ARCHITEC



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contents

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

and COMMENT VEWS

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TECH.NICAL SECTION

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URRENTBUILDING

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

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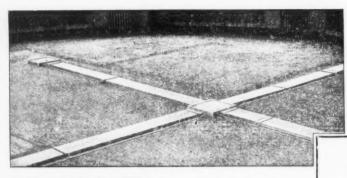
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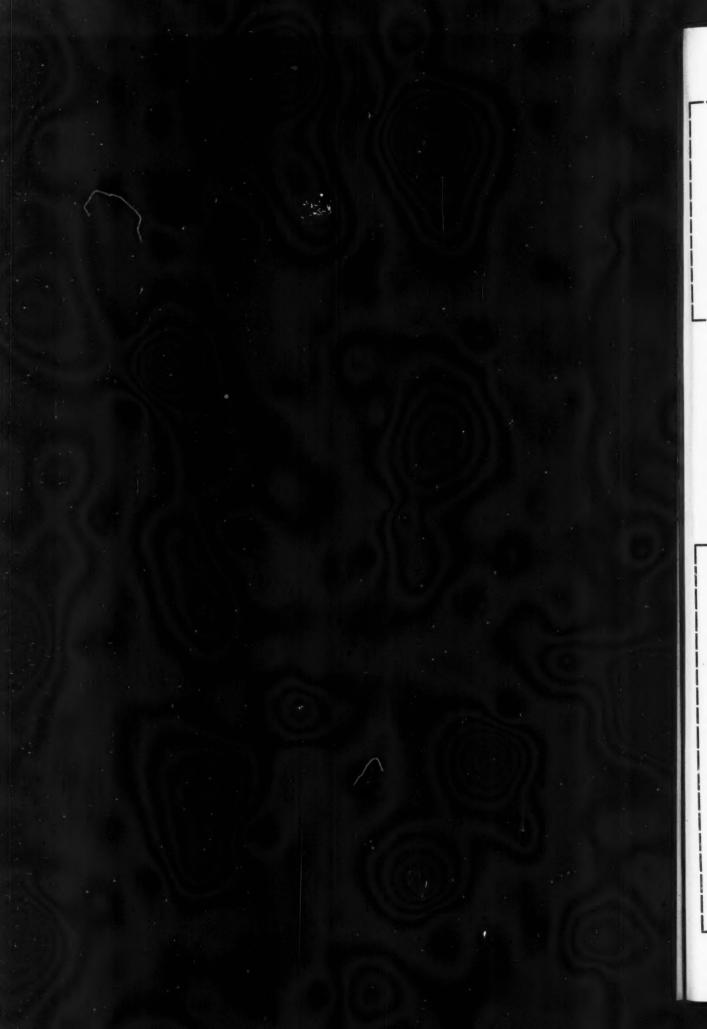
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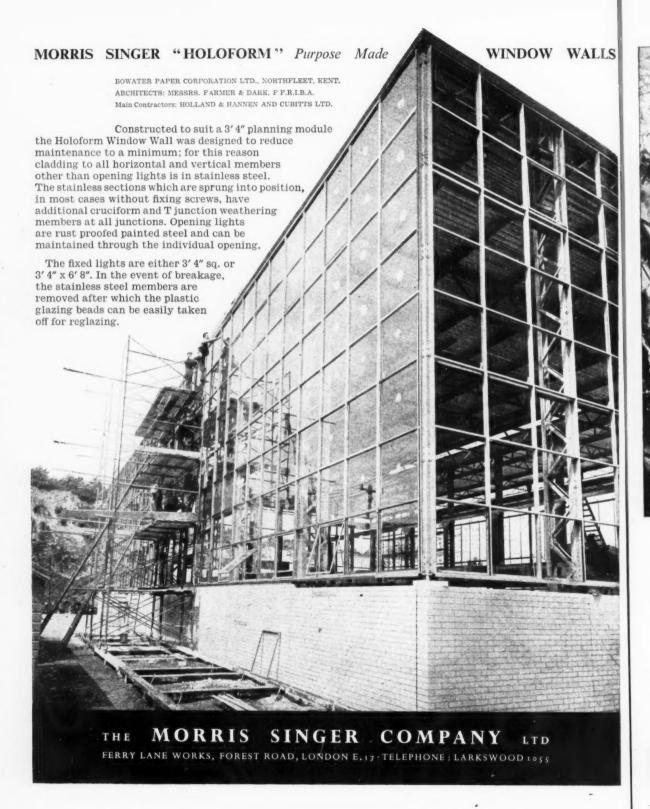
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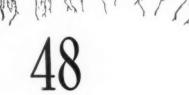
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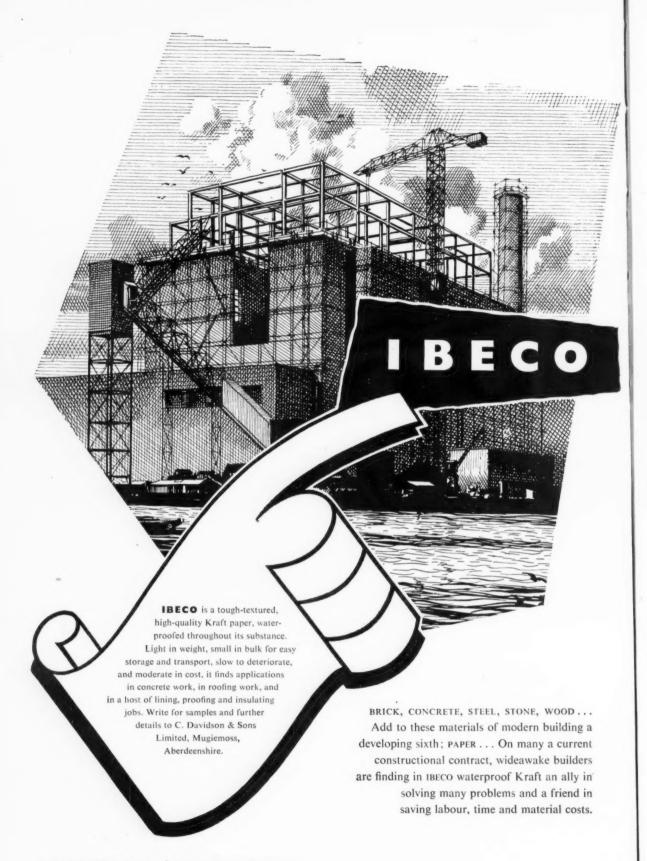
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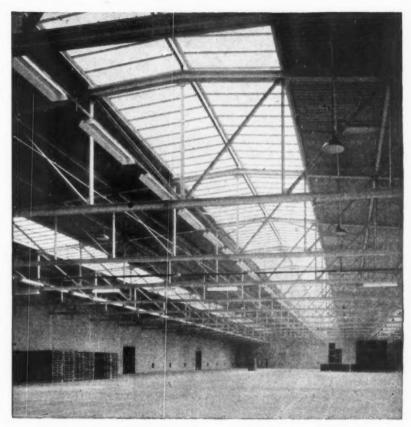
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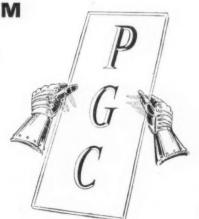
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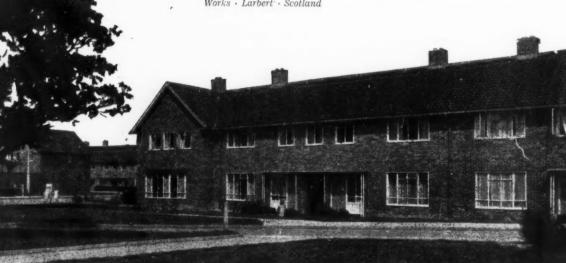
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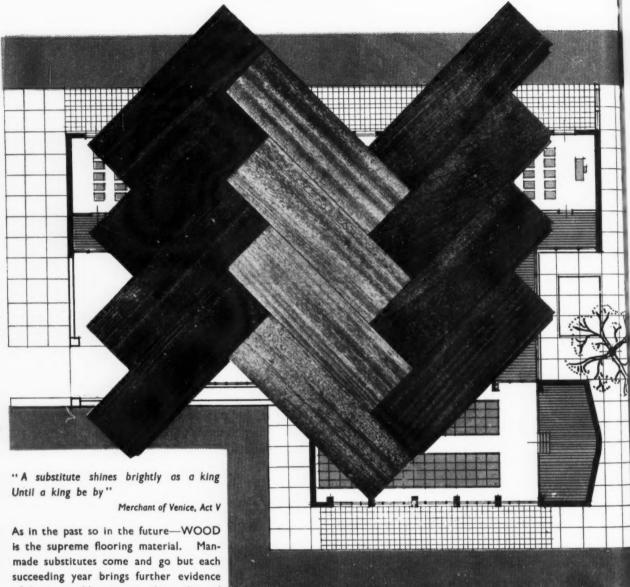
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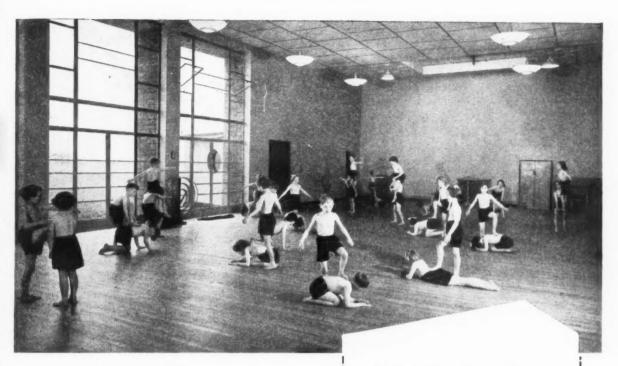
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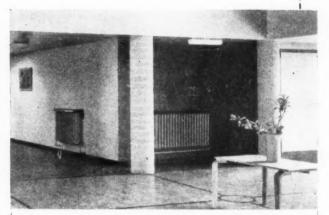
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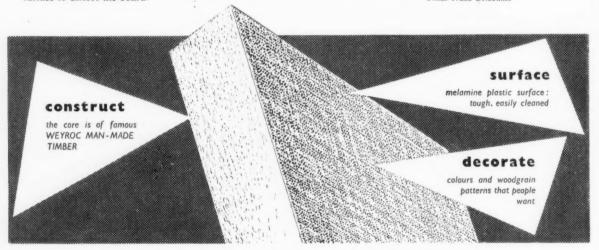
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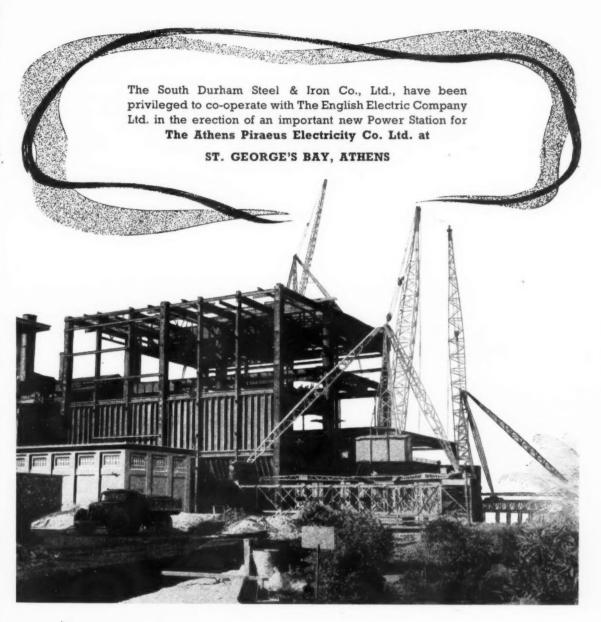
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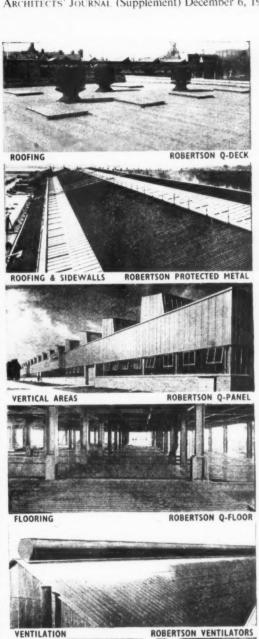
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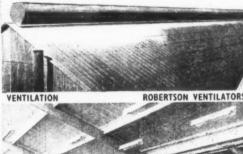
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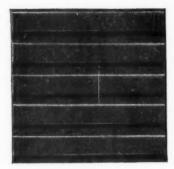
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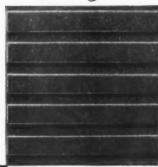


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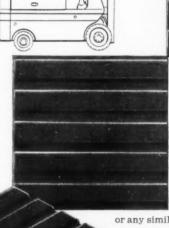
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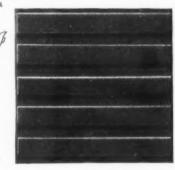
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The radiators are so designed that they may be fitted in the ceiling, walls, or floor as panels, dados or enclosures, or arranged in vertical columns to harmonise with existing decorations or architectural features.

For the new Operating Theatre of Essex County Hospital, Colchester, where reliable, efficient and completely hygienic heating is essential, the No. 35 Ideal Rayrad was chosen and can be seen, in the illustration above, fitted inconspicuously beneath the windows.

Adaptable for use in every type of building

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Approved



by the Fire Offices Committee

For Safety's sake specify "CRUSADER" Automatic Sprinklers. Designed, manufactured and installed by the Sprinkler



Division of FIRE ARMOUR LIMITEDthe only independent F.O.C. authorised Sprinkler contractors.

Technical advice and estimates without obligation.

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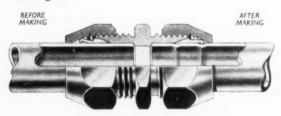


Cheapest. On big contracts, Municipal and private, hundreds of pounds are saved by using HANLO Compression Joints.

Neatest. HANLO nuts are of streamlined design to give a more attractive appearance to installations. Strongest. Insert tube (with nut in position) and tighten one to one and a half turns. The patent HANLO ferrule impresses the tube in two places for a doubly positive grip which has withstood 5,200 lbs. p.s.i, without failure. HANLO Joints can be made in 10 seconds and re-made times without number.

The comprehensive range meets all requirements.

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LIGHT GAUGE COPPER TUBE POLYTHENE PLASTIC TUBING

Levell & Hanson Ltd

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Contemporary
Well Glass
Luminaires

cut your costs with

Simplex Screwglass

for 40/60w GLS lamps

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FOR 40/60W GLS LAMPS

Two striking new ranges of screwglass fittings here — simple and modern in design. WEATHERPROOF, CORROSION RESISTANT, Simplex screwglass fittings are ideal indoors or out

The two types: vitreous enamelled acid-resistant cast iron or cast aluminium alloy. Reflectors in pressed aluminium (optional) to suit all types. Complete with B.C. lampholders

in bakelite — porcelain optional extra Basic price: vitreous enamel 13/6 Cast aluminium alloy 12/6

Simplex

Simplex Electric Co Ltd Blythe Bridge Staffs

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With OXYLENE BORAM Fire
Retardant Coating which raises
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OXYLENE BORAM can be overpainted or applied to painted surfaces without loss of fire retarding qualities. It gives real fire protection and is approved by Local and Fire Authorities.

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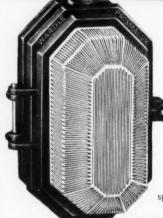
Architect

says . . .

"I prefer



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it's so handy for confined space lighting."

Prismalux Directional
Lighting Units have
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for lighting confined
spaces and locations where
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practical. For lighting subways,

stairways, passages, entrances to garages, Prismalux is ideal. It is designed to meet modern requirements both in appearance and installation and needs no servicing. Incorporating a full size reflector and a carefully designed system of prisms to control the light, Prismalux is available in enamelled or galvanized finish with a choice of seven inlet points.

You can get full information about Prismalux by writing to: The Wardle Engineering Co. Ltd.



Tilted for subways, cable and conduit runs, arches.



Guarded for passages, stairways, porches,



With detachable cover for corners of passages, cellars, arches.



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THE ARCHITECTS' JOURNAL (Supplement) December 6, 1956

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Radiant heating by SULZER

NOW! selective sound control with BURGESS acoustic tiles AND radiant heating by SULZER, write for information.

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600 GROUP OFFICE BLOCK, WOOD LANE, LONDON, W.12 MAIN CONTRACTORS, KYLE STEWART LTD.

The design by
Fitzroy Robinson & Hubert Bull,
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finest contemporary building design
and was on view at this year's
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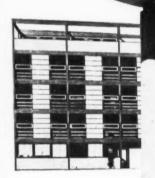
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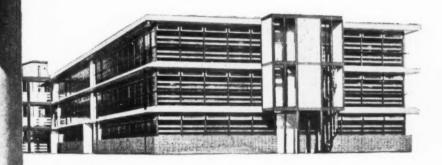
Wood Lane, London, W.12 Telephone: SHEpherds Bush 2020
Reinforcement Department 17 Buckingham Palace Gardens, London, S.W.1 Telephone: SLOane 5271
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Telephone: VICtoria 6838.

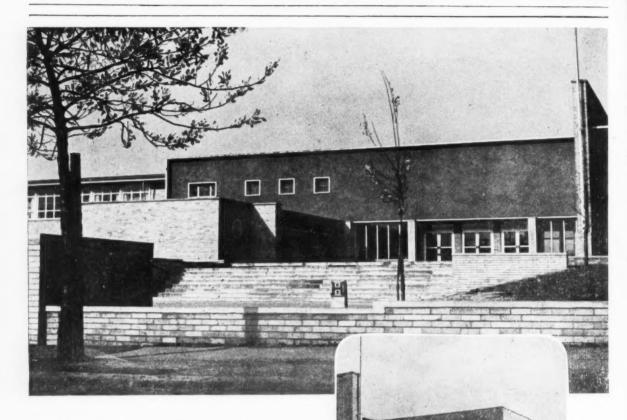
Also at Birmingham, Bridgwater, Newcastle upon Tyne, Retford, Sale, Worthing.

Water tower of unique design at Bousfield School, London, S.W.7 Ferro-concrete design by Helicon. Constructed by W. J. Marston &

Seed warehouse and offices at Witham, Essex. Ferro-concrete designed and constructed by Helicon.

Architects in both cases: Messrs.

Another notable TOWNSON building



The Droylsden Secondary Modern School for Girls. Architect: G. Noel Hill, F.R.I.B.A., M.T.P.I., County Architect, Lancashire County Council.

This impressive school won for the architect the R.I.B.A. Bronze Medal awarded by the Manchester Society of Architects for the period 1945-50. It is a typical example of the many large-scale contracts which for over 90 years have been entrusted to Townsons . . . Builders, Contractors and Civil Engineers.

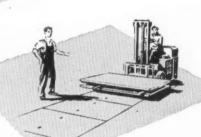
TOWNSON AND SONS LIMITED

HIGHER SWAN LANE, BOLTON

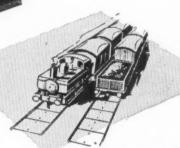
Telephone: Bolton 1840/4



right for docks



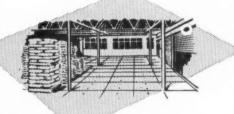
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A Stelcon Raft floor will take the heaviest traffic the moment it has been put down. The Rafts* are simply laid on a bed of compacted sand, so dispensing with a sub-floor, and can always be picked up and laid elsewhere as required. The use of Stelcon Rafts shortens the time to get into production when building new factories or replanning existing works. As to the working life of Stelcon Rafts - they are doubly reinforced concrete, having a Stelcon Steel Clad wearing surface, bound in angle iron. Many a Stelcon Raft floor has already lasted 20 years without costing a penny in maintenance.

* Approximately 61' square.



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telcon 'RAFT' FLOORS

strong - mobile - adaptable

Please write for details of Stelcon Floors, including Stelcon Anchor Steel Plates—Stelcon Steel Clad and Mineral Clad Flags

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Here's the complete DEXION S

RANGE OF FOUR SLOTTED ANGLES NOW DOES MORE JOBS—AT LOWER COST

YOU can now get Dexion Slotted Angle in four sizes, which will between them solve nearly all your equipment problems. Two new angles, Dexion 140 and 112, in addition to the existing 225 and 300, make Dexion a complete system of construction.

Used together or used alone, these four angles will give you structures of any size, economically. The new smaller angles not only widen the range of Dexion's uses. They save you money, too. You can use them for the lighter jobs—or for lightly stressed members in many structures. In fact, you can now pick the right angle for the right job—at the right price!

Dexion keeps its simple, scientific design, but now has even greater adaptability. In factory, shop and office, whatever your equipment needs—from heavy duty racking and workbenches to light shelving and displays—there is a Dexion angle for every purpose. Standardization on the Dexion System will cover *all* your needs.

New Dexion shelves, too

If storage is your problem, the new self-supporting Dexion steel shelves give a fine finished job. They bolt direct to the uprights, rigidly locked without bearers or bracing—so the job is neater, quicker, cheaper. Five sizes: 36" x 12", 18", 24", 30", and 36". A unique feature: support bars that bolt on to increase load capacity wherever needed.

THE RIGHT ANGLES . . . THE RIGHT COMBINATION . . . FOR ANY JOB



DEXION 300 This is the largest size; exceptionally strong, it is ideal for heavy duty structures, and any case where accidental shock loads are likely.



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DEXION 225 The standard Dexion Slotted Angle 225 is the popular industrial size now used widely in factories, stores and workshops for every kind of job. Even more versatile when used with the heavier or lighter angles.

THE TWO NEW DESIGNS



DEXION 140 Ideal for light racking, display racks in shops and stores, and countless jobs where the extra strength of the larger sections would be wasted. New Dexion 140 has equal flanges and will bolt with all three other Dexion angles.



DEXION 112 The smallest angle in the Dexion system. It is just the thing for light shelving, display-stands and frames, models, small laboratory and workshop frameworks—and has many more possibilities when used with Dexion 140.

All in steel and aluminium alloy, sold complete with nuts and bolts. Steel Dexion is rust-protected and stove-enamelled.

NSYSTEM of construction



and is a the

xion the the 18". bolt

Mixed use of Dexion: extra-strong 300 uprights support a second storage tier above; rest of structure is Dexion 225. Part of a large installation designed and erected by Dexion for Vickers-Armstrongs.



This strong, rigid work-table is typical of the wide range of lightweight structures that can be built at low cost with the new Dexion 140.

DEXION SERVICES

A trained representative will show how Dexion can meet your particular needs in factory, warehouse or office. His practical experience can help save you money, space and labour. It pays to consult him early.

DEXION Design Service. Most users have no difficulty at all in using Dexion. But for large or complicated jobs, careful design can mean substantial savings. The free Dexion Design Service takes the worry off your hands.

DEXION Construction Service. Finally, if you haven't the labour for any fairly large structure, a skilled Dexion team will do the whole job-with speed and efficiency that keep the cost

THIS BOOKLET IS FULL OF IDEAS

To judge Dexion's usefulness to you, send for booklet BI. 143 Illustrations show how up-to-date firms use Dexion to solve dozens of problems. Full description of the Dexion System with prices. Just write "BI. 143" on your business letter-head, and post to Dexion Ltd., London, N.W.6. Maygrove Road, Or ring MAIda Vale 6031(21 lines),



New Dexion 112 proved the ideal material for making this temporary fixture in the laboratory of a London manufacturer.

Get in touch with DEXION®





white

PRESTIK

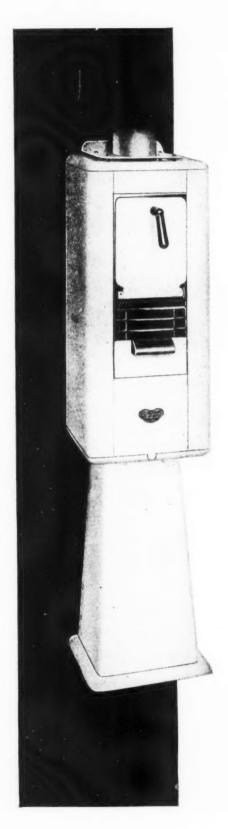
Builders' Sealing Strip

made by the Bostik people

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SANITARY WARE - Sealing baths, wash-

basins, etc., to walls.



Safeguard Public Health Encourage Personal Hygiene

in FACTORIES · HOSPITALS · CLINICS SCHOOLS · HOTELS AND OFFICES

Investment by British industrialists and others in modern equipment to safeguard the health and welfare of the vast and growing numbers of workers, has proved beyond doubt the wisdom of a policy both far seeing and democratic in concept.

The installation of Sugg's incinerators wherever women employees form part of an organisation is plain commonsense.

Our sales and technical staff will be glad to advise and co-operate.

The Sugg Incinerator

Gas-Fired

WILLIAM SUGG & CO. LIMITED

(Incorporating Cowper Penfold & Co. Ltd.)
VINCENT WORKS, REGENCY ST., LONDON, S.W.1. Tel: VIC 3211



Famous Names

The other day by one post
we received orders for Quarries for three of
the leading mineral water manufacturers, namely
SCHWEPPES, JEWSBURY & BROWN, AND
APPOLLINARIS

Looking through the order book
for the last three or four months, we notice
we have also supplied Quarries
to such nationally known concerns as
GLAXO, KODAK, COURTAULDS, EXPRESS DAIRY, NESTLES
AUSTIN MOTORS AND BROWN & POLSON

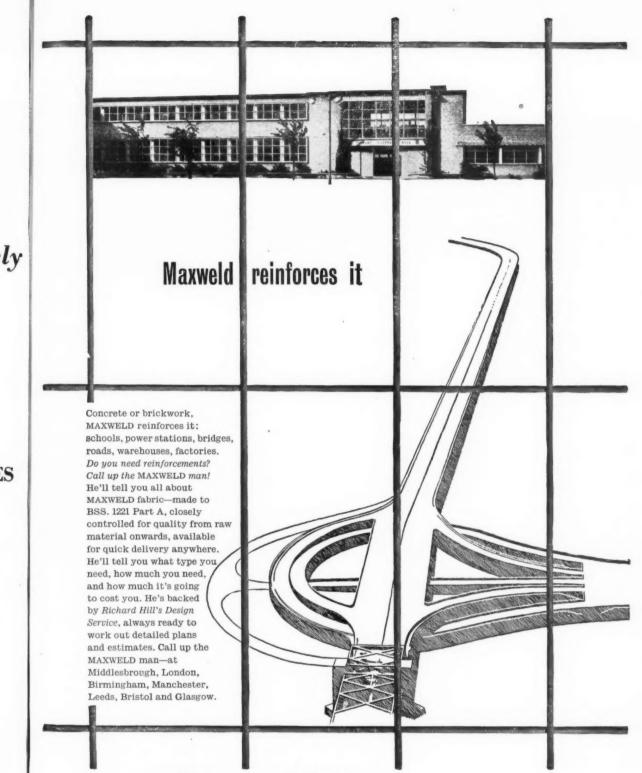
In Quarries a famous name is WHEATLY Triton

Specimens of Wheatly burnt clay products may be seen at the Building Centre, London. They include Single-lap Roofing Tiles, Ridge Tiles (blue and red), Floor Quarries, Air Bricks and Briquette Fireplaces.

WHEATLY & COMPANY LIMITED

SPRINGFIELD TILERIES · TRENT VALE · STOKE-ON-TRENT
Telephone: NEWCASTLE (Staffs) 66251 Telegrams · WHEATLY, TRENTVALE

WH. 78



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is manufactured by RICHARD HILL LIMITED (Established 1868)

Newport Wire and Rolling Mills, Middlesbrough, Yorkshire. Tel: Middlesbrough 2206

A MEMBER OF THE FIRTH CLEVELAND GROUP

RC 3MX



BPL/D 56

Blooming Muisance ...



Blooms in the garden are all very well—in their right place. But'bloom' on the front door—or anywhere else in the house for that matter—is a blooming nuisance!

'Bloom' is never a problem with 'SUPERLATIVE'. The high-gloss surface of this superb paint is never clouded by 'bloom'. 'SUPERLATIVE' maintains its beautiful highly-polished appearance for many years of splendid service.



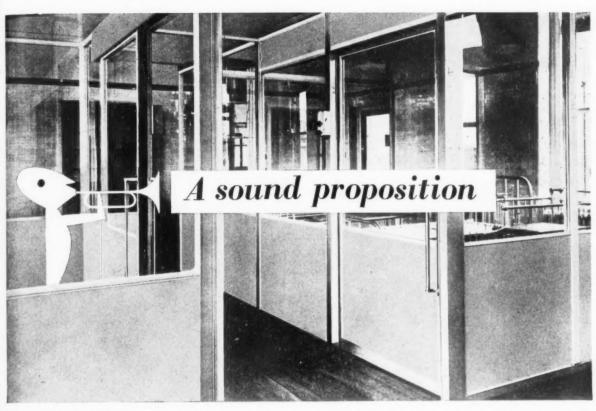


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OUR WORLD-WIDE SERVICE IS AT YOUR DISPOSAL FOR THE ASKING





Northern Ireland Fever Hospital Purdysburn, Near Belfast

/D 56

Ireland Fever Hospital and shows a typical application of Braby Bar-Form Partition. The partition is constructed of extruded aluminium alloy sections, with double dado panels of sheet steel or aluminium, insulated with slag wool. Rapid assembly of components permits conversions of pleasing design to be made quickly by this method. In the event of subsequent alterations to layout, the components are quickly dismantled and easily interchanged.

This illustration was taken at the Northern

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Structural Steelwork Metal Windows Pressed Steel Stairs Tanks, Cisterns and Cylinders Ducting Dovetail Steel Sheets



BRABY 'bar-form' aluminium partitions



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AP266/207



people are beginning to expect
warmth and comfort – peace and quiet
with

FIBREGLASS LIMITED, RAVENHEAD, ST. HELENS, LANCS . ST. HELENS 4224



After weeks of ignoble existence, the lowly dragonfly nymph crawls, at dawn, from the mud and gloom of the pond and undergoes a great metamorphosis. Arching its back, it splits open its imprisoning case and there emerges what is to become a graceful dragonfly of brilliant iridescent hues, capable of darting speeds—'a living flash of light'.

The advantages of the dragonfly's ability to change are obvious, but ability to change can also benefit other than insects. In industry, where production is becoming increasingly linked with automation, it is essential that the layout of machines and departments should always be arranged to suit the needs of maximum production efficiency. For this reason, movable internal

walls are constantly specified by leading Architects for industrial buildings, for only by the use of these walls can periodic re-allocation of working space within the building be carried out easily and quickly whenever required.

Rowe Bros & Co. Ltd., with manufacturing facilities devoted solely to the production of movable walls, are leaders in this field and provide partitions for major building projects throughout the world. They offer not only a range of partitions of advanced design, suitable for Industrial, Commercial and Public Buildings, but also provide, when required, an expert advisory and erection service. We will gladly supply Architects with details of our products.

Rowe MOVABLE WALLS

illustrated catalogue available on request

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These outstanding weather-resistant qualities of Beacon Windows are due largely to the use of the Thompson Zinc Metallisation rustproofing Process. This process not only gives life-long protection against rust and corrosion, but because it is applied by means of an oxy-propane metallising gun-after the window is assembled-there is no risk of distortion due to heat.

It is, in fact, a well-recognised characteristic of all Beacon Windows that invariably they fit accurately exclude all draughts and are completely rattle-proof.



Member of the Metal Windows Association

JOHN THOMPSON BEACON WINDOWS LTD . WOLVERHAMPTON

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for endurance ...

Every cable made by the sixteen members of the Cable Makers Association is rigorously tested for quality and endurance, as in this pulse and cross-talk test of television relay quads. And every cable has behind it an elaborate and continuous process of research. Together, the member-firms of C.M.A. spend over one million pounds sterling every year on research and development-none of it wasted by duplication of effort, since one of the C.M.A.'s important functions is to ensure that essential knowledge, data and experience are freely and equally available to all members. The benefit to cable users of such co-operation is self-evident. It has helped to make Britain the largest exporter of cables in the world.

> The Roman Warrior and the letters 'C.M.A.' are British Registered Certification Trade Marks

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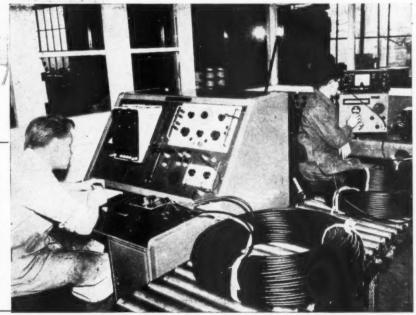
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CMA/IS









pulimplicity for the New Elizabethans









Our Victorian forebears saw no virtue in restraint when they planned their homes. Ceilings fantastic with plaster curlicues, walls cluttered with pictures, fireplaces all bobbles and tassels, red Turkey carpets—all these assaulted the eye with colours and shapes that were in harmony only in their common purpose, the display of comfort and "position" of the owner. Our revolt began with the other extreme, but time has mellowed first judgments, and today a controlled beauty of ornamentation is bringing pleasure to the modern eye—beginning at the new focal point. the floor. With Semastic and Vinylex Decorative Tiles the designer can plan beauty of colour and design for floors that is in keeping with the purpose of each building—applied art that will always reflect to our credit, however much fashions and times may change.

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DECORATIVE TILES

Products of a Dunlop Company

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WOOD-nature's best building material

White Pine ...

-a light-in-weight creamy white wood used extensively where long life is of greater importance than high strength

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Patterns, drawing boards and artists' supplies

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Match splints

Wood flour (used for manufacture of linoleum etc.)

SPECIAL ADVANTAGES

Uniform in texture, works well under tools

Seasons easily, low shrinkage

Takes stains, paints and varnishes exceptionally well

Good nail-holding properties, does not tend to split or splinter

Exported as deals, boards, sidings, deal ends—and as waney and square timbers for special purposes

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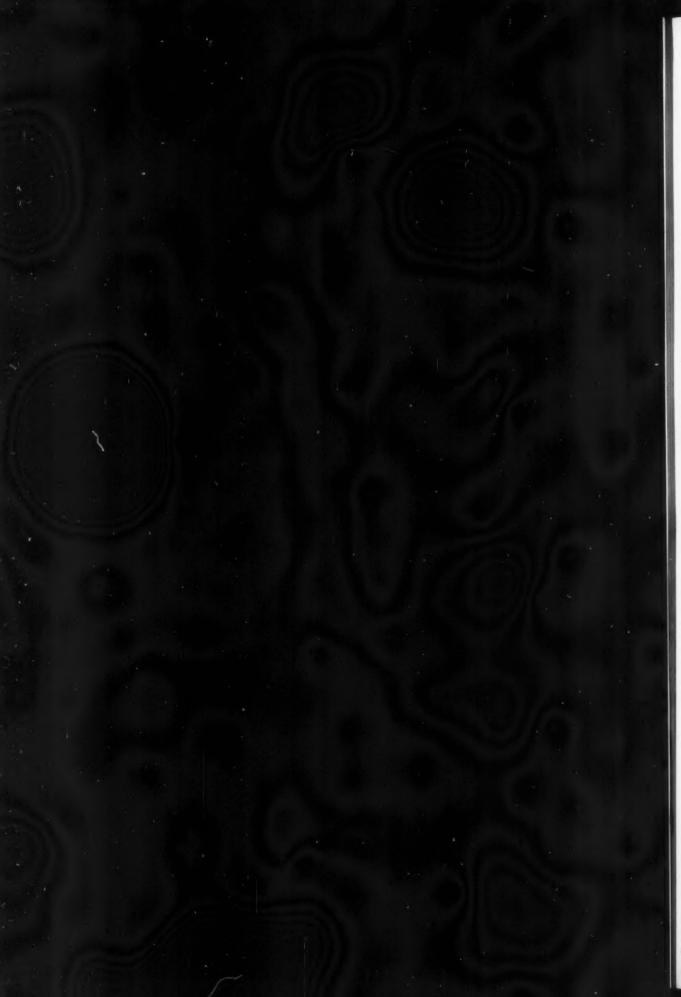
concerning Canadian woods contact The Commercial Counsellor (Timber), Canada House, Trafalgar Square, London, S.W.I.



Reproduced here is figure of Canadian White Pine

This advertisement is one of a series featuring Canadian Douglas Fir, Spruce, Red Pine, Pacific Coast Hemlock, and Western Red Cedar



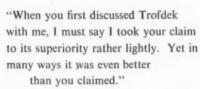


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"You were quite right,

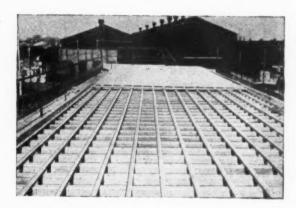


"Remember that roof where we had a forty foot clear span?

"Trofdek did that more economically and so very much simpler than any other system; I will certainly use it on a number of other projects."

TROFDEK offers these other advantages . . .

- Ultra light weight—only 3-4 lbs. per sq. ft.
- Greater strength/weight ratio.
- Supporting framework eliminated or reduced.
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- Minimum fixing time.
- Comprehensive Contracts Service.



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Look at it from your own point of view De La Rue Polythene pipe has these big advantages over metal of any kind:-

- Doesn't corrode, inside or out; needs no maintenance at all, indoors or out. Lasts indefinitely.
- Needs few joints (you simply bend it round corners).
- Cheaper in labour, no dearer in first cost.
- Doesn't collect scale.
- Far lighter which means easier handling, longer lengths.
- DOESN'T BURST,
 not in the coldest weather.

Yes, it's O.K. for drinking water.

The best builders' merchants stock it.

No cold water trouble at all...

... when the pipes are

DE LA RUE POLYTHENE

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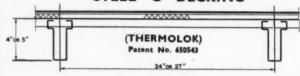


Weight, 44-lb, per ft. super fixed complete. Thermal Transmittance 'U' = 0.32

Standard Spans: 10ft., 11ft., 12ft. and spans up to 15ft. using Multi-Span system. Where required, can span from truss to truss eliminating purlins.

Flexible design permits variation to meet all requirements. Dry construction and top-fixing provides speedy erection. Finish—natural aluminium

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Standard Spans: 8ft., 9ft., 10ft., 11ft., 12ft. and spans up to 15ft., using Multi-Span system.

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Weight, 54-lb, per ft. super fixed complete.

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Standard Spans: 6ft., 7ft., 8ft., 9ft., 10ft. for 2in. depth.

3ft. 4in., 4ft.

4ft. 6in., 5ft. for lin. depth.

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Transmittance

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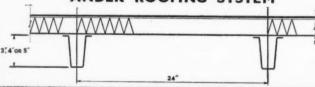
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Units 24in. wide by 24in. depth in 18-, 19- and 20-gauges. Also available in 1in. depth mainly for sloping roofs on spans up to 5ft. Finish—natural or embossed.

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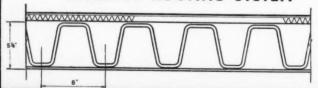


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Thermal Transmittance 'U' = 0.21. Insulation is continuous over points of Standard Spans: 8ft., 10ft., 12ft. and longer spans, using the Multi-Span system. Where required, can span from truss to truss, eliminating purlins.

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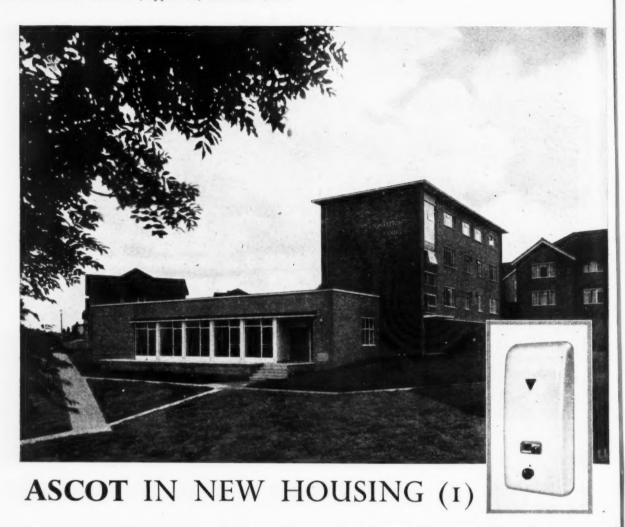
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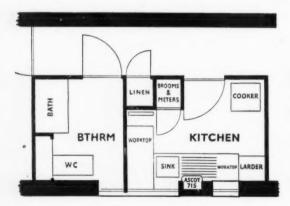
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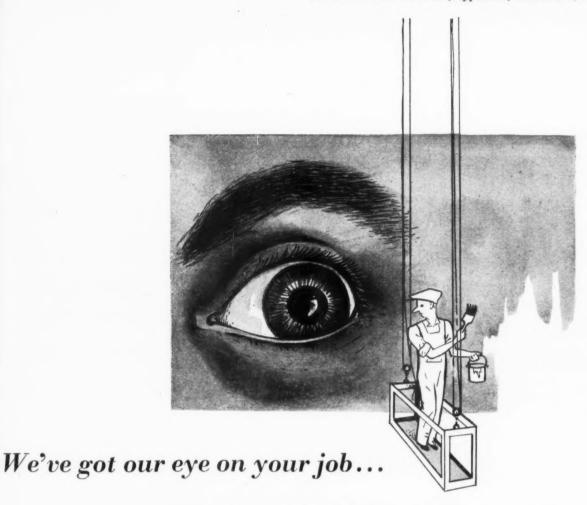


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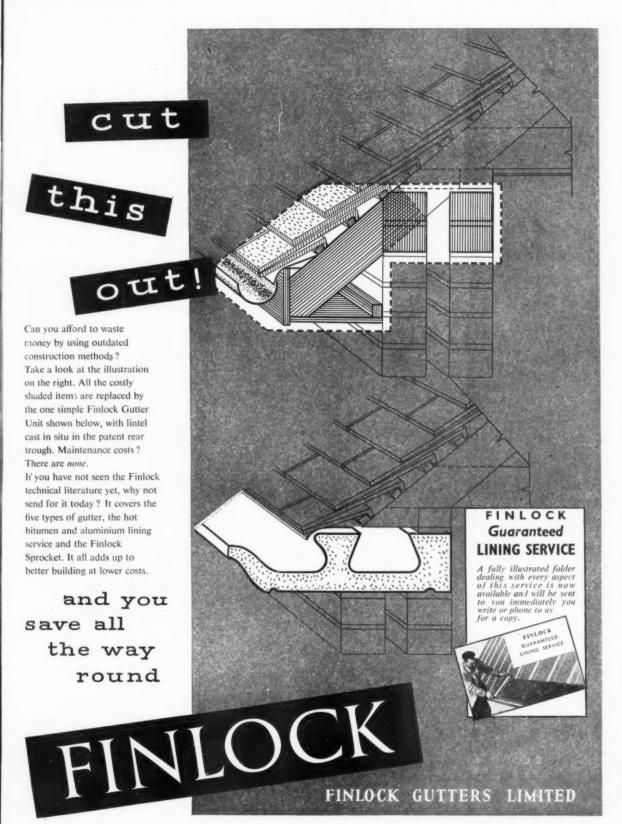
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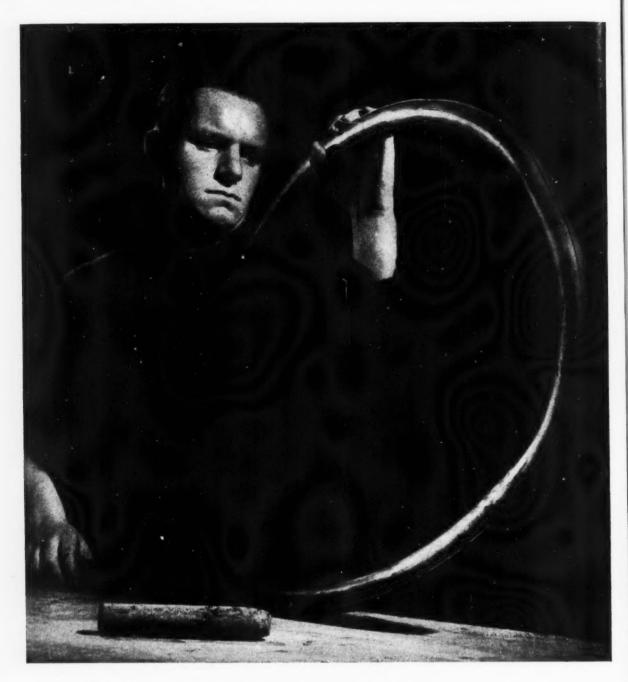
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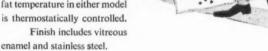
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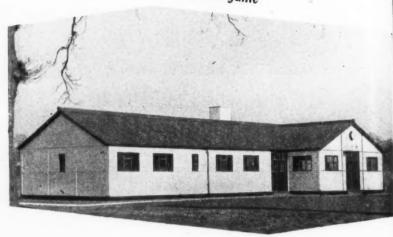
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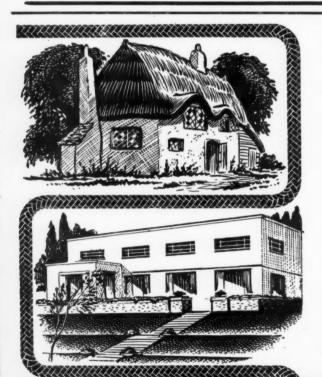
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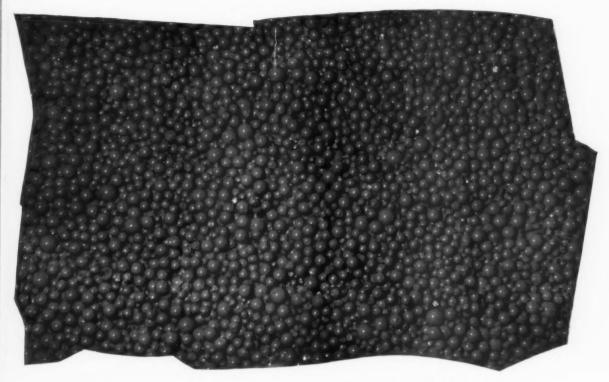
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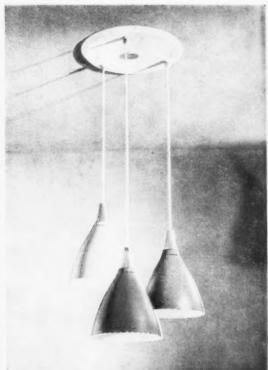
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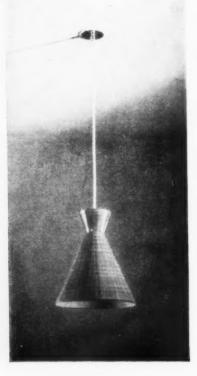


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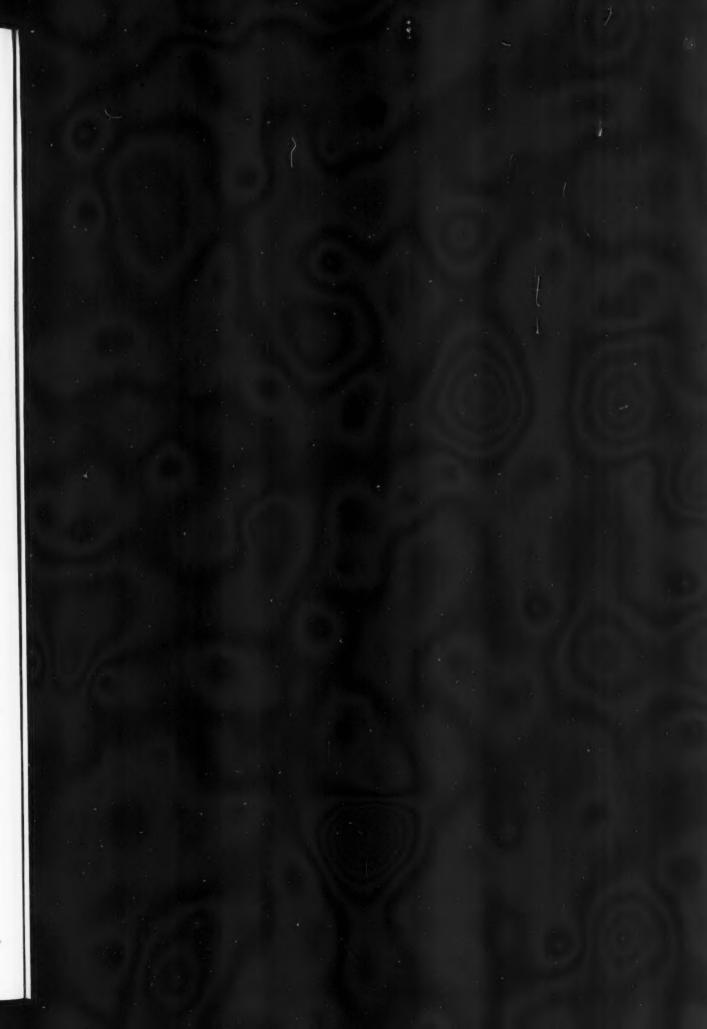
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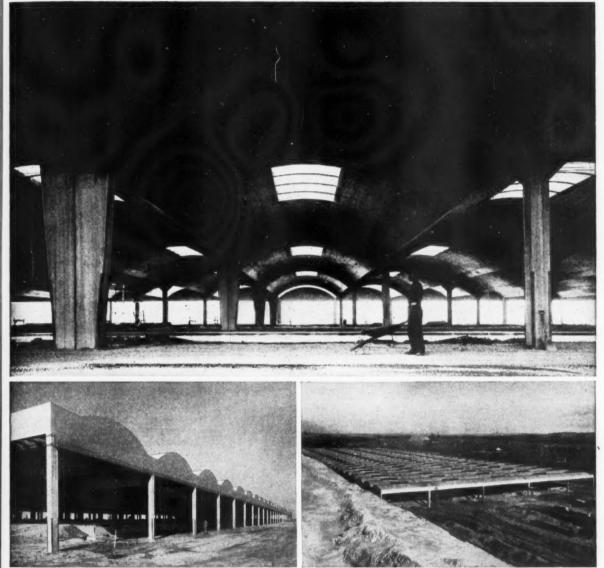


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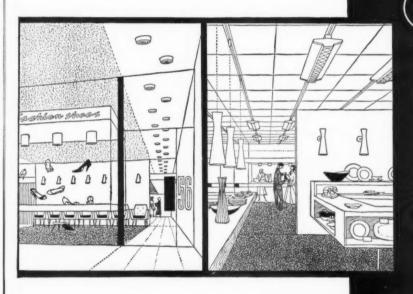
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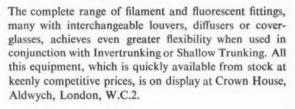
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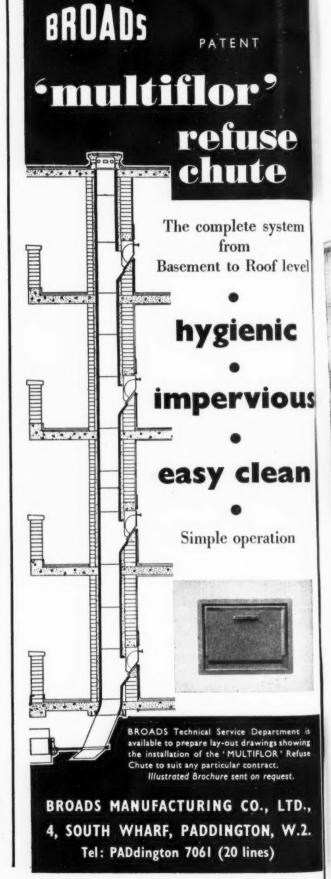
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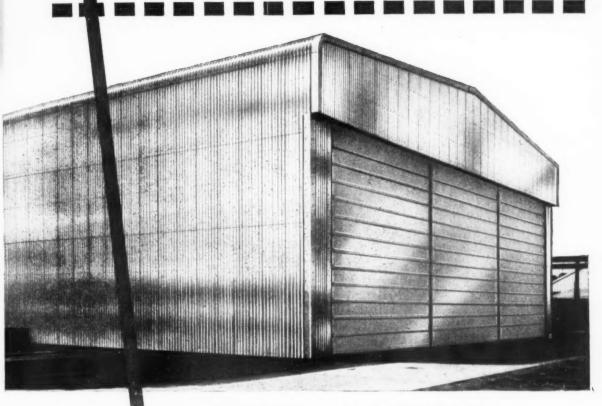
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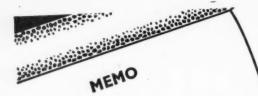
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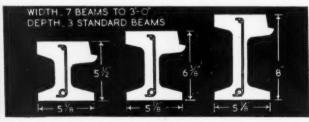
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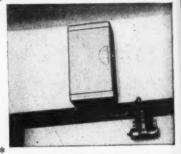


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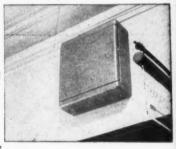
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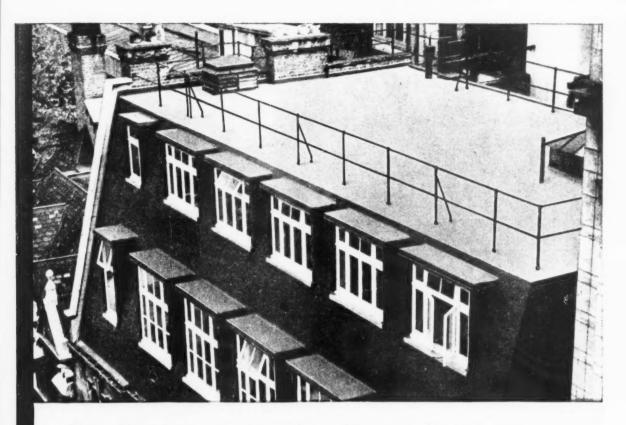
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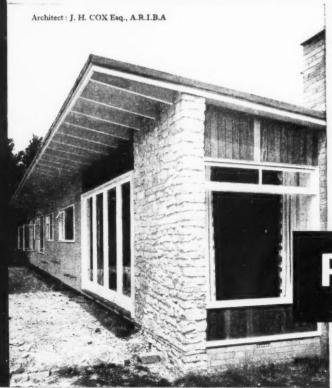
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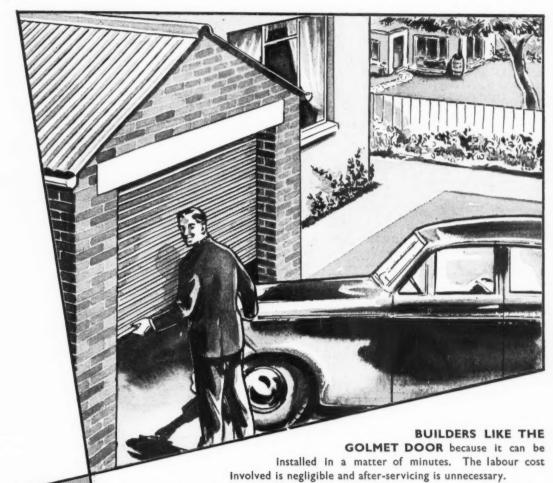
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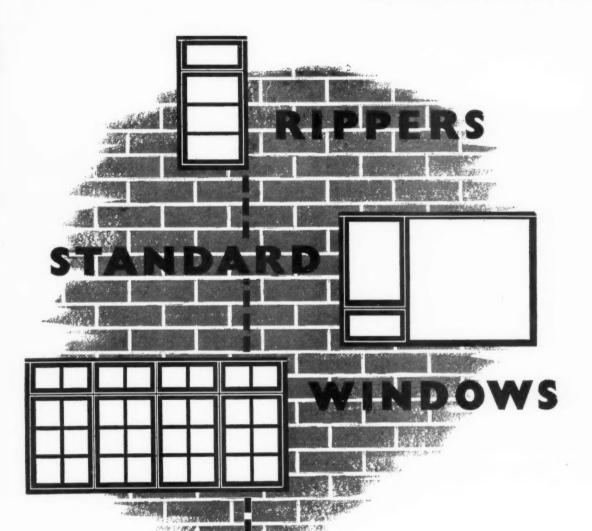
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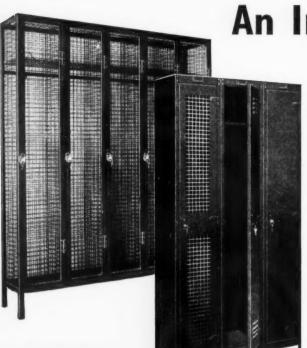
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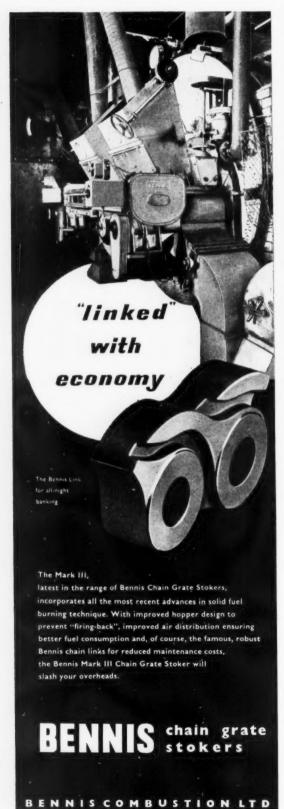
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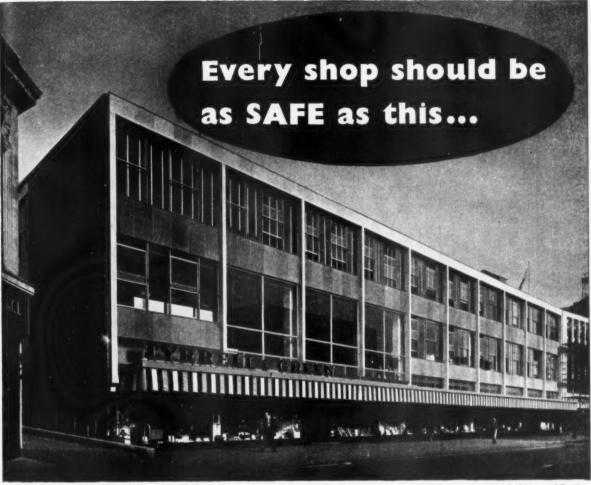
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Architects: Yorke, Rosenberg & Mardall. Photograph: Architectural Review



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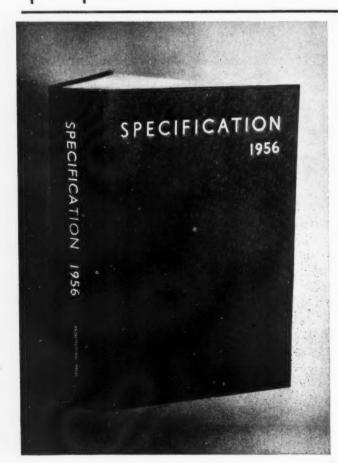
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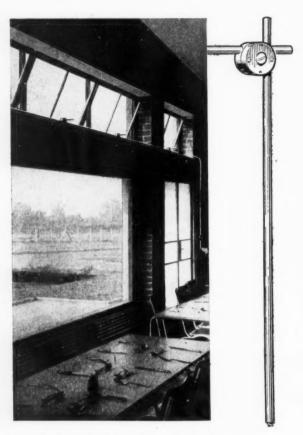


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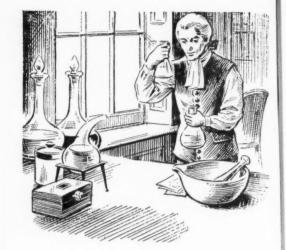
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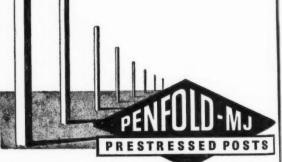
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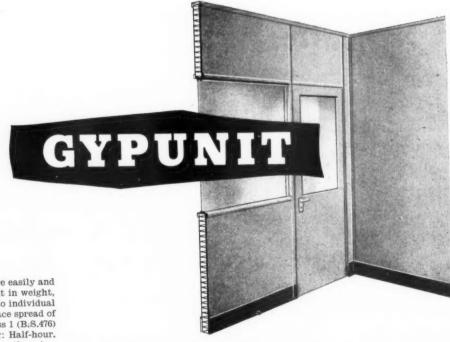
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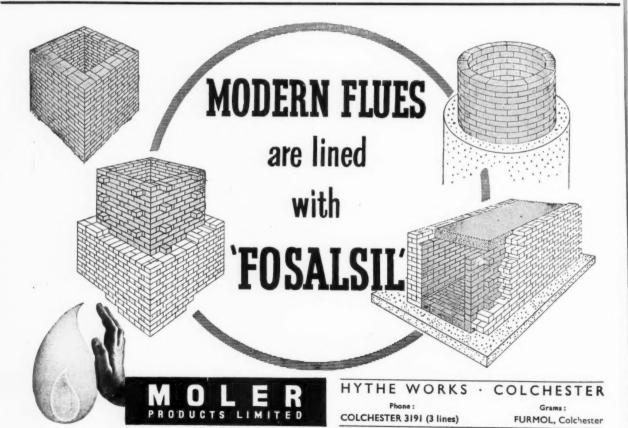
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STANDARD WINDOWS FOR ECONOMY in Newhaven Council Flats

It is appropriate that one of the first buildings you see as you disembark from the Dieppe/Newhaven steamer should be a first-class example of the native genius for compromise.

Designing Meeching Court Flats for the Newhaven Urban District Council posed the architects a pretty problem of how to reconcile two irreconcilables. On the one hand was the usual current requirement of Public Authority building—stringent economy. On the other hand the site has a commanding hillside position overlooking Newhaven Harbour, which must be to many overseas visitors their first close-up sight of England—so Meeching Court is a 'shop window', not only for Newhaven, but for the whole country. In the middle of a picturesque huddle of existing building with a fascinating interplay of textures—age-mellowed brick, knapped flint, and timber—an essay in the modern manner would obviously be out of place.



Detail of window grouping-North elevation

The architects' answer lay in careful conformation of the building to the contours of the site and ingenious detailing-especially as regards the placing and grouping of the windows. All the windows are standard types manufactured by Williams & Williams, but any possible feeling of monotony has been avoided by skilful combining of 1' 8" and 2' ('Z') module windows, the effective but restrained use of concrete subframes and mildly decorative brickwork. emphasis is given to the staircases by the use of Williams & Williams 'Wallspan' partly fixed glazed, partly filled by 1' module opening lights. The 'Wallspan' is fixed directly to the sides of the reinforced concrete stair slabs.

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H. P. BUCKINGHAM

Passing the Buck

Last month Crawley New Town said goodbye to Mr. H. P. Buckingham who has been Area Manager for the district since Williams & Williams office was opened there in 1954. His place has been taken by Mr. H. G. Randel.

'Buck' goes to Bristol as Divisional Sales Manager to replace Mr. E. P. Butler who is going overseas.

Another candidate for foreign travel is Mr. W. Littlewood of Leeds who is bound for the U.S.A. Mr. W. Brindley becomes Area Manager in his stead.





ANDEL W. BRI



The 'Wallspan' cladding on one of the staircases.

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n

COMBATING CORROSION

A seaside situation such as this imposes severe strain on the corrosion resistance of all metallic components used. Ideally we would recommend that the windows in such a building should be aluminium. Unfortunately the budget in this case would not run to the additional expense involved, so yet again a compromise was reached. Hot dip galvanized steel windows were supplied and these have been treated after installation with aluminium paint. This serves two purposes.

It makes for a similar overall appearance between the windows and the 'Wallspan' and also gives a very real additional protection against the salt-laden atmosphere. The difficulty with this procedure as against using aluminium windows is that the efficiency of the paint film may be affected by surface damage while the oxide layer on a solid aluminium section would automatically renew itself. Also, of course, the paint will need to be renewed periodically.





Vehicle Repair Shop. Southern Electricity Board, Reading, Architect: Southern Electricity Board. Windows and Patent Glazing by Williams & Williams.

INGENIOUS USE OF STANDARD SASH

Standard Industrial Sash—despite its very real economic advantages—tends to be regarded as something of a Cinderella among standard windows. It is all the more interesting then to see how effectively it has been used in this contract, not only for the continuous fenestration but also fixed direct to the structural steelwork to form glazed internal partitioning.

The photograph (1) shows how this has been carried out, using standard 'T' form coupling members to join the component sashes together. The glazed door was also manufactured by Williams & Williams.

Note the excellent lighting provided by a continuous run of Standard Sash in the sidewalls combined with Aluminex Patent Glazing in the roof.

'Super Standards'

All Williams & Williams standard domestic windows to BS.990—both I' 8" and 'Z' range—are now available in aluminium as well as in rustproofed steel. Owing to the high cost of aluminium these windows are unfortunately still too expensive for normal day-to-day uses but they can effect a considerable long term saving in maintenance if the initial outlay can be borne.

Aluminium 'standards' are particularly recommended for exposed seaside situations where the high salt content of the atmosphere causes quicker - than - usual breakdown of paint with subsequent deterioration of steel windows. Owing to the different physical properties of aluminium—and the fact that the sections are extruded instead of being rolled—the sections used for these windows are modified slightly from the familiar BS.990 form. Half-size details are reproduced here for comparison.

steel aluminium F7C NF7 outside frame or ventilator bar NF3 outside bar F2 ventilator bar



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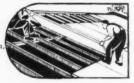




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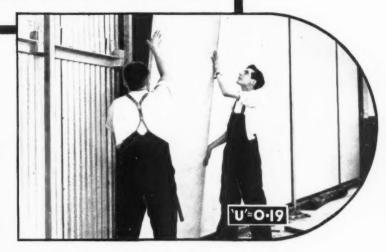
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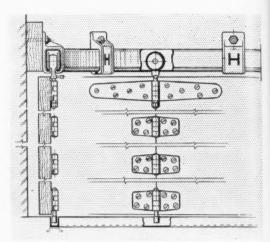


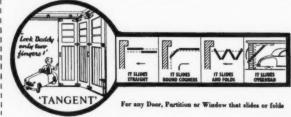


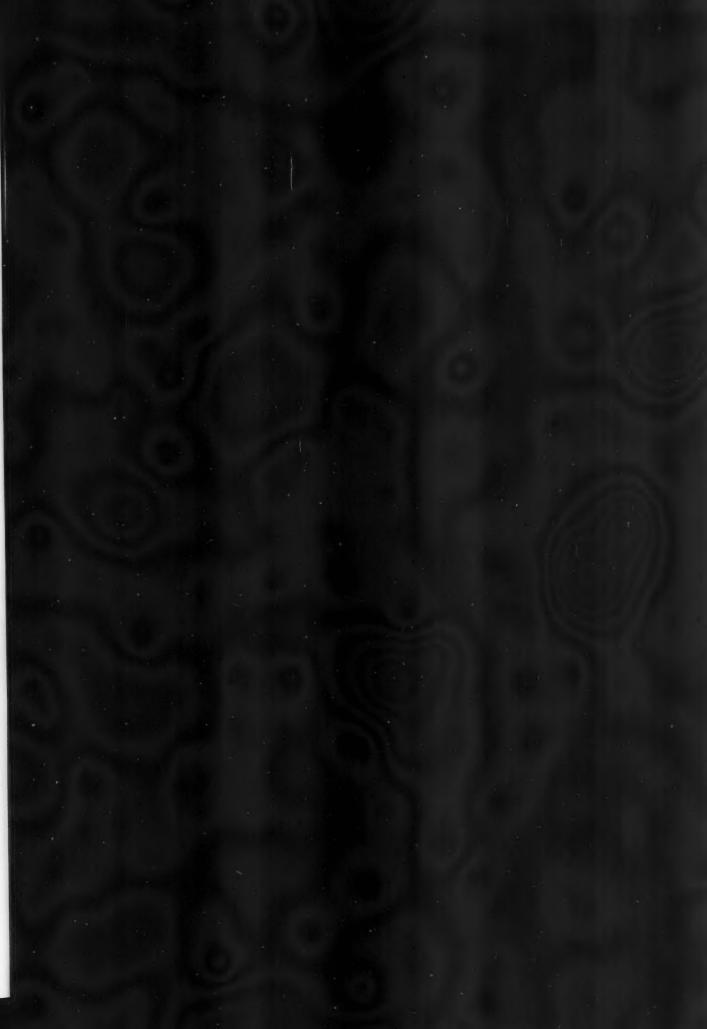
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THE ARCHITECTS' JOURNAL

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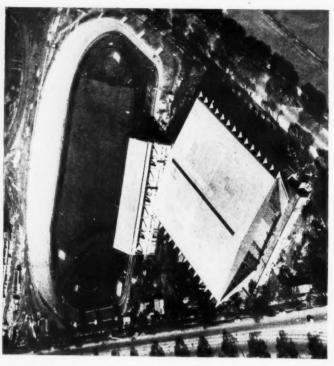
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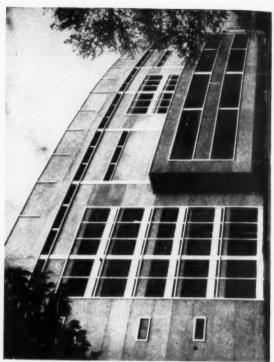
NOT QUITE ARCHITECTURE

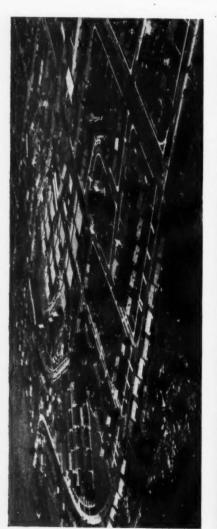
THE OLYMPICS

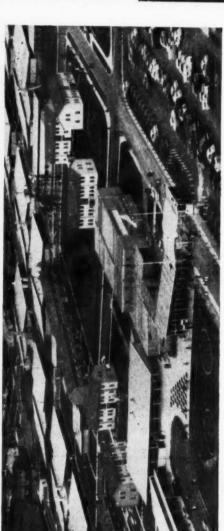
Years ago, when Melbourne was granted the 1956 Games, preparations began bumbling along with a garrulous backseatful of drivers and the engine apparently stuck in an agonizingly low gear. Mr. Brundage, the American Chairman of International Olympia, was driven many times to the edge of despair. Work bumped over typical Australian obstacles: fearsome-sounding disagreements, denunciations and resignations at the management level, and a continual threat of strikes at the labour level. Melbourne was pained by the lack of confidence displayed by visitors who doubted she could ever get ready in time. This was the normal way to do any public work, wasn't it? There's always a bit of healthy argument, isn't there? What's the panic? Sure enough Melbourne was ready on time, and what she produced was as typically Australian as her means of producing it.

The Olympic background called for new housing for visitors, a completely new Olympic Park of pools and special arenas, remaking the Melbourne Cricket Club's huge old arena, several minor new sports buildings in other parts of town, and extensive finishing and titivating touches. The housing problem was solved in an entirely Melburnian way. Athletes and officials were given a £3,500,000 village of cottages, designed to convert to public housing after the Games. Many private visitors were given rooms in private houses. This was carefully organized, hosts and guests were matched. and the whole project should assist international understanding. Most volunteer hosts expressed a preference for foreigners and often for Asians. This surprised the Asians, who sometimes find difficulty in reconciling the eager hospi-









OLYMPIC BUILDINGS: Robin Boyd, writing in the adjoining column, says that "the Olympic Games leave behind in Melbourne equal quantities of the worst and the best sports architecture you are likely to find in the world today, and a third equal helping of crashing mediocrity." The two pictures above show the athletes "Olympic Village," which will be used as permanent housing when the Games are over. Mr. Boyd writes that "it was made up of the ordinary small house and flat units which the State Government has been churning out with ill-concealed apathy for a decade or so." He is non-committed about the street decorations (left), but he says that the new multi-level stand at the Melbourne Cricket Club (right) "appeared to be determined to look like a street of almost-matching office buildings." The Olympic Pools building (above right) is apparently a "remarkable popular success, moving sports-writers to unexpected appreciations."

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tality which Australia extends to any Asians who manage to enter with her strong determination to keep them out.

The architectural approach to all the new construction was in characteristic Australian style, which is to say a great range of styles, all broadly-speaking Twentieth-century, almost as long as the range of Nineteenth-century revival styles in Collins Street. Many designers (far too many to begin naming here) said their pieces; the rough and the smooth rubbed elbows. The Games leave behind in Melbourne equal quantities of the worst and the best sports architecture you are likely to find in the world today, and a third equal helping of crashing mediocrity. The athletes' "Olympic Village" was made up of the ordinary small house and flat units which the State Government has been churning out with ill-concealed apathy for a decade or so. Brave and generally successful attempts were made to dress up the dreary little units with sharp colours and Australian plants.

The new multi-level stand at the M.C.C. had to fit between a florid Victorian grandstand and an impressive semicircular sweep of austere concrete from Depression times. It chose to ignore both and appeared to be determined to look like a street of almost-matching office buildings. For the street decorations a team of designers was organized. Their work focused on a dozen main squares or street intersections. Over the busiest traffic corner they hung a sparkling open metal torch of giant proportions, spouting real (gas) flames.

But the structure which received the most attention, starting with a competition, and brought the richest rewards was the Olympic Pools building. It stands by the Yarra at the apex of two boulevards. The glazed end which faces the city is a diagram of its cross-section. The sloping beams beneath the steep tiers of seats on either side of the pools are connected to the ends of the roof trusses, the resultant up-ended triangles being stabilized by vertical tension rods dropping from the high extremities to the ground. The work has been handled with a sinewy, rugged technique which extracts an almost exhausting amount of appropriate visual character from the athletic structural idea. This building is a remarkable popular success, moving sports-writers to unexpected appreciations. The New York Times reported that it is "an architectural triumph . . . that fascinates and lures people back day after day."

ROBIN BOYD.

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

The Editors

WORKING FOR THE COMMON-ILLTH

THEN the smallest, and most loyal of the Dominions-New Zealand-decided to show its pride and faith in Britain and the Commonwealth of Nations by building a large and mildly luxurious Government office on an expensive site in the heart of London, innocent, simple fellows might have supposed that every Minister and official would have taken all possible steps to help the project forward. As it happens, however, it seems that a backward-looking upper layer of officialdom has been going out of its way to frustrate, confound and domineer over the executors of the proposal, the Government of New Zealand and their architect.

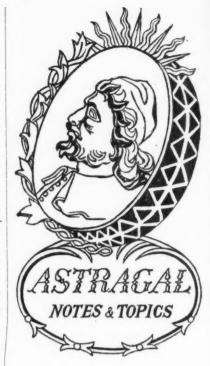
New Zealand was wise in the selection of a site which is on the west side of the junction of Pall Mall and Haymarket and, therefore, closely related to the vestigial club-land and the Royal apartments of St. James' to the west, the governmental offices of Trafalgar Square and Whitehall to the south and east, and the world of commerce and entertainment of Piccadilly and the West End on the north. For the, we hope, evergrowing number of visitors from New Zealand, an embassy in such a position would form an ideal hub and headquarters. The site is also large enough to enable all the various subsidiary official and trade departments to be housed under one roof and still allow for a little expansion within the normal 5 to 1 plot ratio.

New Zealand was also wise in its choice of architect—Robert H. Matthew, who, before entering private practice, was architect to the London County Council and thereby ensured that this country has some of the finest housing anywhere, many excellent schools and a great concert hall; or so the world's most discerning critics state.

Both decisions, however, contained two hidden snags. First, Robert Matthew designs modern buildings and in much of the upper governmental and ministerial circles of this country (David Eccles and the Ministry of Education being notable among the exceptions) there is no understanding of what is meant by modern architecture. Second, the site is on Crown Land, and under the Commissioners of Crown Lands, guided by the cautious Sir Malcolm Trustram Eve, and therefore does not come under ordinary town-planning procedure. In addition, as the site is not far from a Royal Park, the Ministry of Works have to be consulted.

Robert H. Matthew has produced an answer to the design problem which should suit every democratic and contemporary-minded man. He has produced an open layout which allows nearly every office worker to have sunlight, a view, and good office conditions. To do so has meant using modern structural techniques to build high, that is, to two hundred feet or two-thirds the height of the Victoria Tower. The tower is slender and does not overshadow the neighbouring buildings. The arrangement of public rooms in the four-floor podium promises to be visually interesting and the height of the podium is carefully related to the best of the nearby buildings.

It is reported, however, that some Cabinet Ministers (who, presumably, saw no reason to object to such antediluvian monsters as Whitehall Gardens, circa 1912), the Ministry of Works and the Commissioners of Crown Lands have put great pressure on the New Zealand High Commissioner and even on the New Zealand Prime Minister to reject their architect's design. In particular, the Ministry of Works are not yet reconciled to the fact that the top of the tower will be seen over the top of Carlton House terrace from St. James' Park. And, finally, the Royal Fine Art Commission are reported as saying that the tower is too high for an area which they seem to wish to preserve in perpetuity as one with an even skyline. They suggest that about four storeys be removed from the tower and the remainder of the tower reduced in depth and width to maintain the same proportion. The fact that this would mean that New Zealand House would not then be large enough to contain all its staff the Commission carefully ignores. The Commission's real quarrel, which may well be valid, is with the 5 to 1 plot ratio. This is a matter which they should take up with the Ministry of Housing and Local Government, who originally laid down the ratio. The Commission have no right, because they disagree with Ministerial planning policy, to victimise the developers of sites whose buildings have the misfortune to attract the Commission's attention. As for the complaints of the Crown Commissioners and the Ministry of Works, they have two alternatives; either to insist on the adoption of an outworn, dying, æsthetic theory of design which will compel the users of the offices to work under inadequate conditions of comfort, or they must accept the accomplishments of modern building technique and modern planning and design, and allow this forward-looking Dominion to house its workers in offices providing the standards of amenity and efficiency to which even the white-collared worker of a twentieth-century democracy is entitled.



BED/BATH = FLOOR/COAL

Francois Caviglioli's two talks at the Bartlett fully lived up to their title, A Very Critical Survey of European architecture in North Africa. Not that he said anything, to ASTRAGAL'S ear, that hasn't been muttered (at least) before on the general subject of building in sub-tropical urban areas, but it was enlightening to be given chapter and verse, including planning by-laws, on some of the more monstrous offences against life and view, and equally enlightening to see the original drawings for the so-called plans of some of these monstrosities, complete with lettering that Caviglioli charitably called archaïque.

What stuck in the mind and eye, however, were not so much the competitive, commercial slabs pinching one another's light and air, but such images as an air view of neat chess-board housing, for natives, at two hundred and twenty to the acre—single storey







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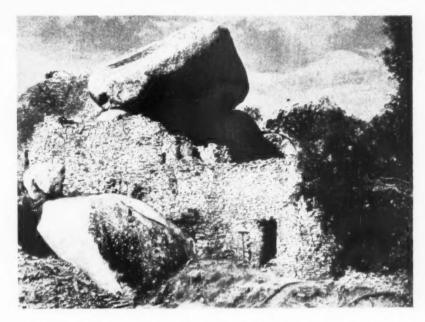
about

ATTE

at that! The official attitude to such housing is that if you give an Arab a bed he still sleeps on the floor, etc., which Caviglioli justly compared to the English coal-in-bath legend; but this had a nice social back-hand to it when he revealed that in Algerian "luxury" flats that sell at anything up to £1,000 per room it is unusual to find any built-in equipment beyond the lavatory pan, and that a minor sensation is caused if there is a space designed to be fitted up, at the purchaser's expense, as a bathroom.

WHAT ABOUT ZIMBABWE?

The rising tide of architectural publications laps a hundred pages higher with the arrival of Architecture and Design, the Journal of the Institute of Southern Rhodesian Architects. The September issue (No. 1) gives, as might be expected, a bustling picture of the architecture of a bustling country, and projects for new work that varies from the rousing to the you-know-what. The article that pinned ASTRAGAL to his chair, however, was entitled Zimbabwe -The Third Question. This sounds like Rider Haggard country, and is (with a tolerance of about 800 miles either way, but what's 800 miles in Africa?). ASTRAGAL, who reads the Listener, did at least know what went on at Zimbabwe-viz., the biggest masonry structures put up in Africa south of the Sahara, by unaided and unconquered Africans-but he had no idea what the questions might be. A little disappointingly, they proved to be Who built them, When and Why? Although the third question doesn't really get answered in the article, it is very refreshing indeed to see these curious works of man discussed and described by someone who knows them at first hand (Anthony Whitty) and cares for them as architecture, and not simply as ammunition to be flung about in discussions on Apartheid.



Who built these; when and why? See "What About Zimbabwe?"

MODERN ARCHITECTURE IN THE BALANCE Architects now have the all-too-rare opportunity of helping to persuade the Commissioners of Crown Lands to accept a modern design for a building in central London. The building is the proposed New Zealand House, and two designs for it are illustrated on page 817. The Commissioners have stated that they would be interested to hear public opinion upon the designs submitted by the architect. Professor Robert Matthew. So far the MOW, the RFAC, and others have criticized the designs for being too high. In particular they object to the tower just showing over the top of Carlton House Terrace when viewed from St. James's Park. In ASTRAGAL'S opinion the second design, which is the best, would be improved yet further if the tower was a few stories higher, so that it stood well clear of the roofs of Carlton House Terrace.

The objection has also been made that the building would be visible from Buckingham Palace, but rumour has it that it is not the Queen, but only cautious Ministers who object to the idea of there being a visible symbol of the Commonwealth rising above the skyline and discernible from the Palace. The objectors on this score should rather concern themselves more with the squat and dreary buildings which are now going up to the west of the Palace around Grosvenor Place.

The main issue before the public, however, is high buildings, and open planning, versus low building, with reentrants and internal wells and corridor streets. Is public opinion sufficiently behind modern architecture and planning to win the day by persuading the Crown Land Commissioners to accept Robert Matthew's design? To a considerable extent it is up to the

What a young, ambitious architect needs is a Bogart-type cap and a girl who understands him-a girl who is prepared to . . .









readers of the JOURNAL to achieve this by putting their views forward to the Press and elsewhere with real conviction.

WHAT PARENTS OUGHT TO KNOW

Now that nearly all large firms are spending quite big money to attract and keep properly qualified staff the Careers supplement has become regular journalistic practice, no doubt quite profitable. One of the more recent efforts, by the Financial Times, runs true to pattern but the architectural piece seems astonishingly inept. It is accurate enough, but it is confined to RIBA exams and it gives no warning at all to the unfortunate parent who will find himself expected to cough up further fees for TPI exams. builders' piece on the facing page isn't much better and one is amused at seeing that many directors of large building firms have started as apprentices. This is true, no doubt, but one would like to know how many did so in family businesses with the inevitable directorship at 25 or so. While practically all large contractors remain private firms, choosing the right parents is still a vital factor.

ASTRAGAL BLUSHED

Last week, in an hour or so of disarming modesty, Larry Perkins led his AA audience along the path he has followed in developing American school designs from 1939 to the present day. This is a path which set out from the old conception of the teacher-on-rostrum and now, 17 years later, is leading to spatial forms which encourage a far more sympathetic attitude—an attitude where, in Perkins' words, the doors of the mind are open to more than books alone.

Don't think that many of the buildings he showed weren't frankly corny. They were. Many incorporated constructional clichés and much of the detailing was comparatively insensitive. But each project showed a development of idea and thought springing from the one that preceded it; and Mr. Perkins obviously follows with care and conscience the fortunes of his buildings years after they are completed. He studies modestly and objectively how far they succeed and how far they fall short in responding to the needs of the people who use them. How many English architects do the same?

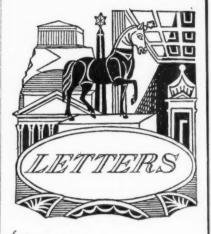
ASTRAGAL blushed to find that the only response from his architect brethren was the usual whine about shortage of time and money.

HOW THE CONTEMPORARY HALF LIVES

The publishers of Architectural Record have done a very sensible thing. They have issued in book form a selection of houses published during the year in the magazine. This book is none the worse for the mass of informative, and doubtless very lucrative, advertisements which sandwich the meat of the houses. We have very little to compare with the modern American house in quality and interest, but as it is no longer a novelty we can now view it critically and with detachment. Indeed, though many of the houses have been designed by famous avant garde architects, such as Breuer, Neutra, Rudolph et alia, any keen enthusiast of the American house will find little startling, though everything shown is of considerable interest.

One of the most interesting things about this book is a convincing series of photographs showing a house in use by the family, accompanied by some notes by the architects and the clients giving their own reactions. It is a pity that these notes tend to be rather too polite.

ASTRAGAL



Geoffrey Newman

Gordon Nettleton

Ian Nairn, Author of " Outrage"

Why New Towns Are Sterile

SIR,—The remarkable "plan for a new town with a specific function" prepared by the students of University College, London, and the nature of the scheme for Cumbernauld, are encouraging signs of a more logical approach to the building of new towns.

These schemes, with their compactness and truly urban character and scale, represent a vindication after nearly 20 years, of the theories of Dr. Thomas Sharp. In all the exciting new towns, the garden city movement has been the dominant influence. That Dr. Sharp's theories have been ignored is the chief reason for these towns' architectural and social sterility.

Sussex.

GEOFFREY NEWMAN.

The Stevenage Landscape Destroyed

Sir,—If Mr. Vincent would look agian at any aerial photograph of Stevenage before the new town was built, he would find a strong field pattern defined by excellent hedges. These hedges have been thoughtlessly uprooted, and the field pattern replaced by a formless mass of housing and open space.

The original landscaping has been destroyed, and Mr. Vincent now asks for money to replace it.

GORDON NETTLETON.

Stevenage.

... listen to his planning problems, and to give him an incentive in square ten. (Comic strip from the "Texas Architect").









SIR,-Ex time to d get hold Senior ha number o extensions overspill developm guard, ar comes a town pla based or SUSC criticism. Second: thing tha boroughs seems a county b between ties who for hous Now th oughs). ancs co Manches derelict districts dispensi open c reclaime and wa (2) Ina fill inact Here same M which a

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Facts for Mr. Senior

SIR.—Excuse the delay in replying: it took time to do the "necessary research," i.e. to get hold of the same set of figures as Mr.

Senior had.

First: if Mr. Senior can estimate the number of applications for housing, runway extensions, changes in CEA plans, private overspill agreements, etc., on "white land"

—i.e. ordinary countryside, which on the development plans is left without any safeguard, and is open to any application that comes along—he is an astrologer, not a town planner; and any calculation that is based on such an estimate is unlikely to be susceptible to reasoned quantitative criticism.

Second: Lancashire dereliction. The first thing that comes out of the figures is that Mr. Senior has omitted all the county boroughs—and has omitted to say so, which seems a little disingenuous. There are 15 county boroughs in South Lancashire and between them they control a lot of twilight "town-country"; they are just the authorities who could best re-use their derelict land

for housing. Now the figures (minus the county boroughs). I am taking areas 4, 5 and 6 of the Lancs county report—roughly a wedge from Manchester to Preston, including the chief Manchester to Preston, including the chief derelict areas. I am only considering urban districts and metropolitan boroughs—i.e. dispensing with cases of derelict land in open country). This is what could be reclaimed:

(1) Derelict building sites war defence works (2) Inactive tips which can

fill inactive holes.

Here I have only equated tips and holes inside the same M.B. or U.D.—i.e. those which are likely to be much closer together than three miles (in fact, of course, many of the mineral workings have tips and holes next to one another)

× 394.4 acres = Residue of holes (which far from being costly to fill are likely to be-in M.B.'s and U.D.'s-the most sought-after land for tipping both of household and industrial Miscellaneous disused land ...

4.807-1 acres TOTAL ...

462.7 acres

788-8 acres

914-2 acres

2 641-4 acres

In addition, the subsidence flashes which can be filled to form open space (though in fact I believe Lancs CC already built houses on land reclaimed from flashes (how about "floating on flashes" as an example of weighted words, Mr. Senior?—ignoring the fact that the flashes can

and are being filled) 815.5 acres So, in the urban parts of the area alone, there are 4,800 acres reclaimable for housing, with another 800 acres of open space.

And rehousing at reasonable urban density (Mr. Senior can hardly expect me to base my arguments on his density figures) at, say 80 people to the net residential acre (like Paulton's Square, Chelsea, for example, a much sought-after neighbourhood of indi-vidual houses with their own gardens and communal open space as well); these acres could house 384,000 people. Even halving this for the gross density they would house 192,000 people-or about 60 per cent. of the expected overspill.

If Mr. Senior really believes that density above a certain figure automatically grows horns and cloven hooves, he should come down from Manchester to see what London did yesterday in its urban squares (1800-1830) at 70-120 people to the acre, and in

sites like the LCC's at Horndean Close, Roehampton (1955), which provides (by cutting down on dead ground in verges and road widths) separate houses with back gardens at about 70 people to the acre; or alter-natively, he could read the December issue of the Architectural Review, which should keep him in material for papers at summer schools for some years.

What this rehash of the Lancashire figures proves is that figures and "reasoned quantican be used-like wordstative criticism to mean just what the proposer wants them to mean. But unhappily, the sites themselves stay ugly whoever looks at them; a prairieplanned botch-up remains a prairie-planned botch-up. Quite frankly, the sites themselves and their inhabitants are the only things I care about. If every administrator in England could say the same most of the things shown in Outrage would never have happened.

If anyone wants to see whether Mr. Senior practises what he preaches, they should read the Cambridge Review for October 20 in which J. F. Q. Switzer shows that Mr. Senior's guide to the Cambridge Plan is full of just those weighted words which he so loudly condemns in others.

IAN NAIRN.

Birmingham's principal housing architect is now H. E. Buteux, who has transferred from the Stevenage Development Corporation, where he was a group architect.

Professor Sir Albert Richardson will present prizes to apprentices in the LMBA No. 1 Area, at Derry & Toms, Kensington, on December 12.

April in Portugal and May in Spain: that is the itinerary of the TCPA's springtime study tour. Only thirty-five people can go on this tour (from April 25 to May 14). Enquiries should be sent to the Tour Secretary, Town and Country Planning Association, 28, King Street, W.C.2.

A writ against the Minister of Housing and A writ against the Minister of Housing and Local Government, Duncan Sandys, has been issued by the Dean and Chapter of Christ Church, Oxford. The writ is in connection with the Minister's proposal to close Magdalen Bridge, Oxford, to motor traffic and put a relief road through Christ Church meadow. It relates to the Minister's letter to Oxford City Council, notifying his decision, and claims that the City Council are not bound to comply with the direction which, in any case, is contrary to law. It declares that the Minister cannot now lawfully amend the City Council's development Green belts should be bigger in the opinion of the County Councils of Bucks and Herts. Bucks CC is to discuss with the Minister of Housing and Local Government a proposal for making the whole of the county south line between Dunstable and Thame, with the exception of existing built-up areas, green belt land. The proposal would more than double the existing green belt area. Herts CC, who also want to extend their green belt, are discussing their plans with Bucks CC to ensure that the proposed extensions link up at the county borders.

Building sites on canals should be used, wherever possible, by firms which can make wherever possible, by firms which can make use of the waterways, says the general purposes committee of the LCC. The committee has given evidence on canal use to the Council, with the proposal that it should be submitted to the committee of inquiry into inland waterways set up by the Minister of Transport.

The new Parliamentary Private Secretary to the Minister of Housing and Local Government, Duncan Sandys, is Geoffrey Rippon, MP for Norwich South. He takes the place of Sir Henry d'Avigdor-Goldsmid, MP

"The brick has never been so tormented," says John Wood in an article on London office buildings in the current Spectator. "However cultivated and sophisticated city men may be as individuals," writes Mr. Wood," "when they get together on a board their preference for the worst in architecture seldom fails them. Their choice will lie between Messrs. Blank, Blank and Partners, whose work has already done so much damage to the London scene, or XYZ and Sons, whose depredations are on a smaller Sons, whose depredations are on a smaller scale because they have had fewer opportunities. What is really puzzling about all this is the question, "Who gains by bad architecture? Cannot something be gained by the businessman, industrialist or financial institution from good architecture?

A competition for housing in the Leith Fort area is proposed by Edinburgh Corporation Housing Committee. The proposal is being considered by the Town Council. The city architect has said that he is confident that plans for the area could be developed in his department as quickly as they could by competition.

CORRECTION

Our attention has been drawn to a misleading report, in our issue of October 25, of a decision of the Queen's Bench Divisional Court allowing an appeal by Messrs.
W. S. Meyer and J. W. Jakubowicz.
We have been asked to point out that both We have been asked to point out that both Mr. Meyer and Mr. Jakubowicz have for many years past been naturalized British subjects, and also that the grounds of the Court's findings were that Mr. Meyer and Mr. Jakubowicz, who hold the Polish qualification known as "Dipl. Ing Arch.." were not carrying on business under a name, style or title containing the word "Architect."

Picasso, himself. Exhibition at the ICA. 17-18, Dover Street, W.1. Monday to Friday 10 a.m.—6 p.m., Saturday 10 a.m. pm. Admission free to members, 2s. to until DECEMBER 8

The Motor Vehicle in Civic Design. Talk by Professor M. Myles Wright. At the RIBA, 66, Portland Place, W.1. 6 p.m. DECEMBER 11

HOLIDAY-WITH-PAY STUDENTS FIND

On July 26 last, we published photographs of 15 students who had been awarded grants to assemble material for Working Details on the continent of Europe. All but one (Nicholas

Quennell) have now returned or are presumed to have returned (for one of them preserves

a rather ominous silence); and as we are publishing in this week's issue the first two details to be gathered in this way we feel that the time has come to present a report. The students listed appears will receive six guinous for each Working Detail.

listed opposite will receive six guineas for each Working Detail.

On the whole our experiment has been a great success. The experiences of our envoys were varied-as we knew they would be. Perhaps the most frequent obstacle was the fact that students and architects take their holidays at roughly the same times: one student was cheated of a splendid detail by his architectvictim being away shooting lions in Africa. We had warned students never to trust the architect's promise to send on missing drawings and photographs, but it is not always easy to refuse this delusive comfortparticularly when neither architect nor student is perfectly clear what the other chap is saying and both are longing for the interview to end: so this was another common cause of frustration. But the most common of all was the fact that, until you come to draw out a detail, it is very difficult to be sure that it is complete. For these and many other cognate reasons it is probably fair to say that those who have been successful have done very well indeed; but that those who have failed to bring back the goods have not necessarily done very badly.

In order to sum up the position to date, we have decided formally to "accept" certain of the details which have so far come in. To be accepted, a detail must be both interesting as regards subject and reasonably complete as regards information. Twenty-six details have passed this test to date and there are perhaps half as many more which need more information to make the grade. It will be seen from the table opposite that, of these 26, 19 are attributable to three students; for two, Robert Dewhirst of Liverpool School of Architecture and Michael Sadler of the Kingston School of Art, have each had seven accepted, and one, D. J. Leadbetter of Hammersmith School of Building, has had five accepted. This is splendid, but in defence of those who have only scored one or two so far it is only fair to add that they were told emphatically that it is better to concentrate on bringing back one or two complete than to cast the net too wide; also that no one in their senses would think of assessing details on a quantitative basis only. One, after all, may serve to turn the whole course of British architecture. . . . In order to underline our indebtedness to those who have helped us successfully we are pro-

posing to acknowledge the authorship (perhaps we should call it "retrievership") of each foreign Working Detail.*

Up to now we have been talking about students only. The response from architects has not been so fruitful. Of the dozen or so architects who were kind enough to volunteer, only four have been heard of since: one has brought four details which look like making the grade and another has sent us a large collection of photographs and drawings which we don't greatly fancy. In addition, we have received some details which seem likely to mature from two students who did not get grants.

Choice of subjects

Turning to the subjects chosen for detailing, it will be seen from the table that the ground covered is very similar to that covered by existing UK Working Details: windows, window walls, wall claddings, staircases, balconies-these are the most common. At first sight this is disappointing and suggests a certain lack of imagination in our briefing. This may well be so; but it is also true that these are the critical parts of architecture the world over and in fact what makes these details so interesting is precisely their evidence of the different ways in which continental architects solve problems which are common to all of us. In cladding, for example, we have the accomplished precasting of concrete in the old Hanseatic countries, the imaginative use of asbestos cement in Germany, of aluminium in France, and in Italy the use of fine facing materials (such as clinker tiles) to bring traditional solid walling into line with a machine æsthetic. If the building parts (we would call them "elements" were it not that cost analysis has given a different and more precise meaning to this word) are the same, the classes of building from which they have been mainly assembled are different. Our envoys were carefully briefed on this and told to keep off schools and to concentrate on the classes of building at which foreign architects are more adept than our own. The details, therefore, are mainly drawn from office buildings,



R. K. Deu

Name of stu

R. K. Dew

). J. Leac

M. Sadler

R. Watts

D. Park

C. H. S

v. Hun

N. Gilr

Unfortunately this is not acknowledged on the details published this week.
 These have both been retrieved by Michael Sadler.

WORKING DETAILS

from tall flats, and from shops.

These details are expensive to get and take a disproportionate amount of staff time to publish; but they seem abundantly worth while. In the first place they should serve to raise the general standard of working details, regarded simply from the design standpoint. After all, when we have the total annual building product of all Europe to pick from we can

afford to be more choosy. Their chief value, however, rests on the oblique light they throw on our building problems: for it is only when you get down to matters of detail that you can tell why the buildings produced by other people's technology look different from ours and in what respect they are better. For this reason we are going to persevere with these awards next year, so keep your eye on the Journal round about May.











R. K. Dewhirst

Name of student

N. Gilroy

School

D. J. Leadbetter

M. Sadler

K. Wall.

Description of detail Building type Place

R. Padovan

Architect's name

Werner Stücheli

R. K. Dewhirst	Liverpool School of Architecture	Wall detail	Flats	Alessandria	Ignazio Gardella
		Staircase	Offices	Milan	Bernasconi, Fiocchi and Nizzoli
		Glazed wall	Offices	Milan	Vito Latis
		Partition wall	Offices	Milan	Giuseppe Valtolina
		Spiral stair	Offices	Paris	Pierre Forestier
		Curtain wall	Flats	Paris	Lionel Mirabaud
		Staircase	Flats	Paris	Lionel Mirabaud
D. J. Leadbetter	Hammersmith School of Building	Acoustic doors	Concert hall	Copenhagen	Frits Schlegel and Hans Hansen
		Acoustic windows	Concert hall	Copenhagen	Frits Schlegel and Hans Hansen
		Side lighting	Concert hall	Copenhagen	Frits Schlegel and Hans Hansen
		Acoustic screen	Town hall	Copenhagen	Povl Ernst Hoff and Bennet Windlage
		Curtain wall	Offices	Copenhagen	Arne Jacobsen
M. Sadler	Kingston School of Art	Wall detail	Offices	Copenhagen	Eske Kristensen
		Spiral stair	Offices	Copenhagen	Eske Kristensen
		Partition wall	Offices	Copenhagen	Eske Kristensen
		Balcony	Flats	Rødovre	Eske Kristensen
		Canopy	Town hall	Rødovre	Arne Jacobsen
		Staircase	Town hall	Rødovre	Arne Jacobsen
		Balcony	Flats	Hellerup	Eske Kristensen
R. Watts and R. Padovan	Architectural Association School of Architecture	Glazed wall	Technical school	Delft	van den Broek and Bakema
		Glazed wall	Exhibition building	Rotterdam	van den Broek and Bakema
D. Parker	Birmingham School of Architecture	Cladding	Factory	Heidelberg	Ernst Neufert
C. H. Simon	Manchester University School of Architecture	Window	Offices	Düsseldorf	Hans Schwippert
J. Hummerston	Northern Polytechnic (London) Department of Architecture	Lift shaft	Shop	Rotterdam	van den Broek and Bakema
	are provided to be a second	Lift room	Shop	Rotterdam	van den Broek and Bakema



D. Parke



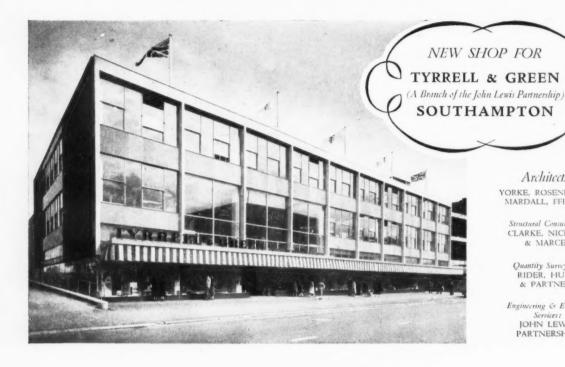
C. H. Simon



J. Hummerston



N. Gilroy



Architects:

YORKE, ROSENBERG & MARDALL, FFF.RIBA.

Structural Consultants: CLARKE, NICHOLS & MARCEL

Quantity Surveyors: RIDER, HUNT & PARTNERS

Engineering & Electrical Services: JOHN LEWIS PARTNERSHIP

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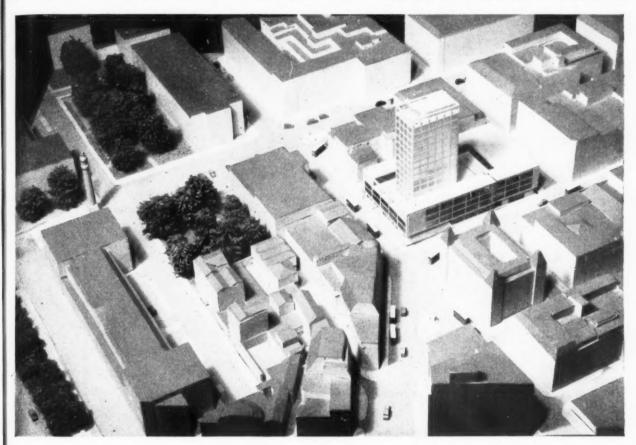


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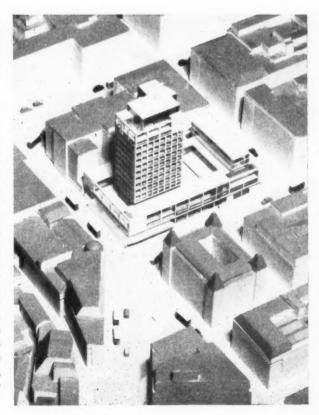
111 WESTMINSTER BRIDGE ROAD, LONDON, S.E.1

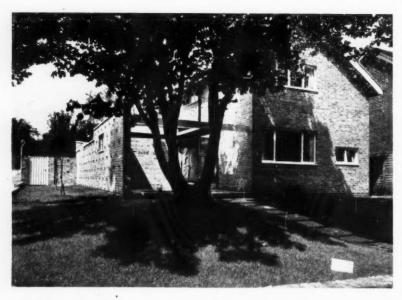
Telephone: WATerloo 4977

PUBLIC OPINION WILL DECIDE NEW ZEALAND HOUSE DESIGN



Professor Robert Matthew has produced two designs for the proposed New Zealand Government Offices on a Crown Land site fronting the Haymarket and Pall Mall. The first design, approved by New Zealand, is shown right. This design was submitted informally to the RFAC and the Commissioners of Crown Lands. It was objected to by both. The latter body further consulted a panel of three: Sir Howard Robertson, Sir Edward Gillett (PPRICS) and Anthony Minoprio, who also strongly condemned the design. The second design, above, where its relationship to Carlton House Terrace and the Duke of York's statue is shown, has not yet been finished in detail, and therefore has not yet been approved by the New Zealand Government. The planning of both schemes is similar (the plans and section of the second scheme are shown on pages 818-819), but the second tower is more slender. This second design has also been condemned by the RFAC. The Commissioners of Crown Lands, however, are now prepared to await the public expression of opinion on these designs before coming to a decision. The tower of the first scheme is 237 feet high; and of the second, 204 feet. Both buildings will be faced in Portland stone and glass. The cost is estimated at above £2m. In each design the low base is related in height to the best neighbouring buildings, such as the Athenæum Club and the National Gallery in order to try and regain the original street scale.





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ROB

- I. Bank va
- Mail
- Car are Existing
- Arcade 8 Future
- 9. Informa II. Recept
- 12. Library 13. Immigr 14. Upper

exhibit

Below: with Pa right, s is relate The cer stories. pedestr through open te of viev second

Right :

ROBERT MATTHEW'S DESIGN FOR NEW ZEALAND HOUSE

KEY to basement and ground floor

l. Bank vaults

2. Stores 3. Mail

4. Car areas

5. Existing shops

6. Bank

7. Royal Opera Arcade

8. Future shops

9. Information

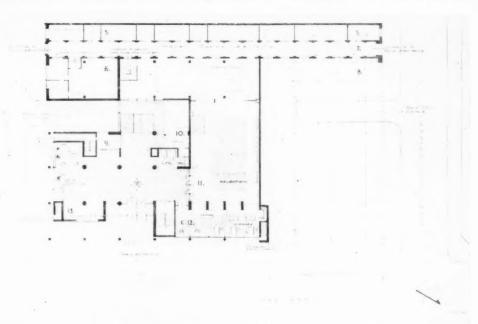
ID. Coats

II. Reception

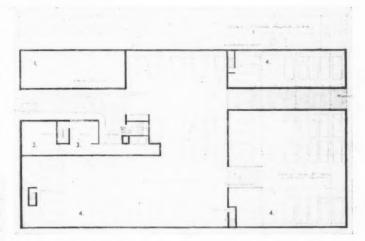
12. Library 13. Immigration

enquiries

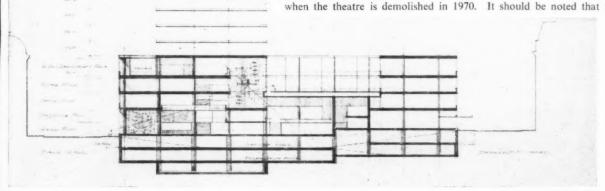
14. Upper part of exhibitions



Below: a longitudinal section through the embassy, with Pall Mall on the left and Charles II Street on the right, showing how the 60-foot, four-storey podium is related very closely in height to existing buildings. The central tower rises to 204 feet in a further twelve stories. The diagonal sight-lines indicate that a pedestrian in Pall Mall will be able to see up and through the main hall in the podium to the internal open terrace on the second floor. A similar interplay of view exists between the reception hall and the second and third floor exhibition and waiting space. Right and above: the basement and ground floor



plans. The basement is on two levels (with a boiler house below one) and provides garage space for seventy cars. There are access ramps to Pall Mall and Charles II Street. The accommodation on the ground floor is given in the key above. The area within the dotted outline shows the existing Her Majesty's Theatre, on the site of which the remainder of the embassy will be built (indicated by dotted lines) when the theatre is demolished in 1970. It should be noted that the



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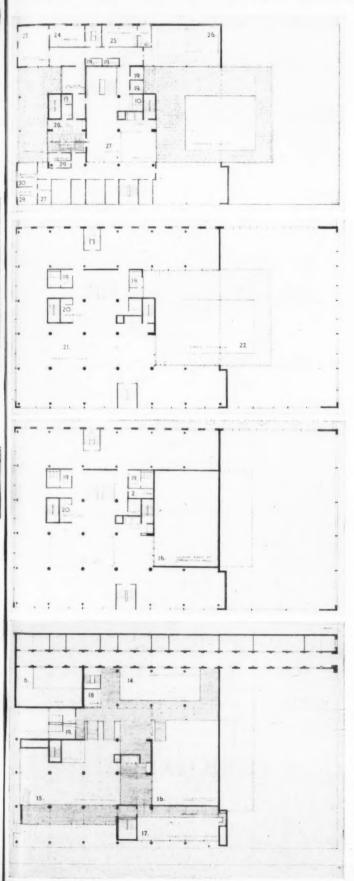
Signal Box at Stratford-For British Railways,

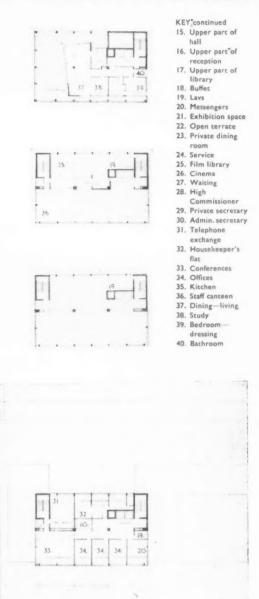
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ROBERT MATTHEW'S DESIGN FOR NEW ZEALAND HOUSE continued





Royal Opera Arcade, attributed to John Nash and George Repton, is being retained and is being given a new lease of life by having the New Zealand Bank placed at one end, new shops at the other, and one side opened up to allow views into the main reception floor of the embassy.

Left: reading from bottom to top, are the mezzanine, first, second and third floor plans of the low block. The mezzanine consists mainly of galleries overlooking the main reception floor. The first and second floors are offices. At the top is the High Commissioner's floor. Above, in ascending order, are the floor plans of the centred tower block: the lowest tower floor, showing the position of the tower in relation to the low block; a typical office floor; and the canteen floor which is immediately below the Prime Minister's flat at the top of the tower. (The scale of all these design drawings, except the basement, is approximately: $\frac{1}{16}i'' = 1'$ 0".)





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THE INDUSTRY

This week Brian Grant reviews a new aluminium foil for floor and ceiling, a synthetic rubber paint, aluminium building sheet, two new electrical heaters, a whole-house heating system, and a staff location system.

HEAT INSULATION

P. H. Thermal Products, whose insulating jackets for hot water storage cylinders were recently noticed here, are now marketing aluminium foil for floor and ceiling insulation. The foil is .0016 in, thick and is supplied in 2 ft. wide rolls 300 ft. long, enough to insulate a roof space of about 600 square feet. The foil is merely unrolled over the joists and at right angles to them and the overlap between each strip secured by drawing pins or a stapling machine. Alternatively if the roof space is being used for storage purposes the foil can be equally easily applied to the pitch of the roof. When used for insulating timber ground floors the foil is laid across the joists underneath the boarding and a sag of 2 in. should be allowed between each joist to provide an air space for further insulation. With this method of laying an average of 57 per cent. of the heat normally lost is saved.

The manufacturers also suggest that the foil should be used to insulate the back of radiators which are fixed to the external walls. The foil can easily be cut to the required size with a pair of scissors and fixed to the wall with wood beading or, as before, by drawing pins or a stapling machine. The price of the standard roll of foil is £6 13s. (P. H. Themal Products, Westgate, Baildon, Yorkshire)

SYNTHETIC RUBBER PAINT

As long ago as 1930 the Goodyear Company started experimenting with natural rubber derivatives as a base for paints. Further developments have led to a resin known as Pliolite S-5, which is closely related to synthetic rubber and is highly resistant to acids and alkalis so that it is particularly valuable in paints for masonry, brickwork

or concrete. A booklet details the use of Pliolite in metal primers, aluminium paints, wall sealers and stucco finishes. (The Goodyear Tyre & Rubber Co. (Great Britain), Ltd., Wolverhampton.)

ALUMINIUM ROOFING

Northern Aluminium are now producing their Snaprib building sheet in an embossed stucco finish which, as can be seen from the photograph, gives it an appearance slightly reminiscent of artificial leather cloth. This finish has other advantages, as the reflection from the sheeting is reduced, making less noticeable any handling marks or buckling caused during transport and at the same time decreasing the glare from reflected sunlight. The pattern does not repeat, so that no care in lining up the sheeting is necessary. (Northern Aluminium Co. Ltd., Banbury, Oxon.)

ELECTRICAL HEATING

Dimplex Ltd. have recently introduced two sizes of convection heater which were originally designed for mounting on skirting boards but have now been modified so that they can be used free-standing with feet. The heaters are made in two lengths, 2 ft. and 3 ft., with loadings of 300 and 450 watts, and they can, if required, be built up into long lengths with a maximum loading of 2,500 watts. Four keyhole slots in the rear cover of the heater allow for easy fixing of screws and although the cover fits flush there are four small projections at the back which provide a gap between the back plate and the skirting board, so that there is no danger of decorations becoming scorched. The prices of the models are £4 6s. 3d. and £4 19s. 3d. including purchase tax, the floor standing models each costing about

7s. more. (Dimplex Ltd., Millbrook, South-ampton, Hampshire.)



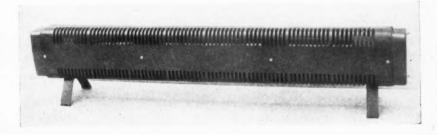
Detail of a Snaprib aluminium sheet.

WARM AIR HEATING

Produced under Weatherfoil patents, the new Agavector is a system of whole house background heating by means of warmed air which is suitable for the open-type plan. The installation consists of an indirect hot water cylinder for the domestic supply heated by one of the standard range of Aga boilers. A large area heat exchanger provides the warm air, which is circulated by an electric fan thermostatically controlled to keep the room temperatures at the required level. The heat exchanger draws in cold air at floor level and discharges it through grilles

continued on page 827

The Dimplex electrical convector heater.





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23 HEATING & VENTILATION

heating costs

When clients ask "what is the best and cheapest form of house heating?" answers must be qualified because different systems, of comparable cost, may give different comfort conditions. Moreover choice will be influenced by both running and capital costs. This week we print a study of five systems made by R. Baden Hellard, architect and R. J. Playle, quantity surveyor, of Brunton, Baden Hellard & Partners. Three points about it should be noted. The systems do not all provide the same comfort conditions; the architects have included the cost of an architectural feature where there is no fireplace to "sit round"; and they show the total expenditure (both running and capital) for a twenty-five year period.

The object of this analysis was to compare the initial and running costs of five heating schemes.

The job chosen for this study was a house of 1,274 square feet with a total cubic capacity of 11,438 cubic feet.

The house was for a young couple with a limited budget, but with prospects of a steadily increasing income in the future. As their desire was to build initially to the limit of their resources, they required a large Building Society mortgage, and the capital costs had to be kept low. The client had a "traditional" approach to the appearance of his house, but approached the functional requirements with an engineer's logic.

The heating problem had a considerable bearing on design and construction and as the house had a north/south aspect a cross-wall system of construction was chosen to free the long north and south walls from load-bearing duties. Thus the north side could have a high thermal insulation with light-weight materials, and the south, maximum window and door openings.

Procedure

Once the basic sketch scheme had been approved, five ways of heating the house were considered.

1. A convection and radiation system using an inset domestic boiler for the water heating in the kitchen, and a part-radiant and part-convection fire in the sitting area.

- 2. A Radiation whole-house warming system with blown and ducted warm air.
- 3. A Weatherfoil warm air circulation system.
- 4. The conventional system of hot water radiators from a solid fuel boiler placed in the kitchen.
- 5. An electric floor-warming system using coppersheathed cable.

An assessment of the heat loss from the house had first been made and for this purpose the thermal insulation figures used were as in table 1. It was decided to include the costs of providing and running hot water systems as some of the heating systems shown included the provision of this service. In all cases the client required an electric immersion heater for summer hot water; the cost of this, the wiring and socket have been included. It was realized that the five schemes listed above are not of equal capacity, performance or controllability, and might, therefore, produce different standards of heating amenity. The necessity for compared systems to be precisely alike may in any case be questioned, especially since different users will get different results (and consumptions) from the same system (see article by Danter and Dick, AJ, June 28, 1956, page 738).

TABLE 1: THERMAL INSULATION AND HEAT LOSS Area, sq. ft. Overall " U

		Schemes	Revised
		1 10 5	Scheme 5
1st floor ceiling and roof			
(combined)	632	0-25	0.18
North wall	511	0-25	0.2
North window	51	1.0	0.6
South wall	510	0.25	0.2
South window	76	1.0	0.6
East and west wall	712	0.28	0.2
East and west windows	36	1.0	0.6
Ground floor	600	0.2	0.18

Air change Temperature difference 35°F 43,417 B.T.U. per hour Heat loss Heat loss with improved " U " 35,332 B.T.U. per hour

Table showing the assumptions on which all five schemes were based.

The cost assessments take into account builder's work entailed; for example, omission of brick flues in the electric floor-warming system. They also account for other changes which the architects considered necessary; for example, the provision of a "focal point" in the living room where the open fireplace is omitted. Thus table 2 shows:

- 1. Direct cost of the equipment.
- 2. Cost of incidental builder's work.
- 3. Cost of other builders' work not usually considered in heating system comparisons.

Five plans were drawn (pp. 823-4) each appropriate to one of the five systems and from these detailed estimates were prepared and costed. Where special equipment is involved, estimates have been checked against specialists' quotations. Table 2 -shows the capital cost of the heating installation and the price per square foot of floor area.

(continued on page 825)

Total capital costs

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563 0 0

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436 0 0

rod BD I rod BD 3 rod BD 2 Convector thousand Fire rod SA LA rod DA

Scheme 4	£	s.	d.
Convector Fire as Scheme 1	21	0	0
Independent boiler serving radiators in dining area, sittin area and bedrooms 1, 2 and and towel rail in bathroom.			
Installation complete	300	0	0
Hot water cylinder and pipin as Scheme 1	55	0	0
10 gal. galvanised cistern in roof and supply to boiler	13	15	0

	Company of the Company			
	389	15	0	
Air chamber and ashpit to sunk fires underfloor ducts and inlets. Concrete flue block and outlet				
grille	12	10	0	
Ducts in ground floor for radiator pipes, cutting away for and making good to installation; painting of radiators and pipes	20	0	0	

Work in connection with hot
water supply as Scheme 1, and
including lagging and top to
feed cistern

	36	15	0	
6s. 8.id.	426	10	0	
Chimney breast, flue and				
partition wall, as Scheme I	85	0	0	
Recess and tiled base for				
boiler; foundation under recess				
and concrete flue block to		10	~	
carry flue	1.2	15	0	
Flue for boiler as Scheme 1	21	0	0	
Rendered concrete block fuel				
stores, as Scheme 1	24	0	0	
Additional area of covered				
way, as Scheme 1	9	0	6	
Additional kitchen fitments as				
Scheme 1	15	0	0	
Point for immersion heater	4	10	0	

171 5 0

597 15 0

BT hw cyl with 2 im heaters electrical floor warming BD 1 BD 2	
	C.
el htrs- electrical floor warming SA LA DA	٧ ا
L	

Scheme 5	£	s.	d.
Electric floor warming, Pyro-			
tenax heating cable, cold tails			
and thermostat, contactor, glands, seals and sundries			
supplied and fixed complete	66	0	0
No. 6-1 K.W. electric flush			
wall panel fires in sitting area,			
dining area and bedrooms 1,			
2 and 3 (excluding socket			
outlets)	21	0	0
331 gal. direct copper cylinder,			
insulating jacket, piping and			
one 2 K.W. and one 1 K.W.			
immersion heaters (excluding			
socket outlets)	50	0	0
	137	0	0
2 in. woodwool slabs 2 ft.			
high to edge of ground floor			
concrete slab at external walls	20	0	(

	137	0	(
2 in. woodwool slabs 2 ft.	-		
high to edge of ground floor			
concrete slab at external walls	20	0	(
Cutting away for and making			
good after floor warming			
installation	5	0	(
Work in connection with hot			
water supply as Scheme 1	3	10	(

28 10 0

133 5 0 298 15 0

28. /id.	103	10	U
Additional 1 in. thickness to			
ground floor screed	10	0	0
Partitioning forming " focus			
point" as Scheme 3	54	0	(
Additional kitchen fitments			
provided in lieu of boiler			
recess or heat unit compart-	34	0	
ment	34	U	
Electric points for No. 6 fires			
and No. 2 immersion heaters	35	5	(

technical section

TABLE 2: CAPITAL COSTS

Details and plans of the five heating schemes showing the prices of the heating equipment; builders work in installation; and certain costs affected by the choice of heating method. The following points should be noted. Schemes 2, 3 and 5: the equip ment is supplied and fixed by the specialist sub-contractor, his price including builder's profit and attendance. Schemes 2, 3 and 5 do not require a fireplace, so to replace it a special " focus point" treatment for the sitting area was designed and its price included in the table. Schemes 2 and 3 take more of the kitchen area for the heating unit than other schemes. To compensate, additional kitchen fittings are allowed for in the price. The cost per square foot of floor area shown left represents what is normally included for " Heating Installation" in a cost analysis. It excludes internal plumbing.

TABLE 3: ANNUAL FUEL CONSUMPTION

Scheme	Fuel	Price per unit £ s d	Annual cost £ s d	Notes
1	2 tons household coal	8 0 0	16 0 0	
	2½ tons boiler coke	7 7 0	18 7 6	
	120 K.W. hrs.	1.1	11 0	Electric fire in D.R. 6 weeks in yr. Summer ho
	2,000 K.W. hrs.	1-1	9 3 4	water
		4	44 1 10	
2	5½ tons baker nuts	7 7 0	40 8 6	
	260 K.W. hrs.	1-1	1 3 10	Fan operation
	2,000 K.W. hrs.	1.1	9 3 4	Summer hot water
			50 15 8	
3	3½ tons broken coke	9 15 0	34 2 6	
	200 K.W. hrs.	1.1	18 4	Fan operation
	2,000 K.W. hrs.	1.1	9 3 4	Summer hot water
			44 4 2	
4	4 tons broken coke	9 15 0	39 0 0	
	½ ton household coal	8 0 0	4 0 0	
	2,000 K.W. hrs.	1-1	9 3 4	Summer hot water
			52 3 4	
-	10,000 K.W. hrs.	0.75	31 5 0	Night storage rate
	2,000 K.W. hrs.	1-1	9 3 4	Day rate
	3,000 K.W. hrs.	1.1	13 15 0	Winter hot water
	2,000 K.W. hrs.	1.1	9 3 4	Summer hot water
			63 6 8	
5a	Corrected for improved insulation values			
	8,000 K.W. hrs.	0.75	25 0 0	Night storage rate
	2,000 K.W. hrs	1.1	9 3 4	Day rate
	3,000 K.W. hrs.	1.1	13 15 0	Winter hot water
	2,000 K.W. hrs.	1.1	9 3 4	Summer hot water
			57 1 8	

Note: prices are average for summer and winter.

Although in the assessment of capital expenditure electric fires were included, no particular running costs for these have been considered in schemes 3 and 5 as a result of the experience gained of the actual costs resulting from Scheme 1.

Left: Table of assumed fuel costs. These have been plotted graphically to show cumulative expenditure on heating in 25 years in fig. 1.

Table 3 shows the annual fuel costs of each system, based on assessments of probable use—obtained from manufacturers or suppliers of the systems. This was felt to be more realistic than an assessment based on calculated heating load.

Both capital and running costs are shown graphically in Fig. 1. The vertical ordinate represents cost and the horizontal, time. The curve of each system begins at its capital cost, the slope being determined by the accretions of yearly fuel cost. Thus to give an example, after 12½ years the total outgoings (capital and running cost) for schemes 2 and 5 will be the same. This graph does not show the following:

- (a) Maintenance cost of heating installation.
- (b) Maintenance such as painting of fuel store and fire surround, chimney sweeping, etc.
- (c) Additional cost of interest on capital borrowed, for the original installation.

These costs are shown in table 4 and their effect is shown in the second graph (Fig. 2).

The steepness of the curve for scheme 5 (electrical floor warming) could obviously be reduced by spending more on thermal insulation (capital cost) to reduce the yearly fuel bill, without exceeding the client's target for capital expenditure. The effect of this extra insulation has been considered in table 3, where the estimated reduced running costs on the improved thermal insulation values are shown.

Conclusions

The system chosen when the house was built in 1953. was scheme 1, but at that time much less was known about system 5, electric floor warming. The house was built with the insulation values shown for "revised scheme 5" in table 1 and has proved adequate. The client, who had demanded "central heating," has found that only in the very coldest weather has an electric fire in the dining room been used at breakfast time and the bedroom fires have never been used! This is thought to be due in part to the thermal gain from solar heat and cooking. The fuel consumption figures have been less than those shown in table 3 and in fact are what one would expect for the system with the higher insulation that was provided. Had an electric floor-heating system been more readily available at the time this would have been chosen for several reasons in addition to those shown up by the analysis:

- 1. The amenity value of no stoking or irksome manual
- When the electric system becomes more expensive the client will be more able to cope with the higher running costs, because his income will have increased.
- 3. If the system should prove too expensive for full operation the client could fall back on radiant electric

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TABLE 4: RUNNING COSTS OTHER THAN FUEL

Item for annual expenditure	Heating Schemes														
	1			2			3			4			5		_
Interest on capital borrowed	£	S	d	£	S	d	£	S	d	£	S	d	£	s	d
(3½ per cent.)	13	10	7	21	2	3	16	7	0	22	8	4	11	4	1
Interest on extra thermal insulation				****										15	
Sweeping chimneys		15	0 p.a.)		7	6	***	7	6		15 ice	0 p.a.)	_		
Scaling boiler	(0			etary educer		5	0	(2.1		6	-		
Redecoration of stoves		15	0		11	0		11	0		15	0	-		
Maintenance of equipment				5	5	0	2	2	0	1	0	0		2	(
Replacement of parts				2	0	0		12	6		2	6			
Extra redecoration to pipes, radiators and small areas around grilles		5	0		5	0		5	0	2	0	0	_		
Domestic incidentals (tip coalman, replacement of tools, scuttles, etc.)	1	2	6		16	0		16	0	1	2	6	-		
DIRECT RUNNING COST (FROM TABLE 3)	44	1	10	50	15	8	44	4	2	52	3	4	57	1	-
TOTAL YEARLY RUNNING	60	14	11	81	2	5	65	10	2	80	14	2	72	3	

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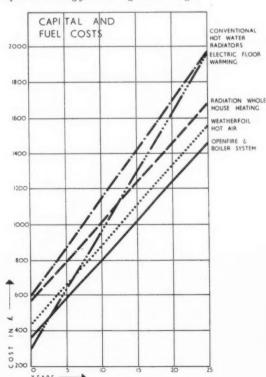
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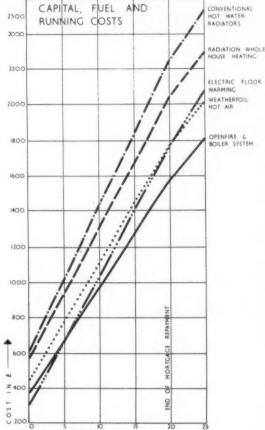
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sive gher sed. full etric (2) Direct running cost of Scheme 5 is at the improved thermal insulation value.

Above: table of running costs, other than fuel. These have been plotted graphically with fuel costs to show cumulative expenditure in 25 years in Fig. 2 above right.





Left (Fig. 1): graph showing capital and fuel costs. Each curve begins at a figure representing its installation and capital cost set out in table 2, and rises at a rate representing yearly expenditure on fuel, set out in table 3. Thus the electric floor warming system costs less to instal than the others but its yearly cost is greater. Above (Fig. 2): graph showing capital, fuel and running costs. This is the same as Fig. 1 except that the running costs set out in table 4 (maintenance of equipment, interest on capital etc.) are included.

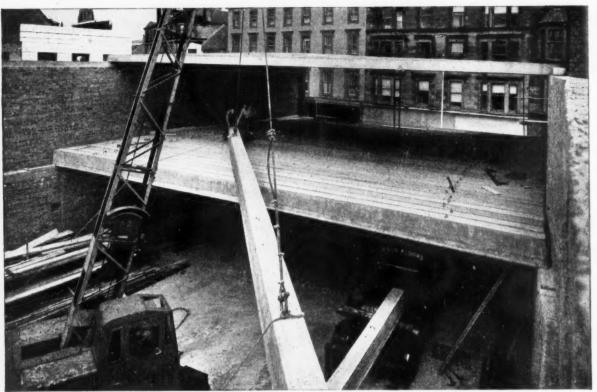
fires and the capital tied up in the system would be far less than in any other.

4. It is quite a possibility that within 15 to 20 years a major change in the production of electricity could lower the cost of the system while solid fuel costs may continue to rise.

Fig. 3: the completed house.



⁽¹⁾ Compound interest rate at 6% over 20 years, with equal repayments of capital of interest throughout the period gives a "net" interest rate of 3½%.



Another example of reducing costs and saving time with—

Long Span BISON

The customer states that our price for this contract makes the complete job cheaper than their standard method of construction using steel columns and beams and short span Bison. It also gives entirely clear floor space and materially reduces the time taken for erection.

Littlewoods New Store at Dumbarton.

Designed by: Littlewoods Construction Dept.

Engineers: Bingham & Blades & Partners, Liverpool.

Contractors: A. A. Stuart & Sons Ltd., Carmyle, Glasgow.



CONSTRUCTION DETAILS

FLOOR: Thickness of floor beams — 22½". Length of beams — from 49'7" to 58'9". Super Imposed Load — 80 lbs. per sq. ft. Finishes — 30 lbs. per sq. ft. Partions — 15 lbs. per sq. ft. Weight — from 3 ton 12 cwt. to

4 ton 15 cwt. 2" concrete screed trowelled to receive thermal plastic tiles.

False ceiling suspended on underside of 1st floor on ½" dia. bolts in the joints between beams. Soffit of roof left smooth and pointed to receive decoration direct.

ROOF: 11½" at the ends, 17½" at the centre. Length—from 51'1½" to 60'6". Super Imposed Load—15 lbs. per sq. ft.

Finishes — 24 lbs. per sq. ft. Weight — from 2 ton 10 cwt. to 2 ton 15 cwt.



BISON floors, beams and precast frame structures

THE LARGEST STRUCTURAL PRECAST CONCRETE MANUFACTURERS IN THE WORLD

LONDON Green Lane, Hounslow, Middlesex. Hounslow 2323
LEEDS Stoursen, Leeds, 10. Leeds 75421
LICHFIELD Doveheuse Fields, Lichfield, Scaffs. Lichfield 2404
FALKIRK Etna Road, Falkirk. 1930

CONCRETE LIMITED

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Continued from page 821

with adjustable shutters so that the available heat can either all be provided in one room or ducted to other parts of the house. The standard Agavector will provide background heat and domestic hot water for a house of up to 1,500 square feet and there is also a simpler model (without the cylinder) for use where domestic hot water is not required. Prices run upwards from £107, to which must be added the cost of the appropriate boiler. Installations of this kind should of course be considered at the planning stage as, in order to simplify the ducting, it is most desirable that the boiler and heat exchanger unit should be placed at the centre of the house. (Aga Heat Ltd., 20 North Audley Street, London, W.1).

AN INTERESTING STAFF LOCATION SYSTEM

In their search for an efficient staff location system, St. Thomas's Hospital have investigated a number of systems involving loudspeakers, bells, flashing lights, buzzers and other methods, but it was quickly realised that what was required was a selective location system so that individual members of the staff could be called without distracting other members or disturbing patients. After a good deal of development work the hospital's Electronics Department evolved, in conjunction with Messrs, Multitone, a system whereby each member of the staff carried an individual receiver and can be sent messages without their being overheard by anybody else.

The main control unit can be housed in the porter's lodge or at the telephone switchboard, or anywhere else convenient, and from this point a single loop of wire is run right round the outside walls of the building. Numbered push-buttons on the main control panel link up with the selected receiver by magnetic induction and create a persistent buzz. A simple code can be evolved to transmit messages, but if a verbal message is required, all the doctor has to do is to press a clip on the receiver and receive the message in clear. The receiver unit clips into a breast pocket like a rather plump fountain pen and measures 53 in. long \times 1 $\frac{1}{8}$ in. diameter. It is entirely self-contained, and power is provided by a miniature mercury cell which costs about half a crown and lasts from eight to ten weeks.

The standard control panel has 56 separate channels, but by making use of different callsigns it is possible for up to 336 people to be called individually, though of course any number of people can share each channel. Signals and speech messages can be heard on the pocket receiver anywhere inside the building and even for short distances outside it, as, for example, in the car park.

Altthough the system was originally evolved for hospitals, it has obvious advantages in many other types of building and should be invaluable in organizations where the staff are invariably in anybody's office but their own. No names, no pack drill. (Multiton Electric Co. Ltd., 12-20 Underwood Street, London, N.1.)



10.152 design: building types SHOPS AND STORES

Shops and Stores Today. Ellis E. Somake and Rolf Hellberg. (B. T. Batsford Ltd. 63s.)

Shops are a building type which has been very well served by two recent books. First there was the Architectural Press' The Modern Shop by the Westwoods (1952, revised edition 1955, 30s.) and now we have this more expensive work by Somake and Hellberg. The ground covered by the two books is very similar, but this latest one adds much useful information on the large shop-whether "multiple specialty" like Mr. Somake's Dolcis shops, or departmental store like Mr. Hellberg's Owen Owen. On these two subjects. Shops and Stores Today is probably the most complete, up-to-date and lucid guide to be had in any language. The authors note the growth of display departments, the shift towards complete dependence on artificial lighting, the issue of departmental as against central stockhandling. They grumble about our fire regulations which force us to adopt a more compartmented plan than we might wish (and, incidentally, insist on a separate set of sprinklers in any suspended ceiling more than 2 ft. 6 in. deep). Above all, they give a real insight into what we might call the big shopkeeper's world: the economic frame within which he has to work, the influence of such factors as taxation and choice of accountancy methods on the decisions the architect must make. Though we miss the comparative cost data given in the Westwoods' book, practical advice of a technical kind is continually offered: small but telling points such as (to take some at random from the electrical section) if you go for an all-in tariff you need only have a common rising main, that electrical spur conduits taken from each column base are cheaper than electrical duct systems and that the small extra cost of the variable voltage lift is well worth it. The shopkeepers' new gimmick is, of course, the air curtain door. This is an expensive toy but, in addition to removing the last visual barrier against the shopper, it keeps out dirt, keeps in heat and removes one fruitful source of accident.

Four out of the 12 chapters in the book are contributed: Frederick Gibberd writing on Shopping Centres, Arthur Symes on Display Policy, Hugh Olson on Illumination, and T. E. Dunwoody on Mechanical Services, and eight tables are given as appendices, most of them relating to lighting. (Why, incidentally, is the recommended light source for a grocer in the south of England "de luxe warm white fluorescent and filament"

and in the north "colour-matching fluorescent and filament?") Last of all there is a table on "Materials and Finishes" which marks an all time low in imprecision: materials are listed against the various uses, inside and out (facade, fascia, vertical surfaces, etc.): they are starred if they are "usable," "suitable" or "highly suitable" and their price range is described as "high," medium "or "low." Hardly the best conclusion to a very useful book.

17.110 construction: STEELWORK ERECTION

Erection of Structural Steelwork, T. Barron. (BCSA 1956, 15s.)

Comprehensive and modern text book of interest to everyone in the steel industry but with a particular appeal to the young architect or engineer. This books forms a companion volume to Constructional Steelwork Shop Practice previously reviewed in the JOURNAL and follows the same practical and simple style. It has been written by an engineer who has had considerable experience of steelwork erection and he has prepared some 136 drawings and 21 tables with illustrate the text particularly well.

The general organization of the average erection firm is first described. Duties of the personnel are explained, the various tools and tackle and their use. Erection of tackle and falsework and site problems are discussed followed by two chapters devoted to the erection of buildings and one to bridges. A little more might have been written here on the use of temporary bracing in the members for erection, e.g., the space frame shown on page 109 is of a proportion where considerable sag would occur at the centre of the bottom boom of the shallower sloping truss. Bolting and riveting, welding and flame-cutting and elementary surveying are dealt with and there are chapters on estimating and costing, the planning and control of erection work and building regulations.

Although the book is directed particularly to steelwork it is largely applicable to precast concrete and at the price of 15s, is a valuable acquisition to all young architects and engineers.

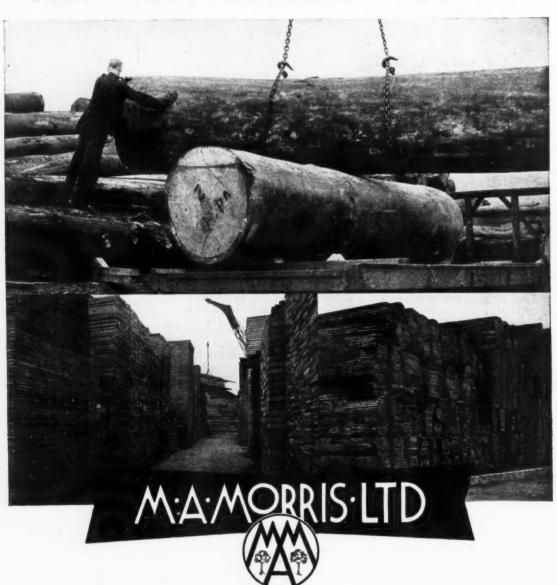
18.186 construction: theory STRESS ANALYSIS

Experimental Stress analysis in the USA and Canada. (HMSO. 1956. 2s.)

DSIR Overseas Technical Report No. 1 describes current practice and new applications which are being investigated in North America. It is based on published literature and personal contact during the UK scientific mission to Washington in 1954 and 1955. Among subjects dealt with are electrical resistance strain gauges, photoelastic techniques and brittle coatings. General and electrical analogy methods are described and there is a section dealing with high temperature effects in aircraft structures. A large bibliography is provided.

HIGH-GRADE HARDWOODS

TEAK · IROKO · MAHOGANY · OAK · etc.



RAVENSDALE WHARF . STAMFORD HILL . LONDON . N.16

TELEPHONE: STAMFORD HILL 6611 (6 lines)

building illustrated

DEPARTMENT STORE

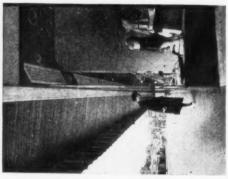
in ABOVE BAR STREET, SOUTHAMPTON; designed by YORKE, ROSENBERG and MARDALL associate architect JOHN R. PENOYRE; architect-in-charge JACK S. SNELL consultants (structural) CLARKE, NICHOLLS and MARCEL; (heating and electrical) the Directorate

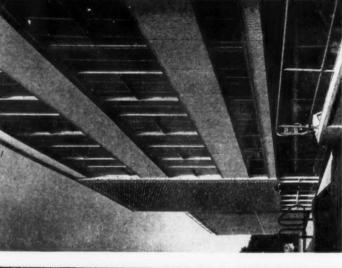
of Building, JOHN LEWIS and CO. LTD.; quantity surveyors RIDER, HUNT and PARTNERS

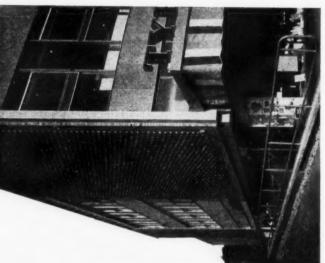
After demolition of temporary shops on the west side of Above Bar Street, Southampton, a new Guildhall Square will be laid out in front of the Civic Centre, and the new department store for Tyrrell and Green will then form part of the east side of this square. It is encouraging, therefore, that the store is the first building of real quality to be erected in the wardamaged area of the city. Provision has been made to add an additional floor over the whole site at a later date. This is the first department store to be analysed in the JOURNAL.

Viewpoint 1: the west facade from Above Bar Street.







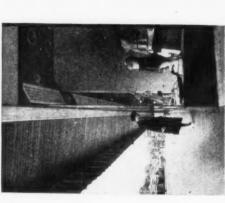


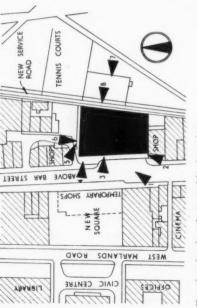
Above left (viewpoint 2): the window display, which was not examination. The framing is cased in Portland stone, with aluminium. The large glass areas of the "void" break the the work of the architect, does not match the general boarded and shaded by a canvas striped valance. Opposite page, left (viewpoint 3): the frontage to Above Bar Street, which shows excellent scale and delicate handling, is large Square. The colouring is subtle and the detailing merits close window breasts in Westmorland slate. Window frames are general facade treatment at the main entrance and provide standard of design. The soffit of the canopy is mahogany enough to form the east side of the future New Guildhall an accent, which will be more obvious when the new Guildhall Square is built. The irreconcilable conflict of inward and

very successful and comparatively inexpensive. Opposite outward facing displays in the first floor windows can be judged from this photograph, but is revealed more clearly in the internal view on page 836. Above centre (viewpoint 4): the quiet colours and smooth surfaces of the main facade are contrasted strongly with the bold sign and the rough patterned brickwork of the side elevation. Above right (viewpoint 5): the north elevation, though due to become a party exposed aggregate concrete slabs and patterned brickwork is wall in due course, is not less carefully designed than the more permanent facades. The use of reeded asbestos cement panels,

page, right (viewpoint 6): the glazed screen at the bottom of

the main and escape stairway on the north side of the store makes an inviting secondary entrance out of a necessary exit.





Key plan showing photographic viewpoints

at ABOVE BAR STREET, SOUTHAMPTON DEPARTMENT STORE

designed by YORKE, ROSENBERG and MARDALL







building illustrated

DEPARTMENT STORE

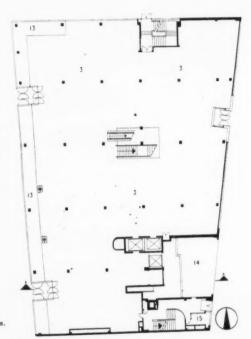
IN ABOVE BAR STREET, SOUTHAMPTON designed by YORKE, ROSENBERG and MARDALL



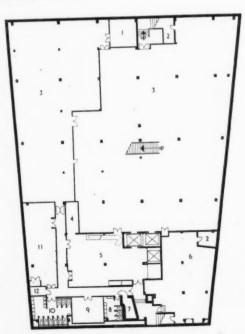
Roof plan, south end

KEY:

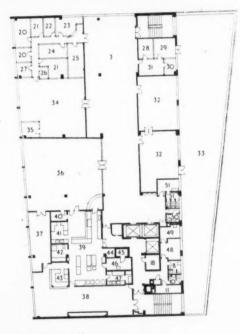
- I. Radio service.
- Switch room.
- 3. Sales area. 4. Baling room.
- 5. Receiving and
- dispatch with
- spiral chute. 6. Boiler room.
- 7. Strong room.
- 8. Male staff lavs.
- 9. Male scaff changing and lockers.
- 10. Female staff lavs.
- 11. Female staff changing and lockers.
- 12. Sewage pump. chamber.
- 13. Display.
- 14. Delivery.
- 15. Watchman's
- 16. Void.
- 17. Hairdressing.
- 18. Store.
- 19. Fashion work-
- 20. Registry and Registrar.
- 21. Staff training.
- 22. G.P.O. Exchange. 23. Typing Pool.
- 24. Pay office.
- 25. Cash receiving.
- 26. H.P. interviews.
- 27. Credit manager.
- 28. General manager. 29. Managing
- director. 30. Managing
- director's sec.
- 31. General office.
- 32. Workroom.
- 33. Terrace.
- 34. Counting house.
- 35. Manager.
- 36. Restaurnt.
- 37. Senior staff dining and rest room
- 38. Staff dining and rest room.
- 39. Kitchen. 40.
- Manager. 41. Wash-up.
- 42. Pastry.
- 43. Servery. 44. Chef.
- 45. Cold store.
- 46. Larder.
- 47. Veg. prep. and
- store.
- 48. Staff Nurse. 49. Doctor.
- 50. Male Public lavs. 51. Female public lavs.
- 52. Plant room.
- 53. Storage and
- tanks. 54. Lift motors.



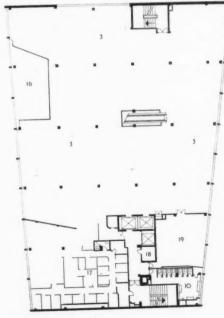
Ground floor plan



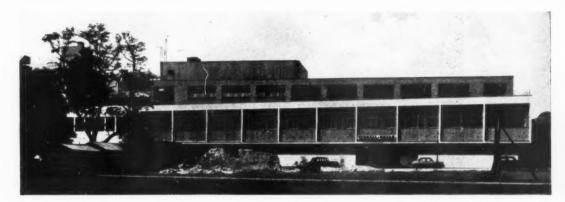
Basement plan [Scale: 4" = 1' 0"]

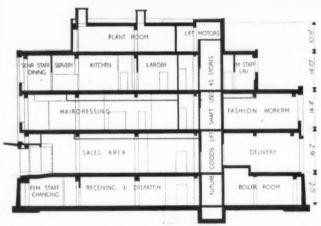


Second floor plan



First floor plan



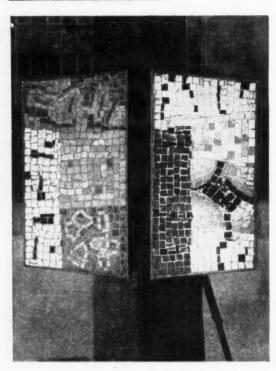


Section A-A [Scale: 12" = 1'0"]

Viewpoint 7: the east park frontage is tiled at the base and framed above in Portland stone with exposed aggregate concrete window breasts. The upper sections will later be brought forward to the same line and another floor added.

Viewpoint 8: the rear entrance from east park is obviously less imposing than the more important frontage to Above Bar Street but exhibits the same meticulous detailing and good proportions. The sign is, as it should be, the principal decoration and focus of the design.





Left: door handles do not normally receive enough attention, but these colourful, decorative and practical mosaic handles are unusually good examples. Below: the staircase to the basement is centrally placed and 6 ft. wide. The open treads of teak are suspended from the underside of boxed steel strings, and the balusters are alternately plain and sleeved in stainless steel with teak handrails.





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DEPARTMENT STORE

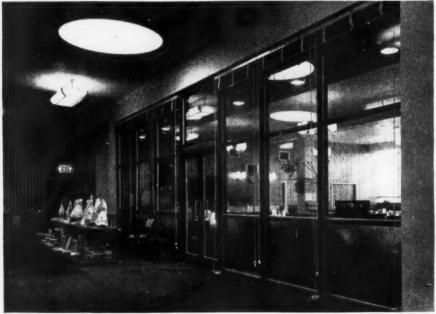
in ABOVE BAR STREET, SOUTHAMPTON designed by YORKE, ROSENBERG and MARDALL





Above left: another view of the staircase to the basement. The non-slip treatment of the suspended treads is shown in the detail, left, Above: the main staircase to all floors lies on the north side of the block. It is cleanly detailed with precast terrazzo treads and in situ coved corners for easy maintenance. The simple but decorative handrail is firm and rigid without appearing heavy. Coloured tile panels identify floor levels.







Top: at the main entrance a two-storey "void" forms a special feature, but loses both a sense of drama and a feeling of space due to the unfortunate intrusion of the enclosed display windows, which completely block the visual effect. Displays are difficult to arrange and, when seen from inside the shop, are lost against the sky glare. Above: the narrow sales area on the second floor is used as an approach to the restaurant and the offices. The light fittings and interior decoration throughout the store were the responsibility of the clients' building department. Left: the small public restaurant on the second floor was designed by the Directorate of Building of the John Lewis Partnership, and was carried out mainly in reeded timber with one long wall papered.

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DEPARTMENT STORE

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CLIENT'S BRIEF: his stated requirements

A department store to replace buildings destroyed during 1940 by bombing. A temporary shop was built on the site after the war, and either this store or part of the new building had to be open to the public at all times during rebuilding. The store was, therefore, built in two stages, firstly using the unoccupied area of the site and, secondly, demolishing and rebuilding the temporary store. Provision was required for expansion and will be met by the extension of the second floor to cover the rear terrace, and the addition of another floor over the whole building. Internal decoration and shop fitting were the responsibility of the client's own directorate of building, who were also

responsible for the heating, ventilation and electrical services.

SITE: topography, surroundings, access and planting

Area of site 17,500 sq. ft., frontage 175 ft. An important position which will form part of the east side of New Guildhall Square, opening the main shopping street to the civic centre. The site is wholly covered by the building, which is served by an access road at the rear which overlooks East Park.

PLAN: general appreciation and relation of units

The building is planned on four floors, basement, ground, first and second, with sales areas on all levels. Goods are received and despatched from the south side of the basement, which is connected by lift and chute to the delivery bay

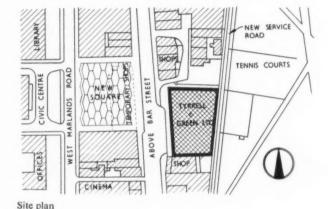
at the rear of the ground floor. All sales areas are connected to receiving and despatch by a spiral chute and goods lift, with provision for an additional lift when required. Two passenger lifts are provided and an escalator from ground to first floor is placed centrally with an open staircase to the basement alongside. A further escalator can be added later from first to sec ond floors. Mechanical plant is housed in basement and roof plant rooms and all services, receiving and despatch of goods are concentrated in the south-east corner. At basement level, staff cloakrooms fill the remainder of the south side and, at first floor level, the hairdressing department does the same, thus leaving the remainder of the floor clear for sales. Entrances on the ground floor are from front and back, with two on the main frontage. A minor entrance on the side feeds directly into a staircase tower. The second floor contains the restaurant, offices, staff dining, workrooms and offices, sales being confined to a narrow central area. Stock is carried in the departments on the sales floors and there is no provision of stock rooms anywhere in the building.



The building is piled, over the whole site, with a structural steel frame and hollow tile floors. Basement walls and floor are reinforced concrete with asphalt floor finish. The main frontage framing is faced with Portland stone, with slate window breasts. The rear elevation is stone, with exposed aggregate concrete slabs. The end elevation is treated with patterned brickwork and exposed aggregate slabs, and will later become a party wall to an adjoining building—possibly in about 15 years time. All windows are aluminium sashes.

d

cost per sq. ft.



	preliminaries and insurances	6	1
	contingencies	3	93
	site clearance	1	91
TRUCTURAL ELEMENTS			

Work below ground floor level: foundation type, basement	Location	Materials	Finish	Reasons and comments		
Piling	Throughout	18-in. diameter concrete piles				
Concrete pads and bed		1:2:4 reinforced concrete	Cement and sand screed and pavings			
Concrete retaining walls		1 : 2 : 4 reinforced concrete	Asphalt tanking	work below ground floor level	11	5
External walls and facings	Location	Materials	Finish	Reasons and comments		
Brickwork and concrete facing, stock facings or	North elevation	11-in. brick cavity	Faced with concrete slabs			
asbestos		15½-in. brick cavity stock bricks	Fluted asbestos sheeting			
Brickwork with slate or stone facings	West elevation	9-in. brick	Faced with slate or Portland stone			
Brickwork panels to concrete frame	South elevation	11-in. brick cavity filled between concrete frame in panels	Painted externally on brickwork and fair-faced concrete			
Brickwork with concrete or timber facing and brick	East elevation	9-in. brick, 11-in. brick cavity, outer skin of blue Staffordshire facings	Stock bricks, concrete slabs, Western red cedar boarding			
		-		external walls and facings	4	0

					S	d
Frame or lead-bearing element Concrete encased steel	Location	Materials Structural steelwork with	Beam spans Column grid Main beams 35 ft. × 22 ft.	Reasons and comments		
tanchions and beams	Throughout	I : 2 : 4 concrete casing to beams and stanchions	35 ft. Secondary beams 22 ft.			
Canopy	West elevation		fr	ame or load bearing element	11	8½ 3¾
			si	hop fronts, including glazing	2	34
Upper floor construction	Location	Materials	Finish	Reasons and comments		
Hollow tile	All floors	Hollow tile with concrete topping, reinforced with fabric and rods	Screeds and various pavings			
		up	per floor construction, ex	cluding screeds and pavings	5	34
Staircases	Location	Materials	Finish	Reasons and comments		
Teak open tread	Basement to ground	Teak treads with metal hangers	Oiled			
Reinforced concrete	Basement to second	I:2:4 reinforced concrete	Terrazzo and various paving	staircases	. 1	01/2
Roof construction	Location	Materials	Finish	Reasons and comments		
Hollow tile	Main building, motor room and second floor terrace	Hollow tile, building paper, screed, lightweight felt and cork	Three layer felt roofing			
				roof construction	2	101
Roof lights	Location	Materials	Finish	Reasons and comments		
Dome lights	Main building	Galvanized metal frame and glazed	Paint on metal			
Lantern lights	Roof buildings			roof lights		4.
Windows	Location	Materials	Finish	Reasons and comments		
Metal	Generally	Galvanized metal to timber sub-frames, concrete or brickwork jambs	Painted			
				windows	1	7
External doors	Location	Materials	Finish	Reasons and comments		
Armour plate doors	Main entrances	Armour plate glass				
Softwood flush doors	Staff entrance	13-in. softwood	Painted			
Framed ledged and braced doors	Roof buildings	2-in, softwood	Painted			
*	- T			external doors		0
Glazing	Location	Materials	Finish	Reasons and comments		
Clear sheet, polished plate, Georgian wired and obscured	Throughout					
PARTITIONING	3			glazing excluding shop fronts		6
Internal partitions	Location	Materials	Finish	Reasons and comments		
Brickwork and concrete block	Throughout		Plaster and paint			
Metal	Second floor offices		Painted			
Terrazzo	Toilets		Fair faced		4	-
				internal partitions	1	7
Screens Timber	Location	Materials	Finish	Reasons and comments		
a proces	Restaurant	Hardwood frame with glazing	Polished			
	Timekeeper's office	Softwood frame with tongued and grooved boarding with glazed panels	Painted			
			•	screens		0

W.C. do

Internal Flush d

Doors

FINI Floor fi ∦-in. p

Tessela

Terrazz Terrazz Oak blo Granol and sar T & G

Wall fi Fair fa Plaster

{-in. w claddir l-in. a

Ceiling Susper

Decora Applie

Intern

Shop Shop Roller

FIT

Telep

1839

analysis d Location Materials Finish Reasons and comments W.C. doors and partitions Toilets generally Fair faced 11-in, precast terrazzo Terrazzo Brickwork Public toilets Eletton brick Plaster and paint Softwood flush doors Throughout Painted Doors w.c. doors and partitions 2 Finish Materials Reasons and comments Internal doors Location Softwood flush doors Flush doors Throughout Painted Hardwood flush doors Polished internal doors 31 Ironmongery to internal doors Materials Finish Reasons and comments Location Throughout BMA or anodized aluminium ironmongery to internal doors 23 FINISHINGS Finish Materials Reasons and comments Floor finishes Location Staff training and managers' rooms 1-in. plastic tile paving 18 0 6 in. × 6 in. × § in. plain paving Kitchen, larder, etc. Tesselated tile paving 35 0 Terrazzo-in situ Public toilets in. terrazzo 45 5 Terrazzo-precast Panel to landing 9 in. \times 9 in. \times 3 in. tile paving 45 0 Oak block flooring Lift lobby ground floor in. (finished) block 45 0 Granolithic paving cement and sand screeds 1 in. T & G flooring Generally floor finishes 103 Materials Finish Wall finishes Location Reasons and comments Fair faced concrete, Basement Gloss paint Plaster Generally Emulsion, gloss and flat f-in. western red cedar cladding Restaurant Telephone exchange Flat paint }-in. acoustic tiles wall finishes 11 Ceiling finishes Location Materiale Finish Reasons and comments Suspended ceilings Sales area Expanded metal lathing Hollow tile Generally Plastered ceiling finishes 31 Decorations Location Paint types Munsell or other ref. Colour scheme and comments Metal work Gloss oil on primer Colours by clients' own advisers Applied paint finish Weed work Gloss oil on primer Brick work Two coats bitumastic Emulsion, flat oil or gloss oil paint Plastered surfaces Asbestos sheeting Gloss oil on primer The type of paint used and colour scheme was chosen by the client Interna Joinery Gloss oil paint Plastered walls Matt paint or wallpaper decorations FITTINGS Shop fittings Location Materials Reasons and comments Shop fittings Throughout Chosen by clients Roller shutters Ground floor Electrically operated

" Hood " type

Acoustic lining

Telephone booths

Second floor

	analysis					
Other fittings: continued	Location	Materials	Finish	Reasons and comments	s	
Strong room doors	Basement	Steel		The second secon		
Signs	West facade	Bronze and green and white plastic infilling	Letters lit internally by neon tubes	Similar lettering on east facade, not lit internally		
Chutes	Second floor to basement	Spiral, steel sheet	neon tubes	For parcel delivery		
			telephone booths, strong	room doors, signs, flagstaffs	3	
		op mings, roner snatters,	terepriore bootins, strong	chutes		
Kitchen equipment	Location	Materials	Finish	Reasons and comments		
	Restaurant kitchen second floor	Standard equipment	Mainly gas fired			
				kitchen equipment	1	
SERVICES						
Plumbing: external	Location	Materials	Finish	Reasons and comments		
Purpose-made copper r.w. outlets with gratings	Main roofs and canopy roof	Lead outlets to canopy roof				
Rain water disposal	Location	Materials	Finish	Reasons and comments		
Downpipes	Concealed in concrete cover to stanchions and in ducts on temporary external wall of second floor (east side)	Galvanised steel				
LCC horizontal runs	Suspended basement ceilings	Cast iron		Discharging by gravity to new separate sewer in Service road (east side)		
Phombing internal: waste disposal	Location	Materials	Finish	Reasons and comments		
Plumbing	Concealed in ducts and suspended ceilings except in certain storage etc.	Copper, steel and cast iron	Exposed pipework painted	All services concealed in ducts and suspended ceilings in areas used by customers. Pipes run in cubicle partitions in hairdressing department		
Single-pipe system	Staff lavatories at base- ment level are below existing foul sewer in Above Bar Street	Copper and cast iron	Exposed pipes painted	The whole of the foul sewage is therefore led to a sump constructed below basement level and pumped to sewer level. Grease traps are installed in the kitchen disposal system		
				plumbing internal	1	
Cold water storage	Location	Materials	Capacity	Reasons and comments		
Supplies and services	Roof	Sectional tanks				
Plumbing: sanitary fittings	Location	Materials	Finish	Reasons and comments		
50 fittings	Lavatories, doctor's room	White fireclay	Glazed	4.		
	and crafts room		cold water stora	ge, plumbing: sanitary fittings		
Boiler type and capacity	Location	Heat load and fuel type	Stoking method	Reasons and comments		
Sectional boiler 3,454,000 B.Th.U. total	Separate boiler house under loading dock	2,635,000 B.Th.U. boiler installed to take possible extension. 200 second oil		Easy bunkering on restricted site		
Water heater type	Location	Fuel type	Stoking method	Reasons and comments		
Ideal sectional boiler with cylinder. Fitted emer- gency connection to heating circuit through internal heater battery	Boiler house					
Heating installation: heat exchanger type	Location	Criteria temp.	Air change rate	Reasons and comments		
Air heater batteries ceiling panels and radiators	Basement, restaurant, canteen and hairdressing —warm air	Restaurant, hairdressing, offices and workrooms— 65° F.	Basement 6, hairdressing 6 to 24 in setting area			
	Selling areas (other than basement) and large offices—ceiling panels. Small offices and toilets— radiators	Selling areas—65° F, and toilets—55° F.	Kitchen 25, restaurant 1,500 cu. ft. per hour per person			
			heating install	lation, boiler and water heater	7	

Electrical

Special fli incandesco louvred u transpare employin 2-15 watt lamps and tungsten

150 watt silvered s Single an fluorescen Multi-lar fittings

Special li

Wiring a Wiring c duct and in vertica 13-amp.

Incoming three ph

Lifts Lifts Escalator

Fire alar Electrica

THE

Type Externa Cork ins SPE

Sound a Acoustic

FIRE

Structur

Normal

Normal ments

	-						S	
Electrical installation source and fitting type	Location		Illumination le	evel	Quality	Reasons and comments		
Special fluorescent incandescent fitting with louvred underside and transparent plastic sides employing 4-40 watt and 2-15 watt fluorescent lamps and 3-60 watt tungsten lamps	Selling area	is	Generally 12 sq. ft. and spo	lumens ot-lighting	To suit selling require ments	Lighting mixture employed to give conditions best suited to requirements of selling trade		
150 watt internally silvered spotlight fittings	Throughou	t sales areas						
Single and twin tube fluorescent fittings	Offices, stockitchens, et	ckrooms,	12-15 lumens	sq. ft.	General overall lightin	g High efficiency lighting		
Multi-lamp incandescent fittings	Restaurant		8-10 lumens s	q. ft.	Of lower and softer intensity than selling areas	Lighting and fittings to suit decor		
Special lighting	Hairdressin	g			To requirements of hairdressers	To suit decor		
Wiring and switching types Wiring carried out in VRI	cables in heavy	gauge enamelle	d conduits burie	ed in the floor	screeds, Main trunk con-	duits emanate from the vertical rising		
duct and break down to the	e smaller condu	iits from each of ose areas, 5-amr	six main floor to switches of sta	rap boxes on ndard design	each floor. Switches for se	elling areas mounted with fuse gear used throughout. Sockets are of		
Power supply type		Location		How distrib	nuted	Reasons and comments		
Incoming power is taken at three phase on to a main sv		Switchroom is ment	the base-	lated cables including a fed at its e units from fuseboards	throom through paper insists to various positions to 250-amp. "barduct" riselectrical centre. Tapping "barduct" feed 3-phase, mounted within the risir which employ HRC fuse	ier,		
					electrical	installation, wiring and switching	5	3
Lifes		Location		Materials		Reasons and comments		
Lifts		On south side						
Escalator		Ground to firs	t floor			lifts	7	6
Fire alarms		Location		Details		Reasons and comments		
Electrical detectors		Throughout		and warn ti telephone v the station, side the bu appear on a	ors should locate any fire he local fire brigade across vires directly connected to causing a bell to ring out ilding and an indication to in indicator fixed just insi g to show the location of	installed after due economical consideration de		
						fire alarms		6
						internal tele-communications		11
						total net cost per sq. ft. of floor	89	0
THERMAL INS	ULATIO	N						
Туре	-	Loca	tion		Reasons a	and comments		
ternal walling 11-in. cavity brickwork		rk	No speci	al requirements				

Туре	Location	Reasons and comments
External walling	11-in. cavity brickwork	No special requirements
Cork insulation	Roof	

Reasons and comments

Location

SPECIAL ACOUSTICAL TREATMENT

Sound absorption material

Acoustic tiles	G.P.O. telephone room and counting house		asures taken were precautionary rather in result of special problems
FIRE			
Structural precautions	Grade of protection apparatus	Sprinklers	Reasons and comments
Normalconforming with bye-laws	Automatic fire alarm, complete coverage, 1 dry riser, 2 hose reel risers (wet)	None	Protection apparatus selected to conform to assurance company's requirements
Planning precautions	Access for fighting	Means of escape	Reasons and comments
Normal—conforming with requirements,	Above Bar Street (dry riser intake) and Service Road	Normal—staff staircas secondary escape	se as

REFUSE DISPOSAL

Method	Type of refuse	Waste recovery	Materials and installation	Reasons and comments
Collection	Kitchen			
Baling and incineration	Packaging	Incinerator—haling m.c.		

TIME SCHEDULE

Drawings	Tender date	Contract signed	Work commenced	Work completed	Type of contract	Comments
	April 22, 1954	May, 1954	Stage 1, May, 1954, Stage 2, May, 1955	Stage 1, May, 1955, Stage 2, May, 1956	RIBA with quanti-	Very wet weather in summer, 1954

RATIOS

Area of enclosing walls	0.364	Area of windows (including external doors)		0.114
Total floor area	1	Total floor arear	223	1
Area of solid wall	0.250	Total roof area (excluding second floor terrace)		0 - 205
Total floor area		Total floor area	==	I

COST ANALYSIS

			£	s.	d.
Total ground floor area of superstructure	20,131 ft. super	Tender cost of superstructure installations and finishings	290,197	0	0
Total floor area (excluding basement)	58,568 ft. super	Tender cost of foundation and basement	50,480	0	0
Total floor area of basement	20,131 ft. super	Tender cost of site clearance, temporary and external works	9,645	0	0
Storey heights of basement	10 ft. 9 in.	(The last three figures include a proportion of the prelimi- naries, insurances and contingencies)			
Total depth of basement	12 ft. 6 in.	Gross total cost	350,322	0	0
		Cost per ft. super of floor area including basement	4	9	0

SITE ORGANIZATION

Site labour and equipment: General foreman, foreman carpenter, foreman bricklayer, ganger one resident site engineer for foundations and one assistant general foreman. A dragline for excavation, mono-rail, part time. One 14-10 concrete mixer, one 30-cwt. electric A.C.E. hoist with concrete hopper, one 15-cwt. crane for about two months.

Sub-letting: Joinery to local joinery firm, painting as a policy of the company, tiling as some of the tiling was already nominated and glazing as this is a specialist operation.

Job management: Progress charts, incentives and periodic review. Visiting contracts manager approximately twice per week, varying as necessary.

CONTRACTORS

Clerk of Works: W. C. Knight. General contractors: Richard Costain Ltd. Sub-contractors: Demolition: Henry Osman & Co. Ltd. Piling: The Cementation Co. Ltd. Asphalt: The Neuchatel Asphalte Co. Ltd. Concrete blocks: Messrs. Blockcrete. Stone: The Bath & Portland Stone Firms Ltd. Roofing felt: William Briggs & Sons Ltd. Slate, slabs and stall boards: Setchell & Sons Ltd. Glass: E. A. Hetherington Ltd. Wood strip flooring: R. W. Brookes Ltd. Acme Flooring & Paving Co. Ltd. Structural steel: Powers & Deane Ransomes Ltd. Central heating (Ventilation, boilers): Arthur Scull & Son Ltd. Stoves and kitchen equip .: Benham & Sons Ltd. Gas fitting: Arthur Scull & Son Ltd. Electric wiring and fixtures: F. H. Wheeler (Southern) Ltd. Metal staircases and balustrades: Clarke, Hunt & Co. Ltd. Plumbing: R. J. Audrey Ltd. Spiral chute: Sovex Ltd. Door furniture: A. G. Roberts Ltd. Telephones: Internal: Telephone Rentals Ltd. Casements: Williams & Williams Ltd. Internal doors: F. Hills & Sons Ltd. Roller shutters: Haskins. Sanitary fittings: Stitsons Sanitary Fittings Ltd. Shanks & Co. Ltd. Fire alarm system: Associated Fire Alarms Ltd. Strong room door: Chubb & Sons Lock & Safe Co. Ltd. Joinery: Golding & Ansell. Tiling: Wiggins Sankey Ltd. Wallbaper: Coles (Wallpapers) Ltd.; Arthur Sanderson & Sons Ltd. Concrete slabbing: Costain Concrete Co. Ltd. Office partitions: Compactom Ltd Painting: Arnold Sharrocks Ltd. Terrazzo: Diespeker & Co. Ltd. Lifts and escalators: Waygood Otis Ltd. Signs: Signcrafts Ltd. Paint: Leylands Paint & Varnish Co. Ltd. Suspended ceilings: Bracketting Centering & Lathing Ltd. Display windows and canopy finishes: H. N. Barnes Ltd. Hairdressing dept., complete: Henry Serventi Ltd.



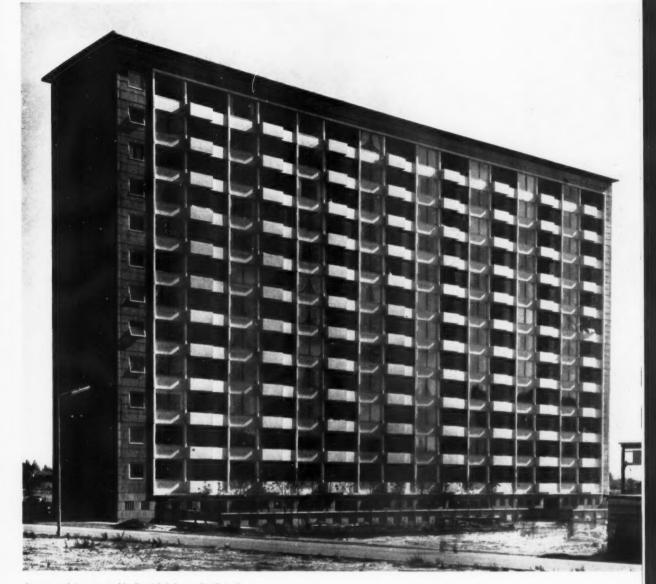


working detail

BALCONIES: FLATS AT RØDOVRE, DENMARK

Eske Kristensen, architect; P. E. Malstrøm, consulting engineer

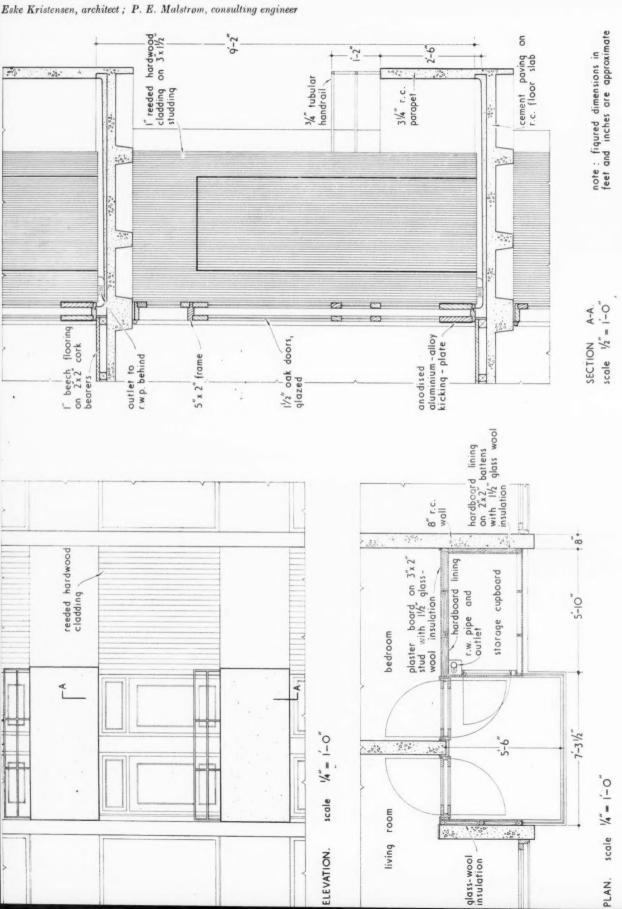




An unusual feature of this Danish balcony detail is the incorporation of a storage cupboard in the bedroom frontage, the reeded hardwood used as a cladding to these cupboards being an important element in the facade. The balcony front and the floor are formed in precast concrete. One slab comprises the floor of both balcony and storage cupboard while the balcony front is formed in four slabs, one to each face. The standard of insulation is high with double glazing used everywhere except in the fanlights over the balcony access doors. Though plasterboard is used on the partition separating the bedroom and cupboard, the internal wall surfaces are unplastered. Sound reduction in the floor between living rooms is obtained by laying the beech flooring on 2-in. by 2-in. cork bearers.

working detail

BALCONIES: FLATS AT RØDOVRE, DENMARK

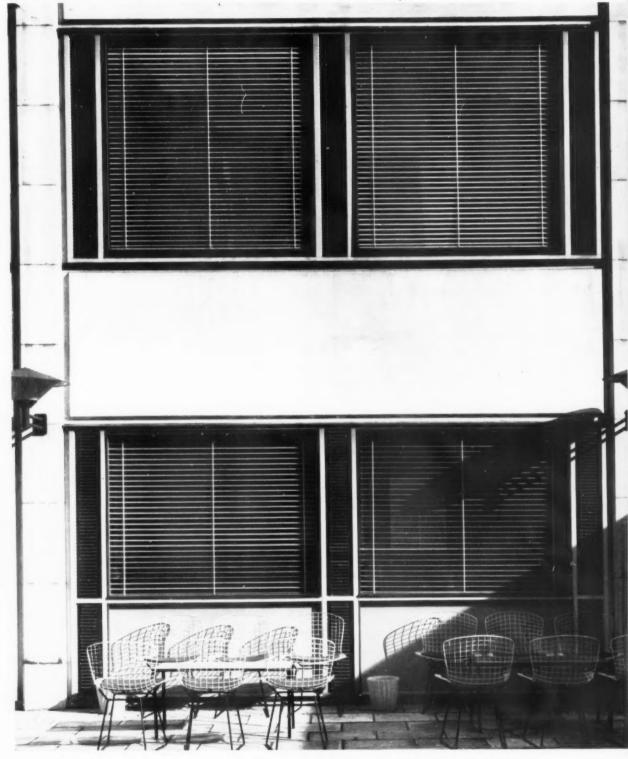


working detail

WINDOWS: OFFICES IN COPENHAGEN, DENMARK

Eske Kristensen and E. Barfoed, architects

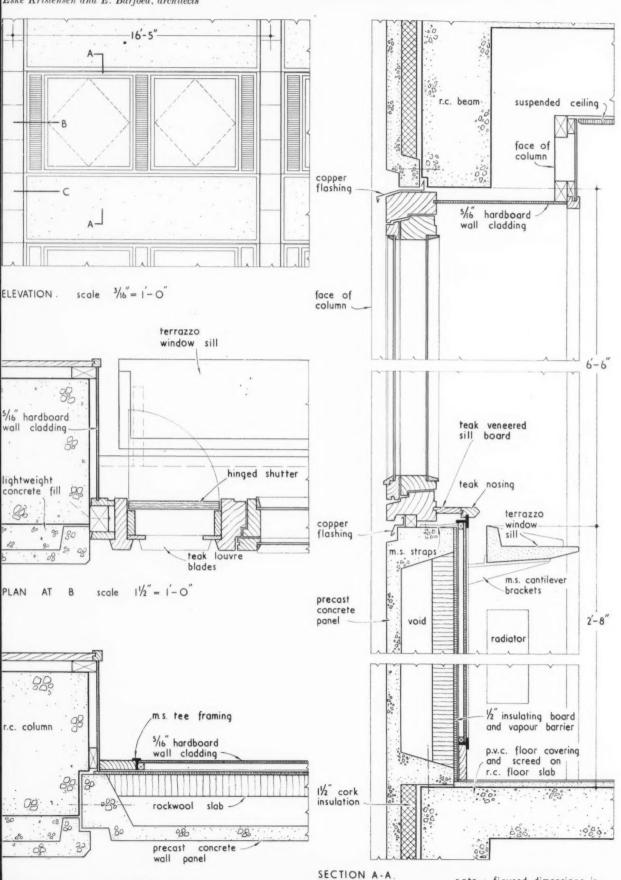
WINDOWS: 46



The first point of interest about this detail is the skilful use of a recessed joint round the edges of the panels between sill and head, and the repetition of the thin but emphatic bands of high light which this gives in the painted wood sub-frames. The large panels are monolithic and were lifted into position by cranes. They have one nib at approximately mid-height to bolt to the structural floor, another at the top to serve as a sub-sill and provide a frame to hold insulation, and a third at the bottom to serve this second purpose only. The internal finishings are of hardboard. To overcome the fixing difficulty a T-sectioned m.s. framing is used, both to hold the hardboard beneath the sill and to support the radiator and the inner terrazzo window sill.

WINDOWS: OFFICES IN COPENHAGEN, DENMARK

Eske Kristensen and E. Barfoed, architects



PLAN AT C scale 11/2" = 1'-0"

scale 1/2"=1'-0"

note : figured dimensions in feet and inches are approximate

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The County Architect, Cumberland

County Council

County Council.

The Borough Architect, The County Borough of Darlington.

The County Architect, Durham County Council.

The County Architect, Glamorgan County Council.

The City Architect, The City and County of Newcastle upon Tyne.

The County Architect, Northumberland County Council.

The County Architect, Northamptonshire

County Council.

The Borough Architect, The Borough of Stockton-on-Tees.

The Engineer and General Manager, Tees Valley Water Board.

The Borough Engineer, The Borough of Thornaby-on-Tees.

The Borough Architect, The County Borough of West Hartlepool.

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FACTORY AND OFFICES AT ROTHERHAM, YORKS

The factory and offices at Eastwood, Rotherham, Yorkshire, for William Cooke & Co., Ltd., was designed by William K. Gill; quantity surveyors, Thornton-Firkin & Partners. The site, of approximately five acres, was a Corporation rubbish tip with ashes and domestic





refuse to a depth of 18 in., requiring the use of pile foundations and r.c. ground beams. Above: the office block (on the left) and workshops (on the right). The office block is 150 ft. long by 31 ft. wide, constructed of steel framing with hollow-concrete beams and asphalt-covered roof. The main facade has aluminium surrounds to windows and stanchions and facing panels of 18-in. by 12-in. faience tiles. The suspended office ceilings are of fibreboard acoustic tiles with built-in light fittings. The staircase in the office entrance hall (left) was made by the clients and will later incorporate a wire rope balustrade. General contractors, W. J. Simons, Sons & Cooke Ltd.

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103

SHOP AT EASTBOURNE

Right, a new flower shop in Eastbourne, Sussex, designed by Hubbard Ford. The main display window is of sloping plate glass, to avoid reflection, and there is a steel cantilevered canopy over the forecourt. The entrance wall is of white marble tiles with gold mosaic joints, and the pillar is of Horsham, Sussex, stone. The general contractors were Messrs. Hudsons.



Announcements

PROFESSIONAL

D. H. Seabrooke, A.R.I.B.A., has now commenced practice at 24, Tufton Street, Ashford, where he will be pleased to receive trade catalogues, etc.

Laurence J. Perlston, DIP.ARCH., A.R.I.B.A. (Max Lock & Partners), has moved from 43, Woodstock Avenue, N.W.11., and now resides at 5, Mount Lodge, Shepherds Hill, Highgate, N.6.

Alfred G, Church, F.R.I.B.A., M.T.P.I., of Park Chambers, Molesworth Street, Wadebridge, Cornwall (telephone Wadebridge 272), will be pleased to receive trade catalogues, etc.

W. S. Hattrell & Partners, F/A.R.I.B.A., of 1, Queens Road, Coventry, and 14, Hanover Square, W.1., have now opened a branch office at 15, Piccadilly, Manchester, 1 (telephone Deansgate 8288) where they will be pleased to receive trade catalogues, etc.

Ronald J. Ovenden, A.R.I.B.A., has been appointed staff architect to Dorothy Perkins Ltd., 17, Newman Street, W.I., where he will be pleased to receive trade literature, etc.

Paul Mauger & Partners F/A/A/A.R.I.B.A., announce that the name of the firm has been changed to Paul Mauger, Gavin, Mathers & Mitchell. The personnel of the firm remains as before: Paul Mauger and George Mathers practising mainly from the firm's office at 31, Church Street, Welwyn, Herts, and Alick Gavin and John Mitchell from the firm's office at 25, Marylebone Road, London, N.W.1.

Mence & Moore, A/L.R.I.B.A., have opened offices at 71, Murray Street, Georgetown, British Guiana, and a separate office establishment, viz.: Mence & Moore Group, c/o Demerara Bauxite Co. Ltd., Mackenzie, British Guiana, and will be pleased to receive trade catalogues, etc., at both addresses.

TRADE

Protim Ltd., announce that following enquiries concerning showings of their film, "The Control and Eradication of Timber Pests" they will be pleased to show it wherever an audience of a reasonable size can be got together.

The Universal Asbestos Manufacturing Co. Ltd. announce that M. B. Henderson, who has been Technical Manager of the Company for the past six years, has been elected to the Board.

Correction

In connection with the article on the Coloured Television Research Laboratories, Enfield, in the JOURNAL for November 15, 1956, the names of the following consultants were omitted: landscape design, in collaboration with the architects, G. P. Youngman; electrical, Thorn Electrical Industries Ltd. (Atlas Lighting Division).



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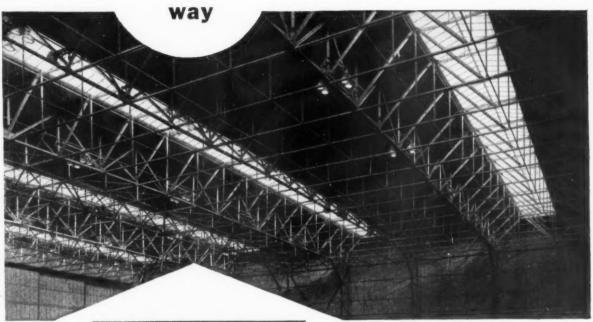


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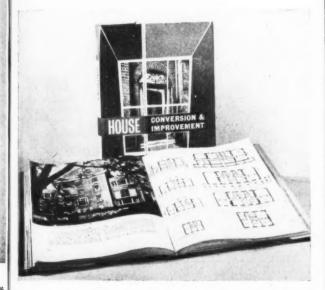
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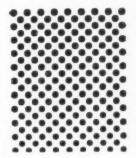
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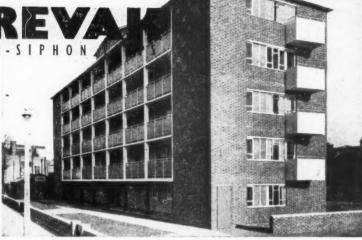
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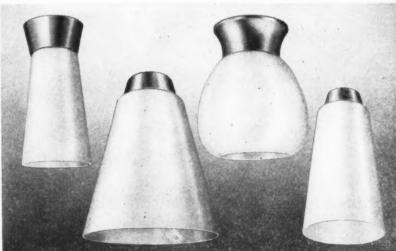
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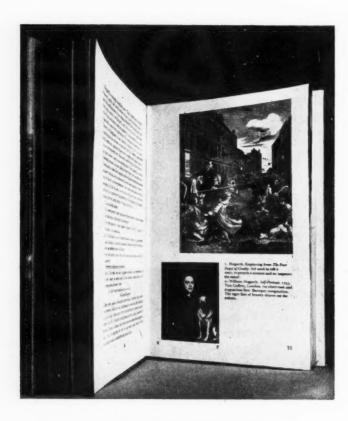
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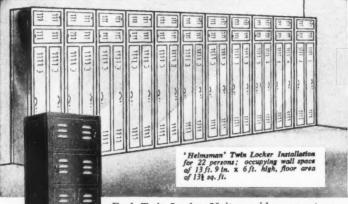
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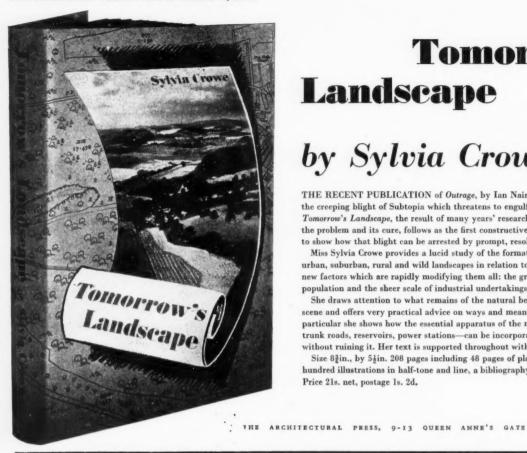
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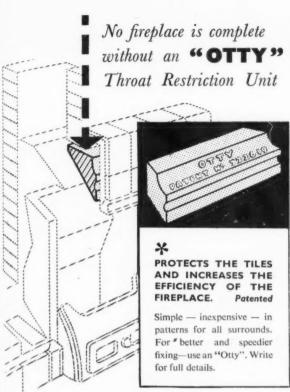
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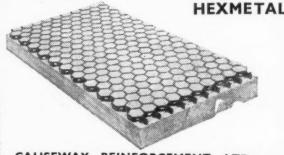
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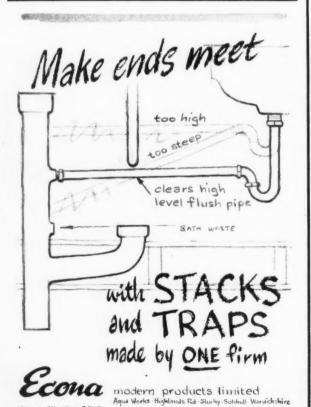
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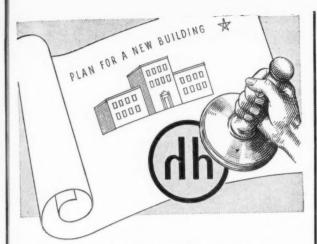
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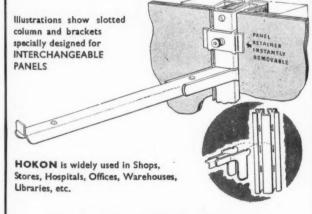
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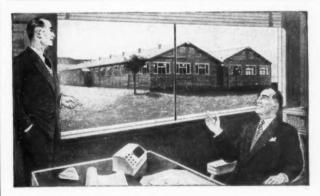
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Town development. Applicants for post of the experienced in estimating, preparing schedules of quantities, site measuring and settling final accounts.

Houses to let available if required. Medical examination under Superannuation Scheme.

Applications giving full details of age, experience and qualifications together with the names of referees, must be lodged with the Secretary, Glenrothes Development Corporation, Glenrothes, Fife, not later than 12th December, 1956.

Glenrothes, Fife, not later than 26th 4634
1956.

COUNTY BOROUGH OF GLOUCESTER CITY ARCHITECT'S DEPARTMENT Applications are invited from persons having suitable qualifications and experience for the following (alternative) appointment:—

(a) ARCHITECTURAL ASSISTANT, A.P.T. II, 2509 17s. 6d.—2691 17s. 6d. per annum (Intermediate R.I.B.A. standard).

(b) ARCHITECTURAL ASSISTANT, A.P.T. I 2543 5s.—2625 5s. per annum (Part Intermediate R.I.B.A. standard).

Superannuable post. Medical examination. Municipal experience not essential. Applications stating age, married or single, training qualifications, previous and present appointments, with copies of testimonials, or names of referees, to City Architect, Suffolk House, Gloucester, not later than 11th December, 1956.

BUCKS COUNTY COUNCIL
Applications are invited for the following pointments in the County Architect's Depart-

Applications are invited for the following appointments in the County Architect's Department:—

ASSISTANT QUANTITY SURVEYOR, Grade VI, £902—£1,107 p.a.

ASSISTANT QUANTITY SURVEYOR, Grade III, £656—£734 p.a.

The appointments are superannuable and subject to medical examination.

A weekly allowance of 25s. and return fare home once every two months may be paid for six months to newly appointed married officers of the Council unable to find accommodation.

Applications, on forms to be obtained from F. B. Pooley, County Architect, County Offices, Aylesbury, must be returned by 15th December, 1956.

CITY OF OXFORD

PLANNING ASSISTANT

Vacancy in City Architect and Planning Officer's Department Salary within range £707—£861 per annum, according to experience. Candidates should be qualified members of the Royal Institute of British Architects and/or the Town Planning Institute, although consideration will be given to applicants who have completed the Intermediate examination of either or both bodies, and in which case the salary would be in accordance with the scales laid down by the National Joint Council. Varied duties in the Planning Section, emphasis of work on design. Permanent pensionable post; medical examination.

Housing accommodation will be provided, if required, polications.

The Application Forms and Conditions of Appointment from the City Architect and Plan-ning Officer, Town Hall, Oxford, returnable by 22nd December, 1956. HARRY PLOWMAN, Town Clerk.

Town Hall, Oxford.

Town Hall,
Oxford.

CITY OF WORCESTER
AMENDED ADVERTISEMENT
APPOINTMENT OF SENIOR QUANTITY
SURVEYOR

Applications are invited from qualified Quantity
Surveyors for this appointment within A.P.T.
Grade V (salary £814 17s. 6d.—£994 5s.). Housing accommodation will be offered if required and a casual users' car allowance will also be available.
Applications with the names of two referees, are to be sent to the City Engineer and Surveyor, 22.
Bridge Street, Worcester, by 17th December, 1956.

BERTRAM WEBSTER.
Town Clerk.

KING'S COLLEGE HOSPITAL,
DENMARK HILL, S.E.5
Applications are lavited for the post of ARCHITECTURAL ASSISTANT in the Building Surveyor's Department at a salary of £595×£20—£655

veyor's Department at a sample of the preparation of plans of existing buildings and working drawings for alterations and improvements. Preference will be given to applicants who have passed the Intermediate Examination of the R.I.C.S. (Building Sub-division).

Applications, stating age, experience, training and qualifications, stating age, experience, training and qualifications, should be sent to the undersigned by 20th December.

S. W. BARNES, House Governor.

4682

COUNTY BOROUGH OF DARLINGTON BOROUGH ARCHITECT'S DEPARTMENT

BOROUGH ARCHITECT'S DEFARMENT Applications are invited for the posts of :
(a) SENIOR ASSISTANT ARCHITECTS (A.P.T. V., £213—£994).

(b) ASSISTANT ARCHITECTS (A.P.T. IV, £727—£907, and Special. £707—£961).

(c) ARCHITECTURAL ASSISTANTS (A.P.T. III, £656—£784; A.P.T. II, £609—£691; A.P.T. I, £647—£656).

£656-£784; A.P.T. II, £609-£691; A.P.T. I, £543-£625).
(d) JUNIOR QUANTITY SURVEYOR (A.P.T. II,

(d) WINTOR QUANTITY SURVEYOR (A.P.T. II, £609-£691).

The Department has a large programme of work, including Secondary and Primary Schools, Housing, and New Municipal Buildings. Preference will be given to applicants for posts (a) and (b) experienced in this class of work, and who are members of the R.I.B.A.

Applicants for posts (c) should have passed Parts I and II of the R.I.B.A. Final or Special Final Examination, or other equivalent, at one of the recognised Schools of Architecture.

Applicants for post (d) should be experienced in the preparation of Bills of Quantities, Interim Valuations, and settling of Final Accounts.

Consideration will be given to the provision of housing accommodation in certain cases.

Applications, giving age, qualifications, present appointment with salary, previous appointments with dates and salary, and names and addresses of three referees, to be sent to: E. A. Tornbohm, A.R.I.B.A., A.M.T.P.I., Borough Architect, Central Buildings, Darlington, not later than 17th December, 1956.

H. HOPKINS, Town Clerk

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PONTYPRIDD URBAN DISTRICT COUNCIL ASSISTANT
APPOINTMENT OF ARCHITECTURAL ASSISTANT at a salary in accordance with the maximum of A.P.T. Division Grade IV (2907 2s. 6d. per annum).
Candidates must be Associate Members of the Royal Institute of British Architects.
The appointment is subject to the provisions of the Local Government Superannuation Acts, medical examination, and one month's notice on either side for termination.
Particulars of the mode of application are obtainable from Mr. W. Cecil Evans. Engineer and Surveyor, Municipal Buildings, Pontypridd. Housing accommodation will be provided in necessary.

Applications must be delivered to the under-signed not later than Saturday, 15th December, 1956.

BERNARD M. MURPHY, Clerk of the Cour

Municipal Buildings, Pontypridd. 27th November, 1956.

Zith November, 1956.

LINDSEY COUNTY COUNCIL
PLANNING DEPARTMENT
Applications are invited for the following appointments:—
(a) SENIOR ASSISTANT
A.P.T. Grade V (2814 178. 6d.—£994 5s).
(b) JUNIOR ASSISTANT, A.P.T. Grade I (2554 5s.—£625 5s.).
Both appointments at Headquarters—Lincoln. Candidates for (a) should be A.R.I.B.A. and have some experience in dealing with redevelopment schemes, housing layouts and architectural control. Post requires officer to provide own car for official journeys, for which an allowance will be paid at essential user's rate for car not exceeding 10 h.p. or 1,199 c.c. Candidates for (b) must have trained in planning, architect's or surveyor's office, and be good draughtsman, with experience in field surveys.

Superannuation and N.J.C. conditions of service as approved by the County Council. Canvassing will disqualify. Relationship to any member or senior officer of the Council to be disclosed in writing by applicants.

Applications, with particulars of age, training, experience, and names of two referees, to County Planning Officer, The Castle, Lincoln, not later than 14th December, 1956.

MORTH WEST METROPOLITAN REGIONAL

County Planning Officer, The Castle, Lincoln, not later than 14th December, 1956.

NORTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD

The Board are engaged on a number of new building projects, including a new hospital, at Welwyn, and the following staff are required to fill new posts on the establishment created to deal with the increased work:—

(a) ASSISTANT ARCHITECTS. Good experience of design and construction necessary, preferably in hospital work. Salary scale: £680×225 (3) × £30 (2) × £35 (1) × £36 (1) × £35 (3)—£985, plus £20—£40 London weighting.

(b) ARCHITECTURAL ASSISTANTS. To give technical assistance to professional officers. Salary scale: £610 (age 21 and over) × £20 (5) × £30 (1) × £20 (1) × £25 (2)—£710, plus £20—£30 London weighting.

Applicants for (a) above must be Associate Members of the R.I.B.A., and for (b) must have Inter. R.I.B.A. Commencing salary above minimum may be paid to successful candidates, according to appropriate experience since qualification. Posts are subject to Whitley Council conditions and are superannuable.

Apply, stating which post and giving age, qualifications (with dates) and experience, with names of two referees, to Secretary, North West Metropolitan Regional Hospital Board, 11a, Portland Place, W.1, by 17th December.

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NEWCASTLE REGIONAL HOSPITAL BOARD CHIEF ASSISTANT ARCHITECT (PROJECTS) (Principal Architect Grade, £1,115—£1,550 p.a.) Applications are invited for the above appointment on the permanent Headquarters Staff of the Board's Architect in Newcastle. The appointment relates to the section of the staff concerned with practical architectural work throughout the Region (which includes the Counties of North-umberland, Durham, Cumberland, and parts of Westmorland and Yorkshire).

To Architects who already are or wish to become hospital specialists the appointment offers an excellent opportunity for doing good class work full of interest and variety in a developing public service.

The successful applicant will be required to take complete charge of the Board's Architectural and Surveying Drawing Office in Newcastle (present establishment, 13 assistants).

Candidates should be Members of the Royal Institute of British Architects, and have had extensive and responsible experience in the design and construction of large public buildings, including some experience of hospital and health-service buildings. They must be capable of supervising drawing office staff and building projects through all stages of work.

The appointment will be subject to the provisions of the National Health Service (Superannation).

Applicants should state: (1) Name and full applicants should state: (1) Name and full

ministion) Regulations, 1955. The successful candidate will be required to pass a medical examination.

Applicants should state: (1) Name and full address: (2) age and whether married; (3) degrees and professional qualifications; (4) past appointments and experience; (5) present appointment and salary; (6) war service; (7) date available if appointed, and (8) names and addresses of three referees.

Applications are to be received not later than the 14th December, 1956, and are to be addressed to the Secretary to the Board, Benfield Road, Newcastle upon Tyne, 6.

Newcastle upon Tyne, 6. 4664
METROPOLITAN BOROUGH OF BATTERSEA
Applications are invited for the following permanent appointments:—
ARCHITECTURAL ASSISTANT, A.P.T. II
(£895×£20 to £675 per annum).
OFFICE JUNIOR, Architects' Section (Qualified General Division, £180 to £640 per annum, subject to certificates of efficiency).
To the above salaries are to be added recent national award of 2½ per cent., and also London weighting of £10 per annum under 21 years; £20 p.a., 21.25 years; and £30 p.a., 26 years and over.

Overvious Local Government experience not essential. Work of the department includes public buildings and multi-storey flats. Application forms from the Borough Engineer and Surveyor, Town Hall, S.W.11. Closing date: 17th December. 4540

and Surveyor, Town Hall, S.W.11. Closing date: 17th December. 4540

BOROUGH OF HARROW
BOROUGH ENGINEER AND SURVEYOR'S
DEPARTMENT
Applications are invited for the following appointments in the Department of the Borough Engineer and Surveyor:—
(a) ARCHITECTURAL ASSISTANT, Grade A.P.T. II/III (£609 17s. 6d. to £734 2s. 6d. per annum, plus London "weighting"), and (b) QUANTITY SURVEYING Grade A.P.T. II (£609 17s. 6d. to £691 17s. 6d. per annum, plus London "weighting").
The appointments are subject to the provisions of the Local Government Superannuation Acts; the passing of a medical examination, and to the National Joint Council's Scheme of Conditions of Service.

National Joint Council's Scheme of Council Service.

The Council are unable to provide housing accommodation for the successful candidates.

Canvassing will be a disqualification.

Forms of Application may be obtained from me, to whom they should be returned not later than Friday, 21st December, 1956.

D. H. PRITCHARD,

Town Clerk.

Town Clerk's Office, Harrow Weald Lodge, Harrow Middlesex.

COUNTY BOROUGH OF CARLISLE
CITY ENGINEERS' DEPARTMENT
APPOINTMENT OF BUILDING INSPECTOR
Applications are invited for the above post.
Salary A.P.T. III (£656 to £784 2s. 6d.). Applicants must hold the Building Inspectors' Certificate of the I.Mun.E. or equivalent.
Housing accommodation will be made available

able.
Forms of Application from City Engineer, 18,
Fisher Street, Carlisle.
Closing date: 17th December, 1956,
Closing date: 17th December, 1956,
Town Clerk.
4684

METROPOLITAN BOROUGH OF BATTERSEA APPOINTMENT OF ARCHITECTURAL ASSISTANT, A.P.T. IV

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

had several years' office experience, preferably in housing and other buildings undertaken by a local authority.

Salary £710×£35 to £885 per annum, in which is to be added recent mational award of 2½ per cent, and also London weighting (£30 per annum at age 26 or over).

Application forms from the Borough Engineer and Surveyor, Town Hall, S.W.11. Closing date: 17th December.

WARWICKSHIRE COUNTY COUNCIL
COUNTY PLANNING DEPARTMENT
Applications are invited for the appointment of
a SENIOR PLANNING ASSISTANT A.P.T.
Grade V/VI (£814 17s. 6d.—£1,107 per annum).
Commencing salary will be according to experience and qualifications.
The appointment is subject to the provisions of the Local Government Superannuation Act and to the National Scheme of Conditions of Service.
The successful candidate will be required to pass a medical examination.
Applicants should be professionally qualified.

a medical examination.

Applicants should be professionally qualified, with all-round planning experience. Experience in overspill and its related problems will be an advantage.

vantage.

Applications together with the names and addresses of two referees should be forwarded to J. J. Brooks, County Planning Officer, Northgate, Warwick, not later than Monday, 10th December, 1056

L. EDGAR STEPHENS, Clerk of the Council.

Shire Hall, Warwick.

BOROUGH OF HESTON AND ISLEWORTH
Applications are invited for the under-mentioned
appointments in the Borough Engineer and Surveyor's Department:—
(a) SENIOR PLANNING ASSISTANT.
Salary in accordance with A.P.T. Grade III
(£656×£25 12s. 6d.—£784 2s. 6d., plus London
weighting).

ceighting).
(b) PLANNING ASSISTANT.
Salary in accordance with A.P.T. Grade I £609 17s. 6d. × £20 10s. – £691 17s. 6d., plus Londo

Salary in (£609 17s. 6d. ×£20 10s.—£691 17s. 6u., ... weighting).

Applicants for (a) must have passed and applicants for (b) should have passed the Intermediate Examination of the Town Planning Institute or other equivalent, and have had experience in the town planning department of a

Salary in accordance with Grade A.P.T. I (£609 17s. 6d.×£20 10s.-£691 17s. 6d., plus Londo

(£609 178. 6d. × £20 108.—£691 178. 00., preceditions weighting).

Applicants must be capable and expeditions draughtsmen, and town planning experience will be an advantage.

The Council is unable to assist the successful candidates with housing accommodation.

Applications are to be submitted by 22nd December, 1956, on forms to be obtained from and returned to the Borough Engineer and Surveyor, 88, Lampton Road, Hounslow.

D. MATHIESON.

Town Clerk.

Town Clerk

Town Hall, Hounslow.

Town Hall, Hounslow.

4672

COUNTY COUNCIL OF NORTHUMBERLAND COUNTY ARCHITECT'S DEPARTMENT Applications are invited from Architects who have passed the R.I.B.A. Final or Intermediate Examination, having some previous office experience for the post of ASSISTANT ARCHITECT on the staff of this Department. Salary according to qualifications up to A.P.T. Grade IV, £727, rising to a maximum of £907 per annum, with prospects of promotion to higher grades within the office in due course.

The appointment will be subject to the provisions of the Local Government Superannuation Acts, and the successful candidates will be required to pass a medical examination.

Applications in writing, stating age, qualifications and previous experience, together with the names and addresses of two referees to whom reference can be made, to be forwarded to the County Architect. County Hall, Newcastle-uponTyne, 1, not later than Wednesday, 12th December, 1956.

GOLD COAST LOCAL CIVIL SERVICE

(a) ASSISTANT TOWN PLANNING OFFICERS
(b) TOWN PLANNING OFFICERS
(c) TOWN PLANNING OFFICERS
(c) Required for duty with the Ministry of Local
(c) Government and Housing. Contract appointments
(c) for two tours of 18-24 months in first instance.
(c) Salary ranges (a) £1,180-£1,530 p.a., (b) £1,600£2,020 p.a., plus a temporary addition of
£29 15s. p.a. Gratuity £12 10s. for each month
(c) fatisfactory service on completion of contract.
(c) Free passages for officer, wife, and up to three
(c) the first of the first o

perience, quoting (a) or (b) BUD.105/15/105. 1050
CITY OF BATH
CITY PLANNING AND ARCHITECTURAL
DEPARTMENT
Applications are invited for the appointment
of a PLANNING ASSISTANT at a salary in
accordance with Grades A.P.T. I-II (£943 58.—
£951 178. 6d.) per annum, according to qualifications and experience. The post is pensionable
and subject to the N.J.C. conditions. The Council
is prepared to consider providing housing
accommodation if required to applicants who are
married.

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COUNTY COUNCIL OF THE WEST RIDING
OF YORKSHIRE
OFFICE OF THE COUNTY ARCHITECT
Applications are invited for the appointments of ASSISTANT ARCHITECTS in the grades shown below, the salary ranges of which are:
Special Grade: £690-£840.
A.P.T. IV: £770-£885.
Applicants should be Registered Architects and have had good training in the design and construction of modern buildings. Opportunities available for taking responsibility and supervising works in progress in connection with extensive and interesting programmes of first-class architectural work.
The appointments are subject to the provisions of the Local Government Superannuation Acts and to the successful candidates passing a medical examination.
Applications, on forms obtainable at this office, must be delivered not later than the first post on Monday. 17th December, 1956.
A. W. GLOVER, F.R.I.B.A.,
Deputy County Architect.
Bishopgarth, Westfield Road, Wakefield. 4680
URBAN DISTRICT COUNCIL OF EAST
Applications are invited for the following permanent appointments:—
(4) ASSISTANT ARCHITECT, Grade A.P.T.

Applications are invited for the following permanent appointments:—
(a) ASSISTANT ARCHITECT, Grade A.P.T.
III (£656 to £784 2s. 6d. per annum).
(b) ARCHITECTURAL ASSISTANT, Grade A.P.T. II (£609 17s. 6d. to £691 17s. 6d. per annum).

nnum). The above salaries will be increased by London veighting of £20 to £30 per annum, according

weighting of £20 to £30 per annum, according to age.

Housing accommodation will be provided for appointment (a) if necessary.

Conditions of Appointment and Forms of Application, returnable by the 29th December, 1956, may be obtained from the Engineer and Surveyor, Town Hall, Station Road, New Barnet, Hertfordshire.

veyor. Town Hall, Station Road, New Barnet, Hertfordshire.

SURREY COUNTY COUNCIL
COUNTY PLANNING DEPARTMENT
Applications are invited for the following appointments:—
(a) At Headquarters at Kingston-upon-Thames, ONE PLANNING ASSISTANT. A.P.T. Grade III (£640 × £25-£765, plus London allowance).
(b) At North-West Area Office, Woking, ONE PLANNING ASSISTANT, A.P.T. Grade III (£640 × £25-£765).
Applications, stating age, experience and qualifications, together with the names of two persons to whom reference may be made, should be lodged with the Clerk of the Council not later than Thursday, 20th December, 1956.
County Hall, Kingston-upon-Thames.

STAFFORDSHIRE COUNTY COUNCIL.
COUNTY PLANNING AND DEVELOPMENT
DEPARTMENT
Applications are invited for the appointment of a PLANNING ASSISTANT in the Northern Area Planning Office, Newcastle, Staffs, within A.P.T. Grades III-IV (£640 to £385). Commencing salary according to experience and qualifications.

A.F.T. Grades 111-1v (£640 to £885). Commencing salary according to experience and qualifications.

Applicants must have passed the Intermediate of the Town Planning Institute or its equivalent, and have had experience in the preparation and carrying into effect of housing estate layouts, estate redevelopment work, and urban redevelopment schemes.

estate redevelopment work, and urban redevelopment schemes.

Applicants should give details of age, education and training, qualifications, present and previous appointments and experience, and the names of two persons to whom reference can be made. Applications, in which relationship to any member or senior officer of the County Council must be disclosed, should be sent to D. W. Riley, County Planning and Development Officer, 41a, Eastgate Street, Stafford, not later than the 19th December, 1956.

T. H. EVANS,

Clerk of the County Council.

COUNTY BOROUGH OF EAST HAM
Applications are invited for the following appointments on the established staff:

(a) SENIOR ARCHITECTURAL ASSISTANT. Salary: A.P.T. V.VI (£814 178. 6d.—£1,107), plus London weighting.
(b) ARCHITECTURAL ASSISTANT. Salary: A.P.T. V (£814 178. 6d.—£994 58.), plus London weighting.

A.P.T. V (£814 178, 661.—£934 58.), plus London weighting.
(c) ARCHITECTURAL ASSISTANT. Salary:
A.P.T. II (£609 178, 6d.—£691 178, 6d.), plus London weighting.
Further details and forms of application (returnable by 19th December, 1956) from the Town Clerk, Town Hall, East Ham, E.6.

LONDON COUNTY COUNCIL ARCHITECT'S DEPARTMENT Vacancies exist for ARCHITECTPLANNERS (salaries up to £817). Tasks include 3-dimensional planning within London's eight major Comprehensive Development Areas (including Stepney/Poplar, the South Bank, and Elephant and Castle) and other Redevelopment Areas.
The work includes the preparation of comprehensive layouts covering all the important areas of new public and private development throughout the County, and covers the whole field of planning technique.

Particulars and application form from Architect (AR/EK/ATP/I), County Hall, S.E.I. (907)

4543

HER MAJESTY'S OVERSEA CIVIL SERVICE ARCHITECT, PUBLIC WORKS DEPARTMENT, JAMAICA

To prepare designs, plans and working drawings, etc., under direction of Chief Architect.

Appointment is either permanent and pensionable or on contract for three years in first instance. Salary £820—£1,200 p.a. Starting salary according to experience. Contract gratuity payable £100—£150 p.a.

Free passages for officer, his wife, and children up to a total of five persons. 1½ months' leave for each completed year of resident service. Government quarters mot provided.

Candidates must be A.R.I.B.A. Write Director of Recruitment, Colonial Office, London, S.W.I., stating briefly age, qualifications and experience, quoting BCD 112/32/06.

BUCKS COUNTY COUNCIL

of Received age, quannearing quoting BCD 112/32/06.

Applications are invited for the appointment of an ASSISTANT ARCHITECT in the County Architect's Department. Salary A.P.T. Grade VII (£999—£1,230 p.a.).

The appointment is superannuable and subject to medical examination.

A weekly allowance of 25s_ and return fare home once every two months may be paid for six months to newly appointed married officers of the Council unable to find accommodation.

Applications, on prescribed forms, must be returned by 21st December. 1956.

F. B. POOLEY,

County Architect.

County Offices, Aylesbury.

County Architect.
4685

LONDON COUNTY COUNCIL
ARCHITECTS DEPARTMENT
Vacancies for ARCHITECTS Grade III (up to
£987), and ARCHITECTURAL ASSISTANTS (up
to £818), for widespread construction programme
which includes houses, blocks of flats, schools of
all types, and various public and industrial buildings. Application forms and particulars from
Architect (AR/EK/A/2), The County Hall, S.E.I.
(1189)

LONDON COUNTY COUNCIL ARCHITECT'S DEPARTMENT
ARCHITECTURAL and SURVEYING ASSISTANTS required for BUILDING ACT and BYLAW WORK in connection with the Council's constructional and fire-precautionary standards. Starting salaries up to £818 according to qualifications and experience.
Particulars and application form from Architect (AR/EK/BCW/3), County Hall, S.B.I. (2223).

CITY OF STORE-ON-TRENT
CITY ARCHITECT'S DEPARTMENT
Applications are invited from young, keen
QUANTITY SURVEYORS with experience in
taking-off and/or settlement of accounts, N.J.C.
scales of salary, according to qualifications and
experience. Previous Local Government experience not essential.
HOUSING ACCOMMODATION can be made
available, if necessary.
Applications to J. R. Piggott, T.D., F.R.I.B.A..
City Architect, Kingsway, Stoke-on-Trent, before
31st December, 1956.
HARRY TAYLOR.

y, Store-... HARRY TAYLOR, Town Clerk. 4703

LONDON COUNTY COUNCIL
(1) LANDSCAPE ARCHITECT and (2) LANDSCAPE ARCHITECTURAL ASSISTANTS required. Good experience of preparation of working
drawings and specifications and supervision of
work on site essential. Programme includes new
parks, gardens and playing fields ground reinstatement, land drainage, etc.
Salaries (1) £775 to £987, (2) up to £817 a year;
starting point in each case according to qualifications and experience. Superannuation scheme.
Four free Saturdays in five.
Apply giving brief particulars to Chief Officer
of the Parks Department, Old County Hall, Spring
Gardens, S.W.1 (WHItehall 3121 Ext. 33). (2334)
4706

Architectural Appointments Vacant 4 lines or under, 7s. 6d.; each additional line, 2s.

A SSISTANTS urgently required, around Interstandard. 5-day week and lunch vouchers.—
Write full particulars, Lanchester & Lodge, 10,
Woburn Square, London, W.C.1.
4585

A RCHITECTURAL ASSISTANTS required.
State salary, age. experience, etc. Harvey & Scott, 2, Lynedoch Place, Glasgow, C.3. 4278

A RCHITECTURAL ASSISTANT required: qualified or Intermediate stage. Must have good experience, and considerable capacity for work.—Write, stating salary required, to David Carr & Stuart Matthew, 14, Lynedoch Place, Edinburgh.

RILEY & GLANFIELD require male ASSIS-TANT, maximum salary £650. Work: church, industrial, housing and public house, Telephone CHA 7328.

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A RCHITECTURAL ASSISTANT required in Wembley. Experience in design and construction of industrial buildings and office blocks, Write stating age, experience, and salary required to Box 4553.

A RCHITECTURAL ASSISTANT required, with about four to five years' office experience.
Write or telephone giving full particulars, including age and salary, to Hasker & Hall, Architects,
13 Welbeck Street, W.1. (WELbeck 0061), 4561

A R.I.B.A., Chesterfield House, Chipping Sodbury, Pristol

COMPETENT ARCHITECTURAL ASSIS
TANT required in small intimate office, for
detailing interesting and varied City building.
Work just commencing on site. Position offers
all round experience to person of right calibre.
State salary required.—Box 4601.

A SSISTANTS required in West End Office. Standard, and with previous drawing office experience preferred.—Box 4598.

NDUSTRIAL Designer requires ASSISTANT Experience in Engineering and Furniture Design welcome. 1st class draughtsmanship essential. State salary.—Box 4596.

A RCHITECTURAL ASSISTANTS required, London and Home Counties. Salaries £5000 to £750.—Box 4576.

POST-INTERMEDIATE ASSISTANT required, in large London Office with widely varied practice. Lewis Solomon, Son & Joseph, 21. Bloomsbury Way, London, W.C.I. Telephone HOD

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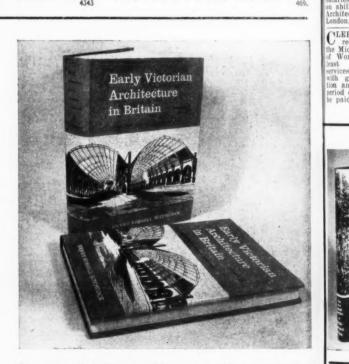
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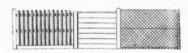
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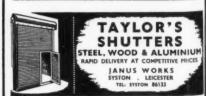
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