ARCHITECT JOURNAL



Information for the architect:

From October the AJ will be changed and enlarged to include the special features listed below. Architects and students are recommended to make sure that they get, if they do not already, their personal copies of the AJ in order to be able to create their own individual sfB-classified library (see AJ order reply paid form at the end of the Journal.)

Elemental check lists

Each week in addition to its usual features the AJ will publish a supplement giving a design check list for one of the functional elements in Table 1 of the sfB system of classification.

Technical references

Accompanying this elemental check list will be a list of technical references telling architects where to obtain the factual data needed in all stages of the design process.

Technical studies

These technical references will be accompanied by a special article, additional to the normal AJ technical article, which will deal with some aspect of the functional element in question.

Information sheets

Supporting these supplements will be a special series of Information Sheets. These have been designed as an enlargement of the present series to provide a complete and concise coverage of all materials and trade products.

Informative advertisements

The co-operation of advertisers and advertising agents is being sought in producing preclassified advertisements giving basic information on their products for inclusion in each sfB element file.

THE AJ LIBRARY

New products and new publications

The AJ's weekly features, The Industry, by Brian Grant, and Information Centre are being redesigned so that each note is contained on A6-sized paper and carries an sfs classification number so filing enthusiasts can keep each item for future reference.

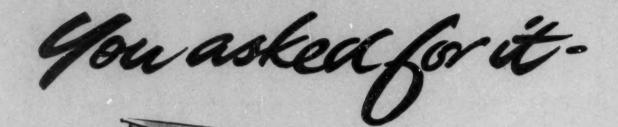
As usual

The AJ will continue to publish technical articles, cost analyses of buildings, Working Details and prices of measured work, all of which readers may wish to file in personal, as well as office, libraries.

SfB classification

All articles, features and reviews will be classified with the sfB number and the UDC number where appropriate in a coding box in the top right-hand corner.

The introduction of a special method of binding has enabled the AJ to be opened out flat and to make all pages, and not just Information Sheets and Working Details, to precisely the A4 size, the officially recommended size for technical publications. An inch margin and centring marks for punching at the standard 31 spaces allow the AJ's pages to be filed in most types of folder or binder. All articles will be arranged so that they can be easily extracted as a whole, without including other editorial matter. The removal of pages or groups of pages from the glue backing is facilitated if the Journal is opened out and the join rubbed flat on both sides of the page or pages being extracted.



Architects and local authorities were asked if they would welcome a cold water cistern that was corrosion free, lightweight, strong, frost resisting and at no extra cost. The overwhelming majority said 'Yes'. The Osma reply—the 30/25 gallon polyester-glass fibre

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Extract from a report prepared by:

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Mr. G. C. Wilson for R. H. Harry Stanger, Testing Consultants, The
Laboratories, Summerfield House, Barnet Lane, Elstree, Herts.

5th October 1960
Report of permeability test carried out with Febproof Integral Liquid
Waterproofing Compound in a Mortar Mix.

Febproof
Control

	Treated	Untreated
Mix:-	3	1
Sand, Parts by Volume Sand, Parts by Volume Portland Cement by Volume "Febproof," Pints per cwt. Cement	0-47	Nil 0-53
Water Cement Ratio	112"	
Slump Inches		WITH FEBPROO

TEST RESULT ON MORTAR TREATED WITH FEBRROOF

Water P	ressure	Water Pressure Held For	Amount of Water Percolation
46 69 92 115 172 230 287	20 30 40 50 75 100 125	1 HOUR 1 " 1 " 1 " 1 "	NIL NIL NIL NIL NIL NIL NIL NIL

The thickness of the 1-3 cement, sand mortar slabs, was 2", and age at date of test 28 days. Water percolated through all untreated control specimens. No water percolated through Febproof treated specimens, SEE TEST RESULT ABOVE. Signed by G. C. Wilson for R. H. Harry Stanger.

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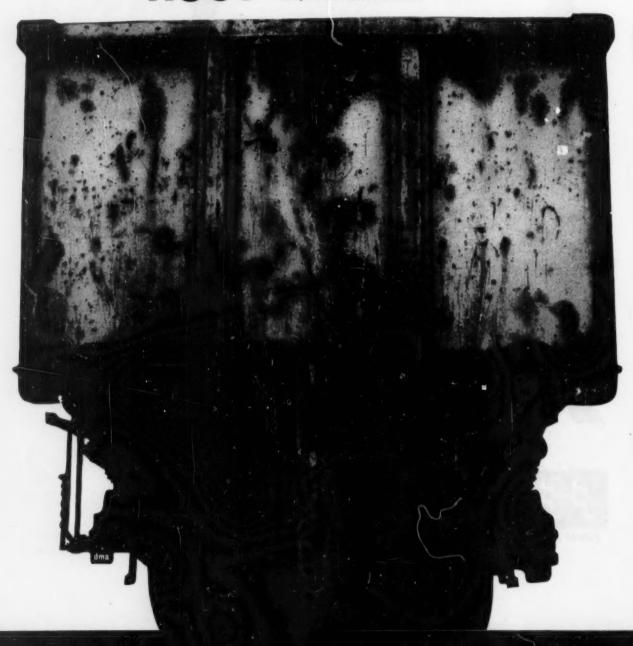
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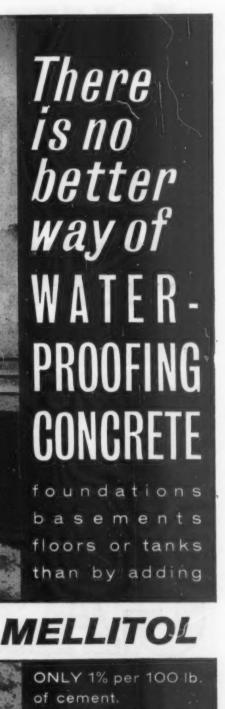
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Contractor: Tersons Ltd., Landon, N.3.

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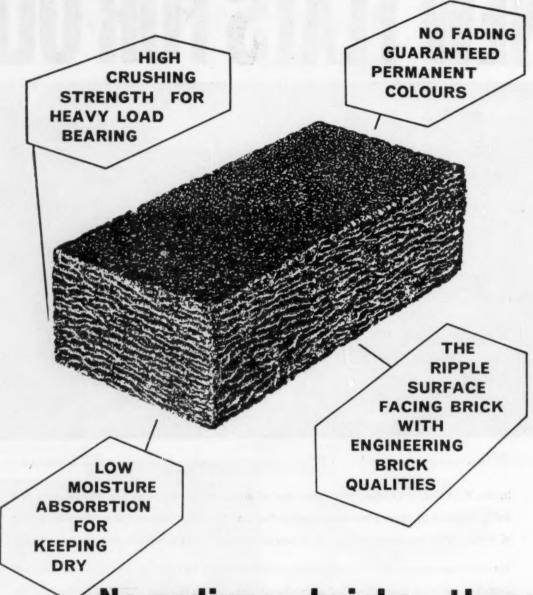
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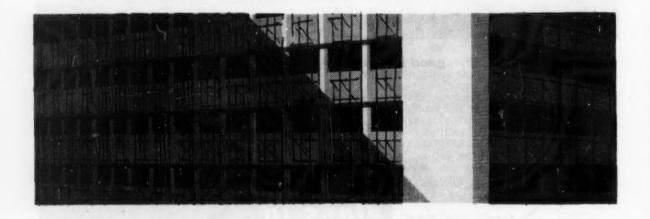
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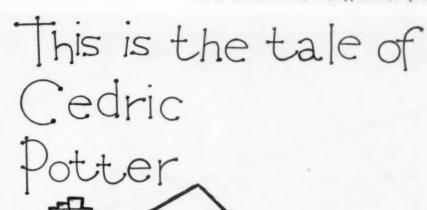
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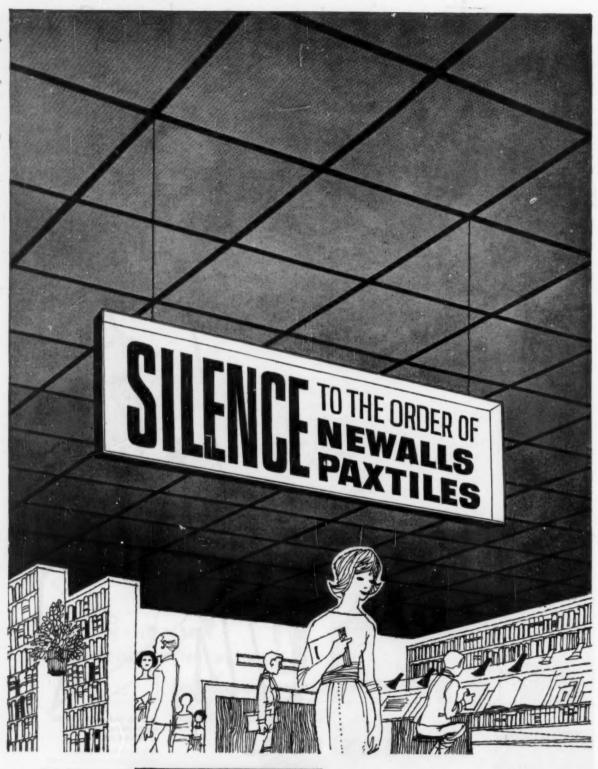


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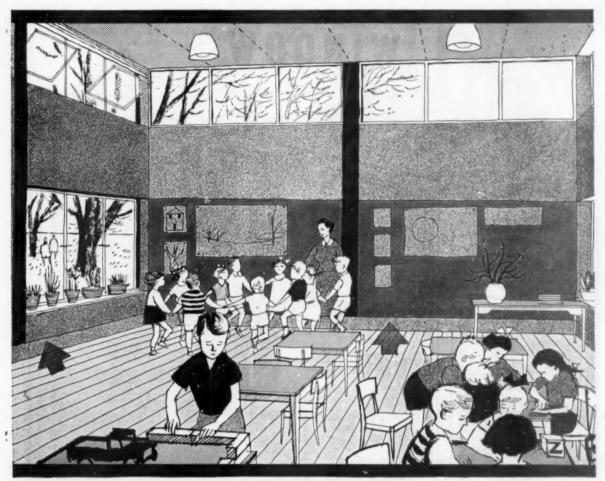
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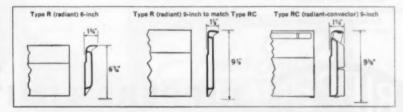


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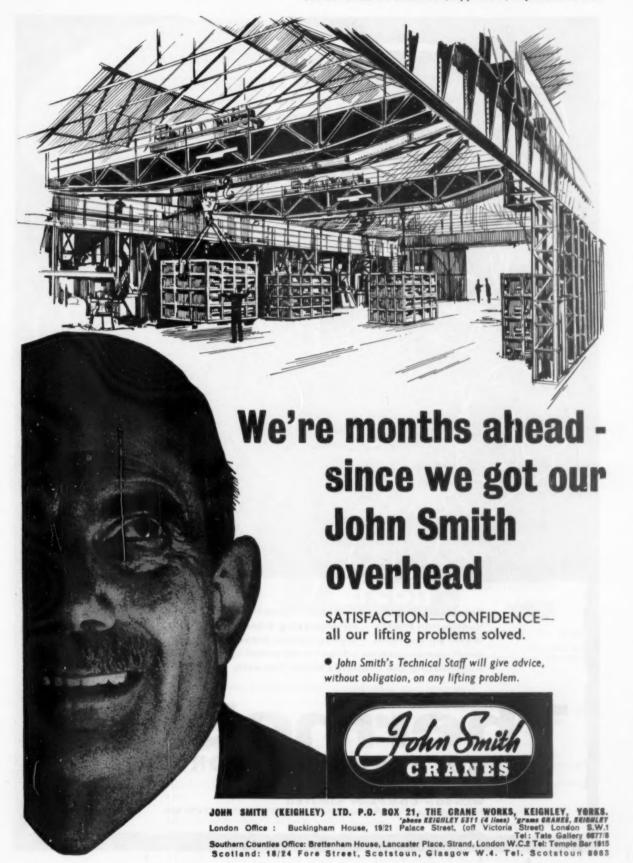
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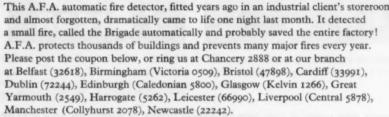
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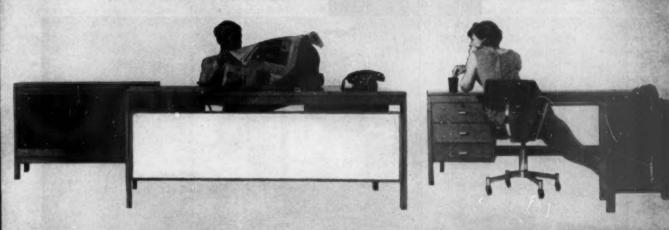
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Architect: Albert H. Clarke, F.R.I.B.A., A.M.P.T.I.
City Architect, Bristol.

Waring and Francombe Houses, recently completed, together with Underdown House, form the largest single block in the 400-flats first stage of the Redcliffe development.

The 400 flats of the Redcliffe Precinct development are an impressive new landmark in Bristol, standing at the very heart of a district which has been planned as the city's newest smoke-controlled area. The flats are provided with central heating and constant hot water from a central boiler-house—and the fuel chosen to fire the boilers is coal. But the chimney which traditionally marks the location of a boiler-house is hidden from the Redcliffe skyline. You'll see no smoke clouds drifting on the wind. For the six modern boilers which heat 6,000 gallons of water a day for the Redcliffe flats produce no smoke, although they have been burning 300 tons of coal a year, and will burn much more as the development reaches completion.

The National Coal Board is proud of the fact that coal, in competition with other fuels, was chosen for heating purposes in this major housing project. Mr. D. F. Pexton, the Board's Divisional Marketing Director, looks upon Redcliffe as a graphic illustration of how coal—properly burned with modern equipment—is proving itself to be the most economical and efficient fuel for present-day needs.

CLEAN AIR

"Smoke and grime are no longer an inevitable outcome of burning coal," he states. "The days of burning any type of coal any old how, without thought for the power wasted or the smoke produced, are gone. A lot of progress has been made since then in methods of burning, and power engineers now know that the right kind of coal used with the right kind of equipment produces maximum efficiency, maximum value for money—and does not pollute the atmosphere."

R. W. Gregory and Partners of Manchester acted as Heating Consultants for the scheme, and the Redcliffe boilerhouse is equipped with 'Suxé' burners, which are specially designed to burn the cheaper grades of anthracite. This is a naturally smokeless fuel, but all modern furnaces—from the huge chain grate stokers used in large industrial plants to the small installations burning a few hundredweights a week for flat or office heating—can burn bituminous coals without producing smoke. By controlling draughts and regulating combustion rates all the smoky gases given off by burning coals are

consumed in the furnace.

This control is frequently fully automatic—as with the Redcliffe boilerhouse, which virtually runs itself. The burners are regulated by a thermostat which operates according to the temperature of the outside air. The colder the temperature out in the open, the more heat the burners produce, and vice versa, thus assuring the tenants of the Redcliffe flats of comfortable living conditions whatever the weather. The burners also bank themselves down automatically at night and open themselves up again in the morning.

Coal is fed into the boilers by gravity, and one daily filling of the feed hoppers provides sufficient fuel for a whole day's operation. The filling is also done automatically by means of an electrically driven travelling loader, with push-button controls, which has been specially designed for this boiler-house. The coal is, in fact, 'untouched by human hand' from the time that it is mechanically cut from the coal face until it is burned on the firebeds.

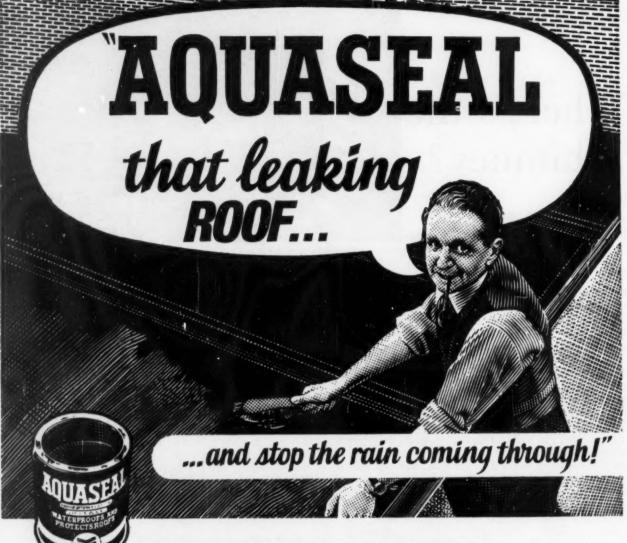
NO LABOUR TROUBLES

The boilerhouse, which will eventually provide a central heating system for the whole of the first stage of the Redcliffe development, is located in the basement of Canynge House. Four boilers were originally installed here, two more having since been added to meet peak demands when the scheme is completed. Hot water for domestic purposes and central heating in the newly completed and separate 170-flat block is pumped by underground pipes from Canynge House. Further pipes will feed the third block of 100 flats which will complete the first stage. Work on these has already begun. By centralizing the boiler installations in this way, coal delivery, handling and storage are simplified and maintenance made considerably easier.

This modern heating and hot water system makes a minimum demand on the time of the caretaker and his assistant who are responsible for its operation. A few minutes each day has been sufficient to keep the boilers running at peak efficiency without further supervision and it is not anticipated that boiler operation will be appreciably more arduous even when all 400 flats are connected.

PROGRESSIVE HOUSING IS GOING FORWARD ON





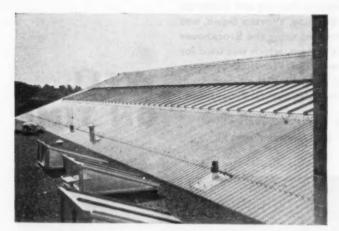
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THE ARCHITECTS' JOURNAL (Supplement) September 6, 1961

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WELL ON TIME

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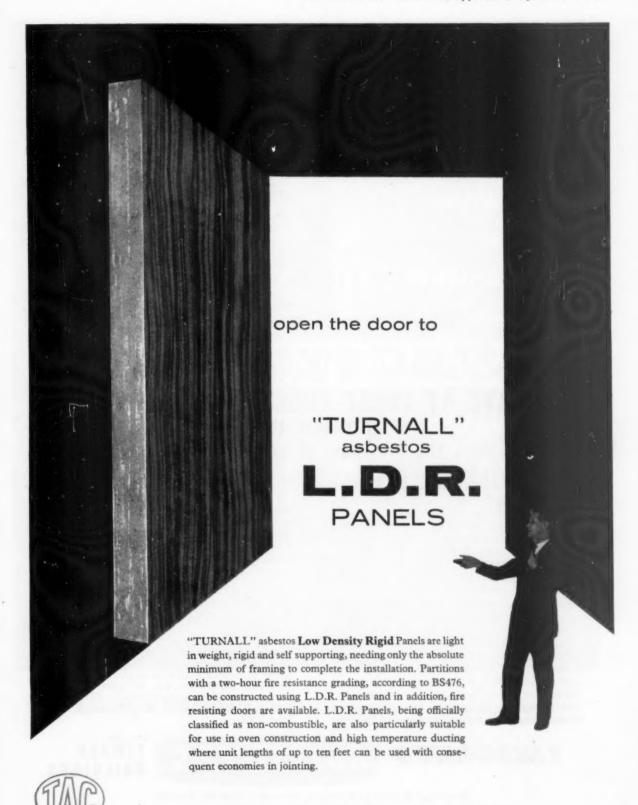
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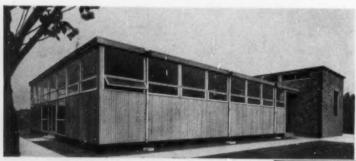
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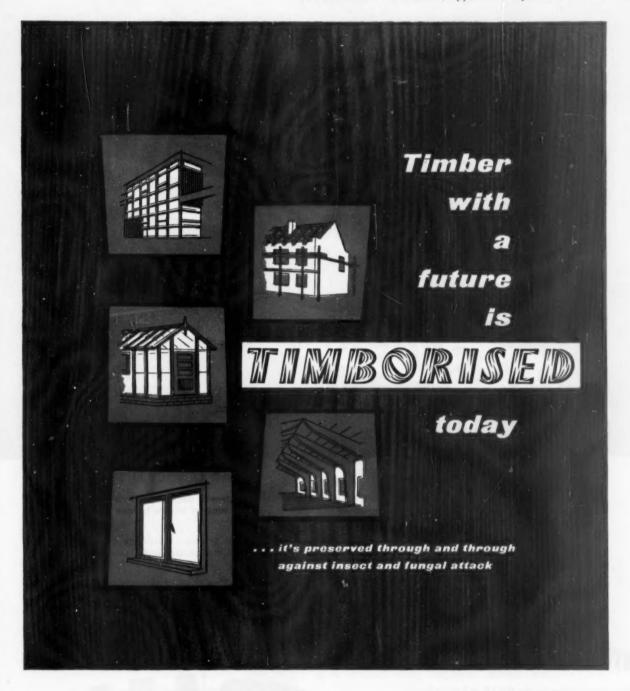
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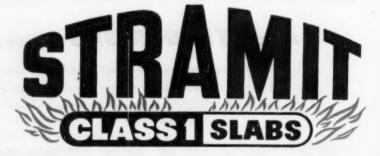
This was a chemistry laboratory in Saffron Walden, Essex, which was decked with Stramit structural insulating slabs. A fire raged in the laboratory for several hours before being brought under control.

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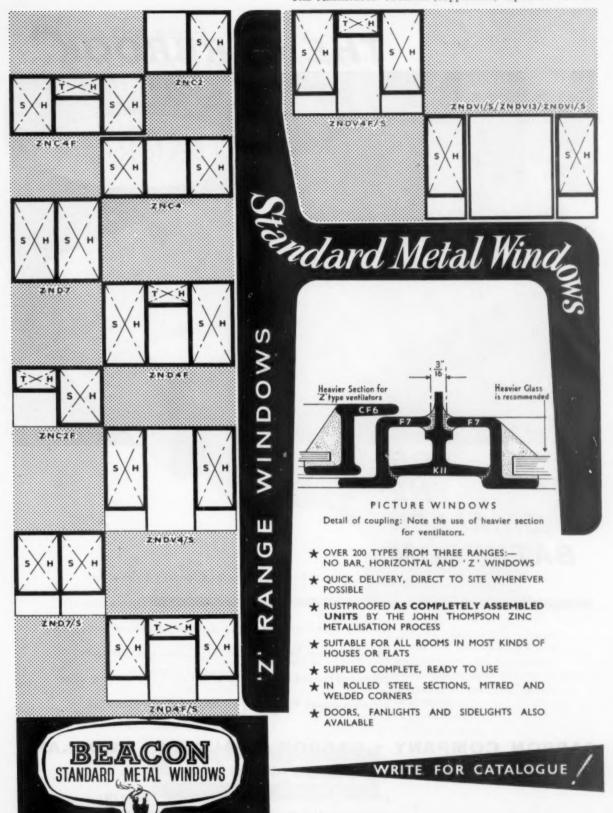
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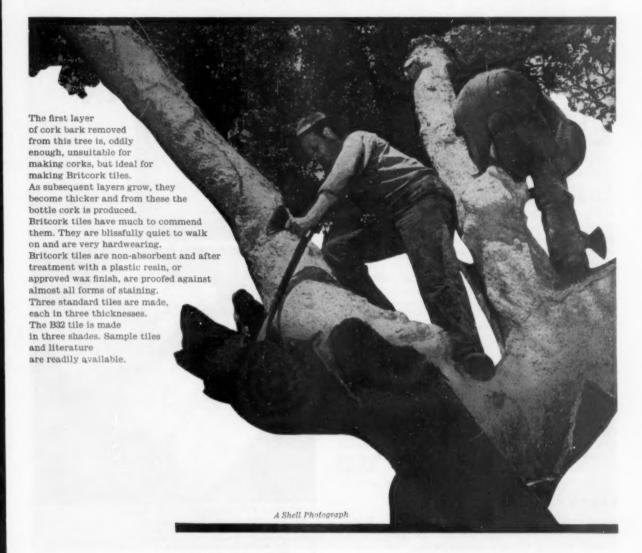
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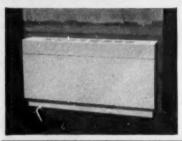
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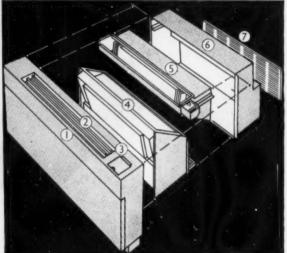
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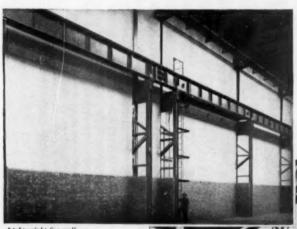
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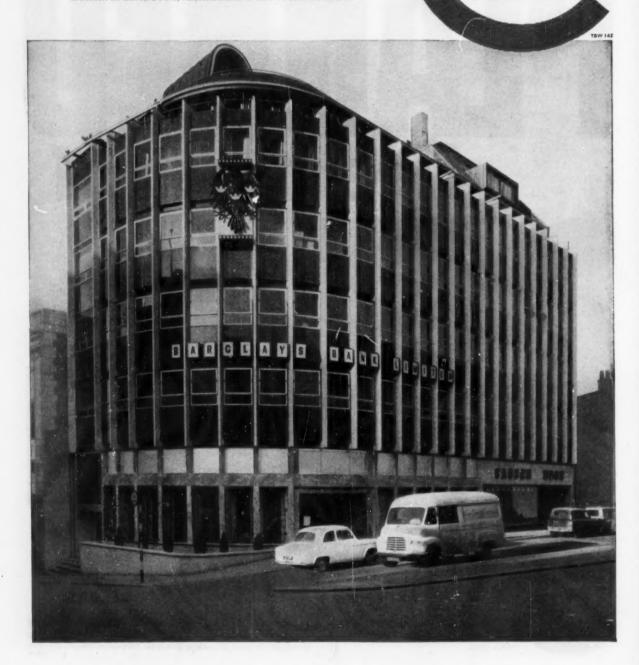
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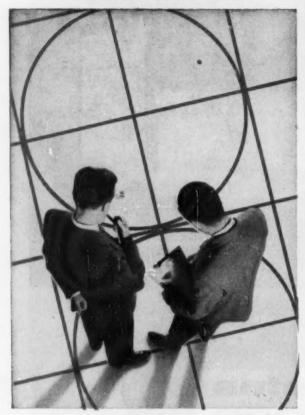
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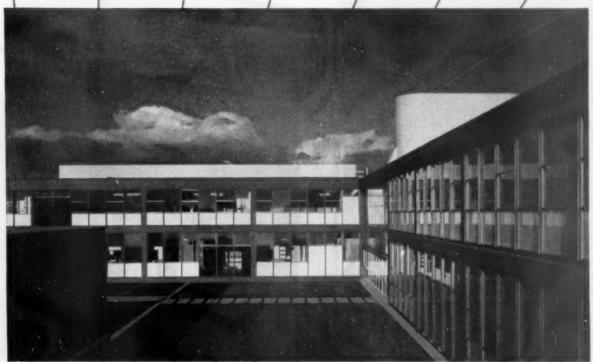
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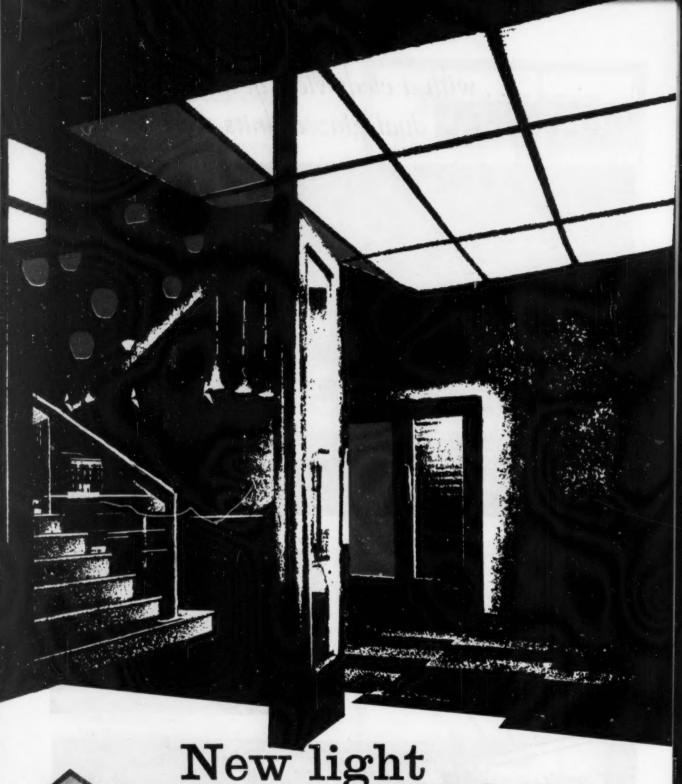




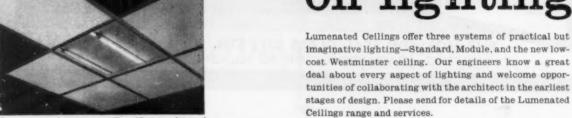
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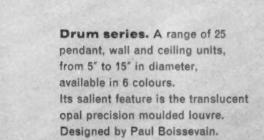


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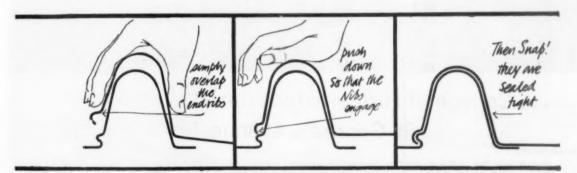
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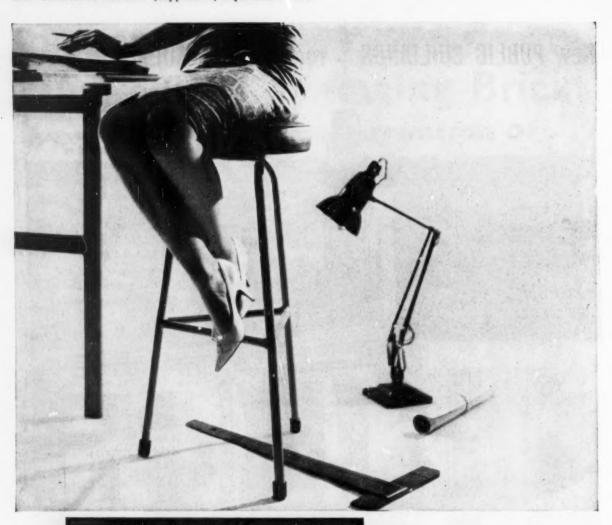
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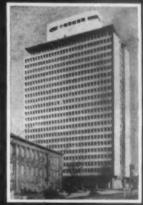
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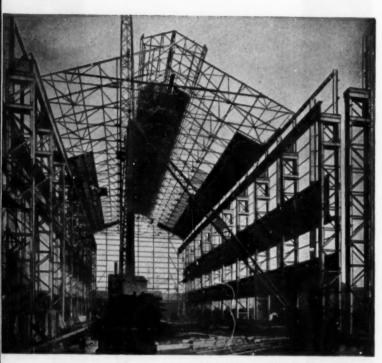


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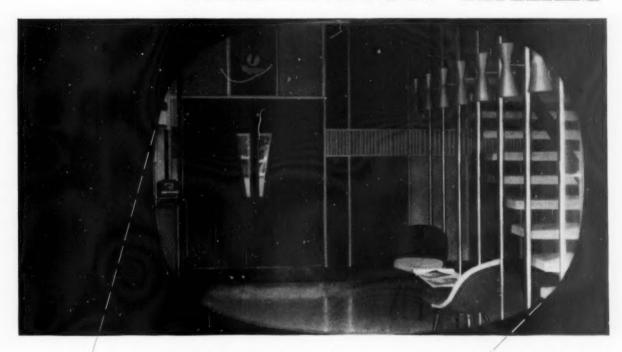
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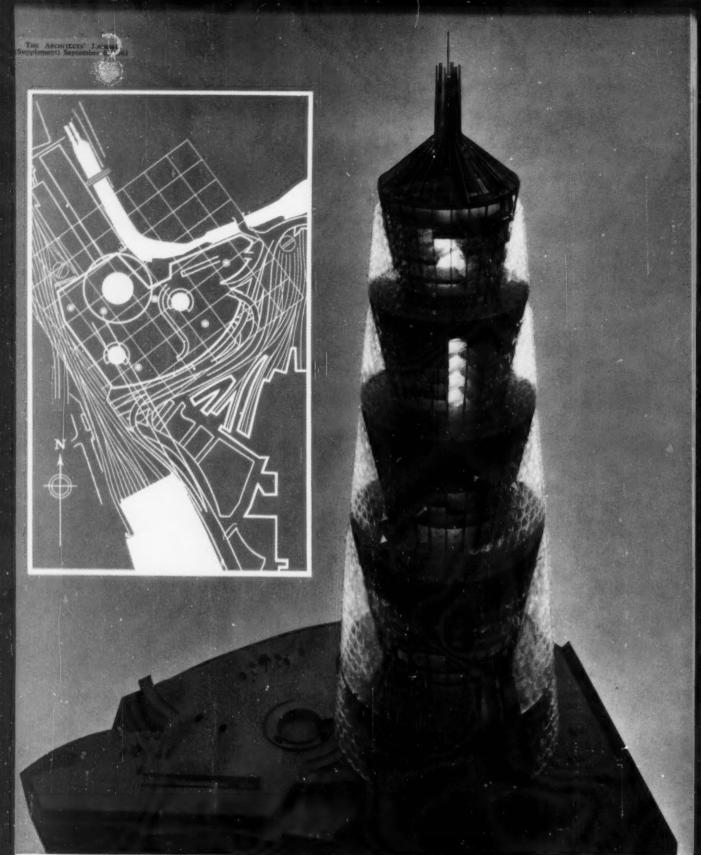
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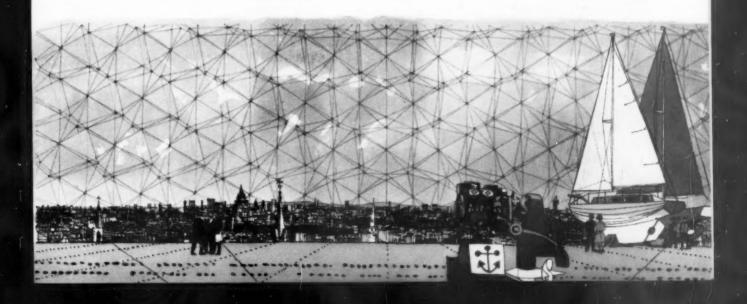
Crystal 61 was conceived by Mr. Ove Arun and Mr. G. A. Jellicoe.

Crystal 61 was conceived by Mr. Ove Arup and Mr. G. A. Jellicoe, with John Martin of Ove Arup and Partners, Civil Engineers, and Hal Moggridge of Jellicoe, Ballantyne and Coleridge, F.A.R.I.B.A., under the auspices of the Glass Age Development Committee, which is convened by Pilkington Brothers Limited and consists of Mr. G. A. Jellicoe, C.B.E., F.R.I.B.A., Mr. Edward D. Mills, C.B.E., F.R.I.B.A., and Mr. Ove Arup, C.B.E., M.I.C.E.

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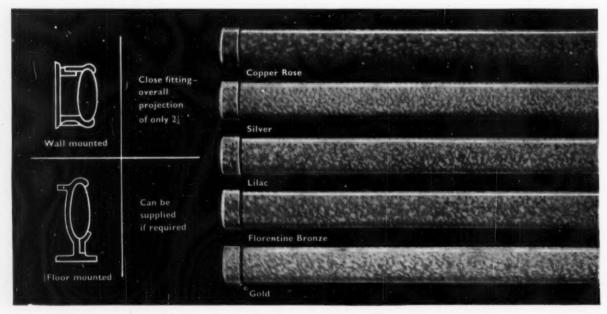
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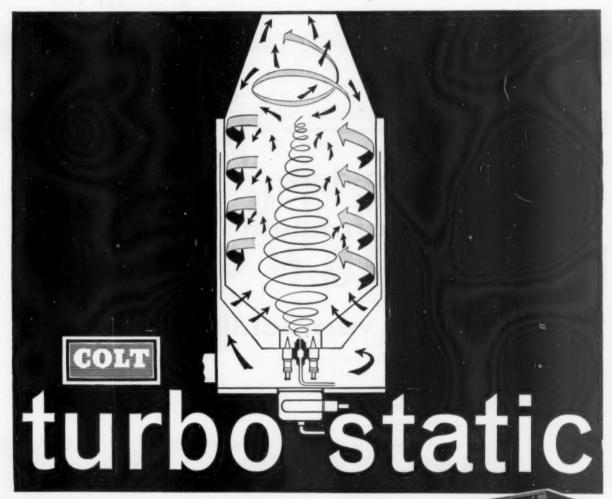
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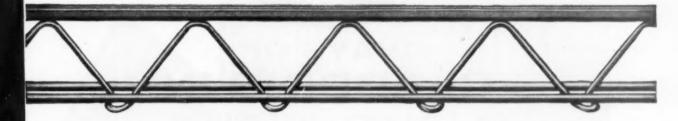
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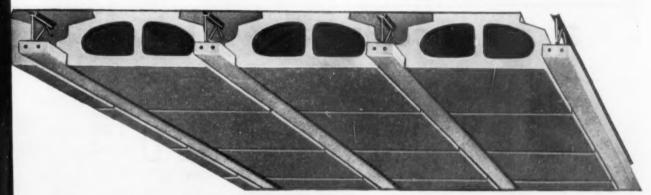
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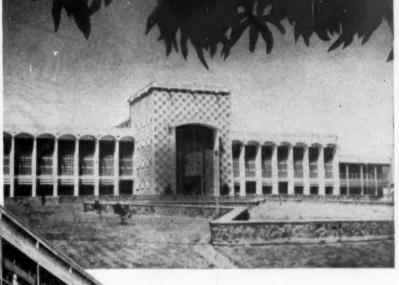
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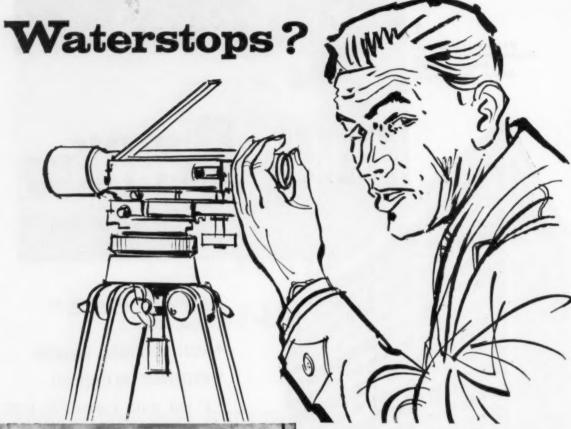
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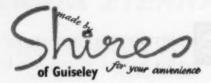
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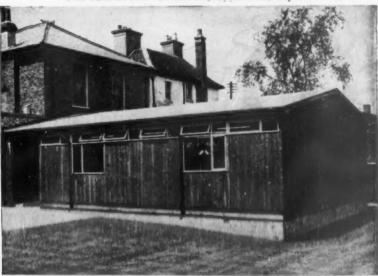
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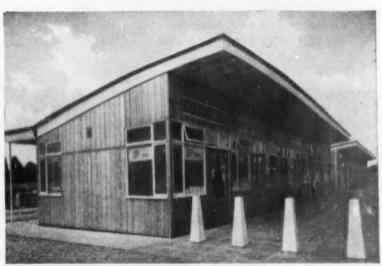
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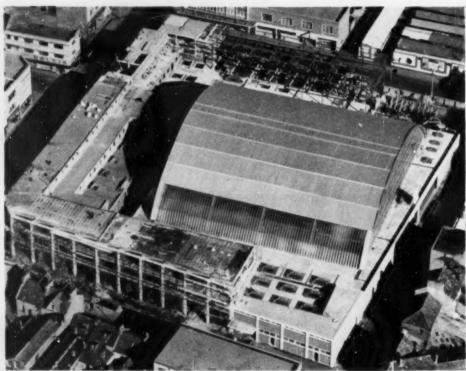


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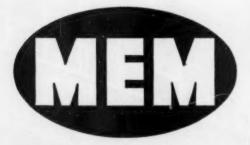


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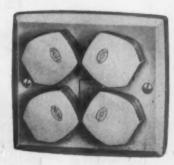
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Specially trained Thermalite teams are now in operation delivering and erecting Thermalite Ytong reinforced roofing units. In addition to the speed of construction, facilitated by ease of fixing, this roofing offers many further advantages including:

- * Lightness with loadbearing. Dry density range of 30-40 lbs/cu. ft.
- * 'Built-in' thermal insulation.
- * Excellent fire resistance complying to B.S. 476 Part 1.

For full technical details of roofing, internal and external wall units write to :

THERMALITE YTONG LIMITED

Hams Hall, Lea Marston, Sutton Coldfield, Warwickshire. Telephone: Coleshill 2081

Factories at: Birmingham - London - Manchester
Newcastle - Reading



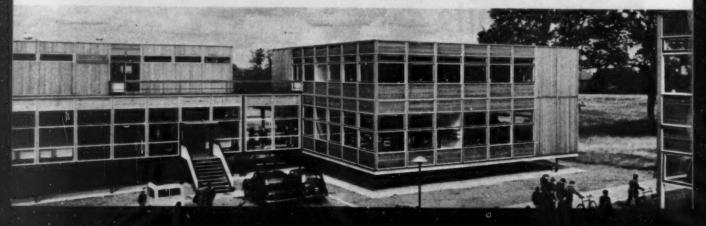
Medway Constructional Systems

Medway modular systems save both time and money. This is ensured by first class architectural detail and sound timber engineering, combined with really up-to-date production techniques. Very rapid site schedules can be offered with 'all-dry' methods. Design costs can also be cut at the 'working drawing' stage of a project.

Medway have systems suitable for almost any one or two-storey building—permanent or demountable. For rapid building, economic cost and, of course, a most attractive building use a *Medway System*.

MEDWAY BUILDINGS & SUPPLIES LTD.

Phoenix Wharf, Rochester, Kent. Tel: Strood 7521



The Wincilate Group Service

ADVance 2203

Architects requirements discussed Finest slate quarried and selected, opmas & cladding precThe Bow Slate & Enamel Co. Ltd The Town Hall, Bow Rd. E3. ADV 2203









workers or the lighting?

In point of time, of course, the lighting comes first. Or does it? It's rather like the chicken and the egg. With lighting, Holophane plan first for the visual task. To do this effectively calls for a close study

of the work to be done, the problems of glare control, work surfaces, angle of vision and placing of lighting fittings. All these must be scientifically assessed as they affect the worker.

So call in Holophane before building construction begins. By doing so you'll be putting the workers first—their eyesight and working comfort. Write for latest Holophane lighting catalogues without obligation.

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SCIENTIFICALLY CONTROLLED LIGHTING

HOLOPHANE LIMITED, ELVERTON STREET, WESTMINSTER, LONDON, S.W.I Telephone: VICtoria 8062

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NEWEDGE

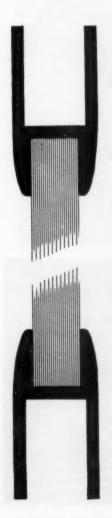
FITTINGS

FOR YOUR "ARMOURPLATE" DOORS

So that you get

NEWMAN'S "BRITTANIC" FLOOR SPRINGS with "ADJUSTABOX" the modern method of door alignment 2" DEEP RAILS FOR MAXIMUM GLASS AREA

5 LEVER LOCKS & SLIDING ESCUTCHEONS





"NEWEDGE" FITTINGS ARE GUARANTEED 5 YEARS APPROVED AND USED BY PILKINGTON BROTHERS LTD.

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Ask Your Glass Merchant for a Leaflet

All details can be found in the 'Barbour' Index, File No. 53



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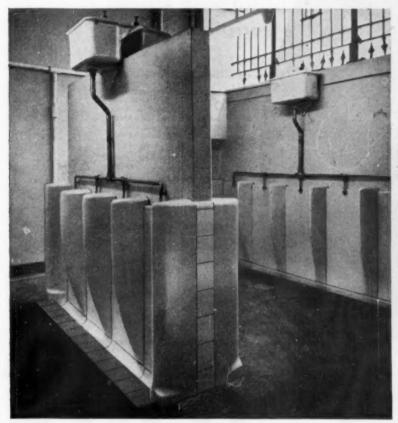
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NEWS FROM HULL



'Standard' vitreous china sanitary equipment for use in Municipal undertakings

Three definite advantages—hygiene, durability, economy.

For some time now, 'Standard' vitreous china sanitary equipment has been recognised by most Public Authorities as being more hygienic than non-vitreous ware. This is because 'Standard' vitreous china is fired at a very high temperature. As a result, it is a dense and non-absorbent material which does not depend on its glaze to make it watertight. Being non-porous, it is impossible for germs to lodge and breed in it.

This is strikingly borne out in the use of the new 'Standard' Vitural slab urinal which is being installed in an ever increasing number of public conveniences. This is the first vitreous china full-length slab urinal ever to be manufactured. As well as being germ-free, it also has the important advantage of being odour-free. Normal cleaning alone keeps the Vitural (because it is made from vitreous china)

free from those unpleasant smells which in the past have been taken for granted in public conveniences. The Vitural itself is available in three basic forms:—

- (a) Slabs 18" wide plus divisions. Total width per stall 24".
- (b) Slabs 15" wide plus divisions. Total width per stall 21".
- (c) Slabs 18" wide with no divisions.

In (c) the urinal is free from protruding division pieces and each slab has a slightly concave shape. End screens are either

free-standing or designed for fitting against or into an end wall. Floor channels and high level cisterns are also of vitreous china. The range of cisterns is from one to six gallons.

Another 'Standard' vitreous china aid to public hygiene is the new Handspray basin which can be used in public conveniences. The main advantage of the 'Standard' Handspray basin is that it makes it easier for a user to wash his hands. There is no need to plug the basin, and then mix hot and cold water to the right temperature for washing. The user just turns on the mixer tap, and water of the right heat is sprayed over his hands, which he can soak and rinse in a matter of seconds. He also does not have to empty and swill it out when he is finished.



Another 'Standard' vitreous china product much in favour with Loca! Authorities is the Trimline Bathroom suite which has been designed specifically for lowcost housing projects. Despite its very low price, the Trimline suite, which consists of a wash basin and water closet, is exceptionally well-designed. The wash basin is available on cast-iron wall brackets or a pedestal-the closet of the wash down type coupled to a low-level cistern. Strong and permanently hygienic, the Trimline suite has all the advantages of more expensive luxury suites and has already figured prominently in many new housing estates.



'Standard' vitreous china equipment has a very long life, and a high resistance to harsh treatment. The percentage of replacements is low, and it is easy to clean and maintain. These qualities make 'Standard' vitreous china ware a very practical proposition for Local Authorities.

THE ARCHITECTS' JOURNAL (Supplement) September 6, 1961



got Pocketsful of air

... with desirable
U-value at lowest cost.
Apply the DOUBLE-'A'
System ... NOW!

The Facts

ALUMAFLEX IS A FIRST-CLASS ROOF INSULATING MATERIAL—

a reinforced bituminous felt **plus** a surfacing of flame resisting burnished aluminium foil that reflects 95% radiant heat back into the building.



THE NEW DOUBLE-'A'

consists of **two** layers of ALUMAFLEX... the first allowed to drape between the beams, the second stretched taut over the beams.

This creates pockets of warm air at the highest point of the building—and the most effective barrier yet against penetration of cold and loss of heat through the roof.

The Figures

An average ceiling and roof including ordinary understating felt gives an approximate U-value of '43.

ONE LAYER OF ALUMAFLEX-

in place of ordinary felt yet costing only about 7d. per sq. yd. more — gives an approximate U-value of 30.

THE DOUBLE-'A' SYSTEM-

costing less than 3/- per sq. yd. more than ordinary underslating felt - gives an approximate U-value of '21!

This — and the cost of labour saved by installing complete roof insulation in one operation — makes DOUBLE-'A' the finest system at the lowest possible cost available today!

ALUMAFLEX

In time for your next important project... please ask for a sample of ALUMAFLEX and full details of THE DOUBLE-'A' SYSTEM... Post your business letterhead or the coupon provided, to...

ENGERT & ROLFE LIMITED

Barchester Street London E14

Tel: EAST 1441

	Please send a sample and details of ALUMAFLEX and
t	he DOUBLE-'A' SYSTEM
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(Designation)
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A.J.L.

These amazing new materials match new building techniques

FARO BUTYL SEALING COMPOUNDS AND COMPONENTS

Man-made rubbers are rapidly taking the place of materials traditionally based on natural products such as vegetable oils, bitumen and plantation rubber. In applications as diverse as glazing and roofing, they have already revolutionised the building industry. New applications and techniques are continually being devised.

Here are just some of the advantages of these materials:—

- Unmatched resistance to ozone, sunlight, heat
- · High flexibility; non-hardening,
- Excellent shock absorption and vibration isolation properties.
- · Impermeability to gases, moisture vapour.
- · Very low water absorption.
- Outstanding thermal and electrical properties, hence excellent insulation.



Pioneers in the production of Butyl for building, Farmiloe Sealants Limited are now, after years of intensive research and development, making a wide range of Butyl sealing compounds and components which satisfy new requirements, match new techniques and master old problems.

The Faro Butyl range includes:-

- * Farocaulk—non-hardening mastic in brush, knife, trowel and gun grades.
- * Farostrip soft compression adhesive laminate for glazing and sealing applications.
- * Farofoam soft compression adhesive seal based on a laminated dense or open cell sponge for glazing or expansion joints.
- * Faroform gaskets and extrusions for weather seals.
- * Farosheet sheeting with adhesive surfaces for cladding, tanking or roofing.
- * Faroled lead/butyl laminates for conventional and new style roofing and flashings.
- * Farobase—solvent based primers for developing adhesion between Faro products and porous building materials.
- * Farofor—floor tiles and sheeting offering chemical resistance and high sound insulation for industrial and domestic application.

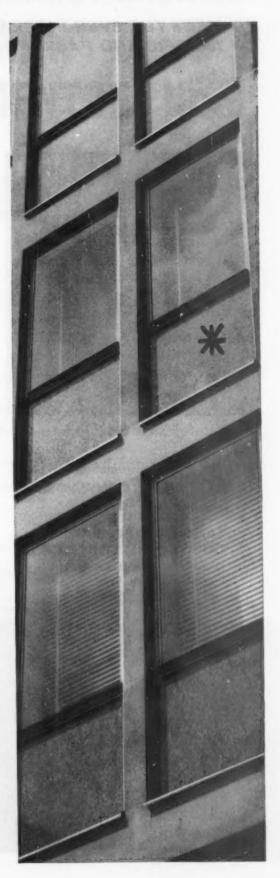
Write for full technical information on all problems of sealing bis:

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



Sandvik

introduces the PASSENGER CONVEYOR

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



NEW CEMENTONE No. 9 now goes 25% further... and is easier to apply

Whenever you are faced with the problem of covering brickwork, concrete, asbestos-cement, plaster or compoboard, remember that Cementone 9 will give you a double job with a bonus.

The indestructible aggregate from which it is compounded, together with its special medium, gives a stone finish that is both waterproof and alkali resisting. No primer is necessary.

There are 20 colours. Covering capacity is 25% more. So don't forget your bonus when you cost!

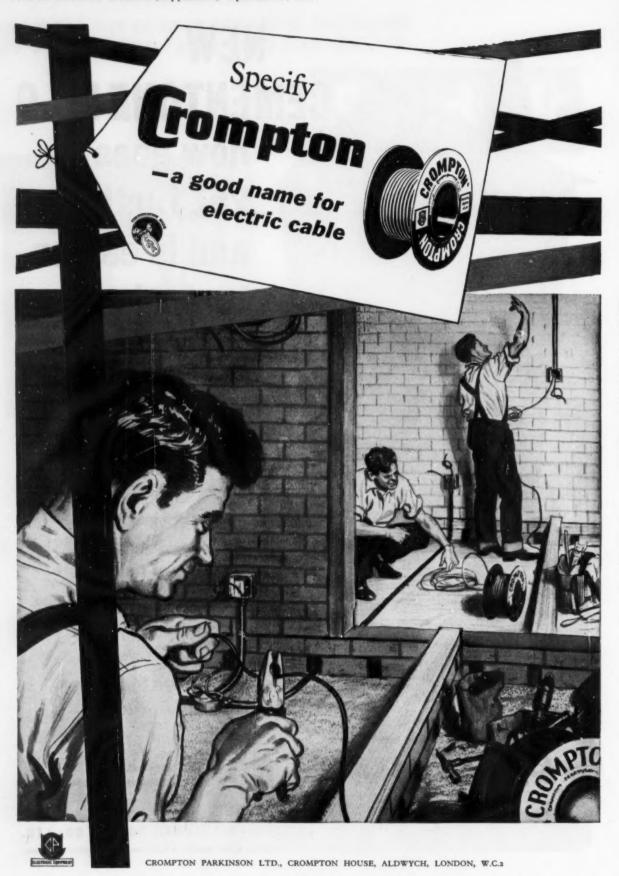
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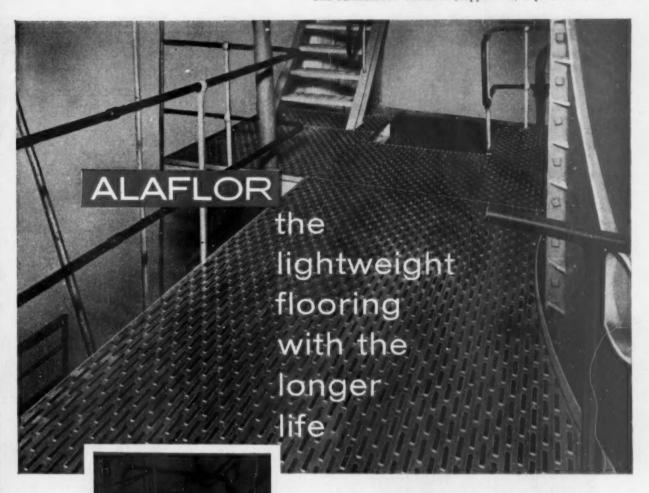
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ALAFLOR... is half the weight of a steel installation of equal strength. Is readily cut to cater for the unusual shape or application. Is easily, quickly installed. Is immune to the elements or manmade fumes. And never, never needs painting or protecting... interested? The ALAFLOR brochure gives you full details...

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Thousands of tiny air cells keep K value down to 0.23*

This simple illustration shows the remarkable lightness of foamed polystyrene. As an insulation material, transfer of heat is retarded by the thousands of air pockets in expanded polystyrene.

Rock-bottom installation costs

Foamed polystyrene is amazingly light, and rigid. Handling on site is simple, fixing is quick and straightforward—either mechanically or with adhesives. Foamed polystyrene can be cut, sawn or drilled with ordinary woodworking tools. Quick, trouble-free handling that cuts on-site costs.

Versatile! Ideal for roof, wall and floor insulation

Foamed polystyrene can be readily faced with wood, hardboard, etc., to make doors and partition units with first-class insulation properties. Used in floors it also adds 'step-sound' insulation.

Pre-cast wall units too!

Foamed polystyrene, made into sandwich constructions with concrete, produces excellent thermally-insulated curtain wall units. Foamed polystyrene does not absorb water, is dimensionally stable, unaffected by vibration and rot-proof.

*The K value quoted is in B.T.U./Sq.ft./hr./°F per inch thickness at 1 lb. cu. ft. density for cold/hot face temperatures of 32°F/68°F.

Foamed polystyrene is a low-cost material available in many sizes and thicknesses. For more information and the name and address of your nearest supplier, write to Monsanto—the makers of Montopore, the raw material for foamed polystyrene.

Montopore is a Registered Trade Mark



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In association with: Monsanto Chemical Company, St. Louis, U.S.A. Monsanto Canada Limites, Montreal. Monsanto Chemicals (Australia) Ltd., Melbourne. Monsanto Chemicals of India Private Ltd., Bombay. Representatives in the world's principal cities.

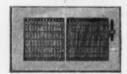


NO PIPES, NO RADIATORS IN THIS BAX -OIL HOUSE

WARM AIR CENTRAL HEATING SYSTEM

If there were a radiator behind these curtains, you'd see its outline. Then you'd think about all the heat channelled uselessly up to the ceiling or out of the window.

But in a BAXI-OIL house, this can't happen. For there are no radiators. No pipes, either. Nothing to leak, nothing to suffer frost damage, nothing to get in the way of furnishing and decoration, Just wonderful whole-house warmth; fresh, lively warmth with never a hint of stuffiness.



Flush fitting grilles in walls or ceiling are the only visible parts of the BAXI-OIL system.

THE BAXI-OIL WARM AIR CENTRAL HEATING SYSTEM FILLS THE HOUSE WITH WARM, FRESH AIR—NOT WITH PIPES OR RADIATORS.

... and for cosy, open-fire comfort



The BAXI Patent Fire is ideal for adding the comfort and companionship of an open fire to a centrally heated

home—for the BAXI is as easy to run as



comprehensive brochures give full details of both BAXI-OIL and the

Fire. Use enquiry service or write to:

BAXI (AJ/13) BAMBER BRIDGE, Lancs.

Telephone: Preston 85271 (5 lines)

TECHNICAL SUMMARY

Air, directly heated in a compact 32,000 B.t.u./hr. heat exchanger, is ducted to adjustable grilles, up to eight in number and unobtrusively flush-fitted in ceilings or walls. The heat exchanger need occupy no living floor space. It can be installed in a cupboard 25in. by 25in. or placed in a garage or outhouse.

- * No leaks-because there is no water in the heating system
- ★ Constant freshness—air is recycled about three times an hour
- ★ Cool in summer—fan system can circulate unheated air
- * Selective heating—all grilles continuously adjustable
- * Easy maintenance—fan is only moving part
- ★ Easy installation—bends in lightweight ducting can be fabricated on site
- * Attractive price—£200-£250 retail, if installed during building





Yes, indeed, Wilson seems to be doing pretty well. Just look at those panelled

walls . . . sheer luxury! The chap must be a business genius.

Truth of the matter is, Wilson is no genius. He's just a good businessman. He knows that a good-looking office is good for his Company's prestige and not only that . . . it's good to work in. Most people realise that, but Wilson went one better . . . he went to Walways. Wilson soon discovered that the Walways System of Executive Partitioning costs no more than ordinary partitioning, but it has that wonderful 'luxury look'.

More than that, Walways have an exclusive method of erection that makes them more economical than other systems. In fact, Wilson being a methodical man, has listed fourteen separate advantages of Walways Executive Partitioning. Perhaps he is a genius after all!

If you would like to study for yourself the fourteen advantages of the Walways system, please write or telephone to:-

EXECUTIVE PARTITIONS

Waddells (Stratford Steel Equipment) Ltd. Stirling Corner, Boreham Wood, Herts. Telephone: Elstree 5441.

GO ONE BETTER-GO TO WALWAYS!

THE ARCHITECTS' JOURNAL (Supplement) September 6, 1961

CALL IN INTERGRID-NOW



Before you put pencil to paper just stop to consider the advantages of the Intergrid service. AT ONCE you have behind you a large experienced staff whose sole aim is to help you all they can during the planning stage; subsequently you save yourself months—many months—in the overall design/construction time. Intergrid, in addition to being the most up-to-date system for reinforced concrete building frames allows you complete freedom of planning and to incorporate traditional cladding and other features.

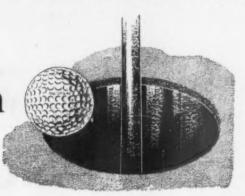
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The clothes storage problem HOLED IN ONE!





A round at the Wildernesse Club, near Sevenoaks, Kent, is all the more enjoyable for the ease with which golfers' gear may be collected and stowed away. Untidiness and confusion are avoided by the installation of Harvey Lockers and Cloakroom Fittings.

In industrial and commercial buildings, as well as in the clubhouse, provision for the orderly and secure storage of personal belongings is an important amenity.

Harvey Clothes Lockers are made in a variety of sizes, in stove enamelled sheet steel or wirework, and can be supplied as individual units or in nests of any number. Cloakroom fittings, free-standing or for wall fixing, can also be supplied.

A PLANNING SERVICE is available, and complete schemes will be submitted on request.

Please ask for literature.

CLOTHES LOCKERS & CLOAKROOM FITTINGS

G. A. HARVEY & CO. (LONDON) LTD. WOOLWICH ROAD, LONDON, S.E.7

Telephone: GREenwich 3232 (2 lines)





Makers of HARVEY and HARVEY Milner Steel Furniture and Partitioning

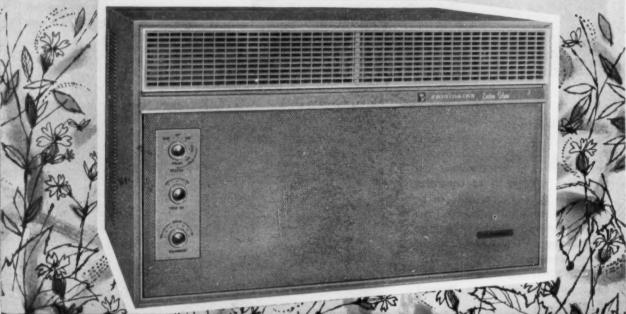
SF/68

INDOOR WEATHER FORECAST

EVERY DAY A 'LOVELY DAY'

with the FRIGIDAIRE ROOM AIR CONDITIONER

MODEL ACDR-905



A controlled flow of fresh air, cooled or heated

What sort of day is it today? Hot and dry—or cold and damp? FRIGIDAIRE ROOM AIR CONDITIONERS are specifically designed to bring you *ideal comfort* at the touch of a switch. Thermostatic Control quickly adjusts to provide a perfect indoor climate *every* day—temperature and humidity just right. The Frigidaire Model ACDR-9D5 brings in a regulated flow of fresh air—filtered, dried, cooled (or heated, as the weather changes).

These attractive units can be installed easily in either window or wall, in premises new or old. They function quietly, competently—powered by the famous FRIGIDAIRE 'Super Meter-Miser', warranted for five years.

* Simple, easy to use controls * Plastic foam filters clean the air as it passes into the unit * Easy to install * Compact size—26" x 184" x 16" * Powered by the exclusive frigidaline 'Super Meter-Miser'—sealed in steel, oiled for life—warranted for five years * One-piece wrap-round cabinet construction * Insulated top and sides * Extra capacity fan motor with 3 speed control.

FOR LARGER AREAS CHOOSE THE FRIGIDAIRE MODEL ACD-1505

The Frigidaire Air Conditioner Model ACD-15D, commands an amazing cooling capacity—nearly 13,000 B.Th.U's, per hour. This makes it very suitable for cooling larger areas such as conference rooms, hotel lounges and bars, hospitals, etc. Narrow width design—26° w x 16° h x 27° d—340-380 cubic feet of air circulation per minute. (This model does not incorporate heating).

For information about any aspect of air conditioning or refrigeration consult your nearest Frigidaire distributor, or write to:



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THE FRIGIDAIRE ROOM AIR CONDITONERS Ideal for offices, conference rooms, lecture theatres, hospitals, hotels, wherever people congregate

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57 GREAT GEORGE ST. LEEDS

One of the 500 ton pressen in the floor tile factory at Poole. These presses are the key to the production of the new range of vitreous tiles.



the best known name in floor tiles

Fully vitreous floor tiles have outstanding performance and appearance and there are none superior to the Carter Dorset range.

Only at Carter's in Poole are British ceramic floor tiles produced in such variety. The colours are excellent and the price in relation to the quality is remarkably low. Samples and quotations on request.



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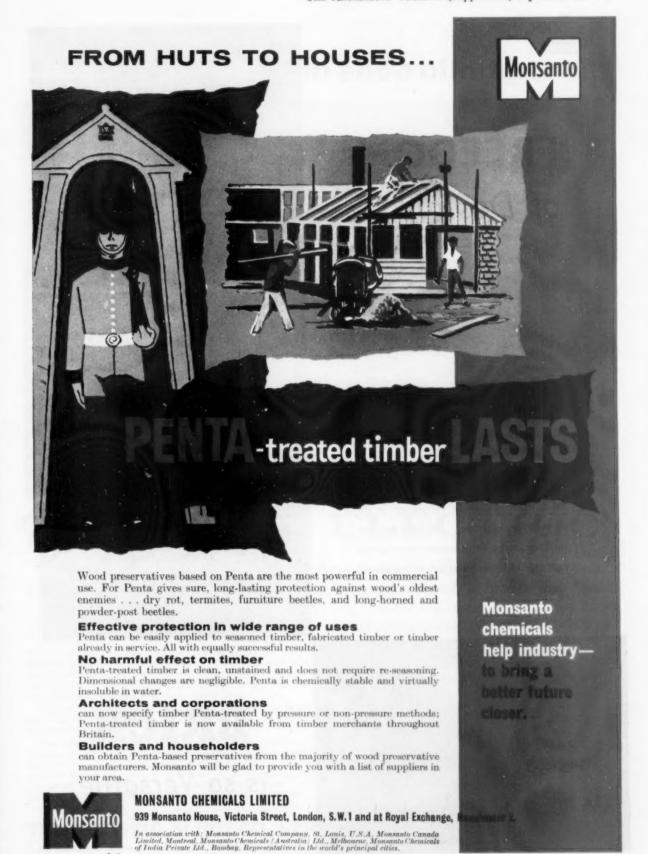
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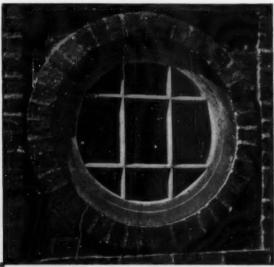


FREEDOM of Design

The adaptable Brick offers exceptional freedom in design. Variations of bond and joint, and an almost limitless range of colours and textures, allow wide scope for imaginative treatment.

Brick can be used successfully in practically any composition, being equally at home on flat or curved elevations.

Brick offers a unique advantage in its permanence of finish. Its tones mellow with age, but a brick surface never needs painting or other decorative treatment.









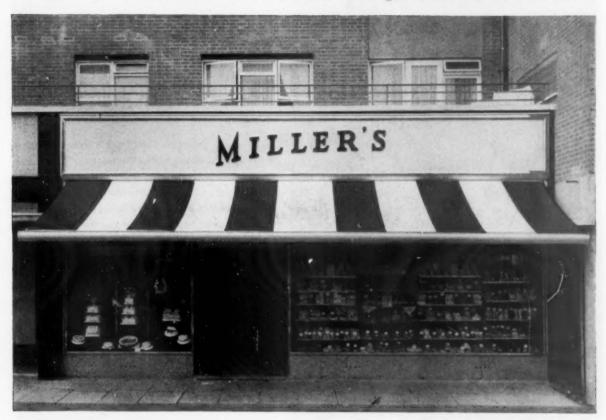
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is so Versatile

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THE 'PAGE-ELECTRIC'

The most up to date blind available. Easy to operate. Trouble free service. Light and attractive in appearance and design. An essential feature of modern shop fronts.

Electrically operated shop blinds are now universally accepted as a fundamental feature of modern shop and store design.

The "Page-Electric" is a precision made blind combining long life with constant rigidity and space saving. It has the smallest blind box available for powered blinds. Time-wasting work on the part of the staff is eliminated. Operation is by push button alone or combined with photo-electric cell unit, thus giving automatic operation over week-ends and early closing days.

With attractive blind cloths and continuous lengths up to 200', the "Page-Electric" is the finest compliment you can pay to a first-class shopfront.

The Artistic Blind Co. Ltd. have over fifty years' experience in making all types of blinds and more than any other blindmaker in the specialised field of electric and gear operated blinds. Visitors to their factory are welcome to watch the blinds being made, inspect the component parts and see the 33' demonstration "Page-Electric" blind operated by push button and photo-electric cell.

Electrically operated Venetian and Blackout blinds also available.

THE ARTISTIC BLIND CO. LTD.

OAKCROFT ROAD . CHESSINGTON . SURREY

Telephone: LOWer Hook 3344

Post the coupon to-day for further details.

THE ARTISTIC BLIND COMPANY LIMITED OAKCROFT ROAD - CHESSINGTON - SURREY

Please send me details of:

- (a) The 'Page-Electric'
- (b)

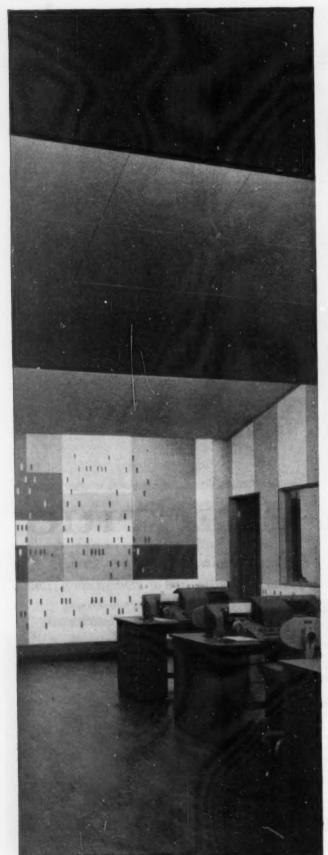
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A subsidiary of John Mowlem & Co. Ltd.







Subtracting noise...

Bull computers are silent, but those who demonstrate and sell them aren't. To provide a quiet and restful background in their new showroom in Southampton Row, London, De La Rue Bull Machines Ltd had Armstrong Cushiontone acoustic tiles installed on the ceiling, the plane of which was broken to mute the room even further. The side walls, too, were lined with Armstrong acoustic tiles - fire-resistant mineral wool Travertone which enhance the attractive modern appearance of the showroom at the same time as they help to ensure quiet for prospective buyers and staff.

Corkoustic is another Armstrong tile with a high sound-absorption coefficient. Armstrong experts are at your service to assist you in the choice of acoustic materials and the solving of acoustic problems. Please write for full details.

◆Showroom of De La Rue Bull Machines Ltd in Southampton Row

Chartered Surveyors: Whiteley, Ferris & Puckridge Designer: J. W. Begg (Formica Ltd.) Acoustic Contractors: Anderson Construction Co. Ltd.

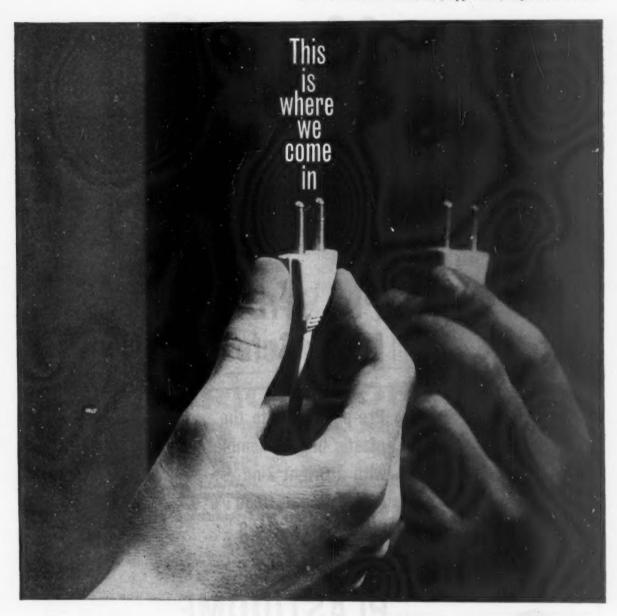


Armstrong acoustics

Armstrong Cork Company Ltd Acoustics Department Carlisle Road, London N. W.9 Tel: COLindale 9744

Also at 24, Fitzwilliam Place Dublin 2 Tel: Dublin 61907

AT24



There is a simple solution to the problem of providing power points for electric dry shavers. Ordinary outlet sockets are neither safe nor convenient. But CHILTON Electric Shaver Sockets, which comply fully with BS. 3052, are approved for use in any room—including bathrooms. They are used in hotels, airports, clubs, ships, blocks of flats and private houses, and accommodate British 5 amp, Continental 6 and 10 amp and American 15 amp (flat pin) plugs in a single socket.



Two types are available, single or dual voltage, with double-wound transformer. Each type is available for flush or surface mounting, and in ivory or grey finish.

DUAL VOLTAGE (illustrated) Output: 115 or 230V SINGLE VOLTAGE Output: 230/240V

Full information will gladly be sent on request

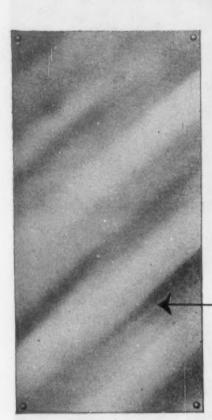


ELECTRIC PRODUCTS LIMITED

CHILTON ELECTRIC PRODUCTS LTD., HUNGERFORD, BERKS Tel: 237/8

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API14



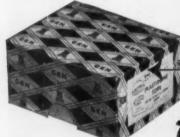
NOW you can get **PLASTIDOME Mirror Screws**

Pre-packed, 4 to the plastic bag, assembled with a Bright Zinc **Plated Round Head** Wood Screw 1" x 8



OF- Two piece **PLASTIDOME**

by the gross



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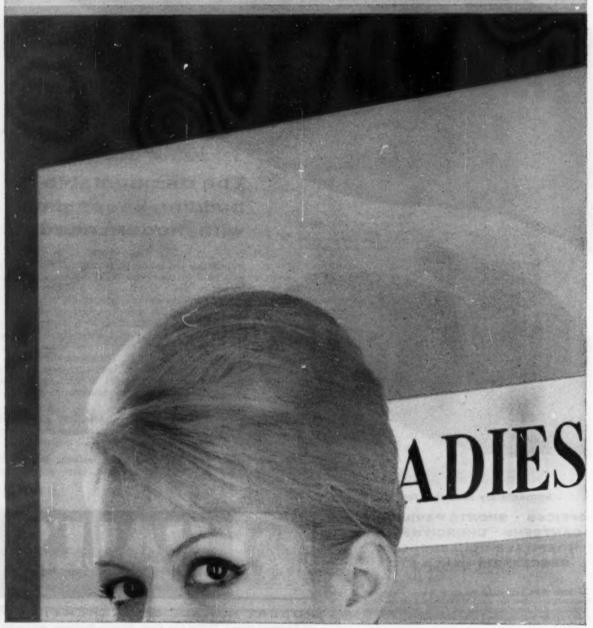
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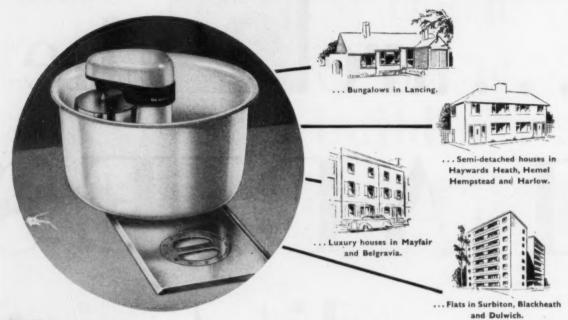
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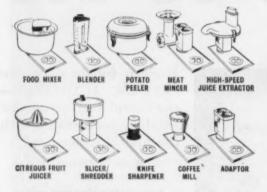
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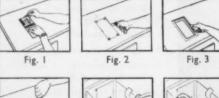
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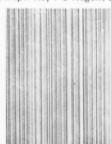
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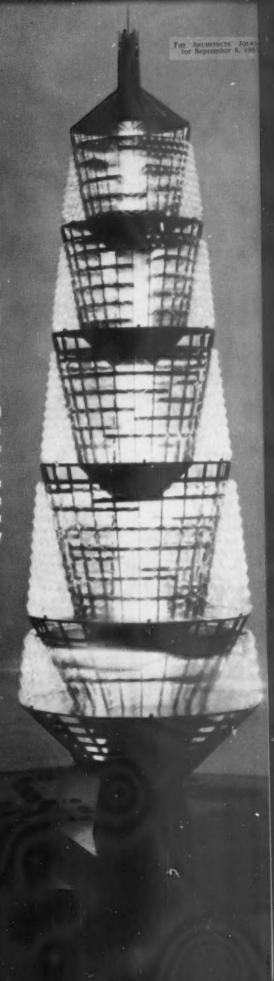
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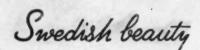
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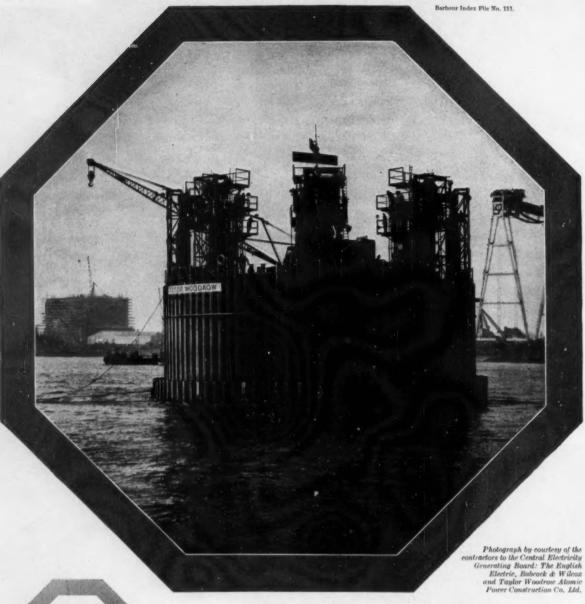
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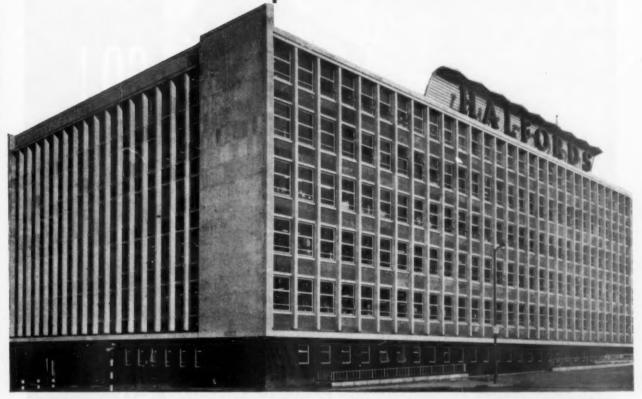
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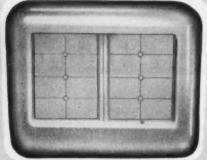
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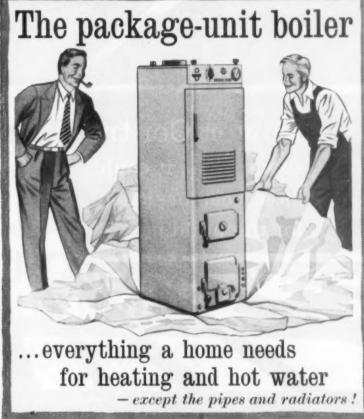
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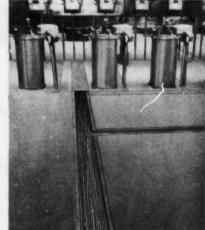
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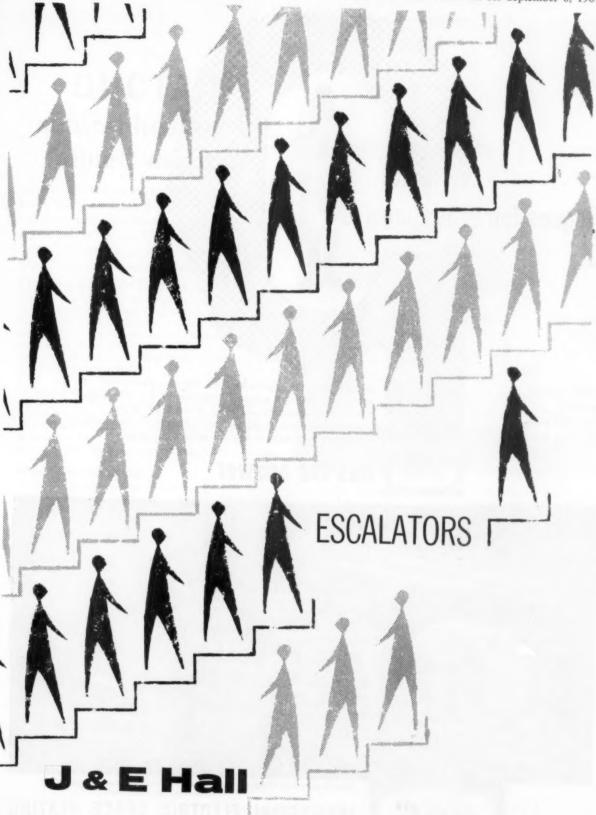
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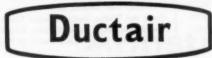
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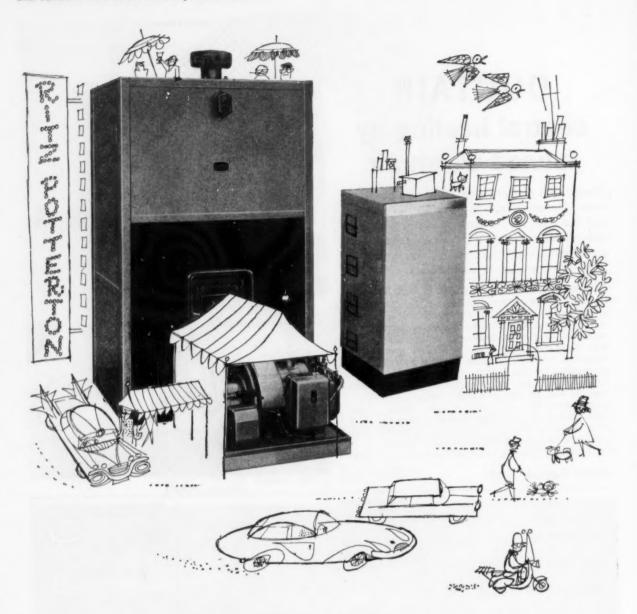
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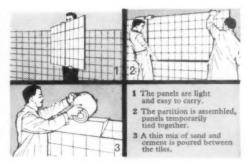
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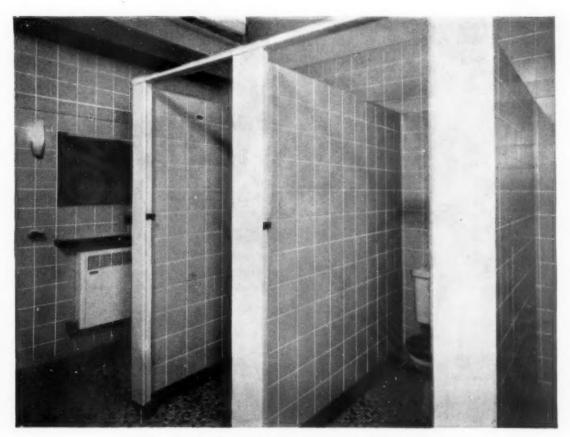
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NOT QUITE ARCHITECTURE

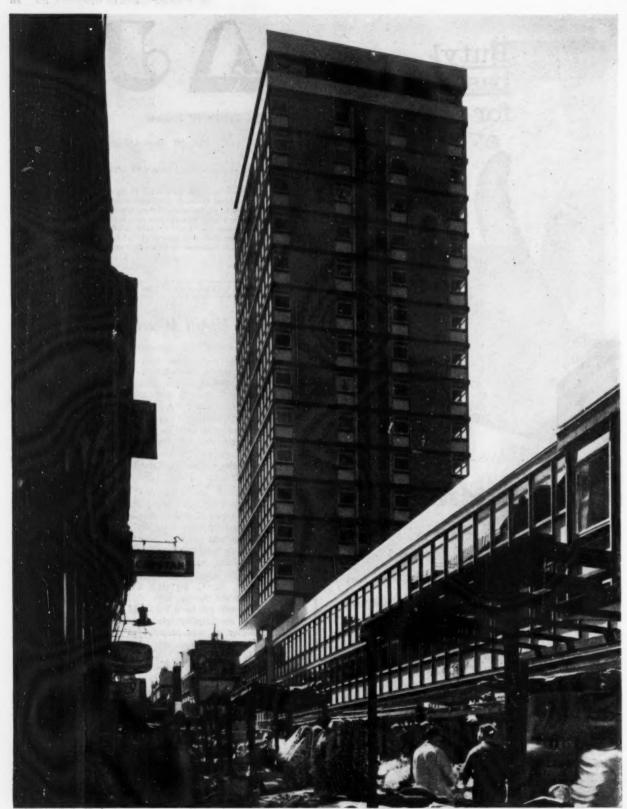
The Uphill Wheelers

The discussion was learned and technical as befits two professional men. "I think," said the doctor to the solicitor, "that we will content ourselves with increasing the tyrepressure." "But the steering will be awful," said a bystander. "Awful, my dear chap [doctor speaking], it's positively non existent but it seems to know its way up the hill and waggles at the right times especially if you go fast enough." (Bystander retires to vantage point halfway up the hill.)

Fifty-six years ago a young man stood upon the start line and watched the birth of a legend. His planning, negotiating and scribing over many months was over. Now the dust-coated drivers in their monster motor cars were out to see who could record the lowest time. Amongst those that made it to the top, was E. M. C. Instone's Daimler, which caused the young man to remark that 77 seconds was good but could be improved upon considerably given sufficient time. However he was prepared to wager that no one, but no one, would ever see it done in 34 seconds.

The glow of the cigarette end, whipped to a cherry red by the rush of the cool night air, and the faint glimmer of reflected light on polished metal were the only visible signs to the watcher by the garden gate. The time was after midnight. Come the dawn and the brain child of the constructor even now turning into the drive, would be ready to be given its head and lammed through a thousand yards of twisting climbing track that make up the hill climb that is Shelsley Walsh.

You sit at the start line, nervous and tensed There's nothing to do except keep the engine running with quick blips of the throttle and let the machine relax against the giant wooden



High Soho

This scheme in Berwick Street, designed by Riches and Blythin for the Westminster City Council, is a mixed development on a site declared a slum tion of a tower of flats astride, and carefully articulated from, a long hori- to publish shortly cost analysis.

clearance area about six years ago. zontal block for offices and shops, the The design is the imaginative combina- latter forming a perfect backdrop for the Berwick Street market. We hope

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chock under your rear wheel. It's hot. The riding leathers are sticky against your arms and back. Unblinkingly, a head-phoned face stares at you from the control hut and the starter holds his hockey-stick timing-pad like a golfer about to drive off. You see sixty yards of road which presently you will blast over. Your confidence returns. Of course you are going to do it. Record this time??

You're away! Down goes the hockey stick under the wheel . . . kick it into gear . . . stoke up the boiler and at four thousand feed in the clutch. You're gone and the start line staff search desperately for air untainted by burnt rubber, burnt oil, and "nitro".

Past the commentator's box at Vox Villa, hard over to the right and you clip the grass verge making yourself a little frightened. Into second cog . . . and crank it left for the approach to the Kennels. In the middle of the road, ease off for a fraction of a second and pile on the agony, swapping into third for the crossing. The crossing bank looms close as you brush by it at 70 mph, the faces crowding the rails are a blur. Bumping, and pitching, your hands hold the bars in a grip of steel . . . top gear and the Esses loom into sight. Down through the box, gravity hauls you back on the 1 in 6 gradient . . . brakes on . . . you almost lean the bike on the road as you struggle to cross the run of the corner and head for the inside. Second gear work this. Flip her over, aim for the opposite bank and bike and body are barely one as you wind on the power, and the delivery of 90 brake horses to the back end slams the rear wheel away and you hit the drain so nicely placed out of sight round the corner. You hold it (you never know how) third gear ... max revs . . . power, power, you scream for power as the finish looms up. Now stop . . . stop . . . stop from 110 mph in 110 yards. (How? You don't know?) and swop a fag with the lads at the top and watch the next man, crack a joke and listen for your time. . . .

Darling can I borrow the oven for two hours I want to shrink the new barrel onto the liner. I'll need the deep freeze afterwards. No, I promise there will be no oil on it this time!

Who said the BRM would never do anything? A man stood watching at the start line. He had been there before many years ago, and every year since then. Retirement as scribe was still recent and only that morning his eyes had rested upon the silver salver commemorating his marathon term of office. This was the golden jubilee and this was the car on which so many hopes had been pinned in the grands prix of Europe. And this was the moment of glory for him, for the car, for the driver, for everyone. The remark of so long ago so uncannily prophetic when uttered, discussed but impossible to believe, had come true on a sunny day in August 1961. Tony Marsh (2½ litre BRM), 34-41 secs. (new course

DENNIS BATES

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The Editors

THREE-DIMENSIONAL READINESS

Another stage has now been reached in the long and involved story of the rebuilding of Piccadilly Circus, with the news (p. 332) that a developer has acquired a large part of the Criterion block, which forms the south side of the Circus. When the scheme prepared by Holford was published earlier this year (AJ 16.2.61), he said that it seemed unlikely that this part of his proposals could be carried out for many years, partly because the site was divided among many owners. Now a major barrier in terms of ownership has been removed; rebuilding of this imaginative layout should be able to go ahead, provided, of course, that everyone can work together amicably, not least the Ministry of Transport. Holford's scheme included provision for realignment of streets affecting the site acquired by Dr. Zygmunt.

This new situation shows the advantages that can result when planning authorities have prepared detailed schemes for important sites before developers move into action. Not only are such layouts an obvious stimulus to rebuilding, since developers start with knowing what the planning authority will allow, but the developer's architects can be guided by a carefully considered three-dimensional framework, which takes into account the social requirements of the whole area. This is a much better position than the conflicting uncertainties which shaped the original and ill-fated Monico design, as emerged during the inquiry.

That the long-drawn-out uncertainty about Piccadilly's future nearly lost the public all say in its future and, as events have turned out, was also hard on the first would-be developer on the scene, Jack Cotton, who tried to rebuild the Monico site while the LCC vacillated about what was wanted, and has suffered for it ever since. For once, the early bird got—

the bird.

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



INVOLUNTARY TRUMPET

Excuse an unaccustomed trumpet. I really must blow one on behalf of the Journal now that I have seen its programme for publishing its SfB Elemental Files and Library of Information. From October you will get 52 weekly tear-out supplements, providing easily used and reliable information and technical data of a kind that are so badly needed by the profession today. It will be ready to file and to be used as a skeleton for the most complete and practical filing system ever devised.

A tall-sounding claim, perhaps, but the compiling and presentation of this information library is undoubtedly the biggest service to architects the AJ has ever taken on—one that will be of enormous value to every branch of the building industry. You've probably noticed the first signs of the new Journal—two research fellows appointed to the staff, a new cover design (this week), and a type of binding that makes it easier to extract sections of the paper for filing. Look out for further announcements this month.

ARCHITECTURAL PERISHERS

The second big architectural news of the week is the plug given to the JOURNAL by the Perishers. No, I don't mean the TCPA: the Perishers, as the more broadly read will know, are two toddlers in a Daily Mirror strip cartoon. The plot, as usual in these things, is simple: one Perisher criticises the other's sand castle because too little attention has been paid to structural detail and the aggregate is under strength. The second Perisher responds to this criticism with a smartly-aimed spade, whereupon first P. marches off screaming that "By Harry—the Architect's Journal shall hear of this!"

Very nice too, but why the AJ? Perhaps there wasn't room in the caption balloon for the Royal Institute of British Architects. Tracked down, the author (not the artist—apparently it takes two brains to do these things) explained that as a copywriter in an advertising agency he likes to keep abreast of the shape of modern buildings, and he always reads The Architects' Journal "and that other magazine, what's-it-called?" It's as simple as that.

PLANNERS V. ARCHITECTS

There seems to be a very worrying deterioration in the relations between the TCPA and the architectural profession (and I don't just mean the angry letters of Mr. Wyndham Thomas in the AJ). The August issue of the Association's Journal attacked architects and made an assault on Reyner Banham, who praised Sheffield's Park Hill scheme in the New Statesman a couple of months ago. Although he expressed

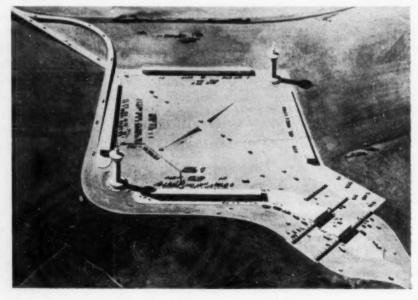
himself cautiously on the sociology of the scheme, and asked that sociologists should study it, the enraged anonymous attacker misses this point in his fury that Banham should like the buildings at all, and went on to libel the architectural profession. "One wonders," he wrote, "if housing committees ever question their architects' qualifications to make even the most simple social judgment. Certainly there is nothing in the architect's training which enables him to do so, and the emphasis on the architect as artist [TCPA's italics] is a positive disqualification. . . . this looks wonderful/awful, therefore it must be wonderful/awful to live in."

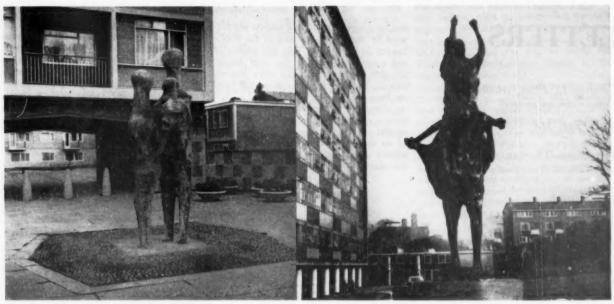
Though it would be tempting to suppose that the TCPA dislikes Park Hill because it looks like a block of flats, I won't play tit-for-tat, but simply ask them how they expect to have any influence on the profession that alone is qualified to turn town-planning ideas into bricks and mortar, if they continue abusing it in this way?

DIFFICULT STRAITS

The Channel Tunnel Company wants, as you might expect, to build a tunnel; the French want a bridge; one engaging enthusiast wants to start each side with a bridge and then dive into a tunnel for the middle bit so as not to interfere with shipping. Letters to the Press argue for and against rail or road, or both. Do you change, they ask, from right to left hand side of the road in

After seeing this model, published by the French Société d'Etude du Pont sur la Manche, of the proposed bar-port at Cap Blanc Nez, ASTRAGAL votes for a tunnel. See "Difficult Straits"





Two recent sculptures commissioned by local authorities. The one on the left in Westgate Street, Gloucester, by J. M.Whiskerd has aroused protests in the press. The other, is Ralph Brown's "Mother and Child," at the LCC school at Tulse Hill. (See "Mother and What?".)

the middle, or at one end, and if so, which? And what about secret service men, airborne troops or traitors seizing the tunnel (bridge) head (heads)? The whole thing now seems to have moved into the level of the arguments of 30 years ago over whether Charing Cross Station was to be moved across the river or back to the middle of Shaftesbury Avenue. But on looking at the bridge design reproduced opposite, ASTRAGAL would rather settle for the tunnel.

MOTHER AND WHAT?

What's certain is that attempts to use "works of art" as a sort of jam to get the world to accept the medicine of speculative development is not going to help. When ASTRAGAL heard that a "work of art" to commemorate the former race course was promised by the developer of Hurst Park, for instance, he ungratefully gave a horse laugh. What would this sculp be, one wonders: a group of tic-tac men by Reg Butler?

Letters continually pour into the Press ("wicked waste . . . other people's money . . . ugly creations . . . mend roads instead") about artadorned housing estates as far apart as Gloucester (see above picture) and Roehampton. In fact someone at Roehampton felt too strongly merely to write a letter and painted Clatsworthy's Bull a delicate pink for the recent IUA visit.

The Bull is, I think, a successful re-

sult of bringing artist and architects together at an early stage—and so is the work of the LCC's blow-lamp-andmosaic artists, George Mitchell and Anthony Holloway. But far too many marriages of sculpture and architecture look "arranged." The Philistines are always with us, but not all lay critics of art on housing estates are necessarily wrong. Too often the sculptor is simply doing what he likes without thinking of the site his work is gracing. I don't know what the solution is, but I do think it's a pity that the new patrons of art should so frequently get less than they deserve.

IMPORTANCE OF ERNST

August doldrums are over earlier than usual and one or two London art galleries are back to abnormal. The ICA has recaptured its old nut-house atmosphere with a twopenny bazaar of a sculpture show, including not only a piece made up of two or three wooden boxes, but also a plaster cast (I think) of some lengths of air-conditioning duct mounted on a plinth of milk crates. Meanwhile, down at the Tate they are exhibiting (from tomorrow) a pebble belonging to Erno Goldfinger. This happens to be decorated by Max Ernst whose giant retrospective show of work has been brought from New York, with the addition of loans from European collections. Ernst is not as thrilling as he was in the Surrealist Thirties, although some of his grisly metamorphoses of people, geometry and landscape still touch a nightmare chord. The show is well hung and worth seeing.

PATRONS NOT SAINTS

Frank Jenkins' book Architect and Patron* is a scholarly and charming history of a strange and wonderful body of men (even including Martin Chuzzlewitt). It is also a fascinating account of the translation of patron into client. The author, who sees architecture as a pre-eminently social service, deals with patrons and clients so thoroughly that he warms an architect's heart. You'll find that Soane was a Five-Percenter and frustrated other people. Bonomi charged travelling expenses in 1794, Chambersforceful man though he was-found himself in trouble with fees, and Sarah Churchill behaved like a super-client. After blenheiming Vanbrugh she wrote: "I know of none (architects) that are not mad or ridiculous and I really believe that anybody that has sense with the best workmen of all sorts could make a better house without an architect than any has been built these many years."

There is only one man missing—the Don Quixote of them all, the father of the three Sitwells and patron of Lutyens. But to know more about him you have only to read Osbert Sitwell's books.

ASTRAGAL

LETTERS

Geoffrey L. Price, ARIBA
Northern Architectural Association

Peter Jay, MA

Wyndham Thomas
Director, Town and Country Planning Association

Paul Ritter, MCD, BArch, ARIBA, AMTPI

Raymond Moss, DipArch, ARIBA

Newcastle roundabout

sir: I have been asked by the Study Group of the Northern Architectural Association to send you the enclosed article from the Newcastle Evening Chronicle illustrating the City Council's latest proposals for the road junction at the foot of Pilgrim Street which it joins with the approach road to the Tyne Bridge. This scheme has now been approved by the City's Town Planning Committee.

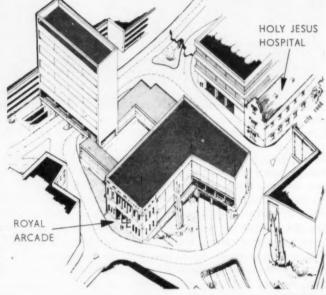
Our Study Group intend to examine the implications of the city's scheme in detail and to report on same to the NAA Council. In the meantime, it is felt that you may like to be informed of this development

and to compare it with the scheme put forward by the NAA at the time of the Public Inquiry in June 1959. This was illustrated and commented upon in the AJ of August 27, 1959, together with the city's original scheme, and was further commented upon on December 31, 1959.

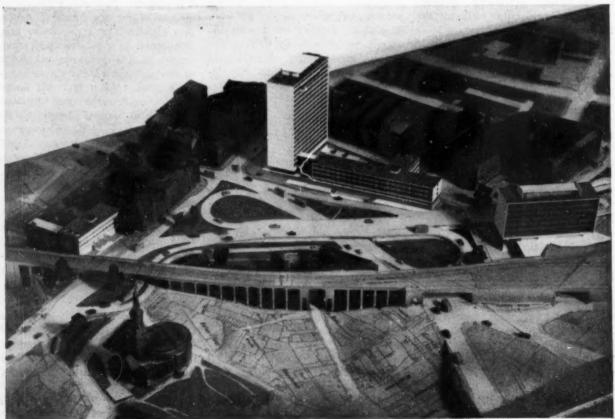
As shown by the latest proposal, the road pattern of the city's scheme remains more or less unchanged, except for the addition of an underpass. Leaving to one side the validity of this scheme as a traffic solution, the questions which the NAA Study Group

propose to examine are as follows:—

1. Is the architectural treatment shown on the axonometric appropriate to this very important entrance to the city or is it too broken up and too small in scale? In this respect the city's proposed redevelopment would appear to form three separate visually enclosed spaces with the Royal Arcade retained in the centre. This may be a valid approach in an area of pedestrian movement in the heart of the city, but is it valid in an area of quite different character? This is a "gateway,"



The revised street plan just approved by Newcastle City Council, right: below the plan proposed by the NAA and first published, AJ, 27.8.59



not the heart of the city centre, and it is not primarily a pedestrian area. In fact, the volume of traffic and the inevitable restriction of pedestrian cross-movement to subways and one overbridge would suggest that the architecture should relate to the pattern of free-flowing traffic rather than to the semi-static, intimate and visually enclosed environment that is associated with the pedestrian. It is interesting to compare the city's latest proposal with the bold spacious approach of the NAA's scheme (see illustration in AJ. 27.8.59).

2. Is the retention of the Royal Arcade in the middle of a roundabout logical? The arcade and the rebuilt entrance facing down Mosley Street will be at road level while the pedestrian access will presumably be from overbridge and subways at higher and lower levels respectively. The main entrance to the Arcade therefore ceases to have functional value now that it is cut off from Pilgrim Street and Mosley Street by a stream of free-flowing traffic. It is perhaps worth noting that the NAA has always considered that neither the Royal Arcade nor the Holy Jesus Hospital is of the first importance as a building and that their preservation could not be justified if to any extent they compromised the large-scale and imaginative redevelopment which this main gateway of the city demands.

GEOFFREY L. PRICE

Newcastle upon Tyne

IAN NAIRN replies: This letter from the NAA Study Group worries me very much. In the first place, they do not seem to recognise how much they have gained in this revised road plan: as a result of making a larger roundabout the Royal Arcade has been saved from demolition, and the idea of the underpass seems to have been adopted from the NAA's scheme in 1959. In the second, I think that both in their 1959 design and their comments on the present solution they have misunderstood the character of Newcastle at least as much as the original roundabout which started all the fuss. Newcastle is an intricate, superimposed, under-and-over place. It has enormous scale but that is not the same thing as physical size, as the NAA should well know. Comparing the two schemes, the NAA would make a big gap in the fabric of a very close-knit city while the city's own solution will give a minimum of empty space and a maximum of inter-meshing of roads and buildings. It is the bigger scheme (the NAA's) which has the smaller scale, and talk of a "bold and spacious approach" cannot disguise this. That is just what the big bad designers of civic centres said in the 1930s. The fact that the Royal Arcade may have to be entered from below could increase its effectiveness if it is done in the right way, and the effect of roads tunnelling through buildings-something which the NAA scheme eschewed-could be brilliant. Even when done on a minor scale, as at Bowater House in Knightsbridge, the result is more effective as townscape than the most elaborate of clover-leaf junctions devoted to unrelieved flow. The buildings around such a junction seem no more real than the backcloth of a stage, and there are plenty of American examples to prove it. The city's plan is a real attempt to integrate town and traffic and in a purely Novocastrian way. What saddens me most in the letter is the contemptuous dismissal of the Royal Arcade. If it were properly restored, it would be amongst the best halfdozen in Britain. Demolition would only be justified by new buildings which in their way would also be among the best halfdozen in Britain. The NAA scheme came nowhere near this.

Heat loss calculations

SIR: I have read the letters from Mr. K. W. Dale and H. C. Jamieson in the August 30 issue with interest.

Many of the questions they raise are important, but I do not think that the correspondence columns of the AJ are necessarily the best place to pursue them.

The really important point about your notice of the HVRA report is that it stated quite categorically that the figures for the consumption of floor heating installations given in the IHVE's book "Central Heating in Your Home" are much higher than those found in practice. So far, no comment or reply from the IHVE has been published.

PETER JAY

London, w1

New town blues

SIR: Astragal was characteristically peeved (AJ, 16.8.61) that the Tonight team is more concerned with people than with things; that they asked Stevenage residents how they liked the town rather than trying to buttress the fiction that the new towns are too openly developed. (The gross and net densities of the new towns are, of course, higher than those prevailing in most other medium-sized towns, including those frequently advanced as exemplars of compactness and urbanity.)

"A combination of good scripting and good camerawork," he urges, "could say far more about the architecture of New Towns in a few minutes, than any amount of interviewing the tenants." The people don't matter, do they! It's what it all looks like to the self-appointed arbiter of taste that is really important.

WYNDHAM THOMAS

London, wc2

Park Hill

SIR: I was delighted that you drew attention to Park Hill, in Sheffield. I believe that it is indeed, as you say, our most advanced sociological and architectural concept, and so a vital experiment. The hypothesis was clearly stated in the report explaining the idea before the building began.

It seems an incredible waste that such a vast and expensive experimental set up

should not be used to the full. For it is sad, but true, that no independent research whatever is examining the way people are moving in, adapting and changing their life patterns, and the way in which the keen tenant participation found at the beginning is developing.

During my recent lectures in Sweden it was the Park Hill project, more than anything else in Britain, which arrested the attention of audiences. Architect after architect, sharply critical of the haphazard use of point-blocks, saw the idea of Park Hill as a refreshing return to some horizontal lines. It seemed to me that the bold contours of a Farsta or Hasselby, on the outskirts of Stockholm, or some of the schemes nearer the centre, might advantageously have included the idea of the continuity of decks at higher levels. Density could vary greatly.

In Britain too there are authorities who wish to develop this brilliant Sheffield pro-

Please allow me to express this plea: that here, if ever, the Ministry of Housing, or the Nuffield Trust or the Leverhulme Trust or the Gulbenkian Trust or the City of Sheffield itself, should start a research project at once. When millions have been spent on the experiment it is silly not to spend a few hundred on observing it, which might save a few hundred thousand next time.

PAUL RITTER

Nottingham

Hospital costs

SIR: The proposal contained in your editorial on Hospitals Research (AJ. 26.7.61) to create another centralised body demands very careful consideration.

As Peter Cowan points out in his letter (AJ, 9.8.61) hospitals research covers a very wide field, and it is necessary to distinguish between the levels of research involved.

The problems requiring investigation at operational level are encountered by those engaged in programming, designing, building, equipping and operating hospitals based on a predetermined organisational concept. However, because of the complexity of providing comprehensive community care in a changing world the fundamentals upon which the health service is built also require continuous examination and it is obviously of great importance that any results should be published free from external pressures.

The Regional Hospital Boards are well placed to undertake the operational work and surely the universities who already conduct multi-disciplinary investigations could further undertake the fundamental enquiries with flexibility and impartiality.

The importance of the Ministry of Health as a central development, collection, classification and information agency would thus be heightened.

If the decision to consider such a proposal were taken early enough, the architectural implications could well be of interest to the proposed October conference of the RIBA Board of Architectural Education. RAYMOND MOSS

Thorpe Bay, Essex

NEWS

PICCADILLY

Criterion development

The architect for the projected development scheme on Piccadilly's south side, Geoffrey Bryant Hobbs, FRIBA, said this week that no detailed plans for the part of the Criterion site recently acquired by Dr. Sieczko Zygmunt could be made until Sir William Holford (now on holiday abroad) and the LCC had agreed the final comprehensive scheme for the whole area. In fact, all that has happened so far is that Dr. Zygmunt has acquired a sizeable slice of the Criterion site, which he proposes to develop in accordance with the LCC's plan, and that development will not begin until the leases fall in-in about 10 years.

This should give ample time for the solution of some of the problems that clearly stand in the way of redeveloping the south side of the Circus in an adequate manner: for instance. Holford's present, tentative scheme (illustrated, AJ, 16.2.61) for this area involves the realignment of Jermyn Street, and an overhead pedestrian bridge above it. And the proposed tower block would project over a raised pedestrian deck, and "shallow pool with fountain jets." These were the first fruits of Holford's imagination, and the final plan agreed may be very different-one hopes not too different. But its satisfactory development clearly depends on the whole south side being designed as one, whether by one developer or several agreeing to co-operate is irrelevant, and even more on agreement by the Ministry of Transport to considerable modifications of the road layout at Piccadilly. The recent one-way experiment there didn't suggest that Sir William's imagination had set light to the Minister of Transport's, but something may be smouldering there.

Geoffrey Bryant Hobbs is an architect who specialises in the remodelling of shops and hotels: his most recent job was the modernisation of the Mapleton Hotel in Coventry Street, for which he has designed and executed a large 14 ft. by 7 ft. mural of Piccadilly itself by a photographic process-a work which he hopes will soon have "a historic interest" as the future Piccadilly goes up.

COMPETITION

Ideal Home/RIBA Group Housing

For the first time, Ideal Home Magazine in association with RIBA has invited architects to submit designs suitable for developing either or both of two sites, including both the design of individual dwellings and their grouping on the site. The sites are at Stockport, Cheshire, and at Harlow New Town, Essex, and each site is just over 41 acres. "The promoters," says the announcement, "believe that it is essential to produce

schemes both economic to purchasers and profitable to developers by means of increased density and that intelligent groupplanning can give an environment of spaciousness with family privacy within a closely knit neighbourhood."

For the Harlow site a mixed development with a minimum of 15 dwelling units to the acre is designed, and the selling price of the largest units will not, it is hoped, exceed £5.000, excluding land. The Stockport site requires a mixed development with a density of at least 20 units to the acre, and a maximum selling price of £3.000. The two authorities concerned have agreed to permit appropriate development of the sites without any preconceived density limitation.

The developers designated for Harlow are Laing Housing Co. Ltd., and for Stockport, Hampson & Kemp Ltd.

Assessors in the competition are: Sir Basil Spence, Donald Gibson, and G. Grenfell Baines.

Premiums for each site are £1.000, £350. £200, and six special awards of £50, and fees for architectural services in building the winning schemes will be at the RIBA scale and will be in addition to the premiums.

Closing date for submitting designs is January 2, 1962. Applications for conditions should be sent, with details of registration number or date of application for registration and Architects' Registration Council receipt number, to: Ideal Home Magazine, Design Competition Office, 5th Floor, 96, Long Acre, London, wc2.

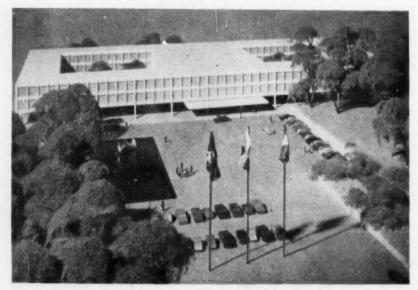
RIBA

Conference on education overseas

An informal conference on the education of architects in the developing countries of the Commonwealth was held at the RIBA on August 16 and 17 attended by spokesmen of 10 countries of Africa and Asia and eight from bodies concerned with architectural education in the United King-

In the light of general agreement that there is an acute lack of facilities for training architects, or any of those supporting categories of workers that are necessary, and the alarmingly high wastage rate in most schools training architects, it was agreed that there is a need for almost every country to devise other courses, of good standing but more appropriate to the talents of many who now seek to be architects, and this would help to meet the need for well-trained supporting workers in the office and the field "if the crash programmes to meet what amount to prolonged social emergencies are to be fulfilled." It is hoped that by next summer, when the full Commonwealth Conference meets again, some statistics of the needs of the countries concerned, at professional and sub-professional level will be available. Against this background it was agreed that as new universities, which are rapidly emerging, will be independent and therefore decide their own standards of entry and curricula, it may soon be unrealistic for the RIBA to "require" a given standard. Instead the RIBA was urged to keep in contact with the new universities and try to encourage the right entry standards and appropriate degree courses. Already three schools have adopted a satisfactory expedient for remaining in line with the RIBA's new entry requirements without prejudicing their possible intake: these recruit candidates at five "o" levels and by combining general with architectural education train them to two "A" level standard before they sit the Intermediate.

On the question of syllabus and recognition, it was agreed that flexibility is essential. Schools are to be invited to prepare and send a draft of the syllabus they think right and send it to the Board of Architectural Education, which will see how far



Work is due to start early next year on this project at Essen, West Germany, a prestige office block for the Krupps organisation, which will be Mies van der Rohe's first building in Europe for thirty years

they can be accommodated with regard to RIBA examinations. Membership of the RIBA might not be the object of all overseas students' studies, but the RIBA Final and Special Final Examinations also qualify for registration under the UK Architects Registration Acts, and in view of reciprocity arrangements between countries, overseas schools may want to accept the RIBA qualification standard which is internationally recognised, as the standard to be attained in their own courses. The RIBA could help forward this object by allowing Intermediate and Final papers to be set and marked locally without counter-checking in London. On provision of teaching staff it was pointed out that the financial provisions of the Department of Technical Co-operation for augmenting salaries, etc., are encouraging and governments in developing countries should apply to draw on these funds. The difficulty of recruiting architects who know how to teach is not however confined to these countries, and all efforts by the RIBA to facilitate exchange of information, ideas and teaching techniques in the UK should be extended as far as possible.

One promising way for a school to recruit teachers from the UK or other industrialised countries, it was pointed out, is to start or become associated with a development Group. Young but talented architects are attracted by the idea of combining teaching with development work at the drawing board on a practical, social problem.

Finally it was agreed that all information about scholarships available should be collated by the Department of Technical Co-operation; that scarcely any fellowships for post-graduate study in architecture have been awarded under the Scholarships and Fellowships Plan of the Department, and this must be remedied; and that more stringent selection methods were needed for selecting candidates to receive scholar-

The delegates were entertained to dinner at the Architectural Association in the course of the conference.

TPI

Gold medal for Holford

The presentation of the Town Planning Institute gold medal to Sir William Holford will be held at the Carpenters Hall, Throgmorton Avenue, London, Ec2, on Wednesday, October 4 at 6 p.m.

LIVERPOOL UNIVERSITY

Wholesale market research fellowship

A research fellowship, provided by the Horticultural Marketing Council and tenable at Liverpool University, has been awarded to Hilary Chambers, to enable him to do a year's research into the design and building of wholesale markets. The work will be under the guidance of the Professor of Architecture at Liverpool and of the Horticultural Marketing Council, and it will

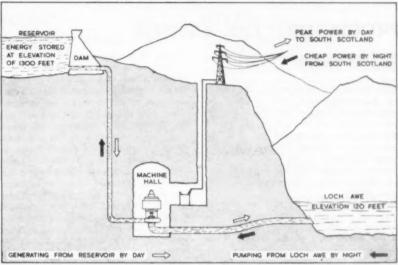


Diagram issued by the Scottish Hydro-Electricity Board of the pumped storage system in Ben Cruachan which is central to the Loch Awe hydro-electric scheme

entail a good deal of travelling to see wholesale markets in Europe and perhaps America, and the writing of a thesis which would provide a factual basis for the building of future markets.

Hilary Chambers is a founder and one of the ex-presidents of BASA, and was much involved in the initiation of the AJ's monthly BASA Supplement. He is working at present at Matthew and Johnson-Marshall's

LOCH AWE

Power house in Ben Cruachan

A huge subterranean generating hall, hewn from the granite of Ben Cruachan, will be the main feature of the Loch Awe power scheme near Oban in W. Scotland. The room, 350-ft. long by 65-ft. wide by 120-ft. high will have a concrete vault supported by arches although the walls where possible will consist of living rock. Inside the hall will be four reversible pump-turbines. When demand for electricity is at a peak water will descend to the turbines through two 1.700-ft, tunnels from a dammed corrie on the flank of Ben Cruachan. When demand is low the turbines will reverse and pump water from Loch Awe back up the tunnels into the corrie

Work has started on an access road to the

mountain top and on a 3,600-ft, horizontal tunnel into its heart. Subterranean workings on this scale make the argument against subterranean cables look a bit silly.

MOHLG

Birmingham's overspill

The Ministry of Housing has been considering the problem of Birmingham's oversp.ll and come to the conclusion that a combination of town expansion schemes can provide a solution. Daventry, Redditch and Worcester are the towns proposed for expansion under the Town Development Act 1952. There is also a proposal to alter the line of the proposed green belt at Wythall, on the eastern side of the Alcester Road by joining up some of the "existing pockets of development."

The plan is to increase the population of Daventry to 25,000 (from 16,500), of Redditch to 60.000 (from 33.000), and of Worcester to 100,000 (from 65,000), while the green belt adjustment would provide another 600 acres of building land.

These measures are in addition to the possibility of a new town at Dawley, still being investigated.

Building in Twenty Years' Time: Weekend Discussion Conference, Junior Liaison Committee, Downing College, Cambridge.

SEPTEMBER 15 TO 17

Max Ernst Exhibition: Tate Gallery. FROM SEPTEMBER 7

26 Young Sculptors: ICA Exhibition.

New buildings in Manchester: Tour organised by Manchester Society of Architects, meeting at the Building Centre, 1.30 p.m.

SEPTEMBER 9

DRAWING OFFICES

International survey

The British Institute of Management is organising an international survey of the management and function of design departments and drawing offices in the mechanical and electrical engineering industries in nine countries, where an identical questionnaire is being sent out covering questions of relation of design and drawing offices to their firm, personnel, organisation of work, education, recruitment and training, costs, responsibilities, and current design techniques, policy and drawing office methods.

PROCESSING THE CENSUS

by Derek Senior

In his preliminary report on the 1961 Census the Registrar-General told us that the population of England and Wales had increased in the last 10 years by just over 5 per cent. This, he pointed out, was the fastest rate of increase for half a century. It was also twice as fast a rate as we had bargained for when land was being allocated for urban growth in the original development plans.

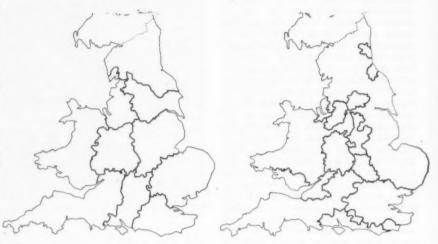
Reading on, we learned that the rises in birth and immigration rates to which this increase was due were largely concentrated in the second half of the decade. While present trends continue, then, we may expect the future rate of increase to be higher than for the decade as a whole. We also learned that the number of private households had increased nearly 2½ times as fast as the population, and the number of private dwellings nearly four times as fast. And here again the operative factors remain

vigorously in force.

The report went on to give corresponding figures for each of the "standard regions," for their conurbations and regional remainders, for counties, for towns of various size groups, for urban and rural areas and for local authorities. We gathered that there had been a decline of 2.1 per cent in the population of Greater London, while the remainder of the London and South Eastern Region had gained 13.3 per cent, giving a net increase of only 1.7 per cent for the region as a whole; and that the increase for what we normally regard as "the South East" (including the Eastern and Southern Regions) was no more than 7.3 per cent. We also gathered that the six conurbations taken together, and even (for the first time) the outer ring of Greater London, had actually been losing population.

We might reasonably conclude from all this that our land needs for urban growth, though vastly greater than we had supposed 10 years before, were not in total too formidable; and though unevenly distributed, were nowhere overwhelming. Some of us might still have been disposed to maintain that each region's prospective housing demand could be accommodated within its existing urbanised areas—given the necessary changes in policy—even if the higher rate of increase prevailing over the last five years were sustained for the next 20.

A radically different picture emerges, however, if we look at the figures in terms of the true regional planning units to which I referred last week—the "study areas" that form the basis of an embryonic regional planning system now quietly in process of gestation. These areas were defined by the planning staff of the Ministry of Housing and Local Government, in consultation with the local planning authorities concerned, for the purpose (in the first instance) of meeting the Minister's request in Circular 37/60 for a regional reassessment of land needs and resources. To this end it was obviously necessary to get together all the authorities



On left, England and Wales, showing the standard regions on which the Census figures are based. Right, showing the "study areas" that form the basis of a future regional planning system, as defined by the planning staff of MOHLG

affected by each major source of pressure for urban growth. And it became as obviously desirable that these authorities, having worked out how much land they had available among them to meet their combined requirements, should go on to consider (with the help of Ministerial planners, researchers and experts on water supply, transport, industrial location and the like) exactly how and where the agreed deficiency in each region should be made good.

So far 13 of these "study areas" have been provisionally defined. Six of them consist of the city regions whose problems arise from the explosive tendencies of what the Registrar-General calls the conurbationsthe continuously built-up metropolitan areas in their midst. The others are potential city regions: on the South Coast (from Hastings to Poole), in the North Midlands (round Nottingham, Derby and Leicester), in Yorkshire's "South Riding" (around Sheffield), the industrially expanding Bristol-Gloucester area, in South Wales, on Teesside, and in the Bedford-Northampton "bridge" between Greater London and the West Midlands along the M1 route. Between them these 13 areas contain almost threequarters of the population of England and Wales.

Not until the Census figures are added together for these areas, instead of for units so unrelated to contemporary patterns of settlement as "standard regions" and counties, do they begin to reveal the true nature and scale of our land allocation difficulties. We then find that in the Greater London of today (which stretches from Newbury to Harwich and Dover) the net change in population has been an increase of nearly 7 per cent, not a fall of 2 per cent. What is more to the point, the population increase for the outer zone of this region (excluding the con-

tinuously built-up core) becomes nearly 25 per cent instead of 13.3 per cent. Still more significant is the rate of growth revealed in the number of households, which has gone up by not far short of one-third in this outer zone, and by over a half in its inner country ring. Together with the contiguous South Coast study area, which is subject to much the same influences, the outer zone of modern Greater London has accommodated nearly 14 million new residents, forming over half a million separate households, in the last 10 years; and most of them are owner-occupiers who have moved out of London of their own accord in the five years since the abolition of building licences took effect.

The same trends are apparent, in varying degrees, in the figures for the other city regions. Their outer zones show a combined increase in population of about 12½ per cent, and in number of households of about 21 per cent. Together the six city regions account for nearly three-fifths of the population of England and Wales, and the number of people living in their combined outer zones increased by about 20 per cent—not far short of four times the national average. The combined figure for the corresponding "remainders" of the standard regions is barely 7 per cent.

Such is the extent to which the official Census report fails to fulfil what it describes as its primary purpose: "to meet the essential demographic needs of central or local government." Such also is the true measure of the current demand for houses outside (but within reach of) London and the other metropolitan centres.

It should be noted that the demand created by migration from other regions to the South East and to the West Midlands has been small in relation to the demand arising from local dispersal within these regions —so small, indeed, that a complete reversal of the inter-regional movement of population would serve only to narrow the difference between these and other city regions in the intensity of the pressure on their outer zones—without having any effect at all on the total volume of that pressure.

Whatever is done, or not done, about the drift to the South East, and whatever is done. or not done, about the involuntary dispersal that arises from the redevelopment of slum areas, this pressure will remain unrelieved. Failing an economic crisis we shall still have to cope, in the next 20 years, with something like two million families, avid for space and reckless of lengthening journeys to work, who can and will pay through the nose for building land rather than go on living in congested metropolitan centres. How to accommodate them without sacrificing either the green belts round those centres or the rural character of the open country beyond them is the major planning problem of our

MOW

Spec building in 1961

The result of the Ministry of Works' third enquiry into private house building was published last week. The enquiry shows that private firms building houses for sale on their own initiative started work on 59,000 houses during the first half of this year and expect to start on 60,000 houses during the second half, a total of 119,000 houses this year.

In the previous enquiry held in November 1960, contractors expected to start 131,000 houses this year. They attribute the unforeseen reduction to delays in planning consents, land shortage, and purchasers' difficulties in obtaining mortgages. Asked to estimate how many houses would start in 1962, the contractors expected little change in their programmes next year, but the economic measures since announced by the Chancellor may produce a further reduction in house building.

Building boom figures

Further figures published by Mow last week, show that constructional work carried out by contractors in the second quarter of 1961 reached an all-time record of £600 million. Allowing for price increases, this represented an increase of 4 per cent over the first quarter of the year, and of 8 per cent over the same period in 1960.

A breakdown into types of building showed that increased industrial building is the main cause of the boom, and new housing increasing less than any other type. Allowing for price increases, industrial building increased 19 per cent on last year, "private miscellaneous," which includes such jobs as office blocks and shops, increased 10 per cent, and local authority building, apart from housing, increased 14 per cent.

New housing, however, showed an overall increase of only 6 per cent, although private house building went up by 9 per cent.

MOHLG

Housing for Hurst Park

The Minister of Housing has given permission for houses and shops to be built on 54 acres of Hurst Park race course, but considers that the remaining 67 acres of the site should be the subject of further consideration. The site was the subject of a public inquiry in September 1960 (reported and commented on, AJ, 6.10.60).

He differs from his Inspector only on the question of density: HM Inspector's report had proposed development at a maximum density of 40 persons per acre: the Minister considers that this should be the minimum and says, "with a skilful layout the density could well be higher and in the interest of using valuable land to the full he would like this to be considered by the owners and authorities." A plan to build a secondary school on the site he felt should be the subject of further consideration. Permission to erect buildings on the western part of the race course and on the car park is subject to agreement with the local planning authority on the "number, siting and design and external appearance of the dwellings and shops" and "before building work begins, a scheme for raising the lands liable to flooding, the layout of the roads, means of access to the buildings, landscaping of the site and planting of trees shall be agreed with the local planning authority, or failing agreement, shall be determined by the Minister"

Mr. Norman Wates welcomed the decision and said, "every effort will be made to maintain and improve the amenities of the site, which will be developed with many landscape features, and will probably include a sculpture to commemorate the [race] course." The new Hurst Park, he thought, would be "a credit to Esher."

COID

Farm buildings advisory panel

The Council of Industrial Design has set up an advisory panel on farm buildings, to which landowners, manufacturers and officials of all kinds can turn. The panel is in response to the number of inquiries coming in to the Council since Design magazine began to review the design standards of pre-fabricated farm buildings.

Invited to serve on the panel are: F. J. Stratton, CBE, chairman of the Fatstock Marketing Corporation Ltd. (chairman); Edward D. Mills, Sir Gordon Russell, Michael Shepheard, John Voelcker, J. Noel White and Peter Whitworth (the last two, deputy director and industrial officer of COID).

In making this announcement COID point out that the design of farm buildings is of importance, since many are prominent in the landscape and they are relatively free of planning control. As a first step the panel will survey the range of standard components in concrete, steel, aluminium, timber and plastics now available, with a view to recommending worthwhile lines of development.

NFBTE

Sub-contract forms

The National Federation of Building Trades Employers and the Federation of Associations of Specialists and Sub-contractors have recommended to their members the desirability of each part to any sub-contract agreement having a complete copy signed by the other party.

Where there are amendments to sub-contract documents, they recommend that the contractor should prepare two copies, initial amendments and send both to the sub-contractor, who would initial amendments on both copies, stamp and sign one and return both to the contractor. The contractor should then stamp and sign the other copy and return it to the sub-contractor.

CONSERVATION COURSE

Institute of Archaeology

A two-year post-graduate course on the Conservation of Historical Monuments is starting this year at the Institute of Archaeology, with the aid of a Gulbenkian Foundation Grant. It is open to architectural students who, except in the matter of professional practice, have qualified for admission to the register, and leads to a Diploma of the Institute.

Lecturers will be R. Gioyard-Beer, Sir John Summerson and H. M. Colvin, on the history of British architecture; Marie Draper on Palaeography; S. E. Dykes Bower on diagnosis and treatment of structural faults in buildings, and W. A. Eden, who is also the Director of Studies, in the theory of architecture, and the law relating to ancient monuments and historic buildings. Applications for admission to the Registrar, the Institute of Archaeology, Gordon Square, London, wc1.

BRIXTON SCHOOL OF BUILDING

Two new courses

This year's series of lectures on legal aspects of building work, arranged by Brixton School of Building at the Building Centre, will be on the subject of "The Quantity Surveyor—his legal position," and the lecturer will be Donald Keating, barrister-atlaw.

The course will begin on Tuesday, October 31 at 6 p.m. and run on Tuesdays for five weeks. Fee for the course is £1, and applications for admission hould be sent to the Secretary, Brixton School of Building, before October 20.

An advanced course in Public Health Engineering with particular attention to sanitation of buildings is also to be introduced at Brixton this year.

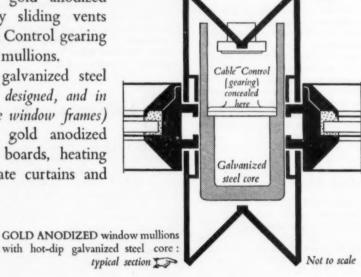
HOPE'S aluminium



UNITED STATES EMBASSY, GROSVENOR SQUARE, LONDON Architects: Eero Saarinen & Associates, U.S.A. Associate Architects: F. R. S. Yorke, E. Rosenberg & C. S. Mardall, FF.R.I.B.A.

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THE INDUSTRY

This week Brian Grant describes an electric heating system, flexible joints for drainage, a gas fire, a refuse disposal unit, veneered chipboard, developments in plastics, a coloured plastic cistern, and an electric cooker

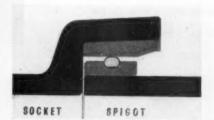
Electric beating

The ESWA system of low temperature radiant ceiling heating consists of electrically heated resistance foil elements embedded in units of resin-treated kraft paper sheets with high electrical and moisture resistance, which are placed immediately behind the ceiling face. The amount of ceiling covered naturally varies with heat requirements and heat losses, and is generally somewhere between 50 and 80 per cent of the whole ceiling area. The large area of the heat source gives a rapid and even transmission of heat to the whole of the room, and the manufacturers claim that a ceiling temperature between 85° and 90° F. will give a room temperature between 65° and 70°, and will be almost constant between floor and ceiling. Ceiling heights may be anything up to 30 ft. so that the system can be applied to public halls.

The electrical loading of the heating elements is 15 or 20 watts per sq. ft., and is transmitted as about 85 per cent radiation and 15 per cent convection. Cost is between £15 and £20 per kilowatt installed, and no complex suspensions for the heating mats are needed, though they must have above them some form of insulation to give a U figure of not more than 0.25. (ESWA Ltd., 26, Newman Street, London,

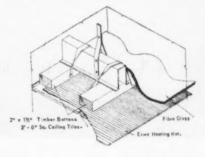
Flexible joints for drainage

During the last few years it seems to have been agreed that although drains can be laid in straight lines and to regular falls it is impossible to keep them that way, and that the proper thing to do is to allow for a certain degree of flexibility in the joints. The section below shows the Hepseal joint, in which polyester mouldings are applied to the spigot and socket of glazed vitrified clay pipes and provide a piston type telescopic joint in which the rubber sealing ring does not roll, but slides into position, the joint being completed by pushing the pipes together and compressing the rubber ring between the polyester surfaces. Under test, a water pressure of 20 lb. per sq. in. is maintained with an angular movement at each joint up to 5 deg. in any direction, and any linear movement up to in. per joint. This type of joint has numerous advantages, as pipe laying can be carried out in bad weather with wet trenches, and testing can be carried out at once as no cement compound is used and therefore no drying time is needed. This



Above: the Hepseal joint

Below: ESWA heating with a suspended ceiling



type of joint also ensures that the spigot is automatically centred in the socket, a detail which is often neglected when joints are made in cement. (The Hepworth Iron Co. Ltd., Plumpton House, Thurlstone, Penistone, Nr. Sheffield.)

New gas fire

The illustration below shows the new Flavel Debonair gas fire, which has a heat output equivalent to about 3 kilowatts. The louvres across the top are for convected warm air, and considerable trouble has been taken to make sure that the air is projected well out into the room and does not merely drift upwards to stain decorations. Of the three radiants, the two outer ones can be turned off, and there is also a separately controlled ventilator in the base of the fire for the extraction of stale air, which should be quite efficient with the pull of the flue. The fire surround is mahogany or light oak, finished with a polyester resin which resists heat and the usual household hazards, which I am interested to see are now listed as spirits and cosmetics. Living room hazards of course, not kitchen. The photograph has been taken from too low a level, and the satin brass feet are less emphatic than one would think. The fire will fit any standard opening and the makers claim an overall efficiency of 65 per cent. Gas ignition is by dry battery, which should last about a year. Price is £25 6s. 7d. including purchase tax, and the fire should be in the gas showrooms by the time this note appears. (Sidney Flavel & Co. Ltd., Leamington Spa.)



The Flavel Debonair radiator/convector gas room-heater



Who started all*this anyway

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Waste disposal

The Clear-a-Waste disposal unit is intended to deal with all types of kitchen waste, including bones and even broken glass. It is made in two models, one of which is intended to stand on the draining board (or a convenient shelf), with a water supply fed in by hose at the top. There is also a built-in unit for sinks with drain holes of the right diameter. Prices of the two models are £29 8s., and £31 10s. A kit for converting the portable to a built-in unit costs £3 19s. 6d. (Delapena Mechanical Developments Ltd., 6 Russell Gardens, London, w14.)



The Clear-a-Waste disposal unit

Veneered chipboard

Corven veneered chipboard is a non-loadbearing cladding material for internal applications, and is made in a single ply with both surfaces veneered in a standard range covering 19 different woods, which may be different on opposite faces of the base board. Thicknesses vary from 1 to 1 in., and the sizes with most veneers can be anything up to 11 ft. 6 in. by 5 ft. 9 in. wide, though teak and sycamore are limited to 7 ft. Edging strip in all veneers is made in tape form for application to edges which have to be cut on site. The board can be machined at the edges to suit most fixing methods, or to give a concealed joint between adjacent sheets. Where sheets are vee jointed or mitred at the edges the chipboard base is always exposed and is best dealt with by painting so as to provide a purpose made break between the sheets, which is generally better than cover strips. Tongued and grooved joints are not desirable with sheets less than 4 in. thick. As a guide to cost six sheets of maximum size work out at about 3s. 2d. a square foot. (Williamson & Kay Ltd., Holme Street, Liverpool 20.)

Developments in plastics

At the plastics exhibition Thermo Plastics were showing a new type of urinal made from Perspex. It was a 3-stall unit made in a single moulding with a total width of 76 in., and was shown in white, though it could equally easily be produced in a range of colours. Perspex as a material is apparently suitable for this purpose, and of course does away with the cemented joints necessary with conventional materials, which have a tendency to absorb moisture and trap dirt. The unit illustrated weighs only 70 lb., so it gives quite a considerable reduction in floor loading. Perspex is easy to cut or drill, so it is easy to fix and there should be no difficulty in concealing the pipework to the flushing spreaders. The design of the unit follows the conventional shape, and it is presumably blow moulded from sheet, so that different shapes would not be too costly to produce. I am not suggesting that architects should design their individual versions, but it would be interesting to see a design which started more or less from square one and was not a fairly close imitation of conventional shapes. (Thermo Plastics Ltd., Dunstable, Beds.)

Coloured plastic cistern

The new Viking cistern is made entirely of plastic, the inside having no metal parts. The outer shell is moulded in high impact Styron, which has a high gloss surface and is claimed to be proof against cracking and chipping. It is also available in a considerable range of pastel shades, and the price is about the same as pottery cisterns. (Cisterns Ltd., Addingham, Ilkley, Yorks.)

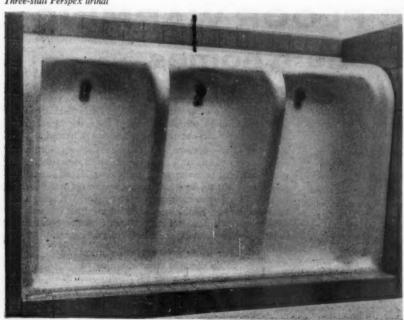


The Viking plastic cistern

Electric cookers

English Electric have announced a new double oven electric cooker which has been designed in collaboration with Design Research Unit. Three of the hob plates have the usual Simmerstat control, and the fourth has a sensing disc which prevents saucepans from boiling over. The lower main oven has a glass inner door, an interior light and an automatic timer, while the top oven is intended for grilling or slow cooking at a pre-set temperature of 300 deg. F. There are two rollers under the back of the cooker so that it is easy to move for cleaning. Price, in white or cream, is £69. (English Electric Co. Ltd., English Electric House, Strand, London, wc2.)

Three-stall Perspex urinal





English Electric's double oven cooker



Modern Hampton Home. Architectural Surveyor: F. J. Edwards, F.V.J., F.A.L.P.A.

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For more detailed information on electric floor warming please write to your Electricity Board.

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

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10.218 design: building types

RESEARCH LABORATORIES

The Design of Research Laboratories. Published for the Nuffield Foundation by the Oxford University Press. 45s.

This book is the first systematic attempt ever made to study laboratory design and for that reason alone deserves a welcome from all architects concerned with research laboratories. The book is really a report of a study initiated by the Nuffield Foundation in 1954 at the request of the Agricultural Research Council, and was carried out by the Foundation's Division for Architectural Studies.

The work is divided into two parts; the first contains an historical introduction on the evolution of laboratories and reviews current practice in the design of research establishments. Very little space is wasted on either because laboratory history is short and, on the evidence of the illustrated examples, current practice is largely empiric and woefully inadequate.

The second part is the meat of the book and its conclusions will be of great help to architects. In brief it appears that laboratories can well be planned much deeper than has been normal practice (24 or 25 ft.), that the grid can most conveniently range between 10 ft. 6 in. and 12 ft., and that room heights can be quite low (8 ft. 6 in. to 9 ft.). Natural light at the windows must therefore be supplemented by artificial light at the back of the room in multi-storied blocks, or by carefully designed roof lights in singlestorey units. These conclusions are arrived at through a well-set-out text and literally dozens of tables. Many of these are of purely academic interest and a possible criticism of the book could be that it is difficult to use as a reference because the facts a designer wants are often immersed in a sea of analytical tables.

Nevertheless, the information is all there; services, lighting and colour are discussed and the main text is concluded by a consideration of special planning problems, such as noise, vibration, fire and safety precautions. This latter group is mainly a

survey of existing data but it is most helpful to have the information all in one

There are two appendices. The first is on Cost Analyses where it is quickly seen how rewarding a thorough study of services can be when in all seven examples they and the fittings total about 50 per cent of the total cost of the job. The second appendix is on materials and finishes and, while not nearly so critical a factor in determining the cost of the job, these few pages will be most often used by architects. Indeed, architects will probably feel that there was no need to relegate the subject to an appendix and will wish it was far more fully covered. Perhaps sheer lack of experience with new materials was a limiting factor which only time and further editions will amplify. Meanwhile, architects responsible for designing research laboratories will wish to have this book on their shelves

> (94) 725-511

10.219 design: building types

TEACHING HOSPITAL

New Teaching Hospital and Medical School at Ninewells, Dundee. Report on the Preliminary Sketch Plans. Available from the Secretary, Eastern Regional Hospital Board, Vernonholme, Riverside Drive, Dundee. Price 3 gns.

This well-presented report outlines the problems and preliminary solutions of the new 700-bed teaching hospital and medical school soon to be built on the outskirts of Dundee. The text, which is clearly organised into relevant sections and sub-sections, is concise yet very readable. It is accompanied throughout by many coloured diagrams of great simplicity and clarity.

The first sections of the report give a general background to, and analysis of, the problem. Factors common to most hospitals, such as flexibility, environment, circulation, etc., are commented on together with the particular problems caused by the presence of students, and research facilities in a teaching hospital. The implications of "Embedding"—a term used to signify the closest possible relationship between the medical school and the hospital—and its effect upon the architectural and organisational concepts of the plan, are discussed.

The latter part of the report defines the outline proposals of the preliminary scheme. These include the general pattern of circulation, services, supply routes and external traffic organisation, together with relevant details which describe the main features of the plan. The site, with the aid of sections, contour maps, and climate graphs, is carefully analysed and the main planning decisions listed. Each department is individually described and the text illustrated with zoning diagrams, line plans and sections. The wards and theatres are treated in greater detail and the reasons for the resulting plans described.

The hospital is planned around several courtyards and seldom exceeds 4-storeys in height. The corridors are open ended and the

general layout is designed to allow for future growth. It is a predominantly horizontal scheme placed upon a sloping site. This results in long service routes, many vertical lift points and tenuous links between closely related departments, particularly the surgical wards and the radiology departments. Many of the fundamental problems associated with the planning of a 3-storey hospital have not been fully resolved, and the scheme could very well be expensive both in capital and running costs. It is however the most interesting teaching hospital plan to be produced so far and it is hoped that many of the inflexible elements within it, such as the wards, will be eliminated in the final scheme. Four appendices, each compiled by specialists, follow the main report. The first outlines the little-known field of laboratory planning. The second concerns services engineering, and the third outlines the building engineering problems-both are very well illustrated. The last is a description of the preliminary proposals for site landscap-

The carefully selected information contained within this report is exceptionally well written and illustrated. The layout and construction are excellent and the whole provides a good example of how an architect's report should be compiled.

Hd2

19.240 construction: details

COLD FORMED SECTIONS

The Use of Cold Formed Steel Sections in Building. Addendum No. 1 (1961) to British Standard 449:1959. Published by British Standards Institution. Price 7s. 6d.

This BS forms an addendum No. 1 (1961) to BS 449:1959 and relates to the use in building of cold formed steel sections formed from plate, sheet and strip steel 4 in. thick and under, formed by cold rolling or pressing. The sections are particularly applicable to the problem of light-weight structural members to carry light loads but at the same time the use of thin steel makes the components prone to other types of failure not experienced with the thicker sections.

The publication is concerned with design and details of construction with stress tables and information on bending stresses, bearing stresses, sheer stresses, web buckling for members in bending and axial stresses and slenderness ratio for members in compression. It also covers design and tension members, fixing details, fabrication and erection. Appendices give data for actual sections and examples of design calculations.

The Cold Roll Formed Structural Framing Institute has members in the United States, Europe and Britain with the object of producing international standard codes for high strength joists, truss and girder design. The technique aims to use steel in the most economic way in low-load-capacity buildings. In conjunction with Bs 449 this will be of particular interest to architects, structural engineers and builders concerned with light-weight structures.

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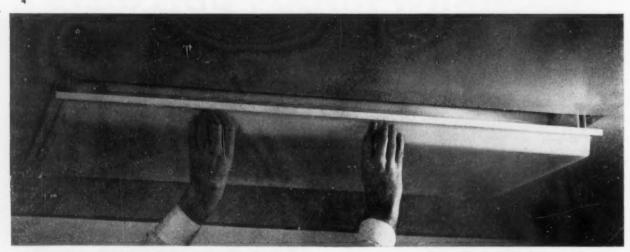
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10 DESIGN: BUILDING TYPES

basic accommodation for old people

It is the policy of the Ministry of Housing and Local Government to recommend bed-sitting rooms and shared toilets in accommodation for old people. In this article Harry Chadwick suggests that both of these infringe the human requirements of old people and he bases his argument both on an a priori consideration of their practical and psychological needs and on the evidence furnished by a social survey which he has recently carried out.

The Ministry of Housing, in one of its latest publications,* is still recommending local authorities to provide "flatlets" schemes for old people. Admittedly the proposals are advocated "for the less active and for those who live alone," but there is every indication that, even for people such as these, the suggested accommodation is far from satisfactory.

All too often a local council will tend to follow the Ministry's recommendations, even where shades of doubt exist. For the architect there is a temptation to design a large building block, irrespective of its prime desirability, in a sphere where small individual units, such as houses and bungalows, have before been erected as a matter of course. A "flatlets" block offers more "architectural" scope, so long as architecture is viewed in terms of isolated buildings.

In flatlets, the basic unit consists of a bed-sitting room (180 sq. ft. with, 140 sq. ft. without, bed recess) and kitchenette (30 to 40 sq. ft.). This unit is completely self-contained. Toilets are shared, and work out at one bath or shower to every four occupants, one w.c. to every two. The warden maintains and cleans the toilets. In addition there may be a common sitting-room.

The problems of bed-sitters and communal toilets are

here being singled out for special attention because they affect the basis of any planning for this kind of accommodation. Neither of these features is generally liked, despite the fact that the Ministry says that most old people living in flatlets are very pleased with them. Several surveys amongst old people have proved that the bed-sitter is not generally popular. One of the latest such surveys, by Vere Hole,* who questioned the occupants of 61 old people's dwellings in Edinburgh, showed that 80 per cent of those who had bed-sitters (including single people) would have preferred separate bedroom accommodation.

Some surveys of my own have shown that 55 per cent of those living in flatlets were quite definite in wishing for a separate bedroom. The strongest objection to the bed-sitter came from an old lady who disliked the comments of some of her visitors: "Oh, you've got to sleep in here, too!" One or two tenants remarked that there would have been a different atmosphere about the place if there had been another room, a bedroom, to go into at night time. It was depressing being surrounded by the same living room scene all day long.

Some 70 per cent of the tenants were whole-heartedly against shared toilets ("But, of course, I'd prefer my own bathroom."). Protests about the lack of privacy were frequent. It was interesting to note that, although those who objected to bed-sitters and shared toilets were very definite and vigorous in their statements. none of those who did not object were very certain of their opinions-they were only too thankful for the accommodation they had been given, so poor had been their previous living conditions. When I visited a block of flats where facilities were not shared, most of the tenants questioned had to be reassured that they were not going to lose their homes. They were alarmed and felt insecure at the possibility of being moved to other accommodation they considered to be of an inferior standard. None of them would have preferred a bed-sitter, and all of them were horrified at the thought of shared bathrooms.

A tenant in one of the flatlets blocks succinctly summed up a very general objection when she said,

^{*} More Flatlets for Old People. HMSO 1960.

^{*} AJ, 20.4.61 and 27.4.61.

about returning to her flat, "I don't feel I'm going home. There's nothing like being able to go out of your own front door. If you want to go outside here, you're still inside. It feels all fastened up in here."

The social survey tends to be a lifeless questionnaire, useful, in so far as it goes, for corroborative evidence to present before wayward committees. There is, however, a more worth-while approach to any planning problem. We are much more than our bodies and our immediate bodily needs. D. E. Harding* considered this line of thought some years ago. He likened architecture to a biological function. Our clothes, furniture, rooms, houses, streets and paths may be seen as extensions of ourselves ("embodiments"), enriching or impoverishing us as the case might be. His article set forth the kind of thought that needs to pass through any designer's head before he even puts pencil to paper or considers a constructional detail—at least, if anything vital is to result.

"In a manner of speaking, man is chiefly not-man, and the not-man chiefly architecture. And the whole lives. You cannot meaningfully say of this whole that it is alive here and dead there, any more than you can meaningfully say of my life-blood that it is a dead juice in which living corpuscles are swimming for their lives and mine."

This is common sense. Architecture, if it is to enrich us, must be considered as an extension of the human body, and as a vehicle for human needs, both emotional and physical. It is such thinking that leads one to question the desirability of providing bed-sitters for old people, shared bedrooms in children's hostels, and the like.

The Bed-sitter

Bed-sitting rooms are frequently provided for old people, whether the overall accommodation be in flats or bungalows. Many advantages (mainly economical ones, one suspects) will have been considered, but at a comparatively superficial level, and from only a few angles.

The criticisms that follow are taken at random, some of them referring to straightforward "practical" considerations, others dealing with more subtle emotional reactions and effects.

A bedroom tends to be a particularly untidy place, especially for the period when the bed remains unmade, sheets folded back, perhaps partly on the floor, items of clothing lying scattered on the tops of chairs, chests of drawers and other pieces of furniture. If the bed is not in a curtained-off recess, the untidiness makes itself apparent in the rest of the living room, and one has an acute reminder of having just got up whilst preparing breakfast, perhaps. A nasty start to the beginning of the day, particularly if the living area has been left untidy from the supper things of the night before! Two masses of untidiness facing one first thing in the morning are likely to be experienced as quite a jolt indeed.

There is a way of avoiding this kind of situation. The

living area can be left tidy at night time, the bed made first thing on getting up in the morning. Such an imposed regimentation is, however, an unnecessary restriction, placing a strait-jacket on what might quite possibly be a typical living pattern.

There is also the fact that making and keeping a bed in order creates a good deal of fluff, and disturbs a lot of dust. Without any division between bed and living quarters, cleaning and dusting need to be carried out far more frequently than would otherwise be the case—a point to be borne in mind by those who suggest that it is far less trouble, and involves far less exertion, looking after one room rather than two. Even a curtain to the bed recess is too insubstantial a barrier in combating this problem.

It has been mentioned that even single people object to bed-sitting rooms, on the grounds that there is difficulty in having guests stay the night. Here is a grave disadvantage, because old people tend to be much more lonely than any other section of the community, and anything that helps to relieve that loneliness is worth while. This illustrates the way in which a building, or a group of buildings, may either help or mar the social and friendly interaction between people, depending upon the type of planning. It is true that, architecturally, it is impossible to change a person's basic make-up, or considerably improve anyone's capacity for enjoying life; but it is also true that, architecturally, we may inhibit emotional wellbeing and abet emotional ill health. A bed-sitter discourages inviting friends or relatives to stay the night. A divan, or a convertible settee, is hardly a feasible proposition in a room which already contains a bed and is also used for living in, especially when, as usually happens, the space provided is not overgenerous (it seems to be an accepted standard that old people, even when active, require much less space than younger ones, despite the fact that they have had much more time, over the years, to gather many more belongings around them).

A guest's bedroom, communal, is no real answer to this problem, and it is not surprising to find that such rooms are seldom used. The reason lies deep in one's character, one's attitude to personal possessions, and one's sense of belonging.

We call a house that is lived in a "home," and this word has a very special meaning. It denotes comfort, reassurance, a haven, and so indeed it is. Our home is a fundamental part of our existence, and we identify ourselves with it (. . . "the unhoused and the underhoused are to some degree disembodied or disorganised."*). To invite someone home is to invite him or her to share part of our personality. A home is something we have tended, our mark is everywhere upon it, and if we are deprived of it, we suffer a loss that is greater than the temporary discomfort of a sling or plaster cast.

To ask someone to stay the night in a guest's bedroom is not the same thing at all as asking that person to stay the night with us, in our own home. The guest's

^{• &}quot;Embodiments," The Architectural Review," February 1955.

bedroom is an impersonal affair, no matter how well furnished; to reach it, if only down a corridor, one has to leave the confines of a home. It may only be a question of moving a few yards away, but even that short distance creates the emotional equivalent of bidding an irrevocable "good-night!"

Where a married couple occupy a bed-sitter, there is something of a different problem. Here, the difficulty is in being thrust together with someone else not too little, but too much. Apart from some of the more "practical" issues involved, there is the fact that all people need to experience occasional privacy if their well-being is not to suffer. Without the means of enjoying one's own company, one remains unrefreshed for taking pleasure in other people's. Not only loneliness, the state of being perpetually alone without any understanding contact with somebody else, is a problem: so also is the opposite, the situation where one is never able to be alone. Enjoyment results from the constant interaction between one's own feelings and those of others. Without this pendulum-like motion. now inwards towards oneself, now outwards towards others, the strain is considerable. The lonely are not the only ones to commit suicide in desperation with it all-those living in a "mad social whirl" are also often driven to self-destruction, lonely in the sense of being cut off from themselves.

Again, here is a situation where planning cannot improve the richness of emotional health to any marked degree, but may decidedly hinder it. To allow the means for privacy will not ensure that privacy will be enjoyed, but at least there is the consoling fact that privacy has not been discouraged outright. People do not work together like clockwork all the time. There are individual preferences even over what time to get up, what time to go to bed, take a nap. . . . These preferences cannot possibly operate in a bedsitter shared by two people living together and seldom leaving the home. Frustration arises when one partner feels like having a snooze, whilst the other would prefer to watch football on the telly.

If husband or wife is ill in bed this renders matters even more acute, and it is unreasonable to expect the partner who is up and about to restrict his or her movements and enjoyment all the time, merely because the living quarters are also one big sick-room. It is ironical that bed-sitters are not seriously entertained for married younger couples (even of the quaintlystyled "business" variety) whereas for old people, who ail more and are confined to bed more, bedsitters are often thought to be quite the thing.

The Ministry of Housing has now ceased to recommend bed-sitting rooms for married couples, though its concessions to greater personal freedom are very lukewarmly expressed: "Generally two people require more space and privacy for dressing and undressing than can be had in a room which is also used as a living room. Moreover, if there is an illness, a separate bedroom may be a big advantage." However, there are still doubtless many schemes afoot, in connection with individual bungalows, as well as with flats, where bed-sitting rooms are being provided for married couples. One or two "package deals" provide this type of accommodation.

Bed-sitting rooms are smaller in area than a separate bedroom and living room together. Add to this that smaller areas seem to be considered suitable for old people (the 1949 Housing Manual recommended livingroom areas for aged persons some 20 per cent lower than for other dwellings) and it will be appreciated that room for furniture is at a premium. Some authorities give financial help to those who wish to purchase new furniture when moving into new accommodation, but who are put off by the cost. This is admirable, but avoids the fact that it is a wrench to be parted from the possessions one has gathered together over a lifetime. Many old people view "contemporary" furniture with complete mistrust and a divan (a very necessary adjunct to a bed-sitter if it is to function in any reasonable way at all) is for many of them a very new-fangled contraption indeed.

If one becomes identified with one's house, how much more so is one identified with one's furniture. It helps to form the pattern of one's life. One associates such and such a drawer with these things, that cupboard with those. With old people, the pattern of use is even more firmly established than with younger ones, and to have that pattern disrupted may be even more unsettling. Something of value may be irretrievably lost, and cause harm to the person who has suffered the loss. Bones, tissues and arteries are not the only things that become harder and less flexible with age. Not only muscles become more rigid and set: hand in hand with rigid muscles goes a rigid emotional makeup,* a severe jolt to which may be fatal.

With a complete change of environment, even to one's furniture, familiarity with one's surroundings has been lost, and one is emotionally deprived, temporarily at least, until one is able to familiarise oneself with all that is new. Many old people do not have the capacity to adapt themselves readily to complete changes. Sudden, severe shocks benefit nobody. It is reasonable to modify and replace one's possessions as the needs arise, gradually. A complete change, in one fell swoop, may severely disrupt one's sense of security. In a recent article,† it is suggested that large windows may give a sense of exposure and insecurity to old people; at the same time, in the same article, it is deprecated that a tenant might introduce a wardrobe into the bedroom which is possibly bulky and old-fashioned. And yet that old-fashioned wardrobe might be treated with affection by its owner, and loss would indeed result in a sense of insecurity.

There is another way in which a common characteristic of old people's lives has apparently been ignored where bed-sitting rooms are provided. Generally, old people go out, meet others, far less than is usual with younger age groups. All this is conducive to a routine dullness of living, and there is not even the change between home and workplace for those who are re-

^{*} Wilhelm Reich. Character Analysis.

[†] The Housing Needs of Old People, AJ, 11.5.61.

tired. Old people are at home for most of the time. All the more reason, therefore, why their home should function happily for them, and provide them with enjoyable surroundings.

The bed-sitting room, again, detracts from all this, and only adds to the general monotony which obtains. Having spent most of the day pottering around, doing odd jobs around the house perhaps, the possibility of being stimulated by different surroundings, of the different "feel" of another room, before going to bed at night, is absent. There are many times when one is in need of a complete change, and such a change involves a difference in outlook, both physical and emotional. If one suddenly wants to "pack it all up," there is no means of escape, other than outdoors; there is no other room to move into. Instead, one remains hemmed in by an environment that, for the time being, is associated with one's present mood. A refreshing change is impossible, and once again one has been impoverished. The only amelioration of this situation occurs where communal social facilities, such as sittingrooms, have been provided, and even these are not suitable should one still wish for privacy.

. . . and communal toilets

There is an overriding reason why bed-sitters, and particularly communal toilets, should be discarded in accommodation for old people. One comes to associate different living standards with different "prestige" evaluations (the word "prestige" here referring to a sense of human dignity rather than an inflated ego). A bed-sitter is not typical of accommodation in this country. Socially, on any level, it is certainly not regarded as an ideal, even though in many cases it has to be endured. Bed-sitters are usually thought of in connection with untidy young bachelors, working spinsters, crabby landladies and tatty old wall-papers. A bed-sitter, all too often, goes hand in hand with roughing it. It is true that the rooms provided in most of the old people's flatlets now being built are a paradise indeed when compared with many a dingy city apartment, but the basic stigma and associations remain. The provisions of bed-sitters inevitably make any building a hostel (a "lodging place," not a true home). For the young and active, still with their way to make in life, living in a hostel may not only be tolerable, it may even be invigorating; but the old come to accept different standards over the years, though possibly having to put up with this kind of accommodation. The flatlet may, for them, be a vast improvement in living conditions, but there is every indication that such improvement could itself be improved upon. As one old lady, very lively for her age, told me with contempt in her voice: "This place should have been an old folk's home."

The acceptable norm in living conditions in this country comprises separate living rooms and bedrooms, and a toilet attached to the house itself (even where, as with so many old houses, the w.c. is outside in the back-yard, it is still usually within the curtilage

of the home). This is what most people associate with decent living standards. Bed-sitting rooms and communal toilets are inevitably regarded as belonging to an inferior order of things. When they are provided, human dignity has been affronted.

It is pointed out, in the Ministry booklets, that standards of toilet accommodation in hostels having shared facilities are higher than in most modern family dwellings. So they may be, worked out in terms of w.cs and baths per person; but this is by no means the only valid criterion. A toilet within the home is seen, emotionally, as a desirable living standard. Whether the home consists of one or five persons is immaterial from this point of view. A toilet divorced from the dwelling unit itself is felt as a humiliation, only to be endured out of necessity. Two of one's vital functions, washing and excreting, both normally enjoyed in privacy, have become divorced from one's home. To this extent, apart from any other factors, these functions will be felt as depersonalised, they will be experienced less pleasurably. Gone is the possibility of singing away in the bath to one's heart's content, no matter how cracked the voice; gone, the wandering from a warm bath into a warm bed, still warbling under one's breath, still within one's own home. Little of all this! There is the corridor to think about, and other people, too, who may not be so happily disposed towards one's warbles. All the privacy has been lost, and most people feel very strongly on the subject of privacy. "I'd even put up with a shower if I could only have my own bathroom."

Even away from these considerations, however, communal toilets have their more practical disadvantages. Chamber pots, if they are used, can only be emptied down the w.c., and this again means a walk out of one's home, pot in hand, to the little room down the corridor. Indignity indeed, if anything ever was, although less than forty feet of it (the recommended maximum distance to any toilet). To make matters worse, many tenants do not use chamber pots. For them, there is often a trip down the corridor four or five times in a night. Flatlets may have the equivalent of half a w.c. per person, but each w.c. is used more times per person than is usual!

Basic, desirable standards do not have to be skimped on the grounds of economy. It is to be hoped that the near future will see both a change of policy—and a change of heart. There is still time for many old people to be provided with the kind of environment they want, and the kind conducive to greater happiness in retirement.

site reports

47

Arrangements must be made for reports to be submitted to the architect's office weekly from the site, either by the clerk of works, where there is one, or alternatively by the contractor. This should take a standard form to give a completely clear picture of the current stage of the contract and anticipate anything on which the architect or contractor should be taking action.

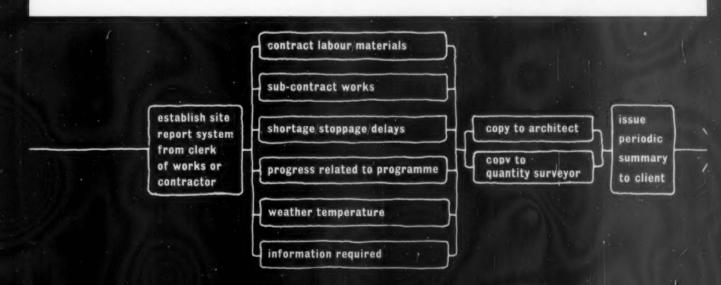
To do this, the report should include the following information:—

(a) The main contractor's labour force on the site each day.

- (b) The sub-contractors' labour force on the site each day.
- (c) Materials delivered to the site and plant delivered or removed.
- (d) Labour, plant, or material shortages.
- (e) Any delays or stoppages incurred and causes with running totals.
- (f) Daily state of weather including temperatures.
- (g) Visitors to the site and which day, with meetings noted.
- (h) Date on which drawings or information received and notes of any information required.

(i) Notes on general progress related to programme.

In the absence of a clerk of works it must be signed and dated by the person in charge of the works as a true record of the works for the week. These documents represent a job diary from the date when the contractor takes over the job until completion of the works. As such, it is the principal source of information for the maintenance of good progress and also may subsequently be the basis on which claims are negotiated.



site meetings

48

Regular site meetings can waste a great deal of time when the programme, site reports and site visits have been established to ensure satisfactory progress in terms of the day to day running of the contract. There are certain periods throughout the contract, however, when a well organised site meeting will do a great deal to

- (a) give a renewed impetus to the job by reorganisation where delays or difficulties are likely to affect or have affected the programme.
- (b) help to avoid delay or confusion in planning particular operations with all concerned well in advance.
- (c) solve site problems where a number of people are concerned or where cost or delay are involved.

Site meetings are best restricted to these occasions and should be called only when necessary to deal with such an occasion to maintain good progress or

settle outstanding problems.

A copy of the articles of agreement under which works are being carried out should be kept on site together with a copy of the contract drawings and bills of quantities. Throughout the course of the work points of dispute may arise which must be carefully analysed in terms of their compliance with the terms of contract, as deviation from these during the course of the work may make it that much harder to enforce particular contract clauses at the end of the work. To establish a precedent in having ignored the contract on one or two points during an operation can make it difficult to apply the same terms when dealing with the more important points of the final account.

Minutes should be taken with decisions recorded and copies of the minutes sent for agreement to everyone concerned. A copy should be sent to the client for his records.

As, under the contract, the general contractor is responsible for the site and sub-contractors, he should arrange and run site meetings after first obtaining your approval of the agenda which should include the following:

- 1. Record of those attending.
- 2. Acceptance of previous minutes.
- 3. Items arising from previous minutes.
- 4. Progress related to programme.
- Labour strength and materials queries.
- 6. Drawings received or due.
- 7. Sub-contracts.
- 8. Financial review.
- 9. Any other business.
- 10. Date of next meeting.

It is essential to include an "action" column in the minutes so that there is no confusion as to who is responsible.

progress related to programme labour materials contractor establish contractor to issue to circulate site information required agenda in advance minutes meeting to all concerned for action procedure sub-contracts supplies anticipated problems

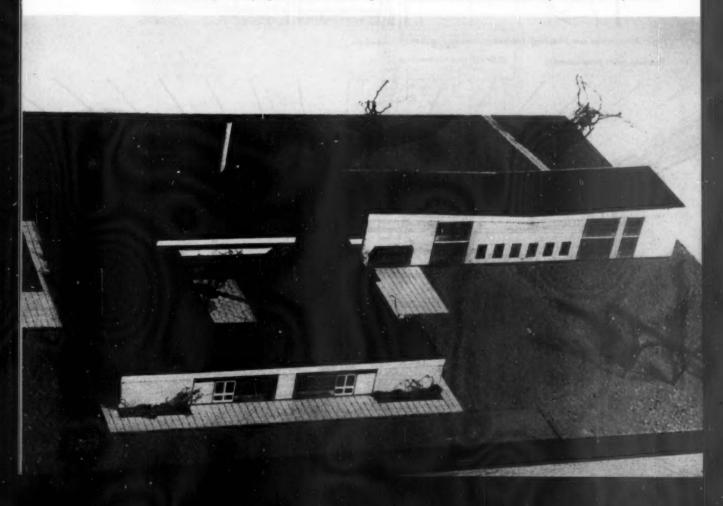
SIB File No. (97)

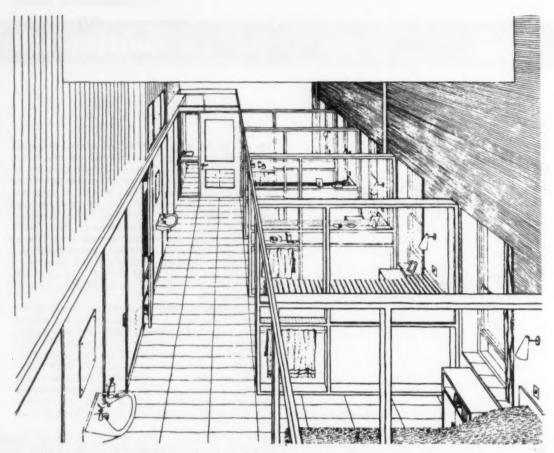
Junior Training Centre at Warwick

Model, with teaching block in foreground and dormitories beyond

The aim of this project, a residential school now under construction for about 48 subnormal boys and girls, is not only to provide a high standard of training facilities, but to exploit as fully as possible the limited but latent capabilities of such children to eventually become partly or completely self-supporting. The intention is also to provide a temporary home for children in the county who, for one reason or another, are in need of care and protection for short periods. The overall aim of the planning has been to provide an intimate and small-scale environment for these children, whilst making supervision, which is constantly required, as simple and easy as possible for the staff. As a result, the architects have made a fresh and interesting reassessment of this building type.

The teaching accommodation includes four classrooms, for groups of from twelve to fifteen, and practical spaces for domestic science and handicrafts, together with the assembly-dining space, this accommodation has been grouped around an internal court. This not only provides outdoor play space which can be easily supervised, but creates a visual link so that children can see the activities of other classes. The plan also allows for cloakroom and w.c. accommodation, with direct access from each classroom. The kitchen, screened from the main entrance by the boiler house, has been





Boys' dormitory as seen from staff bed-sitting room on first floor

Teaching court from assembly



Detail of typical external walling [Scale: }" = 1' 0"]



provided with enough elbow room to allow some of the children to help under supervision.

The living accommodation consists of a play room off the main entrance, placed so that it can also serve as an additional classroom for observing the more seriously disturbed children, and as a domestically-scaled interior for general use including meals during week-ends. From this playspace there is access to two dormitories for up to 6 boys and 6 girls. These are laid out in the form of double or single alcoves, each furnished for personal belongings, books and clothes.

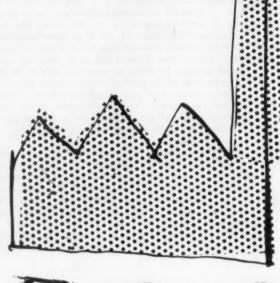
The staff accommodation, two family and one single person flats, are included in the residential block, placed so that there is direct observation of the dormitories from each living room. This allows the staff to be aware immediately of any disturbance, without having to stay in the dormitories, and in addition there will be a bell system from each alcove for use at night. To create as domestic a scale as possible, the ceiling level in the dormitories has been kept low by use of an inverted pitched roof, which still allows this visual control. The architects have also attempted to set a high standard in the staff flats, to offer as much compensation as possible to the occupants for the out-of-hours care that must often be required.

The building, which is expected to be completed in about twelve months' time, at a cost of about £55,000, at 81s. 21d. per square foot, is mainly in loadbearing brickwork carrying timber upper floors and prefabricated deep timber roof beams. It has been designed by Eric Davies, County Architect; K. Allerton, Deputy; J. J. Smith, Assistant County Architect, and A. W. Penn, Job Architect, E. C. P. Wilkinson, quantity surveyor, L. E. Barnes, engineer.



Ground floor plan, first floor plan and section [Scale: 3] " = 1' 0"

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Speculative Housing

at HELENSBURGH, SCOTLAND

architect T. G. HUMPHREYS

quantity surveyor R. F. JAMIESON

site architects to

Ferniegair Estates Ltd. NOAD & WALLACE

The chief interest of this modest but very successful scheme is that within a vocabulary of conventional materials and quite low cost limits, the architect (who himself occupies one of the houses) has managed to achieve a high standard of accommodation with a real sense of quality in terms of character and detail

Houses from the south-west (from the hotel garden)



building study-2nd series



Houses from the north-west

APPRAISAL

This field of speculative house design is one fraught with hazard for the ambitious architect; recent statements in more sophisticated southern climes make it difficult to remember that it is most wise to stick closely to traditional methods, particularly in one's first exercise. Yet here is a most successful example of an architect in his first job, and disciplining his ideas so that traditional forms and techniques prevail to assist in a typically modern concept of house design.

The scheme is modest in character and size, and equally in the proposals it makes for new ways of living, but this makes it a no less interesting subject for study. Indeed, any housing project wholly acknowledging prejudices in favour of close grouping with complete detachment, two-storey living with maximum privacy, and large areas at lowest costs, while still making something worth while architecturally, merits profound examination. In shape and size, these five houses closely resemble their neighbours in an otherwise messy, mixed-up development. But in terms of detail, pattern and character they are quite outstanding. This is in spite of there being no colour featured outside apart from that of natural materials and the grey and white rendering. They were built by a local builder experienced in traditional methods for a fairly modest sum and with site supervision from the architect on Saturday mornings only. He received no fees or expenses for his efforts, but lives in one of these houses himself and claims to have benefited sufficiently thereby. Several good points derive from this situation. There are much larger-than-usual master bedrooms, for instance, and only counter height separation between dining room and kitchen so that the former can be a play space for children (who would otherwise insist on being in the kitchen proper). This idea works only because laundry facilities are provided separately from cooking arrangements. Having experienced living in one of these houses, the architect is frank and forthcoming in his criticisms-disarmingly so-but thinks his present home "quite a pleasant house from which to plan our next one." He wishes he had combined the windows at the south-west wall of the living room (agreed) as the wall space between is rather disturbing and "we tend to draw the curtain right across it and the window as well"; long lintel-to-skirting windows in children's bedrooms "would have been more functional,"

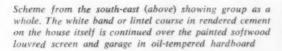
for the interesting reason that the children might have been more likely to stay put upstairs in bad weather. He also volunteers that "the bathroom windows and blank panel is of course downright untruthful, and is no way to convince a spec. builder of the form arising purely from function." These purist standards are altogether admirable, but perhaps too high for their context. Similar remarks might apply to the two-tone grey and white colour scheme but, in the absence of a natural facing material, there is always the danger of individual occupiers running riot colour-wise with window frames, etc., and the idea here was to encourage them to stick to white trim (which it has done). Such subterfuge deserves mention.

Other minor points of criticism might include the fact that horizontally-pivoted windows do not combine well with curtains, and virtually prohibit venetian blinds (likely to be required at some gable windows for privacy in an echelon arrangement of two-storey houses). Things which personally irritate slightly-but which may fairly be matters of personal opinion-are the absence of a mantelshelf somewhere on the chimney breast, the obvious difficulties of resolving the lap-board ceiling with electric lights and ceiling roses, and the rather left-over look about certain residual areas of plaster between door frames, attic hatches, light fittings, etc. This last complaint crops up so much in one's own work it is only fair to emphasise that in this case the building operation came hard on the heels of the design and there was obviously no time for second thoughts during the rapid execution of this phase.

The architect was in fact "drawn out" considerably during discussion of this scheme and some of his remarks are both significant and salutary.

"On such a site it would have been interesting to have done something a little less conventional . . . however the plan had to convince the builder that the houses would sell easily and I felt that sufficient progress had been made in being allowed to build the group at all. . . ." This is indeed the point in which this scheme is outstandingly successful, because the houses were sold very well-not so quickly as usual but sufficiently so. " One lesson I have learnt from this scheme is that the architect should insist on his details being adhered to. The idea that the joiner may be able to do it

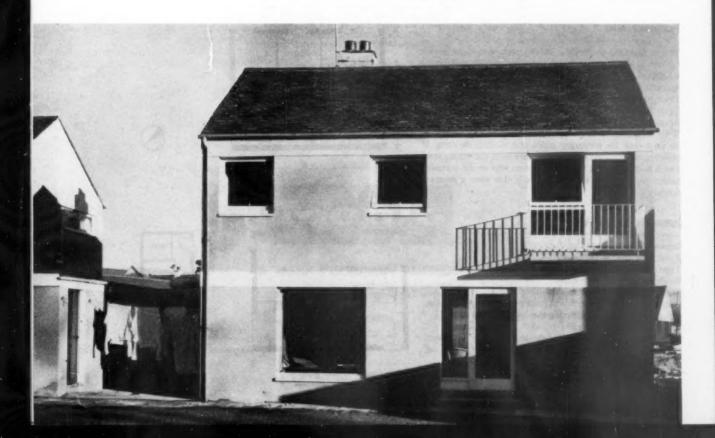




Right, an elevational view from the south, grey Tyrolean rendering with white cement rendering on the half gable (on brick-on-edge). If a functional reason for the blank window panel is required, then it can be said to allow the medicine cabinet to be built-in to the thickness of the wall

Below, an elevational view from the west. The regulating white band does allow a certain freedom and a merger between the living room window and door might have been an advantage, but nevertheless the "sophisticated" vernacular still reads well. Second-hand West Highland slate is used on the roofs





building study-2nd series

cheaper should never be entertained. Another lesson is that, if possible, the drawings should be made on one large sheet and nailed to a board. Generally the relationship with the builder, who owns the land, is a tricky one and fraught with difficulties. But somehow one must come to terms with this subtopian mess that spec-builders create everywhere and try to beat it; and this is an attempt to do just this."

It is only due to add that the success of this endeavour, as exemplified in the accompanying photographs, transpires in a part of our island where the general notoriety of speculative building has been hitherto at its most manifest. One feels that a proper beginning has now been made, in a very proper

CLIENT'S REQUIREMENTS

These were two-fold. The architect-client wanted a modern family house of moderate size, which could be run economically with little maintenance: maximum privacy, but taking advantage of the views: maximum living-space for the money. The builder-client wanted a plan acceptable to varied types of prospective customers and easily adapted to suit individual requirements, because each house would be finished only after it had been sold.

SITE

The site of the five houses is part of the western perimeter of Ferniegair Estate, once the garden surrounding a large Victorian house, now demolished. The estate is being developed by a local builder and will contain about fifty houses when completed. The group is sited in echelon to take advantage of the view to the south-west, overlooking the garden of the Cairndhu Hotel and the waters of Gareloch beyond, also to catch a glimpse of the Firth of Clyde through spaces between houses to the south-east. The grounds falls very slightly from north to south.

PLANNING AIMS

It was intended to create a small street of modern houses composed of simple traditional elements readily understood by a local builder, so that the houses might be built quickly and efficiently without much supervision.

Brick piers 3 ft. wide, internal glazed screens and transom lights and a continuous wood-lined ceiling have been used to integrate visually most of the ground floor space.

With a separate utility room, or laundry, the kitchen need be used only for preparing meals and feeding children. It is therefore separated only by a counter from the dining area, which becomes a play space for children who would normally hanker to be in the kitchen proper if this were a separate

SUMMARY (Architect's house only)

Ground floor area: 575 sq. ft. Total floor area: 1,117 sq. ft.

Type of contract: Schedule of quantities-fixed price.

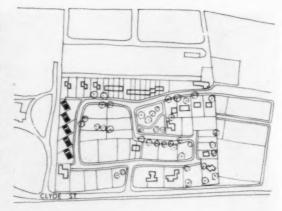
Work began: February 1959. Work finished: November 1959.

Estimated price of foundation, superstructure and finishes, including drainage to collecting manhole: £3,558 os. od

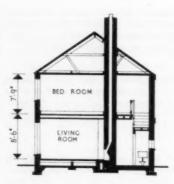
Final contract price: £3,684 os. od.

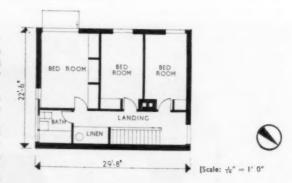
Estimated price of external works and ancillary buildings, including drainage beyond collecting manhole: £342 os. od. Final contract price: £369 os. od.

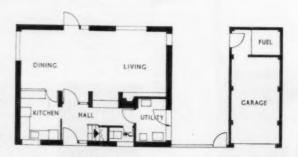
Total: £4,053 08. od.



Block plan [Scale 1: 5,000]







Ground and first floor plans

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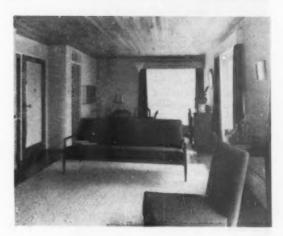


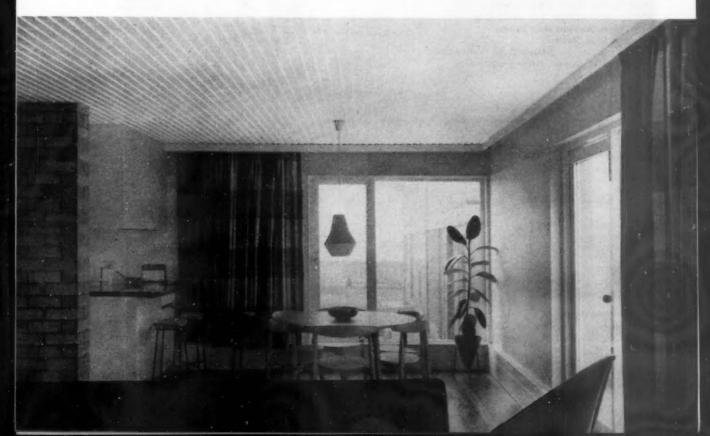
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These photographs show the same view (from top to bottom respectively) in numbers 17, 18 and 19—the bottom view being in the architect's own house. Interesting points of comparison include different approaches to the problem of dining/kitchen relationships (i.e., service counter plus screen, complete separation with service hatch only, and a quite open service and breakfast counter) and to the curtain pelmet problem. Perhaps there should be standard arrangements for curtain hanging "built in"







building study-2nd series

GOST ANALYSIS	Cost	
Based on final contract price. (AJ revised elemental breakdown in use from November 10, 1960.)		
Preliminaries and insurances		111
1.50 per cent of remainder of contract.		
Work below lowest floor finish	3	31
Concrete strip foundations; 11-in. cavity brick underbuilding, 4½-in. brick sleeper walls, lead core damp-proof course. Damp-proof membrane on		

4-in. hardcore in utility room and w.c.

Upper floors	4	9
4 in. × 2 in. ground floor joists; ½ in. fibre		
nailing strips.		
Guarea strip flooring in living-room and hall:		
368 sq. yds., 37s. od. per sq. yd.		
1-in. tongued and grooved softwood flooring in		
kitchen:		
7 in. \times 2 in. joists at 18-in. centres, 7 in. \times 3 in.		
bridles and trimmers, ¼-in. tongued and grooved softwood flooring on nailing strips on ½-in. fibre.		
Root		01

6 in. × 2 in. rafters, 4 in. × 2 in. ties, 4 in. × 2 in. braces, 7 in. × 2 in. ceiling joists, all at 18-in. centres, ½-in. sarking.

Cat walks in attic space and 2-in. fibre glass insulation. Second hand West Highland slates, roofing felt, blue-black plain ridge tiles: 74 sq. yds., 34s. 5½d. per sq. yd.

Staircases

One 8 ft. 6 in. high × 3 ft. 0 in. wide.

Straight softwood flight, 1-in. treads, 1-in. risers, 11-in. inner and outer strings.

Finish for fitted carpet.

 $4\frac{1}{2}$ in. \times I in. hardwood handrail and intermediate rail, $\frac{1}{2}$ -in. mild steel balusters at approximately 3-ft. centres.

External walls

11-in. brick cavity walls (brick-on-edge outer leaf, half gable only), precast concrete slip sills, precast reinforced concrete lintels.

4-in. rendering, grey Tyrolean finishing coat (except lintel course and half gable): 165 sq. yds., 64s. 4d. per sq. yd.

Windows
Red pine horizontally-pivoted opening and fixed lights.

1/2-in. polished plate and 32-oz. glass, obscured glass in entrance sidelight and w.c. Espagnolette bolts

and friction hinges: 243 sq. ft., 25s. 5d. per sq. ft.

5 6

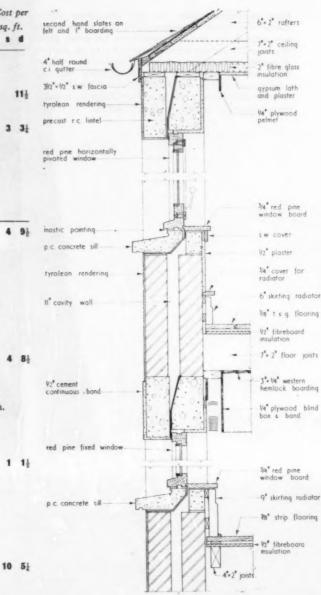
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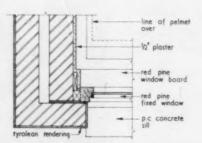
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External doors
2 solid flush, 2 glazed softwood: 75 sq. ft.,
15s. 4½d. per sq. ft.

Internal structural walls
9-in. facing brick; 7 sq. yds., 69s. id. per sq. yd.
4\frac{1}{2}-in. facing brick; 6 sq. yds., 34s. 6\frac{1}{2}d. per
sq. yd.

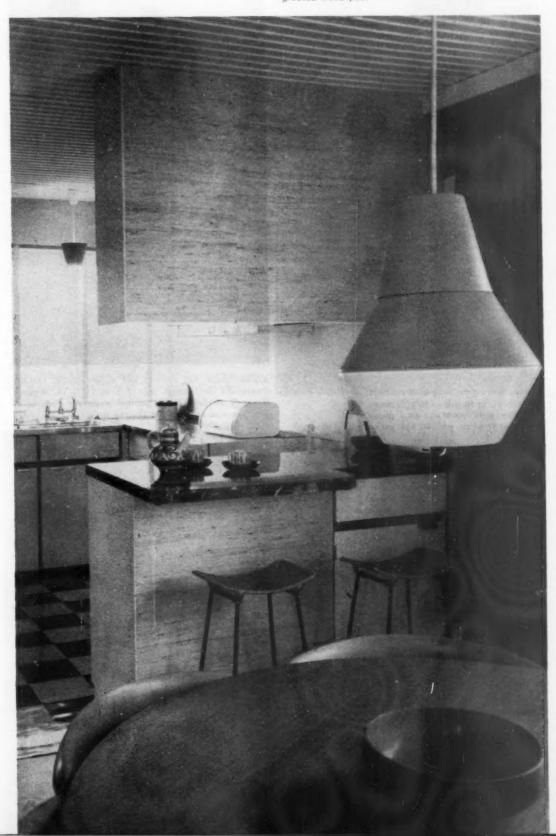
Stud partitions, transome lights above glazed





Typical section through external walls, and plan at corner [Scale: $\frac{1}{4}$ " = 1'0"]

The kitchen from the dining area. Black "marble" plastic counter tops with prefabricated units below and 9 in. × 9 in. thermoplastic tiles on ½-in. tongued and grooved wood floor



Dion.

building study-2nd series

screen, kitchen and bathroom doors, and partition between living room and hall; 71 sq. yds., 15s. 2½d per sq. yd. (Kitchen counter and wall unit included in kitchen fittings.)

1 32

1 21

3 11

1 4

Internal doors

I glazed with sidelight, 2 single hardwood faced sliding flush, 5 single hardwood faced flush; 169 sq. ft., 8s. 7 d. per sq. ft.

Ironmongery

Satin nickel lever to main external door, Swedish pull handles, recessed handles to sliding doors.

Total of structural elements: 31s 9id

FINISHES AND FITTINGS

Wall finishes Plasterboard skim-coated; 178 sq. yds., 14s. 2½d.

per sq. yd. \(\frac{1}{2}\)-in. lacquered hardboard on plaster in bathroom; \(\text{9 sq. yds., 40s. od. per sq. yd.}\)

I ft. $\times \frac{1}{4}$ in. Sycamore plywood continuous band over all ground floor window walls; 6 sq. yds., 76s. 8d. per sq. yd.

Floor finishes

Thermoplastic tiles; 10 sq. yds., 26s. od. per sq. yd. Quarry tiles; 8 sq. yds., 60s. od. per sq. yd. 9-in, and 6-in. softwood skirtings to match skirting radiators.

(Guarea flooring included in upper floors.)

Geiling finishes

Ground floor: 3 in. × 1½ in. Western Hemlock shiplapped; 55 sq. yds., 15s. 7½d. per sq. yd. First floor, utility room and w.c.: plasterboard skim-coated; 68 sq. yds., 8s. 8½d. per sq. yd.

Decorations

External: 3-coats gloss paint on wood and metal generally.

Internal: walls and ceilings, 2 coats water paint. Handrail, intermediate rail and all ground floor doors stained black and waxed. Upper floor doors, natural, waxed.

Fitting

2 full length wardrobes with double doors, 2 door height wardrobes with single doors, 1 storage cupboard with double doors, linen cupboard with slatted shelves, prefabricated kitchen storage units, counter and sink unit, small bathroom cabinet, hardwood slatted bench in hall.

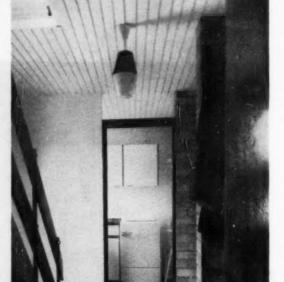
Total of finishes: 11s 11ad

SERVICES

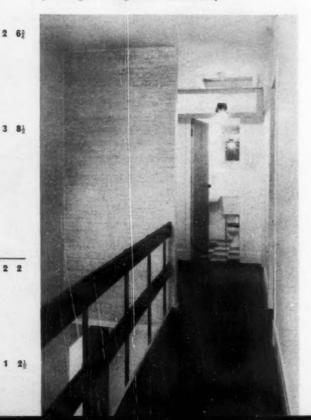
Sanitary fittings		2	2
Type	No. of each type		
Wash hand basin	1		
Earthenware sink	I		
W.c.s	2		
Bath	1		
Stainless steel sink	1		

Waste, soil and overflow pipes

Internal soil, waste and vent pipes. Bath and w.c waste to rain water pipe



Kitchen from hall (above) and upper landing (below). Downstairs the ceilings are of 3 in. × ½ in. Western Hemlock shiplapped and painted while the floor is of ½-in. tongued and grooved Guarea strip



The main bedroom is deliberately large (at the expense of space in the two smaller ones) and is also used by the architect as a study



The three piers look much better from a more oblique angle but nevertheless successfully separate the fireplace, piano recess, door to hall and breakfast counter without any of the fragmentation one might expect from such diverse elements cheek by jowl



Looking at the sitting end of the living room. The fireplace seems to be rather out of the way (behind projecting facing brick pier on right) and television (for which there might perhaps have been space built in) wins the competition of visual interests set up between these elements



building study-2nd series

Cold and hot water services 35-gallon heavy quality copper indirect cylinder (with immersion heater) suspended from ceiling in utility room. Copper pipes.

40-gallon mild steel cistern in attic.

No. of draw-off points: 6. Includes builder's work, 37d.

Heating services

Solid fuel boiler, 47,000 B.t.u.s per hour. Accelerator pump, small bore pipes in copper. Living/dining room: 9-in. high skirting radiators, 36 ft. run.

Bedrooms: 6-in. high skirting radiators, 28 ft. run. Hall: 4 ft. × 1 ft. 6 in. high panel radiator.

Bathroom: towel rail.

Linen cupboard: heating coil. Fireplace with controlled air feed. Includes builder's work, 81d.

Electrical services

Type of point	No. of e	ach type
Lighting	12	
r way switch	8	
2 way switch	3	
Cooker	I	
13-amp. power	17	
Total load: 20 kW.		
Includes builder's work, 1d	1.	

Drainage

4-in. fireclay pipes to manhole.

Total of services: 17s 112

External works

Garage and fuel store, louvred screen, fences, driveway and paving slabs.

6 7

65 114

Total cost per sq. ft. of floor area:

£3,684	(net	cost	excluding	external	works)	
--------	------	------	-----------	----------	--------	--

1,117 sq. ft. (measured inside external walls)

COST COMMENT

It is not easy to make direct comparisons between these costs and those of other houses recently published in the series, such as the one near Tunbridge Wells (AJ, May 11, 1961) and the two examples from Scotland (AJ, January 28, 1960), because of considerable variations in size and standard of accommodation, and because each of these previous schemes was a "one-off" design. The interest of this analysis is in the conscious decision by the architect to provide a simple and inexpensive shell, within which a high standard of fittings and heating could be included within a low overall figure.

Thus the cost of structural elements has been kept down to under 32s. per square foot, whilst over 7s. per square foot (or about £400 per house) has been spent on heating.

Much of the success in this objective in keeping down the structural costs would seem to be due to the very simple plan shape, and the use of clipped eaves for the roof, which cost less than 5s. per square foot despite the choice of West Highland slates.

CONTRACTORS

General: A. Trail & Sons. Joiner: A. Gow & Sons. Plumber: A. W. Mickel & Son. Electrician: J. A. Graham. Painter: J. G. Burgess.

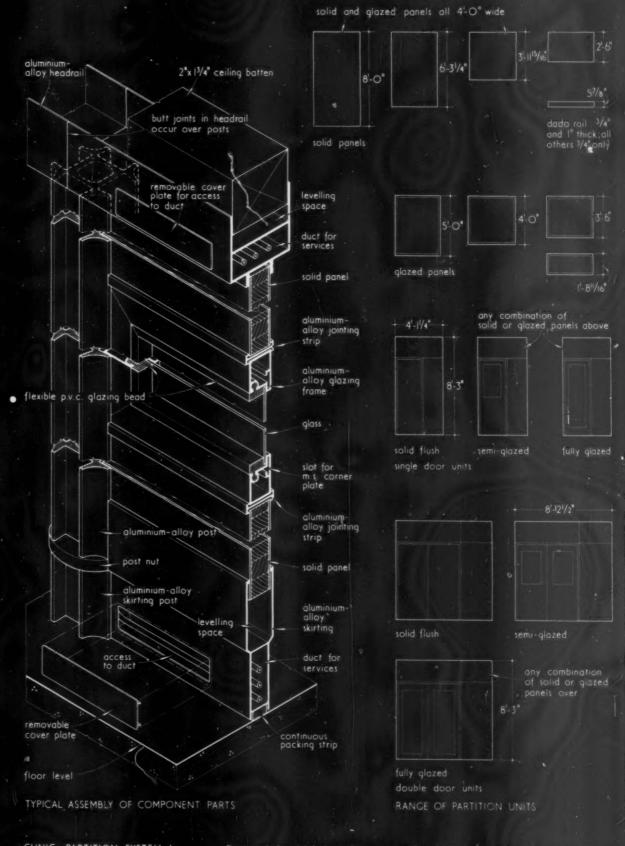


View through living room glazed door and screen, between facing brick piers to entrance door

PARTITIONS ALUMINIUM ALLOY

21.C2 C

The Architects' Journal Library of Information Sheets 841. Editor: Cotterell Butler, A.R.I.B.A.



CUNIC PARTITION SYSTEM 1 Designed by Nicholson Bros., Manufactured by Holland and Hannen

21.C2 · CUNIC · PARTITION SYSTEM 1

This Sheet, which should be read in conjunction with Sheet 21.C3, describes the Cunic system of demountable partitioning. The system is designed for complete flexibility on a standard module and can be used with the manufacturer's suspended ceiling system or any other type of ceiling desired. Its erection or demounting is easily effected with no disturbance of the surrounding structure and finishes: provision for services is incorporated in the partition members so that no wall chasing is required. Infilling panels may be of any suitable material and finish to suit individual requirements. Glazed panels can be included where required and a range of storage wall units is available to enable shelves, cupboards, drawers, hatches, etc., to be incorporated in the partitions. The drawings on the face of this Sheet show the basic components and further details are given on Sheet 21.C3. The notes below describe the components and installation of the partitioning; those on Sheet 21.C3 give details of special applications for fire protection, soundproofing and acoustics.

Construction

Posts: These are of extruded aluminium-alloy and are of cruciform section to take panels from up to four directions. There is a central hole for service cables and an adjustable jacking pin is incorporated in the base of the post. The post is located at ceiling level by a pin. Posts can be of any required height up to 16 ft. 0 in.; standard posts are based on a ceiling height of 8 ft. 3 in.

Headrail: The headrail, as shown in the drawing on this Sheet, has a duct for services with removable cover plates for access.

Skirting: The skirting member is similarly provided with an accessible duct.

Door jamb: The door jamb, which is detailed on the face of Sheet 21.C3, is the only member of the partition which requires fixing to the structure, the floor plate being screwed to the floor.

Glazing frame: The glazing frame section is mitred at corners and jointed by a flat corner plate, as shown on the face of Sheet 21.C3. The frame can also be supplied in hardwood if required.

Jointing strip: This narrow I section occurs between solid panels or between a solid panel and a glazed panel.

Panels: The partitioning is designed on a module of 4 ft. $1\frac{1}{4}$ in. to suit boards of 4 ft. 0 in. standard width. Units to special modules can be produced to meet individual requirements. The diagrams on the face of the Sheet show the standard sizes in which solid or glazed panels are obtainable. The dado rail is used

also below 6 ft. 3½ in. high glass panels. The panels may be composition board or blockboard and may be veneered, covered with p.v.c. or finished in any other way desired.

Doors: Standard single and double door units are available as shown in the diagrams on the face of this Sheet. The doors may be solid flush or glazed.

Electrical outlets: Single or double light switches, switch plug, bell pushes and telephone outlets are available for fixing in the partition posts, as shown on the face of Sheet 21.C3.

Ceiling section: The aluminium-alloy ceiling section supplied by the manufacturer can be used with any type of ceiling panel to form a suspended ceiling to which Cunic partitions can be fixed at any point on the modular grid.

Installation

The timber ceiling batten is fixed first and takes up any unevenness in the ceiling surface. Where there is very little clearance between the ceiling and the top of the partition a resilient packing strip can be applied to the ceiling surface with adhesive, to form a seating for the headrail.

From the starting point, in most cases a wall, the overall length of the partition should be checked so that the size of any filler piece required may be decided. The positions of the posts should then be checked with a plumbline to ensure accurate setting out. The first post should be fixed and the panels of the first bay placed in position, the lowest resting on the knurled nut of the jacking pin. The panels are held by a jig and the skirting placed in position. The second post is then erected and its jacking pin tightened sufficiently to retain the panels. When the whole partition is erected the posts should be finally adjusted and the jacks tightened. The end filler piece can then be cut to an accurate fit.

Further Information

The manufacturer maintains a technical advisory department available to answer questions on the design and installation of Cunic partitions.

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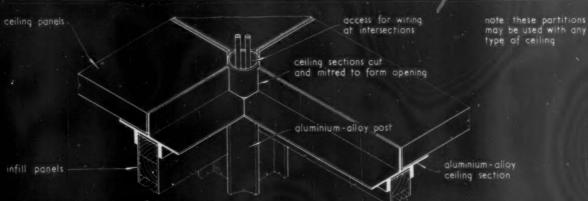
Holland & Hannen and Cubitts Ltd.
Address: 1, Queen Anne's Gate, Westminster,
S.W.1.

Telephone: Whitehall 3111.

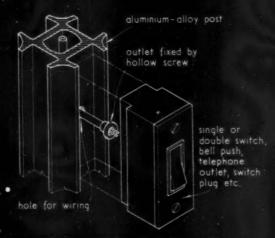
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PARTITIONS ALUMINIUM ALLOY

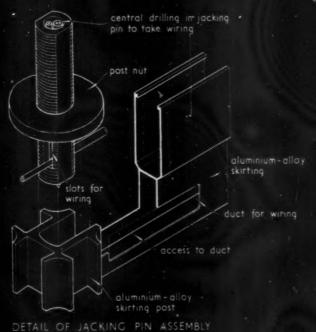
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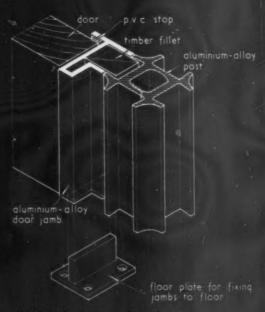
glass

aluminium - alloy glazing frame

glazing bead

aluminium - alloy post

DETAIL OF FIXING AT MITRED JOINTS.



DETAIL OF DOOR ASSEMBLY

CUNIC PARTITION SYSTEM 2. Designed by Nicholson Bros, Manufactured by Holland and Hannen

21.C3 ·CUNIC· PARTITION SYSTEM 2

This Sheet, which should be read in conjunction with Sheet 21.C2, describes the Cunic system of demountable partitioning. The drawings on the face of the Sheet give details of components, supplementing the drawings of basic components shown on the face of Sheet 21.C2. The text on the reverse of Sheet 21.C2 describes all the components and the installation of the partitioning. The notes below give details of special applications for fire protection, soundproofing and acoustics.

Flameproof Partitions

The standard range of partitions can be supplied with panels of incombustible quality to meet certain conditions, e.g. in multi-storey buildings where it is required to reduce the fire loading. These partitions are also suitable, owing to their additional weight and density, where a greater degree of sound reduction is required than that given by the standard partition.

Partitions for B.S. Fire Protection Requirements

1-hour grading: A special range of Cunic partitioning is available to meet the 1-hour fire protection requirement of B.S. 476. These, however, owing to the fire regulations, are of more traditional construction than the standard partitions. They are, however, completely demountable and can be refixed without

1-hour grading: The requirements of B.S. 476 for a 1-hour grading are such that traditional constructions are normally employed, e.g. solid brick partitions. Where special conditions require a thin, demountable partition, or where dry construction or rapid installation is desirable, a special incombustible Cunic partition can be supplied. This also can be taken down and re-used if required, but owing to the necessity for solid fixings to walls and ceilings and the provision of a fire check, a small amount of making-good is inevitable. The panels are con-structed from compressed mineral boards of asbestos fibre, hydrated lime and silica and are entirely incombustible and resistant to heat penetration.

The high density of this material reduces sound penetration considerably and it is also acoustically satisfactory. Designs are available to meet particular site conditions and local regulations.

Sound-Protected Partitions

The Cunic sound-protected partition has been developed as a result of extensive research to give a reasonable decibel reduction at an economic cost and at the same time to be of good appearance and easy to erect and dismantle.

The reduction of sound being based on density or the mass law, any partition other than that with a cavity of less than 7 in. between membranes must be constructed with dense materials and is consequently heavy. There are also limits to the sound reduction possible, test figures having proved that by doubling the thickness or weight, the amount of reduction is only increased by an average of approximately 5 decibels. Much depends also on the position the partition occupies and the type of building. Noise can be transmitted through the structure of walls, floor or ceiling and therefore the partition requires a certain amount of insulation to prevent its becoming a resonant surface: Cunic sound-protected partitions are insulated on all surfaces. It is also important to seal all cavities and to provide sealing strips around doors: Cunic door frames are fitted with a noise seal. Cunic partitions are not claimed to be completely sound-proof. However, they give a reduction that is recognised as satisfactory and the test figures show that the rating for various types of Cunic panel over a frequency range of 75 to 1,000 cycles lies between 20 and 45 decibels or an average over the frequency range of 35.4 decibels.

Acoustic Treatment

Cunic partitions can be designed with sound-absorbent surfaces, including special quilted panels, to correspond with the general acoustic or decorative scheme.

Further Information

The manufacturer maintains a technical advisory department available to answer questions on the design and installation of Cunic partitions.

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Holland & Hannen and Cubitts Ltd.

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working detail

FURNITURE AND FITTINGS: 120

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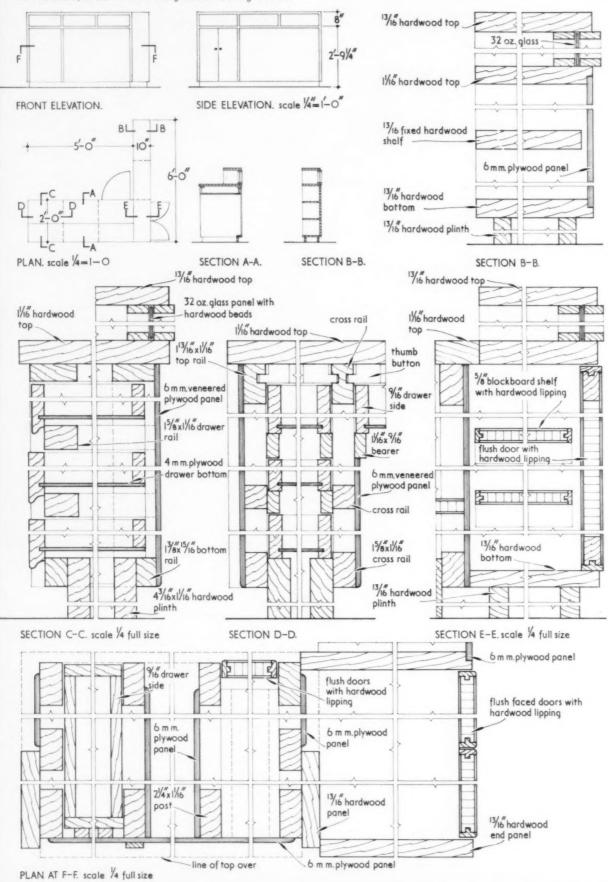
G. C. Fardell, Architect to the Hertfordshire County Council

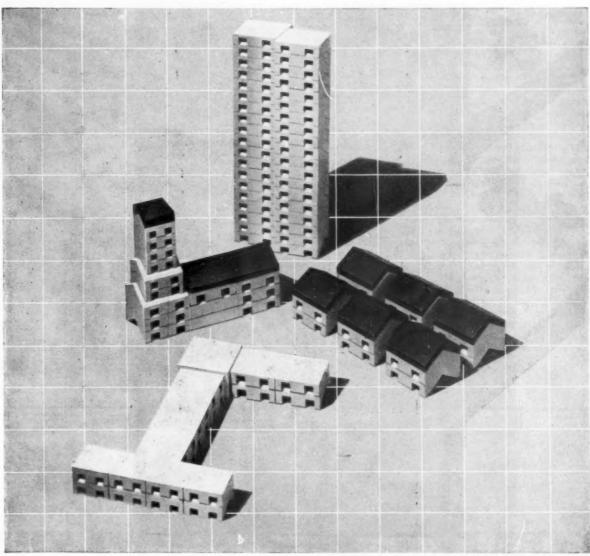


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MARLEY floor tiles

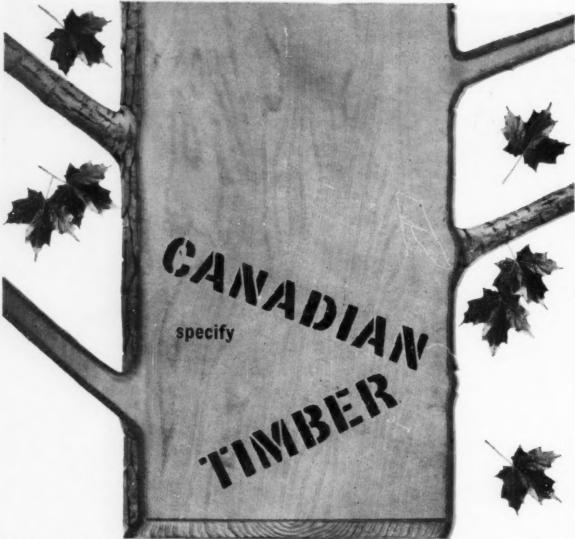
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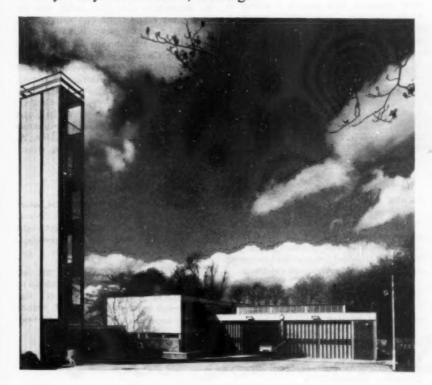
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Colwyn Bay Fire Station, Denbigh



Built to replace war-time huts, this fire station serves as divisional headquarters and area control for the joint fire services of Denbigh shire and Montgomeryshire. Designed by R. A. Macfarlane, County Architect, E. L. Lewis, Deputy, and J. B. Davies, assistant in charge, it accommodates six appliances-Previous phases of this scheme, consisting of a garage and workshop block in loadbearing brickwork and the construction of a new access bridge to the rear of the site were carried out some time ago. The present final phase, consisting of an administration block, appliance room, tower and ancillary accommodation has been mainly carried out in the "Intergrid" system on the standard 3 ft. 4 in. module. External cladding is mainly in precast concrete slabs with white spar finish, but some panels have exposed black aggregate. External door and window frames are in Afrormosia; infil panels are made up of tinted glass behind wired cast glass, backed by painted asbestos board. The metal shutter doors on the front of the appliance room are electrically operated from the control room. The 65-ft.-high control and hose tower has an exposed steel frame, with infil panels similar to those on the main building.

SPECIFICATION

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Announcements

PROFESSIONAL

D. R. Hardy, ARICS, and R. J. Hughes have commenced in partnership as quantity surveyors under the style of David R. Hardy & Partner. They have opened an office at 1, Wellington Road, Edgbaston, Birmingham 15 (telephone Calthorpe 1447) and will be pleased to receive trade literature.

Bronek Katz and R. Vaughan have taken into partnership Woitek Meyer, Stefan Osiecki and Roger Balkwill and the style of the firm has been changed to Bronek Katz, R. Vaughan & Partners. The practice remains at 208a, Regent Street, w1 (telephone: Regent 5401).

Stanley Keen has taken Eugene Roy Bryan, ARIBA, into partnership and is continuing to practise at 9, The Mews, Roding Lane South, Ilford, Essex, under the style of Stanley Keen, ARIBA.

DSIR headquarters has moved to State House, High Holborn, wc1 (telephone: Chancery 1262. Alan Marshall & Partners, consulting structural engineers, have opened a branch at Castle Chambers, Castle Street, Liverpool 2.

J. L. Hutter, Amstructe, is in charge and will be pleased to receive trade literature.

W. G. Phillips & Partners, chartered architects and surveyors, have moved their offices to 201, Dyke Road, Hove 4, Sussex.

Burles & Newton, A/ARIBA, AMTPI, have appointed J. O. Fogarty, Diplarch, ARIBA, and B. A. Muggleton, ARIBA, associate members of the firm.

TRADE

W. Morris, secretary of Colt Ventilation Ltd. and its associated companies and F. W. Price, sales manager of Colt Ventilation Ltd. and W. H. Colt (London) Ltd. have been appointed directors of the Colt Associated Companies.

The Hemel Hempstead Lightweight Concrete Company have appointed T. C. Ivens as sales manager and organiser.

Plywood Manufacturers Association of British Columbia have opened their Liverpool office at 20, North John Street, Liverpool 2, Lancs. (telephone: Maritime 2197).

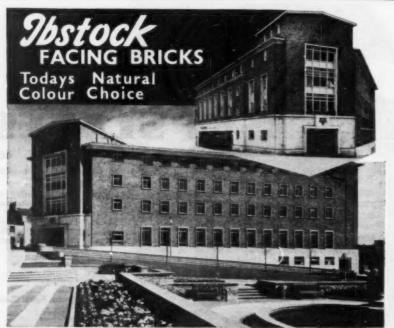
The trading activities hitherto carried on by Bambergers have been taken over by Bambergers (Timber and Plywood) Limited, which is a wholly owned subsidiary company. In future Bambergers Limited will be a Holding Company only. The directors of Bambergers (Timber and Plywood) Limited are C. D. Woodburn-Bamberger (chairman), R. S. Annan and L. A. Woodburn-Bamberger (joint managing directors), E. A. Godfrey, M. E. Hodson, A. Galler, A. W. Bath and G. E. Ward. The following executive directors have been appointed: E. N. Bellows, A. Easterfield, A. W. Holdom and A. A. Drinkwater.

CORRECTIONS

In our issue of July 19, 1961, page 94, under the heading Windows the description "porcelain-enamelled steel" was incorrect; the external facing was, in fact, porcelainenamelled aluminium.

In our issue of August 16, page 251, we stated that F. French has been appointed to the Board of Allardyce Palmer Ltd.; this was incorrect and should have read F. French has been appointed to the Board of Medway Buildings & Supplies Ltd.

In our issue of August 30, 1961, the lower caption on page 315 should have read First floor.



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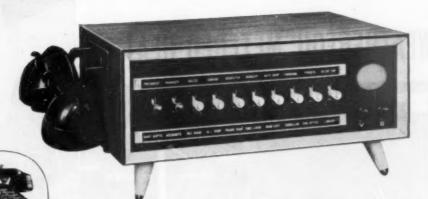
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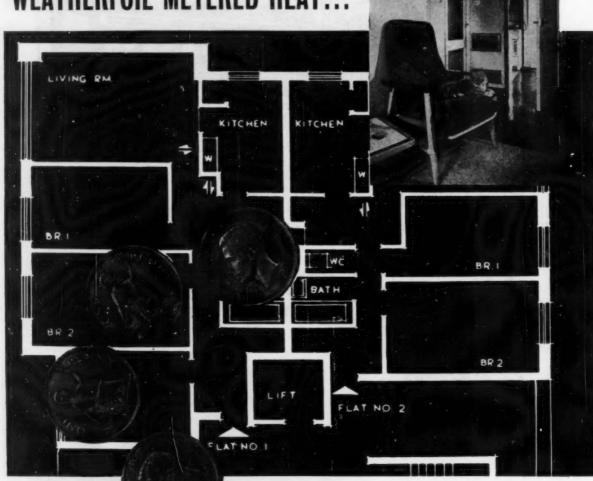
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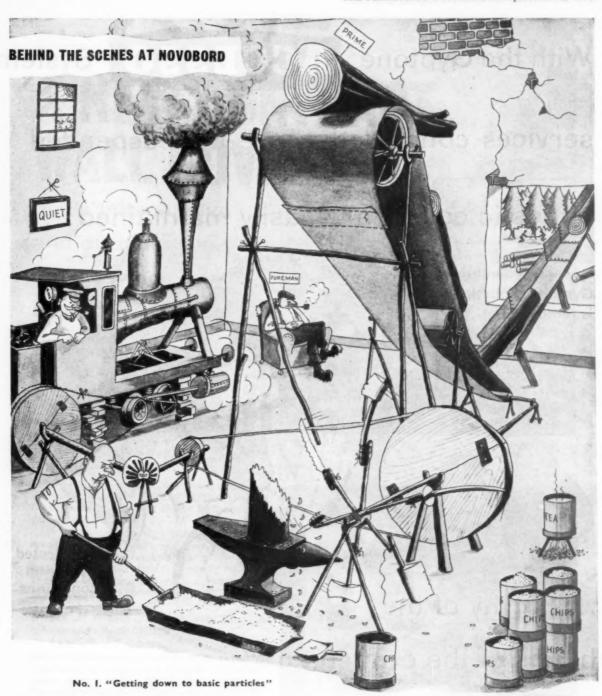
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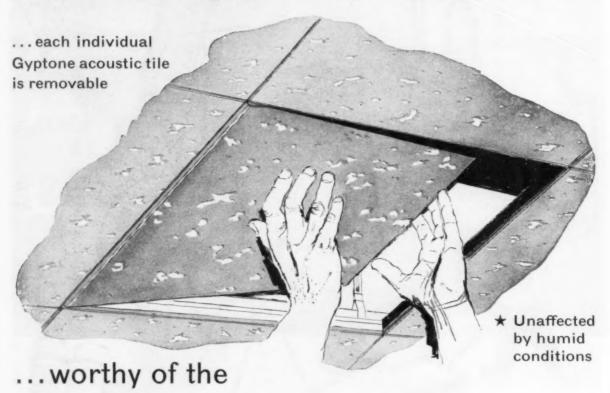


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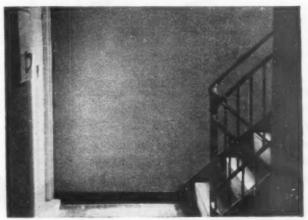
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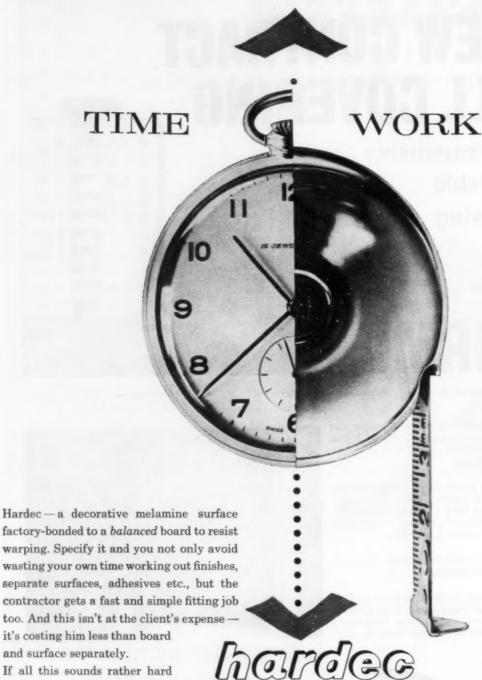
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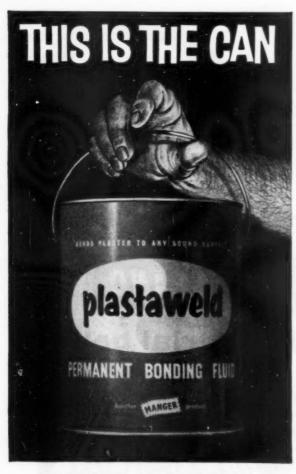
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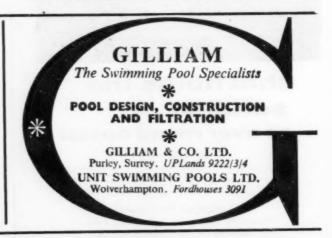
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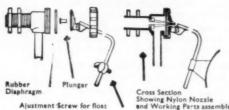
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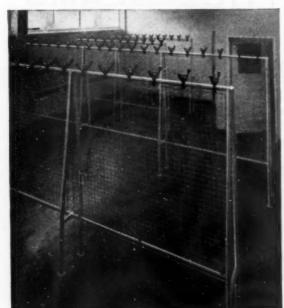


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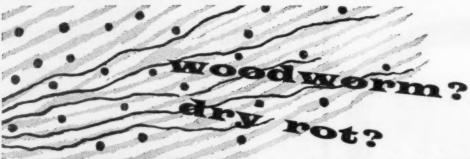
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THE ARCHITECTS' JOURNAL for September 6, 1961







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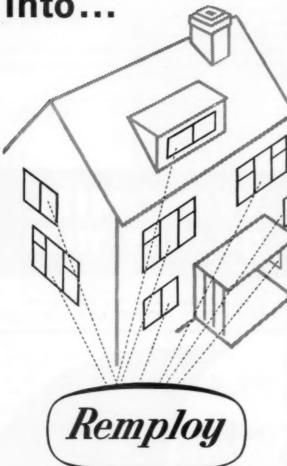
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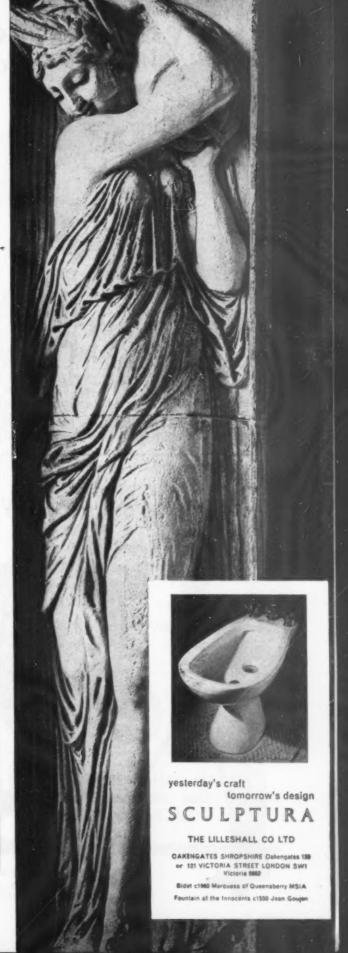
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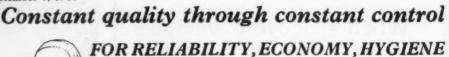
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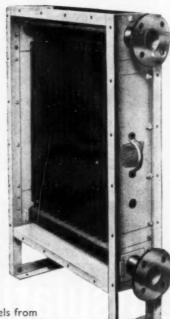
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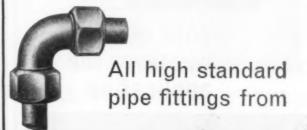
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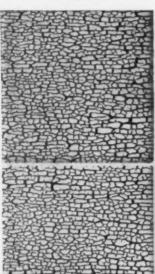
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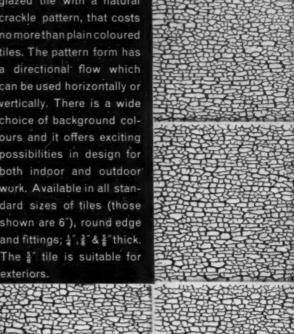
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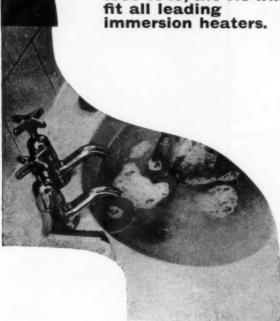
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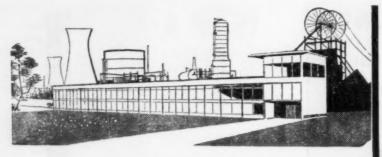
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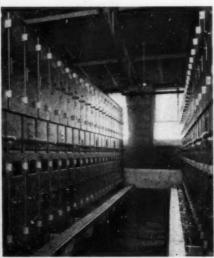
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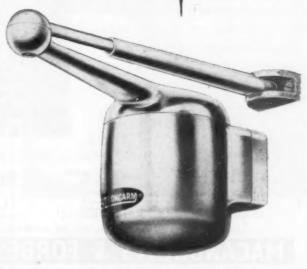
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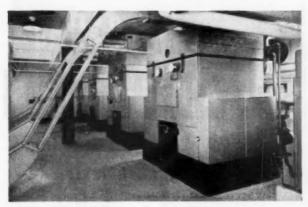
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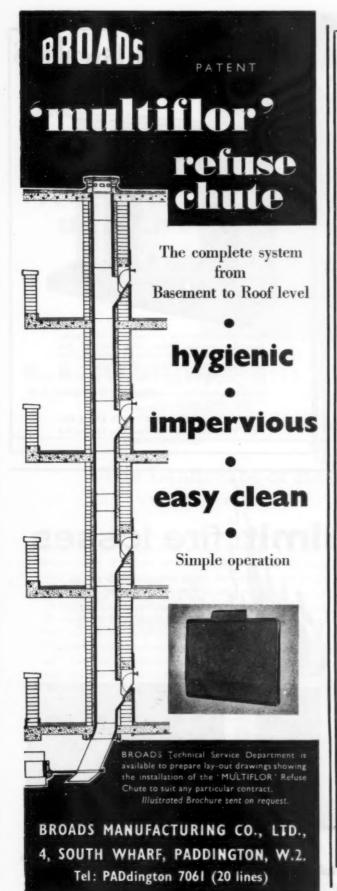
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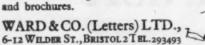
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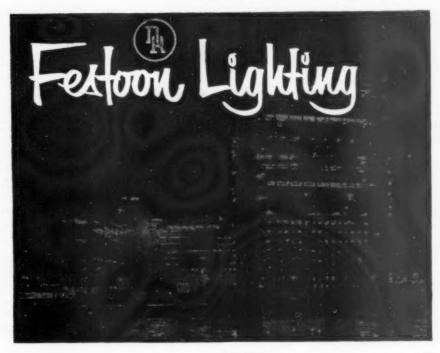
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CW7201

The Landscape of Roads

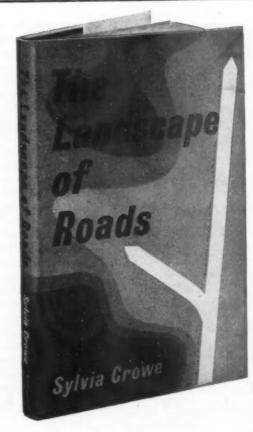
SYLVIA CROWE PPILA

£230 million will be spent during the next three years on the construction and improvement of roads in Britain. This vast programme is of national interest, not only because new roads are so badly needed, but also because if they are not handled with infinite care, they will certainly ruin much of what remains of our landscape

Following her successful books, Tomorrow's Landscape, and The Landscape of Power, Miss Crowe here turns to the landscape of roads and motorways. Writing with her usual lucidity and forcefulness, and with numerous drawings and photographs, she shows that if roads are regarded merely as an engineering problem, their effect on the landscape will surely be disastrous; road design and construction demand the combined skills of a team of experts: planners, architects and landscape architects, as well as highway engineers. Only when such a team is brought together at the outset will we obtain roads which are absorbed naturally into the existing landscape pattern; and which will be vastly more pleasant to travel on, safer, and not necessarily more costly than alien constructions which make no inflection to the landscape through which they pass.

> Size 9 × 51 ins. 134 pages, 70 half-tone illustrations. 18s 6d. net. Postage 1s.

The Architectural Press 9-13 Queen Anne's Gate, S.W.1.



AJ SfB

A statement to advertisers We are appealing to advertisers to join with us in giving architects more concise, classified technical information.

A successful journal is a joint venture of editorial and advertising interests. The editors do their utmost to give architects the news, comment and technical information necessary for them to keep abreast with new developments and to practise efficiently.

Our advertisers form a complementary service by supplying information on new materials, products and services, and by keeping this information up to date.

We believe that a neglected field of advertising lies in the preparation of informative advertisements. This is the field where the most response to an advertisement can be expected from a responsible, professional reader. In our policy of providing information for the architect we want to give every encouragement to advertisers to produce concise, logically ordered material, in tabular, drawn or diagrammatic form, fully dimensioned and annotated where necessary.

This is a method which has been successfully demonstrated by the AJ's Information Sheets. Advertisements that present information in an acceptable, authoritative way will be preserved by readers. Informative advertising is not intended to take the place of full catalogue information or the visit of technical representatives, but rather to assist the architect to make basic decisions and selections during the initial stages of his design when speed is vital. In particular, The Architects' Journal seeks the co-operation of all the advertisers in its forthcoming series of supplements, which, commencing on October 4, will provide within a year the nucleus of a personal library (based on the SfB filing system) for every architect. Easily detachable, the supplements will deal with a different building element each week, and contain a check list, design information, references and information sheets. We hope manufacturers will see the value of making their own contribution to this library by providing as much informative advertising as possible for each subject dealt with. Such advertising being an integral part of the supplement can be easily filed by readers as information complementary to the editorial. If any advertiser or his advertising agent seeks advice or further information on this we will be pleased to give it.

CLASSIFIED ADVERTISEMENTS

Advertisements should be addressed to the Advertisement Manager, "The Architects' Journal," 9, 11 and 13, Queen Anne's Gate, Westminster, S.W.I. and must reach there by first post Friday morning for inclusion in the following Wednesday's paper, Replies to Box Numbers should be addressed care of "The Architects' Journal," at the address given above.

above.

given above.

AIR-MAIL SERVICE available on request. In fesponse to requests from a number of Overseas subscribers for air-mail delivery of Public and Official Appointment details and Other Appointments Vacant, we have been pleased to arrange that cuttings of all such classified advertisements appearing in the A.J., shall be despatched by air-mail each week. The cost of this special service to Overseas subscribers will be 5s. for four weeks (1s. 3d. for each additional week) and prepayment should be sent by subscribers wishing to take advantage of this service. The charge we are making represents only the actual cost of the postage involved.

Public and Official Announcements

36s. per inch; each additional line 3s.

BOROUGH OF LYTHAM ST. ANNES
APPOINTMENT OF
CHIEF ASSISTANT ARCHITECT
Applications are invited for the position of Chief
Assistant Architect in the office of the Borough
Engineer and Surveyor, at a salary in accordance
with A.P.T. IV (21,140-21,310). Candidates must
have passed the Final R.I.B.A. examination. Housing accommodation will be provided, if required.
The appointment is subject to the provisions of
the Local Government Superanuation Acts and
to the passing of a medical examination.
The commencing salary (within A.P.T. IV) will
be agreed with the successful candidate.
Applications, giving details of age, education,
qualifications and experience, accompanied by
copies of two recent testimonials, should be forwarded to the undersigned not later than Friday,
15th September, 1961.

R. A. CORK,
Town Clerk.

R. A. CORK. Town Clerk.

Town Hall, Lytham St. Annes.

ADMINISTRATIVE COUNTY OF LEICESTER
(a) PRINCIPAL ASSISTANT ARCHITECT,

(b) CHIEF ASSISTANT ARCHITECTS, £1,310-

(c) SENIOR ASSISTANT ARCHITECTS, £1,140

(c) SENIOR ASSISTANT ABURITEUIS, £1,4w
—£1,310.
Candidates for (a) must be members of the
R.I.B.A., have had sound experience and be
capable of acting as Group Leaders on an extensive programme of education buildings. Candidates for (b) must be members of the R.I.B.A.,
have had considerable office experience and be
capable of taking charge of contracts from inception to completion. For (c), should be members
of the R.I.B.A., have had office experience and be
capable of taking charge of small contracts.
Lodging allowance and removal expenses may his
paid to a married man. Apply on form obtainable from County Architect, 123, London Road,
Leicester.

HACKNEY BOROUGH COUNCIL
ENGINEER AND SURVEYOR'S DEPARTMENT
VACANCIES FOR ARCHITECTURAL STAFF
Applications are invited for permanent appointments of ASSISTANT ARCHITECTS AND
ARCHITECTURAL ASSISTANTS in the Architectural Section of the Department in Grades
ranging between A.P.T. I (£645-2815) and
A.P.T. V (£1,310-£1,480), plus London weighting
allowance.

Grading and commencing salaries will xed according to training qualifications

fixed according to training quantitative experience.

The department has on hand a heavy and varied programme of Housing Development and other architectural projects.

In appropriate cases the Council will be prepared to consider 100 per cent. advances for house-purchase within or without the Borough.

Application forms obtainable from Town Clerk, Town Hall, Hackney, London, E.8, returnable by 9 a.m., 16th September, 1961.

COUNTY BOROUGH OF GREAT YARMOUTH EDUCATION COMMITTEE SCHOOLS ARCHITECT'S DEPARTMENT Applications are invited from Associate Members of the R.I.B.A. for the appointment of a SENIOR ASSISTANT ARCHITECT at a salary within A.P.T. IV (£1,146 to £1,310) to work on an invited and progressive programme.

Principal of the propersistive programme of the propersistive programme.

Principal of the propersistive programme of the propersistic programme.

essential.

Housing accommodation will be available to the successful candidate if married and assistance with removal expenses may be made in suitable

Cases.
Full details of present and past appointments, age, qualifications and experience, together with the names of two referees, should reach the Schools Architect, 22, Euston Road, Great Yarmouth, by 26th September, 1961.
D. G. FARROW,
Chief Education Officer.

22, Euston Road. Great Yarmouth, Norfolk.

LINDSEY COUNTY COUNCIL PLANNING DEPARTMENT tions are invited for the lents:— Applicati following appointments:—
(a) SENIOR ASSISTANT, A.P.T. IV, £1,140—
£1,510.

(a) SENIOR ASSISTANT, A.P.T. IV, £1,140—£1,310.
(b) ASSISTANT, A.P.T. III/IV, £960—£1,310.
(c) JUNIOR ASSISTANT, Misc. II or A.P.T. I. £555—£625 or £645—£815.
Appointment (a) in design section of department—architectural control, estate layouts and central area redevelopment. Appointment (b) in development plan section with junior assistance on county review, town maps and village maps. Appointment (c) general duties, survey and draughtsmanship. Essential users car allowance, 10 h.p. for officers (a) and (b).
Candidates for (a) and (b) should hold final qualifications and have had previous experience in the respective duties of these appointments preferably in a county planning department. Candidates for (c) should hold Intermediate qualification or University Degree in Geography for A.P.T. I or otherwise have received practical training in a drawing office.
Commencing salary within advertised grades in all cases will have regard to qualifications and previous experience.
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.
Applications, with particulars of age, training,

writing.

Applications, with particulars of age, training, qualifications and experience and names of two referees to County Planning Officer, County Offices, Newland, Lincoln, not later than 16th September, 1961.

COUNTY BOROUGH OF BLACKPOOL
APPLICATIONS (by 18th September) are invited
from ARCHITECTS, QUANTITY SURVEYORS
and DRAUGHTSMEN in the ARCHITECTS'
SECTION of the Borough Surveyor's Department
on an extensive and varied programme of building
Work.
Vacancies exist for —

Vacancies exist for:-ASSISTANT ARCHITECTS, A.P.T. III/IV.

(£960—£1,310). ASSISTANT QUANTITY SURVEYORS, A.P.T. III/IV. (£960—£1,310). ARCHITECTURAL ASSISTANTS, A.P.T. II.

ARCHITECTURAL ASSISTANTS, A.P.T. I.

[645—£815].
DRAUGHTSMEN of DRAUGHTSWOMEN.
ISC. III. (£555—£625).
A five-day week is in operation in the Depart-

ment.
The Council do not provide housing accommoda-tion, but operate a Mortgage Scheme under which advances up to 100 per cent, are made in suitable

cases. Application forms from Arthur Hamilton, B.Sc., A.R.I.B.A., Borough Surveyor, P.O. Box 17, Municipal Buildings, Blackpool. 89057

Municipal Buildings. Blackpool. S9057

STAINES URBAN DISTRICT COUNCIL.
ENGINEER AND SURVEYOR'S DEPARTMENT ARCHITECTURAL ASSISTANT. A.P.T. IV E1.140—E1.310 plus London Weighting.
Applicants must have had a good experience in architectural design and building work under construction and should have passed the examination for associateship of the R.I.B.A.
Application form may be obtained from the Engineer and Surveyor, Shortwood House, 240 London Road. Staines, and must be returned to him in suitably endorsed envelope, not later than 5 p.m. on Monday, 18th September, 1961.

F. ENTWISTLE,
Clerk of the Council.
S8078

COUNTY BOROUGH OF BURNLEY
Applications are invited for the appointment of
QUANTITY SURVEYING ASSISTANT in the
Borough Engineer and Surveyor's Department at
a salary in accordance with Grade I (2645 to £815
per annum) of the National Scales.
Abolicants should have a sound knowledge of
building construction and some experience in the
preparation of Quantities and Measurement of
Work is essential. Five-day week.
Forms of application, etc.. may be obtained
from the Borough Engineer, 22-24 Nicholas Street.
Burnley, to whom applications should be returned
not later than Friday, 15th September, 1961.
C. V. THORNLEY,
Town Clerk.

COUNTY COUNCIL OF NORTHUMBERLAND COUNTY ARCHITECT'S DEPARTMENT Applications are invited from Architects who have passed the R.I.B.A. Final Examination and have practical office experience, for the post of ASSISTANT ARCHITECT on the permanent staff of this Department. Salary, according to qualifications and experience, on A.P.T. Grade IV, £1.140—£1.310 per annum with prospects of promotion to higher grades within the office in due course.

course.

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

Application forms which can be obtained from the undersigned to be submitted not later than Monday, 25th September, 1961.

C. C. BROWN,
County Architect.

30/32, Great North Road, Newcastle upon Tyne, 2

METROPOLITAN BOROUGH OF GREENWICH PRINCIPAL ARCHITECTURAL ASSISTANT required in Borough Engineer and Surveyor's Department. Salary Grade A.P.T. V (£1,356-£1,255 per annum including London Weighting). Commencing salary in accordance with qualifications and experience. Candidates should be registered Architects preferably Associates of the R.I.B.A. with experience in housing and other municipal projects.

Application forms from Borough Engineer and Surveyor, Town Hall, Greenwich High Road, S.E.I.O. Closing date 15th September, 1961. S9080

CITY OF BIRMINGHAM

CITY ARCHITECT'S DEPARTMENT
Appointments within Grades A.P.T. V (£1,310/£1,480) and A.P.T. IV (£1,140/£1,310) are offered to entinsiastic and imaginative qualified ARCHITECTS to take a responsible part in a large and interesting programme of work for the CITY OF BIRMINGHAM, which includes housing, educational and other public buildings. Candidates who have passed Parts I and II of the Final R.I.B.A. Examination or hold equivalent qualifications will be eligible for A.P.T. IV appointments.

Commencing salaries within the scales will be according to capabilities and experience. Pension scheme. Five-day week. Medical examination.

Applications to the undersigned, stating age, present position and salary, qualifications, experience and names of two referees, to reach the undersigned by 15th September, 1961.

A. G. SHEPPARD FIDLER,
City Architect.

Baskerville House, Civic Centre, Birmingham, 1

BOROUGH OF HARROW
Applications are invited for appointments on the Architectural staff of the Borough Engineer and Surveyor's Department, which is engaged on a varied programme of municipal building schemes.

schemes.

A.P.T. III/IV (£960 to £1,310 per annum plus London "weighting"). Commencing salaries will be in accordance with qualifications and experience, but applicants who are qualified will be given additional responsibilities and may be placed in A.P.T. IV (£1,140 to £1,310 per annum). The Council may be able to help with housing accommodation in the light of the applicant's circumstances.

circumstances.

A contribution towards removal expenses will

a contribution towards removal expenses will be considered.

The appointments are subject to the Local Government Superanuation Acts and to the National Joint Council's Scheme of Conditions of Service.

Forms of application

National Joint Countries

Service.

Forms of application may be obtained from me, and must be returned not later than Friday, the 22nd September, 1961.

D. H. PRITCHARD.

Town Clerk.

ow Weald Lodge, arrow Weald,

Harrow W. Harrow.

NEW ZEALAND
MINISTRY OF WORKS
The New Zealand Government Ministry of forks invites applications for Permanent Staff pointments. Positions available are:—

works invites applications for Permanent Staff appointments. Positions available are:—
ARCHITECTS
Commencing salaries up to £1,700 a year according to qualifications and experience. Applicants should be members of the Royal Institute of British Architects (R.I.B.A.). These positions offer excellent prospects for those with the right qualities and scope for initiative and creative thinking in helping to meet the architectural requirements of a prosperous and fast-developing country.

ARCHITECTURAL DRAUGHTSMEN
Salaries up to £1,210 a year according to qualifications and experience. Applicants should have had at least 5 years' draughting experience in an architectural office.

Subject to completion of a Bond to remain in the Service for 3 years, successful applicants will be assisted with expenses incurred in travelling to New Zealand. A superannuation scheme is available and there are generous annual and sick leave privileges.

Enquiries, mentioning this publication, quoting reference number Bi3/201 and indicating the position sought, should be addressed to the High Commissioner for New Zealand, 415, 8trand, London, W.C.2. Full details of housing available, fares payable, career prospects, type of work, terms of contract, local conditions and application forms will then be supplied.

COUNTY COUNCIL OF ESSEX COUNTY PLANNING DEPARTMENT DRAUGHTSMAN—A.P.T. Grade I (£645—£815) Experienced Draughtsman required to work, under the Architect/Planner, in the General Drawing Office for the preparation of a wide variety of blanning maps.

The applicant will be required to lead a team of young draughtsman under training and should be skilled, disciplined and able to impart his knowledge to others.

Fiveday week, medical examination, superannuation, Day release facilities and grants to study for a planning career.

Applications in own handwriting, giving details of age, education and experience to County Planning Adviser, Broomfield Place, Broomfield, Chelmsford, Essex, by 14th September, 1961, 9164



LONDON MIDLAND REGION

REQUIRE

ASSISTANT ARCHITECTS

Architects are required for work in London on the redevelopment of major stations and for general work in connection with the London Midland Main Line Electrification Scheme and Modernisation Plan.

Vacancies exist in the following grades:—

SENIOR ASSISTANT ARCHITECTS £1,350/£1,560 LEADING ASSISTANT ARCHITECTS £1,230/£1,350 ASSISTANT ARCHITECTS £1,070/£1,145 All applicants should be qualified members of the R.I.B.A. and should preferably hold the diploma of a recognised School of Architecture. For senior positions it is essential that applicants have had experience of the control and direction of staff.

ASSISTANT ARCHITECTS £945/£1,020 ARCHITECTURAL ASSISTANTS £290/£855 Applications will be considered from newly qualified members of the R.I.B.A., unqualified assistants with experience and juniors wishing to enter the profession who have the necessary academic qualifications.

Superannuation Fund. Five-day week and concessionary rail gravel.

When applying, quote reference No. 122 (AJ) giving qualifications, age, experience and salary required to:—

W. R. Headley, A.R.I.B.A., A.A. Dipl.
Regional Architect
Chief Civil Engineer's Office
British Railways, London Midland Region
Stephenson House, 67/87 Hampstead Road
London, N.W.I

£800-£1,500

CO-OPERATIVE WHOLESALE SOCIETY LTD.

Architect's Department, Manchester
have vacancies for

ASSISTANT ARCHITECTS

within the range £800-£1,200 with annual increments of £50. Commencing salary dependent on ability and experience. Vacancies also exist for more experienced staff with a commencing salary up to £1,500 with prospects of promotion to a higher grade.

Five-day week. Three weeks' holiday. Pension Scheme.

Apply in writing, with details of age, qualifications and experience to-

G. S. Hay, F.R.I.B.A., Chief Architect, Co-operative Wholesale Society Ltd. 1 Balloon Street, Manchester 4

AYCLIFFE DEVELOPMENT CORPORATION

New Town of Newton Aycliffe

ASSISTANT ARCHITECT

Applications are invited for the above appointment at a salary within the range of Grades APT IV and VI of the Whitley Council for New Towns Staff salary scales, i.e., £1,140-£1,565 p.a. The commencing salary and grade will be fixed according to the qualifications and experience of the successful applicant.

The principal work for the successful applicant will be in connection with the development of the Town Centre and new forms of housing layout.

Appointment subject to N.J.C. Conditions, superannuation, medical examination and to one month's notice, in writing, on either side.

Housing accommodation available, if required.

Applications stating age, qualifications and experience together with the names of two referees to be sent to the undersigned not later than Monday, the 11th September,

A. V. WILLIAMS,

General Manager.

Churchill House, Newton Aycliffe, Nr. Darlington.

ARCHITECTURAL ASSISTANTS and DRAUGHTSMEN

All Grades

Required for heavy programme of building development.

Good working conditions in pleasant surroundings. 5-day week. Progressive salaries commensurate with age and ability. Continuous employment. Pension scheme. Staff canteen.

Interviews to suit applicants.

Write or Phone:-

District Architect,
F. W. WOOLWORTH and CO., LIMITED
1266, London Road, Norbury, London, S.W.16

Telephone: POLlards 5050

NEWCASTLE REGIONAL HOSPITAL BOARD EXPANSION OF ARCHITECTURAL DEPARTMENT
P. H. KNIGHTON, M.B.E., A.R.I.B.A., REGIONAL ARCHITECT, ARCHITECTURAL STAFF
The Board has prepared a 10-year programme containing a large number and variety of major hospital projects. Planning and building is already current on schemes costing about \$215,000,000. As the programme includes also a wide range of buildings which are not peculiar to hospitals, good general experience as well as specialist experience may be gained.
Applications are invited for the following (superannuable) posts:—
1. SENIOR ASSISTANT ARCHITECTS (£1,300 Onen to regristered architects with experience in

annuable posts:—

1. SENIOR ASSISTANT ARCHITECTS (£1,300 × £56(5)—£1,600)
Open to registered architects with experience in the design and construction of major public buildings. Experience of hospital work desirable but not essential. Assistance with removal expenses if appointee at present in a lower-graded Health Service post.

2. ASSISTANT ARCHITECTS (£905×£35(1)× £45(6)×£50(2)—£1,310)
Applicants must have passed the R.I.B.A. Final Examination. For registered architects increments can be given above the bottom of the grade in accordance with relevant practical experience.

erience.
Qualified but unregistered architects can enter
the Architectural Assistant scale at a salary
oint of £865 per annum with a view to entering
the Assistant Architect grade when registered.
ARCHITECTURAL ASSISTANTS (£625×£30(8)

 $\pounds 35(1) - \pounds 900)$ Inter R.I.B.A. and preferably some practical ARCHITECTURAL DRAUGHTSMEN (£475×

Three years' previous experience in an archi-ect's drawing office and good draughtsmanship

required.

Evening study facilities available at King's College of Durham University in Newcastle.

A 5-day working week is in operation.

Details of training qualifications, experience, present salary, etc., with the names of three referees, should reach the Secretary to the Board, Benfield Road, Newcastle upon Tyne, 6, not later than 14th September, 1961. Canvassing will disqualify.

9142

OXFORDSHIRE COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT
pplications are invited from suitably qualified
sons for the following appointments:—
SENIOR ARCHITECT. J.N.C. Scale "B"

(a) SENIOR ARCHITECT. Grade A.P.T. V (£1.410-£1.670).

(b) ASSISTANT ARCHITECT. Grade A.P.T. V (£1.310-£1.480).

The Council will pay 50 per cent of any removal expenses. Five-day working week.

The appointments are permanent, superannuable and subject to a medical examination.

Applications, on forms to be obtained from the undersigned, to be returned by the 16th September, 1661.

ALBERT E. SMITH. County Archi

rk End Street Offices, Oxford.

BOROUGH OF ACCRINGTON
A vacancy exists in the Borough Surveyor's
Department for a SENIOR ARCHITECTURAL
ASSISTANT with good experience in design and
construction. Preference will be given to those
who have passed the final examination of the
R.I.B.A.
Salary within A.P.T. III/IV (£960—£1,310), commencing salary according to qualifications and
experience.

mencing salary according to qualifications and experience.

An interesting programme of work includes new covered market; swimming baths; bus terminal; transport garage, housing, etc.

HOUSING accommodation if required.
Detailed applications, with names of two referees, to Town Clerk. Town Hall. Accrington. not later than the 13th September. 1961.

SURREY COUNTY COUNCIL
Applications invited for appointment of ASSISTANT ARCHITECTS on GRADE IV (£1,140-£1,310 p.a. plus £45 p.a. London Allowance).

Must be A.R.I.B.A. and have had experience in preparation of drawings and specifications, and be capable of assuming responsibility for medium to large scale contracts.

Full details, present salary and three copy testimonials, preferably one from present employer, to County Architect, County Hall, Kingston, as soon as possible.

CITY OF PORTSMOUTH

CITY ARCHITECT'S DEPARTMENT

Applications are invited for the following:—

(a) SENIOR ASSISTANT ARCHITECTS.

A.P.T. Grade IV (£1,40—£1,310).

(b) ASSISTANT QUANTITY SURVEYOR.

A.P.T. Grade III/IV (£960—£1,310).

(c) ARCHITECTURAL ASSISTANT.

Grades I (£645—£815) or II (£815—£960)

according to experience.

(d) ASSISTANT QUANTITY SURVEYOR.

A.P.T. Grades I (£645—£815) or II (£815—£960)

according to experience.

Applicants for (a) and (b) must be Associates of their respective Institutes, and for (c) and (d) must possess their Intermediate qualification.

For posts (a) and (b) housing accommodation, if necessary, may be provided at an economic rent.

ent. Applications, with full details, and names as ddresses of two referees, must be delivered he City Architect. 1, Western Parade, Port nouth, not later than Monday, 25th Septembe

nouth, not be a second of the second of the

CARSHALTON URBAN DISTRICT COUNCIL ENGINEER AND SURVEYOR'S DEPARTMENT ASSISTANT ARCHITECT (A.P.T. IV)
Salary within range £1,155—£1,355 according to experience. Candidates must have passed final R.I.B.A. or equivalent. Experience offered on design and supervision of housing, public buildings, etc., in large Urban District within the Greater London area (Population approximately 60,000). Car allowance payable. Five-day week. Good working conditions. Staff canteen. Application forms obtainable from the undersigned to be returned by 25th September. Canvassing will disqualify.

C. H. DURRANT, Clerk of the Council.

District Council Offices, The Grove, Carshalton, Surrey.

The Grove. Sy201
Carshalton, Surrey. Sy201
LANCASHIRE COUNTY COUNCIL
PLANNING DEPARTMENT
PLANNING ASSITANT required at Wigan,
A.P.T. I and A.P.T. IV (£645—£1,310), commencing
and maximum salary according to qualifications
and experience. Candidates should have an appropriate University degree and or be studying for or
possess a recognised qualification in town planning,
architecture, surveying or engineering.
Disturbance allowances and removal expenses
to a maximum of £125 may be granted in approved
cases.

ses. Applications giving age, qualifications, present pointment, experience, etc., and two referees in the County Planning Officer (C), East Cliff ounty Offices, Preston, by the 12th September,

LANCASHIRE COUNTY COUNCIL

PLANNING DEPARTMENT
SECTIONAL PLANNING OFFICER required at the Bury Divisional Planning Office, A.P.T. V (£1,310—£1,480 per annum). Candidates should possess an appropriate University Degree and/or a recognised qualification in architecture, civil engineering, surveying or planning. Experience in the preparation of Town Maps and schemes for areas of comprehensive redevelopment is desirable and candidates should possess a sound knowledge of town and country planning legislation.

Disturbance allowances and removal expenses to a maximum of £125 may be granted in approved

to a maximum of the coasts.

Applications giving age, qualifications, present appointment, experience, etc., and two referees to the County Planning Officer (B), East Cliff County Offices, Preston, by the 12th September.

LANCASHIRE COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT
ARCHITECTURAL ASSISTANTS
(within the salary range £646—£960 according to
experience and ability)
Applications are invited from Architectural
Assistants for appointments to the permanent staff
of the County Architect's Department, which is
engaged on a large and varied programme of
major projects.
Applicants should have attained at least Intermediate R.I.B.A. standard and, within this stage
of qualification, have a reasonably varied experience.

or quantization, because the country Architect, P.O. Box 26, County Hall, Preston, should be returned by 29th September, 1961.

September, 1961.

29th September, 1961.

LONDON COUNTY COUNCIL
HISTORIC BUILDINGS SECTION OF
ARCHITECT'S DEPARTMENT
ARCHITECT to advise on applications under the
planning acts affecting "listed" buildings; collection of historical information; dealing with
Building Preservation Orders; attendance at public
enquiries. Salary up to £1,500.

Application form and further particulars from
Hubert Bennett, F.R.I.B.A., Architect to the
Council (EK/A/2455'9), County Hall, S.E.I., returnable by 29th September, 1961.

S9092

LANCASHIRE COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT
SENIOR ASSISTANT ARCHITECTS
SENIOR ASSISTANT ARCHITECTS
Applications are invited from experienced Architects for posts on the permanent staff. The County Council has a large and extremely varied building programme, and posts will be filled by men of initiative, imagination and a flair for sensitive design.

initiative, imagination and a nair for sensitive design.

Applicants are expected to be Registered Architects, as well as Associates of the Royal Institute of British Architects and, if appointed, will be able to claim a disturbance allowance up to a maximum of £125. a facility offered by the County Council to cover the expenses of removal and other associated costs.

Application forms and conditions of appointment are obtainable from the County Architect, P.O. Roy 25, County Hall, Preston, returnable by the 29th September, 1961.

29th September, 1961. 89145

LANCASHIRE COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT
ASSISTANT ARCHITECTS
A.P.T. V (£1.310-£1.480) and A.P.T. IV (£1.140-£1.310). (Starting salary according to experience)
Applications are invited from qualified ARCHITECTS of initiative, keen on design and modern
constructural methods, to work on a large and varied programme.

varied programme.

If appointed, applicants will be able to claim a disturbance allowance up to a maximum of £125, a facility offered by the County Council to cover the expenses of removal and other associated

costs.

Application forms and details of appointment, obtainable from the County Architect, P.O. Box 25, County Hall, Preston, should be returned by the 29th September, 1961.

S9147

COUNTY BOROUGH OF BARNSLEY
BOROUGH ENGINEER AND SURVEYOR AND
PLANNING OFFICER'S DEPARTMENT
APPOINTMENT OF ARCHITECTURAL STAFF
Applications are invited for the following ASSISTANT ARCHITECT-A.P.T. V (61,310-

(2001). Candidates for this appointment must hold a ecognised Diploma in Architecture and/or be

A.R.I.B.A. The

recognised Diploma in Architecture and/or be A.R.I.B.A.

The appointment is superannuable and subject to N.J.C. Conditions of Service, passing of a medical examination and one month's notice on either side.

Housing accommodation can be provided if necessary and 59 per cent. of removal transport expenses will be paid in approved cases. A five-day week is in operation and staff diring facilities are available.

Applications, stating age, qualifications, present and previous appointments and experience, together with the names of two referees should be sent to the Borough Engineer, Town Hall, Canvassing will disqualify.

A. E. GILFILLAN, Town Clerk.

Town Hall, Barnsley, August, 1961.

89195

The new aids to Roof Construction

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Lime Grove, Shepherd's Bush, W.12. Shepherd's Bush 3321 Principal: E. M. RICE, F.R.I.B.A., Dip. Arch., (Leeds)

FULL-TIME, PART-TIME DAY AND EVENING COURSES

ARCHITECTURE

ART Basketry, Cabinet Making, Commercial Art, Drawing, Dress Design and Making, Ladies' Tailoring, Embroidery, Handloom Weaving, Interior Design, Leatherwork, Lettering, Mural Decoration, Painting, Pottery, Sculpture, Technical Illustration, Textile Design, Television Design, Weaving

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Full-time and Part-time Day Building Courses start 11th

September, 1961.
Full-time and Part-time Day Building Courses start 11th September, 1961.
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ARCHITECTS

ASSISTANTS

required for permanent and pensionable appointments at salaries of

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HOTEL, COMMERCIAL and HOUSING PROJECTS

In the growing ARCHITECTS DEPARTMENT of a nation-wide Development Organisation with offices near Hyde Park, London.

Please write to Box No. 9223 c/o Architects Journal with brief details of age, experience and qualifications. All communications will be acknowledged and treated as confidential.

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GROUND SURVEYS LIMITED

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have a large staff of land surveyors based on London, Glasgow, Leeds and Swansea.

Any type or size of survey undertaken using the most modern techniques to achieve an accurate, and economical, result.

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CITY OF SHEFFIELD
EDUCATION COMMITTEE
COLLEGE OF TECHNOLOGY
Department of Building and Civil Engineering
Applications are invited for the following

Senter Lecturer In Surveying Candidates should possess auitable professional qualifications in Surveying (i.e., membership of R.I.C.S. and/or degree in Estate Management) and should be capable of teaching Surveying subjects up to R.I.C.S. final examination level. The ability to teach Town and Country Planning and Valuations would be an advantage. Duties will include the administration of existing partitine day courses in Surveying and the development of new general division courses of the R.I.C.S. LECTURER

LECTURER
To teach Building Construction, Quantities,
Contracts and Specifications in the sandwich and
part-time National Certificate courses. A knowledge of Administration and Management related
to the Industry would be an advantage. Candidates should be members of an appropriate professional body and have had satisfactory industrial
and teaching experience.

and teaching experience.
ASSISTANT (GRADE B) in Civil Engineering

ASSISTANT (TRADE Considered to the condition of the conditions and have had suitable industrial or teaching experience. The person appointed will be expected to teach two or more of the following subjects in sandwich courses leading to the A.M.I.C.E.: Heat, Light, and Sound; Principles of Electricity; Hydraulics and Mathematics. iples of Electricity,
natics.
salary Scales (Burnham Technical):—
senior Lecturer:
£1,550 ×50—£1,750 per annum;

£1,550×50-£1,750 per annum;
Lecturer:
£1,370×£35-£1,550 per annum;
Assistant (Grade B):
£700×£27 10s-£1,50 per annum; with additions for appropriate qualifications, training and experience.
Application Forms, obtainable from the undersigned (s.a.e.) at P.O. Box 67, Sheffield, 1, should be returned within 14 days of the appearance of this advertisement.

T. H. TUNN,

T. H. TUNN, Director of Education. 9149

THE URBAN DISTRICT COUNCIL OF FELLING SURVEYOR'S DEPARTMENT—APPOINTMENT OF CHIEF ASSISTANT ARCHITECT
Applications are invited for the appointment of Chief Assistant Architect in the Department of the Surveyor. The salary payable will be in accordance with Grade A.P.T. V of the National Salary Scales, viz.: £1,310 per annum rising by two annual increments of £55 and one of £60 to a maximum of £1,480 per annum.
Applicants must have passed the final examination of the Royal Institute of British Architects. Forms of application together with particulars and conditions of employment can be obtained from the undersigned to whom they must be returned not later than Monday, the 11th September, 1961.

returned not later than Monday, the tember, 1961.

Housing accommodation will be provided by the Council if required or alternatively the Council will grant a 100 per cent mortgage for the purchase of an approved private dwellinghouse.

Canvassing will disqualify any applicant.

JOHN DONKIN

Clerk of the Council.

Felling, Gateshead, 10.

LANCASHIRE COUNTY COUNCIL PLANNING DEPARTMENT
PLANNING ASSISTANT required at LIVER-POOL, A.P.T. I to A.P.T. IV (2645-£1,310), commencing and maximum salary according to qualifications and experience. Candidates should have an appropriate University degree and/or be studying for or possess a recognised qualification in town planning, architecture, surveying or engineering.

Disturbance allowances and removal expanses a maximum of £125 may be granted in approved

cases.

Applications giving age, qualifications, present appointment, experience, etc., and two referees to the County Planning Officer (E), East Cliff County Offices, Preston, by the 19th September, 1961.

PEMBROKESHIRE COUNTY COUNCIL COUNTY ARCHITECT'S DEPARTMENT Applications are invited from members of the I.B.A. for ASSISTANT ARCHITECTS Grades II and IV A.P. & T. Division.

Applicants must have had a good experience a architectural design and building work under instruction and possess sound administrative bility.

construction and possess sound administrative ability. Conditions of appointment and forms of applica-tion may be obtained from the County Architect, County Offices, Haverfordwest, and must be re-turned to him not later than September 23rd, 1961.

H. LOUIS UNDERWOOD, Clerk of the County Council. County Offices.

Haverfordwest. 28th August, 1961.

NORTH RIDING OF YORKSHIRE
COUNTY COUNCIL
SENIOR PLANNING ASSISTANT in County
Planning Headquarters, Northallerton, for duties
relating to the North York Moors and Yorkshire
Dales National Parks. Salary within Grades
A.P.T. IV and V (£1,140 to £1,310 and £1,510 to
£1,460) according to qualifications and experience.
Further particulars available from the undersigned. Trayelling allowance for 10 h.p. car.
Applicants must disclose in writing relationship
to any member or senior officer of the County
Council. Canvassing disqualifies. Applications,
giving age, qualifications, previous appointments
and experience, with addresses of two referees,
to the Clerk of the County Council, County Hall,
Northallerton, by 18th September, 1961. 9161

BEDFORDSHIRE COUNTY COUNCIL
COUNTY PLANNING DEPARTMENT
Applications are invited from suitably qualified
persons for the following new posts:—
(a) DEVELOPMENT PLAN OFFICER (Urban
Renewal) A.P.T. IV/V (£1,140—£1,480).
(b) DEVELOPMENT PLAN OFFICER (Urban
Renewal) A.P.T. IV/V (£1,140—£1,480).
(c) VALLER/PLANNER (Urban Renewal) A.P.T.
IV/V (£1,140—£1,480).

IV/V (£1,140-£1,480). DRAUGHTSMAN MODEL MAKER A.P.T. II III (£815-£1,140). DEVELOPMENT PLAN ASSISTANT A.P.T.

II (2815-2860). Application forms and particulars of the posts rom Establishment Officer, Shire Hall, Bedford. Closing date 15th September, 1961. 9,62 COUNTY OF ARMAGH EDUCATION COMMITTEE ARCHITECTURAL STAFF Applications are invited for the following of the control of the con

(a) ONE ASSISTANT ARCHITECT (Salary Scale

2935—£1,439).

(b) TWO ARCHITECTURAL ASSISTANTS (Salary Scale £645—£915 with possible progression to £1,040).

For post (a) applicants must be Associates of the R.I.B.A. or have an equivalent qualification, and for post (b) should have previous architectural experience.

and for post (b) should have previous architectural experience.

Application forms and particulars and conditions of appointment may be obtained from the Director of Education, Education Office, Courthouse, Armagh, with whom completed application forms must be lodged by 12 noon on FRIDAY, 29th SEPTEMBER, 1961.

9202

armagn, with whom completed application forms must be lodged by 21 noon on FRIDAY, 29th SEPTEMBER, 1961.

APPOINTMENT OF QUANTITY SURVEYOR Applications are invited from Quantity Surveyors with suitable qualifications and experience, for an appointment as ASSISTANT QUANTITY SURVEYOR in the Architects' Section of the Borough Surveyor's Department at a salary in accordance with A.P.T. Grades III-IV (£960—£1.310 per annum) commencing according to experience and qualifications.

The Borough, which has a population of approximately 96.000 and which is still expanding rapidly is an Excepted District for Education, and in April last assumed delegated powers for Health and Welfare Services. It has also been recommended for County Borough Status by the Local Government Commission for England. The appointment is subject to the usual Local Government Conditions of Service, to a satisfactory medical examination, and one month's Interpreparate cases the Council will assist in the provision of housing accommodation as soon as possible and the whole of an officer's removal expenses will be paid subject to 12 months' service.

Applications, giving full particulars as to age,

In appropriate cases the Council will assist in the provision of housing accommodation as soon as possible and the whole of an officer's removal expenses will be paid subject to 12 months' service.

Applications, giving full particulars as to age, qualifications, and experience and past and present appointments, together with the names and addresses of two referees, should be submitted to the Borough Engineer and Surveyor, 90. Station Road, Solthull, not later than Saturday, 16th September, 1961.

W. MAURICE MELL.

W. MAURICE MELL Town Cle Council House, Solihull.

BOROUGH OF BANBURY
DEPUTY BOROUGH ARCHITECT
Applications are invited for the post of Deputy
Borough Architect. Salary within Grade A.P.T. V
(£1.310-£1.480 p.a.) according to qualifications and experience

(£1.310—£1.480 p.a.) according to qualifications and experience.

Aptilicants must be Associate Members of the R.I.E.A, with suitable experience. The successful candidate will be responsible to the Borough Engineer and Surveyor for all the architectural work of his Department.

Benbury is an expanding town and extensive works will be undertaken in connection with a town development scheme, and the post offers a varied experience. A car allowance will be navable and removal expenses will be reimbursed in accordance with the Council's scheme. Temporary housing accommodation for a married applicant will be considered.

Applications, stating age, qualifications and experience and the names and addresses of two referees, must be received by the undersigned not later than the 18th September 1961

FREDERICK G. BOYS.

Municipal Buildings,

Municipal Buildings, Banbury.

ARCHITECTURAL ASSISTANTS AND DRAW-ING OFFICE ASSISTANTS REQUIRED BY AIR MINISTRY H.Q. IN LONDON. Salary (inner London scale) Grade II, £1,046 to £1,202; Grade III, £658—£1,048 (£866 at age 25). Drawing Office Assistant, £404 (age 18) to £695 (men), £731 (women)—starting salary depends on age, quali-fections and experience

And the series of the series o

B. V. ENTWISTLE,

Peter's Street, lbans, Herts.

DURHAM COUNTY COUNCIL

OUNTY ARCHITECT'S DEPARTMENT
Applications are invited for the following appointments on the permanent staff:

ARCHITECTURAL AND QUANTITY SUR-

VEYING:
Grade A.P.T. V, £1,510 to £1,480—A.R.I.E.A. or
A.R.I.C.S.
Grade A.P.T. II, £815 to £960, Grade A.P.T. I,
£645 to £815—Inter, R.I.B.A. or R.I.C.S.
The department has a large and extremely
varied building programme, including all types
of Schools, Hostels, Health Centres, Fire Station,
Police Stations and Courles, etc. The County
Council are members of a Consortium of Local
Authorities carrying out an extensive programme
of building in C.L.A.S.P. construction.
The Quantity Surveying Section of the Department undertakes work in all stages from cost
analysis to Final Accounts including the preparation of Elemental Bills of Quantities and the
programme is both interesting and varied.
Staff canteen facilities are available. A fiveday week is in operation, Assistance in obtaining
rented housing accommodation in the new towns
of Peterlee and Newton Aycliffe is given to
successful applicants.

Hall is in course of erection

nted housing accommodation in the re-Peterlee and Newton Aycliffe is given to iccessful applicants. A new County Hall is in course of erection Durham and the department will be trans-ired to it during 1962. Application form and full particulars can be brained from the County Architect, South Street,

rham.

Personally canvassing members of the Council prohibited and the Council may declare any ndidate infringing this rule to be disqualified appointment.

J. T. BROCKBANK, Clerk of the County Council,

Cierk of the County Council.

1MPORTANT ANNOUNCEMENT TO ALL

YOUNG ARCHITECTS

No more rewarding career is open to the enthusiastic young Architect, whether just leaving college or with some years experience behind him, than to be in on the ground floor in the big new hospital building programme envisaged by the Welsh Hospital Board.

Here is a challenging opportunity for those interested in contemporary design to plan not only complete new hospitals but to enjoy the variety offered by the whole field of Hospital Architecture, from the design of operating theatres to staff housing accommodation.

Previous experience of hospital design is not essential, since post-graduate training facilities at the Royal Institute of Architecture are planned.

Posts are vacant for ARCHITECTURAL ASSISTANTS holding the Intermediate Examination of the R.I.B.A. (salary scale 6625—6500) whilst for those with practical experience who hold the final examination of the R.I.B.A. there are vacancies for ASSISTANT ARCHITECTS (1955—61.310). For those with enthusiasm and creative ability prospects of promotion to the higher grades are excellent. All posts are superannuable and there is a five-day week.

Successful applicants will work in Cardif's city centre. Applications stating age, full details of qualifications, experience, present position and salary, with names of two references, should be sent to the Secretary, Welsh Hospital Board, Temple of Peace and Health, Cathays Park, Cardiff, within fourteen days.

MANCHESTER CORPORATION

ENGINEERS & PLANNERS

Grades JNC 'B' (£1420/£1670) and APT V (£1310/£1480)

Engineering appointments offer experience in an extensive programme of design and construction work including highway improvements, new major roads and bridges, main drainage, airport extensions and new roads and sewers on housing sites.

The Planning appointments offer practical experience in comprehensive redevelopment schemes in central areas and in large scale new residential development projects.

Applicants must be appropriately qualified.

Housing Accommodation and Removal Expenses

Applications giving details of age, qualifications, and experience, together with the names of three referees, to the

City Surveyor, Town Hall, Manchester, 2

BRIGHTSIDE

HEATING & ENGINEERING CO. LTD.

requires a

QUANTITY SURVEYOR

well versed in building contract procedure.

The position is progressive and will entail travelling to and from the Company's branches throughout the country as necessary, although based at Ecclesfield, near Sheffield.

Pension and Life Assurance Schemes in operation.

Please write giving full particulars of experience to:—

THE MANAGING DIRECTOR,
BRIGHTSIDE HEATING &
ENGINEERING CO. LTD.
G.P.O. BOX 118,
SHEFFIELD, I

The Elementary Principles of Reinforced Concrete Design W. H. ELGAR, M.A., M.ENG.

The author of this book is a civil engineer and a chartered surveyor who, for some years, has been a lecturer at Cambridge University. His purpose in writing this book is to provide an introduction to the subject of reinforced concrete design which will be suitable for students of architecture or building surveying. He has therefore dealt with the subject almost entirely in its relationship to buildings, and frequent reference is made to the Codes of Practice which govern the use of reinforced concrete in this field of design. In his preface the author writes, 'It is hoped to show that the design of the structural elements of a building is not merely a matter of substituting the right dimensions in the "right formula", but that it involves judgement and a sense of the right

use of materials, which raises it to the status of an art with its own logic and philosophy. For this reason the load factor method of design and the basic principles of prestressing are discussed in general outline.' Fully worked out examples of the design of structures are not included, for they are considered to be beyond the intended scope of the book and likely to prove confusing and discouraging to the student reader. The calculations which have been included are those which it is considered necessary to the explanations of the principles of design.

Size $8\frac{3}{4} \times 5\frac{5}{8}$ ins. 112 pages with 56 diagrams. 18s. 6d. net, postage 11d.

The Architectural Press, 9-13 Queen Anne's Gate, London S.W.1

BECKS COUNTY COUNCIL

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

ASSISTANT ARCHITECTS, A.P.T. Grade V-13.10-41,460 per annum.

These 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 provided, must be returned by Monday, 18th September, 1961.

F. B. POOLEY.

County Offices,

Aylesbury, Bucks. 9184
INVERNESS COUNTY COUNCIL
invite applications for appointments in the County
Architect's Department as follows:
(a) 1 SENIOR ASSISTANT ARCHITECT—Section Leader—Salary Scale £1,140—£1,365 per
annum.

tion Leader—Salary Scale £1,140—£1,365 per annum.

(b) 1 FIRST ASSISTANT ARCHITECT—Salary Scale £1,135—£1,200 per annum.

(c) 2 SECOND ASSISTANT ARCHITECTS—Salary Scale £850—£1,150 per annum. Applicants must be fully qualified. Appropriate placing on salary scales will be given in accordance with qualifications and experience. Housing accommodation may be made available if required. Applications together with the names and addresses of three referees to the County Clerk, County Buildings, Ardross Street, Inverness, by 15th September.

Buildings, Ardross Street, Inventees, 9131
September.

THE UNIVERSITY OF MANCHESTER
Applications are invited for the post of LECTURER IN ARCHITECTURE from candidates
with professional membership of the Royal Institute of British Architects and not less than
three years of practical experience. Salary on
a scale £1,650 to £1850 per annum; initial salary
according to qualifications and experience. Membership of the F.S.S.U. and Children's Allowance
Scheme. Applications should be sent not later
than September 30th, 1961, to the Registrar, the
University, Manchester, 13, from whom further
particulars and forms of application may be
obtained.

MINISTRY OF WORKS, LONDON
ASSISTANT DESIGN OFFICER to produce
integrated schemes and prepare coloured perspective sketches for domestic and office furniture
and interiors. Must hold M.I.S.A., Des. A.R.C.A.,
National Design Diploma, or equivalent. Previous
experience essential. Salary: £1,188—£1,448 per
annum.

DESIGN ASSISTANT to carry out work similar to above but less advanced level. Starting pay up to £897 per annum (depending on experience) rising to £1,043 per annum. These appointments will be for a period of 3 to 5 years. Write to Controller of Supplies, Ministry of Works (S.G.1.A.). Southbridge House, Southwark Bridge Road, London, S.E.1.

PERTHAL COUNTY COUNCIL

Road, London, S.E.I.

PERTH COUNTY COUNCIL

Applications are invited for vacancies in the COUNTY ARCHITECT'S DEPARTMENT, Perth, on salary scale \$1.000 to \$1.300. Applicants should be fully qualified A.R.I.B.A. but applicants with a Diploma sa Architecture will be considered. Placing on the scale may be given according to experience. Housing accommodation will be available. Particulars and forms of application from The County Clerk, P.O. Box 15, County Offices, Vork Place, Perth. Applications to be lodged by 25th September, 1961.

BOROUGH OF JARROW
Applications are invited for the appointment of an ASSISTANT ARCHITECT, Salary Grade A.P.T. III (£860-£1,140). Housing accommodation provided, if necessary.
Details and application forms obtainable from the Borough Engineer, Town Hall, Jarrow, Co. Durham.

rham, ompleted applications should be returned to me Monday, 18th September, 1961.

M. L. ROTHFIELD,
Town Clerk.
9210

31st August, 1961

Applications are invited for the following posts in the Department of the City Engineer and Surveyor (G. Alexander McWilliam, B.Sc., A.M.I.C.E., A.R.I.C.S., M.I.Mun.E.).

(a) A.P.T. V. (£1,310—£1,480 per annum) (2) (b) A.P.T. IV.V (£1,310—£1,480 per annum) (2) (c) A.P.T. IV.V (£1,310—£1,310 per annum) (1) The Council is particularly anxious to engage enthusiastic assistants with a modern outlook in design and construction.

The successful candidates for appointment (a) will be members of the Housing and Redevelopment Team engaged on a challenging programme of multi-storey housing, central area redevelopment and overspill. Those appointed to (b) and (c) will be engaged on Education and General works.

(c) will be engaged on Education and General works.

ASSISTANT QUANTITY SURVEYORS:—
(d) A.P.T. IV-V (£1,140—£1,480 per annum).
(e) A.P.T. IV-V (£1,140—£1,310 per annum).
(f) A.P.T. II (£1,160—£1,310 per annum).
(g) A.P.T. II (£1,160—£1,310 per annum).
The Department has an interesting and varied programme of work and offers scope for wide experience in all aspects of quantity surveying on building and architectural projects carried out for all Committees of the City Council.

The commencing salaries will be dependent upon qualifications and experience.

Housing accommodation may be provided in approved cases. A five-day week is in operation.

Applications indicating the post applied for and stating age, education, qualifications and experience, together with the names and addresses of two referees, should be sent to the City Engineer and Surveyor, Town Hall, Salford, 3, Lanes., to arrive by Monday, 18th September, 1961.

COUNTY BOROUGH OF SMETHWICK BOROUGH ENGINEER & SURVEYOR'S DEPARTMENT APPOINTMENT OF SENIOR ASSISTANT ARCHITECT APPLICATION APP

successful applicant.

The post is subject to the provisions of the National Scheme of Conditions of Service: the Local Government Superannuation Acts 1937-53; the passing of a medical examination and to termination by one month's notice on either side.

Form of application may be obtained from the Borough Engineer and Surveyor, Council House, Smethwick, and should be returned, in envelope suitably endorsed, to reach him not later than 25th September, 1961.

E. L. TWYCROSS, Town Clerk.

HAMPSTEAD BOROUGH COUNCIL
ARCHITECTURAL ASSISTANTS required in
the Housing Architect's Department for new
development including multi-storey blocks of
flats, Salary will start at a point within A.P.T.
Grades I-IV (£645—£1,310 per annum plus London
weighting) according to qualifications and experience. Local Authority experience not essential. Group system of working, Advances for
house purchase up to 100 per cent. of valuation
will be considered in suitable cases. Applications
with names of two referees to Town Clerk, Town
Hall, Haverstock Hill, N.W.3. TC7886

METROPOLITAN BOROUGH OF

CAMBERWELL
ARCHITECTS
Vacancies for Architects in the Borough
Architect's Department within a salary range of
£855 and £1.525 (Grades A.P.T. II to V of the
National Scales). Grade and commencing salary
according to qualifications and experience. The
work of the department includes design and construction of public buildings, housing estates,
including multi-storey construction, Application
form from Town Clerk, Town Hall, S.E.5. TC7928

BOROUGH OF WANSTEAD AND WOODFORD ARCHITECTURAL ASSISTANT A.P.T. I/II (£645 to £969 plus London Weighting) Applicants should have passed the Intermediate examination of the R.I.B.A. Starting salary in accordance with the experience of the successful applicant.

applicant.
Forms obtainable from and to be returned to
L.S. Jeffery, Borough Engineer, Municipal Offices,
Woodford, E.18, by 29th September, 1961. S9196

Tenders Invited

36s. per inch; each additional line 3s.

BOROUGH OF EALING

Tenders are invited for the construction of a overed Way, Lavatories and Printing Room at the rear of the Town Hall, Uxbridge Road, aling, W. 5. Borough Engineer, Town Hall.

Covered Way,
the rear of the Town Hall, Uxurioge
Baling, W.5.
Details from Borough Engineer, Town Hall,
Ealing, W.5, on payment of 12, returnable on
receipt of bona fide Tender.
Closing date of Tender: 22nd September, 1961.
E. J. COPE-BROWN,
Town Clerk.
89118

Architectural Appointments Vacant per line; minimum 12s. Box Number, including forwarding replies, 2s. extra

including forwarding replies, IS. extra

A RCHITECTURAL ASSISTANT. Man or

Woman with some office experience
required for interesting country practice. L. H.

Bond and B. W. Read, 44, Castlegate, Grantham.

TC8851

LANCHESTER & LODGE urgently require grades. Work includes hospitals, laboratories. universities, offices, housing, etc. Write full particulars or ring for interview: 10, Woburn Square, W.C.l. MUS 0845-6-7.

A FEW vacancies still left for experienced and confident ARCHITECTS to fill positions of responsibility in a growing and varied practice with industrial and commercial work throughout the southern half of the country. Applicante must have initiative as well as architectural ability to carry through contracts up to £100,000, working directly with Principals but with minimum supervision. Apply in writing to Thomas Mitchell & Partners, 20 Bedford Square, London, W.C.I.

TC7443

RYAN & NORMAN WESTWOOD require

ASSISTANT ARCHITECTS. Salaries up to
£1,200. Apply to Il Suffolk Street, S.W.1, Trafalgar
1106, or S Balfour Road, Weybridge, Surrey, 6088.
TC8600

£1.000 / £2,000 p.a. will be paid to experienced competent ARCHI.
TECTS by a private practice in the City of London. The work will be primarily on the drawing board on new and interesting projects of magnitude. A high standard of design and detailing ability is required. Please apply in writing to Box TC3560.

\$2850-\$21,600. ARCHITECTURAL ASSISTANTS required. Long term prospects. Non-contributory pension and life assurance schemes. Five-day week. Telephone or write: Ronald Ward & Pattners, 29, Chesham Place, Belgrave Square, S.W.l. Belgravia 3361.

S.W.I. Belgravia 3361

ARCHITECTS' ASSISTANT required, up to Intermediate standard, to work on large and interesting projects. Salary within range £600—2800 Applicants must be good draughtsmen, with sound knowledge of detailing. Please write giving full particulars of experience, age, etc., to: F. W. Beech & E. Curnow Cooke, F./L.R.I.B.A., 15, Dix's Field, Exeter. TC8706

ASSISTANT ARCHITECTS. Salaries would be between £750 and £1,250 per annum. Please write to 20, Gower Street, W.C.1. A RCHITECTS

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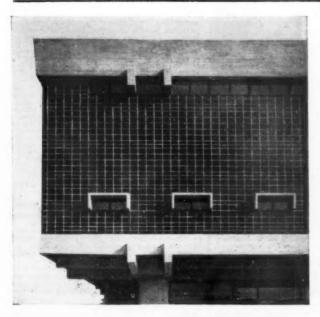
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New Japanese Architecture

by Udo Kultermann

Western opinion has an ideal image of modern Japanese architecture: spare, elegant, informal. While the work of Junzo Sakakura seemed to support this, there is an increasing awareness that in Kenzo Tange Japan possesses an architect who probably ranks with the world's top ten, but practises an entirely different kind of architecture.

Dr Kultermann's book shows how different the work of Tange and other leading Japanese architects has turned out to be. It is not afraid of mass, thickness and solidity; not afraid of bold plastic and sculptural forms; not afraid to mate the most advanced technology with the most hallowed traditional usages.

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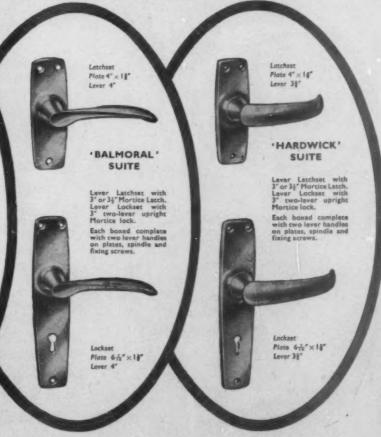
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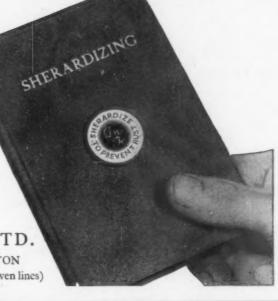
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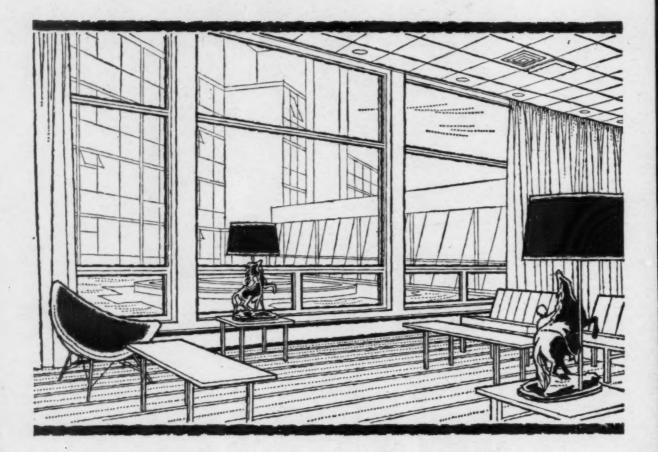
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