# THE ARCHITECTS' JOURNAL



*standard contents*

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



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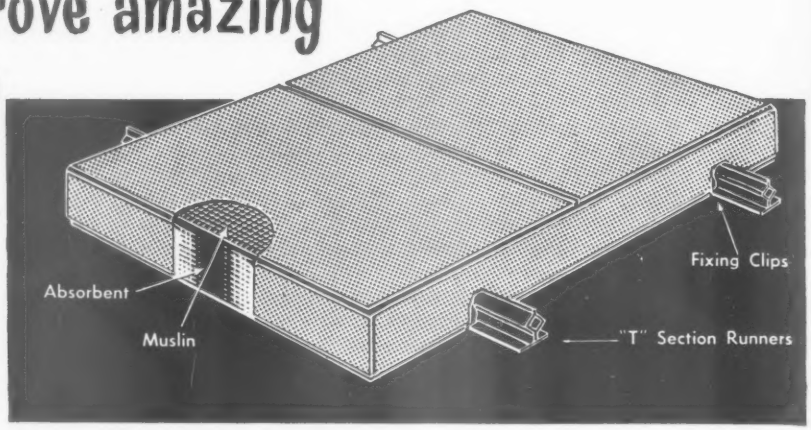
★ A glossary of abbreviations of Government Departments and Societies and Committees of all kinds, together with their full address and telephone numbers. The glossary is published in two parts—A to Ie one week, Ig to Z the next. In all cases where the town is not mentioned the word LONDON is implicit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

| | | |
|---|---|---|
| IGE | Institution of Gas Engineers. 17, Grosvenor Crescent, S.W.1. | Sloane 8266 |
| IHVE | Institution of Heating and Ventilating Engineers. 75, Eaton Place, S.W.1. | Sloane 3158/1601 |
| IIBD | Incorporated Institute of British Decorators. Drayton House, Gordon Street, W.C.1. | Euston 2450 |
| ILA | Institute of Landscape Architects. 12, Gower Street, W.C.1. | Museum 1783 |
| I of Arb. | Institute of Arbitrators, 35/37, Hastings House, 10, Norfolk Street, Strand, W.C.2. | Temple Bar 4071 |
| IOB | Institute of Builders. 48, Bedford Square, W.C.1. | Museum 7197/5176 |
| IR | Institute of Refrigeration. Dalmeny House, Monument Street, E.C.3. | Avenue 6851 |
| IRA | Institute of Registered Architects. 47, Victoria Street, S.W.1. | Abbey 6172 |
| ISE | Institution of Structural Engineers. 11, Upper Belgrave Street, S.W.1. | Sloane 7128 |
| IWA | Inland Waterways Association. 11, Gower Street, W.C.1. | Museum 9200 |
| LIDC | Lead Industries Development Council. Eagle House, Jermyn Street, S.W.1. | Whitehall 7264/4175 |
| LMBA | London Master Builders' Association. 47, Bedford Square, W.C.1. | Museum 3891 |
| MARS | MARS Group (English Branch of CIAM). Secretary: Gontran Goulden, Building Centre, 9, Conduit Street, W.1. | Mayfair 8641 |
| MOA | Ministry of Agriculture and Fisheries. 55, Whitehall, S.W.1. | Whitehall 3400 |
| MOE | Ministry of Education. Curzon Street House, Curzon Street, W.1. | Mayfair 9400 |
| MOH | Ministry of Health. 23, Saville Row, W.1. | Regent 8411 |
| MOHLG | Ministry of Health of Local Government Whitehall, S.W.1. | Whitehall 4300 |
| MOLNS | Ministry of Labour and National Service, 8, St. James's Square, S.W.1. | Whitehall 6200 |
| MOS | Ministry of Supply. Shell Mex House, Victoria Embankment, W.C. | Gerrard 6933 |
| MOT | Ministry of Transport. Berkeley Square House, Berkeley Square, W.1. | Mayfair 9494 |
| MOW | Ministry of Works. Lambeth Bridge House, S.E.1. | Reliance 7611 |
| NAMMC | Natural Asphalte Mine-Owners and Manufacturers Council. 94-98, Petty France, S.W.1. | Abbey 1010 |
| NAS | National Association of Shopfitters. 9, Victoria Street, S.W.1. | Abbey 4813 |
| NBR | National Buildings Record. 37, Onslow Gardens, S.W.7. | Kensington 8161 |
| NCBMP | National Council of Building Material Producers. 10,Princes Street, S.W.1. | Abbey5111 |
| NFBTE | National Federation of Building Trades Employers. 82, New Cavendish Street, W.1. | Langham 4041/4054 |
| NFBTO | National Federation of Building Trades Operatives, Federal House, Cedars Road, Clapham, S.W.4. | Macaulay 4451 |
| NFHS | National Federation of Housing Societies. 13, Suffolk St., S.W.1. | Whitehall 1693 |
| NHBRC | National House Builders Registration Council. 82, New Cavendish Street, W.1 | Langham 4341 |
| NPL | National Physical Laboratory. Head Office, Teddington. | Molesey 1380 |
| NSA | National Sawmilling Association, 14, New Bridge Street, E.C.4. | City 1476 |
| NSAS | National Smoke Abatement Society. Chandos House, Buckingham Gate, S.W.1. | Abbey 1359 |
| NT | National Trust for Places of Historic Interest or Natural Beauty. 42, Queen Anne's Gate, S.W.1. | Whitehall 0211 |
| PEP | Political and Economic Planning. 16, Queen Anne's Gate, S.W.1. | Whitehall 7245 |
| RCA | Reinforced Concrete Association. 94, Petty France, S.W.1. | Whitehall 9936 |
| RIAS | Royal Incorporation of Architects in Scotland. 15, Rutland Square, Edinburgh. | Edinburgh 20396 |
| RIBA | Royal Institute of British Architects. 66, Portland Place, W.1. | Langham 5721 |
| RICS | Royal Institution of Chartered Surveyors, 12, Great George St., S.W.1. | Whitehall 5322/9242 |
| RFAC | Royal Fine Art Commission. 22A, Queen Anne's Gate, S.W.1. | Whitehall 3935 |
| RS | Royal Society. Burlington House, Piccadilly, W.1. | Regent 3335 |
| RSA | Royal Society of Arts. 6, John Adam Street, W.C.2. | Trafalgar 2366 |
| RSI | Royal Sanitary Institute. 90, Buckingham Palace Road, S.W.1. | Sloane 5134 |
| RIB | Rural Industries Bureau. 35, Camp Road, Wimbledon, S.W.19. | Wimbledon 5101 |
| SBPM | Society of British Paint Manufacturers. Grosvenor Gardens House, Grosvenor Gardens, S.W.1. | Victoria 2186 |
| SCR | Society for Cultural Relations with the USSR. 14, Kensington Square, London, W.8. | Western 1571 |
| SE | Society of Engineers. 17, Victoria Street, Westminster, S.W.1. | Abbey 7244 |
| SFMA | School Furniture Manufacturers' Association. 30, Cornhill, London, E.C.3. | Mansion House 3921 |
| SIA | Structural Insulation Association. 14, Moorgate, London, E.C.2. | Central 4444 |
| SIA | Society of Industrial Artists. 7, Woburn Square, W.C.1. | Langham 1984 |
| SNHTPC | Scottish National Housing. Town Planning Council. Hon. Sec., Robert Pollock, Town Clerk, Rutherglen. | |
| SPAB | Society for the Protection of Ancient Buildings. 55, Great Ormond Street, W.C.1. | Holborn 2646 |
| TCPA | Town and Country Planning Association. 28, King Street, Covent Garden, W.C.2. | Temple Bar 5006 |
| TDA | Timber Development Association. 21, College Hill, E.C.4. | City 4771 |
| TGC | The Gas Council. 1, Grosvenor Place, S.W.1. | Sloane 4554 |
| TPI | Town Planning Institute. 18, Ashley Place, S.W.1. | Victoria 8815 |
| TTF | Timber Trades Federation. 69, Cannon Street, E.C.4. | City 4444 |
| WDC | War Damage Commission. Devonshire House, Mayfair Place, Piccadilly, W.1. | Mayfair 8866 |
| WEDA | Welfare Equipment Development Association. 74, Victoria St., S.W.1. | Victoria 5783 |
| ZDA | Zinc Development Association. Lincoln House, Turl Street, Oxford. | Oxford 47988 |

# N.P.L Tests prove amazing efficiency of (New) Acoustic Tiles




Soundproofing takes a new step forward! Burgess have produced—and the National Physical Laboratory have tested (Report Ref. 1015 of 12th June 1950) an Acoustic Ceiling Tile with an exceptionally high sound absorption coefficient. (See N.P.L. chart under diagram). Construction—a specially perforated metal tray, size 24in. by 12in. by 1¾in., fitted with clips containing a non-inflammable, non-hygroscopic, sound absorbent pad. The clips make for rapid and easy attachment to the specially shaped tee bar runner. The Tiles are stove enamelled which gives this treatment an exceptionally uniform and neat appearance

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|---|---|---|---|---|---|---|---|---|
| Frequency c.p.s. | 125 | 250 | 500 | 1000 | 2000 | 4000 | 6000 | 8000 |
| "A" 3.32in. dia. hole. | 0.15 | 0.50 | 0.75 | 0.80 | 0.75 | 0.75 | 0.75 | 0.75 |
| "B" 1/8in. dia. hole. | 0.15 | 0.45 | 0.70 | 0.75 | 0.80 | 0.85 | 0.85 | 0.85 |

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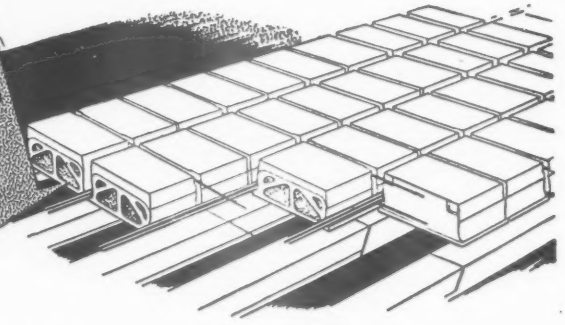

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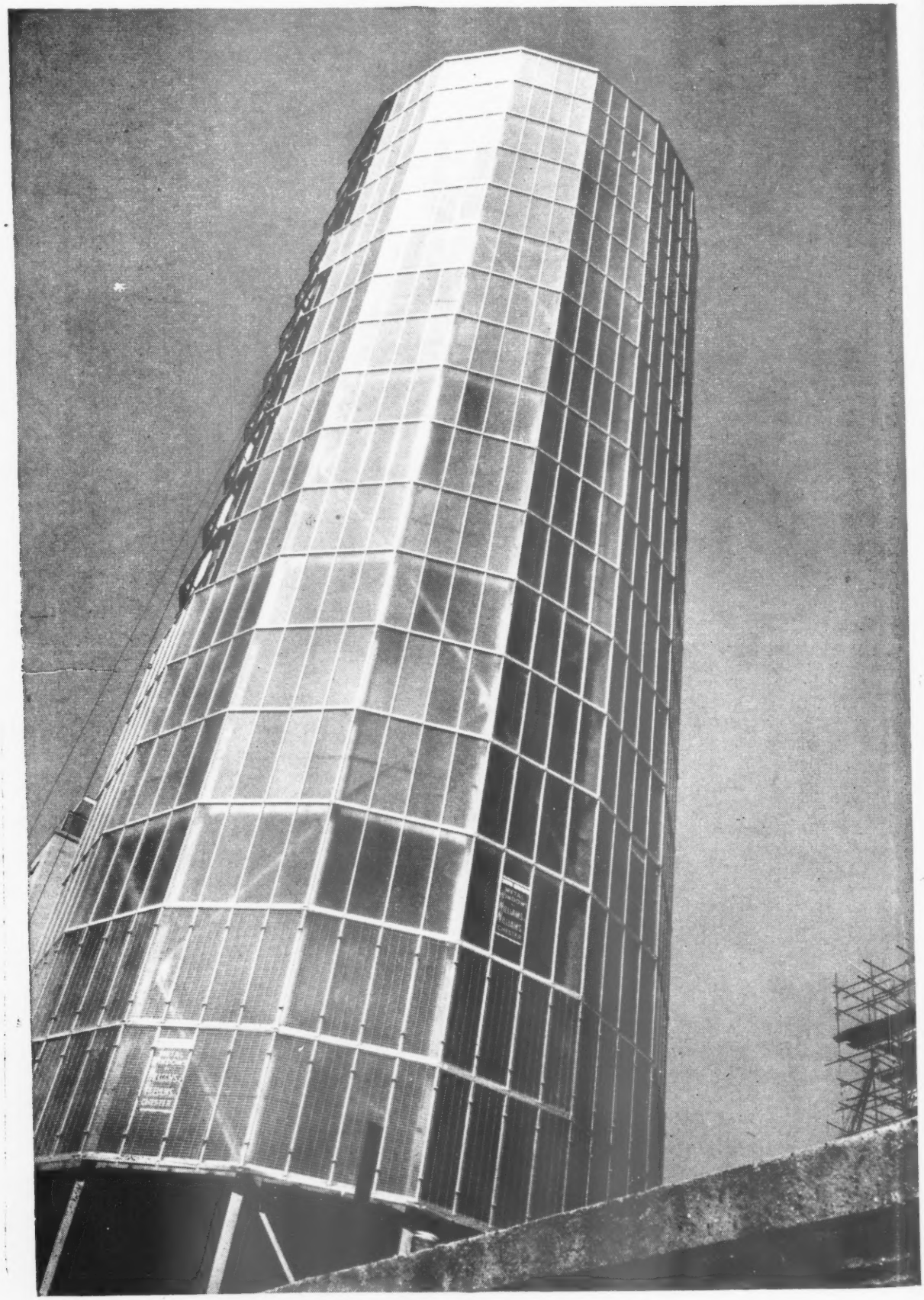
**2 WAY REINFORCED FIREPROOF FLOORS**

A



# Pimlico polygon...

**a hot water accumulator that delights the eye! A 16-sided tower glazed by Aluminex Patent Glazing houses the hot water accumulator of the Pimlico District Heating Scheme of the Westminster City Council.**

When a hot water accumulator tank 29 ft. in diameter and 126 ft. high is set cheek by jowl with blocks of new flats, something special, obviously has to be done about its appearance. Something, indeed, has been done, and to some purpose, to the hot water accumulator of the Pimlico District heating scheme. The remarkable photographs in these pages show how Aluminex Patent Glazing was used in accomplishing these three prime requirements of:

1 — **providing an aesthetic finish;**
2 — **protecting the accumulator and its lagging;**
3 — **providing a measure of additional heat insulation.**

In particular the architects desired that the accumulator enclosure should have a light and airy appearance and harmonise with the design of the flats in the surrounding estate.

It was with these considerations in mind that they chose Aluminex Patent Glazing—the modern, all-aluminium system—for the tower cladding. The Architects built round the accumulator a 16-sided steel tower glazed with rough cast glass panes, 6 ft. × 1 ft 9 ins., set in Aluminex patent glazing bars.

These are the normal Aluminex glazing bars as used in the Brabazon Assembly Hall, motor factories, steel works and other industrial structures large and small.

In this application of versatile Aluminex however, the tee-shaped glazing bars have been set to face inwards. This permitted the glazing to be placed from the inside, doing away with the need for scaffolding. Moreover this arrangement suited the wind conditions for the wind suction is much greater than pressure.

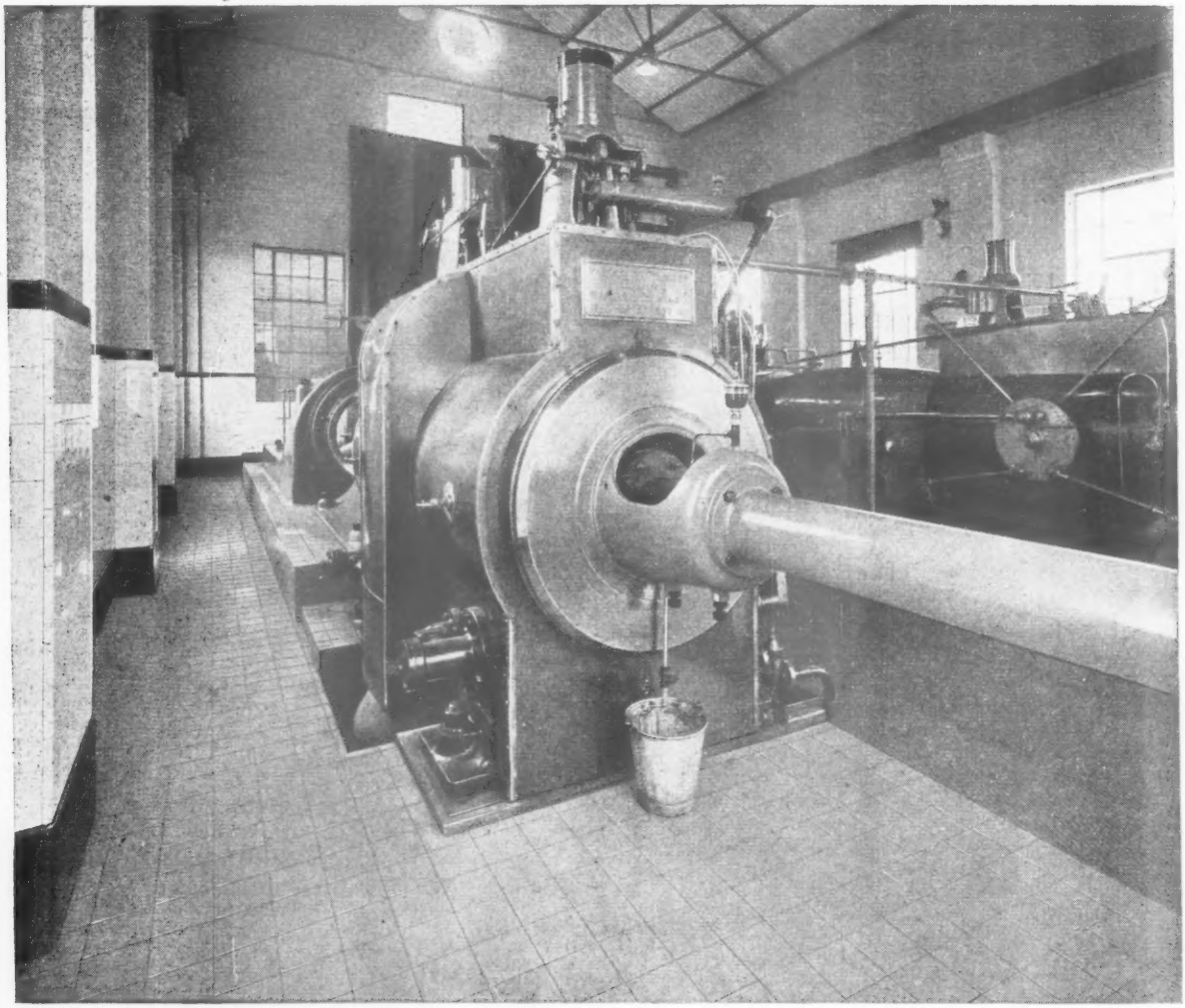
The manufacturers of Aluminex, Williams & Williams Ltd., carried out tests showing that the glass would not break until a suction of 65 lbs. per square foot was reached and that the Aluminex continuous spring glazing strip inside would not give way under a pulsating outside pressure varying up to a maximum of 45 lbs. per square foot. It was therefore clear that there was an ample margin of safety, since the maximum design suction is 50 lbs. per square foot and the maximum design pressure is 30 lbs. per square foot.

It is, however, from the point of view of appearance that the choice of Aluminex has been so notably justified. Aluminex is essentially a neat and precise glazing system. The bars are extruded to a design which represents the strictest adaptation of shape to function. The Aluminex engineers who designed it re-thought "dry glazing" from basic principles. The components and fixings are equally simple, efficient and functional. The result is that, in such structures as the Pimlico tower, when clean, precise lines play an important part in the aesthetic effect of the finished building, Aluminex presents invaluable advantages.

**Aluminex Division** *of* **Williams & Williams Ltd.,** *Reliance Works, Chester*

● See pages 708-712

**Architects:** *Messrs. Powell and Moya, AA.R.I.B.A.* **Chartered Civil Engineers:** *Messrs. Scott & Wilson.* **Consulting Engineers:** *Messrs. Kennedy & Donkin*



"TRITON" *Quarry Flooring in 6" Red Quarries with coved skirtings, carried out for the National Coal Board in the Winding Enginehouse of Wheatsheaf Colliery. Builders: G. & J. Seddon Ltd., Little Hulton. Flooring Contractors: Harold Westwell (Tilecraft) Ltd. Sale.*

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

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Copper and copper alloys can be wasted as easily by wrong use as by extravagance. Any information about their use in building can be obtained free of charge or obligation from the C.D.A. The Association provides expert advice and technical data to enable the best and most efficient use to be made of these materials. It pays to consult the C.D.A. at an early stage of any project.

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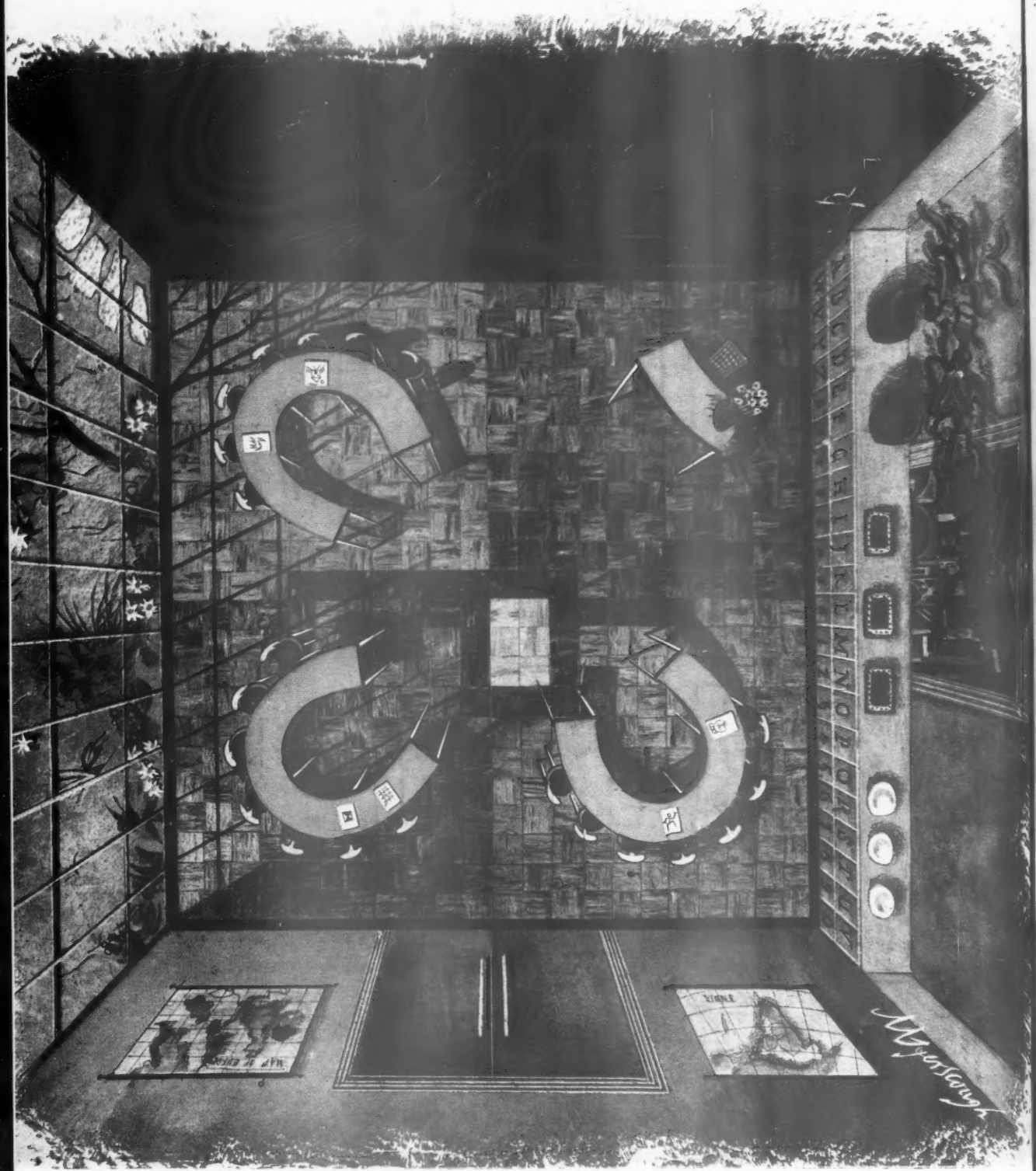

*Design for a Nursery Schoolroom. From the original Collage by R. Myerscough-Walker*

The modern Nursery Schoolroom calls for comfort and colour. The floor must also stand hard wear and constant cleaning. It must be hygienic and waterproof, yet warm and not tiring to young feet. In this unusual design, Marley floor tiles have been used to provide an inexpensive solution to all these problems.

*Cock o' the walk*

*The Marley Tile Co. Ltd., London Rd., Riverhead, Sevenoaks, Kent. Sevenoaks 2251-6*

MARLEY

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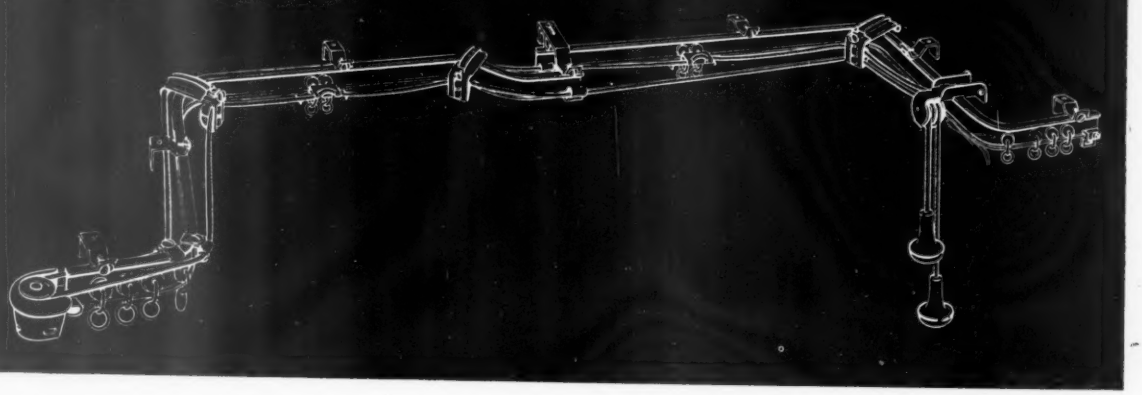

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BAY WINDOW COMPONENTS

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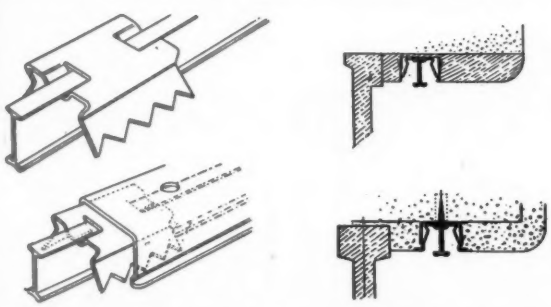

'Rufflette' brand Recessed Curtain Runway is a permanent and integral part of building construction. It is inexpensive and can be fitted into wood or plastered lintels. The runway is held rigidly in position by a patent spring clip without screws and is a concealed and a permanent fitting.

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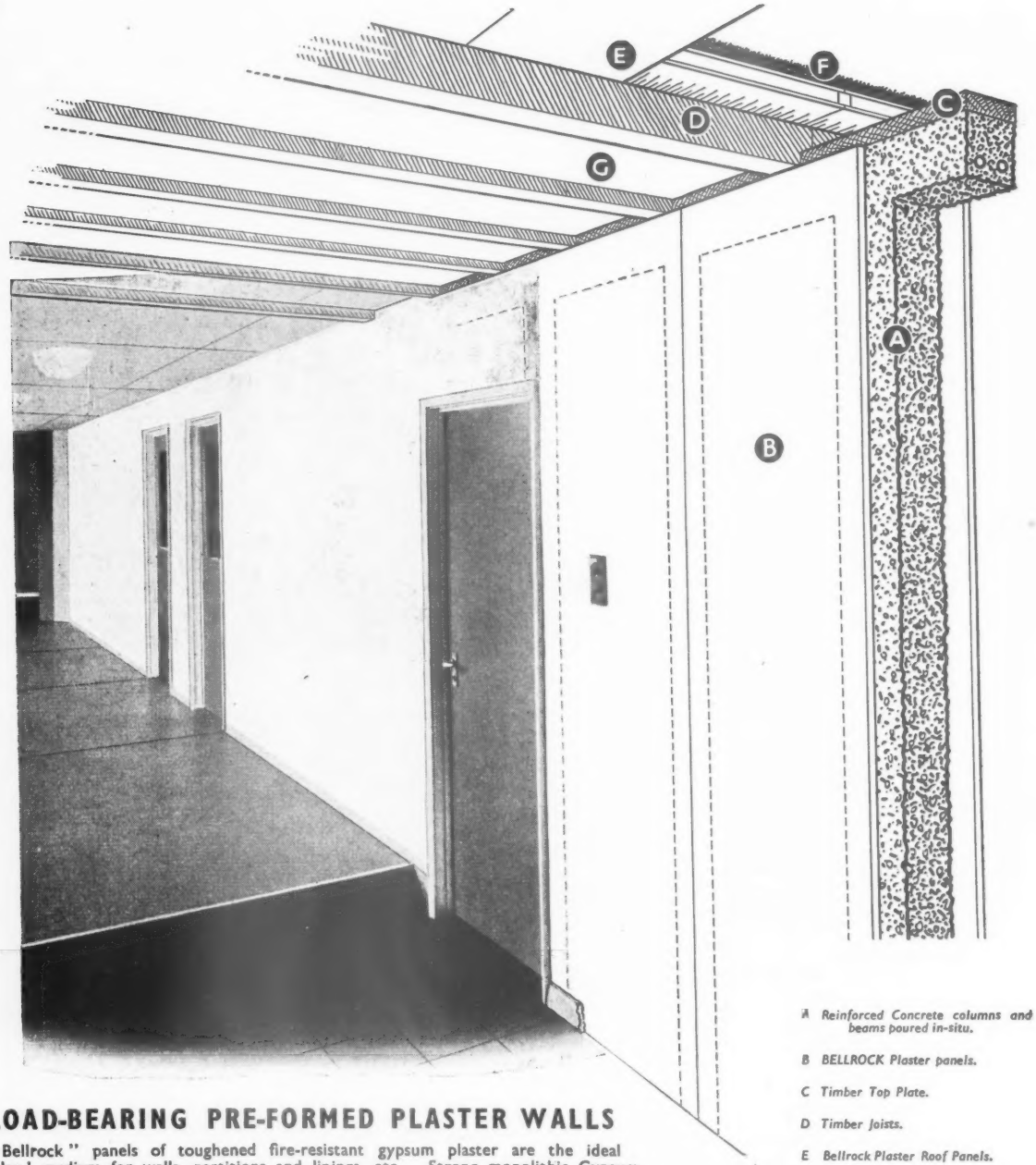


*A Reinforced Concrete columns and beams poured in-situ.*

*B BELLROCK Plaster panels.*

*C Timber Top Plate.*

*D Timber Joists.*

*E Bellrock Plaster Roof Panels.*

*F Bitumen Roofing Felt.*

*G Ceiling Board.*

## LOAD-BEARING PRE-FORMED PLASTER WALLS

"Bellrock" panels of toughened fire-resistant gypsum plaster are the ideal 'dry' medium for walls, partitions and linings, etc. Strong monolithic Gypsum joints 'weld' panels into a *permanent* ready plastered construction.

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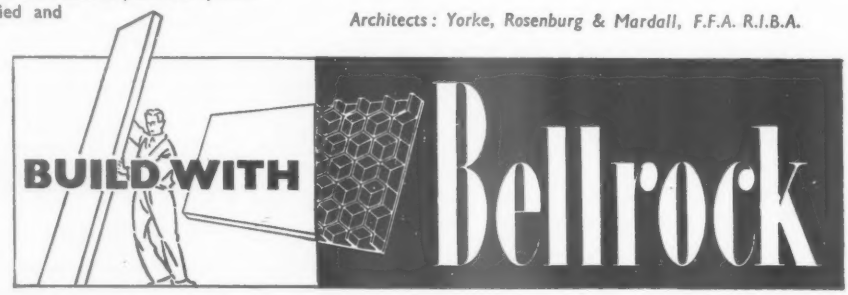
*Building Research Station and National Physical Laboratory test reports, together with further technical information may be obtained on request.*

*Architects: Yorke, Rosenburg & Mardall, F.F.A. R.I.B.A.*

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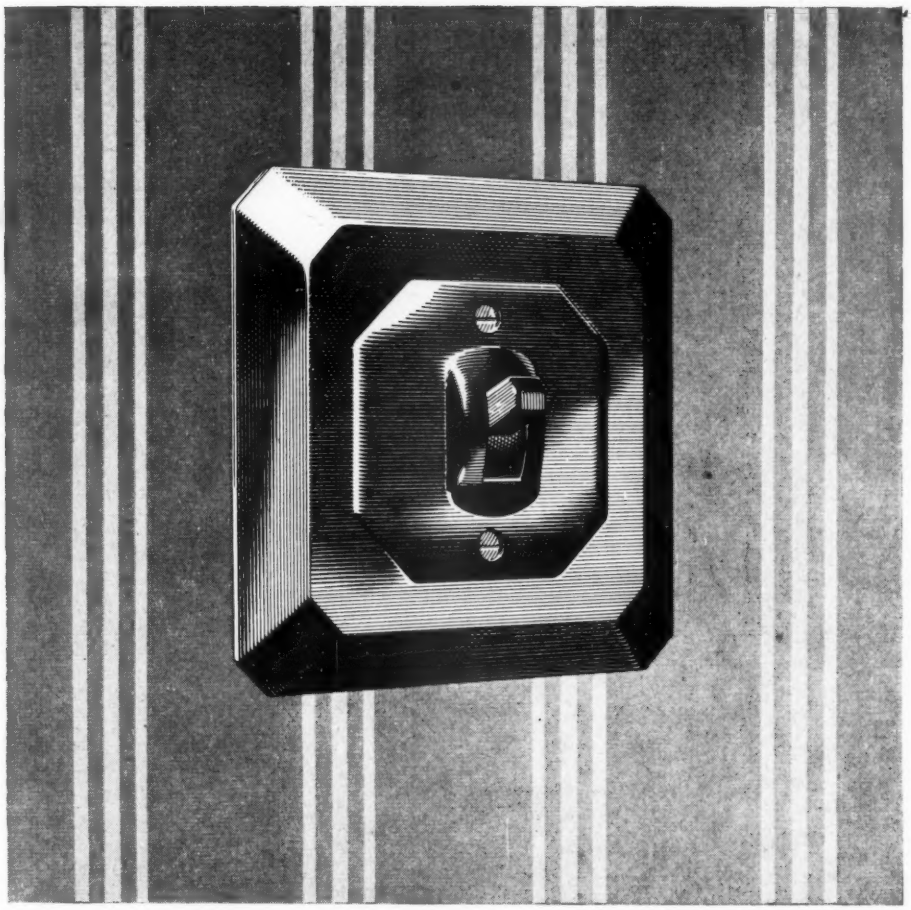

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# Tangible Proof


(Photograph by courtesy of F. W. Winchester Ltd.

The accompanying photograph shows one of the tiles recently removed during work on a Tunbridge Wells hotel. Its face is inscribed: "Thomas Rack his tile June the 21, 1777" and on the back it bears the name of the burner. The tiles were replaced for a further period of service.

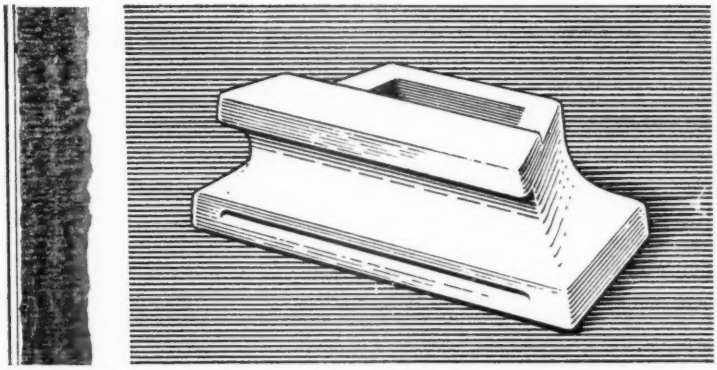
In every town and village there is ample proof of the unrivalled durability of the Clay Roofing Tile. The picturesque old roofs of the English countryside are a constant reminder that the roofing tile tradition was founded on the unique physical properties of burnt clay.

When considering Roofing Tiles, remember Thomas Rack, and the materials and craftsmanship which have been handed down to the present day.

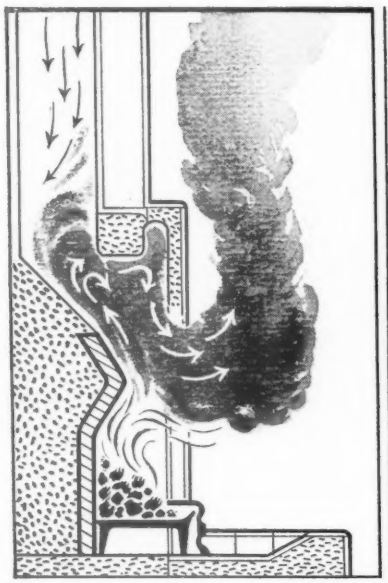
*For Beauty, Durability and ultimate Economy, specify—*

**Clay Roofing Tiles**

*"The Clay Tile Bulletin", published quarterly, post free on request. The National Federation of Clay Industries, Drayton House, W.C.1*



# The ready-made, scientific answer to the smoke problem

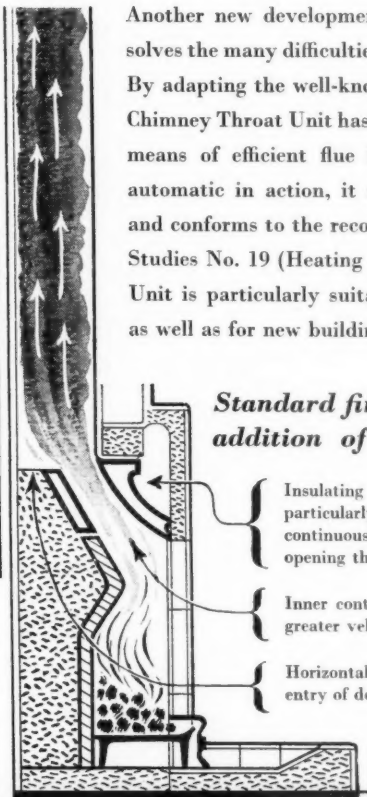


***Standard fireplace with usual faults that encourage smoking***

- ★ The throat is too wide.
- ★ The surround is not protected from hot flue gases.
- ★ No provision against downdraught, i.e. no horizontal smoke shelf.
- ★ Hollows, projections and bad shaping above fire cause smoke eddies and turbulence.

**Building Materials with Service**

Another new development of the Finch Research Division solves the many difficulties caused by faulty flue construction. By adapting the well-known "Rumford" principle the Finch Chimney Throat Unit has been produced to provide a positive means of efficient flue installation at low cost. Entirely automatic in action, it reduces excessive room ventilation and conforms to the recommendations in Post War Building Studies No. 19 (Heating and Ventilating of Dwellings). The Unit is particularly suitable for fireplace replacement work as well as for new building.



***Standard fireplace with the simple addition of a Finch Throat Unit***

- Insulating void gives protection to surround—particularly useful asset with the growing use of continuous burning fires which stand higher in the opening than the usual stool bottom grate.
- Inner contour is streamlined to induce 2½ times greater velocity of rising smoke column.
- Horizontal smoke shelf at back and sides bars entry of downdraught.

THE Finch ORGANIZATION

*Write or telephone Mr. Butler, manager of the Finch Fireplace Division, for full details and specifications of the Finch Throat Unit; or write for fully descriptive brochure. It is part of the Finch service to answer your queries and offer help in solving any of your building problems.*

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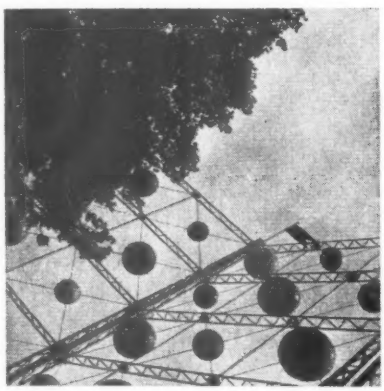
assistants: GRAHAM PARTRIDGE and BARBARA TRASLER
consulting engineers: R. T. JAMES and PARTNERS



All external walls to the building above ground level were constructed of "PHORPRES" 6" RUG FACED BUILDING BLOCKS rendered externally and plastered internally. They were chosen because of their speed of erection, ease of handling. heat and sound insulation value and economical cost.

The ground floor walls were constructed of "PHORPRES" KEYED BRICKS, rendered. The screen wall below the screen of coloured balls was constructed of "PHORPRES" COMMONS faced on the road side with "PHORPRES" SAXON LIGHT FACINGS.

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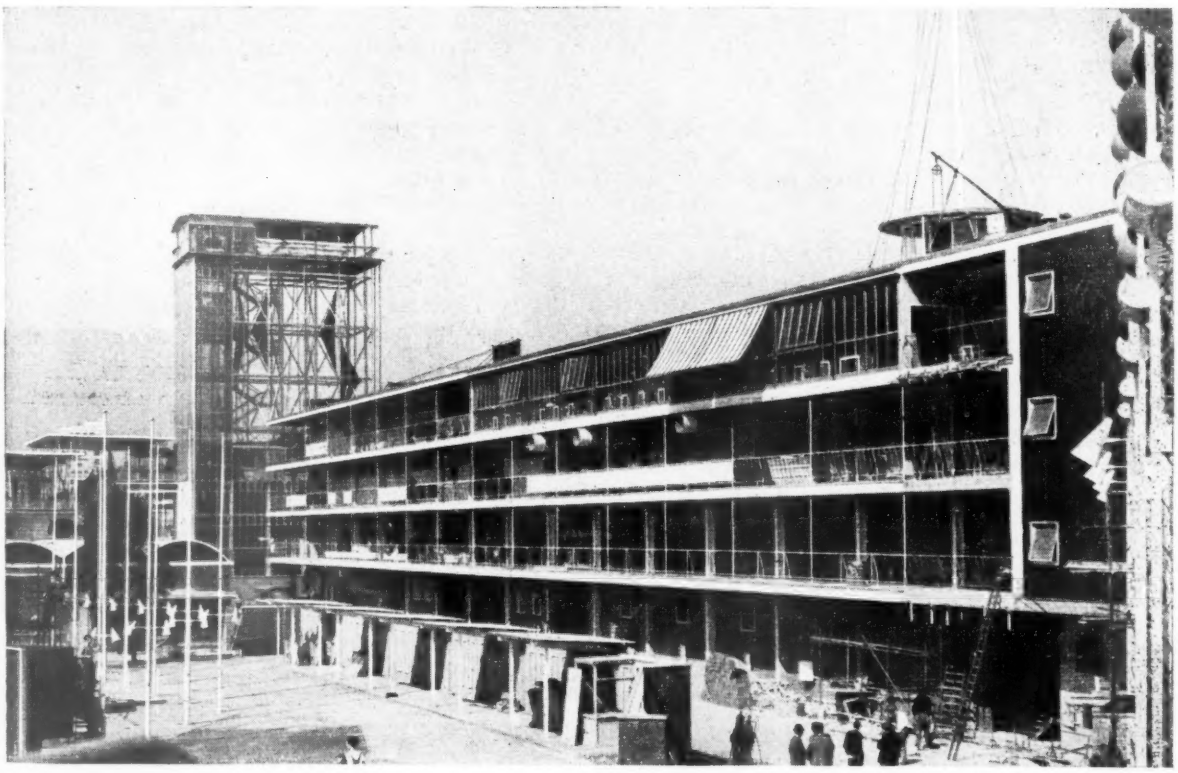

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## Vermiculite


200 bags of "KISOL" ready to leave Ringway Airport, Manchester for I.O.M.

200 bags of "KISOL" Vermiculite—a total of 700 cu. ft., weighing only 25 cwt., were recently flown from Manchester to the Isle of Man in this light freighter. This is indeed evidence of the exceptional lightness of "KISOL", and its usefulness to the architect and builder in providing a versatile insulating material of great advantage in building construction, solving many building problems such as reducing the dead-weight load on structures.

At Ronaldsway Airport I.O.M., "KISOL" Vermiculite concrete was used to insulate the whole of the roof —for one inch of "KISOL" has the equivalent insulating value of 15 inches of ordinary concrete.

Roof of Ronaldsway Airport, I.O.M. screeded with "KISOL" Vermiculite.

"KISOL" Vermiculite Concrete is esteemed by architects and builders because its absence of joints and low temperature-movement make it an ideal base for final waterproofing.

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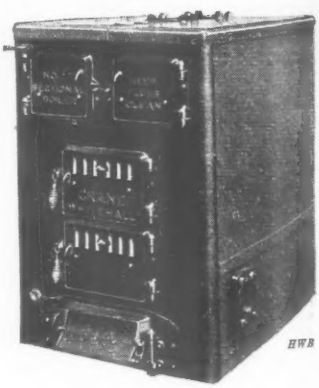


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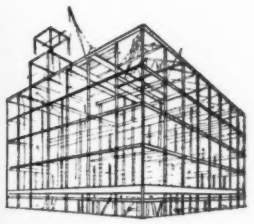

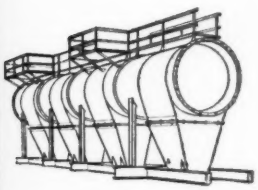

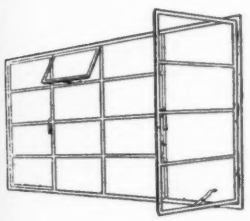

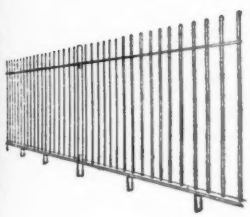

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*Restored view of a street of Shops in Ostia*

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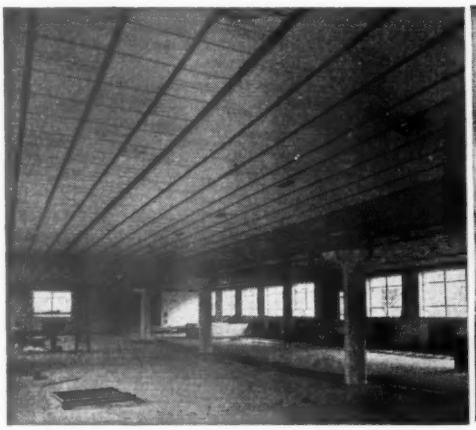
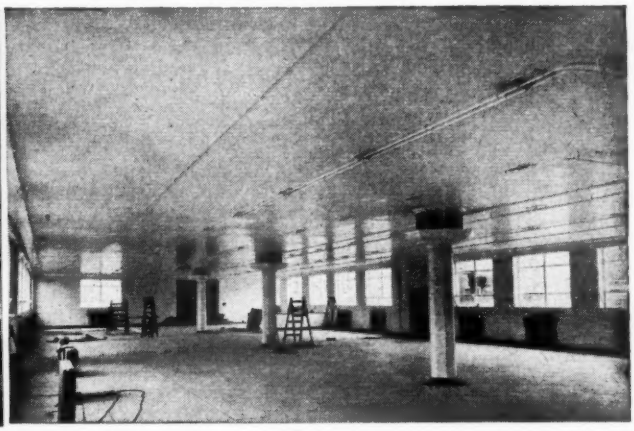
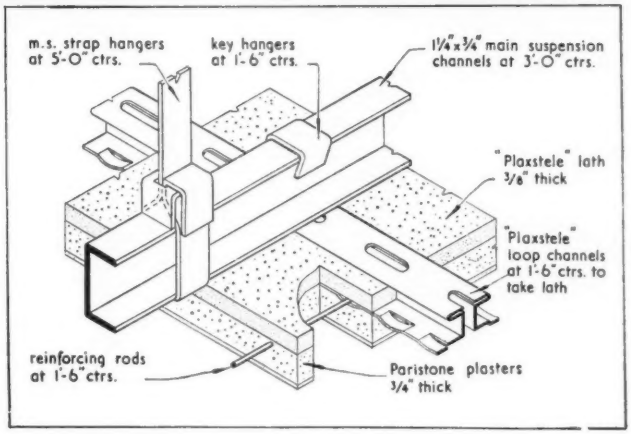




The "PLAXSTELE" ceiling system is adaptable to any type of building construction and can be suspended horizontally at any level below the main roof structure. It provides a suspended ceiling with a substantial, smooth plaster finish having high fire resisting properties.

The system combines the use of "PLAXSTELE" lath, specially designed for plastering with "PARISTONE" plaster, with metal patented suspension and jointing members which hold the lath rigid and at the same time anchor metal reinforcing rods in the plaster finish.

Advantages of the system include simplification of plastering work, saving of time, elimination of timber framing, superior strength, improved thermal insulation and high fire resistance (B.R.S. One hour. Grade D). Further information about this and other "GYPROC" products or systems will gladly be supplied.




The photographs show
*a large area of* PLAXSTELE *ceiling before and after plastering, decorating and fixing strip lighting.*

The isometric sketch shows
*the general assembly of the component parts.*

## *GYPROC PRODUCTS LIMITED*

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*Makers of* "GYPKLITH" *Light-weight Building Slabs,*
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G.P.5

*Patent Glazing at Morecambe Promenade Station*

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Whenever glazing is required, consult Heywoods who, during 60 years of helpful, reliable and speedy service, have installed over 80 million square feet of patent glazing.

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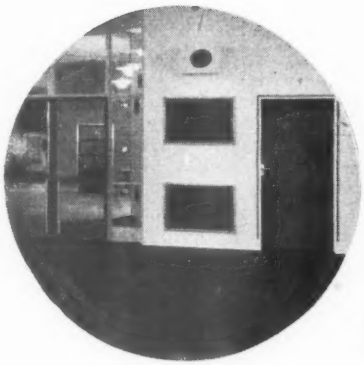

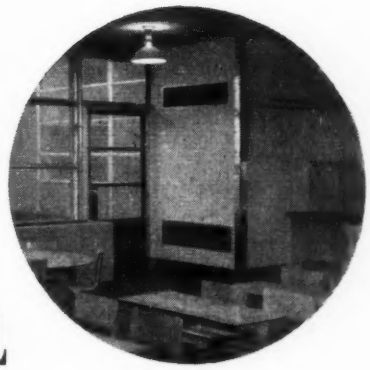

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WEATHERFOIL heating simplifies the problem of co-ordinating the heating installation with the general construction. The position of the WEATHERFOILS can be agreed upon at the ⅛" scale plan stage, and their actual dimensions adjusted to conform with the detail planning.

**Economy**

The high degree of control provided by WEATHERFOIL heating saves fuel and money. Each occupied space is controlled individually; a time switch reduces the heat at night and during the weekends, and thermostatic control automatically adjusts the temperature according to weather conditions.

**Weatherfoils**

Each WEATHERFOIL has two metal grilles fixed flush with the wall surface. The air is withdrawn through one grille, passes over a heater battery and is returned, warmed, through the second grille. These two grilles, which are the only heating items exposed to the occupied areas, impose no limitation on the use of floor space, and can be positioned according to the use that is to be made of the wall space.

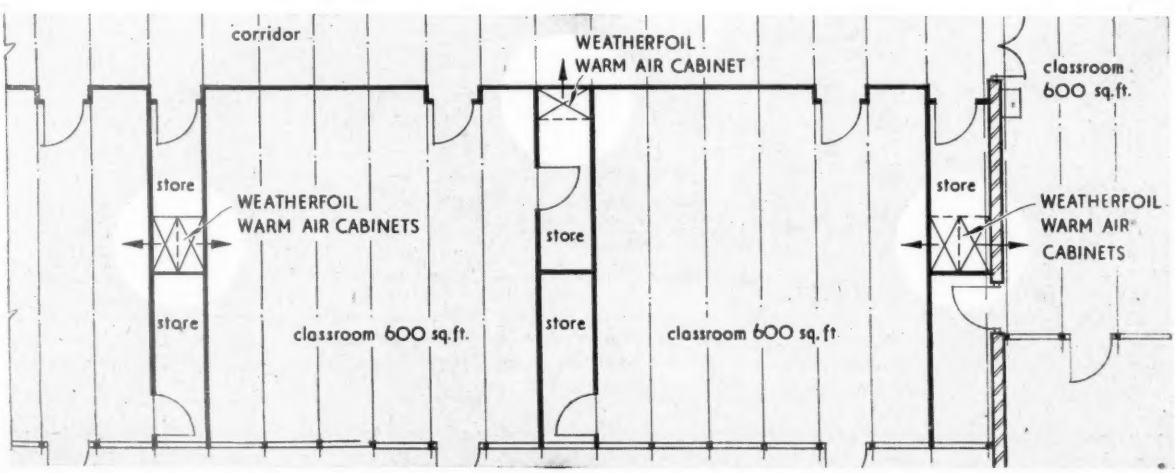
**Advisory Service**

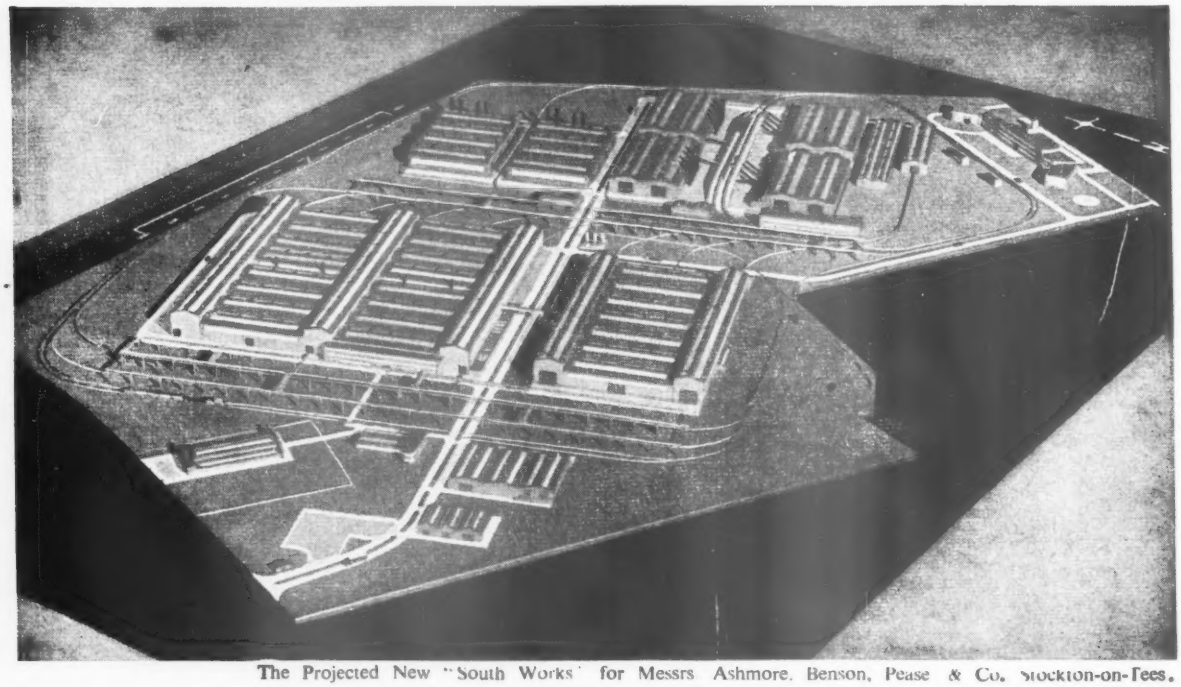
WEATHERFOIL have specialised in the heating problems presented by buildings of light construction with large areas of glass, and can offer a comprehensive advisory service covering all aspects of the heating of such buildings.

*The photographs above show typical installations. The plan below shows how conveniently* WEATHERFOILS *can be accommodated in a typical school layout.*

**WEATHERFOIL HEATING SYSTEMS LTD.**

185, BATH ROAD, SLOUGH, BUCKS. Telephone: SLOUGH 20269



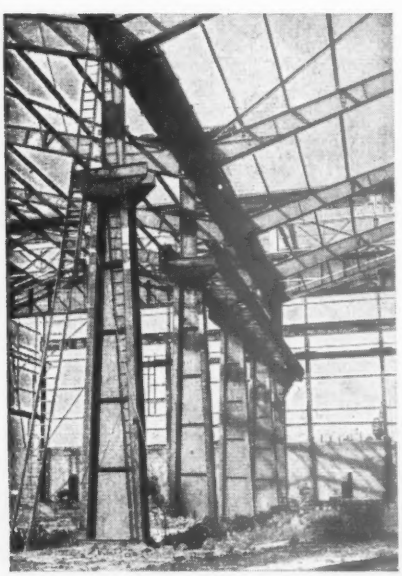


The Projected New "South Works" for Messrs Ashmore, Benson, Pease & Co. Stockton-on-Tees.
*(Consulting Engineers: Messrs. F. R. Bullen and Partners, Dacre House, Dean Farrar Street, Westminster, S.W.1.)*

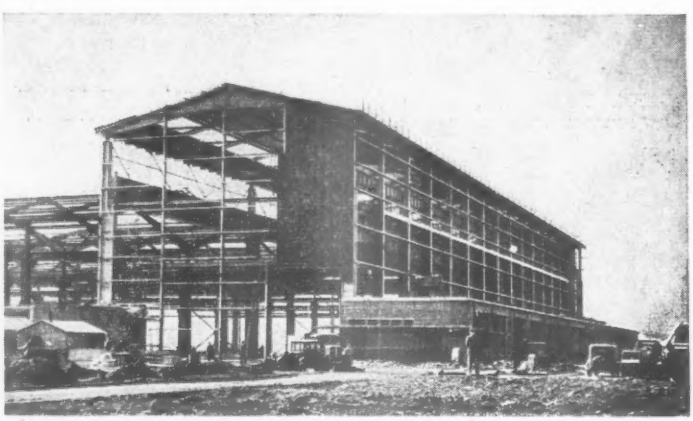
**STAGE I —** *Constructional Shop with ancillary services and buildings.*

# STEELWORK BY CARGO FLEET

From start to finish you get sound planning, economical use of materials, and a high standard of workmanship on every contract undertaken by Cargo Fleet. This first phase of 132,000 square feet floor area of the extensive new factory for Messrs. Ashmore, Benson, Pease & Co. Gas, Chemical, Iron Works Plant and General Engineers, now nears completion at Stockton-on-Tees.

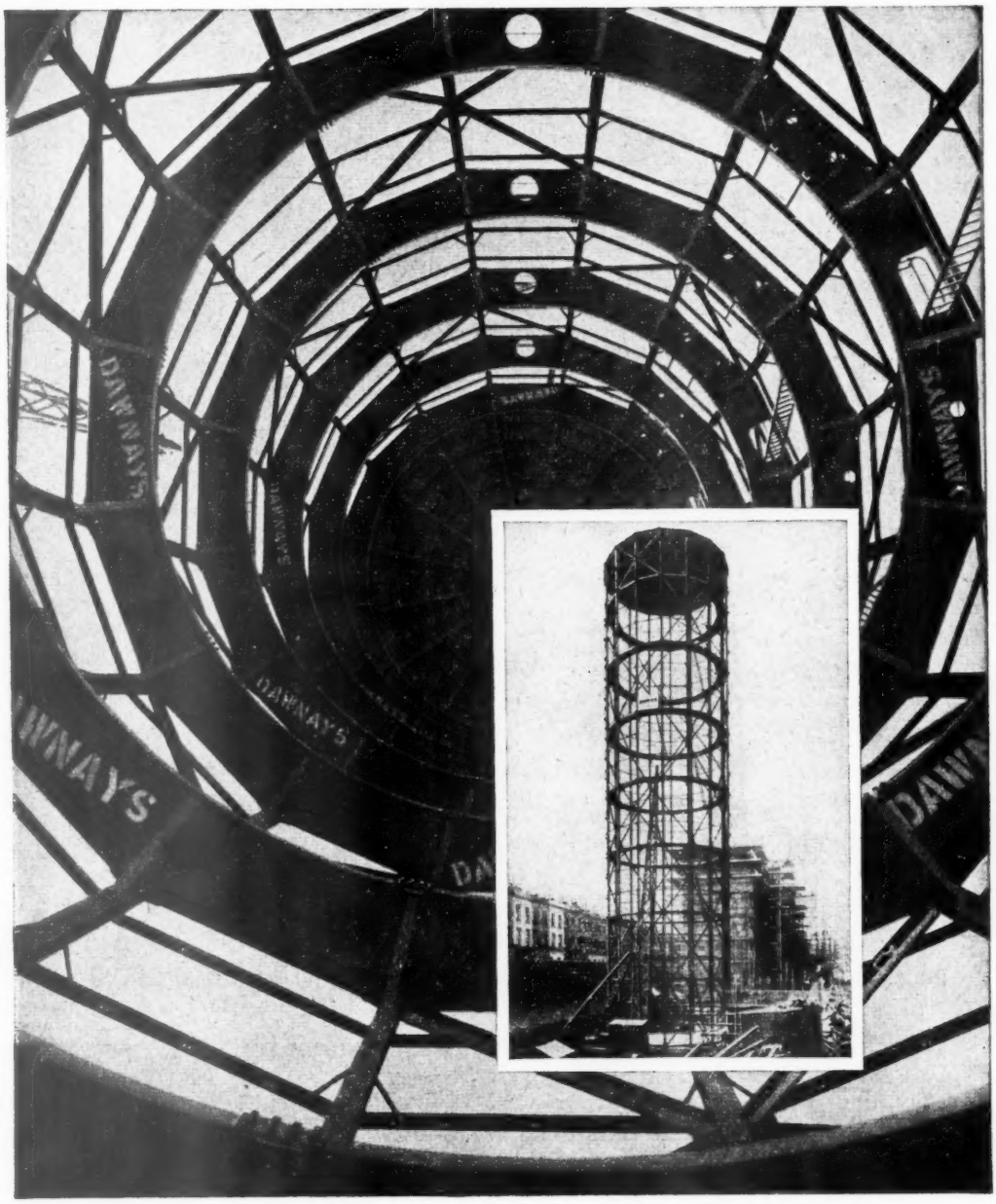


Stanchions of a transverse bay, 30 feet high to the crane track. Crane tracks of the low bays are cantilevered out beneath those of the high bays giving easy transfer of material from the high bays to the low bays and vice-versa.



The Shop consists of four transverse bays 85 feet wide by 250 feet long and 30 feet high to the crane tracks, and two longitudinal bays 65 feet wide by 340 feet long and 50 feet high to the crane tracks, served by twelve overhead cranes, the heaviest being 50 tons capacity.

**CARGO FLEET IRON CO. LTD., Constructional Dept: Malleable Works, Stockton-on-Tees. Tel: Stockton-on-Tees 66117**




**ACCUMULATOR ENCLOSURE STRUCTURE FOR PIMLICO DISTRICT HEATING SCHEME**

*Consulting Engineer:* S. B. Donkin, Esq., M.I.C.E., M.I.Mech.E., M.I.E.E.
*Chartered Civil Engineers:* Messrs Scott & Wilson.

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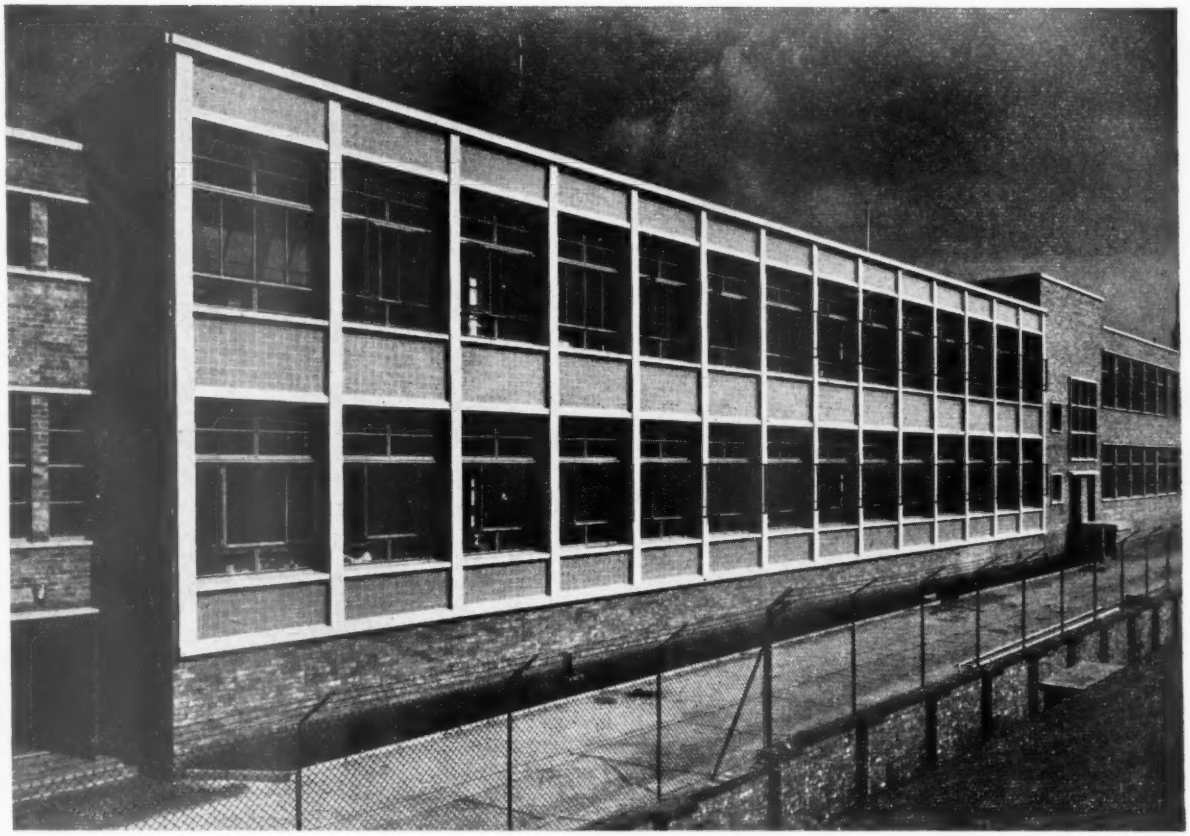

*ST. ANNE'S SECONDARY SCHOOL, LIVERPOOL.* *ARCHITECTS: Weightman & Bullen, F.R.I.B.A.*

## The Reinforced Concrete work

**which included Inverted Tee Beam foundations, Reinforced Concrete Frame, as shown in the illustration, Truscon Precast and in-situ floors, columns, beams and Hy-Rib reinforcement for ceilings.**

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# TRUSSED CONCRETE
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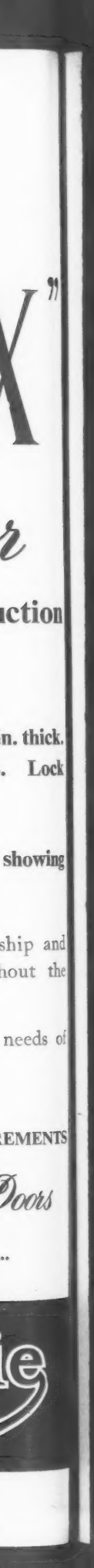
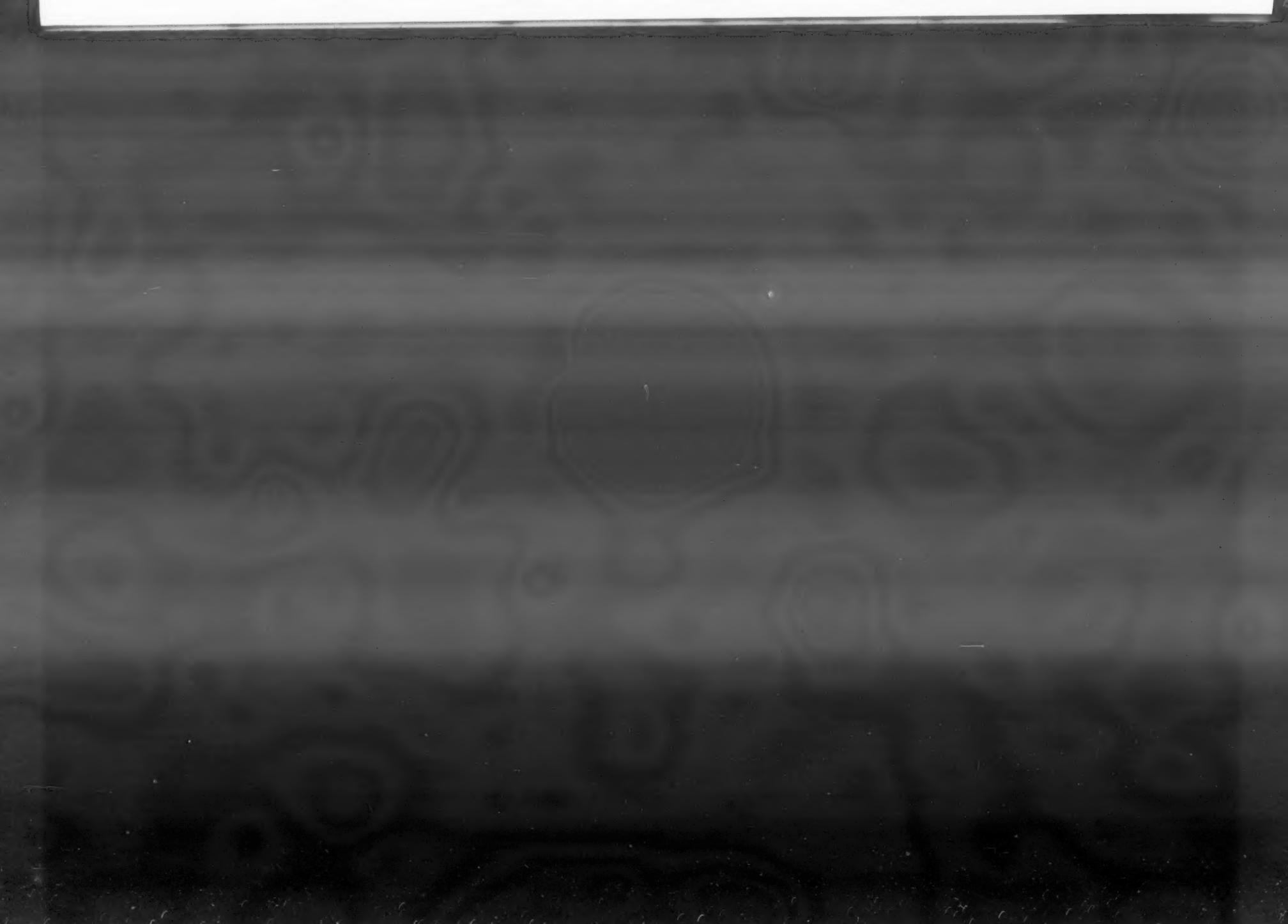
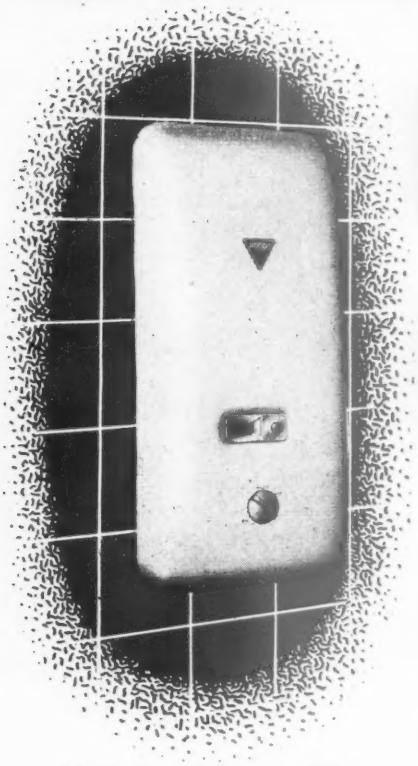




# ASCOT PRODUCE FIRST BALANCED FLUE WATER HEATER



The new Ascot 715 multipoint is the first balanced flue gas water heater to go into production anywhere in the world. Once again Ascot leads the way! Once again Ascot helps the gas industry to maintain the position of gas as the best and most economical fuel for providing an instant, endless supply of hot water!

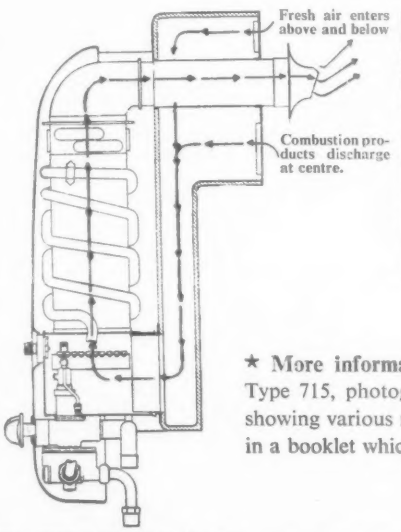
**THE NEW ASCOT 715** is fundamentally different from any other water heater. The combustion chamber and flue are sealed off from the room in which the heater is installed. Enclosed ducts draw air to burn the gas from outside the building and carry away all the products of combustion.

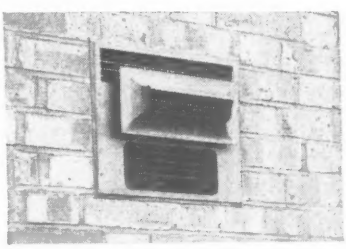
**A FULL INSTANTANEOUS MULTIPOINT SERVICE** *similar to that of the popular Ascot 709 is given by the 715. It also has a stainless steel burner which has proved so successful in resisting corrosion and maintaining a high standard of efficiency.*

**Particular advantages of the Ascot 715**

1. Combustion chamber and flue sealed from the room. Vitiation of air in the room is absolutely impossible. No down-draughts.
2. Handsome but unobtrusive. Projects only 5 inches. No visible flue.
3. Can be fitted in a cupboard without regard to ventilation.
4. Ideal for multi-storied buildings. Can be installed on any outside wall even though the terminal may be in proximity to overhanging, or other projections.
5. Installation is simple. Full advantage can be taken of service ducts.
6. Smooth contours and hard enamel make cleaning easy. No crevices or dust traps. Particles cannot drop from the heater.

**Supplies.** As many municipalities have specified the 715 for their housing projects the needs of new buildings must have priority.



The terminal can be fitted even in proximity to overhanging, or other projections. There is no flue pipe or cowl.

★ **More information.** A detailed explanation of the Type 715, photographs, a specification and drawings showing various methods of installation, are contained in a booklet which will be sent on request.

ASCOT

**ASCOT GAS WATER HEATERS LTD., 43 Park Street, London, W.1. Grosvenor 4491**

AJ

THE ARCHITECTS' JOURNAL

No. 2963 13 DECEMBER, 1951 VOL 114



**9, 11 & 13 Queen Anne's Gate, Westminster, London, S.W.1 Whitehall 0611**

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CHELSEA CHALLENGE

Last week's high tides in the Thames reminded many of us that the river is not always as smooth and fair as it is painted by Canaletto. One South Bank architect I know, who has often been heard to speak enthusiastically of the æsthetic values of intimate contact between land and water in the urban scene, had this emphasized for him by two inches of Thames water over his sitting-room floor. I hope, however, that such occasions will not be used to strengthen the case for barricading the Thames behind huge granite revetments. Some such threat hangs over that pleasant stretch of the riverside immediately up river from Battersea Bridge; where the shore sweeps round to form a bay in which swans and house-boats gather, barges lie up on the mud and the boat-repair yard completes a busy foreshore scene—a place where the river front is really *used*, as well as looked at.

*

Behind stands Whistler's house, one of a row of charming Georgian houses; nearby is Turner's house; the scene has often been painted by these and other artists. The view from Battersea bridge is one of the sights of London. Chelsea borough council, it appears, propose to sweep all this away (except for the actual houses) by straightening the curving foreshore so as to replace the boats on the foreshore with a widened traffic road, leaving a narrow shrubbery between it and the houses, on the same lines as the rest of the embankment.

*

The council announced this scheme a little while ago, saying that their purpose was only to test public opinion. I hope they meant this sincerely, and that they will be ready to change their plans now that public opinion has shown itself so strongly in opposition. The Chelsea Society has issued a most detailed and convincing analysis of the pros and cons of alternative schemes, from which the Council's scheme emerges with very little in its favour. And it is clear that public disapproval extends far beyond the membership of the Chelsea Society.

*

Something, I believe, has got to be done soon, because the present river wall is alleged to be becoming unsafe. The Chelsea Society recommends rebuilding it in much the same position. I suspect that the borough council might have been content with this too, if they had not realized that by sponsoring the grander (and much more costly) road-widening scheme they would qualify for a Ministry of Transport grant. But it is all public money, and the council's first duty is surely to watch over the interests of Chelsea rather than to go in for so-called improvements because the central Government can be made to pay.

*

Chelsea doesn't want more traffic along the river front. It wants the river accessible for its own use, and even if, in the eyes of municipal officials, a tidy shrubbery, a wide road and a solid granite wall are better than the muddy foreshore, boats, swans, swimming school-children, moored yachts, boat-repair and nautical jetsam that constitute the present picturesque scene, that is not the view of the London public.

MACMILLINERY—LAST YEAR'S MODEL

Last week's housing debate brought hardly any new ideas and was mainly a repetition of the arguments that have been put forward *ad nauseam* for the last six years or so. The only point of any interest was Mr. Macmillan's statement, that he thought his new one to one ratio would in practice work out at the old ratio of one to four. So why should the Socialists object to a ratio which they had themselves approved as reasonable? The more this Parliament goes on the more both sides seem to me to be saying the same thing in only slightly different language—at least a contrast perhaps to the last century when different things were said, so to speak, in the same language.

CORBY'S OAK

A westerly wind, soggy ground, scurrying clouds, bowlers, Glastonbury's county constabulary and flapping

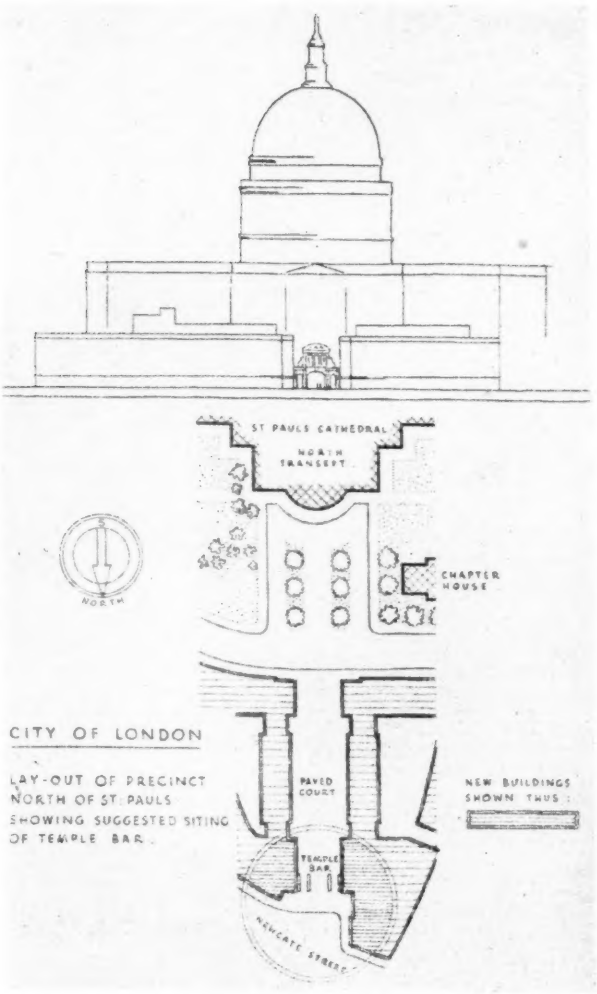
marquee—a familiar scene. But no field glasses? No horses? No. Corby Development Corporation had asked Lord Exeter, Lord Lieutenant of Northamptonshire to plant an oak to mark the start of a new building contract for five hundred and one houses and flats and the roads of the New Town Centre.

*

Planting an oak seems the right thing to do at Corby. The New Town is on land once covered by Rockingham Forests, cut down largely for charcoal for smelting the ironstone which the new Corby is going to use in a big way. Also Lord Exeter clearly knew a lot about planting oaks and was more at home with them than with New Towns. With the cheerful candour to which a Cecil can still hold himself on public occasions, he remarked that if the oak took, as he hoped it would, it would long outlast the New Town.

*

When driving away, guests noticed that the multitude of RAC signs bearing the legend " The Development Corporation Works." had already gone, thus disappointing those wags who had hoped to add " Only Just " or " Believe it or Not." The secretary of the Corporation said he didn't believe in tempting people unfairly.




*A suggestion for the siting of Temple Bar which Astragal (see below), in company with Sir Gerald Barry and Hugh Casson, finds inadequate. This plan prepared by Dr. Holden, shows a Battle of Britain memorial way leading through Temple Bar to the north side of the cathedral.*

SI MONUMENTUM REQUIRIS . . .

The recent correspondence in *The Times* about a Battle of Britain Memorial got quickly shunted down a siding by the Dean of St. Paul's, and developed into an argument about the re-siting of Temple Bar. The Dean's suggestion—that it should be placed on the axis of the North Porch of the cathedral—is clearly a solution in which neither the cathedral nor Temple Bar (nor, to be frank, the Dean) emerge to much advantage. As Barry and Casson remarked in their subsequent letter, which suggested as an alternative the opening up of the riverside way, the result of such a marriage looked no better than a tiny cruet placed upon a very large sideboard (see illustration above). To place it on Tower Hill, as another correspondent suggested, seems equally inappropriate.

*

In any case, this hawking around of a famous monument, like Ruth Draper swanning round a sitting room trying to place a vase—is surely rather a ludicrous operation. If Temple Bar is to return to London at all—as may well be a good idea—then surely it should be placed as near its original site as possible. Why not in Temple Gardens? But in any case let it keep its own identity, and not be dubbed " Battle of Britain Arch " or some such meaningless phrase. The habit of changing street names to commemorate temporarily popular heroes or great events is a dangerous one. (I wonder how many times some main streets of Central Europe have carried a shiny new name plaque during the last twenty years?)

*

Other monuments in search of a plinth are General Gordon—still an exile from Trafalgar Square—and the Skylon, which it is now rumoured may get to Longleat in Wiltshire. My first reaction to this proposal was one of dismay—on second thoughts I am not sure whether it is not a most excellent idea. Properly sited—not on a bare down—but in a hidden clearing suddenly discovered among huge beech trees, it might, I think, look very exciting indeed—and far more moving than it ever would look spiking up above the slates and chimneys of South London. My best wishes then to the Marquess of Bath on the day of the sale.

. . . CIRCUMSPICE ON THE SOUTH BANK

Speaking of which, the news that Salvador Dali is back in town with a cargo of religious pictures at genuine Botticelli prices and his famous moustache (but not his diving helmet nor wolfhound) will obviously cause no stir in the office of Harold Williams, the Croydon auctioneer who prepared the South Bank sales catalogue. I have long admired the intuitive perceptiveness of auctioneers—that unfailingly correct hunch as to exactly

# *Vertical Life Begins Tomorrow*

Le Corbusier's advocacy of better environment as a cure for moral ills was the only feature of the French film, " Life Begins Tomorrow," that justified the film's title. Life one felt, might *really* begin tomorrow for workers from the slums of Marseilles, when " L'Unité d'Habitation " (shown here) was ready for living in. But during the past few months a giant Rumour, the child of social and political passions, has left many people in doubt as to whether life would have a chance to begin at all in the great Marseilles block. Now, however, BBC listeners have heard from R. Furneaux Jordan that life begins in April in the first " fragment of Le Corbusier's city," but not for those whose plight inspired the scheme. Does this matter? It depends whether the Marseilles building is regarded simply as an architectural achievement, or as a social experiment. As Mr. Jordan pointed out in his talk, Le Corbusier is all the greater an architect for being a social philosopher first and an architect second. And one cannot but share his hope that " air, sunlight, intimacy and peace " will still be made available to the *workers* of Marseilles.

what object should be thrown in with what other object to avoid being left with one of them unsold—but here professional judgment is splendidly apt.

*

I quote a few items at random. (Random hell, as Perelman says; it took me half an hour to pick them out.). . . . 849: a large leather man and a quantity of wooden fish. 878: two plaster fishermen (could these be the Charoux Islanders? If so, somebody gets a surprise). 941: an ice-cream barrow. 947: 19 sheets of perforated zinc. 969: a plaster Venus (masterly to keep these last two lots separated). 1010: three large paving stones and two stacks of large wooden gear wheels. 1077: a quantity of triangular shaped glass, and a quantity of other glass (a description Gide himself could not have bettered—succinct, lucid, evocative). 1268: two copper oxidized smoker's companions (can't you picture the bronzed and solemn little squaws?). 1460: a snow-blowing and blizzard machine. But you see the idea. News of the sale next week.

TEMPER

To conclude without voiding a little spleen is unusual, so boo to some pet geese. Firstly to those exulting over the LCC's discomforture following the granting of an appeal against 11-storey flats in Wimbledon. While I have considerable sympathy with the man whose privacy was threatened, it would be a tragedy if it means that the LCC's first post-war housing venture with a high quality of design should be jeopardized. Secondly, to those Harrow members of a local joint planning committee who object to the design for a College of Further Education (see page 702) by the pioneer of contemporary school designs, C. G. Stillman.

*

The redeeming feature of this regrettable incident is that die-hard defenders of the Hill and of traditional design are being given an opportunity to criticize before actual building commences (other authorities please note). Only a few weeks ago I referred to fierce opposition to an *academic* design for a Croydon technical college. Is anyone prepared to do a swop?

ASTRAGAL

**POINTS FROM THIS ISSUE**

POINTS FROM THIS ISSUE



The Editors

## THE TWO-BEDROOM HOUSE

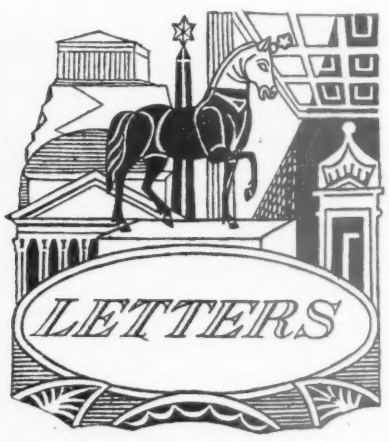
"WHAT young people want today," said Mr. Macmillan recently, "is a two-bedroom house, which they can get into quickly, and, perhaps, move later to a larger one." An increase in the percentage of smaller homes is one of the main principles of Government housing policy. It would be a pity, however, if the very good and pressing reasons of the moment for building a greater percentage of two-bedroom houses resulted in an over-concentration on this type.

The two-bedroom house has obvious drawbacks from the point of view of any growing family. There is no separate bedroom for children of opposite sex, or for a relative dependent on the family, and there is no flexibility in case of illness. In present circumstances, it is surely rather wishful to suggest that young families saddled with such a house may perhaps, at a later time, move on. Rising prices over a number of years have created a strong inclination for the sitting tenant (or owner) of the larger house to stay where he is. Leaving aside sentimental reasons, it is usually cheaper to stay put. Again, a large proportion of families wanting two-bedroom accommodation are not necessarily about to set up a family, and for them a flat is, from many points of view, a better proposition than a house. From the economic point of view, the two-bedroom house tends to have wasteful areas on the first floor (several of the specimen designs issued by the Minister have first bedrooms over 150 sq. ft. in area), and the stair represents a wastage of circulation area as compared with a flat. A more flexible answer to the problem of the small house, of which only one example is given in the specimen designs, is the three-bedroom type with two single bedrooms. The extra area required is only 20 sq. ft. over the average two-bedroom house, and local authorities might do well to build a greater proportion of houses of this type.

Does anyone really know what sizes of houses are actually needed by the thousands of families queueing up on local authorities' waiting lists? Why no mention in the Ministry circular of larger houses, a proportion of which is still required, or of flats? The census results will not be out in detail for at least another twelve months, but even when they are known, it would be wrong to base local percentages to meet the demands of given waiting lists on the national average, or to make any assumptions about the free movements

of families downwards from larger to smaller houses. Again, a recent investigation into the requirements of families on the waiting list of a large provincial borough is said to have produced the amazingly high figure of 69 per cent. requiring two-bedroom accommodation. But the validity of such investigations must be accepted with caution unless it is known to what extent prospective tenants are really stating what they need and not what they can afford. The LCC is currently providing 40 per cent. of accommodation in two-bedroom units (which is believed to reflect the actual needs of families on the waiting list) and this figure is confirmed by the national average provided by local authorities which has risen during recent months to 39 per cent.

As a temporary measure, there may be good reasons for increasing the percentage of two-bedroom houses even above this figure, but local authorities should now carry out local housing surveys to find out exactly what is the local position and what are the real needs of families (at least the few hundred nearest the top) on their waiting lists. Such housing surveys should surely be regularly maintained and should try to anticipate what changes are occurring in local needs and how local housing policy can be adapted to meet these changes.




*J. M. Aitken, A.R.I.B.A.*

*G. Stuart Alderson, A.R.I.B.A.*

*Thomas Foster*

## Housing Subsidies in Northern Ireland: Two Replies

SIR,—I write in regard to the statements of fact in Mr. Cole's letter in your issue of December 6. I am not concerned with his opinions. He states that the bulk of the housing in Northern Ireland is in the hands of private builders building for sale. In fact the entire Northern Ireland post-war programme of new houses is divided as to 67 per cent. houses built by public authorities for letting, 7 per cent. houses built by private individuals for letting and 26 per cent. built by private individuals for owner occupation. In criticising the scheme under which subsidies are given to private individuals he refers to "an exhaustive list of requirements." In fact these are prescribed minimum standards of accommodation, construction and siting which any good architect would observe as a matter of course but which serve to protect the public from any risk of exploitation. Outside these obvious minima our subsidy scheme is completely flexible and architects have no difficulty in meeting their clients' detailed requirements. In his complaints that the amount of subsidy increases with the number of apartments and that this encourages the building of five apartment houses he does not realize that to add a fifth apartment of at least 100 sq. ft. increases the subsidy by only £25, so the provision of this extra room is certainly not done from sordid profit. I do not agree with Mr. Cole's allegation about planning weaknesses in Northern Ireland. Planning authorities have adequate powers to control the layout and architectural character of building powers which they use extensively.

With regard to quality of workmanship I should like to make two points:—(*a*) We alone of the British departments who sponsor house building maintain a staff of skilled building inspectors to make spot checks of work in progress, (*b*) our skilled workers belong to British craft unions and transfer freely to and from jobs in Great Britain.

Mr. Cole's description of "an ignorant clientele" building large houses festooned with "bag windows, leaded lights and so on" and then cowering in their kitchens apparently aghast at the architectural horror they have created is mere caricature which I am sure he will recognize as such when he has survived his first six months of Ulster hospitality.

J. M. AITKEN,
Ministry of Health.

Stormont.

SIR,—The sorry state of affairs alleged by Mr. D. Cole to exist in Northern Ireland, has, I must confess, escaped my notice and is certainly non-existent within the Borough of Portadown. The "small amount" of housing carried out by the Borough Council and the housing trust here amounts to 511 houses erected and occupied, whereas the "bulk" of the subsidy housing in the hands of the builders amounts to 65 erected and occupied. This situation has not yet presented any planning problem incapable of solution.

Type plans have been issued by the MOHLG for the guidance of local authorities, and widely varying house types have been erected within the scope of the regulations. Indeed, Mr. Cole's criticism of the regulations contradicts his guarded praise of public housing, and such housing is carried out within the framework of the regulations he condemns. The amount of subsidy payable is governed by the number of apartments, which means that the proportion of subsidy to total building costs is reasonably static. This system does not, therefore, directly influence the type of houses built. The reason for the preponderance of the 5-apartment type is the simple sociological one of public demand.

The inspection of all subsidy houses in Portadown is carried out by my department twice per week on behalf of the Borough Council and once per week by an independent inspector on behalf of the Government.

The standard of workmanship compares more than favourably with that at present found in England, and I speak of this matter by personal observation as recently as three weeks ago. In general, I feel that Mr. Cole is guilty of gross distortion of fact as far as Portadown is concerned, and this leads me to view his statement concerning Northern Ireland as a whole with a certain amount of suspicion.

G. STUART ALDERSON.
Borough Architect and Planning Officer,
Portadown.

## Preservation Mania

SIR,—The old buildings in this country, including the churches and cathedrals, are for the most part in use. Were they allowed to decay, ultimately—and perhaps not so ultimately—it would be necessary to provide alternative accommodation. It is a truism that repair is cheaper than re-building, but it is also true that the restoration of buildings more than 150 years old is expensive, and amounts often to twice the cost of like repairs to newer property. It requires, as you have rightly said, the most expensive, highly-skilled labour and materials more costly than common bricks and wallpaper at a shilling a piece. Nevertheless, it has been my experience to find that even such repair is cheaper than the building, *de novo*, of equivalent accommodation even in Nissen huts.

Yet, were this not so, it could still be maintained that repair is justified, because only by having such work to do can we preserve a remnant of highly-skilled craftsmen: freestone and marble masons, hardwood joiners, carvers, gilders, decorators who can mix their own colours, thatchers and blacksmiths who can make what we nowadays call ironmongery. If our national affairs take a more prosperous turn, so that we can build something better than the austerity stuff we turn out today, we shall desperately need such men.

In the long run, the cost of this repair work will not be expensive. For buildings in good repair, maintenance costs are much the same, no matter the age of the structure. Once the initial outlay is made, the system should be cheaper than long periods of neglect, alternating with extensive and expensive schemes of restoration, which is our present method of looking after many old buildings.

THOMAS FOSTER.

London.


## MOHLG

### *Housing Progress*

The MOHLG has announced that 17,724 permanent houses were completed in October in Great Britain compared with 17,168 in September. The corresponding figure for October, 1950, was 17,603.

The total number of houses completed under the post-war programme is now 1,136,354 (979,208 permanent and 157,146 temporary).

## NEW TOWNS

### *Report on Progress*

The progress made up to March 31 last of the 12 new town development corporations of England and Wales is described in reports presented to Parliament last week by Harold Macmillan, Minister of Housing and Local Government.

The corporation responsible for the planning and building of Newton Aycliffe, Co. Durham, reports that the rate of progress in the construction of the town has accelerated during the year under review, but has still fallen short of what it had been hoped to achieve, chiefly because of bad weather. The corporation is concerned at the lack of interest shown by contractors in tendering for contracts.

To secure reductions in the cost of building and quicker development the corporation has created a direct labour department with the object of competing with private contractors for some of the building and other work. This department is under the control of a manager who has had a wide experience in the building trade. He has introduced a comprehensive bonus scheme for all workers in the department, which has had the effect of attracting good craftsmen and of accelerating the work.

The Welwyn Garden City corporation is also worried about the constantly rising cost of building materials and labour. It does not seek favoured treatment by way of an additional housing subsidy even though, through being subjected to the Rent Restriction Acts, it is unable to level up the rents of those houses it has acquired with those which it has built. The corporation considers that without lowering the standards of housing in any material detail the problem may be partly solved by a relaxation from strict adherence to certain prescribed total measurements for houses.

The Hatfield Development Corporation says that in the future if houses are to be built at a cost which will allow a rent that a working man can pay some variation in the accepted standards must be made. Instructions were given for houses to be designed for the 1951 programme which, while retaining the living space, reduced the superficial area. Various designs for houses of this nature were put forward, but negotiations with the Ministry of Health to obtain approval of these designs were disappointing.

Although the living space in each room conformed to the Housing Manual standards, it was believed that the greatest objection to the designs was that the superficial area of the houses amounted to less than that indicated in the Housing Manual. It was felt that rigid adherence to the Housing Manual figures must rule out any skill shown by the architect and did not allow an opportunity for any reduction in the capital cost of the house.

The reports, in one volume, are published by the Stationery Office, 10s.

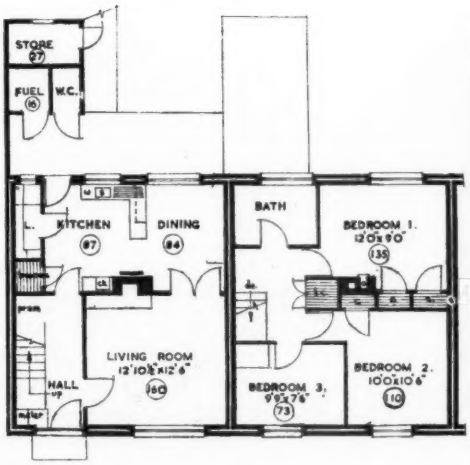
## AMERICA

### *Gold Medal to Auguste Perret*

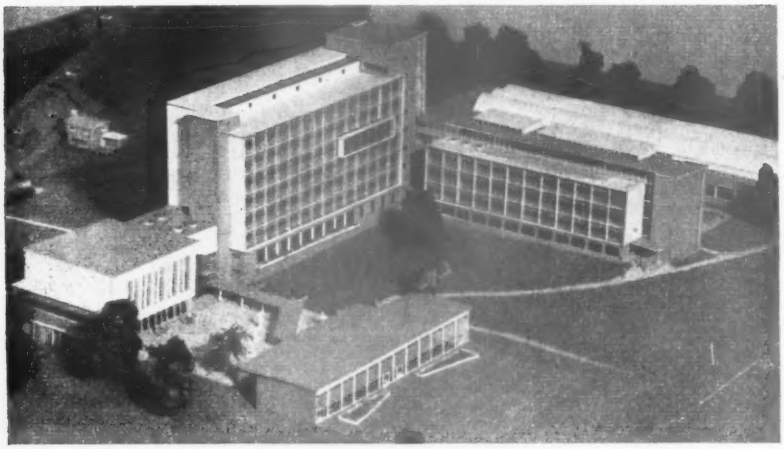
The Gold Medal of the American Institute of Architects, its highest professional honour, will be awarded in 1952 to Auguste Perret.

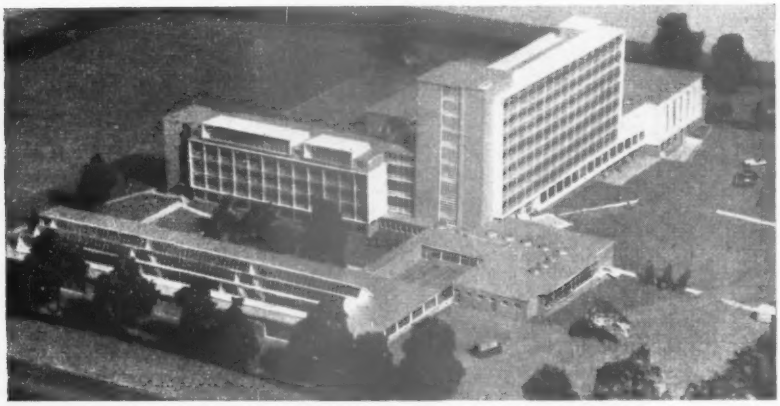
## STUDENTS DESIGN BIRMINGHAM HOUSES

*This terrace of four traditional type houses at Rednal was designed for Birmingham Corporation by third year students of the Birmingham School of Architecture. Construction details :—*11*-in. cavity brick external and party walls,* 4½*-in. load bearing partitions and* 3*-in. breeze partitions. Party walls : solid skins linked by one joint only, thereby keeping sound transmission to a minimum ; window frames and door and window surrounds : standard metal. Roof :* 7*-in. by* 2*-in. rafters with* 1*-in. wood wool slab covering and built-up roofing ; plasterboard and skim under. Concrete* in situ *flats over porches and outhouses. Finishes :— rustic facing bricks ; blue bricks below DPC level ; internal walls distempered on plaster ; thermoplastic tiling on concrete on ground floors ; first floors, timber; metalwork and woodwork painted. Designers :— D. Radford, G. Darke, M. Keyte and D. Meylan. General contractors : Langley Brothers.*




## PROPOSED COLLEGE FOR HARROW : CRITICISMS INVITED

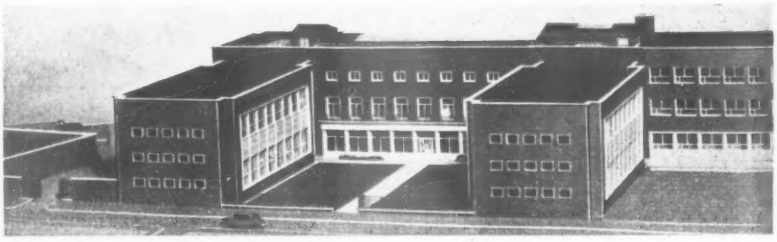


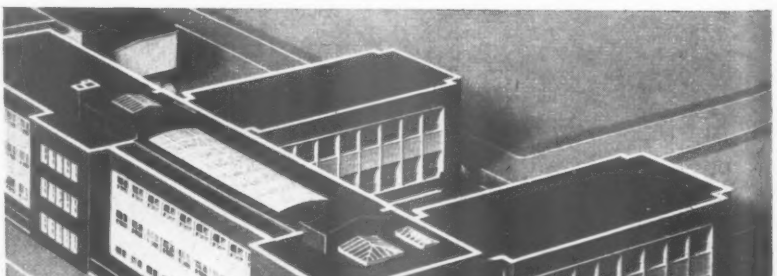


*To stimulate criticism at an early stage in the building of a college of Further Education for Harrow, the County Planning Officer for Middlesex, B. J. Collins, has arranged that a model of the proposed college should be on view to the public and has invited comments from local inhabitants. Last week the model was exhibited at Wembley Town Hall. This week it is being shown at the Harrow Council Offices in Peel Road, Wealdstone, until December 15, from 10 a.m. until 7 p.m. (Saturday, 10 a.m. to 4.30 p.m.). Objections to the design, which is by the County Architect, C. G. Stillman (assistant architect, G. F. Holden), have already been made by the Harrow representatives of the local joint planning committee on the grounds that it destroys the view of Harrow Hill from the road and railway (shown in the top left and bottom left corners of the upper and lower photographs respectively). See Astragal's comment under the heading "Temper," on page 699 of this issue.*

## CHEMISTRY BUILDING FOR UNIVERSITY

*A steel-framed chemistry building, with floors and roofs of precast reinforced concrete, and an external finish of brick with Portland stone sills, copings and facings, has been designed by Robert R. Young for Liverpool University. The building, shown here in model form, will be erected in several stages and should be completed within the next eight years. Five wings will project from a three-storey spine, which will contain research and teaching laboratories and staff rooms. The central projecting wing will house three lecture theatres. Two two-storey wings will contain workshops and further research laboratories. The other wings will contain four large teaching laboratories. There will be five staircases in the building.*





The award will be made during the annual convention of the Institute in New York City on June 24-27, 1952, at the Waldorf-Astoria.

## BSI

## *RIBA Will Not Support Publication*

The RIBA has not given its support to the publication of the new British Standard for Steel Windows for Industrial Buildings (BS 1787:1951). The Institute has felt unable to agree to the inclusion of illustrations of types and sizes of complete window units as advocated by the other interests concerned in the preparation of this standard.

Copies of the standard, which covers two ranges of steel windows, the one having both horizontal and vertical glazing bars and the other having many of the vertical glazing bars omitted, may be obtained from the British Standards Institution, Sales Department, 24, Victoria Street, London, S.W.1, price 4s., post free.

# DIARY

*AA Carnival.* At 34, Bedford Square, W.C.1. 9 p.m. until 5 a.m. DECEMBER 14

*Influence of Design on Building Productivity.* L. W. Elliott. At 66, Portland Place, W.1. 6 p.m. DECEMBER 18

*American Design.* (First of two meetings.) Mrs. Phœbe Stanton, William Johnstone, P. A. Ulbrand and Carl Fischer. At Royal Society, Burlington House, Piccadilly, W.1. (Sponsor, Design and Industries Association.) 12.30 p.m. DECEMBER 18

*On November 1, Astragal made a plea for removal of the obstacles to conversion of old houses. The following brief description, by a correspondent, of his unfortunate experience after buying an old building for conversion, reinforces Astragal's plea. Our correspondent hopes that it will also serve as a warning to others.*

## How not to get a Home

In February I found a lovely old 16th century house in a place which suited me. It is classed as one for preservation as having architectural and historical merit. It is as sound as a bell, and division into two houses, each of them with five bedrooms, is ridiculously easy.

I saw the local authority—town planning, sanitary engineer, building and licensing departments—and had a clear bill from all of them. Since conversion was so very easy they advised me to do it within the free limit and, with two years' free limit to go, it should have been easy. My wife and I faced the fact that we should not be able to redecorate nor to indulge in any frills at all.

It took four months of maddening correspondence and telephoning to establish that there would not be a development charge, and I had to take a chance on this and complete my purchase.

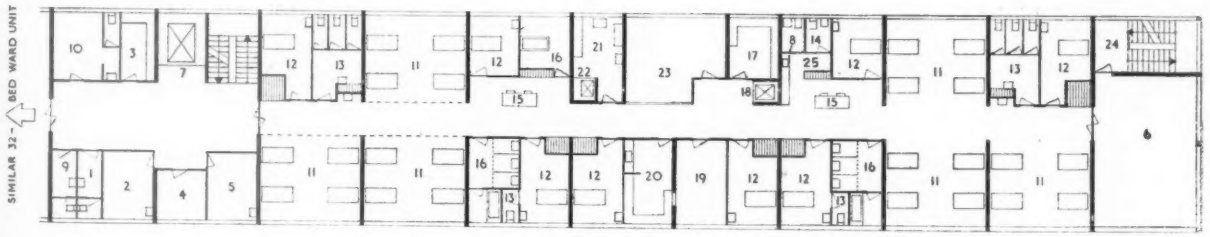
I obtained town planning and by-law consent and started to convert, and the job was almost complete when the first setback happened—a building inspector rolled up and recited a list of by-law requirements, of which there was no mention in my by-law permission, just as if it were possible to make a 16th century house comply in all respects with 20th century practice.

Then we found that the existing electric wiring was rotten. This shouldn't have been a disaster, but we couldn't re-wire within the free limit and had to apply for a licence. We were told by the local authority that we had to apply for a licence for the whole conversion, as well as the re-wiring. This we did early in August and decided to go for a sum sufficient to make both houses habitable, which amounted to only £550. (*Two houses for* £550.)

The licensing officer went behind a screen of subordinates and wouldn't answer letters or telephone calls. When the licence was finally received, on November 9, it fixed a maximum rent and selling price which bore no relation whatever to the values of similar property in the district and was less than the property cost me without the cost of conversion.

Since this would mean financial ruin we are now back where we started with a four

## ALTERNATIVE WARD UNIT DESIGN BY NUFFIELD INVESTIGATION



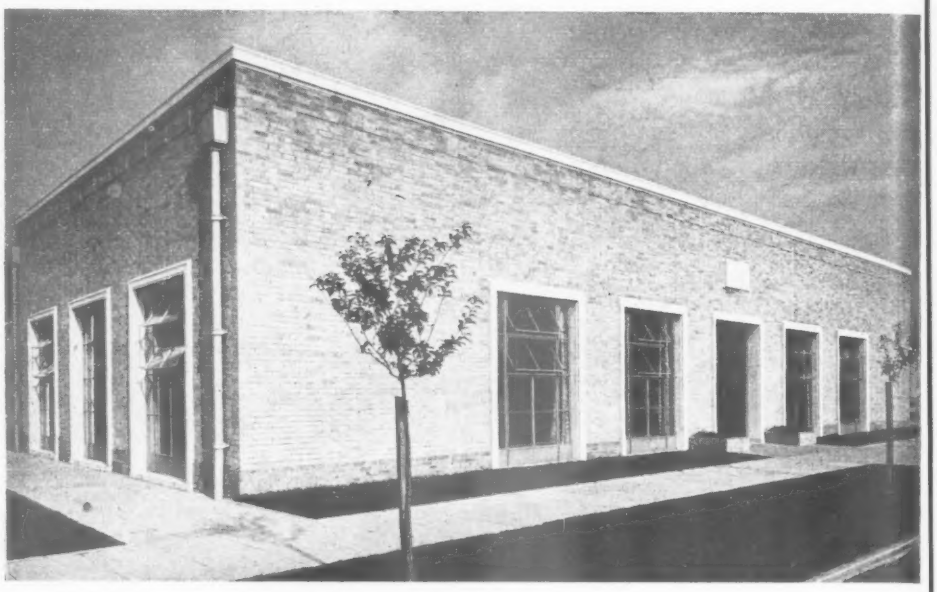

1. Doctors' toilet room
2. Doctors' room
3. Laboratory
4. Interview room
5. Sister's room
6. Loggia
7. Bed lift
8. Cleaner
9. Visitors' and doctors' toilet room
10. Nurses' toilet and locker room
11. 4-bed ward
12. Single-bed ward
13. Patients' toilet room
14. Nurses' toilet room
15. Nurses' station
16. Bath and wash room
17. Kitchen
18. Supply lift
19. Treatment room
20. Wash-up and clean utility room
21. Bedpan and disposal room
22. Disposal lift
23. Day space
24. Escape stair
25. Flowers

*The Nuffield Trust's Investigation into the Functions and Design of Hospitals, whose design (by Richard Llewelyn Davies) for a hospital ward block for the Greenock Royal Infirmary was illustrated in the* JOURNAL *for November* 15, *have another project in hand. It is, similarly, an extension, this time to a hospital near Belfast. The ward block at Greenock is only one of many ways in which the fundamental requirements of ward planning, as they are coming out in the work of the Investigation, can be satisfied. This drawing shows another plan based on the same fundamental principles. In this case the design is suitable for an east-west orientation, the plan being one of several alternatives worked out for experimental buildings in Northern Ireland. The fundamental principles embodied in both plans are :—*

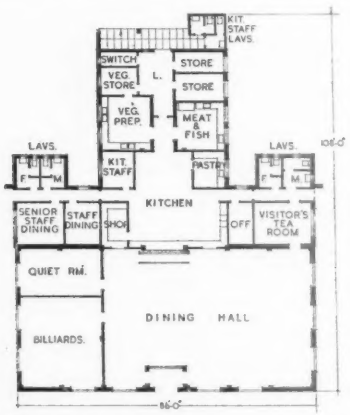
*Short compact planning.* (*Ward blocks should contain at least two beds for every* 10 *ft. run.*) *Ancillary rooms should be in the centre to reduce walking distances. Lavatories and washing facilities on a scale of not much less than one to four beds and decentralized so that patients can use them as soon as possible. Adequate day space adjacent to kitchen. One out of every four to five beds to be in a single room. The remaining beds to be in a fairly open layout for ease of nursing and to maintain some of the undoubted advantages of the traditional British open ward. Where it is desired to use four-bed wards partition walls can be placed as shown by the dotted lines. The value of such wards is however, questionable, once sufficient single rooms have been provided to take all seriously ill or distressing cases.*

D

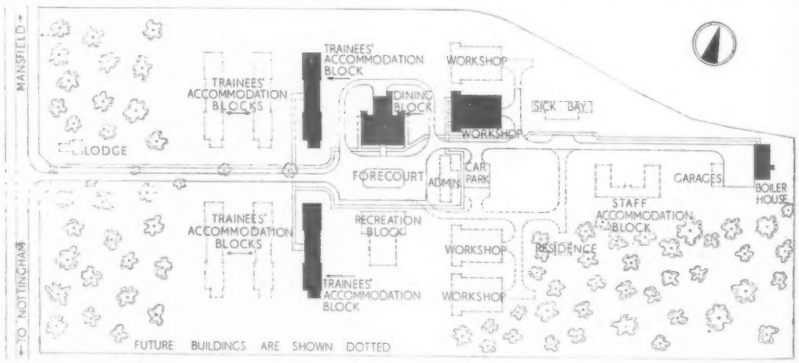
# TRAINING COLLEGE AND REMEDIAL BATH FOR DISABLED



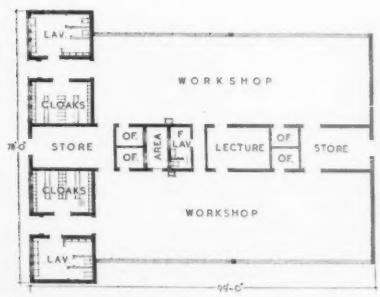
*The Portland Training College for the disabled, designed by Bromley and Cartwright, lies on the main Nottingham - Mansfield road, twelve miles from Nottingham. The site, which adjoins the Harlow Wood Hospital, the Orthopædic Centre for the East Midlands, was presented by the Duke of Portland and is set in wooded country sloping to the south-west and with fine views in a southerly direction. Trainees live on the premises during their course, which takes about six months and includes bench carpentry, surgical boot-making, commercial, clerical, gardening and watch and clock repairing courses. It is claimed to be the only college of its kind in the country for which completely new buildings have been designed. At the present stage there is room for only 100 trainees, but there will ultimately be accommodation for 300. The dining block, seen above, at present contains recreation space, which will eventually be in a separate block. Walls are of brick with a reinforced concrete frame. The workshop block, seen below, consists of two workshop units, each of 2,000 sq. ft., which can be divided up by means of movable steel partitions. Opposite page :—at the top is the common-room loggia to one of the blocks of living quarters; below is a photograph of the new remedial bath for the Orthopædic*



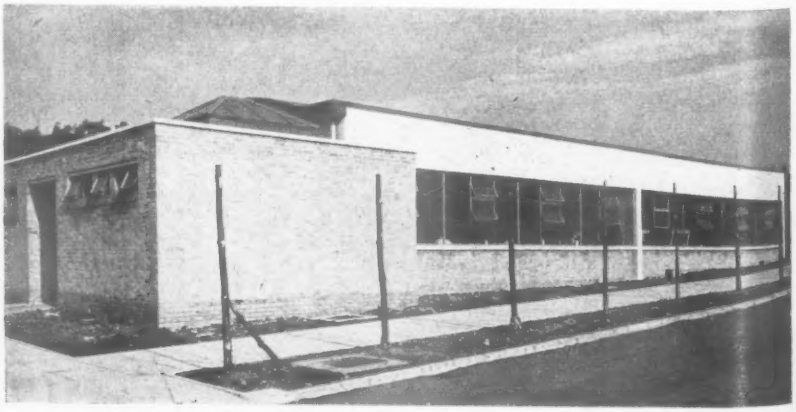

Plan of dining block [Scale : $\frac{1}{16}$" = 1' 0"]



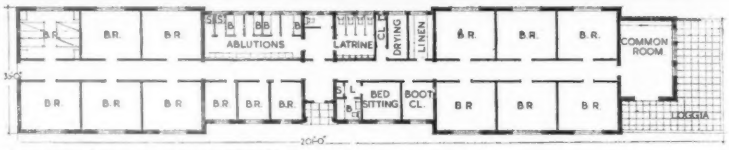

Site plan




Plan of workshop block

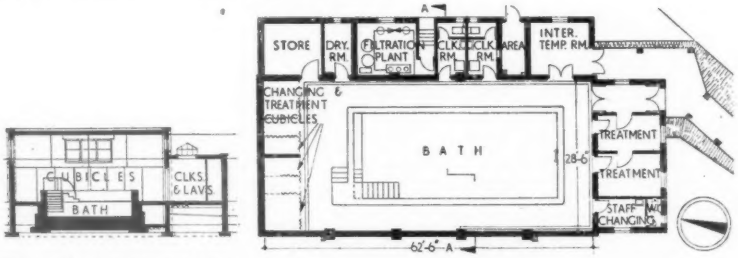


AT HARLOW WOOD, NEAR MANSFIELD, NOTTS.

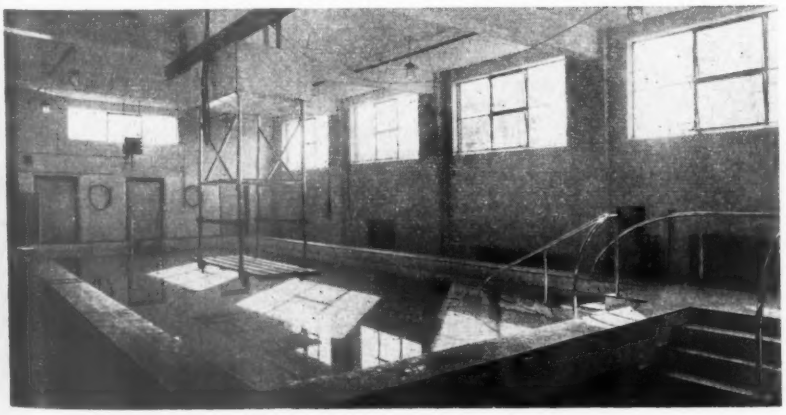



Plan of trainee accommodation block [Scale : $\frac{1}{16}$" = 1' 0"]

*Hospital, the site for which was determined by the position of a static water tank built in* 1943. *The MOH insisted that this should be used, as far as possible, to form the structure of the new pool. The depth varies from* 3 *ft. to* 5 *ft.* 6 *in., and a maximum temperature of* 100 *deg. F. is required. The general contractors for the college are Ford & Weston, Ltd., and for the bath, Greenwoods (Mansfield), Ltd. A list of sub-contractors will appear next week.*




Plan of remedial bath and section A-A [Scale : $\frac{1}{32}$" = 1' 0"]



hundred years old house on our hands standing empty all winter. And, as I have said, *it would house two families*. This obviously is the larger lunacy, but it is even more foolish because with the house go three acres of land, now derelict and choked with fallen timber, but of the highest fertility. I had planned to take the land into cultivation but since the cost of doing this would merely put me further in the red, it is not even to be thought of. If the country wants more houses and more food it is quite obvious that the whole administrative machine is devised to prevent us getting them.

Meanwhile the unfortunates who are waiting to come into my present home are homeless.

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*In this article Mr. Watkins discusses the Government's proposal to allow local authorities to sell council houses, a proposal which he believes may "bring life back to local Government." He considers the proposal in relation to the recently published study on "internal migration."*

## ERNEST WATKINS

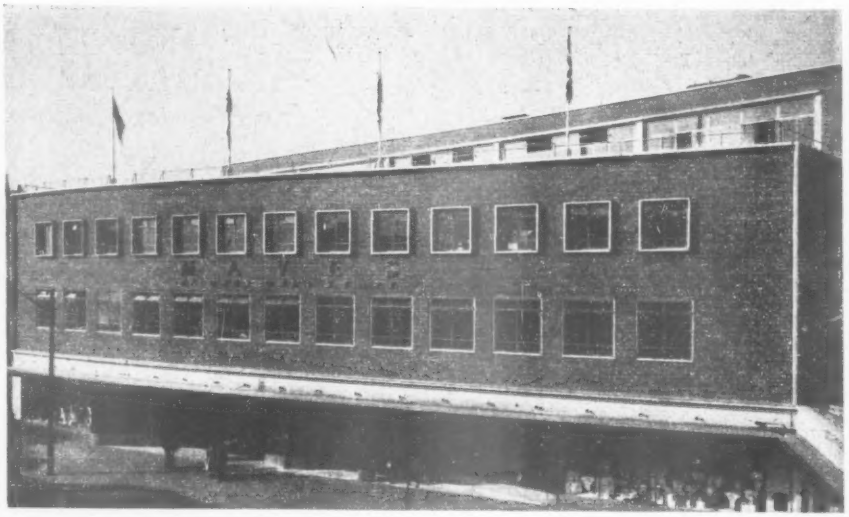
## The Architect and Current Affairs

There is no greater political division between Left and Right in this country than the division on the matter of allowing local authorities to sell council houses. As the Socialists believe that housing should be provided by the community they consider it should be in public ownership. But the Conservatives believe in a property-owning democracy, in which the greatest good results from the widest possible spread of private ownership.

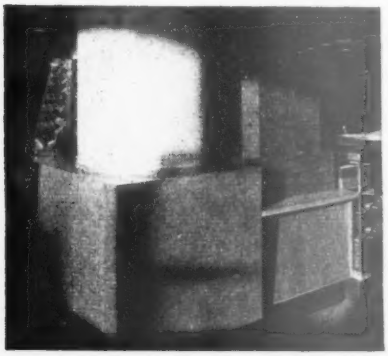
The Labour Party sometimes rationalizes its faith by saying that privately owned houses may degenerate into slums, because owners may not have the money needed to maintain them properly. But that remains a rationalization.

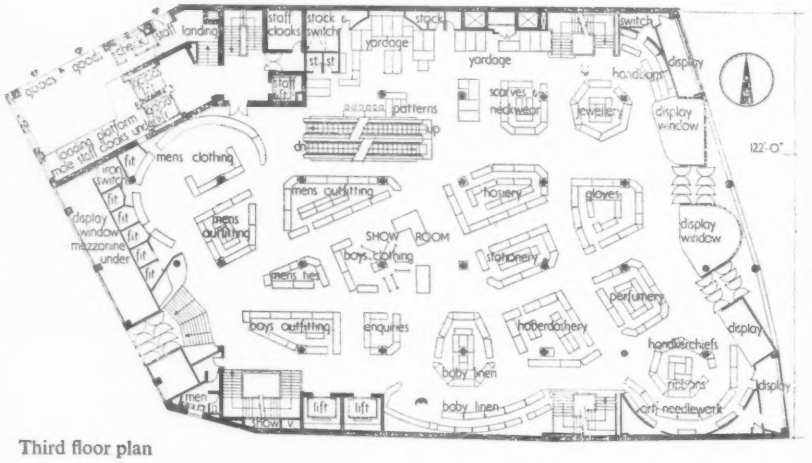
One may marshall the arguments in favour of private ownership in vain. At the moment the community pays an average subsidy of £22 a year towards each council house; each one sold would reduce taxation by that extent (so one hopes; that is, if anyone still has any hopes of living to see reduction in taxation). The council house tenant has no

# A NEW DEPARTMENT STORE IN THE HIGH STREET, SO

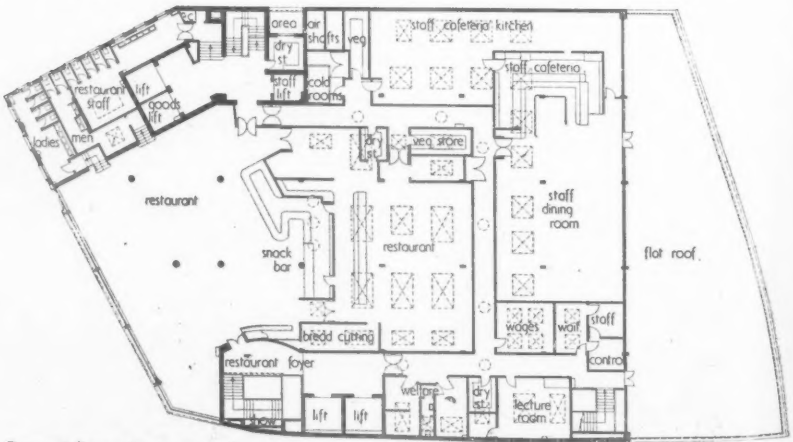


*The new store for E. Mayes & Son, Ltd., at Southampton, stands on the site where the firm started business 125 years ago. In 1940 the original store was completely demolished in an air raid and soon after this sketches for the rebuilding were produced. The new store, costing over £450,000 was designed by Gutteridge and Gutteridge. The interiors of showrooms, restaurant, kitchens and show windows were designed by Tripe and Wakeham. The main building has a steel frame with RC floors and concrete beam and stanchion casings. The north-west corner of the building is constructed mainly of load-bearing brickwork with various mezzanine floors of RC construction. The two elevations, on the east (seen above and bottom left) and the west (bottom of opposite page) have brick infilling panels, faced with hand-made multi-coloured bricks. An interesting innovation is the ceiling on the second floor (opposite page, right centre). This is of 2-ft. square panels of plasterboard with bevelled edges. The panels are fixed by four screws, which are easily removable for access to services. This is supposed to be the first dry ceiling of its kind in the country. Among the special fittings is (below left) a square veneered base to columns*



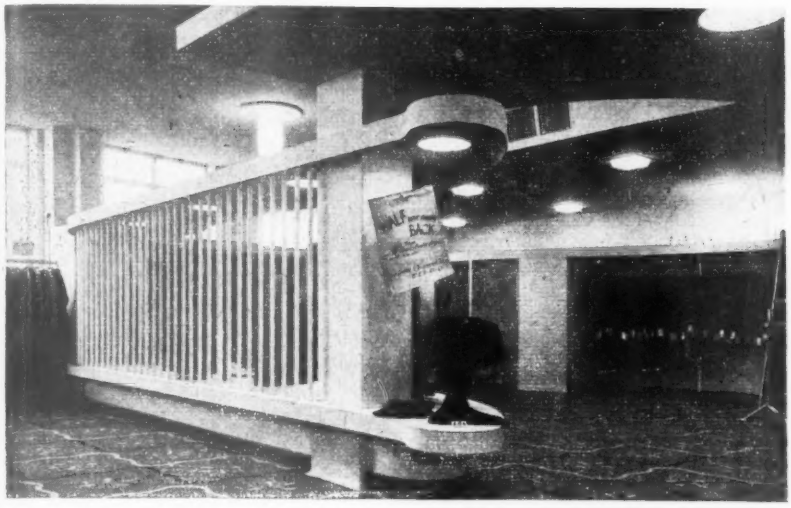



Third floor plan

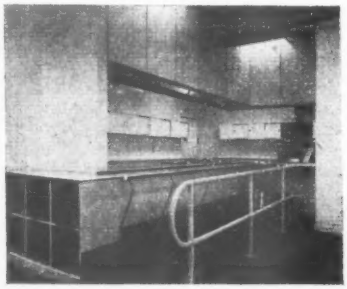




Ground floor plan [Scale : $\frac{1}{16}$" = 1' 0"]

## SOUTHAMPTON, HANTS



*on the lower ground floor and the ground floor. It can be rotated and thus give variations of counter layout. At the top of this page is part of the first floor showroom. Below left is the staff canteen*



*servery. The store has been built under a contracting system by which the contractor's profit is a "fixed fee" based on an approximate estimate. Under this system the builder has an incentive to keep costs to a minimum. The general contractors were Bovis Ltd. For sub-contractors see page 724.*

security of tenure. His rent may be changed, upwards as a general rule, by a council decision. He is dictated to about what he may grow in his front garden, how his house shall be painted and decorated, and what pets and lodgers he may keep. If he lives in a seaside town his rent may rise when relatives stay with him for the summer. He occupies his house almost on a "grace and favour" basis. Nevertheless, the purists say, the principle of community ownership should be sacrosanct. There must be no exceptions. The council knows best.

Perhaps the most stimulating prospect arising from Harold Macmillan's decision to allow local authorities to sell council houses is that here is an issue that will bring life back into local government. The Government does not insist that local authorities must sell their houses. The decision in each case will be made by the local authority. Presumably, those authorities with Labour majorities will refuse to take advantage of the new freedom, and those with Conservative majorities (however described) will do so. At last we may have vitality coming back into local elections. They may cease to be pale shadows of the national campaigns. The voter who wants to buy his own council house will have no doubts where to place his vote. With all respects to the purists, I think that is something to look forward to. Local affairs need local interests to give them vitality among the vast majority who are not stout party members for every twelve months in the year.

Mr. Macmillan's decision gives a new interest to a recently published study on Internal Migration, a General Register Office report on population movements in England and Wales (Stationery Office, 1s. 6d.). This register is based on data obtained from changes of address recorded by National Registration Officers (one of the first practical benefits from the identity card that I have yet met). It shows that in 1948 and 1949 there was a total, in round figures, of four million internal migrations in England and Wales. When that is compared with the total provision of some 250,000 new "units of accommodation" in each of these years, it means that, for every person who moved into a newly provided house, fifteen moved into an existing one. We might judge from the prosperity of estate agents that property changes hands on a considerable scale, but it is interesting to think that, on the average, every one of us will move within the next ten years.

When it comes to selling council houses, Mr. Macmillan proposes some restriction of the buyer's right to re-sell, at once, at a profit—an extension, no doubt, of the existing restrictions on the prices at which houses in private ownership built under post-war building licence may be sold, not above the figure fixed by the local authority. Today, the price of a house with vacant possession is still too high—that is, it is above what the house would cost to build today. It is still possible to pay the pre-1948 value for land, build a house and sell it, with possession, at a profit. The situation is artificial, and therefore dangerous. No one, least of all the architect, would benefit from a sudden slump in the market price of houses with possession, yet everyone would feel happier if their prices could be brought down to somewhere nearer the cost of building.

We are now nearing a stage when the authorities, as a result of the Inland Revenue valuations for rating purposes, made since the Local Government Act of 1948, should have a pretty complete register of property values. Could not Mr. Macmillan set his department to work on some scheme that would provide a price ceiling for sales of all houses, based upon present-day building costs? It would need to be gradual in operation, but it might prove to be another useful step in the process of giving a little more value back to the currency notes that move so quickly through our fingers.

# PUMPHOUSE and WORKSHOPS

in RANELAGH ROAD, PIMLICO, LONDON, S.W.1

designed by POWELL and MOYA, assistant architect MARTIN HURLEY

structural engineers SCOTT and WILSON, district heating consultants KENNEDY and DONKIN

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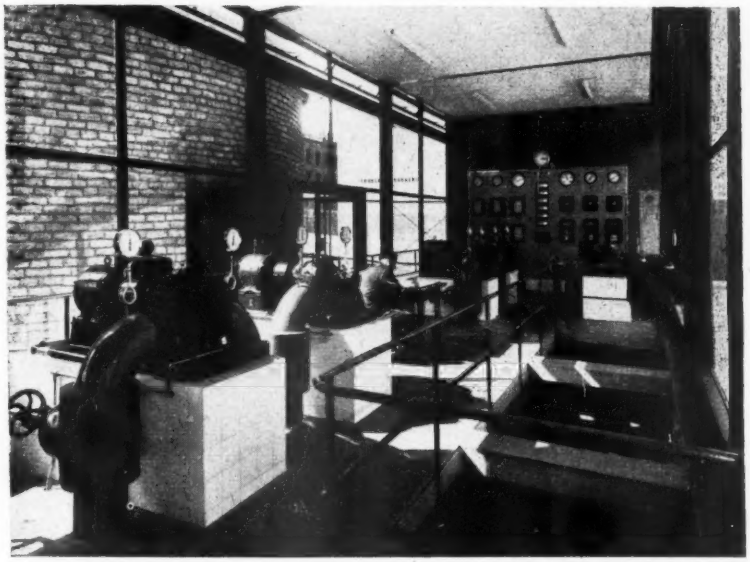
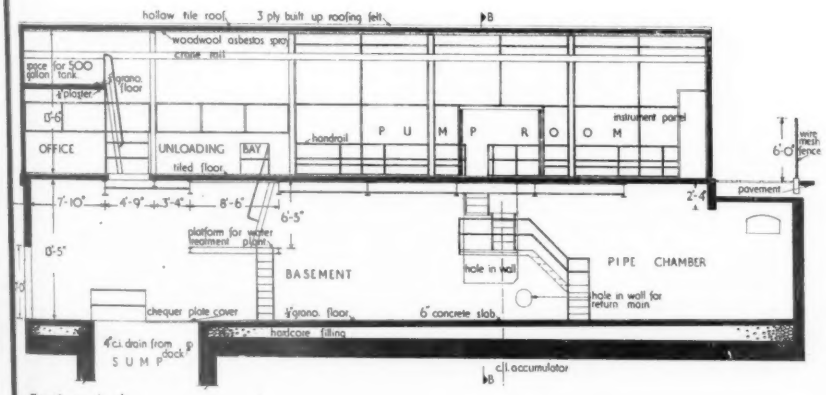
The pumphouse for the district heating scheme on the Pimlico housing estate is situated at the base of the 136-ft. high accumulator tower and is linked at the south end to the workshops. The base of the tower lies on a disused dock and advantage has been taken of this fact to form a sunken garden to the south of the tower. The architects' aim was to design the pumphouse so that the machinery was visible from the outside, thus forming a " show window " for the district heating scheme.

*Looking north-west at the pumphouse.*

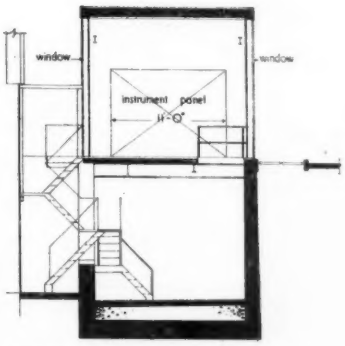
PLAN.—The main problem was to design a small building adjacent to the tall tower and to avoid the building being dwarfed by the tower. The pumphouse was therefore made as simple, and the proportions as generous, as possible. The part immediately opposite the tower is attached to it by a small glazed link and both sides of the building are glass so that the most powerful elements in the design are the circular granite sett base of the accumulator, and the pumps and polished steel handrails seen through the pumphouse building. Where the pumphouse is not opposite the accumulator, slightly more solidity is used in the west wall, but the east wall is glazed throughout, except where the folding gate occurs. The ground floor contains the pumps circulating the main water to Battersea Power Station as well as hot water from the accumulator to the flats, the



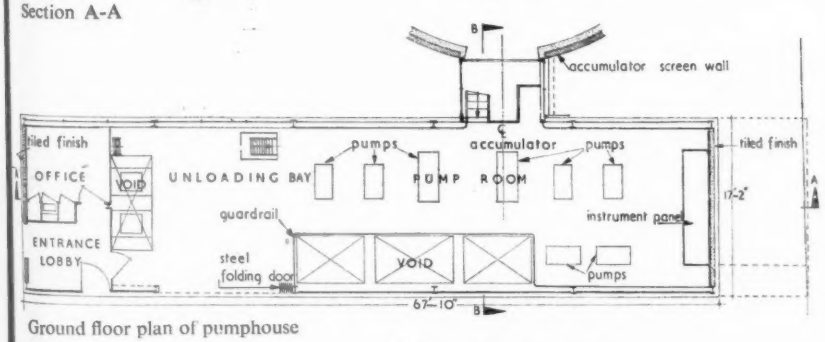
*Above, interior of the pumphouse. Bottom right, the link between the pumphouse and accumulator.*



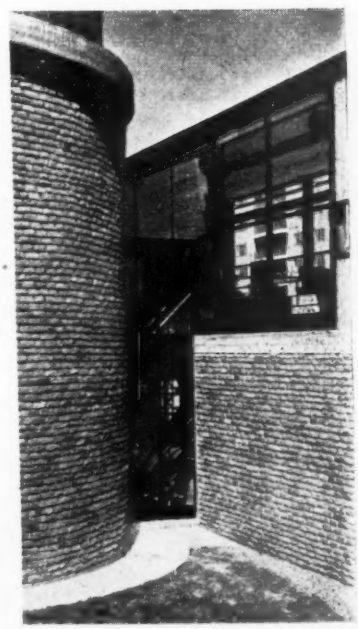

Section A-A

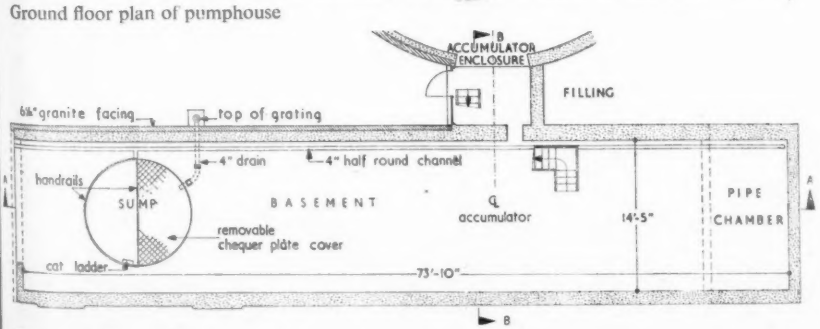



Section B-B

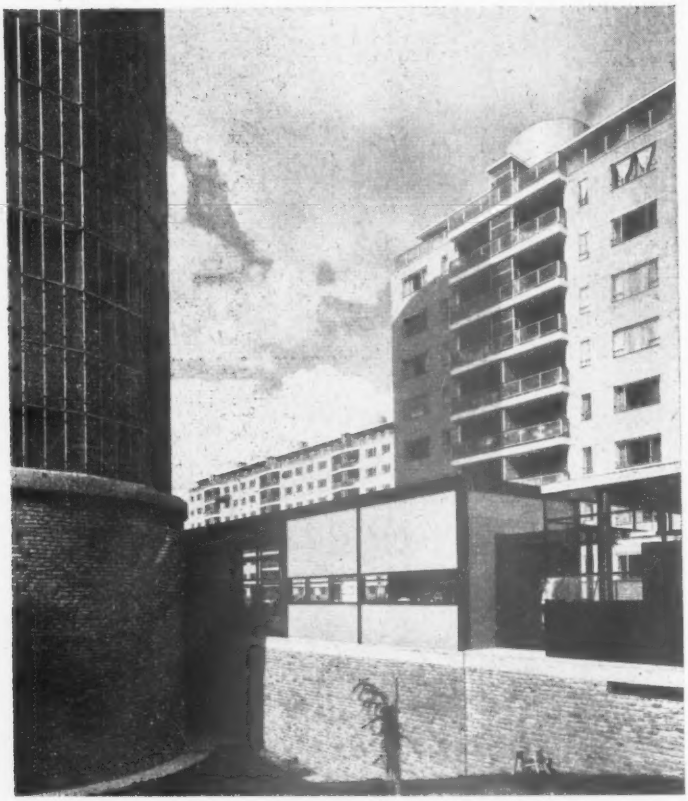



Ground floor plan of pumphouse






Basement plan [Scale : $\frac{1}{8}$" = 1' 0"]

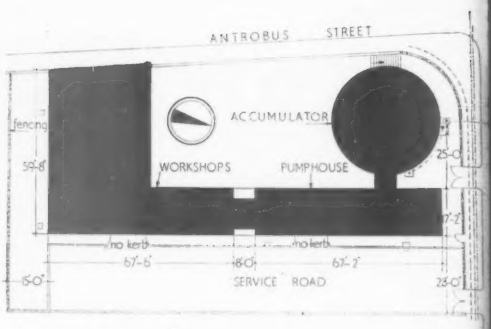


*Above, looking north, with the accumulator on the left, the pumphouse centre and workshop on the right. Right, the connecting link between pumphouse and workshop.*

# PUMPHOUSE and WORKSHOPS

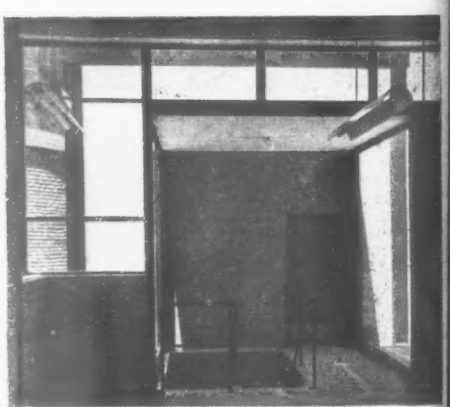
in RANELAGH ROAD, PIMLICO, LONDON, S.W.1

designed by POWELL and MOYA

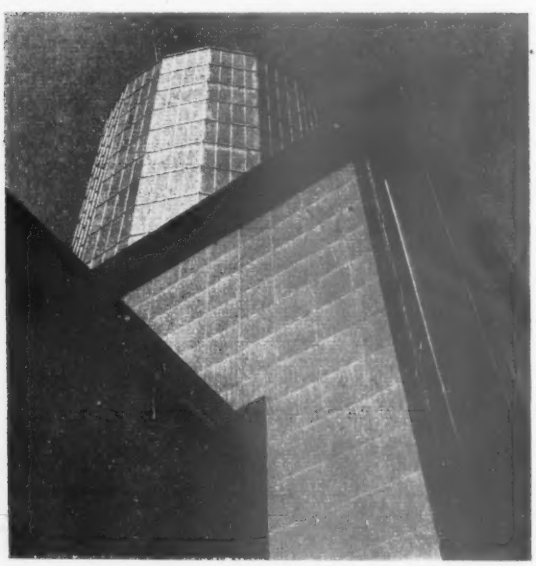


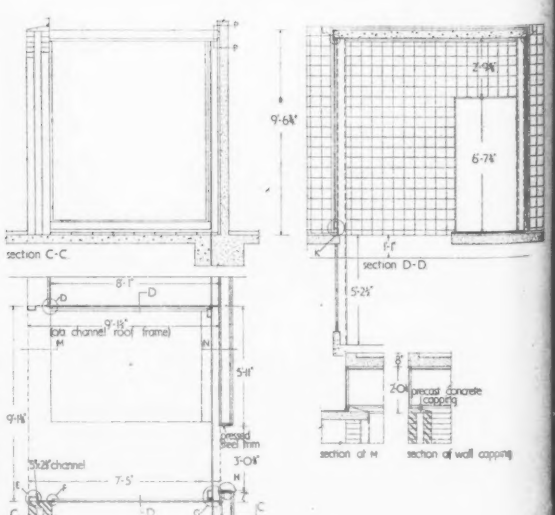

Site plan

control panel for the whole scheme, an office, entrance lobby and unloading bay. The basement contains the main piping and valve gear, water treatment plant and pumps for drainage the accumulator tank. Since less glass was required in the workshops than the pumphouse it was decided to treat the former in a more solid manner and the east wall of the workshop consists almost entirely of brickwork, with a small strip window at a high level. As a contrast to the exposed steel frame of the pumphouse, the concrete frame of the workshop is internal, leaving an unbroken external wall. The workshop-pumphouse link is made as light and transparent

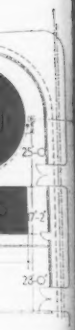


*Below, a corner of the pumphouse with the workshop link on the left.*






Plan and sections of link between pumphouse and workshop. [Scale: ⅛" = 1'-0"]



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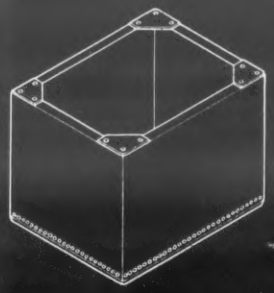
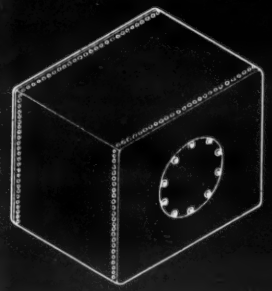
# TANKS | CISTERNS AND CYLINDERS

The Architects' Journal Library of Information Sheets 341. Editor: Cotterell Butler, A.R.I.B.A.





CISTERNS.



TANKS.

CYLINDERS.

| B.S. size number | | C.1 | C.2 | C.3 | C.4 | C.5 | C.6 | C.7 | C.8 | C.9 | C.10 | C.11 | C.12 | C.13 | C.14 | C.15 | C.16 | C.17 | C.18 | C.19 | C.20 | C.21 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| dimensions (ft. and in.) | length | 1-6 | 2-0 | 2-0 | 2-0 | 2-0 | 2-3 | 2-0 | 2-5 | 2-6 | 2-8 | 3-0 | 3-0 | 3-2 | 4-0 | 3-2 | 3-10 | 5-0 | 5-0 | 6-0 | 6-0 | 8-0 |
| | width | 1-0 | 1-0 | 1-4 | 1-5 | 1-6 | 1-8 | 2-0 | 1-10 | 1-11 | 2-2 | 2-0 | 2-2 | 2-3 | 2-0 | 2-6 | 2-11 | 3-0 | 3-9 | 4-0 | 4-0 | 5-0 |
| | height | 1-0 | 1-3 | 1-3 | 1-5 | 1-7 | 1-8 | 1-7 | 1-10 | 2-0 | 2-0 | 1-11 | 2-0 | 2-3 | 2-0 | 2-7 | 2-11 | 2-8 | 3-0 | 3-4 | 4-0 | 4-0 |
| capacity (gal.) | nominal | 10 | 15 | 20 | 25 | 30 | 40 | 40 | 50 | 60 | 70 | 70 | 80 | 100 | 100 | 125 | 200 | 250 | 350 | 500 | 600 | 1000 |
| | actual to waterline | 4 | 8 | 12 | 15 | 19 | 25 | 25 | 35 | 42 | 51 | 50 | 58 | 74 | 72 | 93 | 156 | 185 | 270 | 380 | 470 | 740 |
| waterline from top (in.) | | 4 3/8 | 4 3/8 | 4 3/8 | 4 1/2 | 4 1/2 | 4 1/2 | 4 1/2 | 4 1/2 | 4 1/2 | 4 1/2 | 4 1/2 | 4 1/2 | 4 1/2 | 4 1/2 | 5 3/4 | 5 3/4 | 5 3/4 | 5 3/4 | 5 3/4 | 7 1/2 | 10 |
| overflow or warning pipe details | size of hole (in.) | 1 3/32 | 1 3/32 | 1 3/32 | 1 3/8 | 1 3/8 | 1 3/8 | 1 3/8 | 1 3/8 | 1 3/8 | 1 3/8 | 1 3/8 | 1 3/8 | 1 3/8 | 1 3/8 | 2 | 2 | 2 | 2 | 2 | 2 1/2 | 3 5/8 |
| | c.l. from top (in.) | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 1/4 | 3 1/4 | 3 1/4 | 3 1/4 | 3 1/4 | 3 1/2 | 4 1/2 |
| inlet details | size of hole (in.) | 7/8 | 7/8 | 7/8 | 7/8 | 7/8 | 7/8 | 7/8 | 7/8 | 7/8 | 7/8 | 7/8 | 7/8 | 7/8 | 7/8 | 1 3/8 | 1 3/8 | 1 3/8 | 1 3/8 | 1 3/8 | 1 3/4 | 2 1/2 |
| | c.l. from top (in.) | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 3/4 | 1 3/4 | 1 3/4 | 1 3/4 | 1 3/4 | 2 1/4 | 3 |

DIMENSIONS OF CISTERNS.

| B.S. size number | | T.1 | T.2 | T.3 | T.4 | T.5 | T.6 | T.7 | T.8 |
|---|---|---|---|---|---|---|---|---|---|
| outside dimensions (ft. and in.) assuming handhole at front | height | 2-0 | 2-0 | 2-0 | 2-0 | 2-0 | 2-3 | 2-5 | 2-6 |
| | width | 1-4 | 1-5 | 2-0 | 1-6 | 2-0 | 1-8 | 1-10 | 1-11 |
| | back to front● | 1-3 | 1-5 | 1-0 | 1-7 | 1-3 | 1-8 | 1-10 | 2-0 |
| capacity (gal.)—actual | | 17 | 21 | 21 | 25 | 27 | 34 | 45 | 53 |

● excluding handhole cover

DIMENSIONS OF TANKS.

| B.S. size number | | Y.1 | Y.2 | Y.3 | Y.4 | Y.5 | Y.6 | Y.7 | Y.8 | Y.9 | Y.10 | Y.11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| dimensions (ft. and in.) | inside diameter | 1-3 | 1-6 | 1-3 | 1-6 | 1-6 | 1-6 | 1-8 | 1-8 | 1-8 | 2-0 | 2-0 |
| | height over dome | 2-6 | 2-3 | 3-3 | 2-6 | 2-9 | 3-6 | 3-0 | 3-6 | 4-3 | 4-0 | 5-3 |
| capacity (gal.)—actual | | 16 | 21 | 22 | 24 | 27 | 35 | 36 | 43 | 53 | 73 | 97 |

DIMENSIONS OF CYLINDERS.

# 42.B2 CISTERNS, TANKS AND CYLINDERS TO B.S. 417 : 1951

**This Sheet** supersedes Sheet 42.B2 published 7.4.49. It describes a range of cisterns, tanks and cylinders to B.S. 417 : 1951.

**Further Products**

Other types of tank and bin manufactured include corrugated cisterns, supply and flushing cisterns, cattle troughs, corn and flour bins, dust bins, coal bunkers, oil and petrol tanks and street orderly bins.

**British Standard**

In the preparation of this Sheet, information has been extracted, by permission of the British Standards Institution, from B.S. 417 : 1951 *Galvanised Mild Steel Cisterns, Tanks and Cylinders*

**This Series** of Sheets deals with tanks, cisterns, bins, bunkers, cycle-racks, non-ferrous metal mouldings, perforated and embossed metals, woven wire screens, steel partitions and furniture, railings, fencing, gates, manhole covers, rainwater goods and ventilators.

*Compiled from information supplied by:*

**G. A. Harvey & Co. (London), Ltd.**
**Head Office :** Greenwich Metal Works, London, S.E.7.
**Telephone :** Greenwich 3232 (20 lines).
**Telegrams :** Cheaper, Wol, London.
**London Office :** 58, Victoria Street, S.W.1.
**Telephone :** Victoria 4963.

# 46.Z (A-F) ALPHABETICAL INDEX TO DEC. 27, 1951

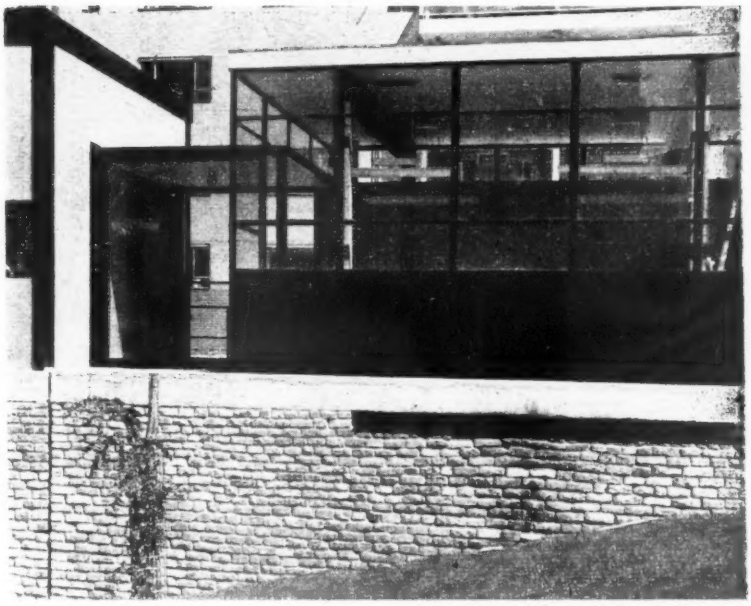
*Sheets* 43.E10 *and* 43.E11 *have been cancelled. Sheets* 8.E1, 14.B1, 28.H1 *and* 32.D8 *are being revised and will be republished shortly.*



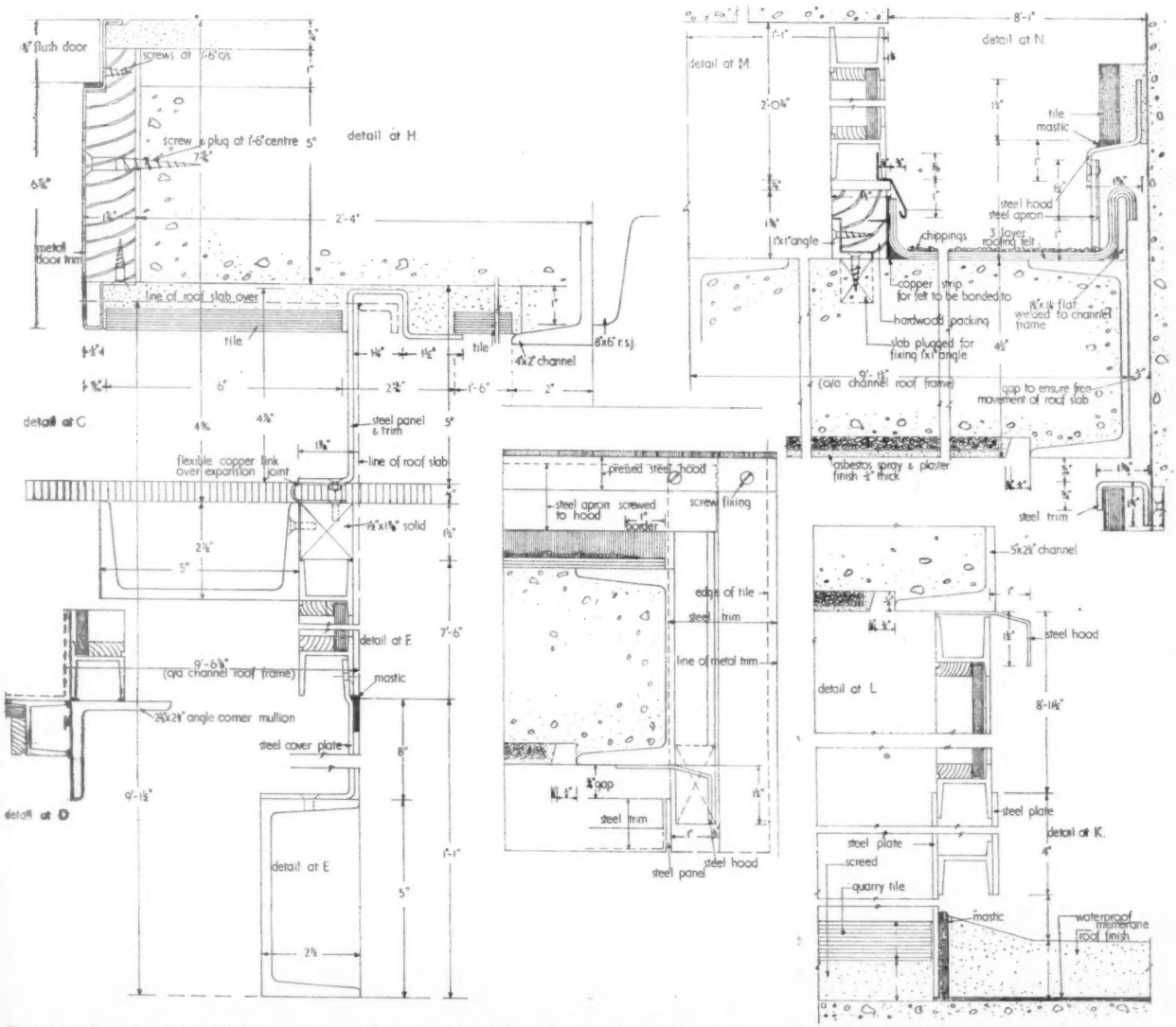
(*To be continued in our issue of* 27.12.51)

as possible. The ground floor contains a workshop for the Westminster City Engineer and another for the Director of Housing for housing maintenance work, an office, unloading bay, stores, communal canteen, cloakroom and lavatory. The basement contains workshop storage and space for the main flow and return heating pipes to the power station.

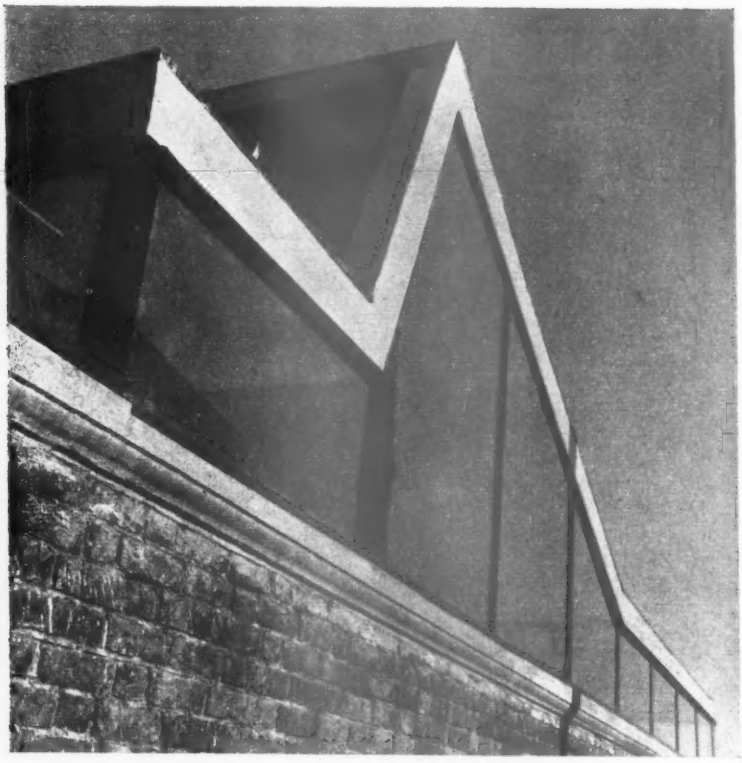
CONSTRUCTION.—The pumphouse has a frame of 8-in. by 6-in. rolled steel stanchions and reinforced concrete floor. Walls, where solid, have reinforced concrete panels and the roof is of hollow tile construction. The basement has RC walls. In the workshop reinforced concrete is used for frame, floor and roof. External walls on south and east are of cavity brickwork and on north and west 9-in. brickwork to cill height. Internal walls are 4½-in. brick.



*Above, from left to right, pumphouse, link and workshops.*




Details and section P-P of link between pumphouse and workshop [key on plan and sections opposite] [Scale : 3"=1'0"]



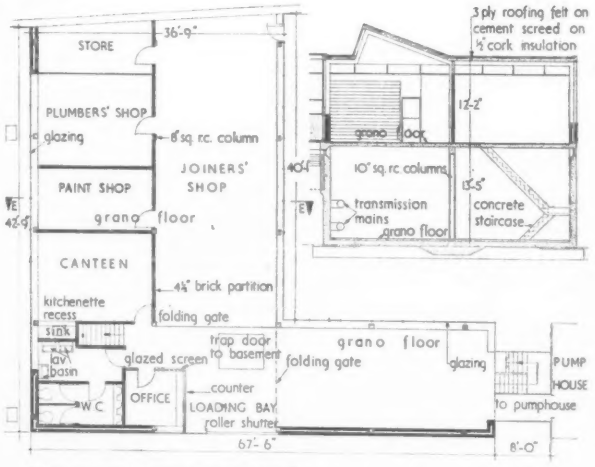
*Above, the workshop roof and west wall. Below, interior of the workshop.*

## PUMPHOUSE and WORKSHOPS

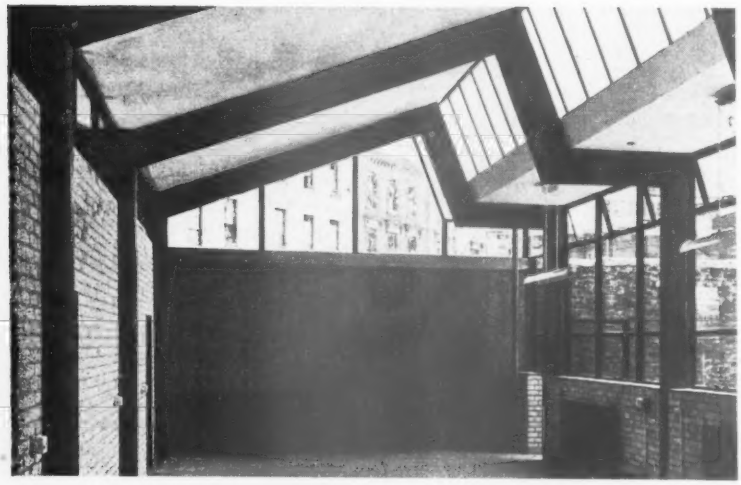
in RANELAGH ROAD, PIMLICO, LONDON, S.W.1

designed by POWELL and MOYA

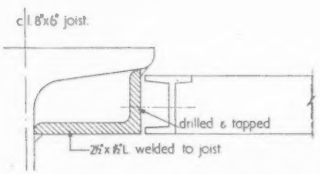
FINISHES.—The pumphouse walls, where solid, have wood wool used as permanent shuttering internally and tiles externally. Elsewhere there is ¼-in. polished plate glass in universal section steel frames. Wood wool is also used as permanent shuttering for the roof and the ceiling is finished with ½-in. asbestos spray. Floor finish is of blue-black quarry tiles. Basement walls, where exposed, are faced with granite setts. The colour scheme includes:- externally, steel frames and glazing bars, black; folding gate, olive green; tiling, medium warm grey, glazed. Internally, ceilings, white; north and south walls, Post Office red; west wall, above window, white, below window, grey green; pumps and machinery, mid-bronze green; pipes, flow, red, return, blue; control panel, French grey. In the workshops the external walls are faced with white flint lime bricks or steel sheet, painted black; internally, white sand lime bricks. Floors are granolithic. The colours used include, roller shutter and surrounding steel panels, olive green; steel windows and panels below, black. Internally, walls to unloading bay, cloakroom, lavatory and one canteen wall, are lavender, sand lime brickwork;




Plan of workshop and section E-E [Scale: 1/8" = 1' 0"]



RC frame, dark putty grey; steelwork generally, dark blue grey. The general contractors were Holloway Bros. Ltd. For sub-contractors, see page 724.




Detail of typical window jamb [Scale: 3" = 1' 0"]

# SECONDARY SCHOOL

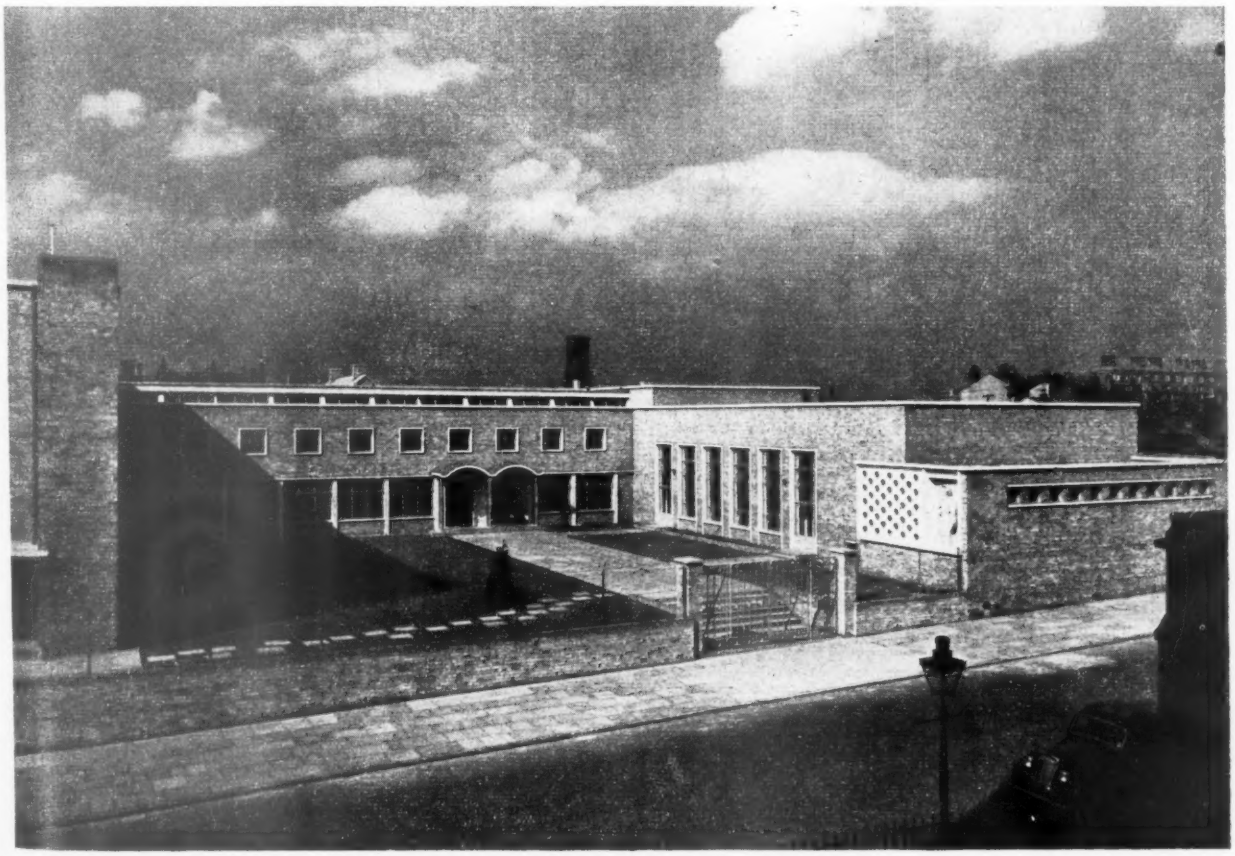
in OVERBURY STREET, LIVERPOOL

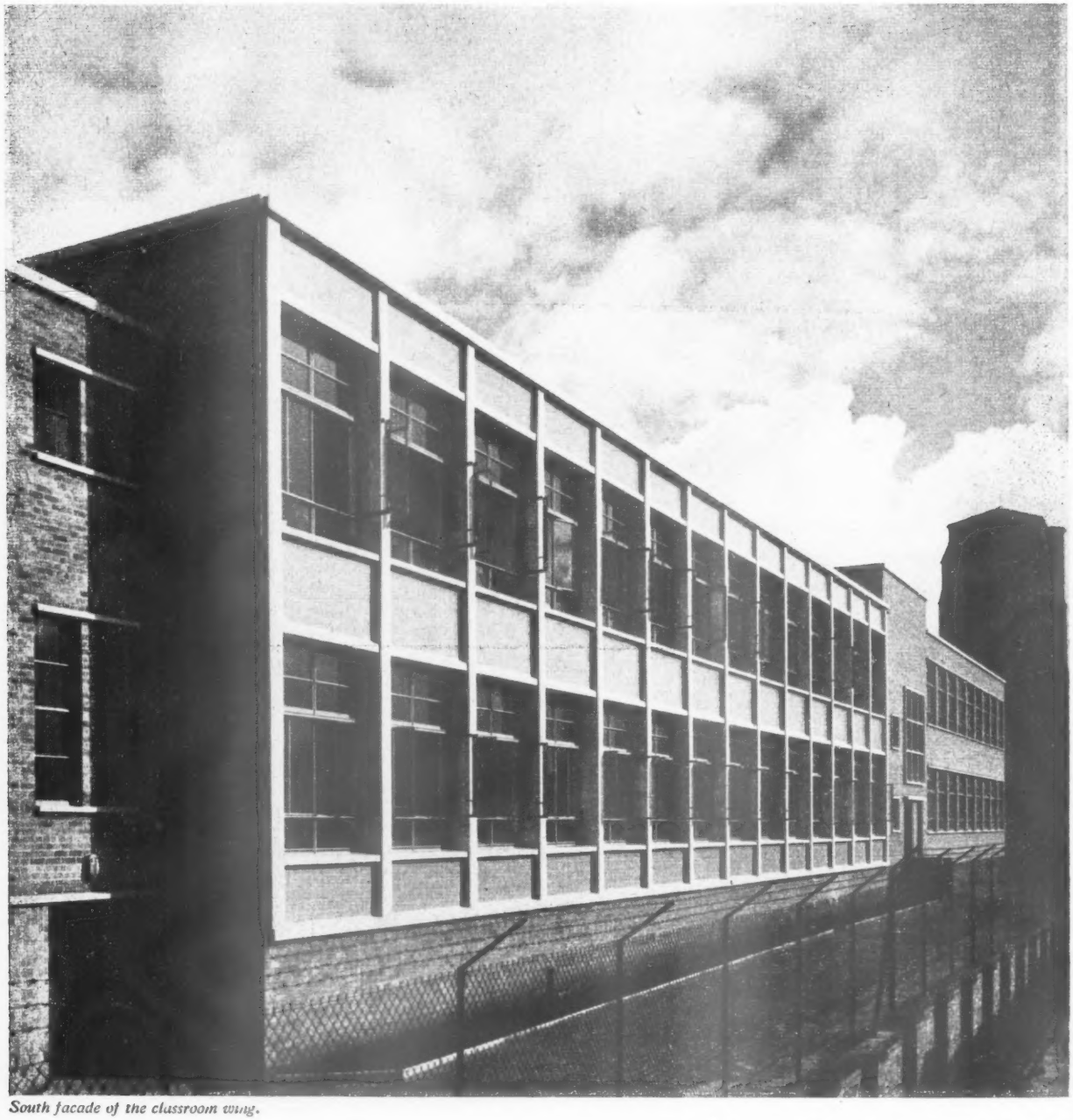
designed by WEIGHTMAN and BULLEN

assistant architects, R. C. BLAIR, S. M. PATER-LANCUCKI and R. H. MILLER

St. Anne's Secondary Modern School is a two-form entry school for boys and replaces the original war-damaged school in Chatham Place. The buildings have been provided by the parish and maintained by the local authority as a Voluntary-Aided School. The site will in future be extended southwards to cover 4 acres and when the scheme is completed there will be a second school of equal size for girls. There will be a central kitchen between the two buildings.

*Looking north-west across Overbury Street.*





*South facade of the classroom wing.*

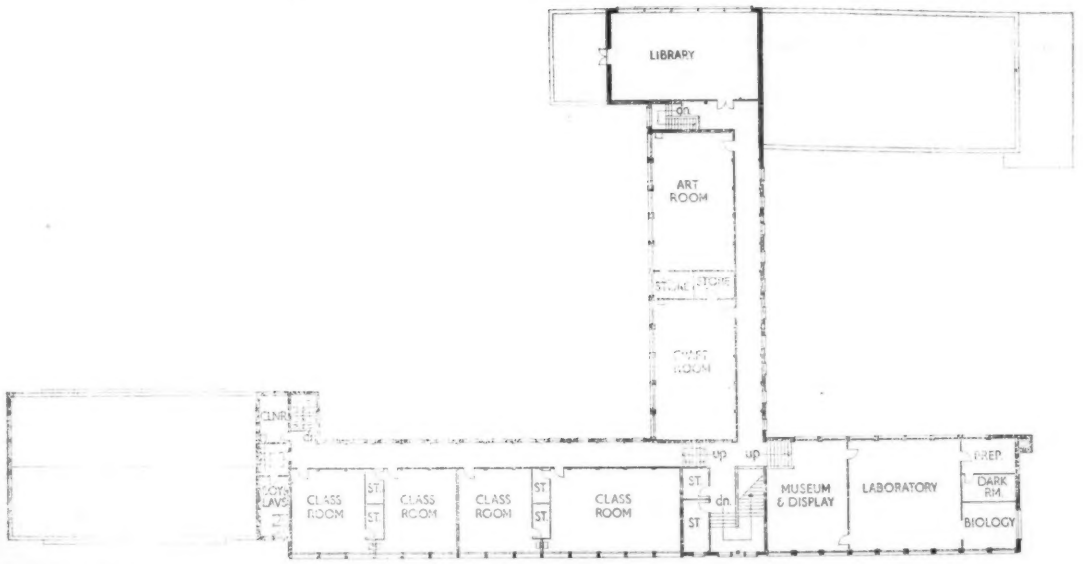
## SECONDARY SCHOOL

in OVERBURY STREET, LIVERPOOL

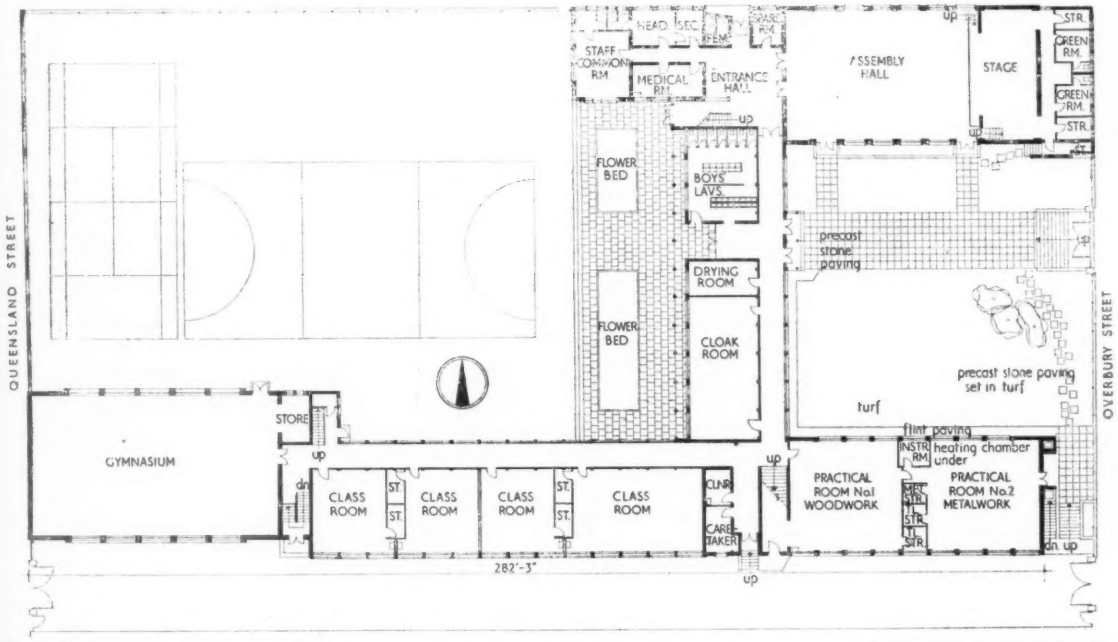
designed by WEIGHTMAN and BULLEN

SITE.—The area in which the new school has been built is densely populated and the site available for the first stage of the reconstruction is only about 1 acre. When the scheme is complete there will be adequate open space for playing fields.

PLAN.—The prescribed area for a paved pitch made it necessary to plan the classrooms on two floors and to build up to the site boundaries. The pupils' entrance is through a courtyard off Overbury Street, which is the less busy street, and faces St. Anne's Church and Priory, while the administrative entrance is on the north side. The assembly hall, with a fully equipped stage and green rooms, has separate cloakrooms and sanitary accommodation, allowing for evening use for parochial purposes. The gymnasium is at the end of the classroom wing, where a sound barrier is formed by stairs, and it opens on to the paved pitch for outside physical training. Showers and changing rooms below the gymnasium are level with the future playing fields area and will eventually serve a dual purpose. Wood and metal workrooms have direct outside access for delivery of materials.




First floor plan

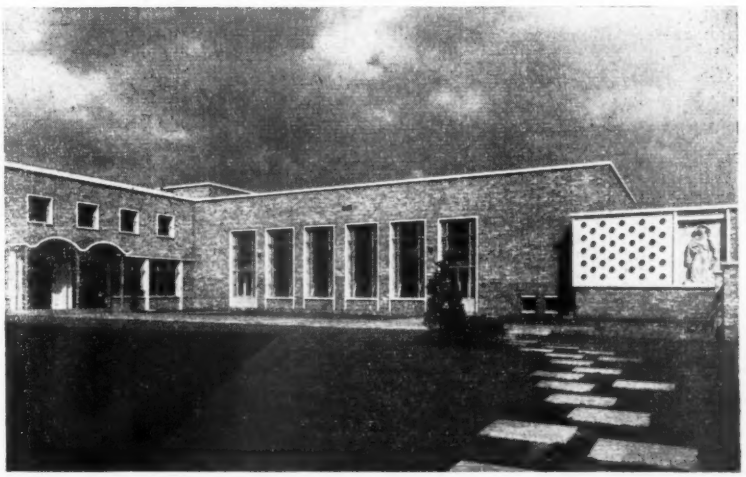


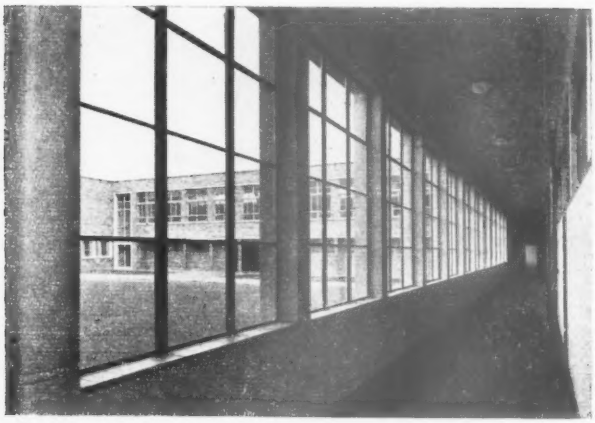

Ground floor plan [Scale : $\frac{1}{16}$" = 1' 0"]

*Looking north-west with the assembly hall in the centre and main entrance on the left.*

CONSTRUCTION.—The two-storey part of the building has a reinforced concrete frame using an 8-ft. grid. In-filling is of 11-in. cavity brickwork. RC columns supporting the first floor above the sanitary accommodation have been cast in earthenware pipes, which act as permanent shuttering and this method of construction is also used to support the canopy over the main entrance. Internal partitions forming stores, etc., are of hollow block construction. The assembly hall and gymnasium are of load-bearing brickwork with RC roof to assembly hall and steel trusses over gymnasium.

FINISHES.—The concrete frame to the classroom wing has been left exposed and is treated with



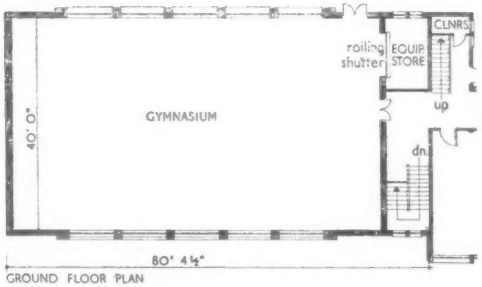


*Above, ground floor corridor in the classroom wing. Above, right, the gymnasium*

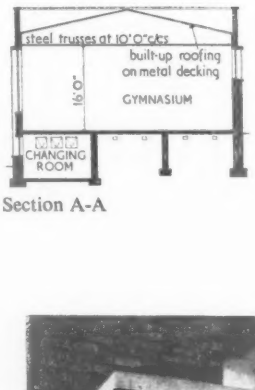
## SECONDARY SCHOOL

in OVERBURY STREET, LIVERPOOL

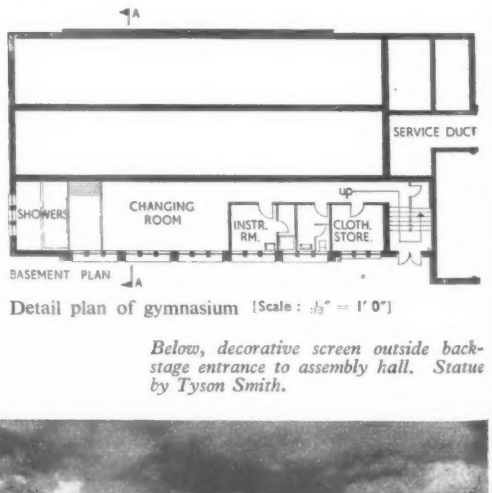
designed by WEIGHTMAN and BULLEN




GROUND FLOOR PLAN




Section A-A



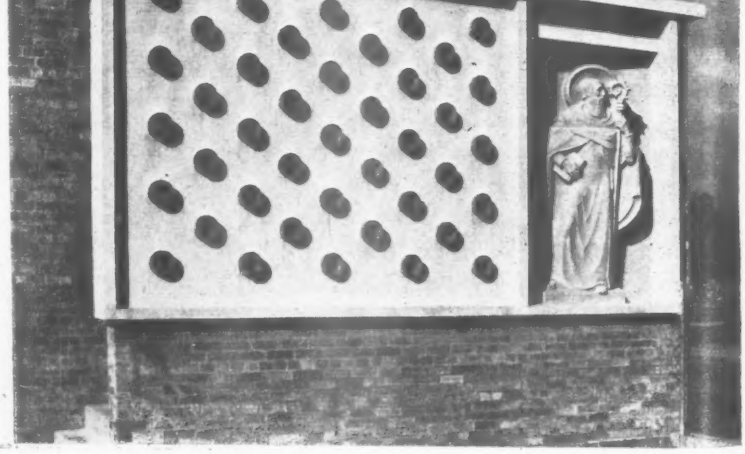

Detail plan of gymnasium [Scale : $\frac{1}{16}$" = 1' 0"]

cement paint. Panels between windows have been finished in blue-grey weatherproof tiles. The windows overlooking the playgrounds and other areas where damage may be inflicted have been glazed in armour plate glass and are of the folding type, giving 100 per cent. clear opening. The gymnasium flooring is beech strip, changing rooms are in teak block and the assembly hall in birch block. Elsewhere floors are of asphalt tiles. All internal walls are plastered and distempered in light colours.

SERVICE.—Radiant heating coils in ceilings are installed throughout the school, finished with expanded metal and plaster below and cork insulation above. These coils are fed from two solid fuel boilers with automatic stokers. There is a boiler for domestic hot water when heating is not required. Service ducts from the heating chamber are run below ground floor corridors. Electric installations include wireless relayed to all teaching rooms, stage lighting and power points in the practical rooms. The building was erected over a period of 18 months and the contract price was £92,545, representing approximately 3s. 1d. per cubic foot. Increased costs brought the cube foot figure up to 3s. 4d.

The general contractors were Wm. Tomkinson & Sons Ltd. For sub-contractors, see page 724.

*Below, decorative screen outside backstage entrance to assembly hall. Statue by Tyson Smith.*



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*QUESTIONS AND ANSWERS · CURRENT TECHNIQUE*
*THE INDUSTRY · PRICES · TECHNICAL ARTICLES*

# TECHNICAL SECTION

*In addition to the exhibits in the various halls and galleries at the Building Exhibition there were several lectures and meetings. We publish below a summary of one of these, sponsored by TDA, followed by a report, by the* JOURNAL'S *Specialist Editor No. 15, of a paper given by A. F. E. Wise at a sessional meeting of the Institution of Sanitary Engineers which also took place at Olympia.*

## SOUND PRACTICE IN THE USE OF TIMBER

By Alwyn Jay

Probably more avoidable troubles with wood result from lack of knowledge of the relationship of wood to moisture than from any other cause.

It is estimated that a log of beech 6 ft. in length and 18 in. in diameter would contain, immediately after felling, some 36 gallons of water. Most of this would have to be removed before the wood could be put into use.

There are a number of reasons why it is necessary to remove the bulk of the moisture, as follows:—

(*i*) *Shrinkage.*—To prevent undue shrinkage after the wood is manufactured.

(*ii*) *Strength.*—Most strength properties of wood increase as it is dried.

(*iii*) *Weight.*—For transport and handling it is an advantage that wood is as light as possible. Wood may easily lose half its weight on drying from green to air dry.

(*iv*) *Decay resistance.*—Wood with a moisture content lower than 20 per cent. is immune from decay.

(*v*) *Finishing.*—Wet wood is very much more difficult to finish with polish, paint, stain, etc., than dry wood.

(*vi*) *Impregnating with preservatives.*—In most processes of wood preservation a low moisture content is necessary to obtain good penetration.

(*vii*) *Corrosion.*—Wet wood is much more corrosive to metals than dry wood. This is particularly important in certain classes of containers or packing cases.

### SHRINKAGE

When moisture in wood is dried out the timber shrinks. This shrinkage, however, is nearly twice as great in the direction of the annual rings as in a radial direction, *i.e.*, at right angles to the rings. This difference in shrinkage can easily result in a splitting of the timber or warping unless care and knowledge are used in seasoning.

It also means that flat-sawn wood (*i.e.*, wood in which the growth rings meet the face of the board at less than 45°) shrinks about twice as much as quarter-sawn wood (*i.e.*, with rings meeting the surface at 45° or more). (See Fig. 1.)

Dry wood will also swell if it takes up moisture and, however well seasoned a piece of wood may be, it will "work" slightly with changes of atmospheric humidity.

### HOW MUCH TO DRY WOOD

It is important to determine the extent to which wood should be dried for the particular purpose for which it is to be used.

For convenience a measure of dryness has been established whereby the "moisture content" of the wood is determined. This indicates the amount of moisture in the wood compared with its oven-dry weight. It may be determined in various ways, the two most common being:—

(*i*) *The Oven Method.*—The piece of wood to be tested is weighed and then placed in an oven at about 200° F. and dried until no further loss of weight occurs on repeated dryings. The following formula is then used:

$$\text{Moisture Content} = \frac{\text{Initial weight} - \text{oven dry weight}}{\text{Dry weight}} \times 100$$

This method is accurate but, naturally, takes some hours, depending on the size of the sample.

(*ii*) *The Use of an Electric Moisture Meter.*—A quicker way is the use of an electric moisture meter, which works on the principle that the drier the wood the lower its electrical conductivity. In most meters of this type two short needles mounted in a handle are pressed into the wood and an electric current passed from one needle to the other through the wood. The moisture content is read directly on a dial.

An indication of the importance of moisture contents for different purposes may be realised from the following examples:—Building timber, *e.g.*, rafters, joists, etc., about 20 per cent.; timber for general joinery purposes, 15 per cent.; woodwork in offices, etc., with central heating, 12 per cent.

### HOW TIMBER IS DRIED

Timber will never dry to any extent however long it is kept if it remains in the round log. It must be cut into boards before seasoning can take place.

There are two methods of seasoning commonly employed:—

(*i*) *Air Seasoning.*—The timber is stacked in piles with each board separated from its neighbour by thin sticks (usually ¾ in. to 1 in. square and of suitable length) in order to allow the air to circulate through the pile. The time for seasoning varies with species and thickness of the timber but, no matter how long the timber is kept in the open in this country, it seldom dries much below about 18 per cent. moisture content.

(*ii*) *Kiln Drying.*—The timber is piled in a similar way to that used in air seasoning and then placed in a kiln in which temperature and humidity can be controlled. By this means any predetermined moisture content can be achieved, and moisture contents of 5 per cent. or even less can be obtained. This is important when considering the moisture content necessary in centrally-heated buildings for example, *i.e.*, about 12 per cent. It must be emphasized that kiln drying, properly carried out, has no deleterious effect on the wood, in spite of a still continued prejudice against this form of drying.

### TIMBER IN NEW BUILDINGS

In new buildings during and for some time after construction the humidity naturally varies very considerably. In the early stages before the windows are glazed and when the bricks and plaster are still wet, the humidity is extremely high and the moisture content of any timber may be 20 per cent. or even more. After the shell is completed and as drying out proceeds the humidity begins to fall; this may be accelerated by temporary heating. Following this comes early occupation of the building and frequently the heating is turned on to the full and the building is "baked"; under such circumstances the moisture content of the timber may fall to 7 per cent. or even lower. Finally, when occupation has been continuing for some time, a fairly settled state of things obtains and there are only minor fluctuations with the seasons.

The excessive heating described above should always be avoided as the wood will shrink unduly and then swell and so cause trouble later on. The danger of this becomes obvious when it is realised that the mean moisture content of timber in a centrally-heated building is about 12 per cent. Some temporary heating is, however, highly desirable if done before the internal joinery and any decorative woodwork is installed.

The above description of the typical early history of many new buildings shows how essential it is for the right moisture content of timber to be obtained. It is, for example, of little use to kiln dry wood to, say, 12 per cent. moisture content and then leave it in a building in which the walls have not even begun to dry out; or, worse still, leave it outside in the rain. Timber not only loses moisture on seasoning but absorbs it on exposure to damp conditions. The 12 per cent. can thus easily rise to 15 per cent. or more unless precautions are taken. It is extremely important therefore that joinery, panelling, etc. should not be introduced into a new building until humidity conditions are suitable.

If timber must be kept on the building site before use the period should be reduced

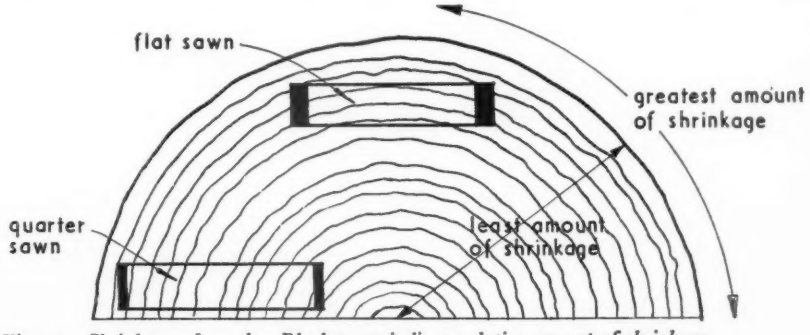



*Fig.* 1. *Shrinkage of wood. Black parts indicate relative amount of shrinkage.*

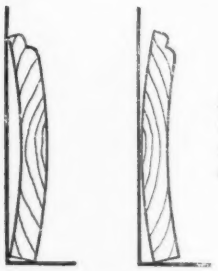


*Fig. 2. Skirting boards. Left, correct; right, wrong.*

to the minimum and the timber should be close-piled, kept off the ground, and thoroughly protected from weather with a temporary roof or water-proof sheeting, which should extend under the pile as well as over it. These conditions, however, should not be maintained for long, especially if the timber is not of low moisture content, otherwise there will be a danger of discoloration or even decay.

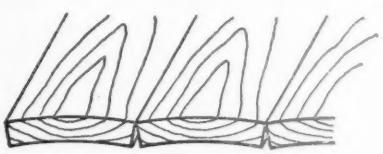
### USING WOOD THE RIGHT WAY ROUND

It has been mentioned that the shrinkage in the direction of the annual rings is twice as great as that in a radial direction, (see Fig. 1). This means that if a flat-sawn board warps, the side furthest from the heart becomes concave, *i.e.*, it curves away from the heart. Therefore, in such cases as skirtings, flooring boards, mouldings and any other uses where the timber is flat-sawn, it is desirable to see that it is used the right way round so that if any warping does occur the curving of the wood will cause the least trouble. (See Figs 2 and 3.)

The position of knots in beams (*e.g.* joists) is important. Wherever possible these should come on the top surface, which is in compression, and not on the lower surface, which is in tension. There is a very much greater tendency for the beam to fail if there is any irregularity in the grain, whether caused by knots or by any other defects, in the lower or tension edge.

### DEFECTS AND PSEUDO-DEFECTS

*Sap-Stain.*—Under adverse conditions the sapwood of many softwoods and of some hardwoods may become stained a bluish or blackish colour by fungi which grow in the wood and feed on the contents of the cells. These fungi do not attack the cell walls in the way that wood-rotting fungi do and, therefore, have practically no effect on the strength of the wood (except in the case of impact bending). This type of stain looks unsightly, of course, but its presence need never necessitate the rejection of timber for structural purposes as the wood is as mechanically efficient as "bright" wood. This point is particularly important as imported softwoods now tend to have a higher proportion of sapwood than was the case in years gone by. This is the result of changes in softwood forests and, particularly, of the use of second-growth timber.



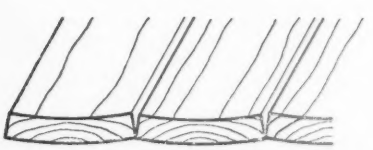


*Fig. 3. Flat-sawn softwood floor boards. Above, heartside down. May give some ridging but not shelling out of grain. Best for uncovered floor. Top, heartside up. May result in shelling out. Best for flooring covered with carpet, linoleum, etc.*

| — | PIN-HOLE | POWDER-POST (LYCTUS) |
|---|---|---|
| (i) | Borings usually run in fairly regular lines and across the grain. | Borings usually start along the grain but in cases of severe attack will run irregularly in all directions. |
| (ii) | Borings and holes usually dark in colour and wood surrounding them may also be dark. | Borings and surrounding wood same colour as normal wood, or lighter. |
| (iii) | Borings empty. | Borings filled with powder. |
| (iv) | Wood never reduced to powder. | Wood may be completely powdered. |
| (v) | Hardwoods, especially tropical woods, generally affected; softwoods not immune. | Only certain hardwoods affected; softwoods immune. |
| (vi) | Damage may occur in both heartwood and sapwood. | Sapwood only attacked, heartwood not affected. |

*Worm.*—There are two commonly found types of insect damage in wood which are superficially alike and are often loosely called "worm": the pinhole borer (or pinworm) and the powder-post (or lyctus). It is of the greatest importance to distinguish between these two for the following reasons:—

(*i*) Pin-hole borers are not serious, because they cannot attack, nor will they spread in, seasoned timber. These beetles attack green timber usually in standing trees or freshly felled logs.

(*ii*) It is sheer waste to discard timber with pin-hole borer damage, except perhaps where the timber is required for decorative purposes.

(*iii*) Many tropical hardwoods, which are being imported in increasing quantities, are particularly subject to pin-hole borer.

(*iv*) Powder-post (Lyctus) beetles are serious because they may not only attack seasoned timber but may also continue and reduce the sapwood to powder. Affected timber should not be used unless first sterilized.

The table above shows how pin-hole borer damage may be distinguished from that caused by the powder-post beetle.

# ONE-PIPE PLUMBING

By A. F. E. Wise

*(Report by Specialist Editor No. 15.)*

This paper dealt with research undertaken at BRS into the behaviour of small, one-pipe plumbing systems, as used for two-storey houses or the top floors of a multi-storey block of flats. The author did not deal to any great extent with the lower storeys of tall buildings, but he mentioned that the BRS hope to extend the investigation to them before long.

The subject of one-pipe plumbing is of considerable importance to those architects who are trying to reduce the cost of small houses by such expedients as the simplification of plumbing systems without loss of amenity. Hitherto they have found that the provision of trap vents can cancel out the saving made possible by using the one-pipe system, and they are not sure whether or not trouble will arise if the vents are omitted.

The most important of these experiments carried out at BRS are those designed to test for loss of seal of traps by self-siphonage (*i.e.*, due to discharge from the appliance to which the trap is attached) and induced siphonage (*i.e.*, due to the discharge of other fittings connected to the system). It has been found that with 3-in. seal traps, allowing for a maximum permissible loss of seal of 1 in., the closet and bath branches of a normal closely-spaced group of appliances can run to a single 3½-in. or 4-in. stack without the need for venting. There is, however, a danger of self-siphonage of the basin trap unless the length and slope of the branch is severely restricted or a vent pipe is used. For the former case, permissible maxima are given: for the latter, it has been found that a ¼-in. trap vent can be substituted for the normal 1¼-in. vent without loss of efficiency. The provision of a branch waste of greater diameter than the trap has not been found effective. Smooth-bored traps have been found to be more prone to self-siphonage than rough, cast-brass ones, and minor variations in trap design make a considerable difference. A major reason for the fact that there is greater difficulty with basins than with other fittings is that the small amount of "trail discharge" (the last trickle out of the bottom) is less with basins, with well sloped sides, than with baths or sinks, with comparatively flat bottoms. This discharge is useful for refilling the seal of traps withdrawn by self-siphonage.

Induced siphonage, especially from the action of the closet, has been studied. Here it has been found that no trouble is experienced with plain water or with ordinary toilet paper (there is little need to emphasize the dangers of using newspaper).

*This feature answers any question connected with building confidentially and free of charge. Questions to the Technical Editor, The Architects' Journal.*

# QUESTIONS AND ANSWERS

### 3050 CONCRETE BOOT LINTELS

**Q** *I should greatly appreciate your opinion on a problem that must arise in architects' offices every day,* i.e., *the correct design of a boot lintel for normal loading conditions and for spans of up to, say, 10 ft.*

*The points to bear in mind appear to be:—*

(a) *The beam is subject to torsion and should be reinforced at the top and at the bottom and stirrups should be provided.*

(b) *The cantilevering portion will usually be found to be strong enough to carry the wall above (and its own weight) without any reinforcement.*

*Regarding* (a), *I do not feel that a simple boot lintel calls for the usual calculations involving torsion and that the designer should use his own judgment.*

*Regarding* (b), *the normal practice would be to provide nominal top reinforcement in the cantilever.*

*I am enclosing sketches (see Figs. 1, 2 and 3) of three designs for boot lintels, and*

*I should appreciate your opinion as to which you consider to be the most suitable design.*

*I have heard Warland's design criticized as being unnecessarily elaborate and Fairweather's, as incorrect.*

*I put forward my own design as a reasonable solution but I am not a structural engineer and I should appreciate a specialist's opinion.*

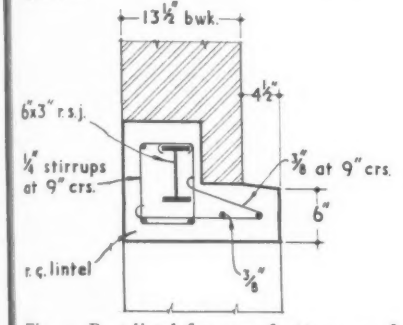



*Fig. 1. Boot lintel for span of approx. 10 ft. from "The Technique of Building" by Warland.*

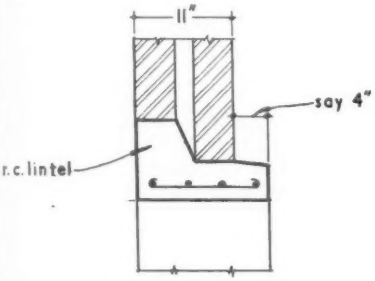



*Fig. 2. Boot lintel from "Structural Economy for the Architect & Builder" by Fairweather. (No rod sizes given.)*

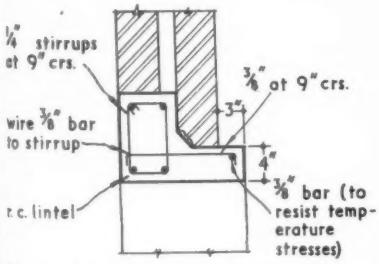
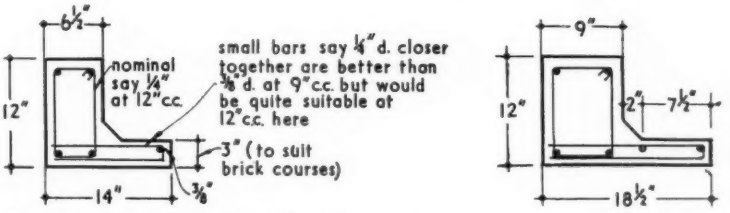



*Fig. 3. Design suggested by reader. (Top and bottom rod sizes according to span and load.)*

A For the purpose of this question a lintel will be defined as a beam supporting brickwork over a window or door in the face of a building, such that the weight carried by the lintel is that of a triangle of brickwork subtending angles of 60° with the lintel.

The correspondent is correct in suggesting that torsion is rarely considered, though the effect of torsion is merely to increase the shear stress and bears no relation to the use of top steel and stirrups unless the allowable shear stress of the concrete is exceeded. With reference to the toe of the boot, the bending and shear stresses are usually very small and steel is required only to avoid cracking.

The design attributed to Warland is usually forced on the engineer in the case of a light steel framed structure in which small tie beams serve a dual purpose by being cased to become lintels. The detail is unpleasant but unavoidable.




*Designs recommended by Specialist Editor No. 13.*

The design attributed to Fairweather should not be used for anything over a 3 ft. span. The correspondent's suggested design is quite a common detail in most structural engineers' offices, though the nominal steel in the toe is usually bent back into the beam. This is, undoubtedly, the best design where there is complete freedom of choice.

**DESIGN OF 10-FT. SPAN LINTEL**

Working on a deflection for a 10-ft. span, allow 1 in. in depth for each 1 ft. of span. Depth to reinforcement = 10 in. Overall depth therefore = 12 in.

Weight of inner skin $= \frac{8\frac{3}{4} \times 10}{2} \times 45$ = 1,955 lb.

Weight of outer skin = 1,955 lb.

Weight of beam = 1,000 lb.

4,910 lb.

Shear force at ends $= \frac{4,910}{2} = 2,455$ lb.

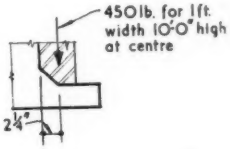
Torsion at ends $= \frac{1,955 \times (5\frac{1}{2} - 1)}{2}$ = 4,400 lb. in.

Shear stress at ends due to torsion $= \frac{4,400}{0{\cdot}23 \times 6\frac{1}{2}^2 \times 10\frac{1}{2}} = 37$ lb./sq. in.

Shear stress at ends due to direct shear force $= \frac{2,455}{6\frac{1}{2} \times 10\frac{1}{2}} = 36$ lb./sq. in.

73 lb./sq. in. (OK)

Consider nib or toe :




Bending moment at face of boot = 450 × 2¼ = 1,012 lb. in.

Modulus of concrete as a homogeneous section $= \frac{12 \times 3^2}{6} = 18$ in.³

fc = ft $= \frac{1,012}{18} = 56$ lb./sq. in. (OK)

Shear force on same face = 450 lb.

Shear stress on same face $= \frac{450}{12 \times 3} = 13$ lb./sq. in. (OK)

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

# INFORMATION CENTRE

8.28 surveying and specification

## CURRENT PRICES: BOOK

*Spon's Architects' and Builders' Price Book*, 1951-52. Edited by Davis, Belfield & Everest. (E. and F. N. Spon Ltd. 77th Edition. 1951. 18s.)

Annual revision of a widely used and respected price book, full of information of great value to architects, surveyors and all who are interested in the cost of building operations.

The book is divided into three parts. In the first is listed rates of wages for all parts of the country, working rules for the various branches of the building industry and market prices of materials. The most important section of the book is at the end of part I, where unit measured rates are given, in trade order, for a very wide range of building operations. In part II is given advice on approximate estimates, rates per foot cube for different types of building and prices for complete operations, including specialist's work. In part III dayworks, prime cost contracts and professional fees are dealt with.

The 77th edition of "Spons"—the accepted abbreviation is evidence of its popularity—has gone up a little in price, but extra value is provided for the extra money, which is more than can be said of the increases recorded in it. The new edition has been carefully revised and made as up to date as printing delays and near inflation permit. The rates for measured work and for approximate estimates are based upon wage rates and prices of materials current at the end of February, 1951. Increases up to May 31 are listed in the "Stop Press," which also gives the approximate percentage increase for each material over the prices shown in the text. This gives a valuable indication of present price trends. Estimators and others needing a more accurate means of keeping abreast of rising prices are provided for in a new section, entitled Constants of Labour and Materials, where all the prices for measured work are analysed, so that the reader can adjust them as required.

In these difficult times a price book as reliable and up to date as "Spons" is exceptionally welcome. Even those who possess earlier editions should find this enlarged and revised issue an essential addition to their office library.

19.136 construction: details

## PRECAST CONCRETE FRAMING

*Precast Concrete North-light Roof Trusses.* (Concrete and Constructional Engineering. Sept., 1951, pp. 278-282.)

Precast concrete construction at Elstree factory, of interest to architects and builders.

The area covered by the north-light roof of one building is about 100 ft. by 133 ft. The precast trusses are at 12-ft. 6-in. centres and span 33 ft. 4 in. Alternate trusses are supported on columns, at 25-ft. centres, and the remaining trusses are supported by precast concrete valley beams, which span the 25 ft. between the columns. The truss beams are 6 in. wide, the steeper sloping beams being 13½ in. deep and the others 15 in. deep. Interior columns were precast; they are 12 in. square and were designed to act only as props. Exterior columns were cast *in situ* and act as vertical cantilevers; their bases being designed accordingly. Trusses and frames were cast on the site. The precast columns, weighing 1½ tons, were erected by an 8-ton mobile crane, their feet being grouted into cavities in the bases. The precast valley beams, which are 18 in. deep, 12 in. wide and 24 ft. 5 in. long, were clamped temporarily on to corbels at the heads of the columns and the trusses were then erected by being rested on the heads of the columns or at the centres of the valley beams. When all the trusses had been erected, the joints at the ends of them, which hold ¾-in. bolts, were filled with a stiff grout. Hence the trusses carry the roof loads as a series of arches; horizontal thrusts being carried by the outer columns.

20.206 6.12.51

## REFERENCE BACK

We regret that the name of the author of this article, A. Cathabard, was omitted.

23.153 heating and ventilation

## BACKGROUND HEATING

*Domestic Heating—Tariff Inducement for Continuous Background Warming.* A. C. Hazel. (Electrical Review, Sept. 7, 1951. 1s.)

Article dealing with the possibility of obtaining continuous background heating by combining the use of various sources of power, thus reducing the consumption of electricity during peak periods.

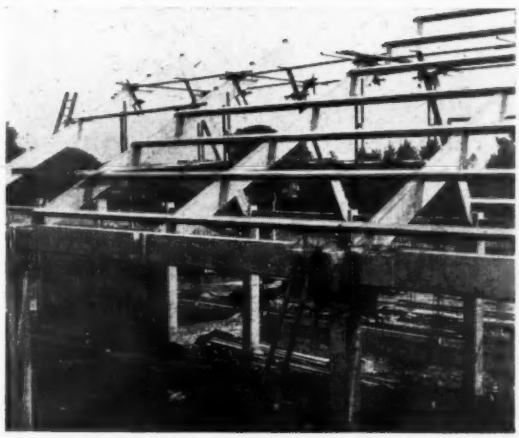
The author suggests methods by which off-peak electricity might be used for background domestic heating, in conjunction with solid-fuel equipment. In a country where the people work, on the average, 8½ hours a day for five days a week, when there is sufficient generating capacity for normal needs, it is desirable to sell off-peak electricity for domestic space- and water-heating. If this is to be done, space- and water-heating equipment must be so designed as to have sufficient thermal "carry-over" to cover the peak periods. A. C. Hazel advocates continuous background heating for comfort, arguing that it is easy to "top up" when necessary, but difficult and costly to heat up from cold.

Electricity, he suggests, should be used only to supplement heat provided by highly-efficient solid-fuel equipment. A boiler with a capacity of 45-50,000 BThU can provide heat for hot water supply and four radiators in the main living rooms of a house.

A smokeless open fire can be used for "topping up" in the living room, and thermostatically-controlled, oil-filled electric radiators can be used in bedrooms. These radiators have sufficient thermal capacity to maintain comfortable conditions, in a well-insulated house, for at least an hour. Thus time switches or "ripple relay" control may be applied to them without undue inconvenience to the occupants and the domestic power load might be removed for an hour in one town and then for an hour in another. A high load factor would thereby be achieved. Electric fires with exposed elements might become less popular, but this might be all to the good as they are a very frequent source of burns, which often prove fatal.

For this system, it would be necessary to employ a "flat-rate" tariff for lighting and heating instead of the "two-part" tariff now widely used, but this disadvantage (if, indeed, it is a disadvantage) would be offset by the low price which could be charged for heat.

*Precast concrete north-light roof trusses (see* 19.136*). Below, erecting a precast column. Right, hoisting a truss. Bottom right, fixing the purlins.*



*This feature covers both the production and marketing of new materials and designs of equipment as well as the general trend of developments within the Building Industry*

# THE INDUSTRY

By Brian Grant

## BUILDING LICENSING

It is good news that Mr. Macmillan is to encourage a reasonable degree of extravagance when licences for new houses are being issued. Although the number of licences granted will still depend on the local authority, the amount of money which may be spent will be greater. So far as I could discover at Mr. Macmillan's Press conference, the drill will be more or less as in the past. You establish your need for a house and end up perhaps with plans approved and a licence for £x. It appears that you will then be able to spend a certain amount (not specified), over and above this figure, on luxuries, provided they do not involve scarce materials. The minister's example was a hardwood floor, the use of which would release softwood for other purposes. However, it is reasonable to assume that there are many other luxuries which will become possible—for instance, insulation to full Egerton standards, perhaps with double glazed windows, or coloured baths and basins, or any of the slightly-better-than-utility fittings, fixtures and finishings, which clients would often like to add if they weren't the first things to be cut when estimates are exceeded.

## INTERNAL PARTITIONING

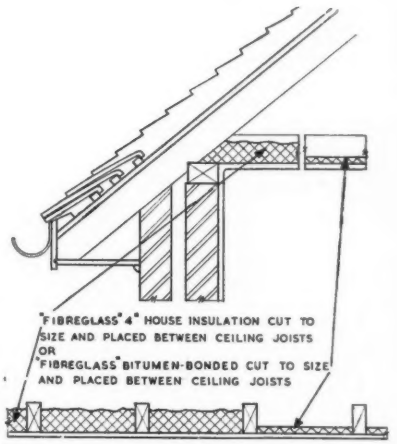
Most readers will know Compactom Ltd.—the manufacturers of many types of fitted wardrobe. I was interested to learn that this firm is now making internal partitioning units which can be supplied with almost any finish, with partial glazing and doors incorporated wherever required. The chief advantage of this partitioning system is that the materials used are all free of licence and that, although expensive finishes can be had, the cost can be as little as five shillings a sq. ft., inclusive of erection. One type of panel used consists of a core of insulation board faced each side with hardboard. This panel is normally one-inch thick, although it can be supplied thicker if required, and, on account of its low cost, is frequently used for factory and office partitioning.

Although a large range of materials can be used for the system the weight of the partitioning is usually about 2 pounds a sq. ft., so that there is little difficulty in using it for dividing up old buildings where floor loads must be minimized. Partitions up to 16 ft. in height have already been constructed and a job with partitioning 24 ft. high is now under construction.

The main advantages of the system seems to be that it is comparatively cheap, that it can be dismantled and re-erected time after time and that it can be supplied in a number of finishes to match the buildings in which it is to be installed. Thermal and sound insulation can also be provided by means of appropriate fillings. (*Compactom Ltd., Oxgate Lane, Cricklewood, London, N.W.2.*)

## THERMAL INSULATION

Some interesting figures about the economies of heat insulation are contained in a recent booklet, published by Fibreglass Ltd., on thermal insulation in schools. On any particular job it is a comparatively simple matter to fix fairly definite figures for such factors as the rate of heat loss, capital and running costs of the heating system and the cost of insulation, and, from these figures, to calculate what degree of insulation will be most economical. This, however, is generally done in conjunction with a heating engineer and probably at a time when the type of construction and the method of heating to be used are already decided upon. The important role of this booklet is to provide general data on which to base discussions at an early stage. Heating and construction costs are analysed and there are also tables which show the cost of insulation and the annual saving (per 100 sq. ft. of wall or roof) resulting from it. In each case which is considered, the use of "Fibreglass" could provide a saving; and, as one might expect, this is greater when the "Fibreglass" is applied to a structure of low insulation value, and less when the structure is already moderately well insulated.




*One of the details from the booklet on thermal insulation in schools, published by Fibreglass Ltd.*

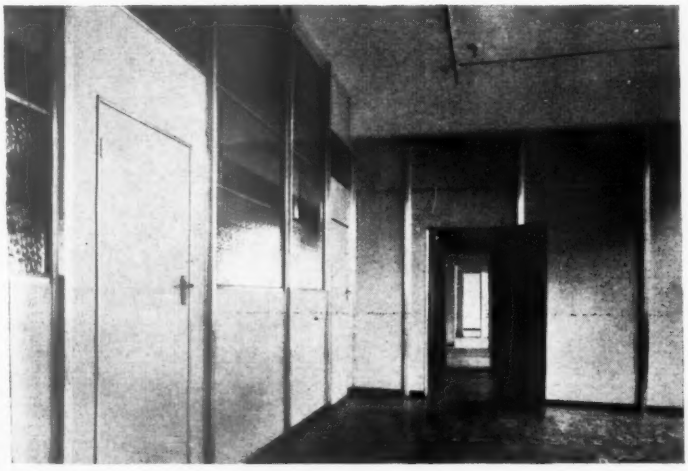
There is one important point which should be borne in mind. When the application of 1 in. of "Fibreglass" would increase the thermal insulation value a structure from bad to moderately good, it will usually pay to increase the thickness to 2 in. thereby providing a high degree of insulation, for, although the cost of the insulating material is doubled, the fixing cost does not rise correspondingly. For walls it is suggested that insulation will show an economic return if the U value of the construction is greater than 0·35, while, if the value is between 0·25 and 0·35 the insulation will pay for itself and increase the comfort of the building's occupants. For walls already having a U value below 0·25, further insulation will only pay if a very cheap method of fixing is possible.

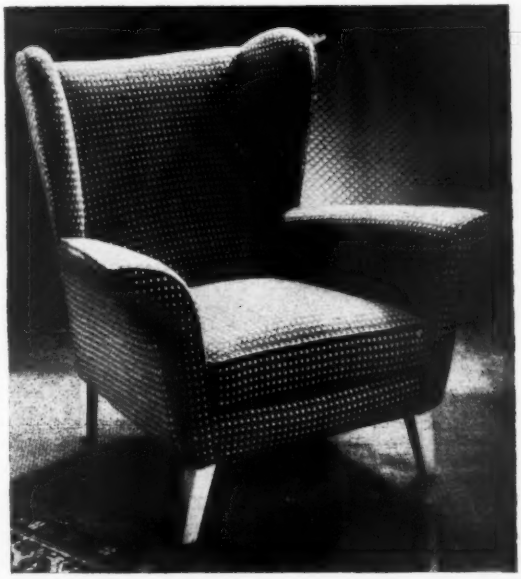
The booklet contains a number of details, one of which is illustrated above. (*Fibreglass Ltd., St. Helens, Lancs.*)

## STANDARD FURNITURE

The illustration below shows one of a new range of chairs which is being produced by H. K. Furniture Ltd. This chair, which is known as the "Cavalier" costs £23 10s. 6d. and, as with most of the other designs, settees, for two or three people, are produced to match. (*H. K. Furniture, Ltd., Andover Gardens, London, N.7.*)

*Below, office partitioning by Compactom Ltd. Cream finished panels, glazed above 4 ft., with aluminium framing. Right, "Cavalier" chair by H. K. Furniture Ltd., price £23 10s. 6d.*





# THE NEW HOUSING POLICY

By Ian Bowen

Housing policy has been the sport of politicians since 1945; yet there is no other subject of social policy that deserves cooler judgment and more careful calculation. Too often the immense power of the modern state is exercised with greater regard for the political theories of the party in power than for the actual and changing needs of the community. Even details, such as the extra lavatory or the materials to be used, are determined on party lines. The "new housing policy" is, unfortunately, no exception to this rule. However, each party, in turn, has to compromise its alleged principles on account of the vulgar intrusion of external economic reality. Hence the resulting schemes have not even the merits of internal self-consistency.

### THE LEGACY

Although the Labour party's housing produced a large number of dwellings, it had several weaknesses. First, there was the summary ending of the temporary housing scheme, anathema to the powers-that-were because it had been begun by Mr. Churchill. Secondly, a lavish standard of building. The three-bedroom oversized version of the Dudley house, with its two lavatories, was casually accepted, though both parties now agree that this standard ought, with safeguards, to be reduced. Thirdly, a form of fixed subsidy was adopted which took away from the central government any direct responsibility for final costs; the intention being to avoid the earlier error of the Addison subsidy, which let all rises in building costs fall on the Treasury. But this new scheme has meant that the state had had no *direct* interest in final costs, and, in fact, it concerned itself mainly with tender prices. This is why local authorities' housing accounts are such cheerless documents. Fourthly, the Labour government did very little in the way of converting and adapting existing premises for housing purposes.

### THE CHANGES SO FAR

What is the Conservative government doing to correct the weaknesses in its predecessors' policy? As far as the second point (housing standards) is concerned, the government has acted promptly and firmly, although it has been helped by the fact that the Labour party's policy on this subject had already been modified a good deal. As far as the other three points are concerned the new government does not seem to have made any changes. There is no sign of a revival of the centrally-administered housing drive that was the basis of immediate post-war housing policy. There is no sign of vigorous action on costs, although gradually the facts relating to these are being brought to light by the committees concerned with the problem. There is no sign of any realization at party headquarters of the crisis which will occur when the rates have to take the strain of the increases in costs that have already taken place. Nor is there any indication that the housing policy of the new government is in any way consistent with its general economic policy.

### "THE MIXTURE AS BEFORE"

The formula is different, but the public still gets the political mixture as before. Even the figure of 300,000, invented in the happy-go-lucky, "planning" days of 1945, has been paraded again before a confused and bemused electorate. The public wants houses at reasonable prices. To provide them in sufficient quantity requires a well-planned housing programme. The public is, it may be suspected, less concerned than politicians suggest as to whether the state or "private enterprise" provides the houses; while the government, it appears, is more concerned with replacing the Labour government's prejudices by it own.

### PERMISSIVE POWERS

After these somewhat carping remarks, it would be as well to examine Mr. Macmillan's statement point by point. Firstly, the new maximum proportion of "private enterprise" houses to "local authority" houses for 1952. This is *permissive* (and it applies only to England and Wales; for Scotland the new proportion is 1 to 5—it was 1 to 10).

The history of *permissive* legislation on housing matters does not encourage any hopes that the proportion will be widely attained. Those who expect this change to bring about an increase in the housing programme will be disappointed. The new proportion is likely to help those individuals who can afford 1952 prices (provided they can find builders who are prepared to enter this risky market). But how many people are there in this category?

The new proportion cannot by itself guarantee a return to the economic conditions under which the speculative house-builder could resume steady production. Moreover, Mr. Macmillan has introduced certain "safeguards" which entirely inhibit any return towards those conditions.

### CONTROL OF SIZE AND SELLING PRICE

The limit on size is probably not very important; it can be circumvented easily by the notorious device of building two semi-detached houses later to be converted into one. In any case, smaller houses are easier to run and, therefore, easier to sell.

But the limitation on selling price (and on *re-sale* price) is a restriction of the kind that has never yet been enforced. Either it will be ignored, or it will be very tedious to enforce. The problem of the re-sale of houses was investigated thoroughly by the much-neglected Morris committee, whose recommendations were shelved. If Mr. Macmillan's new principle *is* accepted and *is* enforced, a strong case will be built up for extending its application. This would involve the use of widespread, and administratively cumbrous, machinery, for the state would become concerned with questions of house valuation. So, the attempt to revive the contribution of private enterprise under the present inauspicious circumstances opens up a broad vista of bureaucracy.

### MATERIALS TO BE USED

Just how difficult those circumstances will be is emphasized by the fact that private enterprise houses are to "allow for" (by a condition in the licence?) *more expensive* substitutes for some of the scarce materials to be used. This is one extra nail in the coffin of any large-scale private enterprise programme. The houses are not to be subsidized—experience between the wars has, no doubt, prejudiced administrators against any such plan, yet, oddly enough, "the purpose of the policy is to increase the total number of houses" (Mr. Macmillan). This cannot be done unless local authorities have their allocations for 1952 raised. Moreover, allocations must be raised sufficiently to allow for the fact that in some areas the full 50 per cent. of private enterprise houses will not get built during 1952. And who can forecast what the proportion will be?

Let a kind thought be spared for the planners (if they still are allowed that appellation) who have to indulge in forecasts of these new imponderables.

### FINANCIAL POLICY

The gravest of all the omissions from the new policy is its failure to link up with the government's new policy of deflation. The Labour government's policy of keeping interest rates low may have had its disadvantages, but, at least, it was consistent with their announced intention of carrying out a huge investment programme, including housing. Has no one told Mr. Macmillan that some industries (notably the building industry) are much more sensitive to changes in the rate of interest than others? Or are the failures of his proposals to come to him as a complete surprise?

No economist will deny that private enterprise *could* do much more in the housing field than it has been allowed to do since 1945. Granted the political decision to give private enterprise its head, then surely the logical procedure would be to provide the conditions under which it can operate successfully. The present compromise policy seems to have too many contradictions. The restriction on sale-price, the rise in interest rates and the injunction to use expensive materials are snags which the rise in the ratio of private enterprise housing can hardly counteract.

### THE WAITING LISTS

All the above criticisms are directed against the internal inconsistencies of the present government's policy. Political criticism, on the other hand, tends to be directed towards the effect the government's decisions will have on the problem of who is to get the houses. The question is being asked widely—"is the new principle fair?" Whatever view it taken on this point, the fact remains that, this policy too is a compromise. The new rule is that applicants for a house should either be on the local authority's waiting list *or* be "in equally urgent need of a home." But who is to decide? (and who but the denizens of Whitehall could have overlooked the dangers of causing such an essentially judicial responsibility to be fastened on the unfortunate local authority?)—presumably, some local government employee. It is hard enough to supervise the waiting list itself; to adjudicate between rival claims in the new circumstances will expose the adjudicators to grave criticism.

Houses, are, in fact, made of bricks and mortar, not of promises. If the materials' industries produce adequate supplies houses may be erected in 1952 at about the same rate as in 1951, but any hope of a *substantial* increase in the programme must be postponed until 1953, by which time the new principles may have been worked out more fully, and may, indeed, have been modified in order to give private enterprise a genuine chance. Meanwhile, no great change in the programme is likely to take place although it is possible that the number of "houses begun" each month will decrease slightly.

### EXTENT OF THE NEW PROGRAMME

In the housing debate Mr. Macmillan did not specifically commit himself to a programme for 1952. Nevertheless, he twice referred to 200,000 houses being completed in England and Wales in that year. But, as only 160,000 permanent houses are being completed this year in England and Wales, this figure means an increase in the programme of no less than 40,000 houses. (Incidentally is there not to be any increase granted to Scotland?)

A really important issue is raised by Mr. Macmillan's announcement, for if 40,000 more houses, even smaller houses, are to be built in 1952 other parts of the building programme must suffer correspondingly. Where are the materials and labour resources to be found for the big expansion in housing, or what cuts are to be made elsewhere? These questions have not so far been asked and no answers have yet been volunteered.

## Buildings Illustrated

*Department Store for E. Mayes & Son Ltd., Southampton.* (Pages 706-707.) Architects: Gutteridge & Gutteridge, F.R.I.B.A., (main structure and offices) and Tripe & Wakeham, F./A.R.I.B.A. (interiors). Consultants (services), Sloan & Lloyd Barnes, Quantity surveyors, Lemon & Blizard. General Contractors: Bovis Ltd. Subcontractors: installation of sprinkler system, The Atlas Sprinkler Co.; asphalting tanking and roofing works, Ragusa Asphalte Paving Co.; reinforced concrete floors, Phillips floors; electric light and power installation, W. J. Furse & Co.; central heating and hot water system, Young Austen & Young Ltd.; air conditioning and ventilation equipment and refrigeration plant, Andrew Machine Con. Co.; lifts and escalators, J. & E. Hall Ltd.; lantern lights, metal windows, Henry Hope & Sons Ltd.; structural steelwork, Smith Walker Ltd.; terrazzo work, Arcanum Terrazzo & Stone Co.; shop fronts, E. Pollard & Co. Ltd.; counters, fittings, etc., George Parnell & Co. Ltd.; false ceilings to lower ground, ground and second floors, Gyproc Products Ltd.; beauty parlour construction and equipment, Henry Serventi Ltd.; joinery, Bovis Ltd.

*Pumphouse and Workshops on the Pimlico Housing Scheme, Ranelagh Road, London, S.W.*1. (Pages 708-712.) Architects: Powell & Moya A/A.R.I.B.A.; Assistant Architect, Martin Hurley; Structural Engineers, Scott & Wilson; Resident Engineer, R. C. Buchanan; District Heating Consultants, Kennedy & Donkin; Director of Housing, E. J. Edwards, A.R.I.B.A., F.R.C.S.; Quantity Surveyors, E. C. Harris & Partners; Clerk of Works, E. Perry; General Contractors, Holloway Bros. Ltd.; Sub-Contractors: electrical installation, Troughton & Young Ltd.; ironwork, S. W. Farmer & Son Ltd.; metal windows, patent glazing, Williams & Williams; roofing, The Neuchatel Asphalte Co. Ltd., Everseal Products Ltd.; cork insulation to roof, Elisol Ltd.; bricks, Richard Parton Ltd.; wall tiling, W. B. Simpson & Sons Ltd.; roller shutter, Haskins Ltd.; folding gate, The Bolton Gate Co., The Bostwick Gate & Shutter Co. Ltd.; sunblinds, J. Avery & Co.; asbestos spray, Turner's Asbestos Cement Co. Ltd.; steelwork, Dawnays Ltd.; floor tiling, B. Finch & Co., The National Flooring Co., W. B. Simpson & Sons Ltd.; door furniture, Yannedis & Co. Ltd., metal guardrail, T. W. Palmer & Co. Ltd.; heating & hot water installation, pumphouse plant & transmission & distribution mains, J. Jeffrey & Co. Ltd.; sanitary fittings, J. H. Sankey & Sons Ltd.; heat accumulator insulation, Kenyon & Sons Ltd.; heat accumulator enclosure, Dawnays Ltd.; insulation work, Apex Insulation Ltd.; waterproofing materials, William Briggs Ltd.; water treating plant, Hydrautonomat Ltd.; instrumental & control panel, Electroflow Meters Ltd.; pumps, motors, The Pulsometer Engineering Co.; electrically operated valve, Dewrance & Co.; modulating valve & controls, British Arca Ltd.; heat meters, Elliot Bros. (London) Ltd.; stop valves, Hattersley (Ormskirk) Ltd.; pipes, Stewart and Lloyd; stop valves, Blakeborough & Sons Ltd.; expansion bellows, Aiton & Co. Ltd.; office fittings, Sankey-Sheldon Ltd.

*St. Anne's Secondary School, Overbury Street, Liverpool.* (Pages 713-716.) Architect: A. G. Bullen, F.R.I.B.A. (Weightman & Bullen); Assistant Architects. R. C. Blair, A.R.I.B.A., S. M. Pater-Lancucki, R. H. Miller; Statuary, Tyson Smith; Quantity Surveyors, Todd & Ledson; General Contractor, William Tomkinson & Sons Ltd.; Clerk of Works, Harold E. Snape; General Foreman, Joseph James; Sub-Contractors: asphalt, Penmaenmawr & Trinidad Lake Asphalt Co. Ltd.; reinforced concrete, The Trussed Concrete Steel Co. Ltd.; bricks; Proctor & Lavender Ltd.; artificial stone, Forticrete Ltd.; structural steel, W. J. Douglas & Co. Ltd.; special roofings, roofing felt, William Briggs & Sons Ltd.; glass, Pilkington Bros. Ltd.; woodblock flooring, Dixon Bros. (Bootle) Ltd.; patent flooring, Semtex Ltd.; central heating, Richard Crittall & Co. Ltd.; gasfittings, plumbing, The Merseyside Plumbing Co. Ltd.; electric wiring, McGoff & Vickers Ltd.; sanitary fittings, Associated Clay Industries Ltd.; door furniture, Quiggin Bros. Ltd.; casements, window furniture, The Crittall Manufacturing Co. Ltd.; folding gates, George Lowe & Sons Ltd.; rolling shutters, The Sefton Lift & Shutter Co. Ltd.; plaster, decorative plaster, John Cothliff Ltd.; metalwork, Quiggin Bros. Ltd.; joinery, William Tomkinson & Sons Ltd.; tiling, Bangham & Fleming Ltd.; textiles. Watts & Corry Ltd.; William Tomkinson & Sons Ltd.; cloakroom fittings, Quiggin Bros. Ltd.; clocks, Smiths Ltd.; stage fittings and equipment, Strand Electric & Engineering Co. Ltd.

*Portland Training College at Harlow Wood, Notts.* (Pages 704-705.) Architects: Bromley & Cartwright. The list of sub-contractors is held over due to lack of space.

## Corrections

In our issue for November 29, on page 658, it was stated that the "Finlock" combined gutter and lintel was originally designed by J. L. Womersley, A.R.I.B.A., A.M.T.P.I. This is not correct. Although Mr. Womersley designed the "N"-type profile and gave Finlock Gutters Ltd. permission to use it, the "Finlock" combined lintel and gutter was designed and patented by the firm's managing director—C. W. Snazell. In case the sentence we published saying that "the firm regrets it is unable to cope with *special* requirements" should have been misleading, we have been asked to state, on behalf of Finlock Gutters Ltd., that it can, in fact, cope with all requirements in respect of its *standard* gutters.

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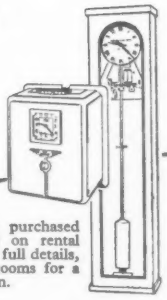

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| Size. | No. per Ton. | Area per Ton. |
|---|---|---|
| 3′ 0″ × 2′ 0″ × 2½″ .. | 13 | |
| 2′ 6″ × 2′ 0″ × 2½″ .. | 15 | |
| 2′ 0″ × 2′ 0″ × 2½″ .. | 19 2½″ thick .. | 8½ yds. super |
| 1′ 6″ × 2′ 0″ × 2½″ .. | 25 | |
| 3′ 0″ × 2′ 0″ × 2″ .. | 15½ | |
| 2′ 6″ × 2′ 0″ × 2″ .. | 18½ | |
| 2′ 0″ × 2′ 0″ × 2″ .. | 23 2″ thick .. | 10 yds. super |
| 1′ 6″ × 2′ 0″ × 2″ .. | 31 | |
| 2′ 6″ × 2′ 0″ × 1½″ .. | 25 | |
| 2′ 0″ × 2′ 0″ × 1½″ .. | 31 1½″ thick .. | 13½ yds. super |
| 1′ 6″ × 2′ 0″ × 1½″ . | 41 | |

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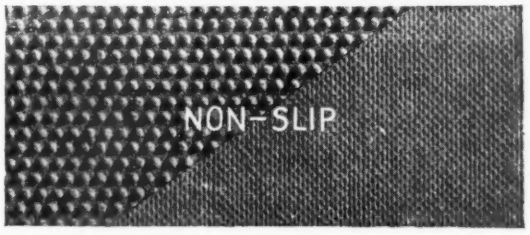


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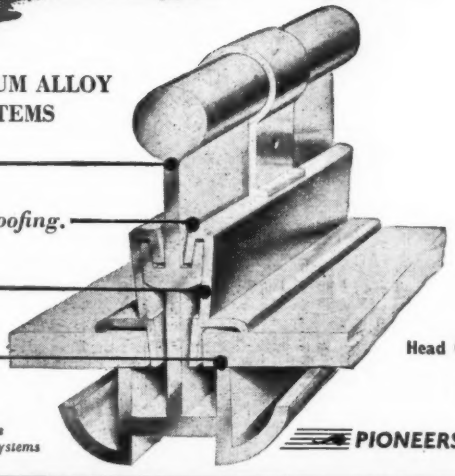

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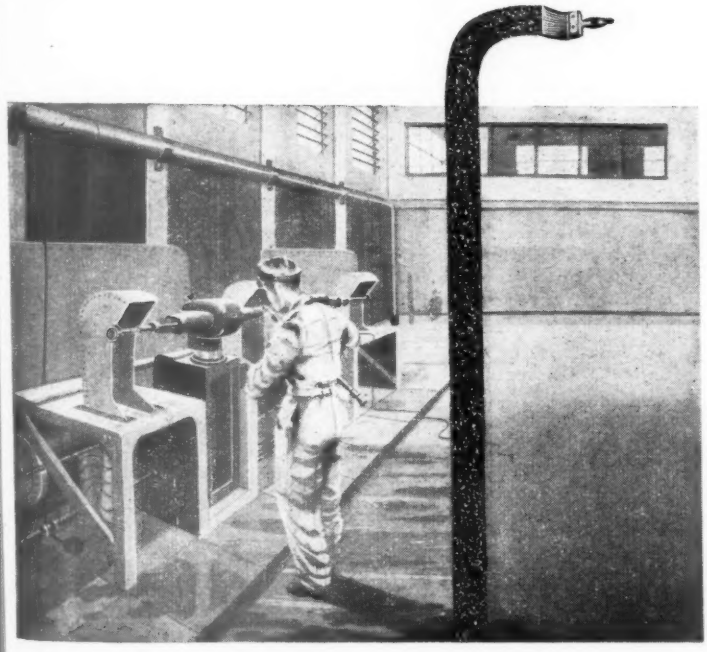

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# CLASSIFIED ADVERTISEMENTS

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

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

## Public and Official Announcements

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

AIR MINISTRY WORKS DEPARTMENT.
HEATING AND VENTILATING DESIGNER/DRAUGHTSMEN required in Designs Branch by Air Ministry Works Department. Applicants should be capable of designing and detailing low and high pressure hot water heating installations or have had several years experience in the design of ventilation and air-conditioning installations. The appointments will normally be in London and salaries are on ranges up to £675 per annum according to age, qualifications, and experience. Applications stating age, qualifications, previous appointments (with dates) should be sent to the Air Ministry Directorate General of Works (W.9), Bush House, S.E. Wing, Strand, London, W.C.2, from which address details may be obtained. 4591

COUNTY BOROUGH OF CROYDON.
SURVEYING ASSISTANT (BUILDING).
Applications are invited from suitably qualified persons for this appointment in the School Architect's Section. Salary A.P.T., III, £500 to £545 p.a., plus London weighting.
Applications, on forms obtainable from the Chief Education Officer, Katharine Street, Croydon (on sending stamped addressed foolscap envelope), must be returned to him by 31st December, 1951.
No living accommodation is offered.
Canvassing will disqualify.
E. TABERNER,
*Town Clerk.*
5012

URBAN DISTRICT OF FELTHAM.
ENGINEER AND SURVEYOR'S DEPARTMENT.
Applications are invited for the under-mentioned established posts in the Engineer and Surveyor's Department:—
(a) TWO ENGINEERING ASSISTANTS (Grade A.P.T., V. Salary £570, rising by two annual increments of £15 and one of £20 to £620 per annum, plus London "weighting"). Applicants must have passed the appropriate Examination of one of the recognised professional bodies qualifying the applicant for this Grade (*e.g.*, Parts A and B of the Institution of Civil Engineers), and have had at least 5 years' experience, including the period spent on theoretical training.
(b) ARCHITECTURAL ASSISTANT (Grade A.P.T., V. Salary as above). Applicants must be Registered Architects.
(c) BUILDING INSPECTOR (Grade A.P.T., II. Salary £470, rising by annual increments of £15 to £515 per annum, plus London "weighting"). Applicants must have a sound knowledge of building construction and of the application of the Building Byelaws, and should have had experience with a local authority in a similar position.
The appointments will be subject to (i) the passing satisfactorily of a medical examination, (ii) the National Scheme of Conditions of Service, (iii) the provisions of the Local Government Superannuation Acts, and (iv) one month's notice in writing on either side.
Forms of application may be obtained from the undersigned, to whom they should be returned, accompanied by copies of two recent testimonials, not later than 4th January, 1952. Canvassing, directly or indirectly, will disqualify, and applicants must disclose, in writing, whether, to their knowledge, they are related to any member of or the holder of any senior office under the Council.
M. W. COUPE,
*Clerk of the Council.*
Council Offices, Feltham, Middlesex. 5014

CITY OF BRADFORD.
JUNIOR PLANNING ASSISTANTS.
Post Nos. 55 and 58.
Applications are invited for the appointment of Two Junior Planning Assistants, at a salary within the range of Grades A.P.T., I-IV, *i.e.*, £440-£575 per annum. The appointment will be made strictly in accordance with the National Scheme of Conditions of Service on the appropriate grade, depending on qualifications and experience.
Applicants should have passed the Intermediate Examination of at least one of the following bodies: Inst.C.E., Inst.Mun.E., R.I.B.A., T.P.I., or equivalent. Some experience in the preparation of development plans would be an advantage.
Successful candidates would have an opportunity of experience in other sections of the department dealing with Highways, Drainage, Architectural Experience in connection with Housing, according to their qualifications and ability.
The appointment is subject to Local Government Superannuation Act, 1937, including medical examination. Application forms, to be obtained from the City Engineer and Surveyor, must be returned quoting post number and giving details of experience, together with not more than three testimonials, to the undersigned not later than 24th December, 1951. Canvassing will disqualify.
No housing accommodation can be provided.
W. H. LEATHEM,
*Town Clerk.*
Town Hall, Bradford. 5045

HARROW URBAN DISTRICT COUNCIL.
ENGINEER AND SURVEYOR'S DEPARTMENT.
Applications are invited for the under-mentioned appointments in the Department of the Engineer and Surveyor:—
(1) ARCHITECTURAL ASSISTANT, A.P.T., Grades IV/V. Salary scale, £530-£620 per annum, plus London "weighting." Applicants should be students of the Royal Institute of British Architects and have had at least six years' full-time school and/or office experience. Duties comprise the preparation of drawings and specifications and the supervision of works on housing and general municipal schemes.
(2) ARCHITECTURAL ASSISTANT, A.P.T., Grade IV. Salary scale, £530-£575 per annum, plus London "weighting." Office experience is essential, and preference will be given to applicants holding recognised professional qualifications. Duties include the preparation of drawings and specifications, and supervision of works on new buildings and work of maintenance and repair.
(3) ARCHITECTURAL ASSISTANT, A.P.T., Grades I/II. Salary scale, £440-£515 per annum, plus London "weighting." Applicants should be students of the Royal Institute of British Architects or equivalent standard and must be neat and expeditious draughtsmen.
(4) QUANTITY SURVEYING ASSISTANT, A.P.T., Grades I/II. Salary scale, £440-£515 per annum, plus London "weighting." Applicants should be experienced in the preparation of bills of quantities, measurement of variation and settlement of final accounts.
The Council is unable to assist in obtaining housing accommodation for successful candidates.
The appointments will be subject to the provisions of the Local Government Superannuation Act, 1937, to the passing of a medical examination and to the National Joint Council's Scheme of Conditions of Service.
Canvassing will be a disqualification.
Forms of application may be obtained from the undersigned, to whom they should be returned not later than Friday, 28th December, 1951.
H. WELLS,
*Clerk of the Council*
Council Offices,
Harrow Weald Lodge,
Harrow, Middlesex. 5039

BOROUGH OF NUNEATON.
QUALIFIED ARCHITECTURAL ASSISTANT required. Grade A.P.T. V (£570-£620 p.a.). Housing accommodation provided. Particulars from Town Clerk, Council House, Nuneaton. 5040

LONDON COUNTY COUNCIL.
ARCHITECT'S DEPARTMENT.
ARCHITECTS required for construction programmes, schools, housing and general. Starting salaries up to £638, according to experience. Applicants should have passed Final R.I.B.A. Particulars and application forms from Architect, The County Hall, S.E.1, enclosing s.a.e. quoting AR/EK/A.2.(1266) 4893

BOROUGH OF WORTHING.
BOROUGH ENGINEER'S DEPARTMENT.
TOWN PLANNING ASSISTANT.
Applications are invited for the above appointment at a salary in accordance with A.P.T., III, of the National Joint Council's Scale of Salaries, i.e., £500-£545 per annum.
Candidates should have had previous experience in the planning department of a local authority, be expeditious draughtsmen, and preference will be given to persons holding an Intermediate qualification of a recognised Institution.
The appointment will be subject to the National Scheme of Conditions of Service of Local Government Officers; to the provisions of the Local Government Superannuation Act, 1937; and to the successful candidate passing satisfactorily a medical examination. The appointment will be terminable by one month's notice on either side.
Applications, endorsed "Town Planning Assistant," stating age, qualifications, experience, and previous and present appointments, and accompanied by copies of not more than three recent testimonials, should be delivered to the Borough Engineer, Town Hall, Worthing, not later than noon on Friday, 21st December, 1951.
ERNEST G. TOWNSEND,
*Town Clerk.*
Town Hall, Worthing.
30th November, 1951. 5052

CITY OF WAKEFIELD.
CITY ENGINEER'S DEPARTMENT.
SENIOR QUANTITY SURVEYOR. GRADE A.P.T., Va-VI.
Applications are invited for the above appointment. Candidates must be Members of the Royal Institution of Chartered Surveyors (Quantities) or the Institute of Quantity Surveyors.
The appointment will be subject to the Local Government Superannuation Act, 1937, and to the passing of a medical examination.
Candidates should state in writing whether they are to their knowledge related to any member or senior official of the Corporation. Canvassing will disqualify.
Applications, endorsed "Senior Quantity Surveyor," stating age, qualifications, present and previous appointments and details of experience, together with the names of two referees, should be sent to me not later than the 31st December, 1951.
W. S. DES FORGES,
*Town Clerk.*
30th November, 1951. 5044

COUNTY COUNCIL OF ESSEX.
COUNTY ARCHITECT'S DEPARTMENT.
Applications are invited for the following appointment on the Established Staff:—
SECTIONAL ASSISTANT ARCHITECT, Grade IX. A.P.T.D., to be in charge of a group of other Assistant Architects in the School Buildings Section. Salary at a rate of not exceeding £910 a year. Candidates should be Members of the Royal Institute of British Architects. Work projected includes Primary and Secondary Schools, Colleges, and any other buildings required for education purposes.
In fixing the commencing salary regard will be had to the experience and qualifications of the successful candidate.
Applications must be made on a form obtainable from the County Architect, Mr. H. Conolly, F.R.I.B.A., at the address stated below, and when completed the form, accompanied by copies of not more than three recent testimonials, should be returned to reach him not later than 28th December, 1951.
Canvassing, either directly or indirectly, is forbidden.
JOHN E. LIGHTBURN,
*Clerk of the County Council.*
County Hall, Chelmsford, Essex.
December, 1951. 5057

SURREY COUNTY COUNCIL.
EDUCATION COMMITTEE.
KINGSTON SCHOOL OF ART, KNIGHTS PARK, KINGSTON-UPON-THAMES, SURREY.
Applications are invited for posts as PART-TIME TEACHERS of the following subjects in the Department of Architecture:—
(1) Acoustics and Sound Control, and
(2) Structural Mechanics to Final R.I.B.A. Examination standard.
Salary will be in accordance with the Surrey County Council (Further Education) Scale for part-time teachers.
Applications are also invited for registration for future vacancies as part-time Lecturers. Practical and teaching experience is desirable but not essential.
Applications by letter should be forwarded to the Registrar. 5058

METROPOLITAN BOROUGH OF FULHAM.
HOUSING AND PUBLIC BUILDINGS DEPARTMENT.
Applications are invited to fill the following vacancies in the Architectural and Quantity Surveying sections:—
*ARCHITECTS:*
(a) PRINCIPAL ASSISTANT (A.P.T., Grade VII. £685×£25—£760 per annum, plus London weighting).
(b) SENIOR ASSISTANT (A.P.T., Grade VI, £645×£20(2)×£25(1)—£710 per annum, plus London weighting).
(c) ARCHITECTURAL ASSISTANT (A.P.T., Grade II. £470×£15—£515 per annum, plus London weighting).
For posts (a) and (b) applicants should be Registered Architects, experienced in planning and designing large schemes of flats, handling jobs and dealing with contracts.
For post (c) applicants should be up to R.I.B.A. Intermediate Examination standard and have experience in preparing working drawings.
*QUANTITY SURVEYORS:*
(d) SENIOR ASSISTANT (A.P.T., Grade V, £570×£15(2)×£20(1)—£620 per annum, plus London weighting).
(e) QUANTITY SURVEYOR'S ASSISTANT (A.P.T., Grade II/III. £470×£15—£545 per annum, plus London weighting).
Applicants must be experienced for post (d) in re-measuring and settling final accounts for large schemes and be able to "take-off" for small contracts, and for post (e) in "working-up."
Applications, on forms obtainable from me, should be returned not later than 29th December, 1951.
CYRIL F. THATCHER,
*Town Clerk.*
Town Hall, Fulham, S.W.6. 5059

ISLE OF ELY COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.
Applications are invited for the undermentioned appointments on the staff of the County Architect:—
(a) FIRST ASSISTANT ARCHITECT, Grade A.P.T. VI (£645-£710 per annum).
(b) JUNIOR ARCHITECTURAL ASSISTANT, Grade Miscellaneous I-III (£285-£415 per annum).
(c) JUNIOR ASSISTANT, Heating and Engineering Section. Salary in General Division, rising to £425 per annum at 30 years of age.
The appointments are permanent and are subject to the provisions of the National Scheme of Conditions of Service, the Local Government Superannuation Act, 1937, and to the passing of a medical examination.
Applications for (a) are to be made on form of application obtainable from the County Architect, County Hall, March, and must be accompanied by copies of not less than two recent testimonials.
Applications for (b) and (c) stating age, education and experience are to be made in the applicant's own handwriting and should be accompanied by copies of not less than two recent testimonials.
Applications for all posts must reach the County Architect not later than Monday, 7th January, 1952.
R. F. G. THURLOW,
*Clerk of the County Council.*
County Hall, March.
4th December, 1951. 5062

CITY OF BRADFORD.
SENIOR ASSISTANT ARCHITECT.

Applications are invited for the appointment of Senior Assistant Architect (Post No. 156), in the City Engineer and Surveyor's Department, at a salary in accordance with Grade A.P.T., VIII, of the National Scales, *i.e.*, £735-£810 per annum.

The department has a large housing programme in hand and the work involved in the design and construction of housing estates, houses, flats, shops, etc., as well as the planning problems associated with central area redevelopment, offer many opportunities for a well qualified assistant architect with a sound knowledge of contemporary design and construction.

The appointment is subject to the Local Government Superannuation Act, 1937, including medical examination. Application must be made to the City Engineer and Surveyor for form of application (quoting post number), to be returned together with details of experience, and not more than three testimonials to the undersigned not later than 24th December, 1951. Canvassing will disqualify.

No housing accommodation can be provided.

W. H. LEATHEM,
*Town Clerk.*

Town Hall, Bradford. 5046

CITY OF MANCHESTER EDUCATION COMMITTEE.
REGIONAL COLLEGE OF ART, MANCHESTER.
*Principal*: JOHN M. HOLMES, Dip. Fine Art (Lond.).
SCHOOL OF ARCHITECTURE.

Applications are invited for the appointment of a full-time STUDIO INSTRUCTOR in the School of Architecture. Candidates must be Associates of the R.I.B.A. and should have had teaching and office experience. An all-round knowledge of the theory and practice of architecture is essential.

Salary in accordance with the Assistants' Scale, Grade B, of the Burnham Further Education Report, 1951.

Application forms and conditions of appointment may be obtained (stamped, addressed, foolscap envelope) from the Chief Education Officer, Education Offices, Deansgate, Manchester, 3, to whom completed applications should be returned by not later than 22nd December, 1951. 5043

BATTERSEA BOROUGH COUNCIL.
SENIOR ASSISTANT ARCHITECT.

Applications are invited for this appointment, which is subject to N.J.C. Service Conditions and L.G. Sup. Act, 1937. Salary £735×£25 to £810 (A.P.T., VIII), plus London weighting. Candidates for the appointment must be Members of the R.I.B.A. Apply to Borough Engineer, Town Hall, Battersea, S.W.11, for particulars and application form, to be completed and returned by 31st December next. 5070

COUNTY BOROUGH OF SOUTHAMPTON.
BOROUGH ENGINEER & SURVEYOR'S DEPARTMENT.

Applications are invited for the following appointment:—

ASSISTANT ARCHITECT. Grade A.P.T. VI (£645-£710).

Applicants must have had experience in housing design, layout, construction, and the administration of contracts, and must be Associate Members of the Royal Institute of British Architects.

The appointment will be subject to the Scheme of Conditions of Service of the National Joint Council for Local Authorities for Administrative, Technical, Professional and Clerical Services; to the Local Government Superannuation Act, 1937; to the successful applicant passing a medical examination and to termination by one month's notice on either side.

Applications stating age, experience, qualifications and war service (if any) together with copies of three recent testimonials, should be submitted to the Borough Engineer and Surveyor, Civic Centre, Southampton, not later than Tuesday, 1st January, 1952.

R. RONALD H. MEGGESON,
*Town Clerk.*

Civic Centre, Southampton.
December, 1951. 5063

CITY OF PLYMOUTH.
CITY ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointments on the established staff, subject to the Conditions of Service of the National Joint Council for Local Authorities, Administrative, Professional, Technical and Clerical Services; the Local Government Superannuation Act, 1937; a satisfactory medical examination, and one month's notice on either side for termination.

(*a*) SENIOR ASSISTANT QUANTITY SURVEYOR, Grade VI (£645 to £710).

(*b*) ASSISTANT QUANTITY SURVEYOR, Grade II (£440 to £515).

(*c*) ASSISTANT QUANTITY SURVEYOR, Grade I (£440 to £485).

Applicants for (*a*) should be Members of the Royal Institution of Chartered Surveyors (Sub-Division III Quantities).

Applicants for (*b*) should have had experience in the measurement of works on site, and preference will be given to persons who have passed the Intermediate Examination (Quantities Sub-Division) of the Royal Institution of Chartered Surveyors.

Applicants for (*c*) must be capable of squaring abstracting dimensions, and will be expected to give general assistance in the preparation of Bills of Quantities and settlement of accounts. Candidates must not be over 40 years of age, but this condition may be released in the case of a person up to 45 years of age employed by another Local Authority.

Applications on forms obtainable from the undersigned, accompanied by copies of not more than three recent testimonials and/or names of persons to whom reference may be made, should be received at my office not later than Friday, the 4th January, 1952.

The Corporation may make housing accommodation available to the successful married candidates if required.

H. J. W. STIRLING, A.R.I.B.A.,
*City Architect.*

Seymour Road, Plymouth. 5074

CITY AND COUNTY OF NEWCASTLE-UPON-TYNE.
CITY ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointments in the Quantity Surveyor's Section:—

(*a*) ONE SENIOR ASSISTANT QUANTITY SURVEYOR. A.P.T. Division, Grade VI (£645-£710).

(*b*) ONE ASSISTANT QUANTITY SURVEYOR. A.P.T. Division, Grade V (£570-£620).

(*c*) ONE ASSISTANT QUANTITY SURVEYOR. A.P.T. Division, Grade IV (£530-£575).

Applicants must have had experience in the preparation of Bills of Quantities, Specifications, Estimates, and the settlement of Final Accounts on all kinds of building contracts. For appointment (*a*) preference will be given to professional Associates of the Royal Institution of Chartered Surveyors.

The appointments will be subject to the National Conditions of Service as adopted by the City Council, to the provisions of the Local Government Superannuation Act, 1937, and to one month's notice on either side. Successful candidates will be required to pass a medical examination.

Applications, stating position applied for, particulars of training, qualifications, experience, present and past appointments, together with copies of two recent testimonials or the names and addresses of two persons to whom reference may be made, should be addressed to George Kenyon, A.R.I.B.A., A.M.T.P.I., City Architect, 18, Cloth Market, Newcastle-upon-Tyne, 1, not later than the 12th January, 1952.

JOHN ATKINSON,
*Town Clerk.*

Town Hall, Newcastle-upon-Tyne, 1.
7th December, 1951. 5072

BOROUGH OF WALLSEND.

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

(*a*) ARCHITECTURAL ASSISTANT. A.P.T., Grade IV (£530-£575).

(*b*) ENGINEERING ASSISTANT. A.P.T., Grade III (£500-£545).

(*c*) ENGINEERING ASSISTANT. A.P.T., Grade II (£470-£515).

Candidates for appointment (*a*) should have Intermediate Examination R.I.B.A. or equivalent, and have experience in housing and other architectural work.

Candidates for appointment (*b*) should have Intermediate Examination Institution of Municipal Engineers or equivalent, and with experience in housing development, Highways and Sewerage.

Candidates for appointment (*c*) should have had practical training in Municipal Engineering, including surveying and levelling.

The appointments will be subject to the terms of the National Joint Council's Conditions of Service and to the Local Government Superannuation Act, 1937. Canvassing will be deemed a disqualification, and applicants must disclose whether they are related to any member or senior officer of the Council.

Applications, in envelopes suitably endorsed, stating age, qualifications and experience, together with copies of not more than three testimonials, to be received by the undersigned not later than Monday, 14th January, 1952.

CHAS. E. BRADBURY,
*Town Clerk.*

Town Hall, Wallsend. 5071

## Architectural Appointments Vacant

*4 lines or under, 7s. 6d.; each additional line, 2s.*

ASSISTANT ARCHITECTS.—Imperial Chemical Industries Limited, General Chemicals Division, require one or two Assistant Architects in the Architectural Section of their Chief Engineer's Department, Runcorn. Applicants should have had good experience in design and the preparation of working drawings. Other factors being equal, preference will be given to those who have passed the Final Examination of the R.I.B.A. Salary dependent on age and experience. Membership of pension fund. Apply in writing, quoting E/81, to Staff Manager, Imperial Chemical Industries Limited, General Chemicals Division, Cunard Building, Liverpool, 3. 4678

ILFORD, LTD., require ARCHITECTURAL ASSISTANTS, capable of work up to Intermediate standard R.I.B.A., and experienced in industrial construction work. Five-day working week, with pension scheme and staff canteen in operation. Applications in writing, giving age, training and experience, to Chief Staff Architect, Ilford, Ltd., Romford, Essex. 4979

ARCHITECTURAL DRAUGHTSMEN, up to Inter. R.I.B.A. standard, required, Westminster area. Write, stating experience and salary, to Box 5056.

CADBURY BROTHERS LIMITED require an Architectural Assistant with knowledge of industrial design, able to assist with a large new factory on which construction is now commencing. Write, stating age, experience and salary required to E.M.A., Cadbury Brothers Limited, Bournville. 5041

ARCHITECTURAL ASSISTANT required, with experience in Housing and Industrial Design. R.I.B.A. Intermediate standard. Send full particulars and salary required to Sydney Greenwood, A.R.I.B.A., 33, Bunns Lane, Mill Hill, N.W.7. 5047

ARCHITECTURAL ASSISTANT required, age 25 to 30 years, for Architect's Department in London Brewery. Experienced in Factory alterations and general maintenance. Please write, stating experience, salary required, etc., to Box 5050.

ARCHITECTURAL ASSISTANT required, age 30 to 40 years, for Architect's Department in London Brewery. Experienced in Factory alterations and general maintenance. Please write, stating experience, salary required, etc., to Box 5051.

IMPERIAL CHEMICAL INDUSTRIES, LTD., Plastics Division, requires an ARCHITECTURAL ASSISTANT in the Engineering Department at Welwyn Garden City. Applicants should have passed the Intermediate Examination of the Royal Institute of British Architects, and it would be to advantage if they had spent a few years in an Architect's office. Staff Pension Fund. 5-day—39 hour week. Write for application form to Staff Manager, I.C.I., Ltd., Plastics Division, Black Fan Road, Welwyn Garden City, Herts. 5048

ASSISTANT ARCHITECT wanted, with view to possible future partnership. Busy country practice in West Kent. Must be good draughtsman, and preferably interested in restoration of old buildings, farm conversions, etc. Apply, stating age, experience and salary required. Box 5066.

SENIOR ARCHITECTURAL ASSISTANTS required for offices in London and Solihull. Varied work, mainly industrial. Write, with full particulars and stating which office preferred, to Hasker & Hall, Architects, 55, Queen Anne Street, W.1. 5054

## Architectural Appointments Wanted

ASSISTANT (34), 14 years' varied experience in N. Ireland and England requires position in contemporary office, Belfast or London. Box 316.

F.R.I.B.A. wishes to contact reputable firm of architects in either S. and E. Africa, Australia, New Zealand, Canada, with a view to obtaining a responsible position as Senior Assistant Architect, preferably with prospects of future partnership. Minimum salary required: £1,800. Able to take up appointment early in the New Year. Box 5031.

WANTED immediately in Architect's office (S.W. Coastal area) INTERMEDIATE ASSISTANT, with all-round experience. Applicants should have knowledge of contemporary design, be capable of making surveys and preparing simple specifications.—Reply, giving full details, if married, when available, and salary required, to Box 5060.

CHIEF ASSISTANT (40), with 18 years' experience in office administration, hospital, industrial and domestic work, requires position of responsibility in office of London Architect. Box 320.

B.ARCH., A.R.I.B.A. (25), single, 3 years' Architectural and Planning experience, requires post where practical experience of as many aspects as possible of Architectural Practice may be obtained. Box 321.

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