THE ARCHITECTS' JOURNAL

No. 3065] [VOL. 118

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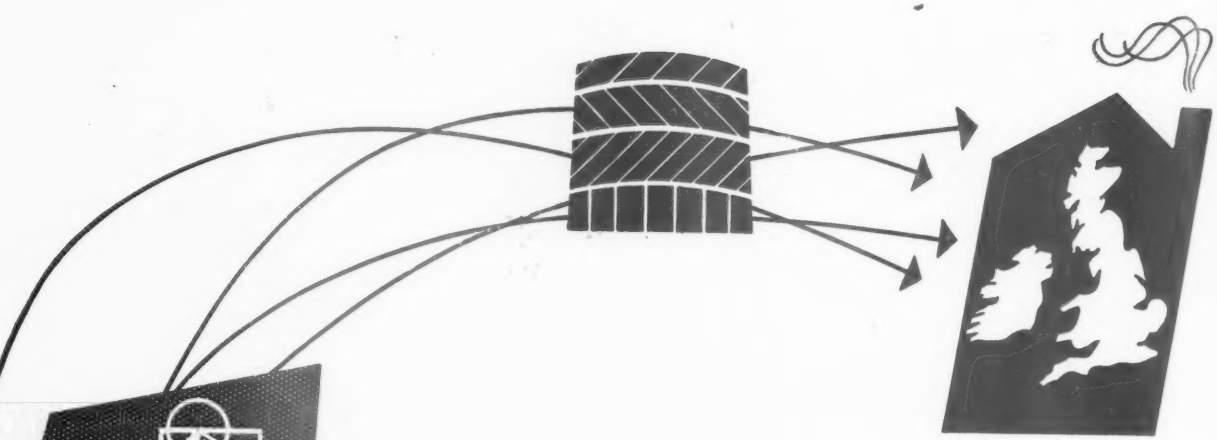
★ A glossary of abbreviations of Government Departments and Societies and Committees of all kinds, together with their full address and telephone numbers. The glossary is published in two parts—A to Ie one week, Ig to Z the next. In all cases where the town is not mentioned the word LONDON is implicit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

AA	Architectural Association, 34/6, Bedford Square, W.C.1.	Museum 0974
AAI	Association of Art Institutions. Secy. : W. Marlborough Whitehead, " Dyneley," Castle Hill Avenue, Berkhampstead, Herts.	
ABS	Architects' Benevolent Society. 66, Portland Place, W.1.	Langham 5721
ABT	Association of Building Technicians. 5, Ashley Place, S.W.1.	Victoria 0447-8
ACGB	Arts Council of Great Britain. 4, St. James' Square, S.W.1.	Whitehall 9737
ADA	Aluminium Development Association. 33, Grosvenor Street, W.1.	Mayfair 7501/8
APRR	Association for Planning and Regional Reconstruction. 34, Gordon Square, W.C.1.	Euston 2158-9
ArchSA	Architectural Students' Association. 34/36, Bedford Square, W.C.1.	
ARCUK	Architects' Registration Council. 68, Portland Place, W.1.	Langham 8738
BAE	Board of Architectural Education. 66, Portland Place, W.1.	Langham 5721
BATC	Building Apprenticeship and Training Council. Lambeth Bridge House, S.E.1.	Reliance 7611, Ext. 1706
BC	Building Centre. 26, Store Street, Tottenham Court Road, W.C.1.	Museum 5400
BCC	British Colour Council. 13, Portman Square, W.1.	Welbeck 4185
BCCF	British Cast Concrete Federation. 105, Uxbridge Road, Ealing, W.5.	Ealing 9621
BCIRA	British Cast Iron Research Association. Alvechurch, Birmingham.	Redditch 716
BDA	British Door Association. 10, The Boltons, S.W.10.	Fremantle 8494
BEDA	British Electrical Development Association. 2, Savoy Hill, W.C.2.	Temple Bar 9434
BIA	British Ironfounders' Association. 145, Vincent Street, Glasgow, C.2.	Glasgow Central 2891
BIAE	British Institute of Adult Education. 29, Tavistock Square, W.C.1.	Euston 5385
BID	Building Industries Distributors. 52, High Holborn, W.C.1.	Chancery 7772
BINC	Building Industries National Council. 11, Weymouth Street, W.1.	Langham 2785
BOT	Board of Trade. Millbank, S.W.1.	Whitehall 5140
BRDB	British Rubber Development Board. Market Buildings, Mark Lane, E.C.3.	Mansion House 9383
BRS	Building Research Station. Bucknalls Lane, Watford.	Garston 2246
BSA	Building Societies Association. 14, Park Street, W.1.	Mayfair 0515
BSI	British Standards Institution. British Standards House, 2, Park St , W.1.	Mayfair 9000
BTE	Building Trades Exhibition. 4, Vernon Place, W.C.1.	Holborn 8146/7
CABAS	City and Borough Architects Society. C/o Johnson Blackett, F.R.I.B.A., Civic Centre, Newport, Mon.	Newport 5491
CAS	County Architects' Society. C/o F. R. Steele, F.R.I.B.A., County Hall, Chichester.	Chichester 3001
CCA	Cement and Concrete Association. 52, Grosvenor Gardens, S.W.1.	Sloane 5255
CCP	Council for Codes of Practice. Lambeth Bridge House, S.E.1.	Reliance 7611
CDA	Copper Development Association. Kendals Hall, Radlett, Herts.	Radlett 5616
CIAM	Congrès Internationaux d'Architecture Moderne. Doldertal, 7, Zurich, Switzerland.	
COID	Council of Industrial Design. Tilbury House, Petty France, S.W.1.	Abbey 7080
CPRE	Council for the Preservation of Rural England. 4, Hobart Place, S.W.	Sloane 4280
CUC	Coal Utilization Council. 3, Upper Belgrave Street, S.W.1.	Sloane 9116
CVE	Council for Visual Education. 13, Suffolk Street, Haymarket, S.W.1.	Reading 72255
DGW	Directorate General of Works, Ministry of Works, Lambeth Bridge House, S.E.1.	Reliance 7611
DIA	Design and Industries Association. 13, Suffolk Street, S.W.1.	Whitehall 0540
DPT	Department of Overseas Trade. Horseguards Avenue, Whitehall, S.W.1.	Trafalgar 8855
EJMA	English Joinery Manufacturers' Association (Incorporated), Sackville House, 40, Piccadilly, W.1.	Regent 4448
EPNS	English Place-Name Society. 7, Selwyn Gardens, Cambridge.	
FAS	Faculty of Architect and Surveyors. 8, Buckingham Palace Gdns., S.W.1.	Sloane 2837
FASS	Federation of Association of Specialists and Sub-Contractors, Artillery House, Artillery Row, S.W.1.	Abbey 7232
FBBDO	Fibre Building Board Development Organisation, Ltd., Melbourne House, Aldwych, W.C.2.	Temple Bar 4561
FBI	Federation of British Industries. 21, Tothill Street, S.W.1.	Whitehall 6711
FC	Forestry Commission. 25, Savile Row, W.1.	
FCMI	Federation of Coated Macadam Industries. 37, Chester Square, S.W.1.	Sloane 1002
FDMA	The Flush Door Manufacturers Association Ltd. Trowell, Nottingham.	Ilkeston 623
FLD	Friends of the Lake District. Pennington House, nr. Ulverston, Lancs.	Ulverston 201
FMB	Federation of Master Builders. 26, Great Ormond Street, Holborn, W.C.1.	Chancery 7583
FPC	The Federation of Painting Contractors, St. Stephen's House, S.W.1.	Whitehall 3902
FRHB	Federation of Registered House Builders. 82, New Cavendish Street, W.1.	Langham 4041
FS (Eng.)	Faculty of Surveyors of England. 67, Oxford Street, W.1.	Gerrard 0021
GC	Gas Council. 1, Grosvenor Place, S.W.1.	Sloane 4554
GG	Georgian Group. 27, Grosvenor Place, S.W.1.	Sloane 2844
HC	Housing Centre. 13, Suffolk Street, Pall Mall, S.W.1.	Whitehall 2881
IAAS	Incorporated Association of Architects and Surveyors. 75, Eaton Place, S.W.1.	Sloane 5615
ICA	Institute of Contemporary Arts. 17-18, Dover Street, Piccadilly, W.1.	Grosvenor 6186
ICE	Institution of Civil Engineers. Great George Street, S.W.1.	Whitehall 4577
IEE	Institution of Electrical Engineers. Savoy Place, W.C.2.	Temple Bar 7676
IES	Illuminating Engineering Society. 32, Victoria Street, S.W.1.	Abbey 5215



A combined operation . . .

The total consumption of Fuel and Power in the United Kingdom during 1951 has been estimated at 214,200,000 tons of coal or coal equivalent. Of this total it is estimated that 60,400,000 tons were used for domestic purposes.

The possible total yearly consumption visualised for the years 1959-1963 in the "Ridley" Report is 248,400,000 tons, of which 66,300,000 tons are allocated to domestic use. (The latter figure included an estimated increase from 700,000 to 1,100,000 in the tonnage of oil fuel used).

This estimate of future domestic consumption is based on the assumption that population will increase by 1 million by 1961, that efficiency of fuel will increase by 5%, and that heat comfort per head will increase by 10%.

Leaving aside the question whether these figures are satisfactory, it is clear that to achieve a balance between desirable standards of heat comfort and the amount of extra fuel likely to be available will require careful planning by all concerned with the pattern of national fuel usage.

The Gas Industry stands ready to play its part in what must be a combined operation, not only by supplying Gas and Coke where these are considered to provide the best answer to a problem, but also by placing the knowledge and experience of its technicians freely at the service of all who wish to secure high standards of heating with economy of fuel.

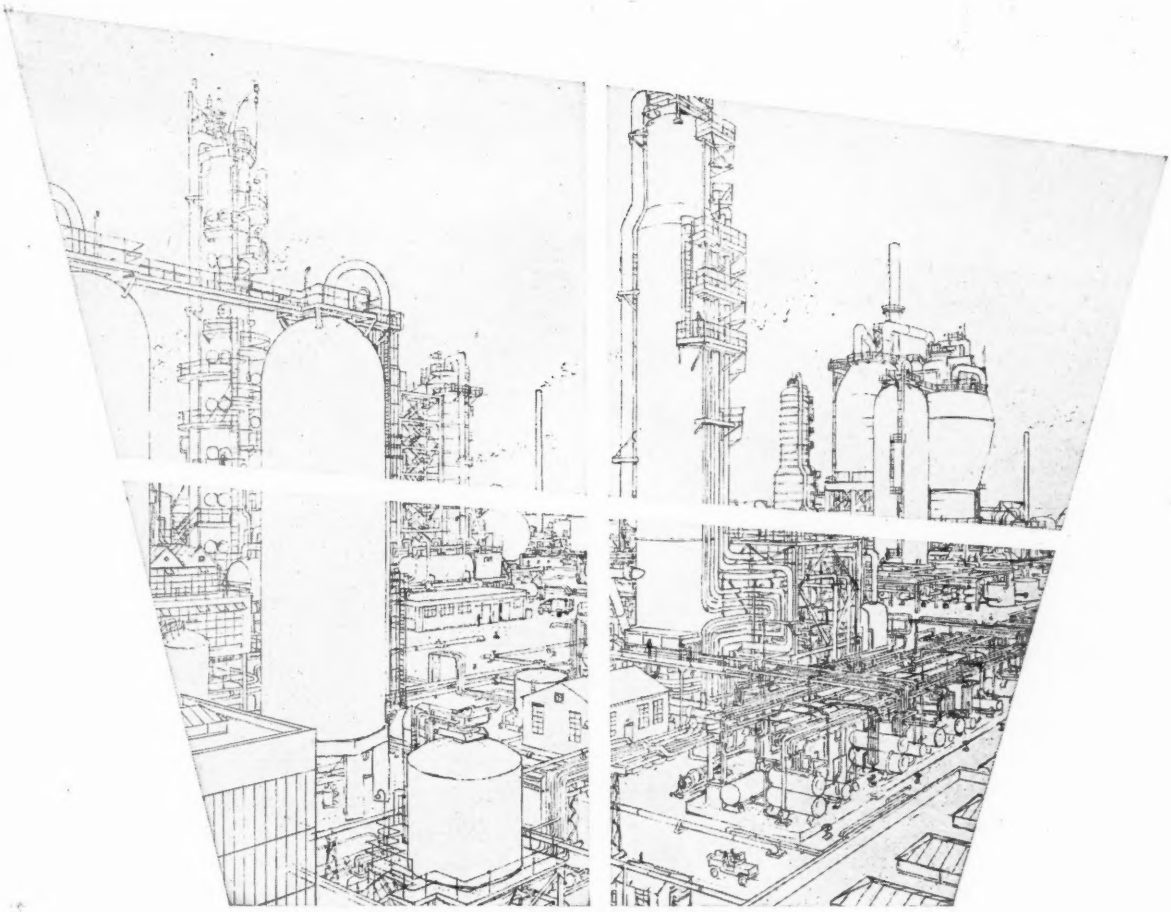
Where to go for information about Gas

If you are considering the use of Gas, however tentatively, your first move should be to get in touch with the Gas Undertaking serving the area in which the job is situated. Through it you have access to the combined technical resources of the entire Gas Industry. The following list gives the addresses and telephone numbers of the Area Boards. Where there is any uncertainty as to which Area Board is concerned, The Gas Council will be pleased to give you the correct address.

Scottish Gas Board: 26, Drumsheugh Gardens, Edinburgh, 3. Edinburgh 34331/5. *Northern Gas Board:* 30, Grainger Street, Newcastle-upon-Tyne, 1. Newcastle-upon-Tyne 26101. *North Western Gas Board:* Bridgewater House, 60, Whitworth Street, Manchester, 1. Manchester Central 8121. *North Eastern Gas Board:* Bridge Street, Leeds, 2. Leeds 32571/4. *East Midlands Gas Board:* Beverley House, University Road, Leicester. Leicester 23201/5. *West Midlands Gas Board:* 6, Augustus Road, Edgbaston, Birmingham, 15. Edgbaston 3616. *Wales Gas Board:* 1 and 2, Windsor Place, Cardiff. Cardiff 28621. *Eastern Gas Board:* 2, The Abbey Garden, London, S.W.1. Trafalgar 5373/7. *North Thames Gas Board:* 30, Kensington Church Street, London, W.8. Western 8141. *South Eastern Gas Board:* Katharine Street, Croydon, Surrey. Croydon 4466. *Southern Gas Board:* 164, Above Bar, Southampton. Southampton 76362. *South Western Gas Board:* 9a, Quiet Street, Bath. Bath 60411/5.

BUILDING TRADES EXHIBITION
OLYMPIA
November 18 — December 2, 1953
National Hall
ROW P **STAND No. 300**

Issued by The Gas Council, 1 Grosvenor Place, London, S.W.1.
Telephone: Sloane 4554
GC 21



Count the oil refineries with Williams & Williams windows

. . . and steel doors and door frames: Coryton and Fawley, Isle of Grain, Grangemouth, Llandarcy, Thornton, Shellhaven, Stanlow, Birkenhead—to mention only those in Britain. There are more abroad, making 30 in all. For in the oil industry as in so many other industries, one good job has led to another . . . and another.

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WILLIAMS & WILLIAMS

MEMO: *Steel is free. You can arrange quick delivery of metal windows by contacting any of our 19 offices in Great Britain. Each office will also give you personal service, estimating, technical co-operation and supply fixing teams on site. Williams & Williams Ltd., Reliance Works, Chester*

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Synthaprufe is extremely adhesive. This means that it forms a perfect, lasting seal over the whole of the surface to which it is applied.

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Besides being ideal for waterproofing and jointing, Synthaprufe makes a highly efficient damp course for walls, both inside and out, and is a recognized treatment where damp is already present. It also makes a very effective sandwich layer in concrete subfloors; it is a completely reliable adhesive for fixing linoleum and wood-block floors; and it makes an excellent mechanical key for plaster finishes over old glazed or painted brick walls, as in hospitals and institutions.

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contains **rubber**

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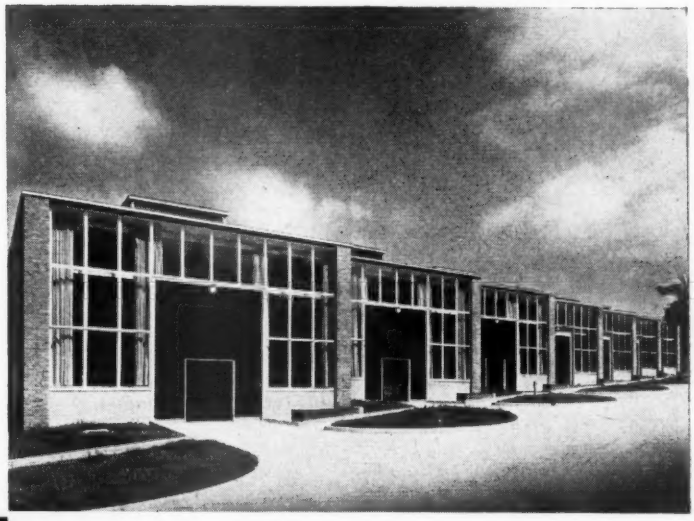
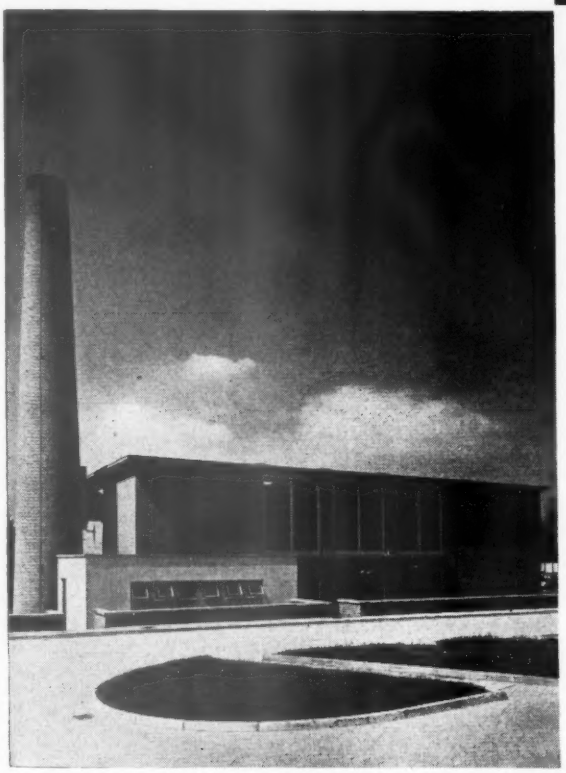
Synthaprufe is a product of British coal. Further details, and advice on any technical problem, will gladly be given on application to the National Coal Board, By Products, National Provincial Bank Buildings, Docks, Cardiff.

Pilot-scale laboratories and central boiler house at the Building Research Station, Garston, Watford, Hertfordshire





for the Directorate of Scientific & Industrial Research.

Architect : A. C. Hopkinson

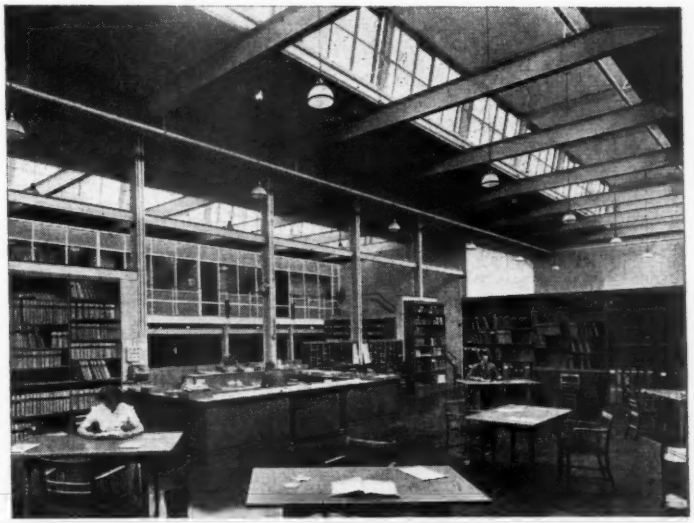
M.A., F.R.I.B.A., A.M.T.P.I.

General Contractors

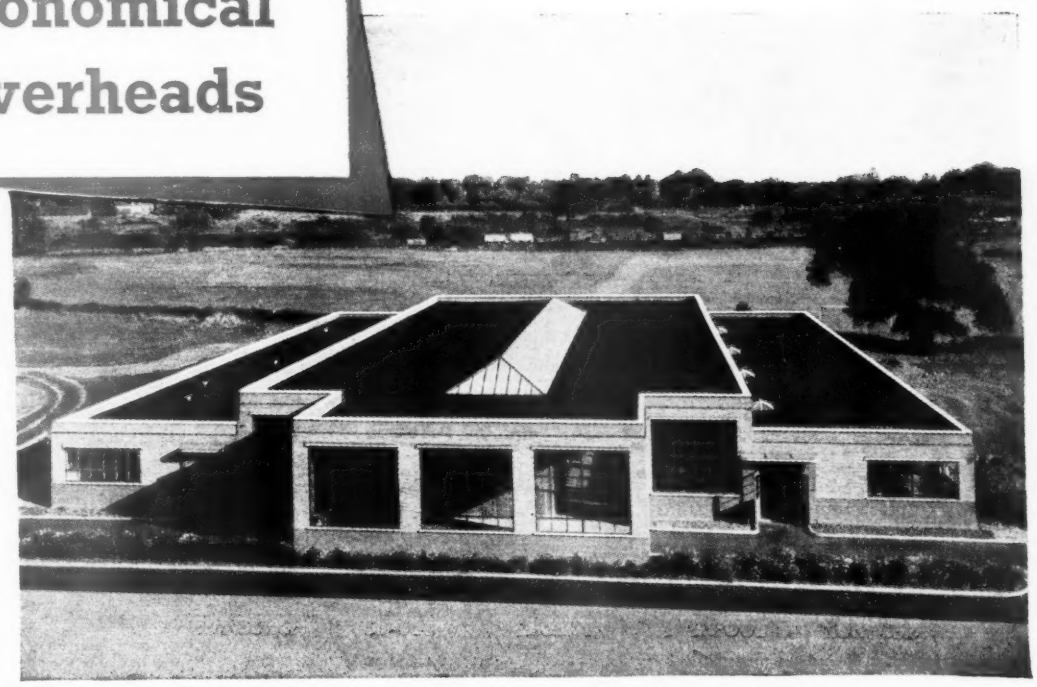
Haymills (Contractors) Ltd.

Hanger Green, Western Avenue, London, W.5

'phone Perivale 5602



Economical Overheads



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Every Briggs Roof is designed to endure . . . year after year defying sun, rain, frost . . . production increased by efficient insulation, valuable plant permanently protected from the weather and completely sealed from draught, dust or soot.

Briggs Roofs comprise :—

Bitumetal—An Aluminium Deck providing ceiling and roof.

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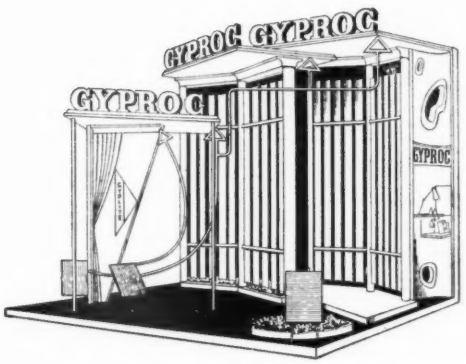
Flooring 'Standards' by HOLLIS

GYPROC *at the* BUILDING EXHIBITION



Among the Company's latest developments to be seen on our **STAND No. G149, GRAND HALL,** *are . . .*

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The angles between the wall and ceiling surfaces are finished with GYPROC Cove which presents a concave profile and consists of a gypsum core encased in an ivory coloured millboard liner. GYPROC Cove was designed to provide a ceiling finish at low cost to combine both simplicity of fixing and ease of handling with a decorative value which at once lends dignity to any room. It is ideally suitable for concealing the cracks which so often blemish the junction of wall and ceiling and can be decorated with any type of distemper or paint in the same manner as the ivory surface of GYPROC Wallboard.

ACOUSTIC "GYPROC"

A specially prepared, perforated, fire-protective gypsum plasterboard, shown on the Stand in ceiling constructions. The perforations, both circular or slotted, are deliberately spaced to provide the correct admission of sound to a sound absorbent backing. Acoustic GYPROC has an ivory surface for immediate decoration.

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A high-grade, lightweight, fire-resistant gypsum plasterboard conforming to British Standard 1230 : 1945.

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"GYPLITE"

Also displayed is the previously exhibited ready mixed vermiculite/gypsum insulating plaster known hitherto as 'ZONAPLAX' but now to be marketed under the new brand name **"GYPLITE".**

Makers of PARISTONE *Browning Plaster (Haired, Unhaired and Metal Lathing Grades),* PARISTONE *Wall Finishing Plaster,* CRETESTONE *Concrete Bonding Plaster,* GYPSTONE *Board Finishing Plaster.* GYPLITE *Vermiculite Insulating Plaster (Undercoat and Finishing Grades).*

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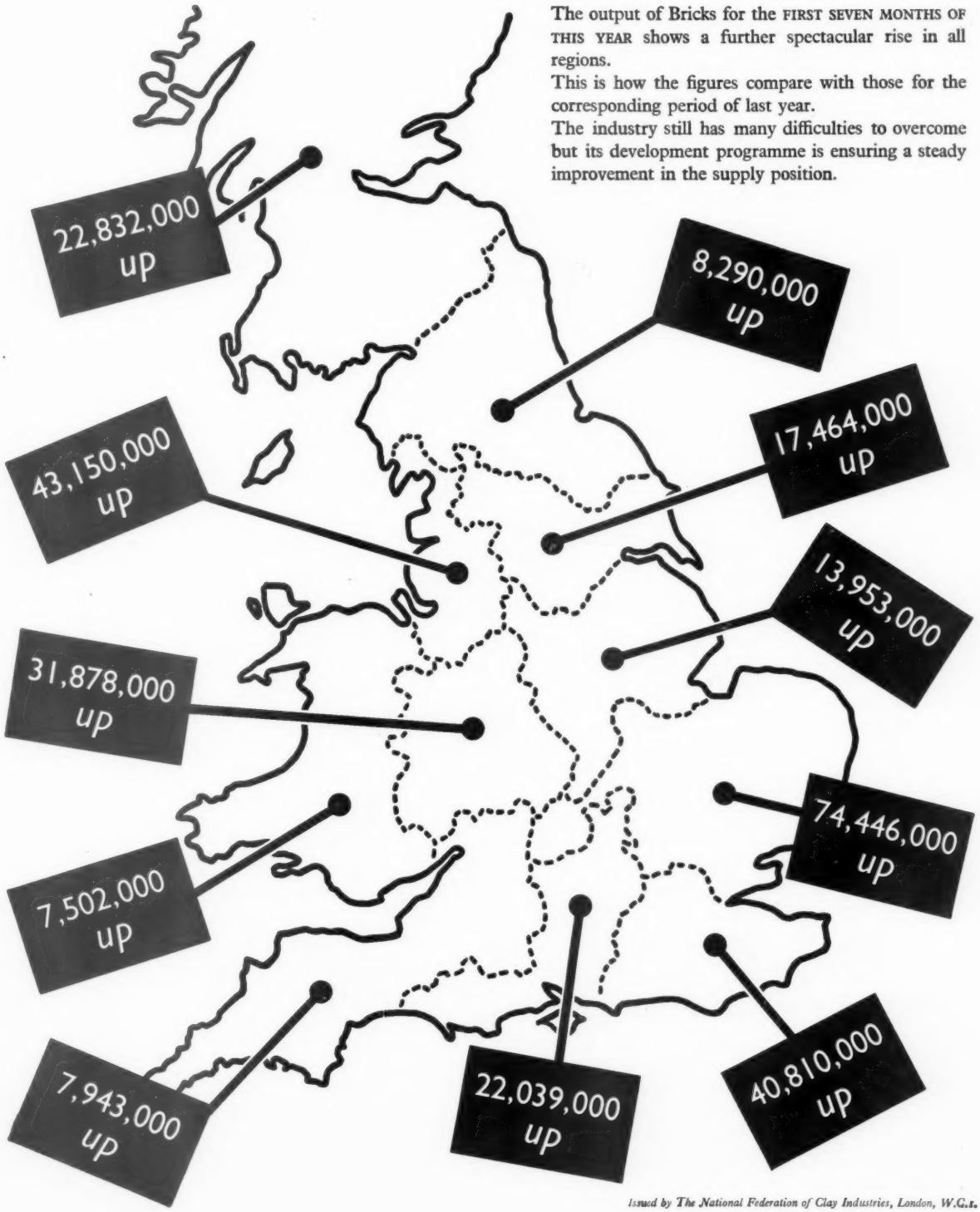
Millions more BRICKS

The output of Bricks for the FIRST SEVEN MONTHS OF THIS YEAR shows a further spectacular rise in all regions.

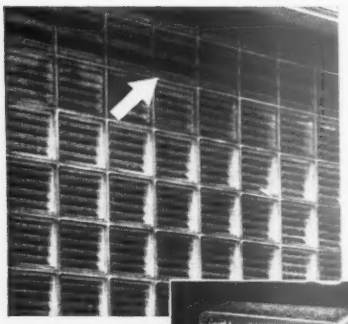
This is how the figures compare with those for the corresponding period of last year.

The industry still has many difficulties to overcome but its development programme is ensuring a steady improvement in the supply position.



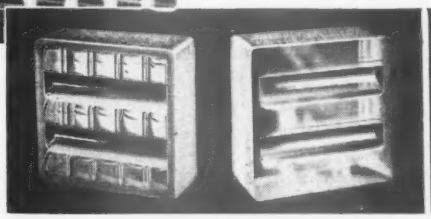
Issued by The National Federation of Clay Industries, London, W.C.1.

Now Available from Local Stockists

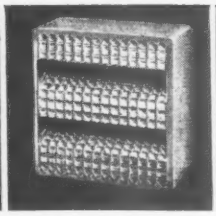


THE CLARK-EATON ALL-GLASS 'VENTIBLOCK'

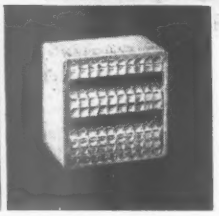
VENTILATION for HOLLOW GLASS BLOCK INSTALLATIONS



Type 3—7¼" × 7¼" × 3⅛"



Type 32—7¼" × 7¼" × 3⅛"



Type 2—5⅛" × 5⅛" × 3⅛"

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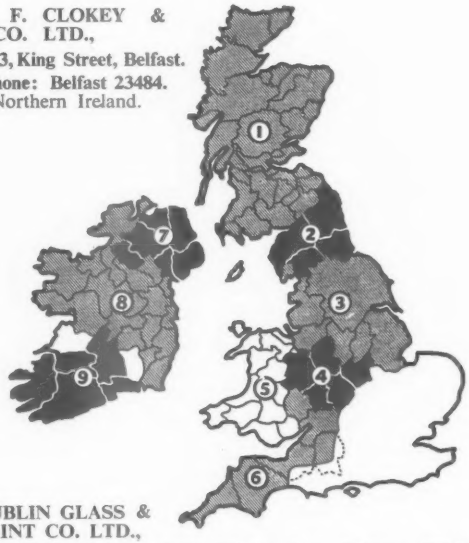

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Enquiries from areas not included above should be sent to the nearest branch of:—

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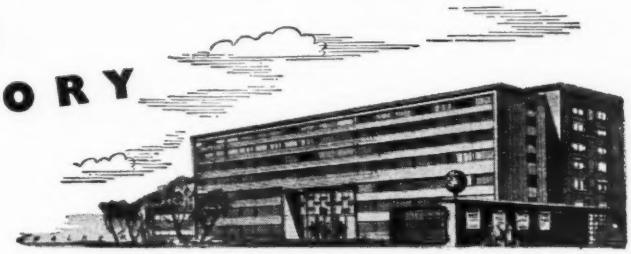
EASTBOURNE: Waterworks Road. Telephone: 3980 (2 lines).
READING: Basingstoke Road. Telephone: 81681 (2 lines).
OXFORD: 6, Hockmore Street, Cowley. Telephone: 77455.

PLIMBERITE

WOOD CHIPBOARD

IN OFFICE AND FACTORY



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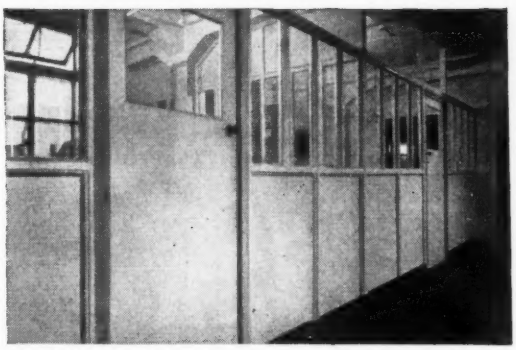
Speed up your conversion work with Plimberite and cut partitioning costs. A sheet (8 ft. x 4 ft. in thicknesses of ½" and ¾") of this versatile resin-bonded wood chipboard cuts readily to fit any angle, thus saving you time, trouble and money. Manufactured under heat and pressure to a density of 50 lbs/ cu. ft., Plimberite is rigid, flameproof, with good sound and thermal insulating qualities. Moisture movement and load tests, carried out on Plimberite by the Department of Scientific and Industrial Research prove its stability and strength. The surface of Plimberite, so ideal for painting, is also suited, because of its pleasing appearance, to staining, waxing and varnishing. To ensure best decorative results, ask for specifications of various finishes. Complete technical data on Plimberite is available from the manufacturers.



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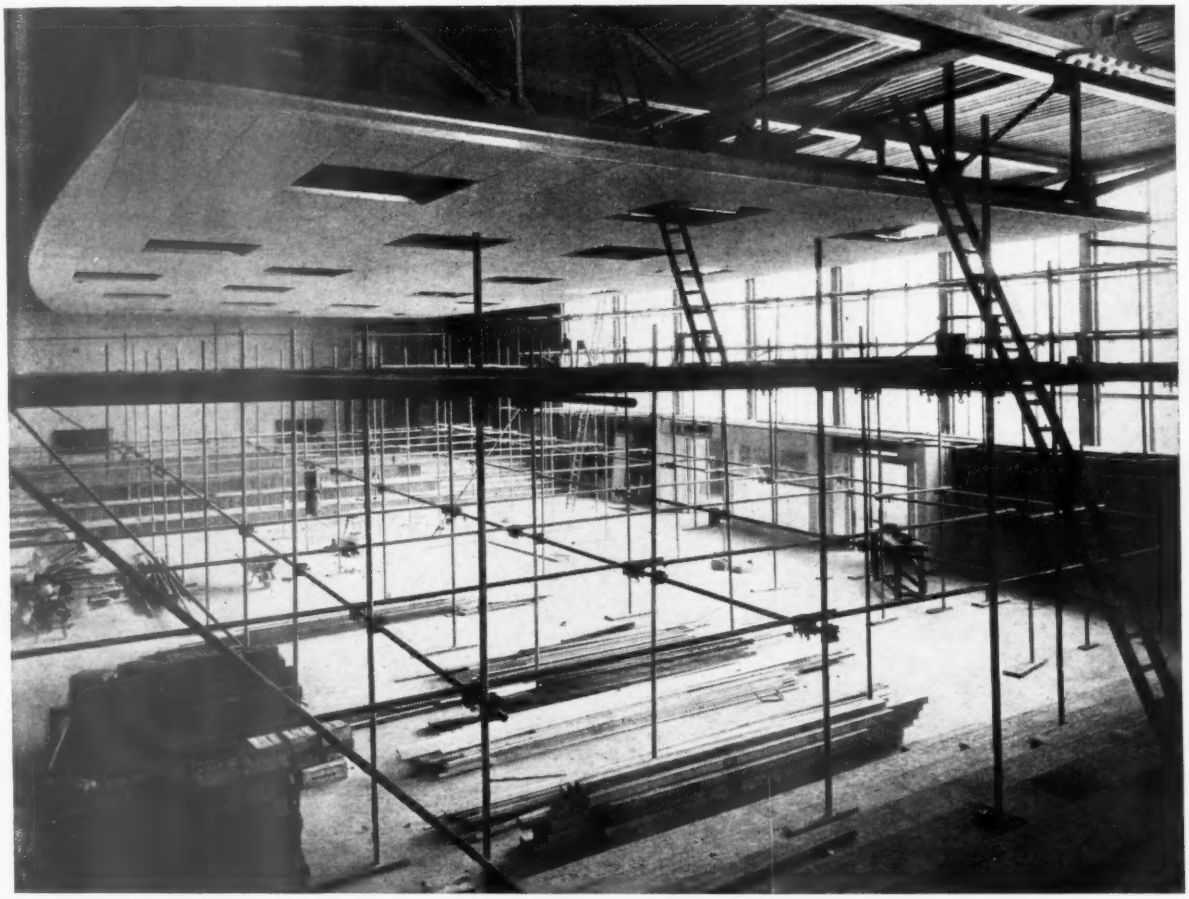
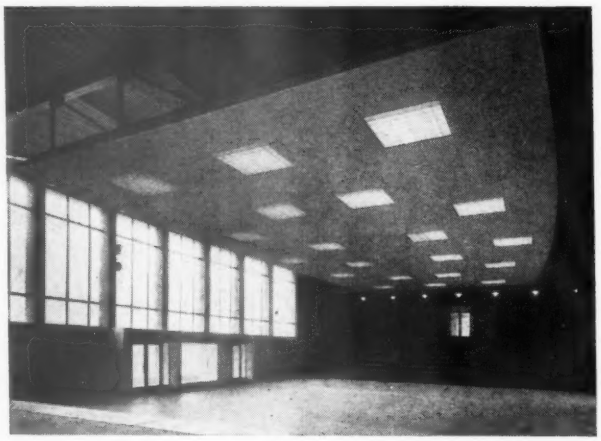


A Functional Ceiling

Copland S.M. School, Wembley, Middx.
County Architect: C. G. Stillman, F.R.I.B.A.



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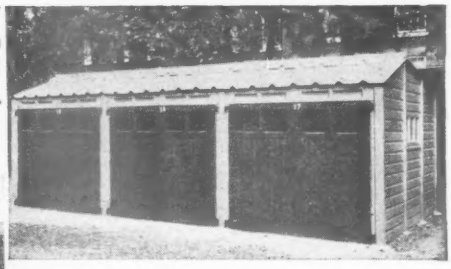

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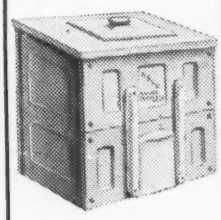

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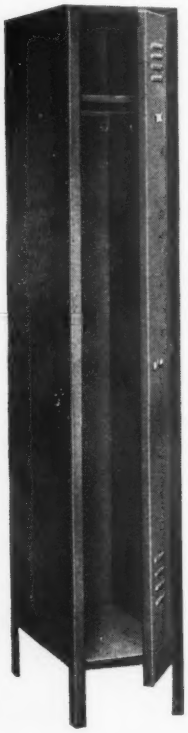

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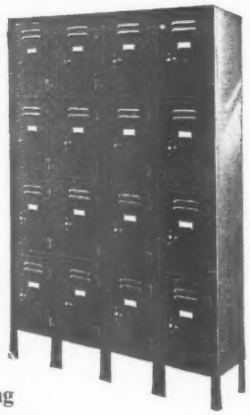

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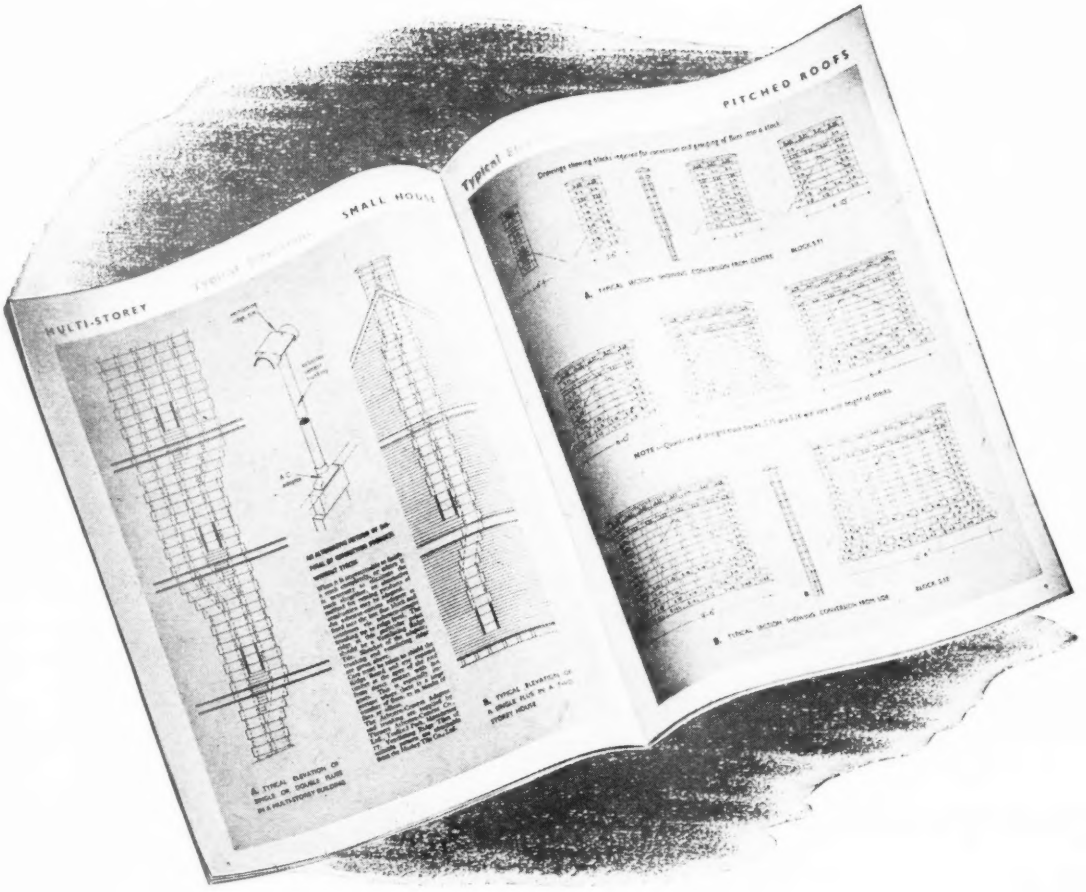

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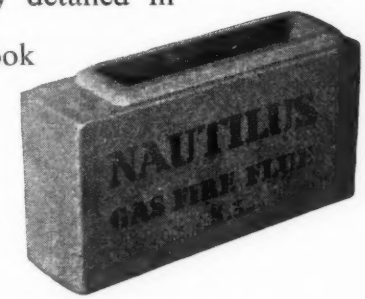

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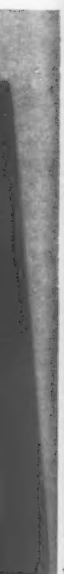

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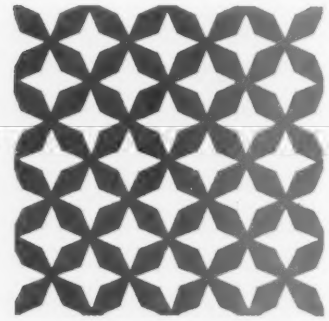

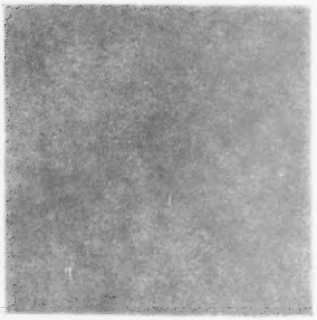

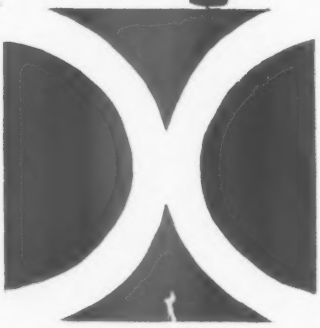

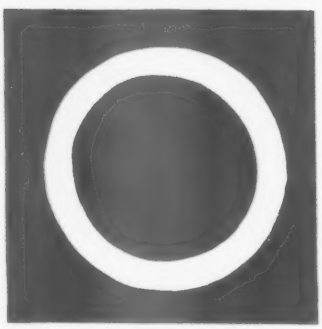

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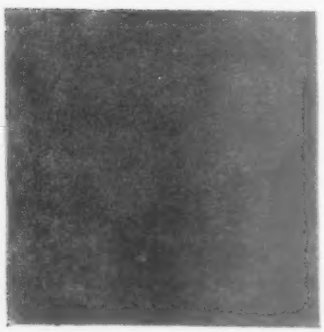
School buildings have become a field for experiment but the new techniques continue the demand for ceramic materials. These do an excellent job on walls and floors and their colours and textures will be just as fresh when Johnnie is a grandfather. The possibilities of patterned tiles, faience or mosaic are almost unlimited. A few copies of the Carter Quarterly on Schools are still available.



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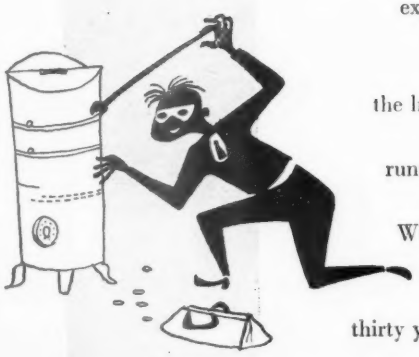

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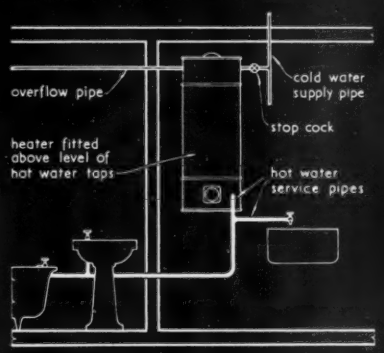

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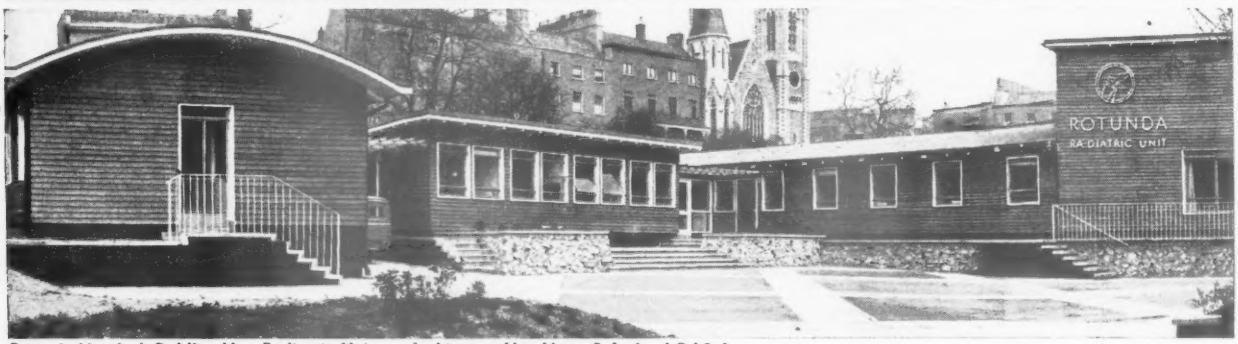
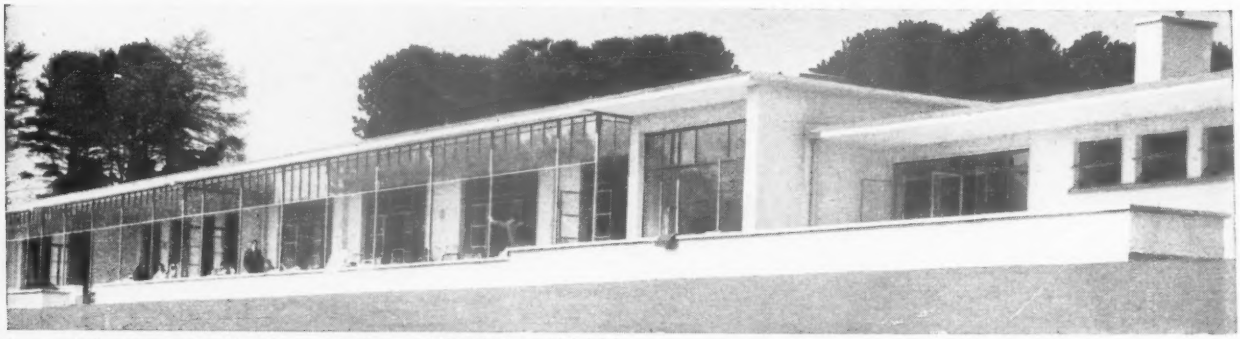


Rotunda Hospital, Dublin: New Radiatric Unit. Architect: Alan Hope, B.Arch., A.R.I.B.A.



Newcastle Sanatorium, Co. Wicklow. Architect: Alfred Phillips, M.R.I.A.I.

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Ferodo Stairtreads at Bentalls' Kingston-on-Thames

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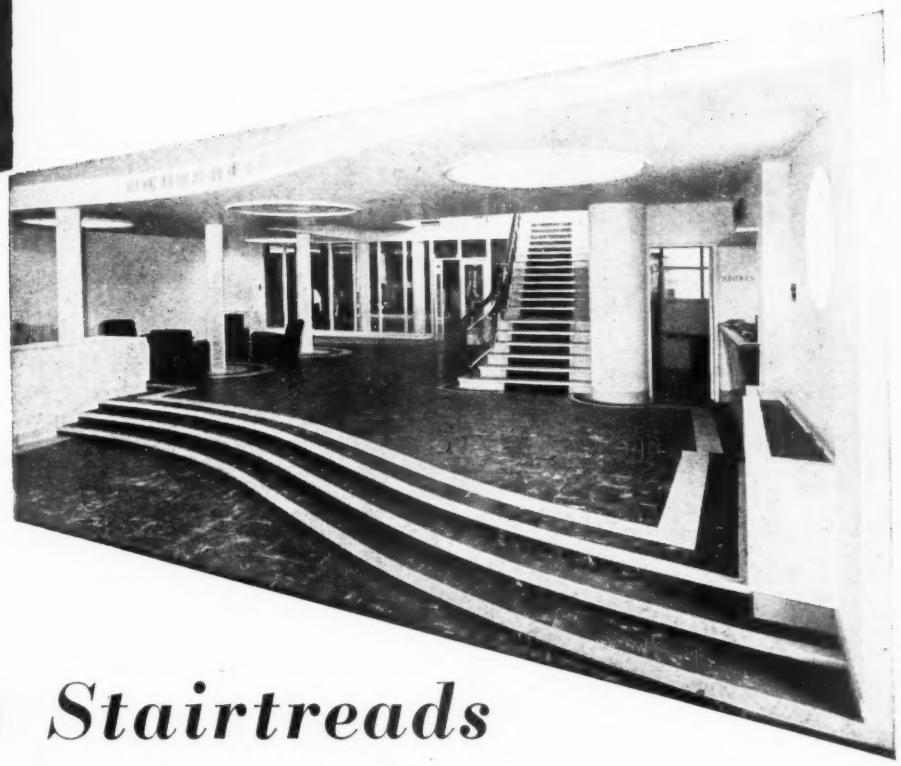

Lea Valley Growers Association, Waltham Cross.
Flooring Contractors: Semtex Ltd.
Architect: Howard Leicester F.R.I.B.A.

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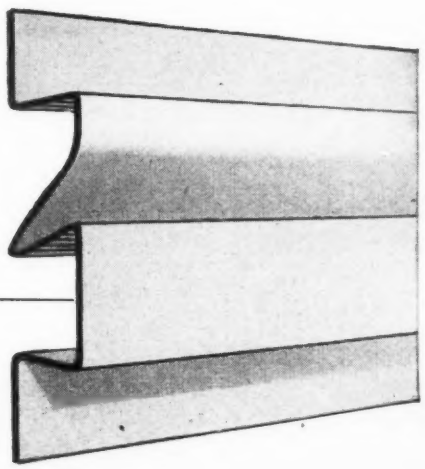

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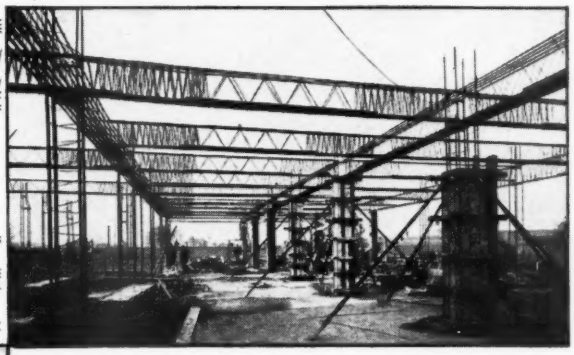

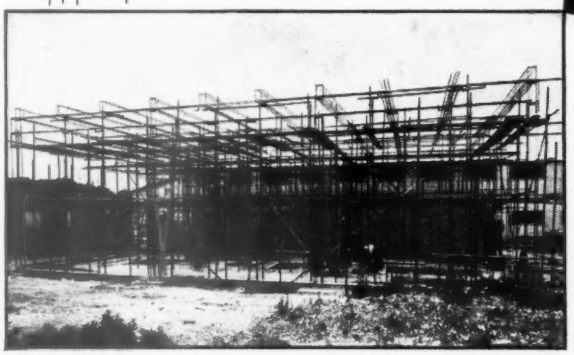

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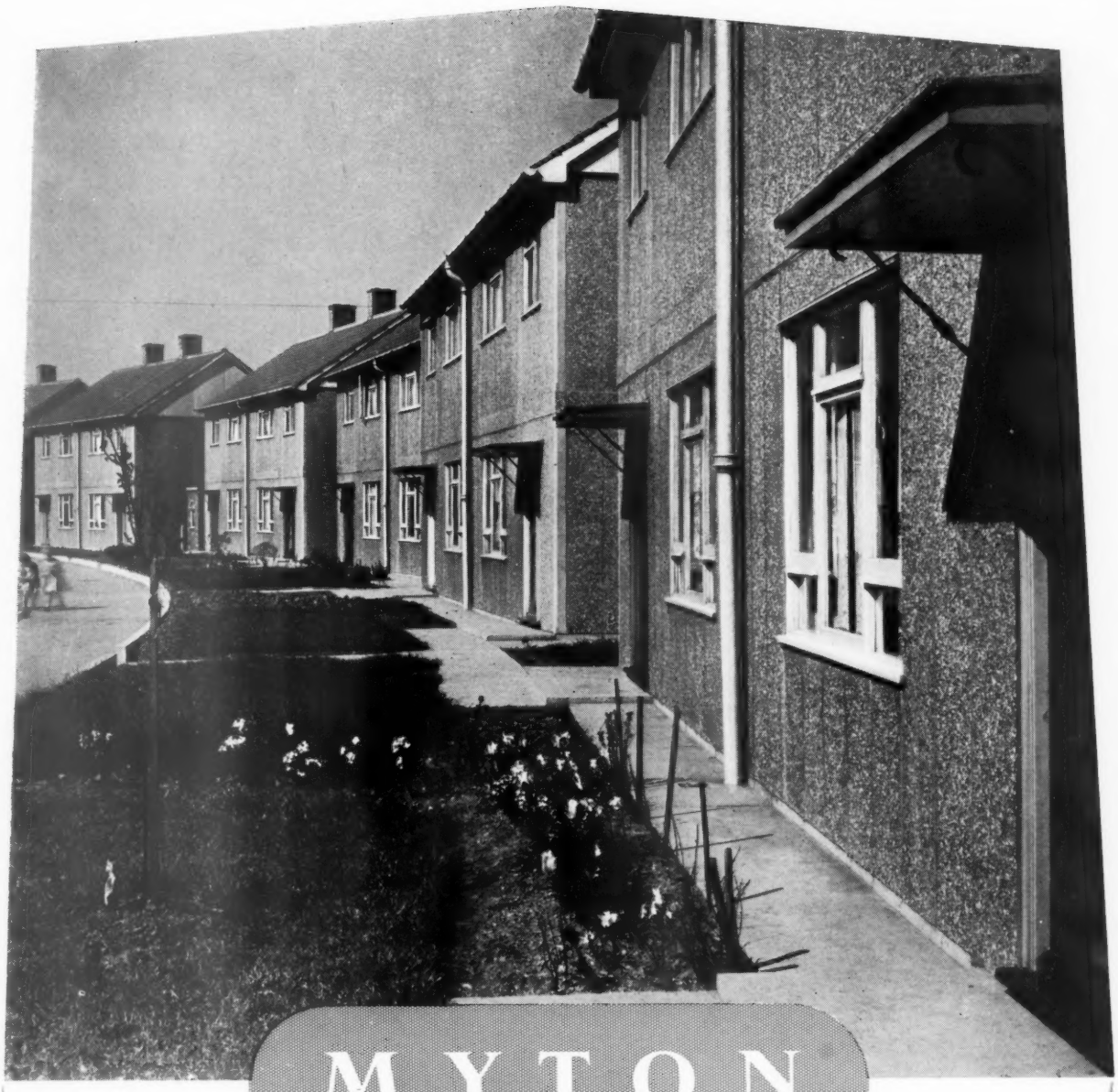

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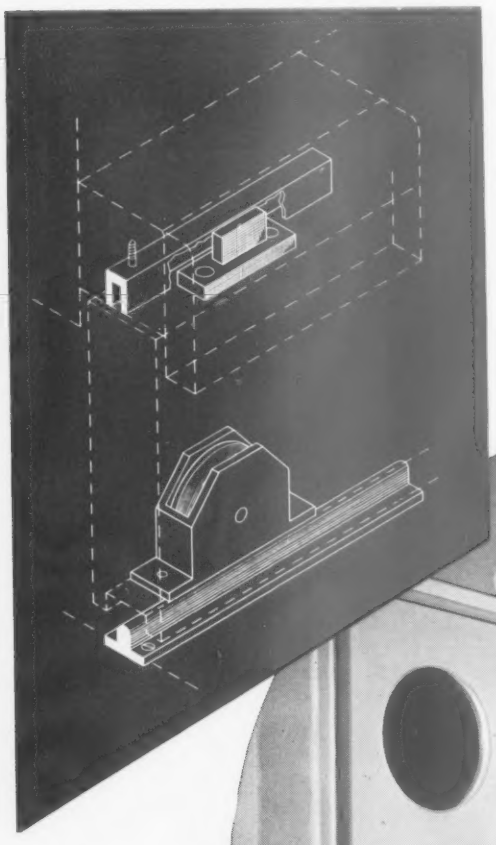

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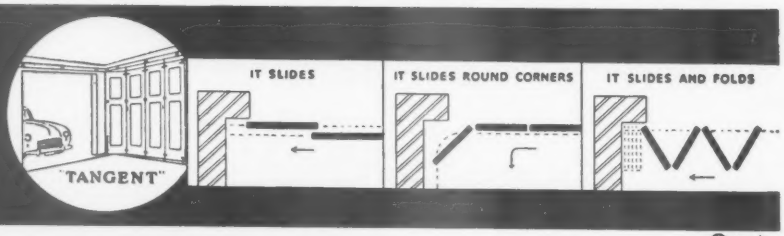

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THE ARCHITECTS' JOURNAL

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

No. 3065 November 26, 1953 VOL. 118

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BIGGER AND (SLIGHTLY) BETTER

Very few architects see the Building Exhibition (unless they are lucky enough to come to London from very remote and lonely parts), because before they have glanced at more than a handful of stands they meet a jolly nice chap they haven't seen for years and—in the time it takes to raise an elbow—they are gazing, not at a stand, but at the bottom of a glass before one of the many bars. These fixed stares do help to reduce slightly the congestion in the gangways (which are, I'm told, narrower than ever this year), and enable one to catch occasional glimpses of the stands themselves.

*

The quality of the design of the stands is higher than last time—mostly, of course, in the slick, string-plane-and-knitting-needle style, and all the real *bon-ton* are on two-storey affairs. It will soon, perhaps, be possible for the JOURNAL to contemplate photographing only those stands which stand out because they are so appallingly *bad*. When this happy day comes the days of cream-and-green and moderne chunkiness will surely be numbered, and some precise historian will be tolling their passing by gathering material for a neat exposition on moderne-ity to be published in the *Architectural Review*.

*

Of all the ugly, or unfashionable, stands, perhaps that of Adamsez, Ltd., lingers longest in the mind. This is because, in startling contrast to the stand, the exhibits—within the limits of their sanitary nature—are so graceful and so much in advance, in design, of those of rival firms. If this contrast has been made deliberately to ensure attracting the attention of the passer-by, my confidence in my fellowmen, and in the modern movement, is gravely shaken.

*

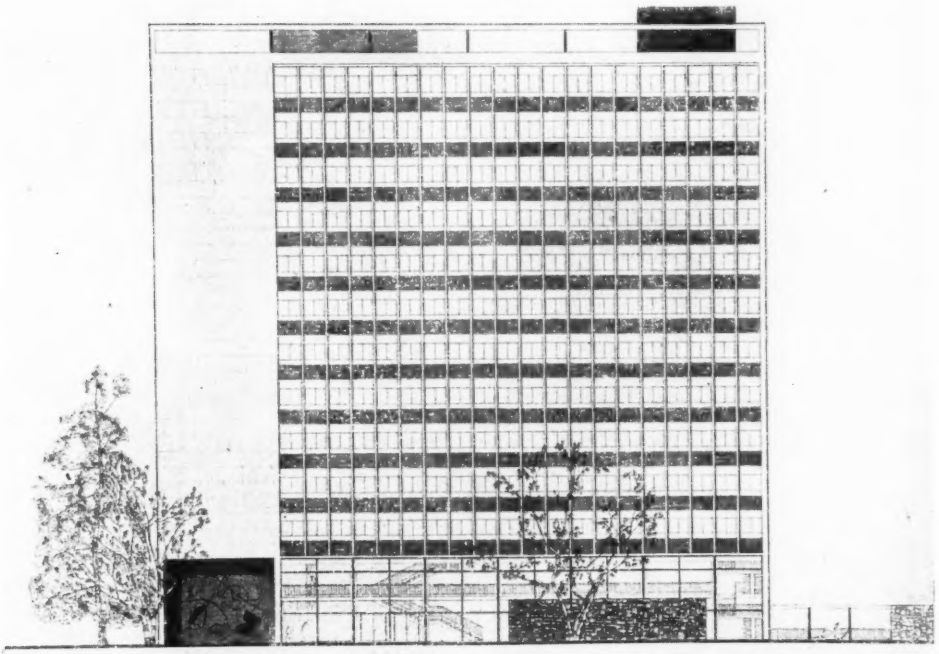
To go from the particular to the general, ASTRAGAL, as a result of strict abstinence, and a most erratic course, brings to the attention of those who have still to go to the exhibition (it closes on December 2), the following: Aluminium sheet roofing (or wall cladding), which can be quickly laid, due to an ingenious fixing system, in up to 90 ft. lengths with little labour, economical framing, and a cost of £1 a sq. yd. (S. W. Ronald & Co., Stand 468). Two ingenious schemes, as yet to be perfected, and not in production, by which a small house is provided with hot water by cooling the larder (yes, sir, your old friend the heat pump, British Electrical & Allied Industries Research Association, Stand G.H.G. 401/2). An intriguing set of tools for digging holes for fences and small pile foundations from 6 in. to 18 in. square (and upwards) to a depth of 12 ft. (S. Guiterman & Co., Stand 168. Is it better than a hand auger? Look for yourself, and let me know). And, of course, there's no doubt a lot more which ASTRAGAL will find tomorrow (as the Editors said last week, it takes four days to get round this show), and which will be duly reported in the next issue of the JOURNAL.

LETHABY LECTURE

There wasn't nearly a big enough crowd at the RIBA last week to hear Basil Ward give the first of his series of Lethaby Lectures. He had a particularly difficult task, having to avoid on the one hand the conventionalities of the wordy pious tribute and, on the other, the earnestness of the research-student's thesis, and the general feeling was that he acquitted himself admirably. He has many things to say of Lethaby, which are undoubtedly going to make future lectures highly instructive.

*

He quoted from that splendid book, *Architecture*, Lethaby's contribution to the Home University Library, and ASTRAGAL hopes the publishers have taken note of the reverence in which it is held by architects. A few years ago, when it was out of print, instead of bringing out a new edition they arranged for it to be superseded in the library by a volume of the same title by another author, which is quite unworthy to take its place—no way to treat a classic. It is time they made amends.



The site plan and two elevations of the winning design in the Sheffield University competition appear overleaf. ASTRAGAL *has given his picture space this week to the west elevation of this stop-press subject.*

THE FEATS OF KLEE

Of the activities on the other side of the moon we still know nothing, but of the activities that went on round the back of the bland, serious and technological façade of the Bauhaus we may gain some inkling from the early drawings of Paul Klee, now on show at the ICA. No one who ponders on the growth of the Modern Movement can help wondering where all the expressionist frenzy went to when the Bauhaus opted for machine finish and plain rectangular geometry, but Klee's drawings do provide a clue.

*

The fifty pieces here are predominantly of the twenties, of the period when he was a Bauhaus master, and though most of them appear at first sight to be no more than rather casual collections of scratches and stains on the paper, " second sight " sets in almost at once and one becomes uncomfortably aware of Rumpelstiltskin characters grinning out between the lines, of a world of trolls and creeping horrors on which the tidy-minded disciplines of the Bauhaus can only have been imposed by terrific acts of will.

Like all gnomes, however, Klee had his comic aspects, and some of the funnies in this show will always find a high place in ASTRAGAL'S private anthology of grins—especially one called *Magicians Disputing* which looks *so* like a certain architectural partnership. . . .

VERSAILLES

A current French belief that ASTRAGAL ought to be interested in Versailles received comment in these columns only the other week, and so he felt a sort of moral compulsion when he passed the National Book League headquarters recently, where an exhibition of books and pictures connected with the chateau is to be seen. In point of fact, the connections in some cases were a little attenuated and one felt that this was just another of those French prestige exhibitions—the Third (or is it Fourth) Republic trading on the miscellaneous glories of the *Ancien Regime*.

*

But there were a number of exhibits that would interest any architect—drawings and plans of the buildings as they were before megalomania and over-enlargement set in, the report of the great Mansart on the condition of the structure as he found it, and many of his drawings, as well as a number of architectural drawings by other hands, including a really charming one of the theatre, plans of the gardens and an elaborate bird's eye view of the Machines de Marly, the great pumps which raise the water for the fountains.

L'UNITE DEUXIEME

ASTRAGAL regretted being unable to attend the inaugural ceremony of " l'Unité d'Habitation Le Corbusier " at Nantes recently, and looks forward to being present at the opening ceremony. However, the idea that another Unité is going up delights his heart for the reason (if for no other) that the sceptics will be confounded. (Most of them, incidentally, have not seen the Marseilles block.) We have always been told that the French are a nationalist, even materialist nation, so the launching of another such project hardly gives support to the rumours that it is uninhabitable, uninhabited and a great big white elephant. Nantes must now prepare itself for a steady influx of architectural pilgrims in the coming years.

Sheffield Competition Winners

Gollins, Melvin, Ward and Partners have won the first prize of £5,000 in the competition for University Buildings at Sheffield. Their designs will be fully described and illustrated in the JOURNAL for December 10. In the meantime we publish this week a few drawings and an extract from the assessors' report. (Other details appear on page 654.) At the top of this page is an elevation from Western Bank—the road that bisects the site plan (shown on the right) horizontally. Beneath it is another view of part of this elevation. Another drawing is shown on page 651. Following is an extract from the assessors' report :—

"This design, in its general layout and disposition of the various units, fulfils all the requirements of the conditions. There is an avoidance of enclosed courts and generally speaking the plan is of an open and spacious character. The library is placed, as suggested in the conditions, on the site in Weston Park to the north of the existing buildings. The reading rooms have a pleasant outlook over the park to the west. The administrative department is placed in a central position facing Western Bank and with the future physics department forms a central mass which will dominate the whole of the Western Bank-Brookhill frontage. This building is well set back from Western Bank but even so special precautions will have to be taken for the physics department against the risk of vibration from traffic on the Western Bank-Brookhill thoroughfare. The arts department is placed to the east of Winter Street opposite the library in a compactly planned building of 13 floors. We feel there is much to be said for the interrelationship of the library and arts departments. The large lecture rooms are planned at the ground floor level and the remainder of the general pool lecture rooms, etc., have good lift and staircase communications. In the courtyard behind the administrative department is the department of architecture. This is kept at low level so as not to obstruct daylight in the large open courtyard formed by the existing buildings and the new extensions."

INIGO JONES

It is a good sign that the present fashion is not to write biographies of architects, but studies of the epochs in which they were central figures, because this is an acknowledgment that a man's work can only be properly assessed in relation to his background. James Lees-Milne's new book *The Age of Inigo Jones** is the latest example, following Ralph Dutton's *Age of Wren* and his own *Age of Adam*.

*

Lees-Milne modestly disclaims writing a work of scholarship, but he has great erudition and his book is packed with information not only about Jones himself but about the other architects of the time, about which not nearly enough is known: Nicholas Stone (who built that porch at St. Mary's, Oxford, with its extraordinary barley-sugar columns), John Webb, Sir Roger Pratt, Thomas Grumbold and the rest. What a strange, un-English yet fascinating piece of architecture is the façade of Lees Court, which Lees-Milne attributes possibly to Webb, and what a tragedy was the destruction only a year ago of Pratt's Coleshill. In a footnote this is described as an act of vandalism. Lees-Milne presumably refers to the levelling of the burnt-out shell, because the cause of the destruction was an accidental fire. To have kept the shell would certainly have preserved for posterity the perfection of the exterior composition, but was the structure, after the fire, in a state that allowed this to be done ?

*

Inigo Jones himself, a man more deeply imbued with the classical tradition than Wren, is described by Lees-Milne as "the first Englishman to introduce form into architecture." That many will concede. I find it more difficult to accept his comparison with Milton, thirty-six years his junior. "Milton," he says, "tidied up the loose ends of the English language left by the Elizabethan poets . . . Inigo Jones did a similar service for architecture and in his own we have a forewarning of the severely grand, minatory organ note of Milton's poetry." The organ is apt enough for Milton, but I would liken Jones more to the disciplined percussive notes of the primitive piano.

ASTRAGAL

*B. T. Batsford. Price, 42s.

POINTS FROM THIS ISSUE

The Editors

ADVICE FROM SCOTLAND

TODAY the country needs more building than the traditional building industry can supply. What can it do ? Robert Matthew answered that question in his recent inaugural address as Professor of Architecture at the University of Edinburgh. He pointed out that many local authorities which had once employed the dregs of the architectural schools were now looking to the cream of the profession for the solution of building problems. If the architect did not accept the responsibility this work entailed—*i.e.*, attention to costs and the fourth dimension of time, as well as to the familiar three dimensions—he would lose his new position in the centre, instead of on the fringe, of society. And the country would still get the buildings it wanted—by other means.

You will see the implication : either the architect takes the opportunity that has been offered him by his new patron—the public authority—and learns to master the techniques of machine building, or he will be overwhelmed and displaced by those techniques. The country cannot afford to wait while he plods along, using traditional methods. Nor can it wait until the day—if it comes—when architects leave their schools with a greater knowledge of structural engineering. So if the architect wants to keep his new-found position, he must collaborate with the engineer. And this, Professor Matthew believes, is "one of the real pre-requisite to an advance in building technique."

New techniques demand experiments, both practical and theoretical, and Professor Matthew referred in his address to the need for modification of archaic building regulations, as well as the need for post-graduate research in architecture. In speaking of one of the subjects which might be chosen for post-graduate studies—the application of scientific methods to the use of stone in building—he introduced the only parochial note in his address. He had more to say about Scotland's own problems in his recent talk* at the Conference on Design Appreciation, organized by the COID Scottish Committee. It was not only tactful, but also truthful, of him to remind his listeners that although Scotland was not a centre for architectural pilgrimages, it had "in no small measure" a healthy (farmhouse) vernacular architecture from which its architects could learn the basic values of design.

We print Professor Matthew's inaugural address almost in full, on page 658, not only because of the stimulating way in which matters of general interest to the architect are discussed, but

* See page 655

also because it is a reminder of the immense influence a man in his position can exert. Perhaps some of his students will not find it wholly improbable that they may—paradoxically—contribute something worthwhile both to Scotland and to contemporary architecture. More important still, Professor Matthew's job gives him the opportunity of putting over useful propaganda in favour of the public architects' department. The designer of "public works" is now thought to have an almost respectable occupation. In time, with the help of such eminent public-architects-turned-teachers, the local authority architect may become the regional interpreter of the new universal architecture, which Professor Matthew referred to in his COID talk.

F. T. Barrett

Jeffrey Webb, A.R.I.B.A.

Letcombe Bassett

SIR,—You helped well and truly in the fight which Letcombe Bassett made for its survival, particularly by sending down an architect to report on the conditions there. The dust and noise of the conflict has died down, but there is now a dramatic post-script to record. Not the building of houses, although, happily, some are going up at this moment, but something more lasting.

The recently-published *Oxford Book of English Talk* includes no fewer than nine pages of what was said at the broadcast from the village. It is, however, not the recorded talk of the main protagonists which is so striking, but the setting out in full of what a villager said. Mrs. Lissemore, the owner of Arabella's Cottage, tells her homely tale. She, thereby, keeps company in the book with the immortals of her sex, Mrs. Poyser, Mrs. Proudie and Sairey Gamp. When the names of chairmen of councils and committees and of planning officers have long been forgotten, the name of the sturdy dweller in little Bassett who was not afraid to speak her mind will be on record in a famous Oxford series.

And so the Whirligig of Time. . . .

F. T. BARRETT.

Sussex.

Don't be an Architect

SIR,—A colleague of mine was asked recently by an acquaintance to comment upon the advisability of her nephew taking up architecture. Your readers may care to assess the suitability of his reply which was as follows:—

"No, I do not advise Ernest to be seduced by the Mistress Art. He has neither the physique nor, I gather, the means. Should he choose to disregard this advice his experience will be along the following lines.

"He will enjoy the school training, for though it is long-winded and unrelated to its objective, it is never tedious. School days are happiest to an architect certainly.

"By the time he has qualified he will be ready for the good life. He will be invited by his first employer to indulge this on six or seven pounds a week. This will have to satisfy his obvious commitments and an acquired craving for wine, Staffordshire pottery, Scandinavian furniture, Mexican indoor fauna and square pianos. Further, it is no easy nor inexpensive business to assume the seemingly casual and artless uniform of the associate.

"Times will be hard at first, but I suggest that the most difficult phase will come about five years later when it will occur to him to reflect upon the activities and accomplishments of those with whom he graduated. A friend of mine has done this statistically and the conclusions are alarming. A fair number of his fellow students in fact gave up the game upon qualifying and turned to pottery. Of the remainder he suggests that 30 per cent. took up Town Planning and of this remainder the majority are involved in the observation, education, analysis, supervision, coercian and obstruction of the rest. The rest, by his figuring, are practising as principals, and number 4 per cent.

"After five years he will be getting £600 a year and weighing the merits of Public Service Protectionism and Private Practice. The official channel I would recommend, having tried the other. However, there are three known approaches to private practice.

"(*a*) The practice built upon a press-illustrated project. This can be an actual contract, usually domestic, always contemporary and invariably located in the Home Counties. This is the only method for the man of integrity. But it is often difficult to survive the noticeable intervals between commissions of a strictly contemporary nature. I can only suggest that where there is capital available the best course is to buy a largish house with pricey let-offs—a method of keeping things going by which a fair section of our profession swear and which we call KIL-O-RENT—The Architects' Preservative.

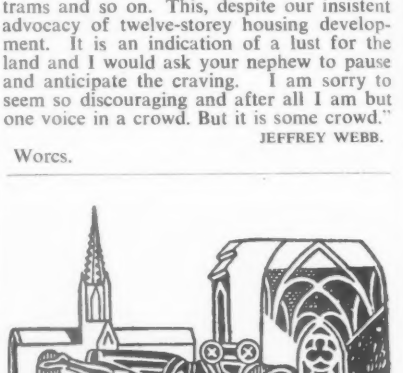
"(*b*) The practice based upon the intention to meet and—as necessary—mould the clients' ideas. Years ago this was the unobtrusive way by which we lived. I can only say that today it is the means to an inevitably unhappy—not to say violent—end.

"(*c*) The practice founded upon success in a competition. This is a system identical in principle to the football pools, laced with anything from four to six months' hard labour. It is said to be a cause of Alopecia.

"If you refer to our professional Kalendar you will see that as a body we chose to live in adapted surroundings—farms, toll-houses, lodges, windmills, water-mills, barns, disused trams and so on. This, despite our insistent advocacy of twelve-storey housing development. It is an indication of a lust for the land and I would ask your nephew to pause and anticipate the craving. I am sorry to seem so discouraging and after all I am but one voice in a crowd. But it is some crowd."

JEFFREY WEBB.

Worcs.



COMPETITION

Sheffield Results

Gollins, Melvin, Ward and Partners, of London, have won the first prize of £5,000 in the competition for University Buildings at Sheffield. The second prize, of £3,000, was won by J. M. Jenkinson and J. M. M. Jenkinson, of Sheffield. H. T. Seward, of Cruickshank and Seward, Manchester, won the third price of £2,000.

The assessors were Sir Percy Thomas, F. R. S. Yorke and Gerald Young, Vice-Chancellor of the University. Photographs appear on pages 651 and 652.

The following entries received special mentions from the assessors:—S. W. Milburn and Partners, of Sunderland, Dr. C. Franck, of Barnet, George Subiotto, and A. M. Gear both of London. There were 99 entries. Prize winning designs will be illustrated in the JOURNAL for December 10. All the designs submitted by competitors will be on exhibition at the University's Department of Applied Science, Mappin Street, Sheffield, 1, on weekdays until December 5, 10 a.m. to 5 p.m. Prize-winning designs will later be exhibited at the RIBA.

Exhibitions

An exhibition on fire prevention, arranged by the DSIR, will be shown at the RIBA during February. In the late spring the Polish Cultural Institute will organize an exhibition on the rebuilding of Warsaw.

MOHLG

Transfers and Exchanges

In order to make the best use of houses in England and Wales, local authorities should examine afresh transfers and exchanges of council house tenancies, and the rents of their houses.

This is a conclusion of the Housing Management Sub-committee of the Central Housing

Advisory Committee in their fourth report* presented to Harold Macmillan, Minister of Housing and Local Government.

A copy of the report has been sent to all housing local authorities in England and Wales. A covering circular says, "The report has been approved by the Central Housing Advisory Committee, and the Minister concurs in its recommendations. He commends it to the close consideration of the council."

The terms of reference given to the sub-committee in October, 1952, were: "To examine local authorities' existing practice and experience with regard to (*a*) the exchange of tenancies and (*b*) the fixing and review of rents and the granting of rent rebates in respect of their houses and flats; to consider in the light of the results of that examination what more could be done towards securing the best use of existing housing accommodation whether in local authority ownership or otherwise; and to make recommendations."

The Committee say that they grew more and more aware not only of the importance of building new houses, but also of making the best use of the 12 million houses already built in England and Wales, and of removing needless obstacles which may prevent people from getting houses which suit them—"thereby helping to thaw and shift the countless people who now are frozen into wrong accommodation."

An active policy of transfers (from one council house to another) and exchanges (between council tenants and tenants of private landlords) can achieve three valuable results: spare accommodation will not be wasted, people will be more contentedly housed, and local authorities will be more certain what sizes of council houses are needed.

The committee say that exchanges proposed by one or other of the tenants are more likely to be successful than those suggested by the landlord and that where direct exchanges would fail to suit one party or the other, the next step should be to examine whether the difficulty could be overcome by a three-cornered exchange.

Exchanges between tenants of local authorities and tenants of private landlords present the most difficulties, but also provide the greatest opportunity. Particularly valuable is the instance in which a landlord, on the council's rehousing his tenant, accepts a new tenant from the council's waiting list, or asks the council which of the people who are seeking the tenancy have urgent housing need.

Other recommendations on transfers are:—When planning new estates, local authorities should include dwellings of different sizes and types, so that tenants may not have to move from familiar surroundings when they need a home of another size.

Local authorities should reconsider any restrictions they now impose upon exchanges with a view to their removal; they should satisfy themselves that the families will be reliable tenants and that there are genuine housing reasons for the exchange.

Local authorities should initiate discussions with private owners in their area on the means of overcoming difficulties in the way of suitable exchanges.

Organizations representing those who own or manage private house-property are asked to bring to the notice of their members the contribution they can make to the national housing problem, if they will work with the local authority in these ways.

Local authorities should consider maintaining a list of people who want to exchange and making it available for inspection, to help families to arrange exchanges for themselves.

Local authorities are urged to give wide publicity to their scheme for exchanges, and to consider how to employ improvement and conversion grants under the Housing Act, 1949.

The report urges all councils who have not already done so to consider a complete review of their post-1919 rents, so that the rent of each dwelling may be fairly related to its size, location and amenities.

The report discusses various different types of rent rebate and additional earner charge schemes at present in operation which are designed to relate the rent of a council house to the capacity of the tenant to pay. The committee say:—

"Differential rent schemes are the most interesting method for applying housing subsidies to the fullest advantage. They are being operated by local authorities of different types and political outlooks, and the evidence is that any initial local opposition has generally soon faded away."

The committee add: "No general recommendations for or against any of these new rent schemes are made, for the circumstances of local authorities vary greatly; a differential rent scheme can unquestionably assist a local authority to allocate accommodation in accordance with need, but its utility will be greater in some types of areas than others."

* "Transfers, Exchanges and Rents," Fourth Report of the Housing Management Sub-committee of the Central Housing Advisory Committee. HMSO 1s. 9d.

KENT

New County Architect

E. T. Ashley Smith, at present deputy county architect of the Lancashire County Council, has been appointed to succeed Sidney H. Loweth, next April, in the post of county architect to the Kent County Council.

HUNTINGDON

County Architect Appointed

S. M. Holloway has been appointed county architect of Huntingdon in succession to the late S. J. Hands. He was previously deputy county architect. There were 69 applications for the post.

AA

Evening Classes in Design

The council of the AA hopes to offer facilities for evening classes in design to architectural students who have passed the RIBA Intermediate Examination, and who are not attending any school of architecture. These classes are intended not as a preparation for the RIBA final examinations, but as a means of providing students with opportunities for discussion and criticism of work.

The course will be staffed on an honorary basis. No charge will be made for tuition, but students will be required to pay a registration fee of 10s. 6d. each term. Students who are interested should write to the Principal's Administrative Assistant, 36, Bedford Square, W.C.1. The commencing date and the frequency and duration of the classes will depend on the interest shown in the scheme.

Symposium on Building for Agriculture

The problems an architect has to solve in planning farm buildings will be discussed at a symposium on Building for Agriculture at the AA on December 2. Subjects and speakers will be as follows:—"Backgrounds and Trends," by N. K. Green of the MOA; "The Large Farm," by C. Leech; "The Small Farm," by Frank Henderson; "Pig Housing," by R. J. Charlton; "Cattle in Relation to Some of the Requirements in Farm Buildings," by Edward Owens; "The Arable Farm," by H. Hollinrake; "Economics of Farm Buildings," by Rex Patterson; "The Raw Materials of Farm Buildings Design," by Gerhard Rosenberg. Each paper, which will be circulated in advance to those attending, will be followed by discussion. The meeting starts at 10 a.m.

Application forms can be obtained from the Secretary, the AA, 36, Bedford Square, W.C.1. The fee is 21s.

COID

Robert Matthew Speaks at Conference

Robert Matthew, whose inaugural address as Professor of Architecture at the University of Edinburgh is reported on page 658, spoke recently at a Conference on Design Appreciation in Edinburgh, organized by the COID Scottish Committee. Extracts from his talk are printed below:—

I believe that in Scotland today, and I am sorry to say it, for we have much to be proud of in many other ways, most people appear to go about with their eyes shut, apparently indifferent to their environment, unless it is positively falling about their ears, and seemingly unaware that it might, with advantage, be judged by any other standards than those of the barest utility.

We very often hear, especially from those who are irritated by the unfamiliar forms of contemporary work, that design is a matter of fads and fashions: the implication being that designers will soon tire of their new ideas, and return to—well—no one quite knows what. This kind of criticism, if we apply it to the development of design in the immediate past, has some justification. But if we take a wider view, and then relate it to what is actually happening today, it is by no means the whole story, and is, indeed, quite misleading.

The end of the Middle Ages was a turning point in human history, and since then an entirely new situation has developed. The universal guiding force of instinct or intuition—whatever you may call it—disappeared, and scientific discovery and invention, bringing with it world-wide travel, left the artist at the mercy of innumerable currents of thought. But during all the period of confusion and eclecticism, there has been a constant search to find a new universal form of expression—from the very days of the High Renaissance, when many architects thought it might be found in mathematics—in the relations of numbers—and even today le Corbusier has spent a life-time looking for the Golden Rule that would unify all design.

The Golden Rule has, so far, not been found—at any rate in mathematics—but in Denmark, Sweden, or Switzerland, the artist, and especially the architect, does not seem to be able to go wrong. A new universal expression has begun to find its way into the world.

Three things, I think, have contributed to this great uprising of a new general standard of design. First, there seemed to come a realization that the architectural forms of past ages, revived in all kinds of ways since the beginning of the Renaissance, had no longer any meaning in terms of present-day life. I imagine, if we really face up to it, that one of the reasons why we have so long hidden our buildings behind façades of sham antiquity, is simply a form of fear—fear of

the unfamiliar, perhaps, but even more, fear and distrust of our own civilization. And so, in self-defence—we have had a long dose of PIN-UP architecture. This strange practice has almost, but not quite, come to an end. In Edinburgh today, you will still see new buildings that are revivals of revivals, and public opinion has a long way to go.

What followed was a simple re-discovery: a re-discovery that all over the world, and stretching far back into history, there has always been in existence a form of building that has maintained itself, almost unaffected by the changes in fashion and taste through the centuries. This kind of building, almost unnoticed by art historians and ignored by architects, is the simple building of the countryside, the village the small town and the farm—unpretentious but enduring. Till recently it has hardly been thought of in terms of architecture at all—it has been mere utilitarian building and indeed for the most part, has not been designed by architects. It is the last remnant, perhaps, of the instructive art forms from the more distant past. Now, under the dignified title of "vernacular" architecture, it has been seized as the developing point for much of the best of our contemporary design and its essential qualities of simplicity, pure form, richness of texture, are those of the best work everywhere today.

The "vernacular" takes many forms: being firmly rooted in social life it inevitably reflects national and even regional characteristics in the use of local materials. The local builders took anything that was to hand, in timber, stone, brick, slates, tiles, and any other material that could be pressed into service to keep out the weather.

But, whether in Japan or South Africa, the Seaboard states of New England, Finland or Scotland—wherever there has been a long period of human settlement—there is a clear honesty of purpose, and an absence of superficial pompousness that stands out in unmistakable contrast to the intellectual gymnastics of the historical revivals, that we have too easily associated with the name of Architecture.

If we, in Scotland, have comparatively few contemporary buildings to show the world, we have, in no small measure, a healthy vernacular, if only we would notice and appreciate it, study it, and learn from it the basic values of design.

This last is the real starting point, but it is a starting point only. To this has now been added all the possibilities of modern building technique. We sometimes hear that the machine has killed the craftsman. This surely is to ignore the fact that at all times the craftsman has taken full advantage of the tools available to him, and today the finest work is coming from the machines of contemporary metal or wood-working shops. Furthermore, the development of structural design has given us the opportunity of new and exciting shapes that were quite impossible before the days of steel and reinforced concrete.

For a couple of centuries, the designing skills of the engineer and the architect have been separated—but remember that the Telford bridge in Edinburgh was designed by a man who would not have understood the difference, and neither would Christopher Wren for that matter, and today these skills are coming together again in our contemporary buildings.

The real tradition of building has been picked up after a lapse of four centuries, and we can now see it had never entirely disappeared; the new expression of architecture is rooted in this tradition, but equally it is now linked to the skill of the engineer, and it may be, that in time, the artificial distinction between engineering and architecture will again disappear, and by that time, perhaps, the new universal may have become firmly established—even in Scotland.

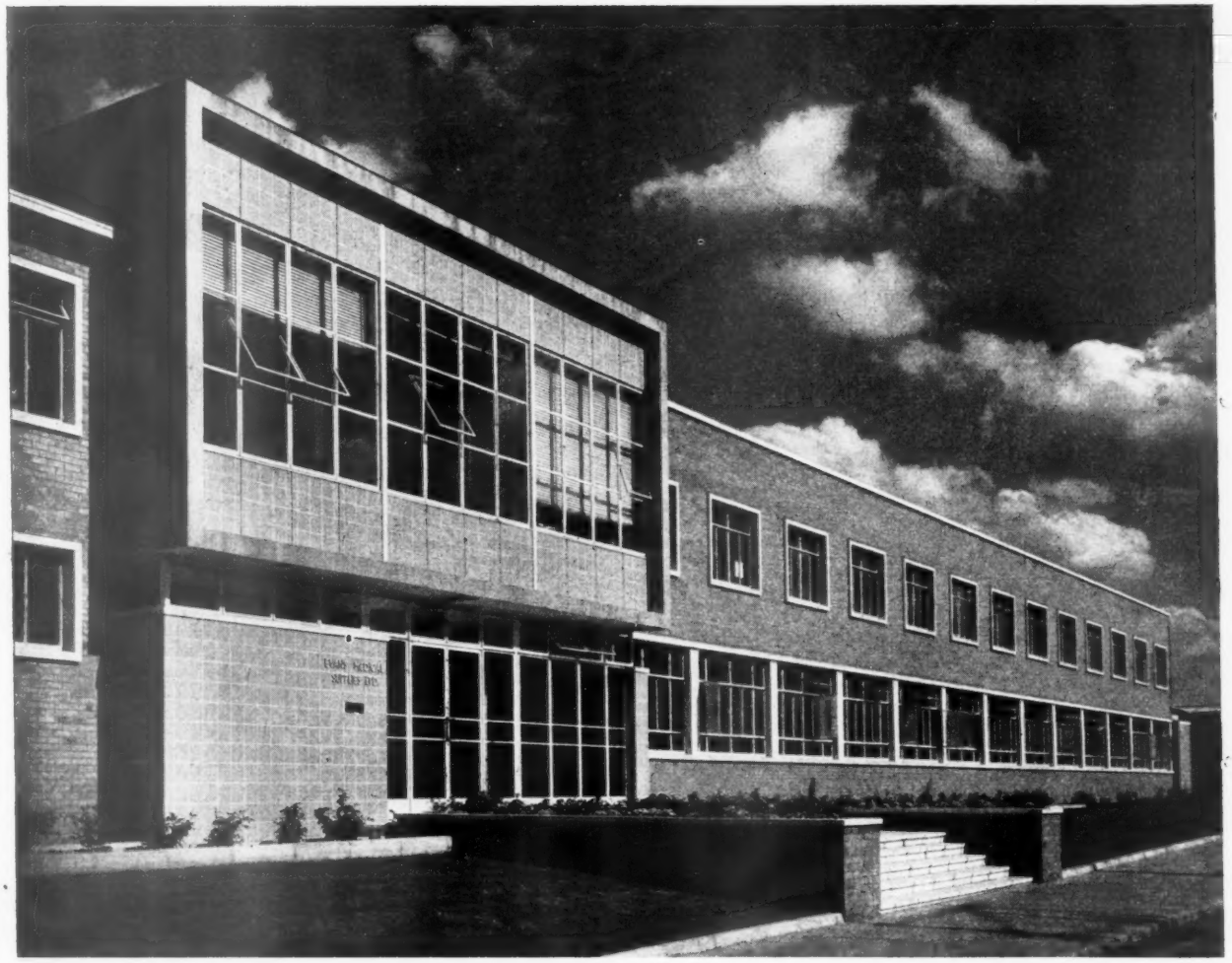
BUILDINGS IN THE NEWS

Restaurant in Torquay

The Regency Restaurant, in Torwood Street, Torquay, is the first in that town to have a contemporary facade. Seating space is provided for 100 *persons. The floor area is* 1,180 *sq. ft. in the restaurant and* 334 *sq. ft. in the service area. The front, which is* 18 *ft. wide, is constructed of oak. The architect was Dawes Dingle.*

Restaurant in Liverpool

The Mersey Room restaurant is situated on the sixth floor of Lewis's store at Liverpool. The interior of the restaurant has been designed by Misha Black, Robert Gutmann and Gunther Hoffstead of Design Research Unit. The floor area is 2,400 *sq. ft. and seating is provided for* 180 *persons. The walls are panelled in cedar of Lebanon and the incised carvings are by Susan Einzig. The vitreous glass mosaic designs on pillars are by Dernbach Mayen.*



Depot and Offices for Medical Supplies Firm

The offices and warehouse for the London branch of Evans Medical Supplies Ltd., at Victoria Park Road, Industrial Estate, South Ruislip, was designed by Eric Firmin and Partners. The site is 1·9 acres in area and the total floor area is 44,724 sq. ft. A boiler house, loading bay and canteen for 100 persons (1,728 sq. ft.) is also included. The two-storey office block is 24 ft. wide and consists of 13 bays, each 12 ft. wide ; it has a steel frame. The three principal offices are placed over the entrance. The total cost was £90,075, or £2 per sq. ft.

Offices in London

The four-storey block of offices in Earnshaw Street, W.C.1, contains 8,992 sq. ft. of floor space, of which 7,609 sq. ft. is office space. The site area is 2,340 sq. ft. The property was heavily damaged during the war and the floors, roof and staircase had to be rebuilt and the front elevation demolished and reconstructed. This work, including fittings, cost under £17,000. The design was by Kochmann and Lam.

SCOTLAND

Historic Buildings Council Appointed

The Secretary of State for Scotland and the Minister of Works have appointed a Historic Buildings Council for Scotland of which the architect members are Ian G. Lindsay and Professor Robert H. Matthew. The council will be under the chairmanship of the Earl of Dundee and will include the Countess of Haddington, Sir John D. Imrie, Douglas Johnston, Lord Polwarth and A. A. Templeton.

Applications for financial aid under Part I of the Historic Buildings and Ancient Monuments Act, 1953, for buildings of outstanding historic or architectural interest in Scotland should be addressed to the Secretary (David Watson), The Historic Buildings Council for Scotland, 122, George Street, Edinburgh, 2.

OBITUARY

Philip Hubbard

Philip Waddington Hubbard died in a London nursing home on November 12, aged 60. In partnership with his father he designed many houses, schools and commercial buildings in the London area and a large number of war memorials. He also wrote books. Mr. Hubbard became an associate of the RIBA in 1920 and a fellow in 1927.

Alexander Meldrum

Alexander Robert Meldrum died in Dublin recently at the age of 73. He was born in Aberdeen and spent his early life in India. After serving in the British Army he worked in the London office of Sir Edwin Cooper. In 1924 he joined William H. Byrne & Sons and became a senior assistant. Between 1937 and 1945 he was in England. Mr. Meldrum became a licentiate of the RIBA in 1912.

DIARY

Brief City. Film at the BC, 26, Store Street, W.C.1. Daily, 5.30 p.m. and 6.15 p.m.
NOVEMBER 26 AND 27

Building Exhibition. At Olympia, Kensington, W.14. Weekdays, 10 a.m. to 8 p.m.
UNTIL DECEMBER 2

South Bank Permanent Development Plan. Exhibition in the Main Foyer, Royal Festival Hall, South Bank, S.E.1. (Sponsor: LCC.) Weekdays, 5.30 p.m. to 10.30 p.m.; Sundays, until 10 p.m.
UNTIL DECEMBER 2

The Electrical Circuit of the House. Electric Water Heating. Films at the BC, 26, Store Street, W.C.1. (Sponsor: BEDA.) 12.45 p.m.
DECEMBER 2

Implications of the "Parallel of Life and Art" Exhibition. Discussion led by Eduardo Paolozzi and Peter Smithson at the AA, 36, Bedford Square, W.C.1. (Sponsor: AA Students' Committee.) 7 p.m.
DECEMBER 2

Parallel of Life and Art. Exhibition at the AA, 36, Bedford Square, W.C.1. (Sponsor: ICA.) Weekdays, 12 noon to 2 p.m.; 6 p.m.
NOVEMBER 30—DECEMBER 3

The Problems of Aerodrome Development. T. F. Bird. At the TCPA, 28, King Street, W.C.2. (Sponsor: Students' Planning Group.) 6.30 p.m.
DECEMBER 3

Smoke and Smog. Exhibition at the Museum of Hygiene, 90, Buckingham Palace Road, S.W.1. (Sponsor: RSI.) Weekdays, 10 a.m. to 5 p.m.; Saturdays, until 12 noon.
UNTIL DECEMBER 5

Part of Robert Matthew's inaugural address as Professor of Architecture, University of Edinburgh, is printed below. Its title is "Architecture in Evolution."

ROBERT MATTHEW

Inaugural Address

THE 18th and 19th centuries have handed on a vast aggregation of buildings of all kinds which, for the most part, have already reached the end of their useful life. Further maintenance can only be a severe and unreasonable drain on our resources. Unfortunately, standards of space, light, air, habitation, acceptable to the Victorian, are no longer so today, and the replacement of these obsolete buildings *on the spot* is only possible to a limited degree. The modes of life of 100 years ago are not ours; and in particular, present day methods of transport become increasingly difficult to fit into the old pattern.

We must add to the problem of obsolescence the great expansion of power production and of industrial capacity in the 20th century, requiring whole new categories of buildings on a very large scale. It seems all too clear now—indeed it was seen by many a long time ago—that at the turn of the century a great period of urban regeneration had become urgently required, taking with it a radical re-grouping of population and industrial plant. Two world wars, with an economic collapse in between, have postponed, it seems for a considerable time, a spring-cleaning operation of this intensity and scale, and the last war added vastly, by sheer destruction of property, to the total building needs.

Sooner or later a stage will be reached—as has so often happened in the past—when the modes of life of today can no longer be served by the buildings and streets of yesterday, and the great cost of wholesale replacement will have to be faced.

In our present circumstances, it is surprising that we have been able, to a small extent, to anticipate this operation in the planning and building of the New Towns—one of the more obvious large-scale results of Geddes' work and an indication of the regrouping of community life that must, I believe, be continued later, but on a much more widely dispersed scale.

The partial fading from the scene of immediate practical reality of many of the ideals of the town-planner, and their replacement by a policy of patching, has tended to make the architect—through a sense of frustration—turn away from the wider problems of civic planning and building. This is a regrettable tendency, for this should be a time for a re-thinking of the real problems of town-building in the light of our present-day circumstances.

OFFICIAL PATRONAGE

We are beginning to realize some of the implications, in terms of building, of our social and industrial evolution. As part of this change, we are also beginning to appreciate the extent to which the patronage of architecture has already moved from the private individual or group to the public body. To some, this may have appeared as a temporary phase to be got over—like a cold in the head—and got rid of as soon as possible. There can be few architects today who believe that such a reversal is likely to take place: indeed, the public organizations responsible for large building works continually multiply and their effect on the building industry constantly enlarges. But with this new opportunity—and it is immense—come many new problems.

The student leaving the architecture school today will have a very different opportunity from the student of even 25 years ago. The public authority has emerged as a substantial building owner, whose architectural need appears to stretch a very long way into the future. This new kind of client has developed for itself a new kind of architectural organization.

STUDENTS' CHANCES

Today the student has an almost equal chance of working in an office of this kind as in a private firm—a striking contrast to pre-war days, when most architectural students commenced their career with the ultimate object of practising on their own.

It so happens that the development of most public bodies has taken place in such a way that the architect has come into the picture at a comparatively late stage. In the organization of the local authorities, for instance—and taken together they represent by far the

greatest architectural opportunity in the country today—the surveyor, the engineer, and the director of education have all been at it long before the architect.

The local authorities have been building owners to some degree for a very long time, but it is only recently, by the pressure of the vast increase in their building responsibilities, that they have been forced to give up the makeshift arrangements by which their buildings had been devised—I can hardly say designed—for so long. And they have, for the most part, now set up their own architectural departments.

For this historical reason, building by the local authorities has long been, in the public mind as well as in that of the architectural profession, under something of a cloud, and it will take some time before the new departments can shake off completely the unfortunate early history of Public Works.

It is not many years ago since only those students who were quite unable to find any other work went into the office of a local authority or other public body. Today there are many offices of this kind which pick, year by year, the very best students coming from the schools.

TIME-LAG IN EDUCATION

There has, inevitably, been a time-lag here in architectural education. The transformation of the approach to architectural design that has flowed from handling a continuous programme of similar buildings is not very well understood outside those offices actually undertaking the work. An organization, for instance, like the Nuffield Trust is approaching the study of the design and planning of hospital and agricultural buildings in a way that would be quite impossible (and this is no criticism) by an architect in normal private practice.

The implications of this kind of development on architectural education must be considerable, and at the present time are barely foreseen. Methods of education cannot be changed very rapidly, and the kind of change that will undoubtedly be necessary will be expensive and will involve much more scientific and practical equipment than we are accustomed to at present—in fact, in most architectural schools there is almost none.

It is a matter of some importance, from the point of view of the national economy, that the great building authorities get the kind of ability they require. If the development of architectural education in the schools, and I speak of the country as a whole, cannot, within the next few years, overtake the development of architectural practice itself, another form of training will have to be found. Speaking for myself, I believe that this would be, to a high degree, unfortunate, and it will be my concern, and this applies to those who like myself, have come from public work into education, to see that this does not happen.

Teachers today have many masters, but I would plead with those who are ultimately responsible for the means by which we teach to appreciate that the link between architectural design and building production has already been established, and furthermore that, once having established this vital link, architectural practice literally cannot afford to wait very long on architectural education.

Now you will see that I have allowed the cat to slip out of the bag—and it is quite a large one!

Underlying the whole situation, and affecting the practice of architecture at almost every point, is the obvious fact that this country needs at the present time, and will continue to need, far more buildings than the traditional building industry can possibly supply. This is not an entirely new phenomenon. It has occurred several times in our history, particularly in the 19th century when periodic famines of materials and labour accompanied successive waves of industrial expansion. At that time the remedy was drastic, but simple: standards of building, of workmanship, of construction, of habitability and convenience, were dropped to the lowest possible level, consistent with the continuance of life and work. And, as we have seen, the architect had little part in that situation.

THE COUNTRY'S DILEMMA

Today such a remedy is impossible. The problem that is clearly before us is, on the one hand, the increasing of the total amount of building year by year, while maintaining relatively high standards—very high in relation to the Victorian slums, both of building and of habitability, while on the other hand—and here is the real dilemma—making no further substantial calls on our already over-strained total national resources.

The rate at which old buildings fall out of use, by reason of sheer age and neglect, is such that unless we can lift the whole technique of building from its present level—and no one who is at grips with the situation will deny that that level is a low one—we must face a *very long period indeed* before we can overtake our pressing social needs in terms of building.

You may ask: what has all this to do with architecture and the architect?

The answer is simply this: it is to the architect that the great building authorities now look for the solution of their building problems, and in that sense he has moved from the fringe of society almost to the centre. His responsibility is not now only for design, but also for production. And he is dealing not only with the three spatial dimensions, but with two more—namely, time and cost.

NON-ARCHITECTURAL BUILDING

It would be only too easy for the architect to repudiate this kind of responsibility. Fortunately it has become sufficiently realized that, if it is not accepted, architecture with a capital A might again become a marginal function or even be totally extinguished, while, at the same time, the country would still get the buildings it required, but by other means. For there are other means, and we cannot ignore them. The story of the development of the pre-fabricated house at the end of the war marks a turning point in the long history of building. The visual effects of the "pre-fabs" in their hundreds, or thousands, were no doubt startling in their unfamiliarity of scale and monotony of repetition, and we could only be thankful that for the most part it was a temporary expedient. But—and this is the important lesson for the architect—for the first time industrial production had entered directly the field of building, and from that moment the architect had the choice of mastering this new force or, in the end, being overwhelmed by it.

INDUSTRIAL ENGINEERING

For a long time, of course, buildings of traditional materials and construction will continue to be built. The very slowness of the evolution of building is a guarantee that tradition will not easily be disturbed and much fine building will rightly continue in this way. But the introduction of the technique of Industrial Engineering to building is, like the introduction of the use of steam or electricity, and we can already see—for instance, in some school buildings particularly—its initial development taking place on a permanent basis.

To the architect in any position of public responsibility there is really no choice in the matter. He knows only too well that he must fail hopelessly in his time-schedule if he relies on traditional methods, and no large authority that I know has seriously tried to do so.

The absorption of this powerful force into the process of architectural design is not easy, and this is hardly surprising as it represents the fusion of two elements that for a very long time have been artificially separated—namely, the designing skills of the architect and of the structural engineer.

ARCHITECTS AND ENGINEERING

The history of the separation of these skills—dating back only to the 18th century—is well known. One consequence has been the inability of the architect, because of his lack of structural knowledge, to take advantage in his designs of new structural techniques. It seems equally to have resulted in the inability of the engineer,

who has become absorbed in mathematical analysis and calculation, to use his developing knowledge of the possibilities of structural design to create imaginative form.

I can see no fundamental difference between the design—let us say—of a bridge and the design of an auditorium. For some generations the first has generally been classed as engineering, the second as architecture. But it is not so long ago that Telford designed both bridges and buildings. Wren considered himself as much an engineer as an architect, and today we make no distinction between the aqueducts, the triumphal arches and the villas of Roman Times.

Surely they are all simply structures, and surely they are all equally architecture. And all must be judged by the same standards of stability, convenience and æsthetic value.

I find it difficult to visualize a common education for the architect and the structural engineer in this country (it has been done abroad), but it may be that the entry of the industrial engineer into building that has now taken place will encourage this fusion, or at least will bring the architect and engineer together at the vital designing stage when the two minds can bear simultaneously on the same problem, and I am convinced that this is one of the real pre-requisites to an advance in building technique.

This is particularly true of experimental building, and one of the peculiar advantages of the public building owner with a continuing programme of building is that full-scale experiment can be carried out over a period of years.

MACHINE ASSEMBLY

The necessity to build prototype cars and aircraft is familiar to everyone, and it is obvious that no advance is possible in these directions without that experimental work. As long as we use familiar and well-tried methods this is entirely unnecessary in building. But with the extension of the use of the machine in the assembly of parts of buildings, and with the use of a great range of new materials, the development of design is now dependent on experimental building, which can be examined and measured in actual use. It is only now that the great building authorities are beginning to realize their power in this matter: the next few years will see a very large extension of experimental building as an essential part of their architectural work, and I can only hope that the archaic building regulations which everyone engaged in building suffers from today will soon be modified to allow such work to proceed in the way it should.

As a country we cannot afford to bear the financial burden of judging the structures of today by the rule-of-thumb building methods of yesterday—apart altogether from the devastating effects of this type of building regulation upon the development of design.

RESEARCH WORK

Practical experiment, however, must take place on the basis of theoretical study. It is an astonishing and unfortunate fact that there is, at present, almost *no* post-graduate research work taking place in any University architectural department in this country. America is a long way ahead of us here, and we have much to learn from that country, for the field is wide open. There is no doubt that a contributory factor to the very slow evolution of building technique is this strange gap in Academic work. There has, of course, been a very great deal done on special subjects that impinge on the work of the architect—in the theory of structures, in the practical development of steel and concrete design in their many new forms, in acoustics, in lighting, in heat insulation, to mention only a few. All these studies yield essential material to the architect.

FIELD-WORK NEEDED

But it is, or rather it *should be*, his function to study the requirements of buildings *as a whole*—as they must be used, for whatever purpose it may be, and to take advantage, in meeting these requirements, of all the collateral research I have just mentioned. If one were to look anywhere at the present time for a fundamental study of the building requirements of, let us say, chemical laboratories, it would not be to the architectural departments of the Universities. And so here, in one direction only—namely in the planning requirements of buildings—is a great field of work wanting to be done. But in fact, the elementary question, what is the proper function of post-graduate work in architecture—has hardly been explored.

I might equally well have mentioned another direction altogether—the planning of whole communities: the discovering of what problems the architect, for instance, in planning the central area, or the residential neighbourhoods, of a new town—is really being asked to solve, and further, to what extent the solutions now being offered are satisfactory.

There has been a very great deal written about this in the last few years, and the central government departments have set an example to the Universities in this field of study. But those who have to build have limited opportunities for prolonged and objective research, and here again the architectural schools should be able to make a substantial contribution to knowledge.

BUILDING IN SCOTLAND

These are only two possible lines of study out of many. It may be, that in Edinburgh, we shall find a direction of research of particular significance for building in Scotland. I have in mind the unusual situation that we apparently have *no basic building material available in this country*.

This island has been referred to as a lump of coal surrounded by fish: as far as Scotland is concerned, there must be added a very substantial lump of stone. Stone has, in the past, been our great traditional building material—but we now find that we cannot use stone economically in building. We have no facing brick, and so we are deprived, for one reason or another, of the most universal building materials in the world.

STONE BUILDING

Surely here is a study well worth promoting—the application of scientific method to the use of stone in building, and the apparent impossibility of doing so at present can be accepted as no more than a challenge. If this study were to be successful, the quality of architecture in Scotland might well be transformed—to its advantage, for I think there is little doubt that this fundamental disadvantage of which I have just spoken, the virtual disappearance of our basic building material, has been a strong contributory factor in preventing Scottish architecture as a whole, from taking a significant part in the evolution of contemporary architectural design.

And this leads me to my last point. Architecture lies midway between the arts and the sciences. Its very nature partakes of both. The mastery of the stresses and strains within the structure, the properties of materials, the problems of lighting, heating and the mechanical services, the logical planning of the building as a whole to meet the requirements of use—*all these* are subject, to some degree—to scientific method, analysis and calculation.

ART—NOT SCIENCE

On the other hand, the expression of the plan and of the physical forces inherent in the structure—in æsthetic form—is the sphere, not of science, but of art.

The architect must transform his scientific material, through the exercise of his creative faculty, into acceptable æsthetic shape. Until the end of the Middle Ages, the historical epochs of building had been expressed in terms of universals. A universal culture pervaded the whole mode of life, and its every expression throughout the range of the arts. No choice seemed possible, no deviation from the universal. A race instinct or intuition bound all its members and their creative work. With the beginning of the Renaissance this universal hand of instinct seems to have been withdrawn and the Age of Reason had begun. It has been said that when the fruits of the tree of knowledge have

been tasted there follows a period of acute indigestion.

It is perhaps no coincidence that over the last 400 years, when the architect has been on the fringes of Society, he has looked—if he has looked at all—in vain for a universal expression of which his work could become part. Today, we are a long way from the attainment of a new universal—and it is only in the last 80 years that the beginnings of a serious search have been made, long after the last unsuccessful experiments of the Renaissance itself, based on theories of numbers and proportions, had died away.

The historical forms of architecture have always, in some measure, been an expression of the structural knowledge of the times. Today, with the expansion of the possibilities of structural design—the forms of architecture are themselves developing. We have almost reached the end of a long period, when, for lack of anything else, we borrowed the architectural forms of past ages and applied them, as a façade—skin deep only—to contemporary structures.

LOGICAL EXPRESSION

The use of science in building, to a far greater extent than we have known in the past, is inevitable and must be accepted by the architect. It is out of that use—out of the knowledge of the vast potentialities of structural design—that contemporary forms of building will come. In the world today we can see, in the work of our greatest architects, a bias towards logical expression—as in the work of Van Der Rohe, or towards feeling—as with Frank Lloyd Wright; and indeed this reflects the age-old distinction between the Classic and the Romantic. Pushed to extremes, as they have frequently been, these expressions, judged by the ultimate standard of man as an integrated personality, must be inadequate. It is the search for the integration of Reason and Feeling—in other words, of Science and Art, that is the driving force behind the architectural evolution of this century.

A DARING TRADITION

The forms that will be created—and they can be seen now in the work of many contemporary architects—must bear little relation to those of past ages, as little as our own culture bears to those of history. We have at our disposal the knowledge upon which we can build an architectural tradition more daring and exciting than anything we have known. This knowledge can be taught — many-sided and complex though it has become—and assimilated by the architectural student. What cannot be created by teaching is the faculty by which that knowledge can be transmuted into architectural form. It is there, or is not, as the case may be: and the teacher can only do his best to draw it forth.

In the following article on the government proposals to encourage the repair of old houses and slums, Professor Ian Bowen says that landlords have little incentive to spend enough money on repairs.

HOUSING DILEMMA

By Professor Ian Bowen

THE Government's White Paper, *Houses—the Next Step*, tells us that out of approximately six million houses subject to rent restriction, over four million have a gross rateable value of less than £20, and another million have a gross rateable value of over £20 and less than £30. A house with £15 gross rateable value has what is called a "statutory deduction"—*i.e.* the difference between gross and net rateable value—of £6. The maximum increase in rent that a landlord could charge on such a house, after proof of expenditure on repairs, would be 4s. 7d. a week (£12 a year), but he could increase it by as much as this if the present rent was as low as 6s. 11d. If the rent was already 11s. 6d., for instance, the landlord would not increase it at all.

The question is, then, what are the present rents of these houses? On this point the White Paper says nothing. It is, therefore, impossible to state the potential increase in rents of any group of rent-restricted houses.

How much can the landlord afford to spend on repairs? Where a full increase of £12 a year could be claimed (*i.e.*, where the present rate is only 6s. 11d.) he could expect to get back £120 or £180, according to whether the remaining life of the house was ten or fifteen years. And as most of these properties must already be very old, ten years is a good estimate for their remaining life. It follows that a prudent landlord would not readily invest more than £70 or £80.

What about the tenant? Would he willingly pay another 4s. 7d. a week for property on which only £70 or £80 has been spent on repairs?

If you study the tables in the White Paper you will come to the gloomy conclusion that the capital sum which most landlords will find it worthwhile investing in the cheaper class of rent-restricted houses will be rather low. There is certainly little hope of landlords finding it feasible to make wholesale modernizations and redecorations of old properties on the strength of the government's proposals.

Local authorities are now being asked to repair slums, or to invest in slum property at site value, but it is well known that many authorities have refused to accept such properties as a gift. The cost of putting them into decent habitable condition would far exceed the value of the return that could be expected from rents on them. There may, of course, be rather better properties in some areas, which local authorities could take over without being led into financial difficulties.

The proposal is undoubtedly courageous, but it is not yet clear how the enormous burden on public finances would be carried. Nor is it clear how large that burden would be.

It is, perhaps, some consolation to recollect that the present dilemma of rents *versus* repair costs is not exclusive to Great Britain. A recent report by the ECE on this subject pointed out that although the degree of rent control enforced in different countries was different, the problem was universal. Since 1938 building costs in ten European countries (Belgium, Denmark, Finland, France, Western Germany, Italy, the Netherlands, Sweden, Switzerland and the UK) have risen much more than rents. It ought, perhaps, to be pointed out that the discrepancy between rents and building costs was worst, not best, in those countries which had allowed rents to rise most, *i.e.*, Italy and Finland, the reason being that these were the countries with the greatest general inflation of prices. Those who attack rent restriction sometimes forget that it was part of a general policy to restrain the increase of prices and was, at one time, a useful stabilising measure.

The ECE report points out that no single remedy is applicable to the ten European countries mentioned. But there is agreement by most countries that (*a*) any rise in rents should be large enough to accomplish its purpose and (*b*) that it should be accompanied by increased taxation on landlords to cut off the windfall profits that will otherwise come to some and to provide a fund from which other parts of any new housing repairs policy can be financed. The possibility of taxation of rents to offset increased public expenditure has yet to be fully investigated.

COMMUNITY HALL

in ADEYFIELD NEIGHBOURHOOD, HEMEL HEMPSTEAD NEW TOWN, HERTS.

designed by H. K. ABLETT, chief architect, Hemel Hempstead Development Corporation

P. R. BEE and H. SCHOFIELD, assistant chief architects,

M. HARDSTAFF, senior assistant architect-in-charge ; T. L. LILLEY and

P. E. SADLER, assistant architects ; N. H. J. CLARKE, landscape architect

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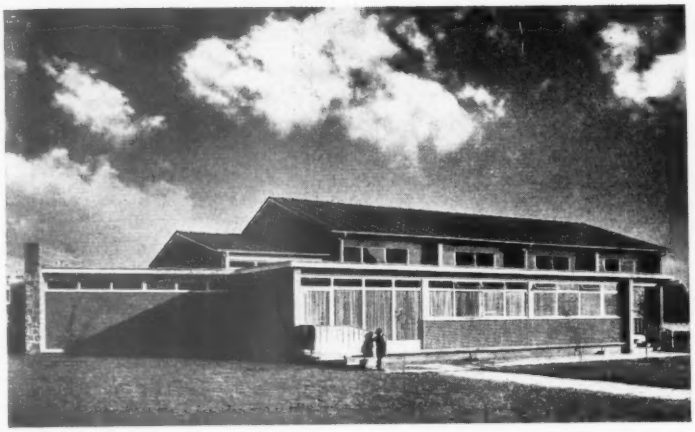
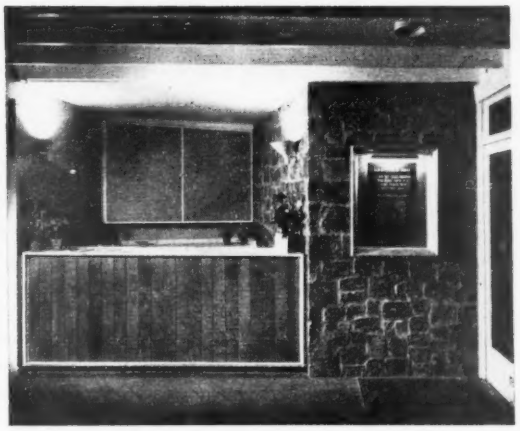
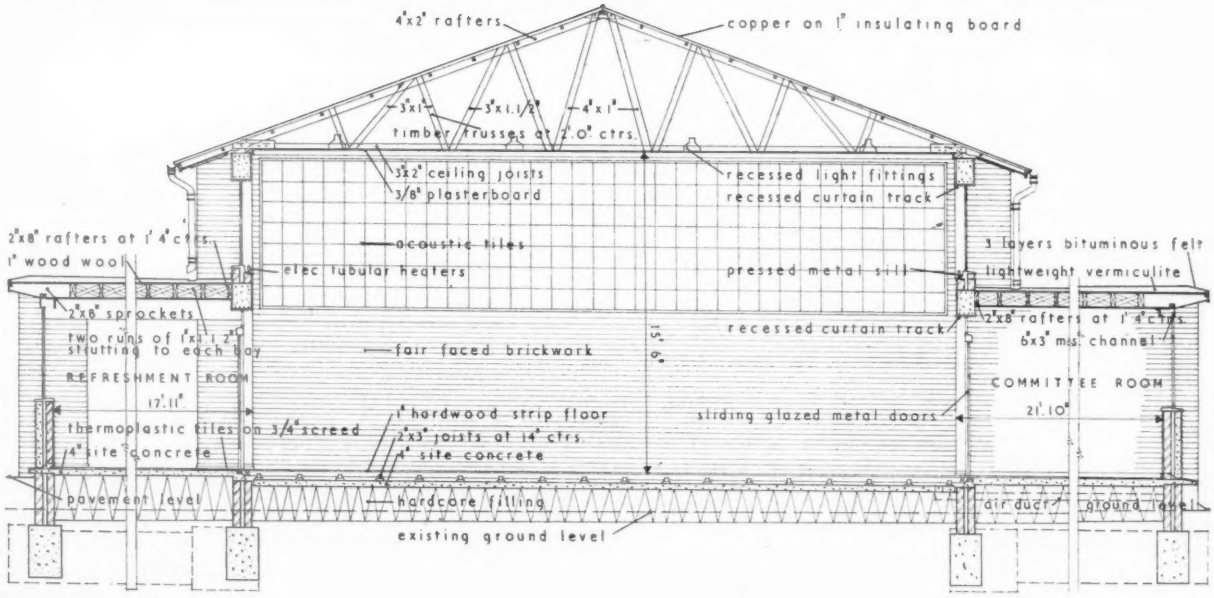
The new social hall in Queen's Square, Hemel Hempstead, the first of its kind in any of the New Towns, was opened on October 31, 1953, as announced on page 556 of the JOURNAL for November 5. The hall is one of the last buildings to complete the Adeyfield neighbourhood centre. On page 668 some of the other recent work in the square is illustrated. The large hall is designed primarily as a ballroom and its semi-sprung floor is one of the few post-war maple dance floors in England.

The hall from the south-west.

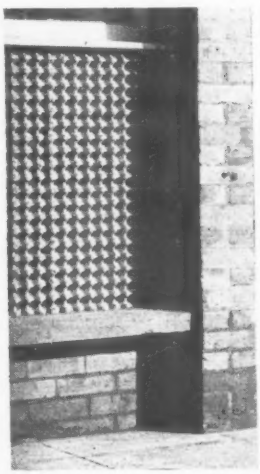


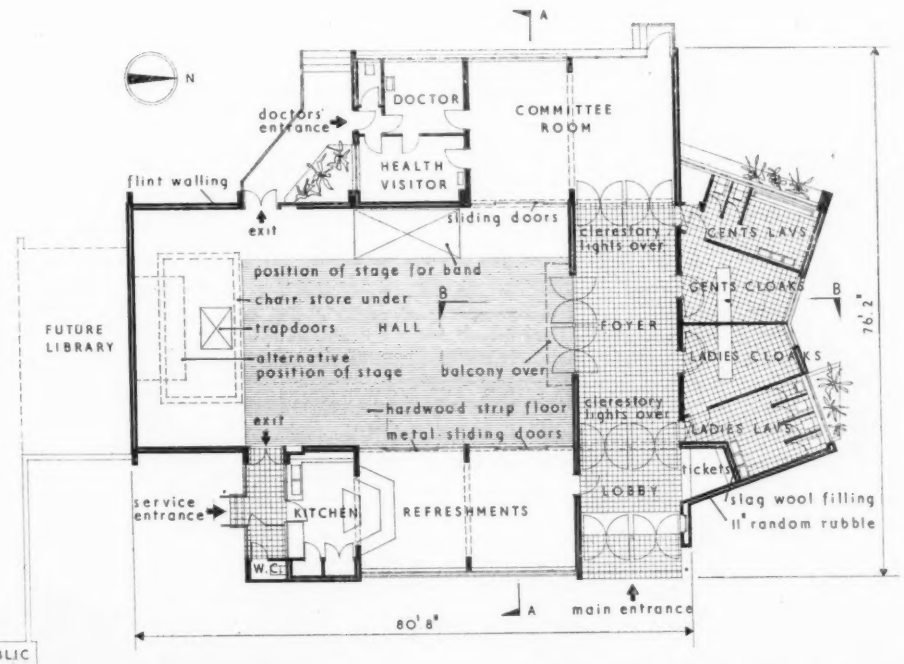




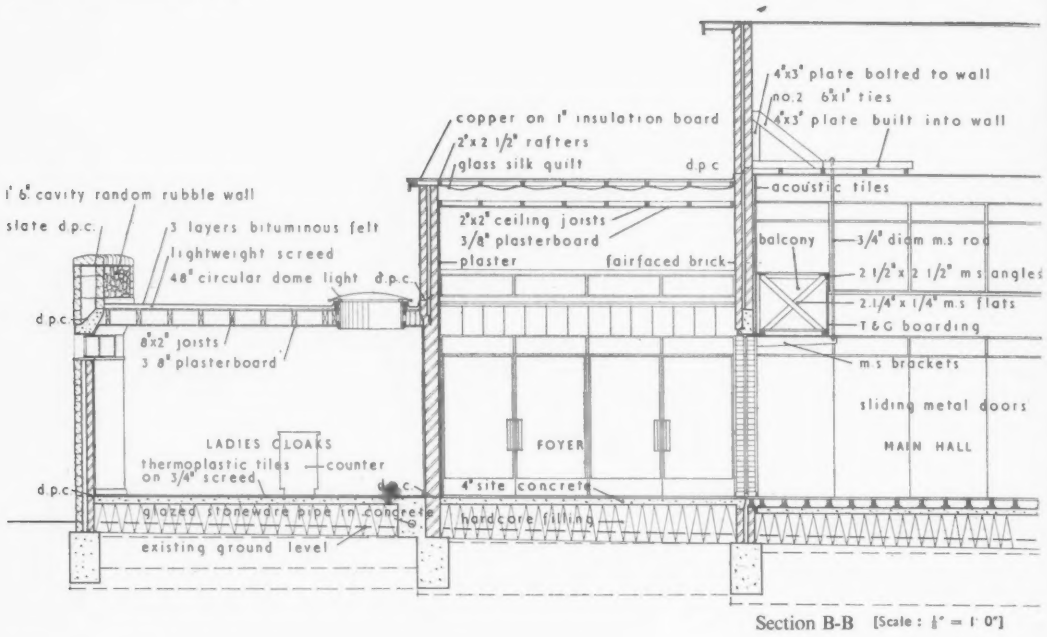
Section A-A [Scale : 1/4" = 1'0"]

Above, from the north-west. Above right, the main entrance lobby and ticket counter. Below, detail of "egg-crate" precast concrete blocks, which are painted blue, and can be seen beneath the small windows in the left-hand picture above.





Ground floor plan [Scale : 3/32" = 1'0"]



Section B-B [Scale : 1/8" = 1' 0"]

COMMUNITY HALL

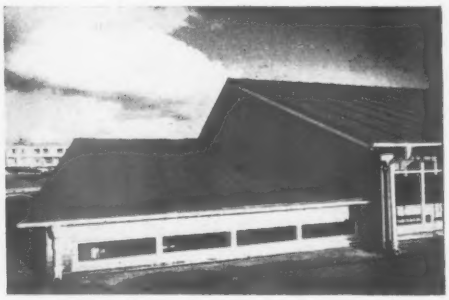
in HEMEL HEMPSTEAD NEW TOWN, HERTS.

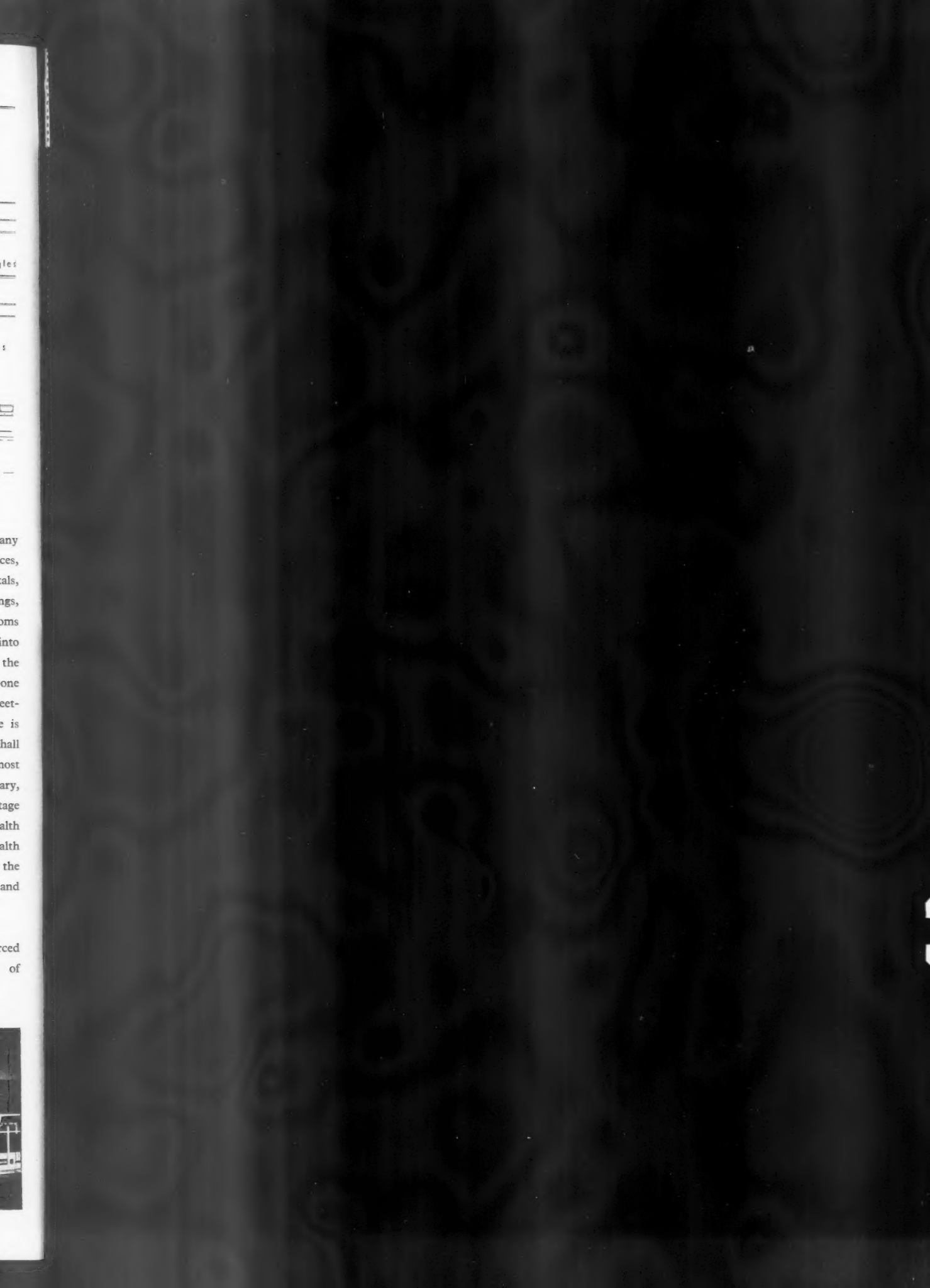
designed by H. K. ABLETT, chief architect

Below, the foyer, looking towards the main entrance doors. The ceiling is painted blue. Set in the light grey wall on the left is a panel which contains doors to cloakrooms, between which is a panel of vertical softwood boarding and a rack for indoor plants. Below, right, the copper-covered pitched roof to foyer and hall on the west side.

PLAN.—The hall had to be planned for many different types of social function such as dances, children's dancing classes, banquets, musical recitals, public meetings, large and small committee meetings, and for use as a health clinic. The public rooms adjoin the main hall, so it is possible to get into any of the ancillary rooms without disturbing the occupants of any other. The large rooms—one for refreshments and one for committee meetings—can be sitting out rooms while a dance is taking place. They can be shut off from the hall by glazed sliding doors. The stage and most counters are on wheels for flexibility. (The library, when built, will be used as a green room for stage shows.) On the west side the rooms for health visitor and doctor are used by the County Health Service on certain afternoons each week and the committee room can then be used by mothers and children as a waiting room.

GENERAL.—Roofs are carried on reinforced concrete beams for the high level part of



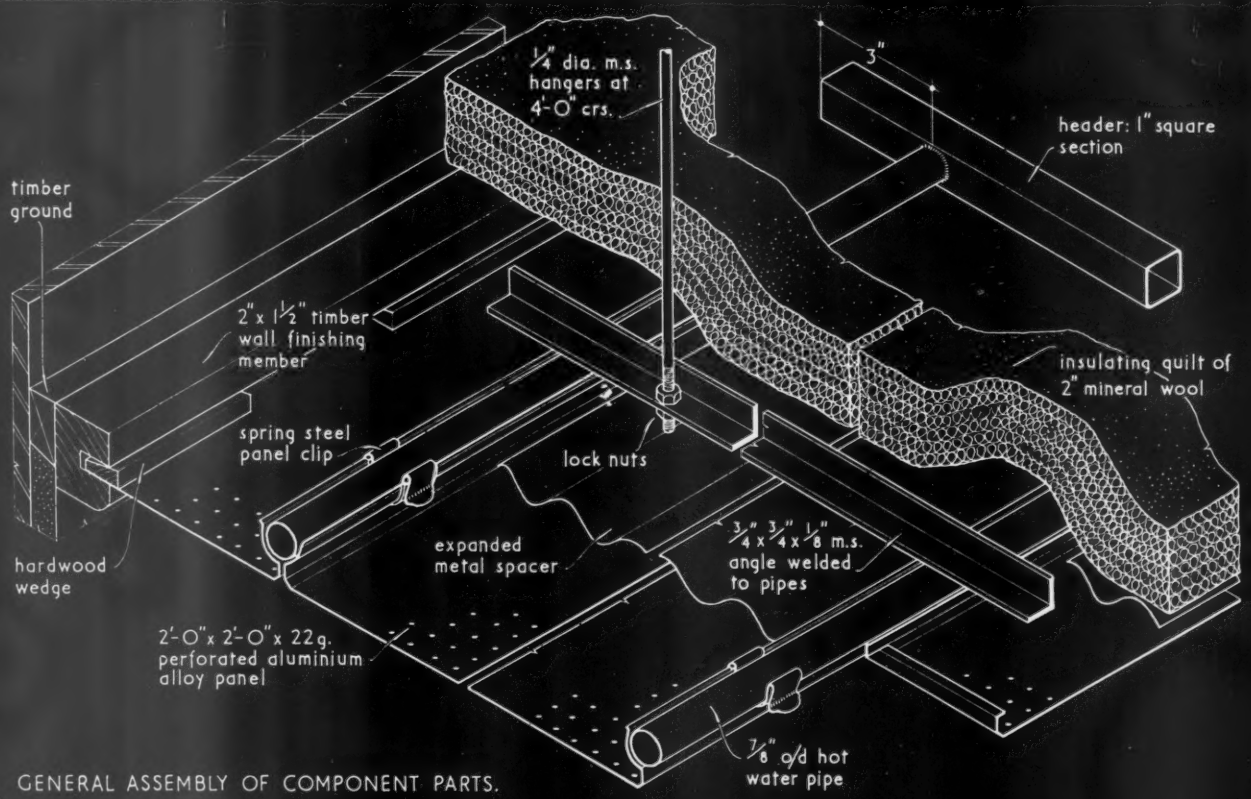


SPACE HEATING | HOT WATER

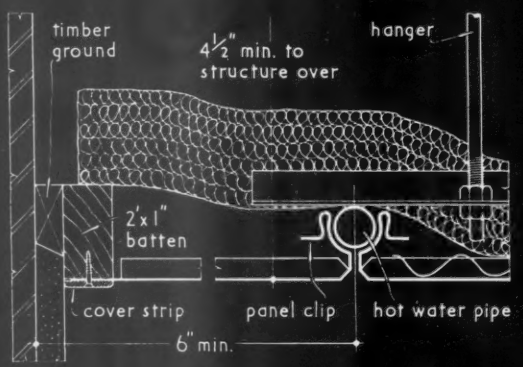
The Architects' Journal Library of Information Sheets 443. Editor: Cotterell Butler, A.R.I.B.A.

29.H1

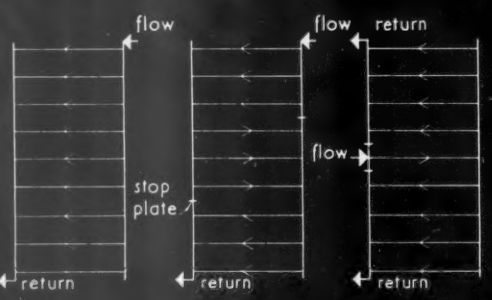
REVISED 26.11.53



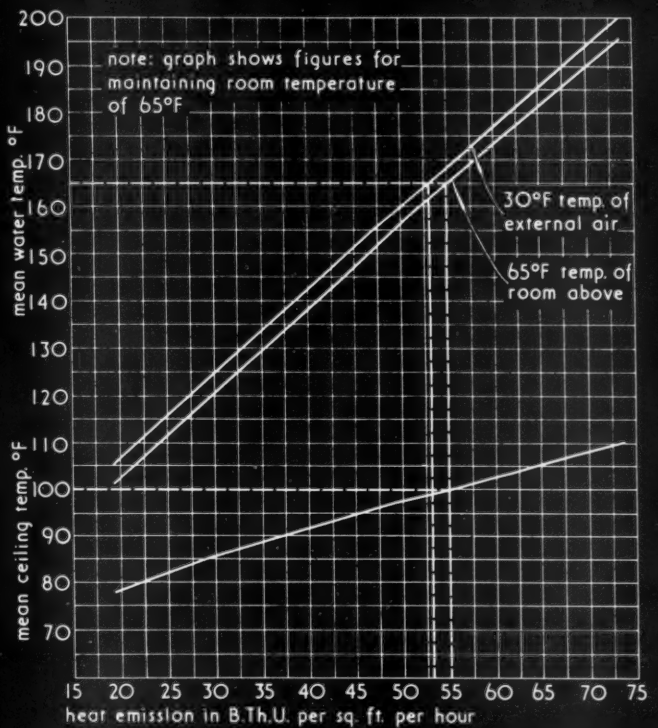
GENERAL ASSEMBLY OF COMPONENT PARTS.



ALTERNATIVE FINISH AT WALL.



TYPICAL LAY-OUTS.



HEAT EMISSION AND MEAN CEILING TEMPERATURES.

·FRENGER· SUSPENDED HEATING AND ACOUSTIC CEILING. Manufacturer: Frenger Ceilings Limited.

29.H1 ·FRENGER· SUSPENDED HEATING AND ACOUSTIC CEILING

This Sheet describes the Frenger suspended heating and acoustic ceiling. The drawings on the face show the general assembly and an alternative finish at walls.

Principle

The Frenger ceiling provides an acoustic surface and at the same time a form of heating which takes up no floor or wall space. No major structural alterations are necessary for its installation in existing buildings. The ceiling, which is suspended from the structure above, consists of a grid of hot water pipes concealed by metal acoustic panels (to which it acts as a supporting framework). It is covered on the upper surface by an insulating quilt which prevents loss of heat upwards and absorbs sound. The panels, being in direct contact with the pipes, radiate heat to the room below. Services may be run in the space over the panels, which are easily removed for access.

Weight

The weight of the standard ceiling, including the water in the pipes, is approximately 3·5 lb./sq. ft.

Components

Hot water pipes : The grid is formed from electrically-welded tube; $\frac{7}{8}$ in. o/d stretchers at 2-ft. centres are welded at each end to 1-in. square headers. Connections are provided on the headers for coupling to the heating system, their location and the arrangement of flow to suit requirements. Typical layouts are illustrated on the face of the Sheet.

Perforated ceiling panels : These are 2 ft. square and are pressed from aluminium sheet. Two parallel edges of the sheet are turned up and shaped to fit round the stretchers; the other two edges are bent as shown to stiffen the panel. The panels may easily be cut to fit round projections on the wall surface or to take light fittings.

Insulating quilt : The standard material is a 2-in. quilt of mineral wool enclosed in paper.

Expanded metal spacers : The quilt is kept clear of the panels by squares of expanded metal, crimped to provide an insulating air-space and to prevent the perforations from becoming clogged when the panels are painted.

Panel clips : These are spring steel strips shaped to be sprung on to the stretchers. Each side of the panel takes four clips. The shaped edges of the panel are sprung on to the sides of the stretchers and into the clips which secure them in position.

Hangers : The pipes are welded to $\frac{3}{4}$ in. × $\frac{3}{4}$ in. × $\frac{1}{8}$ in. mild steel angles which are secured by lock nuts to $\frac{1}{4}$-in. diameter steel hangers. These hangers which are set into the floor slab are fixed at 4-ft. centres.

Light fittings : Special light fittings are designed for this ceiling to replace one or more of the standard panels; names of suppliers may be obtained from the manufacturer.

Finish

The panels have a Pyluminised finish and are usually sprayed on the site with two coats of matt oil paint. (Specification details may be obtained from the manufacturer.) The heating pipes and hangers are rust-proofed.

Heat Emission

A graph is shown on the face of the Sheet giving the heat emission and mean ceiling and water temperatures for a typical room temperature of 65° F.

Example : Where a heat emission of 55 B.Th.U./sq. ft./hr. is required to maintain a room temperature of 65° F (with a room above at the same temperature) the mean temperature of the circulating water would have to be 165° F, giving a mean ceiling temperature of 100° F. Where the ceiling is below a roof exposed to an external temperature of 30° F, emission would be reduced to 53 B.Th.U./sq. ft./hr.

Thermal Capacity

The Frenger ceiling has a thermal capacity of about 0·45 B.Th.U./sq. ft., extremely low when compared with embedded heating panels or radiators. Consequently, when the heating system is turned on there is no long time lag before the heating takes effect.

Sound Absorption

The absorption coefficient of the ceiling may be adjusted to suit particular requirements by using insulating materials of differing thicknesses and types and by varying the air space between the panel and the absorbent. Painting the panels will not affect their acoustic properties.

Given below are the results of the National Physical Laboratory's tests on Frenger ceiling panels: the specimen, 10 ft. square, was spaced 6 in. from walls and backed in turn by the following absorbent materials:—

(*a*) Fibreglass bitumen-bonded mat about $\frac{3}{4}$ in. thick, 0·2 lb./sq. ft.
(*b*) Eldorite mineral wool paper-enclosed quilt about $1\frac{1}{4}$ in. thick, 0·85 lb./sq. ft.
(*c*) Eldorite mineral wool paper-enclosed quilt about 2 in. thick, 1·2 lb./sq. ft.

Absorbent material	Reverberation absorption coefficients (to nearest 0·05) for frequency bands in region (c/s)					
	125*	250	500	1000	2000	4000
a	0·20	0·45	0·65	0·45	0·35	0·25
b	0·35	0·75	0·80	0·80	0·50	0·20
c	0·35	0·80	0·85	0·80	0·50	0·20

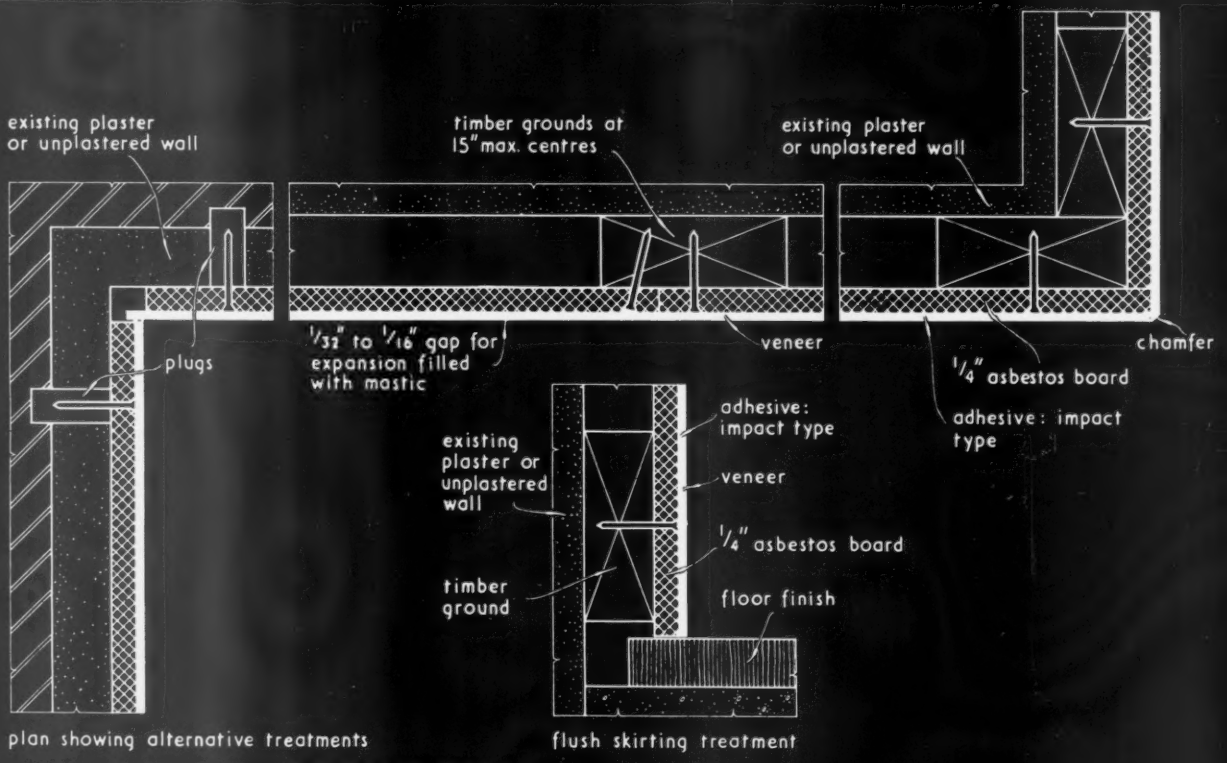
* The accuracy is subject to reservation at this frequency where the measurement presents special difficulty

Further Information

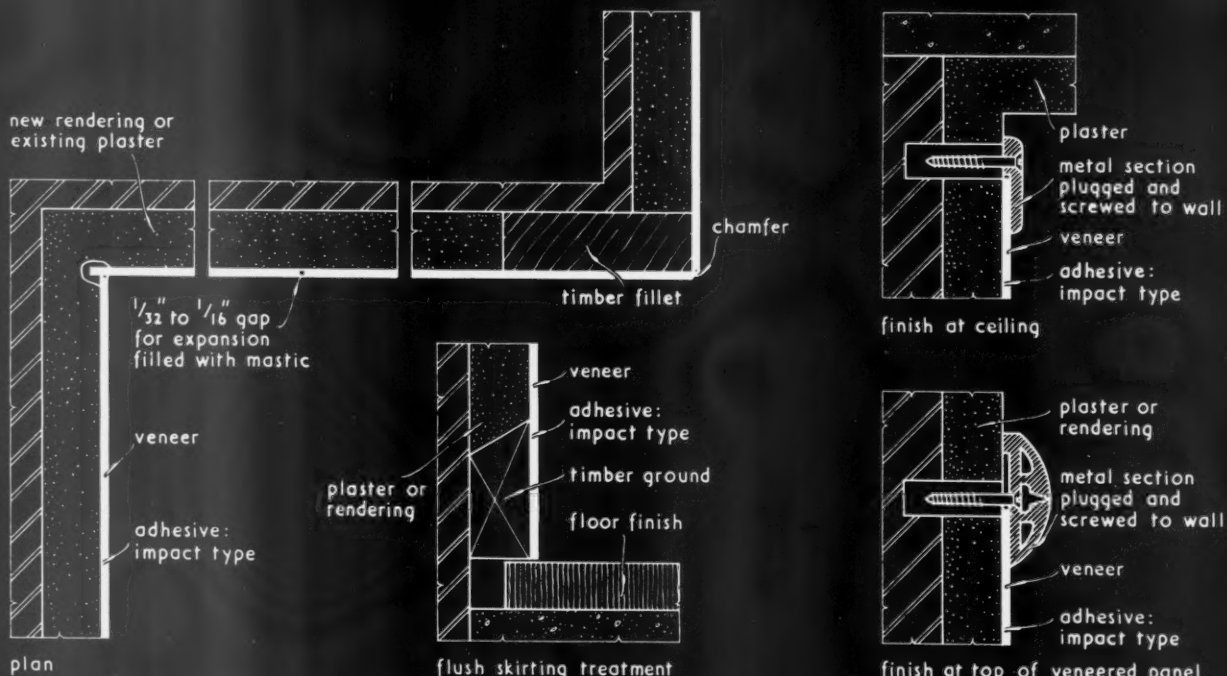
The manufacturer maintains a technical service to advise on problems relating to the Frenger ceiling and to prepare detailed schemes for installations.

Compiled from information supplied by :

Frenger Ceilings Limited,
Address : 67, Great Russell Street, London. W.C.1.
Telephone : CHAncery 5534/5



• VENEER APPLIED TO 1/4" ASBESTOS BOARD.



VENEER APPLIED DIRECT TO PLASTER.

·FORMICA· LAMINATED PLASTICS: VENEERS APPLIED TO PLASTER.

Manufacturer: Thomas De La Rue and Co. Ltd.

15.T7 'FORMICA' LAMINATED PLASTICS: VENEERS APPLIED TO PLASTER

This Sheet is one of a series dealing with Formica laminated plastics. It describes how plastic veneers may be applied to new or existing plaster. Sheet 15.S6 gives a general description of Formica and the forms in which it is available.

General

It is sometimes desired to apply Formica veneers to all or part of a plaster or rendered wall. The following notes, together with the drawings on the face of the Sheet, show how this may be carried out, both on existing and on new plasterwork. $\frac{1}{16}$-in. thickness veneers should be used, $\frac{1}{8}$ in. being unsuitable for this type of work. The satin matt finish is recommended. Where existing plaster is unsound, or where a finish of Formica veneers is required on an unplastered wall, the method described using a backing of asbestos board should be employed.

Preparation of Surface

New rendering: The correct new ground for the veneers is provided by cement-and-sand rendering, finished with a steel float and allowed to dry thoroughly. External angles should be provided with a wrought timber fillet, as shown in the drawing, to which the rendering can be squared up. Internal angles must be raked out clear, as shown.

Old plaster: Where the plaster is hard, it should be trued up, free from bumps and hollows, to which the rather stiff veneer cannot conform. Where it is loose or blown, the cracks should be cut out and stopped. All loose plaster, paint or distemper should be removed and the surface brushed down. All work should be allowed to dry out thoroughly.
External angles should be hacked away and provided with a wrought timber fillet. Internal angles must be raked out clear.

Asbestos board: Where existing plaster is unsound or where the wall is unplastered or damp, any projections should be levelled off and the wall plugged and faced with $\frac{1}{4}$-in. asbestos board. The boards should be well secured, with all joints flush.

Adhesive

The recommended adhesive for applying Formica veneers to walls is Evo-Stik 528 (obtainable from the makers) which is supplied in containers ready for use. It should not be opened until it is to be used.

Application of Veneers

The veneers should be trimmed to size and sharp sawn edges softened with a plane or scraped to make them less vulnerable. At internal angles the overlapping sheet, shown in the drawing, should be fixed before the abutting sheet is trimmed or fixed.

The adhesive should then be poured on to the back of the veneer and spread quickly and evenly with a finely notched spreader of thin plywood, plastic or tin, 6 in. to 8 in. wide. Particular attention should be given to edges of the surface. The adhesive can then be left until it is practically dry.

The Evo-Stik is also applied to the surface of the plaster rendering or asbestos board. The adhesive should be poured on to a hawk or handy panel and applied with the spreader in wide, quick sweeps. It should be allowed to dry naturally until it is just tacky. This takes from five to twenty minutes according to atmospheric conditions. On a very rough surface a thicker coating of adhesive may be necessary, in which case a second coat should be applied when the first is dry.

Care should be taken in placing the veneers, as the adhesive will bond immediately, and it will not allow them to slide. They should be lined up with angle, edge, floor or ceiling and pressed home by hand.

On old and uneven surfaces, mouldings or fillets should be fixed to protect exposed edges of the veneered surface. A small expansion gap (about $\frac{1}{32}$ in. to $\frac{1}{16}$ in.) should be left between adjacent veneers by inserting a gauging strip to maintain an even line. The veneered surface should then be hammered lightly all over with a muffled or soft mallet, particular care being taken at the edges and joints. Expansion gaps can be left open or filled with a mastic filler and cleaned off. External angles should be chamfered or rounded with a scraper, glass-paper or a portable grinder: this must not be attempted until the adhesive has matured, as the friction may generate local heat.

The adhesive develops its maximum strength in 4 days, after which time the bond is resistant to oil, alcohol and solvents and will withstand heat up to a temperature of 212° F.

Further Information

The manufacturer maintains a technical advisory department which is available to answer questions and advise on problems relating to this subject generally.

Compiled from information supplied by:
Thomas De La Rue & Co., Ltd.
Address: Plastics Division, Imperial House, 84-86, Regent Street, London, W.1.
Telephone: Regent 2901.
Telegrams: Delinsul, Piccy, London.

Top, looking across the main hall, from the committee room on the west side towards the refreshment room. On the far wall is a panel which includes an emergency exit, fire-fighting apparatus and heater. This feature will appear as a Working Detail in a later issue of the JOURNAL. *Above left, the bar at the north end of the refreshment room. Above, another view of the refreshment room, showing the buffet counter, which is faced with vertical sycamore boarding.*

the building and on mild steel channels for the low level parts, supported on brick posts. Walls are built in stock bricks or Hornton limestone random rubble. Pitched roofs have timber trusses. Panel infilling is either in egg-crate pattern concrete blocks or random flints. Flints appear on various buildings and screen walls in the neighbourhood. Hornton

COMMUNITY HALL

in HEMEL HEMPSTEAD NEW TOWN, HERTS

designed by H. K. ABLETT, chief architect

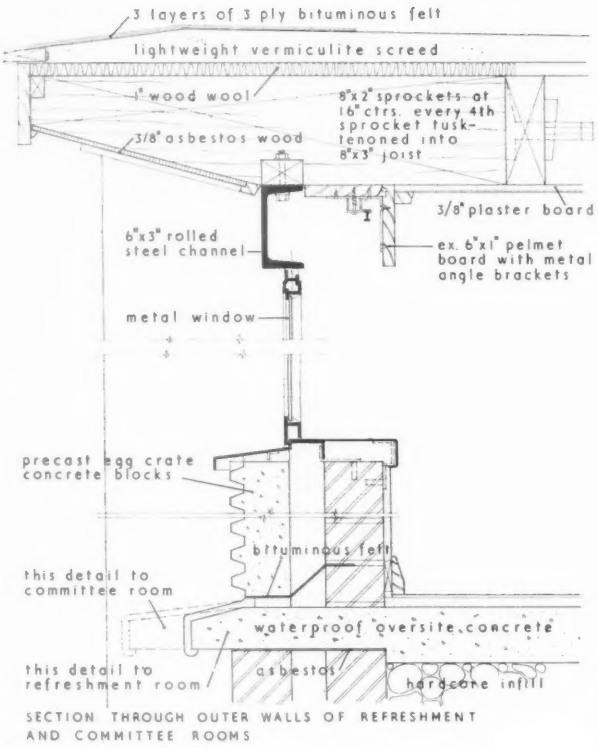
Above, flower box and pergola feature on the north side of the hall. Above right, part of the west wall of the committee room. Below sill level the facing material is egg-crate pattern precast concrete block.

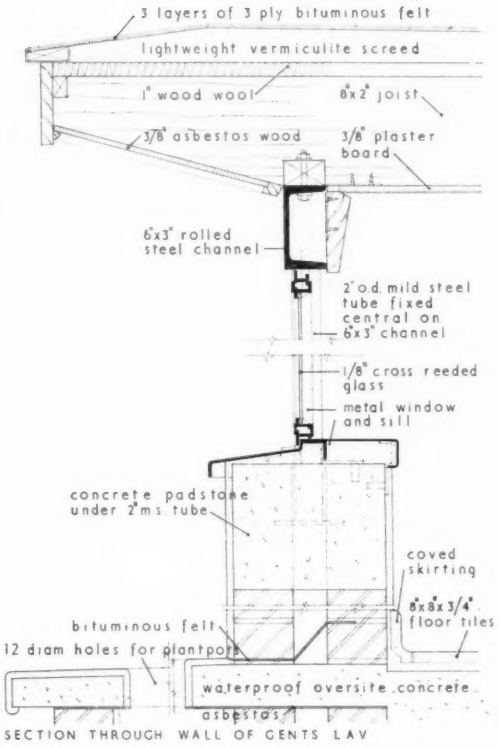
COMMUNITY HALL

in HEMEL HEMPSTEAD NEW TOWN, HERTS
designed by H. K. ABLETT chief architect

stone is entirely new to the district and the 1 to 3 cement coarse sand egg-crate concrete blocks are thought to be something of an innovation. The height of the main pitched roof, which is covered with copper, is such that when one stands on the pavement outside shops to the east of Queen's Square (see site plan on page 668) the ridge appears at exactly the same level as the coping of the flats in the background. The pitch of the main roof is reiterated on plan in the shape of the north wall. The barge boards are tapered from apex to eaves, a detail also used on dwellings that are near the hall. Rendered panels are used on enclosing walls to ladies and gentlemen's cloakrooms and lavatories, painted respectively with deep red and bright blue chlorinated rubber paint. The building is entered through a square lobby with a ceiling of open joists, 8 ft. 3 in. above floor level and carried on wrot iron brackets on the foyer side. The random rubble stone wall is brought inside the lobby on the north side. The foyer is the same width as the lobby, but is twice as wide and has a raked ceiling which is plastered, painted blue and contains recessed light fittings. In the north wall of the foyer, which is painted light grey, is a panel containing doors to cloakrooms, between which is a panel of vertical softwood boarding and a rack for indoor plants. The hall ceiling is painted the same shade of blue as in the foyer. The recessed lights can be dimmed. The lower half of each end wall is fair-faced brickwork the upper half is faced with acoustic tiles. Side walls are plastered and painted grey. The semi-sprung floor is of maple boarding.

SERVICES.—Heating, hot water, lighting and cooking are by electricity. Heating is by thermostatically controlled, low level convectors and by high level, tubular heaters placed on window sills. The lighting is controlled from the ticket office with a subsidiary control near the band platform for dimming lights in the main hall. Emergency lighting is installed in all rooms and incorporated in the general lighting scheme. It is served by batteries stored in the basement and fed by a trickle charger.





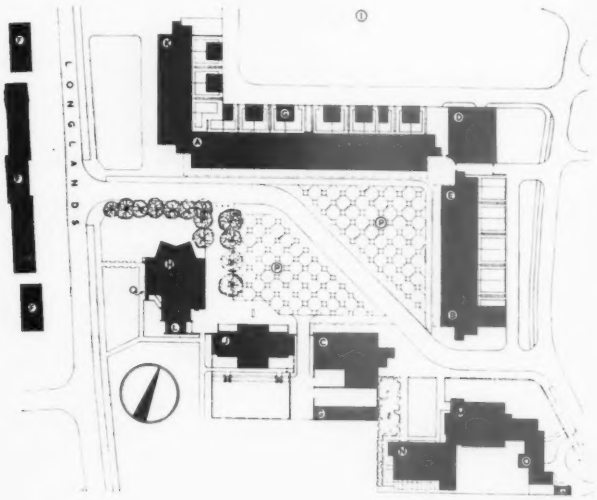
External wall details [Scale: 1" = 1' 0"]

The cost of the building is about £20,000, including furnishings and it took one year to erect.

The general contractors were Brown & Clark Ltd.

For sub-contractors see page 678.

Below, the dance floor from the hall's south side. Over the main doors is a small gallery for a spotlight, which can be reached by an aluminium ladder.



Site plan

KEY

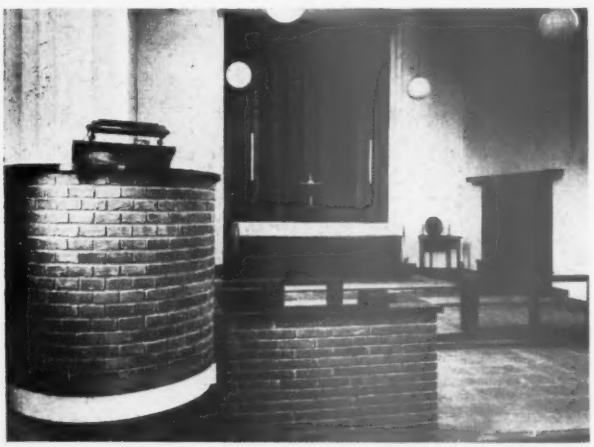
A. 14 shops and 15 maisonettes
B. Post Office
C. Co-operative shop, 4 maisonettes
D. Dairy
E. 7 shops, 9 maisonettes
F. Flats
G. Garage
H. Hall
I. Service industry
J. Public House
K. Extension to shops
L. Library
M. Church
N. Church Hall
O. Vicarage
P. Parking area
Q. Clinic

Note.—K, L, N and O have not yet been built.

NEIGHBOURHOOD CENTRE

at ADEYFIELD, HEMEL HEMPSTEAD
designed by H. K. ABLETT, chief architect
church designed by WELCH and LANDER

GENERAL.—On this page are shown some of the recent buildings which form the Adeyfield Neighbourhood Centre, apart from the new Community Hall. Top right is a view from the new hall with the public house (J on site plan) on the right and beyond it the co-operative shop (C on site plan), with maisonettes over. Centre right, the church (M) photographed from a position which will be later occupied by the church hall (N). Below right, the interior of the church looking towards the altar from the gallery at the west end. Below, the altar and pulpit of the church. A church tower has yet to be built.



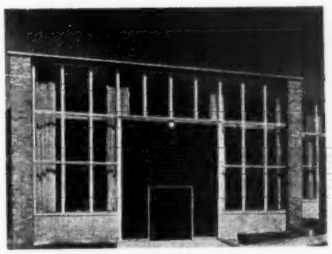
LABORATORIES and BOILER HOUSE

at the BUILDING RESEARCH STATION, GARSTON, WATFORD, HERTS

designed by the Chief Architects' Division, Ministry of Works

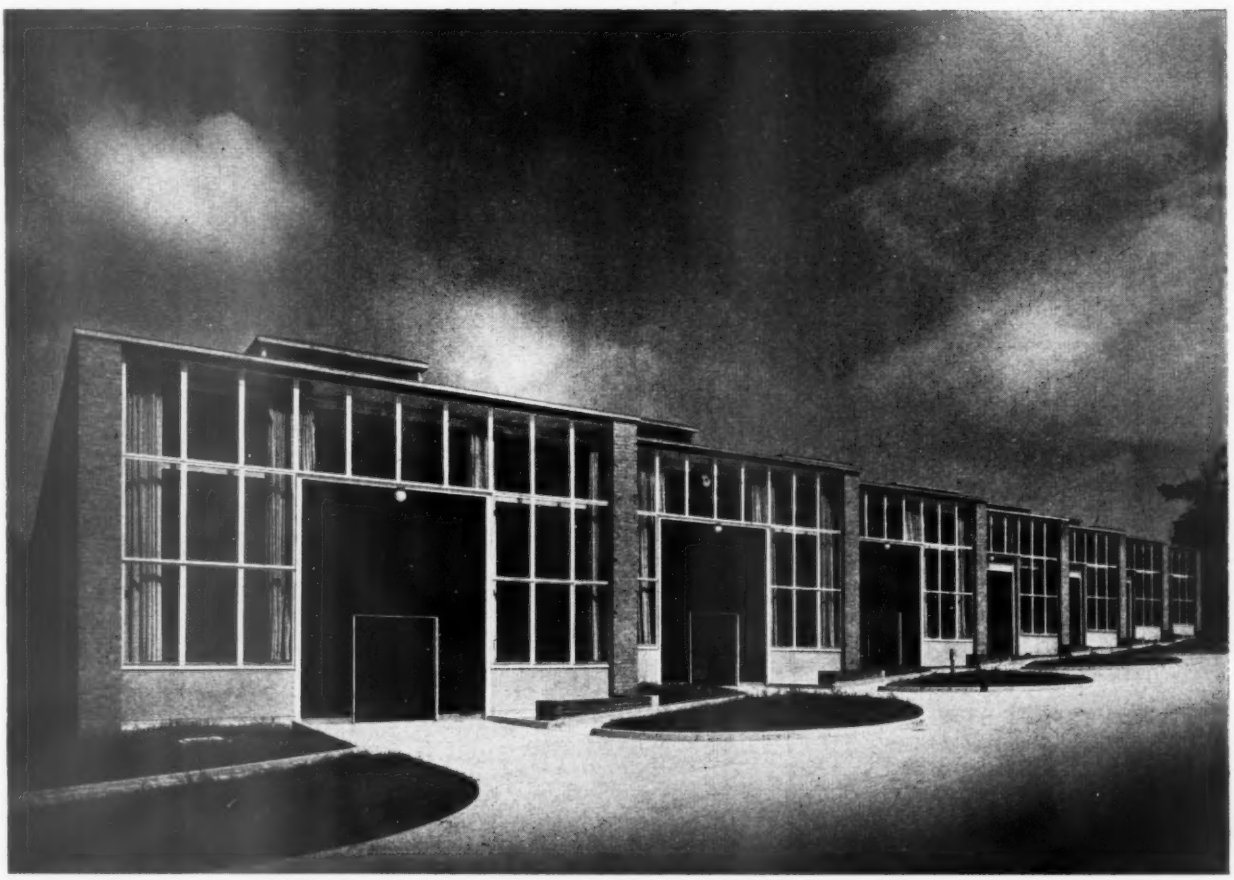
A. C. HOPKINSON, superintending architect; F. L. MASON, assistant architect-in-charge; J. J. TAYLOR, senior engineer

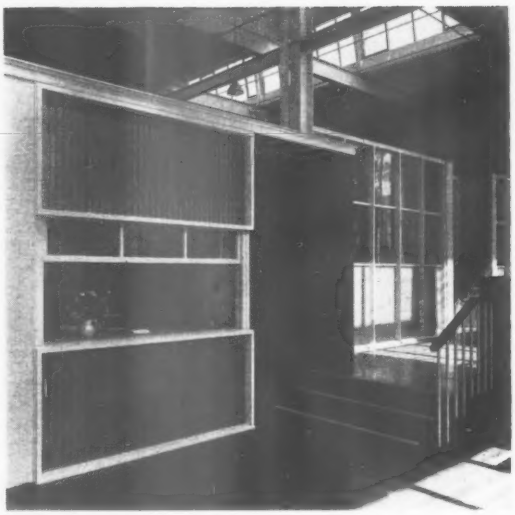
The new buildings at Garston, shown on this and the following three pages, are part of a comprehensive scheme of development which was drawn up for the DSIR in 1947 by the MOW. The new concrete laboratory was illustrated in the JOURNAL for May 1, 1952. The range of pilot plant shops, seen below, will ultimately form part of the permanent accommodation for the chemistry and engineering divisions of the station.

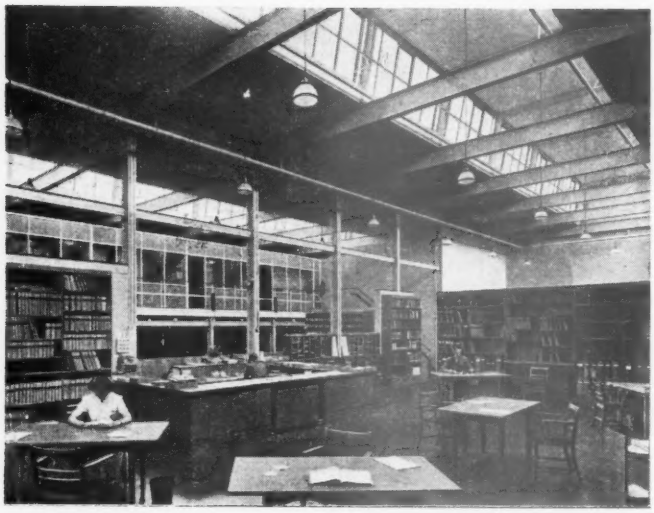


The south facade of bay 3.

The laboratories from the south-west.





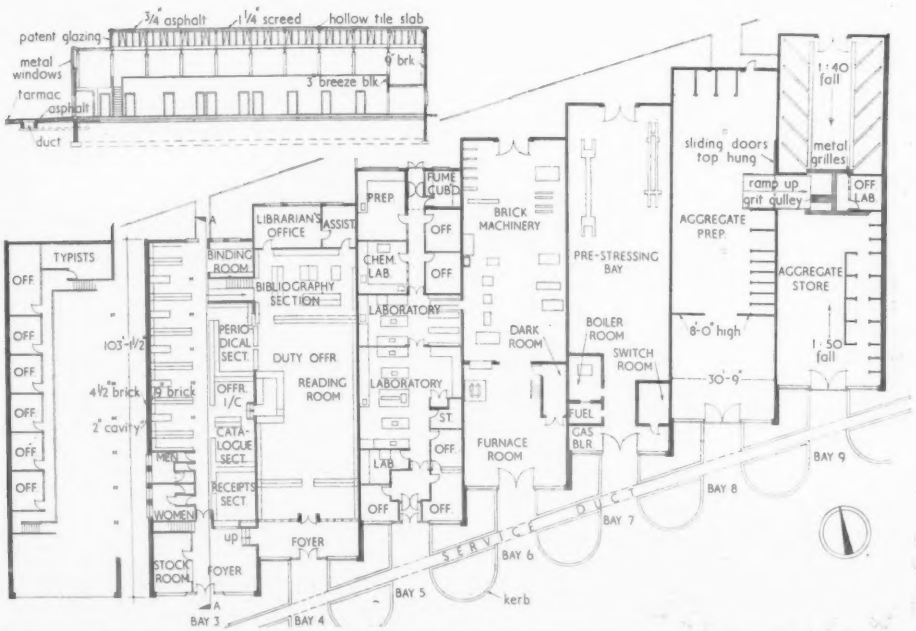


LABORATORIES and BOILER HOUSE

at BRS, GARSTON, WATFORD, HERTS

designed by Chief Architects' Division, MOW

GENERAL.—There will be nine bays in all when bays 1 and 2 are built on the west side and the accommodation will be devoted to development work by the chemistry and engineering divisions, but in the meantime some of the shops are being used temporarily for hitherto inadequately housed sections whose permanent homes have yet to be built. Each of the nine bays is 100 ft. long by 30 ft. wide and are built in echelon formation on plan as the most economical use of a sloping site. Bays 6 and 7 were built as part of a former contract and house, respectively, machinery for pilot scale brick making and plant for practical development in pre-stressed concrete studies. Bays 3, 4 and 5 are only in temporary use, two for the library and the third for clay technology and asphalt sections of the



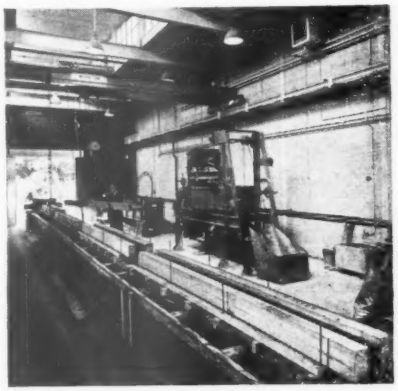
Ground floor plan, first floor plan of bay 3 and section A-A [Scale : 1/8" = 1' 0"]

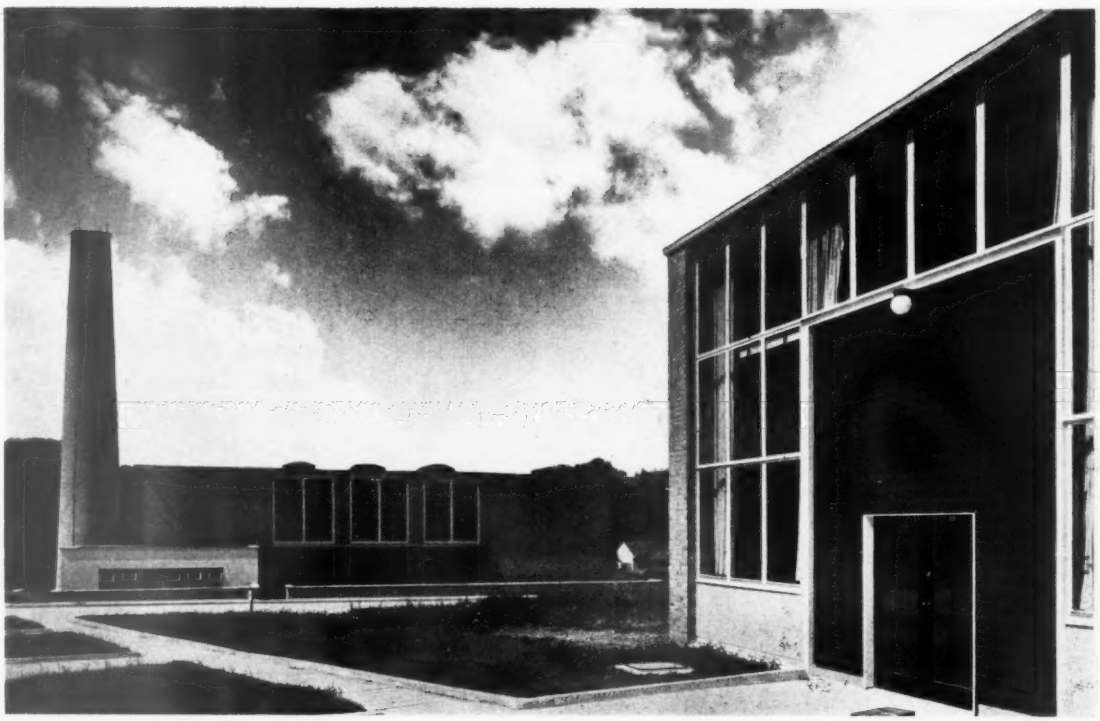
Top left, the main entrance and room containing stock and free issues in bay 3. Top right, another view in bay 3 showing sales window and steps leading to block 4. Above, view from the reading room in bay 4 into the periodicals section in bay 3.

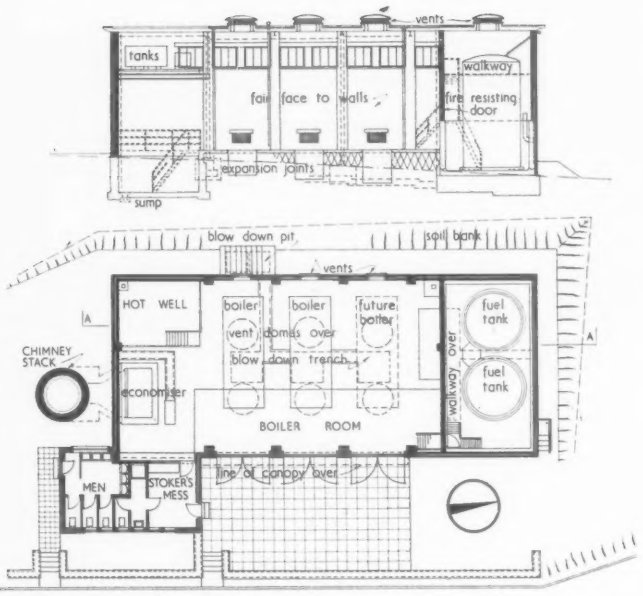
chemistry division. Should it be found necessary to enlarge the accommodation, there is space on the north side of the site to add a further 40 ft. to the building. The laboratories are steel framed, to support gantry cranes. Walls are of brick, faced with London stocks; floors are of reinforced concrete with granolithic finish, and roofs are of hollow tile construction, covered with asphalt. Natural lighting is provided by glazing on the south and by continuous monitor roof lights with standard patent glazing. Double doors large enough to take a lorry were required at the end of each shop, but where the accommodation has been adapted for temporary purposes, the openings have been filled in with weather-boarding and domestic-size glazed doors have been fitted. The fair-faced internal walls and roofs are finished with plastic emulsion paint to colour schemes designed by the BRS in collaboration with the architect. Woodwork is finished with gloss oil paint. The library furniture is designed so that it can be re-used when the permanent library is built. The laboratories are supplied with gas, electricity and hot and cold water. The library and chemistry laboratories are heated by convectors.

The boiler house is constructed of load-bearing brickwork, with brick piers in the walls and steel stanchions between the boiler beds, supporting a grid

Below left, prestressed concrete studies in progress in block 7. Below, laboratories of clay technology and asphalt sections of chemistry divisions. Bottom, from the south-east; bay 3 on the right and the boiler house beyond.







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

Left, the boiler house from the east.
Below left, detail of the east facade.

LABORATORIES and BOILER HOUSE

at BRS, GARSTON, WATFORD, HERTS

designed by Chief Architects' Division, MOW

of rolled steel joists, which in turn carries a flat roof of hollow tiles. The roof is finished with bituminous felt on light-weight screed. Walls are faced with multi-coloured stock facings. There is space for three large oil-fired boilers, but these have not yet been installed and such service as is required until they are ready is provided by a temporary boiler. In front of each boiler position is a pair of large glazed doors through which boiler tubes will be withdrawn into the open air for periodic inspection and cleaning. The fuel is creosote pitch stored in two cylindrical tanks housed in a compartment at the north end of the building which has a special reinforced concrete base. By means of the economiser, mains water is heated before reaching the boilers by exhaust fumes, thus lessening the load on the boilers. Steam from the boilers will be distributed by a new mains system to calorifiers which will replace each of the existing solid fuel boilers now heating individual buildings. The water heated by the calorifiers will circulate within each building by the existing system of pipes and radiators.

The general contractors were Haymills (Contractors) Ltd. For sub-contractors see page 678.

TECHNICAL SECTION

The principal conclusion to be found in the recent report of the Girdwood Committee on the cost of house maintenance* is that the cost today is 316 per cent. of the cost of similar work done in 1939. The Committee points out, however, that the increased age of many of the houses and neglect during the war years probably means that there is a greater need for maintenance now than in 1939, although both exteriors and interiors are now re-painted less frequently and this reduces present expenditure.

Useful as the simple cost comparison is, it does not help us very much to find a method of getting houses properly looked after. This is, to a considerable extent, a political problem, which is to be tackled during the present session of Parliament, but the main question for the building industry remains: how, in view of the high labour-materials ratio in repair work, can repair labour best be organized? The importance of good supervision, stressed in the recently-published report, *Productivity in House-Building*,† applies as much to repair and maintenance work as to new work. In fact, it is even more important with maintenance work, since incentive schemes are more difficult to apply.

There is another question which has yet to be answered: in specifying materials, constructional methods and quality of workmanship for new housing, is sufficient thought given to the problem of maintenance, or is there a danger that housing costs are being reduced at the expense of future maintenance costs?

This week's special feature

8 ESTIMATING
index of materials' prices

The number preceding the week's special article or survey indicates the appropriate subject heading of the Information Centre to which the article or survey belongs. The complete list of these headings is printed from time-to-time. To each survey is appended a list of recently-published and relevant Information Centre items. Further and earlier information can be found by referring to the index published free each year.

Materials' prices and building costs have been relatively stable during the last year. The former have, in fact, been falling so that, whereas up to 1952 *materials' prices were higher, compared with* 1945, *than labour costs, the position has now been reversed. In the following analysis of the indices of materials' prices and building costs, Professor Bowen draws the conclusion that the fall in materials' prices has been due to changes in the supply of materials rather than to changes in the demand for building work. He believes that materials' prices will remain fairly stable, at least until next Spring, and that, if anything, they will continue to fall.*

The Board of Trade index of building materials' prices has remained remarkably stable since the fourth quarter of 1952. The mid-quarterly figures are shown in the table overleaf and in Fig. 1.

Throughout the last twelve months there has been a fall in imported items—timber (hardwood, softwood and hardboard), lead, zinc, etc., whereas between 1949 and 1952 the prices of these commodities increased by a percentage well above that of

* *The Cost of House Maintenance*. Report of the Committee of Enquiry. (HMSO, 1953. 9d.)
† *Productivity in House Building*. Second Report. (HMSO, 1953. 1s. 9d.)

Year	Quarter	Building and Civil Engineering Materials	House Building Materials
1948 ..	1		
	2	(average)	(average)
	3	100·6	100·8
	4		
1949 ..	1	103·1	103·0
	2	101·6	101·4
	3	100·5	100·6
	4	102·8	102·8
1950 ..	1	102·7	102·4
	2	102·3	102·9
	3	107·5	106·9
	4	110·8	108·3
1951 ..	1	113·4	111·1
	2	125·8	124·7
	3	131·2	128·0
	4	131·8	127·7
1952 ..	1	134·8	131·4
	2	134·9	131·8
	3	133·4	130·4
	4	130·2	128·6
1953 ..	1	131·0	129·0
	2	130·2	128·8
	3	130·4	128·6
	(Sept.)	130·1	128·4

building materials generally. The drop in the price of important items has been offset by rises in the prices of several home-produced materials, such as granite chips, roofing slates, sand and ballast and, to a greater extent, asbestos, cement, clay roofing and flooring tiles, and certain iron and steel items. Copper and aluminium sheets rose considerably above their 1952 prices in the first quarter of 1953, but subsequently became cheaper.

Thus, the recent price stability has not been the consequence of any successful policy of stabilizing demand, but the result of two quite separate forces working with approximately equal effectiveness, in opposite directions. The fall in the prices of imported items has probably been the result of a (perhaps) temporary depression of world trade; the rises in the prices of home-produced materials have been largely the result of increased labour costs.

What net effect are these contrary forces having on building costs? Some consideration of figures for weekly earnings in the industry and the changes in housing and building prices (as estimated in the latest White Paper on National Income) may throw some light on the consequences of the present calmness of building materials' prices.

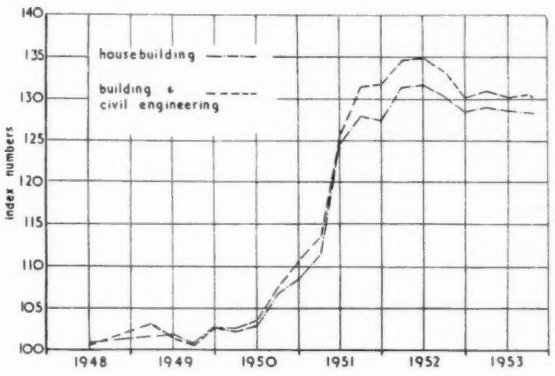


Fig. 1, the Index of Prices of Materials used in Building & Engineering and House - Building. (Source : The Monthly Digest of Statistics.) Figures plotted at mid-quarters.

WAGES COSTS IN BUILDING

Fig. 2 shows the half-yearly figures for weekly earnings of building operatives, plotted against the half-yearly figures of the housing materials' prices index. It will be seen that the check to the rise in building materials' prices was not accompanied by a similar check to the steady rise in earnings in the industry. This continued increase was not due to longer hours worked, but to rises in basic wage-rates. The result has been that, in the last eighteen months, labour costs rather than materials' costs, have become the main reason for the continued rise in the cost of building.

This is a distinct reversal of the post-World War II trend that persisted up to the first half of 1952. During that period, materials' prices were 33 per cent. above their 1949 level (1949 prices already being up on 1945 prices), when wages costs were only 26 per cent. above their level for 1949. But now wages costs are some 36 per cent. above the 1949 level, while materials are up by only 29 per cent.

THE PRICE OF NEW HOUSING

Also shown in Fig. 2 (in order that it may be compared with changes in weekly earnings and materials' prices) is an index of the price of new housing. The *price* of housing may not, of course, vary at the same rate as the *cost* of housing, but it is likely to move in the same direction. In times of high demand tender prices for houses tend to rise faster than housing costs. When demand is low, or economies are being effected administratively, tender prices may move no faster (or more slowly) than costs, even when these are rising. The official index shown in Fig. 2 indicates that, as with the prices of materials and labour, the price of housing in 1952 was not much higher than in 1949.

It may be recalled that the amount of new housing work done in 1952 was £385 millions (at 1948 prices), that is to say 17 per cent. more than the amount done in 1949. It will be interesting to see whether the increased costs of new house construction in 1953 has had much adverse effect on housing prices, or whether administrative action and changes in specifications have prevented a further serious rise in these prices.

Fig. 2, the index for the prices of house-building materials plotted against average weekly earnings of operatives and the price of housing. (Sources : Price of Housing, Table 42, National Income and Expenditure, Aug. 1953 ; Weekly Earnings, Ministry of Labour Gazette ; Building Materials, Board of Trade Journal.) Figures plotted at half-yearly intervals.

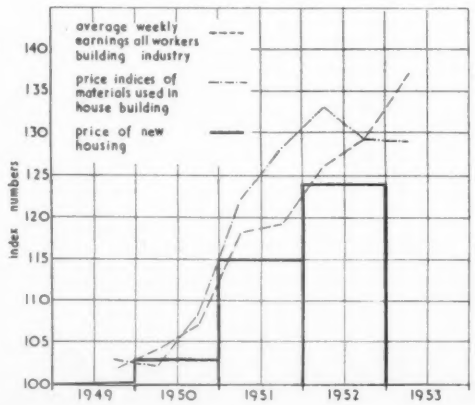
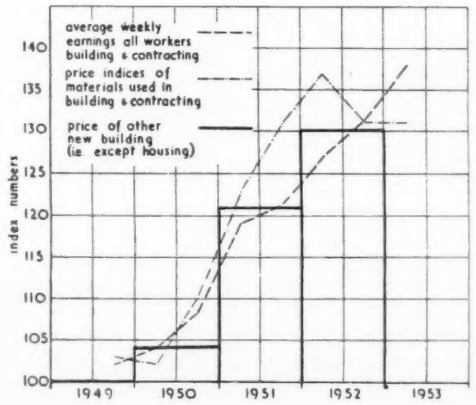


Fig. 3, the index for the prices of building and civil engineering materials, plotted against average weekly earnings of operatives and the price of new building, other than housing. (Sources : as Fig. 2.) Figures plotted at half-yearly intervals.



NEW BUILDING OTHER THAN HOUSING

Fig. 3 shows indices of the prices of materials, of earnings and of building work for new building, other than housing. It is striking that the price of new building work was, by 1952, 30 per cent. above the 1949 level, that is to say, it had advanced distinctly faster than the price of new housing (according to the official indices published, for there is, no doubt, a margin of error in the calculations). The price of new building other than housing has closely kept pace with the rises in materials and labour costs, and it is to be feared that the figures for 1953 will show some further rise.

FUTURE OUTLOOK

A year ago, and for some time before that, the possibility of some lessening in building demand was dismissed in these columns, because any such reduction would be one factor making for a curbing of building costs. With tighter credit control, and budget difficulties, it seemed possible in 1951 and 1952 that the demand for civilian building work might decline. No such doubts can easily be raised today. The moment for a severe curtailing of the building programme has passed. Not only has licensing progressively eased, and a large programme of industrial building been allowed to proceed, but housing is still being encouraged, both out of public funds, and, in the case of repairs, out of the pockets of private landlords.

The fall in materials' prices, that has so far occurred, seems to have been almost wholly the result of a change in supply conditions, rather than by any change in demand. The immediate future, too, will depend on supplies. So far as materials are concerned, no sudden change in prices as a whole, either up or down, is likely until next spring. Until then, they are likely, as a whole, to fall rather than to rise.

The wages position is a different matter. On general economic grounds, the case for their continued rapid upward trend, might effectively be refuted. With world food prices sagging, the cost of living is likely to become more stable, and further increases in manufacturing and engineering labour costs are a disadvantage to our export prices, so that the economic climate is distinctly chilly for the wages claim.

On the other hand, a flat refusal of these claims is always politically very difficult to maintain. A further rise in *building* wages next February would probably soon be followed by a rise in wages costs in many of the domestic building materials' industries. Since, for political reasons, small increases may take place, the rise in materials' prices, and the price of finished buildings (and, of course, of labour) may be expected to continue next year, but most likely at a much slower rate than has been customary.

The recent IHVE symposium on industrial heating and ventilating industrial buildings was given at two well-attended meetings. The seven papers presented covered a wide range of topics. Two of these were mainly on research, but the remainder dealt with up-to-date practical developments. The following report is by Specialist Editor No. 16.

HEATING AND VENTILATING INDUSTRIAL BUILDINGS—REPORT OF IHVE SYMPOSIUM

THE first paper was on natural ventilation. The author, E. Yould, recommended that fresh air inlets should be controllable and well distributed at low level, and that their area should be at least twice as large as that of the outlets. He considered a vertical stack with suitable weather protection to be the most effective extractor, particularly when it terminated at or above the ridge. Another possible alternative was the continuous ridge ventilator which was much superior to the jack roof.

Mr. Yould thought that ventilators in roof slopes were unreliable, although he admitted that, if such ventilators could be opened to give a clear view of the sky, they seemed to provide some "psychological benefit" to workers in very hot surroundings. This point was taken up in the discussion, and one speaker thought that the benefit was *physiological*, and was due to increased heat loss by radiation direct to the sky. The general conclusion from the discussion on this paper was that natural ventilation was particularly satisfactory where there was a large amount of process heat; otherwise, where good distribution of fresh air had to be ensured, a combination of mechanical intake and natural exhaust could provide the best solution.

ROOF CONDENSATION

J. B. Dick, of BRS, dealt with a case of roof condensation in an air-conditioned factory. An investigation had shown that, although relief vents to outside had been provided, the "pressurization" of the factory by the air-conditioning system was forcing large volumes of moist air from the factory through gaps around the fibreboard panels in the ceiling into the roof space. The resulting condensation on the asbestos cement roof had caused serious damage. The trouble had been practically eliminated by using some of the air-conditioning fans which were spare in winter time to introduce fresh air from outside, and thus to "pressurize" and ventilate the roof space.

Mr. Dick thought that some of the condensation troubles which occurred in industrial buildings might well be due to the flow of moist air, rather than diffusion through porous materials, and that there might be, therefore, opportunities for the ventilating engineer to effect an improvement in conditions.

The paper on temperature gradients, by E. Danter, also of BRS, was probably the one of greatest interest to the heating and ventilating engineers present. He reported on surveys which had been made of air temperature gradients in factories. He had found that with floor heating the air temperatures at roof level were comparable with those at working level, whereas with panel heaters and unit heaters the air temperatures at roof level were 7°F. and 10°F. respectively greater than the working level temperatures. There was considerable discussion of this topic, mainly concerning the mechanism of the formation of the gradients. One of the main disadvantages of high temperature gradients is that the maintenance of a higher temperature at roof level increases the rate of heat loss through the roof.

INSTALLATIONS IN THE USA

The last paper of the afternoon session was by W. A. Allen, of BRS, who described heating and ventilating installations which he had seen in medium and large factories in the USA. He reported a swing towards the use of mechanical ventilation, usually combined with heating and in some cases with full air-conditioning. In the larger factories the services were run overhead and ducts dropped at intervals to deliver the conditioned air into the working areas. Anemostats were often used and these could be varied so that air could either be diffused gently into the area or directed in a jet towards a specific spot. There was support in the discussion for

the use of this method of control, especially where no cooling was provided and additional air movement was required in summer.

The first paper of the evening session was on radiant heating methods. It was given by W. R. Cox. He thought that the great advantage of radiant heating was that comfort could be attained with a lower air temperature, so that the heat loss by ventilation was reduced. He suggested that where continuous heating was required, floor warming could offer savings in fuel over any other form of heating, but he considered it unsuitable for intermittent use. He gave many examples of radiant panel installations, ranging from low temperature hot water panels with surface temperatures of about 150°F. to luminous gas heated panels running at 2,000°F.

"STRIP" HEATING

Mr. Cox welcomed the development of continuous strip heating, in which the heating fluid was passed from one end to the other of a continuous panel, thus confining the mains to those required to serve header connections at either end. As pointed out by Mr. Bruce in the discussion, there is a remarkable similarity between this latest form of heating and the ordinary pipe coils mentioned by the following speaker, E. A. Pearce, in his paper on convective heating methods. Mr. Pearce considered that there were many small factories which could be satisfactorily heated by pipe coils, and that these could often be combined conveniently with conventional radiators. The latter were the natural choice for small workshop areas and offices, where a low-pressure hot water supply was available; where only high temperature water or steam was available, convector heaters with gilled tubes could be used.

INDIVIDUAL APPLIANCES VERSUS CENTRAL HEATING

Mr. Pearce described the various types of direct-fired stove and air heater which are on the market. These, he said, covered a wide range of outputs, but were generally more suitable for the smaller factory. If, due to the size or plan of a factory, a large number of these units was required, it was more satisfactory to install a central boiler and pump the heating medium around the building.

Mr. Pearce dealt with the choice of heating media for unit heaters and considered the types of unit heater now available. In the subsequent discussion on this paper, Mr. Wills said he thought that Mr. Pearce had been rather extreme in his opposition to the use of gas. He thought that, although gas was more expensive than solid fuel, there were many small factories where it could provide a high standard of service at a reasonable cost, especially if the heat was supplied in radiant form.

The final paper was presented by A. H. Y. Broderick (of the Structural Insulation Association), who gave details of insulating materials and methods of construction. He made a plea for financial reform to allow the industrialist to meet the cost of insulation out of revenue. He thought that such a step would greatly encourage improvement of the insulation of existing buildings and would result in considerable fuel economy.

On the whole, the papers at this symposium contained much valuable and interesting information; the two on radiant and convective heating methods are recommended, in particular, as useful surveys of modern practice. The discussions were rather limited, but this was due more to lack of time than to lack of enthusiasm. The papers, together with a report of the discussion, will be published in a future issue of the Journal of IHVE and will be noted in the Information Centre, in due course.

QUESTIONS & ANSWERS

Questions to the Technical Editor are answered confidentially and free of charge.

3076 COMBINED DRAINS

Q *I am erecting a house on a site adjoining eight cottages which have a common drain running through their gardens at the rear and eventually connecting with the main sewer.*

If this scheme was put into operation before Sept. 30, 1937, am I entitled to connect the drainage of my house to the common drain without obtaining the consent of each owner of the cottages? If I am, would you please tell me the relevant Act and Section?

A Section 20 of the Public Health Act, 1936, provides that all combined drains constructed before the commencement of the Act (Oct. 1, 1937) became vested in the local authority on that date.

Under Section 34 of the Act, notice must be given to the local authority if it is proposed to connect the drainage of premises to the sewerage system. The local authority, if they approve the connection, may make it themselves, or may consent to an owner doing the work under their superintendence.

(See also Q & A No. 3060, published in the JOURNAL for Sept. 4, 1952.)

3077 THE CLERK OF WORKS

Q *We wonder whether you have any records of an agreement between the NFBTE, or a similar body, and any professional institute setting out the duties of a clerk of works. In particular, we should be interested to know whether any responsibility can be attached to the clerk of works or the employer for defective materials or workmanship which may have been embodied in a building during the presence of the clerk of works, but without his specific approval to the material or workmanship.*

A There is no agreement between institutions relating to the duties of a clerk of works. He is referred to in the RIBA form of contract as an inspector on behalf of the employer and the RIBA scale of charges states that he is appointed and paid by the client.

The fact that defective materials or workmanship may have been embodied in a building would still leave the contractor liable for breach of contract in cases where a clerk of works is employed. It may be, however, that a certificate under clause 24(f) of the RIBA form of contract would have a bearing on this point where that document is used.

Announcements

Hills (West Bromwich) Ltd. have recently negotiated a contract in connection with a two-storey school in Toronto, value 300,000 dollars. The main factors which decided the placing of the order were the extremely low number of erection man-hours required and the fact that immediate delivery of all essential components was possible. The whole of the prefabricated steelwork and windows for this two-storey school were despatched three weeks from the receipt of the order. The key erectors from Hills (West Bromwich) Ltd. are being flown out to Canada to supervise the erection. The school will have accommodation for 400 pupils and will include thirteen classrooms and two large indoor play centres. The architects of the school are Allward & Gouinlock of Toronto; the contractors, Anderson, Smythe & Co. of Toronto. More than 300 schools

have been built to date by the Hills Presweld System of Construction. In addition to exporting to Canada, the firm are exporting to Australia and it is anticipated that this Canadian contract will be the forerunner of a sizeable school programme in Canada, all in the Presweld System of building.

R. Benson, who previously represented Vidor Ltd. has been appointed representative to Philips Electrical Ltd., and he will operate in Lancashire and Cheshire.

F. Woodcock, director of the Helical Bar & Engineering Co. Ltd. has been elected President of FASSC for the second year in succession.

R. W. Allen, B.SC.(ENG.), A.M.I.E.E., has been appointed north east area representative for Nife Batteries, Redditch. Mr. Allen, who has spent five years in the company's technical sales department, has been especially concerned with the application of batteries and charging equipment for switchgear operation, emergency lighting and marine duties.

T. H. Atkinson has joined the Thermovent Heating Division of E. K. Cole Ltd., as technical sales representative, covering the south and south eastern area. He is well known in this area, having, until recently, represented Parnall (Yate) Ltd., and may be contacted through the London office of E. K. Cole Ltd., at 5, Vigo Street, W.1.

H. C. Margrett has been appointed manager of the Business Development Department of The General Electric Company Ltd., in succession to P. H. Nye who has recently retired.

To meet the growing demand for cuprinol wood and fabric preservatives, the separate manufacturing and distributing services have been amalgamated in one company, Cuprinol Ltd., with increased capital resources. The head offices of the company are now at 86, Carpenter's Road, Stratford, London, E.15. Jenson & Nicholson Ltd., makers of Robbialac paint, have so far only been concerned with cuprinol sales and distribution, but to facilitate this expansion, they have taken a substantial shareholding in Cuprinol Ltd., which is a subsidiary of the National Smelting Co. Ltd.

Correction

Included in the design team working on the proposed scheme for South Bank Development, illustrated on pages 501 to 506 of the JOURNAL for October 22 were D. Medhurst, T. W. Bliss and I. M. Purdy.

Buildings Illustrated

Community Hall, Adeyfield Neighbourhood, Hemel Hempstead New Town, Herts. (Pages 662-668.) Chief architect: Hemel Hempstead Development Corporation, H. K. Ablett, F.R.I.B.A., M.T.P.I.; Assistant chief architects, P. R. Bee, A.R.I.B.A., A.M.T.P.I., H. Schofield, A.R.I.B.A. Senior assistant architect in charge of contract: M. Hardstaff, A.R.I.B.A.; Assistant architects on contract: T. L. Lilley, A.R.I.B.A., P. E. Sadler. Landscape architect: N. H. J. Clarke, A.I.L.A. General contractors: Brown & Clark Ltd. Sub-contractors: metal windows and doors, The Crittall Manufacturing Co. Ltd.; electric heating and lighting, The Eastern Electricity Board; copper roofing, Broderick Insulated Structures Ltd.; bituminous felt roofing, Permanite Ltd.; maple strip flooring, Hollis Bros. Ltd.; cork flooring, The Resilient Tile & Flooring Co. Ltd.; plastic tile flooring, The Marley Tile Co. Ltd.; counters and fitments, Central Shopfitting (London) Ltd.; metalwork, J. W. Cubbage & Son, McLaren Johnson & Co. Ltd., and Clark, Hunt & Co. Ltd.; firefighting equipment, L. & G. Fire Appliance Co. Ltd.; lighting fitments, Troughton & Young (Lighting) Ltd.; mats, The General Welfare of the Blind; lettering, The Lettering Centre; sound equipment, Tannoy Products Ltd.; stacking chairs and tables, Metchair Ltd.; mirrors, James Clarke & Eaton Ltd.; door furniture, Alfred G. Roberts Ltd.; sanitary goods, Sharpe & Fisher Ltd., and Ashley Brandon (Kensington) Ltd.; doors, Walter Lawrence & Son Ltd.; curtains, C. S. Everett; clips for dance floor, J. C. Birch Ltd.; drugget, Burfield & Son Ltd.; paint, Hadfields (Merton) Ltd., and The Inertol Co. Ltd.

Pilot Scale Laboratories and Central Boiler House at the Building Research Station, Garston, Watford, Herts, for the Directorate of Scientific & Industrial Research. (Pages 669-672.) Supt. Architect: A. C. Hopkinson, M.A., F.R.I.B.A., A.M.T.P.I., of the Chief Architects' Division, MOW. Assistant-in-charge: F. L. Mason, A.R.I.B.A. Quantity surveyors: MOW. General contractors: Haymills (Contractors) Ltd. Clerk of works: G. W. Coupe. Agent: J. Swain. General foreman: W. Haynes. Sub-contractors: roads, General Asphalte Co. Ltd.; asphalt, Faldo Asphalte Co. Ltd.; chimney stack, Custodis (1922) Ltd.; bricks, Henry J. Greenham (1929) Ltd. (multifacing), Cement Marketing Co. Ltd. (London stocks); structural steel, Redpath Brown & Co.; hollow tile roofs, Frazzi Ltd.; roofing felt, Ruberoid Co. Ltd.; patent glazing, W. H. Heywood & Co. Ltd.; glass, dome lights, Faulkner Greene & Co. Ltd.; quarry tile and grano flooring, Alan Milne Ltd. (Flooring Division); heating, hot water supply, steam and gas services, William Freer Ltd.; boilers, Cochrane & Co. (Annan) Ltd.; electric installation, Electra (B'ham 1935) Ltd.; fume and dust extraction, British Vacuum Co.; plumbing, Alan Milne (Plumbing Division); metal casements, Maclean & Co. (Metal Windows) Ltd.; library furniture, Edmonds, Birmingham (under Controller of Supplies Division, MOW); cranes, Wharton Crane & Hoist Co. Ltd.; fire proofing to laddering and catwalk, Albi-Willesden Ltd.

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.

The engagement of persons answering these advertisements must be made through a Local Office of the Ministry of Labour or a Scheduled Employment Agency if the applicant is a man aged 18-64 inclusive or a woman aged 18-59 inclusive unless he or she or the employment, is excepted from the provisions of the Notification of Vacancies Order, 1952.

TUTBURY RURAL DISTRICT COUNCIL.
ARCHITECTURAL ASSISTANT.

Applications are invited for the above appointment in accordance with the National Scale of Conditions of Service and the Local Government Superannuation Acts.

Salary: A.P.T., Grade II, £495, rising to £540, or Grade III, £525, rising to £570, according to qualifications and experience.

Car allowance: As National Scale for cars up to 8 h.p.

Housing: If desired, a house will be made available on completion.

Applicants should have had experience in general architectural work, house planning and design, including the preparation of working details and bills of quantities.

Applications, stating age, qualifications, experience, present appointment, etc., the names of two referees, must reach the undersigned not later than the 2nd December.

R. E. FURNER,
Clerk of the Council.

"Kingsley," 44, Rolleston Road,
Burton-on-Trent.
9th November, 1953. 9992

MINISTRY OF WORKS.

Vacancies exist in London and Cambridge in the Chief Architect's Division for ARCHITECTURAL ASSISTANTS with recognised training and fair experience. Employment will be on a wide variety of Public Buildings, including (in London) Atomic Energy and other Research Establishments, and Housing.

Salary: Up to £628 per annum (London) or £597 per annum (Cambridge). Starting pay according to age, qualifications and experience.

Although not established posts, many have long-term possibilities, and competitions are held periodically to fill established vacancies. Reasonable prospects of promotion to Leading and Senior Architectural Assistant.

State age, nationality, full details of training and experience, to Chief Architect, W.G.10/C.A.3 (G), Ministry of Works, Abell House, John Islip Street, London, S.W.1. 9733

GOLD COAST GOVERNMENT.
VACANCIES FOR ARCHITECTS—PUBLIC WORKS DEPARTMENT.

Applications are invited for vacancies in the post of Architects in the Public Works Department.

Duties: The Architects will be required to carry out investigation for, plan, design and supervise the construction of new Government buildings, arising in connection with the Government's development programme such as quarters, offices, hospitals, schools, halls, reading rooms, etc. They will also be responsible for the preparation of working drawings and specifications, and the administration of contracts.

Qualifications: Candidates must be Associates of the Royal Institute of British Architects. Previous experience of Government or Local Authority work is desirable and of Hospital or Bank Buildings and advantage.

Terms of Service: Some of these posts are "Development Posts" for implementation of specific projects under the Gold Coast Development Plan. The appointments will be on contract/gratuity terms for one tour of 18 to 24 months with a possible extension to two tours. Salary will be in the range £1,250—£2,020 per annum (consolidated) according to age, qualifications and experience. A gratuity at the rate of £37 10s. (or £25, if salary less than £1,000) for each completed three months of satisfactory service will be payable on final termination of the contract.

Free passages on first appointment and on leave will be provided for the officer and his wife once each way during each tour of service. Officers will normally be required to travel by air. Free air passages will also be provided for a maximum of three children under 13 years of age.

Vacation leave with pay: seven days for each month of service. Free medical and dental attention provided for officer and family. Reasonable but sub-standard partly furnished quarters are available at low rentals. Income tax at local rates. Kit allowance on first appointment £30—£60 according to salary.

Contributions to the Widows' and Orphans' Pension Fund are at present compulsory.

Intending candidates should apply to the Commissioner for the Gold Coast, Melbourne House, Aldwych, London, W.C.2, for a form of application. 9951

GOVERNMENT OF NORTHERN IRELAND.
CIVIL SERVICE COMMISSION.
ASSISTANT ARCHITECT.

Applications are invited for a permanent and pensionable post of Assistant Architect Class II in the Directorate of Works, Ministry of Finance. Candidates must be Registered Architects by examination, with experience in school design.

Inclusive salary scale £675—£1,000.

Preference will be given to candidates who served in H.M. Forces in wartime provided that such candidates are, or within a reasonable time will be, able to discharge the duties efficiently.

Applications, giving date of birth and full details of qualifications and experience with copies of two recent testimonials should be sent to the Secretary, Civil Service Commission, Stormont, Belfast, so as to reach him not later than 5th December, 1953. 1051

COUNTY BOROUGH OF BARNSLEY.
BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.
APPOINTMENT OF CHIEF ASSISTANT ARCHITECT.

Applications are invited for the appointment of Chief Assistant Architect in the Borough Engineer and Surveyor's Department, at a salary in accordance with A.P.T., Grade VII (£710-£785).

Applicants should be Associate Members of the Royal Institute of British Architects, and have had considerable experience in the design and layout of Municipal Housing Estates and other Public Buildings.

Housing accommodation will be provided for the successful candidate if necessary, and a car allowance will be paid in accordance with the Scheme for Casual Users.

The appointment will be subject to (*a*) the Scheme of Conditions of Service for A.P.T.C. Staff; (*b*) any other general conditions of employment in operation within the Corporation from time to time; (*c*) one month's notice on either side; and (*d*) to the Local Government Superannuation Acts, for which purpose the successful candidate will be required to pass a medical examination.

Applications, stating age, qualifications, present and previous appointments, experience, etc., and giving the names of two persons for reference, should reach the Borough Engineer, Town Hall, Barnsley, not later than Thursday, 10th December, 1953.

Canvassing will disqualify, and applicants should disclose whether they are related to any member or senior officer of the Council.

A. E. GILFILLAN,
Town Clerk.

Town Hall, Barnsley.
November, 1953. 9990

BRITISH ELECTRICITY AUTHORITY.
EAST MIDLANDS DIVISION.

Applications are invited for the following positions within the Division.

CIVIL ENGINEERING DRAUGHTSMEN, Construction Department. (Vacancy No. 22/53.)

Candidates should have experience in design and detail of reinforced concrete structures, piled and slab foundations for heavy plant, culverts, cable subways, etc., for general building construction drainage and sanitation schemes, associated with office and administrative buildings.

The salary will be in accordance with Grade 5 (£567-£671 per annum) or Grade 6 (£433-£567 per annum) of Schedule D of the National Joint Board Agreement.

ENGINEERING DRAUGHTSMEN (MECHANICAL), Construction Department. (Vacancy No. 44/53.)

Senior Draughtsmen are required in the Mechanical Section of the Construction Department at North Wilford Power Station. Candidates should have experience in one or more of the following:—

(i) Design and layout of Power Station equipment, including turbo-alternators, boiler plant, coal and ash plant, and general station auxiliaries.
(ii) H.P. and L.P. steam and feed pipework. Condensing plant and feed heating systems.
(iii) Conveyor plant, coal handling systems and material handling of station auxiliary equipment.

Salary and conditions of service will be in accordance with the National Joint Board Agreement, Grade 5 (£567-£671 per annum) and Grade 6 (£433-£567 per annum) of Schedule D, according to experience.

ENGINEERING DRAUGHTSMEN (ELECTRICAL), Construction Department. (Vacancy No. 61/53.)

Candidates should have experience in the preparation of layouts and diagrams for the installation of E.H.T. and L.T. Switchgear, transformers, E.H.T. and L.T. cables; knowledge of protective gear systems would be an advantage.

The salary will be in accordance with Grade 5 (£567-£671 per annum) or Grade 6 (£433-£567 per annum) of Schedule D of the National Joint Board Agreement.

The above positions will be pensionable within the provisions of the British Electricity Authority and Area Boards Superannuation Scheme.

Applications should be submitted on the official form which may be obtained from the Divisional Establishments Officer, British Electricity Authority, Barker Gate, Nottingham, and should be returned to the undersigned by the dates stated. Please quote Vacancy Number.

L. F. JEFFREY,
Divisional Controller. 1018

DEVON COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the undermentioned appointments on the permanent staff. Conditions of service and salaries are in accordance with the National Joint Council's Scheme for Local Authorities.

ASSISTANT ARCHITECTS. A.P.T., VI (£670-£735 per annum).

ARCHITECTURAL ASSISTANT. A.P.T., III (£525-£570 per annum).

ARCHITECTURAL ASSISTANT. A.P.T., I (£465-£510 per annum).

Application forms, with full particulars of qualifications and experience required for these posts, are obtainable from the County Architect, 97, Heavitree Road, Exeter, and must be returned to him by Thursday, the 3rd December, 1953.

Canvassing, directly or indirectly, will disqualify.

H. G. GODSALL,
Clerk of the County Council.

The Castle, Exeter.
6th November, 1953. 9981

LONDON COUNTY COUNCIL.
ARCHITECT'S DEPARTMENT.

TEMPORARY TECHNICAL ASSISTANT (estimator) (up to £721), required for Historic Buildings Section for preparing estimates for maintenance and improvements work. Experience of special craftsmanship and of treatment of defects in old buildings essential. Application form, returnable by 25th November, from Architect (AR/EK/HB/2), County Hall, S.E.1. (1215). 9946.

EAST RETFORD RURAL DISTRICT COUNCIL.
HOUSING.

Applications are invited for the appointment of a QUANTITY SURVEYING ASSISTANT to the Council's Architect.

Applicants must be capable of preparing bills of quantities, measuring works in progress, and assisting in the settlement of final accounts with contractors. The duties will also include some supervision of works in progress, including maintenance of existing estates.

A travelling allowance will be paid for a car not exceeding 10 h.p. in accordance with the National Scales. Salary: Miscellaneous, Grade VI (£525×£15—£585).

The appointment will be subject to the Council's approved conditions of service and the National Scheme.

Applications, stating age, qualifications, previous experience, and enclosing copies of two recent testimonials, should be addressed to the undersigned not later than 12th December, 1953.

R. L. GAY,
Clerk of the Council.

Amcott House, 40, Grove Street,
Retford, Notts.
12th November, 1953. 1017

COUNTY OF HUNTINGDON.
COUNTY ARCHITECT'S DEPARTMENT.
ARCHITECTURAL ASSISTANT, GRADE IV, A.P.T.

Applications are invited for the appointment of an Architectural Assistant, at a salary in accordance with Grade IV, A.P.T., of the National Joint Council's Scales, namely £555×£15 (3) to £600 per annum. Preference will be given to applicants holding the R.I.B.A. Intermediate Examination, or other equivalent qualification.

The appointment is subject to the provisions of the Local Government Superannuation Act, 1937 (as amended by the Act of 1953).

Applications, stating age, qualifications, experience, present position and salary, together with the names of two persons to whom reference could be made, should be delivered to S. M. Holloway, A.R.I.B.A., County Architect, County Buildings, Huntingdon, by Wednesday, 9th December, 1953.

JOHN KELLY,
Clerk of the County Council.

County Buildings, Huntingdon.
20th November, 1953. 1042

COUNTY BOROUGH OF SOUTHPORT.

Applications are invited for a CHIEF OFFICER, with engineering, surveying and architectural experience, to control the Engineering, Surveying, Architectural and Town Planning Department of the Corporation, at a salary within the range of £1,400 to £1,650 per annum, according to qualifications and experience, with five increments of £50.

Applicants must have had similar administrative experience, and be capable of organising the Department and its functions, for which the officer selected will be wholly responsible, and will include the whole of the Council's engineering, surveying and architectural work and planning under the Town and Country Planning Acts. Applicants must have excellent ability and good experience.

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

Applications, stating age, qualifications, present and past appointments and details of experience, together with the names and addresses of three persons to whom reference may be made, must be forwarded to the undersigned at the Town Hall, Southport, endorsed "Chief Officer, Engineering and Architectural," not later than the 15th December next.

Canvassing will disqualify.

R. EDGAR PERRINS,
Town Clerk. 1014

URBAN DISTRICT COUNCIL OF EAST BARNET.

The above Council invites applications for the undermentioned appointments:—

(i) ASSISTANT ARCHITECT (Permanent Staff), A.P.T., Grade IV (£555×£15—£600), plus London weighting, and

(ii) CLERK OF WORKS—BUILDINGS (Temporary Staff), at an inclusive salary of £10 10s. a week.

Application Forms and Conditions of Appointments may be obtained from the Engineer and Surveyor, Town Hall, Station Road, New Barnet, to whom completed application forms should be delivered by 14th December, 1953. 1041

HEMEL HEMPSTEAD DEVELOPMENT CORPORATION.
APPOINTMENT OF SENIOR ASSISTANT ARCHITECT.

Applications are invited from Associates of the R.I.B.A. for an appointment in the department of the Chief Architect (H. Kellett Ablett, F.R.I.B.A., M.T.P.I.). Applicants should have considerable experience in commercial architecture, as the successful candidate will be required to work on the development of the new Town Centre.

Salary scale: £635-£835. Conditions of service are broadly similar to Local Government Officers' "Charter."

Contributory superannuation, with opportunity of entering or continuing in Local Government Superannuation Fund.

It may be possible to provide housing.

Application forms from this office (please quote vacancy No. 64), to be completed and returned to undersigned by 11th December.

W. O. HART,
General Manager.
Westbrook Hay, Hemel Hempstead, Herts. 1039

PETERLEE DEVELOPMENT CORPORATION.
APPOINTMENT OF MODEL MAKER AND PERSPECTIVE ARTIST.

Applications are invited for the appointment of Model Maker in the Chief Architect's Department, at a salary of £585×£50—£685 per annum. The person appointed will be expected to prepare, in addition to models, perspectives of house designs and other buildings, and it will be an advantage if applicants are capable of undertaking general assistant's duties in an Architect and Planner's Drawing Office, although experience of this nature is not essential.

The appointment, which is superannuable and subject to medical examination, is terminable by one month's notice in writing on either side. Housing accommodation is available if required.

Applications, stating age, experience, qualifications, and giving the names of two referees, should reach the undersigned not later than 7th December, 1953.

A. V. WILLIAMS,
General Manager.
Shotton Hall, Castle Eden, Co. Durham. 1040

CITY OF LEEDS.
CITY ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointment:—

CHIEF ASSISTANT ARCHITECT (EDUCATION). Grade A.P.T., IX. Salary scale: £815-£935.

Candidates must be Registered Architects, competent in architectural design and in administration. The officer appointed will be responsible for the control of a section of the department dealing with the construction of schools.

Payment of salary increments will be subject to satisfactory service, and will be granted normally with effect from the 1st April following the completion of 6 months' service.

The appointment is subject to the Local Government Superannuation Acts, 1937 to 1953, and the successful candidate will be required to pass a medical examination.

Application forms may be obtained from the City Architect, Priestley House, Quarry Hill, Leeds, 9, to whom they should be returned, together with copies of three testimonials, by 10 a.m. on Saturday, 5th December, 1953.

Canvassing in any form, either directly or indirectly, will be a disqualification.

R. A. H. LIVETT, O.B.E., A.R.I.B.A.,
City Architect.
Priestley House, Quarry Hill, Leeds, 9.
14th November, 1953. 1025

COUNTY BOROUGH OF WEST HAM.
BOROUGH ARCHITECT AND PLANNING OFFICER'S DEPARTMENT.

Applications are invited for:—

(*a*) ARCHITECTURAL ASSISTANT. Salary according to experience within the range £465—£570 plus London Weighting.

(*b*) GENERAL ASSISTANTS, TECHNICAL (3). With 2 years' experience in an architect's office. Salary according to age within the range of £160—£450 plus London Weighting.

Application forms returnable by Monday, 30th November, 1953, from Thomas E. North, O.B.E., F.R.I.B.A., Dist.T.P., 70, West Ham Lane, Stratford, E.15. 9955

B.B.C. requires ARCHITECTURAL ASSISTANTS for Building Department, London: (1) Assistant Class III. Must be Registered Architect to Final R.I.B.A. standard, with several years' office experience. Salary £590 (possibly higher if qualifications exceptional) to £800 max. Promotion prospects. (2) 2 Assistants Class IV. Must have passed Inter. R.I.B.A., with at least 2 years' office experience. Salary £500 (possibly higher if qualifications exceptional) to £685 max. Promotion prospects. Apply to E.E.O., B.B.C., London, W.1, within 7 days. 1055

COUNTY BOROUGH OF SOUTHEND-ON-SEA.
BOROUGH ARCHITECT'S DEPARTMENT—APPOINTMENTS.

Applications are invited for the following appointments on the established staff:

(*a*) SENIOR ASSISTANT QUANTITY SURVEYOR (A.P.T. Division, Grade VII) (£710—£785).

(*b*) ASSISTANT ARCHITECT (A.P.T. Division, Grade V) (£595—£645).

Preference will be given to applicants who hold R.I.C.S. and R.I.B.A. qualifications respectively.

The appointment will be subject to the provisions of the Local Government Superannuation Act, 1937 and the J.I.C. Scheme of Conditions of Service.

The successful candidates will be required to pass a medical examination.

Applications stating age, qualifications and experience with the names of two persons to whom reference can be made to be submitted to the Borough Architect, 30, Alexandra Street, Southend-on-Sea, by Monday, 14th December, 1953.

ARCHIBALD GLEN,
Town Clerk.
1052

BOROUGH OF ERITH.

Applications are invited for the following appointments:—(*a*) ENGINEERING ASSISTANT Grade A.P.T. III £525—£570, plus London weighting. (*b*) ARCHITECTURAL ASSISTANT Grade A.P.T., II, £495—£540, plus London weighting.

Applicants must possess the professional qualifications required by the respective scales.

The appointments will be subject to the National Conditions of Service, to the Council's Regulations governing staff, to one month's notice in writing, to the Local Government Superannuation Acts, and to passing a medical examination.

Applications must be on the form to be obtained, together with a list of duties, from the Borough Engineer & Surveyor, Town Hall, Erith, Kent, and to be delivered to him not later than Monday, 14th December, 1953.

Canvassing, either directly or indirectly, will disqualify.

J. A. CROMPTON,
Town Clerk.
Town Hall, Erith, Kent. 1048

CITY OF STOKE-ON-TRENT.
CITY ARCHITECT'S DEPARTMENT.

Applications are invited from suitably qualified persons for the following appointment:—

ASSISTANT QUANTITY SURVEYOR: Salary A.P.T. Division, Grade VIII. £760—£835.

NOTE: Suitable housing accommodation may be made available to the successful candidate.

The selected applicant will be required to pass a medical examination and the appointment will be subject to the Provisions of the Local Government Superannuation Acts, 1937 and 1953.

Applications, stating date of birth, particulars of training, experience, etc., with copies of two recent testimonials, should be received by J. R. Pigott, F.R.I.B.A., City Architect, Kingsway, Stoke-on-Trent, Staffs., endorsed with the title of the appointment, not later than Monday, 14th December, 1953.

HARRY TAYLOR,
Town Clerk.
Town Hall,
Stoke-on-Trent.
17th November, 1953. 1050

COUNTY BOROUGH OF EAST HAM.
HOUSING DEPARTMENT.

SENIOR ARCHITECTURAL ASSISTANT, A.P.T., VI (salary: £670-£735, plus London weighting).

Applicants should preferably be Associate R.I.B.A., and have had experience in housing work of a local authority. Further details and form of application (returnable by 12th December, 1953) obtainable from the Town Clerk, Town Hall, East Ham, E.6. 1059

NATIONAL COAL BOARD—SOUTH-WESTERN DIVISION.

Applications are invited for the following appointments in the Divisional Architect's Department, National Coal Board, South-Western Division, Cardiff:—

(*a*) QUANTITY SURVEYOR, Grade II.

Salary: £600×£25—£650×£30—£900. Applicants should be Professional Associates of the R.I.C.S. (Quantities Section), with not less than twelve months' practical office experience after qualifying, and should be thoroughly experienced in the preparation of estimates, bills of quantities, measurement and settlement of final accounts.

(*b*) QUANTITY SURVEYING ASSISTANT, Grade I.

Salary: £525×£25—£650. Applicants should have passed the Intermediate Examination of the R.I.C.S. (Quantities Section), and have had not less than three years' subsequent experience in working up, site measuring, and checking accounts. In exceptional circumstances consideration will be given to applicants who have not passed the examination but have considerable practical experience.

The appointments are subject to the provisions of the Board's Superannuation Scheme.

Applications, in writing, stating age, education, qualifications, experience, previous and present appointments, present salary, and names and addresses of two referees, should be sent to Secretariat (E), National Coal Board, Cambrian Buildings, Mount Stuart Square, Cardiff, not later than the 9th December, 1953. Applicants should state clearly the appointment for which application is made. 1058

METROPOLITAN BOROUGH OF FULHAM.
SENIOR ASSISTANT ARCHITECT.

Housing and Public Buildings Department. Salary: A.P.T., VI, £670-£735, plus London weighting, £30 p.a. over 26 years. Applicants must be registered architects, capable of planning and designing large schemes of flats, and experienced in handling large jobs in progress and in dealing with contracts. Application forms from me. Closing date: 7th December.

CYRIL F. THATCHER,
Town Clerk.
Town Hall, Fulham, S.W.6. 1064

COUNTY BOROUGH OF WALLASEY.
APPOINTMENT OF QUANTITY SURVEYOR—GRADE A.P.T. IV.

Applications are invited by 7/12/53 for the above position. Forms of Application and further particulars obtainable from the Borough Architect, Town Hall, Wallasey.

A. G. HARRISON,
Town Clerk.
1049

LONDON COUNTY COUNCIL.
ARCHITECT'S DEPARTMENT.

Vacancies for TECHNICAL ASSISTANTS (up to £721) in Structural Engineering Division. Work includes steelwork and reinforced concrete design and detailing for Council's building, and checking structural designs and calculations under London Building Acts.

Application forms from Architect (AR/EK/SE/5), County Hall, S.E.1. (1270) 1057

BRECONSHIRE AND RADNORSHIRE JOINT FIRE BRIGADE COMMITTEE.
PROPOSED NEW FIRE STATION AT LLANDRINDOD WELLS.

Tenders are invited for the erection of a new Fire Station in Tremont Road, Llandrindod Wells.

Building Contractors desirous of tendering should apply to the Joint Committee's Architects, Messrs. Scott & Redwood, A.I.Struct.E., A.R.I.B.A., 5, Rodney Place, Clifton, Bristol, 8, for the necessary documents, enclosing a deposit of £2 2s., which will be returned upon receipt of a *bona fide* tender.

Tenders, in sealed envelopes, endorsed "Tender for new Fire Station, Llandrindod Wells," must be received by the undersigned not later than Saturday, 12th December, 1953 C. M. S. WELLS, Clerk of the Joint Committee, County Hall, Brecon. 9952

Architectural Appointments Vacant

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

The engagement of persons answering these advertisements must be made through a Local Office of the Ministry of Labour or a Scheduled Employment Agency if the applicant is a man aged 18-64 inclusive or a woman aged 18-59 inclusive unless he or she is, or the employment, is excepted from the provisions of the Notification of Vacancies Order, 1952.

ASSISTANT required for large general Architectural Practice with offices in Maidenhead. Some experience in specification writing essential. Salary £300 to £500, according to experience. Box 8933.

VACANCY arises for Articled Pupil (Architectural or Building Surveying) in City firm. Box 9468.

A SENIOR ARCHITECTURAL ASSISTANT required, full experience in preparation of Working Drawings, Details, and supervision of office and Industrial Buildings in the London Area. Good knowledge of construction and design essential. Apply in writing giving full particulars of qualifications, age, experience and salary required to Box 9829.

VACANCY arises for JUNIOR ASSISTANT approaching inter standard in building, surveying or architecture in City firm. Box 9929

QUALIFIED HOUSING ARCHITECT. Full time services required. Apply stating experience, age and salary to Smiths Building Systems (Birmingham), Ltd., Smith Road, Wednesbury. 9928

ARCHITECTURAL DRAUGHTSMAN required for the South East London Area. Preferably with experience of Industrial buildings and L.C.C. requirements. Also JUNIOR DRAUGHTSMAN to assist the above. Please state age, experience and salary required. Box 9901.

WANTED immediately in office of Architect dealing with domestic work for London Housing Company, ARCHITECTURAL ASSISTANT, of Inter. R.I.B.A. standard. Able to prepare designs, working drawings and specifications. Salary: £400 to £600 per annum, according to experience and capabilities. Pension scheme. Box 9967.

HILLS (WEST BROMWICH), LTD., Albion Road, West Bromwich, Staffs., can offer a 12 months' experience engagement to young ARCHITECTS in their West Bromwich Estimating and Drawing Offices. Excellent salaries and expenses paid. Apply Personnel Manager. 9968

YOUNG ARCHITECT required to collaborate in preparation and editing of technical reference and catalogue material for the building industry. Part-time appointment is visualised, but accommodation can be provided. Box 1070.

ARCHITECTURAL ASSISTANT, experienced in shop design, required in London Architect's office. Salary by arrangement. Box 1068.

EXPERIENCED ARCHITECTURAL ASSISTANT required. Preference will be given to applicants of contemporary outlook, with experience of brewery work, and capable of handling jobs in all stages. Salary range: £600-£800, according to experience and ability. Write, stating qualifications, experience, age, and when free. J. A. Dorin, A.R.I.B.A., Chartered Architect, 69, Piccadilly, Hanley, Stoke-on-Trent. 9970

SENIOR ARCHITECTURAL ASSISTANT required for London Offices. Good Draughtsman, experienced and capable of undertaking work with minimum supervision. Full details and salary required to Box 1001.

ARCHITECTURAL ASSISTANT, of Inter. standard, required for small office, Chancery Lane. Office experience essential. Good draughtsman, working drawings and details. Please reply, stating details of experience and salary required. Box 1063.

ARCHITECTURAL ASSISTANT of Intermediate standard required immediately; previous office experience essential. Apply in writing stating age, experience and salary required. Antony Lamb, A.R.I.B.A., A.M.T.P.I., Ottery St. Mary, Devon. 1053

SENIOR ARCHITECTURAL ASSISTANT required in North Wales office, with varied practice. Must have good general experience in preparation of working and detail drawings and specifications. Knowledge of construction from experience essential, and be able to take charge of small drawing office. Application in first instance to be made in writing, giving full particulars and salary required, to Box 1044.

SENIOR ASSISTANT required for large South Coast practice. Must be qualified, have first class designing ability, a sound knowledge of construction and specifications, and have had several years experience in a senior capacity. The successful applicant will be required to take full charge of the drawing office and work in course of construction, under the managing partner. Full particulars including indication of salary expected and when available, to Box 1056.

ARCHITECTURAL ASSISTANT required in busy South London office. Age about 30. Capable of preparing without supervision sketches and working drawings for medium and small jobs. Must have sound knowledge of construction. Apply, stating experience and salary, to Box 1036.

REQUIRED, for Architects' Office, Central London area, young qualified ASSISTANTS for varied contracts. Salary: £500-£750 p.a., according to age and experience. Apply Box 1043.

REQUIRED, at Company's Head Office, Guildford, ARCHITECTURAL ASSISTANT, A.R.I.B.A. Varied work, mainly factory. Five-day week. Salary by arrangement. Box 1026.

ARCHITECT'S SENIOR ASSISTANT required. Write, giving full particulars of experience and salary required. S. T. Walker, 83, Suffolk Street, Birmingham, 1. 1023

ARCHITECTS REQUIRED.—A leading firm of specialist sub-contractors are anxious to strengthen their technical staff and improve their service to the architectural profession in West Lancashire and the Southern Counties by the appointment in each area of an architectural representative. In addition to the consideration from the architectural aspect of problems connected with the production and development side of the business, the duties would consist of making reviews and recommendations in the light of practical experience of the Company's products. The West Lancashire representative would be entirely responsible, under the Sales Director, for the sales in his area; the commencing earnings would be not less than £2,000 a year. In the Southern Counties the post is for an assistant pending retirement of the present holder; the commencing earnings would be not less than £1,500 a year. In view of these income figures, and that these would be increased in proportion to the volume of business which developed in the areas, together with the provision of a car and participation in an established pension scheme, it is felt that the vacancies would be of interest to men of outstanding personality, ambition and drive, who want wide scope and lucrative prospects, who at the same time can render valuable assistance in the progress and development of an important aspect of building construction. Applicants must be of good appearance, have a pleasant personality and proved ability, be not over 40 years old, and live in the respective areas. Reasonable architectural qualifications are required, so that the man appointed in each area will feel thoroughly at home at meetings and discussions with senior local authority officials and members of the profession, with whom it would be an advantage if he is already widely known and well received. Applications will be dealt with by a director and treated in the strictest confidence. They should give full details of career and social background, and be addressed to Box 1045.

EXPERIENCED ASSISTANT required for general practice. Good draughtsman with sound knowledge of construction. Salary up to £600 p.a., according to qualifications. Reply stating age and experience to Crickmay & Sons, FF.R.I.B.A., 88, St. Thomas Street, Weymouth. 1054

QUALIFIED and experienced SENIOR ASSISTANT required by provincial private practice with varied works in hand. Apply giving full details and salary required to Deacon & Laing, 9, St. Paul's Square, Bedford. 9905

SAMUEL MORRISON & PARTNERS require ASSISTANT of Final standard for contemporary work. "Derwent House," Full Street, Derby. 1027

QUALIFIED ARCHITECT, with experience prefabrication and thorough knowledge timber construction, required to supervise small growing office. Write, stating age, experience, and salary required, to Box 1030.

Architectural Appointments Wanted

A.R.I.B.A., Dip.Arch. (36) seeks senior position in contemporary London office where there is scope for technical and constructional knowledge. Box 9809.

ARCHITECT (38), public school education, school trained Associate, requires position with firm of Architects with view to future partnership. Winchester, Southampton or Salisbury area. 15 years' all round experience. Car owner. Box 815.

SENIOR ASSISTANT (34), with general experience, especially of industrial and housing work, and used to controlling jobs from sketches to completion, requires position in small office in Midlands or the south. Box 810.

IN HAMPSHIRE or nearby. Qualified ASSISTANT (27), with varied experience in private and local government practice, of schools, housing, etc., requires responsible position. Box 811.

CONTINENTAL ARCHITECT (31), previous experience in Italy and Czechoslovakia, four years in England, seeks full or part-time engagement. Box 805.

A.R.I.B.A., A.M.T.P.I. (28 years), virtually all London experience, seeks responsible post, preferably London, Dublin, Belfast. Box 813.

ARCHITECTURAL ASSISTANT/SURVEYOR seeks change; Manchester. Comprehensive experience, including administration. Prefer small practice or commercial firm. Box 1061.

CHIEF ASSISTANT (45) seeks post London, S. or S.W. England. Thoroughly experienced every branch architecture, including surveys, quantities, specifications, etc. Can organise, control and administer branch office. Available one month from appointment. Salary required: £800 per annum. Box 1021.

A. R.I.B.A. (age 43) seeks progressive position. varied experience; excellent testimonials; car driver. Box 814.

ARCHITECT, 8 years' varied working experience, seeks responsible post. London or abroad. Reply Box 1019.

ASSOCIATE, B.A. (43), chartered and generally experienced, own car and office space, seeks co-operation/employment, based Sussex area. Box 1060.

A. R.I.B.A., A.M.T.P.I. (48 years), virtually all London experience, seeks responsible post, preferably London, Dublin, Belfast. Box 813.

Other Appointments Vacant

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

The engagement of persons answering these advertisements must be made through a Local Office of the Ministry of Labour or a Scheduled Employment Agency if the applicant is a man aged 18-64 inclusive or a woman aged 18-59 inclusive unless he or she or the employment, is excepted from the provisions of the Notification of Vacancies Order, 1952.

ESTIMATOR, experienced in design and construction, required for architectural wrot metalwork. Pension scheme and canteen facilities in operation. Apply stating age, experience and salary, etc. Foundry Manager, H. H. Martyn & Co. Ltd., Sunningend Works, Cheltenham. 9912

JUNIOR TAKER-OFF and SITE MEASURING SURVEYORS required. Apply, stating age, experience, and salary required, to Lay & Partners, 8, Clarges Street, London, W.1. 9966

SHORTHAND TYPIST, with minimum 5 years' experience, also to handle reception. Write, stating experience and salary required, to Box 1033.

SECRETARY, with wide experience and thorough knowledge German, preferably English/German shorthand, required for International professional and construction office. Write, stating experience and salary required, to Box 1032.

SENIOR QUANTITY SURVEYOR required by well-known and progressive company of Building and Civil Engineering Contractors, established in Midlands for many years. Experience is required in control of staff and settlement of final accounts on contracts up to £500,000 value. Salary offered will be according to qualifications and experience, but a minimum of £1,400 per annum is envisaged. Assistance with housing accommodation may be provided if necessary. The appointment is intended to be permanent and subject to Superannuation Scheme after preliminary period of satisfactory service. Replies will be treated in strict confidence. Box 1029.

ESTIMATORS.—Two required for senior positions with Structural Engineers dealing with specialised form of construction widely used for the School building programme. Initial training given: good salaries. Full details of age, experience and salary required, to Personnel Manager, Hills (West Bromwich), Ltd., Albion Road, West Bromwich. 1035

TWO SENIOR DRAUGHTSMEN required—Reema Construction, Ltd., Milford Manor, Salisbury. Designers, Manufacturers and Builders in the "Reema" precast concrete system of construction. Experienced in the detailing of buildings essential. Location Salisbury, Wilts. Salary up to £550. 1046

TIMBER ENGINEER-DRAUGHTSMEN, with thorough knowledge design calculations and estimating timber structures. Write, stating age, experience and salary required, to Box 1031.

DESIGNER required. This post is for a Senior with experience, and entails interesting and varied work. Apply, giving details of age, experience and salary required, to Personnel Manager, Hills (West Bromwich), Ltd., Albion Road, West Bromwich. 1034

ARCHITECT'S SECRETARY required, full or part time, in small private practice, Chancery Lane. Experience with Architect or Surveyor essential. Shorthand and simple book-keeping. Please state particulars and salary required. Box 1062.

VACANCIES for DRAUGHTSMEN, for detailing reconstructed stone and precast reinforced concrete, preferably with prior architectural or concrete experience. Apply, with details of experience, salary required, and copies of recent references, to the Managing Director, The Croft Granite, Brick & Concrete Co., Ltd., Croft, Leics. 1047

KNOWLEDGE of Architectural Ironmongery and a good basic education will qualify you for the position of Estimating and Correspondence CLERK on the Sales Department of London's largest Ironmonger Factors. Applicants should not be more than 27, and be able to work with architects. Apply with full details to Staff Manager. Box 1020.

APPLICATIONS are invited for the following appointment in the office of the Civil Engineer, British Railways, North Eastern Region, York:—

LEADING ASSISTANT QUANTITY SURVEYOR.

Experienced in all phases of Quantity Surveyor's work and in standard method of measurement. Able to write specifications, compile Contract Documents, and negotiate with Contractors. Applicants possessing A.R.I.C.S. (Quantities Division) preferred. Commencing salary range: £818 to £868, according to qualifications and experience.

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