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

IGE	Institution of Gas Engineers. 17, Grosvenor Crescent, S.W.1.	Sloane 8266
IHVE	Institution of Heating and Ventilating Engineers. 75, Eaton Place, S.W.1.	Sloane 3158/1601
IIBD	Incorporated Institute of British Decorators. Drayton House, Gordon Street, W.C.1.	Euston 2450
ILA	Institute of Landscape Architects. 12, Gower Street, W.C.1.	Museum 1783
I of Arb.	Institute of Arbitrators. 35/37, Hastings House, 10, Norfolk Street, Strand, W.C.2.	Temple Bar 4071
IOB	Institute of Builders. 48, Bedford Square, W.C.1.	Museum 7197/5176
IR	Institute of Refrigeration. Dalmeny House, Monument Street, E.C.3.	Avenue 6851
IRA	Institute of Registered Architects. 47, Victoria Street, S.W.1.	Abbey 6172
ISE	Institution of Structural Engineers. 11, Upper Belgrave Street, S.W.1.	Sloane 7128
IWA	Inland Waterways Association. 11, Gower Street, W.C.1.	Museum 9200
LIDC	Lead Industries Development Council. Eagle House, Jermyn Street, S.W.1.	Whitehall 7264/4175
LMBA	London Master Builders' Association. 47, Bedford Square, W.C.1.	Museum 3891
MARS	Modern Architectural Research Group (English Branch of CIAM) Secretary: Gontran Goulden, Building Centre, 26, Store Street, W.C.1.	Museum 5400
MOA	Ministry of Agriculture and Fisheries. 55, Whitehall, S.W.1.	Whitehall 3400
MOE	Ministry of Education. Curzon Street House, Curzon Street, W.1.	Mayfair 9400
MOH	Ministry of Health. 23, Saville Row, W.1.	Regent 8411
MOHLG	Ministry of Housing and Local Government. Whitehall, S.W.1.	Whitehall 4300
MOLNS	Ministry of Labour and National Service, 8, St. James' Square, S.W.1.	Whitehall 6200
MOS	Ministry of Supply. Shell Mex House, Victoria Embankment, W.C.	Gerrard 6933
MOT	Ministry of Transport. Berkeley Square House, Berkeley Square, W.1.	Mayfair 9494
MOW	Ministry of Works. Lambeth Bridge House, S.E.1.	Reliance 7611
NAMMC	Natural Asphalte Mine-Owners and Manufacturers Council. 94-98, Petty France, S.W.1.	Abbey 1010
NAS	National Association of Shopfitters. 9, Victoria Street, S.W.1.	Abbey 4813
NBR	National Buildings Record. 37, Onslow Gardens, S.W.7.	Kensington 8161
NCBMP	National Council of Building Material Producers, 10, Princes Street, S.W.1.	Abbey5111
NFBTE	National Federation of Building Trades Employers. 82, New Cavendish Street, W.1.	Langham 4041/4054
NFBTO	National Federation of Building Trades Operatives, Federal House, Cedars Road, Clapham, S.W.4.	Macaulay 4451
NFHS	National Federation of Housing Societies. 13, Suffolk St., S.W.1.	Whitehall 1693
NHBRC	National House Builders Registration Council. 82, New Cavendish Street, W.1.	Langham 4341
NPL	National Physical Laboratory. Head Office, Teddington.	Molesey 1380
NSA	National Sawmilling Association. 14, New Bridge Street, E.C.4.	City 1476
NSAS	National Smoke Abatement Society. Chandos House, Buckingham Gate, S.W.1.	Abbey 1359
NT	National Trust for Places of Historic Interest or Natural Beauty. 42, Queen Anne's Gate, S.W.1.	Whitehall 0211
PEP	Political and Economic Planning. 16, Queen Anne's Gate, S.W.1.	Whitehall 7245
RCA	Reinforced Concrete Association. 94, Petty France, S.W.1.	Whitehall 9936
RIAS	Royal Incorporation of Architects in Scotland. 15, Rutland Square, Edinburgh.	Edinburgh 20396
RIBA	Royal Institute of British Architects. 66, Portland Place, W.1.	Langham 5721
RICS	Royal Institution of Chartered Surveyors. 12, Great George St., S.W.1.	Whitehall 5322/9242
RFAC	Royal Fine Art Commission. 22A, Queen Anne's Gate, S.W.1.	Whitehall 3935
RS	Royal Society. Burlington House, Piccadilly, W.1.	Regent 3335
RSA	Royal Society of Arts. 6, John Adam Street, W.C.2.	Trafalgar 2366
RSI	Royal Sanitary Institute. 90, Buckingham Palace Road, S.W.1.	Sloane 5134
RIB	Rural Industries Bureau. 35, Camp Road, Wimbledon, S.W.19.	Wimbledon 5101
SBPM	Society of British Paint Manufacturers. Grosvenor Gardens House, Grosvenor Gardens, S.W.1.	Victoria 2186
SCR	Society for Cultural Relations with the USSR. 14, Kensington Square, London, W.8.	Western 1571
SE	Society of Engineers. 17, Victoria Street, Westminster, S.W.1.	Abbey 7244
SFMA	School Furniture Manufacturers' Association. 30, Cornhill, London, E.C.3.	Mansion House, 3921
SIA	Structural Insulation Association. 14, Moorgate, London, E.C.2.	Central 4444
SIA	Society of Industrial Artists. 7, Woburn Square, W.C.1.	Langham 1984
SNHTPC	Scottish National Housing. Town Planning Council. Hon. Sec., Robert Pollock, Town Clerk, Rutherglen.	
SPAB	Society for the Protection of Ancient Buildings. 55, Great Ormond Street, W.C.1.	Holborn 2646
TCPA	Town and Country Planning Association. 28, King Street, Covent Garden, W.C.2	Temple Bar 5006
TDA	Timber Development Association. 21, College Hill, E.C.4.	City 4771
TPI	Town Planning Institute. 18, Ashley Place, S.W.1.	Victoria 8815
TTF	Timber Trades Federation. 75, Cannon Street, E.C.4.	City 5040
WDC	War Damage Commission. Devonshire House, Mayfair Place, Piccadilly, W.1.	Mayfair 8866
ZDA	Zinc Development Association. Lincoln House, Turl Street, Oxford.	Oxford 47988

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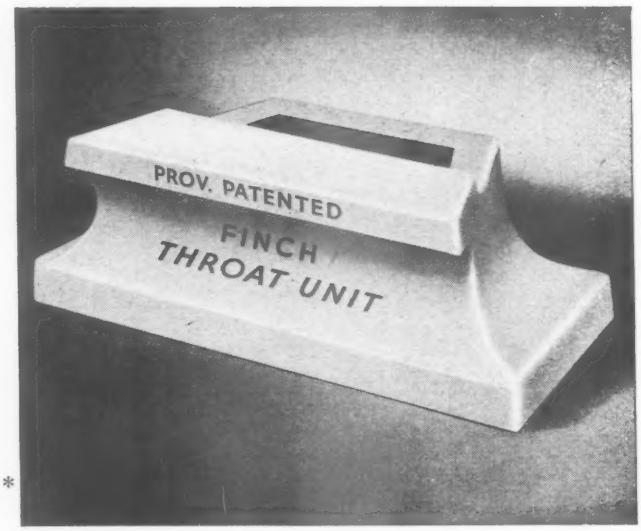
17% more room heat retained by The Finch Throat Unit



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The principles embodied in the Unit are approved in the Ministry of Works Housing Manual

Considerable advances have been made in the development of continuous burning fires to maintain room heat with minimum fuel consumption. Parallel with this work the Finch Organisation have made important progress in heat saving by developing their Throat Units. Recent practical tests with the Finch Throat Unit show a room heat conservation figure of 17% plus, regardless of the type of fire fitted.

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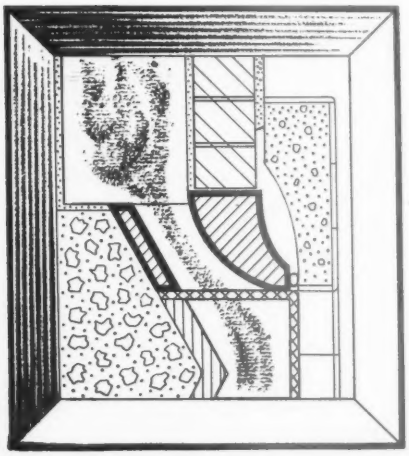

Versatile Application

The Finch Throat Unit can be used not only in conjunction with normal open fireplaces, but for a large range of back boiler installations. No adapting is necessary. An important problem confronting many architects and builders today is the one of down-draught. This, invariably, is caused by faults in both throating and flue construction.

Here the Finch Organization not only provide the unit, which in itself is a contribution to the solving of the problem, but advise generally on flue design.

* * * * * * * * * * * * * *

New Facts and Findings

Finch's recently built a number of experimental flues to test the Finch Throat Unit under all conditions. The results of these experiments have enabled them to produce a comprehensive work on flue design, entitled "The Finch Chimney Throat Unit." Copies available, free, on request. B. Finch & Co. Ltd., Belvedere Works, Barkingside, Essex. Telephone: Valentine 8888 (30 lines).

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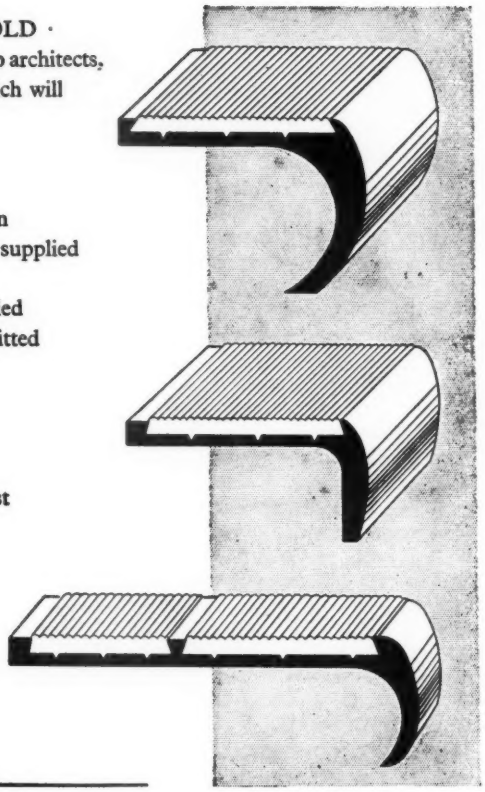

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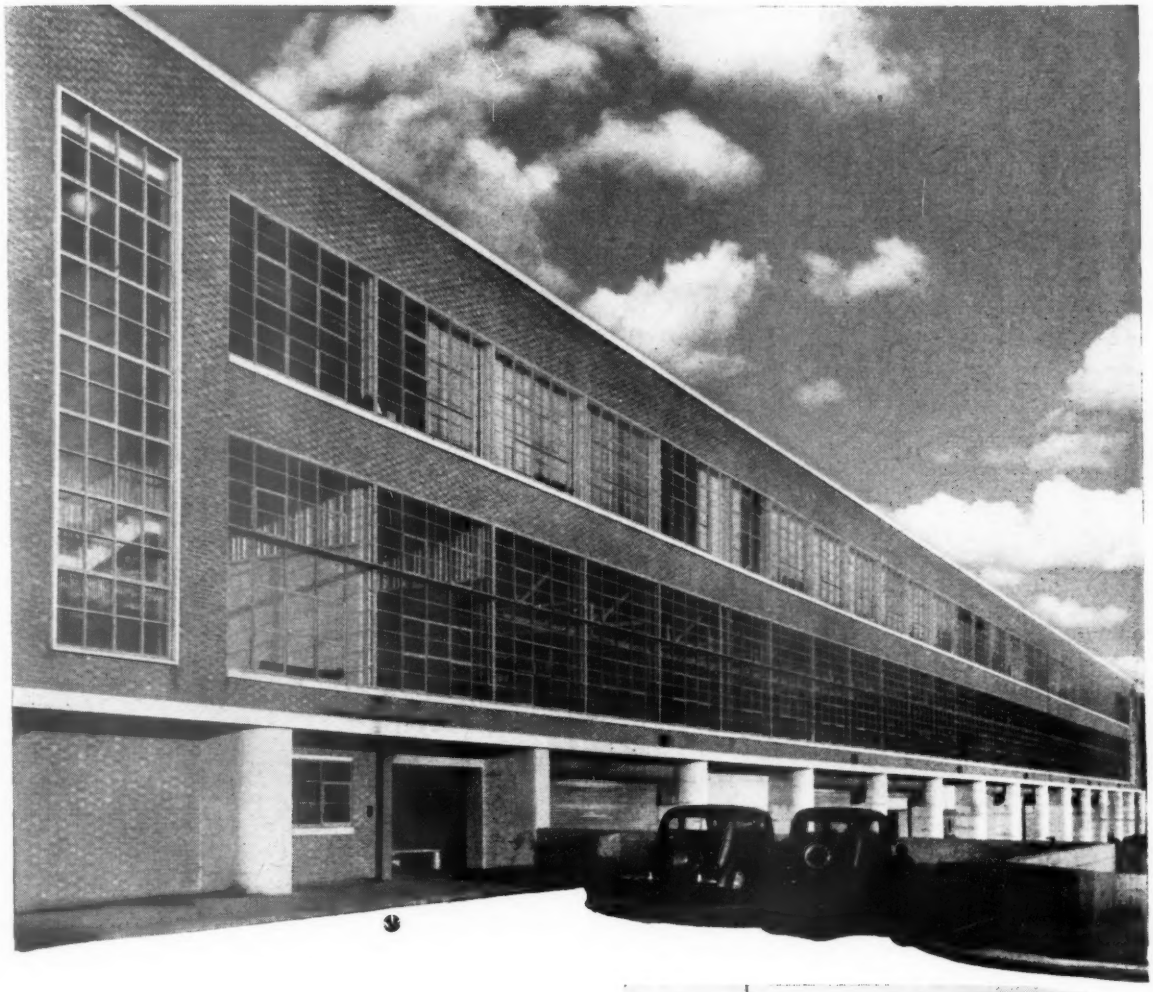

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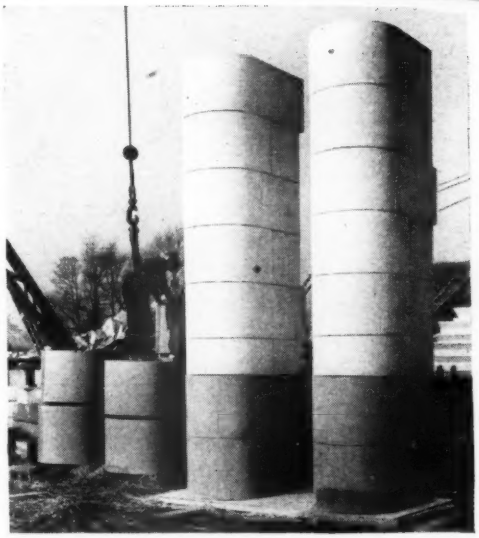

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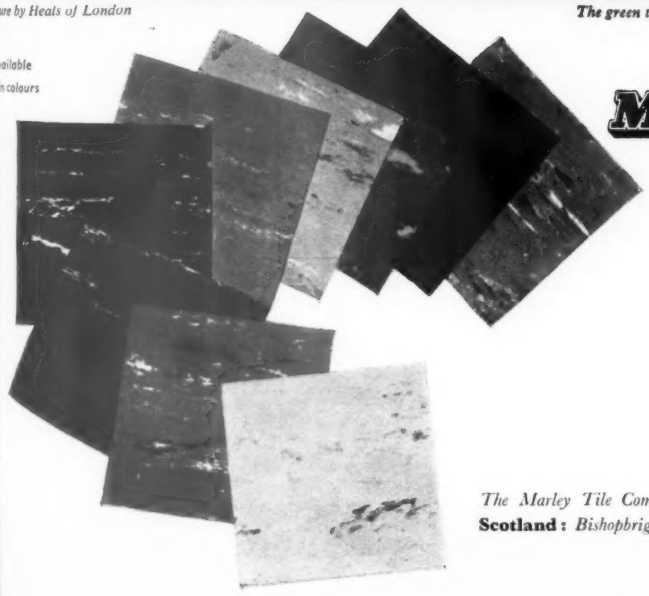

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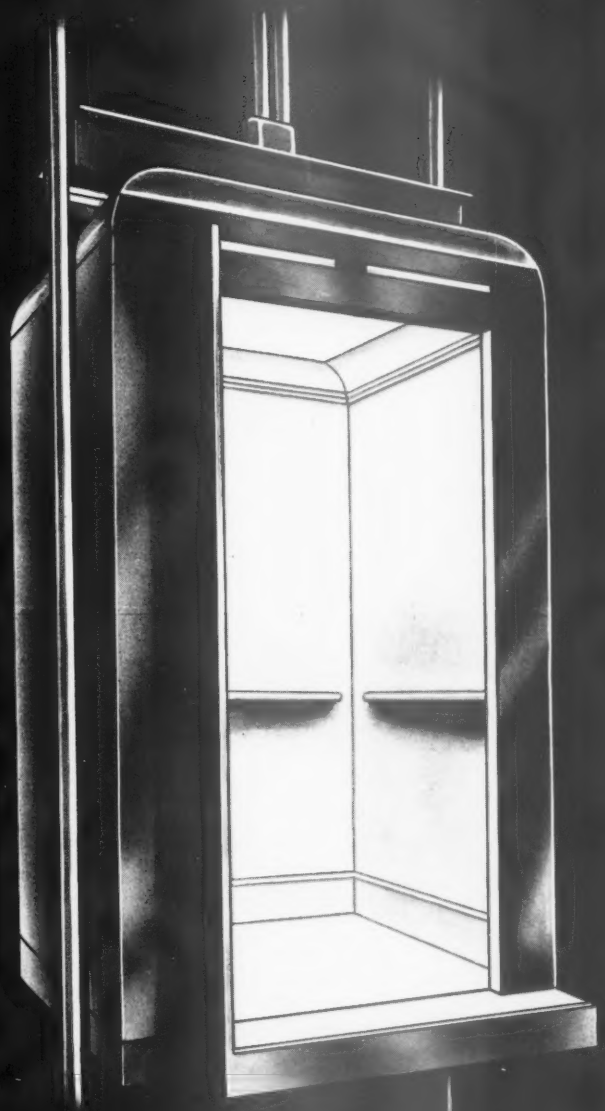

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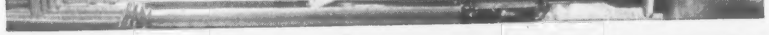

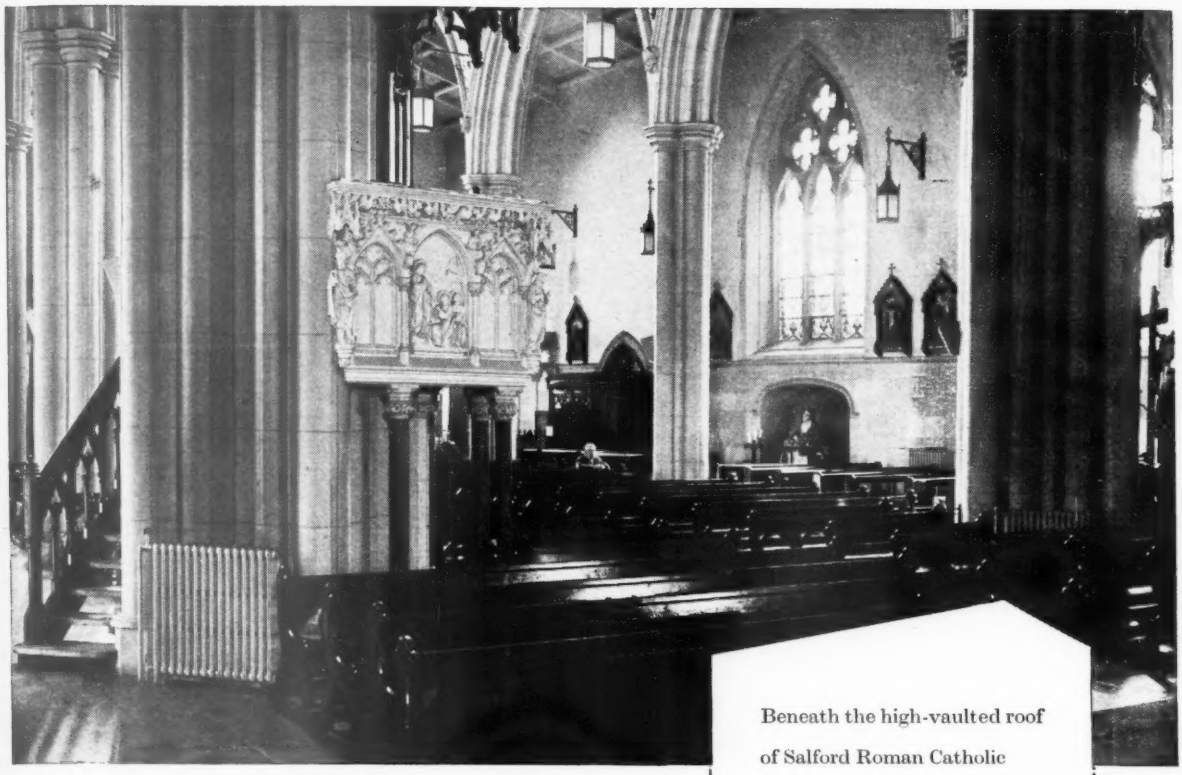

Once again, radiators by Crane...

Beneath the high-vaulted roof of Salford Roman Catholic Cathedral a comfortable temperature is maintained with Crane radiators. This has been achieved without detracting from the quiet dignity of the Gothic-style interior, as the radiators are situated inconspicuously to give even distribution of warmth throughout. Salford Cathedral is one example of how Crane equipment can be used in modern heating installations for beautiful buildings, ancient and modern, everywhere in Britain.

Salford Cathedral

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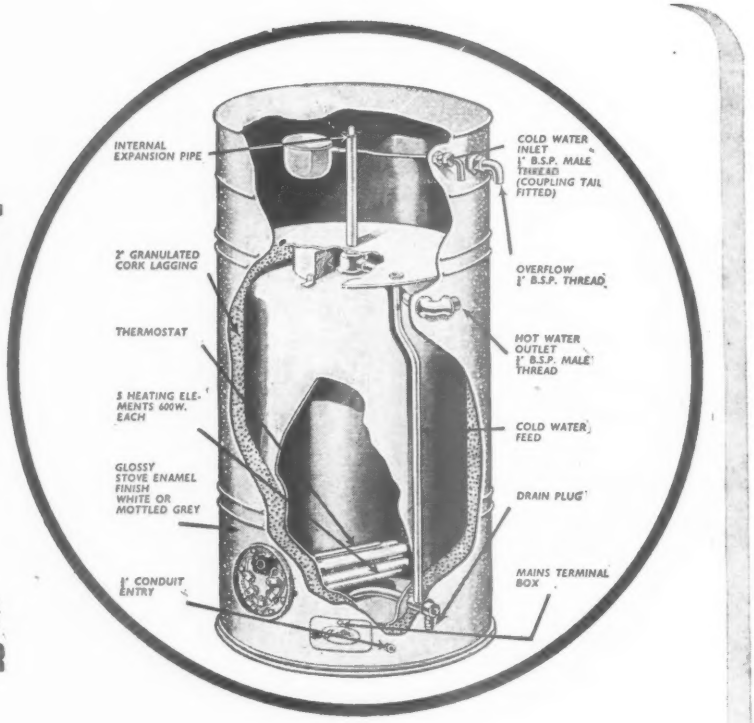

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Item 1. Ball valve supply tank
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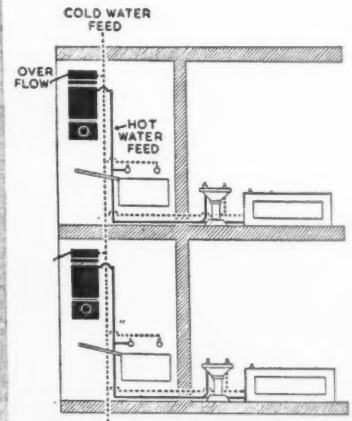
Item 4. Expansion pipe exhausting back into the supply tank



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The simple plumbing for two flats is clearly shown in the sketch alongside, and it will be noted that a single cold water feed serves the heaters as well as the cold taps. This feed can be direct from the water mains or from a storage tank in the roof.

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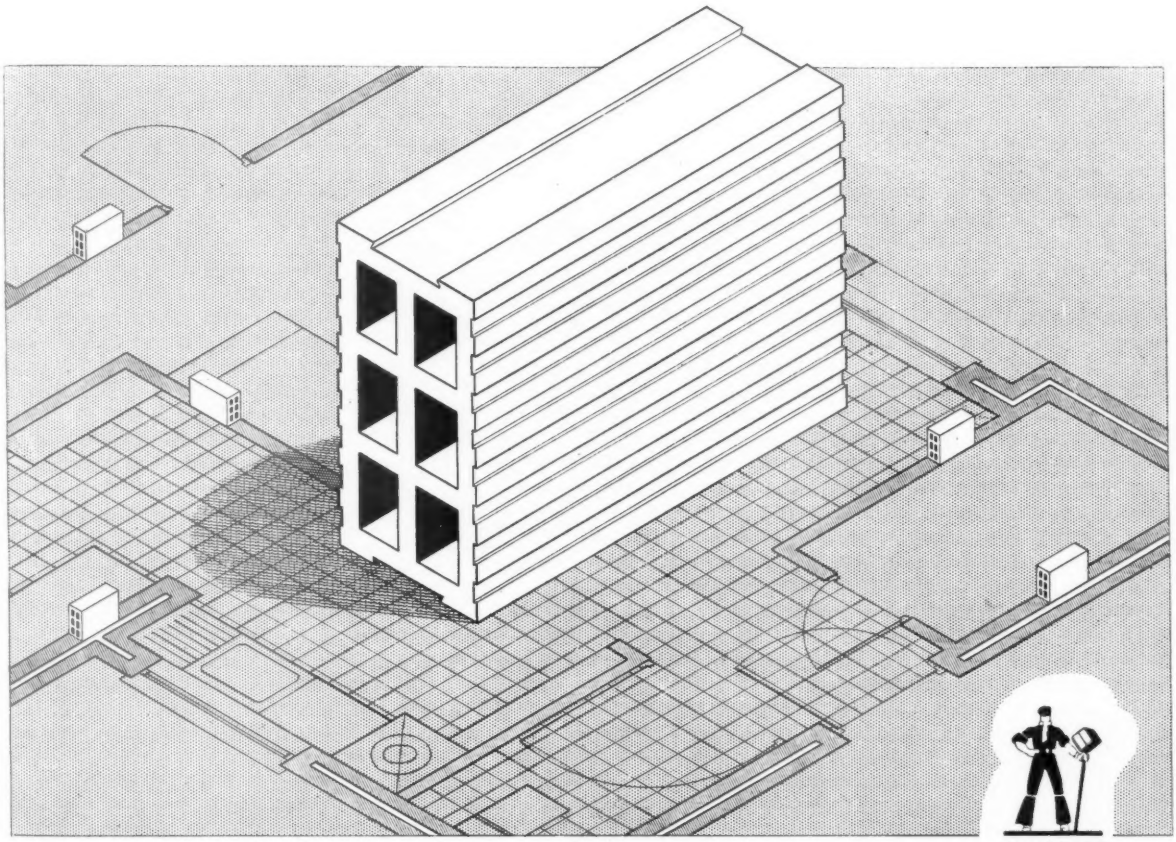

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★ *Illustration on left shows a Power Door Cramp with operator cramping dowelled doors.*

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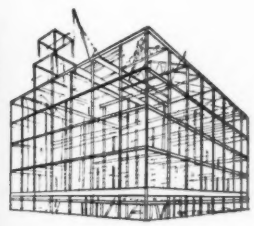

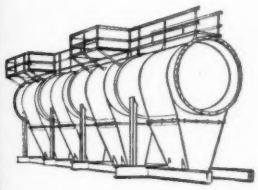

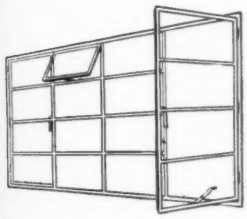

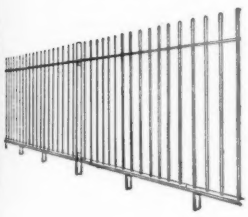

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Above, a general view of the Station, showing the main building and the 750-foot mast supporting the combined vision and sound transmitting aerial. Right: Acoustic Gyproc ceiling in a Control Room.

Mast: Designed and erected by British Insulated Callender's Construction Co. Ltd. to B.B.C. detail specification.

General Contractors: John Laing & Son Ltd.

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A.I

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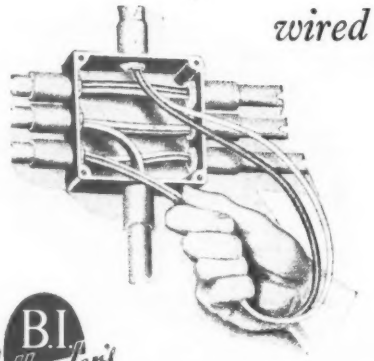

Eighteen thousand yards of BICC Rubber Insulated Cables were used by the electrical contractor, Mr. F. Burton of Birmingham, for the complete wiring installations of the Birmingham United General Hospital Nurses' Home.

Architects: *Messrs. Martin & Martin & W. H. Ward of Birmingham*
Consultants: *Messrs. Hoare, Lea & Partners of Birmingham*

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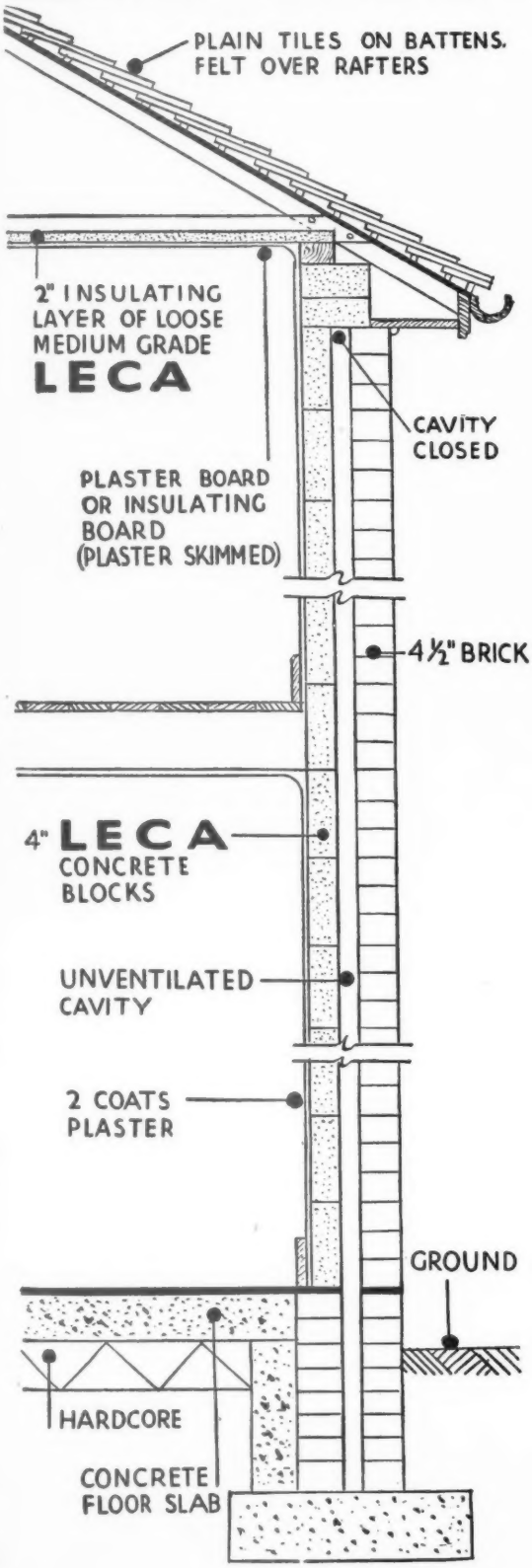

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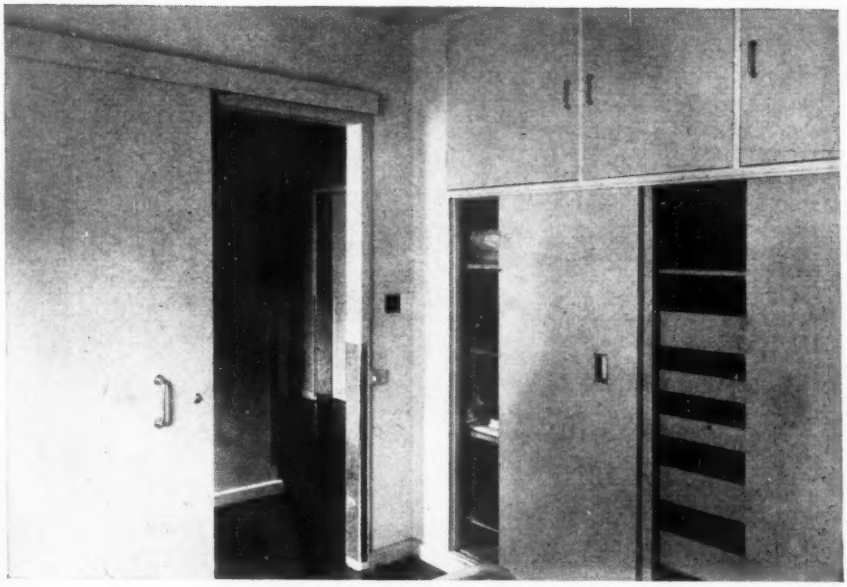
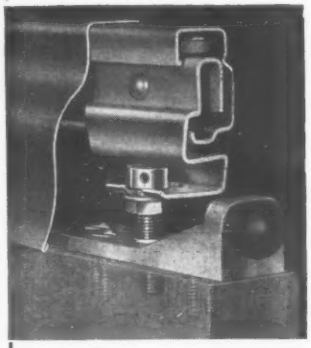
ESTATE is the finest door gear for domestic and light industrial use. Many housing estates throughout the country, and abroad, are using ESTATE Sliding Door Gear. The illustration on right shows an interior at the Kytes Estate, Garston, Herts. All communicating doors are fitted with ESTATE Sliding Door Gear. Ease of operation, trouble-free life, and pleasing appearance are the qualities which appeal to progressive planners.





An exclusive "snap-on" pelmet conceals all fittings and will harmonize with picture rail or panelled effect. ESTATE gear is approved by the L.C.C. and is stocked by hardware firms throughout the British Isles and in many countries overseas.

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FOR THE DOMESTIC GARAGE

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ESTATE and RADIAL Sliding Door Gears have recently been supplied to the following: London County Council Flats and Housing Schemes; Peterborough, Sedgefield R.D.C., Rushden U.D.C., Easington R.D.C., Eston U.D.C., Mexborough U.D.C., Corporation Housing Schemes; Canterbury, Sawbridgeworth, Castletown, I.O.M., Housing Estates, Garston-Watford, Kytes Settlement Estate.

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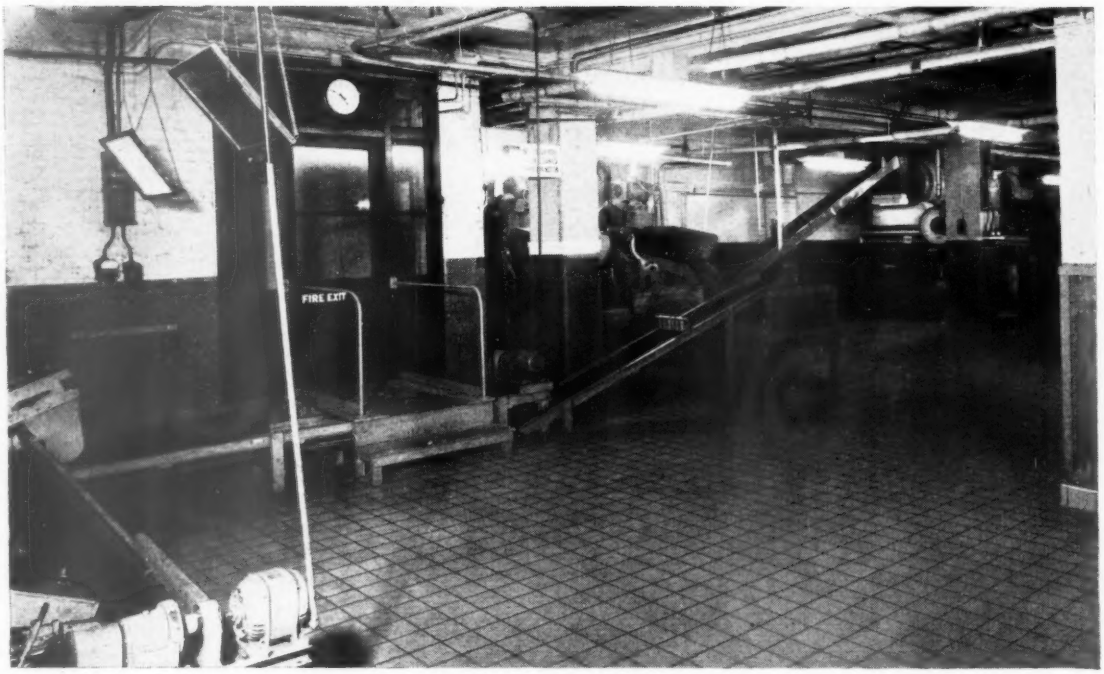
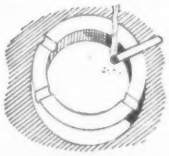
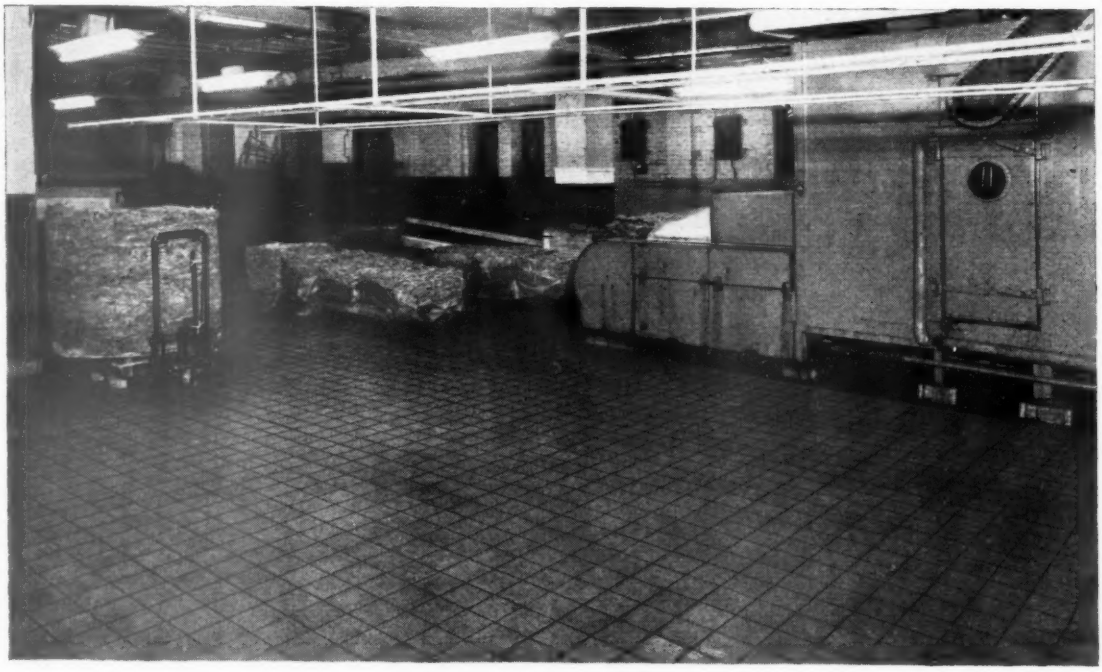
SEE OUR EXHIBITS AT THE BUILDING CENTRE, 26 STORE STREET, LONDON, W.C 1 and THE SCOTTISH BUILDING CENTRE, 425-427 SAUCHIEHALL STREET, GLASGOW, C 2





"TRITON" Quarry Flooring in 6" x 6" x $\frac{7}{8}$" Quarries in Ardath Tobacco Company's No. 1 Factory in London, carried out by the Engineering Department of Ardath Tobacco Company Limited. Flooring Contractors: A. H. Herbert & Co. Ltd., London.



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

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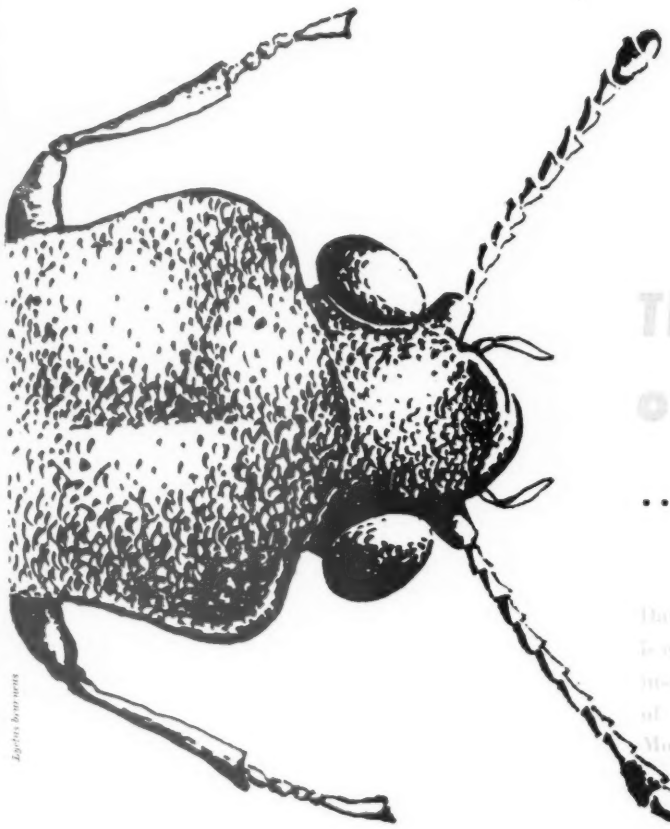


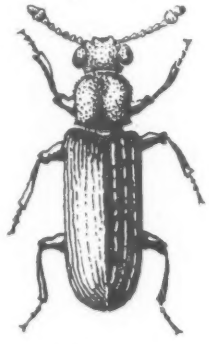
Lyctus brunneus

The enemies of woodwork

... and the modern antidote

Damage costing several million pounds a year is caused by destructive fungi and wood-boring insects. Some of the most effective methods of modern preservation are provided by Monsanto's 'penta' chemicals.

PENTACHLOROPHENOL gives protection against all of the wood-destroying fungi and insects found in this country—including dry rot, furniture beetles, etc. When the annual cost of dry rot alone is estimated at £20,000,000, such a preservative speaks for itself.



Lyctus planicollis

Remember — impregnated timber is the best guarantee of future immunity. 'Penta'—made by Monsanto in several forms—can be easily applied to whole timbers before construction by simple cold dipping; or it can be brushed on to woodwork already in service which cannot be treated by dipping.

'Penta' preservatives are clean and safe to handle under normal operating conditions. Timber treated with 'penta' is free from stain and can be painted over.

What to specify

Monsanto's range of pentachlorophenol preservatives includes :—

PERMASAN.* Monsanto's own oil solution of pentachlorophenol, ready for application.

SANTOPHEN* 20. Pentachlorophenol (technical) for solution with oil ; chemically stable, involatile, virtually insoluble in water — the cheapest, most versatile good preservative.

SANTOBRITE.* Sodium salt of pentachlorophenol, water soluble. A short-term preservative, especially for sapstain control in newly-converted timber.

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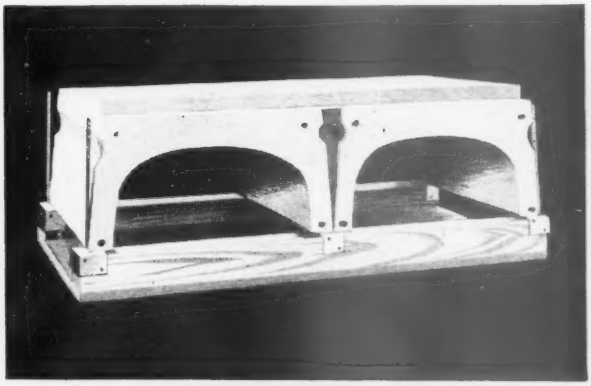
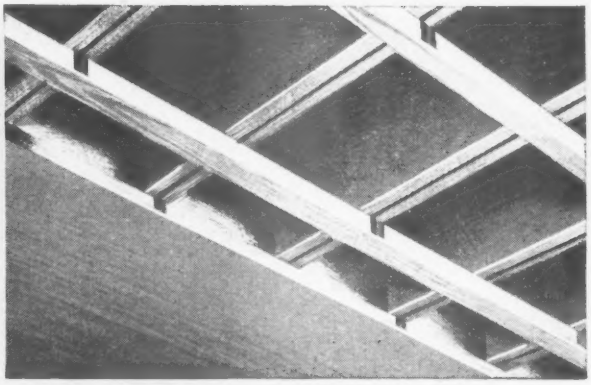
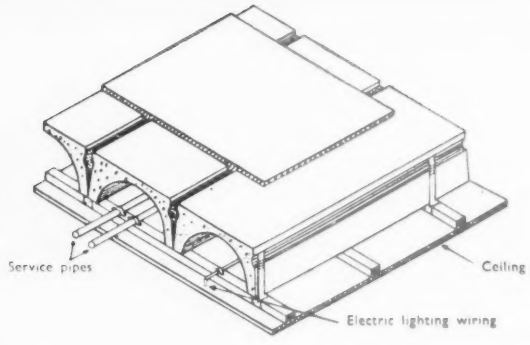
Sound insulation is of the utmost importance in dwellings, particularly in flats. Amongst the types of floor which the Building Research Station recommends for sound insulation in flats, is the ribbed concrete floor, a type to which the Truscon floor conforms. TRUSCON PRECAST FLOORS, with suspended or semi-suspended ceilings provide a satisfactory insulation against sound transmission.

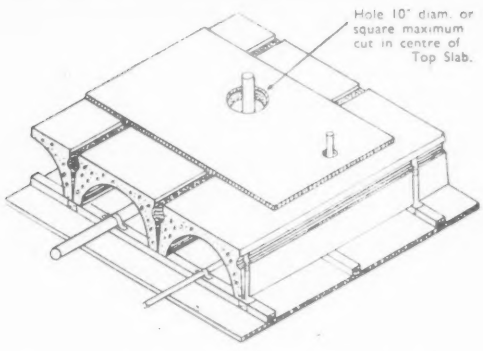
Suggested method of constructing a sound resisting floor, showing finishes (refer to Building Research Station Digest No. 15).







Domestic services can be housed within the voids of the Truscon units.



Details of the advantages of Truscon Precast Floors will gladly be sent on request

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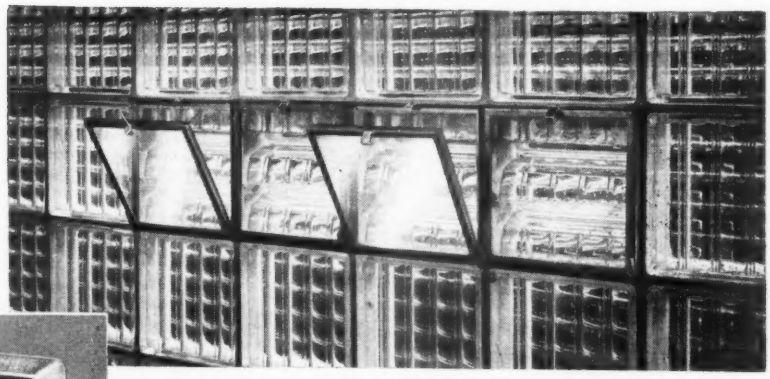
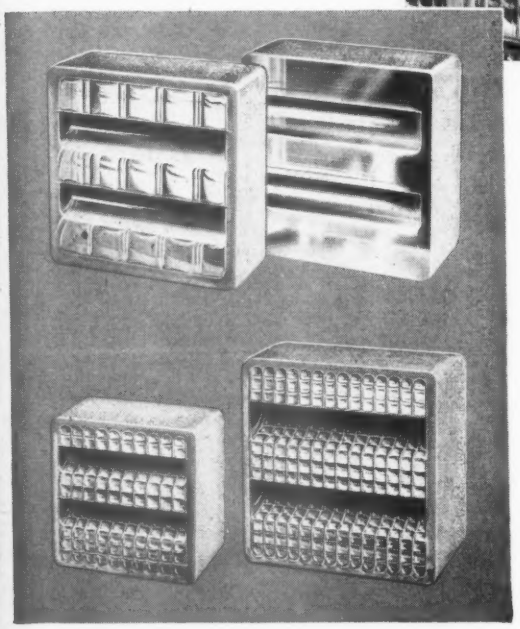
VENTILATION
THROUGH
GLASS



A group of four shutters, Face Fitting Pattern Type A, fixed to Type 3 'Ventiblock'.



THE FULL 'VENTIBLOCK' RANGE—there is a pattern to match every type of 'Insulight' Hollow Glass Block.

These New Developments
complete the answer

to the problem of ventilating
'INSULIGHT' HOLLOW GLASS BLOCK INSTALLATIONS

They provide controlled ventilation, completely exclude flies and insects, and consist of

SHUTTERS & FLY SCREENS
FOR THE CLARK-EATON ALL-GLASS
'VENTIBLOCK'

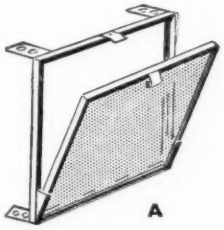
(Patent Nos. 552195, 583552. Others Pending.)

These are available, each in two types, for all patterns of 'Ventiblock', as follows:—

FACE FITTING PATTERN—TYPE A:

SHUTTER—Metal frame glazed with clear glass. Easily opened and closed, or removed completely. Can be fitted to existing 'Ventiblock'.

FLY-SCREEN—As above, but glazed with metal gauze.



A

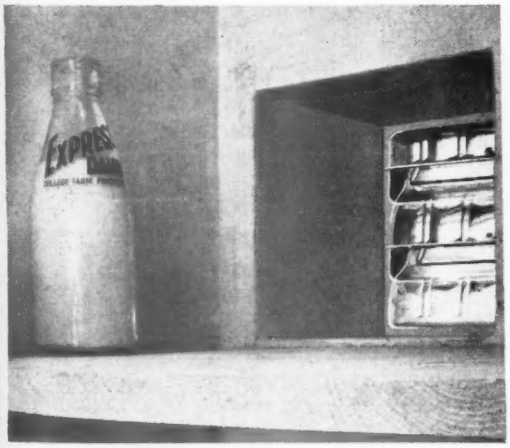
INTERNAL FITTING PATTERN—TYPE B:

SHUTTER—Sheet metal, with handle. Easily fitted or removed.

FLY-SCREEN—As above, but metal gauze.

B

Supplied through the usual Trade Channels. Please ask for literature.



For larders, as for other purposes, the 'Ventiblock' with shutter and fly screen is the ideal means of providing ventilation with light.

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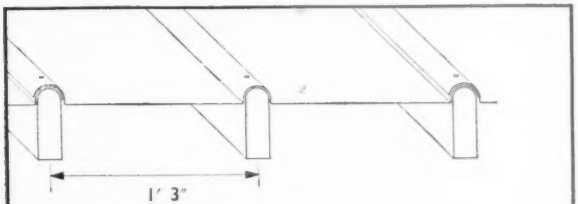
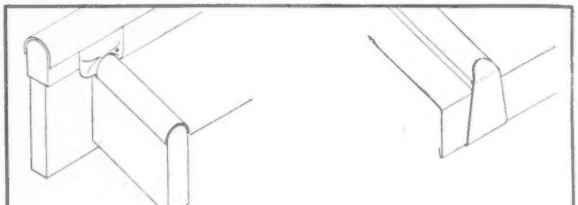
SEE OUR EXHIBIT AT THE BUILDING CENTRE

DATA SHEET FOR ARCHITECTS No. 8

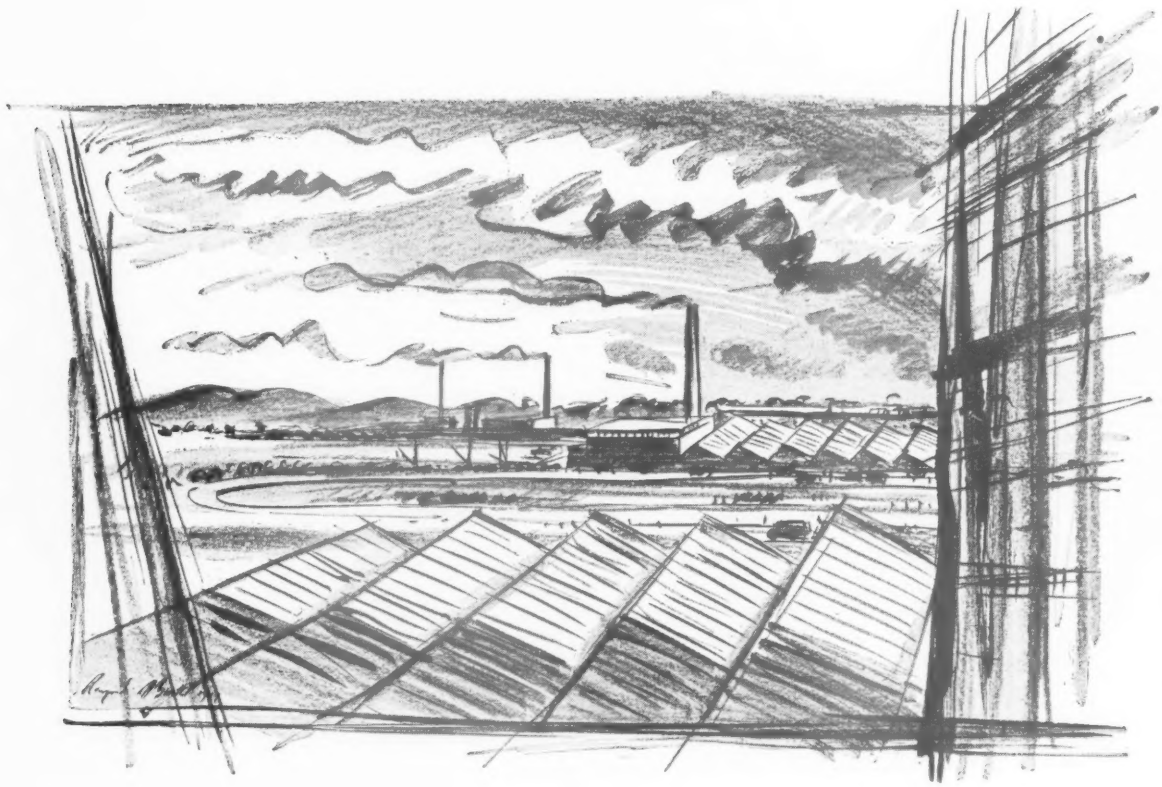
ITALIANIZED ZINC ROOFING



Standard italianized sheets have 3 corrugations approximately 1⅛″ wide



Details at ridge and eaves



Italianized zinc roofing enables zinc roofs to be laid directly on to rafters or purlins without the use of boarding. It is thus both cheaper and easier to lay than other systems, since the sheets are factory-formed; and it is especially suitable for large buildings, such as warehouses, railway stations, etc. It can be adapted to housing, if used with a decking material to provide sound proofing and thermal insulation. The standard italianized sheet of Z.G.16 (19 I.S.W.G.) measures 8′ long by 2′ 8″ wide, the rolls being spaced at 1′ 3″ centres. The sheets are fixed by galvanized screws directly to the rafters or purlins. Further information on roofing systems and other uses of zinc in building can be had from the Association, together with a list of publications.

ZINC DEVELOPMENT ASSOCIATION

LINCOLN HOUSE TURL STREET OXFORD TELEPHONE OXFORD 47988

AJ

THE ARCHITECTS' JOURNAL

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

No. 3007 October 16, 1952 VOL 116

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STUDENTS AND THE RIBA

ASTRAGAL sincerely hopes that the letters published in the JOURNAL last week from Pembroke Wicks and from Everard Haynes, together with the leading article, really were the last chapter on the unhappy controversy between students and the RIBA. There are, however—apart from anything the RIBA may do to put its own house in order—two lessons to be learned from it all.

*

One is that institutes—however big and powerful—cannot be wrong with impunity, and cannot have things both ways. Mr. Haynes, for instance, said on behalf of his officers, that the Professional Practice Examination in question was solely the affair of the schools. If that is so, then several heads of schools—acting independently of each other in different parts of the country—were all under the same false impression; so were the external examiners who certainly thought they were acting for the RIBA. On top of that, in the end it *was* an RIBA examination, since one student—a Mr. Ash—was elected associate on the strength of it. Mr. Ash's twelve months post-graduate practical experience is quite irrelevant to the fact that it was an RIBA examination for him, but not—according to the Officers of the Board—for anyone else. That is having it both ways with a vengeance.

*

The other lesson to be learned is on the subject of "How to Be Wrong." In the end the Institute did admit its error; in doing so it could so easily have announced a simple "reconsideration of our decision." It preferred a smoke screen of tangled explanations suggesting that it had really been right all the time, but . . . That is not the way to do it.

*

One last point. As a result of all this blundering the students concerned have, of course, lost seniority, and will therefore lose opportunities for promotion. Yet even now we hear, as we go to Press, that the pre-dating of their election to Associateship has been refused by the Institute.

PLANNING GOES THROUGH IT

Whatever hard things are said about some parts of the T & CP Act, its central idea still has the support of both political parties and most reasonable people. You may recall it. A survey was to be made and a plan prepared; then, after a public inquiry and examination and approval by the Minister, the plan was to remain in force for five years. It would then be re-examined to see if changes were needed.

*

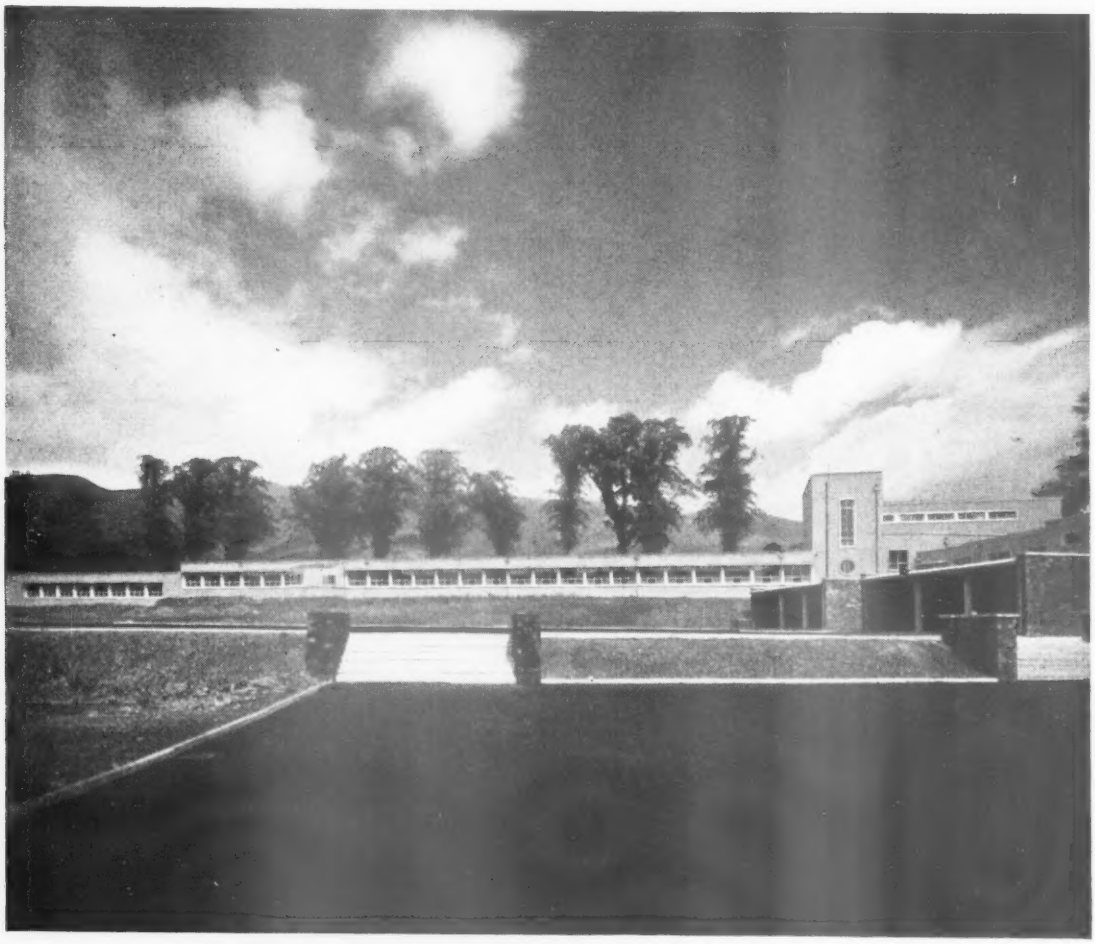
It still seems a good idea. But we are now learning all the things that can happen to a good idea when it is taken up thoroughly by administrators and lawyers, and put through the tests called for by our British passion for fair play.

*

The Inquiry into objections to the LCC Plan has now got into its stride, with four Inspectors—and has faded from the newspapers. After the first day's hearing a departing spectator calculated, between yawns, that judged by the pace so far the Inquiry was going to last twenty years. And whatever allowances are made for settlements and short cuts induced by the weariness of all concerned, it does not look as though the LCC Plan could be approved by the Minister much before the quinquennial review comes along. And then everything starts again?

*

This week, by the way, a rival attraction began at Cambridge, where the University and the City—for different reasons—dislike the County's Plan for that well-known place, and they have hired distinguished counsel to say why. One man's meat . . . Those who have to be present at the Inquiry will be missing familiar legal faces during the week. Their owners will be on the train to Cambridge, mumbling about the Spine Relief and Midsummer Common, and smiling to themselves



CLASSROOM BLOCK, LAIRTHWAITE SCHOOL, KESWICK

John H. Haughan, F.R.I.B.A., County Architect, Cumberland County Council

HOPE'S WINDOWS

HENRY HOPE & SONS LTD

SMETHWICK, BIRMINGHAM AND 17 BERNERS STREET, LONDON, W.1

(was that Harlow we passed?) as they think of awkward questions for Professor Holford.

ANY ALTERNATIVES?

No one seems able to suggest an alternative for a procedure which the LCC, and later, the Middlesex, Inquiries are magnifying into absurdities. Objectors are supposed to confine themselves to objections on matters of principle. Detail will be considered later at another inquiry preceding compulsory acquisition. But objectors are not so easily gulled. If they don't object to the principle they will have little hope of resisting on matters of detail.

*

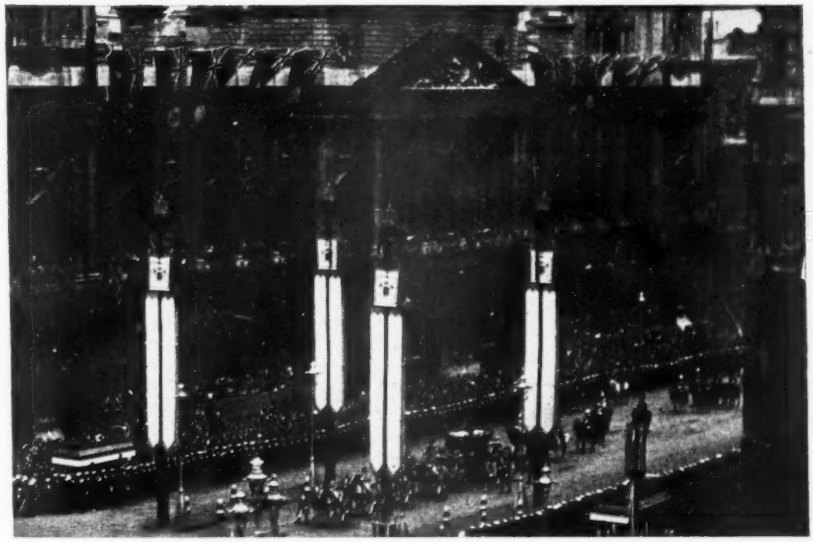
So they do object: whelkstall owners, owners and occupiers of each dilapidated house, preservation societies and all. It is their right; and planners and other defenders of the plans must endure the treadmill of the Inquiries. No one who dislikes planners could think of one much more dreary.

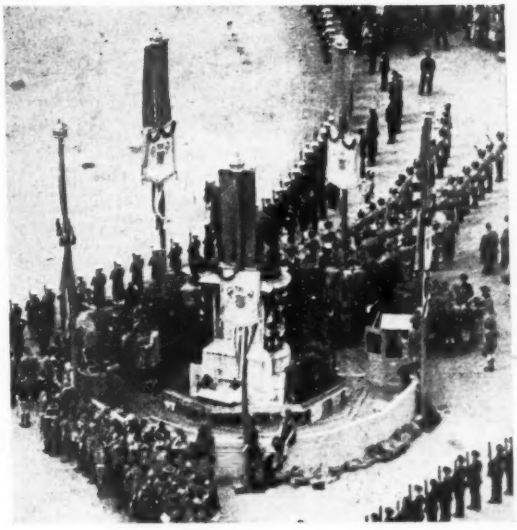
POMP WITHOUT OSITY

"Just one more, Sir Hugh!" As flashbulbs seared the air in Westminster City Hall a modest and immaculate forefinger jabbed with practised nonchalance at a sketch of proposals for Coronation decorations. "Finished?" asked the city council's Coronation consultant, his flagging finger wilting across the bunting. But up piped a Glossy Weekly in polite protest and Sir Hugh Casson returned to his pose, pointing—as is his practice—towards the future.

*

This time, however, the future is steeped in the past. One expects the rhetoric of pageantry to be overloaded with clichés, and ASTRAGAL has been looking forward to seeing how the ex-director of Architecture for the Festival of Britain would marry his imagination to traditional needs. Some of the results are reproduced on pages 459 to 465. They are, you will agree, excellent. Regal symbols have been incorporated in designs which are gay, elegant and sometimes witty, and yet lack nothing in dignity. My first reaction on studying them was to wonder why the street decorations of the last Coronation had made so little impression on me. However, after flicking through my records—or, to be perfectly honest, after spending two dusty hours in the cupboard under the staircase—I found the answer. Photographs taken at the time show no features of startling originality—merely a fairly conventional collection of poles, shields and bunting.





Readers may like to compare features of Sir Hugh Casson's proposals for Westminster City Council's Coronation decorations with those designed by Grey Wornum for the last Coronation in 1937. Above is Mr. Wornum's feature for the junction of Parliament Street and Square. On the right is his treatment of the Charles I statue in Trafalgar Square. The proposed treatment of these areas in 1953 is shown on pages 460 and 463.

*

ASTRAGAL'S one regret about next year's decorations in Westminster is that their life will be so brief. However, they may well set a new standard in this field of design by proving that it is possible to be light-hearted about things that matter without being flippant—that pomp and pomposity need not be synonymous.

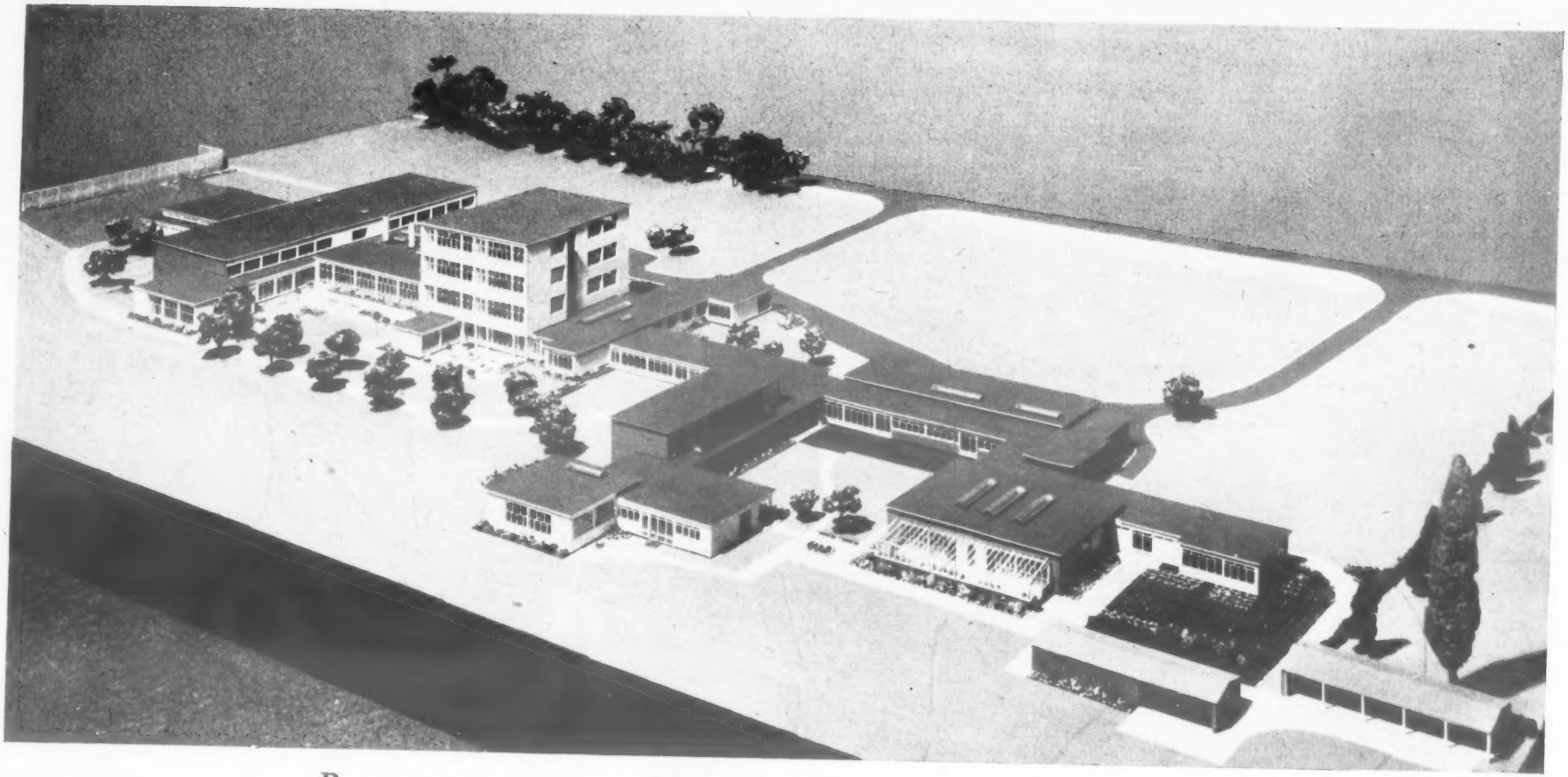
NEW TOWN'S CENTRE

Corby, latest of the new towns, pushed a hoof out ahead of its elders last month when a scraper took the turf from two sites and began the buildings in the Town Centre. Not a mere neighbourhood centre but *the* Centre.

The first two buildings, west and north of the Market Square (Holford & Wright, with R. L. Banks) will be pursued within a fortnight by the south block. (Corporation architects under Denis Harper.)

*

The Centre is on a low ridge west of Hazel Wood and gives the encouraging first impression of being already half built, as the Corporation's first 500 houses and flats adjoin it on the east and south. In fact, the only visible thing almost finished in the Centre is the double carriageway of the main street—Corporation Street. One notices that almost every architect's eyes wander sourly over the heavy R.C. slabs. They just can't help it. In these days, it seems quite shocking for real money to get into the hands of engineers.



Reports on MOE Development Work

Architects John Stillman and John Eastwick-Field, whose extremely informative and interesting series of progress reports during 1950 and early 1951 on the design and construction of the Royal Festival Hall will be remembered by readers of the JOURNAL, this week commence another series of articles. The subject is the Wokingham secondary school, above (see pages 469–475). This school, for the Berkshire County Council, has been designed by the Development Group of the MOE and is now in course of erection. The subject of secondary school design, in all aspects of planning and construction is a particularly vital and topical one today. It is the major task in school building which confronts the architect and the building industry. The huge primary school programme no longer needs priority, for the post-war bulge of school places is now moving from the primary to the secondary age-group. It was in order to provide systems of construction for single or multi-storey secondary school buildings, which would supplement more traditional methods of building, and which, at the same time, would be within the cost limit and be quicker to erect than traditional buildings that the MOE has undertaken a certain amount of development work. The first fruits of this work are now being tried out in the field at Wokingham. It is, of course, but one of several systems which are being worked on by the Development Group. The significance of this development work and its full implication to the building industry, together with detailed descriptions of, and comments upon, this particular structural system and of the plan and design of this particular school, will form the basis of this series of articles in the JOURNAL. Ways of increasing building production are one of the most topical and controversial architectural issues of today and, as exemplified at the above school, form a fitting subject on which John Stillman and John Eastwick-Field can continue in the JOURNAL their study of contemporary buildings.

On October 7 Ernest Marples, deputizing for the Minister, opened one of the first of the new houses which was already occupied by Mr. Murphy from Glasgow. He then went over the Show House next door, which was furnished at quite reasonable prices with most of the things we all mean to have sometime: and ended at the exhibition (by Corby architects) which will show the Master Plan to Corby people until the end of this week.

*

It was all done neatly and sufficiently, without that quite-big-money-public relations display which irritates all of us these days when it is our money that is being spent.

*

ASTRAGAL'S only grouse is directed at the central figure. Parliamentary secretaries ought not to be forty-five minutes late for outdoor functions in October.

SLIDING DOWN THE BEDSTEAD

The following was unearthed by a friend burrowing in the Patents Office:—

*

"I, Thomas Dawson, of King's Arms Yard in the City of London, Engineer, do hereby declare the nature of the said invention for improvements in bedsteads, couches and other like articles of furniture, whereby parts thereof can be made to form a fire-escape when required, to be as follows:—

"I make the side frames of a bedstead of a tube, and enclose within it several other telescopic tubes. I connect one end of the tubes by a swivel or other suitable joint permanently to the bed posts, and to these elongating tubes (or tubular parts) I attach a sacking or net by means of rings or other appliances. In the event of fire, the bed posts are drawn up to the foot posts by connecting rods, through which they slide. The fire-escape sacking or net is made to overhang the window, and the same operation also dislodges the tubes from the foot posts against which they rested, by a rod being run out of them. The tubes, now no longer supported by the foot, take their incline to the street, and are let down by unwinding a rope from two cylinders, which act in such a manner as to prevent the too rapid descent of the tubes and the sacking. The persons escaping descend in the sacking to the ground."

ASTRAGAL

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POINTS FROM THIS ISSUE

The Editors

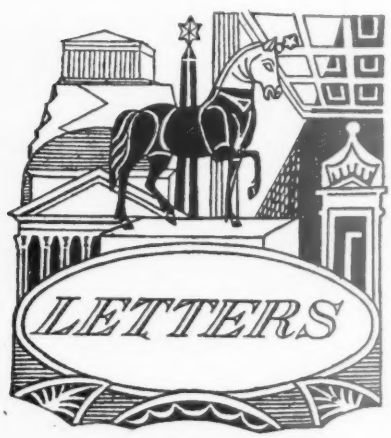
THREE YEARS TOO LATE

ARCHITECTS and planners who, during the last three years, have been engaged in the preparation of Development Plans, may well feel like greeting the Ministry of Housing's new handbook *The Density of Residential Areas* with the cry: "Too late, my Ministry, *three years* too late!" The Development Plans are now submitted (or should be so), the Town Maps are complete, and the areas zoned for agriculture, or for housing—at ten to the acre—are mapped, at least for the next five years. How exasperating to receive *now* what is virtually a guide book to the establishment of reasonable urban densities in residential areas new and old, and to learn *now*, for example, that the Ministry agrees with what has so far been the policy of only a minority of councils—that it is possible to achieve a saving in land coverage of about 20 per cent. compared with pre-war practice, and at no greater cost, by a modest increase in net densities using terrace housing and a proportion of flats.

Why has there been this fantastic delay? In the introduction to the companion handbook *The Re-development of Central Areas*, it was stated "this is the first of a series of handbooks which will be published by the MOTCP dealing with the technique of planning . . . It is hoped that it will be followed by handbooks on residential and on rural areas." This was in the summer of 1947 and no further handbook has appeared till now. It is well known that work on the desirable densities of residential areas was in hand then, and that the substance of the present report was in draft many years ago. Does the blame for the delay lie with technicians, administration, or politicians? And why has the handbook been allowed to see the light of day at this precise moment? Can it be that its original purpose—the saving of agricultural land from being swallowed up for housing development has been rather overshadowed by the necessity for squeezing the maximum number of houses on the site for economic reasons? It would be interesting to know more of the detailed history behind the preparation of this report.

Now that the handbook is out the information it contains will be of considerable interest to all housing architects and planners. It discusses, with diagrammatic illustrations, a variety of methods of arranging and spacing dwellings,—houses (two- and three-storey) of varying frontages and depths, flats,

and mixed developments of both—to achieve a wide range of densities. It has a chart on the relative costs of these different kinds of development, appendices on daylighting and street widths, and a useful summary of conclusions. It will be reviewed in detail in the JOURNAL shortly.



Horace H. Laws, L. B. Matthews, G. E. Soulsby, A/A/A./R.I.B.A.

J. H. D. Wickham, A.R.I.B.A.

"Mendicant"

Raglan Squire, F.R.I.B.A.

Leonard C. Howitt, F.R.I.B.A.
City Architect, Manchester

W. Fisher Cassie, Ph.D., M.S., F.R.S.E., M.I.C.E., M.I.Struct.E.

J. H. Napper, M.A., F.R.I.B.A., A.M.T.P.I.

J. Ian Robertson
President, N.F.B.T.E.

Qualifications and Registration

SIR,—An important aspect of the question of architectural qualification and registration, is not touched upon in either your leading article September 18 "Students and the RIBA" or your correspondent A. E. Ward's letter in the JOURNAL for October 2.

We refer to the carrying out of architectural work by men who call themselves "building consultants" or anything else but architects.

While we strain our energies over questions which are undoubtedly of great professional importance, but neglect the obvious precautions required to prevent "Blacklegging" by unqualified people, we feel personally that this correspondence has the quality of "hitting the *shadow* but missing the *substance*."

L. B. MATTHEWS,
HORACE H. LAWS,
G. E. SOULSBY.

Maidstone.

Laymen as Judges

SIR,—Recently I sent plans of a small house to a local authority who, in turn, passed it on to the planning officer, the plans being dispatched from my office last February. Nothing happened until some three weeks ago, when I was told by the planning officer that a special sub-committee had looked at the plans, and visited the site, and had asked if I would consider amending one of the elevations "to make it more pleasing." I replied that I was not considering making any changes. To date I have received no further information about it.

Now my point is this:—the special sub-committee, I understand, were all laymen with, I should say, probably no taste of such things at all. Even if the matter had been dealt with entirely by the planning officer himself, we, as architects, are having our work criticized by, in very many cases, people not qualified to do so.

Of course, there are local panels of practising architects who act in an advisory capacity (when asked to do so by the planning authority), and I feel that they should look at all schemes and not just those selected by the planning officer. The panel ought to have on it younger men in addition to the "old stagers," and everyone should be appointed by the RIBA or local society.

J. H. D. WICKHAM.

Bideford.

Salaries and Overcrowding

SIR,—For all his slick sub-titles and film-critic journalese, ASTRAGAL is tackling my arguments very gingerly indeed. All I can be sure about, from his comments to date, is that he disagrees with me.

Employers do not need to make any moves at all with the situation as it is at present. Their interest lies in maintaining the *status quo*. Cheap labour and low wages are here with a vengeance, the employing section of the profession is in control, and these gentry have only to dig in their heels (an almost imperceptible motion) for nothing to be done. As I said before (AJ, Aug. 14): "Nowhere have assistants achieved such representation as will give them an effective voice in matters which vitally concern them."

As for the business of employers writing the names of "rebel" assistants in little black books, what I said was "there is a firm belief that employer members take note of such rebels." Such a belief most certainly exists, and I am not charging employers with being less than human in discouraging what is contrary to their particular interests.

Who are these architects who are compelled to spend all their time trying to keep solvent? There will always be a few looking worried, but this is often the result of starting in practice prematurely, and—on the other side of the scale—a matter of 6 per cent. on present day building costs is a great deal of money. As for architecture not being a "simple trade where rates for the job can easily be established"—remarkably low "rates for the job" seem to have become established very easily and permanently.

Surely it is better for those contemplating entry to a profession to find the doors closed, with "House full" notices up, at the outset, rather than to be welcomed into one of the many establishments which advertise courses leading to registration only to find after six years' work, plus expenditure many can ill-afford, that even a poorly paid job is hard to come by.

Mr. Herbert, while objecting to a "close the door Jack, I'm in" attitude towards entry into the profession, will accept a state of affairs in which far too many qualified assistants chase far too few jobs. What he says is, in effect, "If you can get a job you are competent and industrious, if you cannot get one you are *ipso facto* incompetent and lazy. But take comfort that you are witnessing (at very close quarters) the working of the age-old laws of supply and demand, the survival of the fittest, etc."—nice liberal sentiments I must say.

Those who assert that salaries are too low and overcrowding is a fact are not "demanding a job where promotion and position are determined by seniority rather than competence," in any shape or form; and in comparing the incomparable, *i.e.* painting and poetry with architecture, ASTRAGAL once more "hits the nail on the thumb." As far as the stage is concerned, the people who make real money on the boards have no comparable opposite numbers in our profession; while the smaller fry are looked after by Equity, their association, much more effectively than one ever dare hope that the assistant architect will be by his professional bodies. But the analogy is false in any case.

MENDICANT.

London.

SIR,—ASTRAGAL'S reference in the August 21 issue to the "ominous articles" written by me, refers to a series of leader articles I worked on with you during my period of guest-editorship of the *Architects' Journal* in 1950. At that time we were pursuing a line of enquiry as to the opportunities for employment facing the profession generally and with particular reference to the many students who we knew were at that time preparing themselves for entry into the profession during the 1952-3 period. Our conclusions were certainly startling and we prophesied, then, that unemployment would seriously begin to raise its ugly head just about now. However, we did not, at that time, offer any remedies other than a few generalized remarks and it is concerning this question of remedies that I would now like to contribute a few thoughts.

Firstly, I must explain that it is my *firm* belief that the dual problems of unemployment and "under-employment" are not temporary and seasonal problems which will disappear in a year or two but rather that they will remain with us for quite a long period—at least the next ten or fifteen years and maybe forever if we don't do something constructive about them now.

Employment in the architectural profession in any country is directly related to both the quantitative and the qualitative employment of the building industry as a whole in the general economic structure of that country. When so many young men and women decided to take to the practice of architecture after World War II they did so against a general background of belief that this country was entering a period of great building activity. This belief was almost universally held at that time and equally it was thought the profession was in for a long run of creative and lucrative work.

There are two reasons why these conditions have not occurred:—Firstly, there has been a quantitative reduction in the total amount of money to be spent on building in the country due to the fact that we soon discovered that our economy had been radically undermined by the last two wars and that, as a nation, we must concentrate a far greater proportion of our efforts into exports. We can only afford to spend a much smaller proportion of our available funds on building than we had anticipated. Secondly, there has been a qualitative re-

duction which is partly due to the fact that the meagre funds which are available have to be spread over too great a number of projects and partly to the fact that a greater proportion of that building which does take place is on factories, defence works and other similar projects of an austerity nature. In upshot, therefore, there is less total building than was anticipated and that proportion which still remains is of a kind which implies less architectural service than the banks, insurance buildings, churches and large country house of the inter-war period.

What, then, is the profession to do? The crux of the matter is this. *The problems we are facing and the inherent unemployment implicit in them only exist so long as we continue to consider our activities to be contained within this small island.* Whereas in this country it is likely that the conditions we are now encountering will be part of our daily life for the next ten or fifteen years, during this same period a vast amount of building and construction work of all kinds will be taking place all over the world and particularly within the British Commonwealth. It is to these fields that we should turn our eyes. This is not to suggest a mass exodus of the profession from the home country. With the great increase in air transport facilities and the general reduction in the comparative size of the world, it is no more difficult for an architect today to carry out a job in, say, Colombo, from an office in London than it would have been 50 years ago for that same architect from that same office to carry out a job in Scotland. Admittedly, the scale of the job must be larger to carry the additional overheads of travelling but then a great deal of the overseas work is on a very large scale indeed.

However, a mere wishful look abroad will not be enough. It will be no good sitting in an office here and hoping that overseas' contracts will fall into one's lap. The problem of organizing the profession not only to undertake but to "land" such work is the point around which there appears to have been little constructive thought so far. Firstly, let us analyse the problems:—(*a*) In order to obtain overseas work, personnel must be sent on long and expensive trips. (*b*) The type of work which has to be done varies enormously from one country to another, but in every case it requires great efficiency in execution and in general administration. (*c*) Much more research than is normal is necessary into the type of building required, the most suitable type of structure and the availability of materials in the particular locality under consideration. (*d*) The type of client one will encounter may be unlikely to understand the finer points of professional ethics and of the codes of practice in this country, and in many cases will prefer to place one contract not only for the architectural but for the structural, civil and services engineering work to be carried out on the project. Indeed, they may sometimes wish to place the building contract with the same party. (*e*) Site supervision offices may be necessary in remote parts of the world and staff must be found who are prepared to leave this country for long periods at a stretch. A study of these factors will indicate that the expenses will often be far too heavy for the typical medium-sized office into which the private practitioners in this country are at present organized and here we get to the root of the problem.

I believe that it is essential for Architects and Engineers in all fields to group themselves together through some sort of joint organization which could afford to finance the type of operations which the analysis I have made above suggest is necessary. What form should this joint organization take? No professional firm likes the idea of losing its identity. The normal industrial practice to meet such circumstances would be for the respective partners in the enterprise to form, amongst themselves, a company in which they could all be shareholders while still, at the same time, retaining the separate identity of their individual firms. It would seem that this would be a sensible procedure for the professions to emulate but this they cannot do through a company structure today because they are forbidden by their codes of practice to be directors of such a company. It would no doubt be possible to associate through some structure other than a company but, on investigation, it will be found that the difficulties of defining the contractual or partnership arrangements between the respective parties would become most involved.

I hesitate to occupy more of your space, but would like to leave your readers with the following thoughts:—(1) It is in the direction of overseas' work that the opportunities of the immediate future lie. (2) Owing to the heavy financial commitments involved, it is only through association of firms that the majority of the profession can participate in such work. (3) It would appear —unless your readers have other ideas—that it is only through some form of company structure that such association could be achieved whilst, at the same time, allowing the individual firms to retain their separate identities in this country.

RAGLAN SQUIRE

London.

Educating the Architect

SIR,—May I commend to your correspondent, John Leaning, the sound common sense and refreshing enterprise displayed in the letter from Gerald Stanwell on the same page (AJ, September 25).

Mr. Leaning should not allow present difficulties to cloud his judgment and cause him to depreciate the value of his school training; if students "waste the bulk of their five years," the fault lies in themselves. His disappointment makes him attach imaginary benefits to an alternative system of training he has not experienced. For instance, he writes "that students should also be lectured on what they could learn better in an office in the same time is, to say the least, ludicrous." Here is a complete misunderstanding of the facts. Most office-trained architects have either attended a part-time school or otherwise gained the major part of their training from sources outside the office, including lectures. What is ludicrous is to imagine that these subjects "can be learned better in an office in the same time."

Incidentally, why do those who have such prophetic vision that they are able to forecast demands six or seven years ahead always blame the schools of architecture for producing more architects than might be needed at the moment?

In the years 1949-50-51, 3,646 candidates entered for the schools examinations which afford exemption from the RIBA Intermediate examination, whereas 4,562 sat for the external examination. Although it is true that of these 2,731 school candidates passed compared with only 1,716 external entrants (no doubt due to a combination of superior training and more selective admission of school students), the figures show that if there is any blame to be attached to the production of qualified architects (and many of us deny it), it must not be ascribed wholly to the schools of architecture.

LEONARD C. HOWITT.

Manchester.

Structure in Building

SIR,—The authors have been much encouraged by the reception given to "Structure and Building" (AJ, August 28) by Mr. Reid and Mr. Samuely, and are glad to accept the editor's invitation to make a brief reply. Both critics suggest additions which might have been made to the text. The authors agree that the subject might well have been extended in several directions. The book, however, was not intended to give complete illumination, but rather to be a pocket torch showing the way and allowing divergence at any point as the students' interests direct. Further extension would also have taken the book out of the reach of students' pockets, and it is for architectural students that the work has been done.

One of the important points raised was that of the economics of structure. The authors' attitude to this problem is stated in the book, pages 20, 189, 190, 193, 195, 204, 209 and 210. They agree that too little of an authoritative nature has been published on the economics of structure. The factors involved are complex; certainly they are outside the competence of the architectural student.

It is surprising to find that the light sketches of design procedure in Chapters 1 to 9 are looked upon by Mr. Samuely as "more exact calculations." The authors are also puzzled by Mr. Samuely's attitude to the chapter on Statistically Indeterminate Structures. He advises a course which the authors were under the impression they had adopted. There was never any question of asking architectural students to cover full calculations necessary to the design of a redundant structure. Mr. Reid considers that some may develop interests in that direction. But the authors consider that this is unlikely with the present system of architectural training.

In answer to Mr. Samuely's final points: (*a*) The aim of plastic limit design is to avoid the appearance of plastic hinges at working loads, but at failure the possibility of three hinges appearing in the way shown must be considered. An excellent paper published a week or two ago by the British Constructional Steelwork Association shows a number of examples of this kind; (*b*) Of course, diagonal tension can be produced by pure shear, but this state of stress occurs in beams only fortuitously and over short lengths. A much commoner and more damaging cause of diagonal tension is shear plus tension. And again, it must be said that the book is not a treatise on the finer points of strength of materials.

W. FISHER CASSIE,
J. H. NAPPER.

Newcastle-upon-Tyne.

Foremen's Appeal

SIR,—This year I am privileged to be chairman at the annual dinner of the London Association of Builders' Foremen and Clerks of Works, and it is my pleasing duty to launch the appeal on behalf of the Association's pension fund. The Association makes only one appeal each year in support of its pensioners and I would like, through the courtesy of your columns, to call upon all my friends and associates in the industry to take a share in this excellent work in the form of a generous subscription. During nearly 60 years the association has carried out the task of improving the status of the builders' foremen and clerks of works with such success that today members are accorded recognition everywhere as an integral part of building management. It is, however, still an important part of the Association's function to provide for its more needy members in their later years.

The 56th annual dinner of the association will be held on Wednesday, October 29, at the Café Royal, London. I am confident that, as usual, the occasion will provide an opportunity for the many friends and supporters, representing all sections of the industry, to foregather for an enjoyable evening. Donations to the pension fund should be forwarded to Mr. T. Cutler, 27, Ennersdale Road, Hither Green, S.E.13, from whom tickets for the annual dinner may be obtained.

J. IAN ROBERTSON.

London.

MOHLG

Requisitioned Houses: Minister Acts

The Minister of Housing and Local Government, Harold Macmillan, has called the attention of all local authorities in England and Wales to the report of the Working Party on Requisitioned Properties in Use for Housing, published recently (HMSO, 4d.). He has asked them to inform him by the end of this year what action they have taken, or are taking, to comply with the report's recommendations.

The report recommends that those local authorities that have one family or less per thousand of their population housed in requisitioned premises should release all such properties by December 10, 1953. For those authorities having between one and two families per thousand so housed, the corresponding date should be December 10, 1954.

Mr. Macmillan states in his circular that he hopes authorities will take immediate steps to carry out the recommendations, and emphasises that those which " include specific proposals designed to secure the speediest practicable release of requisitioned properties."

SCOTLAND

Removal of Building Restrictions

Central restrictions on private house building in Scotland have been removed. Individual town and county councils were told in a Department of Health circular issued recently that they now have full power to decide how many private building licences should be issued in their particular area. They are no longer limited to issuing licences up to a maximum of one-fifth of their allocations.

The Secretary of State is confident, says the circular, that Councils can use their new discretion without in any way prejudicing the expanding programme of houses built to let. He is anxious that all reasonable applications for private house building should be granted wherever possible.

It is pointed out in the circular that experience in Scotland since last November has shown that generally the number of private licences issued has not approached the permitted limit of one-fifth of the Councils' housing allocations. " In most areas it seems clear that the legitimate demand could in fact be satisfied in a smaller proportion than one-fifth."

The demand from the public for private building " evidently varies from area to area and does not bear any close relation to the demand for houses to let, which is, of course, the governing factor in determining the size of local authorities' own programmes. The Secretary of State has for these reasons decided that the number of licences should no longer be determined as a fixed proportion of the programme but should be left to the discretion of each local authority. Most local authorities, subject to their being satisfied of the merits of each application, should now be able to issue building licences quite freely.

" In a few areas it might be necessary occasionally for the local authority to defer the issue of some licences to ensure that there is no unreasonable diversion of labour and materials from its own housing programme. But the Secretary of State believes that this situation will seldom occur." Certain controls on the size and selling price of private houses are to remain. The circular specifies that local authorities should: " Continue to insert in each building licence the controlled selling price and rent; continue to ensure that the plans and specifications provide for reasonable economy in the use of those building materials required in the programme of houses to let; refuse to issue a licence for a house exceeding 1,500 square feet area unless in most exceptional circumstances that make the additional accommodation essential."

ABS

Christmas Cards

Osbert Lancaster, Henry Elder, and P. S. P. Morter have designed Christmas cards for the Architect's Benevolent Society, for Christmas, 1952. A fourth card has on it a photograph taken by Bryan Westwood. The cards will be 5½ in. by 4¼ in. and sold with envelopes.

The drawing by Osbert Lancaster shows a colossal and somewhat improbable Baroque triumphal arch; Mr. Elder has taken the RIBA badge apart and on his card the lions can be seen playing with the other component elements of the badge. Mr. Morter's drawing shows seventeenth century warships in full sail and is a vigorous composition of tall carved ships, bunting, sails, clouds and waves. Bryan Westwood's photograph is of an alpine snowscape.

The cards will cost 6d. each (including envelopes) in any quantity. Orders should be sent, *as early as possible* and accompanied by a cheque or postal order, to the Secretary, the Architects' Benevolent Society, 66, Portland Place, W.1. Alternatively cards may be bought for cash at the offices of the Society. There is no charge for postage.

The Society will have cards printed with the name and address of the purchaser, provided orders are received not later than December 7. (Names and addresses typewritten or in block capitals please.) The cost of printing a name and address is £1 10s. for the first hundred and £1 for each additional hundred or part of a hundred. Printing of names and addresses cannot be undertaken for less than fifty cards of one type.

Last year the sale of Christmas cards, mainly at the Building Exhibition, added a substantial sum of money to the funds of the ABS. All architects are asked to purchase some, if not all, of their cards from the ABS and thus to help their own charity.

YORK

Restoration of Minster

Work commenced recently on the restoration of the two pinnacled west towers of York Minster. It is estimated that it will take eight craftsmen eight years to complete the work. A mechanical hoist has been installed to raise stone 100 ft. from the ground to the working level. Apart from the repairs to these towers, the restoration of the west front is now complete, but other parts of the Minster are also in need of repair—in particular, the roof over the north aisle and the stonework of the chapter house. It is stated that, although £160,000 has been collected, a further £90,000 is required " if the work is to be completed thoroughly."

EDUCATION

Specialized Courses in the Manchester Area

Eight courses in specialized branches of building and civil engineering will be provided for evening students in the Manchester area during the 1952/53 session. These courses are being organized by the Manchester and District Advisory Council for Further Education in accordance with its policy of supplementing the normal provision of courses at technical colleges in the area by providing " courses of lectures dealing with specialized parts of [students] daily work."

The subjects for the coming session are: Builders' Plant and Formwork; Programming and Progressing of Building Work; Design of Modern Timber Trusses; Refresher Course for Building Foremen; Soil Mechanics in Road Construction; Law and the Builder; An Introduction to Statistics and Probability with Civil Engineering Applications; Prestressed Concrete.

A booklet giving full particulars of the courses, together with details of the normal courses at technical colleges in the area, is available from the honorary secretary of the council, at the Education Offices, Deansgate, Manchester, 3.

DIARY

Architecture in the New Warsaw. Max Lock. BBC Third Programme. 7.45 p.m. OCTOBER 16

Post-war Reclamation of Land in Holland; its Effect on Contemporary Landscape. Brian Hackett. At 28, King Street, W.C.2. (Sponsor: Students' Planning Group.) 6.30 p.m. OCTOBER 17

The Problem of Old Property. Martin Bond. At 13, Suffolk Street, S.W.1. (Sponsor: HC.) 6 p.m. OCTOBER 21

Site Planning and Landscape Design for Residential Development. Derek A. W. Lovejoy. At 28, King Street, W.C.2. (Sponsor: Students' Planning Group.) 6.30 p.m. OCTOBER 23

The Development Plans: Conference. At the Council Chamber, County Hall, S.E.1. Sessions at 10.30 a.m. and 2.15 p.m. on both days. For particulars apply to TCPA. OCTOBER 23, 24

Private Enterprise House Designs: Display. At the Housing Centre, 13, Suffolk Street, S.W.1. Monday to Friday, 9.30 a.m. to 5.30 p.m. Saturday, until 12 noon. UNTIL OCTOBER 25

Revised Designs for Coventry Cathedral. On view at 26, Store Street, W.C.1. (Sponsor: BC.) Daily: 9.30 a.m. to 5 p.m. Saturdays: 9.30 a.m. to 1 p.m. UNTIL OCTOBER 25

Irish Architecture. Exhibition. 66, Portland Place, W.1. (Sponsor: RIBA.) Daily: 10 a.m. to 7 p.m. Saturdays: 10 a.m. to 5 p.m. UNTIL OCTOBER 31

Ceramics in the Home. Exhibition at Charing Cross Underground Station. (Sponsor: *Observer*.) Monday to Saturday, 11 a.m. to 7.30 p.m. UNTIL NOVEMBER 2

CORONATION DECORATIONS

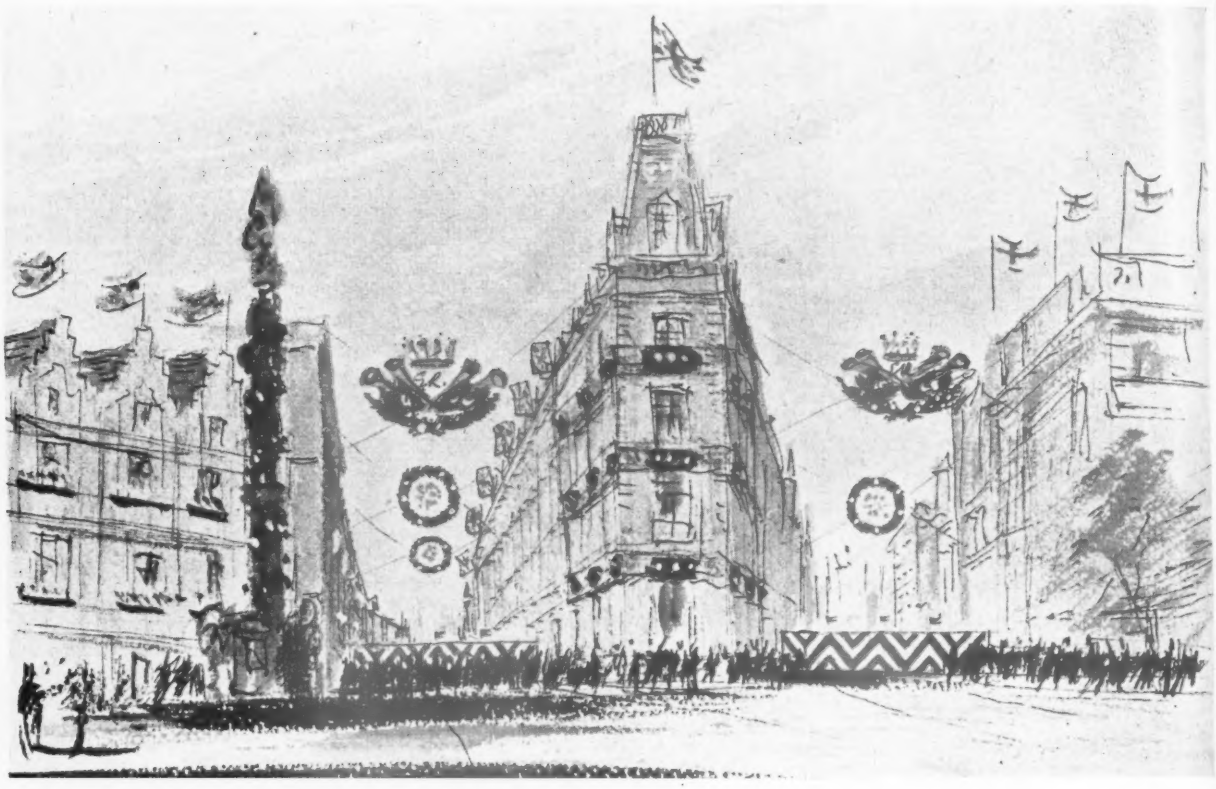
SIR HUGH CASSON'S PROPOSALS

Last week Sir Hugh Casson, the consulting architect to the City of Westminster for Coronation street decorations, talked about his proposals at a Press conference. Some of the illustrations he showed at the time are seen on this and the following six pages. The associated designers engaged in this work are Misha Black, who is responsible for St. James's Street and St. James's Square; James Gardner, who has prepared a scheme for the Strand, and Robert Goodden who has designed the arch for Parliament Street which is illustrated below. (The feature above will appear on either side of Hungerford Bridge.)

PARLIAMENT SQUARE

Theme : Dominions and Commonwealth

The decoration of this square is mainly the responsibility of the MOW. Sir Hugh Casson suggests that apart from "closing the square" (see page 460, top) the City of Westminster should confine itself to treatment of lamp standards (page 465) and the construction of a triumphal arch or similar feature at the junction of Parliament Street and Parliament Square, placed to enhance the drama of the Abbey approach. The tentative proposal below was designed by Robert Goodden. Construction: tubular steel masts, approximately 12 in. diameter at base, 60 ft. high. "Openwork" infilling. Each fan vault prefabricated as a unit and bolted in situ *to the central ring. (Diagonal tension wires may be required at springing level, but the weight of hanging garlands will partly counteract the thrust of the vault. A web of wires forms the infilling of the vault, carrying gilded palm fronds of sheet metal. Vault span:* 35 *ft. each, with* 17½*-ft. wide central island. The palm fronds and suspended wreaths are liberally spangled with naked lamps to pick out their outline at night. Floodlights will be placed within the central raised enclosure.*

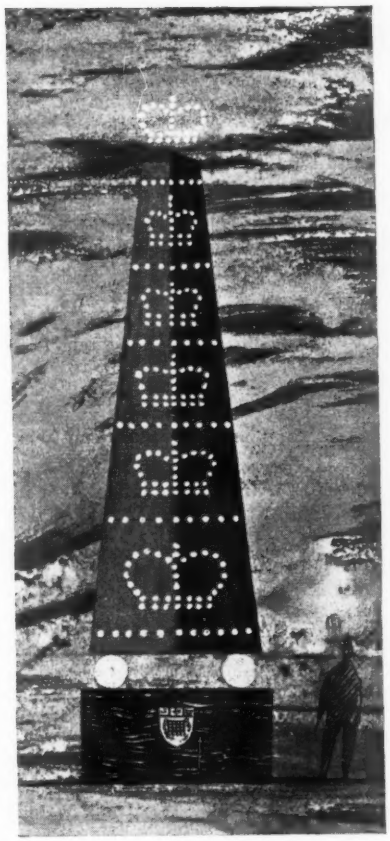


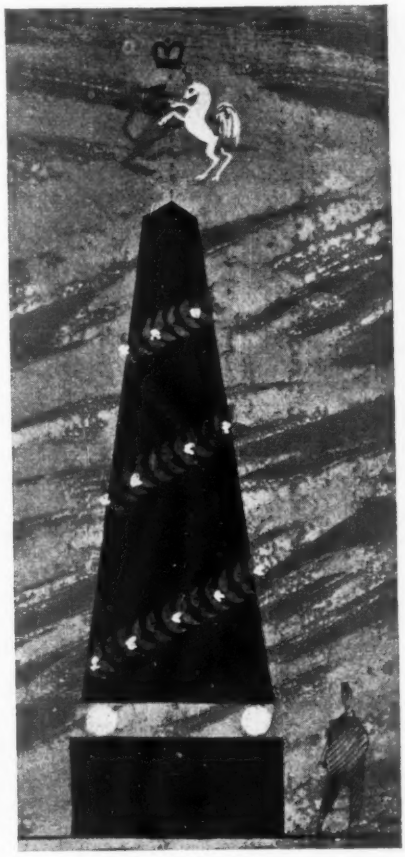
CLOSURE OF PARLIAMENT SQUARE
Victoria Street and Tothill Street

It is suggested that Parliament Square shall be closed by a suspended feature across the end of Victoria Street and Tothill Street, as in the above sketch. If enough money is available these features could be continued down both streets.

WHITEHALL
Theme : HM Government

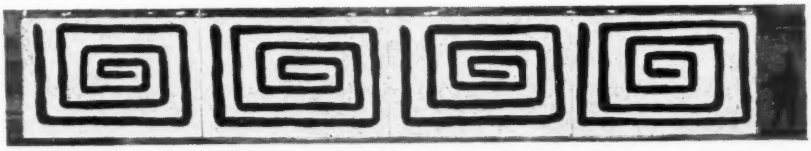
There is already a "spine of interest" along Whitehall (Cenotaph, traffic islands, statues, etc.); this centre line will be emphasised by three groups, each of eight masts carrying decorative features. (Sketch below.) Each group will be closely placed "to increase its total visual effect and to simplify erection and lighting." The buildings of Whitehall are being decorated in the traditional manner with flags and flower-boxes.

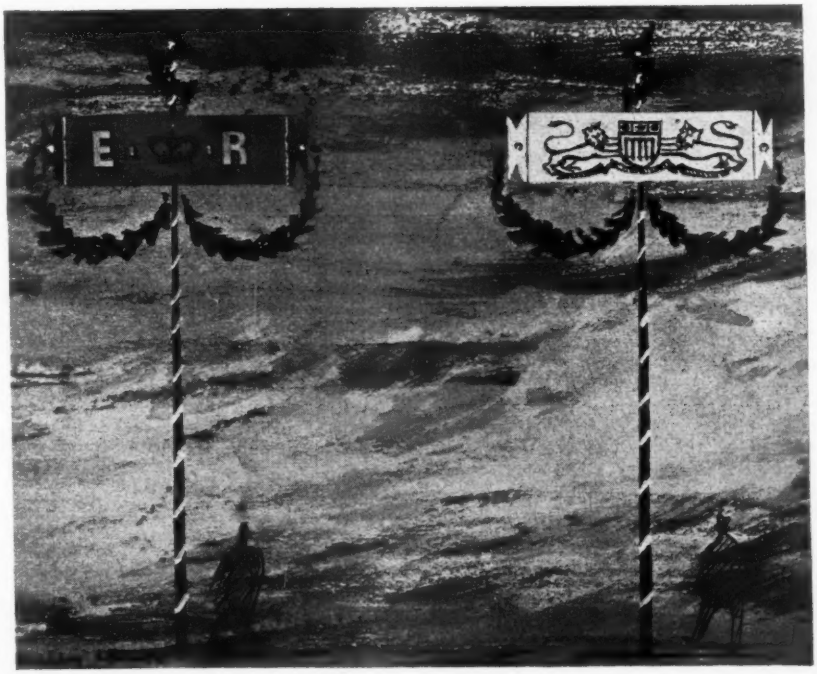


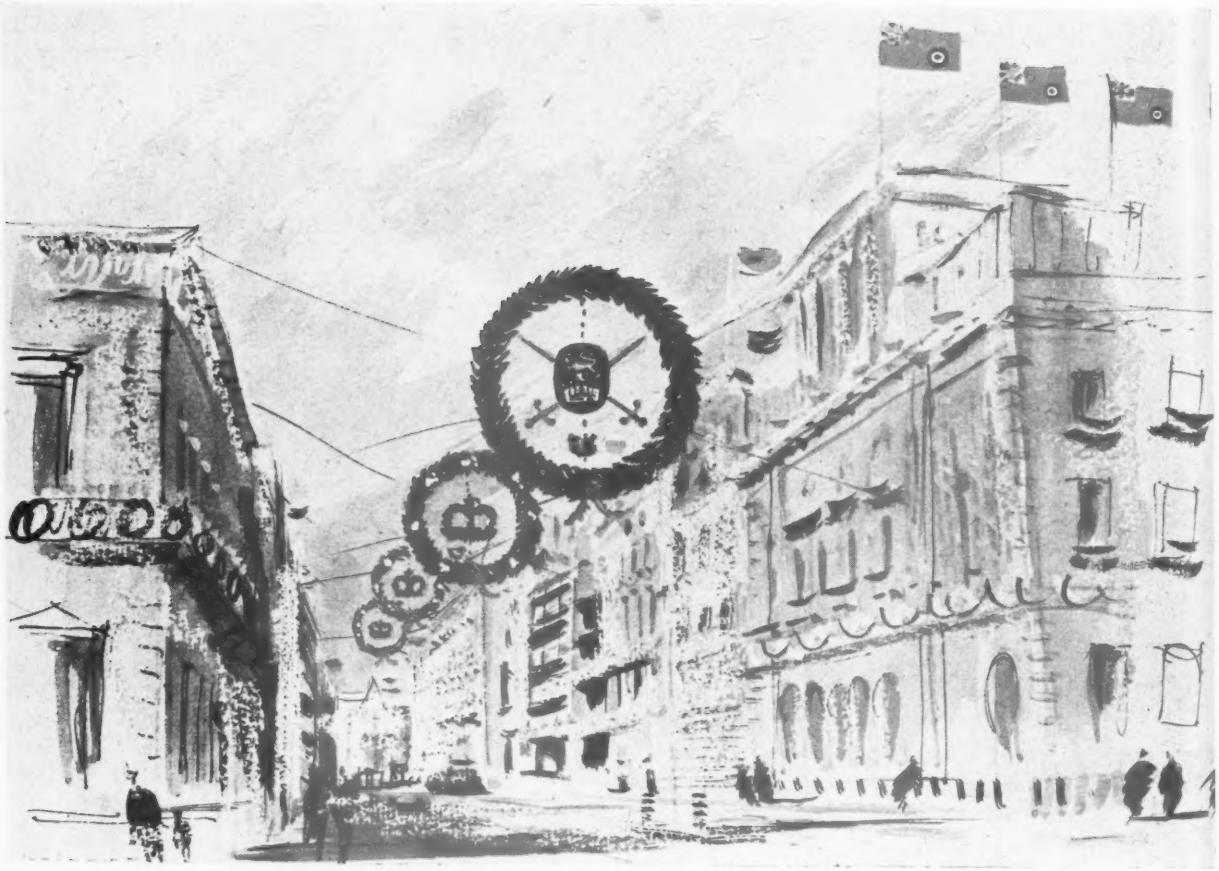


BOUNDARY FEATURES

As the area covered by the Westminster City Council is very large some parts of it may seem remote from the centre of activity. For this reason it is proposed that "boundary stones" should be set up at principal demarcation points, where road conditions permit. [i.e., traffic island at north end of Lambeth Bridge, Temple Place (Victoria Embankment), Kingsway, Cambridge Circus, Marble Arch, Queen's Gate, Chelsea Bridge]. Suggested boundary stones are seen top, right, and bottom, right. Between these illustrations is a suggestion for police gateways, to be painted in bright colours. Sir Hugh Casson has pointed out that in the usual way the temporary hoardings, barricades and other protective devices erected in the streets are a uniform grey, and that it would cost no more to paint them in gay colours.



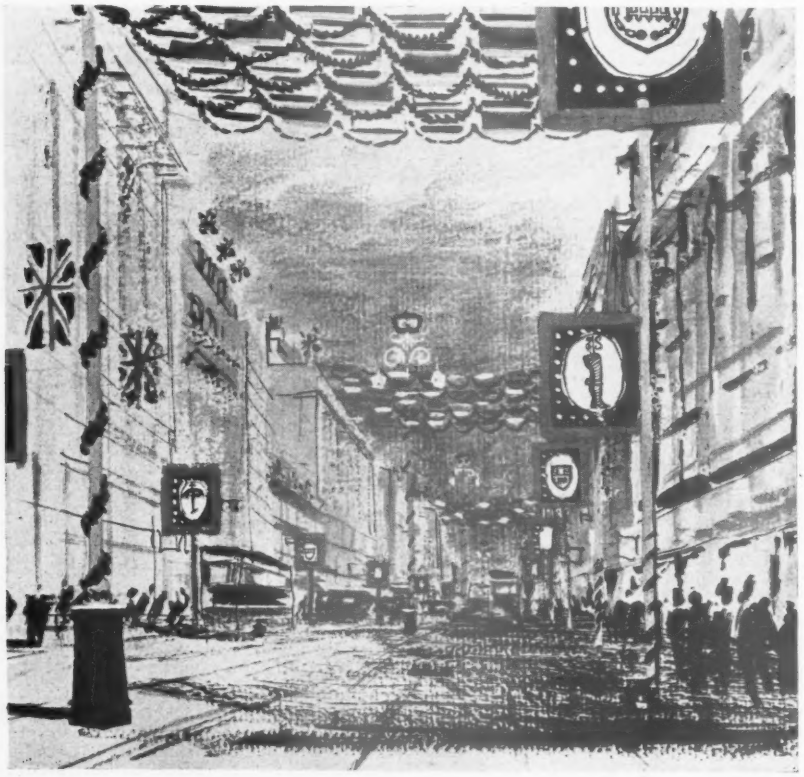




WATERLOO PLACE

Theme : The Armed Services

Buildings in this square, whose architecture is enriched by military trophies, are almost symmetrically placed and the atmosphere of the square is formal and dignified. It thus lends itself to the theme, "The Armed Services." Three symbolic devices, representing the three Services, will be hung, one across each of the square's three entrances. (Sketch above.) It is suggested that property owners be asked to fly, at cornice level, the appropriate flags of the services.



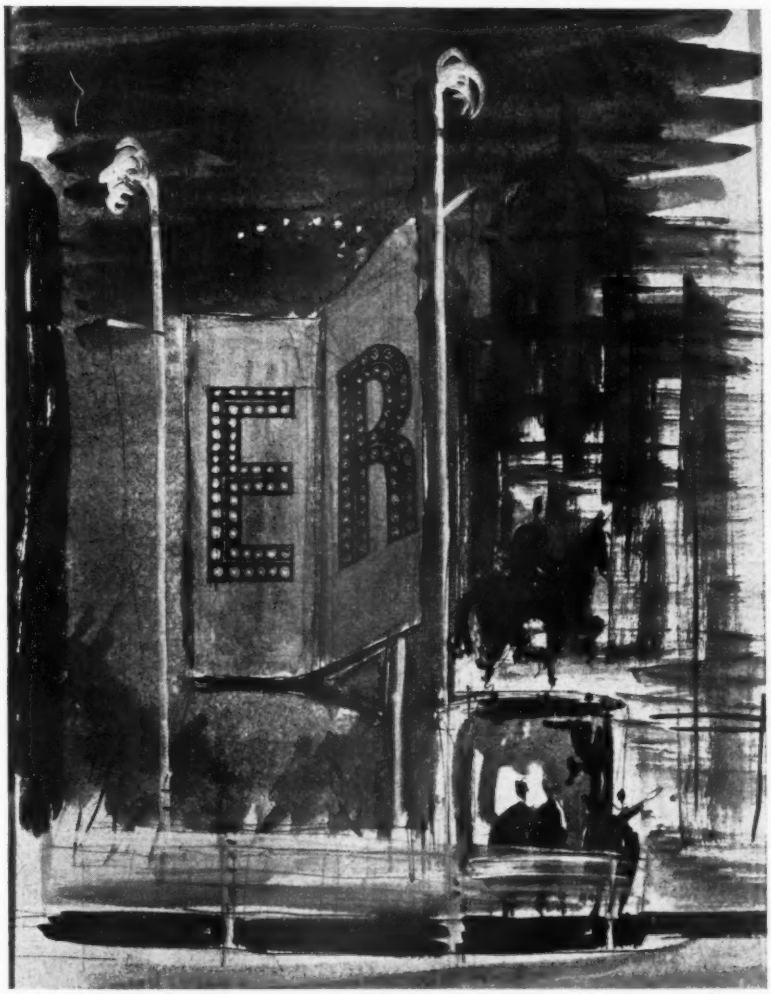
OXFORD STREET

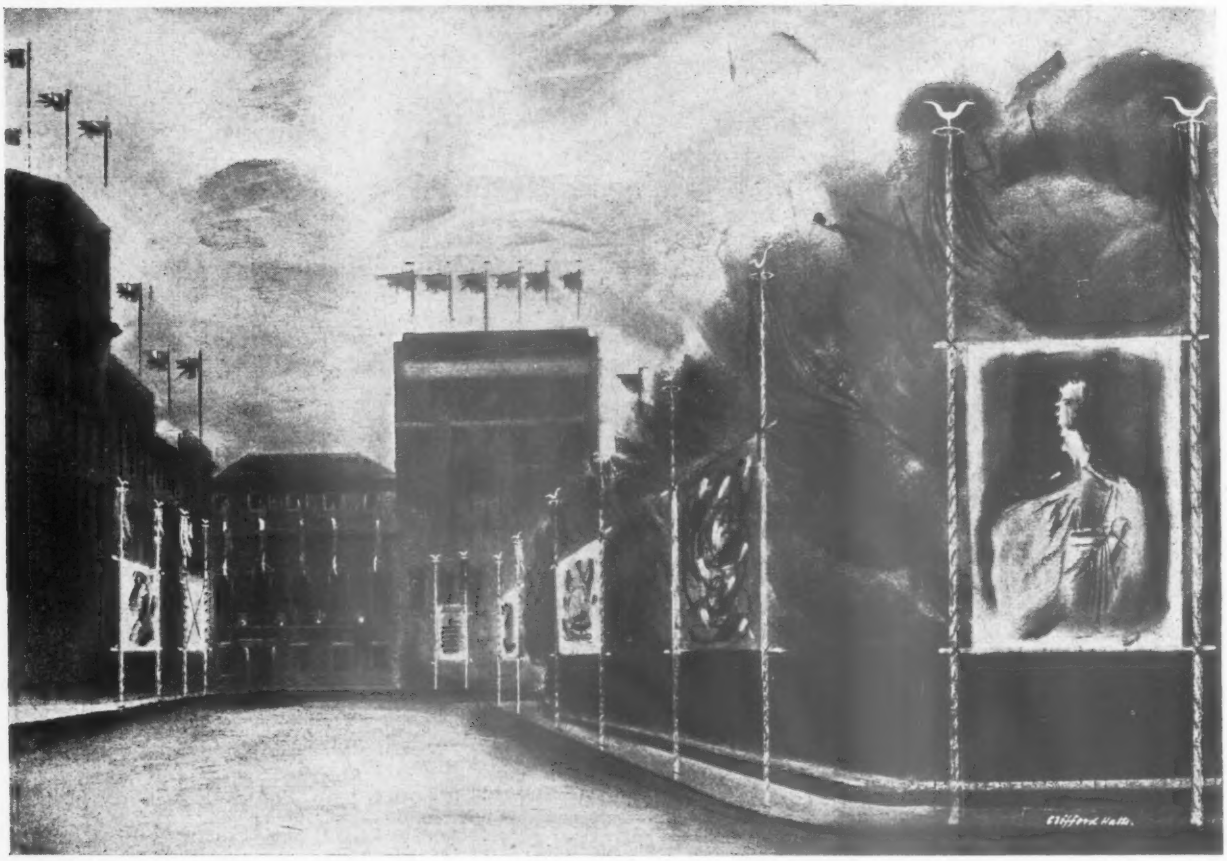
Theme : Industry and Commerce

As this "architecturally undistinguished"—but famous—shopping street is lined with shop signs and notices, a simple, bold form of decoration is proposed, i.e.: to line the street with masts carrying enlarged versions of 18th-century tradesmen's signs (sketch on left), alternating, perhaps, with the Arms of St. Marylebone and the City of Westminster. Property-owners may be asked, through the Street Association, to pursue this theme, and perhaps to make use of ribbon streamers, instead of flags, in places.

TREATMENT OF STATUARY

Sir Hugh Casson suggests that when a statue is encased a painting of the statue should be done on the hoarding surrounding it. He has also put forward a suggested treatment of Eros in Piccadilly which disappears at festive times beneath its ARP box. The sketch on the right shows his proposal for the treatment of the island (" a pivotal point in the procession ") carrying the statue of Charles I. It is too often a " no-man's land," cluttered with the untidy debris of newsreel and broadcasting equipment. But the sketch shows a decorative vertical treatment of the island, " visually strong enough to act as a focus, and incorporating within it the staging for the use of the camera men and also protection for the statue itself. It is considered possible that the cost of this might be borne, in part or in whole, by those organizations making use of it." Alternative decorations of this site are shown below. *(On page 453 is a photograph of the statue's treatment for the Coronation in 1937).*





ST. JAMES'S STREET
A Canopy of Crowns

The designer of the Canopy of Crowns (below) is Misha Black. The crown motives are suspended in groups across the street, the lacing also joining the groups down the length of the street. The number of motives to be used will be determined after more detailed consideration of cost, but is likely to be approximately the quantity shown in the sketch. Ideally, the crown motives should form a canopy over the whole street and preferably each rather smaller than indicated in the drawing. Where the lacing wires cross, the junction will be marked by small papier mache spheres in variegated colours. The Catherine Wheel surround is made of cellulosed steel rod. It is hoped that flags hung at right angles to the buildings, as indicated, will all be carrying heraldic motives. This is important if the regal effect of the street is to be preserved as Union Jacks would be discordant with the scheme for the centre of the street.

ST. JAMES'S SQUARE
Theme : The Arts

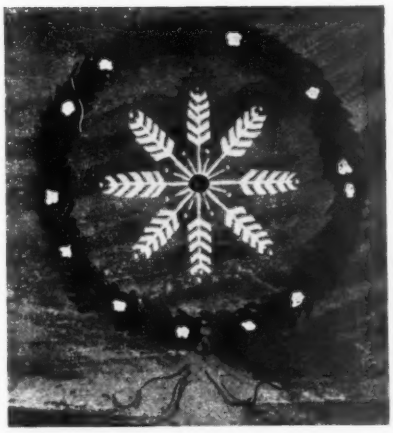
Misha Black also designed the feature above. The main motive : two vertical posts, each 35 ft. high, with cross posts laced to them. The central panel thus formed carries a canvas panel secured to the posts at top and bottom and is fastened by rings to vertical straining wires. It is hoped that British artists will paint on these panels. Main poles, painted with a candy stripe, are topped with formalised bull's horns, one of the last remaining symbols of British Folk Lore. Below the horns, ribbons fly from a wooden ring which is able to move freely to avoid entanglement of the ribbons. The panels will be placed around the perimeter of the square's garden, so that the trees form a natural background to them.

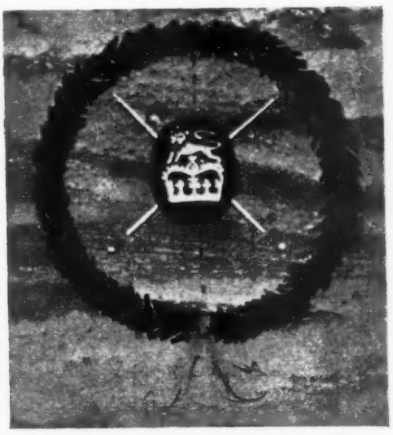
GARLANDS AND STREET LAMPS

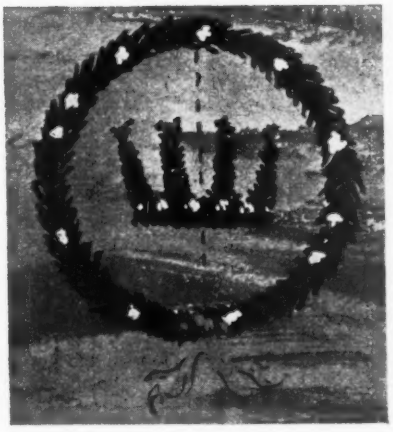
On the right are four designs for garlands to be hung in the streets. Below is a selection of the decorative motifs to be used on lamp-posts.

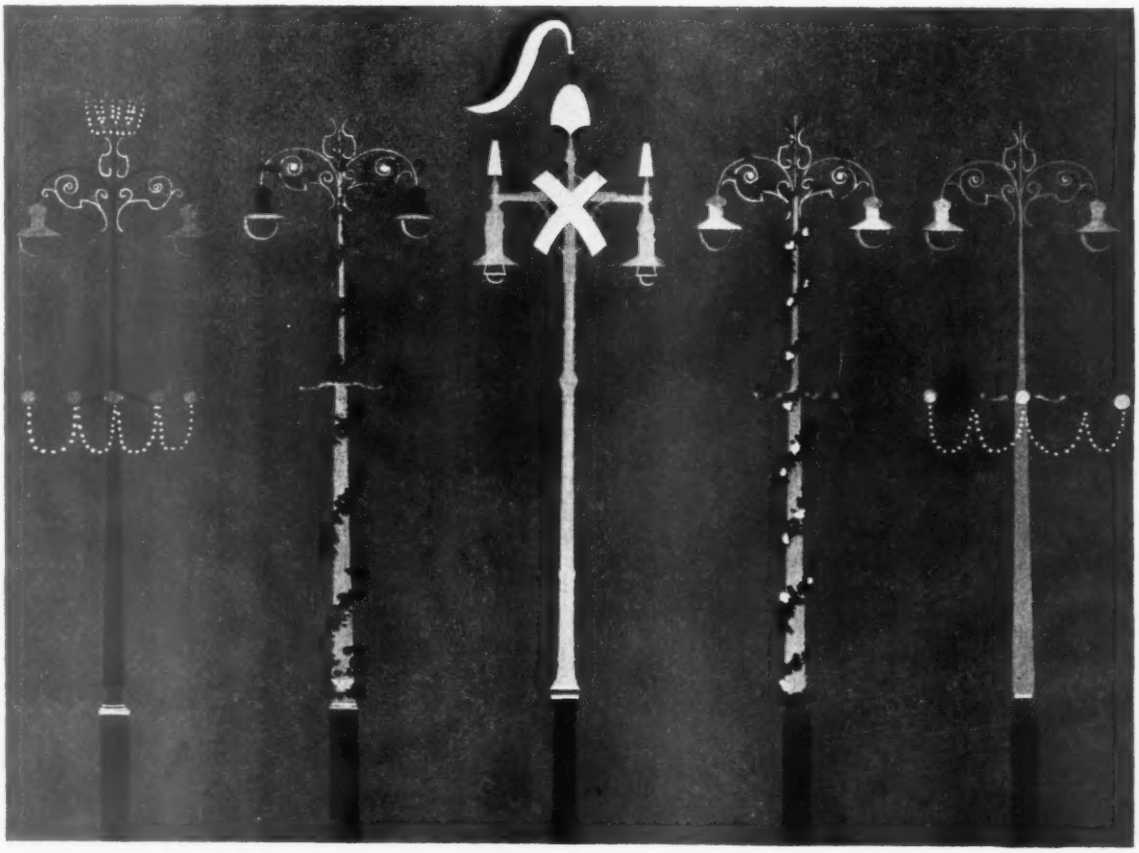
GENERAL DESIGN PRINCIPLES

In his report containing his proposals, some of which have been seen on these pages, Sir Hugh Casson writes :—" For the City of Westminster and its Councillors a Coronation is not a new problem. For centuries the City has been proud on such occasions to bear responsibilities which it well knows to be upon a national as well as a civic scale. But although these responsibilities, it may be thought, are not much different in 1953 from those which have been successfully shouldered before, it is hoped nevertheless that a brief re-assessment of the problems they involve will not be out of place in this report. The Coronation is first of all a religious ceremony and, secondly, an occasion for the national rejoicing which that ceremony evokes. Clearly these two forms of loyal tribute to the Throne—national and personal—demand settings of related but different character. The first should be splendid in scale, formal and dignified in appearance, and basically traditional in spirit. The second can be more light-hearted in character, less dependent upon tradition for its inspiration, and more personal in expression—a chance for every citizen to express in his own individual way his own feeling for the occasion. For this reason any strict uniformity centrally imposed throughout the City would be out of the question, even if it were possible to arrange. Nobody, after all, would want every front parlour to look exactly the same as its neighbour upon Christmas Day."









D

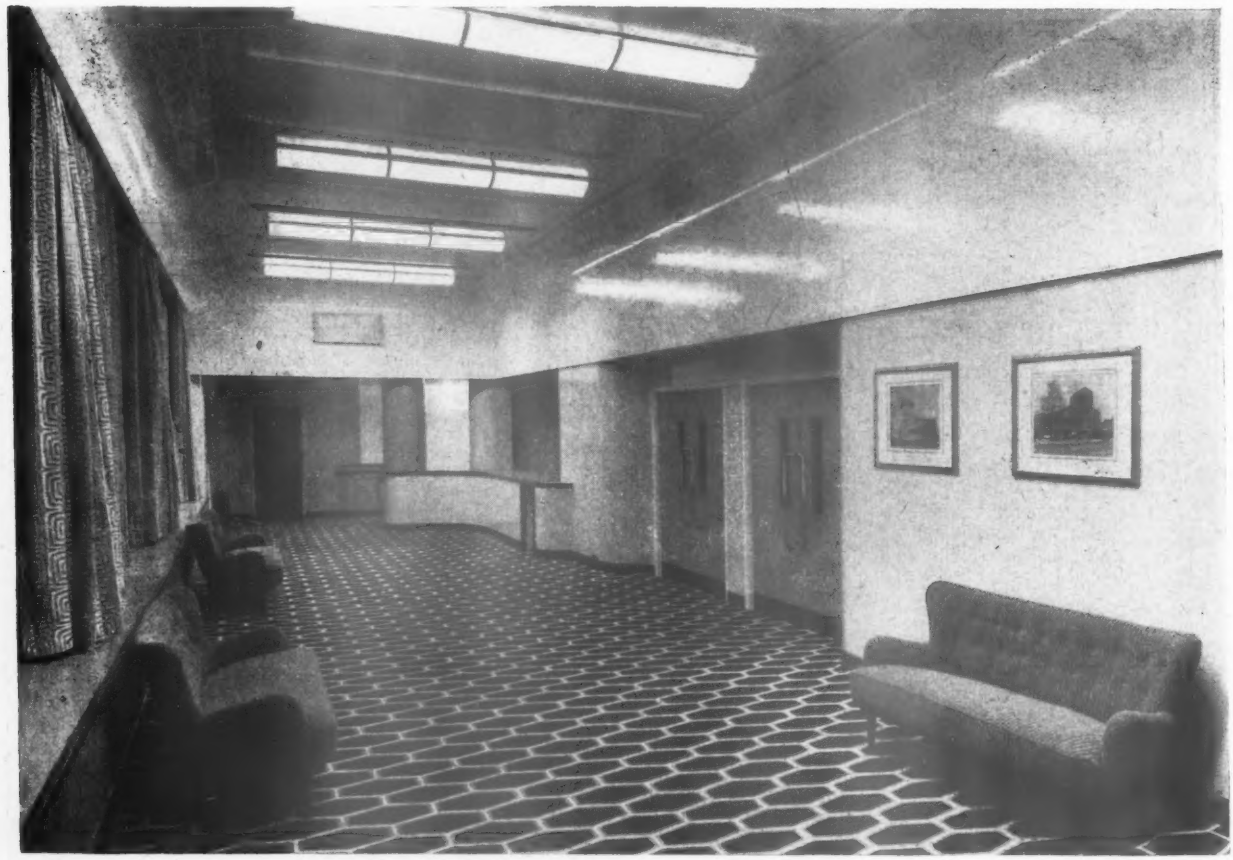
CINEMA

in ST. HELIER, JERSEY, CHANNEL ISLANDS

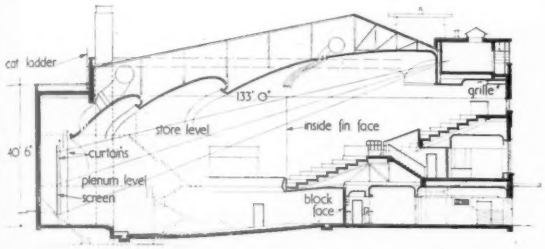
designed by T. P. BENNETT and SON

The Odeon, Jersey, is the first new cinema designed and built in the British Isles since 1939. As only a moderate seating capacity was required by the clients, the architect decided to put a high proportion of seats in the circle. Out of a total of 1,359 seats, 640 are in the stalls and 719 in the circle. This ensures an unobstructed view of the screen from all seats and also a clear view of the auditorium for the majority of the cinemagoers.

The circle foyer.



Right, the auditorium, looking towards the stage. Below, right, the bar, which leads off the entrance foyer. The main surfaces are coloured pale gold and the carpet is red.



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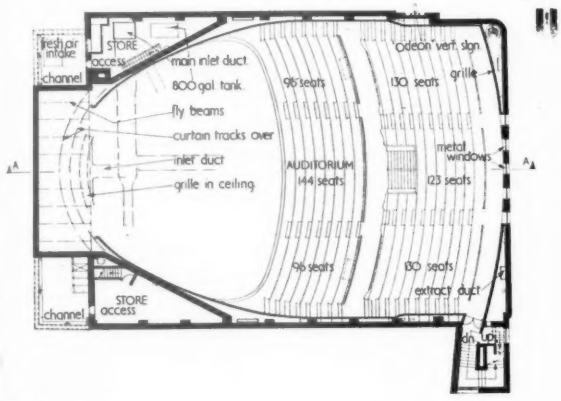
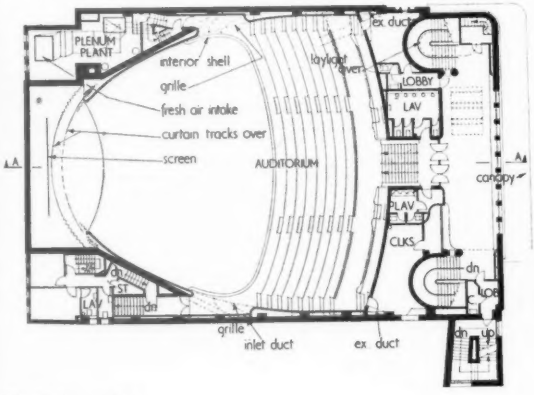
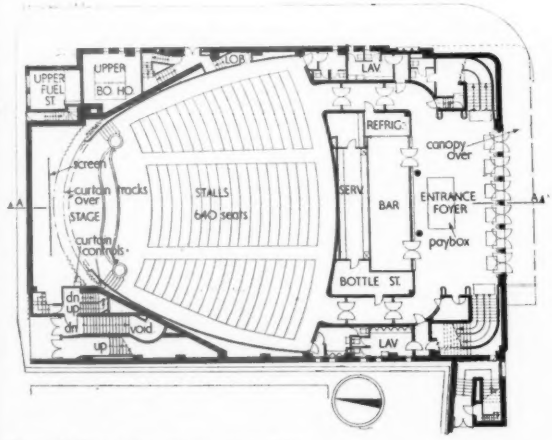


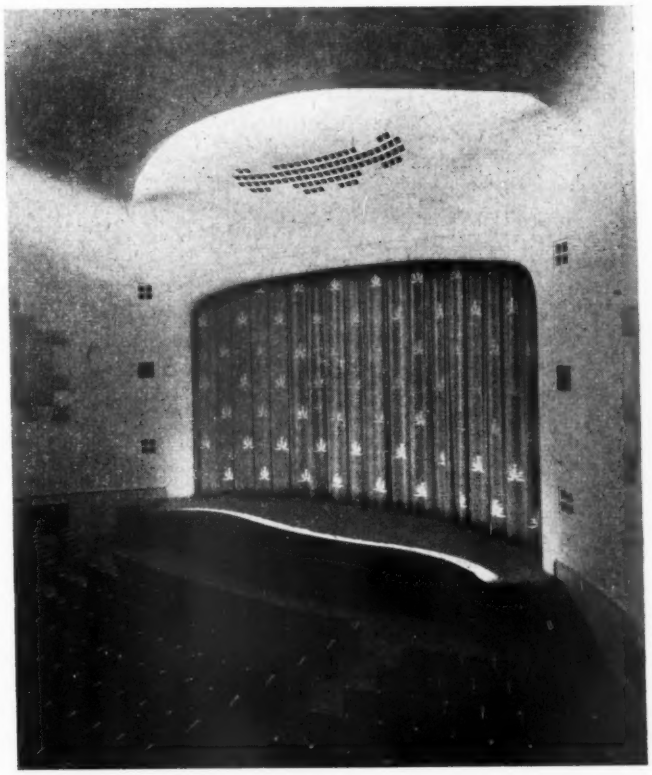
Circle plan



Circle foyer plan



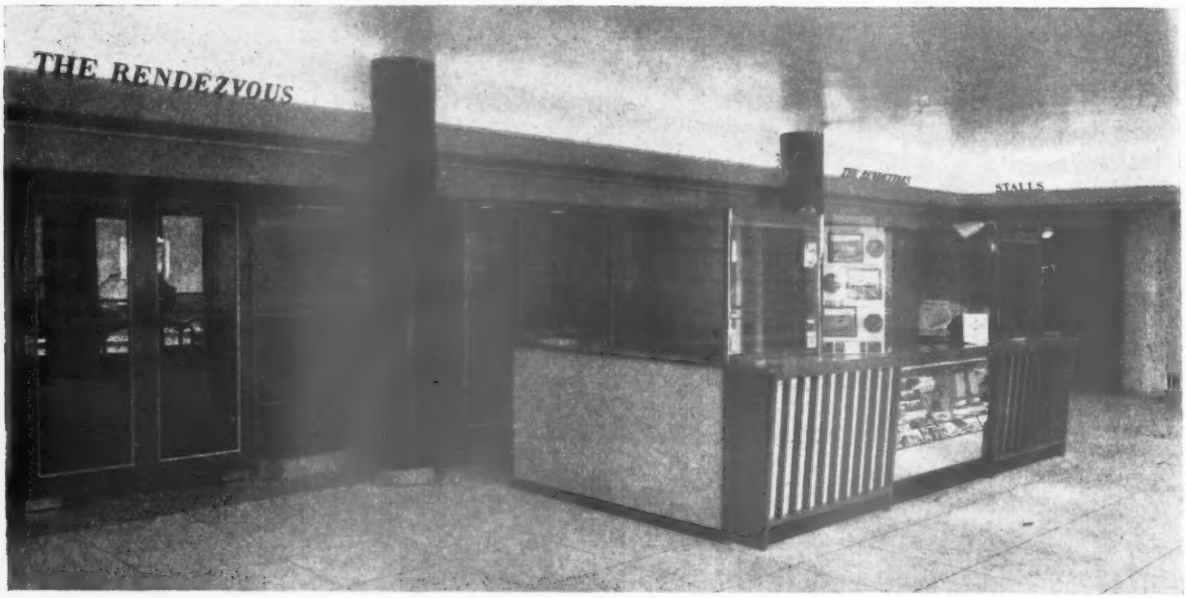
Ground floor plan [Scale : $\frac{1}{16}$" = 1' 0"]



SITE.—The site was relatively restricted and the seating has been made to extend from the inside of the external wall on the south to the minimum distance from the opposite wall, compatible with good site lines and the screen.

PLAN.—Although intended at present to be used for showing films only, stage space and dressing-room accommodation is provided in case variety items are included in the programme later. The angle of throw from the projection room to the screen is 17½ deg. and the distance is 118 ft.

CONSTRUCTION.—Restrictions on the use of steel, the cost of shipping material to the island and the desire to use local labour and materials wherever

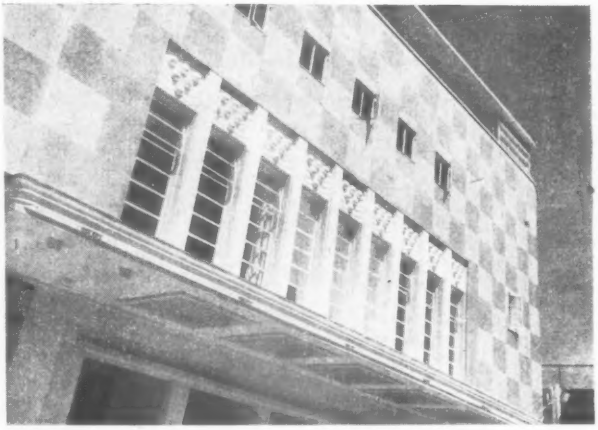


possible, were factors which influenced the construction. There is no large-scale manufacture of bricks in Jersey and for this reason load-bearing concrete blocks, made on the island, are used for the external walls. The concrete-block shell was erected before the steel, which is used to support the circle and roof.

FINISHES.—The chequer-board pattern on the south elevation of the cinema was formed by rubbing down alternate squares with carborundum stone. Flat oil paint on plaster and acoustic tiles are used on auditorium walls. Rear walls and soffits are coloured yellow with two shades of tan elsewhere. Carpets and seats are red.

SERVICES.—Washed and warmed air from a central plant gives an air change every 12 minutes. The general contractors were Kirk & Kirk, Ltd. For sub-contractors, see page 480.

Above, the entrance foyer, showing pay desk and doors leading to the bar. Below, part of the south facade.

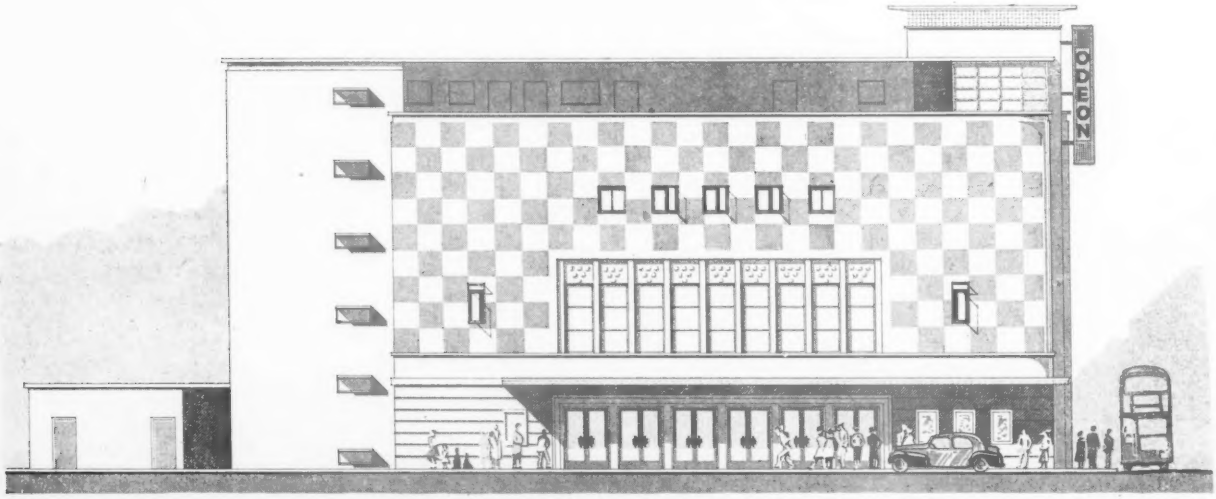


Below, the south elevation, which faces a narrow street.

CINEMA

in ST. HELIER, JERSEY, C.I.

designed by T. P. BENNETT and SON



Below is an introduction to, and background information on, the development work of MOE's Architects and Building Branch, with particular reference to their design for a part-prefabricated secondary modern school in Wokingham which forms the subject of the MOE's Building Bulletin No. 8, published this week. This is the first of a series of articles on this school by John Stillman and John Eastwick-Field, the authors of the very popular series of progress reports on the design and construction of the Royal Festival Hall published in the JOURNAL *during* 1950 *and* 1951. *The authors acknowledge with thanks the help given by members of the MOE's Development Group.*

John Stillman and John Eastwick-Field

MOE DEVELOPMENT WORK: WOKINGHAM: 1

Foreword

THE Ministry of Education has just published a Bulletin* about its first development project at Wokingham. This is a secondary school built in a prefabricated system of construction, and "the aim of this particular project is to develop a means whereby, especially in areas where site labour is scarce, secondary schools can be built to the standards required in the Building Regulations, at a greater speed than is at present normal, and within the current limits of nett cost." The Ministry make a special point that it is not its intention to alter the structure of the building industry or any of its trades or crafts. Nevertheless, if the Ministry's hope is realized, namely, that by 1956 half the schools built will be of non-traditional construction, the industry is bound eventually to be affected. The Ministry's present aim is a limited one, but the work which it is undertaking is but one more move in the inevitable mechanization of the building industry, and its solution to one particular problem reflects a general change in attitude amongst architects to present building methods.

There have been many systems of prefabrication, but most of these have so far had only a limited success, and that only for single storey buildings. This is probably because of the technical difficulties, the inferior appearance of fabricated facing materials, the high degree of maintenance required for painted panels, and the greater initial cost.

Drawing on an accumulation of experience the Ministry has developed a system at Wokingham which appears to overcome these difficulties, but it remains to be seen whether this system achieves only its avowed aim of filling the gap in the school building programme, or whether it is adopted for more general application.

The construction is such that, although prefabricated, it purposely does not make an extensive use of cranes and mechanical plant, and this leads one to the view that there may be three means of mechanizing the industry. The first is concerned with factory-made components easily put together by hand on the site, and exemplified at Wokingham; the second is concerned with the substitution of machinery for manual labour in traditional, or more normal, construction; and the third is concerned with the fabrication of walls complete with windows and finishes, erected by mechanical means. Only the second category would seem to allow for the development of certain on-site structural methods, as, for instance, folded slab roofs in poured concrete, and it is likely that architects will always wish to retain their freedom to experiment in structure, and in the use of materials, which suggests that this approach will continue to find favour for this, if for no other reason. The prefabrication of complete wall units will possibly be the logical result of mechanization, but until this becomes a practicability in this country, the Ministry's present development at Wokingham makes a serious and convincing attempt to overcome the inefficiencies of old-fashioned building methods.

* Building Bulletin No. 8. HMSO. Price 3s. 6d.

Background

THE end of the war and the Education Act of 1944 brought a demand for nearly three times as much school building as there had been before the war. It was officially estimated in 1947 that an expenditure of £70,000,000 per year over a period of fifteen years would be required in order to provide the accommodation needed for the higher standards demanded by the Act and for the anticipated increase in the number of school children. It was recognized that the school building programme would be so large that it would be unlikely to be achieved entirely by normal pre-war building methods, especially since the building industry would be handicapped by the effects of the war.

As early as March, 1943, the president of the then Board of Education appointed a committee under the chairmanship of Sir Robert Wood to consider the design of schools, and to investigate the possibility of "applying some measure of standardized construction." The committee's report* described two methods of doing this, one of which presupposed a framework based on a grid of 8 ft. 3 in. This figure was recommended because it was a sub-multiple of the most generally accepted length for a classroom (which was, at that time, about 24 ft.), and it was also a brick dimension.

The Committee also recommended that the Board of Education and the Ministry of Works should undertake research in conjunction with the industry, and issue "for the information of Local Education Authorities and their architects, as well as of industry, the more technical detail required for the production of suitable structural elements, accompanied by illustrative diagrams, showing the way in which a variety of plan schemes can be evolved, covering a range of schools of different types and sizes."

* Structural Construction for Schools. Post War Building Study No. 2. HMSO. 1944.

The re-named *Ministry* of Education first authorized authorities to prepare their schemes for permanent school buildings in November, 1946, but, in spite of the urgent need, it was obviously not possible to prepare for and build schools to the value of the advisable figure of £70,000,000 by the end of 1947. In fact, the estimated cost of schemes approved for the year amounted to just over £25,000,000.

STANDARD GRID PROPOSED

At this time a Technical Working Party was appointed by the Minister of Education, under the chairmanship of Sir William Cleary, to extend the work of the earlier Committee. In addition to those factors which influenced the Wood Committee, the Working Party were faced with the fact of severe shortages of almost every building material and inadequate

building labour, particularly of bricklayers. They considered* that in order to overcome these difficulties it would be necessary for many schools to be prefabricated, and that this should be done by the mass production in factories of ranges of components which could be assembled with as little site labour as possible. They also suggested that if a gridded framework were used, a unit dimension of 3 ft. 4 in. would be preferable to 8 ft. 3 in., because, amongst other things, it would permit more economic planning.

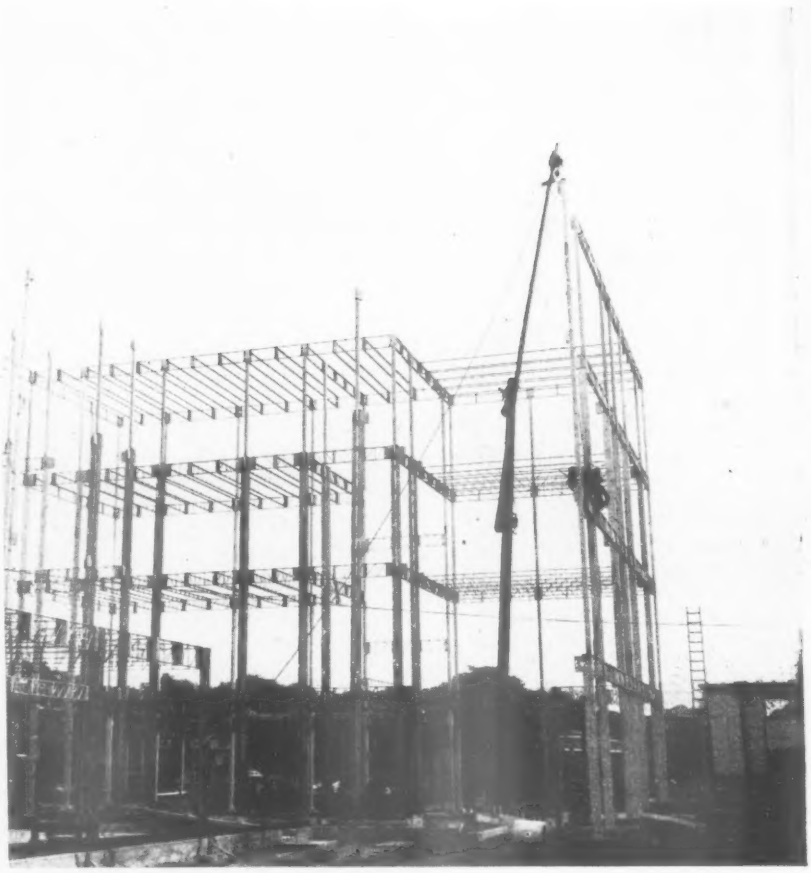
NO NATIONAL SCHOOL

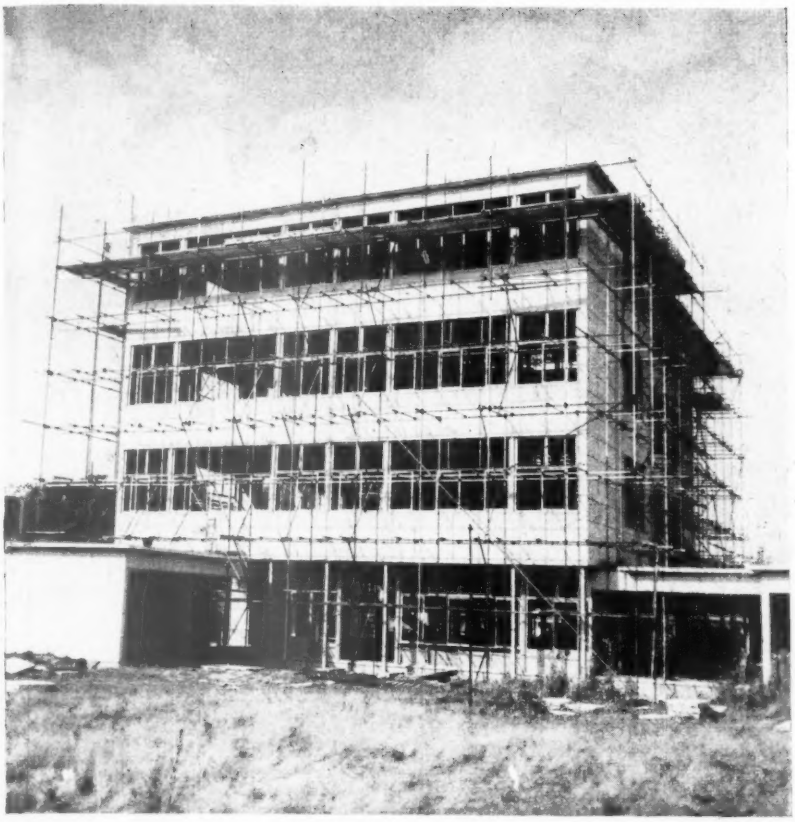
It was anticipated that at least the larger education authorities would benefit by having their own individual systems of standardization, developed within their own architectural departments, and not necessarily using the same materials nor the same set of controlling dimensions. At no time was it thought that there would be a "national" school, but the Wood Committee contemplated standardization covering a much wider field than that of any individual authority, and the Working Party were aware that circumstances might make this necessary. In fact, few authorities have found it practicable to develop standard systems of their own, possibly because they have neither been able to devote the time necessary for such development, nor have they found it expedient to depart from the established Local Government practice of obtaining competitive estimates for each individual scheme. Prefabricated systems involve the prior selection of the key manufacturers, with whom the architect must co-operate from the start in designing the system, and with whom sufficient orders must be placed in advance to enable them to produce the necessary components economically.

MINISTRY DEVELOPMENT GROUP

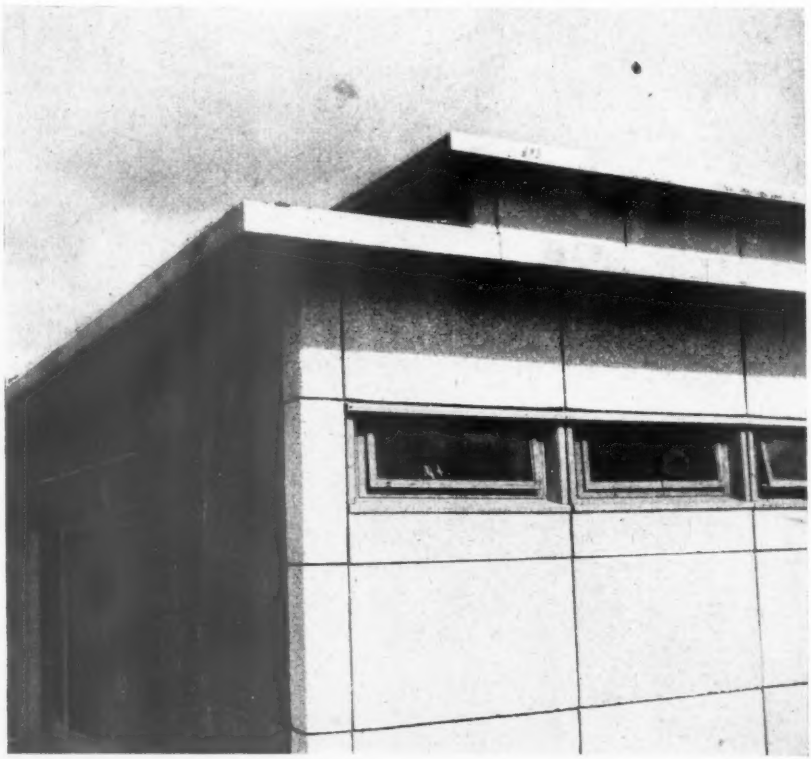
Since the standardized and prefabricated systems envisaged by the Wood Committee were not realized to the extent which had been hoped for, and at the same time the delays resulting from traditional methods were becoming serious, the Ministry of Education extended its architectural department and formed a Development Group to examine problems of school design, with particular reference to economy, both in cost and in the use of site labour, and to issue advisory bulletins addressed to architects and educationists. These bulletins were concerned initially with primary schools, of which there were examples built by local authorities showing suitable methods of prefabricated construction. By the time the Ministry turned its attention to secondary school design, the rising costs of building and the drastic effects of devaluation, involving economy in capital investment, forced

* Report of Technical Working Party on School Construction. HM Stationery Office. 1948.





Opposite page and above, three progress photographs of the erection of the four-storey block for the Wokingham Secondary School, designed for the Berkshire County Council by the architects of the MOE's Development Group. The first photograph, above left, was taken in May of this year and the last, above, in September. The school is scheduled to be finished in March, 1953. Below, a typical detail of the dark and light concrete wall panels used to clad this school, and of the treatment of corners and eaves.

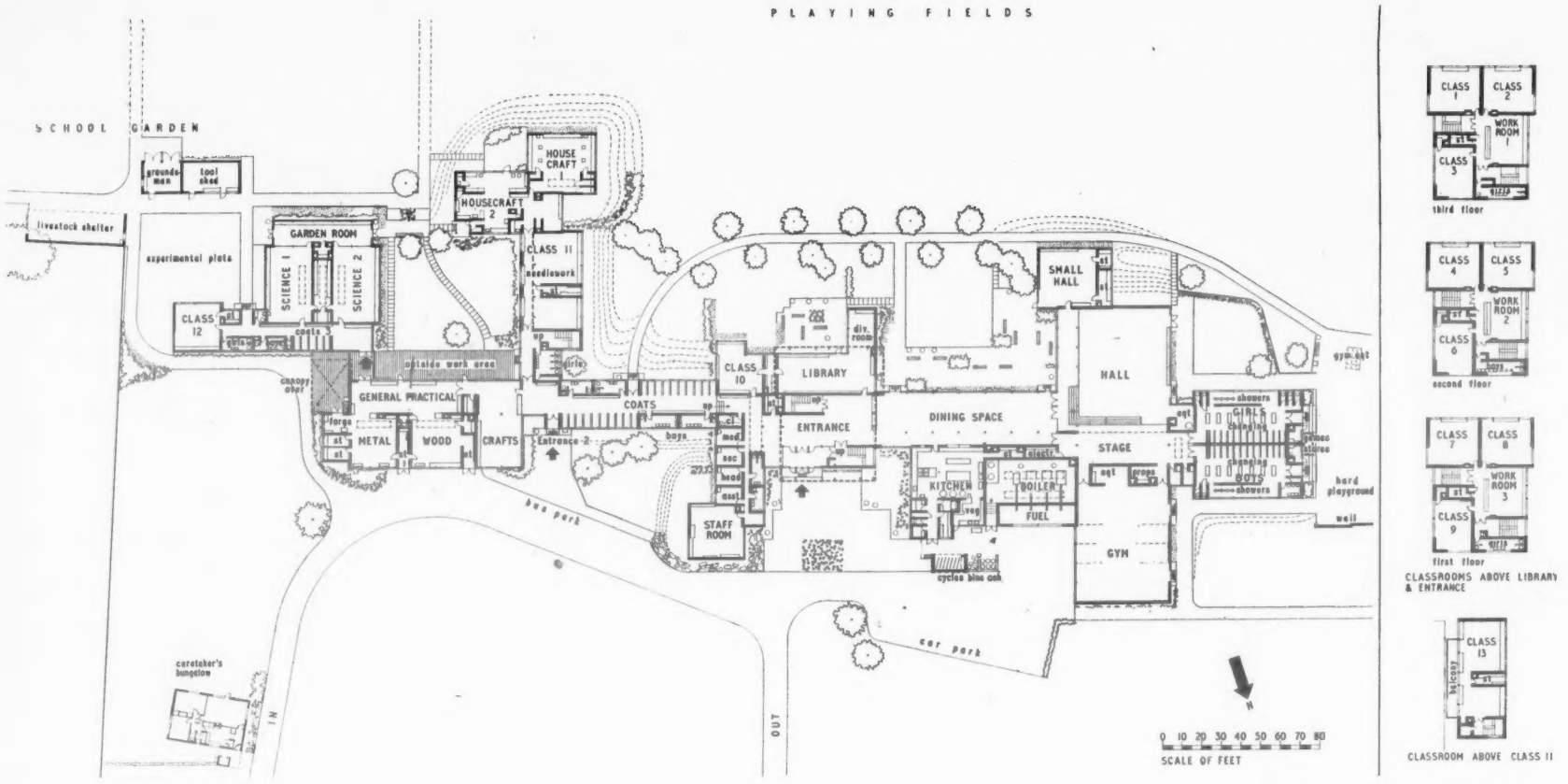


the Government to consider whether they would build fewer schools, or the same number of schools at a cheaper cost per place. They chose the latter course and, for secondary schools, the maximum cost per place was reduced from £270 to £240. As is well known, the Ministry at once set out to show how, with some modifications of the regulations, it would be possible to achieve this obviously difficult end, and its recommendations were contained in Bulletin No. 2. This bulletin was concerned largely with more economical planning, but it was also evident at the time that the introduction of some prefabricated construction would be necessary in order to increase the rate of secondary school building. As the number of examples of prefabricated systems were limited, and applied only to the construction of single storey primary schools, and since none of these were suitable for such multi-storey buildings as were likely to be needed in secondary schools, the Ministry considered it appropriate itself to develop one or more systems of construction for secondary schools and to build examples of these systems incorporating the recommendations in Bulletin 2. The first of these is now under construction at Wokingham* and is the subject of these articles.

REDUCING BUILDING TIME

The evidence before the Ministry showed that the majority of schools of mainly traditional construction had taken so long to build that the local authorities' programmes were being upset. On an average, the building of these schools was taking eleven months on the site for each form entry, and the result was that there was an accumulation of work on the ground beyond the capacities of the building industry. Some measure of relief was given by the Government's suspension of the issue of all building licences for three months early in 1952, and the postponement of a part of the 1951-52 educational building programme; but the problems were not solved. Apart from the overloading of the building industry, it is apparent that the system by which building programmes are authorized yearly by the Ministry, allow barely sufficient time for the present administrative procedure. Any one of the delays which are commonly encountered in local government machinery may leave the architect with an unreasonably short time to prepare his drawings and contract documents, with the result that the execution of the building work is slower than it would otherwise be. All these difficulties give point to the Ministry's decision to encourage the adoption of a much larger proportion of schools built almost

* This school is for the Berkshire County Council, whose co-operation was offered to the Ministry on the understanding that the Ministry's architects would have the same role as that of private architects employed by the County Council.



Plan of Wokingham Secondary School

wholly of factory-produced components, and which, incidentally, require less time for the preparation of drawings. They now look forward to a time within the next five years when perhaps half the country's schools will be built by some non-traditional method.

This does not mean to say that the Ministry of Education has expressed a doctrinaire view that prefabrication is intrinsically better than, and is eventually to supersede, traditional construction. The large extension of its use is seen as the only way in which education authorities in areas where building labour is scarce will be able to close the gap between the maximum amount of traditional building they will be *able* to undertake, both because of the time factors described above, and the limited capacity of the building industry, and the amount of building they will be *required* to undertake in order that the programmes for school buildings may be completed to time. In the words of the latest Bulletin, "such schools, of good educational and architectural quality, could be built at a com-

GENERAL INFORMATION ON WOKINGHAM SECONDARY SCHOOL

Type of school ..	4 *form entry* (20 *class*) *Secondary Modern* (*Mixed*)
Number of pupils ..	600
Number of cost places	680
Floor area ..	51,977 *sq. ft. of which* 60 *per cent. devoted to teaching space*
Sq. ft. per place ..	76·5
Net cost	£146,382 (*i.e. buildings and paved playgrounds only*)
Nett cost per place ..	£215 5*s.* 4*d.*
Nett cost per sq. ft. ..	56*s.* 4·1*d.**
Gross cost	£166,344 (*i.e. including external and site works*)
Gross cost per place ..	£244 12*s.* 6*d.*
Gross cost per sq. ft.	64*s.*
Tender date ..	27*th March*, 1951
Starting date ..	4*th July*, 1951
Completion date ..	*March*, 1953

* Owing to rises in building costs since the date of tender the nett cost has risen and, when calculated in March, 1952, was 63s. 10d. per sq. ft.

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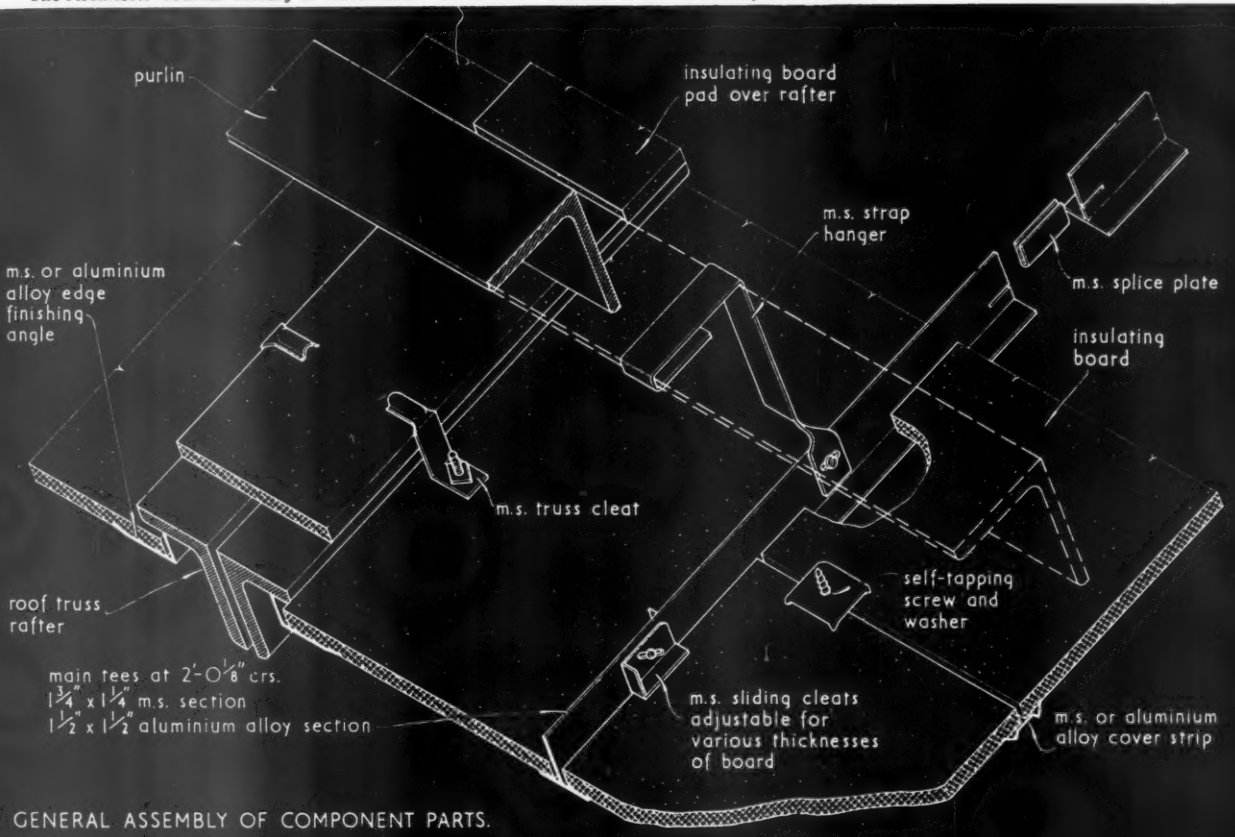
schools, of good educational and architectural quality, could be built at a com-

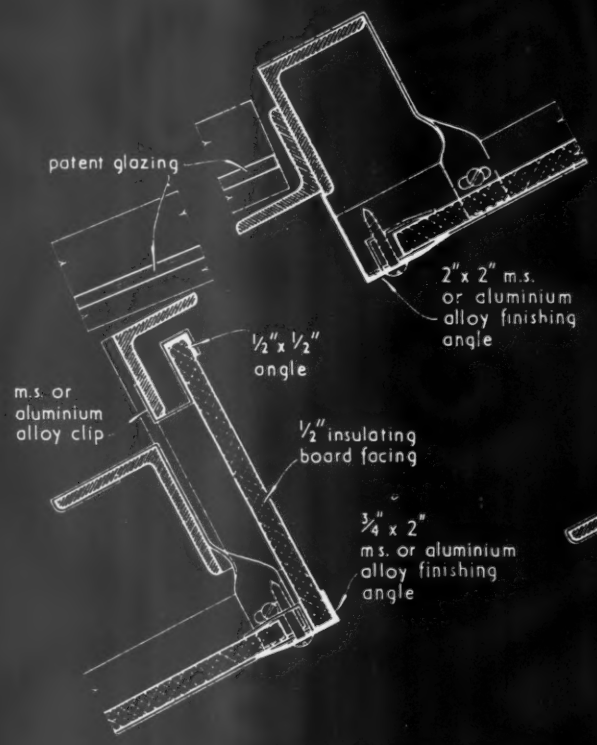
ings and paved playgrounds only)

Completion date . . March, 1953

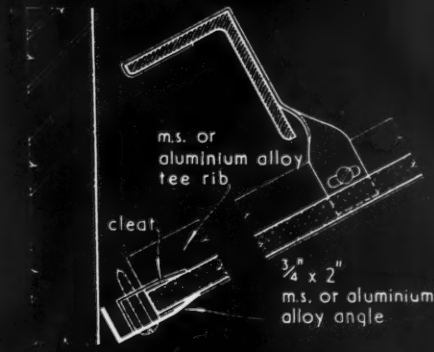
• Owing to rises in building costs since the date of tender the nett cost has risen and, when calculated in March, 1952, was 63s. 10d. per sq. ft.



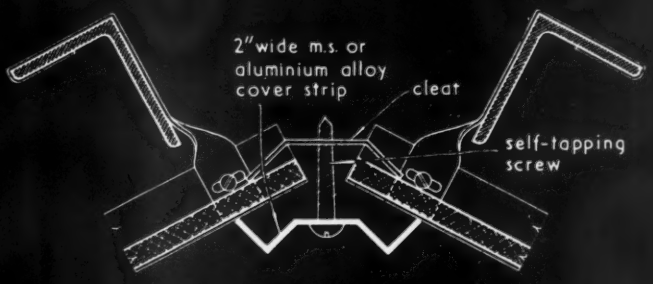
• GENERAL ASSEMBLY OF COMPONENT PARTS.



FINISH ABOVE AND BELOW ROOF GLAZING PANEL.



FINISH AT EAVES.



FINISH AT RIDGE.

HEYWOOD'S SYSTEM OF UNDER-PURLIN STRUCTURAL INSULATION. Manufacturer: W. H. Heywood and Co. Ltd.

22.D16 HEYWOOD'S SYSTEM OF UNDER-PURLIN STRUCTURAL INSULATION (Patent No. 533815)

This Sheet describes an under-purlin system of board fixing using steel or aluminium-alloy tee sections with insulating board, asbestos-cement wallboard, plasterboard, etc., for the thermal insulation of corrugated asbestos-cement or metal roofs and walls. The system is applicable to flat or curved roofs and may be used for suspended ceilings.

General System

The drawing at the top of the face of the Sheet shows the general system. The boards are carried on tee sections to which they are held by pairs of cleats (adjustable to any thickness of board) riveted together through the web of the tee. The ends of the boards are joined by cover strips held by self-tapping screws and washers as shown in the drawing. At the rafters, the boards are supported by cleats bolted through them to the angle finishing section; this method facilitates replacement of individual boards. A continuous strip of insulating board spans the rafter under the cleats. The edges are trimmed at eaves and verges with angle finishing sections to which angle cleats hold the board by self-tapping screws.

The main tees are supported on strap hangers suspended from the purlins or other structural members.

Components

Main tees : Steel—1¾ in. wide by 1¼ in. high by 18 gauge. Aluminium alloy—1½ in. wide by 1¼ in. high by 16 gauge. Other sections are available to suit varying spans.

Main tee splice plates : These are of galvanised steel and are used for jointing the main tee sections.

Cover strips : These are of 2 in. wide 18 gauge cold rolled steel or aluminium alloy and cross the main tees. Alternatively, nogging pieces may be of tee section and rest on the main tee flanges.

Sliding cleats : These are of non-corrosive steel and are riveted to the web of the tee section, the rivet passing through a slanted slot on the cleat, making it possible to adjust it to take any thickness of insulating board, as shown in the drawing on the face of the Sheet.

Truss cleats : These are of 16 gauge steel and are used to suspend the end finishing angle (which is fixed by bolts passing through the boards) from the rafters.

Edge finishing angles : These are of 18 gauge steel or aluminium alloy. A special closing strap or closing tee is available for fixing the last board in an assembly.

Edge finishing cleats : These are of 16 gauge steel and are used at eaves and verges to attach the finishing angles to the edges of the boards.

Ridge finishing sections : The drawing on the right lower part of the face of the Sheet shows the special sections used for finishing the boards at the ridge. They are of extruded aluminium alloy or cold rolled steel.

Roof glazing treatment : The drawings on the left lower part of the Sheet show the special angles used for finishing the boards above and below patent-glazing panels.

Special fittings : As all metal sections and finishing strips are manufactured in the company's factory, special fittings may be obtained to suit particular requirements.

Finish

The aluminium-alloy sections are supplied in their natural finish. The mild-steel sections are supplied finished with two coats of best quality lead paint. All hangers and small fittings are hot dip galvanised.

Insulation Boards

The system may be used with wood fibre boards, asbestos fibre boards and plaster boards, with or without overlays of glass silk, aluminium foil or other blanket insulation materials. Thermal and sound insulation values for these finishes may be obtained from the manufacturer.

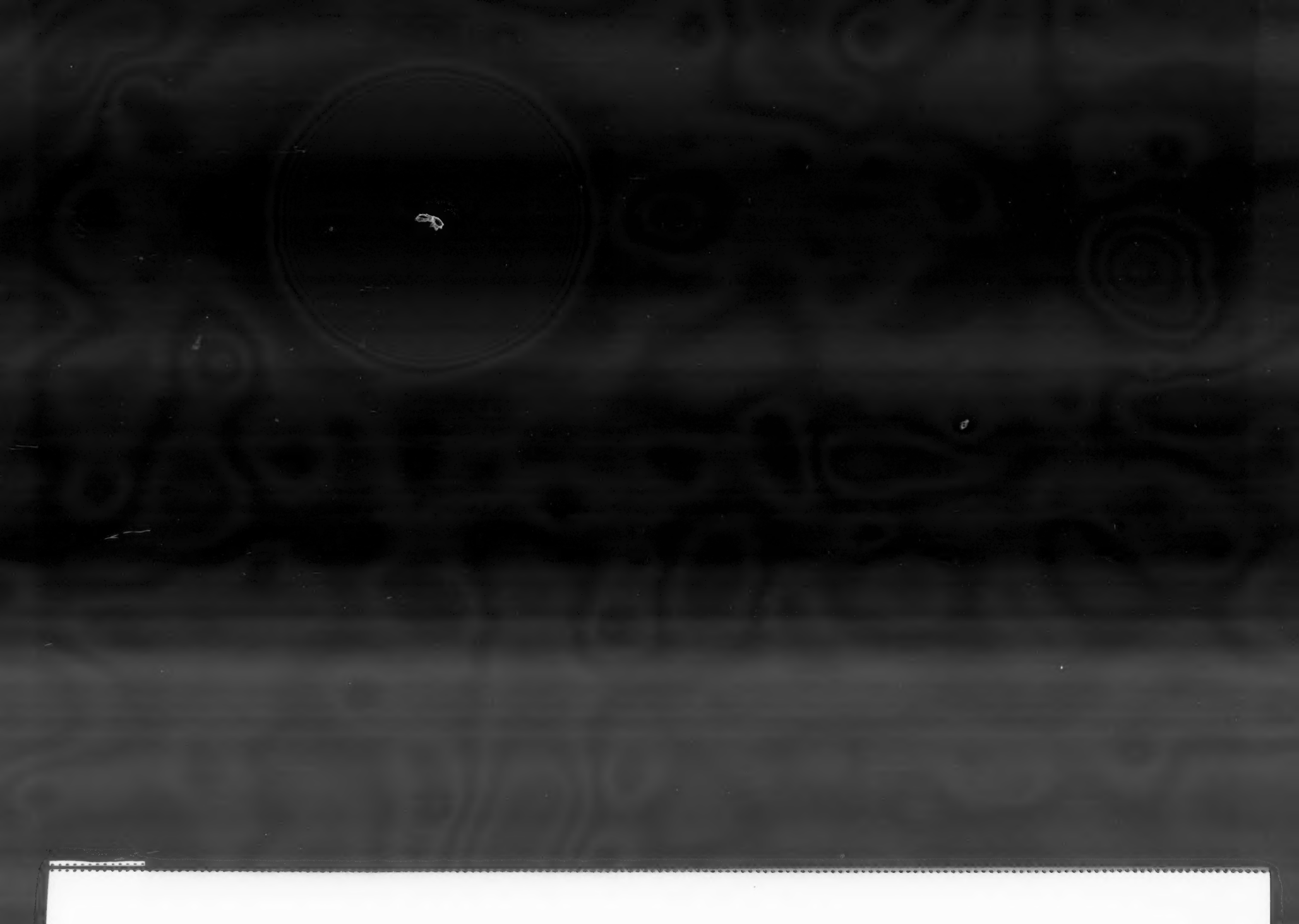
Further Information

The manufacturers maintain a planning service which will prepare designs for each contract and advise generally on technical problems.

Compiled from information supplied by :

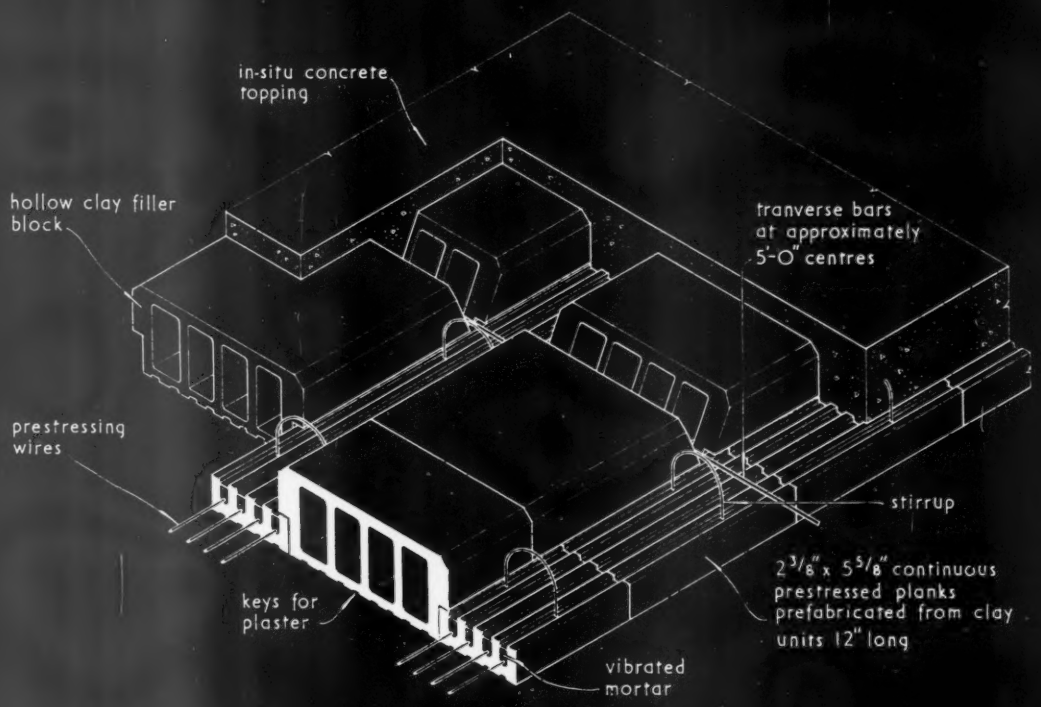
W. H. Heywood & Co., Ltd.

Head Office : Bayhall Works, Huddersfield.
Telephone : Huddersfield 6594 (5 lines).
Telegrams : Glazing, Huddersfield.
London Office : 54, Victoria Street, S.W.1.
Telephone : Victoria 2994.
Branch Offices : Belfast, Birmingham, Bristol, Coventry, Dublin, Glasgow, Leicester, Liverpool, Manchester, Newcastle-upon-Tyne, Nottingham, Plymouth.

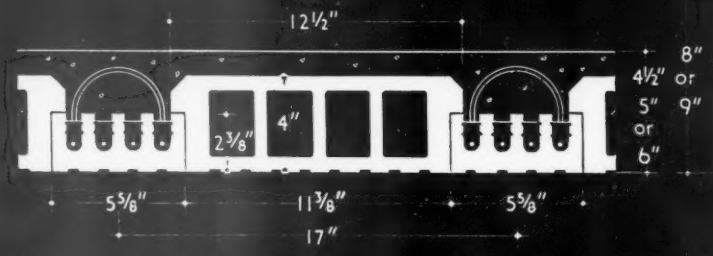


FLOORING HOLLOW CLAY BLOCKS

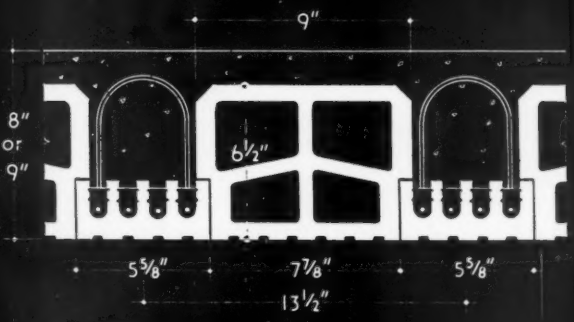
The Architects' Journal Library of Information Sheets 386. Editor: Cotterell Butler, A.R.I.B.A.



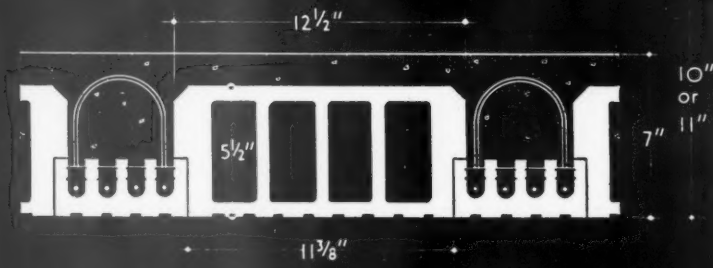
GENERAL ARRANGEMENT.



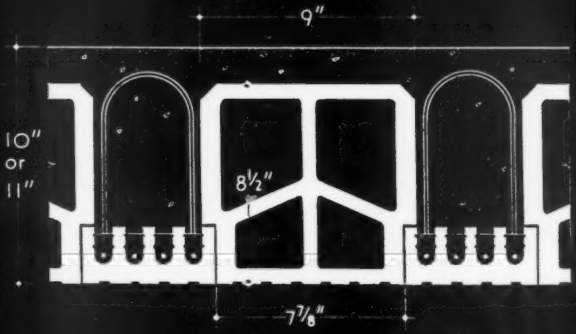
KL 4·5, KL 5 AND KL 6.



KN 8 AND KN 9.



KM 7.



KO 10 AND KO 11.

SECTIONS SHOWING TYPICAL THICKNESSES OF FLOOR.

·STAHLTON· PRESTRESSED CLAY BLOCK FLOORS.

Manufacturer: Costain Concrete Co. Ltd.

20.B1 STAHLTON PRESTRESSED CLAY BLOCK FLOORS

This Sheet describes Stahlton prestressed clay block floors. The drawings on the face show the general arrangement of the components and the different sizes of block used for various thicknesses of floor. Stahlton floors are suitable for all classes of construction from lightly-loaded roofs to factory floors.

Construction

The principal component of the floor is a factory-made prefabricated plank. This consists of clay blocks, laid end to end, with grooves in the upper surface into which high-tensile steel wires are placed and tensioned, after which they are embedded in vibrated mortar. Hollow clay filler blocks are placed between the planks and the floor is completed by laying the required thickness of concrete over the blocks.

Fixing

No shuttering is required in fixing the floor and there are no heavy units to be transported to the site. The planks are temporarily supported at approximately 5 ft. centres and the hollow blocks fitted between them. Transverse stiffening is provided by reinforcement placed across the planks at approximately 5 ft. centres before the in-situ concrete is cast. The concrete is a 1 : 2 : 4 mix and the temporary supports to the planks may be removed when a compressive strength of 2,500 lb./sq. in. has been reached, normally in 7–10 days.

Services

The hollow blocks may be cut to allow for electric light drops, sprinkler nozzles, etc.; the conduit or pipework can be accommodated within the thickness of the in-situ concrete.

Openings

Openings for stairways, roof lights and large pipe ducts, etc., can be formed by trimming with two or more planks placed side by side or with in-situ concrete beams within the depth of the floor.

Finish

The in-situ concrete may be laid flat, screeded to falls or left ready to receive normal floor finishes. The underside of the floor presents a uniform surface of clay blocks keyed for the application of plastered finishes.

Sizes and Loadings

The table below gives typical thicknesses of floor for simply-supported spans with given applied loads. All other dimensions are given in the drawings on the face of the Sheet. The carrying capacity of a floor of any given thickness can be increased for heavy concentrated loads, such as partitions, by placing two or more planks side by side. The floor can also be designed for continuity.

Floor type	Overall depth (in.)	Dead weight (lb./sq. ft.)	H.T. steel weight (lb./sq. yd.)	Allowable spans (ft. and in.) for applied loads (lb./sq. ft.) of :						
				40	50	60	80	100	200	300
KL 4·5 ..	4½	32·5	2·73	13 9	12 9	12 0	11 0	10 0	7 3	—
			2·93	14 0	13 3	12 6	11 3	10 3	7 6	—
			3·13	14 9	13 6	12 9	11 6	10 9	7 9	—
KL 5 ..	5	39	2·73	14 6	13 9	13 0	11 9	10 9	8 3	6 9
			2·93	15 3	14 3	13 6	12 3	11 3	8 6	7 0
			3·13	15 9	15 0	14 0	12 9	11 9	8 9	7 3
KL 6 ..	6	51	2·73	16 0	15 0	14 3	13 3	12 3	9 3	7 9
			2·93	16 6	15 9	15 0	13 9	12 9	9 9	8 3
			3·13	17 3	16 3	15 6	14 3	13 3	10 3	8 6
KM 7 ..	7	52·5	2·73	18 0	17 0	16 3	15 0	14 0	10 9	9 0
			2·93	18 9	17 9	17 0	15 6	14 6	11 3	9 3
			3·13	19 9	18 6	17 9	16 3	15 0	11 9	9 9
KN 8 ..	8	61·5	3·40	21 3	20 3	19 3	18 0	16 9	13 0	11 0
			3·65	22 3	21 0	20 3	18 9	17 6	13 6	11 6
			3·90	23 0	22 0	20 9	19 6	18 3	14 3	12 0
KN 9 ..	9	73·5	3·40	22 0	21 0	20 0	18 9	17 6	13 9	11 9
			3·65	22 9	21 9	21 0	19 6	18 3	14 6	12 3
			3·90	23 9	22 9	21 9	20 3	19 0	15 0	12 9
KO 10 ..	10	73	3·40	23 6	22 9	21 9	20 3	19 0	15 0	12 9
			3·65	24 6	23 9	22 9	21 3	20 0	15 9	13 3
			3·90	25 6	24 9	23 9	22 0	20 9	16 3	14 0
KO 11 ..	11	84·5	3·40	23 6	23 0	22 3	20 9	19 6	15 9	13 6
			3·65	24 6	24 3	23 3	21 9	20 6	16 3	14 0
			3·90	25 6	25 0	24 3	22 9	21 3	17 0	14 6

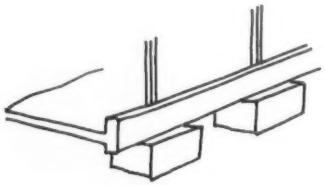
Compiled from information supplied by :

Costain Concrete Co., Ltd.

Address : Dolphin Square, London, S.W.1.
Telephone : Victoria 6624.
Telegrams : Cosdown, Sowest, London.

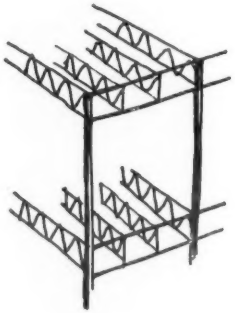
DIAGRAMMATIC KEY TO STRUCTURAL SYSTEM

The following notes and sketches and the table of information on the opposite page illustrate the main elements of construction of the Wokingham school now being built by the Ministry of Education, and are intended as an introduction to a more detailed study of the planning and construction which will follow in later articles.



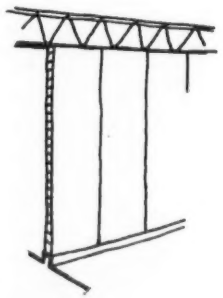
GROUND FLOOR AND FOUNDATIONS

In-situ concrete floor slab. Edge foundation beam and individual bases to columns.



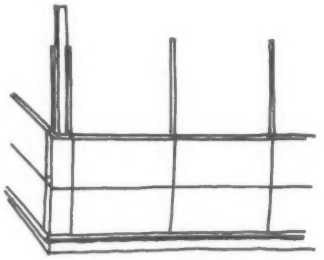
STRUCTURAL FRAME

3-ft. 4-in. modular steel frame; box stanchions, lattice beams bolted.



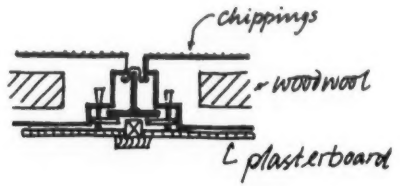
INTERNAL PARTITIONS

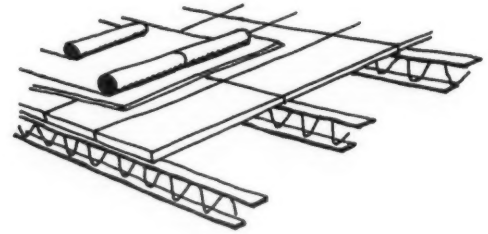
5¾-in. thick precast self-finished, cellular plaster panels, room height. Joints run in-situ.



EXTERNAL WALL

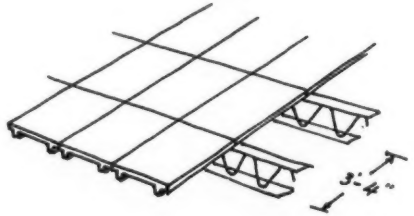
3¾-in. precast concrete wall panels. Mainly 3-ft. 4-in. by 2-ft. lined internally with painted plaster-board.





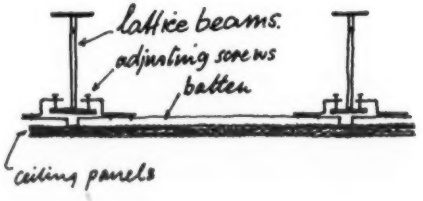
ROOF DECKING AND ROOF COVERING

Two layers bituminous felt, top layer mineral coated, on 2½-in. wood-wool slabs, 3 ft. 4 in. by 2 ft. with 1¼-in. cement and sand screed.



UPPER FLOORS

1½-in. precast reinforced concrete slabs.



CEILINGS

1½-in. vermiculite concrete panels 3 ft. 4 in. by 1 ft. 8 in.

A view taken in May of the Wokingham Secondary School. In the foreground are the housecraft and needlework rooms with the four storey block in the background. Left, fixing a vermiculite concrete ceiling unit in the above school.

petitive price and much faster than the average project."

BULK ORDERING

It can, of course, be argued that the faster rate of building on the site is achieved because of the large proportion of the work undertaken previously in the factory. The assessment of the time required to produce the school should, perhaps, include this factory time. From the point of view of producing more schools, however, the latter can be discounted, just as the time required for the production of bricks for a traditional building is discounted, provided that the components are produced for a number of products in advance *and are available when required on the site.*

A prerequisite of the successful development of any system is, therefore, that the manufacturer with whom the development is undertaken must have

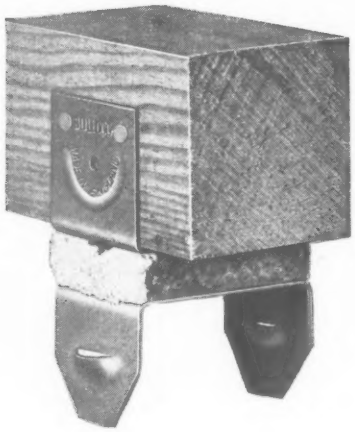
BULLDOG STANDARD & ACOUSTIC

Still the first name in

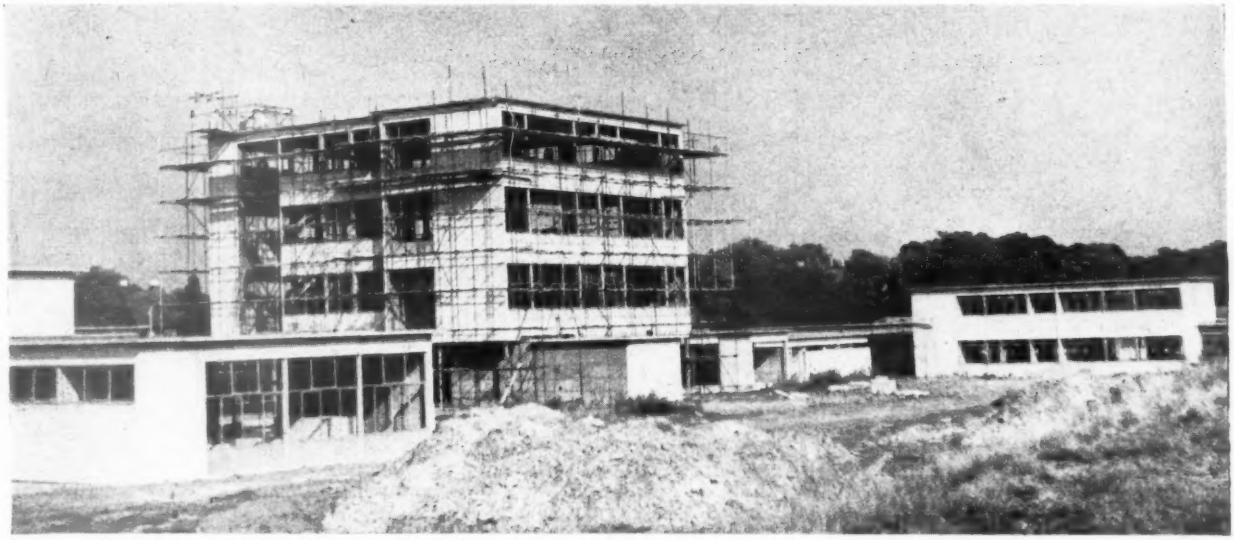
FLOOR CLIPS

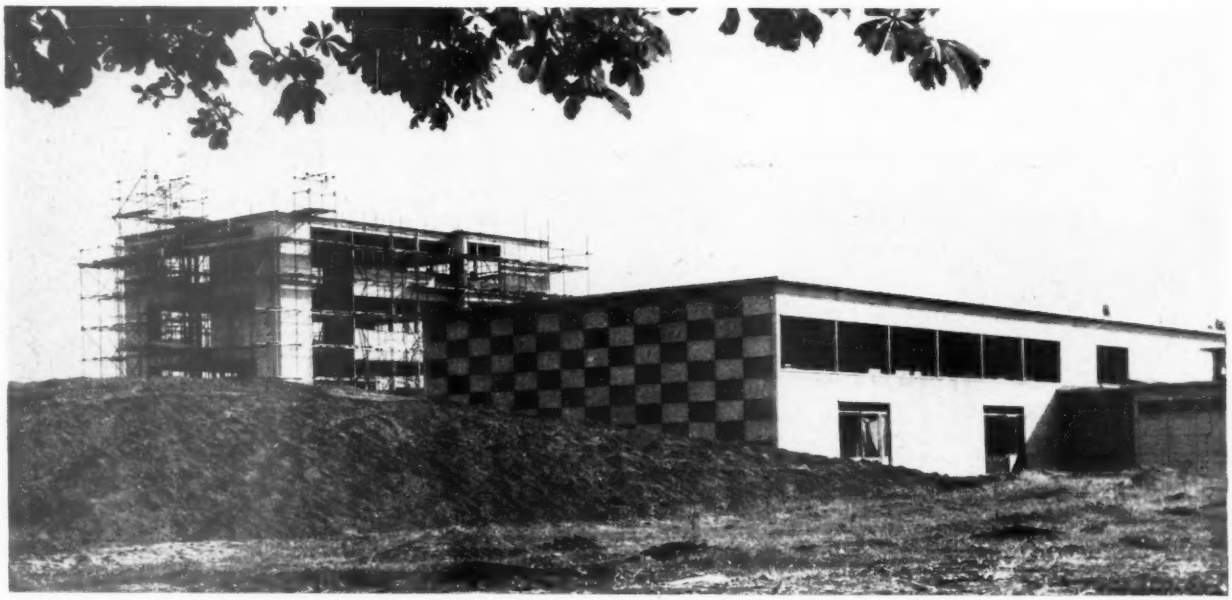
Write to me for a copy of Bulletin No. 2

Cecil Kahn



THE ADAMITE COMPANY LTD., Mansfield House, Strand, W.C.2 Temple Bar 6233/6





Above, two recent general views of the Wokingham Secondary School. Note the pattern of light and dark concrete wall panels.

confidence that his products will be ordered in sufficient quantity to justify the expense of the initial experimental work and the setting up of his plant for the mass production of the components. The supply of materials must be assured, and it is difficult to see how a local authority, whilst undertaking its normal work, can at present embark on long-term development, using materials (such as steel) which are licensed annually and which presumably could not be used to enable the manufacturer to build up stocks of components for future programmes. Whereas these factors might discourage some local authorities from undertaking experimental and development work, the Ministry of Education is in a better position to encouarge development, since some of the more adventurous manufacturers are anxious to be associated with development work which, on completion, will be brought to the notice of many local authorities, and which, therefore, might lead to substantial orders.

THE WOKINGHAM DEVELOPMENT

We shall discuss in greater detail, when describing the school at Wokingham, to what extent the particular system used there saves building time and reduces site labour. It is immediately apparent that, taken all in all, the construction does not differ very greatly from orthodox school building practice, which, nowadays, makes use of many factory-produced parts. In fact, one aim in the design was that the system could be readily understood and organized by normal building contractors. Furthermore, such parts of the building as foundations, drains, roof and floor coverings, and painting and glazing, are common, and require the same amount of site labour. The use of standard self-finished panels for internal and external walls does, however, almost eliminate the need for bricklayers and plasterers. The main significance of the construction at Wokingham, apart from many interesting detailed innovations, is perhaps that the superstructure consists of a limited number of standardized components which, under favourable conditions, could be produced in large quantities, thus offering substantial advantages in cost and speed of delivery over components specially designed for a single project.

Whilst the time taken in erection has not been dramatically short, it is expected that the building will be completed in the scheduled time of 20 months, approximately half the time taken for schools of similar size built by traditional methods. This will obviously be a considerable achievement.

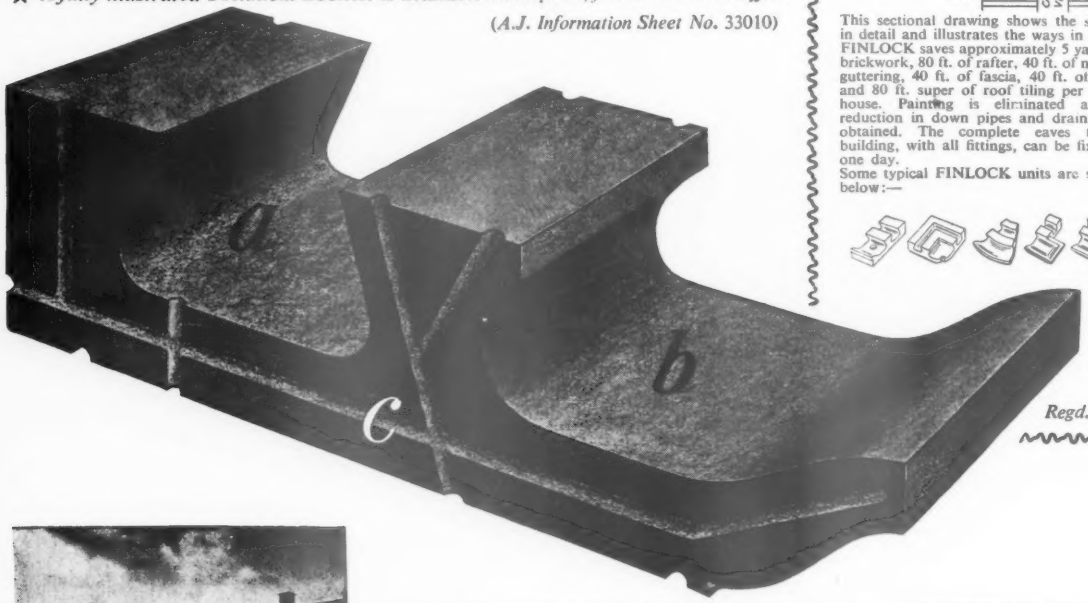
USING this system of Guttering shows a tremendous saving in cost, material and maintenance charges. Finlock Gutters are made with a fine waterproof concrete—simple in design, easy to use and *permanent*.

Finlock forms the eaves and gutters (*says Mr. Fin*)

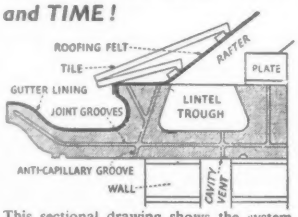
. . . and saves £15 per house! (*says Mr. Lock*)

On the illustration below "a" shows the trough in which lintels can be cast *in situ* if required, "b" shows the large sectioned gutter channel which permits laying without fall. Strong enough to walk in and to withstand all building stresses. Completed by a bituminous lining after laying. "c" indicates the jointing grooves.

★ *A fully illustrated Technical Booklet is available on request, from our Head Office* (*A.J. Information Sheet No.* 33010)



HOW FINLOCK SAVES MONEY and TIME!



This sectional drawing shows the system in detail and illustrates the ways in which FINLOCK saves approximately 5 yards of brickwork, 80 ft. of rafter, 40 ft. of normal guttering, 40 ft. of fascia, 40 ft. of soffit and 80 ft. super of roof tiling per single house. Painting is eliminated and a reduction in down pipes and drainage is obtained. The complete eaves for a building, with all fittings, can be fixed in one day.

Some typical FINLOCK units are shown below:—

Regd. Pat.

Finlock Gutters are being used by the following County Councils: CAMBRIDGESHIRE, DERBYSHIRE, EAST SUSSEX, GLAMORGANSHIRE, GLOUCESTERSHIRE, KENT, LONDON, MIDDLESEX, NORFOLK, SURREY, STAFFORDSHIRE, WARWICKSHIRE, WORCESTERSHIRE.

Over 200 local authorities are now using Finlock.

* The buildings shown are in accordance with the winning design in the £1,000 low cost housing competition organised by "THE BUILDER". By courtesy of J. L. Womersley, Esq., A.R.I.B.A., A.M.T.P.I., Borough Architect for Northampton.

FINLOCK GUTTERS LIMITED

20 ST. JOHNS RD., TUNBRIDGE WELLS, KENT

Telephone: Tunbridge Wells 20396/7/8

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DHB

TECHNICAL SECTION

The problem of fire precautions in building has been admirably tackled by the MOE in its latest Bulletin, reviewed below. This Bulletin, however, relates only to schools. Even more urgently needed is a similar study of the problem in multi-storey flats.

The optimum height for blocks of flats depends mainly on the type of construction used and the cost of lifts. The problem is, however, much confused by the somewhat inflexible and, possibly, over-rigorous fire escape regulations. While we can be justly proud of the reputation we have in this country for a low annual loss by fire, it is still necessary to keep a proper sense of proportion.

It has been suggested that money spent on excessive fire escape precautions would save more lives if spent on road safety precautions. This might be considered a rather wild suggestion, but certainly a great deal of research is required on the problem. While no architect would want the occupants of his buildings to be exposed to unnecessary dangers, it is equally important that the nation's limited resources be used to the greatest advantage.

This week's special article

9 DESIGN : GENERAL
fire and the design of schools

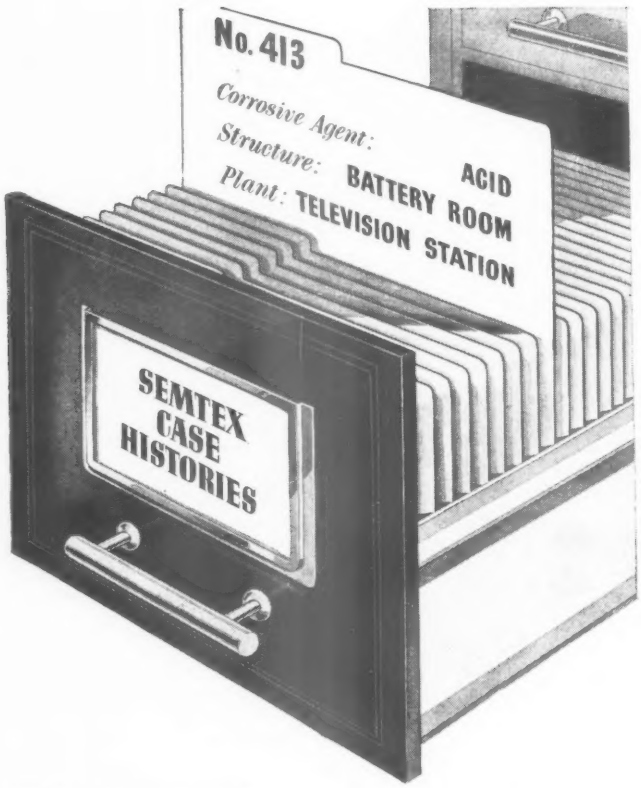
The number preceding the week's special article or survey indicates the appropriate subject heading of the Information Centre to which the article or survey belongs. The complete list of these headings is printed from time-to-time. To each survey is appended a list of recently-published and relevant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

The MOE's latest Building Bulletin—No. 7—reviewed below, is well up to the standards we have come to expect of the Ministry's publications. The confused problem of fire precautions has been tackled vigorously, and there is little doubt that this booklet will become the architect's principal reference on the subject.*

It must be admitted, perhaps rather reluctantly, that there is much apathy towards the subject of fire precautions amongst architects in this country. This may be due to the fact that we suffer comparatively few serious disasters due to fire or panic, but, whatever the cause, there is a lack of interest which, for some time, authorities have viewed with alarm. Occasionally disasters have occurred, such as the one at Paisley in 1929, when some 70 children lost their lives, which have awakened the public conscience and brought about some legislative action to prevent the recurrence of such accidents. Yet we are almost free from any stringent Acts dealing with this aspect of building planning.

Before the last war, such control as

* *Fire and the Design of Schools.* MOE Building Bulletin No. 7. (HMSO, Sept., 1952. 2s. 6d.)



THE TROUBLE

In industrial battery rooms the spillage of acid presents a constant problem, calling for a floor surfacing capable of withstanding this form of corrosive attack. Usefulness rather than good looks is generally the order of the day. In this instance it was desired to provide a surfacing which, in addition to being corrosion-resistant and hard wearing, was also attractive in appearance.

THE TREATMENT

The entire concrete sub-floor was rendered with Semtex cement to form an impervious membrane. The membrane was, of course, carried up all skirtings and vertical surfacings to give a complete tanking of the main floor structure. Over this were laid durable, acid-resistant tiles in a cream flecked finish, Semtex cement again being selected as the bedding and bonding mortar by reason of its good chemical-resistant qualities and its tenacious yet flexible hold when set.

THE TECHNICAL SERVICE

The anti-corrosion treatment described was devised and carried out by the Industrial Division of Semtex Ltd., a company in the Dunlop group. The materials and methods used are typical of many which have been developed and perfected in the Division's own laboratories and works, and applied with success in almost every branch of Industry. This wide experience of corrosion counter-measures can be brought to bear upon the problem that is troubling you. Send your enquiry to :

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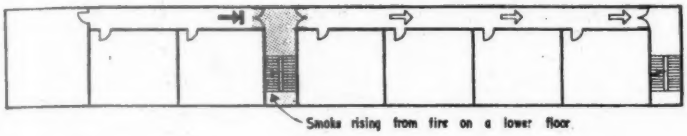


Fig. 1; cul-de-sac isolated.

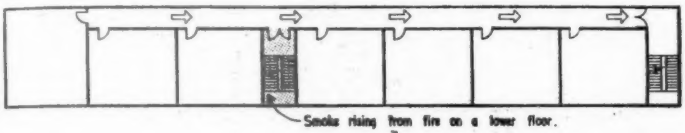


Fig. 2; corridor kept continuous.

there was was vested in the London Building Act and in a few local Acts administered by one or two other large authorities. Perhaps the Paisley disaster was responsible for the issue by the Home Office (as the custodians of public safety), in 1934, of a *Manual of Safety Requirements in Theatres and Other Places of Public Entertainment* (HMSO, 5s.). Observance of this manual was not obligatory until after the war, when the Home Office appointed Chief Fire Officers for various parts of the country. The fact that the manual was much out of date and inaccurate apparently mattered little and the administration of it was somewhat ruthless.

MOE INDEPENDENCE

However, the Home Office manual applied only to public places, or buildings where large numbers of persons gather together within confined limits. Schools may be thought to come under this heading, in so far as children are gathered together in large numbers, but the MOE is, to a large extent, a law unto itself, and, providing school buildings are to be used solely for the purposes with which the Ministry is concerned, the MOE is obliged to set the standards to which local authorities must conform. How far it can, or, for that matter, desires, to work independently of the Home Office on matters relating to fire precautions is a little obscure. But a footnote in *Building Bulletin* 7 (page 16) states that, where an assembly hall within a school building is to be used by the general public "it will usually be necessary to obtain the approval of the local licensing authority, whose requirements may not be satisfied by these recommendations." This statement can have only two interpretations: either that the standards laid down in the Bulletin are not as stringent as those of the Home Office or the local authorities, or that opinions vary so much that agreement cannot be reached. In either case, the position can hardly be considered satisfactory. However, one thing is certain, the MOE is not prepared to be conciliatory—the footnote on page 16 of the Bulletin (quoted above) continues: "Additional requirements of a minor nature necessary to satisfy the local licensing authority may be provided within the current cost limits, but capital investment will not be available in excess of current cost limits to permit school halls to be treated as places of public assembly, nor would such excess expenditure qualify for grant from the MOE."

WORKING DATA

It seems that the MOE felt that it was necessary not only to clarify the position regarding fire precautions, but to present in one document all the relevant working data. This was a courageous decision, and the Ministry's aim has clearly been to reduce to a minimum the need for reference to other publications. The Bulletin does, in fact, succeed in doing this, but it should not be forgotten that the facts presented in it (in a somewhat spectacular manner) deal only with the dangers of fire and *their* effect on school planning. This is, of course, only one of the many aspects of planning. Besides egress, there is, for example, the problem of ingress. While a bias towards public safety is a good thing, it must not be allowed to upset the functional planning of a building, and the satisfying of its occupants' requirements.

THE INCEPTION OF FIRE

The authors of the Bulletin have wisely assumed that the reader knows little or nothing about "fire and the design of schools." In the first part of the Bulletin, following a useful, although somewhat brief (1½ pages), section on terminology, general principles both of fire and escape from fire are dealt with. Comparisons have been made of the inception of fire in small rooms, large rooms, dual-purpose areas and, finally, staircases. This is called the "first phase." The second phase is "horizontal spread." This is described, and the provision of alternative means of escape is considered. The third phase—the "vertical spread of fire"—is then dealt with, and suggestions are made as to how smoke checks may be used, together with alternative means of escape, under the various planning arrangements normally encountered.

Several diagrams have been included to illustrate the points made in the text. Figs. 10 and 11 (reproduced above left as Figs. 1 and 2) show the scheme of analysis used. In this case a multi-storey building, with two staircases and a cul-de-sac corridor, is examined. Fig. 1 shows a method of providing smoke stops to one staircase in a manner which would place occupants of the cul-de-sac in an isolated position. Fig. 2 shows the better solution to the problem; the corridor remaining continuous, so that the two means of escape may be used to the full. The logic of dividing the development of fires into phases may be questioned, but it is an excellent aid to the examination of plans; it creates a sense of reality, which brings the designer to grips with the problem.

PLANNING AND CONSTRUCTION

Part II of the Bulletin deals with "Planning and Construction." In it, attempts have been made to apply in detail the principles outlined in Part I. In this the authors have not been as successful as they are in Part I, for, in many cases, the information given is inadequate. For example, assembly halls, where the greatest indoor concentration of children occurs, are dismissed in four paragraphs and a table giving the number and widths of exits required (reproduced below as Table I). Similarly, for stages and film projection rooms, admitted elsewhere to be "specially important," no guidance is given and no recommendations are made.

In making detailed recommendations as to the number of persons that may occupy rooms and the maximum distance between rooms and exits, certain figures are given without any indication as to how they were determined. Some planners may prefer to work under conditions where recommendations are cut and dried, but others might prefer to see developed a practical method of producing means-of-escape schemes from basic principles.

The increasingly popular practice of designing escape routes so that buildings may be completely vacated within a certain time is not mentioned anywhere in the Bulletin. This system has the advantage of taking into consideration not only the internal conditions of

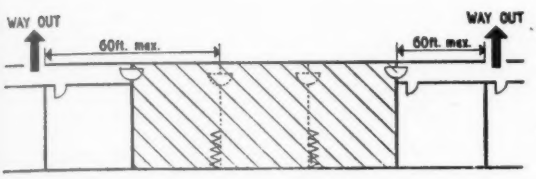
TABLE I.—*Number and Width of Exits from every Part of Assembly Halls, Dining Spaces and all Rooms likely to have over* 100 *Occupants.*

Number of occupants*	Minimum number of exits	Minimum clear width of each doorway when open
100–200	2	2 ft. 10 in.
201–500	2†	4 ft. 6 in.
501–750	3†	4 ft. 6 in.
751–1,000 ..	4‡	4 ft. 6 in.

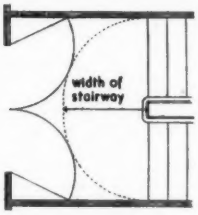
* With fixed seating, the same as the number of seats; otherwise, on the basis of 5 sq. ft. of floor area per child in assembly halls and 10 sq. ft. of floor area per child in dining spaces and gymnasia.

† Each exit should lead by a separate route to the open air at ground level.

‡ At least three of the exits should lead by separate routes to the open air at ground level. The fourth exit may use part or the whole of the escape route from one of the other exits.



Left, Fig. 3, diagram showing fire precautions for dual-purpose area with movable partitions.



Right, Fig. 4, doors opening on to landing — a good arrangement.

the building, such as occupancy and type of structure, but also adjoining hazards. It also allows the designer more freedom and, therefore, tends to permit a greater number of solutions to a given problem.

CORRIDORS AND DUAL-PURPOSE ROOMS

Perhaps the most significant section of Part II of the Bulletin deals with corridors and dual-purpose areas, and the number and position of exits from them. Many examples are given for single- and multi-storey buildings, and for a variety of positions of partitions, both fixed and movable. The current tendency to use rooms as a means of circulation for adjoining rooms is taken into account, and maximum distances to exits are recommended. These vary from 60 ft., where both fixed and movable partitions are to be used and two ways out are possible, to 40 ft., where there is cul-de-sac planning and only one exit. An additional precaution, imposed where there are culs-de-sac, stipulates that there should not be more than 120 children in a cul-de-sac on any one floor. How the figure of 120 was arrived at is not explained and, as no limit is given for the number of *floors*, this recommendation cannot be accepted without a great deal more qualification.

STAIRCASES

Most of the requirements for staircases have been given before in the Home Office Manual, with the exception of three tables, which are from the Post War Building Study, *Fire Grading of Buildings, Part III (Precautions Relating to Personal Safety)*, to be published shortly. These tables give the recommended widths of staircases for multi-storey buildings having two, three or more staircases; the figures given are related to the number of occupants. This appears to be a more sensible and practical method than those employed in the past, but it cannot be said that the use of the staircase as a means of escape is yet understood fully. It is hoped that the MOE will devote further research to this important problem in order that planners may have more confidence in the data they are called upon to apply.

THE BUILDING ITSELF

The most important other topic considered in the Bulletin is the behaviour during a fire of a building itself. Obviously, if the whole building and its contents were fully resistant to fire, fires could not spread; at least, those from inside sources. However, a completely fire-resistant building can seldom, if ever, be achieved, and it is highly desirable, therefore, that the use of materials which are susceptible to fire should be controlled. Part III of the Bulletin is devoted entirely to this subject and the authors' approach has been based on the need for structural precautions to ensure personal safety. This part of the Bulletin is comprehensive, and, from the data given, the designer will be readily able to choose materials which will satisfy stringent conditions, not only for the structure, but also for finishes.

FIRE FIGHTING EQUIPMENT

In the remainder of the Bulletin can be found information on fire-warning systems, the provision of facilities for fire-fighting, and, under the heading of "daily precautions," the routine which should be carried out by the occupier so that the emergency facilities provided by the designer can function properly. These three subjects are dealt with summarily, but their inclusion is sufficient to remind the architect of the need for further understanding and sensible application. Ten pages at the end of the Bulletin are filled with tables forming appendices to the main text. One of these, in Appendix 2, is an analysis of the fires that took place in educational buildings between the years 1947 and 1950. The varied causes of the fires and the number of them emphasize the importance of fire precautions—not only those taken by the architect, but also those taken by the occupant after a building is completed.

In general, the MOE is to be congratulated on the quality of its latest Bulletin. It will satisfy a much felt want, but it is doubtful if it goes far enough or if it is adequate. However, if the need arises for revisions, it is to be hoped that the Ministry will not hesitate to keep its promise and reissue the Bulletin, amended in the light of new information and, if necessary, considerably enlarged.

INFORMATION CENTRE

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

13.98 materials : timber

NEW TIMBERS

Forest Products Research Laboratory Leaflets Nos. D.S.A. 22036/1-6. (HMSO, 1952.)

Six leaflets giving description, seasoning properties and other characteristics and brief list of uses of six timbers: Berlinia, Idigbo, Nyankom, Pterygota, Utile and Yellow Steculia. Idigbo is perhaps the best known of these but several of the others are worth noting.

18.110 construction: theory

PRESTRESSED CONCRETE

Prestressed Concrete Structures. A. E. Komendant. (McGraw Hill Publishing Co. Ltd., New York and London. 1952. 42s. 6d.)

Text book presenting American attitude to prestressed concrete design, and a concise review of world wide practice. 251 pages, 153 diagrams, well produced and easy to read.

The design section of the book takes up roughly half the pages. In addition to simple and continuous beam work, the book deals with trussed girders, shells, tanks, pipes and domes. The reader who is already battling with the wealth of symbols suggested in the "First Report on Prestressed Concrete" will find another 70 different ones to be considered before he can follow the more mathematical sections devoted to design, but to the enthusiast in prestressed concrete this will present little difficulty.

The section on representative structures fills a quarter of the book. An interesting variety of structures and methods of execution are provided. The author's statement, in his foreword, that "no general theory of prestressed design is available," may be true in America, but readers here will, no doubt, have noted more than one review of similar works in the Information Centre since 1949 (see item 18.86:23.8.51).

21.43 construction: miscellaneous

FIXING GUNS

Explosively-actuated Fastening Tools. K. G. H. Fryer. (The Builder, Sept. 5, 1952.)

4½-pp. illustrated article on gun fixing methods, based on BRS investigation.

The use of cartridge guns for fixing purposes is common in America and some Continental countries and is clearly going to spread in Britain. This is a good general article; types of gun and their uses are described and results of some tests are given. Mainly of interest to contractors, the article should be read also by architects, for the use of quick methods of fixing alters the cost of many details, and makes economical different designs.

Readers requiring up-to-date information on building products and services may complete and post this form to the Architects' Journal, 9,11 and 13, Queen Anne's Gate, S.W.1

ENQUIRY FORM

I am interested in the following advertisements appearing in this issue of "The Architects' Journal." (BLOCK LETTERS, and list in alphabetical order of manufacturers' names please).

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Buildings Illustrated

Cinema, St. Helier, Jersey, Channel Islands, for Odeon Theatres Ltd. (Pages 466-468.) Architects: T. P. Bennett & Son. Quantity surveyors: Gardiner & Theobald. The cinema was furnished and equipped under the supervision of Circuits Management Association Ltd.; engineering controller: S. B. Swingler. General contractors: Kirk & Kirk Ltd. Sub-contractors: lighting, Troughton & Young Ltd.; decorations, bar fittings, pay box, entrance doors, James Walker Ltd.; heating and ventilation, G. N. Haden & Sons Ltd.; paint, Leylands Paint & Varnish Co. Ltd.; external rendering, Clark & Fenn Ltd.; neon signs, Pearce Signs Ltd.; terrazzo, Diespeker & Co. Ltd.; windows, Crittall Manufacturing Co. Ltd.; doors and sanitary fittings, J. W. Huelin Ltd.; ironmongery and door furniture, B. Finch & Co. Ltd., G. & S. Allgood, Comyn Ching & Co. Ltd.; acoustic tiles, Newalls Insulation Co. Ltd.; pile foundations, Piling Construction Co. Ltd.; structural steel, Matthew T. Shaw & Co. Ltd.; concrete blocks, The Croft Granite, Brick & Concrete Co. Ltd.; seating, main curtains, carpets, G. B. Kalee Ltd.; lettering, The Lettering Centre; foyer and bar fabrics, Warner Ltd.; furniture, Ernest Race Ltd.; suspended ceilings, The Universal Metal Furring & Lathing Co. Ltd.; fanlights, glass bricks and special glazing, Haywards Ltd.

Announcements

Messrs. Dorman Long Ltd. announce the appointment of Mr. G. E. Chicken and Mr. C. Hipwell as directors of the company. Three senior officials have also been appointed special directors.

The autumn meeting of the R.I.B.A. Golfing Society was held at the Berkshire Golf Club on September 25. The Selby Cup was won by H. St. John Harrison with a score of 84 – 15 = 69. The runner-up was P. Hickey with a score of 81 – 9 = 72. In the afternoon the foursomes bogey competition was won by A. D. McGill and F. Sutcliffe with a score of 3 up. At the annual general meeting in the evening, Col. A. E. Henson, F.R.I.B.A., was elected captain for the next season.

Mr. A. B. Grayson, F.R.I.B.A., A.A.DIPL., has opened an office in Hill House, Wincanton; Telephone: Wincanton 3355, and wishes to receive trade catalogues, etc.

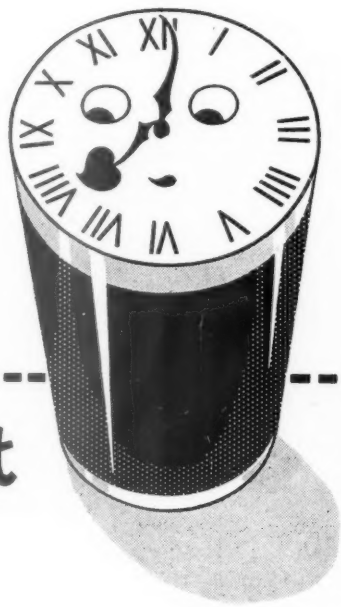
Mr. R. Harley-Smith, A.R.I.B.A., A.M.T.P.I., and Mr. D. Steel, A.R.I.B.A., have entered into partnership and taken over the practice of F. P. Trepess & Son, Architects. The firm will continue under the title of Trepess, Harley-Smith & Steel from the present address at 1, Church Street, Warwick (Tel. Warwick 19), where they will be pleased to receive trade catalogues, etc.

British Aluminium Co. Ltd. announce the opening of a branch office at 20, Brunswick Place, Southampton, to handle sales of unwrought and fabricated aluminium alloy in Sussex and Hampshire. Mr. W. H. Marston has been appointed area representative. (Tel.: Southampton 76780. Telegrams: Britalumin, Southampton.)

W. and H. Internal Construction Company of Cooling Road, Frindsbury, Rochester, Kent, who specialize in the erection of "Holoplast" movable walls and partitions, have now been registered as a limited company. They will now conduct their business under the name of Internal Constructions Limited. Address unchanged.

Obituary

We regret to announce that Geoffrey T. Hollis, Chairman of Hollis Bros. Ltd., died recently at 16, Bell Moor, Hampstead, N.W.3.



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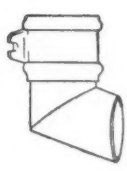

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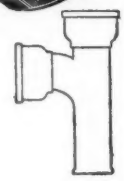

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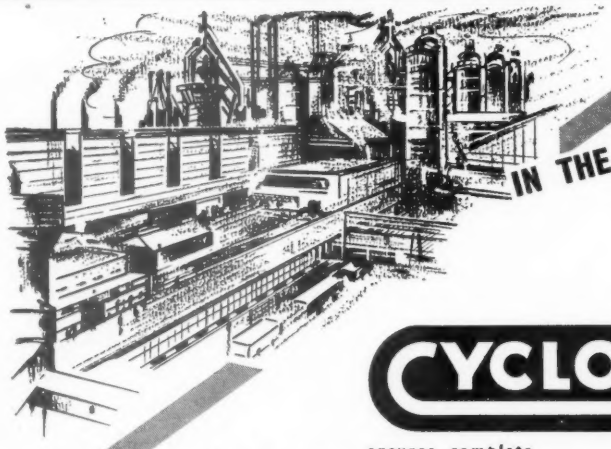

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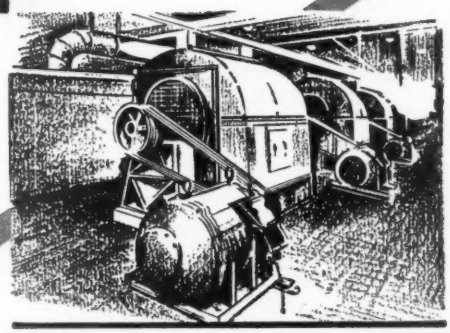

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Replies to Box Numbers should be addressed care of "The Architects' Journal," at the address given above.

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.

BOROUGH OF BRIDGWATER.
BOROUGH ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointments on the permanent staff of the newly formed Borough Architect's Department.

(*a*) CHIEF ASSISTANT ARCHITECT. Grade Va, A.P.T.

Applicants should be A.R.I.B.A., with wide experience in housing and general works, and be capable of taking charge of contracts, control of staff, etc.

(*b*) QUANTITY SURVEYOR. Grade V. A.P.T.

Applicants should be suitably qualified and have wide experience in the preparation of Bills of Quantities and estimates for works, site measurement, and the preparation and adjustment of interior and final accounts.

Consideration will be given to the provision of housing accommodation for successful candidates, if married.

The appointments are subject to the Local Government Superannuation Act, 1937, the passing of a medical examination, and one month's notice on either side.

Applications, stating age, qualifications, with full details of past and present appointments and experience, and the names of three referees, must be received by J. D. Blacklock, A.R.I.B.A., Borough Architect, Town Hall, Bridgwater, not later than the 24th October, 1952.

H. A. CLIDERO,
Town Clerk.

Town Hall, Bridgwater.
2nd October, 1952. 7526

COUNTY BOROUGH OF EAST HAM.
BOROUGH ENGINEER'S DEPARTMENT.

Applications are invited for the under-mentioned appointments:—

TWO SENIOR ARCHITECTURAL ASSISTANTS. Grade A.P.T., VI. Salary, £670-£735 per annum.

TWO ENGINEERING ASSISTANTS. Grade A.P.T., V. Salary, £595-£645 per annum.

TEMPORARY ESTIMATOR for Building Works. Grade A.P.T., V. Salary, £595-£645 per annum.

London weighting (£10 per annum to £30 per annum, according to age) is paid in addition. Salaries in excess of the minima may be paid according to the qualifications and experience of successful candidates.

The Council will be prepared to consider applications for a subsistence allowance in appropriate cases from persons appointed should they be unable to obtain suitable housing accommodation.

Particulars of the terms and conditions of appointment and form of application (which must be returned by Monday, 27th October), obtainable from the undersigned. Candidates must state for which post they are applying.

R. H. BUCKLEY,
Town Clerk.

Town Hall, East Ham, E.6. 7523

BOROUGH OF CHELMSFORD.

Applications are invited for the following appointments:—

(1) SENIOR ENGINEERING ASSISTANT. A.P.T., Va.

(2) JUNIOR ARCHITECTURAL ASSISTANT. A.P.T., III.

Applicants for appointment (1) should have passed the Final Examination of the Institution of Civil Engineers and/or Institution of Municipal Engineers, and for appointment (2) should have passed the R.I.B.A. Intermediate Examination. The appointments will be subject to the provisions of the Local Government Superannuation Act, 1937, and will be terminable by one month's notice on either side. The selected applicants will be required to pass a medical examination.

Housing accommodation will be available for the person appointed to appointment (1), if required.

Applications, stating age, qualifications, experience, present and previous appointments (with salaries), are to be delivered to the Borough Engineer, Surveyor and Architect, Municipal Offices, Chelmsford, not later than Friday, the 31st October, 1952. Applicants must state whether to their knowledge they are related to any member of or holder of any office under the Council. Canvassing will disqualify.

B. A. FRANCIS.
Town Clerk.

Municipal Offices, Chelmsford.
7th October, 1952. 7533

COUNTY BOROUGH OF BLACKBURN.
BOROUGH ENGINEER'S DEPARTMENT.

Applications are invited to be sent to the Borough Engineer, Town Hall, Blackburn, by 31st October, for the under-mentioned permanent appointments:—

(1) ARCHITECTURAL ASSISTANT. Grade VI (£570-£735).

(2) ARCHITECTURAL ASSISTANT. Grade II (£495-£540).

Preference for the Grade VI post will be given to applicants who are Associates of the R.I.B.A. and are Registered Architects, and have good experience in the design and building of housing estates and Municipal buildings.

(3) ASSISTANT QUANTITY SURVEYOR. Grade VI (£670-£735).

Professional Associates of the Chartered Surveyors' Institute preferred, and applicants must be experienced in the preparation of Bills of Quantities, specifications, estimates, and settlement of final accounts.

(4) ASSISTANT BUILDING INSPECTOR. Grade II (£495-£540).

Applicants should have good knowledge of building byelaws and construction, and have had similar experience with a Local Authority.

CHAS. S. ROBINSON,
Town Clerk.
7546

COUNTY BOROUGH OF BLACKPOOL.

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

ARCHITECTS AND QUANTITY SURVEYORS:

(*a*) Chief Assistant Architect. Grade A.P.T., X.

(*b*) Principal Assistant Architect (2). Grade A.P.T., IX.

(*c*) Senior Architectural Assistant. Grade A.P.T., VI.

(*d*) Senior Assistant Quantity Surveyor. Grade A.P.T., VII.

(*e*) Assistant Quantity Surveyor. Grade A.P.T., Va.

ENGINEERS AND TOWN PLANNING ASSISTANTS:

(*f*) Senior Town Planning Assistant. Grade A.P.T., VII.

(*g*) Engineering Assistant. Grade A.P.T., V.

(*h*) Engineering Assistant. Grade A.P.T., III.

The minimum qualification for posts graded A.P.T., V, and upwards is the Final Examination of the appropriate professional institution (*i.e.*, Royal Institute of British Architects, the Institution of Civil Engineers, the Institution of Municipal Engineers, the Royal Institute of Chartered Surveyors or the Town Planning Institute). Form of application and further particulars may be obtained from the Borough Surveyor (Arthur Hamilton, B.Sc., A.R.I.B.A.), Municipal Buildings, Blackpool.

The closing date for the receipt of applications is Saturday, 8th November, 1952.

The Council are unable to assist the successful candidates in the provision of housing.

TREVOR T. JONES,
Town Clerk.
7547

CROWN AGENTS FOR THE COLONIES.

ENGINEERING DRAUGHTSMAN (MALE OR FEMALE) required by the Government of Tanganyika for the Public Works Department for one tour of two to three years in the first instance. Salary (including present temporary allowance of 25 per cent.) (Male) £852 rising to £1,050 a year. (Female) £693 rising to £840 a year. The appointment will be either (*a*) on Probation for permanent and pensionable employment or (*b*) on agreement with a gratuity, on satisfactory completion, at the rate of £100 for each year of service. Outfit allowance up to £45. Free passages. Liberal leave on full salary. Candidates should have had five years' drawing office experience in design, preparation of plans and contract documents for civil engineering work, including roads, aerodromes, water supply, sewerage, structures, etc. Female candidates must be *single*. Apply at once by letter, stating age, full names in block letters, and full particulars of qualifications and experience, and mentioning this paper to the Crown Agents for the Colonies, 4, Millbank, London, S.W.1, quoting on letter M.27892.D. The Crown Agents cannot undertake to acknowledge all applications and will communicate only with applicants selected for further consideration. 7536

BOROUGH OF LEYTON.
APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited for the following permanent appointment:—

GENERAL ARCHITECTURAL ASSISTANT. Grade A.P.T. IV (£555—£600 per annum plus London Weighting Allowance).

Candidates should have passed at least the R.I.B.A. Intermediate Examination and have had municipal post-war housing experience.

The appointment is subject to the National Scheme of Conditions of Service, the provisions of the Local Government Superannuation Act, 1937, and the passing of a medical examination.

Canvassing will be disqualification and candidates must disclose in their application whether to their knowledge they are related to any member or senior officer of the Council.

Applications, stating age, details of qualifications and experience, together with copies of three recent testimonials, should be delivered to the Borough Engineer and Surveyor, Town Hall, Leyton, E.10, not later than Saturday, 1st November, 1952.

D. J. OSBORNE,
Town Clerk.

Town Hall, Leyton, E.10. 7535

HOLLAND COUNTY COUNCIL.
COUNTY PLANNING DEPARTMENT.

Application is invited for the appointment of PLANNING ASSISTANT at the Boston office.

Salary is on A.P.T., Grade IV (£555×£15—£600).

Applicants for post should have had good experience in planning, survey and research work under current legislation, and should have passed the Intermediate Examination of the Town Planning Institute; further qualifications will be an advantage.

The appointment is subject to the provisions of the Local Government Superannuation Act, 1937, and the successful applicant will be required to pass a medical examination.

Applications, stating age, education, qualifications and experience, accompanied by two recent testimonials and the name of one person to whom reference may be made, should be sent to the undersigned to arrive not later than 14 days after the publication of this notice. Canvassing, either directly or indirectly, will be a disqualification.

H. C. MARRIS,
Clerk of the County Council.

County Hall, Boston, Lincs. 7553

BOROUGH OF STOCKTON-ON-TEES.
BOROUGH ARCHITECT'S DEPARTMENT.
ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of an Architectural Assistant in the Borough Architect's department, at a salary in accordance with Grade A.P.T., V (£595-£645) of the National Scale of Salaries.

Applications, on forms which can be obtained from the Borough Architect, 28, The Square, Stockton-on-Tees, should be forwarded to the undersigned not later than Wednesday, 29th October, 1952.

Housing accommodation will be made available if the successful applicant is married.

JOHN B. HAWORTH,
Town Clerk.

Barclay's Bank Chambers,
Stockton-on-Tees.
10th October, 1952. 7559

COUNTY BOROUGH OF SOUTHEND-ON-SEA
EDUCATION COMMITTEE.
MUNICIPAL COLLEGE.
Principal: T. L. MORGAN, M.Sc., A.M.I.C.E., A.M.I.Struct.E.

Applications are invited for the following full-time teaching appointment:—

STUDIO MASTER FOR ARCHITECTURE. Salary:—Burnham Technical Grade B: men, £490×£25—£765; women, £437×£20—£612, plus additions for recognised training and qualifications.

Further particulars and forms of application may be obtained from the undersigned (s.a.e. foolscap). Completed forms should be returned to the Principal, Municipal College, Victoria Circus, Southend-on-Sea, within 14 days of the appearance of this advertisement.

D. B. BARTLETT,
Chief Education Officer.

Education Office, Warrior Square,
Southend-on-Sea. 7558

BOROUGH OF GRANTHAM.
APPOINTMENT OF CHIEF ARCHITECTURAL ASSISTANT.

Applications are invited for the above appointment in the department of the Borough Engineer and Surveyor, at a salary in accordance with Grade VII, A.P.T. (£710-£785), of the National Scheme of Conditions of Service.

Applicants must be Registered Architects and be capable of preparing and supervising schemes of construction—principally housing.

Previous experience with a Local Authority is desirable, and the successful candidate will be required to take charge under the direction of the Borough Surveyor of the planning and execution of the Council's housing programme.

The appointment is subject to the Local Government Superannuation Act, 1937, and the National Scheme of Conditions of Service, and will be terminable by one month's notice on either side.

Housing accommodation will be made available if necessary.

Application, stating age, qualification, present and past employment and experience, together with the names of three persons to whom reference can be made, should be sent to Trevor J. Livesey, A.M.I.C.E., A.M.I.Struct.E., A.M.I.Mun.E., Borough Engineer and Surveyor, Guildhall, Grantham, to arrive not later than 10th November, 1952.

JOHN F. GUILE,
Town Clerk.

Guildhall, Grantham. 7552

COUNTY BOROUGH OF BOLTON.

Applications are invited for the permanent appointment of an ARCHITECTURAL ASSISTANT in the Borough Engineer and Surveyor's Department at a salary in accordance with Grade A.P.T. II of the National Scales (£495 to £540). Commencing salary will be fixed according to the candidate's experience and qualifications.

Applicants should have attended a full time course of Architecture, and have passed the Intermediate Examination of the R.I.B.A. or its equivalent.

The appointment is subject to the provisions of the Local Government Superannuation Acts.

Applications, on forms to be obtained from the undersigned, together with copies of not more than two testimonials, should be forwarded to me not later than 30th October, 1952, in envelopes appropriately endorsed.

PHILIP S. RENNISON,
Town Clerk.

Town Hall, Bolton. 7555

CORBY DEVELOPMENT CORPORATION.
QUANTITY SURVEYOR.

Applications are invited for the appointment of a Quantity Surveyor, in the Chief Architect's Department, within the scale £630×£30—£750.

The appointment is in connection with large-scale construction projects associated with the development of a New Town, and candidates should have experience in "taking off" and in the settlement of accounts.

The appointment is subject to one month's notice on either side, the provisions of the Local Government Superannuation Act, and to the passing of a medical examination.

Applications, stating age, education, training, qualifications, experience, past and present appointments and salaries, together with the names of two persons who can speak from recent personal knowledge of the applicants and to whom the Corporation can refer, must be received by the undersigned not later than 31st October, 1952. Envelopes should be endorsed "Quantity Surveyor."

The Corporation will endeavour to assist the successful candidate in the matter of housing accommodation if this is required.

R. F. BROOKS GRUNDY,
General Manager.

The Stone House, South Road,
Corby, Northants. 7530

HATFIELD RURAL DISTRICT COUNCIL.
ARCHITECT'S DEPARTMENT.

JUNIOR ARCHITECTURAL ASSISTANT required in the Department of the Architect to the Council. Salary in accordance with A.P.T., Grade I (£465×£15—£510). Forms of application may be obtained from Mr. J. H. Parker, A.R.I.B.A., 82, Great North Road, Hatfield, to whom they should be returned not later than Wednesday, 12th November, 1952.

E. F. CULL,
Clerk to the Council.

16, St. Albans Road, Hatfield, Herts.
9th October, 1952. 7545

FIFE COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT

Applications are invited for appointment as **ARCHITECTURAL DRAUGHTSMAN.** Salary Scale £480 rising by £20 to £600 per annum. Candidates must have had experience in an Architectural Drawing Office and be quick and accurate draughtsmen. Applications, stating age, experience, etc., and enclosing copies of recent testimonials, to be lodged with the undersigned not later than 31st October, 1952.

J. M. MITCHELL,
County Clerk.

County Buildings, Cupar-Fife.
6th October, 1952. 7538

IMPERIAL WAR GRAVES COMMISSION require, for employment in France, **LEADING ARCHITECTURAL ASSISTANTS.** Salary £623 by 6 increments to £733 plus foreign local allowance at present £385 for married man or £200 for single man. All candidates should be up to at least Inter. R.I.B.A. standard, skilled draughtsmen capable of preparing half inch scale drawings and full size details from Architect's design, and capable of supervising the work of a small team of draughtsmen.

Apply:—Appointments Officer, Imperial War Graves Commission, Wooburn House, Wooburn Green, High Wycombe, Bucks. 7537

PEMBROKESHIRE COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.
APPOINTMENT OF ASSISTANT QUANTITY SURVEYOR.

Applications are invited for the appointment of an Assistant Quantity Surveyor at the salary in accordance with Grade V(a), A.P. & T. Division (£625×£20—£685).

The appointment will be subject to the National Scheme of Conditions of Service for Local Government Officers, to the Local Government Superannuation Act, 1937, and to the passing of a medical examination, and will be terminable by one month's notice on either side.

Applicants for the post should hold a recognised qualification and be experienced in taking off, under supervision, the measurement of all trades or works in progress, the preparation of interim certificates, and the checking of sub-contractors' accounts.

Forms of application can be obtained from the County Architect, County Offices, Haverfordwest, and completed applications, together with copies of not more than two recent testimonials, should be returned to him not later than Saturday, 8th November, 1952.

Canvassing, directly or indirectly, will be a disqualification.

H. LOUIS UNDERWOOD,
Clerk of the County Council.

County Offices, Haverfordwest.
10th October, 1952. 7557

LONDON ELECTRICITY BOARD.
JUNIOR QUANTITY SURVEYOR.

Applications are invited for the above position in the Construction Branch of the Chief Engineer's Department in Central London.

Applicants should have had good general office training and experience in working-up in quantities. The successful applicant will work under the direction of a Chartered Quantity Surveyor.

The post is graded under Schedule "C" of the National Joint Board agreement as Grade IX—£400 per annum, rising to £579 12s. per annum, inclusive of London allowance.

Application forms obtainable from Establishments Officer, 46, New Broad Street, E.C.2, to be returned completed by 29th October, 1952. Please enclose addressed foolscap envelope and quote ref. V/1525/A. on all correspondence. 7556

Tenders for Contracts

6 lines or under, 12s. 6d.; each additional line, 2s.

HUYTON-WITH-ROBY URBAN DISTRICT COUNCIL.

ST. JOHN'S ROAD (EAST) HOUSING ESTATE.

Tenders are invited for the erection of 17 pairs of semi-detached houses, type "B," three bedroom. The Contract is for 7 pairs of North aspect and 10 pairs of South aspect types.

Bills of Quantities, drawings and form of Tender may be obtained from the Surveyor, Council Offices, Derby Road, Huyton, on payment of two guineas deposit which will be returned on receipt of a bona-fide tender not subsequently withdrawn and the return of all documents supplied.

Sealed Tenders, in the official envelope provided, bearing no name or mark, must be received by the Clerk of the Council not later than 10 a.m. on Monday, 27th October, 1952.

The Council do not bind themselves to accept the lowest or any tender.

H. E. H. LAWTON,
Clerk of the Council.

Council Offices, Huyton.
10th October, 1952. 7554

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, or the employment, is excepted from the provisions of the Notification of Vacancies Order, 1952.

ARCHITECTURAL ASSISTANTS, with 3 to 5 years' experience, required immediately. Good salary and prospects. 5-day week. Write to Messrs. J. M. Sheppard & Partners, 38, Bedford Place, W.C.1, giving particulars of age, qualifications, experience, and salary required. 7504

ARCHITECT capable of accepting responsibility and producing contemporary work required for general practice. Good office accommodation and working conditions, with group working. Salary according to experience. S. Morrison, A.R.I.B.A., Derwent House, Full Street, Derby. 7513

JUNIOR ARCHITECTURAL ASSISTANT required, some office experience essential. State experience and salary required. Deane Skurray, 22, Minster Street, Reading. 7516

SENIOR ASSISTANT required in Midlands office, fully qualified and with considerable office experience, to carry through work of varied nature from sketch plan to completion. Salary about £700. Box 7532.

LONDON Architects require **SENIOR ASSISTANT ARCHITECTS,** fully experienced in design and constructional details of Multi-storey Buildings, including Flats, Hospitals, Office Buildings, etc. Salaries from £1,000 to £1,500 per annum. Write, giving full particulars, to Box 7531.

D. C. DENTON-SMITH & PARTNERS, Chartered Architects, Surveyors, of 40, Regent Street, Cambridge, will shortly have vacancies for **ARCHITECTURAL ASSISTANTS,** qualified by examination or experience, in connection with local authority and other housing, ecclesiastical, agricultural and industrial buildings, etc. Applicants must be sufficiently competent to handle projects throughout with minimum supervision. Salaries up to £500, depending upon capabilities. Written applications, giving particulars, are invited. 7541

ARCHITECT'S ASSISTANT required. Must be good draughtsman: working drawings, details, and good knowledge of construction. Experience in supervision an asset. Write, stating previous experience and salary required, to H. S. Goodhart-Rendel & Partners, 13, Crawford Street, London, W.1. 7549

SENIOR ARCHITECTURAL ASSISTANT required for general and commercial practice. Must be thoroughly experienced, able to prepare all drawings and take charge of jobs from sketch plans to completion, including preparation of specification.

Also **QUANTITY SURVEYOR'S ASSISTANT** (up to Intermediate standard R.I.C.S.). Experience in working up and final accounts essential.

Apply, stating age, experience, qualifications, and salary required, to Messrs. Duncan Clark & Beckett, F./L.R.I.B.A., F.R.I.C.S., Architects and Surveyors, 7, West Stockwell Street, Colchester. 7550

Architectural Appointments Wanted

ARCHITECTURAL ASSISTANT (31) married. Requires suitable position on surveying and maintenance staff of large firm. Seven years' experience, including domestic conversions and levelling. Energetic and keen. Box 577.

ARCHITECTURAL ASSISTANT, experienced, seeks London position. Box 7528.

ARCHITECTURAL ASSISTANT (23), resitting Inter. R.I.B.A., design office trained, with 4 years' experience in office dealing with Local Government and general practice, seeks position with responsibility, preferably in West Country. Box 579.

A. R.I.B.A., A.M.T.P.I., 25 years' good general London experience, including central government, desires Partnership or responsible post business firm or other organisation in England, Ireland or Overseas. Capital available. Box 7539.

A. R.I.B.A. (25), single, requires position as Senior Assistant in progressive office in the Birmingham Area. Four years' varied experience, including surveys, levelling and site supervision. Box 586.

YOUNG woman, Inter. R.I.B.A. and studying for Final, seeks post as **JUNIOR ASSISTANT,** London or Surrey. Some office experience. Box 580.

ASSISTANT, 5½ years' general experience, studying for Final, seeks position offering good prospects and a measure of responsibility. Box 581.

A. R.I.B.A., Dipl. Arch. (23), single, just released H.M. Forces, requires position in London office; contemporary outlook. Available immediately. Box 582.

SENIOR ASSISTANT, school trained, with 6 years' office experience, capable of handling contracts to final account, requires interesting and responsible position. Box 583.

YOUNG LADY, studying interior and industrial design, seeks drawing office experience in Architect's or other suitable office. Would consider some clerical work. Box 7551.

SENIOR ASSISTANT ARCHITECT, long experience in domestic, office, and industrial building, seeks post in London or Home Counties. Box 584.

A.R.I.B.A., A.M.T.P.I., (Dipl. Arch. S.P.Dip.), single (31), seeks interesting post with responsibility and prospects. Any locality considered. Box 585.

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.

STRAMIT BOARDS, LTD., require a TECHNICAL REPRESENTATIVE for the Southern Counties. Essential qualifications are:—Sound building knowledge, ability to interview at all levels, keenness and residence on territory. Write, giving full details of previous experience and stating whether car owner, to The Manager, Packet Boat Dock, Cowley Peachey, Uxbridge, Middx. 7497

SECRETARY, Sh. Hd. Typist required three half days per week. Experience in Architect's office essential. Small office, Chancery Lane. State salary. Box 7525.

EXPERIENCED DRAUGHTSMAN, with electrical and mechanical knowledge, capable of executing full size and working drawings, required by eminent firm of Electric Light Manufacturers. Salary £600-£700. Box 7534.

CIVIL ENGINEERING ASSISTANT required to work under chartered Civil Engineer. Must be experienced in general factory development and have knowledge of surveying, foundation work, etc. Applicants must live within travelling distance of Birmingham. Apply: Personnel Manager, Tube Investments (Group Services) Limited, Rocky Lane, Aston, Birmingham, 6. 7560

Services Offered

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

A. R.I.B.A., with good all round experience, requires part-time or free lance work to help his growing practice. MUSeum 9106. 7205

TYPEWRITING, DUPLICATING.—Bills of Quantity, Specifications, etc., expertly typed/duplicated. Express service. Work collected/delivered. JOSEPHINE HALL & PARTNERS, 501/2, GRAND BUILDINGS, TRAFALGAR SQUARE, W.C.2. WHI. 6411/2, and 87, High Street, Tunbridge Wells. Telephone: 1255. 7005

BUILDING SURVEYOR, A.R.I.C.S. (34), seeks progressive position, U.K. or abroad. Drawing and specifications for alterations and new work; negotiations with authorities; arranging contracts; supervision; interim payments and final accounts. Building and site surveys; schedules of dilapidation and condition; pricing; management repairs; Compensation (Defence) and War Damage claims; Building Society and structural reports, etc. Used to working on own initiative, and experience includes commercial, house, and agricultural properties, etc. Box 7540.

SPECIFICATIONS, B./Quantities, Estimates, etc. Typewritten or duplicated by qualified experts. Reasonable terms. Miss Stone, 447, Strand, W.C.2. REM. 5984. 7543

SECRETARY, with 5 years' experience in Architect's office, requires part-time position. Box 7548.

For Sale or Wanted

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

RECONDITIONED EX-ARMY HUTS, and manufactured buildings. Timber, Asbestos, Nissen type, Hall type, etc. All sizes and prices. Write, call, or telephone, Universal Supplies (Belvedere), Ltd., Dept. 25, Crabtree Manorway, Belvedere, Kent. Tel.: Erith 2948. 6803

ARCHITECT, wishing to retire, would sell well-established Provincial Practice, together with living accommodation, if required. Please reply in the first instance to Box 7470.

EIGHT Corinthian Carved Capitols with Shaft on Base, and Pilasters 9 ft. high, each four sections. Offers. Brownless, Whinfield Hall, Darlington, Co. Durham. 7527

WANTED.—Copies of the "Architects' Journal" for 25th September, at published price. Box 7542.

Miscellaneous

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

A. J. BINNS, LTD., Specialists in the supply and fixing of all types of Fencing, Gates and Cloakroom Equipment. Harvest Works, 96/107, St. Paul's Road, N.1. Canonbury 2061.

FENCING FOR ALL PURPOSES supplied and erected. Established over 100 years. Cloakroom equipment also a speciality. Write Parker, Winder & Achurch, Ltd., 80, Broad Street, Birmingham, 1. (MIDland 5001.) 6526

AUTHORS invited to submit MSS all types (including Poems) for publication. Stockwell, Ltd., Elms Court, Ilfracombe. (Estd. 1898.) 7544

Educational Announcements

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

R.I.C.S., I.A.A.S., and I.Q.S. Exams.—Postal Courses conducted by the Ellis School (Principal: A. B. Waters, M.B.E., G.M., F.R.I.B.A.), 103B, Old Brompton Road, S.W.7. KEN. 4477/8/9. Descriptive Booklet on request. 7020

R.I.B.A. and T.P.I. EXAMS.—Stuart Stanley (Tuton Sch. of Arch., Lon. Univ.) and G. A. Crockett, M.A./B.A., F./A.R.I.B.A., M./A.M.T.P.I. (Prof. Sir Patrick Abercrombie in assn.), prepare Students by correspondence tuition. 10, Adelaide Street, Strand, W.C.2. TEM. 1603/4.

UNIVERSITY OF LONDON.—A course of three Lectures on "Architecture et Sport" will be delivered by Signor P. Vietti Violi (Milan) at 5.30 p.m. on 28th, 30th and 31st October, at University College (Architecture Theatre), Gower Street, W.C.1. The lecture will be delivered in French.

Admission free, without ticket.

JAMES HENDERSON,
Academic Registrar.
7529

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