THE ARCHITECTS' JOURNAL

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THE ARCHITECTURAL PRESS

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

AA	Architectural Association, 34/6, Bedford Square, W.C.1.	Museum 0974
AAI	Association of Art Institutions. Secy.: W. Marlborough Whitehead, "Dyneley," Castle Hill Avenue, Berkhampstead, Herts.	
ABS	Architects' Benevolent Society. 66, Portland Place, W.1.	Langham 5721
ABT	Association of Building Technicians. 5, Ashley Place, S.W.1.	Victoria 0447-8
ACGB	Arts Council of Great Britain. 4, St. James' Square, S.W.1.	Whitehall 9737
ADA	Aluminium Development Association. 33, Grosvenor Street, W.1.	Mayfair 7501/8
APRR	Association for Planning and Regional Reconstruction. 34, Gordon Square, W.C.1.	Euston 2158-9
ArchSA	Architectural Students' Association. 34/36, Bedford Square, W.C.1.	
ARCUK	Architects' Registration Council. 68, Portland Place, W.1.	Langham 8738
AScW	Association of Scientific Workers. 15, Half Moon Street, Piccadilly, W.1.	Grosvenor 4761
BAE	Board of Architectural Education. 66, Portland Place, W.1.	ham 5721
BATC	Building Apprenticeship and Training Council. Lambeth Bridge House, S.E.1.	Reliance 7611, Ext. 1706
BC	Building Centre. 26, Store Street, Tottenham Court Road, W.C.1.	Museum 5400
BCC	British Colour Council. 13, Portman Square, W.1.	Welbeck 4185
BCCF	British Cast Concrete Federation. 17, Amherst Road, Ealing, W.13.	Perivale 6869
BCIRA	British Cast Iron Research Association. Alvechurch, Birmingham.	Redditch 716
BDA	British Door Association. 10, The Boltons, S.W.10.	Fremantle 8494
BEDA	British Electrical Development Association. 2, Savoy Hill, W.C.2.	Temple Bar 9434
BIA	British Ironfounders' Association. 145, Vincent Street, Glasgow, C.2.	Glasgow Central 2891
BIAE	British Institute of Adult Education. 29, Tavistock Square, W.C.1.	Euston 5385
BID	Building Industries Distributors. 52, High Holborn, W.C.1.	Chancery 7772
BINC	Building Industries National Council. 11, Weymouth Street, W.1.	Langham 2785
BOT	Board of Trade. Millbank, S.W.1.	Whitehall 5140
BRDB	British Rubber Development Board. Market Buildings, Mark Lane, E.C.3.	Mansion House 9383
BRS	Building Research Station. Bucknalls Lane, Watford.	Garston 2246
BSA	Building Societies Association. 14, Park Street, W.1.	Mayfair 0515
BSI	British Standards Institution. 28, Victoria Street, S.W.1.	Abbey 3333
BTE	Building Trades Exhibition. 4, Vernon Place, W.C.1.	Holborn 8146/7
CABAS	City and Borough Architects Society. C/o Johnson Blackett, F.R.I.B.A., Civic Centre, Newport, Mon.	Newport 5491
CAS	County Architects' Society. C/o F. R. Steele, F.R.I.B.A., County Hall, Chichester.	Chichester 3001
CCA	Cement and Concrete Association. 52, Grosvenor Gardens, S.W.1.	Sloane 5255
CCP	Council for Codes of Practice. Lambeth Bridge House, S.E.1.	Reliance 7611
CDA	Copper Development Association. Kendals Hall, Radlett, Herts.	Radlett 5616
CIAM	Congrès Internationaux d'Architecture Moderne. Doldertal, 7, Zurich, Switzerland.	
COID	Council of Industrial Design. Tilbury House, Petty France, S.W.1.	Abbey 7080
CPRE	Council for the Preservation of Rural England. 4, Hobart Place, S.W.	Sloane 4280
CUC	Coal Utilization Council. 3, Upper Belgrave Street, S.W.1.	Sloane 9116
CVE	Council for Visual Education. 13, Suffolk Street, Haymarket, S.W.1.	Reading 72255
DGW	Directorate General of Works, Ministry of Works, Lambeth Bridge House, S.E.1.	Reliance 7611
DIA	Design and Industries Association. 13, Suffolk Street, S.W.1.	Whitehall 0540
DPT	Department of Overseas Trade. Horseguards Avenue, Whitehall, S.W.1.	Trafalgar 8855
EJMA	English Joinery Manufacturers' Association (Incorporated), Sackville House, 40, Piccadilly, W.1.	Regent 4448
EPNS	English Place-Name Society. 7, Selwyn Gardens, Cambridge.	
FAS	Faculty of Architect and Surveyors. 8, Buckingham Palace Gdns., S.W.1.	Sloane 2837
FASS	Federation of Association of Specialists and Sub-Contractors, Artillery House, Artillery Row, London, S.W.1.	Abbey 7232
FBI	Federation of British Industries. 21, Tothill Street, S.W.1.	Whitehall 6711
FC	Forestry Commission. 25, Savile Row, W.1.	
FCMI	Federation of Coated Macadam Industries. 37, Chester Square, S.W.1.	Sloane 1002
FDMA	The Flush Door Manufacturers Association Ltd. Trowell, Nottingham.	Ilkeston 623
FLD	Friends of the Lake District. Pennington House, nr. Ulverston, Lancs.	Ulverston 201
FMB	Federation of Master Builders. 26, Great Ormond Street, Holborn, W.C.1.	Chancery 7583
FPC	The Federation of Painting Contractors, St. Stephen's House, S.W.1.	Whitehall 3902
FRHB	Federation of Registered House Builders. 82, New Cavendish Street, W.1.	Langham 4041
FS (Eng.)	Faculty of Surveyors of England. 67, Oxford Street, W.1.	Gerrard 0021
GC	Gas Council. 1, Grosvenor Place, S.W.1.	Sloane 4554
GG	Georgian Group. 27, Grosvenor Place, S.W.1.	Sloane 2844
HC	Housing Centre. 13, Suffolk Street, Pall Mall, S.W.1.	Whitehall 2881
IAAS	Incorporated Association of Architects and Surveyors. 75, Eaton Place, S.W.1.	Sloane 5615
ICA	Institute of Contemporary Arts. 17-18, Dover Street, Piccadilly, W.1.	Grosvenor 6186
ICE	Institution of Civil Engineers. Great George Street, S.W.1.	Whitehall 4577
IEE	Institution of Electrical Engineers. Savoy Place, W.C.2.	Temple Bar 7676
IES	Illuminating Engineering Society. 32, Victoria Street, S.W.1.	Abbey 5215

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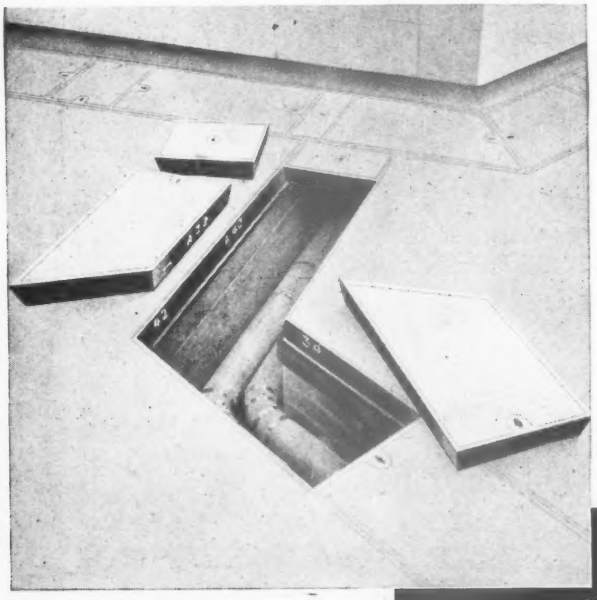

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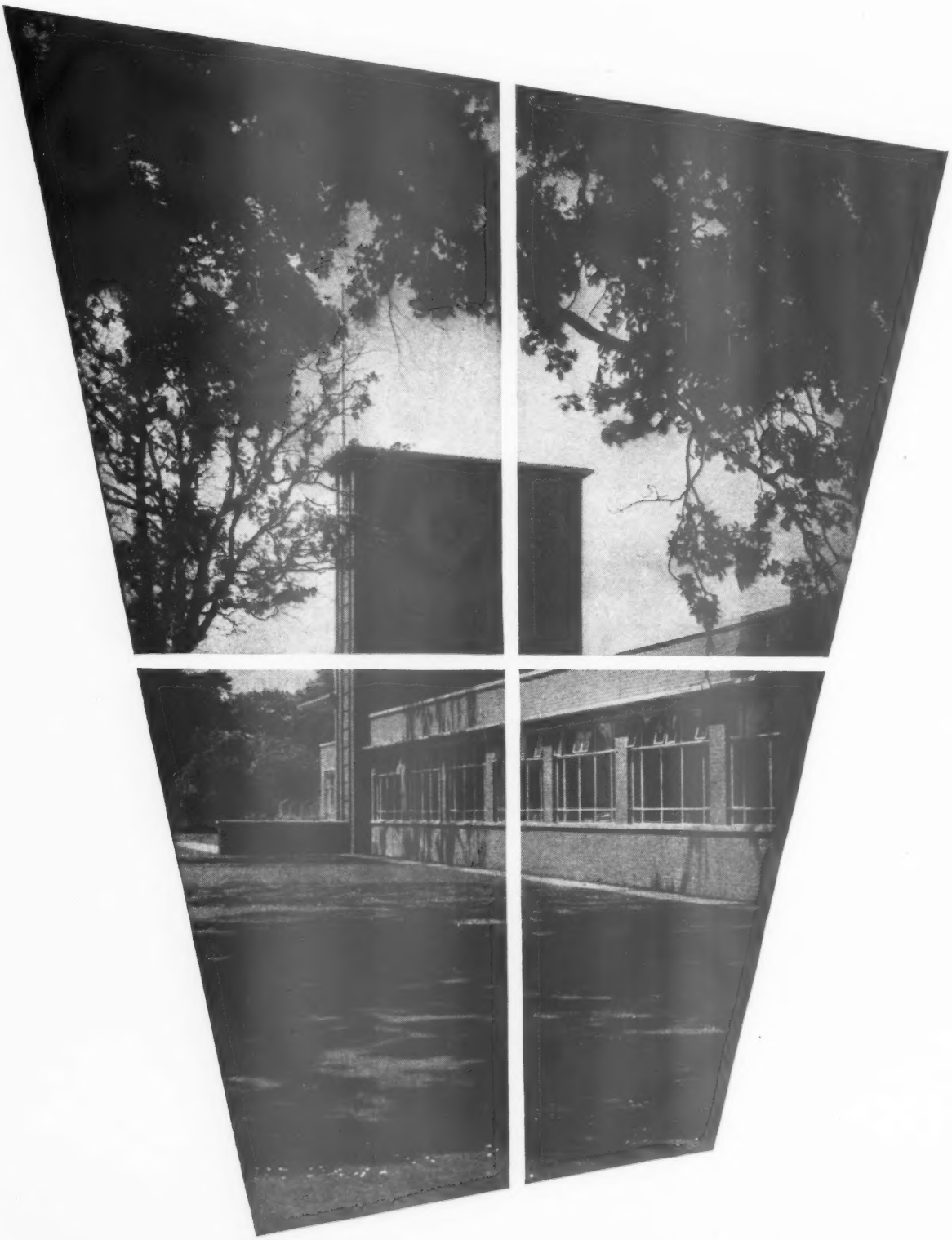
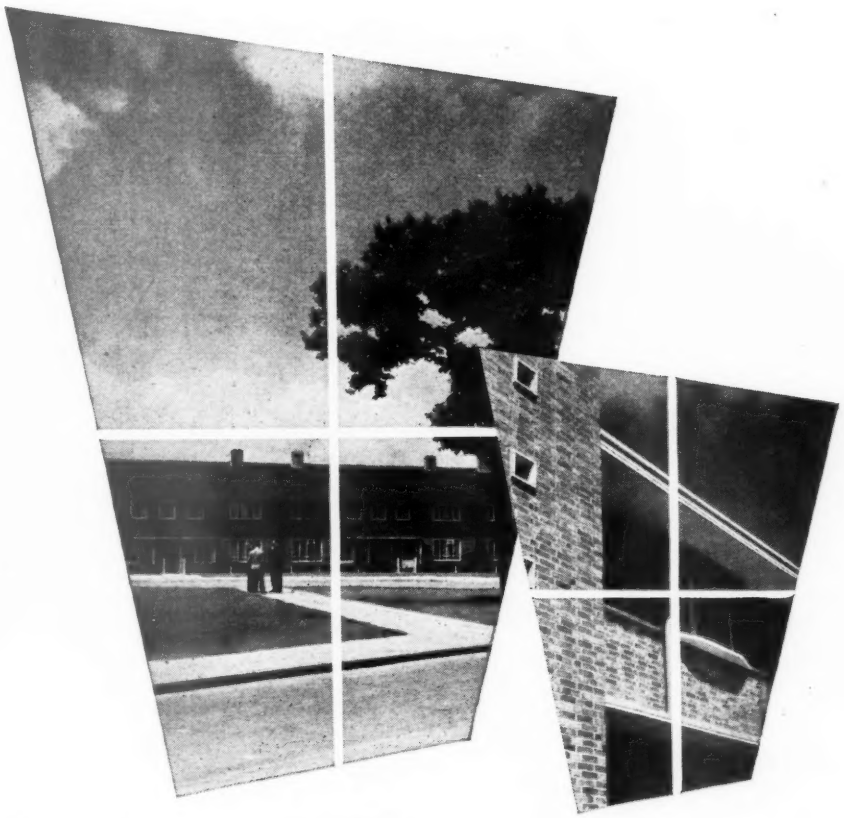
Youngman's Factory, Manor Royal, Crawley
Architect—Albert E. Barnard, A.R.I.B.A. Contractor—James Longley & Co. Ltd.

The housing estate. West Green Neighbourhood, Crawley.
By the Chief Architect and staff Crawley Development Corporation. Contractor — Richard Costain Ltd.

Hazelwick County Secondary School
Architect—J. Catchpole, A.R.I.B.A., County Architect East Sussex County Council. Contractor—James Longley & Co. Ltd.





Crawley: Williams & Williams are doing most of the windows

Factories, schools, houses—hundreds of houses. Crawley New Town is growing up fast and the majority of the metal windows — all rustproofed by the zinc spray process, are by Williams & Williams. This includes the medal winning Northgate Estate. (Architect: A. G. Sheppard Fidler F.R.I.B.A., A.M.T.P.I. Lately chief Architect to the Corporation.) Everywhere the Architects have called for pleasant spacious windows — for the grass is green in Crawley, and worth seeing and the sun shines clear through fresh clean air. It's good to be alive in Crawley.

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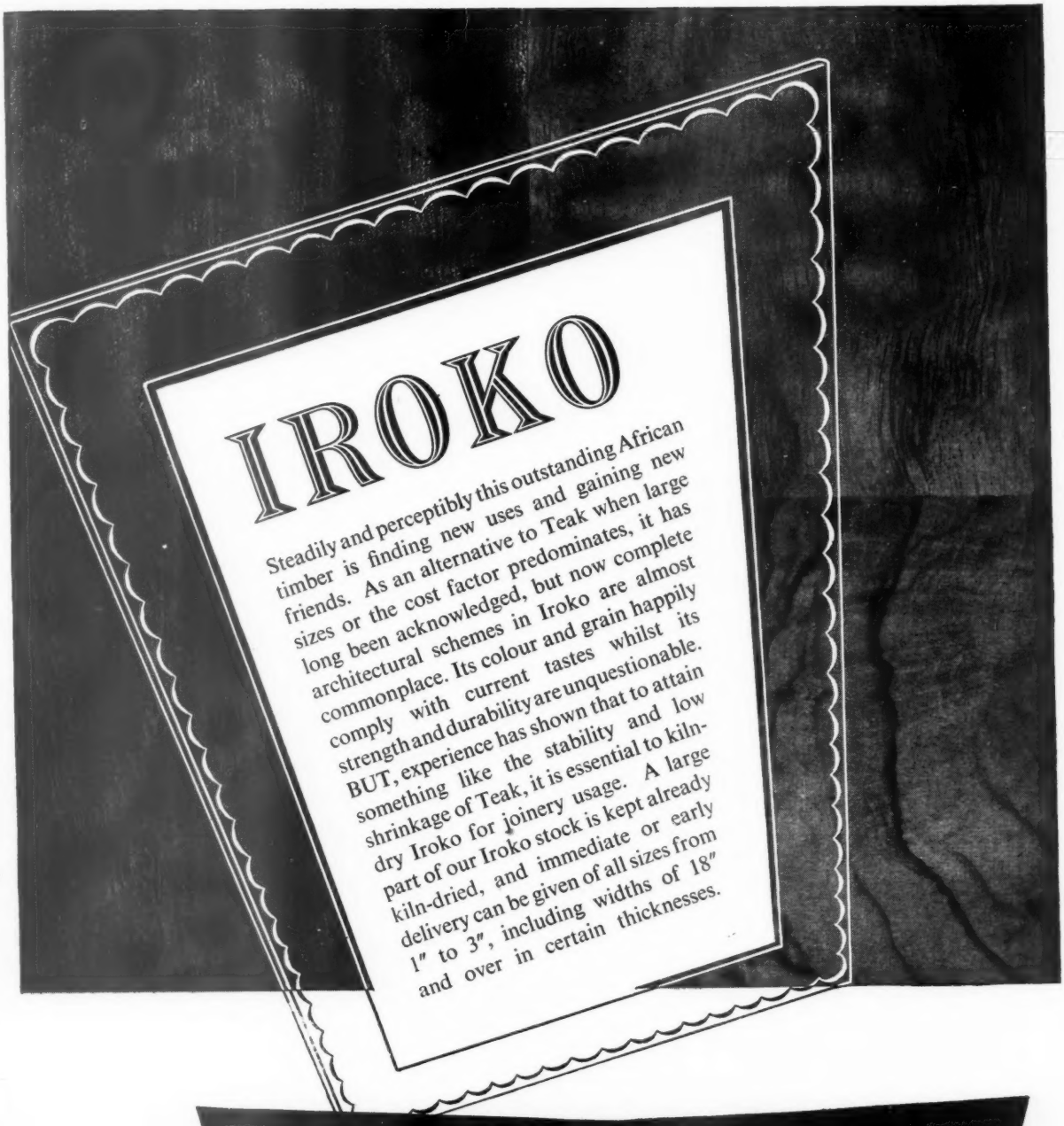

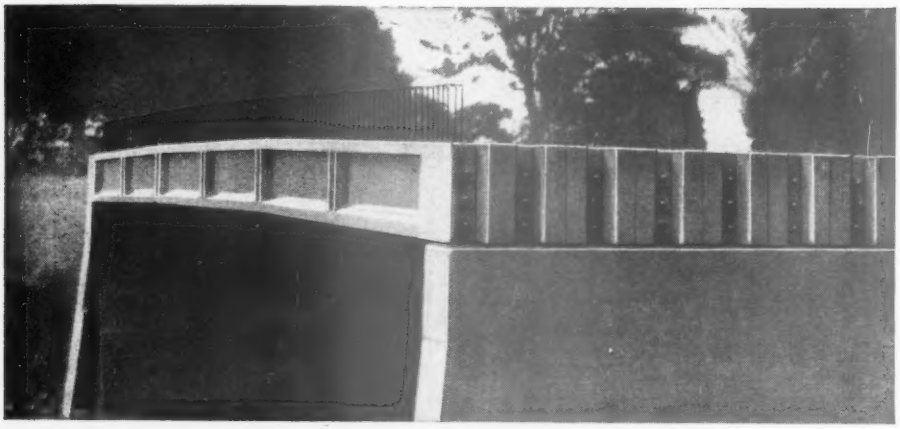

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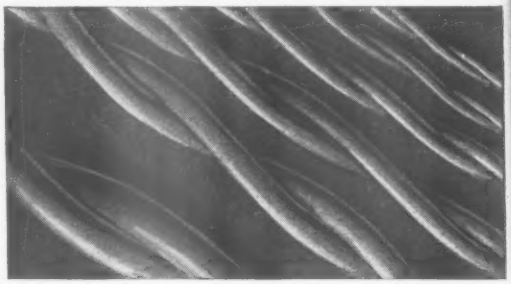

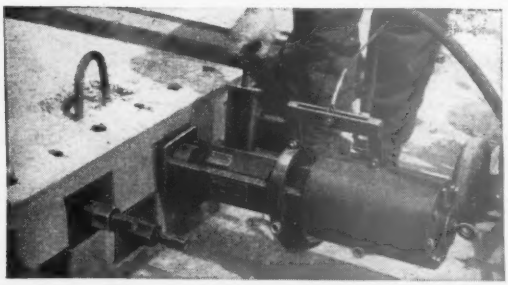

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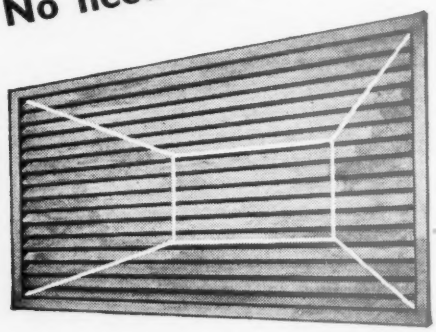

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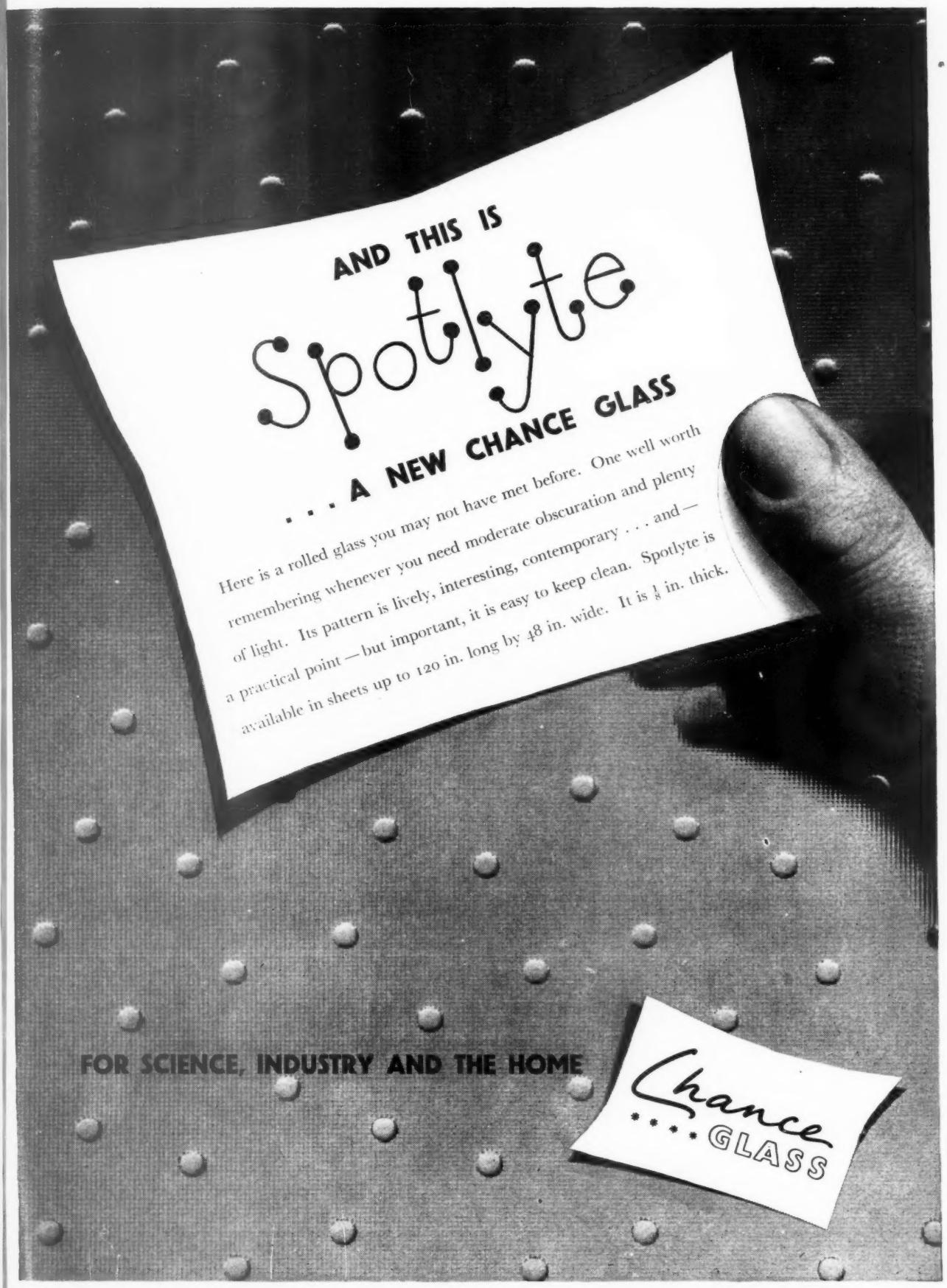

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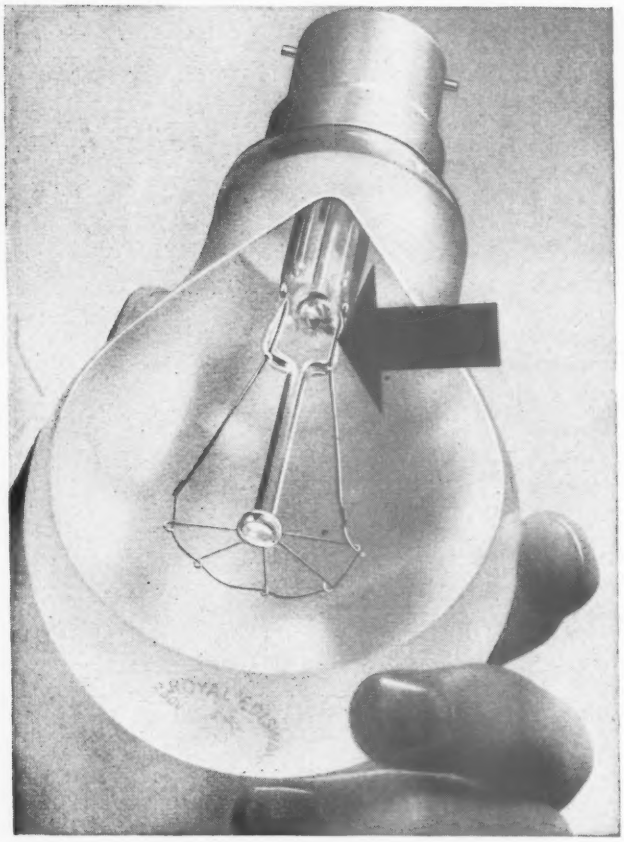

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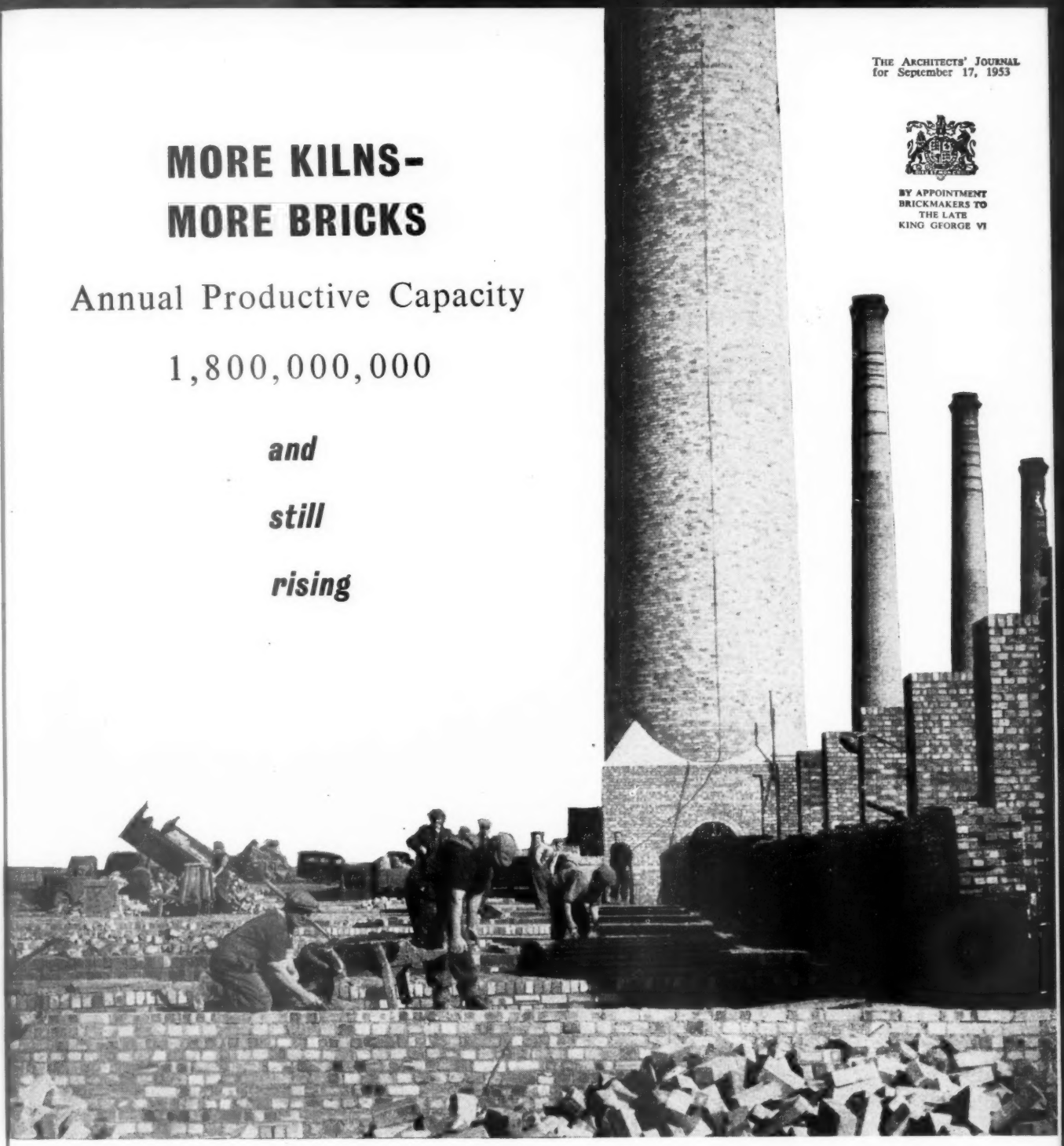

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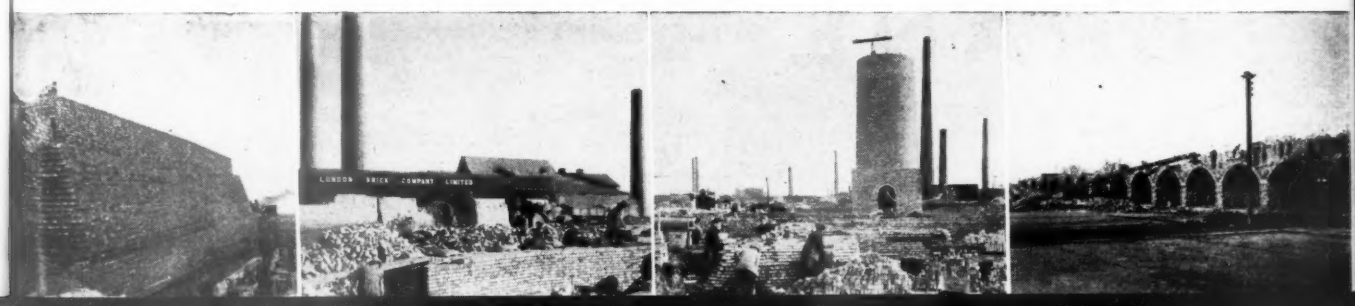
PHORPRES



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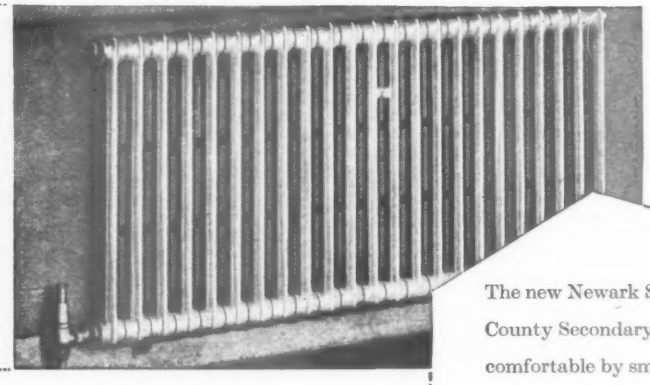

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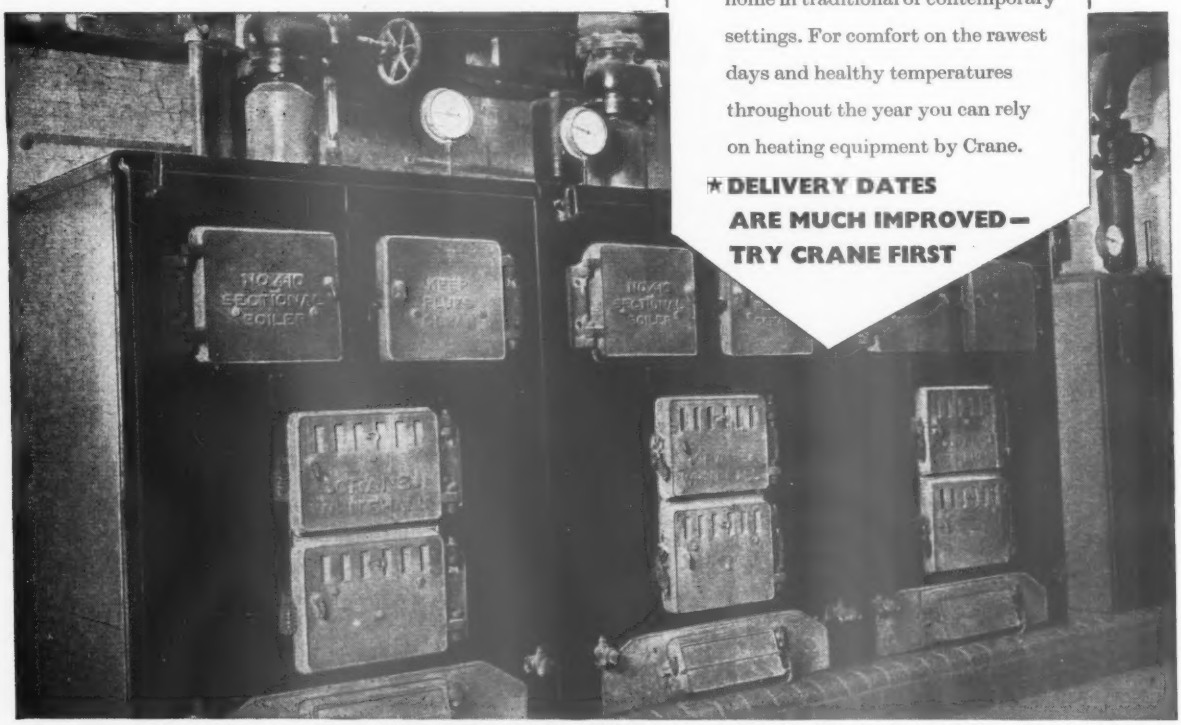

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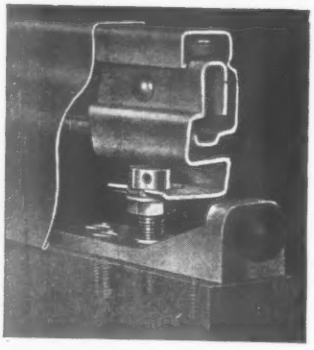

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Where to go for information about Gas

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

SCOTTISH GAS BOARD: 26, Drumsheugh Gardens, Edinburgh, 3. Edinburgh 34331/5.
NORTHERN GAS BOARD: 30, Grainger Street, Newcastle-upon-Tyne, 1. Newcastle-upon-Tyne 26101.
NORTH WESTERN GAS BOARD: Bridgewater House, 60, Whitworth Street, Manchester, 1. Manchester Central 8121.
NORTH EASTERN GAS BOARD: Bridge Street, Leeds, 2. Leeds 32571/8.
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BUILDING EXHIBITION, OLYMPIA
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Offices of the Alexandra Transport Co. Ltd., Glasgow.
Architects: Cullen, Lockhead & Brown.
Contractors: Hugh Broadley Ltd., Glasgow.
Plastering Sub-Contractor: H. Sutton, Paisley.

In this building "ZONAPLAX" Vermiculite Insulating Plaster was used extensively to increase the thermal insulation and fire protection properties of walls.

"ZONAPLAX" Undercoat and Finishing Grades consist of gypsum plaster and exfoliated vermiculite. Both are supplied ready mixed, requiring the addition of clean water only, and are applied by normal plastering methods. For anti-condensation purposes always finish with "ZONAPLAX" Finishing Plaster or, alternatively, where a hard surface is required, "PARISTONE" Wall Finishing Plaster may be employed.

FIRE PROTECTION: The very nature of the ingredients of "ZONAPLAX", gypsum and vermiculite, ensures excellent fire protection. A 4½" brick wall plastered on both sides with ½" "ZONAPLAX" has a four hour fire resistance compared with the two hour fire resistance grading if plastered with traditional materials.

LIGHTNESS AND CRACK RESISTANCE: "ZONAPLAX" is only one-third the weight of traditional plasterwork and, therefore, reduces the dead load of walls and partitions to which it is applied. Also, because of its inherent resiliency, it can more effectively resist cracking through structural movement.

THERMAL INSULATION: "ZONAPLAX" has a thermal resistance three times greater than that of ordinary gypsum plaster materials containing sand.

"ZONAPLAX" Undercoat Plaster being applied over brickwork in the usual manner.

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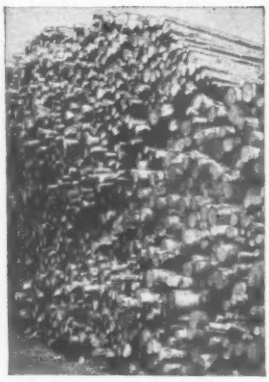

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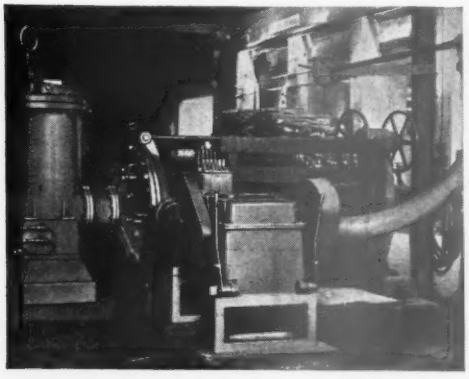
Converting wood chips to wood pulp.



Beating the wood pulp.

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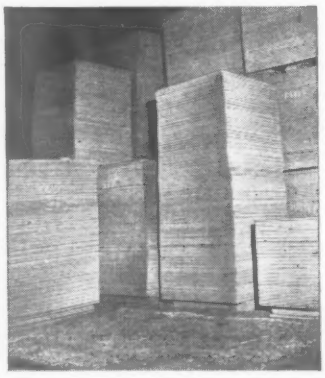

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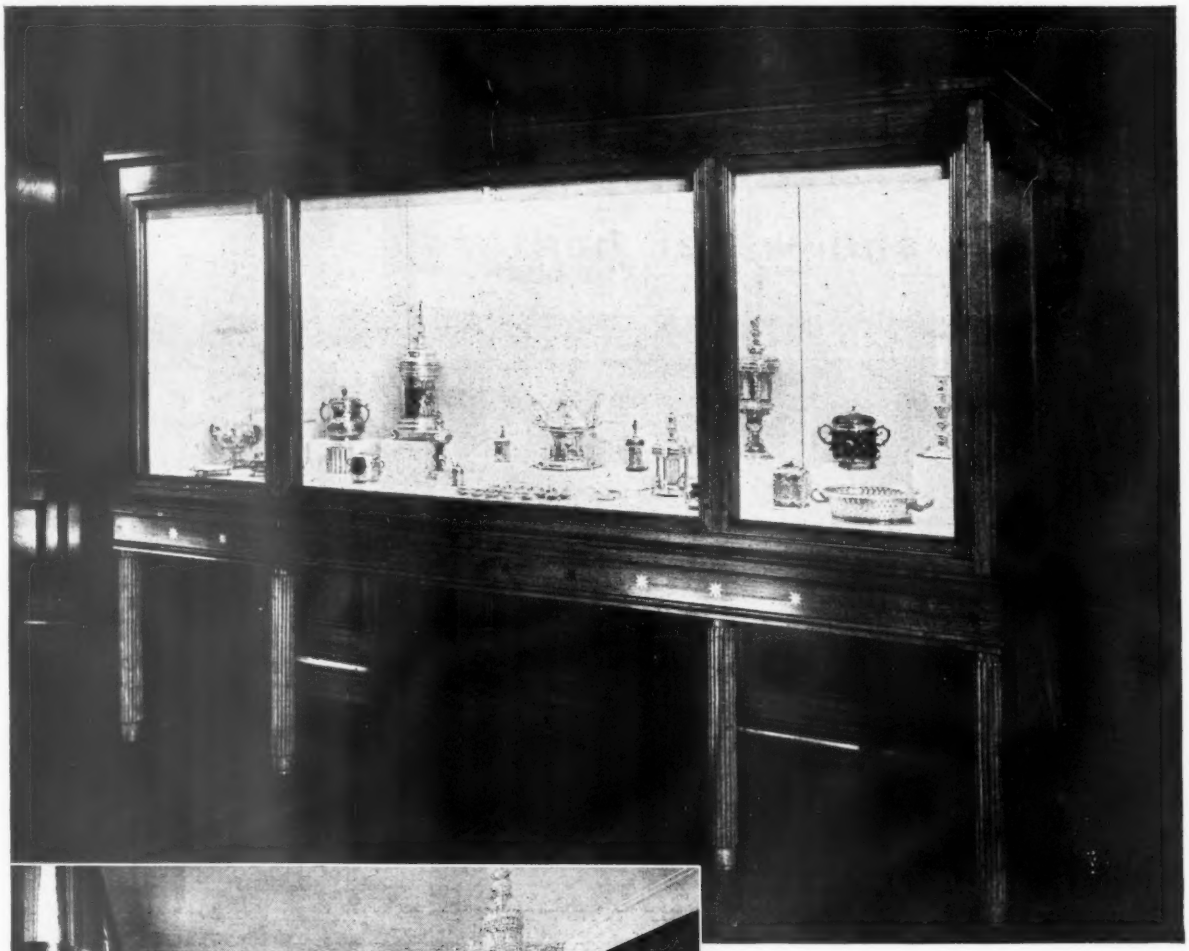

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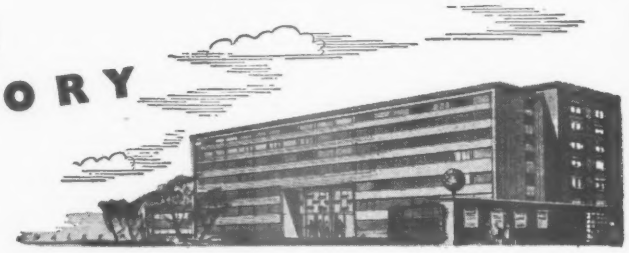

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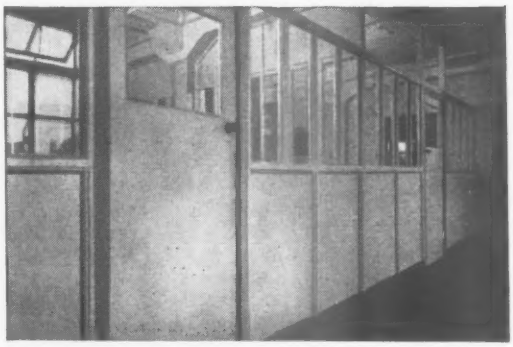

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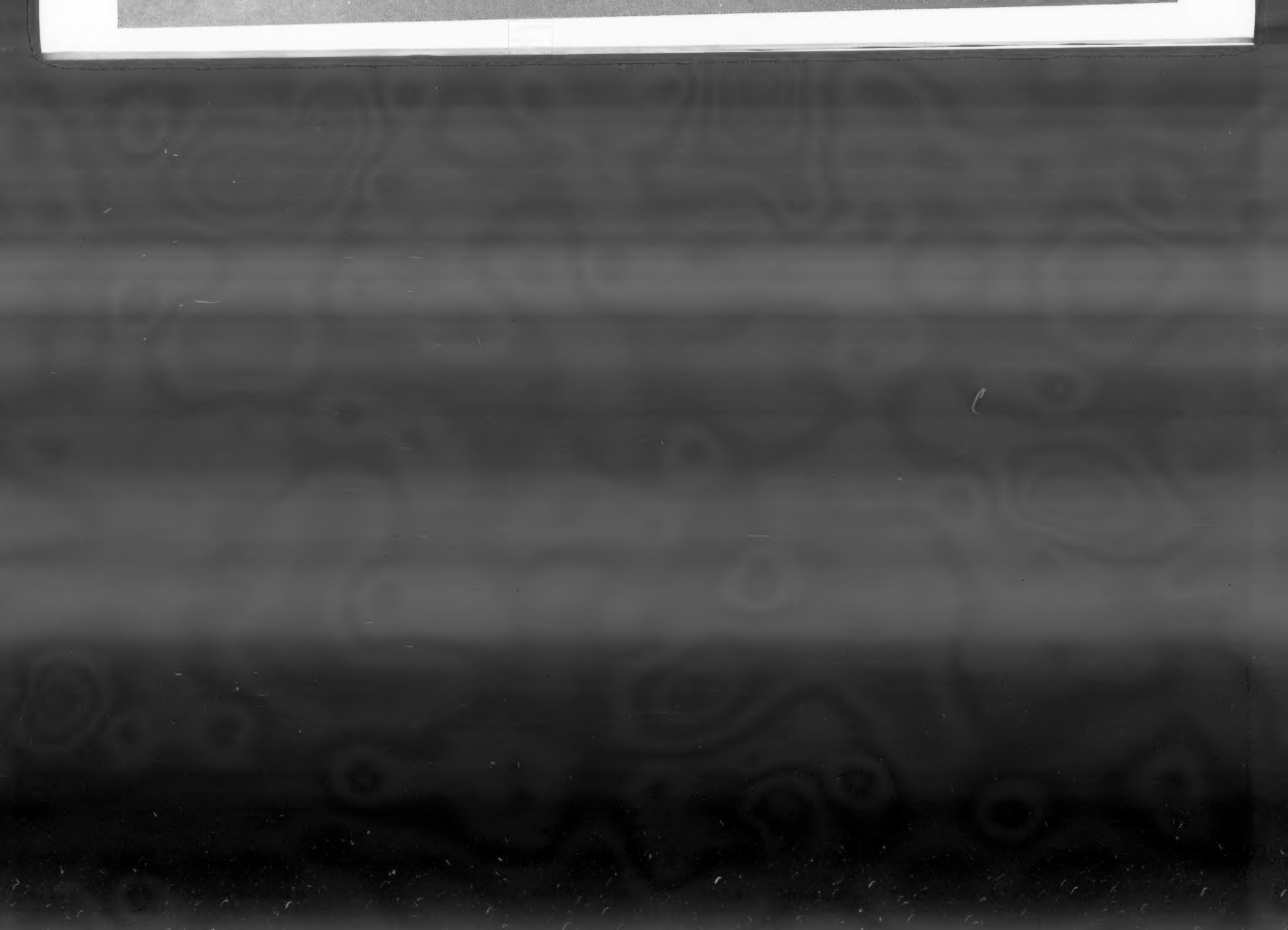

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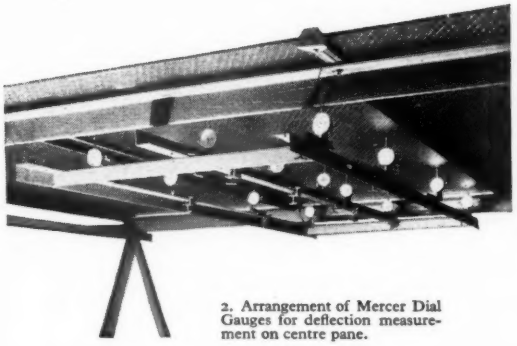
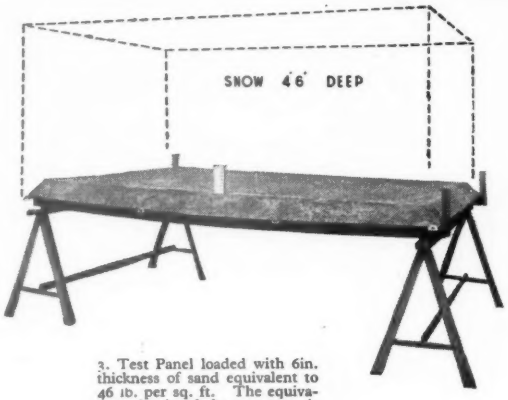
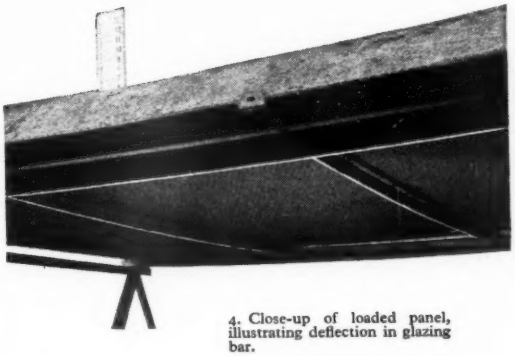


2. Arrangement of Mercer Dial Gauges for deflection measurement on centre pane.



3. Test Panel loaded with 6in. thickness of sand equivalent to 46 lb. per sq. ft. The equivalent depth of frozen snow is outlined.



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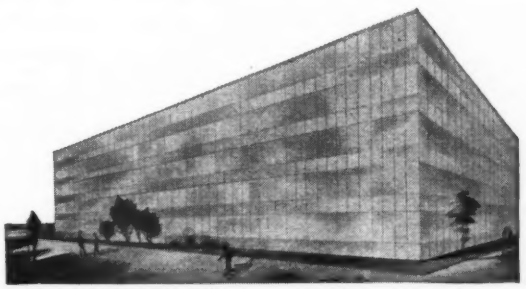
Exhaustive tests of this system were also made against suction, by turning over the three squares of glass with the stalk of the Tee uppermost. Failure occurred at 35 lbs. per sq. ft.



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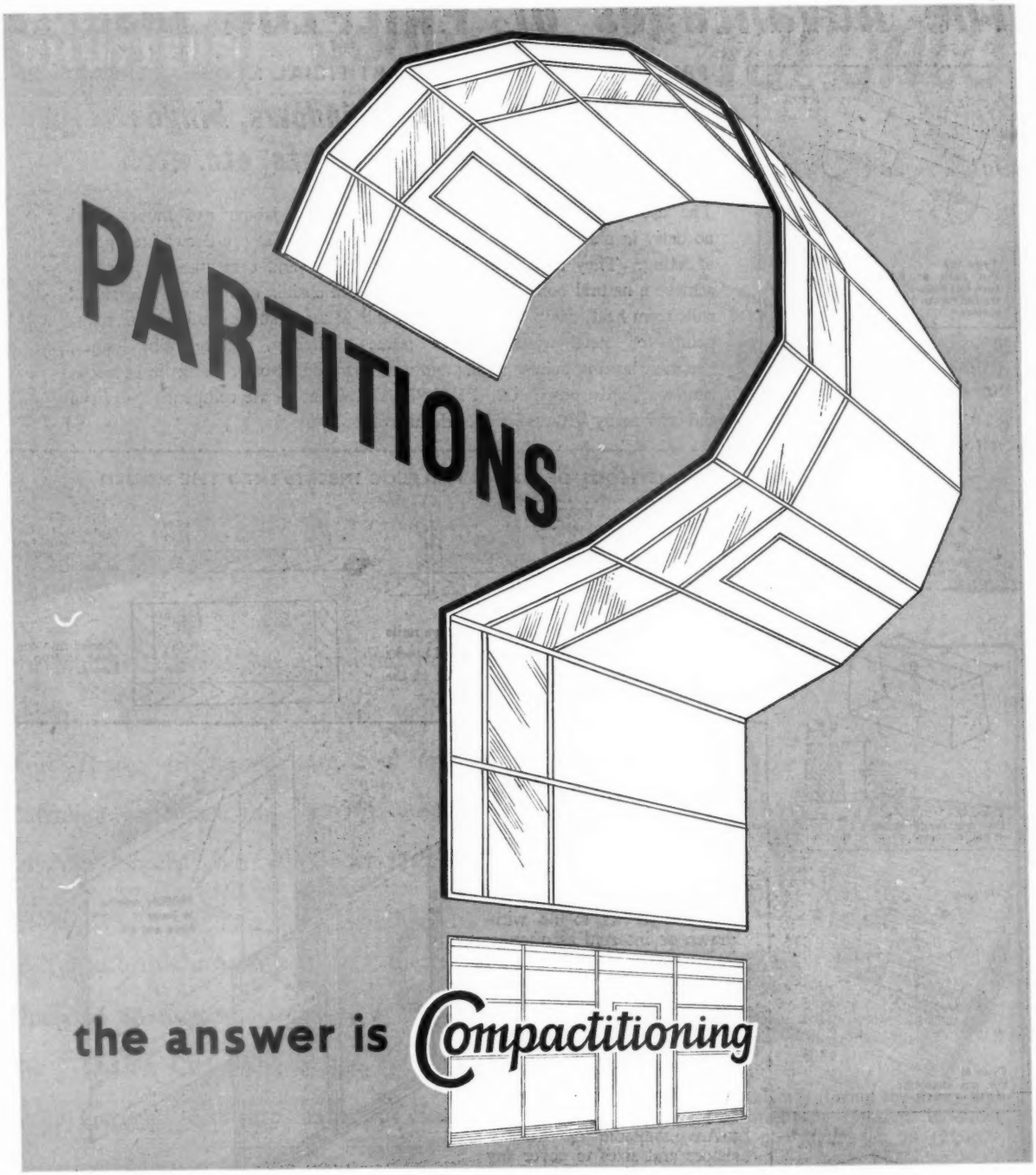

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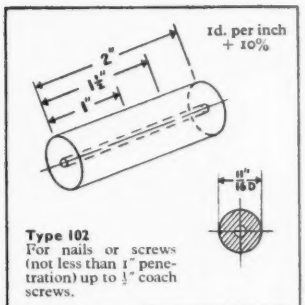

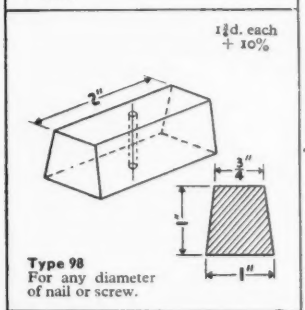

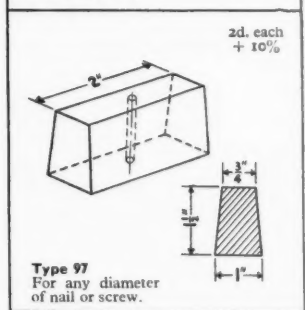

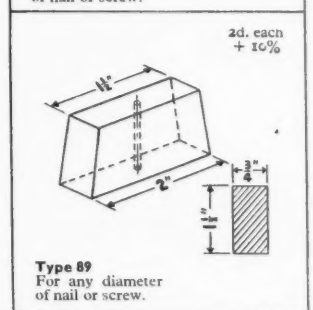

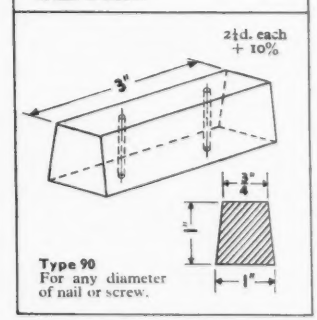

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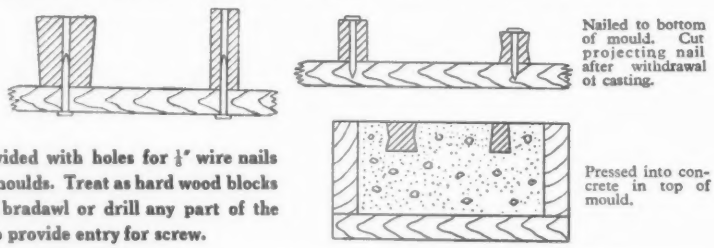

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- Can be specified for use by manufacturers of all types of pre-cast work.
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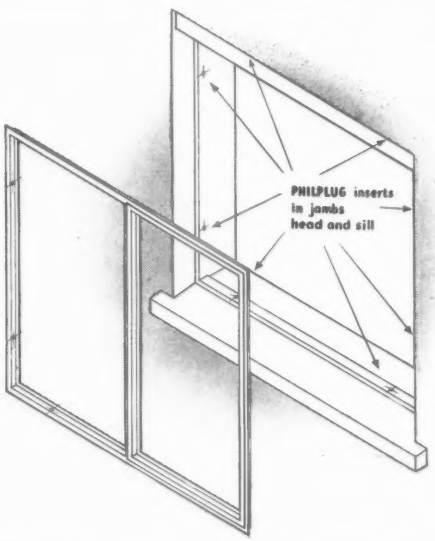

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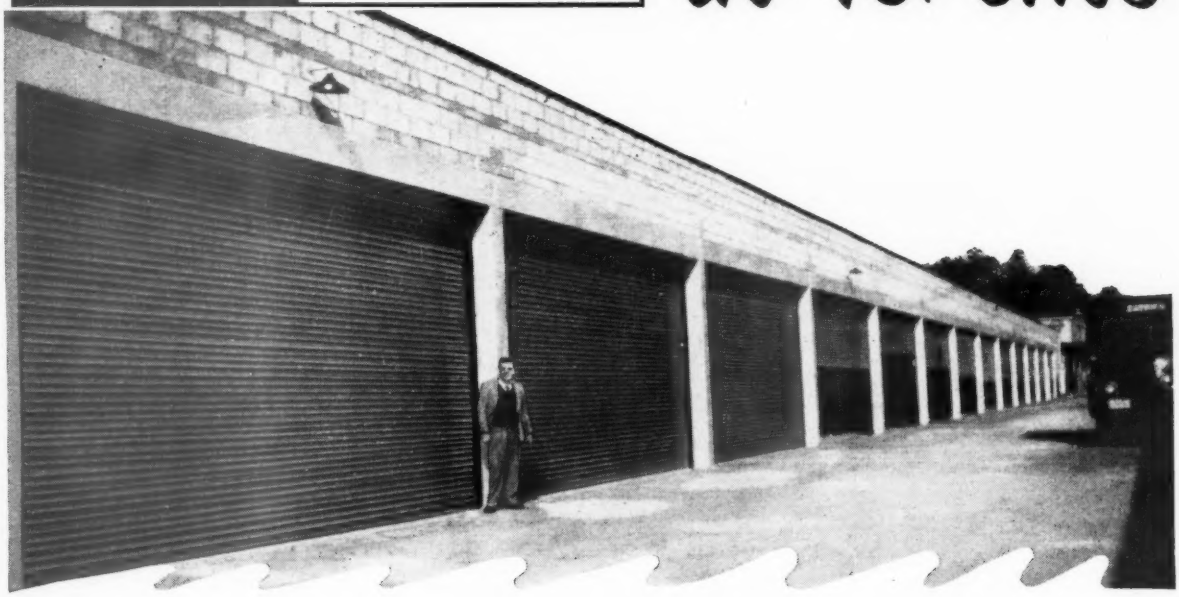

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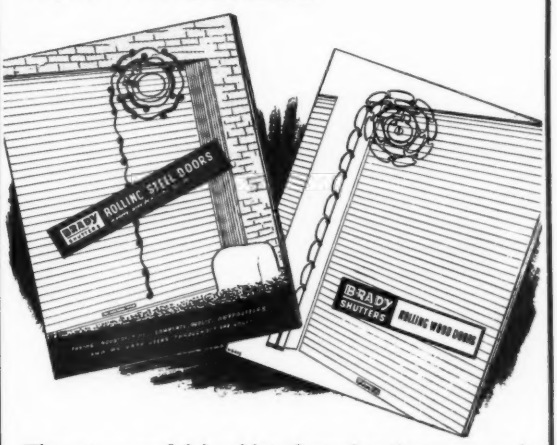

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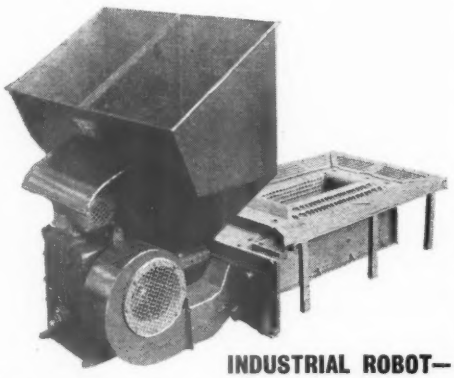

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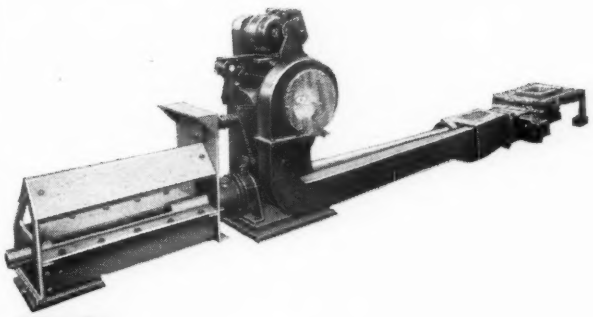

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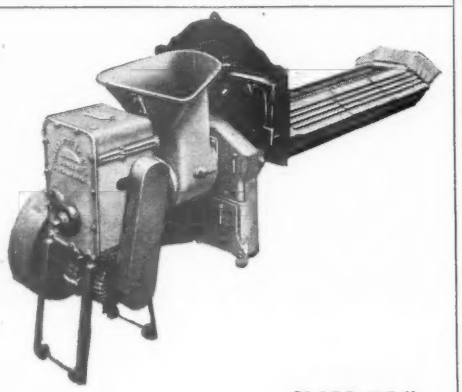

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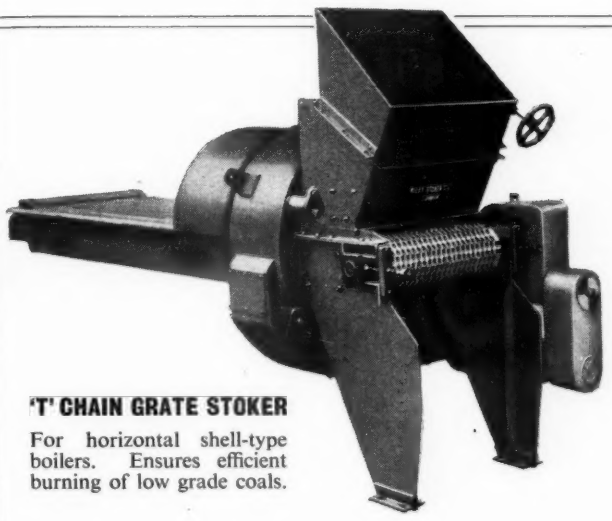

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OFF TO HEAVEN

ASTRAGAL was fortunate enough to be able to spend a few hours at Farnborough last week amongst those remarkable design jobs which look good standing still and even better when they move, a criticism which does not normally apply to our sphere of design.

*

Surrounded by those caricatures of ex-RAF types — double-breasted blazers, suede shoes, caps with sewn-up peaks — and an atmosphere of either paraffin or burnt rubber, ASTRAGAL did his best to preserve due nonchalance while observing some delightfully effortless flying, coupled with the sonic bangs which the public demands.

To a very lay eye, indeed, it is interesting to see how the external finish is still improving—so that a Spitfire, for instance, seems by comparison as rough as the Wright brothers' job. Yet, surprisingly, even on the delta designs, the finish is not as machine-smooth as one would expect and, even more surprising, on the more conventional jets not all screws and rivets are flush.

*

The most impressive were, of course, the jets—Canberras, Hawker Hunters, the Vickers-Armstrongs Valiant bomber, and the Boulton & Paul and A. V. Roe's delta designs. The most extraordinary plane was the coathanger Handley Page Victor; extraordinary, not because of its wing-shape, but because of the almost *enceinte* body and the afterthought of a tail. The most acrobatic exhibit was an Auster Aiglet trainer, which gets nearer to bird-manœuvrability than anything yet built. And lastly, the most significant, perhaps, the Sea Mew, by Short Brothers and Harland Limited, which, designed and built in one year (pause to think, brother) is a first attempt at real simplification and economy in design and maintenance—a process not unfamiliar to architects—which is no doubt pretty necessary when 'planes become progressively simpler on the outside and more and more incredibly intricate within.

*

It is a pity that good design amongst manufacturers so frequently stops at the manufactured article. Farnborough aerodrome is, of course, an architectural horror, and some of the designs for stands in the exhibition hall could have been improved if the designers had taken one or two lessons from the end-products—notably Napier's cream and streamlined job, and Vickers-Armstrong's brown and bulbous décor. Typically, Rolls Royce, with virtually no stand save white-painted railings and brown hand-rail, were as good as any.

*

It is a chastening afterthought to realize that most of these superb planes are designed for war. It seems hard to believe. Expertly handled, they appear to be made solely to satisfy man's delight in quick and graceful flight—let's hope that's all they are really for.

LIGHTING ROMANCE

"Speeding north from London to Whitby late on Tuesday night (September 8)," stated the Press handout, "was Miss June Elizabeth Armstrong, exhibitions organizer at Heals, Tottenham Court Road. She had a date with her bridegroom, Mr. Neville Broadhurst, at the altar in Christ Church, Ugthorpe, Miss Armstrong's home town."

*

And if the church was shrouded in darkness when she arrived, no doubt at a touch of a switch dozens of Mazda 200 watt "Silverlight" lamps would help this romantic Ugthorpe couple to find each other. Because, of course, Miss Armstrong had just organized an exhibition at Heals (pre-view on September 8, open until October 10) which shows the British Thomson-Houston Company's ideas on how to light the home—the home, in this case, being made largely of Heals's well-bred furniture.

*

The exhibition is called "Lighting to Measure," and consists of standard,

Margaret E. Jones, part-author with H. F. Clark of the Architectural Press *book "Indoor Plants and Gardens," which is one of the fifty UK books on view at the Fourth International Exhibition of Book Design, was responsible for the plant decorations at the exhibition. The exhibition will be open on week-days until September* 30 *at* 7, *Albemarle Street, W.*1*—the headquarters of the organizers, the National Book League.*

table or wall and ceiling lights sensibly placed in typical rooms, with metal tape measures showing how far lights should be from the working plane. No way of measuring the strength of light bulb required is suggested. Instead, a list of recommended strengths is given, all—as you can imagine—nearly twice the strength normally used by the falsely economizing householder. (But Heals have no shabby furniture to hide.)

*

This exhibition contains nothing the architect shouldn't already know, but it may be a useful parade ground for instructing reluctant clients in elementary light drill. Also worth seeing, while in Tottenham Court Road, is the highly significant notice displayed in a shop's window amongst a mass of contemporary furniture: "For the connoisseur," it reads, "many fine pieces of quality reproduction furniture available at Greatly Reduced Prices, 2nd floor."

HOSPITAL COMPETITION

Just off Tottenham Court Road, at the Building Centre, are the seventy-odd entries for the Doha Hospital Competition. Architects from Abyssinia, Australia, Rhodesia, as well as some of the competition regulars from Britain, have entered, but their designs are not very exciting. The bulk of them show an economy of line and the most non-committal elevational treatment it can be possible to achieve. Only occasionally a very cautious concession to the building's middle-eastern setting is made.

*

Once again, I'm afraid, the competition system appears to be a rather extravagant way of procuring designs for a building, and it also allows little consideration to those vital factors of building materials (all right, Editor, I mean elements) or labour available, or of costs and the types of construction possible.

*

Nevertheless, congratulations to the winner, John Harris, whose design is shown on pages 341 to 351.

REACTION REARS . . .

When Brian Bunch left Southport to become borough architect of Northampton the post of Southport borough architect was left unfilled. It is now rumoured that the Southport Council are considering putting the architect's department under the borough engineer. No decision is to be made, apparently, until the next council meeting on October 6, when we hope wise and progressive action will be taken and a new borough architect appointed. ASTRAGAL has yet to discover any architectural work by a borough engineer's department which can compete with the best work of architectural departments working under a properly qualified architect.

NOT BAFFLED BY SCIENCE

The potted versions of the various British Association papers don't always mean very much to me, the snag being that scientists are very good at telling other scientists what is going on, but in terms unintelligible to the layman. I admit that there is much research quite meaningless save to the expert, and the public only comes in when some end use emerges. Then we all prattle about gamma rays and geiger counters without really knowing what they do or why. Now Mr. Ritchie Calder has had a good slug at the scientists, accusing them of being illiterate and inarticulate.

High Finsbury

This is one of three star-shaped, twelve-storey, flat blocks (118 ft. high) under construction at Old Street, Finsbury. The architect, Joseph Emberton, believes that these blocks, which will provide 180 flats (at a density of 200 people to the acre), will be the highest in the country. Certainly they are the highest flat blocks to be built in London since the building known as Queen Anne's Mansions was put up in Westminster in 1888.

He may be right, but in the building industry we are better off than we were before the war. There is still a tendency for BRS to add too many qualifications to a simple statement, but at least we can understand most of the terms used, and no scientist (or any other professional type) can be expected to produce simple and universal rules. We, of course, are on the receiving end of all this: are *we* any good at telling the public what we are for?

MACKINTOSH EXHIBITION

ASTRAGAL slipped over the border recently and had a look at the Mackintosh exhibition in Edinburgh, which was presented under the auspices of the Saltire Society and the Arts Council. Dr. Thomas Howarth, author of the recently published book on Mackintosh, collected and arranged the exhibits, which gave a complete picture of the life work of this remarkable man.

*

In addition to his flower studies, textile designs, furniture, craftwork and water colours, the most important of his architectural drawings were on view. These included a complete set of his competition drawings for Liverpool Cathedral. The Glasgow School of Art was splendidly illustrated by photostat copies of the drawings, a fine photomural of the west façade, and two models, one of the complete building to $\frac{1}{8}$th scale and the other of the library to $\frac{3}{4}$ in. scale.

*

Perhaps of greatest interest were the specially constructed models of unbuilt projects. A model of the concert hall project for the 1901 Glasgow Exhibition, with its shallow saucer dome, called to mind the 1951 Dome of Discovery. The other model was of the *Haus eines Kunstfreundes*—the competition design for a House for a Lover of Art, which received second prize, and earned Mackintosh his continental reputation.

*

Londoners will be glad to know that the exhibition, minus the furniture—unfortunately, will be seen at the RIBA headquarters in December. Arrangements are also being made for it to be shown at architecture schools throughout the country.

ASTRAGAL

POINTS FROM THIS ISSUE

The Editors

THE COMPETITION SYSTEM

WITH several competition results declared, or about to be so, the JOURNAL returns to its plea that assessors should write comments upon all the designs submitted. This may appear a tall order, particularly to that overworked man, the assessor. Yet there are very good reasons for all the competitors receiving a fairly detailed criticism.

This week, on page 342, we print in full the report of Alexander Gray, of W. H. Watkins, Gray and Partners, the assessor of the Doha Hospital competition. Within the limit of four hundred words he has made a reasonable comment upon the three prize-winning designs. Compared with one or two other recent reports which were of a negligible nature it deserves some praise. But in it little reference is made to the seventy-odd designs which failed. Doesn't this lack of comment ignore the potentially great educative aspect of the competition system?

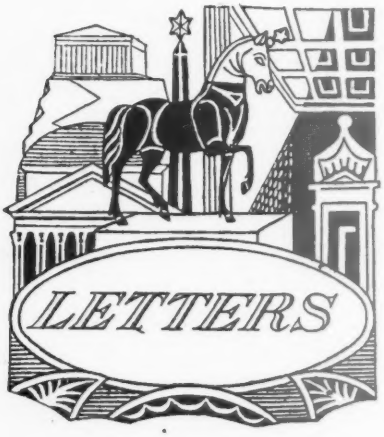
The competition system, as it is run today, has one and a half virtues. It provides a wonderful opportunity for the unknown but hard-working architect to make a name for himself and to set up practice. There is also a fifty-fifty chance that a better design is built than if a firm of architects are commissioned to design the job from scratch.

There are, however, several disadvantages. First, the client-architect relationship is complicated by a third party, the assessor. Second, the competition system is a slow process which may prove expensive in mere running costs to the client. Third, and most serious, the system is extremely extravagant in skilled man-hours; which the results may not always justify. The same number of total man-hours as worked by seventy competitors, if put by a team of architects into the same problem, might well result in a better design, fully detailed and ready for erection.

With the recent rapid growth in the complexity of design and construction, the competition system has become more and more uneconomic as regards the best use of the architect's time. It is to be hoped, however, that the competition system will continue because of its value to the unknown architect and because it is a possible source for the "brain-

wave " design by some genius which can act as a yardstick by which to measure more mundane design-production methods. For the production of monuments and the monumental in architecture, if such are wanted, there is probably no better method of finding a good design.

There is, however, one course of action which can considerably compensate for the alleged waste of time of the competition system. If the opportunity is taken in the assessor's report to criticize all the designs submitted, a badly-needed educative value to the competition system can be introduced. Carefully organized, such criticism should not take much longer time than the assessor already spends when judging the entries. The value of frank criticism, not only to the competitors, but also to the profession at large, in the help it would give towards the development of architectural theory, would be incalculable. We wait with interest and some impatience to learn of an assessor with the diligence and single-mindedness to undertake this task.



L. C. Lomas, F.R.I.B.A.

R. Wormell, Borough Engineer and Surveyor, Warwick

Eric de Maré, A.R.I.B.A.

Salaried Architects

SIR,—I refer to the article "Salaried Architects—Case for the Local Authority" in your JOURNAL dated September 3, 1953, and the last paragraph of your own comment on the same page.

I fail to see how the publication of an article which brings forward a charge of irresponsibility can be consistent with a desire to help to form a sound and progressive opinion.

L. C. LOMAS.

Worcester.

Shops at Warwick

SIR,—I note that in your edition for August 27 you incorporated a sketch of a drawing of a block of shops with flats which are now in course of erection on my council's housing estate.

I should have thought as a matter of courtesy you would have asked if I had any objection to the reproduction of this drawing, or at least notified me that it was your intention to reproduce it.

Also it would have been advisable if you had checked up on the wording to the caption underneath the reproduction which is very misleading. A fully qualified architect is employed in my department.

I would appreciate it if you would publish this letter in the next edition of your JOURNAL, and if ASTRAGAL ever cares to visit Warwick I shall be only too pleased to show him our post-war efforts in housing.

R. WORMELL.

Warwick.

The Age of Plenty: How to Get It

SIR,—Mr. Jackson asks me to divulge my plan for bringing about the age of plenty. It is Social Credit. This is a term for the philosophy, the analysis of the present social-economic system and the financial proposals for adjusting that system put forward since 1920 in a number of books by the engineer and costing expert, C. H. Douglas, who died last year. I especially recommend his "Monopoly of Credit." For a specifically architectural and town-planning approach to the subject I recommend my own "Britain Rebuilt" published during the war.

Social Crediters are not under the spell of John Hargrave. Mr. Hargrave wound up the Social Credit Party over two years ago in the belief that the struggle for a sane, economic system was a lost and hopeless cause. Many of his followers disagreed with him and formed a new body called the Company of Free Men, of which I was elected secretary. We exist solely to establish Social Credit. We have a number of architects among our members, notably our chairman. This is significant.

Interested readers should write to me for further information at 46, Gloucester Terrace, W.2,—or, better, they should call in at the Smoke Room Bar of the Holborn Restaurant between 6 and 9 o'clock on the second Monday of any month, where and when the Company holds an informal rendezvous. Everyone is welcome.

ERIC DE MARE.

London.

N E W S

PLANNING

The Public's Preference

Professor Sir William Holford told the Town and Country Planning summer school at Bristol University, last week, that the planner's job was often made more difficult because people tended to prefer familiar designs to modern development trends.

"Not only in housing," he said, "but in many of the activities with which town and country planning is concerned, as much interest is being shown in quality as in quantity. The economic outlook is far from favourable, and it may be partly for the reason that it has been black for so long that we can no longer afford to sustain the all-out effort, and the quantitative approach. In exports, inventions, industrial production and control, we are beginning to break away from the philosophy of the queue, and to discover new ways of doing things."

The difficulty for the contemporary planner, he went on, was that past achievements not only set a high standard and attached to themselves all the sentiments of familiarity, but in this small island they were practically ubiquitous. When the time came for redevelopment the general feeling was that something equally familiar and picturesque should take the place of the old. But one could not plan informality, nor design a group of buildings to act as a foil to one of the famous set-pieces. One could only design a set-piece of one's own, giving it the character of harmony or contrast as the occasion demanded.

HARLOW

Town Centre Begun

Work on the first stages of construction of the town centre of the new town of Harlow has already started and the building of the market square and the first 50 shops will begin next spring.

It is intended that the development of the town centre will be progressive and it is now being planned in detail. It is expected that applicants for the first shops and offices will move in during 1955. Other buildings to follow will include civic, public, and government premises, department stores, more shops, show rooms, and banks, as well as the development of the headquarters of regional organizations. Factories covering over 300,000 sq. ft. are already in production and a further 1,000,000 sq. ft. of factory space is under construction, or at present the subject of negotiation.

COVENTRY

Funds for Cathedral

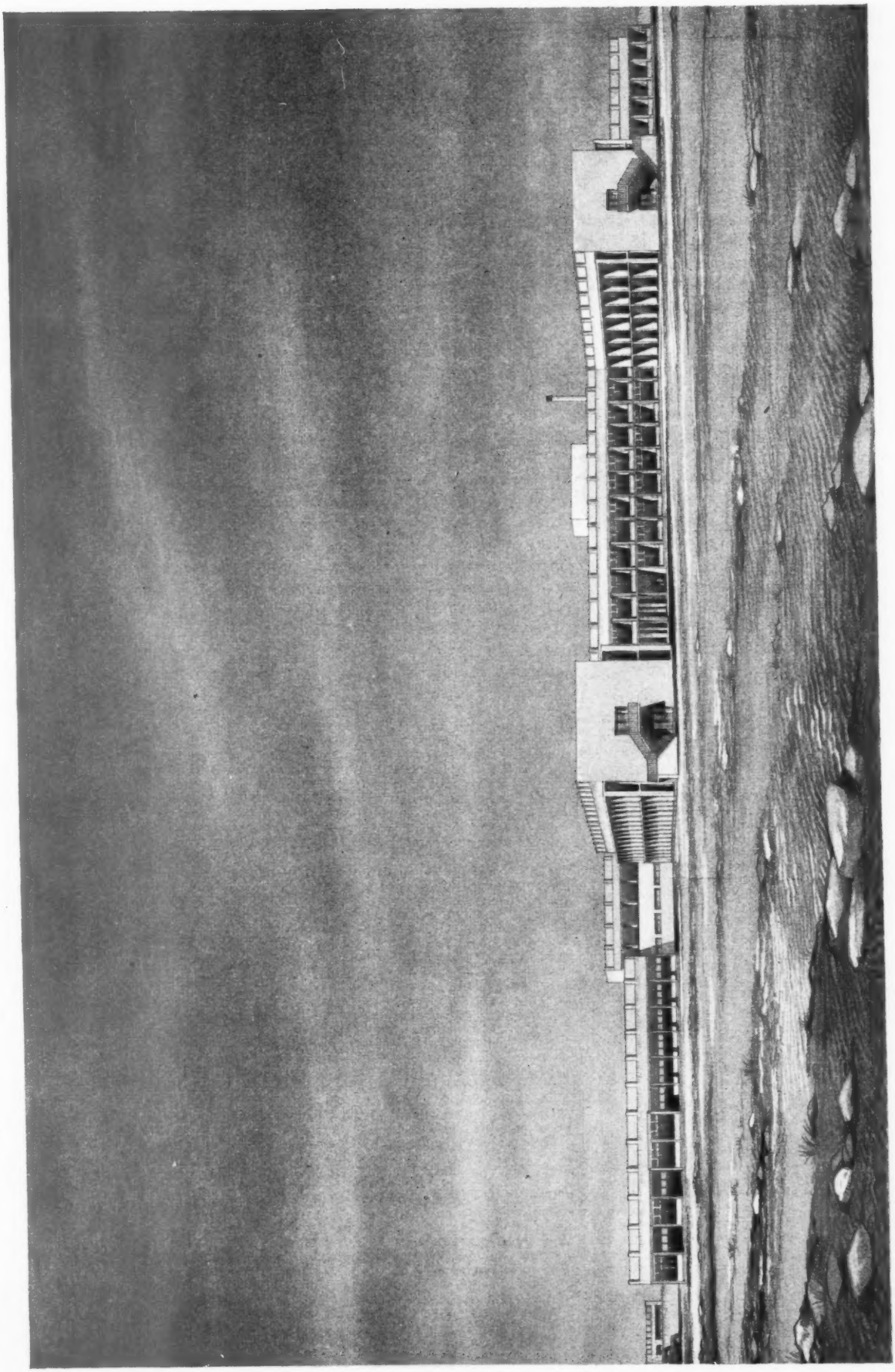
The Provost of Coventry, the Very Rev. R. T. Howard, left last week to begin a three months' tour of Canada to raise funds for the reconstruction of Coventry's war-bombed cathedral. With him flew the cathedral's architect, Basil Spence, and the Rev. Clifford Ross, chaplain to the Bishop of Coventry.

The Provost has said that the cost of restoring the cathedral is estimated at £800,000. £700,000 could be provided, and it was hoped that he and the other two members of his party would be able to raise the remainder as a result of their tour.

Basil Spence said that the cathedral would probably be completed by 1960.

DOHA HOSPITAL COMPETITION: PERSPECTIVE OF WINNER'S DESIGN (details overleaf)

DOHA HOSPITAL COMPETITION: PERSPECTIVE OF WINNER'S DESIGN (details overleaf)



WINNING DESIGNS IN

DOHA HOSPITAL COMPETITION

THE ASSESSOR WRITES:—

I have carefully examined each of the seventy-four designs submitted by competitors. The standard is high and the designs indicate a considerable knowledge of hospital planning and a close study of the particular problems presented by the competition. Many of the designs would make very fine buildings appropriate to the locality; most of them are extremely well drawn and the reports well presented. In most of the entries the ward units are well arranged and sited but with few exceptions the arrangement of the ancillary departments of the hospital is confused, leading to difficulties in the working of the hospital. I have no hesitation in awarding the first place to design No. 58; of all the designs submitted this offers the best solution to the problem. The ward units are particularly well planned to afford good supervision and economy in working while they are sufficiently compact for air-conditioning without detriment to good cross ventilation. The planning of the single bed wards to avoid sun and glare is ingenious. The placing of the operating theatres and X-Ray department in relation both to the wards and the out-patient department is good, but the planning of the kitchen department needs some improvement to avoid through traffic. The boiler house should be placed near ground level. The buildings are well arranged on the site, and the entrances conveniently placed. The hostels and houses are well planned and related. The design gives the accommodation asked for and the cubic extent of the buildings (amounting to a total of 1,474,950 cubic feet) indicates an economical first cost. The construction and specification proposed allow economical use both of local and imported materials; the character of the buildings as indicated would be most appropriate to the architecture of Doha. Design No. 50 which I recommend for the second premium, is developed upon more open lines and is, I consider, the best of several designs of this type in which the buildings as a whole are particularly pleasing and suitable. Each department shows much study and invention but there is not the same clarity in the arrangement between them. The required accommodation is provided and the cubic extent indicates a building at reasonable cost. The third premium I have awarded to design No. 40; all wards are given a northern aspect and the elevations are simple and attractive.

Alexander S. Gray
of W. H. Watkins, Gray & Partners.

FIRST PRIZE-WINNER'S REPORT

John R. Harris, winner of the first prize of £1,250, submitted the following report with his design for the State Hospital, Doha, State of Qatar, Persian Gulf:—

THE SITE.—The hospital is placed in the western half of the site in order that ward blocks planned on the northern side of the hospital may command views towards the sea. The living accommodation for families has been kept to the eastern side of the site, each house having a view towards the sea. The accommodation is separated sufficiently from the hospital to have an atmosphere of its own. Games could be played in this area without undue risk of disturbance to patients. Site circulation: the site has an entrance at either corner kept clear of ward blocks. The main entrance (west) is intended primarily for access to the hospital, whilst the northern entrance is intended primarily for access to the houses.

THE PLAN.—The general principles affecting the plan of the building are:—(1) It has been decided after much study to plan the hospital two storeys in height. (2) Male and female separation is horizontal: female on the ground floor, male on the first floor. (3) The separation of the isolation block. It is felt this separation is desirable (although not now normal in this country) when taking into account diseases in the locality. (4) All wards face north to the prevailing wind, away from the two entrances. The verandahs of the single bed wards face east or west. These single bed wards are pleasantly lit by reflected light from the verandah walls (please see axonometric).

In general the blocks have spine passages: where desirable louvres will be provided into the spine passage to give through ventilation. These louvres will also be brought into use for re-circulation of conditioned air for which the spine passages will be used (please see under services, air-conditioning). The two- and four-bed wards have been so designed that opposite walls may be opened in winter or in emergencies to give through ventilation.

(5) The buildings are planned on a 10 ft. bay with non-load bearing partitions, allowing alterations to room sizes to be quickly made if required in the future. (6) The kitchen department, together with the boiler house and flue, is planned on the south-west, leeward side of the hospital. (7) It is intended that the medical block roof be used by male patients, surgical block by female patients. The isolation block has the roof divided into two sections, one for male and one for female, the obstetric block roof for those patients in this block, while provision is made for the staff on the pathological department roof. It is intended that the stairs to the roof in the two centre ward blocks respectively should be used in the case of the medical block by male patients only, and the surgical block by female patients only. In addition, these stairs are, of course, intended for fire escape in emergency.

THE ELEVATIONS.—The elevations have been designed to be in harmony with existing buildings. All walls subject to the sun's rays are surrounded with 5 ft. cast *in situ* concrete canopies over which rainwater is allowed to discharge.

External wall surfaces to be light in colour. Those surfaces reflecting into the building would have washes of pale colours, buff, pink and blue, also green, a colour of great significance in the Persian Gulf area through its lack in nature.

CONSTRUCTION. — The construction generally will be of reinforced concrete and as described above, the hospital and houses have been designed on a 10 ft. bay with non-load bearing partitions, allowing partitions to be moved at will. A simple standard precast column 1 ft. 4 in. × 8 in. is used throughout, except for the unloading bay. The columns continue above the roof on external walls to take faroush panels forming traditional ventilated parapets, and on spine walls to carry loggia roofs. The external fins 2 ft. 6 in. × 4 in. are also standard, and it is intended should be precast with *in situ* concrete canopies spanning from fin to fin. The columns and fins could be made quickly, in the shade, and under careful supervision in a compound on the site. Columns would be connected by *in situ* beams running the length of the blocks. Floor slabs being cast across these beams projecting over the external walls to form canopies. All ceilings on either side of the corridors would have flat soffits without projecting beams.

Expansion joints to be formed at 40 ft. centres (or every fourth bay). The expansion joints have not been shown on the 1/8th scale drawings. Panels to be constructed in two thicknesses of "faroush" (the cavity being filled with insulation for external walls and partition walls where heat or sound insulation is required). Openings in panels to be traditional teak or other hardwood joinery (louvres, grilles, doors, etc.). Gable ends facing south on the hospital and all gable ends to houses and hostels to be in random rubble. In general, metal windows to be side hung alternately so that they may form scoops for the breeze. In addition, windows to be fitted with locks with master key for locking during the air conditioning period (please see axonometric).

The structural sub-roofs to be of simple reinforced concrete slab construction painted with bitumen. Wood wool slabs to be used as permanent shuttering. Roofs used by ambulent patients and staff to have a further 7 in. of traditional mud finished with concrete tiles. The centres of these roofs are to have loggias roofed by light prefabricated aluminium trusses of a low pitch, roofed in white corrugated plastic sheeting. Roofs not used by patients or staff to have a low pitch behind parapets. Rainwater discharging through parapet weep holes at 5 ft. centres and over canopies. These low pitch roofs to be laid on light steel framing carried on the structural concrete. The steel roof being free to move and take up expansion and contraction. The roofing materials to be corrugated sheeting with whitened outer surface for solar radiation, separated from the concrete with a ventilated air space.

In general the construction is designed to be as fire resisting as possible.

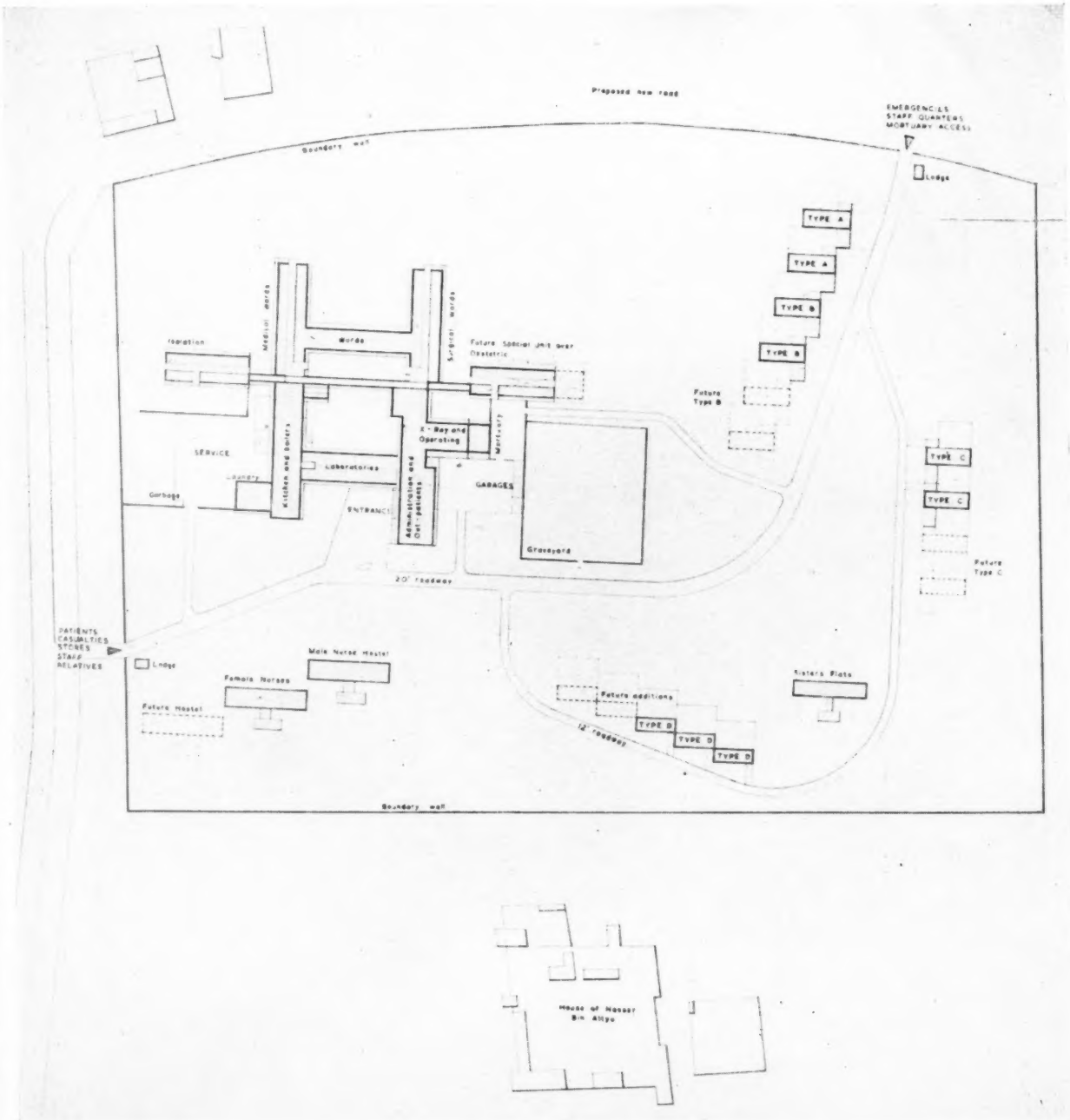
FINISHES.—Floor finishes to the theatre block and all sanitary apartments, also entrance hall, out-patients and mortuary to be in terrazzo or terrazzo tiles. Ward blocks, except as above, to be in teak block flooring. The kitchen to have quarry tile floor. Wall finishes to be in hard plaster painted in light colours, except in sanitary apartments, theatre block, mortuary and out-patients, where the walls will have terrazzo or terrazzo tile dados. All sanitary fittings in other apartments to have tile splashbacks. Ceilings hard plaster except for ward passages, these to be constructed with acoustic panels below the service ducts. Non-actinic glass to be used in all medical and chemical stores. Bamboo blinds or venetian blinds to be used generally as a precaution against glare.

SERVICES.—Generally: The spine service duct for the hospital is in the sub-ceiling of the ward passage; from this duct all wards and operating theatres are fed. All drainage to be external.

(1) *Air-conditioning.*—It is proposed to install a central compressor plant for cooling water, below the kitchen block. This chilled water to be circulated by pumps round the hospital *via* the ward passage duct. Each block will therefore be provided with its own air conditioning plant consisting of fresh air and main filters, cooling battery, fan and automatic controls. From these local fans, systems of ductwork would be run to the various rooms of the block *via* the sub-ceilings over the spine corridors. Recirculation would be *via* the block corridors themselves back to the zone plant rooms. This scheme, it is considered, would show a considerable saving over a central ducted system

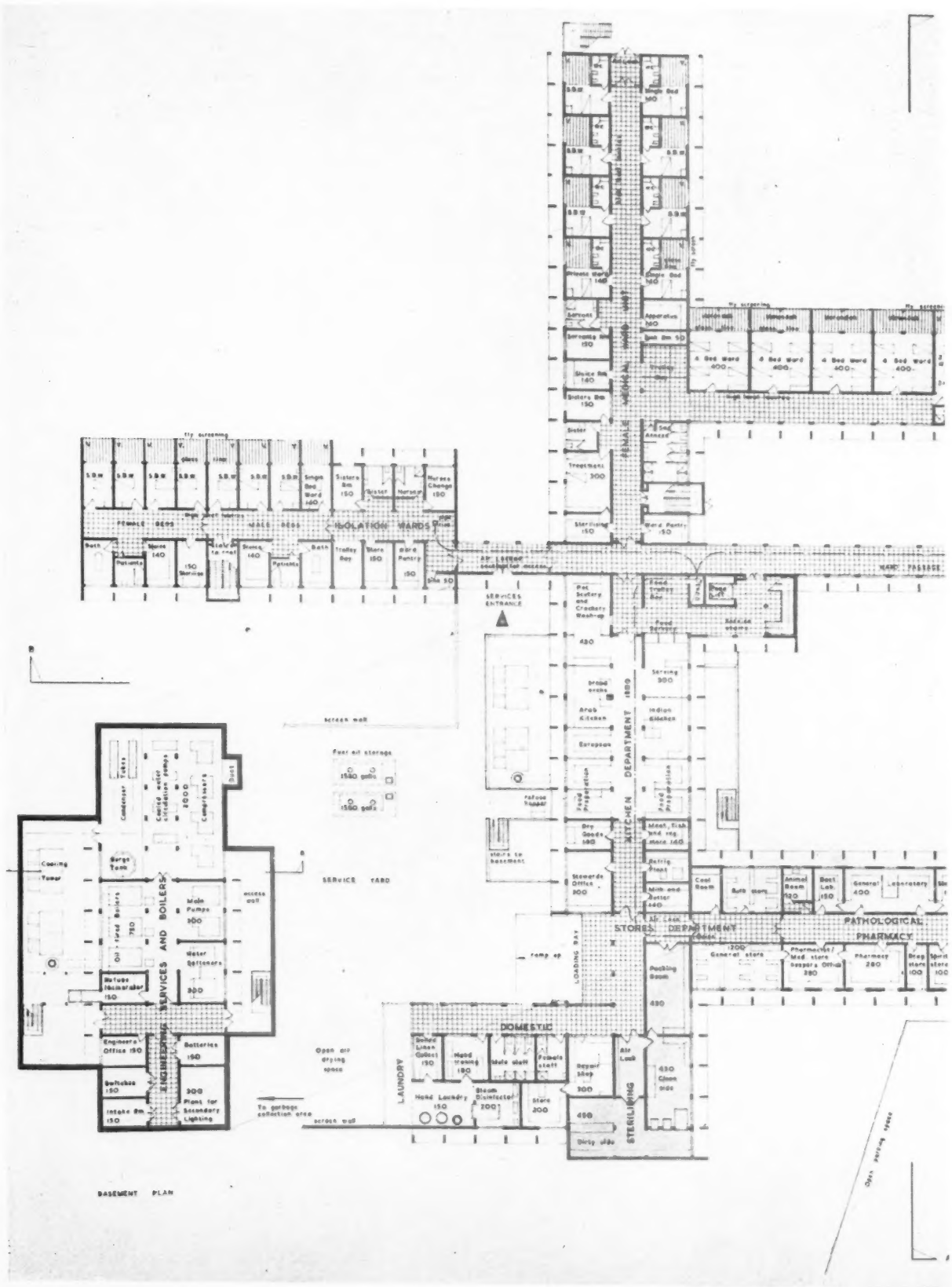
(*continued on page 348*)

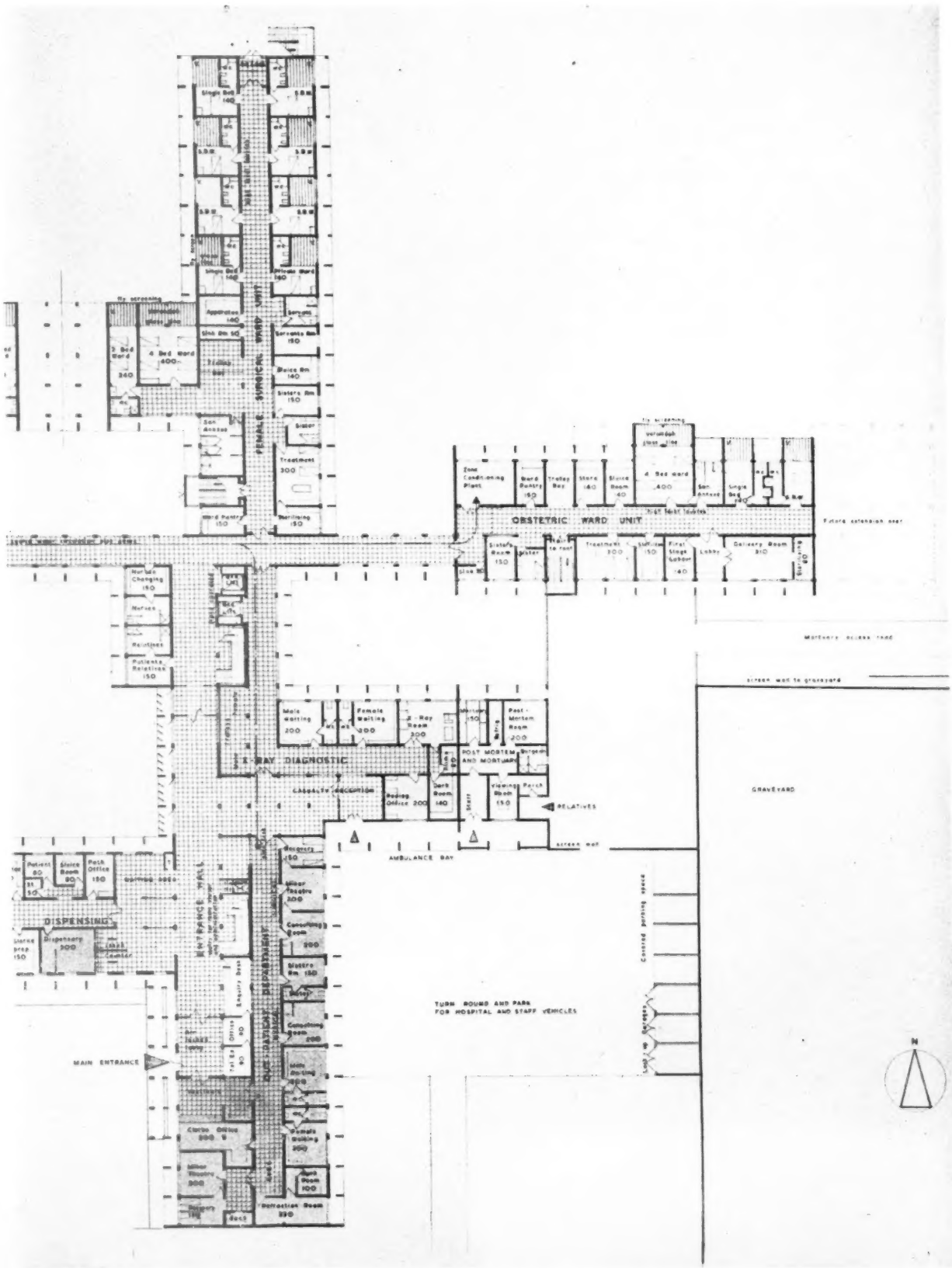
Site plan.



FIRST PRIZE-WINNING DESIGN By JOHN R. HARRIS

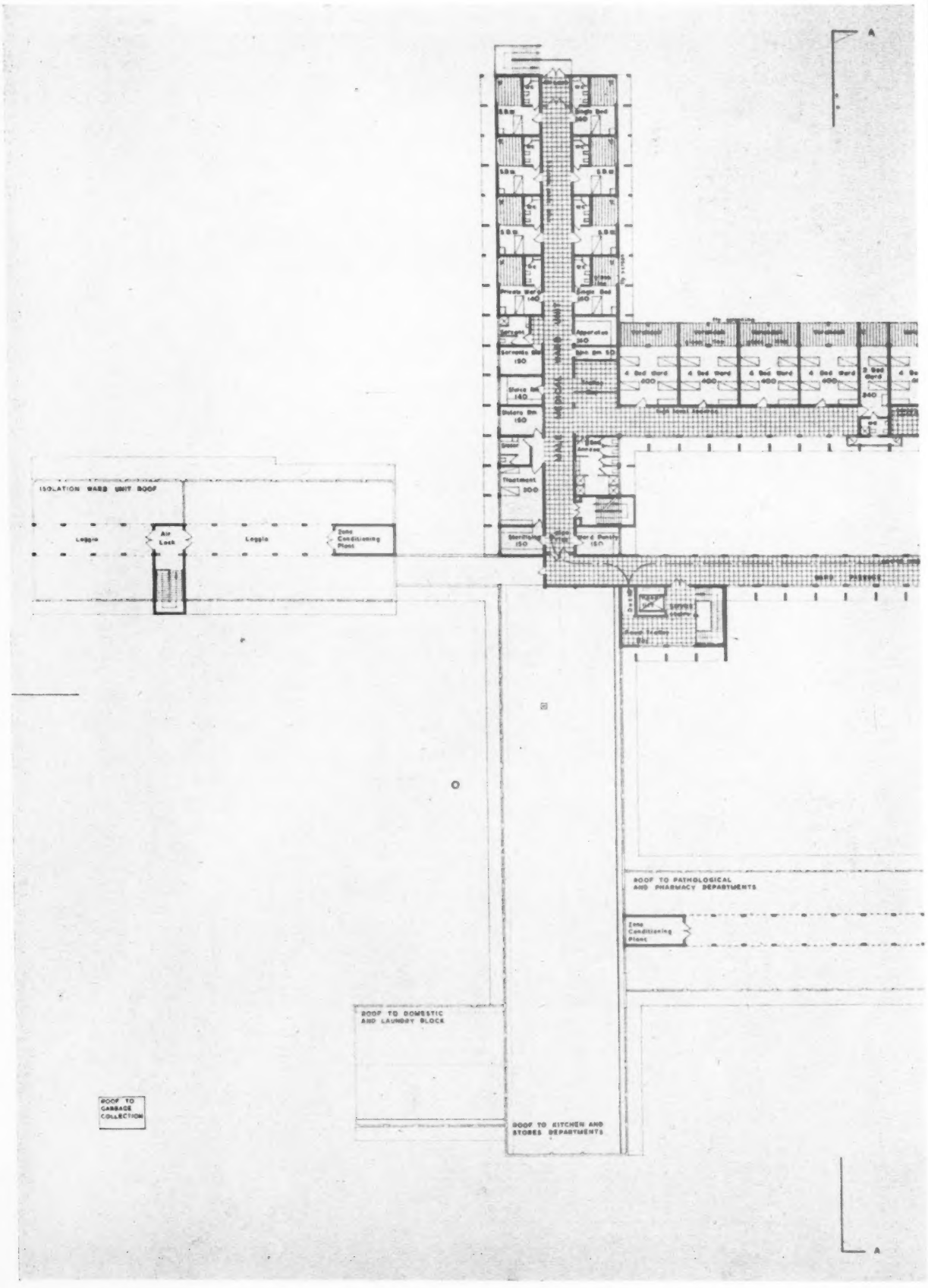
Ground floor plan.

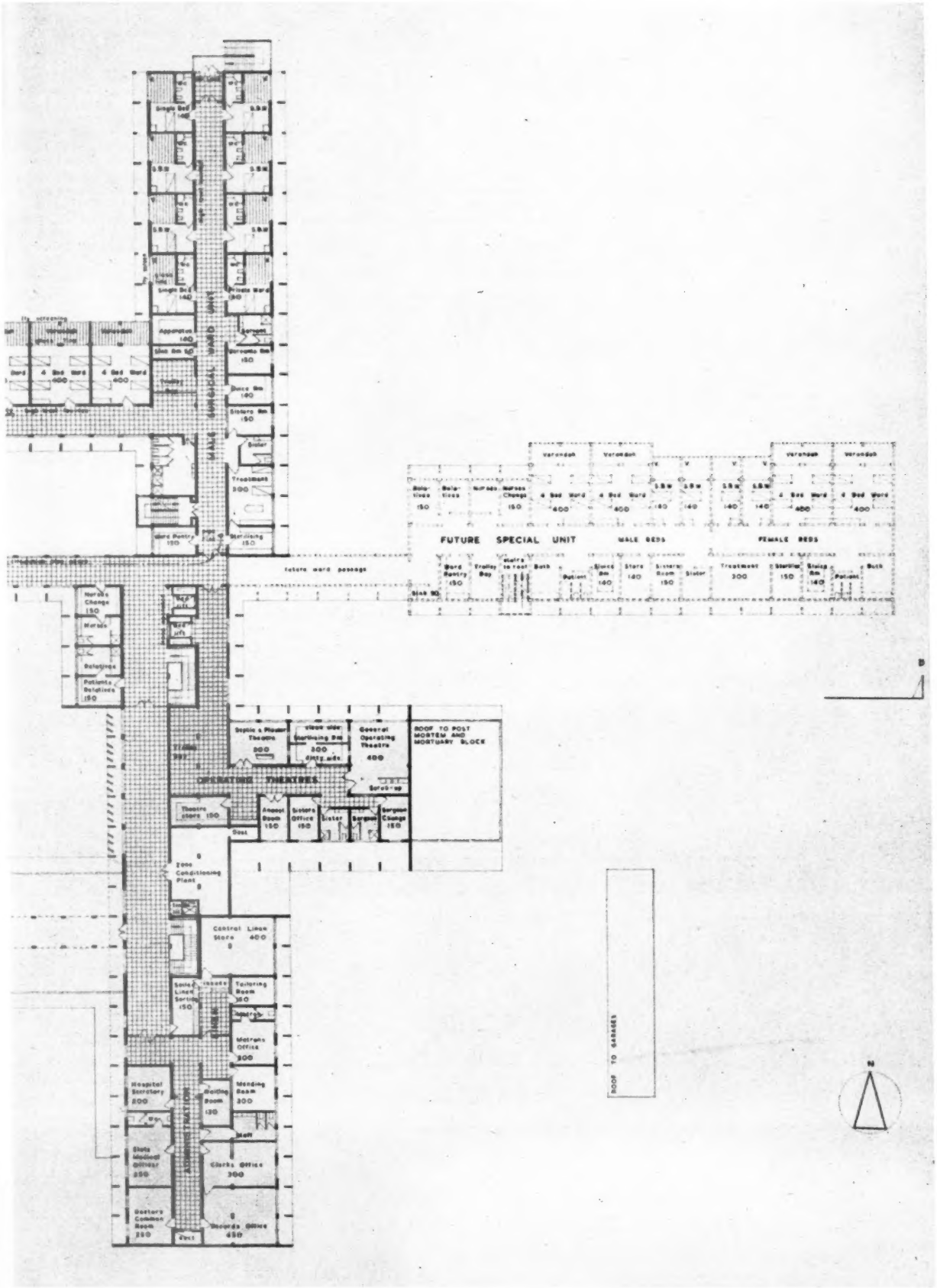



FEMALE SURGICAL WARD UNIT
OBSTETRIC WARD UNIT
X-RAY DIAGNOSTIC
POST MORTEM AND MORTUARY
DISPENSING
MAIN ENTRANCE
AMBULANCE BAY
RELATIVES
GRAVEYARD
TURN ROUND AND PARK FOR HOSPITAL AND STAFF VEHICLES
N

FIRST PRIZE-WINNING DESIGN

First floor plan.




FUTURE SPECIAL UNIT
MALE BEDS
FEMALE BEDS
Verandah
4 Bed Ward 400
Bed Pantry 150
Trolley Bay
Sluice Rm 140
Store 140
Sistern Room 150
Sister
Treatment 300
Sterilising 150
Bath
Patient
future ward passage
MALE SURGICAL WARD UNIT
Single Bed 140
Private Ward 240
Apparatus 140
Sluice Rm 140
Sisters Rm 150
Ward Pantry 150
Horses Change 150
Morgue
Dissecting
Patients Relatives 150
Septic & Plaster Theatre 300
Sterilising Rm 300 dirty side
General Operating Theatre 400
Scrub-up
ROOF TO POST MORTEM AND MORTUARY BLOCK
OPERATING THEATRES
Theatre Store 150
Anaest Room 150
Sisters Office 150
Surgeon Change 150
Dust
Zone Conditioning Plant
Central Linen Store 400
Soiled Linen Sorting 150
Tailoring Room 240
Matrons Office 300
Hospital Secretary 200
Waiting Room 130
Waiting Room 300
Staff
Clerks Office 300
Doctors Common Room 250
Records Office 450
Dust
ROOF TO GARAGES
N

where the primary ducts in the case of the hospital would be very large and could not be accommodated in the sub-ceilings. Further, the system proposed allows for flexibility of control, particularly required in the case of the operating theatre. In winter the theatre would be heated by the zone air conditioning plant using the chilled water pipes to bring warm air to the plant in place of the normal chilled water.

Machinery noise from compressors will be confined to the central plant room, which is placed reasonably far from the ward blocks.

As an alternative to, or possibly in combination with, the proposed zone conditioning plants, unit air coolers could be used, supplied similarly with chilled water. This system might be preferable for certain cases where wards open on to verandahs, and the loss of air through open windows would render the recirculation less effective. A unit cooler, being essentially a recirculation unit, would not suffer from this cause.

(2) *Water Services.*—The hot water service would be by means of pump circulation from calorifiers provided with steam from the central boiler plant. Sweet and crude water would be provided throughout the building by means of a pipe system from overhead supply tanks (tanks still sectional).

Boiler Plant: In view of the fluctuating load on this plant, due to the demand being mainly for cooking, sterilizing and laundry, all of which are intermittent and highly variable loads, it is suggested that the boilers could be of shell type so as to provide reasonable steam storage capacity and so tide over big demands without undue loss of pressure. Boilers would be oilfired from tanks situated according to the drawings. The boiler house with its flue has been situated on the leeward side of the buildings so that the prevailing wind carries the smoke away.

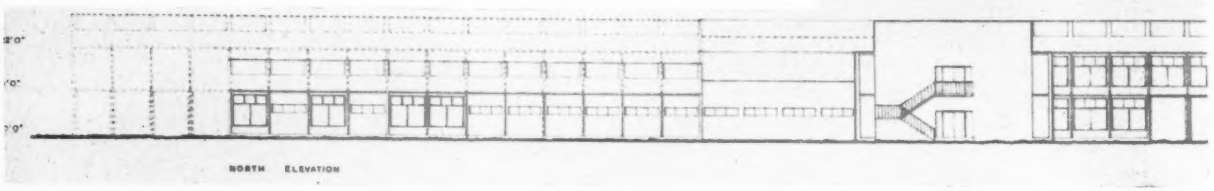
(3).—*Fire Fighting Services.* It is proposed to provide a crude water ring main outside the buildings underground, with hydrant points to which appliances could be connected for fire fighting. The fighting inside the building would be confined to portable extincteurs, etc.

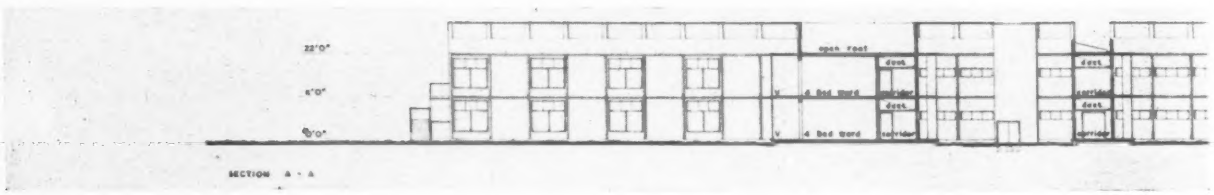
(4).—*Electrical Services.* Electrical intake is situated at the southern end of the basement. The intake is sited to minimise cabling; being located as close as possible to refrigeration compressors, also with access from the road. Low voltage switch room is provided.

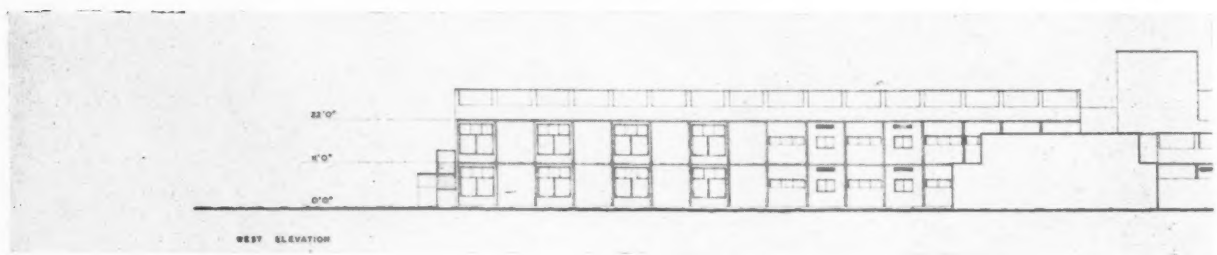
A primary lighting system throughout the hospital will be provided. The secondary lighting system would be operated at mains voltage from a central battery system, the system being normally served off the mains, but in the event of failure would automatically be changed over to the batteries. Trickle charging equipment would be provided, together with quick-charge equipment for use after the batteries had been on load.

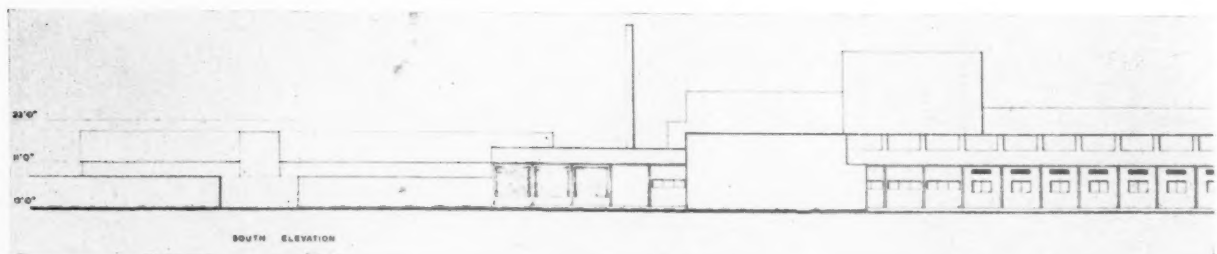
Other electrical services—bells, signals, night lights, electrical outlets for mobile X-ray and cleaning equipment, telephones, clocks, fire alarms, etc., would be provided according to normal practice for a hospital.

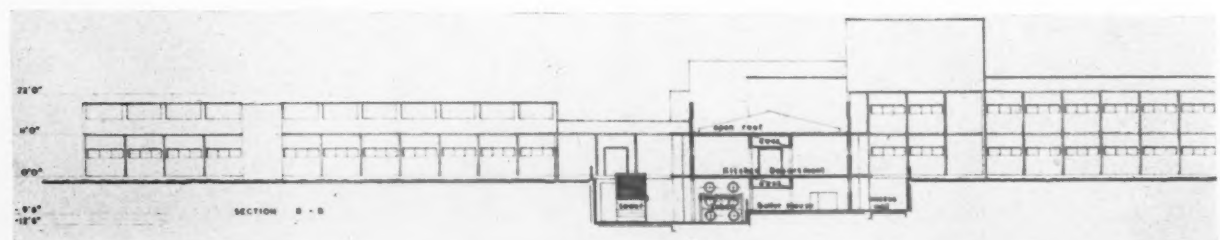
FIRST PRIZE-WINNING DESIGN

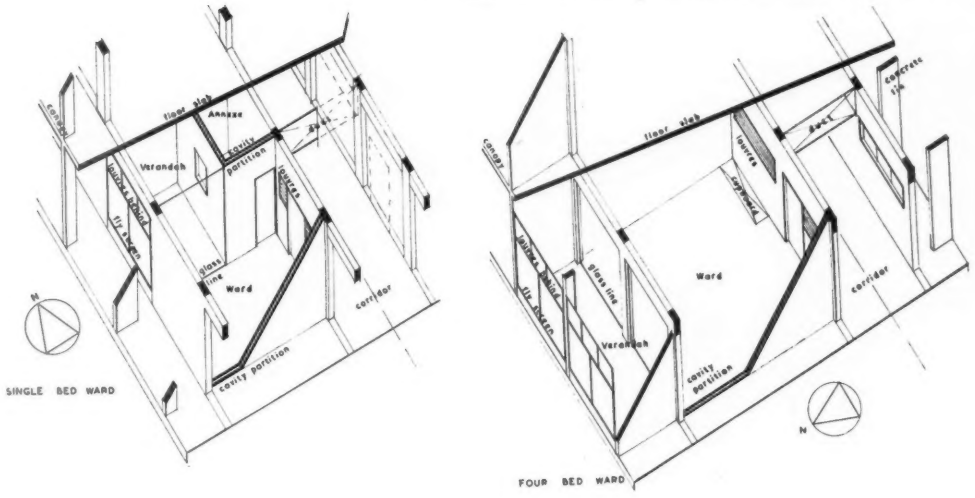






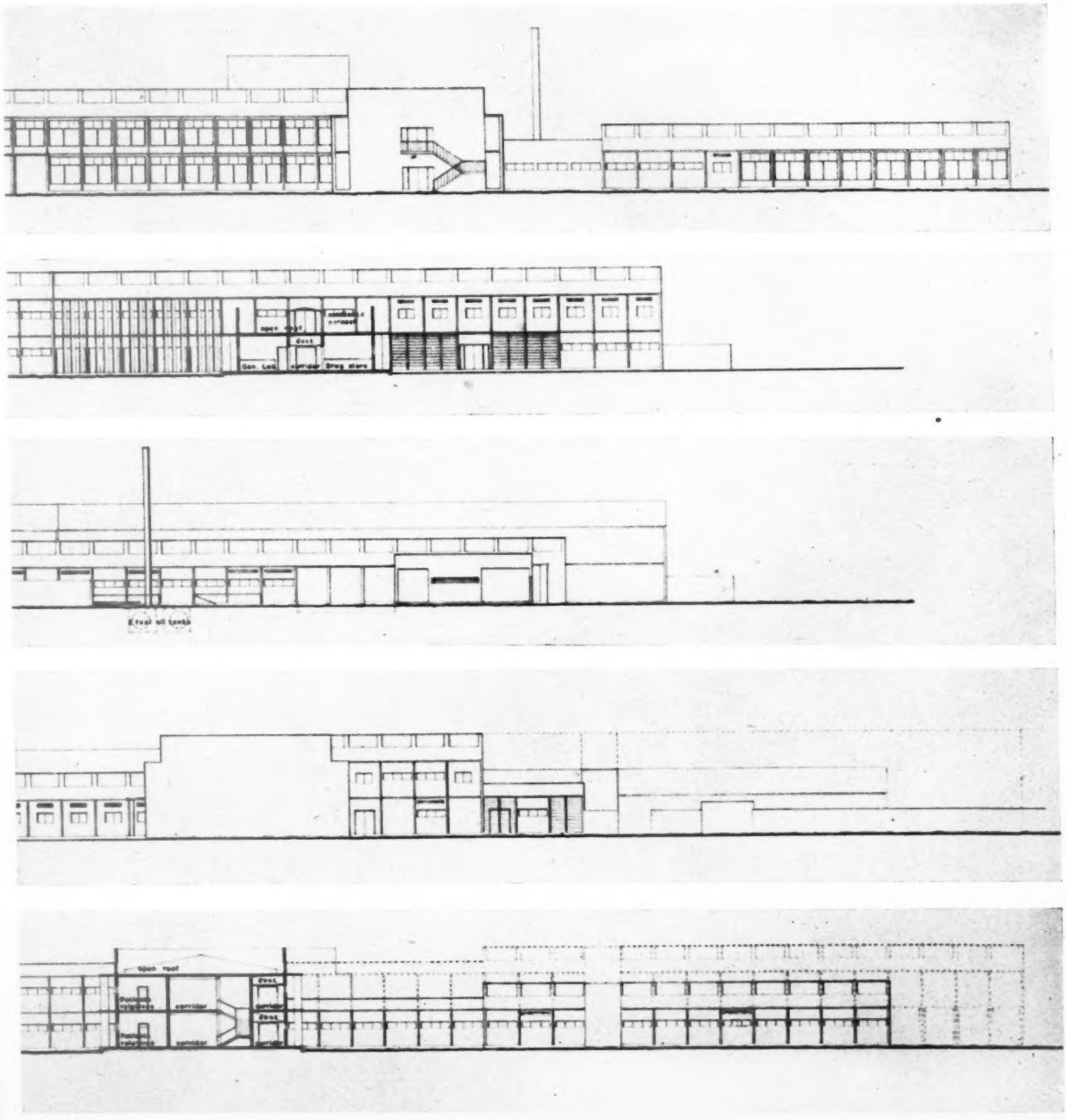






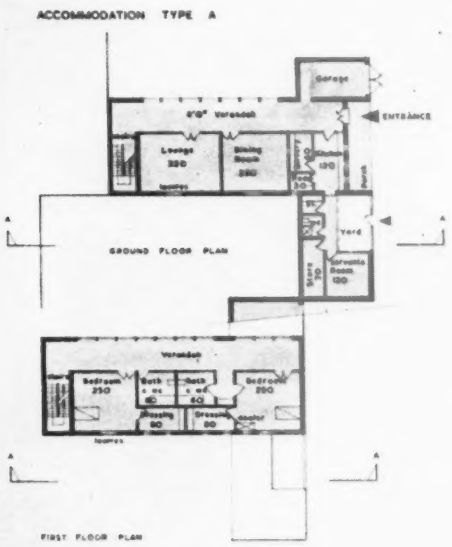
Axonometrics showing arrangements for reflected lighting and for ventilation in wards.

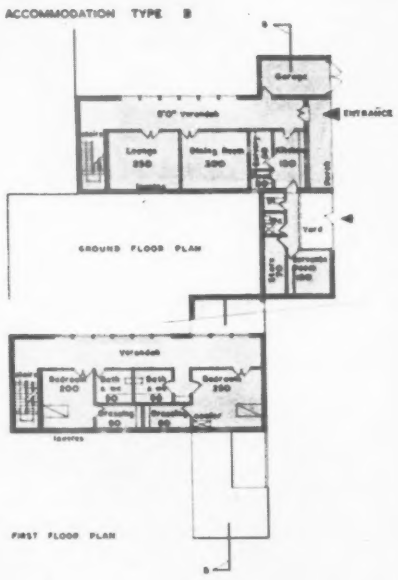
Sections and elevations.

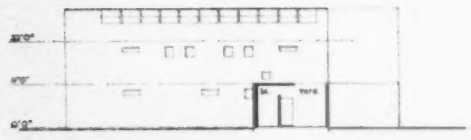


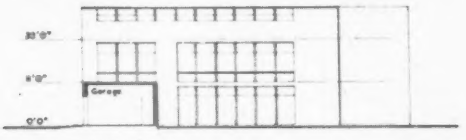
FIRST PRIZE-WINNING DESIGN

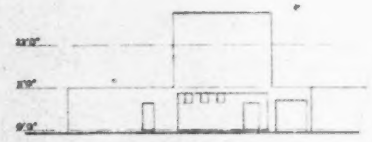
Accommodation for nurses and sisters (see site plan).

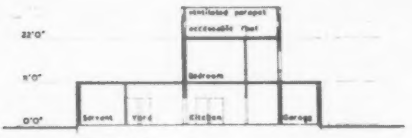




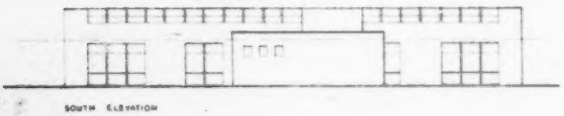


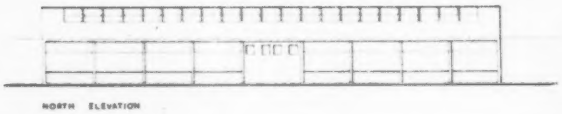


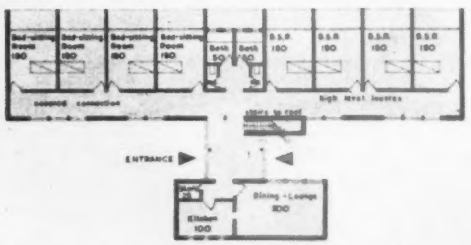


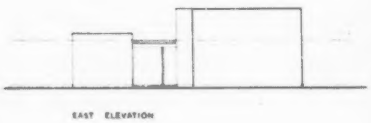


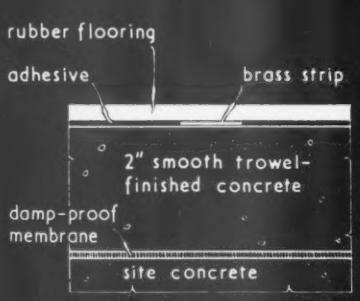
HOSTEL ACCOMMODATION · NURSES



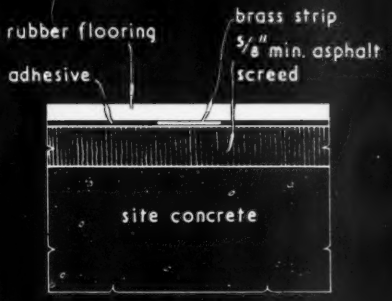




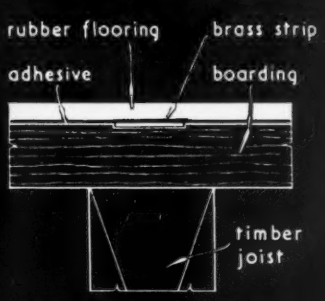




to concrete with sandwich damp-proof membrane (ground floor)

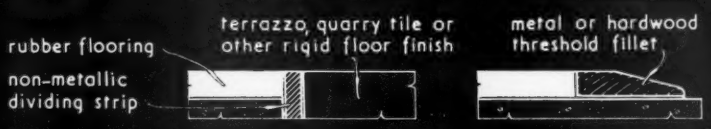


to concrete with asphalt underlay

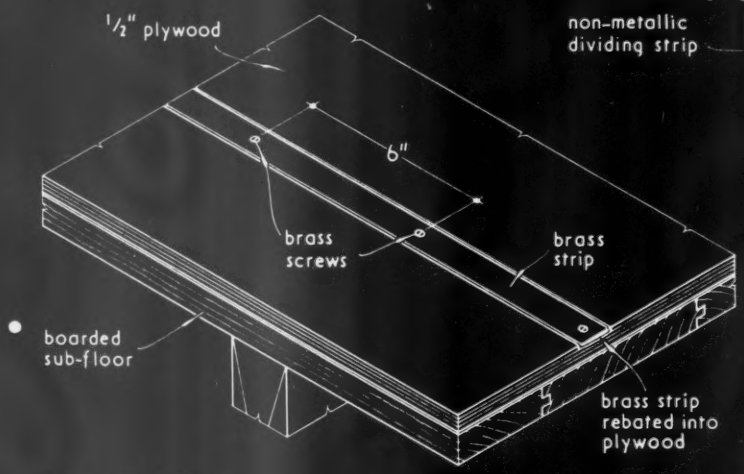


to wood

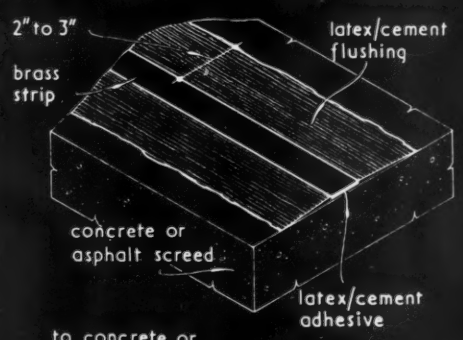
FIXING TO SUB-FLOORS.



EDGE FINISHES.

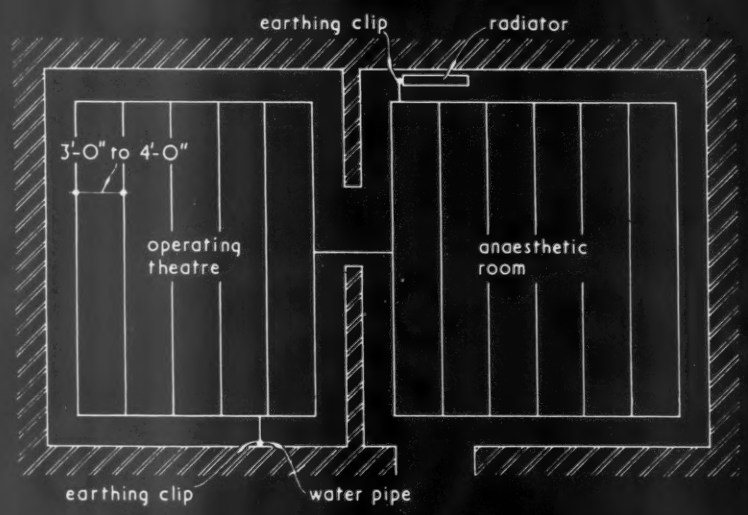


to wood sub-floor

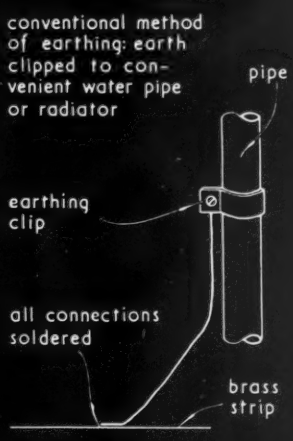


to concrete or asphalt sub-floor

FIXING OF BRASS STRIPS.



TYPICAL LAYOUT FOR BRASS STRIPS.



METHOD OF EARTHING.

19.F11 DUNLOP ANTI-STATIC RUBBER FLOORING

This Sheet describes the laying of Dunlop anti-static rubber flooring in hospital operating theatres. The drawings on the face show details of fixing to various sub-floors and a typical layout for the brass conducting strips.

Principle and Construction

This type of floor is for use in operating theatres and anæsthetic rooms where sparks from a discharge of static electricity might cause an explosion of the highly inflammable anæsthetic gases. It forms the correct foundation for carrying out a full anti-static treatment which includes the use of conductive rubber equipment and clothing.

The principle depends on special rubber flooring sufficiently conductive to allow static electricity to pass through it to brass earthing strips beneath but with sufficient resistance to assist in the prevention of shock to anyone in contact with faulty electrical equipment.

Rubber: The rubber is press-cured in sheets 3 ft. wide by 12 ft. long by $\frac{3}{16}$ in., $\frac{1}{4}$ in. or $\frac{3}{8}$ in. thick.

Brass strips: The recommended size is 1 in. wide by $\frac{5}{1,000}$ or $\frac{10}{1,000}$ in. thick. Alternatively 3 in. wide strips of brass foil may be used to reduce the thickness. To ensure adequate conduction the strips should be not more than 4 ft. apart.

Earthing: The brass strips must be connected to a suitable earthing point, e.g., water pipe or radiator, with all joints soldered.

Colour

The rubber is available in black only.

Condition of Sub-floor

Where the sub-floor is of concrete it must be dry and fully suspended or if in contact with the ground have a suitable damp-proof membrane. Timber sub-floors which should be suspended and well ventilated must be firmly secured and in sound condition.

Preparation of Surfaces

The sub-floor must have a smooth unbroken surface and be of a hard material to prevent indentation from heavy equipment.

Concrete sub-floor: Where the surface has a smooth trowel finish no preparation is necessary. On rough concrete a 1 : 3 cement/sand screed of at least 1 in. thickness may be used to provide a smooth surface. Where it is not possible to lay a cement screed an underlay should be used. A $\frac{1}{4}$ in. thickness of hard latex is a suitable underlay for many situations, but where a greater thickness is required a hard rock asphalt should be used.

Wood sub-floor: Where the floor is exceptionally strong and rigid it only requires to be sanded to a true surface. Otherwise, resin-bonded plywood, $\frac{1}{2}$ in. thick, should be tightly screwed over the boards, or, alternatively, an underlay of hard asphalt provided.

Laying

All joints in the brass strip must be well soldered: this may be done with an ordinary electric soldering iron. To prevent unevenness in the floor surface a minimum amount of solder should be used and any excess carefully removed.

Concrete sub-floor: The brass strips are laid on a latex/cement adhesive which is also used as a flushing compound on either side of the strip, as shown in the drawing on the face of the Sheet. When the adhesive has set, the strip is rubbed down with a carborundum block to expose the brass and to smooth out the latex/cement. A special conductive adhesive solution is used for laying the rubber flooring. Two coats are applied to the entire floor surface (including the strips) and the back and edges of the sheet rubber. In laying the rubber, it is essential that there should be full adhesion over the whole surface and at all edges and joints.

Wood sub-floor: Where the strips are laid on a boarded or plywood floor, a shallow rebate should be made of sufficient depth to take the brass strip, which is secured with small brass screws. The whole floor is sanded smooth and level with the brass strips exposed on the surface. The rubber flooring is then laid as previously described.

Edge finishes: Where the rubber meets another floor finish a non-metallic dividing strip should be used. A metal or hardwood fillet may be used at thresholds where there is a difference in floor level as shown in the drawing on the face of the Sheet. Where metal is used it must have no contact with the brass conducting strips.

Testing: Conductivity tests should be carried out on the installation not earlier than two weeks after the floor has been laid.

Maintenance

The floor may be washed regularly but an excessive amount of water should not be used. Surplus moisture should be removed to prevent the possibility of penetration between the joints of the sheets. Heavy equipment should not be left for long periods in one position on the rubber flooring as it will ultimately cause indentation, especially where the rubber is laid over asphalt.

Relevant Publications

General information relating to this type of flooring is contained in the Ministry of Health Leaflet R.H.B. (53)55, Appendix B.

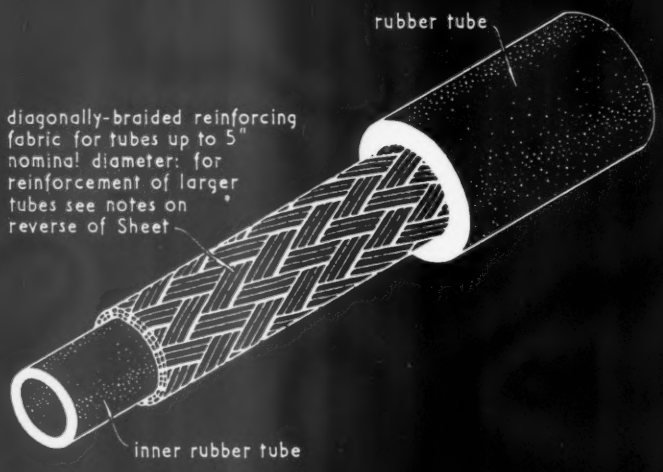
Further Information

The supplier maintains a technical advisory department which is available to answer questions and advise on problems dealing with the subject generally.

Compiled from information supplied by :
Semtex Limited, A Dunlop Company
Address : Semtex House, The Broadway, Welsh Harp, London, N.W.9.
Telephone : Hendon 6543.
Telegrams : Semtex, Mill, London.

CONCRETE | DUCTS

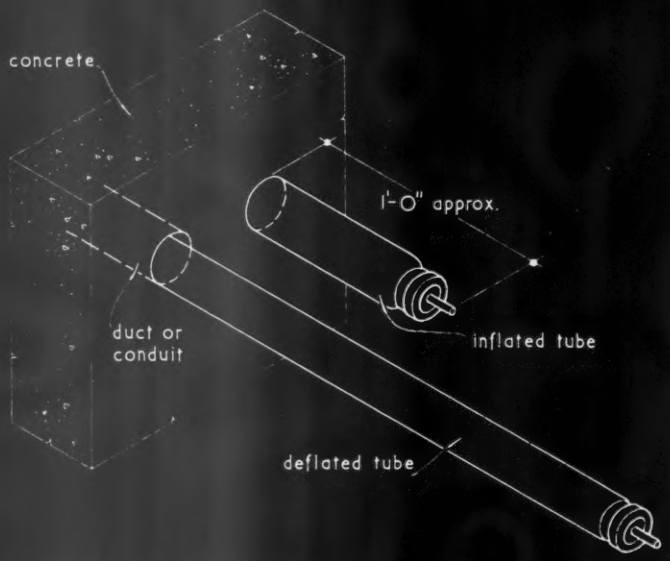
The Architects' Journal Library of Information Sheets 434. Editor: Cotterell Butler, A.R.I.B.A.



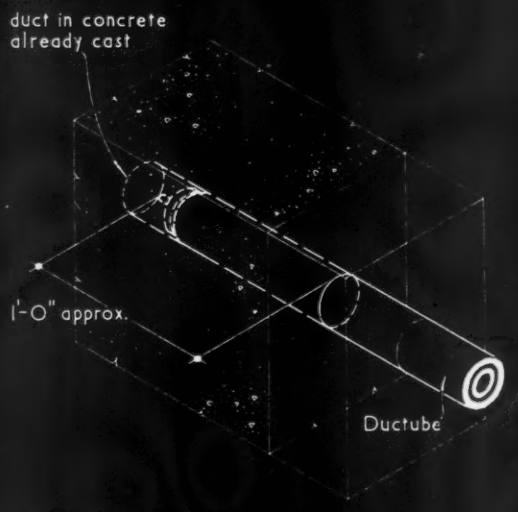
CONSTRUCTION OF TUBING.

nominal dia. (inflated)	max. length (deflated)	min. inside rad. of bend	inflation pressure (lb/sq. ft.)
¾"	60'	3"	70-75
1"	"	4"	"
1 3/16"	"	5¼"	"
1½"	"	6"	"
1¾"	"	7"	"
2"	"	8"	45-50
2½"	"	10"	36
3"	"	1'-0"	25-33
3½"	"	1'-2"	"
4"	"	1'-4"	"
5"	"	1'-8"	"
6"	40'	2'-0"	20-25
7"	30'	2'-4"	less than 25
8"	15'	2'-8"	"
9"	20'	3'-0"	"
12"	"	4'-0"	"

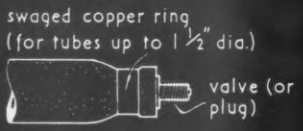
TABLE OF SIZES AND RELEVANT DATA.



METHOD OF WITHDRAWING TUBES.



CONTINUATION OF DUCT.



FINISH AT ENDS OF TUBES.

JOINTING OF TUBING.

·DUCTUBE· PNEUMATIC RUBBER TUBING FOR FORMING DUCTS IN CONCRETE.

Manufacturer: Ductube Company Limited.

6.Z1 DUCTUBE PNEUMATIC RUBBER TUBING FOR FORMING DUCTS IN CONCRETE

This Sheet is one of a series on Ductube pneumatic rubber tubing for forming ducts in concrete. It may be used to form single or multiple ducts in a range of sizes and with reasonable care it may be re-used at least one hundred times. The drawings on the face show the construction of the tubes and the principles of their use, together with a table of available sizes and relevant information.

Principle

The tube is placed in the required position and inflated: it is carefully secured to prevent movement. The concrete is then poured and when it has set, the tube is deflated and withdrawn, leaving a smooth-surfaced duct of the required diameter.

Construction

Tubes: Tubes up to 5 in. in diameter are composed of a hollow core of rubber covered by a diagonally-braided cotton fabric and cased in a further layer of rubber. Larger tubes are similar but the braided fabric is replaced by two layers of braided canvas sheet, diagonally wound in opposite directions, with a thin layer of rubber between them.
The diagonal direction of the fabric in each case enables it to stretch with the rubber on inflation, the increase in the diameter causing a proportionate decrease in the length of the tube. On deflation it pulls the tube back to its original diameter and length; this two-way movement ensures that the tube detaches itself completely from the concrete.

Fittings: Each length of tube is provided with a Schrader-type valve at one end and a plug at the other. These are secured and made air-tight by means of swaged copper rings for tubes up to 1½ in. dia. or by Hayden-Nilos clips for those of larger diameter. All tubes, with the exception of the ¾ in. dia., may be connected by a coupling where longer lengths are required: Hayden-Nilos clips are used at junctions of all sizes of tubes.

Sizes

The table on the face of the Sheet gives the range of sizes in which Ductube is available. The nominal diameter is that of the tube when inflated, i.e., the diameter of the finished duct in the concrete. The maximum length is that of the deflated tube; when inflated the tube decreases its length by approximately 10 per cent.

Bends: A tube may be curved where a bend in the duct is required, but the radius to the inside of the curve should be not less than that given in the table on the face of the Sheet. This is in order to prevent the flattening of the tube and consequent malformation of the duct which would result from too sharp a bend.

Method of Use

Inflation: All tubes may be inflated with a motor-car foot pump, but where a large number of ducts is to be made, and for large diameter tubes generally, a small portable air compressor should be used.
The figures in the table are given as a guide to the approximate air-pressure required to inflate the tube to its nominal diameter. After being used several times, the tubes become more resilient and a lower air pressure will inflate them to their nominal diameter. The tubes, therefore, should always be inflated to a measured diameter and not to a pre-determined pressure.
The tubes may be inflated to ⅛ in. more than their nominal diameter if required. They should not be inflated under their nominal diameter. This may cause flattening of the tube when the concrete is poured and less movement on deflation, thus preventing easy detachment and withdrawal.

Securing tubes: The method of securing the tubes against displacement during concreting varies with the site conditions of each scheme. In some cases the tubing may be fixed to shuttering or reinforcing rods but it may often be necessary to find other means. In any case, the method chosen should prevent the tube from sagging between supports or floating when the concrete is poured.

Continuation of ducts: Where ducts are to be simply formed in trenches, several lengths of tube may be joined (as previously described) to obtain the required length. Where it is desired, however, to extend a duct already formed, a further length of tube is inserted into the existing hole to a distance of approximately 1 ft. It is then inflated and secured and the concrete poured to form the next length of duct, as shown in the drawing on the face of the Sheet.

Maintenance of tubes: After the tube has been used about three times it should be cleaned to remove the fine concrete which adheres to its surface. This may be done by immersing in water and wiping with hessian or other coarse material.
The tube should not be exposed to direct sunlight for long periods or to prolonged contact with mineral oils. With reasonable care in handling and storing, the tubes may be used at least one hundred times.

Applications

Ductube may be used to form ducts for electrical internal-wiring circuits, mains inlets, or cables in large installations. It may also be used for the formation of ducts to take tensioning cables or bars in pre-stressed post-tensioned concrete where the Freyssinet, Lee-McCall, or Gifford-Udall systems are employed. Other applications include the formation of cavities in precast concrete products, service ducts under roads (including surface water and sewage drains) and ducts for ventilation and warmed-air heating.

Further Information

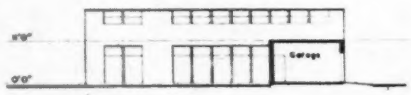
The manufacturer maintains a technical advisory department which is available to answer questions and advise on technical problems relating to the use of Ductube.

Compiled from information supplied by:

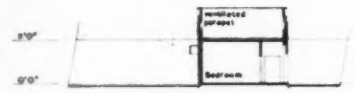
Ductube Company Limited.
Address: Regent House, 235-241, Regent Street, London, W.1.
Telephone: Regent 2592-4.
Telegrams: Ductube, Wesdo, London.

ACCOMMODATION TYPE C

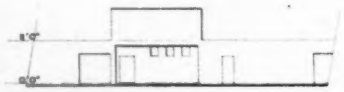
GROUND FLOOR PLAN



SECTION C - C

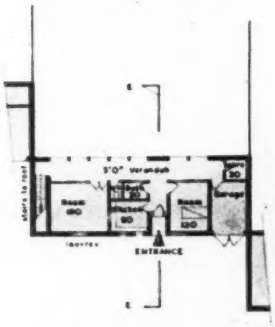


SECTION D - D

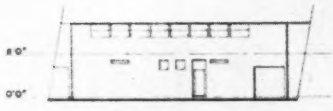


WEST ELEVATION

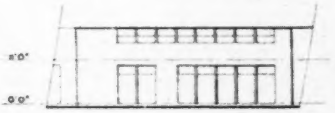
ACCOMMODATION TYPE D



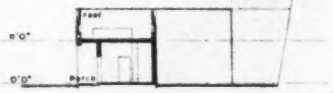
GROUND FLOOR PLAN



SOUTH ELEVATION

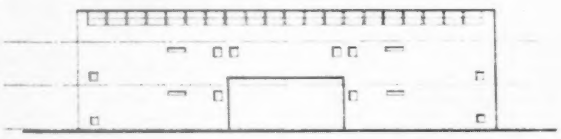


NORTH ELEVATION



SECTION E - E

SISTERS' FLATS



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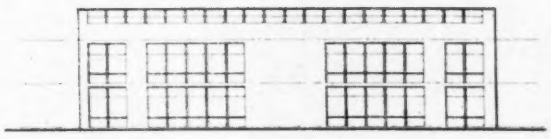
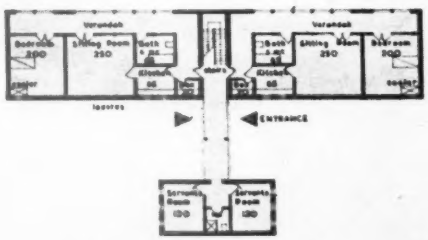
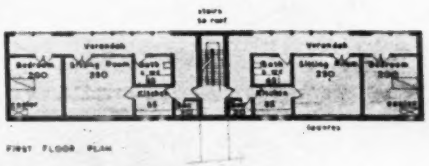


NORTH ELEVATION



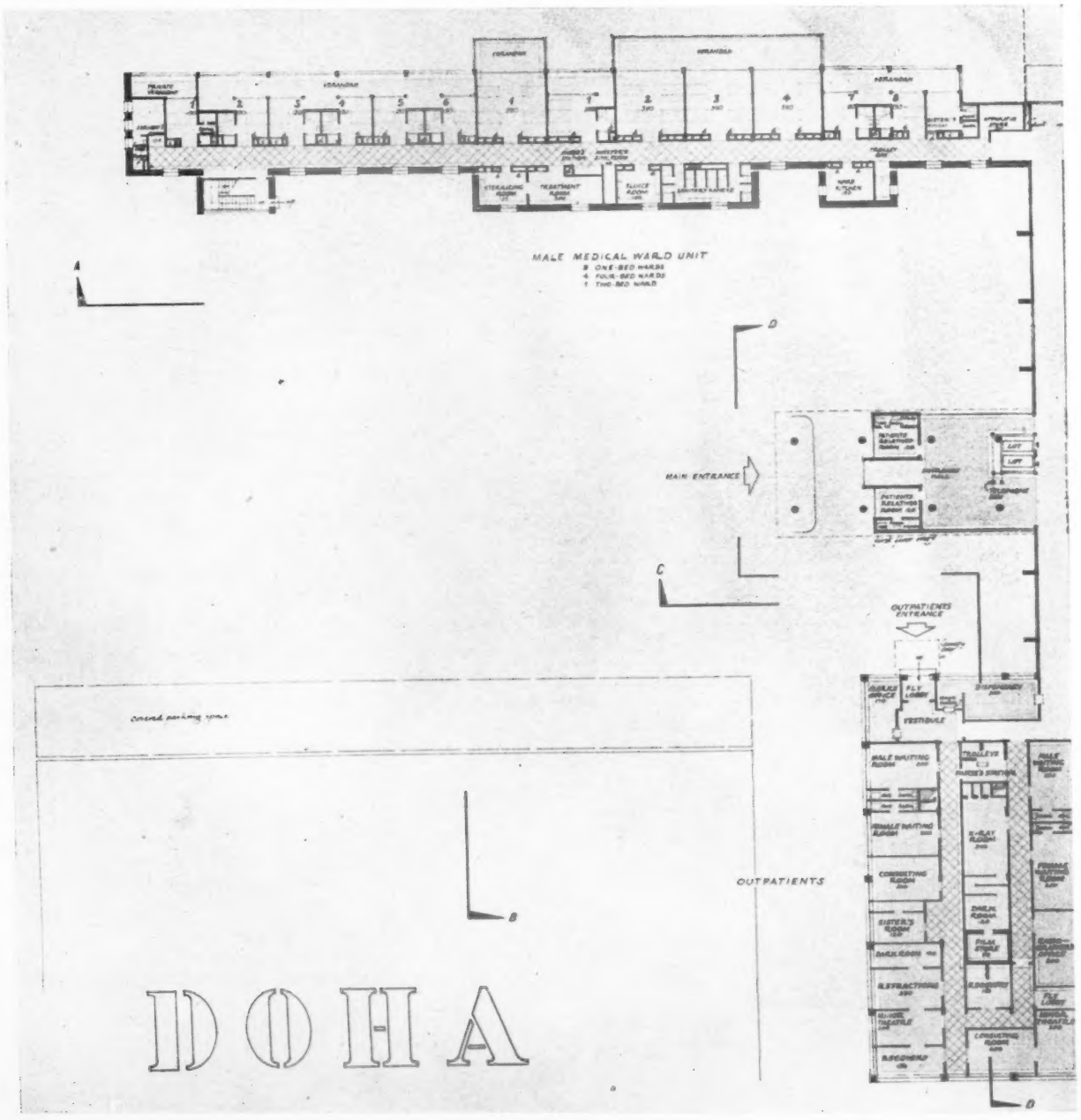
GROUND FLOOR PLAN

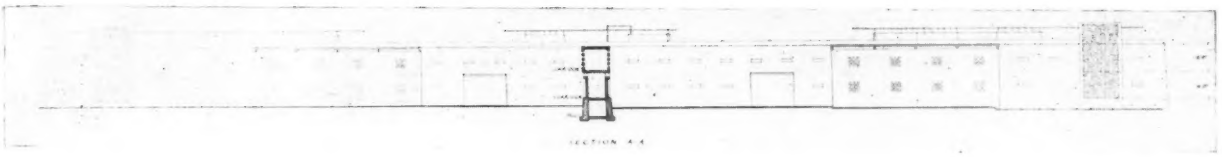


FIRST FLOOR PLAN

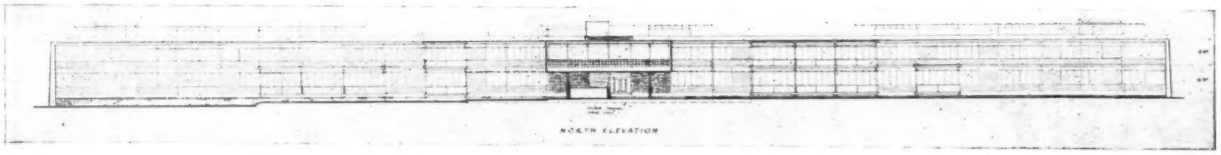
SECOND PRIZE-WINNING DESIGN
By ALISTER MACDONALD AND ERIC MAIDMENT

Ground floor plan.

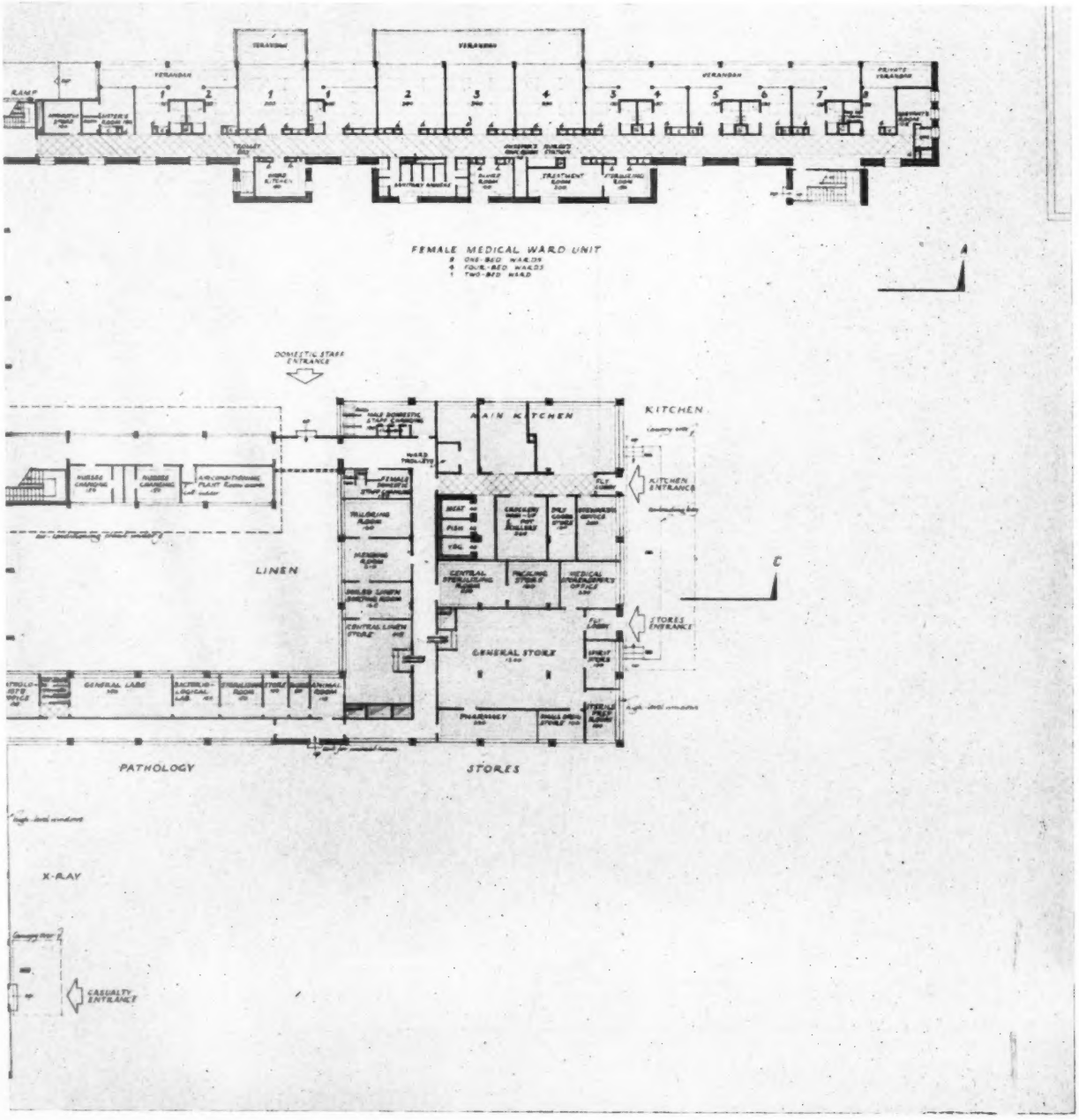




Section A-A

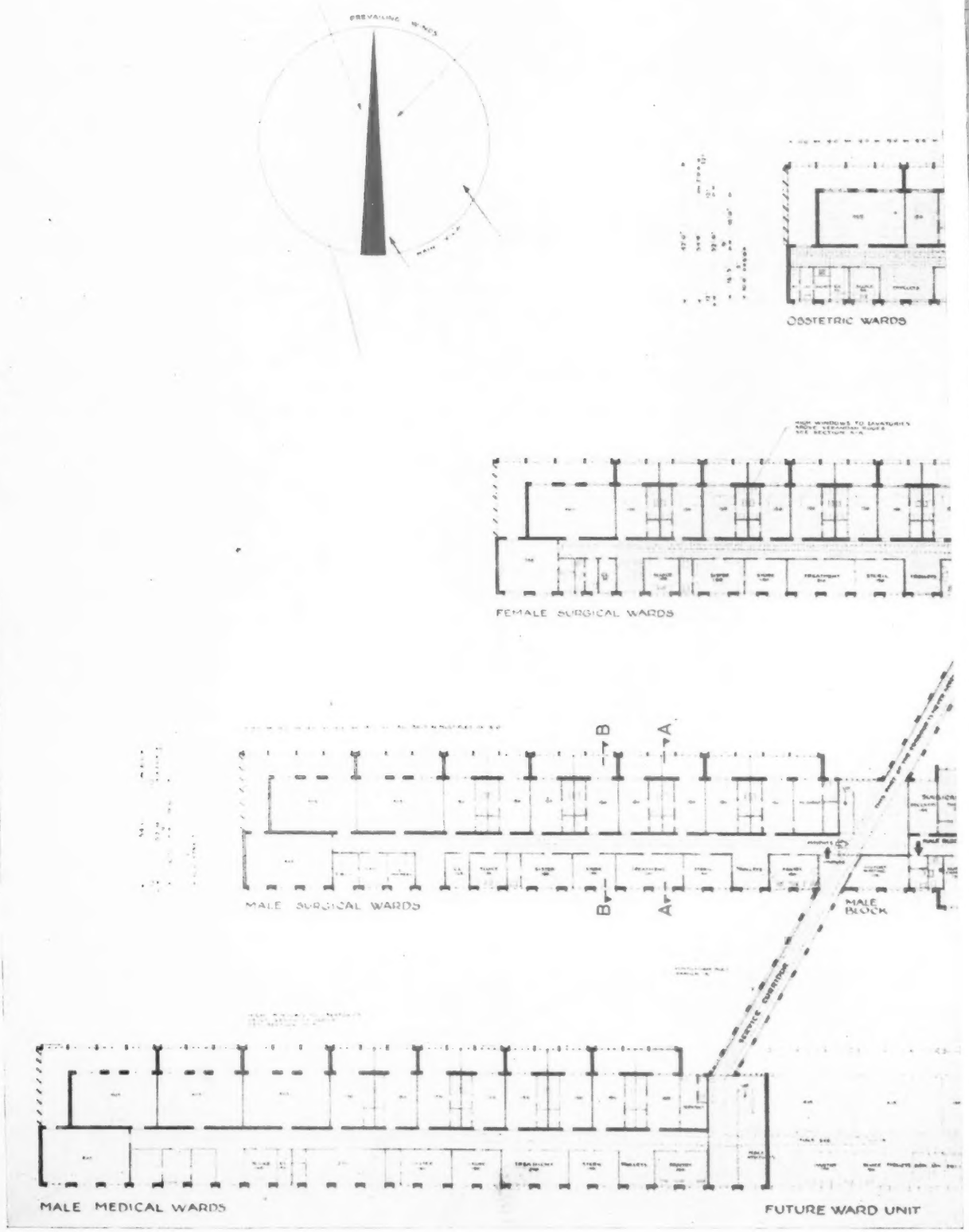


North Elevation

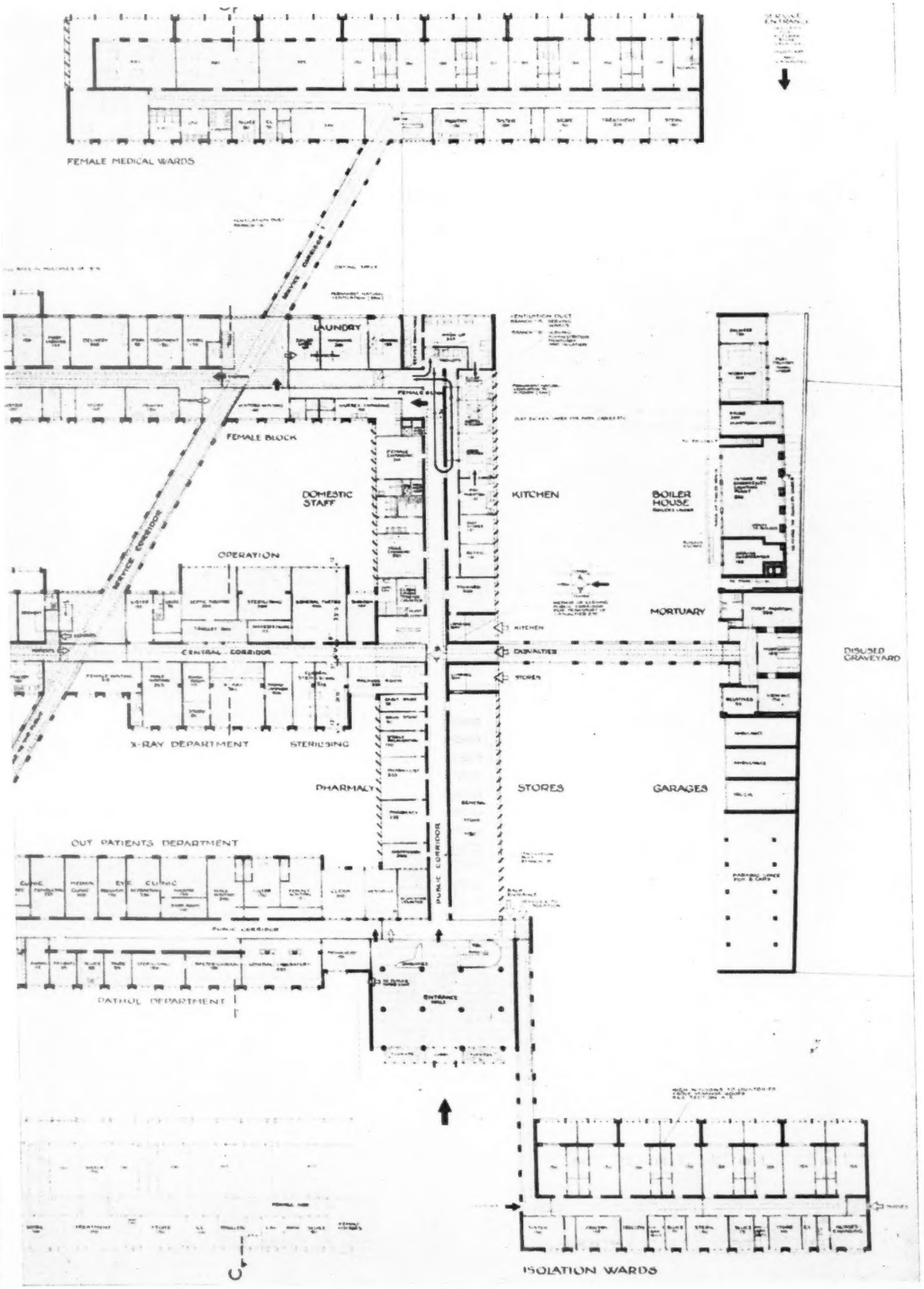


Ground floor plan.

THIRD PRIZE-WINNING DESIGN



By DR. C. L. P. FRANCK



PRIMARY SCHOOL

in KINGSMEAD WAY, HACKNEY, LONDON, E.9

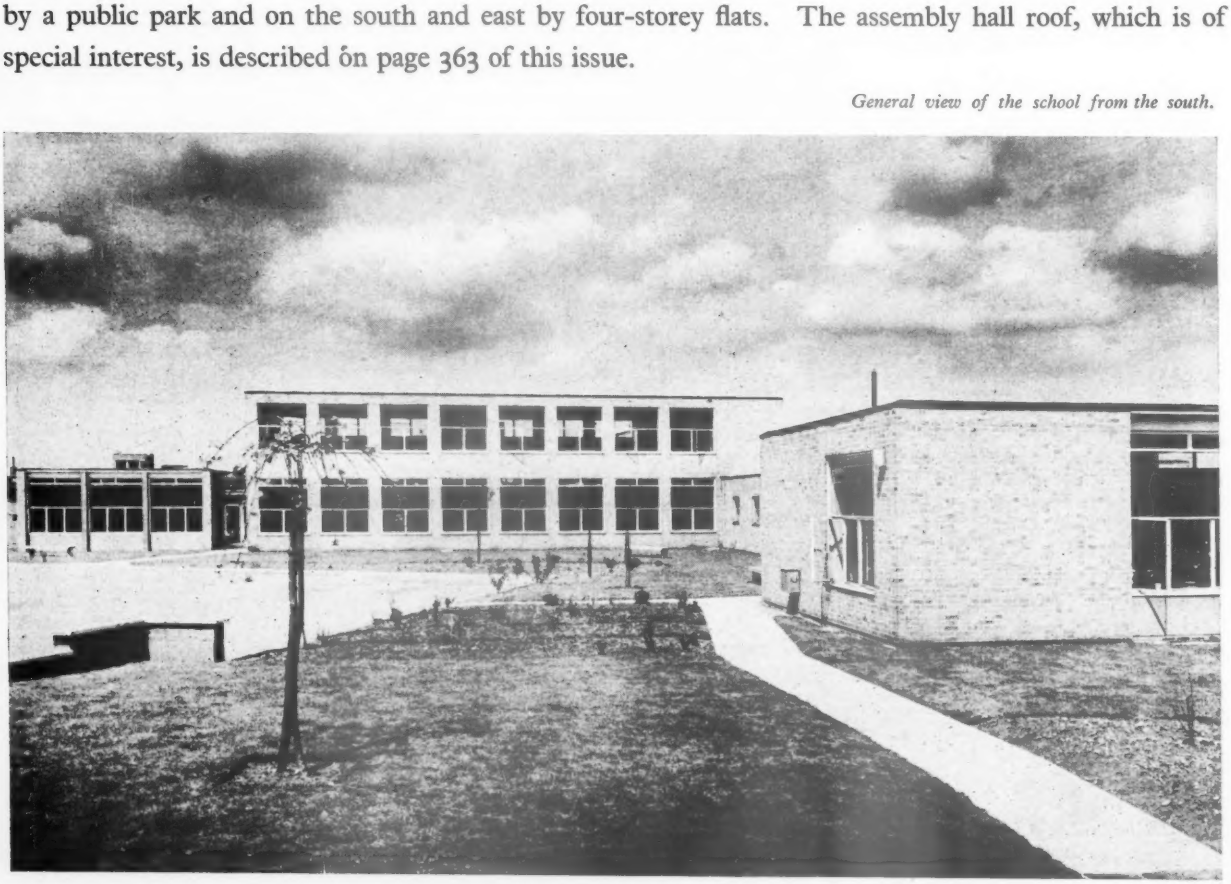
designed by GEORGE FAIRWEATHER

assistant architects, ALEC LIVOCK and ERIC RHEINBERG

consulting engineer, structural, F. J. SAMUELY, heating, J. ROGER PRESTON and PARTNERS; quantity surveyors, E. C. HARRIS and PARTNERS

The Kingsmead Primary School in Hackney was designed for the LCC to accommodate 120 infants and 200 juniors, with a detached 3-bedroom house for the caretaker. The site is 1·6 acres and this school forms the first part of a scheme which will later include a nursery school and a community centre, which are to share a common access road and parking area. The site is bounded on the north and west by a public park and on the south and east by four-storey flats. The assembly hall roof, which is of special interest, is described on page 363 of this issue.

General view of the school from the south.

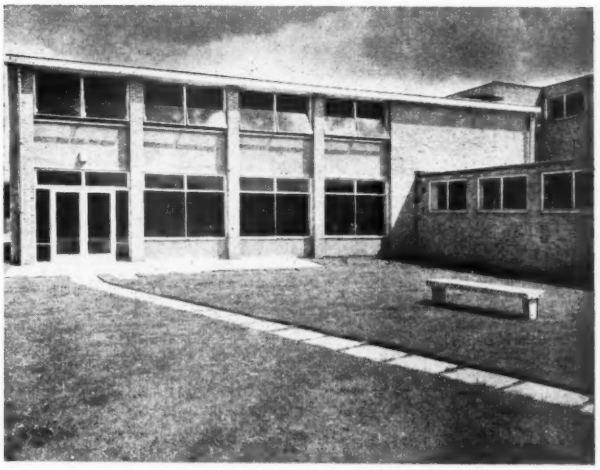


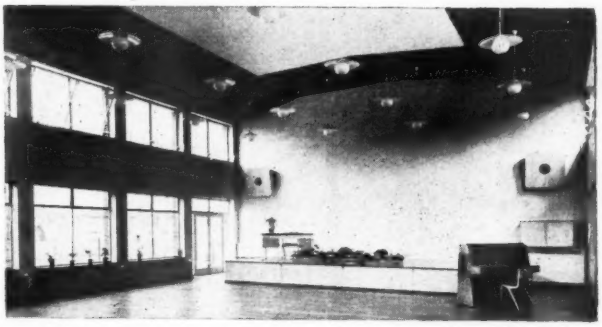
SITE.—The siting of the building was influenced by the size, shape and orientation of the play courts required—the architects' wish to have grass and shrubs adjoining classrooms and the assembly hall—and also the possible siting of the future nursery school on the east boundary.

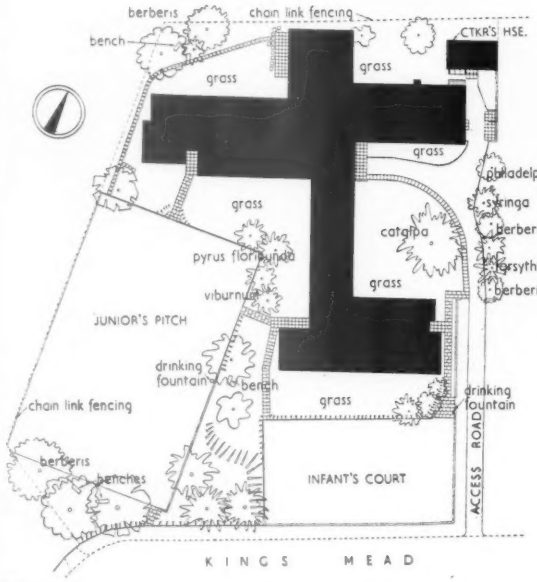
PLAN.—Infant and junior classroom sections are planned separately, but the assembly hall, dining hall and administrative rooms are for joint use.

CONSTRUCTION.—The external walls are mostly of load-bearing cavity walls consisting of 9-in. brickwork, 2-in. cavity and foamed slag inner skin.

Right, the west facade of the assembly hall. Below, right, the assembly hall looking towards the portable stage.



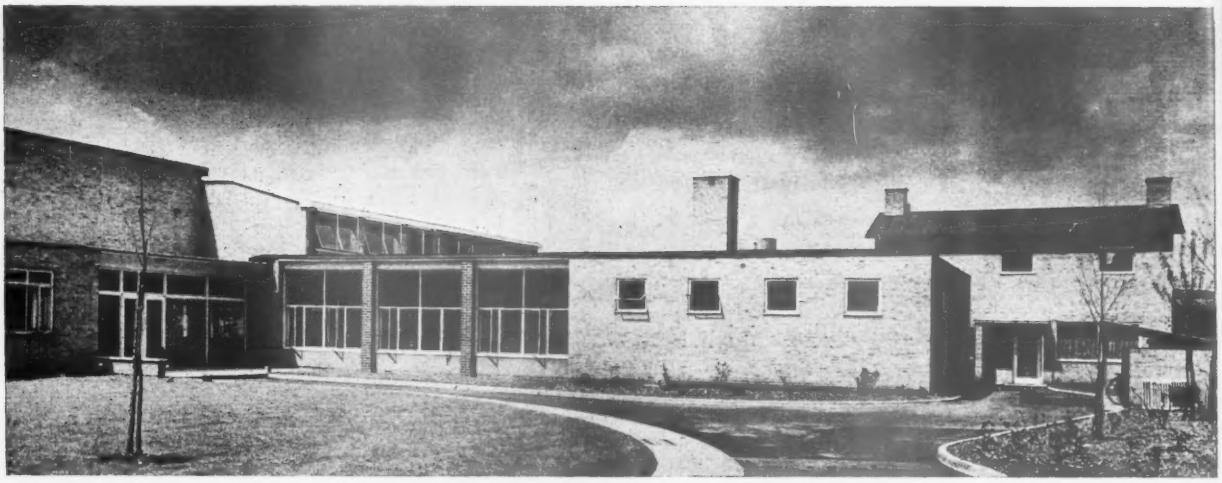


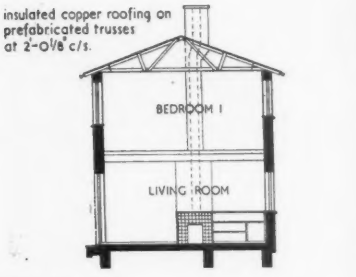


Site plan

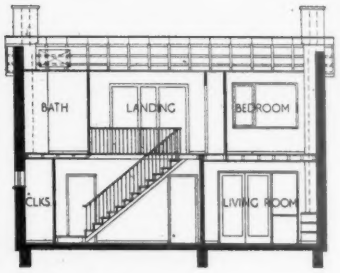
For some of the brick piers one dimension had to be kept to 9 in., and these are built of blue bricks. Floors and roofs are generally of prestressed concrete beams with trough-shaped precast units between, and false ceilings. In the case of the beams, only the lower part is prestressed and standard units were used which had been developed earlier for a

Basement, ground and first floor and section A-A plans
[Scale : $\frac{1}{16}$" = 1' 0"]

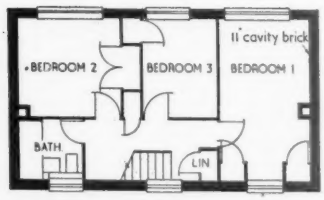




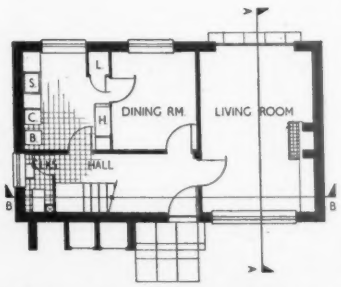
Section A-A



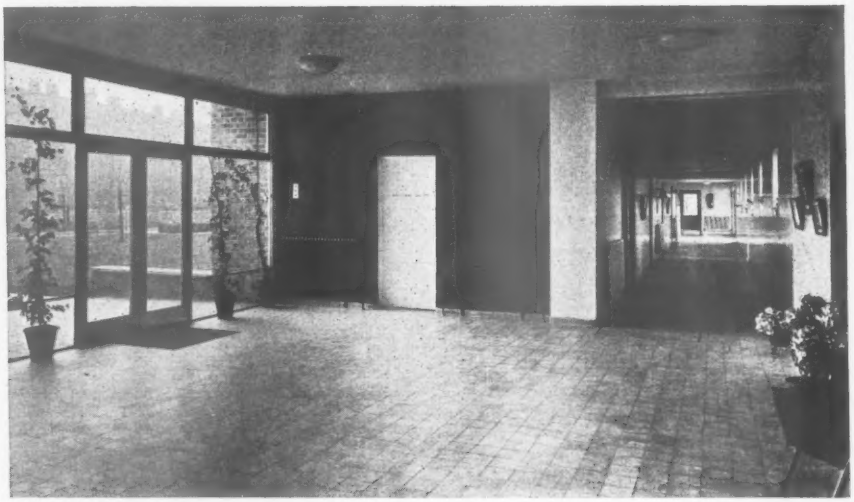
Section B-B



First floor plan



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



Top, the main entrance, on the left, seen from the south-east. On the right is the 3-bedroom caretaker's house. Above, the main entrance hall, with the main entrance doors on the left and the corridor leading to the in ants' classrooms on the right.

number of other buildings. *In situ* concrete was poured on top to combine prestressed soffits and the troughs into a monolithic structure. The caretakers' house is constructed of 11-in. cavity brick walls on a concrete raft with foundation beams.

FINISHES.—Roofs are insulated with vermiculite screed and suspended ceilings form an air space below the trough units. To guard against impact noise from first floor classrooms, two ½-in. layers of building board have been laid on the structural floor with a Gurjan wood strip floor nailed to 1-in. battens in screed. Floors are of wood strip in classrooms, and assembly and dining halls, tesselated tiles in the entrance hall, corridor and stairs, brown quarry tiles in kitchen and lavatories, and linoleum in administrative rooms. The school forms part of the 1950 MOE building programme, when the net cost per place limit was £170. The total cost on tender was £53,788, which is £154 per place, and there are 50 sq. ft. per place. The general contractors were Charles Foster & Sons, Ltd. For sub-contractors, see page 364.

PRIMARY SCHOOL

in HACKNEY, LONDON, E.9

designed by GEORGE FAIRWEATHER

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TECHNICAL SECTION

We mentioned last month (JOURNAL for August 20) the number of deaths caused annually by fires in buildings (between 500 and 600). It will be remembered that the statistics recently published by the Fire Research Board showed that, while roughly half the fires that take place in buildings are in houses and flats, more than half of these are due directly or indirectly to individual heating appliances—solid fuel, gas or electric. We may assume, therefore, that deaths due to fires in houses and flats arising from *other* causes are less than 150 per year.

Unnecessary loss of life is always deplorable, but when this figure is compared, for example, with the annual death roll on the roads (nearly 5,000 in 1952), we may be justified in asking : are fire escape regulations for centrally-heated blocks of flats unnecessarily stringent ?

The economics of housing on expensive land, e.g., in slum-clearance areas, depends largely on building high, and the cost of building high (and, therefore, the rents of the flats) is increased unduly by these regulations. Serious fires in modern blocks of flats in this country are very rare ; sound fire-resistance construction, in accordance with the building byelaws, prevents small fires from spreading from flat to flat or from floor to floor. The money at present spent on providing extra " escape " staircases might save many more lives if it were spent, say, on improving dangerous road junctions.

This week's special article

9 DESIGN : GENERAL
international building research

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.

*On January 1, 1953 we published an article by Arthur F. Ewing, the chief of the Steel, Engineering and Housing Section of the United Nations Economic Commission for Europe, describing the preparations being made to put international collaboration in building research and documentation on to a permanent footing. Mr. Ewing referred to the setting up (in 1950) of CIDB (the International Council for Building Documentation) and to efforts that were being made to set up a similar organization for building research. Below, Mr. Ewing describes the new organization and gives a brief account of some of the decisions taken at its first assembly.**

The first general assembly of the International Council for Building Research, Studies and Documentation (CIB) was convened formally, at the request of a preparatory committee representing leading European research and documentation workers, by the executive secretary of the United Nations Economic Commission for Europe. More than 90 delegates were present, representing governments and national research organizations from 17 countries, 6 international governmental organizations and 14 international non-governmental organizations. The main tasks of the assembly

* A full account of the proceedings has been prepared and circulated under the reference CIB/28. Copies can be obtained from the Distribution Section (C.111), Palais des Nations, Geneva.

were to constitute formally the CIB and to draw up and adopt a programme of work for the three sections of the Council. Statutes, drafted by the preparatory committee, were unanimously adopted and the CIB was thus formally established. Founder members are:

Centre Belge de Documentation et d'Information de la Construction (CEDOC) (Belgium);
Dokumentationszentrum für Technik und Wirtschaft (Austria);
Statens Byggeforskningsinstitut (Denmark);
Asuntotutkimustoimikunta (Finland);
Centre Scientifique et Technique du Bâtiment (France);
Institut für Bauforschung e.V., Hanover (Western Germany);
Comitato nazionale per l'abitazione (Italy);
Bouwcentrum (Netherlands);
Norges Byggforskningsinstitutt (Norway);
Statens nämnd för byggnadsforksning (Sweden);
Building Research Station, Department of Scientific and Industrial Research (UK).

The Council consists of three sections: Experimental Research; Studies and the Application of Results of Research; and Documentation; under the presidency respectively of Dr. Lea (UK), M. Marini (France) and Ir. van Ettinger (Netherlands). The presidency of the Council will rotate among the three section presidents, the first to hold the post being M. Marini. Professor Colonnetti (Italy), Mr. Arctander (Denmark), Dr. Jacobsson (Sweden), Dr. Parker (UK), Dr. Triebel (Western Germany) and Professor Torroja (Spain), are among the other well-known building experts elected to the executive committee.

The Assembly decided that, while the organization should remain unified (in view of the inherent relationship between its three fields of activity), it should be as de-centralized as possible in its day-to-day working. Accordingly, it was decided that the three sections should have their headquarters in, respectively, the BRS (UK), the Centre Scientifique et Technique du Bâtiment (France) and the Bouwcentrum (Netherlands).

A NON-GOVERNMENTAL ORGANIZATION

CIB, although it has been set up on the initiative and with the blessing of governments, is non-governmental in character and its members are national organizations active in the fields of building research, studies and documentation. Such national organizations must be non-profit-making bodies working in the public interest, of sufficient national importance and with the capacity to make an effective contribution to international collaboration in at least one of the fields of activity of the organization. There is provision for up to two full members from each country in each section. In addition, there is a category of associate membership, a category of unattached members and provision for close relations and co-operation with other international organizations active in the field. Most of the international organizations* that attended the general assembly indicated their desire to work with the Council. The Council is independent of UNO, although the latter has the right, under the statutes, to send observers to all meetings and, through the secretariat of the ECE, will continue to take a close interest in the Council's work. The Council is financed by subscriptions from the national organizations that join. By the end of the assembly, some 40 national organizations had been provisionally accepted, subject in some cases to subsequent ratification, either as full or as associate members.

Each of the sections drew up, during the course of the assembly and with the aid of a number of papers especially prepared for this occasion by prominent European housing and building experts, its programme of work for the next year or two. These programmes were subsequently adopted by the assembly at its closing session. It is not possible here to do more than draw attention to some of the most interesting items in the programmes of work.†

DECISIONS TAKEN AT FIRST ASSEMBLY

Arrangements were made for the systematic exchange of information on research organizations, research programmes and research work completed. It was decided to publish critical reviews of the work already done in certain fields, including the transportation and handling of bricks or blocks on housing sites, building methods employing heavy elements, and timber roof structures. Collaboration was initiated in certain fields of research and the two items selected for a start were an investigation on the construction and performance of flat roofs (to be based on work already done in Sweden), and joint research on heat losses in building (a field in which sporadic work has been done in various countries over a period of years but where it was felt that there was scope for a new and co-ordinated approach to the problem).

Among the subjects adopted in the work programme of the studies section were:

a study of the effects of room height and layout on housing costs; a comparative study of the effectiveness of standardization and of its actual effect on the cost of house building (in collaboration with the International Organization for Standardization); a comparative study of attempts made in various countries to ascertain the wishes and needs of the population in regard to housing, with particular reference to methods and techniques of sampling, inquiry or experimentation.

The section on documentation was naturally in a better initial position than the other two sections, in that it inherited the considerable experience of the CIDB (which, before the assembly of CIB, decided to wind up its affairs, subject to what became in effect its incorporation as part of the new organization). It was decided to continue the work of the mixed CIDB/FID Committee on International Building Classification. (A first edition of the document drawn up by this body is now ready in English and editions in other languages are in the course of preparation.) One interesting and practical decision taken was to set up a working party to study the internal organization of the offices of architects and engineers and others engaged in building, with a view to making recommendations for the more efficient use of documentation already available. Work on terminology will be continued. Arrangements were made for more countries to publish abstracts in the form already determined by the former CIDB, following the example of Austria, Denmark, Finland, France, Italy, the Netherlands, Norway, Sweden, and Switzerland.

THE FUTURE OF THE ORGANIZATION

It was recognized that while the new organization had got off to an excellent start, the financial and other resources at its disposal in its early days would be comparatively small. Consequently, the programmes of work were deliberately kept down to modest proportions. Similarly, the administrative apparatus of the new organization is economical. A permanent secretary will be appointed shortly, but there appears to be no danger of anything in the nature of an international bureaucracy developing. The character and qualifications of the leading participants would seem to be sufficient to guarantee that the organization is out to achieve practical, if by no means spectacular, results in limited fields and, if early success is achieved, the future of the organization should be assured. Much will depend on the co-operation of the building industry, and it was good to see that employers and operatives were both represented at the

* Such as the Fédération Internationale de la Documentation (FID), the International Union of Architects (UIA), the Union Internationale des Organisms Familiaux (UIOF) and the Union Internationale de la Propriété Foncière Bâtie.

† For full details see document CIB/28, Appendices IX, X and XI.

assembly and helped to give the new organization an encouraging " send off."

It is fitting to draw attention to the fact that the strong participation of the UK, both in the assembly and in the Council, was a source of general satisfaction. BRS has joined two of the sections and Dr. Lea (the Director of BRS) has undertaken to be the president of the section on experimental research and to be the second general president, following the principle of rotation mentioned above. Among specialized organizations, TDA has already joined the organization, and it is expected that other UK organizations will apply for membership in due course.

The establishment of the CIB frees the ECE Housing Sub-Committee of much technical work, which can be carried out better at a non-governmental level and by an organization in close touch with the building industry and its professions; thus the resources of the intergovernmental body can be devoted increasingly to economic and social problems of major concern to governments.

The purposes and functions of India's Central Building Research Institute are described below.

BUILDING RESEARCH IN INDIA

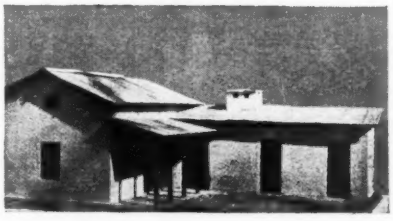
The Indian Council of Scientific and Industrial Research has decided to establish a Central Building Research Institute, which will form one of its chain of National Laboratories.

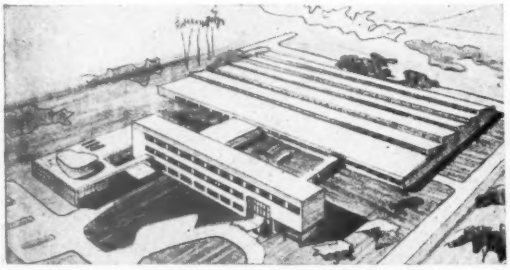
India's Building Research Committee was set up in December, 1943; at its meeting in December, 1944, the committee recommended that a central research institute should be established. The government already has a Building Research Unit, which commenced its work in May, 1947, and now occupies two large hangars at the University of Roorkee. The new institute (see perspective of project below left) will be situated on a 10-acre site near the university.

The functions of the Institute will include: " examination of building materials in common use and methods of applying them, with a view to effecting economy and improvement wherever practicable; examination of new materials or processes evolved at the institute or by other research workers; scientific diagnosis of the causes of failures in materials themselves and in their application; dissemination of useful information and fostering the growth of a scientific spirit and outlook in the building industry in India; preparation of standards for materials and codes of practice for various aspects of building construction."

The Institute will undertake research on building materials (their properties, strength and structure), on engineering and structural aspects of buildings and their foundations, on problems of comfort in buildings (heating, lighting and ventilation), and on durability and speed of construction. It will work in collaboration with government departments, institutes, and industries employing labour on a large scale, including, of course, the building industry. Its activities will include basic research, such as X-ray studies and differential analysis of clays and their electro-chemical and rheological properties, and studies of the stresses and strains in structures. It will afford facilities for the training of a highly-skilled core of technicians. It will carry out surveys, and disseminate scientific and technical information through an information bureau.

One problem the Institute will tackle is that concerned with the provision of houses for working class and lower middle class families. Various materials and elements, such as stabilized earth and hollow concrete blocks, and building systems, such as cement spraying and prefabrication systems, are being used in different parts of India, and there is much scope for the exchange of information.





Left, aerial perspective of the project for India's new Central Research Institute. Above, model of house for a lower middle class family, typical of those now built in many parts of India.

Specialist Editor No. 10 *(Practice) reviews below an important new book* on the subject of planning applications, appeals and enquiries*

PLANNING APPLICATION, APPEALS AND ENQUIRIES

The control of the use of land has become, as the preface to this book suggests, an accepted part of our national life, and it may be thought that an architect ought to know all there is to be known about town planning. This volume should dispel that idea, as it is clearly shown that legal aspects of the subject are even more extensive than the architectural aspects. The architect should, therefore, be able to judge when a problem has become a legal one and be ready to advise his client to take legal aid. The architect is not a lawyer but he is presumed to know the law so far as it relates to his particular branch of town planning; this book deals with the role of the architect, particularly in connection with evidence in planning inquiries.

Other subjects dealt with include: procedure in planning inquiries and development plan inquiries, compulsory purchase, highway and trunk road inquiries, procedure under the New Towns Act and the control of trees and advertisements. The appendices give lists of Ministerial Circulars, Command Papers and Orders and Regulations made under the Planning Acts.

Evidence in planning inquiries is dealt with in detail and it is refreshing to read that " many planning jargon terms like 'amenity' and 'neighbourhood' are employed in a great variety of meanings and do not mean the same thing even to two experts. Some of these terms simply do not mean anything and serve only as a cloak for muddled thought." Other jargon terms could be added to the authors' examples.

On page 11 of the book it is said that planning permission is not required for restoration of war damaged buildings as they are exempt under the conditions of Class XI of the General Development Order of 1950. But, the Planning Act of 1951 provides that planning permission *is* required, as section 12(2)(*a*) of the 1947 Act does not apply in such cases.

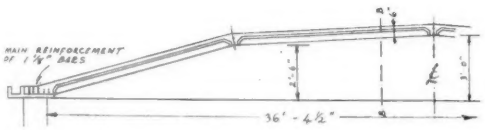
Chapters 5 and 6, entitled Social and Physical Criteria, give examples of the Minister's decisions in appeals. Both these chapters give a guide as to the possible outcome of an appeal against a refusal of planning permission and show the principles that may be applied by the Minister in giving his decision. A study of such decisions by planning authorities and applicants might help to reduce the number of appeals.

In the chapter on change of use, the authors again quote the Minister's decisions in a number of cases, and may, therefore, help the architect to decide when a change of use is not " material " and does not therefore, require planning permission.

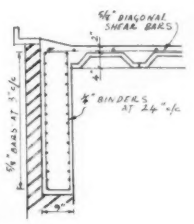
In the chapter dealing with applications to the Court, the authors show the cases in which the Court may intervene to protect the citizen. Modern legislation has given wide powers to ministers, but defects in procedure, acting *ultra vires* and giving an erroneous decision, are matters which, it is stated, may be brought before the Court.

Planning Applications, Appeals and Enquiries. A. E. Telling, M.A., Barrister at Law, and F. H. B. Layfield, A.M.T.P.I. (Butterworth & Co. (Publishers) Ltd. 35s.)

"FOLDED SLAB" USED FOR ASSEMBLY HALL ROOF



Half cross-section [Scale : ⅛" = 1' 0"]



Section B-B
[Scale ¼" = 1' 0"]

The assembly hall roof of the Kingsmead Primary School (described and illustrated on pages 356-358 of this issue ; general view below) is a folded slab structure spanning 56 ft. between the end walls. The clear width between side cladding is 36 ft. 4½ in. and the structural depth is approximately 36 in. at the centre. The area could have been covered by a barrel vault or an in situ *prismatic slab of somewhat similar proportions, but for a single structure this would have involved high costs for the erection of the formwork. Instead, four sloping slabs have been constructed, composed of 9 ft. long by 1 ft. 7½ in. wide trough-shaped precast units, of approx. 4 in. overall depth and 1 in. thickness, the short edges of which were temporarily supported on 3 lines of scaffolding running down the 56-ft. length of the building, while the lowest edge of the external row was permanently supported on the external walls. Precast gutter units were used at the side walls to complete a soffite consisting entirely of precast concrete, except for 6-in. gaps along the three main supports. A 2-in. screed was placed over the units, which together with the end diaphragms and the main reinforcing steel concentrated at the gutter units, acts as a beam, spanning the 56 ft. Transverse top steel of ⅝ in. dia. bars at 15-in. centres has been provided to cater for the local bending which takes place, due to the fact that, in this form of construction, the slabs also span between the folds and the side walls. Steel has been bent up in the plane of the roof along the lines of the principal stresses, giving a somewhat similar arrangement to the usual diamond pattern of distribution steel, but using only half the amount. The ridges were cambered to counteract the calculated deflection, but the actual deflection was only a third of that expected. The edge beam at the gutter provides lateral stability and reduces the tendency for the roof to "spread." Composite (precast and* in situ) *system led, as in ordinary floor construction, to speedy erection. (Architect, George Fairweather ; consulting engineer, F. J. Samuely.)*

INFORMATION CENTRE

2.130 planning: general
PLANNING LAW

Planning Applications, Appeals and Inquiries. A. E. Telling and F. H. B. Layfield. (Butterworth & Co. 1953. 35s.)

Town planning is the concern both of the architectural and the legal profession. This book defines the rights of owners of land, the legal procedure for their protection, and the assistance that can be given by both professions in what is probably one of the most complicated pieces of British legislation, excepting, of course, the Rent Restriction Acts. 387 pp., well indexed. (Reviewed in detail in JOURNAL for Sept. 17. 1953, p. 361.)

11.35 materials: general
LIME

The Uses of Lime in Building. (The British Lime Manufacturers. 1953.)

Fourth edition of a useful booklet on the nature and manufacture of lime, its advantages and methods of use in building work in mortars, plasters and renderings. Now includes limestone limes as well as chalk limes. Those already familiar with the advantages and uses of lime will find little new, but it forms a useful single reference to the subject, dealing with materials, types of mix, preparation of the mix and precautions in use. It also contains a list of British lime manufacturers, listed alphabetically, by counties.

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).

.....

.....

.....

Please ask manufacturers to send further particulars to :—

NAME .....

PROFESSION or TRADE

.....

ADDRESS .....

.....

17.9.53

Buildings Illustrated

Kingsmead Primary School, Kingsmead Way, Hackney, London, E.9, for the London County Council. (Pages 356-358.) Architect: George Fairweather, F.R.I.B.A.; Assistant architects: Alec Livock, A.R.I.B.A., and Eric Rheinberg, A.R.I.B.A. Quantity surveyors: E. C. Harris & Partners. General contractor: Charles S. Foster & Sons Ltd. Clerk of works: J. T. Farmer; General foreman: Mr. Dixon. Sub-contractors: foundations, West Piling Construction Ltd.; reinforced concrete, Liverpool Artificial Stone Co. Ltd.; bricks supplied by W. H. Collier Ltd.; special roofings (caretaker's house), Broderick Insulated Structures Ltd.; roofing felt, D. Anderson & Sons Ltd.; w.c. partitions, Mosaic & Terrazzo Precast Co. Ltd.; patent glazing, Williams & Williams Ltd.; woodstrip flooring, Acme Flooring & Paving Co. Ltd.; linoleum, Cellulin Flooring Co. Ltd.; central heating and ventilation, Edward Deane & Beal Ltd.; boilers, Ideal Boilers & Radiators Ltd.; electric wiring, Harris & Sheldon Ltd.; electric light fixtures (assembly hall), Hume Atkins & Co. Ltd.; sanitary fittings supplied by W. N. Froy & Sons Ltd.; stairtreads (tesselated tiles), Carter & Co. Ltd.; door furniture, James Gibbons Ltd.; casements, window furniture, West Bromwich Casement & Engineering Co. Ltd.; rolling shutters, Shutter Contractors Ltd.; sunblinds, Tidmarsh & Sons; decorative plaster, Horace W. Cullum Ltd.; metalwork (railings and gates externally), George Wright (London) Ltd.; joinery, Fosters (Woodworkers) Ltd. and George Hammer & Co. Ltd. (portable platform); tesselated tiling and eggshell wall, Carter & Co. Ltd (tiles in dining and kitchen); shrubs, trees and garden furniture, Knowles & Weller Ltd. (contract for garden works); cloakroom fittings, Fosters (Woodworkers) Ltd. (partitions), Comyn Ching & Co. Ltd. (seats and baskets); signs, The Lettering Centre.

Announcements

Anthony Avenell, A.R.I.B.A., of 15, Littledown Avenue, Queens Park, Bournemouth, has moved his office to Ellerslie Chambers, Hinton Road, Bournemouth (Tel.: Bournemouth 5110).

C. V. Harborne, L.R.I.B.A., and D. E. Grove, A.R.I.B.A., have commenced practice at 218, Witton Lane, Birmingham, 6, under the style of Harborne & Grove. They will be pleased to receive trade catalogues, etc. (Tel.: East. 0201).

The Quasi-Arc Co. Ltd. are arranging a further course on the "Design of Welded Structures." Further details of the course, together with the enrolment forms, can be obtained from the Constructional Design Department, The Quasi-Arc Co., Ltd., Bilston, Staffordshire.

High Duty Alloys, Ltd., announce reductions in the prices of their "Hiduminium" rainwater goods and more favourable terms to stockists. Revised price lists are available from the company at Slough, Bucks. (Tel.: Slough 23901).

The Southern Lime Association and the Limestone Federation have set up a Joint Building Limes Publicity Committee, with the object of publicising the uses of lime in building. R. L. Eke, secretary of the Southern Lime Association and A. V. Dalzell, secretary of the Limestone Federation, are joint secretaries of the committee. One of the first steps taken by the Committee has been to issue a revised version of the booklet previously published by the Southern Lime Association in order to include limestone limes as well as the chalk limes which it previously dealt with. In addition to dealing with the uses of lime for mortar for brickwork, for internal plastering and for external rendering, it gives a list of British lime manufacturers, alphabetically listed by counties, and a map of England Scotland and Wales, with the location of each manufacturer shown. The addresses of the joint secretaries are Hanover House, 73/78, High Holborn, London, W.C.1, and Craig's Court House, 25, Whitehall, London, S.W.1.

Reliance metal windows and doors, as used in the recently completed Nazareth Lodge Babies' Home, Belfast, are now available for immediate delivery in full standard range for the first time in Northern Ireland. Previously the full range had been obtainable there only on order, not from stock—with the result that immediate delivery could not be guaranteed. Williams & Williams, Ltd., of Reliance Works, Chester, England, manufacturers of Reliance products, supplied and fixed the windows and doors of the Home—a glass area of approximately 5,500 square feet. Williams & Williams also installed the Teleflex gear controlling windows and ventilators of the building, which was designed by architects McLean and Forte, of Belfast. Williams & Williams's area office for Northern Ireland is at 22, Lombard Street, Belfast.

Some 280 Hawksley Construction Type B.L.8D. Bungalows are included in the 2,000 houses which have been completed since the war for the Ellesmere Port, Mereport UDC. The work was carried out on two sites, one at Rivacre Estate, Overpool, where Hawksley Constructions supplied and erected 248 bungalows within fifteen months, including the complete siteworks. The remaining 32 were erected in nine months at the Orchard Farm Estate, Whitby. The bungalows were erected, with a minimum of unskilled labour, in semi-detached pairs and are of light alloy construction. More than 25,000 factory-built bungalows have been supplied by Hawksley Constructions (member of the Hawker Siddeley Group) since the war.

—a perfect key for plaster

REDALON LIQUID

Why laboriously hack for a plaster key when

REDALON CEMENT RETARDER is

The cheapest and most efficient method of obtaining a key

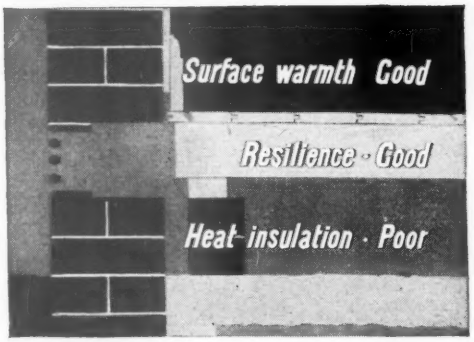
It can be used with ***metal*** or wooden shuttering.

Write to me for copy of Bulletin No. 5.

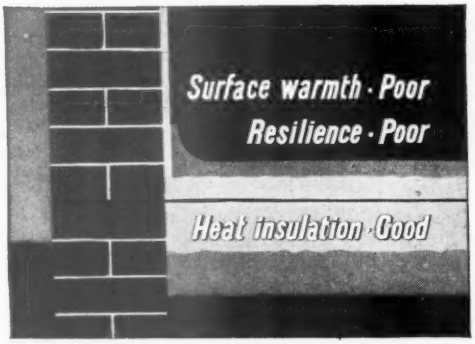
Cecil Kahn

THE ADAMITE COMPANY LTD., Manfield House, Strand, W.C.2 Temple Bar 6233

WHICH



DO YOU

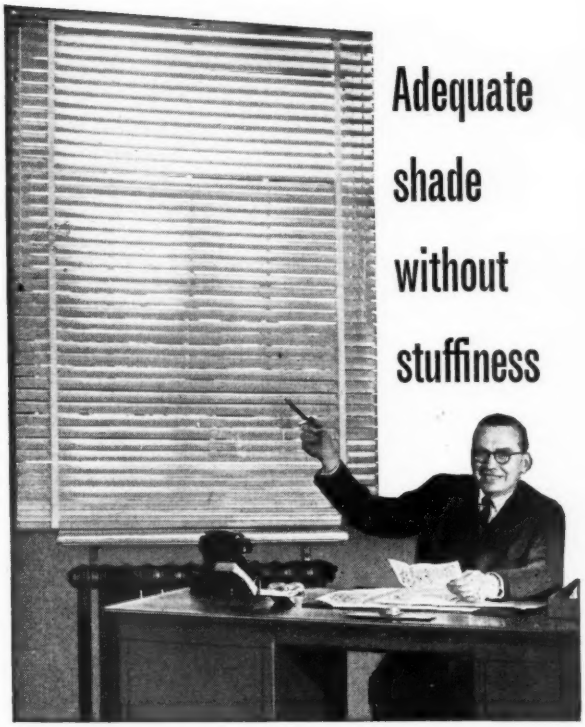


RECOMMEND ?

The 'Tanalised' fillet on concrete floor affords high thermal efficiency, a warm surface and good resilience *plus immunity from fungal decay and wood-destroying insects.*

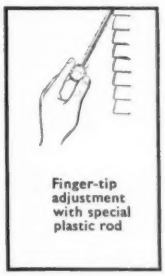
Specification sheet 123 will be sent on request from Hickson's Timber Impregnation Co. (G.B.) Ltd., Castleford, Yorkshire, or from our London Office at 36, Victoria St., S.W.1.

INSTALL 'Tanalised' FILLETS & FLOORING IN THE FIRST PLACE



Adequate shade without stuffiness

—just one of the points I like about DANAURA blinds



DANAURA venetian blinds are becoming increasingly popular in offices, homes, hospitals and schools. When the streets are hot, rooms fitted with DANAURA are shady and cool. When the March winds blow, they are strangely free from draughts. And when it's dark at four and the lights are on, the whole room is bathed in a brighter luminosity.

DANAURA slats are made of an aluminium alloy that deflects solar radiation, but *reflects* artificial light and heat. Their stove enamelled finish deters dust and simplifies cleaning.

Other DANAURA features include: rubber rolls to protect ladder tape; plastic caps to prevent paintwork scratching; free-wheeled cord lock and flexible spindle. Choice of thirteen attractive colours with, of course, matching or contrasting ladder tapes.

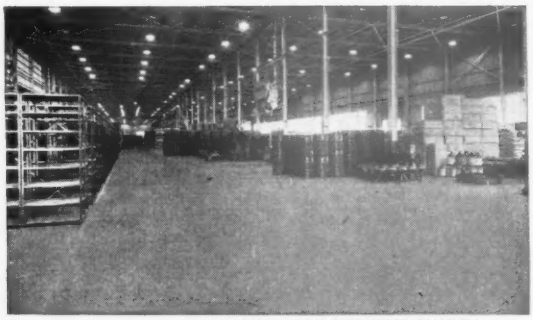
DANAURA *Blinds*

Send for literature and colour card: DEPT. A.J.

DANAURA LTD, 12 WHITEHALL, LONDON, S.W.1

Sealocrete Products

Solve your flooring problems



NEW ESSO REFINERY, FAWLEY
Contractors: Messrs. Foster Wheeler Ltd.

SEALOCRETE DOUBLE STRENGTH PREMIX

Incorporated produces a dustproof, oilproof, waterproof, case-hardened surface. Ideal for industrial purposes. Enables floors to be walked on 4 to 6 hours after they are laid. Increases crushing and tensile strength.

SEALOCRETE CONCRETE SURFACE DRESSING

For existing floors after they are laid and no longer green. Renders them dustproof, greaseproof, oilproof and case-hardened.

SEALOCRETE METALLIC HARDENER

Incorporated in granolithic floors gives very hard surface to withstand extremely heavy usage. Suitable for bakeries, breweries, canneries, dairies, etc.

SEALOCRETE LIQUID COLOURS

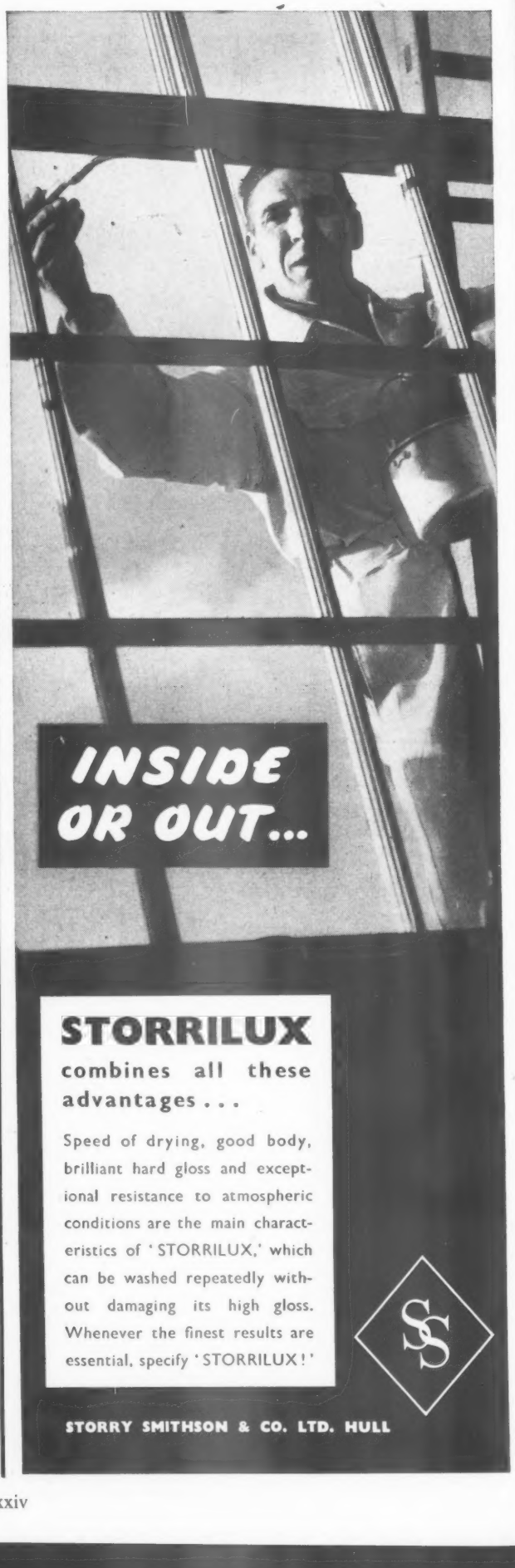
Original and non-fading for granolithic, sand and cement floors. No weighing up or measuring is necessary. Uniformity ensured throughout. Makes floors attractively coloured, dust, oil, grease-proof, water resistant with increased crushing and tensile strength, all in one operation.

SEALOCRETE COLOURED CORK FLOORING COMPOUND

A warm, colourful, resilient, waterproof floor which actually contains cork. Ready mixed, only requires addition of cement and gauging water. Supplied in many shades.

SEALOCRETE PRODUCTS ARE USED IN OVER 2,000,000 SQ. YDS. OF FLOORING PER ANNUM.

SEALOCRETE PRODUCTS LIMITED
ATLANTIC WORKS, HYTHE ROAD,
Tel.: LADbroke 0015/6/7 LONDON, N.W.10
Grams: "Exploiture, Wesphone, London"



CLASSIFIED ADVERTISEMENTS

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

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

Public and Official Announcements

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

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

PEAK PARK PLANNING BOARD.

Applications are invited for the following appointments under N.J.C. Service Conditions:—

(i) SENIOR PLANNING ASSISTANT: Salary A.P.T. Grade VI (£670—£735), Associate Member Town Planning Institute required, preferably with additional technical qualification, car allowance payable.

(ii) JUNIOR PLANNING ASSISTANT: salary A.P.T. Grade II (£495—£540), Intermediate Town Planning Institute Examination or equivalent standard.

Main responsibility of candidates appointed will be preparation of town maps for urban areas of north-west Derbyshire outside National Park but adjacent thereto: previous experience of town map work essential.

Apply on forms obtainable, together with further particulars, from undersigned: forms to be returned by 29th September.

Bath Street,
Bakewell, Derbyshire.

A. L. OLDACRE,
Planning Officer.
9503

CITY OF SHEFFIELD.
CITY ARCHITECT'S DEPARTMENT.
APPOINTMENT OF CHIEF QUANTITY SURVEYOR.

Scale: £1,150-£1,350.

Applications are invited from Chartered Quantity Surveyors for this appointment on the staff of the City Architect (Mr. J. L. Womersley, A.R.I.B.A., A.M.T.P.I.).

The City's building programme comprises mixed developments of houses and flats, including roads and sewers, the redevelopment of outworn central areas, including multi-storey flats, schools, and the general building works of all Committees.

Candidates should possess a thorough knowledge of Building Contract procedure, sound administrative ability, and considerable experience of handling large scale contracts.

The person appointed will be required to take charge of the Quantity Surveying Section, and will be directly responsible to the City Architect and his Deputy for the Quantity Surveying work of the Department.

The post is superannuable and subject to medical examination.

Applications, stating age, education and training, qualifications, present and past appointments (with dates and salaries), experience, and the names and addresses of two referees, should reach me by the 24th September, 1953.

JOHN HEYS,
Town Clerk.
The Town Hall, Sheffield, 1. 9524

CITY OF SHEFFIELD.
CITY ARCHITECT'S DEPARTMENT.

Applications are invited for the following two principal architectural appointments on the revised establishment of this Department under the City Architect (Mr. J. L. Womersley, A.R.I.B.A., A.M.T.P.I.) and his Deputy. Both these appointments offer considerable scope to enthusiastic and progressive architects possessing the requisite qualifications, design ability and experience.

(a) CHIEF ASSISTANT ARCHITECT (HOUSING). Scale: £1,150-£1,350.

The City's housing programme consists of mixed developments of houses and flats in the outer and middle areas, and the redevelopment of outworn and densely populated central areas. The person appointed, who should be a Member of the R.I.B.A. and the T.P.I., will be required to take charge of the "Housing" Section of the Department.

(b) CHIEF ASSISTANT ARCHITECT (EDUCATION AND GENERAL). Scale: £1,150-£1,350.

The City has an extensive school building programme, and the "General" work, which is extremely varied, is expanding with the freeing of restrictions. The person appointed, who should be a Member of the R.I.B.A., will be required to take charge of the "Education and General" Section of the Department.

The posts are superannuable, and subject to medical examination.

Applications, stating age, education and training, qualifications, present and past appointments (with dates and salaries), experience, and the names and addresses of two referees, should reach me by the 24th September, 1953.

JOHN HEYS,
Town Clerk.
The Town Hall, Sheffield, 1. 9525

EAST RIDING OF YORKSHIRE COUNTY COUNCIL.
COUNTY PLANNING DEPARTMENT.

Applications are invited for appointment of a SENIOR PLANNING ASSISTANT, A.P.T., Grades V-VI (£595-£735 per annum). Commencing salary according to experience and qualifications. Candidates must be A.M.T.P.I., or hold equivalent qualifications. The Officer appointed will be required to provide a car, and a travelling allowance will be paid in accordance with the scale adopted by the County Council.

The appointment will be subject to the Local Government Superannuation Acts. Applications, stating age, qualifications and experience, should be received by the undersigned not later than Friday, the 9th October, 1953, and should be accompanied by copies of two recent testimonials. Canvassing, either directly or indirectly, will be a disqualification, and relationship to any member or senior officer of the Council must be disclosed.

THOMAS STEPHENSON,
Clerk of the Council.
County Hall, Beverley. 9536

MIDDLESEX COUNTY COUNCIL, COUNTY PLANNING DEPARTMENT.

PLANNING ASSISTANT required, with full professional qualifications, or a suitably good honours degree. Capable of senior position in charge of group of assistants in headquarters section. Salary: A.P.T., VI, £700 p.a., rising to £765 if 26 years or over. Established, pensionable, subject to medical assessment and prescribed conditions. Application forms from County Planning Officer, 10, Great George Street, London, S.W.1, by 1st October (quoting M.445 A.J.). Canvassing disqualifies. 9535

CUMBERLAND COUNTY COUNCIL.

Applications are invited for the appointment of a QUANTITY SURVEYOR on the permanent establishment of the County Architect's Department at a salary in accordance with A.P.T., Grade V (£595-£645).

Applicants must have had experience in the preparation of Bills of Quantities, Specifications, Estimates, and the settlement of final accounts. The appointment is terminable by one month's notice on either side, and is subject to the provisions of the Local Government Superannuation Act, 1937, and to the passing of a medical examination.

Applications, on forms obtainable from John H. Haughan, F.R.I.B.A., County Architect, 15, Portland Square, Carlisle, must be returned to him not later than Monday, 5th October, 1953, together with copies of three recent testimonials.

G. N. C. SWIFT,
Clerk of the County Council.
9534

CITY OF LEEDS.
CITY ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointments:—

ASSISTANT ARCHITECT (Permanent). Salary: A.P.T., VIII (£760-£835).

Candidates must be Registered Architects, and should have had experience in one or the other following types of work: Schools, Multi-storey Flats, General.

ASSISTANT ARCHITECT (Permanent). Salary: A.P.T., V-VI (£595-£735).

Candidates must be Registered Architects.

ARCHITECTURAL ASSISTANT (Permanent). Salary: A.P.T., IV (£555-£600).

Candidates should have had experience or be interested in one or the other following types of work: Schools, Housing, General.

ARCHITECTURAL ASSISTANT (Permanent). Salary: A.P.T., I (£465-£510).

ASSISTANT HEATING AND VENTILATING ENGINEER (Permanent). Salary: A.P.T., V (£595-£645).

Candidates should have had experience in the design and the preparation of specifications for schemes for Heating and Ventilation of Schools and other public buildings.

CLERK OF WORKS (Temporary). Salary: A.P.T., II (£495-£540).

Candidates should have had a good all round experience in supervising large contracts.

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

The appointments are subject to the Local Government Superannuation Act, 1937, and the successful applicants will be required to pass a medical examination.

Application forms may be obtained from the City Architect, Priestley House, Quarry Hill, Leeds, 9, to whom they should be returned, together with copies of three testimonials, by 10 a.m., Saturday, 26th September, 1953.

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

R. A. H. LIVETT, O.B.E., A.R.I.B.A.,
City Architect.
Priestley House, Quarry Hill, Leeds, 9.
8th September, 1953. 9539

GOLD COAST LOCAL CIVIL SERVICE.
TOWN PLANNING OFFICER, GOLD COAST.

Vacancies for TOWN PLANNING OFFICERS exist in the Local Civil Service of the Gold Coast. Appointments are on contract for two tours of 18-21 months each, in the salary scale £1,130 to £2,020 per annum gross, point of entry determined by qualifications and approved experience. A gratuity of £37 10s. for each completed 3 months' satisfactory service also payable.

Free first class passages are provided for the officer, his wife and children up to 3 in number under the age of 13. Government quarters, if available, are provided at a rental of £75 to £90 per annum. Leave is granted at the rate of 7 days for each month of resident service after a tour of 18 to 24 months.

Candidates, who should be under 45, must hold the qualifications of A.M.T.P.I. (or a recognised exempting qualification), and either A.R.I.B.A., A.M.I.C.E., or A.M.I.Mun.E., and have had at least 3 years' experience in the Planning Office of a Public Body or Planning Consultants.

Apply in writing to the Director of Recruitment, Colonial Office, Great Smith Street, London, S.W.1, giving briefly age, qualifications and experience. Mention the reference number (CDE. 62/13/01). 9540

BRITISH ELECTRICITY AUTHORITY.
EAST MIDLANDS DIVISION.

Applications are invited for the following positions within the Division:—

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

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

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

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

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

(i) Design and layout of Power Station equipment, including Turbo-alternators, boiler plant, coal and ash plant, and general station auxiliaries.

(ii) H.P. and L.P. steam and feed pipework. Condensing plant and feed heating systems.

(iii) Conveyor plant, coal handling systems, and material handling of station auxiliary equipment.

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

ENGINEERING DRAUGHTSMEN (ELECTRICAL). (Vacancy No. 61/53.)

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

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

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

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

L. F. JEFFREY,
Divisional Controller.
9527

SURREY COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the appointment of ASSISTANT ARCHITECT, GRADE VI, at a commencing salary of £670 per annum, rising by annual increments of £20/£25 to a maximum of £735 per annum, plus London Allowance of up to £30 per annum according to age.

Applicants must be Associate Members of the Royal Institute of British Architects and should have had a good training and an adequate experience in the design and construction of modern buildings.

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

Applications stating age, qualifications and experience, and accompanied by copies of three recent testimonials, should be sent to the County Architect, Surrey County Council, County Hall, Kingston-upon-Thames, not later than the 26th September, 1953.

Canvassing, either directly or indirectly, will disqualify a candidate from consideration.

The Council will be unable to provide any housing accommodation and the successful applicant will be expected to make his own arrangements in this direction.

W. W. RUFF,
Clerk of the Council.
County Hall,
Kingston-upon-Thames. 9546

BASILDON DEVELOPMENT CORPORATION.
CHIEF ARCHITECT'S DEPARTMENT.
APPOINTMENT OF ASSISTANT ARCHITECT GRADE IVB.

Applications are invited for the post of Assistant Architect, Grade IVB—£735—£835—on the staff of the Chief Architect Planner, N. Tweddell, A.R.I.B.A. Sound professional training with experience in house design, working drawings and

supervision of contracts is essential. Applicants must be fully qualified and hold membership of the appropriate associations.

Commencing salary within the grade would be in accordance with experience and ability. The appointment is subject to the provisions of the Local Government and Other Offices Superannuation Act, and the successful applicant will be required to pass a medical examination.

Housing accommodation in the New Town will be available in appropriate cases.

Applications on the form obtainable from the Chief Architect should reach the General Manager, Basildon Development Corporation, Gifford House, Basildon, Essex, by 28th September, 1953. 9548

COUNTY BOROUGH OF WOLVERHAMPTON.
APPOINTMENT OF PRINCIPAL PLANNING ASSISTANT.

Applications invited for above appointment, in the Department of the Borough Engineer and Planning Officer, at a salary in accordance with Grade APT VII (£710—£785 per annum).

Candidates should hold appropriate qualifications and have had considerable experience in a Town Planning Office, including administrative experience in a responsible position.

Appointment subject to N.J.C. Conditions of Service and to one month's notice on either side. Medical examination. Superannuable post.

Applications, stating age, qualifications, training and experience, with the names of not less than two persons to whom reference may be made, should be addressed in an appropriately endorsed envelope to the Borough Engineer and Planning Officer, Town Hall, Wolverhampton, by 30th September, 1953.

J. BROCK ALLON,
Town Clerk.

Town Hall,
Wolverhampton. 9547

HARLOW DEVELOPMENT CORPORATION.
TWO ASSISTANT ARCHITECTS (one temporary) required. Salary £625×£25—£725 p.a.

Candidates must possess minimum qualification of A.R.I.B.A. or equivalent and be experienced in all types of housing and Municipal Works.

Detailed applications stating post applied for with names of two referees to General Manager, Terlings, Gilston, Harlow, Essex, by 27th September, 1953. 9549

BOROUGH OF MAIDSTONE.
APPOINTMENT OF GENERAL ARCHITECTURAL DRAUGHTSMAN IN BOROUGH SURVEYOR'S DEPARTMENT.

Applications are invited for the above appointment, at a salary in accordance with Grade II (£495 per annum, rising to £540), from candidates who have completed their National Service training.

Candidates must have a sound knowledge of building construction, and preference will be given to those who have passed parts or the whole of the Intermediate Examination of the Royal Institute of British Architects or other approved Institution, and who have had general experience in connection with housing estate development.

The appointment will be subject to the National Scheme of Conditions of Service, the Local Government Superannuation Act, 1937, the passing of a medical examination, and one month's notice on either side. The Corporation cannot undertake to assist in any way with the provision of housing accommodation. Canvassing will disqualify.

Applications, on forms to be supplied, giving the names and addresses of two referees, must reach the undersigned not later than the 1st October, 1953.

S. F. DIXON,
Borough Surveyor.

Borough Surveyor's Department,
Palace Avenue, Maidstone.
10th September, 1953. 9538

MERIONETH COUNTY COUNCIL.
Applications are invited for the post of ASSISTANT COUNTY PLANNING OFFICER, at a salary in accordance with A.P.T. Grade VII (£710×£25—£785), of the National Joint Council's Scale. Applicants must be Corporate Members of the Town Planning Institute by examination, and preference will be given to applicants who possess an Architectural qualification.

Further particulars of the post may be obtained from the undersigned, by whom applications, accompanied by copies of two recent testimonials, should be received not later than 10th October, 1953.

HUGH J. OWEN,
Clerk of the County Council.

County Offices, Penarlag, Dolgelley. 9545

DERBYSHIRE COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.
Applications are invited for the undermentioned appointments of ARCHITECTS on the permanent staff:

A.P.T. Grade V (£595 by £15 (2) and £20 to £645).

A.P.T. Grade II (£495 by £15 to £540).

The duties are in connection with the General Education Section, dealing with the extension, improvement and maintenance of school buildings. Forms and particulars to be obtained by 30th September, 1953, from F. Hamer Crossley, County Architect, St. Mary's Gate, Derby. 9558

CITY OF LEEDS EDUCATION COMMITTEE.
LEEDS COLLEGE OF ART.
Principal: E. E. Pullee, A.R.C.A., F.S.A.E.
THE SCHOOL OF ARCHITECTURE AND TOWN PLANNING.
Head: F. Chippindale, F.R.I.B.A.
DEPARTMENT OF TOWN PLANNING.
Senior Lecturer in Charge: W. K. Smigielski, Ing. Arch., A.M.P.T.I.
LECTURER AND STUDIO INSTRUCTOR IN TOWN PLANNING.

Applications are invited for the above post, duties to begin on 1st January, 1954, or as early as possible.

Candidates should hold a recognised Degree or Diploma in Architecture, together with a recognised Diploma in Town Planning or Civic Design, and should have experience both in design and teaching. Associate Membership of the Town Planning Institute would be an added advantage.

Salary: Burnham Technical Scale for Lecturers, £940×£25—£1,040.

Application forms and further particulars (stamped addressed envelope) from the Chief Education Officer, Education Offices, Leeds, 1, to be returned within 14 days of this notice. 9553

WESTERN REGIONAL HOSPITAL BOARD.
Applications are invited for the appointment of a SENIOR ASSISTANT ARCHITECT. Applicants must be Associate Members of the R.I.B.A. and hospital experience is desirable. Salary scale £875 by £30 to £1,025. The appointment is superannuable and will be terminable on two months' notice on either side. The successful candidate may be required to pass a medical examination.

Applications, stating age, qualifications and experience, together with the names of three referees should be forwarded to the Chief Architect, 64, West Regent Street, Glasgow, C.2, not later than Friday, 25th September, 1953. 9559

BOROUGH OF OLDBURY.
BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.

Applications are invited for the appointment of SENIOR ASSISTANT ARCHITECT, Grade A.P.T. VII (£710/£25/£785) in the Architects Section of the Borough Surveyor's Department.

Applicants should be Associate Members of the R.I.B.A. The architect appointed will be required to take charge of a Clearance Area redevelopment Scheme and previous experience of this type of work is desirable. In addition candidates should be experienced in the layout of contemporary housing schemes, design and construction of Municipal houses, flats and shopping centres and capable of taking charge of and administering building contracts.

The appointment will be superannuable and subject (*a*) to the Conditions of Service of the National Joint Council for Local Authorities' Administrative, Professional, Technical and Clerical Services, and (*b*) to the successful candidate passing a medical examination.

Applications, giving particulars of age, qualifications and experience, together with the names of two referees, should be delivered to the undersigned not later than Friday, 2nd October, 1953.

Housing accommodation will be available to married applicants if this is required.

KENNETH PEARCE,
Town Clerk.

Municipal Buildings,
Oldbury. 9557

BOROUGH OF WALTHAMSTOW.
ASSISTANT ARCHITECT.

Applications are invited for the above appointment on Grade I/V, A.P.T. Division (£495—£675, inclusive of London Weighting), commencing salary according to qualifications and experience.

Applications, with names of two persons for references, should be received by the undersigned not later than Saturday, the 3rd October, 1953, endorsed "Assistant Architect."

G. A. BLAKELEY,
Town Clerk.

Town Hall,
Walthamstow, E.17. 9556

Competition

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

COMPETITION IN EDINBURGH.

The Church of Scotland Home Board invites Architects resident in Scotland to submit designs in competition for a church and ancillary buildings for a site at Sighthill, Edinburgh.

There will be five prizes: £750, £450, £300, £200 and £100.

The Assessods will be: Professor Robert H. Matthew, C.B.E., M.A., A.R.I.B.A., A.R.I.A.S., Mr. Harry Taylor, A.R.I.B.A., A.R.I.A.S., Architect to the Church of Scotland Home Board, and the Rev. Professor J. G. Riddell, D.D., Convener of the Church of Scotland National Church Extension Committee.

The closing date for submission of designs is 12 noon, Saturday, 30th January, 1954, and the last date for questions is Thursday, 15th October, 1953.

Competition conditions and a plan of the site may be obtained from the Rev. Ivan F. Tibbs, M.A., The Church of Scotland Offices, 232, St. Vincent Street, Glasgow, C.2, on payment of a deposit of £2 2s., which will be returned on receipt of a *bona fide* design or on the return of the competition documents at least four weeks before the last day for the submission of designs. 9474

Architectural Appointments Vacant

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

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

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

ASSISTANTS required in Architect's Department of large commercial organisation. Sound all round training in the profession essential including supervision of work. Excellent opportunities for men of initiative. Apply in writing, giving details of experience, age, and salary required, to Box 3675, c/o Foster, Turner & Everetts, 11, Old Jewry, London, E.C.2. 9453

ARCHITECTURAL ASSISTANT, R.I.B.A. intermediate standard, required for Architects' office. Previous office experience not essential but desirable. Written applications giving details of education, experience, and salary required to Personnel Manager, Taylor Woodrow Homes Ltd., Ruislip Road, Southall, Middlesex. 9528

ARCHITECTURAL ASSISTANT required with commercial office experience, up to Final standard, in office dealing with Road Transport. Apply to Alan A Briggs, F.R.I.B.A., 10, Fleet Street, London, E.C.4. 9537

SENIOR ARCHITECT required by large industrial organisation. Must be A.R.I.B.A. with extensive experience of factory buildings. The appointment is pensionable and carries a good salary. Applicants should be between the ages of 30-45. Please reply giving full details of experience, etc., and salary required to Box (A.0847) A.C. 2402, A.K. Advg., 212a, Shaftesbury Avenue, London, W.C.2. 9541

EXPERIENCED ASSISTANT required for busy office in Worcester. General Practice. Capable of carrying out work from sketch plan to final account, including site supervision. Apply in first instance, stating salary required to Willis, Llewellyn, Smith & Waters, 103, Old Brompton Road, S.W.7. 9531

ARCHITECT practising N.W.3, requires assistant, Intermediate standard, with previous office experience. Box 9529.

ARCHITECTURAL DRAUGHTSMAN required by old-established firm of Chartered Surveyors, Central London, fully experienced in preparation of working drawings and details, mainly domestic. Ability to supervise works an advantage. Box 9555.

ARCHITECTURAL ASSISTANTS immediately required by London Architects for large contemporary design scheme. Temporary staff. Salary: £12-£15 per week. Box 9522.

ARCHITECTURAL DRAUGHTSMAN required in Multiple Shop Company. Experience in ¼-in. and ½-in. working drawings, able to work on own initiative. Five-day week, staff canteen, superannuation scheme, permanent position after qualifying period. Please reply stating age, salary required, when available to Box 9469.

ARCHITECTURAL ASSISTANT required immediately for London Brewery. Must be good Draughtsman, with sound knowledge of construction. Please reply, giving details of experience and training, with salary required, to Box 9492.

ASSISTANT required in Surveyors' Department of London Brewery, age 25-30. Knowledge of Estimating, Specifications and supervision, able to drive car. Superannuation scheme. Reply, giving details of experience, with salary required. Box 9493.

TIMBER DEVELOPMENT ASSOCIATION.
ARCHITECT.

APPLICATIONS are invited for the appointment of Architect in the Research and Design Department of the Timber Development Association at a commencing salary of £1,000 per annum. Applicants should be Fellows or Associates of the Royal Institute of British Architects, should have a keen sense of contemporary design and an aptitude for research into user requirements and the development of new techniques. Experience or special interest in educational activities would be an advantage. The successful candidate will be required to join the Association's Staff Superannuation Scheme, if invited to do so. Applications, stating age, qualifications and experience, together with names of three persons to whom reference could be made, should be addressed to the Director, Timber Development Association, Limited, 21, College Hill, London, E.C.4, to be received not later than 1st October, 1953. 9494

ARCHITECTURAL ASSISTANT aged 28/40 years, experienced in design of industrial premises, all stages, including Surveys, Supervision of works in progress, Contractors' accounts. State salary required, qualifications, earliest time available. Walker & Collinson, Architects & Surveyors, 12, The Exchange, Bradford, Yorks. 9516

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

CLIFFORD TEE & GALE F/F.R.I.B.A. require Architectural Assistant for industrial work in their office at 43, Frederick Road, Birmingham, 15. Five-day week. 9511

ARCHITECT'S ASSISTANT required in London office. Interesting and varied practice, including housing, licensed premises, hospital, factory and laboratory works. Passed R.I.B.A. Intermediate essential. Five-day week, staff profit sharing scheme. Salary: £494 per annum. Applications by letter only, giving particulars of training and experience, to: Stewart & Hendry, F./A./F.R.I.B.A., A.M.T.P.I., 90, Fenchurch Street, London, E.C.3. 9495

ARCHITECTURAL ASSISTANT, Inter. R.I.B.A. standard, required in Reading office of Chartered Architects. Applicant must be capable of preparing working drawings, details and specifications. Salary: £350 to £500. All details to Box 9526.

ARCHITECT'S ASSISTANT required in Birmingham, with sound knowledge and experience of administration, siteworks, contracts, specifications and accounts. Give full particulars, age and salary required. Box 9554.

Architectural Appointments Wanted

SENIOR ASSISTANT (age 35), school trained, 15 years' varied office experience, neat, accurate, quick draughtsman, excellent references, desires engagement in London area, or Southern Counties if accommodation available. Salary: £780 per annum. E. McKeown, 25, Church Road, Barnes, London, S.W.13. 763

EXPERIENCED SENIOR ASSISTANT, A.R.I.B.A., desires change. Present position in full charge contracts, £10,000 upwards, industrial work, etc. Offers to Box 9533.

ASSISTANT seeks London position, experienced for some years. Box 9544.

A. R.I.B.A. (38) seeks position as CHIEF or SENIOR ASSISTANT in London. 6 years' pre-war and 7 years' post-war experience in eminent London Architect's offices. Minimum salary £900 per annum. Box 9514.

A. R.I.B.A. Dip. Arch. (26), 4 years' experience as a qualified assistant in a large London practice, seeks position with contemporary firm in London area. Box 764.

CHARTERED ARCHITECT, 16 years comprehensive Private Practice and Local Authority experience, desires responsible position with Partnership prospects. North-East or North-West preferred. Box 9551.

BUILDING SURVEYOR (26), seeks responsible position with Chartered Surveyor and/or Architect. Wide industrial and commercial experience. Site and property surveys. Working drawings and specifications for structural alterations, repairs and conversions. Measurement and supervision of builders' work. Please state approximate salary. Box 9552.

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.

SENIOR DRAUGHTSMAN required for Architects with extensive general practice, chiefly commercial, in all parts of the United Kingdom, with offices in Maidenhead. Reply, giving full details of experience and salary required, to Box 9477.

QUANTITY SURVEYORS' ASSISTANT required by Architects with extensive general practice, chiefly commercial, in all parts of the United Kingdom, with offices in Maidenhead. Reply, giving full details of experience and salary required, to Box 9478.

REPRESENTATIVE required by well known London Builders Merchants and Manufacturers to call on Architects and develop existing connections. Must be experienced. Car provided. Pension and bonus schemes in operation. Write giving full particulars to Box 9542.

Partnerships

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

LONDON PRACTISING ARCHITECT, F.R.I.B.A., with considerable Local Authority Flats and other work in hand and in prospect wishes to join forces with another firm with established practice. Box 9543

ASSOCIATE R.I.B.A., A.A.Dipl. (Hons.), age 39, now Chief Assistant to London firm seeks junior partnership. Competent and experienced in industrial and general practice. Some business contacts and private work in hand. Willing to purchase share by instalments from salary. Box 9544.

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

ANTIQUARIAN Horizontal Wall Type Photo Copier and 42 in. hand-operated Developing Machine for sale. £50 complete. Telephone: Museum 1105. 9486

NEW.—6/3½ "Ward" Portable Petrol Driven Concrete Mixers for sale. Full details from Thomas. W. Ward Ltd., Albion Works, Sheffield. 9532

Services Offered

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

SURVEYS of Buildings and Sites, Accurate Drawings, Reports on Buildings, Quantities, Schedule of Repairs. Qualified Surveyor. LIV 1839 or Box 9356.

STAINED GLASS ARTIST AND MURAL PAINTER free to undertake Commissions at reasonable terms. W. F. Lowe, 52, Derwent Road, N.13. 9451

THE ADVERTISER is prepared to produce impressive perspectives at cost of materials only. Specimens of past work available for inspection. Telephone: Grimsdyke 109. Box 9513

EXPERIENCED ARCHITECT offers temporary or part-time services. Box 9550.

COMPLETE private service for Midlands Architects. Drawings, Specs., Perspectives, by qualified, practical Architect. Simple percentage charges. Box 9520.

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.

PLEASE send trade literature and data sheets on Kitchen, Laundry and Library Equipment for Homes, Schools and Hospitals. Equipment using solid and liquid fuel and hand-operated equipment is especially needed. Benjamin Polk, A.I.A., Marina Hotel, Connaught Circus, New Delhi, India. 9488

LONDON ARCHITECT wishes to contact qualified structural engineer with view to commencing structural engineering department. Box 9530.

ACCOMMODATION.—Responsible 5th year, December-July, finalists invited to share flat. Ring Putney 9923. 9471

Educational Announcements

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

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

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

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