T H E

JOURNAL OCT TO THE CUBIC



standard

contents

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

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Information Sheets
Information Centre
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Prices
The Industry

PHYSICAL PLANNING SUPPLEMENT

CURRENT BUILDINGS
HOUSING STATISTICS

Architectural Appointments Wanted and Vacant

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THE ARCHITECTURAL PRESS
9, 11 and 13, Queen Anne's Gate, Westminster,
\$.W.1. 'Phone: Whitehall 0611

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ICA ICE

IEE IES

★ 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.

1	mentioned t	the word LONDON is implicit in the address.
	AA AAI	Architectural Association, 34/6, Bedford Square, W.C.1. Association of Art Institutions. Secy.: W. Marlborough Whitehead, "Dyneley,"
	ABT ACGB	Castle Hill Avenue, Berkhampstead, Herts. Architects' Benevolent Society. 66, Portland Place, W.1. Association of Building Technicians. 5, Ashley Place, S.W.1. Arts Council of Great Britain. 4, St. James' Square, S.W.1. Aluminium Development Association. 33, Grosvenor Street, W.1. Association for Planning and Regional Reconstruction. 34, Gordon
	ArchSA ARCUK AScW	Architectural Students' Association. 34/36, Bedford Square, W.C.1. Euston 2158-9 Architects' Registration Council. 68, Portland Place, W.1. Langham 8738 Association of Scientific Workers. 15, Half Moon Street, Piccadilly, W.1.
	BAE BATC	Board of Architectural Education. 66, Portland Place, W.1. Building Apprenticeship and Training Council. Lambeth Bridge House, S.E.1.
	BC BCC BCCF BCIRA BDA BEDA BIA	Reliance 7611, Ext. 1706 Building Centre. 26, Store Street, Tottenham Court Road, W.C.1. Museum 5400 British Colour Council. 13, Portman Square, W.I. Welbeck 4185 British Cast Concrete Federation. 105, Uxbridge Road, Ealing, W.5. Ealing 9621 British Cast Iron Research Association. Alvechurch, Birmingham. Redditch 716 British Door Association. 10, The Boltons, S.W.10. Fremantle 8494 British Electrical Development Association. 2, Savoy Hill, W.C.2. Temple Bar 9434 British Ironfounders' Association. 145, Vincent Street, Glasgow, C.2.
	BIAE BID BINC BOT BRDB	Glasgow Central 2891 British Institute of Adult Education. 29, Tavistock Square, W.C.1. Euston 5385 Building Industries Distributors. 52, High Holborn, W.C.1. Chancery 7772 Building Industries National Council. 11, Weymouth Street, W.1. Langham 2785 Board of Trade. Millbank, S.W.1. British Rubber Development Board. Market Buildings, Mark Lane, E.C.3.
	BRS BSA BSI BTE CABAS	Building Research Station. Bucknalls Lane, Watford. Building Societies Association. 14, Park Street, W.1. British Standards Institution. 28, Victoria Street, S.W.1. Building Trades Exhibition. 4, Vernon Place, W.C.1. 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.,
	CCA CCP CDA CIAM COID CPRE CUC CVE DGW	County Hall, Chichester 3001 County Hall, Chichester Chichester 3001 Council for Codes of Practice. Lambeth Bridge House, S.E.1. Copper Development Association. Kendals Hall, Radlett, Herts. Congrès Internationaux d'Architecture Moderne. Doldertal, 7, Zurich, Switzerland. Council of Industrial Design. Tilbury House, Petty France, S.W.1. Council for the Preservation of Rural England. 4, Hobart Place, S.W. Sloane 4280 Coal Utilization Council. 3, Upper Belgrave Street, S.W.1. Council for Visual Education. 13, Suffolk Street, Haymarket, S.W.1. Reading 72255 Directorate General of Works, Ministry of Works, Lambeth Bridge House, S.E.1. Reliance 7611
7	DIA DPT	Design and Industries Association. 13, Suffolk Street, S.W.1. Whitehall 0540 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
5	EPNS FAS	English Place-Name Society. 7, Selwyn Gardens, Cambridge. Faculty of Architect and Surveyors. 8, Buckingham Palace Gdns., S.W.1.
	FASS	Federation of Association of Specialists and Sub-Contractors, Artillery House, Artillery Row, London, StW.1. Abbey 7232
st	FBI FC FCMI FDMA FLD	Federation of British Industries. 21, Tothill Street, S.W.1. Whitehall 6711 Forestry Commission. 25, Savile Row, W.1. Federation of Coated Macadam Industries. 37, Chester Square, S.W.1. Sloane 1002 The Flush Door Manufacturers Association Ltd. Trowell, Nottingham. Ilkeston 623 Friends of the Lake District. Pennington House, nr. Ulverston, Lancs.
	FMB	Federation of Master Builders. 26, Great Ormond Street, Holborn, W.C.1.
R	FPC FRHB	Chancery 7583 The Federation of Painting Contractors, St. Stephen's House, S.W.1. Whitehall 3902 Federation of Registered House Builders. 82, New Cavendish Street, W.1.
5	FS (Eng.) GC GG HC IAAS	Gas Council. 1, Grosvenor Place, S.W.1. Georgian Group. 27, Grosvenor Place, S.W.1. Housing Centre. 13, Suffolk Street, Pall Mall, S.W.1. Incorporated Association of Architects and Surveyors. 75, Eaton Place, S.W.1.
	ICA	Institute of Contemporary Arts. 17-18, Dover Street, Piccadilly, W.1. Grosvenor 6186

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Institution of Civil Engineers. Great George Street, S.W.1.
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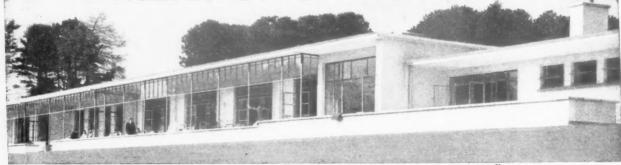
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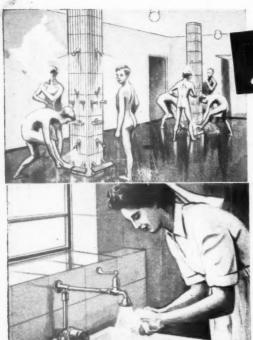
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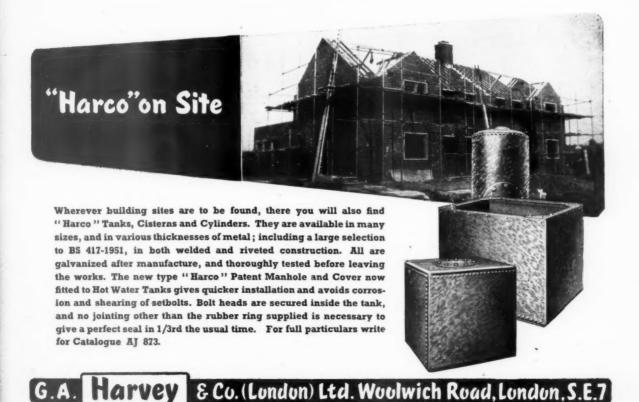
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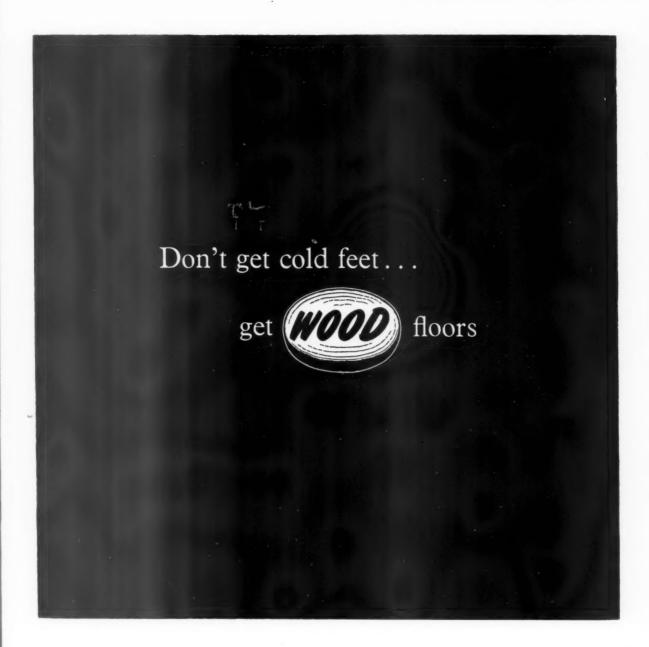
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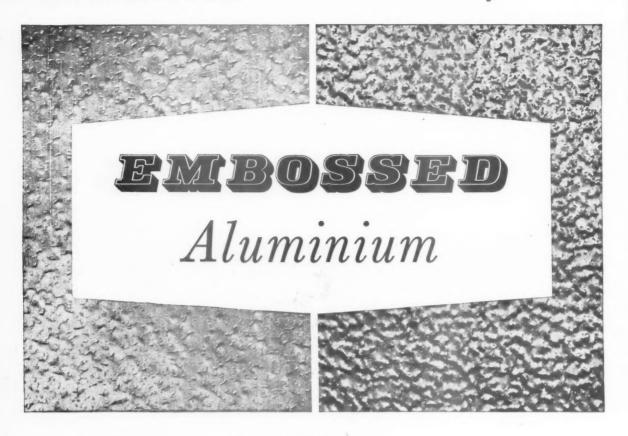
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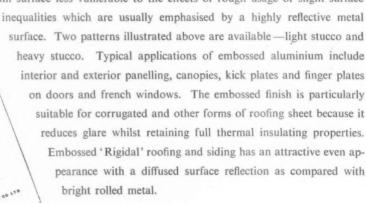
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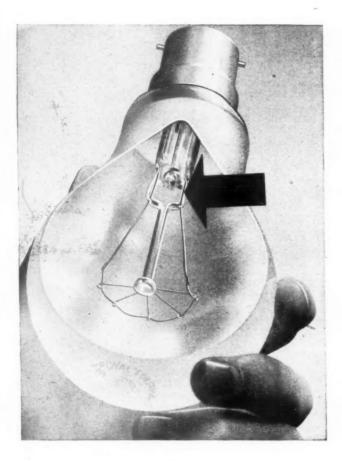
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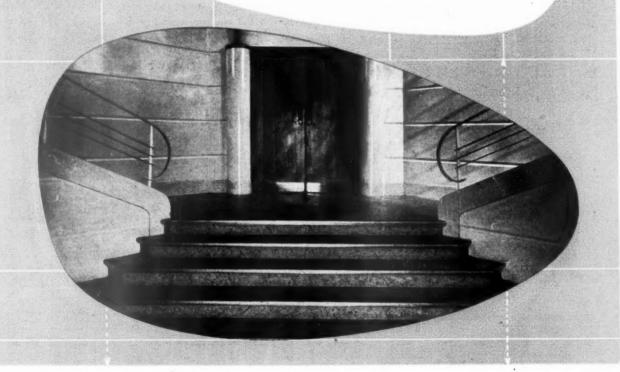
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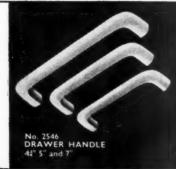
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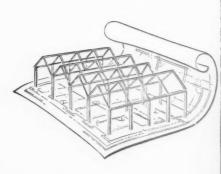
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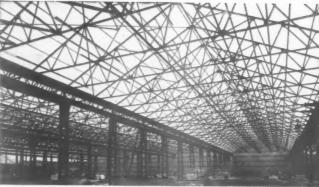
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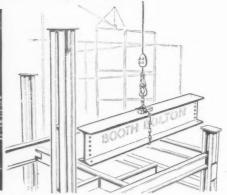
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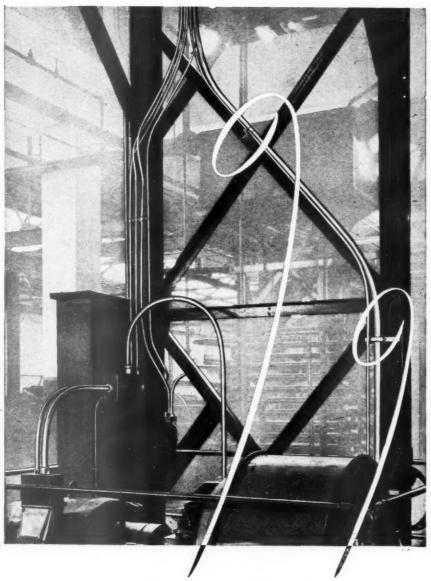


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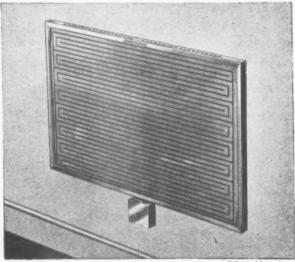
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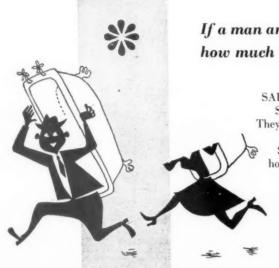
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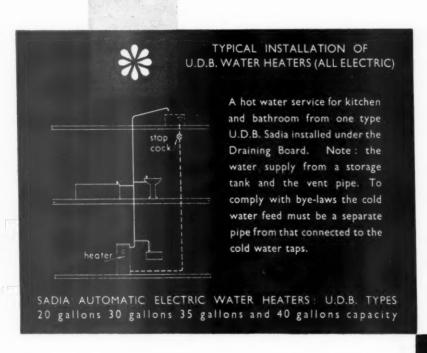
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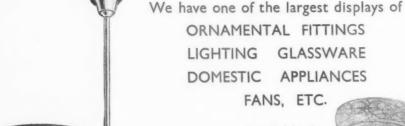
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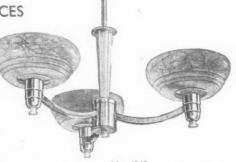


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P.2

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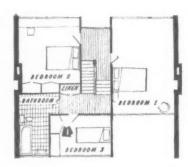


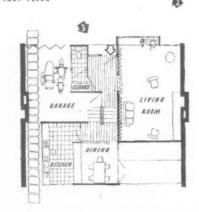
THIS house is designed for a new town in an area where there is a high density of population. Because of the sloping ground, certain rooms have been arranged to be accessible from the staircase half-landing, and the inclusion of a garage and cellar within the area has produced a compact plan unit.

The reinforced concrete box frame construction allows external panel walls to be varied in design to enhance the street architecture; this construction also allows for plenty of light on both sides of the house.

The roof is covered with clay tiles and the timber joists are covered with a layer of fibre glass.

Designed by Leslie Gooday, A.R.I.B.A., M.S.I.A. and C. Wycliffe Noble, A.R.I.B.A., Dip. Arch.



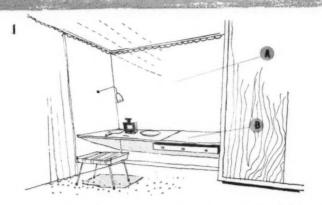


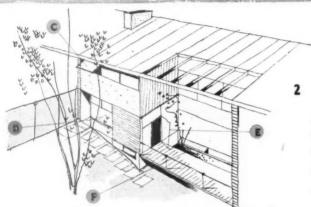
GROWND FLOOR

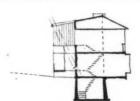
. . GLASS IN THE TERRACE HOUSE

A Silvered Polished Plate glass back to dressing table

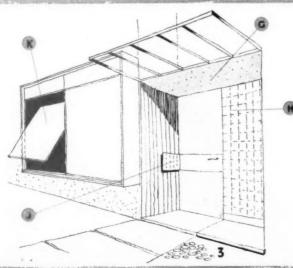
B "VITROLITE" top

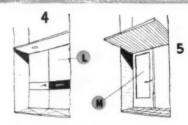






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- 6 "VITROLITE" panel in ceiling
- H "INSULIGHT" Hollow Glass Blocks
- J 4" Polished Plate glass name panel, acid etched
- K "INSULIGHT" Double-Glazing units
- L Panel of 4" Georgian Wired Cast glass
- M Door with panel of 4" Polished Plate glass coarse stippled on acid obscured

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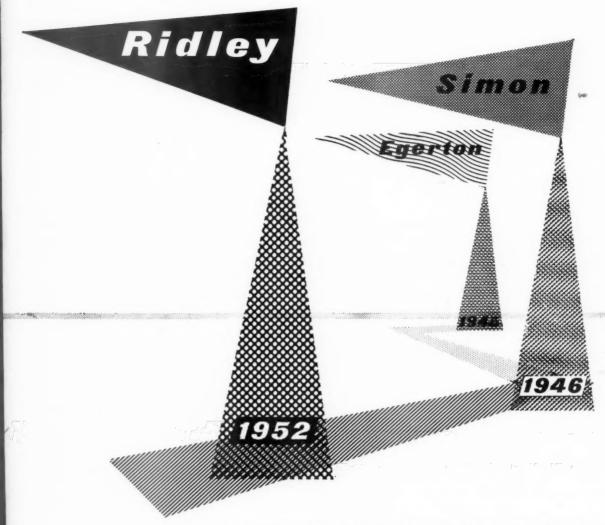
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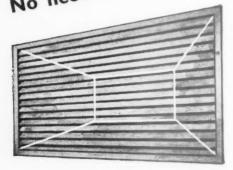
If you are considering the use of Gas, however tentatively, your first move should be to get in touch with the Gas Undertaking serving the area in which the job is situated. Through it you have access to the combined technical resources of the entire Gas Industry. The following list gives the addresses 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.

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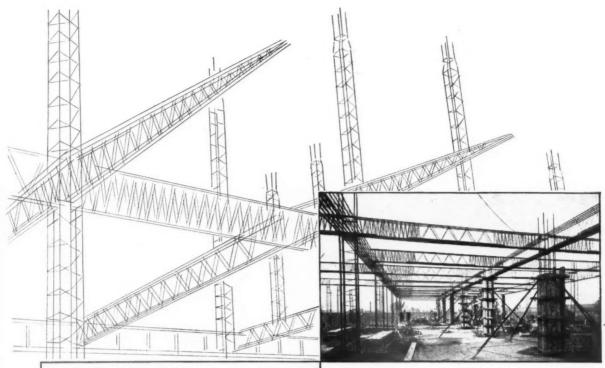
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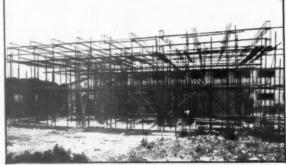
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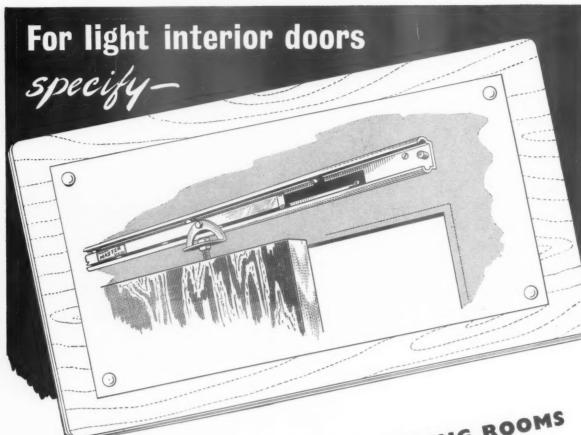
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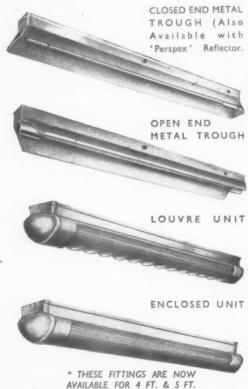
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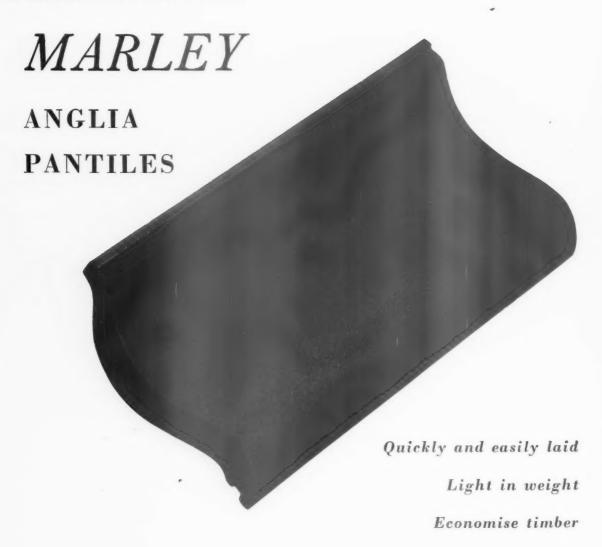
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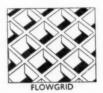
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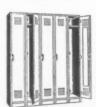
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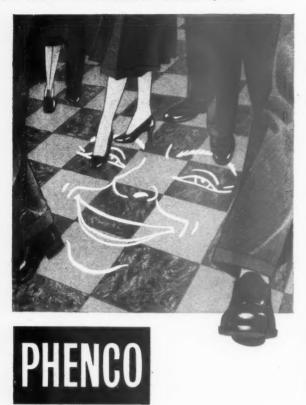
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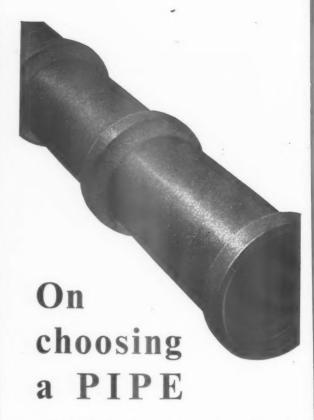
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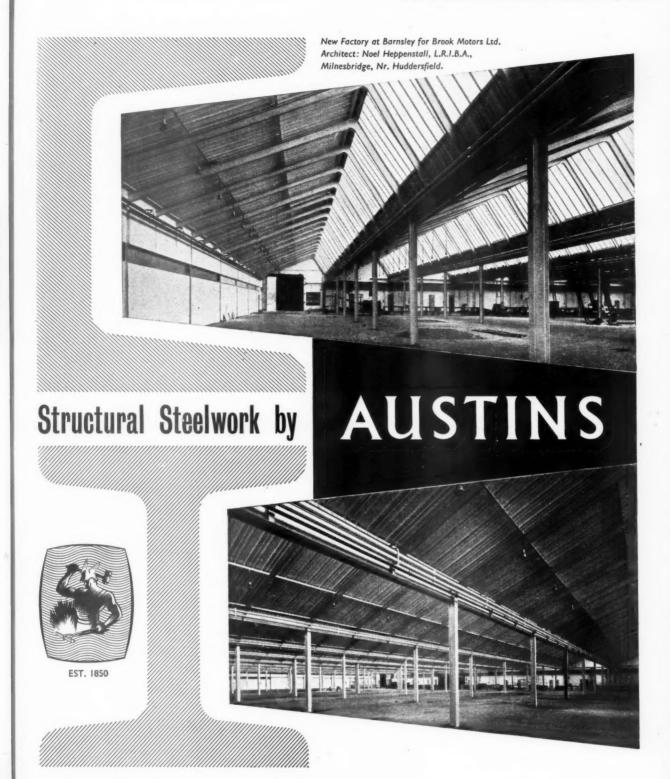
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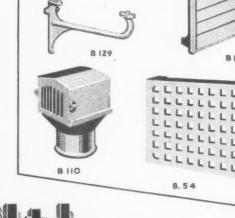
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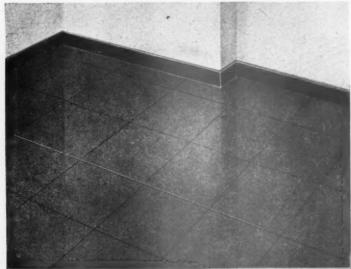
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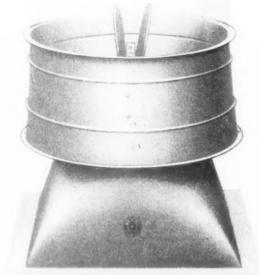
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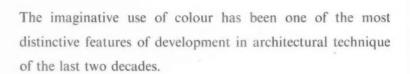


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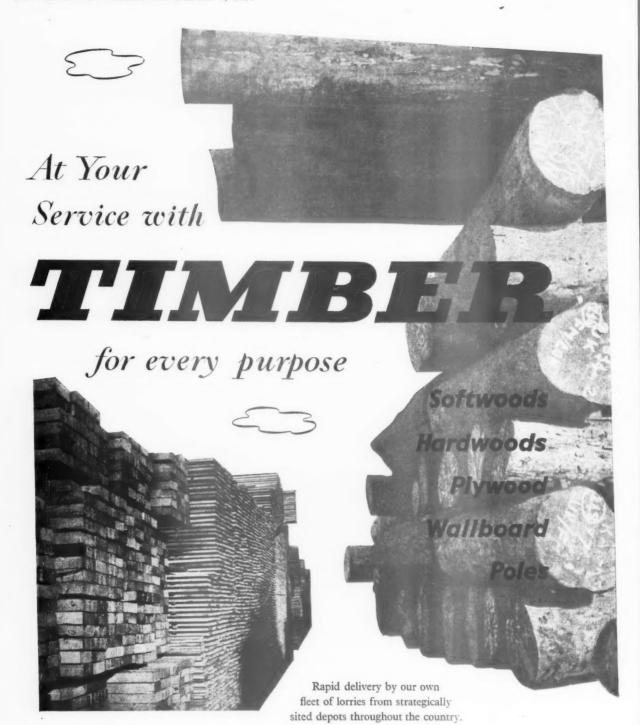
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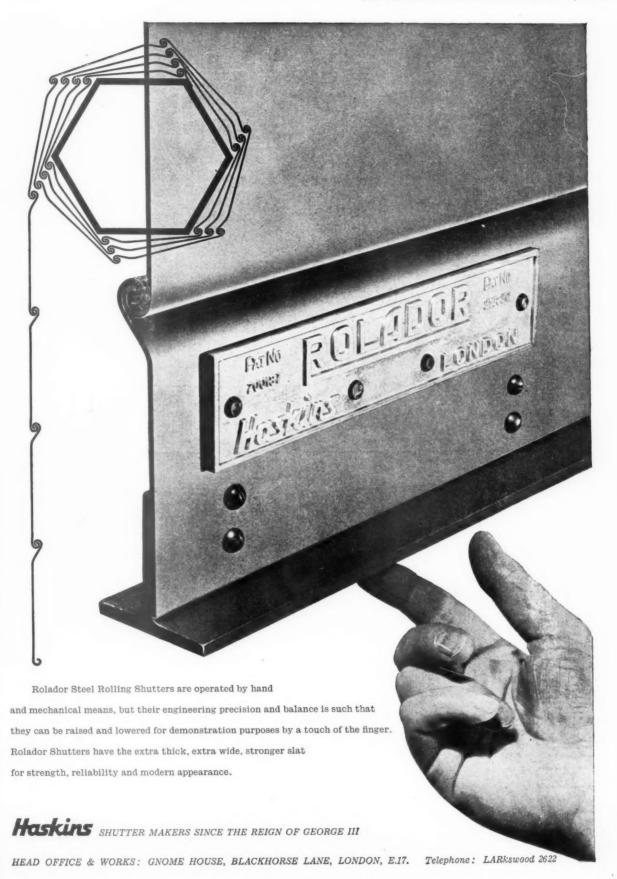
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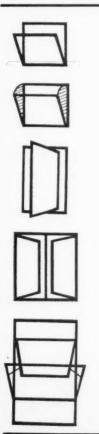


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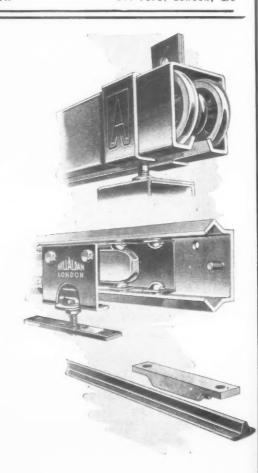
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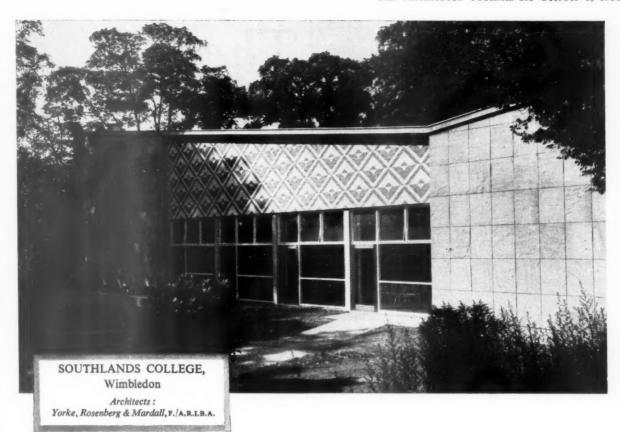
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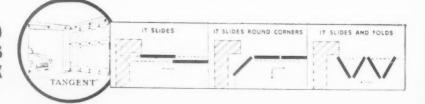


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No. 3057 October 1, 1953 vol. 118

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EXCUSE MY JET

Do high-speed aircraft really do any damage to buildings like Westminster Recent Times correspond-Abbey? ence suggests that they produce considerable vibrations, but one would imagine that the steady processions of buses and the rumblings of the Underground would be far worse.

Supersonic speeds at low level will no doubt produce quite a serious shock wave, but the pundits say that the real supersonic stuff will almost certainly be radio-controlled and will not have any sort of crew, so presumably they will operate at vast heights and be virtually inaudible. The real culprits, one suspects, are the good oldfashioned smokes and fogs.

GROW OLD WITH ASTRAGAL

ASTRAGAL welcomes the fifth number of the Architects' Year Book*-how old it makes us feel to see these young things growing up! AYB5 (as it appears to be known) continues in the tradition of previous numbers in publishing well-illustrated articles of interest to the general architectural reader, as well as the professional architect. Many of its contributors have written before on familiar topics: Hajnal-Konyi writes on pre-stressed concrete; J. L. Martin on Gropius; Heron on space; Wittkower on proportion; Jane Drew on Chandigarh; and so on.

Many of the buildings illustrated are old friends; there is, indeed, little that is either new or news. Partly because of this one find it a most welcome and stimulating book. Nearly every article -and there is something for everyone—is a careful exposition by an expert on his own subject. There is nothing hasty-nothing untried, and the whole collection has been meticulously laid out and edited by Trevor Dannatt, who is to be congratulated for an excellent We wish the AYB continued job. success.

GREAT NORTH ROAD

On a recent road journey to the North ASTRAGAL had plenty of time to brood over road conditions. Have you noticed that commercial traffic now sets the pace, literally, on our chief Even during the holiday season private cars only just outnumber commercial vehicles. What is

* Elek Books, Ltd. 42s. net.

worse, vehicles carrying outsize loads seem to be increasing in number. To get behind one of these ship's propellers, or drag-line excavators at the start of a long run, is to experience a test from which few can emerge psychologically undamaged. If these loaded lorries must travel between 8 a.m. and 6 p.m. it would seem fair to demand that they stop for fifteen minutes every four or five miles to release the numerous raging drivers trapped behind them.

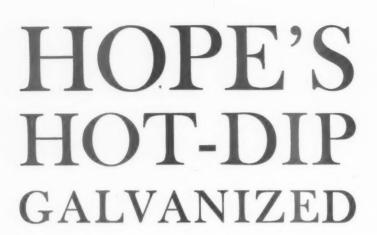
ANTI-LITTER CAMPAIGN

A young man has been fined 10s, at Southend for throwing a piece of paper into the road outside a fish and chip Admirable! let's have a few shop. more fines-especially for leaving paper bags in the parks.

JOHN MARTIN

A painter with an interest in sewage. town-planning, mathematics and architecture is such an improbability that one might be excused for supposing that he never existed, or that he must at least be safely dead by now. John Martin the latter supposition is the true one, and the falsity of the former view is shown by the large exhibition of his paintings, which has just opened at the Whitechapel Gallery.

Martin was an almost exact contemporary of Turner, and rather younger than Nash and Soane, and it has been very fairly observed that his paintings are a useful clue to the correct manner of looking at the work of Nash-that is, as the picture on page 397 will show, along the façade and not straight at it. But visitors to this exhibition will have to take him not primarily for his architectural views (of which only two or three are included) or for his "Metro-



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"Marcus Curtius" an early work by John Martin. See note on page 395.

politan Improvements," but for his landscapes, which make up the greater part of the display, and range from tiny delicate water-colours, to vast canvases which are certainly not delicate, but have, at their best, a romantic frenzy which can be very exciting.

GRAVE DOUBTS

Cemeteries are no subject for levity, either by virtue of their contents or by virtue of the increasing amount of ground which their dead inhabitants are filching from the living, so when ASTRAGAL observed the City of Birmingham parks committee patting itself vigorously on the back for having improved their cemeteries, he at once applied for further information on this serious matter. The improvements proved to lie solely in the fact that the grave-stones have to be of a standard type, and are to lie flat instead of standing up, in order to facilitate the operation of motor mowers.

Even in death Birmingham parks committee are going to keep their ratepayers firmly to attention. The sketch on the right gives a view of the new parade ground, and readers might like to tell me in what way this is supposed to be better for its very difficult purpose than the ordinary, undisciplined graveyard with its leaning headstones, its draped

urns, and all those other funerary pomps of which other writers can speak most affectingly.

The graveyard problem, both in æsthetics and in sheer size, is one which is not to be trifled with in this way, and one might have hoped that a city as big and as influential as Birmingham would see its way clear to giving other authorities a lead in this matter.



PARIS NEWS-LETTER

One of ASTRAGAL'S spies looked in last week, reeking of Petit Gaulois, Molyneux and drains, wearing a bow tie and horizontally striped shirt and with his hat brim turned up in front. We asked him for his impressions of Paris—did you guess too?—and with an elegant shrug he chucked over a grocer's bill from the Boulevard Raspail with some notes on the back. Here—reading between the butter and wine stains—they are:—

"Usual pre-flight Angst among trench-coated companions (where are

the carnationed elegants of the airtravel ads?). Spent first half hour at old architects' game of spotting famous houses from the air—Hampton Court, Chevening, Mereworth, Glyndebourne.

Short glimpse of Versailles before reaching Orly—as usual under reconstruction. Looked in on Industrial Design Congress party at M. Gavreau's elegantly detailed building near Etoile and saw number of architects and designers downing champagne. Looked up Bobby Carter at Unesco—unaltered though drives car more excitably than in Portland Place. Looked in at Industrial Design Congress at Kafkaesque Maison de Chimère and found Paul Reilly delivering lecture in French. Noted Max Bill in audience.

"Members of some congress encountered at various other points:—lunching on Bateau mouche; dining on Tour Eiffel. . . . Why have they painted it brown? . . . to sound of trumpets; watching dress show at Jacques Fath, downing Pernods at Deux Magots.

"Looked in on Louvre to see Braque's new ceiling. Disturbed at first by conflict of scale, but success undoubted. Visit new Fresco Museum in Palais de Chaillot—magnificent: stained glass exhibition in Louvre—





People's Architecture

However depressed we may be by some of the reconstruction in our cities we can, at least, be grateful that none of our post-war neo-classical monuments was designed to toe a party line. We are reminded of the good fortune that gives us freedom (even if we do not always use it) to break with tradition in our buildings by the reports received from architect-members of the team which recently visited Russia. One of these architects, F. R. S. Yorke, who has

written us a diary of his visit (page 400), supplied most of the photographs of Russia which appear in this issue. Among these are pictures of post-war building, including the two above, which show that monumentalism and the "corner-house" manner are still the predominant features in Russian architecture. (Top picture: Stalingrad steps. Bottom picture: a hall, which runs between the railway lines, in an underground station in the Moscow district.)

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magnificent: 100 years of French painting at Petit Palais—magnificent: reception at Hotel de Ville—magnif.
... Well, all right then: listen to a cabinet minister speaking—'grand esprit, grand orateur'—pink, well-shaved, confident, platitudinous.
... 'Art. Beauty ... la France ... Glory ... le Parthenon ... Glory ... la France ... Beauty ... Art.' (40 minutes.)

"Sped off in hired car to see Chambord, Blois and Chenonceaux floodlit and 'parlant,' light music, hidden voices, stereophonic sound. A new and splendid form of spectacle—just the job for Hampton Court and the Tower, Sir David, next summer.

"Called in at Bougival en route back to see pumping station for Versailles fountains, dozens of ranked mill-wheels, each 30 ft. in diameter, turning in huge vaulted hangar. Returned to Paris to see tail end of Design Congress delegates doing last desperate shopping in Bon Marché or crouched over 1,000 franc glasses of Vittel water in Montparnasse night-clubs. In one place wine supplied to table by pipes.

"Returned—stuffed as an armchair—to London, once more a pushover for axes, rond-points, boulevards, and Beaux-Arts planning. And nuts—repeat nuts—to Townscape. Message ends."

Ah, well! Art, Beauty, la France—it's bound to keep catching them, and no doubt my spy will retract his words (and snap down the brim of his hat) in a few days. Nevertheless, it's all very disturbing. . . . very disturbing.

100 PER CENT ARCHITECT

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Equally disturbing was the claim made in a recent newspaper advertisement that a fellow-architect was a "100 Percenter." ASTRAGAL, whose mind is always being pumped full of statistics about the profession, sprouted an indignant balloon—carrying an appropriate slogan—when he saw it. But it seems there is no need to be envious; it is simply that our colleague (you know who) gets his muscles and tissues out of the "big value packet."

Thinks

ASTRAGAL

POINTS FROM THIS ISSUE

RFAC	reject	amendments	by	Sir	Giles	Gilbert	Scott	to		
	Buck	lersbury	Ho	use						page 400
Diary	of visi	t to Russ	i a		4 5		• •	• •	• •	page 400
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The Editors

HOUSES 1953

THE MOHLG's latest supplement to the 1949 Housing Manual, entitled "Houses 1953" was published last week. It is more comprehensive than its predecessor, "Houses 1952," for while the latter only introduced the MOHLG space-saving People's house, the new book advocates more far-reaching economies in the use of land, materials and building costs. Its implications, too, go deeper for it calls for a greater integration of overall and detail planning.

It is suggested in the book that the chief contribution towards further economies, apart from organizational matters, is the raising of densities and the reduction of development costs by better integration of house design and house layout. By the raising of densities it is not meant that theoretical targets should be raised, but rather that present standards should be *attained*. That there is scope for improvement is demonstrated by a survey of 48 post-war housing schemes designed on current principles which shows that their average density is 47 rooms per acre compared with the standard of 65 recommended by the Density Manual: in other words, designers are only reaching about 75 per cent. efficiency.

"Houses 1953" opens with a series of house plan types, whose prototypes were first published in the JOURNAL last year (November 13, pages 578-580) but the new plans show an important difference. They are based on the three-foot "preferred dimension" recommended in the Report of the Committee on House Interiors. On the whole, the plans, which at first glance seem to be neatly arranged, are mainly concerned with the very small house with areas of 755 to 918 square feet, especially with the narrow-frontage house, or, as the authors describe it, "the frontage-saving house." The greatest feat is a terrace house with only a 15-ft. frontage, a plan which in area bears considerable resemblance to the Victorian urban cottage, albeit better planned. (We shall describe these plans later, but in the meantime we note that the living area of at least one house type is scarcely up to the Ministry's space standards.)

The first section of the book is completed with plans for twostorey cottage flats, corner sites and a three-storey block with four flats to a staircase. The following section on layout re-emphasises the need for co-ordination of house design and layout by one designer. This valuable section is complemented

by a note on economies on road and service layout and rounded off by a very worthwhile innovation—a series of layout studies for an actual site (in fact in Harlow New Town). Four studies of different methods of layout ranging from a "conventional layout" to "double footpath access layout" are supported by a table showing their comparative efficiency in terms of density, etc., in relation to the average of the 48 current schemes. This is a most revealing table which alone justifies the publication of "Houses 1953."

RFAC

Rejection of Bucklersbury House Revisions

Revisions made by Sir Giles Gilbert Scott to O. Campbell Jones's design for Bucklersbury House—an office block for the City of Lon-

House—an office block for the City of London—have been unanimously rejected by the Royal Fine Art Commission. (A sketch showing the revisions appeared in the JOURNAL for September 10, page 307.) The original scheme, which was illustrated in the JOURNAL for September 3, has been accepted—with some minor refinements—by the City Corporation Town Planning Committee and the architect's clients. The slightly revised elevations will come before the RFAC on October 14.

MOHLG

" Houses 1953"

The MOHLG's third supplement to the Housing Manual, 1949, entitled "Houses Housing Manual, 1949, entitled 1953," was published last week.

1953," was published last week.

The introduction to the handbook, which summarizes its main arguments, points out that a year ago savings of £150 a house—equal now to 2s. 8d. a week in rent—were made by compact design of the houses.

Over three-quarters of the three-bedroom houses now in approved contracts are designed to achieve the securious transfer. houses now in approved designed to achieve these savings.

The introduction continues: "'Houses 1953' takes a new theme. The purchase of land, the construction of roads and sewers, and the building of houses, are three distinct operations carried out at different times. As a result, the cost of each item is often considered in isolation. But the

times. As a result, the cost of each item is often considered in isolation. But the total cost of all three largely determines rents. Therefore, it follows that economy in the use of land, in the construction of roads and services, and in the cost of houses must constantly be kept in mind from the start.

"One penny saved on the cost per square foot of a house of about 900 square feet gross will save nearly a penny per week in the rent and reduce the cost of 300.000 houses by over one million pounds.

"This 1953 supplement to the Housing Manual is in four parts. Part I describes the planning of frontage-saving houses suitable where access is provided on both sides. There are also plans of three-storey flats and designs for corner sites at internal and external angles. The designs have been prepared by the Ministry's architects with the assistance of a panel of architects appointed by the associations of local authorities.

"Part II shows how layout and house

authorities. Part II shows how layout and house plans can be co-ordinated and land and money saved. Three basic types of lay-out—conventional, 'service cul-de-sac' and footpath access-are reviewed.

"Part III deals with the design and con-struction of roads and services. A distinction is drawn between roads serving general traffic needs and roads serving a limited

purpose in a residential precinct.

"Part IV illustrates the advice given in Parts I, II and III by a series of layout studies for an actual site at Harlow New Town. Various themes are demonstrated with comparative statistical data. They with comparative statistical data. Iney have been designed within the framework of the Master Plan for the whole of the New Town and with the basic information which is normally available to a housing architect. This includes the physical characteristics and contours of the site, the location of shopping centres and other amenities, the alignment and widths of main streets, the permitted net densities in habitable rooms per acre, and the proportion of each house size needed. The net density of all the schemes is about sixty-two habitable rooms per acre."

In addition to the main chapters there are four appendices. The first gives a table showing savings in weekly rent for various savings in capital cost at different rates of interest. Appendix B revises some of the advice given on certain aspects of house advice given on certain aspects of nouse design, fittings and equipment in the Housing Manual, 1949, in the light of four years' experience by local authorities and their tenants. Next there is an appendix dealing with the technicalities of soil stabilization, a method by which roads can be built more cheaply, and finally a short appendix dealing with the provision of tenants' meeting rooms on housing estates where there is a positive need which cannot be met by using other buildings.

RCA

Reader in Architecture

Sergei Kadleigh has been appointed Reader in Architecture at the Royal College of Art. He is now conducting his practice from the college, at 23, Cromwell Road, S.W.7.

DIARY

Secondary Schools for the MCC. D. Clarke Hall and Cyril Mardall. At 34, Bedford Square, W.C.1. (Sponsor, AA, which is arranging visit to the schools discussed on October 10.) 6 p.m.

OCTOBER 7

Exhibition of Architectural Photography. At 66, Portland Place, W.1. (Sponsor: RIBA and Royal Photographic Society.) Mondays to Fridays, 10 a.m.—7 p.m.; Saturdays, 10 a.m.—5 p.m. OCTOBER 9-29

Moscow: the old (St. Basil's)

F.R.S. Yorke, who was a member of a party which has just returned from Russia, has written the following diary.

RUSSIA

Architect's Diary

Saturday, August 29

Ten architects and planners, guests of the Union of Soviet Architects, leave Waterloo Air Terminal at 9.00 a.m. and fly to Prague via Brussels. Met at the airport, Prague, by Vox, a society which deals with travellers who have no currency, and escorted to Alcron Hotel. Fail to contact old friends, who are away week-ending.

Sunday, August 30

A sunny Sunday morning in Prague: wait for the plane to go to Moscow. Walk in the old town and over Charles Bridge; river scene now dominated by new Stalin statue, which looks likely to dwarf the Hradchin. Sightseeing with Vox in the afternoon. Dinner, without formalities-the stuffed boiled ham is very good.

Monday, August 31

Up at 3 a.m. to fly some hours later—cannot understand these flying people-by Russian 'plane.

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Gorki Street (200 ft. between kerbs) seen from National Hotel.

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covers on the seats; less lavish, lighter and more pleasant than the normal 'plane interior. Touch down at Warsaw, but no visa to visit the city. Much reconstruction seen clearly in the distance from the air. Arrive Moscow early evening to drive 20 km. from airport, in lovely light of setting sun. Much impressed by first sight of Kremlin, like a fairy palace—difficult to imagine the dark shadow.

At airport is Ivan Ermoleavitch Markelov, secretary-general of the Soviet Union of Architects, our principal (and charming) host. Pretty speeches, and bouquets for F. R. Yerbury and Colin Penn, chairman and secretary of our party.

A grand suite with sitting room and bathroom at the National Hotel. Laundry service excellent. Our chambermaids are fine old friendly peasant types. Our first dinner in Russia starts at 8 p.m. Vodka, caviare black and red. A mighty smorgasbord—two hours for this—followed by borshch, with cream and a mutton chop, then sturgeon and a chateaubriand. Rise from table sometime after midnight. A short stroll and to bed.

Tuesday, September 1

We start out in cars on a sightseeing tour in Moscow, but it rains so hard that at the Dynamos' Stadium we dash underground and spend the morning on the Metro, where we see at least twenty stations, all different, in a sort of super "Corner House" style, brilliantly lit and incredibly clean—not a cigarette end or a ticket anywhere, and the marble floors all highly polished. A central concourse runs the whole length of the platforms. Waiting for a train one rather misses the advertisements.

Opera at the Bolshoi Theatre after dinner; *Ivan Susalin*, by Michailov. Five intervals, with plenty of time and space for refreshment.

Wednesday, September 2

To Khimky, Moscow River Port, constructed between 1933 and 1937. The river here has been widened and deepened, and through canals is linked to the Caspian and Baltic and by the Volga-Don Canal to the Black Sea. Back to Moscow. The streets are very clean: everything is clean. Hot water for the district heating scheme is by electricity. Lenin's tomb is always being polished.

Piceykaer in Swan Lake ballet at the Bolshoi.

Top: John Berger, art critic of New Statesman (foreground) and C. R. Whittaker, riding zebras in the Moscow Park of Rest and Culture: F. R. S. Yorke in background, on camel. Centre: a vodka session; left to right, John Berger, host Ivan Markelov and F. R. Yerbury, director of Building Centre. Bottom; left to right, F. P. Tindall, B. Lubetkin and host Simbirtzev.









not yet remade. Much building activity—housing and public buildings. Expressed surprise that with great need for housing there are still resources for building monumental steps and flanking pylons at entrance to city from the Volga. This is common phenomenon in the new USSR.

Avoiding usual drawing-office consultation, Simbirtzev brings plan out on to the street, and explains it as we walk around. Visit housing under construction, factory workers' club, hydro-electric project model, and later to the war museum to see Stalingrad sword.

Reception and dinner, starting with Benedictine and chocolate creams. Charming hosts. Our interpreter, Olga, is excellent.

Left and below: the new market hall in Yerevan, the only building seen in the tour which has some slight affinity with western ideas of contemporary architecture.

Thursday, September 3

Up for 9 o'clock breakfast. Meeting in hotel to make the programme with our hosts. Visit to permanent Exhibition of Building Materials and Construction. Particularly interesting is pre-fab one-piece floor for workers' flats; a pre-stressed concrete job with parquet finish in two layers, 6·40 metres × 3·20 metres, with springs and deadening between. Inspect a model of the factory being built to make 700,000 sq. metres of this floor immediately.

Examine collapsible steel mesh skips for bricks, etc., to be loaded at the kiln and taken to the site in batches for hoisting to the operative by tower crane. Visit to new University, a vast building, impressive in its technical achievement but architecturally odd for me. 12,000 students, half of whom

live in.

After dinner to the circus, where we most enjoyed the strong man, and the dog debagging act.

Friday, September 4

Visit to the office of architect Vlassov, chief architect to the Moscow Soviet. Ten-year rebuilding plan is first explained by Vlassov; then we visit four of fifteen ateliers concerned with the fifteen divisions of the city. Vast new schemes projected and building is already under way. All in the style called "Peoples Realism." All Moscow workers will be housed in flats, generally in high blocks, in rather grandiose schemes. A bit like living in the Cardiff civic centre many times as large.

This country seems to be in a period of expansion as we were in our Victorian times; with great vitality, gigantic technical achievement and many architectural anachronisms. But one must agree the actual placing of new sky-scrapers in the old city is very good for

the skyline.



Saturday, September 5

Visit to the Kremlin. Particularly impressed by the cleaned paintings, 16th century and earlier, in the Cathedrals of the Assumption and the Annunciation (1490). Old buildings and art treasures are looked after with great care; there are clearly many experts in this restoration work. Cathedrals are air-conditioned for constant temperature and humidity. Visit to 19th century living quarters of the Tsar. The Kremlin Palace, built in 1849 by Architect Ton, now used as temporary meeting place of the Supreme Soviet.

Afternoon visit to the Park of Rest and Culture, which might be better described as pleasure gardens. Rather autumnal now, the gardens must look lovely in the spring, with many trees and flowers, boating pools, restaurants, roundabouts, shooting galleries, a library, a reading room and a parachute jump, and immense pictures of popular heroes in moss

Sunday, September 6

Up at 3 a.m. to fly 1,000 km. to Stalingrad (Tsaritsin). Met by City Architect Simbirtzev, full of vitality; worked us hard. Rough ride into city where roads

Monday, September 7

Early, by car, to the hydro-electric project above Stalingrad. With a 5 km. dam bank-to-bank across the Volga, the water held up will make a lake so large it seems the local climate will be changed.

By boat downstream to Volga-Don

A new school in Yerevan.



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Canal. Opened July, 1952, to connect the Caspian and the Black Sea, and through the Moscow River, the White Sea and the Baltic. Rise 300 feet in ten immense locks, to a huge artificial lake in a depression in the steppes.

Lunch and songs on board and on to the first of the four locks that go down to the Don. The lock is operated for us and the mechanism is explained. We return to Stalingrad by car for dinner and the Stalingrad Film.

Tuesday, September 8

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Up at 6 a.m. to fly from Stalingrad to Yerevan. Exciting drive to airport over wet mud roads. We fly by chartered plane; stop to see Rostov on the Sea of Azov and touch down at Sukhumi. The whole Volga-Don Canal system can be seen from the air. Rough flying in the Caucasus mountains from Sukhumi to Yerevan. Seaside resorts on Black Sea, especially Sochi, look perfect places for those who like a hydro holiday, and the country looks wonderful for walking and climbing.

It is evening when we get to Yerevan, battered, tired and very hot. A short ride from airport to town. Much gayer here than Moscow; brighter clothes and many people strolling on the streets in the relative cool of evening.

Reception and dinner—after kebab and fine Armenian brandy we go to house of the Armenian Architect, to hear the history of the national architecture; excellent photographs on the walls.

Wednesday, September 9

Up at 8 a.m.: our guide insists I get a haircut, which is on the house. Then to breakfast.

Roast chicken after usual hors d'œuvres, and an excursion in the town to the Opera/Concert House, Art Gallery and Archives of the Ancient Manuscripts. Lots of pretty blondhaired children in the parks where we walk. Good straight-up drinking fountains in the streets: one gets the water from the top of the jet and not from the top of an arc.

Visit to the city wine cellars, and tasting. Enjoy the Voskava (golden bough), 1948/14 per cent.; a few songs, and then in cars towards Mount Ararat, which is just inside Turkey, to

see 7th century church ruins near the border. A dust storm here; very hot.

After dinner to the opera in Delibes

After dinner, to the opera in Delibes Lakme—drinks in the directors' room, to meet the star soprano, Gasparian.

Thursday, September 10

A specially good day. By car (the

Stalingrad from the river, showing post-war reconstruction.

dinner; dancing till 3 a.m.; Gasparian is the guest of honour.

Friday, September 11

Fly to Kiev over Georgia; touch down at Tbilisi (Tiflis) and then at Adler on Black Sea coast, and at Stalino.

Evening when we get to Kiev? a sophisticated looking city, not greatly damaged, but with fantastic new buildings rising in the centre where the damage was.

Reception and dinner. Another kind of cooking here, more like the French, and the wine is a Georgian Risling.

Saturday, September 12

Rain pours down; we go in cars to a collective farm, 30 km. north of Kiev. A long talk, mainly statistics but interesting, from our elected head. On



New Brandy Factory, Yerevan

Russian cars are excellent) over fantastic roads into mountains to see Geghard monastery. Founded in 9th century, with building dating mostly

4,400 hectars, there are 3,015 inhabitants; 800 are working people, all on the farm, including specialists, *e.g.*, a building gang.

New concert hall and opera house, Yerevan. Beneath it is a modern detail inside the building.



from 13th century; there are five churches, three cut dramatically in solid rock, with carved domes open in the centre to the sky. Greek Orthodox |Christian Church. Here live three hundred monks, with own schools and library. Group of post-graduate girl students are here from Moscow School of Architecture. On to Garny; ancient citadel built in 1st century by Armenian King Tiridat I, to see ruins of Graeco Roman Temple.

Picnic lunch at 4 p.m. Huge carpets spread on grass with tablecloths down centre, so we can recline in comfort for the vodka and hors d'œuvres, whilst the chef prepares a shashlik in the open air; this we eat with good Armenian wine.

Back to the hotel for the farewell



Russians at work. Below, women building operatives at work on a new block of University employees' flats near Moscow: right, batches of bricks, which have arrived from the kiln in collapsible metal skips, and will be handled by tower cranes on the site.





Visit to the new school where children start at seven and leave at seventeen (ten years' compulsory education in town, seven in the country). Back to town for shopping, and at 3 p.m. a farewell lunch. Here Yerbury and I leave the main body to go to Leningrad, while we return via Moscow.

In Moscow we are met by Markelov. Something has gone wrong. We have no exit permits; someone had forgotten. Tomorrow is Sunday. This does not spoil the dinner.

Sunday, September 13

Breakfast; caviare and smoked salmon, with vodka, before the omelettes. By car to Home of Rest of the Union of Soviet Architects, in the old Volkonsky Palace 25 km. from Moscow. There are 15,000 architects in the USSR and about 6,000 are members of this Union. They can come to this house, which is like a residential country club, for weekends or for the month of annual holiday. A comfortable place, lovely grounds and a lake, and a library-where we see the Architectural Review and the RIBA Dinner far too big to eat: after three hours of hors d'œuvres the soup is quite sufficient, and the salmon and the steak too much, even for us. A film show: "The Tractor Driver." Return 11.15 p.m., just too late to 'phone home.

Monday, September 14

We breakfast at 9 a.m. and lunch or dine at 5.30 p.m., and the meal goes on until 3 a.m., when we leave to get the 'plane to Prague. We have booked a film, but forget to go because this night the conversation is so good. Pretty buxom waitresses in white satin blouses re-lay the table several times during this classic meal. In the morning we go to Ostenkino Palace, where the Duke Sherematie had the most important 'of his theatres. We have

Russians at play. Below, refreshment Kiosk in Moscow Park of Rest and Culture. The Park's Library is seen below right, behind the ice cream cart. Bottom, uncorking in the Park of Rest and Culture.





afternoon on our own, and are able to slip into a pub for a pint and a chat with the locals."

Tuesday, September 15

Slept solidly to Minsk, at 9 a.m., and intermittently to Prague. We have no money so we must invoke the Vox again. It works. We find there is no 'plane today so we will have the night in Prague with opportunity to meet old friends. Not many post-war buildings in the town. The evening in the wine cellar is oddly like old times, but now there is a midnight closing hour.

Wednesday, September 16

Visit to the reconstructed John Huss Church by Josef Fragner, who now has many reconstruction jobs; and on to see the travelling exhibition screens, designed to show the style called "people's realism," which supersedes the "cosmopolitan formalism" of earlier times. Leave Prague 5 p.m. Leave Amsterdam 9 p.m. At Heathrow, 11.30 p.m.

Thursday, September 17

Breakfast at 8 a.m.—a boiled egg and a cup of tea.



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On July 16 a Local Authority architect put forward a proposal for a new salary scale for salaried architects. Our correspondent was criticized in an article which appeared in the JOURNAL for September 3. He defends his proposals below.

SALARIED ARCHITECTS

PROPOSALS FOR A NEW SCALE DEFENDED

I T is surprising that the author of "The Case for the Local Authority," which you published on September 3, should find it necessary to misrepresent my hypothesis before setting out his objections to my proposals.

The purpose of my article of July 16 was to draw attention to the fact that the remuneration of official architects is, at present, unjust.

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I contend that an association should be formed with the object of ensuring that salaries paid to public architects are

commensurate with the responsibilities they undertake.

In my article I set against the fees earned the entire office expenses as well as salaries paid before a profit was arrived at, and proposed that the local authority should retain only 20 per cent. of the gross earnings, the balance after deduction of salaries and office expenses being distributed. (It would be interesting to know of another enterprise in which so great a proportion of profit is taken from the productive work of the

individual, and in which so little capital risk is involved.)

In my article I proposed that an association should be formed by our own profession to govern the salaries of officially-employed architects. I maintain that salaries should be related firstly to the value of work done, and, secondly, to the fees that would be received for similar work by private practitioners.

As medical and legal professions have taken steps to ensure that their members engaged by public bodies are adequately paid, the medical officer and the town clerk have no need to join the queue for their alleged "bountiful share." The staff of the borough engineer would do well to support a similar salary scale to that which I have suggested for official

No doubt the author of "The Case for the Local Authority" would say that if an architect is being employed for a certain salary, it would be foolish to pay him more than that sum; but if this argument was pursued, the whole structure of official architecture would suffer. Professional staff cannot be expected to

W.1 GIFT IN SOUTH AUDLEY STREET. LONDON. SHOP



{Scale: #" = 1'0"]

The redecoration of this gift shop at 59, South Audley Street for Manbin Stores Ltd., was designed by Werner Heu-The walls are painted silver-grey, the

ceiling is white and the carpet royal blue. The fascia letters seen in the photograph above are designed by Negus and Sharland. Top, right, is a view of the display screen, which is of perforated hardboard on timber framing. The display shelf is painted pillar-box red, with veneered front in sycamore burr and polished brass rods take perspex shelves for the display of handbags. The



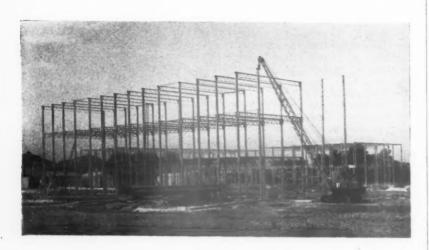




display fitting and storage unit seen above, right, have beech framing and slats and the plywood back is painted white and yellow. The light fitting seen in both the small photographs consist of a shaped mansonia pole with adjustable metal reflectors painted dark grey, red and white. The general contractors were Cooke's (Finsbury) Ltd.

CHURCHDOWN SCHOOL: PROGRESS REPORT NO.1





Churchdown Secondary Modern School, designed by S. E. Urwin, is here seen under construction. The top picture shows work completed after four days; the one below it shows work completed after 11 days. From time to time we shall publish progress reports on the school's construction—which was begun in September. The first report is given below. Between September 1 and 5, the number of man-hours spent on the steel frame was 285. The corresponding numbers for September 6-12 and September 13-19 were 476 and 292 respectively. 184 man-hours were spent on precast roofs and floors between September 13 and 19. The total floor area of the complete school will be 36,200 sq. ft. The floor area of steelwork erected up to September 18 was 23,127 sq. ft. The area of roof slabbing erected up to September 18 was 4,020 sq. ft. Construction: Hills Presweld structural frame, on 8 ft. 3 in. module. Single-storey, 2-storey and 3-storey construction. Precast roof slabbing and suspended floors. Precast wall slabbing, with white Derbyshire spar facing; brick panels integrated on various elevations. Metal windows and sub-frames.

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carry out their duties and to occupy positions of trust, unless adequate salaries are offered to them in return.

The entry of new men into certain engineering and the printing trades is carefully restricted to the flow, or anticipated flow, of work at given times. I have yet to learn that such a practice has been held to restrict "civil liberties." Only by the application of these methods to the architectural profession can overcrowding and degrading of the profession be avoided.

It is futile to train students for appointments or practices which do not exist. In other words, there is a definite relationship between the size of the building industry and the number of architects required. If this is determined, then the number of students allowed to enter annually can be controlled. Those who are really keen could wait for a vacancy and others would enter those professions or occupations which are not overcrowded.

Even though it might take some years for a new association to become competent to administer salary scales and control of entry to the profession (as distinct from qualifying), I am certain that such an organization is essential; the present "machinery" which negotiates such salary scales and adjustments is ineffective.

Regarding my reference to "Junior Architect unqualified," I agree that there can legally be no such designation, but, nevertheless, architectural offices are staffed by "seniors" and "juniors"—some of whom are qualified, some not. It is of little importance what designation is given to them, so long as they are appropriately categorized and justly remunerated, for their services.

Regarding the "RIBA scale of salaries

Regarding the "RIBA scale of salaries for Borough Architects," I regret the error, which your correspondent points out. The scale for Borough Architects is governed by the Joint Negotiating Committee for Chief Officers of Local Authorities.

In my opinion the tone of your correspondent's "Case for the Local Authority" is entirely negative and distorted. Whilst it has drawn attention to my few petty errors of arithmetic and designation, it has not proved that the basic deductions of my article, namely, that better remuneration of official architects and control of entry to the profession, are not urgently needed.

The proposals set out in my article of July 16 are neither arbitrary nor unrealistic. The article is an attempt to show that official architectural staffs are seriously underpaid, and to suggest an arrangement whereby salaries could be to some extent proportional to earnings. At the same time my purpose has been to try to devise means whereby once a scale of remuneration is approved, it does not require repeated revision to meet the continuous currency depreciation.

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RESEARCH LABORATORIES

for the MEDICAL RESEARCH COUNCIL

at HAMMERSMITH HOSPITAL, DUCANE ROAD, LONDON, W.12 designed by Professor BASIL WARD of RAMSEY, MURRAY and WHITE chief assistant, J. R. HUDSON, reinforced concrete consultants

CONSIDERE CONSTRUCTIONS, LTD., quantity surveyors, CYRIL SWEETT and PARTNERS

The building illustrated here is the first of its kind and has been erected for the Radiotherapeutic unit of the Medical Research Council. This unit occupies three storeys of the central block, as well as the 2-storey wing to the north containing a 45-in. cyclotron, and a single storey wing to the south containing a 10 MeV linear accelerator. At present the top floor of the central block is occupied by a research department under the Board of Governors of Hammersmith, St. Marks and West London Hospitals.

From the north-west. In the centre is the staircase tower.



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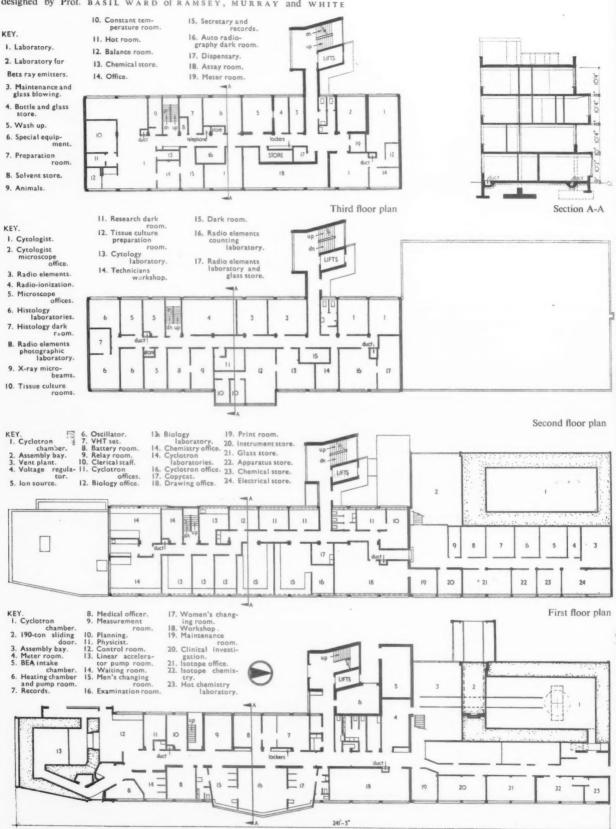
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RESEARCH LABORATORIES

at HAMMERSMITH HOSPITAL, LONDON, W.12

designed by Prof. BASIL WARD OF RAMSEY, MURRAY and WHITE



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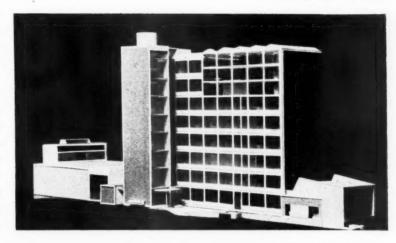
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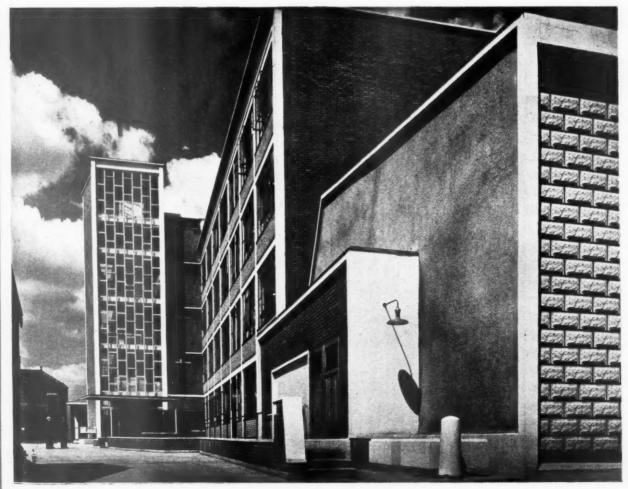
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SITE.-Very little ground could be spared for the new laboratories since the hospital grounds are bounded by scheduled open spaces, a main road and railway and by Wormwood Scrubs prison. The north-east corner of the hospital site is used for the cyclotron building, and as it was also thought desirable to site the linear accelerator block outside the main building, this was planned to the south.

PLAN.—The physical planning of the scheme had to take into account the necessity to complete the suites of rooms containing the cyclotron and linear accelerator at a very early date, and each was designed as a self-contained unit, linked to the main laboratory block. The central block, when the scheme is finally completed, will have a further four storeys, which will be occupied by the Postgraduate Medical School of the University of London. This different occupancy of the future upper floors, together with the need for a great deal of accommodation in the central block and the complicated runs of laboratory services, led to the choice of a separate staircase and lift tower. In the cyclotron suite it was necessary to have an assembly bay outside the main chamber

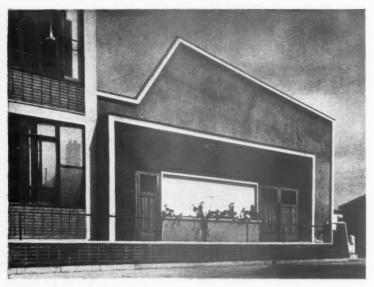
Below, model of the scheme as it will appear when the full nine-storeys are built. Bottom, from the south-west. On the left the staircase tower and on the right the linear accelerator block.





plan

or plan



Above, the linear accelerator block to the south of the main building. The walls and roof are of reinforced concrete about 6 ft. thick. for the erection and maintenance of heavy and bulky apparatus. A large opening has, therefore, been made across the end of the chamber leading to the assembly bay, which is fitted with cranes and is connected with the chamber by a rail track. In the cyclotron suite is a transformer station for the considerable electrical load; electrical plant rooms; cooling and ventilating rooms; workshops and isotope research laboratories. Similar considerations affected the planning of the linear accelerator suite, where a special requirement was the installation of a rising floor.

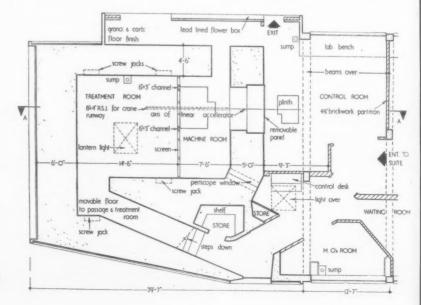
CONSTRUCTION.—The cyclotron and linear accelerator suites have reinforced concrete walls and roofs of approximately 6 ft. thickness. It was necessary to ensure that there should be no

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RESEARCH LABORATORIES

at HAMMERSMITH HOSPITAL, LONDON, W. 12 designed by Prof. BASIL WARD OF RAMSEY, MURRAY and WHITE

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Plan of linear accelerator suite
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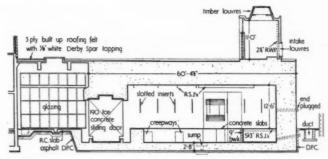
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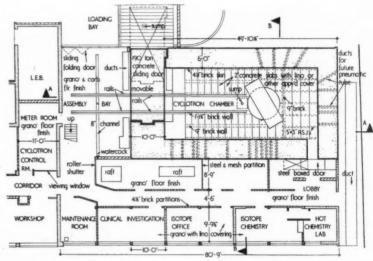
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straight joints throughout the structure. Following each concrete lift the top surface of the concrete was left with 6-in. corrugations in order that labyrinth joints would be formed on completion of the various layers of concrete. The central block has a r.c. frame and solid concrete slab floors. External walls are of 11-in. cavity brickwork.

FINISHES.—All exposed concrete work is rendered and treated in light shades of concrete paint, which range from off-white to honey colour. Facing bricks to north and south walls are dark brown, with pointing a shade darker. On the east and west facades, panels below windows are faced with honey-coloured bricks with dark brown pointing. The west wall of the staircase tower is faced with dark brown bricks and a pattern of ½-in. diam. white glazed, ceramic rods project ½ in. from the mortar joints at regular intervals. The window frames are painted wedgwood blue. The main doorway has a concrete frame finished in blue coloured terrazzo



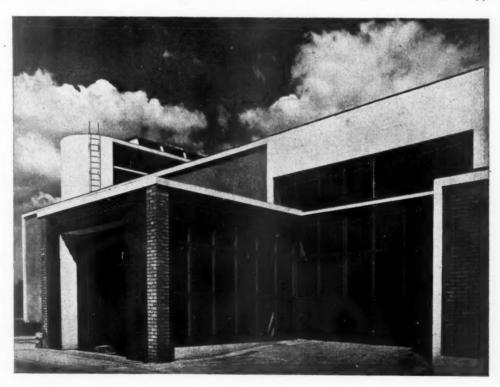
Section A-A



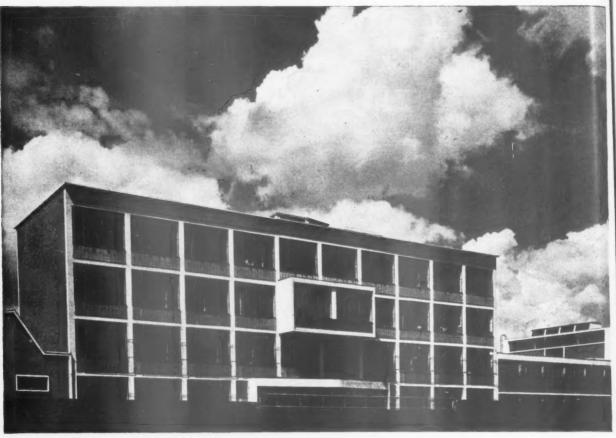
Plan of cyclotron suite [Scale: 34" = 1'0"]

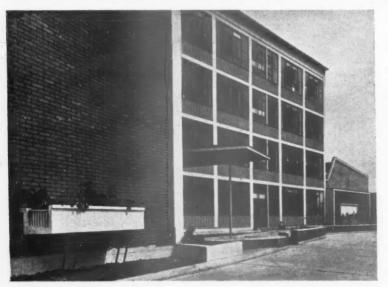
RESEARCH LABORATORIES

at HAMMERSMITH HOSPITAL, LONDON, W. 12 designed by Prof. BASIL WARD OF RAMSEY, MURRAY and WHITE



Right, the cyclotron suite from the south-west. The projecting block on the left is a temporary housing for the 190-ton concrete sliding door.





RESEARCH LABORATORIES

at HAMMERSMITH HOSPITAL, LONDON, W.I2 designed by Prof. BASIL WARD of RAMSEY, MURRAY and WHITE

Top, the east facade show ing, on the right, the cyclo-tron suite behind a single storey wing of offices and laboratories. Above, part of the west facade, with the staircase tower on the left. The main entrance canopy will appear as a Working Detail in a later issue of the Journal.

and a polished grey marble architrave. Internal partitions are mainly of brick, plastered and painted primrose. Apron walls under windows are painted grey. Floors are covered with grey marbled linoleum, except in working areas in the cyclotron suite and workshops, where the finish is grey granolithic. Doors are flush, faced with beech plywood and french polished. Laboratory bench tops are in oiled teak; pedestals and cupboards are mostly in oak. The main entrance to the cyclotron chamber is an electrically-operated, 35-ton door constructed of a steel box filled with concrete. The aggregate of this concrete is of steel punchings, giving it a weight of 365 lb. per cub. ft. This special concrete allowed a reduction of thickness of the door from 6 ft. to 3 ft. The door between the cyclotron chamber and the assembly bay is a 190-ton horizontally-sliding door in r.c., also electrically operated.

SERVICES.-Normal services are housed in vertical risers at each corner of the building and are run in ring mains under windows. Special services, including oxygen, high pressure gas, air and water, are supplied to selected rooms. Lighting is by means of high level spherical fittings and low level pendants over working benches, designed to give

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15 ft. candles on the working plane. An alarm system has been installed for use during movement of radio-active materials. Special drainage has been designed for disposal of radio-active effluent. This consists of waste stacks in chemical stoneware encased with polythene so that should there be a fracture in the stoneware piping, the effluent would be contained within the polythene. Inspection "eyes" are provided at intervals in the casings. To resist the effect of radio-active material, a coating of synthetic rubber dough, which on drying becomes vulcanised, has been trowelled on to the storage pits and sumps. Research is being done to find out whether this dough, originally developed and used for radio-active material, can be applied in other ways. Fume cupboards are finished internally and externally with "stripping lacquer" to a total thickness of nine coats. This lacquer, invented at Harwell, can be stripped off in layers when it becomes contaminated. Each section of fume cupboard is designed to carry removable lead protection of varying weight, depending on the degree of radioactivity of the materials to be handled. Heating is by low-pressure hot water in embedded ceiling nanels.

The work was completed in 16 months, while the linear accelerator and cyclotron suites were ready for the erection of machinery in six to eight months. The architects were given scientific and technical information relating to this type of building by the MOW and MOS.

The general contractors were Sir Robert McAlpine & Sons Ltd. For sub-contractors see page 424.

Right, air inlet ducts of the cyclotron chamber. chamber. Ducts are staggered for radiation protection. Below, grooves formed in the walls of the cyclotron chamber to provide a key for radiation protection between each pour of con-crete. Below right, low level rein-forcement for the roof of the cyclotron chamber. The shuttering (top left) formed an access hole above the magnet and indicates the thickness of the roof concrete.













Below, fume cupboards in the central research block. These will be illustrated as a Working Detail in next week's issue of the JOURNAL. Below right, examination room on the east side of the main laboratory block.

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414] The Architects' Journal for October 1, 1953

TRAVEL BUREAU

at 47, ALBEMARLE STREET, LONDON, W.1. architect, ERIC LYONS

The ground floor and basement of these premises on the west side of Albemarle Street have been converted and redecorated for Blakes (Norfolk Broads Holidays), Ltd., for use as a showroom and offices. Blakes are the sole agents for the Norfolk and Suffolk Broads Yacht Owners' Association, and the office is used for all bookings of craft for hire. The clients required that the new design should reflect, as far as possible, the different aspects of the Broads.

Ground floor reception area, looking towards Albemarle Street.



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PLAN.-The accommodation required included two private offices on the ground floor and provision for four clerks in the reception office, as well as a general office in the basement. The entrance, according to Town Planning requirements, had to be from a common entrance lobby, in the form of a fire-resisting screen. The show window is designed to provide maximum daylight to the ground floor area and the basement office.

FINISHES.—The existing solid stallboard was removed and the new stallboard is formed as a glass brick shelf. The materials used are those in common use in boat building, such as timber boarding, brass fittings, canvas, etc. On the wall of the reception area facing the entrance are two types of display; glass fronted boxes and flat boards for photographs or information. These are attached to the framing by bolts through the main standards. The whole display can be re-arranged in a number of different ways, if required. The specially designed lighting "boom" which is suspended behind the window and extends to the enquiry counter, also has

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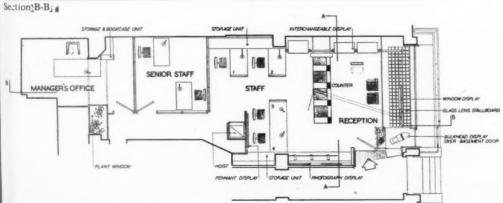
Ground floor plan [Scale: 12" = 1'0"]





The show window seen from Albemarle Street. This win-dow opening had to be retained undisturbed to comply with the Town Planning requirements.









TRAVEL BUREAU

at 47, ALBEMARLE STREET, LONDON, W.1 architect, ERIC LYONS

flexibility since the fittings can be re-arranged and added to quite simply. The pennants of the 32 different boat owners are represented on fibrous plaster plaques on the screen wall in front of the hoist. The contract price was approximately £4,500. The general contractors were Frank W. Clifford, Ltd. For sub-contractors, see page 424.

Above, two views of the main entrance door. On the left, from the entrance lobby, and right, from the reception area. Right, looking from the reception area across the enquiry counter towards the senior staff office.



TECHNICAL SECTION

More than the layman realises, the shape of our buildings is governed by fire, and the means of combatting it. For a long time the LCC has led the country in its positive and pragmatical recommendations regarding this problem. If at times its methods have appeared unduly conservative, it should be remembered that even allowing for the blitz, London has seldom had the modern disasters familiar to many foreign cities as a result of fire. The LCC's pamphlet "Means of Escape in Case of Fire" (revised July 3, 1951) hinted at changes in the familiar pattern, and recent amendments to this are designed particularly to cope with the LCC's own high flat blocks. It now appears that whatever the height of the building in certain classes of flat development, there need only be a single staircase, provided this staircase is fully enclosed, incombustible, naturally lit and ventilated, and only opens through ventilated lobbies directly to the open air, i.e., balconies or the pavement. It is good to see the shadow of the great fire loosening its ghostly grip.

This week's special feature 10 DESIGN: BUILDING TYPES hospitals

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.

K. James Milnes and J. Schooneman, research architects on hospital planning in Holland, contribute, below, the first part of a detailed study of a nursing unit for the modern hospital. The article will be concluded in the JOURNAL'S next Technical Section, on October 15, when Richard Llewellyn Davies, Director and Architect of the Nuffield Investigation into the functions and design of Hospitals; will provide a detailed criticism of the revolutionary proposals put forward.

The reader of this article might find himself wondering, at a certain stage, why it has been published in an architectural periodical. It is natural enough that he should do so, just as the doctor might find parts of it strange reading in *The Lancet*. The truth is that the subject lies somewhere between these two great professional fields, overlapping them both in such a way that has to be in a position to go on

neither alone can cope with it, and, together, they are lost without an interpreter who knows a good deal of both sides of the question. Sometimes one of the two knows a little of the other's language, and they get along well enough to produce some of the best of the existing hospitals. But the problem strikes deeper than this-the one reasoning, logically, from a point where the other leaves off, and this implies that he has been following and understanding a long way back in the other's train of thought.

POST-WAR FACTORS

The whole matter has become accentuated during post-war years. Discontent with current design on the part of architects who know something of the subject, and a sort of resigned tolerance, by the medical and nursing profession, of hospitals they know ought to be better but cannot quite say how or why, are traceable to three specifically post-war factors:

1. The tremendous tempo of wartime

and post-war progress in medical

and nursing science.

2. The far-reaching effects of shortage of capital and high costs (the first might not affect a national hospital service).

3. Shortage of skilled staff and the steadily rising standards demanded of their training and con-

ditions.

Notice that we do not include shortages of labour and materials, because these apply to all types of buildings, although, coupled with shortage of capital, they lead to attempts at finding solutions which are not deeply enough founded, and thus doomed to founder.

Most current procedures involve the architect, and the officers of the hospital concerned, in the writing of a design programme which is to be the bible from then onward, and into which is written, in many countries, an economic demand that the building shall be smaller, regardless.

NEED FOR CONSULTANTS

At the same time, the design programme has to cope with demands that tend to make the hospital larger, until the research has gone far deeper and has disclosed that, right down among the basic principles, are masses of reasoning to assist in coupling the medically desirable to the economically, and technically, possible. The first part of this research is practically all economics and statistics, and the second part consists of organizational studies requiring a fresh approach and considerable medical and nursing insight. Essential as they are, no architect can be blamed for not knowing anything about them. He would have to be highly specialized in the most complicated single building in our economy, and it is small wonder he counts the cost of five years' further study and the restriction of his practice too high. Moreover, it is doubtful whether it would be architecturally advisable. Yet all this research must be carried out with an eye to the final consequence of it all—a building.

We feel that the ideal is the very

highly specialized consultant or research architect combining medical and nursing knowledge with architectural working with the architect, smoothing the path, spreading specialized knowledge over many projects, removing vagueness from the planning, and reducing any uncertainty in the mind of the architect.

Our work is along these lines: all the professions concerned working together under the co-ordination of research architects (who act as hospital consultants) and pursuing independent research into the design consequences of the three factors stated at the commencement of this article.

OUR APPROACH

We commence by stating the prime problem:

> How to provide a given community with the most efficient hospital service possible.

This may be logically reasoned into another form:

How to reduce the costs per hospitalized case, or per out-patient treatment, to the minimum.

And this, in turn, involves two things: 1. Getting down costs per bed per day, and

2. Reducing the average term of

hospitalization.

Despite any misgivings, this reasoning really does include everything necessary—even æsthetic and psychological factors that might tend to speed recovery and therefore shorten the hospitalization term. It also embraces every factor tending to reduce demands on-and in-staff, and, with it, staff costs, and those factors tending to reduce the cost per meal, per piece of washing, or per unit of work, or service, in every sense of the word.

Now we really are under the surface, and we come up with a whole mass of subjects, comprising some beautiful projects for operational research. Consider, for example, these:

Would a given increase in the cost of nurses' accommodation result in speedier recovery of the patient, and in lowered costs per case?

Might not some additional appliance here or there save the employment of

a nurse or ward-maid?

Could not the bed-occupancy factor be raised by separating in our minds the number of beds per accommodation unit from the number per nursingunit? Might we not dispense with the extra septic operation theatre most countries have by introducing air sterilization by ultra-violet radiation? If it costs more per day to allow patients who may, to sleep until 7 a.m., would it perhaps cost less per case?

These, and masses more, employ our time to the full, and there seems no end to them. Each new medical technique, or appliance, raises a new one. Often their solution comprises weigh-

ing against each other two opposed interests rooted in two different departments. Every time, the answer is given by the application of the purely economic yardstick-how can we adjust matters so as to reduce the cost per bed per day, or shorten the hospitalization term?

CONSULTANT-ARCHITECT RELATIONS

When we are called in to consult, either by the hospital board or by the architect, the results of our research are applied to the hospital community concerned. We have to consider the situation, type of population, chance of expansion, prevalent disease types, and gradually work our way towards the choice of site, general form of the buildings (now the architect stops poring over our shoulder and sits down beside us), composition and design of the elements, construction and æsthetic considerations (now we are poring over the architect's shoulder and throwing in an occasional word), final design and construction, equipment and taking into use (us again), and, finally, the vindication in practice of all our postulates (we all hope and

Clearly, we can do no more than rush through the material at high speed in an article of this length, and it would be impossible to say something of all the design consequences to which our research has led us in each and every department of the hospital. And so we are including as an example a recent study of ours, a nursing unit, with a short explanation of some of the design factors. Here and there we have to touch upon work concerning other departments for the sake of clarity.

Fig. 1, on page 419, is the floor plan in a schematic form. It looks a little "architectural," but is in fact bereft of any of the dictates as to block form, or orientation, that a real site would impose. Moreover, it goes no further into structural desiderata than to impose a modulus of 125 cm. (4 ft. 1 in., but 4 ft. would be just as good), which we have found in practice to suit hospital purposes best. It matters little what the architect wants to do with it, since we have found that adaptation of the gist of the design to widely varying views as to architecture merely involves a little transposition of elements and a little "mirroring" here and there. Lift provision will clearly vary from project to project, but the spatial essentials remain much the same. For instance, a halfway break-through for a second block at right-angles is perfectly feasible.

We would like to state here that we are staunch antagonists of any of the "standard plan from top drawer on the left" school, and we like our work to be treated as a visual statement of the

(Continued on page 420)

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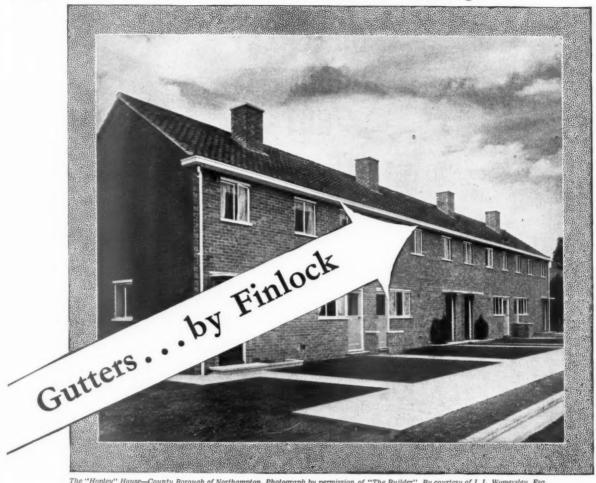
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The "Hopley" House—County Borough of Northampton. Photograph by permission of "The Builder". By courtesy of J. L. Womersley, Esq., A.R.I.B.A., A.M.T.P.I., Late Borough Architect for Northampton. Contractors: T. Wilson & Sons Ltd., Northampton.

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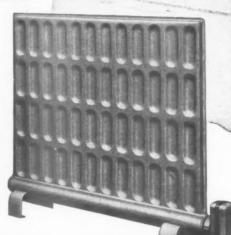
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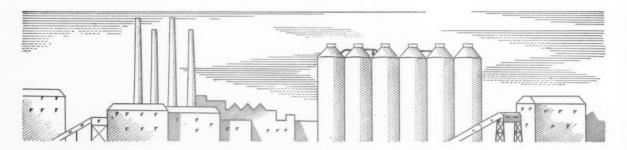
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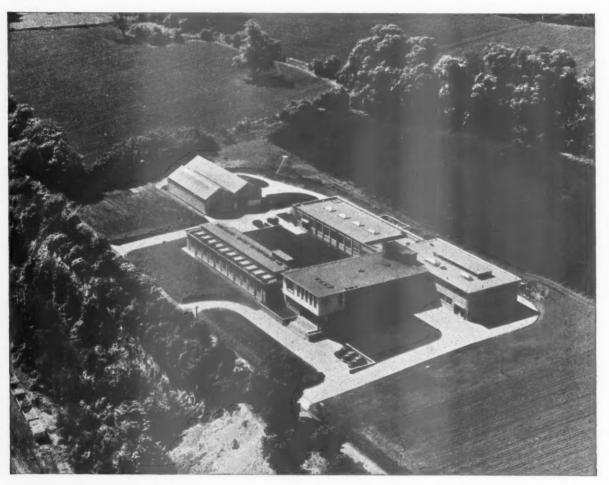
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ailding lasgow Fig. 1, left, a schem-atic floor plan of the nursing unit. The key of the plan, above, is combined with a detailed analysis of space re-quirements, and, there-fore, less than half the munbered items given in the key are shown on the plan.

AMBULANT WING



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CEMENT

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(continued from p. 418)

approximate dimensions of the elements in the plan with one of the best suggestions for their mutual juxtaposition. If we and the architect are working as closely together as we should, we can always warn him if he looks like developing a complication or a less happy co-relationship of the elements from the hospital point of view. But we are not so dogmatic as to insist that ours is the only possibility. We try to help the architect to choose a road leading to the right destination, but there may be many of them.

Harking back to the reasoning summed up under the sub-title "our approach," here are a number of examples of design factors which have affected the nursing unit here

described: 1. Keeping on the heels of medical

progress The main point here is that of "early ambulation," although there are a ambulation, great many others. It is interesting to observe how this medical principle has become generally accepted, but there seems great reluctance to formulate clearly the consequences it has for design and to explain them to archi-One cannot expect them to tects. figure them out for themselves unless they have specialized at great length, and even when they do, the results appear to be so revolutionary that they hardly dare to take them seriously.

EARLY AMBULATION

ntly

Now, as we see it, here are the logical consequences of the medical acceptance of early ambulation:

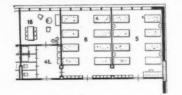
Firstly, the figures quoted are British and consist of a table extracted from a paper by Dr. Goodall (Fig. 2).

This statistical study has not yet been made in Holland, but we are preparing now to get someone on to it, and in the

*J. W. D. Goodall, M.D., EDIN., F.R.C.P.E., "Early Ambulation: A Survey of Hospital Practice." Lancet, 1951 (i) 43. Dr. L. Schalm, "De socialal geneeskundige betekenis van een aparte verpleegafdeling voor observatie-patienten." Tijdschrift voor sociale geneeskunde, Dec. 7, 1951.

meantime we have assumed that Dr. Goodall's figures for fully ambulants will apply when reduced by 5 per cent. or so. Experience is tending to justify the assumption. . . . Now, just look at the category III figures—the fully ambulant group is little short of 50 per cent.! This means that something like half the patient total are to all practical purposes only in the hospital for two reasons-to be close to the medicotechnical equipment it possesses and to be under supervision of the specialist knowledge available there. There is, in fact, nothing at all to prevent them living in a sort of hostel, serving up their own meals (teaching diabetics to choose and make up their diet meals, for instance), sleeping in beds of normal height placed against walls, having their beds made up by maids instead of nurses, seeing to their own personal needs, visiting doctor's surgery hour instead of forcing him to go the rounds. doing without bedside-cupboard contraptions, playing chess, walking in the gardens, receiving business appointments and making business telephone calls-in short, generally getting themselves re-acclimatized to normal life in preparation for leaving the hospital altogether. The other half of the patients are

divided in varying proportions between bedfast and semi-ambulant. The latter group may get up (perhaps in dressing gowns) for a few hours each dayenough to wash, shave, and look after the rest of their personal needs, perhaps to take their meals or to sit and read a little. This half is accommodated in



Category	FIG. 2 I Bedfast (per cent.)	II Partially ambulant (per cent.)	III Fully ambulant (per cent.)
A. General surgery; 155 patients			
Actual regime	50.3	20.0	29.7
Early ambulation	16.4	35.0	48.6
Traditional	66.7	17.3	16.0
B. General medicine: 167 patients			
Actual regime	53.3	24.6	22.2
Early ambulation	25.7	28.3	46.1
Traditional	61 · 1	13.9	25.0
C: Gynaecology; 100 patients			
Actual regime	48.8	33.0	20.2
Early ambulation	16.2	45.5	38 · 4
Traditional	55.7	31.0	13.3
D. Obstetrics (ante-natal): 41 patients			
Actual regime	46.3	36.6	17.1
Early ambulation	22.2	27.8	50.0
Traditional	65.2	19.6	15.2
E. Obstetrics (puerperal); 50 patients	00 =		
Actual regime	48.0	26.0	26.0
Early ambulation	11.9	38 - 1	50.0
Traditional	60.4	24.5	15.1

Fig. 2., percentage figures of the numbers of bedfast, partially ambulant, and fully ambulant patients, extracted from a paper by Dr. Goodall.

sub-units of the type shown in Fig. 3.

PATIENT PROGRESS

The whole thing is organizationally one ward, but physiologically two. Patients becoming semi-ambulant would gravitate into the ward next the toilet and day-space suite, new bedfast entrants filling up behind them in the other ward. The precise relationship between the two groups can vary widely, the one group easily spilling over into the other ward in either direction without upsetting the functioning of the sub-unit at all.

We have therefore divided our complete unit of 72 beds into two wingsone ambulant and one bedfast and semi-ambulant—each wing consisting of two sub-units. The left-hand or bedfast wing has a complement of six single rooms (some of which can take two). thus keeping the ambulant wing slightly under the expected patient total and ensuring that it is always more or less full.

Central between the two wings is a treatment and staff facilities suite with command over the communications.

A patient will progress from the one wing to the other as he improves, but will be under the surveillance of the same ward sister from beginning to end. He retains his continuity of nursing, but obtains in addition the psychological stimulus of "promotion." His getting better is more easily appreciated by him and is accelerated. There is every indication that this point alone, apart from purely medical advantages, will materially shorten hospitalization terms, as will the increased peace and restfulness of the bedfast rooms in the absence of the noisier element. There we have the advantages expressed in economic terms. A relapse is dealt with by a temporary return to the bedfast wing, still under the same ward sister (as, by the way, in misdemeanour).

2. Flexibility The reader will have realized that the entire hospital is broken down into sub-units of 16 patients (with a complement of single-bed rooms).

Now, when the accommodation is the same as the ward-unit (often 40 or 50 beds in an open ward), the problem keeps on cropping up that, for instance, the men's surgical is half empty while the women's medical is chock-a-block and overflowing. Undoubtedly this is leading to a choice between a hectic situation in the building or else the designing and building of far too much capacity, part of which is always empty. In other words, the occupancy factor is too low and the cost to the community per bed/day is too high. Matron would be overioved if it could suddenly become possible to transfer some of the women medical patients to the men's surgical

DIVISION OF PATIENTS

We have felt for some time that this

and wasn't that a tasty dish...?

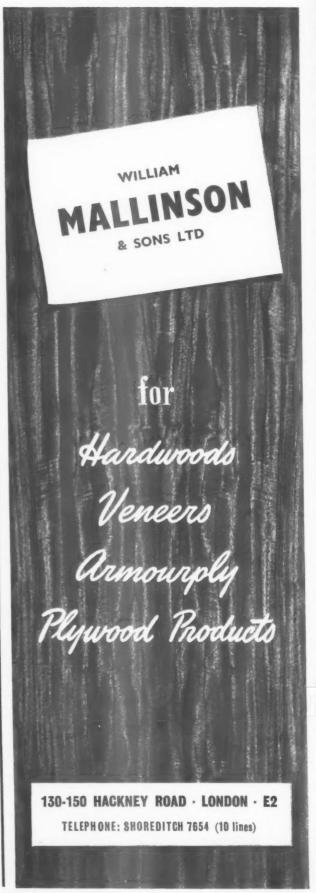


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division of patients purely into sexes and types of case has been imposing unnecessary rigidity upon organization, which may well be a leftover from the days before lifts and other aids. We found in a certain 300-bed general hospital that we could design so that no single bedfast patient was more than 90 ft. on the flat and one storey in the lift from the operation theatres. Hardly any conventional hospital can beat this, even in its "surgical" wards. So we accepted the principle that any sub-unit could be used for either sex and for any type of case, and we felt that it ought to be left to matron and almoner to sort it out further.

We gave a sigh of relief at the sudden blossoming of the possibility that matron might have 15 architects or engineers and an empty bed in one of the sub-units just when we developed an appendix. Another might contain 16 building and engineering artisans with various sorts of tummy trouble, yet another 16 knitting maniacs with grandchildren under five years of age, and finally one containing 16 radio enthusiasts of various ages and complaints. This may seem a little light-hearted, but it will serve to illustrate the point that there is unlimited scope for sorting the raw material provided by the intake, and the cut of a man's suit or the cultured tones of a lady's voice might provide a pointer as to how a day or two might be clipped off their term of hospitalization. Social status, or profession, can join the type of illness or the sex of the patient as guides in allocating beds. Our unit can accept male surgical cases in one sub-unit and female medical cases in the other if required—they only come on to the corridor to and from treatment and under supervision. The same applies to the ambulant wing. It has become clear to us that we can reduce the scale of bed provision for a given community purely for these reasons, without impairing service in the slightest, and we are now gathering data as to how far this goes. It cannot help but tend to reduce the cost per bed per day.

SIZE OF SUB-UNIT

We would like to point out that the number of beds per accommodation-unit (sub-unit), depends on the number of beds in the hospital. Sixteen seems about right for a 300-350-bed general hospital, but a small rural hospital might have to have smaller ones, since the same number of "groups" of patients will probably arise, though in smaller numbers. By the same reasoning, if it proved otherwise desirable, the sub-units might be larger in a larger hospital.

3. Mechanization

For a variety of reasons perfectly well known to all students of industrial efficiency, we are, in general, in favour of

central mechanical plate-washing, mechanical floor scrubbing and all the rest of these things, and have gone into them carefully. There is one modern device, however, which has been adopted here and there, but which hardly ever seems to be absorbed into the functioning of the hospital in such a way that the inherent possibilities are properly and fully exploited. It originates in the kitchen department, but has its repercussions in the nursing units as well.

HEATED FOOD TROLLEYS

We are strong proponents of meal distribution by electrically-heated food trolleys, of which we have designed one which our installations and equipment department have estimated to be capable of production for about £180 apiece, and of which a 300-bed general hospital designed along our lines would require 17. Briefly, our views on kitchen departments lead to the trolleys standing in a space next to the diet kitchen, the diets being placed in them as they become ready, thus saving the expense of hot cupboards in the kitchens.

At a convenient moment in the work of the nursing units, just before mealtime, student nurses from each sub-unit call down to the kitchen space for their trolleys. The kitchen-staff then select their numbered trolleys and wheel them through the kitchen along a prescribed route past the various cooking apparatus, where the menu items are ladled or otherwise placed into them. The kitchen staff helpers then pass the crockery and cutlery issue, which items are also inserted in a specially provided warm cupboard, and send the trolleys up to the ward pantries via the kitchen-lift. The nurses set the trolleys once more under current if it is not yet quite mealtime. In the case of bedfast patients, the trolleys are wheeled into the rooms when mealtime arrives, and the food served up at the bedside. If the capacities have been carefully designed, the nurse will notice that the first patient to be served with soup will be finishing it just about the same time as she is serving the last patient, and she returns to the beginning, collects the empty soup plates and dishes out the next course. Ambulant and some semi-ambulant patients will be sitting at their tables in the day-spaces and living rooms, and will either have their food served up at the table from the trolley or, in the larger rooms, bring their plates to the "bar' (of which the trolley will now be forming a part) to be served by the nurse.

The advantages of the system are: -

saving in staff;

less wastage of food since each may say what and how much he wants; encouragement of the self-help principle for ambulant patients; reduction in the commotion at "kitchen issues" just before mealtime;

flexibility in terms of time (the design of the trolley permits it to stand under current in the nursing unit for some time without spoiling food);

patients get hot food on warm plates; saving of uncongenial work for the nursing staff by the washing and storing of crockery and cutlery centrally in the kitchen;

absolute banning of any meal traffic from the entire general circulation space of the building.

4. Staff specialization

Throughout the onward march of medical and nursing science, one sees more and more sections of the work assume importance and proportions sufficient to establish them as specialist fields of work.

Some of these fields begin in a general way and the circumstances warranting specialization creep up on us unawares until we suddenly realize we have been blindly following an outdated method. So is it with sterilization.

As in the earliest days of boiling up an instrument in a pan as and when and where its use became imminent, we still today have all sorts of sterilization equipment spread throughout the hospital, all being operated by nurses and student nurses who have to assemble instrument, medicament and sterilization process from all over the place before they can proceed to a treatment. To cap it all, we may reasonably expect electronic or nuclear reaction sterilization methods within the foreseeable future, and cost will prohibit the distribution of numbers of equipments throughout a large building. Sterilization has progressed enormously since the early days and we feel it is high time we began to treat it as a specialized skill. There is a good deal of expensive and complicated apparatus involved, and people's lives depend on it.

DUMB-WAITER SERVICE

We have designed a central sterilization department to cope with all the work of the hospital-instruments, syringes, bandages, gloves, coats, masks, and all the rest of it. It has consequences in the design of the nursing unit in that it is one of a series of services situated on a double dumbwaiter line connecting all the nurses' posts in the various units. The other services connected are central store, pharmacy and laboratory, linen room, reception and administration. dumb-waiter line (electric, with emergency hand-winding) is accompanied by a press-button intercom. system, so that, for example, a sterilized syringe and a penicillin injection can be called from central sterilization and pharmacy and assembled in any nurse's



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Incidentally, we have come to the conclusion that the connections between central sterilization and the operating theatres should be separate from the dumb-waiter line to the units. Central sterilization is easily recognized as one productive of savings in the cost per bed per day for the following reasons:

Improved efficiency of sterilization specialist with her own small staff and a sterile store;

Equipment reduced in amount, improved in flexibility and employment factor:

Reduction in amount of work in the units;

Better control (e.g., routine checking of syringes).

5. Economy in the employment of skilled nursing staff.

Whatever happens to the numbers of young ladies desirous of becoming nurses, there is no doubt that their training will impose selection and other standards upon them in the future, making them economically valuable investments, apart from their being in short supply. Clearly, we will have to continue to give thought to their accommodation and working conditions, and both these things have design consequences. We have already mentioned the savings in staff obtainable through the acceptance of the logical consequences of early ambulation, and it is a foregone conclusion that the architect will do everything to reduce lost time through superfluous walking and waiting in the building. We feel that no nurse should do anything that is not strictly nursing (either medically or psychologically speaking).

We know that in the good old days it was held that nurses should all scrub floors because it held high their appreciation of hygiene, but this is now hopelessly outmoded as a training method and we consider it beneath the

dignity of the profession.

There are also relevant and interesting points. For instance, we have been examining and collating a good deal of evidence as to the number of beds people feel should be in a room. We found 98 per cent. of it subjective in the extreme. In the conventional hospital, the doctor naturally wants as many as possible, since it expedites his rounds, but there are quite strong voices raised in favour of single-bed rooms. Now Dr. Goodall* has expounded to some good effect on the scale of provision of single rooms and the reasons for putting a patient in one. If his conditions, and one or two others, are satisfied, we agree the num-

* Single rooms in hospital: Estimate of the Medical Need. J. W. D. Goodall, M.D., EDIN., F.R.C.P.E. Lancet, 1951 (i) 1063.

ber is "one" in that particular case, but what about the rest?

We find that patients, particularly after recent hospitalization, are ready enough to state a preference. But their story really concerns the sweet nurse, the successful treatment, the good food, the nice doctor, the sun that shone outside, the view of the gardens, the room's pleasant decoration scheme and the gentle dispositions of the other patients. Then, purely incidentally, right at the end, one finds that there happened to be six beds in the room, and so the patient plumps for "six beds every time.'

INFORMATION CENTRE

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

7.39 practice DRAUGHTSMANSHIP

Simplified Drafting Practice. W. L. Healy and A. H. Rau (John Wiley & Sons, Inc. (New York). Chapman and Hall, London. 1953. 40s.)

The authors, both of the American General Electric Company, describe methods of simplifying detail drawings which they claim can reduce draughting time by 30-50 per cent. Mainly applicable to mechanical engineering drawings, but of some interest to architects, particularly those concerned with prefabricated systems of buildings.

with prefabricated systems of buildings.

The authors favour the more extensive use of freehand drawing and the use, where applicable, of photographs. They point out how unnecessary it is to include on drawings details of standard products, and to repeat both halves of symmetrical details.

They claim that the methods they describe not only reduce draughting time, but also make drawings easier to "read." This may be true of some of their suggestions, but the extensive use of abbreviations, such as Fin Dim for finished dimension, and ASM for assembling, and the omission of normal dimensioning lines may be more likely to confuse than assist. confuse than assist.

The most useful chapters for the architect are those that deal with drawing office equip-ment, the layout of drawings and schedules, tolerances, and methods of reproducing

drawings.

Mainly for engineers; 153 pp.; illustrated; brief index.

18.136 construction": theory STEELWORK DESIGN

The Design and Construction of Simple Space Frames for Roofs. S. McGloughlin.

(Civil Engineering and Public Works Review, April, May, and June, 1953.)

Interesting article on inclined lattice girder roofs construction in Ireland.

In the review of structural steelwork in the JOURNAL for June 11, 1953, attention was drawn to the clean lines which could be prodrawn to the clean lines which could be produced in factory trusses by laying the lattice in the plane of the roof skin. Mr. McGloughlin prefers to describe this type of roof as an "inclined lattice" rather than a skin structure. In the articles he outlines the practical problems that arise in design and construction and stresses his reasons for basing adorted the restriction between designs and construction. having adopted this particular design, showing that in certain cases the sloping lattice roof can be a logical solution.

Stress diagrams are given for a 175-ft. span multi-bay roof and for a northlight spanning 100 ft.

19.67 construction : details **EXPANSION JOINTS**

Expansion Joints at Peterborough Technical College. David Jenkins. (Architect & Building News. July 30, 1953.)

Good article, with clear diagrams, showing treatment of expansion joints in walls, roofs, etc. The problem was carefully considered on this job and the solution well thought out. The article contains useful new details. A valuable contribution to a subject about which it is difficult to obtain sound information.

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

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Buildings Illustrated

Linear Accelerator & Cyclotron Building, Hammersmith Hospital, Ducane Road, London, W.12, for the Medical Research Council. Radiotherapeutic Research Unit. (Pages 407-413.) Architects: Prof. Basil Ward, F.R.I.B.A., of Ramsey, Murray & White, F.F.R.I.B.A. Chief Asst.: J. R. Hudson, A.R.I.B.A. Reinforced Concrete Consultants: Considere Constructions Ltd. Quantity Surveyors: Cyril Sweett & Partners. Clerk of Works: C. A. Milne. General Contractors: Sir Robert McAlpine & Sons Ltd. Sub-contractors: tanking, Val de Travers Asphalte Paving Co. Ltd.; special services, plumbing, hot water, heating, ventilation, G. N. Haden & Sons Ltd.; electrical services (building excluding Linear Accelerator & Cyclotron Supplies), Electrical Installations Ltd.; large sliding door mechanisms, F. Piper & Sons Ltd.; steel box forming radiation room door, steel staircase, G. A. Harvey & Co. (London) Ltd.; roller steel shutters, Haskins; concrete roof lights, J. A. King Co. Ltd.; haulage rings, (Cyclotron chamber), Turton Ltd.; bricks, Uxbridge Flint Brick Co. Ltd.; atel windows, W. James & Co. Ltd.; metal partitions (plant rooms), Decorative Iron Work Co.; special lighting units, Cyclotron control room, Holophane Ltd.; external concrete block and paving, Wadcrete Ltd.; aluminium doors, Williams & Williams Ltd.; special lantern light, Linear Accelerator Suite. Paragon Glazing Co. Ltd.; bituminous felt roofing, Permanite Ltd.; sanitary fittings, swivel fume cupboard taps, B. Finch & Co. Ltd.; laboratory fitments, special apparatus cupboards, fume cupboards, target fume cupboard extracts, A. Gallenkamp & Co. Ltd.; door furniture, Lockerbie & Wilkinson (Birmingham) Ltd.; target ducts Cyclotron Chamber, Radio-Active Materials safe,

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Showrooms and offices at 47, Albemarle Street, London, W.1, for Blakes (Norfolk Broads Holidays) Ltd. (Pages 414-416.) Architect and designer: Eric Lyons, F.R.I.B.A., M.S.I.A. General contractor: Frank W. Clifford Ltd. Sub-contractors: "Unitex" acoustical tiles supplied by Merchant Trading Co. Ltd.; cork floor tiles, G. Stephenson & Co. Ltd.; electric light fixtures, Vellos Ltd., and Merchant Adventurers of London Ltd.; sanitary fittings, James W. Sergeant Ltd.; door furniture, Comyn Ching & Co., Alfred G. Roberts

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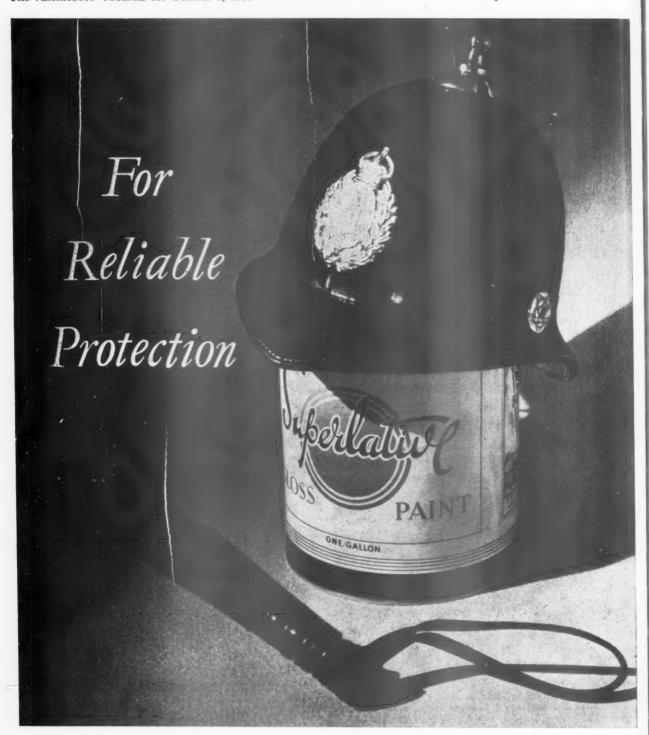
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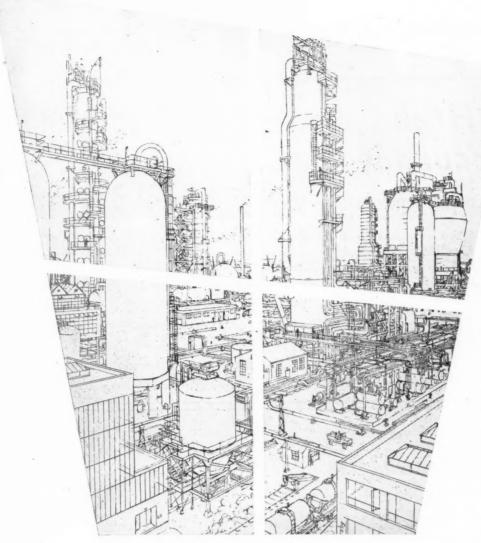
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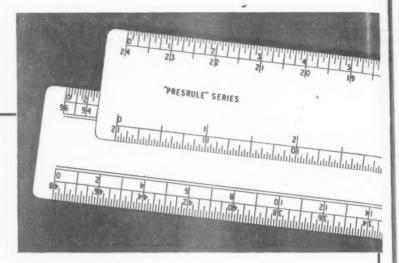
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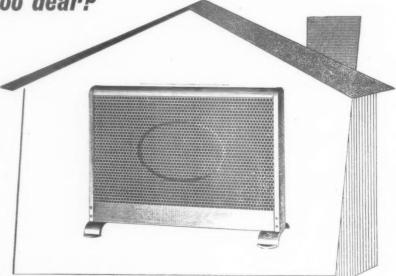
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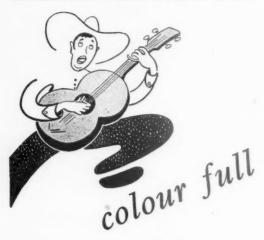
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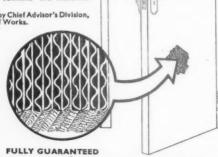
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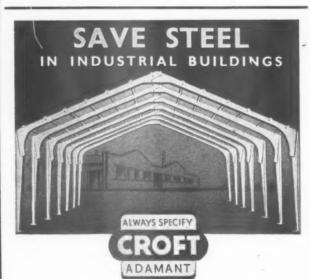
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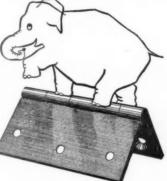


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(b) ARCHITECTURAL DRAUGHTSMAN (Temporary) Grade A.P.T. II.

(a) Architectural Assistant (Temporary).

Salary in accordance with Grade A.P.T. IV (£555).

—6600 per annum).

Candidates for this appointment should possess approved qualifications and have general architectural experience, particularly with regard to the preparation of contracts and working drawings. Preference will be given to candidates who have passed the Intermediate Examination of the B.I.B.A.

(b) Architectural Draughtsman (Temporary). Salary in accordance with Grade A.P.T. I (£465 -£510 per annum). Applicants must be capable draughtsmen, should have had sound drawing office experience in general architectural works, particularly in regard to working drawings. London Weighting is payable in addition to salaries above mentioned. The Council is not in a position to offer housing accommodation in connection with any of these appointments.

accommodation in connection with any of these appointments.

The appointments will be subject to one month's notice on either side, to the provisions of the Local Government Superannuation Acts, the National Conditions of Service and to a medical examina-

Conditions of the tion.

Forms of application obtainable from the Town Clerk, Town Hall, Ilford, to be submitted by the 12th October, 1955.

COUNTY BOROUGH OF WOLVERHAMPTON. APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Architectural Assistant required on the Architectural Staff of Borough Engineer's Department. Salary: A.P.T., Division III—£525 to £570, or A.P.T., IV—£555 to £600, according to qualifica-

A.P.T., IV—£555 to £600, according to qualifications.

Medical examination. Superannuable post.
Appointment subject to N.J.C. conditions of service and to one month's notice.

Applications stating age, qualifications, present
position and full details of experience, together
with copies of three recent testimonials should
be delivered to the Borough Engineer, Town Hall,
Wolverhampton, not later than Wednesday, 14th
October, in an envelope endorsed "Architectural
Assistant."

J. BROCK ALLON.

J. BROCK ALLON, Town Clerk

Town Hall, Wolverhampton.

Town Hall, Wolverhampton. 9638

BRITISH ELECTRICITY AUTHORITY.
EAST MIDLANDS DIVISION.
Applications are invited for the following positions within the Division.
CIVIL ENGINEERING DRAUGHTSMEN.
CONSTRUCTION DEPARTMENT.
VACINCY 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 (2567—2571 per annum) of Schedule D of the National Joint Board Agreement.

Agreement.

ENGINEERING DRAUGHTSMEN (MECHANICAL) CONSTRUCTION DEPARTMENT.

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:

ng:—
Design and layout of Power Station
equipment, including Turbo-alternators,
boilerplant, coal and ash plant, and general station auxiliaries.
H.P. and L.P. steam and feed pipework.
Condensing plant and feed heating
systems.

Conveyor plant, coal handling systems and material handling of station auxiliary

(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 (£857—£671 per annum) and Grade 6 (£433—£587 per annum) of Schedule D according to experience.

ENGINEERING DRAUGHTSMEN (ELECTRICAL) CONSTRUCTION DEPARTMENT.

CAL) CONSTRUCTION DEPARTMENT.

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 (£557—£671 per annum) or Grade 6 (£433—£557 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.

CITY OF PLYMOUTH.

CITY ARCHITECT'S DEPARTMENT.

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

(a) 1 ASSISTANT QUANTITY SURVEYOR, Grade A.P.T. V (£595 to £645).

(b) 2 ASSISTANT QUANTITY SURVEYORS, Grade A.P.T. I (£465 to £510).

Candidates for appointment (a) should be mem-

bers of the Royal Institution of Chartered Surveyors (Sub-Division III Quantities). Candidates for appointment (b) must be capacie of squaring and aostracting dimensions and will be expected to give general assistance in the preparation of Bilis of Quantities and the settlement of accounts. Preference will be given to those who have passed the kirst Examination of the Royal Institution of Chartered Surveyors.

Applicants must not be over 40 years of age but this condition may be released in the case of a person up to 45 years of age employed by another Local Anthority.

Applications on forms obtainable from the undersigned, accompanied by copies of not more than three recent testimonials and/or names of persons to whom reference may be made, should be received at my office not later than the 22th October, 1953.

The Corporation may make housing accommodation available to the successful married candidate for (a) if required.

H. J. W. STIRLING, A.R.I.B.A.,

City Architect,
9606

Seymour Road, Plymouth.

ARGYLL COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.
Applications are invited for the post of ARCHITECTURAL ASSISTANT, in the County Architect's Department, Duncon. The salary scale will be A.P.T. Grade IV-V (#250-#250) per annum), with placing according to qualifications and ex-

with placing according to qualifications and experience.

Applicants must have had a general architectural training, be capable of surveying, levelling, preparing detailed drawings and specifications, and have had experience particularly in connection with school buildings. Preference will be given to applicants who hold a recognised architectural qualification.

The appointment will be subject to the provisions of the Local Government Superannuation (Scotland) Act, 1937, and the successful candidate will require to pass a medical examination.

Applications, stating ago, experience and qualifications, together with copies of two recent testimonials, must be lodged with the County Architect, County Offices, Dunoon, within 14 days of the appearance of this advertisement.

A. D. JACKSON,

County Offices, Lochgilphead.

A. D. JACKSON.

County Offices, Lochgilphead.

22nd September, 1953.

HAMPSHIRE COUNTY COUNCIL.

PRIVATE ARCHITECTS WITH SPECIALISED

EXPERIENCE OF SCHOOL BUILDING.

Applications are invited from established firms of Architects with specialised experience in the design and construction of Schools to recent standards for engagement in connection with certain schools in the Authority's Major School Fullding Programme 1954-56.

Letters of application should be addressed to the Clerk of the County Council, The Castle, Winchester, within fourteen days of the publication of this advertisement and should give particulars of the applicants' experience of school building since 1951, and of their capacity for undertaking similar works in the forthcoming programme.

Clerk of the County Council.

The Castle, Winchester.

The Castle, Winchester. 19th September, 1953.

19th September, 1953.

CHESHIRE COUNTY COUNCIL.
CHESF PLANNING ASSISTANT (Architectural) required at Headquarters Office in Chester.
Salary: A.P.T., IX (£815×240—2935).
Candidates should be qualified Architects, and membership of the Town Planning Institute in addition, would be an advantage.
Considerable experience in detailed planning of housing estates, neighbourhood units and redevelopment areas, is essential.
Application forms and further details may be obtained from the undersigned on receipt of a stamped addressed foolscap envelope. The last date for receipt of completed applications is 24th October, 1953.

KENNETH O. MALE KENNETH O. MALE, County Planning Officer.

KENNETH O. MALE,
County Planning Officer.

Bridgwater House,
Lower Bridge Street, Chester.

9624

COUNTY BOROUGH OF GREAT YARMOUTH.
APPOINTMENT OF CLERK OF WORKS.
Applications are invited for the appointment of a Clerk of Works, to act under the direction of the Borough Engineer in the supervision of the erection of flats and maisonettes.
Applicants should have a thorough knowledge of the building trade and experience in this type of work. Membership of the Incorporated Clerk of Works' Association of Great Britain would be an advantage.

The salary will be in accordance with Miscellaneous, Grade VI (£525-£585), for Local Government Officers, subject to the hours of duty being equivalent to the hours of work of workment of the contracts being supervised.
Applications, stating age, qualifications and previous experience, together with the names of three persons to whom reference may be made, should be enclosed in an envelope endorsed, "Clerk of Works" and must be received by me not later than Thursday, 15th October, 1953.

Any relationship to a member or senior officer of the Council must be disclosed. Canvassing disqualifies.

FARRA CONWAY.

Town Clerk.

FARRA CONWAY. Town Hall, Great Yarmouth. 26th September, 1953.

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BOROUGH OF MACCLESFIELD.

APPOINTMENT OF QUANTITY SURVEYOR.
BOROUGH ARCHITECT'S DEPARTMENT.
Applications are invited for the appointment of quantity Surveyor, at a salary in accordance with qualifications and A.P.T. scales (not exceeding Grade VI).
Details and application forms obtainable from the Borough Architect, 3, Jordangate, Macclesfield, to be returned to the undersigned not later than Thursday, the 15th October, 1953.

WALTER ISAAC.
Town Clerk.

Town Hall, Macclesfield. 30th September, 1953.

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BOROUGH OF HEYWOOD.
BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.
ARCHITECTURAL DRAUGHTSMAN
GRADE II (4495-4540).
Applications are invited for the above-mentioned permanent appointment in the department of the Borough Engineer and Surveyor, at a salary in accordance with Grade II (2495-4540) of the Scale of Salaries.
Applicants must be neat and expeditious draughtsmen, and must have had previous experience in municipal architectural works and housing.

experience in municipal architectural works and housing.

The appointment will be subject to the provisions of the Local Government superannuation Act, 1937, to the National Joint Council's Conditions of Service and to one month's notice in writing on either side.

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

Applications stating age, qualifications and experience, accompanied by copies of three recent testimonials and appropriately endorsed should reach the undersigned not later than Saturday, 10th October, 1953.

W. R. PARKER,

W. R. PARKER, Town Clerk

Municipal Buildings, Heywood. 18th September, 1953.

BOROUGH OF HEYWOOD.
BOROUGH ENGINEER AND SURVEYOR'S
DEPARTMENT.
SENIOR ARCHITECTURAL ASSISTANT.
Applications are invited for the above-mentioned permanent appointment in the department of the Borough Engineer and Surveyor, at a salary in accordance with Grade V (£595—£645) at the Scale of Salaries.
Applicants much beautiful and the Scale of Salaries.

accordance with Grade v (2009—2005) at the Scale of Salaries.

Applicants must have passed the final of the B.I.B.A. examination, or hold an equivalent qualification, and must have had considerable experience in housing general architectural work, quantities and final accounts.

The appointment will be subject to the provisions of the Local Government Superannuation Act, 1937, to the National Joint Council's Conditions of Service and to one month's notice in writing on either side.

The successful applicant will be required to pass a medical examination age, qualifications and experience, accompanied by copies of three recent testimonials and appropriately endorsed, should reach the undersigned not later than Saturday, 10th October, 1953.

W. R. PARKER,

W. R. PARKER, Town Clerk.

Municipal Buildings, Heywood. 18th September, 1953.

LONDON COUNTY COUNCIL.
ARCHITECT'S DEPARTMENT.
Vacancies for (a) PLANNING OFFICERS
Grade II (£837 108.—£1,002); (b) PLANNING
OFFICERS Grade III (up to £837 10s.); (c)
TECHNICAL ASSISTANTS (up to £5056).
Professional qualifications A.R.I.B.A., A.R.I.C.S.
and/or A.M.T.P.I. required. Application forms
returnable by 23rd October, and particulars from
Architect (AR/EK/P/4), County Hall, S.E.I.
(1036).

COUNTY BOROUGH OF EAST HAM.
ARCHITECTURAL ASSISTANT. Salary £670

£735 (Grade A.P.T. VI).
London Weighting is paid in addition. Salary in excess of the minima may be paid, according to the qualifications and experience of successful candidate.
Subsistence Views

Candidate.

Subsistence allowances may be paid to the person appointed if unable to obtain suitable housing accommodation.

Further details and form of application (returnable by Monday, 12th October, 1953), obtainable from the Town Clerk, Town Hall, East Ham, E.6.

BUCKINGHAMSHIRE.

Applications are invited from ARCHITECTS to fill the following permanent posts, and to work on a large and interesting building programme, including traditional and new building techniques:

Special, Grade I: £925-£1,075 p.a.

A.P.T., Grade II: £925-£1,075 p.a.

(Applicants for the above posts should have outstanding design ability.)

A.P.T., Grade VII: £710-£785 p.a.

A.P.T., Grade VII: £710-£785 p.a.

A.P.T., Grade VII: £95-£540 p.a.

A weekly allowance of 25s. and return fare home once every two months may be paid for six months to newly appointed married officers of the Council unable to find accommodation.

Applications on form supplied (giving further particulars of post) to be returned not later than the 31st October, 1953.

FREDERICK POOLEY,

County Offices, Aylesbury.

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 18-69 inclusive unless he or she is, or the employment, is excepted from the provisions of the Notification of Vacancies Order, 1952.

A SSISTANT required for large general Architectural Practice with offices in Maidenhead. Some experience in specification writing essential. Salary £300 to £500, according to experience. Box 8935.

A SSISTANT (Inter./Final) wanted immediately in progressive Nottingham practice. Office experience and good draughtsmanship essential. Contemporary work. Salary according to experience. Box 9626.

A RCHITECTURAL ASSISTANT required in Westminster office of Consulting Engineers for work in connection with designs of Power Stations, Industrial Buildings, Administrative Office Blocks, etc. Apply stating age, experience and qualifications. Box 5635.

A RCHITECTURAL 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.

A MAJOR Oil Company, undergoing rapid expansion, requires ARCHITECTURAL ASSISTANT of Intermediate standard for its London Head Office. Applicants must be capable of carrying out work on the design and re-modelling of Service Stations. Social club. Generous sickness benefits. Pension and life assurance. Luncheon voucher scheme. Write, giving full details, stating age, experience, and salary required, quoting reference A.A.908, to Box 9633.

FOWLER, GROVE & HAGGAR, Chartered Architects, 140, Lodge Road, Southampton, require Junior Assistant. Salary according to qualifications and experience. 9569

MPERIAL CHEMICAL INDUSTRIES, LTD., MPERIAL CHEMICAL INDUSTRIES, LTD., General Chemicals Division, require a number of ARCHITECTURAL ASSISTANTS in the Architectural Section of their Chief Engineer's Department in Runcorn. Applicants should hold either a degree or diploma in Architecture, and preference will be given to Associates E.I.B.A. with one or more years' experience since qualification. The successful applicants will be employed on the design of amenities, canteens, offices and laboratory buildings. Membership of staff pension fund. Apply in writing, stating age, qualifications, experience, and salary required, to Staff Manager. Imperial Chemical Industries, Ltd., General Chemicals Division, Cunard Building, Liverpool, 3.

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

SENIOR ARCHITECTURAL ASSISTANTS and ARCHITECTURAL ASSISTANTS are required in North-West London office engaged on domestic and industrial architecture, which offers excellent experience and good scope. Applicants must have particular experience and interest in house and flat design. Apply, stating age, qualifications, experience, and salary required, to Sydney Greenwood, A.R.I.B.A., 33, Bunns Lane, Mill Hill, N.W.7.

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

ONE ASSISTANT required. Intermediate standard. General practice and interesting work. Some office experience essential Salary according to experience, qualifications and ability, especially ability. William Crabtree, F.R.I.B.A., 8, Robert Adam Street, W.1. Tel.: WEL 8918.

ARCHITECTURAL ASSISTANT required, mainly in connection with large scale maintenance, but including some new building work. Candidate should have good general experience and be about 30 years of age. Commencing salary according to qualifications and experience. Applications should be made in writing, giving full particulars, to Managing Director, Cable and Wireless, Ltd., Electra House, Victoria Embankment, London, W.C.2.

A RCHITECTURAL ASSISTANTS required.
Knowledge of contemporary work, working drawings and details. Sound knowledge London Building Acts. State age, salary, and experience, to Box 9610.

Architectural Appointments Wanted

SENIOR ASSISTANT (26), part Finals, 8 years' practical experience, urgently requires position, even if only temporary, in preferably contemporary office in South East England. J. L. Smith, 4, High Street, Sandown, I.W. 770

IRON STAIRCASES BALUSTRADING FENCING STEELWORK STAIRWAY HOUSE COURTHILL ROAD, LEWISHAM LONDON S.E.13. PHONE: LEE GREEN 4334-9. A.R.I.B.A., 33, accustomed to responsible position, with considerable technical and administrative experience in private offices, seeks position preferably in Southern England. Box 765.

A.R.I.B.A., aged 27, interested in contemporary design with three years' varied experience, requires post in a London office at salary of £570 per annum. Phone FUL 9378.

A RCHITECTURAL ASSISTANT, A RCHITECTURAL ASSISTANT, Intermediate, 3 years' office experience, seeks pottion in London office. Please apply Box 9634.

A SSISTANT (24) requires position in South of England. 18 months' experience, passed Final, N.S. completed, can drive. Box 9627.

SURVEYING AND ARCHITECTURAL ASSISTANT (26) PAGENIFOR TOWNS FANT (26) requires responsible position with Chartered Surveyor and Architect, London. Wide experience industrial and commercial work, surveys, working drawings, specifications, measure-ment for final accounts and supervision. Box 775.

A SSISTANT (28), Final Standard, school trained, 5 years' experience, mainly industrial, some domestic, desires appointment offering scope and responsibility. Box 9617.

A B.I.B.A., Intermediate R.I.C.S. (25), desires Box 772.

SENIOR ASSISTANT (late 40's), in administrative posts over last 15 years, seeks London engagement (not c/w). Own car. Salary £850.

CHARTERED ARCHITECT, with 19 years' ex-perience in general practice, domestic, com-mercial and industrial work, war damage and conversions, handling of contracts, site super-vision, etc., seeks responsible post. Box 773.

A RCHITECTURAL ASSISTANT desires situa-tion, London, in small office, Efficient draughtsman on all working drawings. Box 774.

A SSISTANT ARCHITECT (30), 14 years' varied A experience in general practices, mainly industrial, accurate speedy draughtsman, seeks post, S.W. counties. Box 771.

A. R.I.B.A. Woman. Dip. Arch. Edinburgh of three years' experience. Seeks position in London or Edinburgh. Box 9636.

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.

WELL-KNOWN London fireplace specialists require experienced showroom salesman. Write, stating age and qualifications, to Box 9632

SHORTHAND TYPIST required in Croydon Architect's office, knowledge of building terms an advantage. 5-day week. Write giving full particulars of previous experience and salary required to Box 9578.

Salary required to Box 9578.

QUANTITY SURVEYOR'S ASSISTANT required by British Railways, Eastern Region, Preference given to applicants with experience in abstracting and billing, and assisting with site measurements. Salary according to age and experience. Free residential railway travelling within specified limits and other reduced rate travelling facilities after qualifying period of service. Permanency to suitable applicant after probationary period. Five-day week. Apply in writing, giving full particulars as to qualifications, experience, etc., to the Civil Engineer, Eastern Region, British Railways, King's Cross Station, London, N.1.

SECRETARY wanted for Architect's office, West End. Hours 9-6, no Saturdays. High standard organising ability, typing, shorthand and book-keeping essential. Salary by arrange-ment. Reply, giving qualifications, etc., to Box

ADY TRACER required for Westminster Consultants. Previous civil engineering experience advantageous. Age range preferred, 25 to 35. Salary will be based on experience and ability. Please send full details to Box 9609.

A GROUP of Companies, specialising in the manufacture, sale and distribution of Rubber and Plastic Flooring of all types, with a separate contracting organisation for laying these floorings and carpets, linoleum, wood blocks, etc., require a COMMERCIAL MANAGER to administrate these companies, with a thorough knowledge of the flooring trade. Applicants must have experience of executive control and administration, and be capable of maintaining and developing the selling organisation to a level of high efficiency. Write, with full particulars of qualifications, salary required, etc., to Box 9619.

Moderate LONDON 8103.

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For Sale or Wanted

4 lines or under, 7s. 6d.; each additional line, 2s.
NEW.-5/3\(^{\text{W}}\) "Ward" Portable Petrol Driven
Concrete Mixers for sale. Full details from
Thomas. W. Ward Ltd., Albion Works, Sheffield.

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.

WANTED: Georgian or Adam Doorway suitable for small country residence. State condition and price. Box 9585.

YOUNG ARCHITECT, marrying shortly, requires self-contained Furnished Flat. London area. 'Phone MOU. 0934 after 7 p.m. 9635

Services Offered

4 lines or under, 7s. 6d.; each additional line, 2s.
URVEYS of Buildings and Sites, Accurate
Drawings, Reports on Buildings, Quantities,
Schedule of Repairs, Qualified Surveyor. LIV
1839 or Box 9356.

A RCHITECTS in private practice are able to undertake part-time work, perspectives, working drawings, etc. Phone FUL 9378. 9566

PAUGHTSMAN, forty years experience, requires private tracing work. Mechanical, Architectural or preparing working drawings. Work strictly confidential. Box 9637.

COLLEGE OF ESTATE MANAGEMENT

(Incorporated by Royal Charter)

St. Alban's Grove, Kensington, W.8

DAY, EVENING and POSTAL courses for certain of the Examinations of

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(Including the Valuations, and the Building Surveying and Quantity Surveying Sections)

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POSTAL courses for the Examinations of the

INSTITUTION OF MUNICIPAL ENGINEERS THE ROYAL SANITARY INSTITUTE

THE TOWN PLANNING INSTITUTE

Full information including details of length of courses and times of opening from : THE SECRETARY (Dept. A) Telephone: WEStern 1546





TYPING AND DUP. SPECIFICATIONS, SCH. OF DILAPS, promptly executed. Moderate charges, enquiries welcomed. N.W. LONDON TYP. BUREAU, 148, STRAND, TEM. 3603.

Miscellaneous

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

J. BINNS, LTD., Specialists in the supply and fixing of all types of Fencing, Gates and Closkroom Equipment. Harvest Works, 36/107, St. Paul's Road, N.1. Canonbury 2061.

FREE advice on better heating by oil filled radiators (rental terms), central heating, draught proofing, insulation, etc. Consult Hurseal, 229, Regent Street, W.I. (Regent 1951.)

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

R. I.B.A. AND T.P.I. EXAMS.—Stuart Stanley G. A. Crockett, M.A./B.A., F./F.B.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.C.S., I.A.A.S., and I.Q.S. Exams.—Postal V. Courses conducted by the Ellis School (Principal: A. B. Waters, M.B.E., G.M., F.R.I.B.A.), 103B, 01d Brompton Road, S.W.7, KEN. 4477/8/9. Descriptive Booklet on request

INTER, FINAL & SPECIAL FINAL

ostal Courses in all or any subjects including Design and Professional Practice, Consultation arranged THE ELLIS SCHOOL Principal: A. B. Waters, M.B.E., G.M., F.R.I.B.A.

103B, OLD BROMPTON RD., LONDON, S.W.7

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SPEARPOINT Floor Clips to anchor wood floors to concrete. DOVETAIL Masonry Slot and Anchors to anchor brick and stone facings to concrete. ANKORTITE Box Fittings.

ABBEY BUILDING SUPPLIES CO.

6, Waldemar Road, Wimbledon, London, S.W.19

Telephone: Wimbledon 4178

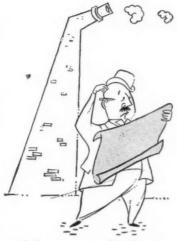
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COMPOSITE STEEL & ASBESTOS ROOFING CORRUGATED DURASTEEL Steel-cored

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Send for data to manufacturers:-Durasteel Ltd., Oldfield Lane, Greenford, Middx Tel.: WAXIow 1051 (P.B.X.)



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26 Stamford Street, S.E.I. Tel: WATerloo 3484.
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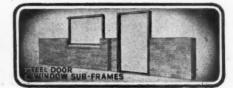
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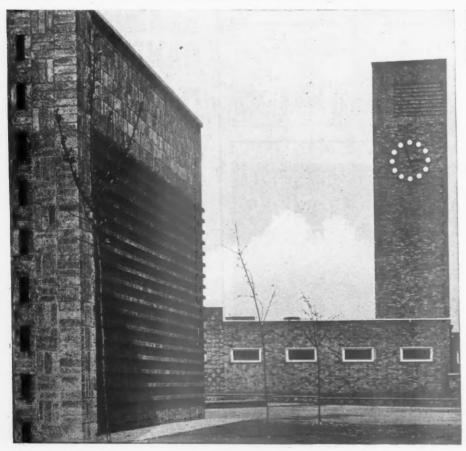
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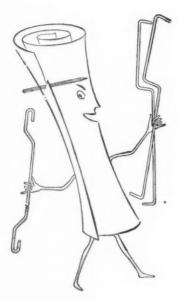
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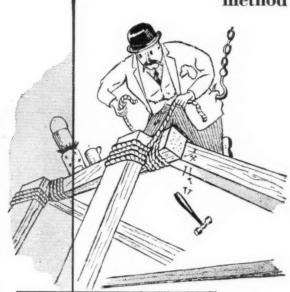
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