THE ARCHITECTS' JOURNAL

tandard contents

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

3221] [Vol. 124

E ARCHITECTURAL PRESS

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Registered as a Newspaper.

★ 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, Ih to Z the next. In all cases where the town is not mentioned the word LONDON is implicit in the address.

IHVE	Institution of Heating and Ventilating Engineers. 49, Cadogan Square.	Sloane 1601/3158
IIBDID	Incorporated Institute of British Decorators and Interior Designers. 100, Park Street, Grosvenor Square, W.1.	Mayfair 7086
ILA	Institute of Landscape Architects, 2, Guilford Place, W.C.1.	Holborn 0281
I of Arb	Institute of Arbitrators. Hastings House, 10, Norfolk Street, Strand, W.C.2.	Temple Bar 4071
IOB	Institute of Builders. 48, Bedford Square, W.C.1.	Museum 7179
IQS	Institute of Quantity Surveyors. 98, Gloucester Place, W.1.	Welbeck 1859
IR	Institute of Refrigeration. Dalmeny House, Monument Street, E.C.3.	Avenue 6851
IRA	Institute of Registered Architects. 47, Victoria Street, S.W.1.	Abbey 6172
ISE	Institute of Structural Engineers. 11, Upper Belgrave Street, S.W.1.	Sloane 7128
LDA	Lead Development Association. Eagle House, Jermyn Street, S.W.1.	Whitehall 7264/4175
LMBA	London Master Builders' Association. 47, Bedford Square, W.C.1.	Museum 3891
LSPC	Lead Sheet and Pipe Council. Eagle House, Jermyn Street, S.W.1.	Whitehall 7264/4175
MAFF	Ministry of Agriculture, Fisheries and Food. Whitehall Place, S.W.1.	Trafalgar 7711
MARS	Modern Architectural Research Group (English Branch of CIAM). Secretary: Trevor Dannatt, A.R.I.B.A., 71, Blandford Street, W.1.	Welbeck 4713
MOE	Ministry of Education. Curzon Street House, Curzon Street, W.1.	Mayfair 9400
MOH	Ministry of Health. 23, Savile Row, W.1.	Regent 8411
MOHLG	Ministry of Housing and Local Government. Whitehall, S.W.1.	Whitehall 4300
MOLNS	Ministry of Labour and National Service. 8, St. James' Square, S.W.1.	Whitehall 6200
MOS	Ministry of Supply. Shell Mex House, W.C.2.	Gerrard 6933
MOT	Ministry of Transport. Berkeley Square House, Berkeley Square, W.1.	Mayfair 9494
MOW	Ministry of Works. Lambeth Bridge House, S.E.1.	Reliance 7611
NAMMC	Natural Asphalte Mine Owners and Manufacturers Council. 94/98, Petty France, S.W.1.	Abbey 1010
NAS	National Association of Shopfitters. 9, Victoria Street, S.W.1.	Abbey 4813
NBR	National Buildings Record. 31, Chester Terrace, Regent's Park, N.W.1.	Welbeck 0619
NCBMP	National Council of Building Material Producers. 10 Storey's Gate, S.W.1.	Abbey5111
NEFMAI	National Employers Federation of the Mastic Asphalt Industry. 21, John Adam Street, Adelphi, W.C.2.	Trafalgar 3927
NFBTE	National Federation of Building Trades Employers. 82, New Cavendish Street, W.1.	Langham 4041/4054
NFBTO	National Federation of Building Trades Operatives. Federal House, Cedars Road, Clapham, S.W.4.	Macaulay 4451
NFHS	National Federation of Housing Societies. 12, Suffolk St., S.W.1.	Whitehall 1693
NHBRC	National House Builders Registration Council. 82, New Cavendish Street, W.1.	Langham 4341
NPL	National Physical Laboratory. Head Office, Teddington.	Molesey 1380
NRDB	Natural Rubber Development Board. Market Buildings, Mark Lane, E.C.3.	Mansion House 9383
NSAS	National Smoke Abatement Society. Palace Chambers, Bridge Street, S.W.1.	Trafalgar 6838
NT	National Trust for Places of Historic Interest or Natural Beauty. 42, Queen Anne's Gate, S.W.1.	Whitehall 0211
PEP	Political and Economic Planning. 16, Queen Anne's Gate, S.W.1.	Whitehall 7245
RCA	Reinforced Concrete Association. 94, Petty France, S.W.1.	Abbey 4504
RIAS	Royal Incorporation of Architects in Scotland. 15, Rutland Square, Edinburgh.	Fountainbridge 7631
RIBA	Royal Institute of British Architects. 66, Portland Place, W.1.	Langham 5721
RICS	Royal Institution of Chartered Surveyors. 12, Great George Street, S.W.1.	Whitehall 5322/9242
RFAC	Royal Fine Art Commission. 5, Old Palace Yard, S.W.1.	Whitehall 3935
RS	Royal Society. Burlington House, Piccadilly, W.1.	Regent 3335
RSA	Royal Society of Arts. 6, John Adam Street, W.C.2.	Trafalgar 2366
RSH	Royal Society of Health. 90, Buckingham Palace Road, S.W.1.	Sloane 5134
RIB	Rural Industries Bureau. 35, Camp Road, Wimbledon, S.W.19.	Wimbledon 5101
SBPM	Society of British Paint Manufacturers. Grosvenor Gardens House, Grosvenor Gardens, S.W.1.	Victoria 2186
SE	Society of Engineers. 17, Victoria Street, Westminster, S.W.1.	Abbey 7244
SFMA	School Furniture Manufacturers' Association. 30, Cornhill, London, E.C.3.	Mansion House 3921
SIA	Society of Industrial Artists. 7, Woburn Square, London, W.C.1.	Langham 1984/5
SIA	Structural Insulation Association. 32, Queen Anne Street, W.1.	Langham 7616
SNHTPC	Scottish National Housing. Town Planning Council. Hon. Sec., Robert Pollock, Town Clerk, Rutherglen	
SPAB	Society for the Protection of Ancient Buildings. 55, Great Ormond Street, W.C.I.	Holborn 2646
TCPA	Town and Country Planning Association. 28, King Street, Covent Garden, W.C.2.	Temple Bar 5006
TDA	Timber Development Association. 21, College Hill, E.C.4.	City 4771
TPI	Town Planning Institute. 18, Ashley Place, S.W.1.	Victoria 8815
TTF	Timber Trades Federation. 75, Cannon Street, E.C.4.	City 5040
WDC	War Damage Commission. 6, Carlton House Terrace, S.W.1.	Whitehall 4341
ZDA	Zinc Development Association. 34, Berkeley Square, W.1.	Grosvenor 6636

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Contractors: Geo. Wimpey & Co., Ltd., London, W.6.
Electrical Contractors: Berkeley Electrical Engineering Co., Ltd., London, S.W.1.

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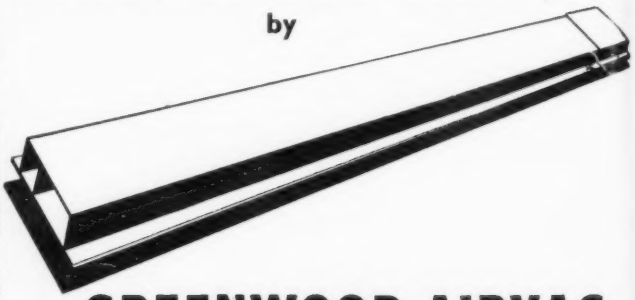

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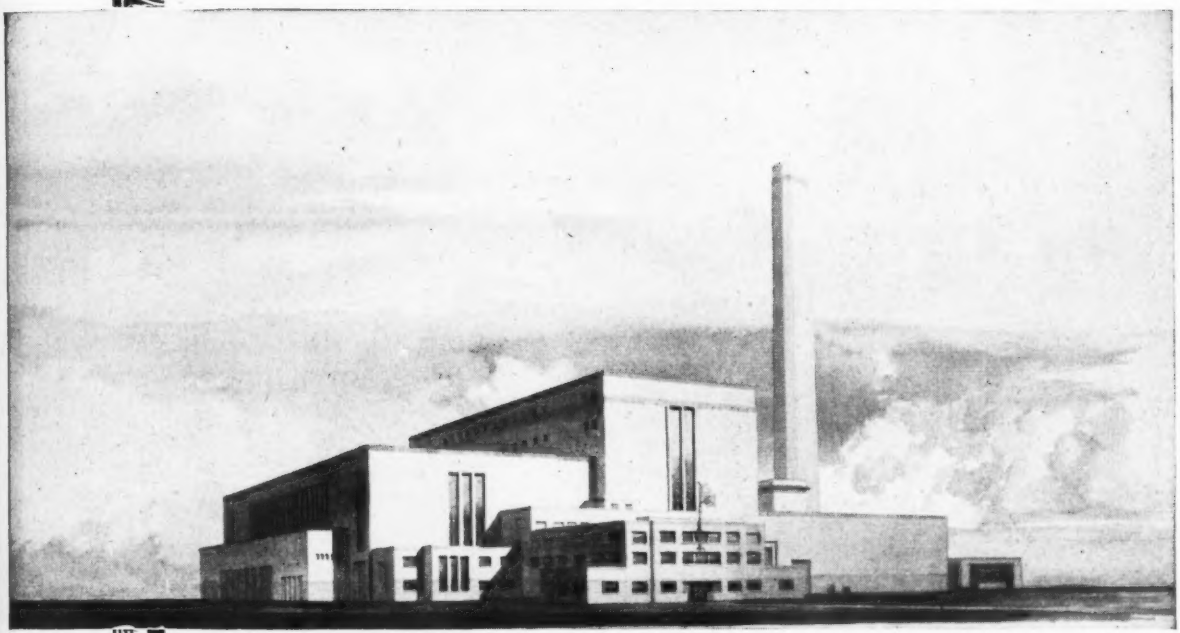

Executive Architect: A. Stocker, Esq., A.R.I.B.A.

THE new South Denes Generating Station for the Central Electricity Authority, Eastern Division, will help serve the power needs of East Anglia. Richard Costain Limited are responsible for the superstructure rapidly taking shape, which is steel framed with brick cladding rising to a maximum height of 145 feet. Approximately 6 million bricks will be used on the Boiler House, Turbine House, Administration Block, Stores, Workshops, Screen Wall and ancillary buildings. The Station has been designed by the Engineering Staff of the Eastern Division of the Central Electricity Authority.

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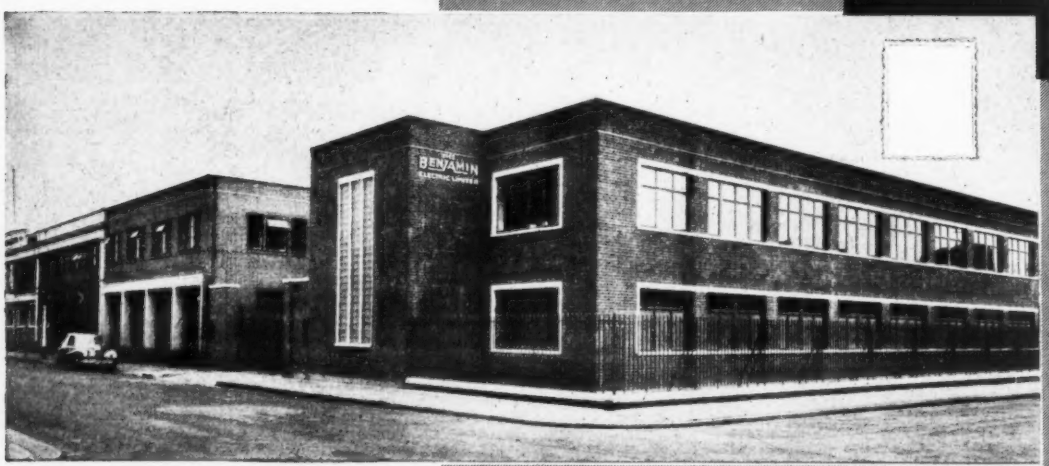

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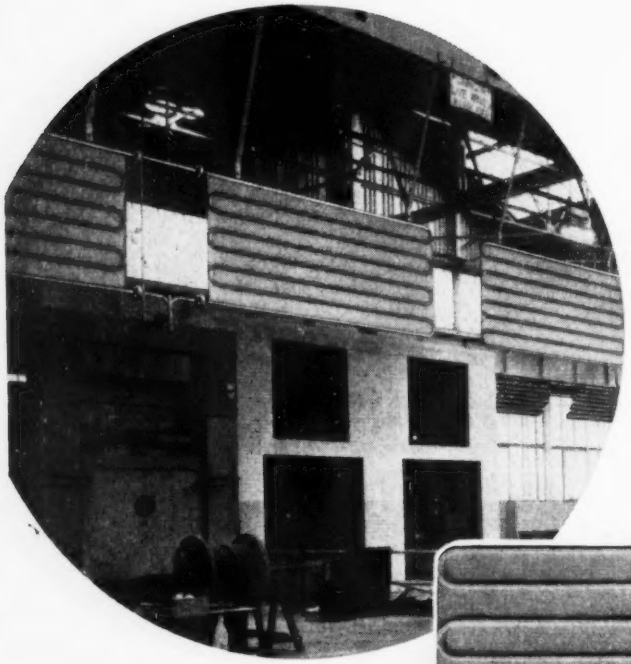

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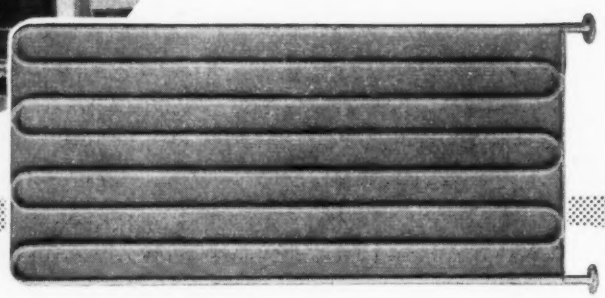

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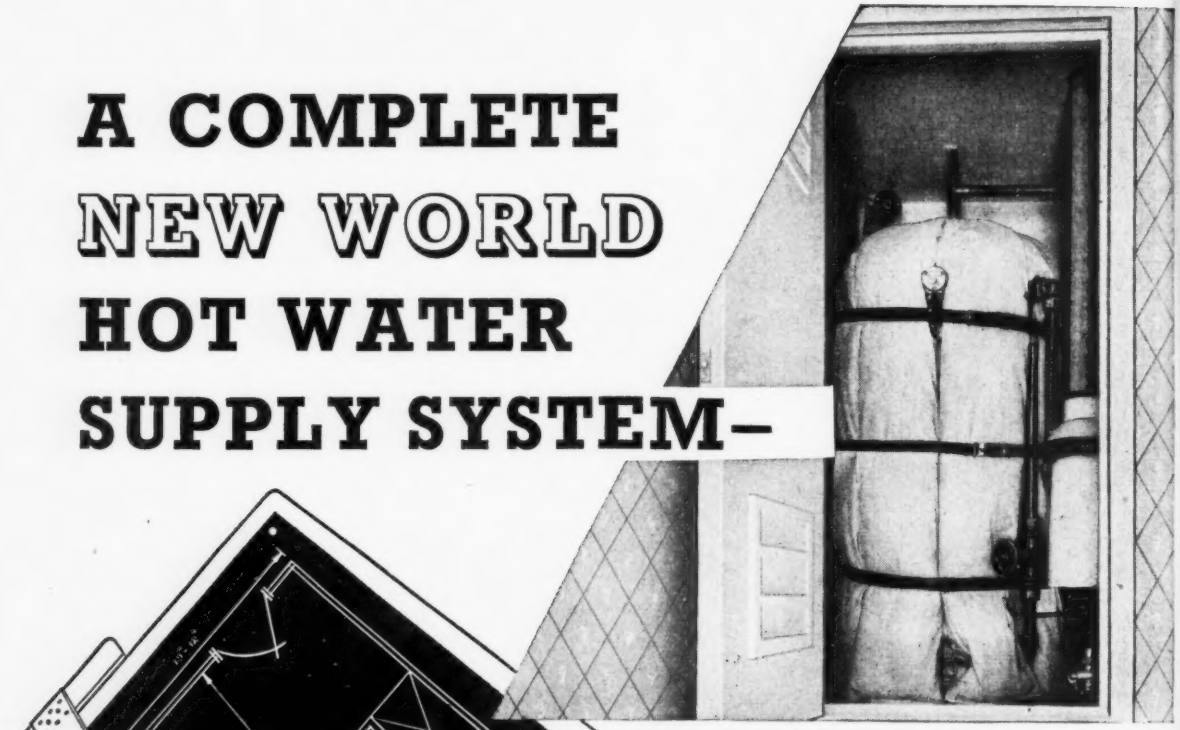

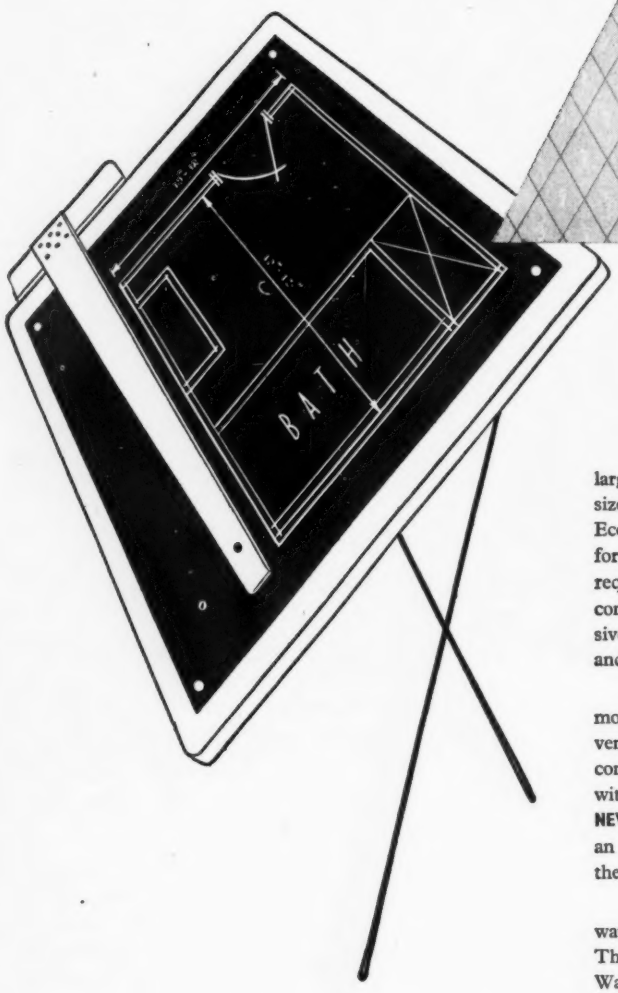

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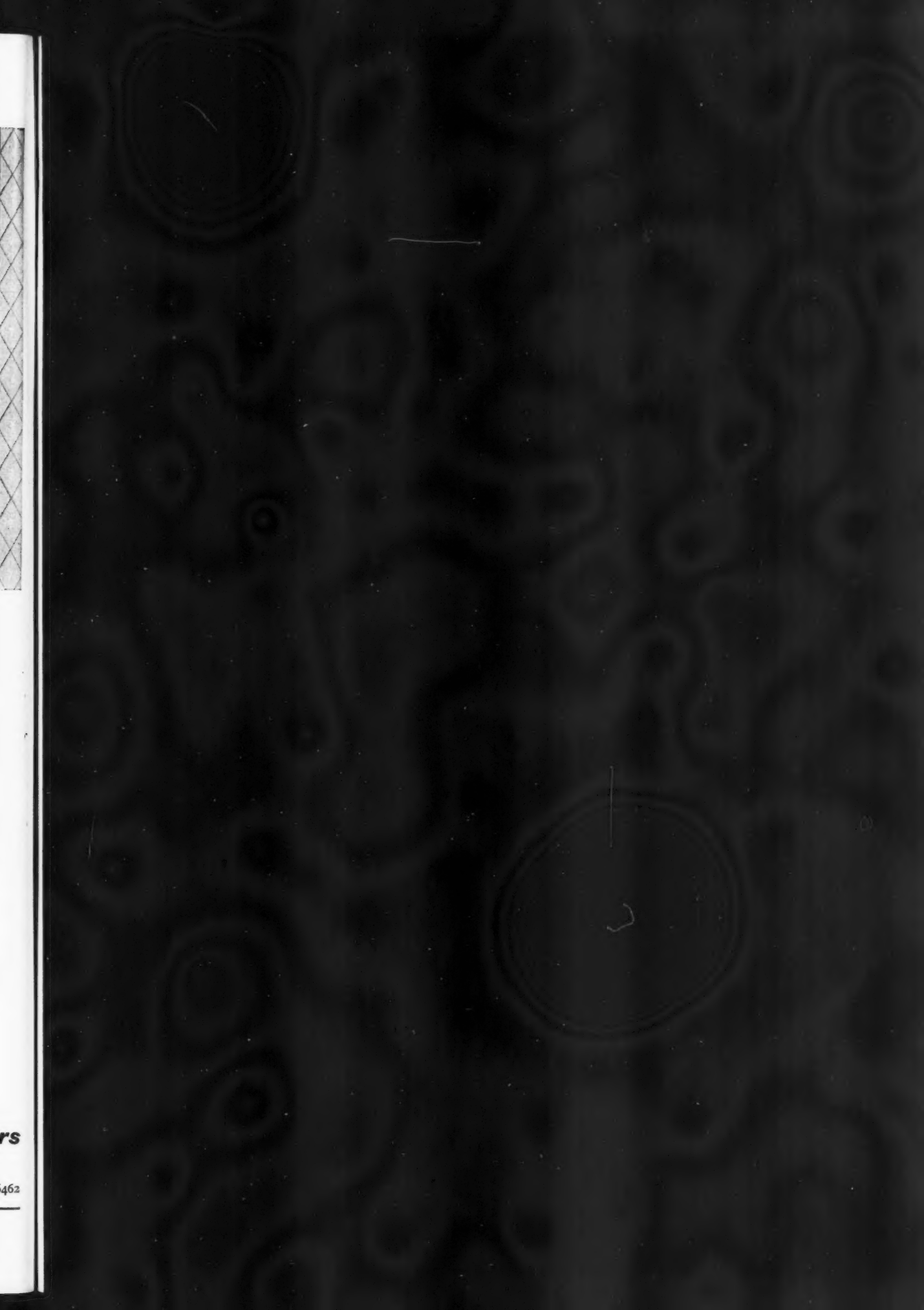

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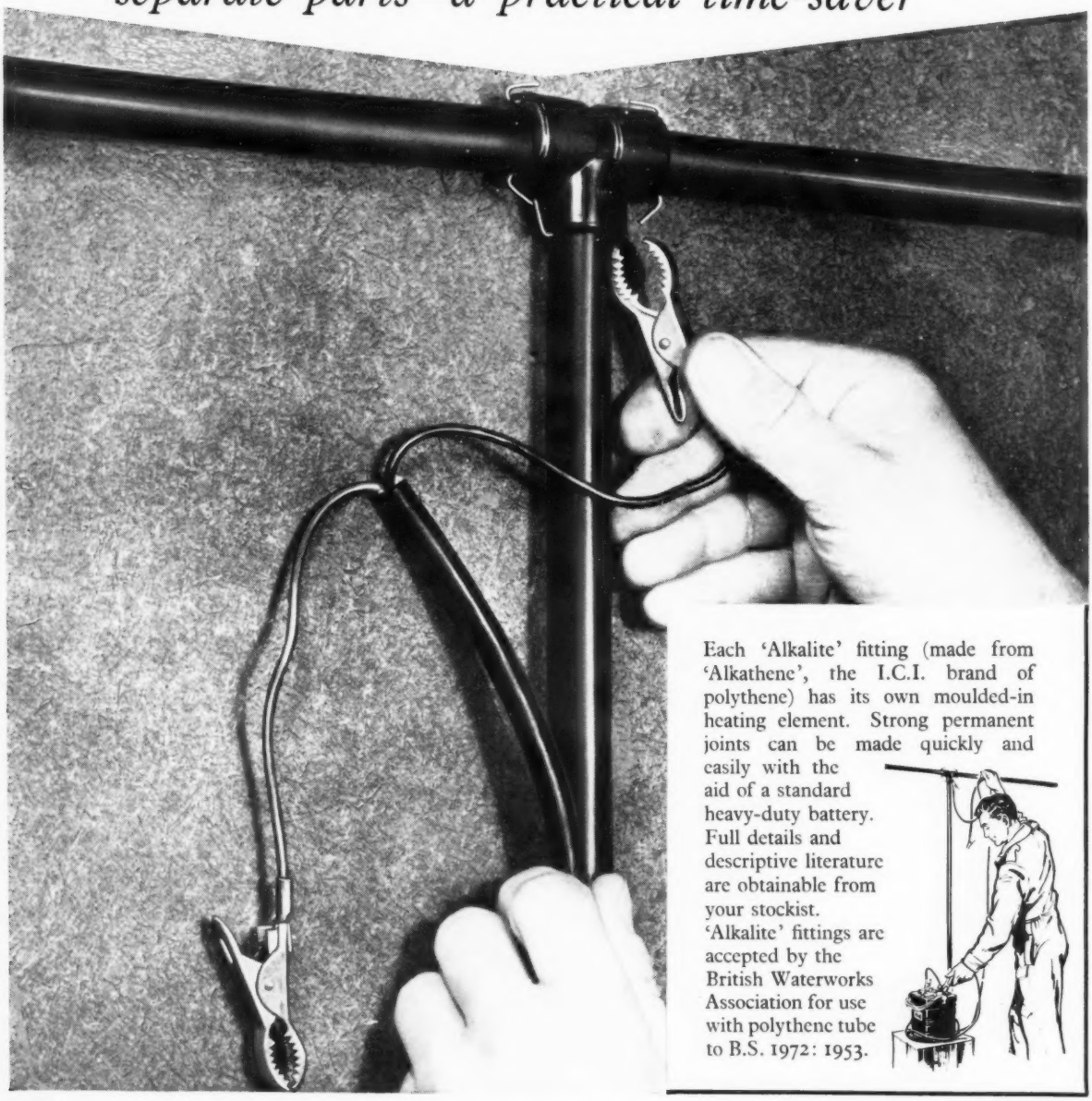

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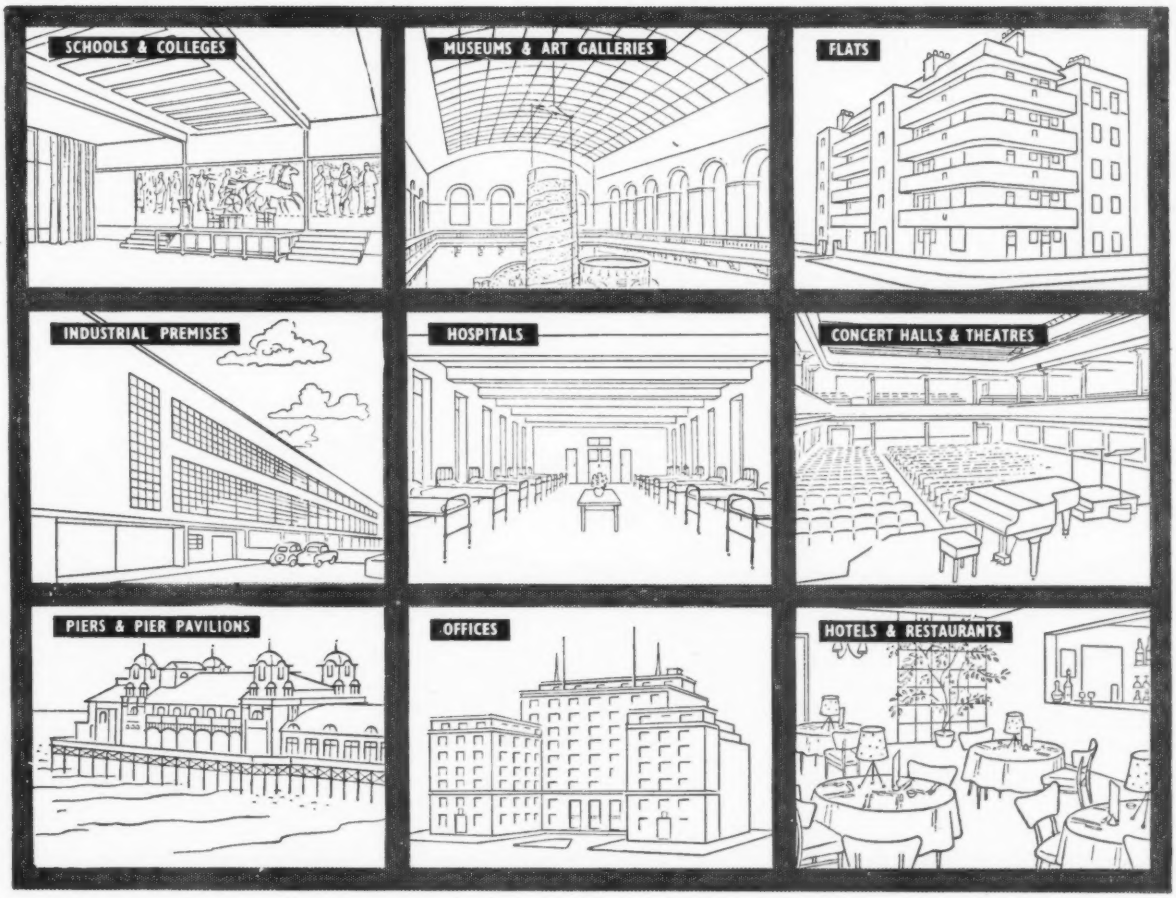

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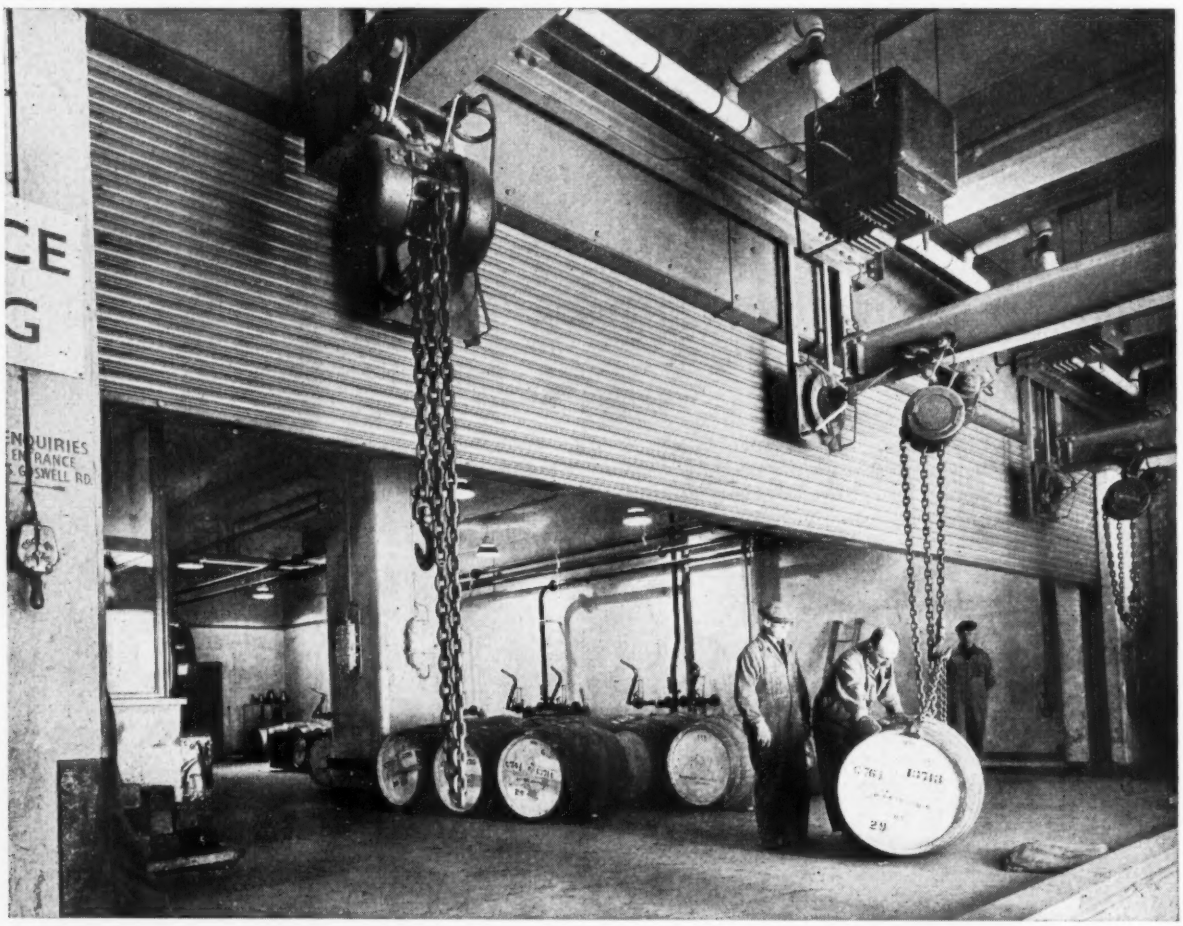

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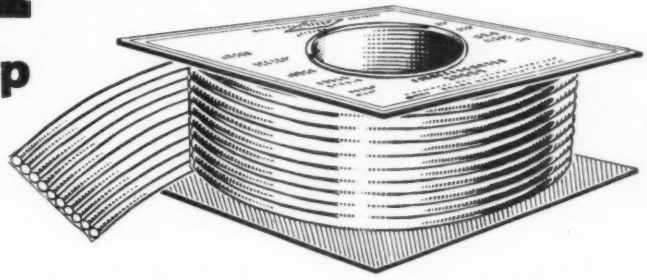

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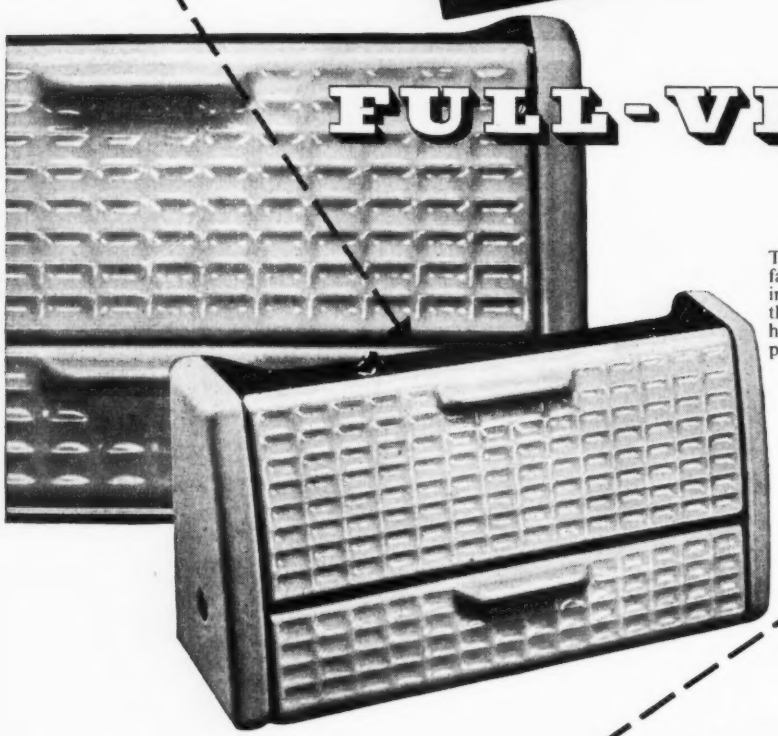

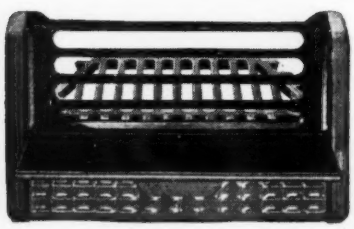

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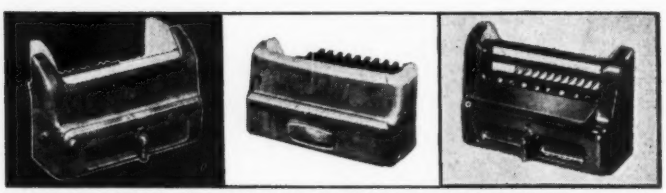

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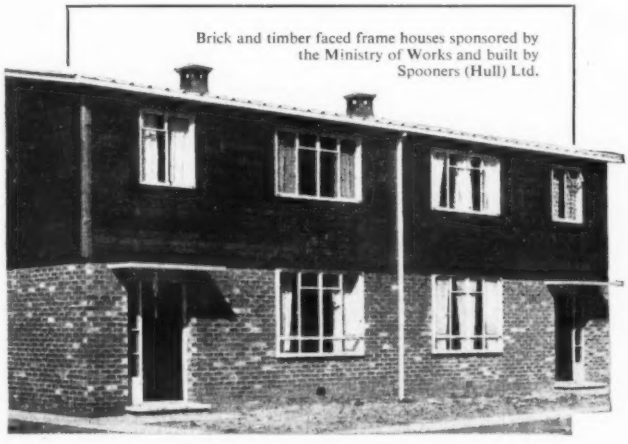

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Model 1003 Auto (CTC) Extinguisher.....FOC Ref. No. 104/5 for Class C fire risks (*minor electrical risks and small petrol fires*).

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(British Standard Code of Practice C.P. 402.401 (1951) is published on behalf of the Council for Codes of Practice for Buildings by the British Standards Institution.)

Universal (Royal Navy) Extinguisher Model 1301 for .. Class A fires
Air Foam Extinguisher Model 1400 .. .. .. Class B fires

ACCEPTED BY THE LONDON COUNTY COUNCIL

Consent granted under Sec. 20 of the London Building Acts (Amendment) Act 1930.

All Nu-Swift extinguishers that are approved by the Fire Offices Committee.

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Nu-Swift extinguishers are the only ones on the market to combine these essential advantages.

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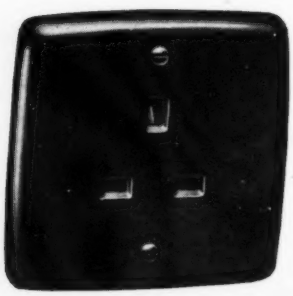

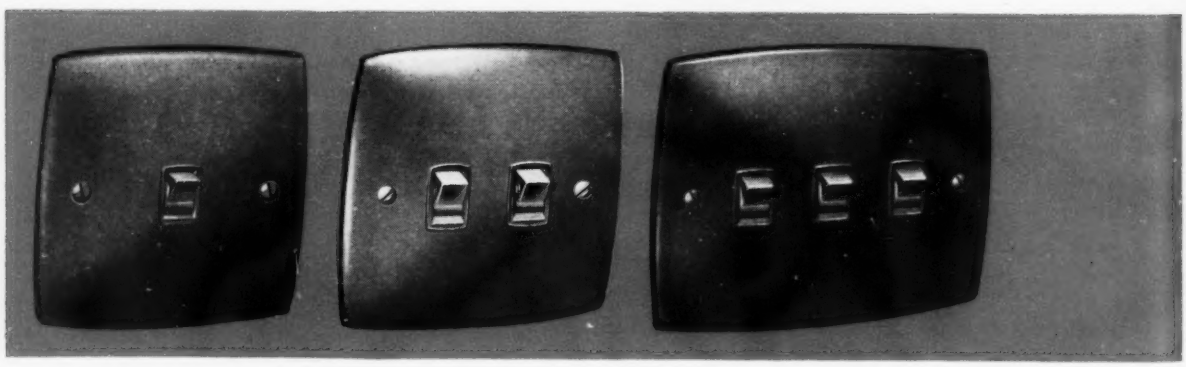

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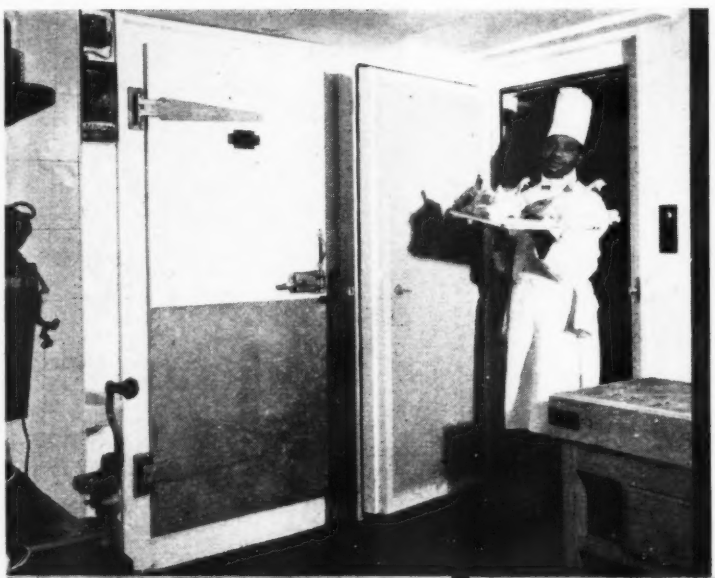

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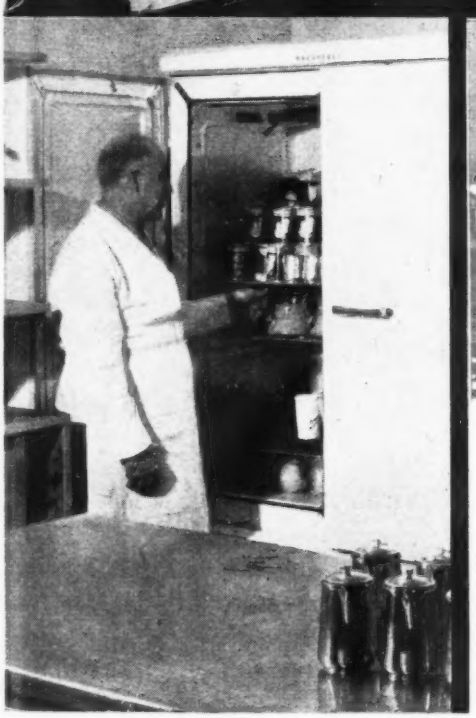

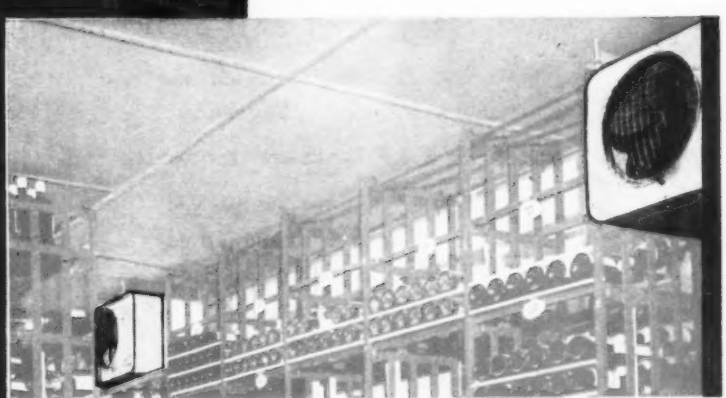

(Top left) **Prestcold coldroom**

(Bottom left) **Prestcold service cabinet**

(Above) **Prestcold unit coolers**

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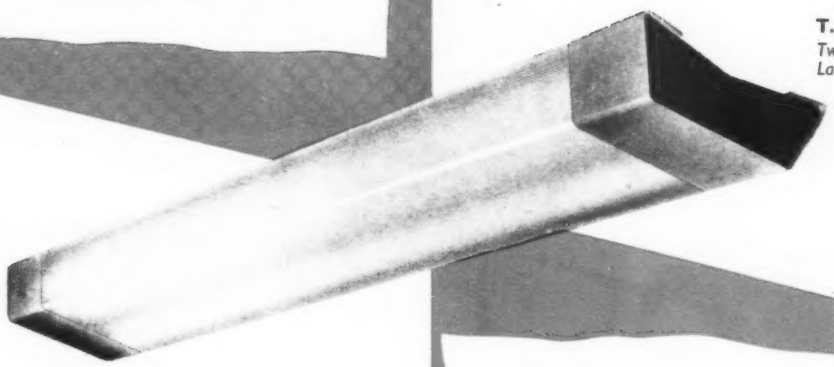

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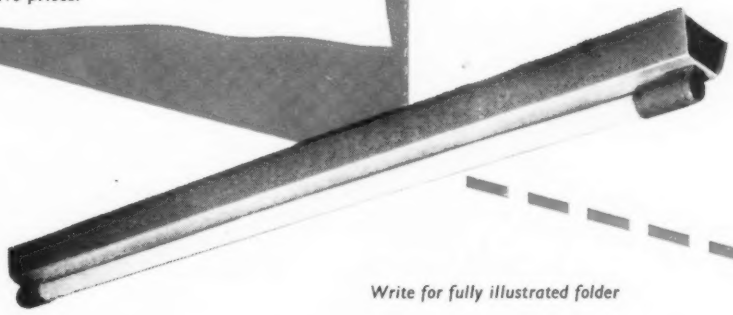

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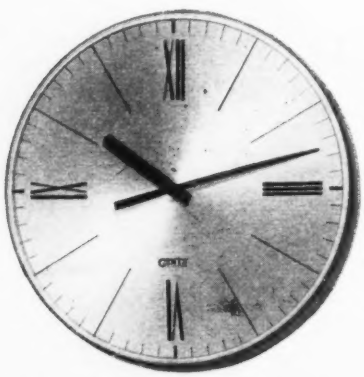
The dial of this model is natural sunburst aluminium with black Gill Sans chapters and black hands. 9" or 12" dials.



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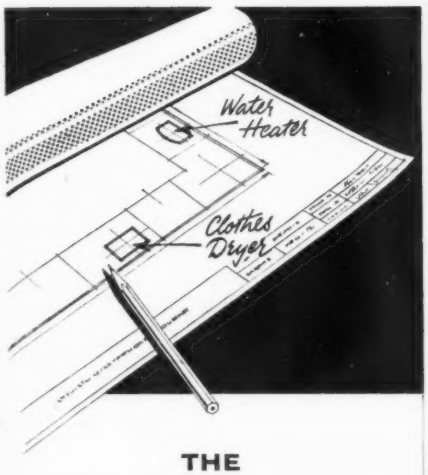

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(for single dwelling installations)

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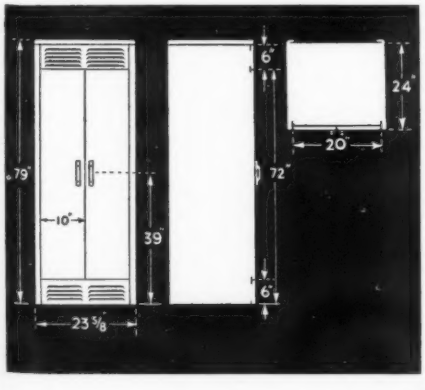
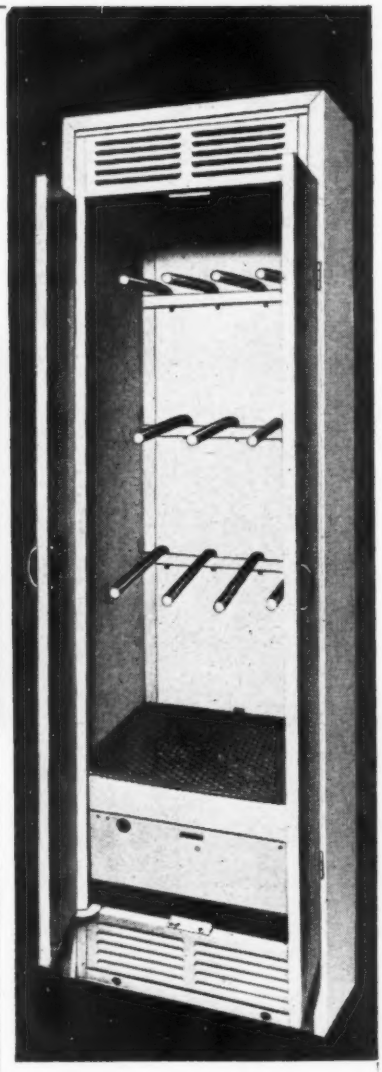
The Flavel 'Suntrap' Clothes Dryer is constructed so that it can be supplied either as a complete unit or, alternatively, for building into a recess or corner by utilising the main frame assembly and such component parts as may be necessary.





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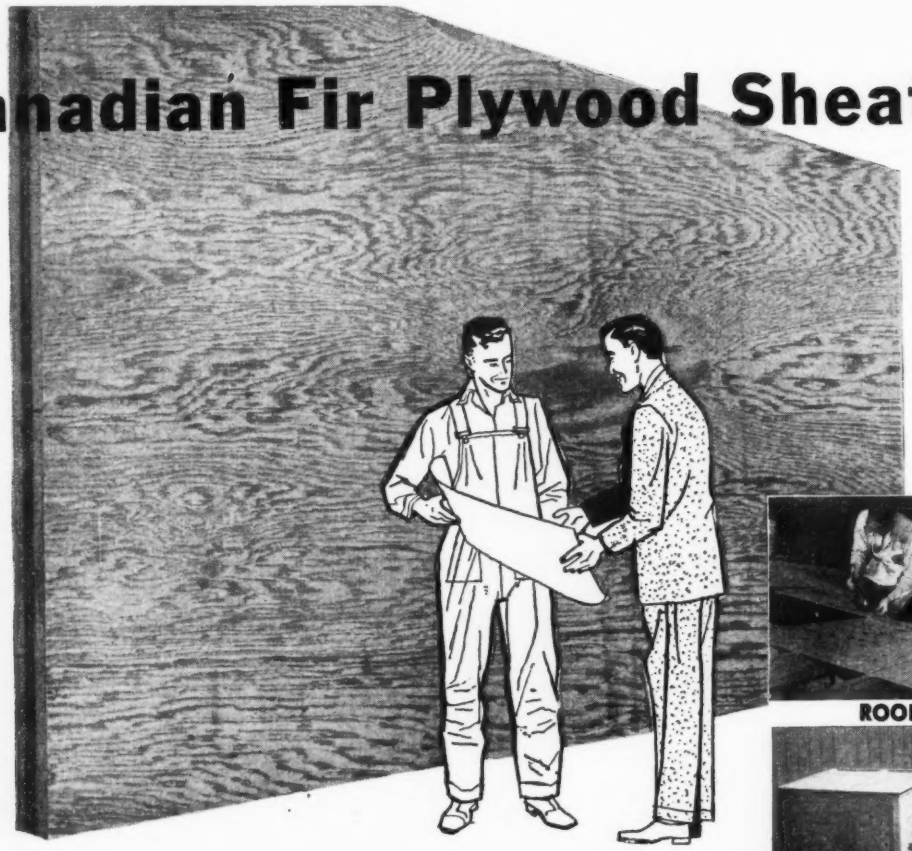

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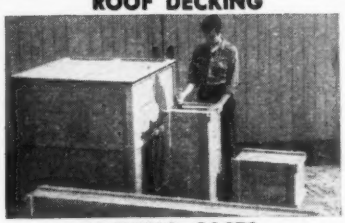

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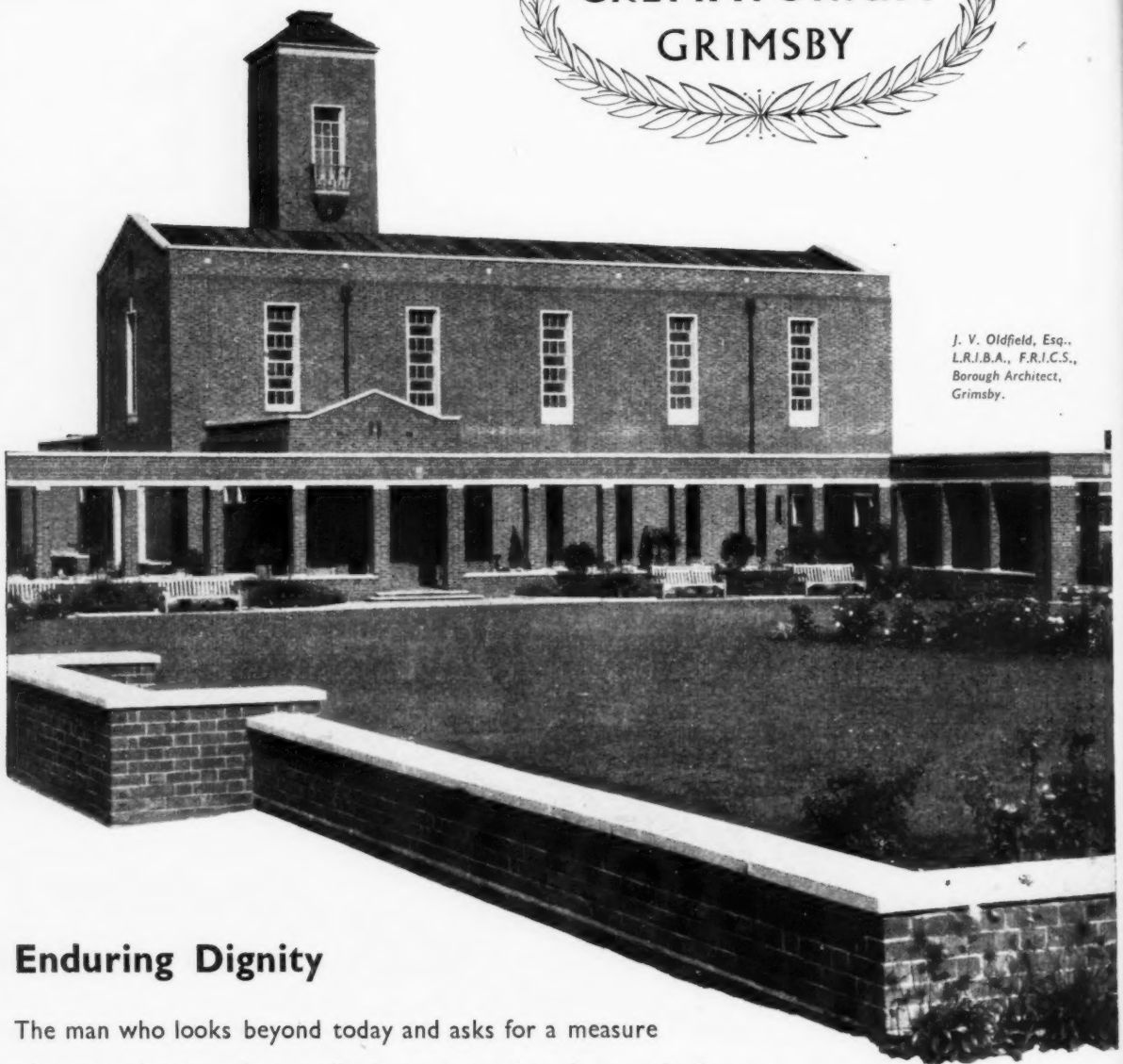

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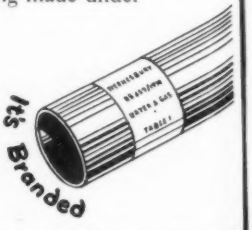

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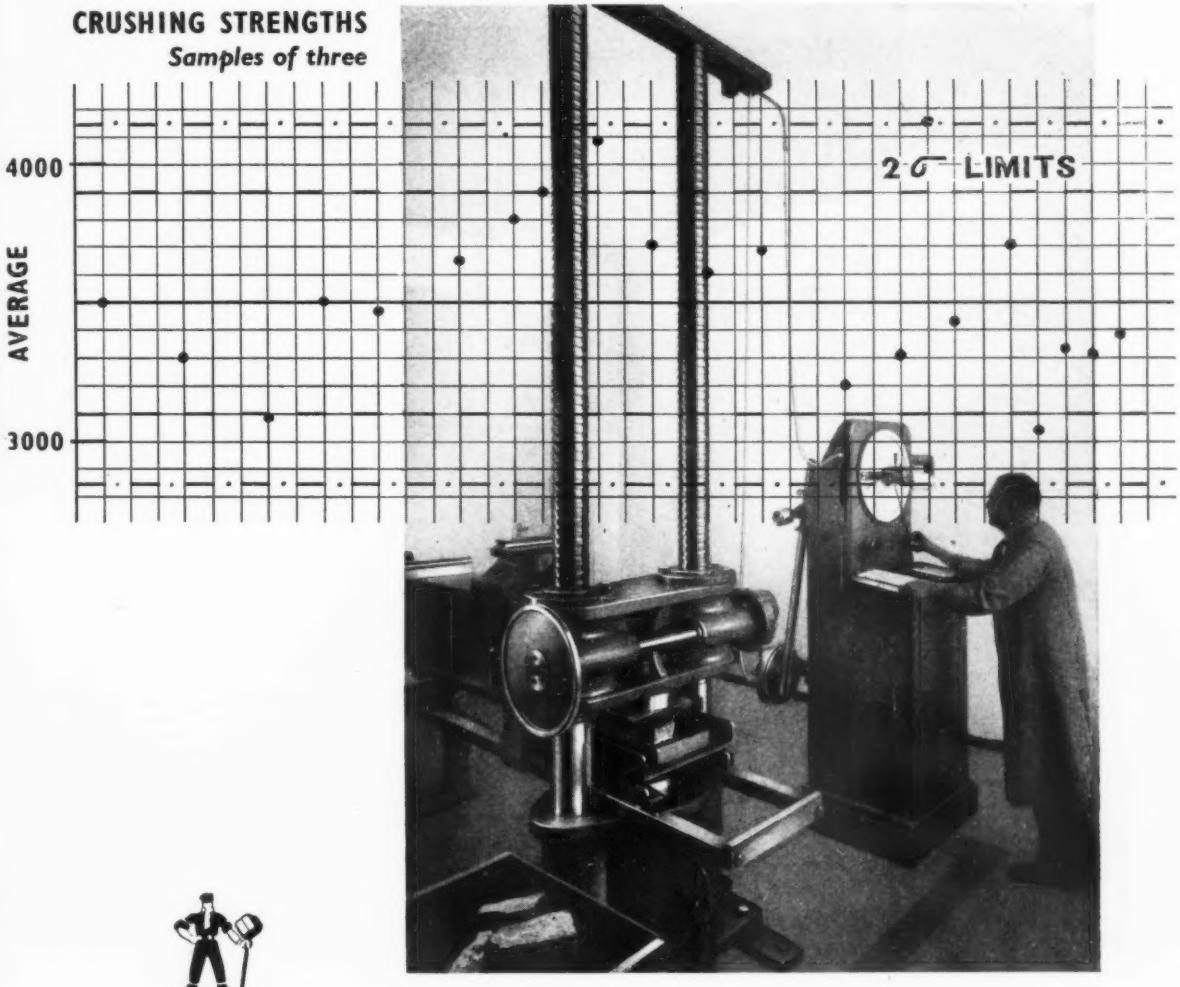

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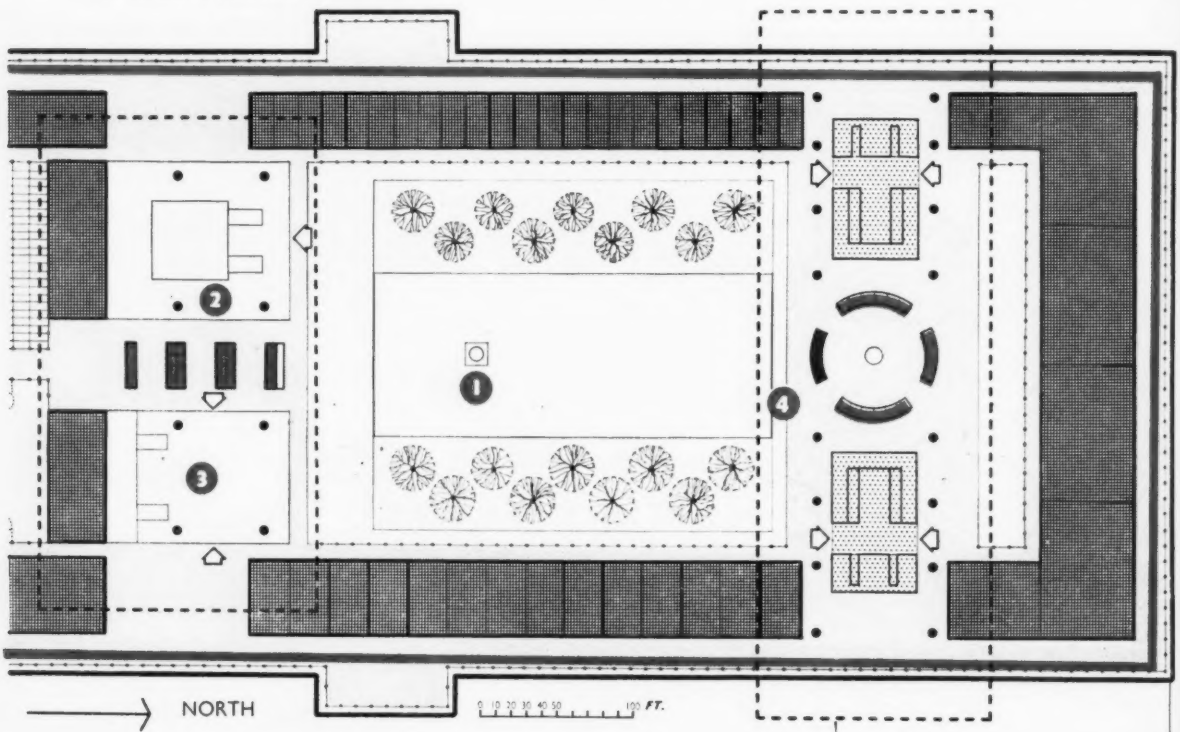
The Glass Age Development Committee

This is the final report issued by the Glass Age Development Committee on "The High Market Project". The previous reports have been published in the form of advertisements throughout this year. The Committee was convened by Pilkington Brothers Limited and has made these detailed proposals for a possible large scale shopping centre, which could be situated in the Black Country area. The Committee consists of G. A. Jellicoe, F.R.I.B.A., Edward D. Mills, F.R.I.B.A., and Ove Arup & Partners, and the project has been designed, under the direction of the Committee, by Gordon and Eleanor Michell, A/A.R.I.B.A.



THE HIGH MARKET 7

THE MAIN SQUARE

On the north side, the Main Square is bounded by a six-floor Department Store: on the south by a building that accommodates a cinema and a restaurant. Open arcades, with single-storey shops continue on either side, and these arcades may be enclosed during the winter with removable glazed screens: the whole shopping area would then be air-conditioned. The larger shops at the north end of the building could accommodate administrative offices, a Post Office and Banks.

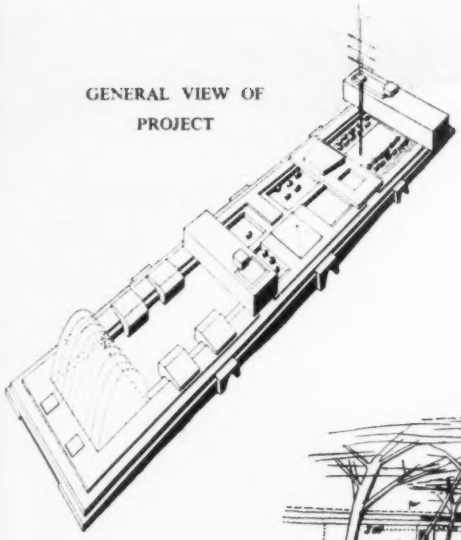
1. *Television communication unit*
2. *Stairs to cinema with illuminated aquarium under large half landing*
3. *Exhibition hall with stairs to restaurant, ballroom and administration offices*
4. *Department Store above*

KEY TO TINTS ON PLAN

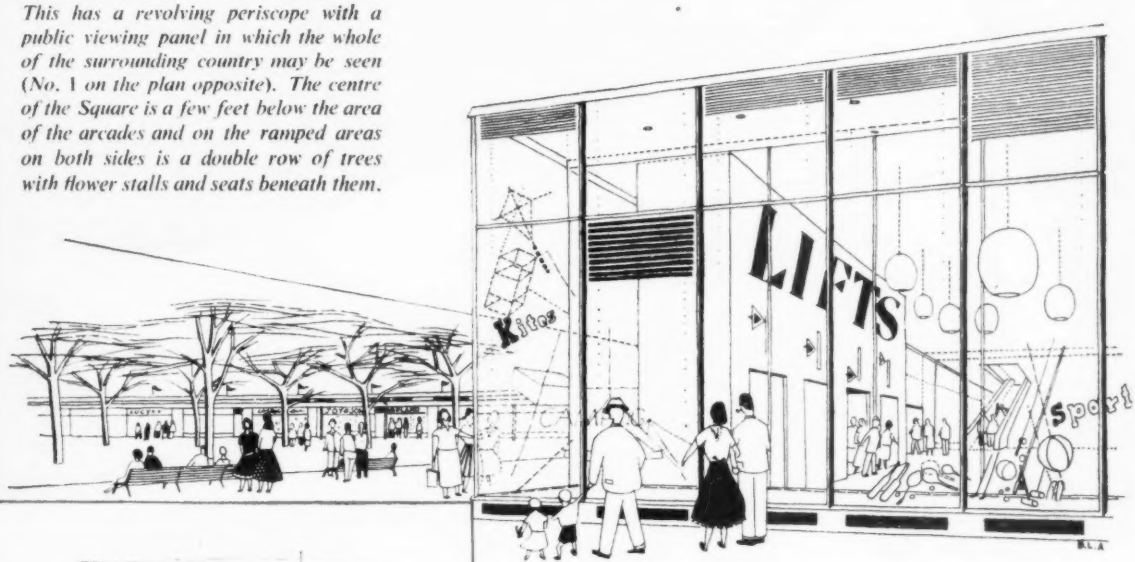
- *Covered shopping area*
- *Single-storey Shops*
- *Shoppers' lifts from car parks*
- *Moving articulated platforms*
- *Goods lifts*
- *Entrance to Department Store with lifts, escalators and display space. Dotted lines represent Department Store above*

PILKINGTON BROTHERS

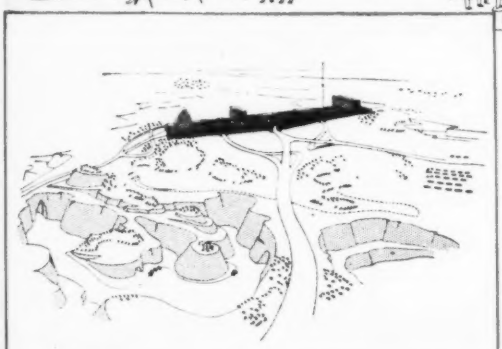
GENERAL VIEW OF PROJECT



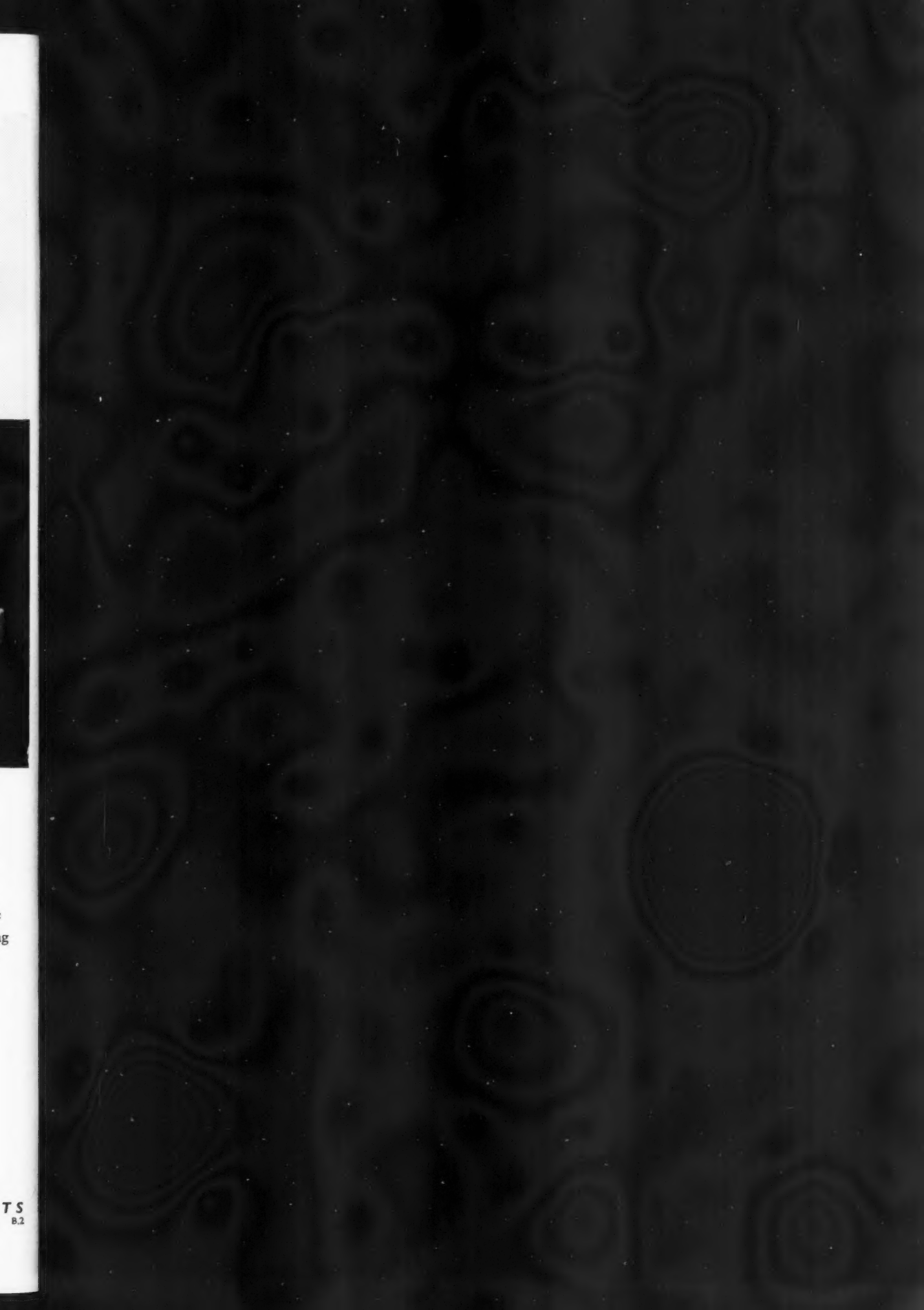
View looking north across the Square to the Department Store (4 on the plan opposite). The base of the T.V. communication unit is seen in the foreground. This has a revolving periscope with a public viewing panel in which the whole of the surrounding country may be seen (No. 1 on the plan opposite). The centre of the Square is a few feet below the area of the arcades and on the ramped areas on both sides is a double row of trees with flower stalls and seats beneath them.



The glazed entrance area of the Department Store. Through the display windows the lifts and escalators may be seen (No. 4 on the plan opposite).



Reduced bird's eye view of the area and site of the project.



Space, Time, and Afterthoughts

SOANE HEIGHTS (architects Soffit & Quoin, A/A.R.I.B.A.) is a seventeen-storey block of flats, overlooking almost everywhere.

The architects made the best of a bad site. Their steel-and-glass structure seems to spurn the comfortable stucco villas which surround it.

Within, no amenity has been forgotten. Fittings include sun blinds from Argentina, double glazing from Sweden, concealed lighting from Italy and waste disposal units from California. There is TV (both channels) in the living/dining/playing area, and h-and-two-kinds-of-c in the usual places.

Such splendour needs protection. May we modestly add that here there is no need to venture overseas for strong, well-designed locks. The office boy found them—in a Chubb catalogue, mislaid beneath a heap of sample tiles from Venezuela.

These Chubb locks are inconspicuous, neat and well-nigh impregnable. They all look the same, but (by a prodigious bit of engineering) their combinations are all different. They will last as long as Soane Heights . . . at least!

Soffit and Quoin now specify Chubb locks all over the place. In this important respect, their work may even be described as Traditional.

If you haven't got a Chubb catalogue (or can't find it), why not ask for the latest one? It makes an excellent door stop or paperweight, and you never know when you'll have a client who wants the best security there is. Write or telephone Chubb & Son's Lock and Safe Co. Ltd., 175-176 Tottenham Court Road, London, W.1. (MUSeum 5822).

DON'T LEAVE IT TO CHANCE—LEAVE IT TO CHUBB

Co-operative Society, Belfast. The engineering services were executed under the direct control of the Chief Engineer, Co-operative Wholesale Society Limited, Manchester, 4.

Only the Primer has made the Difference

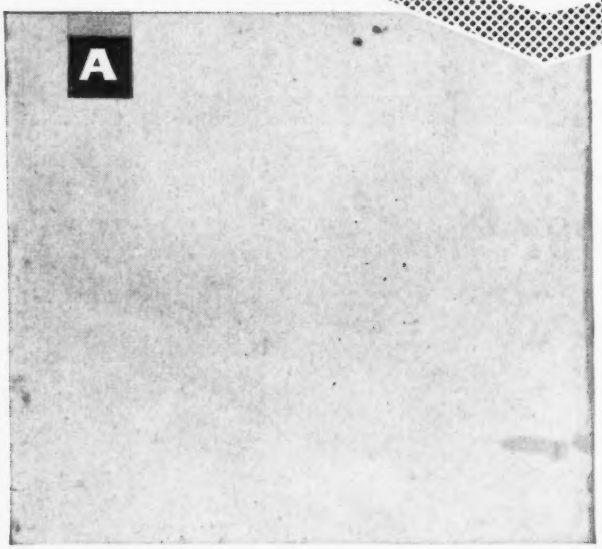
These two identical panels of wood were treated (A) with the Kinslac All-Alkyd System and (B) with the usual oil primer and alkyd undercoat and finish, and both panels were exposed to the elements for a period of 9 years. The photographs (slightly enlarged) speak for themselves.

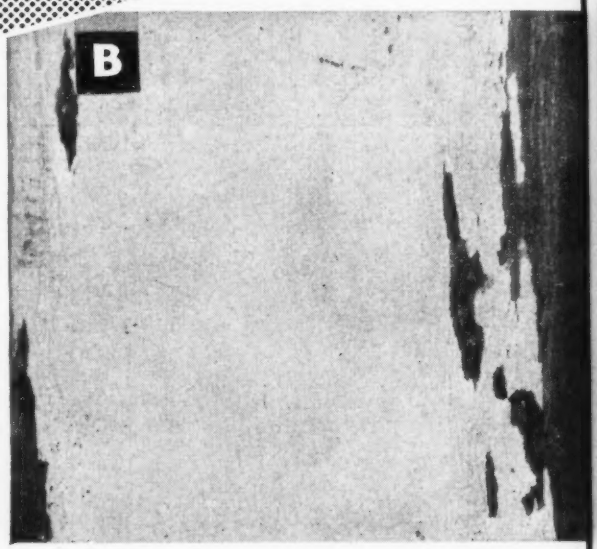
A

The surface of the panel treated with the Kinslac All-Alkyd system showed absolutely no sign of breakage or blistering.

B

Cracks in the finish of the panel treated with the oil primer system have allowed moisture to permeate the undercoat, the primer, and finally the wood itself.





KINSLAC ALL-ALKYD SYSTEM for woodwork means *GREATER DURABILI*

The Kinslac All-Alkyd System is especially designed so that each coat—primer, undercoat and finish—effects the maximum protection for woodwork. The principal difference between this and any other system is that *all coats* have an Alkyd Medium base—including the primer—giving greater flexibility together with coat-to-coat adhesion. The failure of most paint systems is due to loss of adhesion between either wood and primer or primer and undercoat and this problem is effectively overcome by the Kinslac All-Alkyd system.

KINSLAC—All-Alkyd Finish, Undercoat and Primer. An Information Sheet fully describing the Kinslac All-Alkyd System is available, and you are invited to write for a copy.

KINSLAC

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AJ

THE ARCHITECTS' JOURNAL

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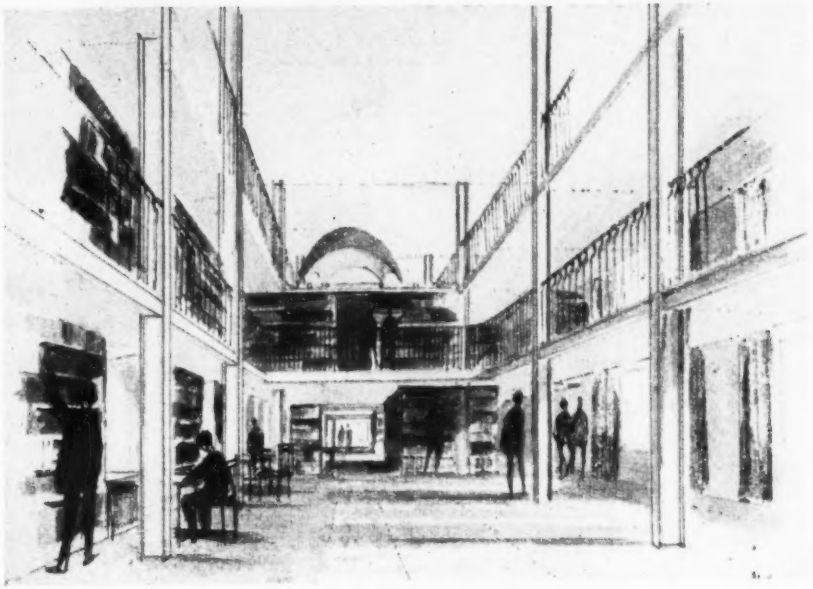
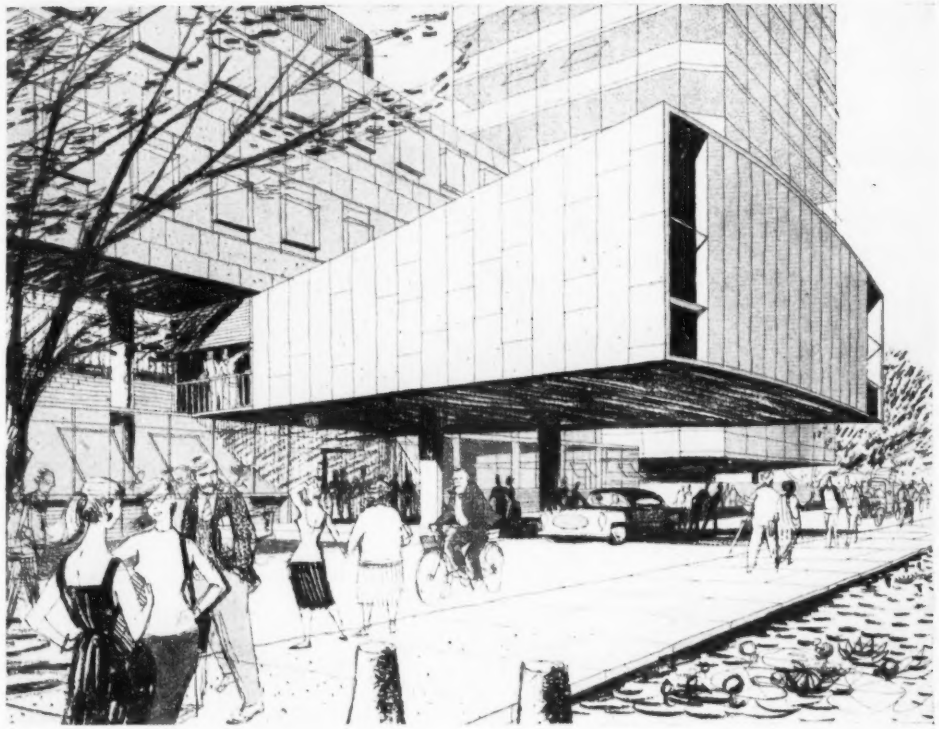
NOT QUITE ARCHITECTURE

ITALY REVISITED

By no stretch of imagination is Milan a beautiful city, but then it pays about one-third of Italy's taxes. However, it is certainly the centre of Italian modern architecture (though frankly there are very few modern Italian buildings that are worth a second look) and so one spent the best part of a week using Milan as a base, and saturated oneself in modern architecture with 120 or so others under the aegis of the Cement and Concrete Association. Correctly enough, much of the time was devoted to stadii and exhibition halls by Nervi (one wit suggested that if Nervi had designed the structures, Knox doubtless had had a hand in the architectural embellishment). But having spent a week thus and business allowances being justified, one felt one could look elsewhere without conscience. Having neither the colour nor temperature suitable to the beach at Portofino—it doubtless has a beach—there is little for an architect to do but look at buildings. To the South is Rome and Rome is a most beautiful city, and to those like myself who know it only in the fall of the year it is always bathed in a golden light, the kind of light which makes so much sense of Baroque architecture. And in between are those astonishing towns like Verona, Arezzo, Siena et alia which by some freak of time and space retain their native individuality. How it has happened goodness knows, for Italy is a crowded country and in the plains one is seldom out of sight of a village and never out of sight of a gaggle of Vespars or an advert for typewriters, petrol or scented soap—always intelligently at an angle to the road. If ever a landscape could be called





A Guardian for Cambridge

Last month, just as some nasty rumours about the future appearance of Cambridge started going the rounds, a new editor took over the University periodical, the *Cambridge Review*, and turned it into what must be the most lively commentary on local architecture that is produced in any city in this country. The editor, Andor Gomme, began his first issue by showing what he considered to be good university buildings—Basil Spence's new engineering laboratory for Southampton (drawing above, by Kenneth Browne, from the *Architectural Review*), and Sir Hugh Casson's Sidgwick Avenue scheme for Cambridge. (Two details of the first buildings—top left, view from Sidgwick Avenue; centre left, interior of part of the Faculty building—are published here for the first time). And then, in strong language Mr. Gomme let fly at work under construction and on the drawing board. His outspoken criticism has been maintained in succeeding issues of the *Cambridge Review*. There have been "Outrage" features, letters demanding that Cambridge should be shown sketches of proposed new buildings before it is too late, and an article on Louis de Soisson's Prudential building (left)—"yet one more undistinguished lump." We wish Mr. Gomme well in his attempts to keep Subtopia at bay in Cambridge, and we hope that his boldly-expressed views will have some influence on the appearance of the city.

humanised this is it. Yet it has changed little over the centuries for again and again it reminds one forcibly of the backgrounds of quartocento and cinquecento paintings.

*

Zones of silence theoretically envelope most Italian cities, but by some trick the Italians have overcome this curb to self expression by doctoring the engines of their Vespars and baby Fiats; while their flashing warning lights connected to their horns seem positively strident. However, silence reigns of an evening (and the evenings at this time of the year are long), for TV has come to Italy. The streets and piazzas are deserted alike for the small trattorias of the hill towns and the mink-lined fashionable cafes like Donney's in Rome where for once in darkness and silence all Italy sits enthralled. It is surely a very anti-social device which can so kill, albeit no doubt temporarily, the *va vient* of the Italian town.

*

Italians operate. I believe, on other (higher?) levels of the mind than the intellectual. Their approach to life and art is intuitive and instinctive. They are therefore more receptive and creative and less sentimental. How else can one explain such wonders as Alberti's S. Andrea at Mantua with its spatial extravagance, the Baroque magnificence of the Piazza Navona or even that most extraordinary egg (on a piece of wire?) which hangs in the centre of the Piero della Francesca Virgin and Child in the Brera Gallery. Art historians may no doubt explain it away but it still retains the quality of magic. The intellect of the Puritan would have strangled such inexplicable miracles in their conception. On the subject of conception and Piero, no one who might be in the region of Arezzo should miss the wonderful Piero of the pregnant Virgin at Monterchi standing in what appears to be a fur-lined quilted tent.

*

If all roads lead to Rome they aren't all as straight as we were led to believe when young; it is terribly easy to deviate a little on the way, and the Palladio villas are not too far from Verona. Familiarity never breeds contempt for that grandfather of the English country house the Villa Rotunda. It is so very successful one can see only too well how it appealed. But it is Villa Maser near Asolo (which I'm told is a very U place now) which captivates one. Where else can one find such perfect collaboration between architect and painter as in that magnificent set of rooms which Palladio and Veronese cooked up together with such simple ingredients?

FELLO ATKINSON

The Editors

PAUSE FOR SLUM-MAKERS

As we start to rebuild the slums in the centre of our congested cities it is sensible to consider whether the houses which replace the slums will be as much an embarrassment to those who follow us in sixty to a hundred years time as the slums are to us today. Are we anticipating sufficiently the changes in standards of living which are taking place, and which are bound to take place, in the immediate future; much more sweepingly and swiftly than ever occurred during the past sixty or so years?

So far, house-building has been easy. Agricultural or low density land has been taken over and developed on the outskirts of towns. This may create traffic problems on the routes to shops and factories as the car-owning population grows, but otherwise it should not unduly disturb the essential central structure of the town. But house-building after slum clearance is a very different matter, if local authorities are going to avoid recreating slums all over again. That is to say, avoid causing buildings to become slums *before* the buildings would, in the normal course of events, reach obsolescence.

Local authorities might first ask themselves how long the country is going to have the poor, labouring, working (label it how you will) class which fills the bulk of the slums, now that State education, scholarships, wireless, T.V. and the cinema are universal factors engaged in either creating equality or in showing people better, or at least alternative, ways of living. In answering this the local authority should not heed unduly the desires of the present middle-aged or elderly generation of slum-dwellers who have reached an age at which they are likely to be intolerant of change anyway. The situation is not helped by the fact that a significant number of the younger slum dwellers have been rehoused on the peripheral housing estates as they received high priority on the housing lists when they overcrowded their parents' houses.

The local authorities should not heed either those planners and preservationists who suddenly discover a virtue in slum buildings because they represent a certain essential, architectural characteristic of a town (the country is a rather different matter). Slums are rarely historic buildings, but when they are they should receive consideration according to their merit as architecture.

Nor should the local authority be unduly concerned with high density. The shortage of land for housing on the outskirts

of towns and the outcry for the protection of farm land may persuade a local authority to try and rehouse all the slum dwellers on the same sites at densities of over 100 to the acre. Such an idea is extremely dangerous, in that unless the new housing is of exceptionally high standards—that is to say equal to the best produced in this country—the slum condition is liable to be created long before it is due. One has only to compare the plans and layout of the point blocks of flats designed by the Housing Division of the L.C.C. under Whitfield Lewis with the estates designed by the same Division under the Valuer to realise which schemes will outlast which—allowing for the few years difference in completion dates. Whitfield Lewis' blocks would be snapped up today as near luxury flats on an open-market. The others are unquestionably mere tenements. The first stand a fair chance of lasting as amenities beyond their sixty-year life. The second may be a liability within a generation.

The problem as regards low density housing is not so difficult because low density means space around individual houses. And space, if land is cheap, gives variety of outlook, privacy and insulation from noise, at relatively low cost. Low density also means a built-in flexibility to deal with change—road alterations, garages, maturing landscapes and so on. But high-density means rigidity, or change only at high cost, which is yet another reason for careful thought by the local authority before it starts to replace slums.

Let it not be supposed that we advocate, therefore, the easy path of low density development only. We don't. It must be remembered, however, that housing standards have steadily fallen since the war and costs risen. Relatively well-off, younger families have been housed in the cheap, high-standard housing of immediate post-war years. Many of the families now in slums are already saying that they cannot afford to pay the rents of new houses, the cost of house building still goes up and central sites are expensive. Therefore pressure will be brought to lower house standards and layout standards still further and increase densities in order to meet these difficulties. Such lowering of standards would be bad enough on peripheral housing estates. To take such action in central areas would be disastrous. In rebuilding central area slums a town is restating its confidence in urban living. It should design accordingly.

The AJ Research Board offers two £1000 Fellowships

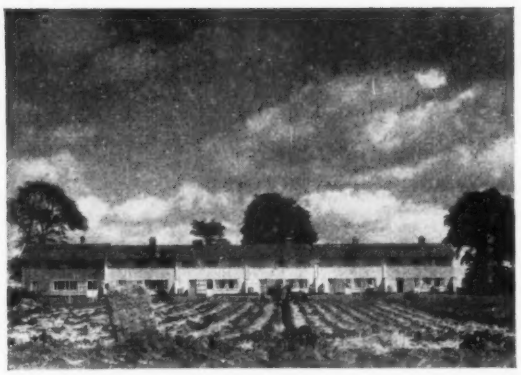
Following the death of Michael Ventris, O.B.E., the holder of their first Research Fellowship, the AJ Research Board are re-advertising their first Fellowship on *Information for the Architect: what does he need and where will it come from?* They are also advertising a new Fellowship on a subject which is left to the choice of applicants. The advertisement announcing these two Fellowships, both of which are to the value of £1000, may be seen on page 88 of this issue. The successful applicant for the first Fellowship will not be starting quite from scratch. Before he died Michael Ventris was able to complete one report. The second part of his report appears on page 748 of this issue.

ON FALSE PRETENCES

When one hears of an architects' department of the size and quality of the LCC's, agreeing to the discussion and criticism of their work at a meeting of the AA in Bedford Square it goes without saying that one makes a point of attending. Last week the room was full to hear Housing Architect Whitfield Lewis describe and dispute—with section leader Colin Lucas (of famous Connell, Ward and), W. G. Howell and J. A. W. Killick—the LCC's 8,000-population housing estate at Roehampton Lane. Surrounded by the usual magnificent LCC models, and accompanying his description with slides of plans and progress photographs, Whitfield Lewis bared the facts with all the skill and suspense of a strip-tease dancer. Come the climax, ASTRAGAL waited for the onslaught, conscious of a nice battle-glow in the eyes of the Howell-Lucas unit. . . .

*

. . . Alas, he still waits. Only the normal yammer of the earnest fact-finder followed: "did Mr. Lewis say . . .? how many garages . . .? " The AA, bless its everlastingly naïve heart, had prepared no one (no, not even a chairman) to stimulate a discussion or put forward a critical point. Thanks to the efficiency of the LCC the evening was not entirely wasted, but is it not time the AA stopped trying to be in quite so many *avant garde* places at



A. F. Scott and Sons' school at Loddon (left) has won the first RIBA bronze medal in Norfolk. The jury looked at and rejected—Tayler and Green's rural housing schemes for Loddon RDC. These schemes are internationally-known and commended, but must their architects do without honours in their own county? See note on this page.

once and concentrated on giving its members the service it promises?

CUMBERNAULD NEW TOWN

Those fortunate enough to get on Hugh Wilson's staff at Cumbernauld New Town will, by all reports, have a good chance of undertaking some really interesting work as well as picking up some of the bricks dropped in the older New Towns. The site, ASTRAGAL learns, is a hill top exposed to south-west winds, so architects will have an opportunity to show that they are as competent in handling a skyline as those who built Edinburgh or Durham (or perhaps those now fashionable hill towns of Italy?) and also the chance to work in teams with landscape architects in laying out trees and buildings to break the winds.

*

In addition, Hugh Wilson is apparently anxious to design a more truly twentieth-century city than existing New Towns by developing further the current ideas on pedestrian and vehicle segregation. Nor is he satisfied, it seems, with the old idea of neighbourhood units sitting adrift in parkland. He aims to group the housing around the town centre and increase densities.

NOT WORTH A MEDAL?

Those of you who saw the buildings by Norfolk and Norwich Association architects, which were published in the British Architects' Conference number of the JOURNAL earlier this year, will remember that by far the most outstanding work was that of Tayler and Green. Their sensitively-designed housing schemes for agricultural workers are generally recognized as the finest examples of new rural housing in the country. In fact, these schemes, which have won MOHLG and Festival of Britain awards, are internationally known, and many visitors to this country have taken the trouble to travel to the tourist-shunned county of Norfolk especially to see them. When ASTRAGAL heard that the RIBA bronze medal was to be awarded for the first time in the area covered by the Norfolk and Norwich Association, he naturally looked forward to hearing that it had been hung on one of Tayler and Green's housing groups. But Norwich architects, it seems, do not have the same high opinion of this work as the outside world. The jury, consisting of four members of the local Association, an RIBA-nominated representative from Cambridge and two local laymen (one of whom declined to vote), decided that this delightful housing was not worthy of the bronze medal. They gave it, instead, to A. F. Scott & Sons, a Norwich firm, for a secondary modern school in Loddon—a school which argues across the landscape with Tayler and Green's largest and most successful piece of village development.

*

The architect-members of this jury must know very well that their rejection of the modern architectural pride of their county looks like a snub. They will have a chance in 1958 of showing that they did not intend to be ill-mannered. This year the bronze medal was given for buildings put up between 1946 and 1954; next time the period will be 1954 to 1957. But perhaps Tayler and Green will not care to allow their work to be nominated again for a jury's consideration.

*

Incidentally, what do architects feel about having their work assessed by local colleagues? The RIBA has recently decided that the architect-members of the jury for the London bronze medal shall be "progressive" non-Londoners. Wouldn't everyone concerned be happier if all bronze-medal juries were formed from architects outside the area to be judged?

These pictures show part of the area in Rolvenden which will be affected by Kent County Council's proposed road-widening scheme. If the scheme goes ahead the road will run through the gardens shown in the bottom picture and will slaughter the fine hedge and the grove of trees in the top picture. ASTRAGAL *publishes these pictures (see also note on right) not because he has a personal axe to grind on behalf of the village, but because too many bureaucratic axes have already swept across the country, and because all proposed subtopian action, however small, deserves the widest publicity.*

The local associations have the power to choose the jury from anywhere they please. And if they did submit their work to outside scrutiny, all their members would have an equal chance of winning the award. As it is, although there is no rule that excludes any jury member from competing, he would surely find it very embarrassing if his fellow-jurors nominated his work.

KINGSTON LEGITIMIZED

For the fifteen years since its formation Eric Brown has been principal of the Kingston School of Architecture. He has built it up from scratch to its present size of about 100 full-time students and 60 part-time students. Last week the RIBA recognized the school for exemption from both the intermediate and final examinations. This is a particularly fine achievement. Apart from Commonwealth schools no school has before obtained recognition for exemption from both exams at the same time, and never in as short a life as fifteen years. Eric Brown has not always had an easy path. At one time his forthright views on educational policy resulted in his losing a number of his staff. Recognition of his school by the RIBA no doubt in part vindicates his policy. ASTRAGAL wishes the school success in the future.

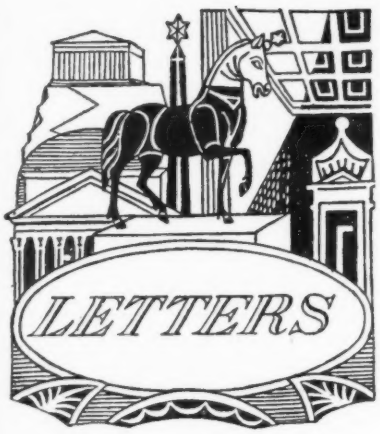
ARTERIAL MOTIVES

"Don't *you* want progress, then?" the county transport official naïvely asked the local inhabitant who was protesting against the widening of his village street. "What do *you* mean by progress?" countered the L.I.—a rhetorical question, for who has time for philosophy? The village is Rolvenden, Kent, a pleasant place with a mediæval church closing the vista at the end of a main street lined not with concrete lamposts but with 18th century cottages. The street forms part of a peaceful highway between Tenterden and Hastings. The County Council's intention is to widen and straighten several hundred yards of the lower end of the street by cutting off a strip of about ten to fifteen feet from the gardens on one side. Besides reducing the size of some already small but fertile gardens, this would mean cutting down a line of well-matured hedges and a whole grove of fine trees which not only add to the charm of the village approach but give privacy to a number of the houses. Yet the road is quite wide enough for present needs and its two slight bends are useful in compelling vehicles to slow down before reaching the village centre. The local inhabitant tells me that the traffic is not heavy and that there have been no accidents on the road here since he came to live beside it seven years ago. If it is "improved," the accidents will probably begin.

*

The proposed widening may not matter directly to you and me, but it matters a lot to people at Rolvenden. And indirectly, as a case, it matters to everyone who is fed up with the soullessness of bureaucrats and their ever-spreading spoors of wire and concrete. Let us hope that the owners (owner?) of the properties affected will delay things by refusing to sell their land to the Council and bringing about a public inquiry.

ASTRAGAL



L. G. Vincent, A.R.I.B.A.
Chief Architect, Stevenage Development Corporation

Kenneth H. Murta, A.R.I.B.A.

"Another Four Disturbed Architects"

Derek Senior

Douglas Stephen, A.R.I.B.A.

G. V. Yates

Unfair To New Towns

SIR,—Your caption to the illustrations in the JOURNAL of November 8 on landscaping examples from abroad is unfair to the new towns. It surely cannot be disputed that the new towns have engaged the best landscape advice in the country—many well-known names have been involved.

Many schemes have been prepared as good as, if not better, than your illustrations, but, as usual, critics forget or ignore the fact that someone has to pay. That someone in the case of new towns is the public purse, via the Treasury. New towns are strictly limited in the amount they can spend on landscaping, etc., and there is just not enough money to do all the things we want to do at this stage. Unlike local authorities, they have no rate or equivalent fund to help out. However, we hope one day that they will be added when money is (if ever) more plentiful. The opportunity is there, and there is scope for public benefactors. Perhaps the AJ would like to raise a fund? All we want is money, not ideas.

L. G. VINCENT.

Stevenage.

Let's Work Alone

SIR,—"Four disturbed architects" (AJ: Nov. 1) have at last pointed in the direction that the remuneration for an architect's services is taking. One certainly cannot blame any large organization for not paying architects' fees when they can achieve the same result by employing an architect and paying him a salary. Surely the answer is a movement in the architectural profession back to private practice.

Any qualified architect should have a reasonable chance of practising architecture in his own right, accepting the responsibilities implied, and being paid for doing so.

It is noticeable that both in Medicine and Law these conditions apply.

I am aware that a strong section of the architectural profession is pressing for conditions, mainly higher salaries, which will eventually make it not worthwhile for local authorities and others to form architectural department, but I feel that this must be accompanied by a genuine desire by architects for independence on design and control of their work. This is particularly so in the organizations offering a combined design and building service, where the final consideration is financial rather than achieving a good design and overall control is not by the architect but by an accountant.

Allowing for the good work done by the LCC, Hertfordshire and Coventry, I maintain that architecture will not achieve greatness again until architects are financially independent of the committees which control them and their work.

KENNETH H. MURTA.

Sunderland.

Architects Lose, But Ratepayers Gain

SIR,—Further to the letter by "Four Disturbed Architects," published in the issue of November 1, the borough council in question is not the only one to be congratulated by its ratepayers.

The signatories hiding below under a nom de plume are all Section-leaders and each is individually handling educational projects exceeding the figure mentioned i.e., £500,000, and the salary of each Section-leader is somewhere on the incremental scale of A.P.T. grade IV £710—£885.

Senior assistants of allied branches in the same authority, quantity surveyors, engineers, enjoy the next higher grade (grade V).

However, we have the recent assurance in your columns of Mr. J. H. Warren, the General Secretary of NALGO, concerning establishments together with the RIBA's biennial questionnaires of much ado about nothing to keep us preoccupied.

"ANOTHER FOUR DISTURBED ARCHITECTS"

Stoke-on-Trent.

Reasoned Quantitative Comment

SIR,—I asked Mr. Nairn (see AJ for Nov. 1) for *reasoned* and *quantitative* criticism of my proposition. Apart from the acreage that is to be "done away with" by afforestation, all the other forms of development he cited though not directly controlled by local planning authorities, are nevertheless included in their development plans and allowed for in my calculation. And I did not contend that the total added up to only ½ per cent. of the open country, but that the "saving" to be obtained from higher residential densities than the planning authorities propose could not amount to more than ½ per cent. of our acreage of improved farmland. That is why it seems to me so silly, and so self-defeating, to confuse planned dispersal with the legitimate objects of "Outrage's" polemics.

The case of the bogus small-holding does, of course, present some difficulty. Planning authorities would, I am sure, be grateful to Mr. Nairn if he could suggest some (defensible) means of distinguishing between bogus and genuine smallholdings. Or does he regard intensive cultivation, no less than afforestation, as "doing away with" farmland? And would he be happy if the bungalows were not "shocking," but beautiful?

Mr. Nairn puts up "an alternative proposition for reasoned quantitative comment," and so enables me to show him what I meant by that phrase. I am sorry the necessary research has delayed this reply; in case your readers' memory needs refreshing, I quote:

"Overspill from Liverpool and Manchester = 339,000 persons. Derelict land in Lancs and Cheshire = 15,000 acres. There's part of the answer to overspill if we had the guts and the intelligence," says Mr. Nairn. "But we'd rather gobble up more farmland."

Lancashire has the lion's share of those 15,000 derelict acres—11,025 of them, to be precise. They are made up thus: 619 inactive tips and old spoil-heaps, 2,675 acres; 952 derelict excavations and holes, 2,900 acres; 131 subsidence flashes, 825 acres; 435 sites of derelict buildings, 575 acres; 17 derelict railways, 50 acres; 887 disused areas at ground level, 4,000 acres.

It would, of course, be nice if the spoil-heaps could be dumped into the holes; but the cost works out at about £12,500 an acre where the heap is three miles from the hole—and few are as close as that. And the £12,500 worth of labour and capital required to save one acre of farmland in this way could, if applied to the upgrading of other farmland, increase its productivity by an amount equivalent to the average output of over sixty acres. I take it that Mr. Nairn would not have houses strung in ribbons along the disused railways, or floating on the flashes. We are left, therefore, with about 4,500 acres, scattered over some 1,300 sites averaging less than four acres apiece, most of them in much-needed green belts, in isolated colliery villages far from any place of employment, or in built-up areas that are desperately short of open space. They must, of course, be put to some good and pleasant-looking use—as pasture, park or playing fields if not some form of building. But it would be the negation of good planning to use more than a small proportion of them for housing. They cannot provide more than about 10 per cent. of the answer to South Lancashire's overspill problem.

It is not every day that a Supertopian strays this side of the fact barrier and commits himself to translating his wild generalities into figures that can be subjected to reasoned quantitative criticism. This is the sort of thing that happens when he does.

DEREK SENIOR.

Cheshire.

Gimmicks On Cars And Buildings

SIR,—Please let me utter a lone cry in the wilderness in support of Reyner Banham, particularly for his article on motor cars, because I think he is really to be congratulated on bringing the design and styling of British motor cars to the average architectural erg. I am sorry that he didn't show a photograph of the Fiat turbine car, to my mind far the best of the turbine cars yet produced, in that it does not look like a flying torpedo, a family runabout, or the Renault reclining camel with three humps. That photo of the Renault is the best I have yet seen; from any other angle it looks absolutely ghastly.

The general run of motor car designers employed by the large engineering firms are men who are paid "not so very much" to look after the styling side of the motor car only, or the engineering side only. Very seldom do the two sides join up to become one. In small firms like Chapmans, styling, aerodynamics, chassis design, steering geometry, and so on are all dealt with by Chapman and his fellow designers, so that the car tends more readily to become one homogeneous unit, the product of one single conception, co-ordinated team work and ideas.

There is a parallel to be drawn with English architecture today. The stylists are the guys who do the elevations in the latest gimmick—you know, curtain walling, aluminium panels, and all that. Engineers in this sense are the boys who produce the latest sandwich with a U-value of .00. "Chaps, come and look at this! You can wash it, turn it upside down, or use it on your aeroplane!" Very seldom do we find

the homogeneous building, the building designed (that is, planned, sectioned and elevated by the same mind, or group of minds,) without resorting to the use of the general paraphernalia for slapping on buildings, left in large quantities by the travellers in all our offices.

In this respect I would like to bring your and your readers', attention to one building which I think is fairly good, and comes the nearest to being the only, non-gimmick, building put up recently in London. That is the Dunhill building in Jermyn Street by T. P. Bennett & Son; I have not yet seen the Goldfinger building in Albemarle Street, although the sketch drawings promised that it would be good.

On another subject altogether, I read in ASTRAGAL that the "Casa del Fascio" is up for sale. I think this information really must be incorrect, as I was there only a few weeks ago when extensive and somewhat lavish reparations were almost complete. It was in the occupation of the Ministry of Finance who were, I was told, to use it as their headquarters. Last year it was in the hands of the combined Socialist parties of Italy, who added considerably to the damage done by the years of neglect since the war. Certain alterations to the original have been made, which would not meet the approval of the true vintagent, but these one forgives because of the exhilaration that one feels when a really superb piece of architecture looks at its best.

DOUGLAS STEPHEN.

London.

ASTRAGAL replies: The information re the Casa del Fascio was culled from normally reliable Italian press sources and the magazine *L'Architettura*. A check of these sources suggests that Ministry of Finance may simply be acting as a holding organization pending sale; it suggests an economical turn of mind on their part to use it while they wait. British ministries, please copy.

Higher Mortals?

SIR,—There is a widespread lack of etiquette by architects towards builders who have gone often to great trouble and expense to prepare estimates and tenders, but who never have an acknowledgment, much less hear the result.

I could quote several instances of architects or their clients contacting a builder, leading him to believe that the order would be placed with him and asking for a considerable amount of information and suggestions for economies—probably after the architect's estimate has been unrealistic.

Many small builders are loath to question an architect's actions as they appear to think of him as some higher mortal.

G. V. YATES.

Bucks.

DIARY

The Analysis of Prestressed Concrete Structural Members and the Application of Recent Research. Talk by Dr. P. M. B. Morice. At the ICE, 1, Great George Street, S.W.1. 5.30 p.m.

NOVEMBER 27

Observations on the Design of Some American Schools. Talk by Lawrence Perkins. At the AA, 34, Bedford Square, W.C.1. 8 p.m. NOVEMBER 28

Keypoints in Planning. TCPA National Conference at County Hall, S.E.1. Applications and enquiries to the Secretary, TCPA, 28, King Street, W.C.2.

NOVEMBER 29 AND 30

OXFORD

Competition Proposal for University Buildings

An architectural competition may be held to secure a design for the layout of the Keble Road triangle, in Oxford, which is to be developed as a new science area for the university.

A resolution, which will be debated on December 4, has been submitted by 68 members of Congregation. The signatories include the principal of Brasenose, six professors, of whom three are heads of scientific departments, and members of 21 colleges. The competition would be for a three-dimensional master plan determining the siting and bulk of all buildings erected in the triangle.

The resolution also asks that Professor Sir William Holford, Professor J. L. Martin, and Professor R. H. Matthew should be asked to join a jury to advise the university on the conduct of the competition and in assessing the plans submitted.

ABT

Conference Postponed

The ABT's conference on "Housing the City Dweller" is postponed from November 29 until January 24. On the original date a Town and Country Planning Association Conference is being held.

SUBURBS

"What Is The Remedy?"

W. Konrad Smigielski, who is in charge of the Department of Planning, School of Architecture and Town Planning, Leeds College of Art, spoke about "The Suburb" to a conference held last month in Brighton by the National Housing and Town Planning Council. Here are his concluding remarks: "I should like to consider the remedies against the suburban sprawl which have been applied in the planning practice of this country for the last twenty years or so.

"The oldest is the establishment of housing estates detached from cities and built in the open country. Over 100,000 people have been rehoused in London in thirteen estates built about 15 miles from the metropolis since the war. Life in these estates, which are sometimes more and sometimes less self-contained, is typically suburban. The Hertfordshire Education Committee comments about community life in Oxhey housing estate in the London region:—'Not only are the Oxhey tenants uprooted from their own background and moved to an estate in which they are strangers, but there are no churches, no church halls, no public halls, no public houses. After three years there is one small café. To enjoy these amenities the Oxhey citizens have to leave the Estate and visit neighbouring towns and this not only adds to their expenses of living, but prevents the growth of a sense of community. . . . At one school alone 50 or 60 children have to be kept until seven o'clock at night because their parents have not returned home to look after them.'

"The second method, to which great expectations were attached, is to deal with overspill of population by building new towns. Here was an opportunity to create real towns in which an urban life could flourish and its qualities be demonstrated to the public at large. Unfortunately, the new towns now under construction repeat the pattern of the first garden cities. Their urban fabric is even thinner; compare the overall town density of Stevenage (13·1 persons per acre), Harlow (13·2) and Crawley (12·5) with that of Welwyn Garden City (21·8)! Life in the residential areas already built seems to be no different from that of any suburb. It is doubtful whether the town centres when completed would focus community life owing to the great distances in these prairies, of low density development. Also the structure of neighbourhood units with their local shopping centres will weaken the civic consciousness of a new town as a whole.

"The third method, introduced by the Town Development Act of 1952, is to provide for 'overspill' by the expansion of existing small towns. This seems to be less wasteful of agricultural land and is pointing towards a higher degree of urbanization of small towns.

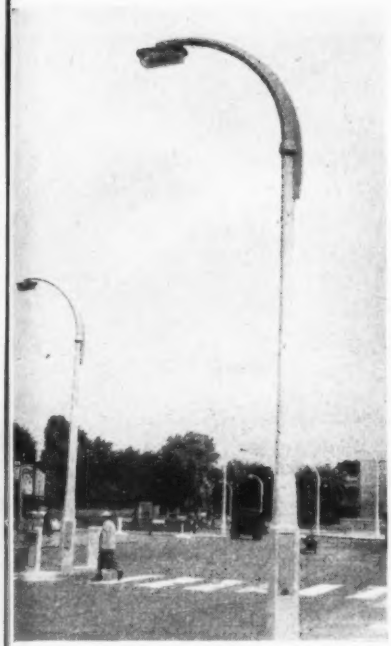
"All these three methods accept the necessity for town sprawl but of course in a more orderly and organized manner.

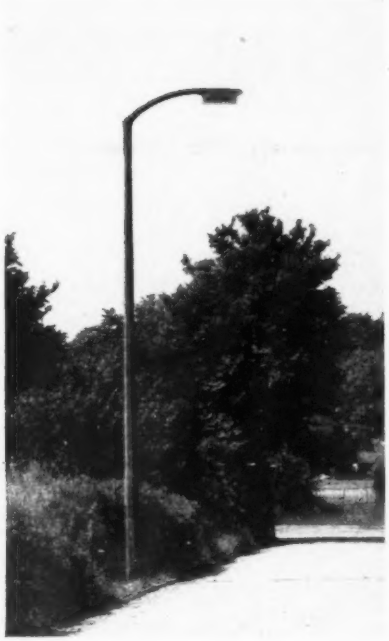
"But is the town sprawl really necessary?

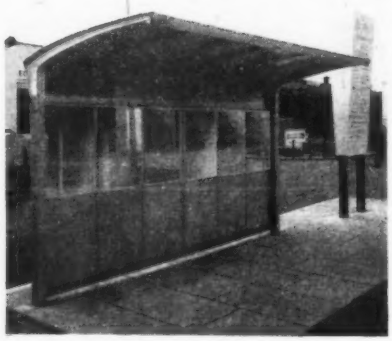
"The question arises, what is to be done with those extensive areas covered by existing towns, partly sound, partly obsolete, partly derelict and armed with costly services, if they are abandoned by the people moving to the suburbs, housing estates and new towns? In future we may find ourselves having to transfer people from the suburbs back to the towns.

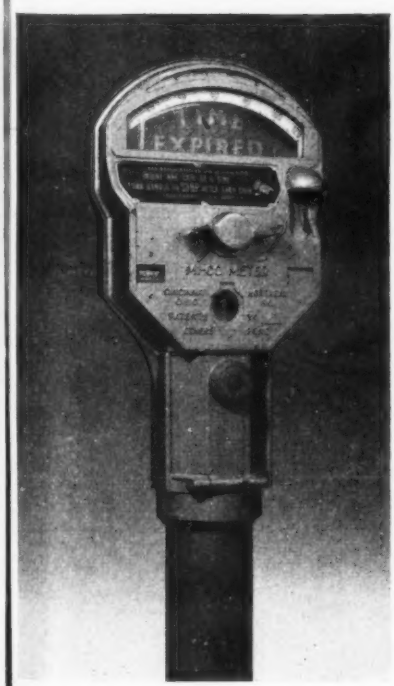
"The capacity of those areas is enormous. Sir Patrick Abercrombie pointed out some time ago that in a circle drawn within a radius of 25 miles from Charing Cross the whole population of England could be housed with the density of 12 houses to the acre. Within the administrative boundary of Leeds on land scheduled for residential use in the Development Plan one could comfortably house the whole population of Leeds and Bradford with estimated 'overspill' plus four or five Yorkshire market towns with a gross density of 50 persons per acre. And yet the Corporation of Leeds intends to purchase over 500 acres of agricultural land to build 5,000 houses right in the open country in the rural area near Tadcaster!

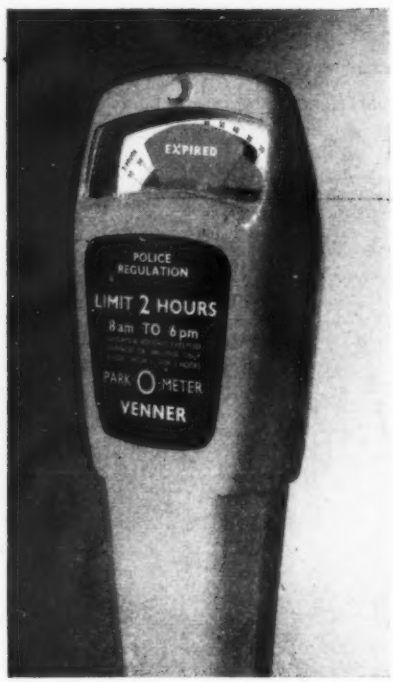
"If planning is going to be realistic it must accept the basic conditions of life on these islands in this age of the little man. If 90 per cent. of the whole population want to abandon cities and to live in semi-rural surroundings, a new theory of suburban planning should be created. The greatest danger at the present moment is that the suburb is shapeless and there is no theory behind it. Theoretically speaking, it is possible to accept the divorce between the three places, of work, residence and entertain-











ment, and to plan for complete decentralization of human functions.

"The second course to take would be to leave the countryside alone, to stop the suburban sprawl by enforcement of Green Belts as insulating coats around cities, to discourage housing on virgin land by vigorous redevelopment of slum areas and city centres, and to foster the revival of a true urban life by a consistent programme of rehabilitation of existing cities.

"This second course is more difficult, more complicated, initially more expensive and it would involve a gigantic programme of re-educating the little man. What government would undertake such a task? Can the recent policy of removing housing subsidies but keeping them for slum clearance be considered as the beginning of a trend towards this last course of action? Will the cancelling of housing subsidies discourage the suburban sprawl? And will the present rate of subsidies for slum clearance be a sufficient incentive for redevelopment of city centres?

"As far as the visual aspect is concerned the solution lies in tightening of controls over the outbuildings and introducing a new system of controls over street furniture. With regard to other visual problems, in particular that of colour, planning control would not lead very far and in certain cases could prove itself disastrous. If we accept the fact that in this age of the common man everybody participates in the shaping of the environment, the solution is in a wide-scale education of the public in art. This is becoming increasingly important with the introduction of automation which will bring more leisure time. We can already look hopefully into the future as our children are being educated in æsthetic matters better than the present generation, and, most important of all, are being brought up in these beautiful new schools, surrounded by bright, clean colours, harmonious space and fresh air.

"If the little man will realize that his power carries with it new responsibilities as well, his tyranny may bring not only great economic prosperity and social justice but a revival of culture on a scale unknown in the history of our civilization."

COID

"Badly-designed Lamp-posts will Go"

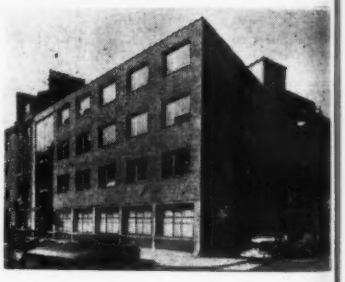
George Williams, speaking at the Kensington Society about the "Design of Street Furniture," said that agreement had been reached between the Ministry of Transport and manufacturers to withdraw from circu-

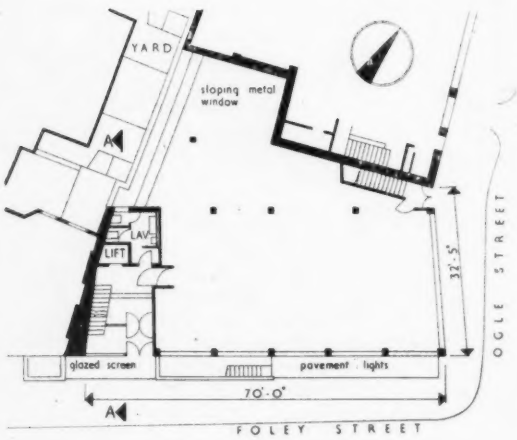
(*Continued on page* 731)

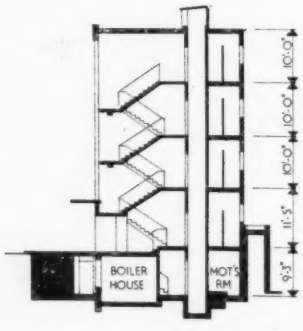
When George Williams, of the COID, spoke recently to the Kensington Society (see brief report above), he mentioned the influence that the Council is having on manufacturers. Here are some of the illustrations he showed. Top left: a lighting column which is being replaced by simpler designs recommended by the COID. Top right: a column approved by the Council. Centre left: a prototype of a shelter: centre right, an amended version designed after consultation with the Council. Bottom left: a parking meter "typical of those being submitted to the COID." Four manufacturers have now taken the Council's advice and appointed consultants to redesign their meters. Bottom right: a meter designed by a student at the Central School of Arts and Crafts.

OFFICES IN FOLEY STREET, GREAT MARYLEBONE, LO

These offices, built on a bombed site at the junction of Foley Street and Ogle Street, were designed by C. H. Elsom (chief assistant architect, R. L. Nicholls; consulting engineers, S. H. and D. E. White; quantity surveyors, Veale and Sanders). The clients required a small office building, suitable for letting to one or more tenants, with the maximum floor area commensurate with good natural lighting and ventilation. There are rights of light to existing adjacent properties. To give unbroken floor areas the main entrance, staircase,







Above: Section A-A
Left: Ground floor plan
[Scale: $\frac{1}{32}$" = 1' 0"]

lift and lavatories are located at the south-west corner of the block, adjacent to a party wall. The main staircase, which is visible from Foley Street through a large window, is seen on the left in the top photograph and in both photographs on the next page. The windows are all metal framed with pressed metal sills and surrounds. Other external finishes include second hard stock facing

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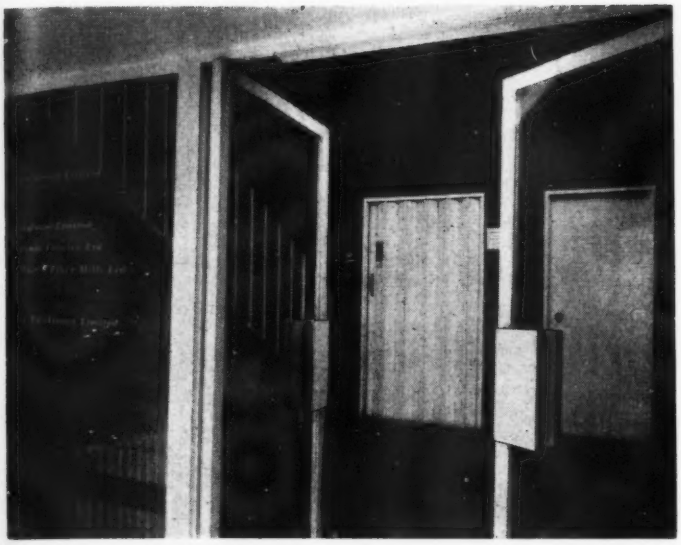


bricks, aluminium copings, dove marble facings to ground floor columns, sills and window heads. Belgian black marble is used for the entrance fascia and at the top of the staircase window. The main structure is a cased steel frame and hollow tile floors and roof. External walls are of 13½-in. brickwork. Internally, walls and ceilings are mainly plastered and distempered. The final cost of the building was £37,500. The general contractors were J. A. Tyler and Sons Ltd. For sub-contractors see page 756.

(*continued from page* 729).

lation the majority of the old bad designs during the next few years. In the meantime, he said, the COID was encouraging them to do even better than those which were included in the Council's approved list.

It seemed likely, Mr. Williams continued, that parking meters would appear in large numbers in our streets, sea-fronts and squares in the fairly near future. The Minister of Transport had informed manufacturers developing meters that he would expect designs of pleasing external appearance, and although there was no official ruling for them to do so, six firms had so far approached the COID with their designs and had reacted well to criticisms. Four of them had taken the advice of industrial designers recommended by the Council.

BC

Doors and Windows

The last of the present series of architect-manufacturer forums at the Building Centre, which was on "Door and Window Furniture," differed from the other three in that the architects had very much the best of the argument. Leo de Syllas asked why architects could never explain their needs to manufacturers direct, but always had to tell them to a supplier. Why, he asked, did hardware catalogues seldom, if ever, give sufficiently precise information—particularly on dimensions? Why was it that the best imported ironmongery was better designed, showed a better appreciation of the use of new materials, and was generally cheaper than English?

Bernard Mountford, who followed Mr. de Syllas, described himself as speaking for "the dull Birmingham Brassfounders" and gave the impression that the demands of the "modern architect" were so whimsical, so subject to fashion, so difficult to supply and represented so infinitesimal a part of the total (and uncritical) demand that it was not worth the brassfounders' while to take notice of him.

One good point was made against the architect by Mr. Whitehead, of Eastwoods, who remarked that the architect's insistence on competitive tenders for ironmongery, coupled with his lack of knowledge, tended to debase ironmongery standards; while another speaker complained of the architect's disinterest in the security aspect of lock-making.

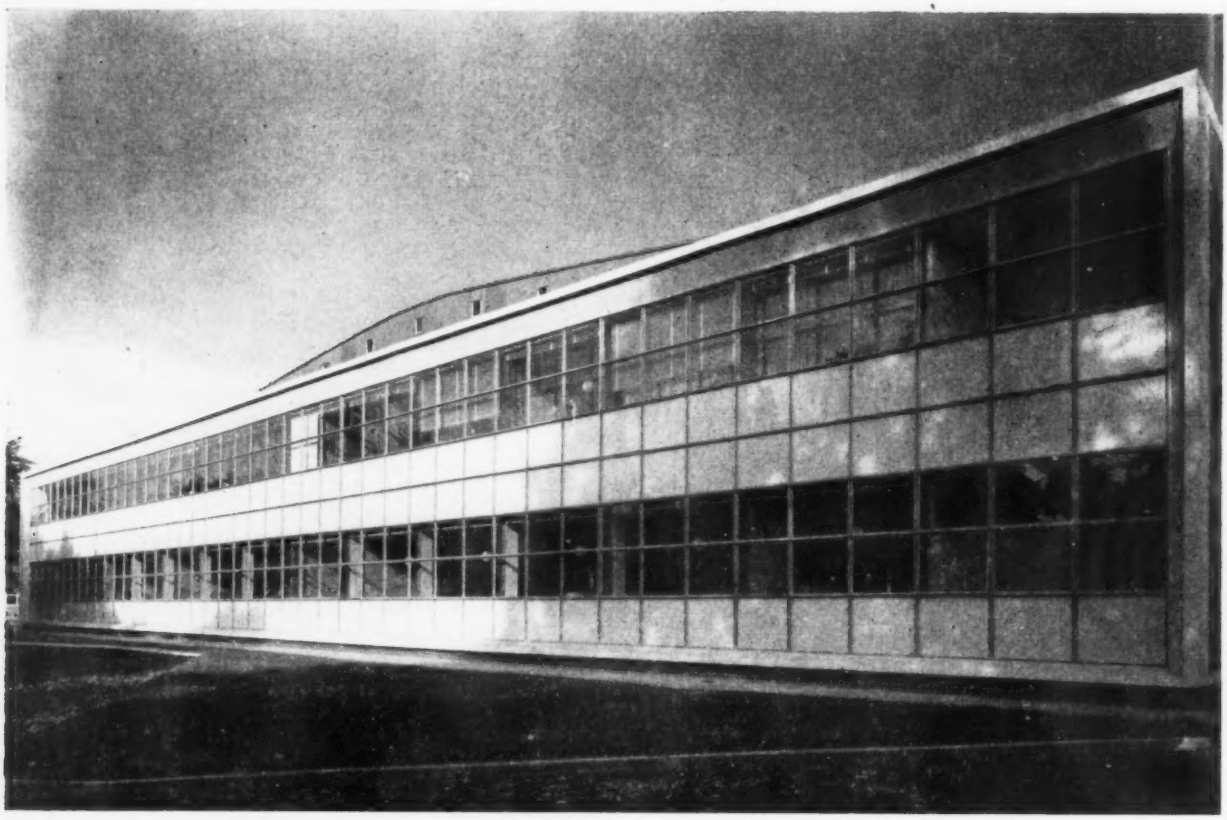
The charge that architects were the victims of short-lived fashions in ironmongery was refuted by several speakers, who pointed out that such good designs as were available mostly dated from the 'thirties, if not from the early Bauhaus.

Several good points of detail were raised during the evening: why was it so difficult, someone asked, to get an English door handle with screw cover plate? Why, said someone else, were English espagnolette bolts for wood windows so difficult to come by and why did they cost £5 per set while the German version cost only 25s.? Why did English manufacturers go for a comparatively weak spring on the lock, necessitating an extra spring to the lever handle? How many different finishes could be catalogued under the description "BMA"?

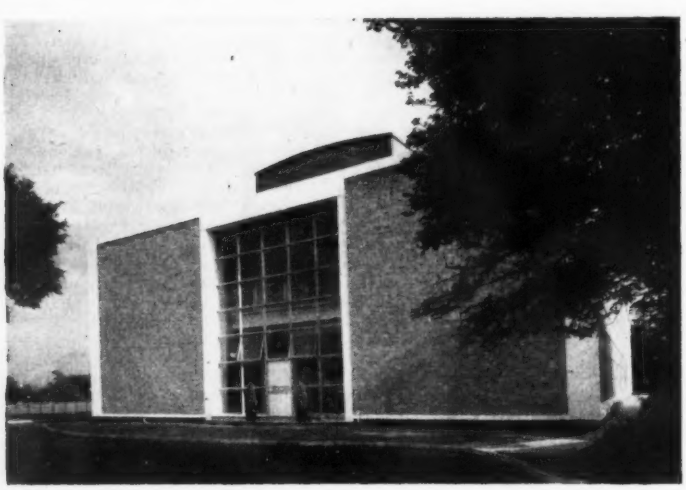
The difficulty architects experienced in finding out what was to be had on the market was illustrated by Michael Brawne, who inveighed against English manufacturers for not having marketed cheap sliding cupboard door gear using nylon wheels running on extruded aluminium rails which is a standard product in America; only to be told that Hill Aldam have marketed precisely this for some time.

Gontran Goulden said that in view of the success of the Forums, the Building Centre was to organize a further series after Christmas.

BIOLOGICAL PRODUCTS AND STANDARDS LABORATORY

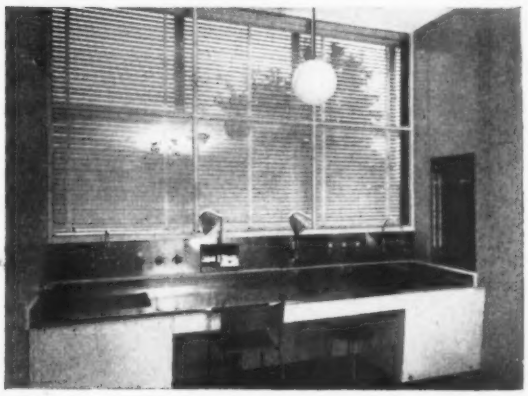


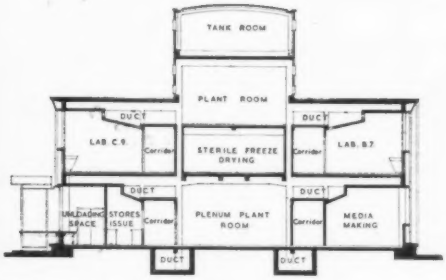
The new laboratory at the Central Veterinary Research Laboratories of the MAFF at Weybridge, Surrey, was designed by the Chief Architect's Division, MOW (E. Bedford, chief architect; A. Swift, senior architect; A. N. Palmer, senior mechanical and electrical engineer; C. H. Stewart, senior structural engineer; and K. W. Tranter, technical officer. Above, the south-west facade; below, the main entrance on the north-west side. Opposite page: left, the washing section; right, laboratory on the first floor. The laboratory has been designed to produce vaccines and other therapeutical products for animal diseases, principally anthrax, swine fever and contagious abortion, and to test similar products made commercially. The building is mainly on two floors, with a large ventilation and refrigeration plant house on the roof, and calorifier chamber and service ducts in the basement. The ground floor is used mainly for receiving materials and equipment, and for packing and dispatching the finished products. The various rooms for packing, storage, washing, post-mortem and apparatus assembly, etc., are planned on each side of a central area containing sterilizing, plenum plant and cold and deep freeze rooms. The laboratories, where vaccines are produced are on the first floor, also grouped on either side of a central block. In this part of the building cleanliness is most important, and care has been taken to conceal all pipework. Double glazing is provided and fully-sterile air-conditioning, with automatic temperature control, is installed. Each laboratory is provided with hot and cold water, steam, gas compressed air, vacuum and waste services. All these services are located in ducts in the external walls and can be serviced from outside the building by the removal of panels in the external cladding. The building is constructed



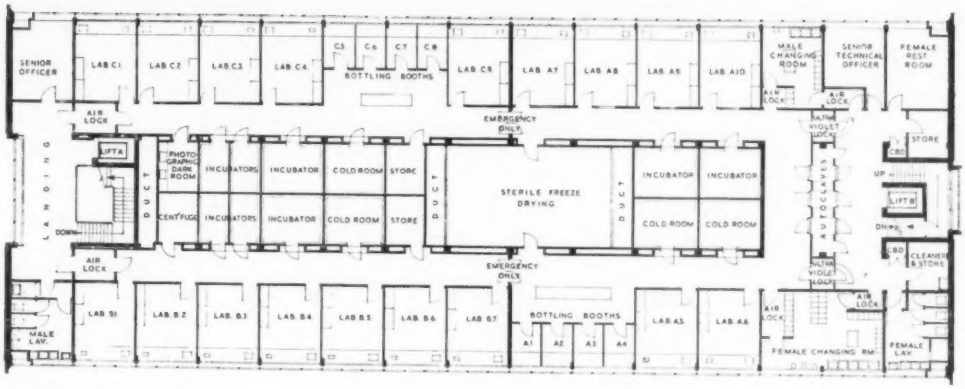
AT WEYBRIDGE, SURREY

of a reinforced concrete frame, floors and roof. Windows are aluminium and the principal elevations are clad in stove-enamelled aluminium panels on a cork base. The laboratories are heated by low temperature coils embedded in the ceilings. The general contractors were Lavender McMillan and Co. Ltd.; sub-contractors on page 756.

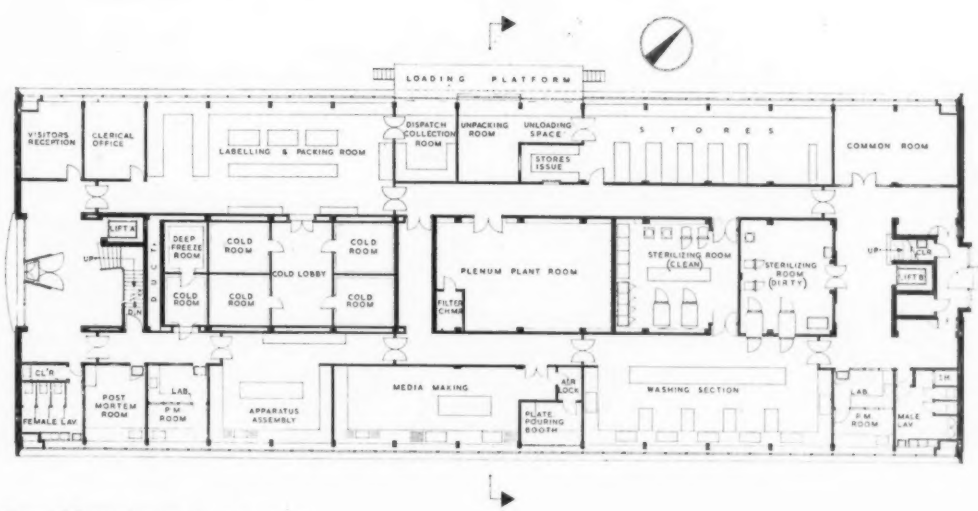




Cross section

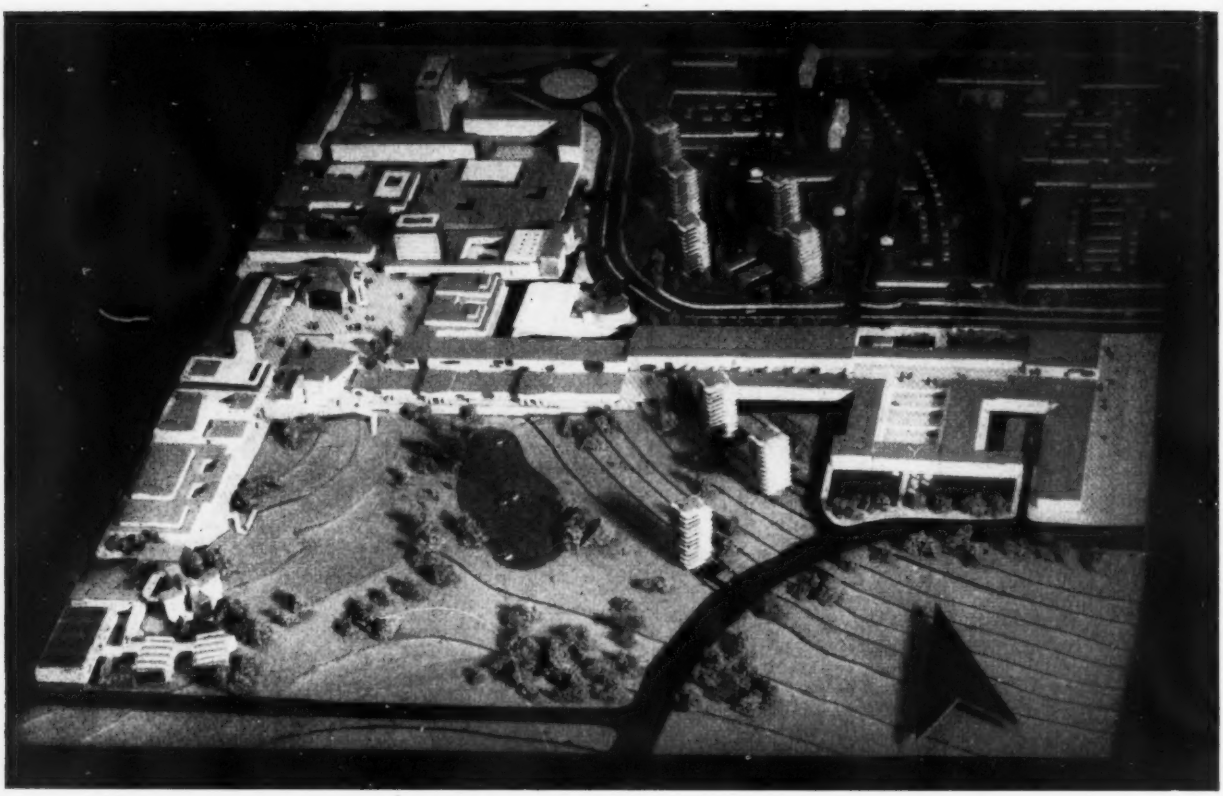


First floor plan

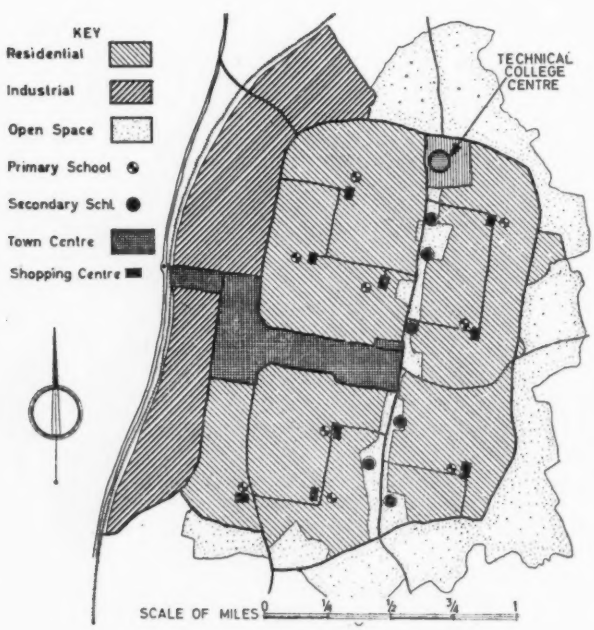


Ground floor plan [Scale: $\frac{1}{32}$" = 1' 0"]

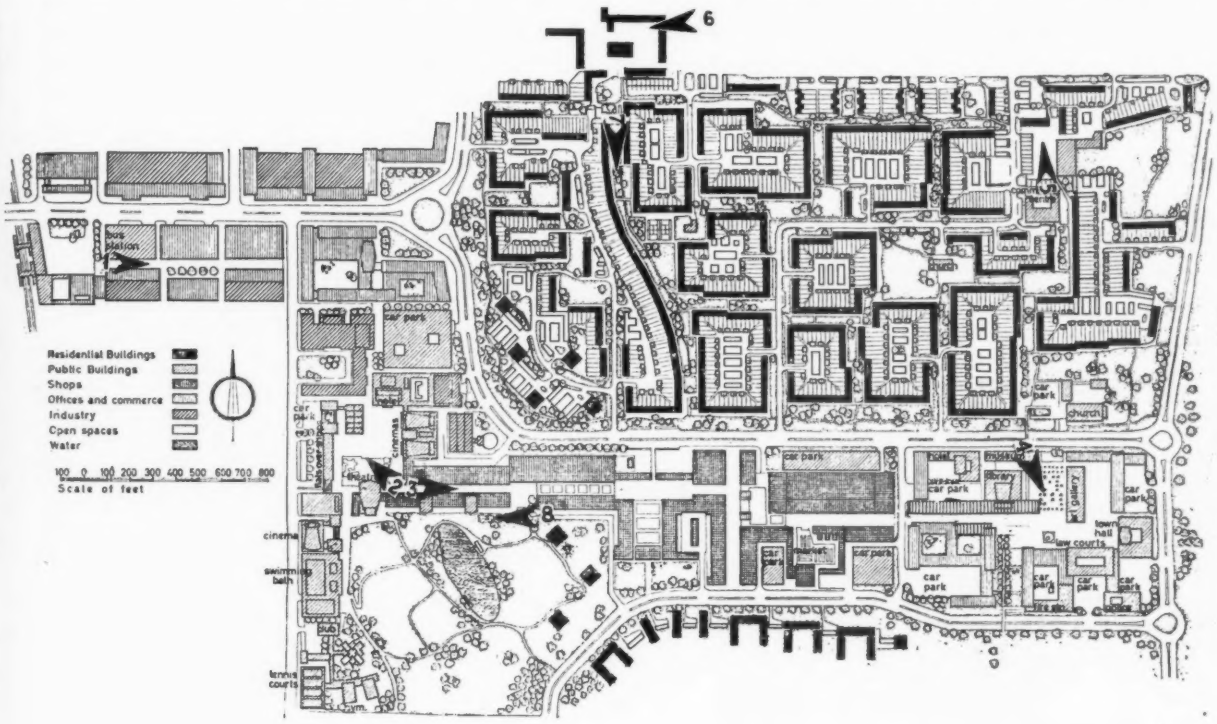
A COMPACT NEW TOWN WITH A "SPECIFIC FUNCTION":



The New Town shown here was the work of students of the Town Planning Department of University College, London. The project, which was described recently at a meeting of the Housing Centre, presided over by Sir William Holford, was planned under the direction of L. B. Keeble, M.T.P.I., and Dr. Schaffenberg. It is interesting to compare it with an existing New Town, Stevenage, which has a similar population—of about 60,000. The students' town of 2,000 acres, covers approximately one-third of the Stevenage New Town area. And you can see why if you look at the model above. Density is high, circulation space is economically planned and there are no large open areas in the middle of the town. The student-planners felt that it was important to strengthen "social cohesion" by putting everyone within walking distance of the town centre. They believed that a compactly-planned town not only looked better—without green wedges or odd bits of open space—but also that it had the great advantage of bringing everyone nearer to the real countryside. However, as you will see from the model and the plan, they wisely provided one long strip of open space which gives safe access to the secondary schools (built adjacent to it) from all parts of the town. (Nursery, infant and junior schools are on pedestrian ways close to the residential areas.) This strip of open space and the town centre itself, as well as the industrial area, were planned as linear developments. The industrial area, incidentally, is not made up of a haphazard collection of unrelated industries. The student-planners felt a truly urban social life could be created only if the town had "a specific function." So they planned it as



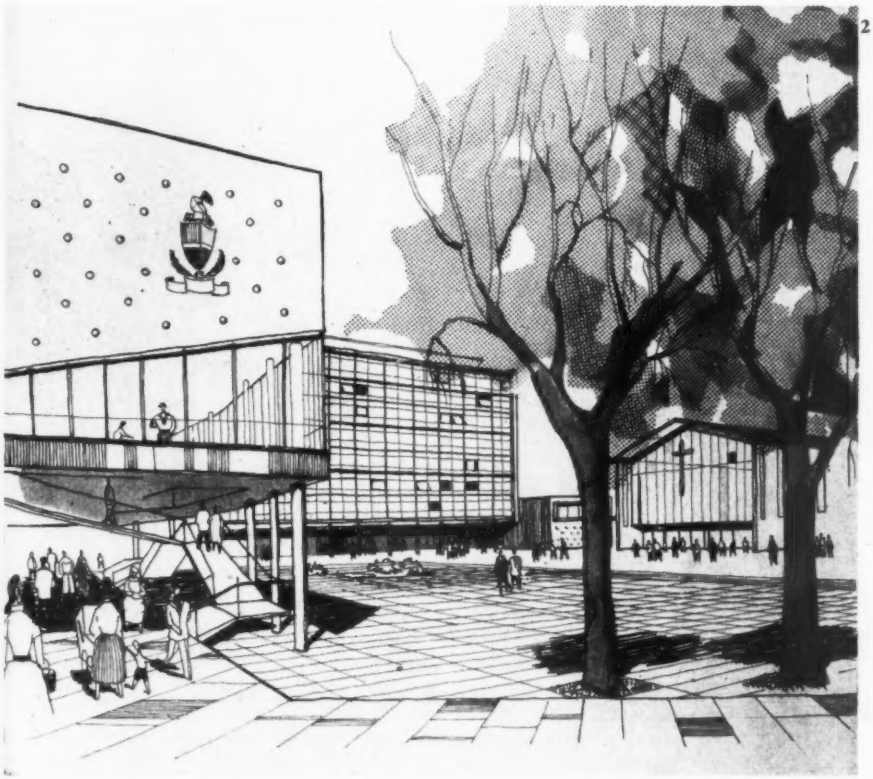
PLANNED BY STUDENTS OF UNIVERSITY COLLEGE, LONDON



Right: a pedestrian way, seen from the new railway station. Showrooms on each side of the way are connected to industrial buildings which lie behind them. Below: the main entertainment and shopping square. On the left is a theatre; in the centre are single-person flats with shops underneath them, and on the right is the main town church. The square is on two levels; it is intended that the higher level should be used as an exhibition area. Under part of the square are a car park and service entrance to shops. (The plans on these pages are published by permission of the *Municipal Journal*. Viewpoint numbers on the plan above relate to numbers on sketches.)

1

2

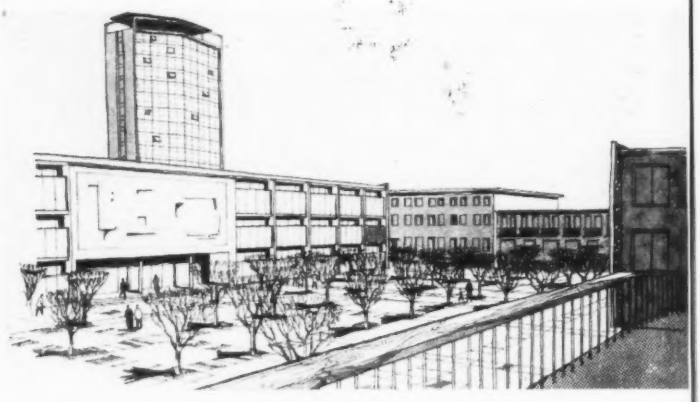


" a centre of national importance for higher education and research, with a large technical college for aeronautical engineering and agriculture and a substantial area for research establishments." They also provided generous office accommodation. This " bias towards technical employment " would, in the students' opinion, have a good effect on " cultural and communal activity," and this bias, they suggest, could be brought about by a " positive lead " from Government research departments. One particularly intelligent feature of the industrial planning of

A COMPACT NEW TOWN (continued): STUDENTS RE

this town is the provision of small industry—largely for women who want to do part-time work—in residential areas. These 60-to-the-acre residential areas cover 1,011 acres of the 2,000 acre town, and dwellings are provided on the assumption that 30 per cent. of the population will live in flats and 70 per cent. in houses. 73 per cent. of the dwellings have garages. These are situated on the ground floor of 3-storey terrace houses, in the back

3



4

5

Left: top, pedestrian shopping street, leading from the entertainment and shopping square on opposite page. Note the two-storey shops on the right, which have basement service as explained in the previous caption. The shops on the left are designed to three-storey height. Structural frames are expressed to achieve continuity of façades. Above: the civic centre. Behind the art museum on the left is the office tower block of the town hall. The view is from a high level pedestrian way, which crosses the main dual carriageway. Left: one of the subsidiary shopping centres within the residential area. There are shops on the left, flats in the centre, and a primary school on the right. Bottom: another shopping centre.

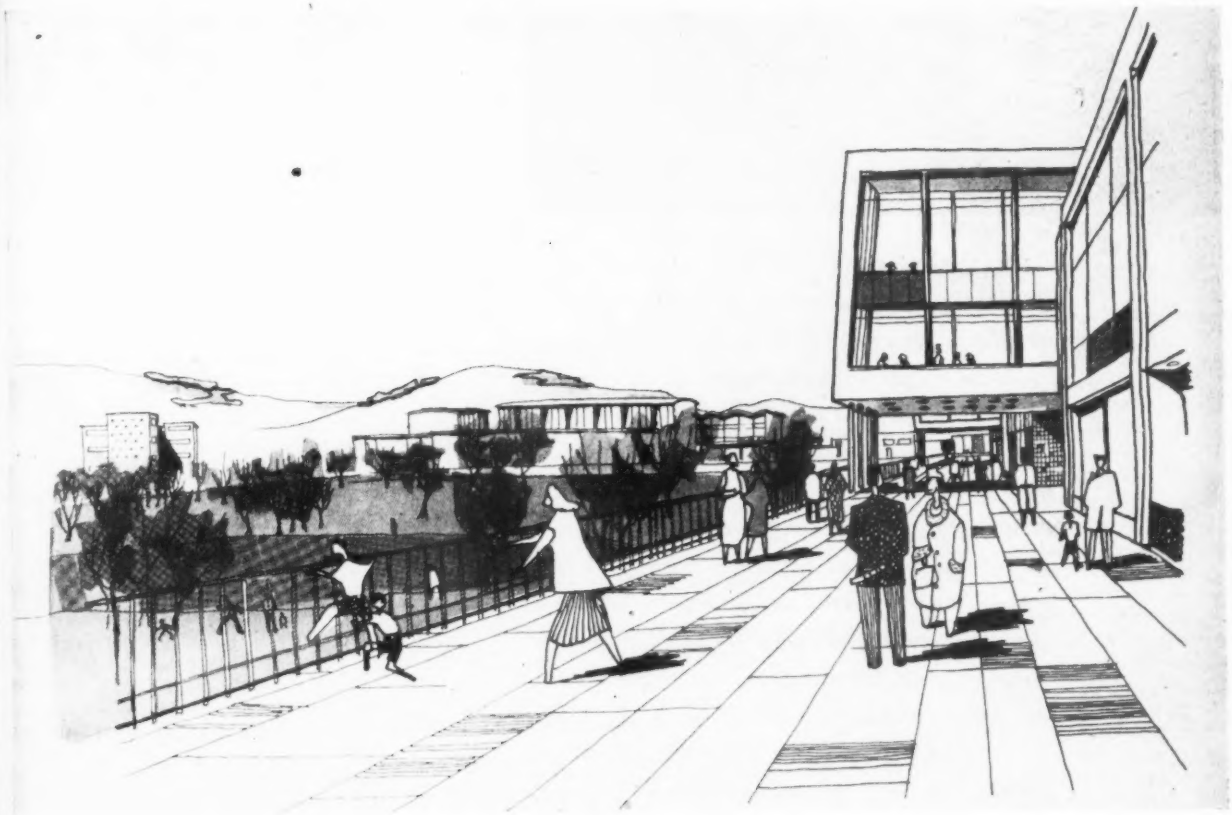
6

REJECT NEIGHBOURHOOD UNITS

7

Left: a terrace in a residential area. Below: the other side of the shops, shown in figure 3. There are shop windows at both ends of shops. Beyond the public open space is the entertainment area and an indoor sports centre.

8

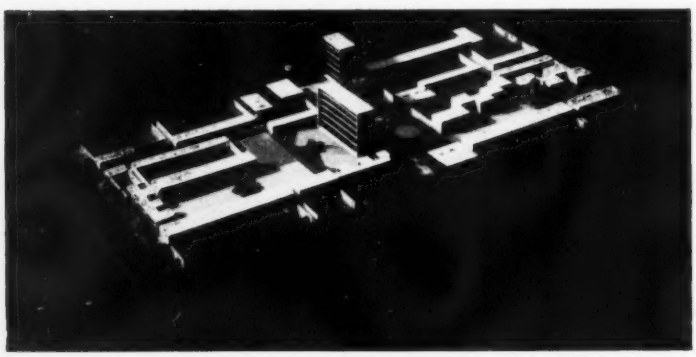


gardens of 2-storey terrace houses and in separate blocks. The flats are designed in blocks of four, seven and eleven storeys, the higher blocks forming the corners of residential areas and occasionally marking the sites of local shopping centres. These centres (served by a road designed to discourage through traffic) are very small; they are by no means neighbourhood centres, for in this scheme the neighbourhood idea has been discarded as a possible distraction from the attractions of a main town centre. The buildings that are situated between the town centre and the railway station include the following: the civic centre, with town hall, museum, library, art gallery and law courts, etc.; theatre, hotel, and office accommodation; the main shopping area, with a creché, and permanent and temporary market stalls; a town park of fifteen acres, and close to it restaurants, a general purpose hall, swimming pools, an indoor games centre, etc.; two large cinemas, a smaller cinema, a public house and a theatre; a seven-storey block of shops with flats above; accommodation for craft industries, and the commercial and service area and main office centre. This linear New Town, in which pedestrian and vehicular

TOWN PLANNED BY STUDENTS continued

traffic are segregated was the work of the following students: E. F. N. Bartholomeusz, T. R. Bedding, N. J. Burren, Miss J. Coombes, E. Duek-Cohen, E. J. Evans, J. B. Gordon, M. Hillman, J. S. Jackson, J. B. Lehrman, D. W. McLaren, L. C. Newnam, W. Unsworth, R. S. Westmacott, W. G. Whear.

AN ALTERNATIVE TOWN



Following a basic disagreement among the students about the form the towns should take, an alternative plan (above) was prepared by a minority group, and was presented by M. Hillman. Densities in the residential area are rather higher—65 rooms to the acre. The town is even more of a pedestrian town. The industrial area is separated from the rest of the town by a green way. And no attempt has been made to create an order which would link the different areas of the town and tie it together as a unity. The plan provides for a linear central area and six linear residential strips running north and south of the centre. Inside each strip, with a population of 5,000, is a pedestrian-cycle way, paved and grassed, leading from the edge to the central area. Down this way, at intervals, are kindergartens, tennis courts, shops, a small shopping centre, a primary school, etc. Small factories and workshops are sited at the end of some of the culs-de-sac, as it is felt that these would help to give life and character to the area. Order is given by means of orientation, all buildings facing either north/south or east/west, while seven-storey flat blocks accent the pedestrian way to the centre of the town. All houses are of two or three storeys and all flats of seven, with the exception of the 11-storey blocks by the small shopping centre in each residential strip. Curved blocks of three-storey terrace houses are used to tie the residential strip together, and even in the case of detached houses a pattern is created by letting them touch at, for instance, the flank walls. (Detail above).

ARCHITECTURAL EDUCATION

A New Approach

Paul Ritter, who writes this article, believes that the "various experts of building" should begin their training together and specialise later on. But this mixing, he says, would be of value only if it took place in an environment of freedom and choice. He explains here how he would set about freeing students from the rigid syllabus, which tries to include everything in a most orderly manner.

The salvation of architectural education does not lie merely with the establishment of faculties for building science, or with the revision of the syllabus, or with the lengthening of courses or with greater professional requirements. Whereas all these things may be excellent, whether they are so, or not, depends upon the basic attitude inherent in the new educational ventures. If they have a dynamic character and their approach is not rigid, but organic; individuals, student and staff will use their freedom for action to produce more and better work within the framework given, whatever it may be. If not, if a new faculty of building science represents a change in name only from the Beaux Art traditions, which are so deeply engrained (and so evasively covered with a thin veneer of contemporary presentation), then nothing will be gained.

It has been suggested that building, unlike engineering or science, is not catered for by a university educational agency, and the suggestion has been made that if it was, the shortcomings of architectural education would be removed. This is too simple an outlook. The enormous harm done to humanity today by specialization comes from the faculties of science in our universities more than from any other sphere of education.

It is further suggested that it would be a good thing if the various experts of building had their early training together and branched later into their individual special field. But it will only be a good thing if the method of education changes also, to become organic and dynamic in the manner detailed later. The idea of letting prospective experts mix, and of early introduction of professionals to management and to craftsmen is vital and overdue, but it will be of value only if they mix in an environment of freedom and choice, not in the bath of perspiration resulting from forced syllabuses trying to include everything in a vain, mock-orderly manner. For a rigid syllabus cannot be right for even the first educational year of such a variety of experts. A very

low common denominator would be introduced. However, such mixing, if applied properly and progressively, would not only cause greater mutual understanding to arise but the traditional conservatism of the various trades might thaw out more quickly and smoothly through co-operative education.

We may realize that this mixing could take place in any school and at any time if those concerned were keen, and in some ways and places it does occur already. We need not await the authoritarian establishment of University Faculties. Many possibilities, that at all times present themselves to those who have enthusiasm and ideas, and who are not afraid, are later specifically mentioned. But before the existing condition of architectural education is contrasted with the desirable state, in some detail, here are some general pointers to the manner of the education. They derive from observation of students and staff enjoying an organic and dynamic education (as compared with suffering a static one!).

Where the student should begin

The young person who may become an architect will easily become interested and enthusiastic about materials and machine production. It is with these that all architectural education should begin. He will also become fascinated by information about people and institutions, his profession and other professions, if it is given in the frank and open way that shows the shortcomings of his elders as delightfully ludicrous, tragic and meaningful. Basically that means a study of life and movement (the basis for all planning). The student then has the two elements from which emerges architectural creation:—The needs of people and the building material. And it is as aspects of life and culture that all aesthetic considerations appear. Beauty in art is as much a spontaneous expression of particular forms of life, and a necessity for its development, as hygiene.

In terms of the above the student will become interested in history. It will be introduced to him as a help in the understanding of the present, not as being "good for him" on principle.

All this is not a directive for the rapid change of the syllabus. Rather a forecast of what will happen when staff and students are free from the syllabus and begin to ask right questions in the right order.

It has been found expeditious in the immediate past to blame the failure of architectural education on to the inexperience of staff in architectural practice. But a more obvious scapegoat could hardly be found! The facts are that architectural practice itself is as confused as is education. The so-called experienced man is likely to be a confused, apathetic and preoccupied fellow. He may not be. But the man who has not been in practice may have gleaned not only the confusion of practice indirectly, by observation, but the nature of the confusion in many practices. He may have a clearer idea of the possible solutions. And finally he may be a capable and enthusiastic teacher. And that is absolutely and utterly different from being an outstanding architect.

My own experience bears this out: two days I waited as a fumbling student with two alternate schemes at the door of a "good architect" who had a very busy practice while he was "busy" in his room at the Liverpool school. When he finally asked me in he looked at the two pieces of paper, obviously preoccupied, and then said very, very kindly, "That's not the way to do architecture, you know," and very, very encouragingly "You go away and think it out yourself." And this was a typical attitude.

My eyes were only opened to the mode and meaning of architecture in the fifth year by a man with no practical experience at all and only three or four years older than myself!

Enthusiasm better than experience

Let us drop the scapegoat of practical experience as a criterion! Clear thought and enthusiasm are far, far more essential and rare and may occur in the "inexperienced" as in the "experienced." Just so does talent for teaching. These should be the decisive factors, not age or professional achievements.

So completely secondary do æsthetic considerations seem in my approach to architectural education that this must be explained. It has been implied that forms and composition should be met as joys which are meaningful expressions of life, and explained like-wise, and that the emergence of the beautiful will be spontaneous if life and learning bind their spell. The danger of the day is that the slick and sophisticated is accepted more readily by most than the realistic, the naturalistic and the crude. I maintain, myself, and it seems logical, that in a period of emergence and of experiment, the best, the truly original will necessarily appear in crude form.

There are other issues which it is desirable to deal with directly, rather than by implication: the need for two grades, the assistant and the architect, and for part-time and full-time schooling. (The despicable practice of articled pupilage shall not be mentioned here.)

Talented initiative

First the answer to the crucial question. What is the difference between the assistant and the architect? I believe it is the greater capacity for talented initiative. Talent we may test when looking at work, but initiative and intelligently modelled progress is today subservient to the dictates of a syllabus. The increased freedom and so the necessity for choice and responsibility for the student, involved in my proposals, would give us admirable insight into the amount of talent and initiative combined in the student. It then only remains to make it a recognized step to allow those students who do not display growing talent and initiative to leave the schools of architecture after three years, with the recognized intermediate qualification and without shame. And, then, we have the two groups required. The efficiency of such a scheme depends on the freedom of the student and on the careful observation by staff. Finished products and examinations cannot be the criterion of worth any more. The group leaving at intermediate (they fail to gain admission to the upper school, administratively speaking), may become excellent builders, quantity surveyors, actors, authors, decorators, painters, and all the other things that those who start on architectural education today, and in the past, turn to in any case!

Regarding part-time education: the answer is very short. A student needs time. In our confused world he desperately needs much time and peace before he engages on the incessant professional practice that tends to preclude contemplation. And so part-time education is out, as is the "crowded syllabus" of full-time schools, for a profession which carries the enormous responsibility of our physical environment, with its immense prophylactic possibilities for a vicious, pathetic and neurotic society.

And now to be more specific: I have suggested that the avowed objects of architectural education, as those of education in general, are suspect. In the RIBA Journal of January 1955, we find them in the Report of the Education Joint Committee, confirmed by the Council.

"The objects of any school are to impart knowledge, to add to knowledge, and to create respect for knowledge."

Let us examine these three aims critically:

Imparting knowledge

1. "To impart knowledge."

This represents the traditional concept that the student is empty-headed and must be filled, often force-fed, with knowledge. The manner of architectural education confirms that this is the present attitude. Disciplinary actions await students who do not attend lectures or studio.

Yet we all agree that the colossal quantity of knowledge relevant to architecture could not possibly be "imparted" by any school. That the student must know, by heart, for examination purposes, the archaic type of information selected by the RIBA, or fail, is an arbitrary and very questionable ruling. There is here a real difficulty which the present system cannot solve, as its aim is to "impart knowledge" and there is far too much to impart it all. Yet most criticism of architectural education (and shallow criticism of a shallow system this is for sure) points to factual ignorance in the graduate: he does not know enough about cost, or construction, or drainage, or office procedure, or site arrangements, etc., etc. The answer of some schools to this dilemma has been to make the younger student take more technical subjects earlier in the course and extra lectures have been introduced. The sad result of this mistaken procedure is the student who has no time to think or to integrate. More knowledge may have been "imparted" but a greater percentage will be obsolete when he emerges into the profession. The whole idea is a travesty of the concept of liberal university education, and still there remains some factual ignorance.

It is my view that to "impart knowledge" is a mistaken aim. I believe that it is this aim which leads to the muddle and frustration of today's architectural education. This is to the detriment of the student, teacher and finally the profession.

Adding knowledge

2. "To add to knowledge."

This is pure irony. Has not the profession in general come to the conclusion that what is needed is integration of knowledge, and the making available of it? There is already too much useless knowledge. The real problem, and this is recognized, is to find out first what we wish to know and why. And, as an indictment of the present system, it is true that most students, having finished their course, are neither capable of useful research nor do they wish to carry it out. They have not been allowed to think independently as undergraduates. As graduates the fear of freedom paralyses. Thus it may be as well they have no opportunities in Great Britain's universities.

Respecting knowledge

3. "To create respect for knowledge."

This aim is archaic and Victorian in origin. "Deferential esteem" to take the relevant Oxford Dictionary definition of "respect" is not what students need. "Deference"—"a manifestation of the desire to comply"—is the very last thing we ought to create in the student in this age, when shrewd, fearless, critical observations are his great need. When we try, confusion results: because of his innate shrewdness, in spite of his education, in spite of the prolonged attempts to instil respect for knowledge throughout his school days, the student feels that "respect" for a mass of contradictions "imparted" to him as "knowledge" is absurd, even grotesque. So we do not succeed in creating the "respect" the RIBA calls for. But cynicism is not much better.

To sum up, the failure of architectural education is intimately related to its objects. Impossible and false aims preclude success. There is a much more effective attitude than that described by the RIBA. It is practicable, applicable and achieves the dynamic kind of education which will grow and develop freely. What is more, it is based on sound evidence. Educational experiments have shown that knowledge acquired with interest and enthusiasm is acquired more quickly, more thoroughly and with greater understanding than that obtained because it happens to be next on the syllabus.

Interest and enthusiasm appear spontaneously with work which is relevant and pertinent to the person engaged in it. We deduce that the best type of study occurs when his work is immediately relevant to the student, and the basis of the new attitude is to make that possible in architectural education.

It is not merely a matter of adjusting the syllabus. We deal with a variety of individuals whose interests are diverse and whose approach to work differs. Thus the only feasible way is to let the student himself govern the subjects of study and the manner of his working. To allow learning with enthusiasm, the best type of learning, the concept of architectural education must change fundamentally. Educational theory in general already recognizes very widely that the liberation of talent is the task of education. It is this which, in the new attitude, replaces the old concept of filling the empty student with a syllabus full of knowledge. Rather than "impart knowledge" the positive aspect of education is to evoke the desire for learning. Quite contrary to many opinions this is easy. Leave the student alone! That is almost the whole secret of success. It may sound simple, but it is very difficult for the elders to leave the student alone until he asks, and then to advise and not direct. A fear grips the teacher, the fear of freedom, and endless rationalizations oppose the experiment. This fear is often relevant to the elders themselves and falsely applied to the young.

If we look coolly and rationally at the new attitude we become clearly aware of what it in fact entails. Basically the belief that human nature includes the desire to learn, to accept responsibility, to achieve, and that a first-year student is a human being! Once this basic belief is granted we are in the company of those who can follow us further. If we look at the instigation of the new education with a practical eye the following points arise.

From schoolboy to student

The "fresher" is the result of his former education. This taught him unconnected scraps of knowledge and did not include the application of any of this knowledge as a rule. The responsibility for progress has been that of the teacher and the boy or girl has been kept up to scratch by a variety of disciplinary measures. Enthusiasm, unless coupled with a liking for an individual teacher is sissy or suspect among the sophisticated schoolgoers. They see themselves in opposition to their teachers and entering the school of architecture thus conditioned, the new attitude, which relies largely on his enthusiasm and his capacity for being responsible, will come as a shock. To most, it will be a pleasant shock. The possibilities of freedom are great, and the joys of being master of your own fate will soon become apparent. Those who cannot master the courage to be free, or manage responsibility, will, at an early stage, indicate their unsuitability for such higher education. It is clear that, compared with the strict syllabus of today, where the youngsters, before they have even attended a single discussion on the nature of architecture, have already done programmes on lettering, sciagraphy, perspective, colour and so on, the new attitudes will seem wasteful in terms of time in the first terms. I maintain that the development from schoolboy attitude to that of the interested student who feels he knows what he is doing, and why, is of tremendous value. It vindicates the virgin sheets of Whatmann left empty until their use makes sense and they fit into his individual pattern of work.

Selbeterkenntnis is essential

The first need of the "fresher" is not drawing technique, neither is it history of architecture. It is logical thinking, the use of reason as a tool for enquiry and investigation. The schoolboy has, at best, met logic in terms of meaningless, dull syllogisms. Although he cannot embark without a considerable standard of maths or architectural education, nobody has considered logic or the use of reason deliberately as essential. But it is essential. More so than mathematics. Language and thought in general depend upon efficiency of logic, just as all of mathematics rest on correct use of numbers. The spectacle of the current student body tackling complicated problems with chop-logic is as ludicrous as that of the higher mathematics student with shaky arithmetic. (Both are a reality!)

This far-reaching evil, the inability to use reason, extends beyond the student body to people in general and so to staffs of schools of architecture. The new attitude will bring to our notice many such shortcomings of which we are dangerously unaware. But as Goethe wrote—"Selbeterkenntnis ist der erste Weg zur Besserung." (Self-awareness is the first step towards improvement.)

I suggest that the ability to use logic is of prime importance. In the first terms the staff will, to the best of their ability, help the fresher to note the irrationality of his thinking and the subsequent ineffectiveness of his approach, whatever the problem he may be tackling. Any inactivity whatsoever lends itself to this twofold task: first, to point out illogicality, so the student becomes aware of it, and second, the deduction that to reach his desired ends he must regard logic as an essential tool. This latter gives the impetus for hard work. The key to the mastery of anything which seems to the old so unpleasant that they cannot envisage the young learning it, without moral or disciplinary pressure, is to make clear how it relates to the efficient solution of the student's relevant, pertinent problem. The momentum of his enthusiasm is enough to carry him through rough parts of his education.

The first important change is then that the student chooses what he wishes to study. This ensures that it is relevant to him, that it will be of interest and evoke enthusiasm easily. This is quite practicable. I have already said that to teach logic any basis will serve, so that it is of no consequence what the fresher chooses to study first. The principle is established, at the very beginning, that the choice of study is his, with all the staff advice at his service. That he should get the feel of responsibility is of the utmost importance. It is this alone which ensures the efficacy of the new attitude.

Responsibility and self-discipline

Responsibility and self-discipline replace discipline as the criterion for progress. The sad inability of the student to act responsibly remains and persists to make him an ineffective architect when he graduates. Thus the new attitude will foster an important requirement, and it will weed out those who cannot manage this quality, which is essential in an architectural practice.

It is not recognized that the lack of capacity for responsibility in the student bodies of today is a direct result of their not being allowed responsibility or decisions on those issues which really matter. So they lack, utterly, an essential experience for maturity. The argument that the *students of today* show clearly that responsibility cannot be given to students is patently false if applied to the *students of tomorrow* who are used to responsibility. We will be bold and accept that students can take the responsibility for their progress. It becomes increasingly clear how

important it is that they should have the ability to use reason. On that rest effective methodologies, specificially suitable to each individual. These ensure that he is not frustrated in his studies. And once we give freedom to the student, and see the spontaneous enthusiasm emerge, the one remaining danger is his frustration at his lack of progress, the feeling of confusion, the ineffectiveness of his work. The second function of staff emerges: having made the student aware of the need for logic first, they will help him to adopt methodologies which suit his talents and temperament.

No more competition

Given the student who is enthusiastic, responsible and has a method of working which is effective, opportunities arise in the new school which do not exist in the old. The normal manner of teaching, in terms of programmes, which are set to one year of students at a time and for a certain, strictly specified, period has very serious limitations. The student is given the accommodation required when it is one of the most exacting tasks of an architect, in most cases, to find out just what is required. He is given a definite period, which means that no allowance whatsoever is made for the well-known fact that some slow workers are excellent. It stops experiment. All prototypes take more time than established types, and this is true for architectural design and presentation of schemes. When a body of students is engaged on the same programme there is, invariably, regrettable competition, the hiding of useful information, and working at home to prevent a certain type of student (usually a very sound chap) from finding the best type of solution so far in the year and then perfecting it himself, cutting out all the basic research. The competitive system is harmful; with enthusiasm it is needed no longer.

Finally, at present the criticism of schemes cannot take into account the manner of the approach. The criterion for criticism is the comparative quality of the finished sheets. This does not take into account what the student was trying to do and how he went about it. "Failure" may be glorious, it may be more useful and a better sign of progress than a "passable" scheme. Other disadvantages include the misleading whims of in the first instance, juries and the countless aggravating injustices and irrevelances that occur and dishearten students again and again. It must be stressed that this is no sentimental and imaginary picture. It is a very serious fact gleaned from much careful investigation.

Students' own choice

The alternative to this existing scheme of things is very attractive. Each student chooses his subject. He is responsible for drawing up the programme, and thus he has to make important decisions quite in keeping with requirements in practice. His progress, and the nature of his approach, is individually suited to himself, as is the time taken over any individual programme. At once we cut out many of the disadvantages mentioned above. There are major gains as well: the number of different programmes in a school at one time is much greater and the students have a broader experience. They can work on several tasks concurrently. Research need not be hidden, because the comparative method of marking is obviously unsuitable. To judge a student's ability to become an architect, there is not only the work he has produced but the way he has done it and the responsibility he has shown. His ability to get on with people, to make himself understood—a very desirable quality in an architect—will have been tested. The manner in which he has used staff, books, references and specialist of all kinds becomes relevant—and rightly so. What is, at present, permitted to the fifth year student in his thesis will be the general rule in all years. This will avoid the embarrassing displays of green-ness in theses now common.

If students are engaged on problems of their choosing, each on his own, it becomes possible to take into account the critical point of cost. To what effect a student has designed for economy or luxury is of the greatest importance. Both are real challenges which test the opportunism of the architect in practice. The architect's ignorance of cost is a very serious drawback, and a recent severe reprimand in the *New Statesman and Nation* draws attention to the bad reputation to which his life in the clouds leads. He will be more material-conscious and more cost-conscious from the beginning, and he will also wish to learn the vocabulary of specification right away—not as an afterthought in the fifth year. The library will have simple lists of costs so the student can become familiar with them. He may never be able to say exactly how much his building will cost, but he will know what quality of work and materials he has planned.

The live schemes which have courageously been instigated by energetic principals, in conjunction with certain local authority architects, represent the first step in the right direction for the student's practical experience. He will, like the medical student, have to be in close contact with this work. Throughout the later years of his study, he will be associated with an office or offices as the medical student is associated with his hospitals. Only thus can he follow a project through all its stages. There will be difficulties: students having to accept responsibilities for little remuneration; there are gains to those who take his services, etc. They can be solved if the will and wish to do so is there, of course.

Genuine team work in a school of architecture must be borne in mind: group working, as it is done at the moment in schools, leaves much to be desired. The best groups are those which are formed spontaneously. Yet with the rigid education programme this inevitably leads to the formation of some groups which cannot work well.

Better student facilities

The responsible student will naturally demand better facilities for study than are at present available. Among these will be libraries. The super-efficient cataloguing of the information available will rightly become a major point. The existence of a full reference library becomes meaningful to those who learn to use it. The duplicating of those books which today in almost all schools of architecture never leave the hands of staff and are so lost to the student, is essential. Material galleries should be provided, to be sure, but, far more important, a large list of buildings where may be seen in actual use all the many relevant building materials and techniques. This would end once and for all effectively the meaningless specification of materials of which the student has no notion whatsoever.

The freedom and information which allows more visits to places of manufacture and experiment will be available. There will also be a need for different and better textbooks. This will result in such, particularly when those who have gained from the new education are in a position to write them.

Needless to say the readiness for research and the eagerness among the students will lead to a stronger demand and finally to the establishment of facilities for research work within the schools. Knowledge will not be "added" but it will develop in an integrated manner.

Lectures must inspire

When universities were in their youth people attended lectures because they wished to be inspired by the wisdom and originality dispensed by some special master. It is a long way from this to our present day lecture courses which cover a number of set syllabuses and are compulsorily attended.

The necessity to take notes frantically for reproduction in exams is a serious drawback. Before we can approach the whole question of lectures reasonably, we must establish that lectures today do not, and cannot, cover the vast fields of architectural knowledge. They are, in fact, arbitrarily selected chunks of information presented in a stereotyped manner. It is necessary to bear this in mind when considering my suggestion that we will return to the original notion: lecture courses will again be the expression of original ideas only. They will again compel attention because of their originality or other inspiring quality. Compulsion to attend will be meaningless. As for the sort of information now imparted in lectures, it can all be obtained elsewhere.

If a man cannot compel attention, if he can neither further enthusiasm nor act as valuable critic appreciating the student's points of view in the studio, then he has no business in a school of architecture. The reported Mexican system of students choosing their tutor (with limitations needed to make this practicable) seems eminently sensible. This will be a most essential guide to the tutor.

One task of the tutor will be the encouragement of the building of structural models. The enthusiasm shown by students in building structural models, especially if these are tested to destruction, and the extent to which they understand structural principles through this, are remarkable.

Geodetic domes should be built, not drawn, whether in the first or fifth year hardly matters. We must get away from all the paper work. Paper is the final abstraction of

what is architecture. And as a musician must be well trained before he can appreciate a score without listening to the music, and must have great gift or experience before he can compose silently, so the young architect is equally presumptuous and foolish if he takes to paper at too early a stage. Yet we encourage them at the moment! The result is limited in two ways: on the one hand the student cannot envisage what he draws; on the other, what he does draw tends to be restricted by his limited spatial experience. Materials, the feel of material, and the feel of space, of colour, of feats of the imagination—these should be the fodder of our young budding architects, not the dull techniques of drawing. They are at best irrelevant at this stage, at worst restricting development seriously.

Materials, space and colour must first be seen and appreciated in reality, not in terms of drawings or slides. Moholi Nagy's wisdom will inspire not just the odd sketch design but the whole sensuous approach.

Limited specialization

One objection to the scheme of things sketched above is that the student may not cover all the needed knowledge. It might be argued that he will be so engrossed with the problem of housing that other programmes hardly enter his five year course. It may be said that here lies the danger of specialization which it is desirable to avoid. The answer to the latter point lies in the manner of the learning. A specialist is only a menace if he cannot relate his field to the rest of knowledge and to the rest of his own experience. A student spending his time freely on housing would in fact use it as an integral part of architecture and of living. It would lead him to other aspects of living and work, other programmes in fact. And staff would help him in the architectural implications of this. Thus, on the one hand, it is most unlikely that a student will specialize on housing for five years, though that may be his starting point and remain his central interest during the entire course. On the other, we have the all important point that if a student has learned to handle his methods of approach in an expert way, if he knows how to find and use references and specialists, he is in a better position to deal with the challenge of architecture, than if he had all the "imparted knowledge," all the "respect" for education and all "the adding" to knowledge the RIBA council dreams of. For it is the method which will make it possible for him to tackle new programmes with efficiency. In fact this is what an architect must do in many cases. No school can cover all programmes in its course. Thus finally we are driven to the conclusion that an effective approach is the main need of the graduated architect, the ability to gain what knowledge he needs when he needs it. That above all.

Joys of higher education

It may be objected that if a student is allowed all the time he wants for every problem then he will get through very little. This is an argument taken from the evidence of the present set-up and applied to the new. Quite wrongly. We began with the enthusiasm which is the essential ingredient of efficient education. It is this which will result in a far greater volume of useful work than is now produced. And to me it matters profoundly that it will be produced with pleasure, a deep pleasure all too rare among the students today. It is the saddest indictment that the joys of higher education are to most students and graduates bound up with sport, making love, and social activities only. These are essential to be sure, and in the new school there will be more time and more energy for them. But the process of learning, hitherto the "work" to be shirked, will also be a deep source of pleasure and satisfaction. All activities will be more intense and vital. That should be the aim of education. That like all good things on earth it can be justified as an end in itself not as the unfortunate and necessary means of becoming one of a profitable profession.

The solutions I have suggested are very specifically relevant to these times, in the history of architecture. They incorporate many ideas expressed by those who have a lifelong and impressive experience of education and particularly architectural education. I stress that their application is practicable now. It needs energy best spent opportunely. No one must be allowed to reject it all as so much pleasant but impossible theory.

In application, the opportunist's approach takes note of such realities as the restrictive RIBA regulations, their visiting boards and such like. To get his way he makes the new way look as much like the old as is possible, so that, at first, the number of protests and objections are kept to the minimum during the experimental stage. Then, when successful, the results vindicate the new attitude, and it can be exhibited nakedly for what it is.

Protests will then seem doctrinaire, forced and weak. It is in that opportunist manner that the assistant has a chance to convert his seniors and can try to modify the RIBA attitude. The other way, to wait until attitude and regulations change, is impracticable and unrealistic.

Taking the enthusiasm and interest of youth as the criterion we can foresee architectural education as more efficient and more pleasurable. If we are opportunists we can advance within the present framework towards that goal. Heads of schools have the greatest chance, senior lecturers less, but even lecturers and assistant lecturers can introduce many items which may herald the new attitude and provide proof for its efficacy.

Emotional plague

The limitations inherent in all my suggestions are not educational. There is scientific proof galore that what I say about learning efficiently is true. The limitations lie in our insufficiency: we suffer from the irrational fear of the new and the vital which Dr. Wilhelm Reich has sadly but correctly diagnosed as one of the symptoms of the "emotional plague of mankind."

Aspects of this are the fresh student's fear of responsibility and failure. The fear of too few passes, empty schools and teachers losing their jobs. And the fear of all of us to take responsibility for freedom given to others.

When these are overcome the better education will bring more students an invigorated architecture. Both the schools and the profession will command a better reputation and the latter a greater percentage of work on the market!

Summary of analysis of architectural education

1. The set syllabus of schools can no more cover the field.
2. The profession, staff and students are at sea and honest admission and explanation of the nature of the prevalent ignorance is hardly found. Instead conscious or unconscious pretensions of knowing, by staff, create mistrust and misunderstanding.
3. Rigid syllabus and programme teaching does not allow students' individual interests to motivate hard work. This is a great drawback as it means reduction in enthusiasm and so of amount of work done, of efficiency of learning and approach.
4. The problem of architectural education seems to staff to be that of WHAT to teach, not HOW to teach, as everything can not be taught.
5. Selection of students and grading on the basis of examinations and prettily finished studio work is often faulty and does not properly distinguish architect from assistant.

Suggestions for development

1. Since fields of knowledge and demands increase daily, students should be learning to the full extent of their capacity. That means with enthusiasm. This can be brought about by
(*a*) more freedom from rigid syllabus, and for individual attention,
(*b*) teaching basic needs to make all work satisfying: these are:—clear thinking (applied logic), methodology, and sympathy with movement and form of life and materials,
(*c*) enthusiastic, logical and original staff.
2. Implementation of the above will result in:
(*a*) desire to establish co-operation with all others in the building industry on a free non-syllabus basis. So establishment of faculties, etc., of building,
(*b*) desire for and capacity to continue to learn after qualification, in pure research or practice.
3. The solution of HOW to teach solves the problem WHAT to teach when each student does the maximum in his enthusiasm.
4. The new requirements for logic and initiative can mark more clearly those to become architects. They must have time to think. Part-time post inter must be abolished. Exams must no longer remain the arbitrary way of selecting student.

LAW REPORT

The New Copyright Bill

Though the main concern of the new Copyright Bill (now passing through Parliament) is to bring legislation into line with new developments in radio, television and tape-recording, the opportunity has also been taken to straighten out the law as it affects building. Our Specialist Editor 17 (Legal) outlines the very devious history of our law of architectural copyright and concludes by explaining the effect of the new Bill.

Copyright, in its most elementary form, is the exclusive right to multiply copies of a book, and its development in our law has closely followed the development of mechanical means of reproduction. Literary copyright was protected only after the development of printing, and artistic copyright was established only with the expansion in the use of engravings and lithographs. It was only by the passing of the Fine Arts Copyright Act in 1862 that paintings, drawings—architectural and otherwise—and photographs, were given a measure of protection. Copyright, by that Act, rested in the author for his life and in his heirs for seven years after his death.

The protection was limited. In 1894, in the case of *Hanfstaengl v. Empire Palace*, an action by the owner of paintings to restrain the exhibition of them as tableaux vivants failed, the Court of Appeal holding that the reproduction was given a totally new character by the exhibition of living figures. It was implicit in the decision that the reproduction of architectural plans existing in two dimensions by the erection of the corresponding building in three dimensions would not involve any infringement of the architect's copyright.

By 1911, when the Copyright Act placed the law on a clear and intelligible basis, there were over twenty statutes on the subject. This Act repealed nearly all the old statutes and consolidated the law in a short code of 37 sections. It extended the period during which work is protected to the term of life and fifty years. Under Section I (2) " copyright " means the sole right to " produce or reproduce a work or any substantial part thereof in any material form whatsoever " and in Section 35 " literary work " is defined as including " maps, charts, plans, tables, and compilations."

The value of these words to the architect was tested in 1936 in the case of *Chabot v. Davies and Another*. There the plaintiff architect had sent to the defendants a blueprint plan and elevation of a shopfront. The plaintiff got no subsequent order from the defendants but they handed on his plans to a building firm which in fact made tracings of them and used them in the erection of the shop front. The plaintiff brought an action against the defendants for infringement of his copyright by authorizing the reproduction of the plan. The defendants contended that a plan could not be reproduced by a shopfront. They failed. " If this case had come before the court in the year 1910," declared the learned judge, " I think it is quite clear that I should have been bound by the decision in *Hanfstaengl v. Empire Palace* to hold that this was not an infringement of the plaintiff's copyright. That case amounts to this: that what one may call, in the common use of the term, a reproduction of a work in another medium altogether is not an infringement." But the court relied on the words in the 1911 Act " in any material form whatsoever," concluded that the shopfront was a reproduction of the plan, and that there had been an infringement of copyright for which the plaintiff architect should receive damages of 100 guineas, this being the measure of the remuneration he might fairly have got for his plan if the defendant had applied for his leave and licence to use it.

The Copyright Act also protects architectural works of art, that is " any building or structure having an artistic character or design . . . or any model for such building or structure, provided that the protection afforded by this Act shall be confined to the artistic character or design and shall not extend to processes or methods of construction." The owner of such a copyright may always get damages for its infringement, but if the defendant has already begun to erect the offending building the plaintiff cannot ask for an injunction to have the work stopped or the building demolished. Every right in the law of copyright in England is, in a sense, a compromise between conflicting claims.

This provision has been judicially interpreted. Thus, in 1931 in *Blake v. Warren* the High Court held that the designs for the front elevation of certain semi-detached villas, built in large numbers in accordance (as far as their interior planning was concerned) with Council requirements, were the subject of copyright in that there was a novel treatment of the gables and doors and the disposition of the voids and solids was of an artistic character and struck the eye as uncommon. The judge remarked on the difficulty of defining " artistic character or design " and said " There is nothing here in the interior planning which can have any artistic character or design. . . . There must be something apart from the common stock of ideas—something which strikes the eye as unusual. If that exists then there is copyright. It is very difficult and one can only take a general view."

But it was not until 1941 that the courts considered the position arising where an existing building is extended in the same general design as the original building. *Meikle v. Maufe* was a case in which the original building was erected in 1912. The contract with the architects contained no special terms as to the ownership of the copyright in the plans or the building and, the plans and design being their original work, copyright vested in them. At the time of building the question of a later extension was discussed. In 1935 the owner decided on an extension but engaged another architect who, in making his plans, incorporated certain features of the original erection; for example, he repeated the façade and reproduced much of the interior. The owner was then sued by the original firm of architects but contended, first, that there could not be a separate copyright in a building as distinct from the copyright in its plans and, second, that if there were, it belonged to the builder.

These contentions were dismissed by Mr. Justice Uthwatt. " An architectural plan," he declared, " finds its meaning and purpose in the use to which it is put. The point of the architect's activities is not the making of plans as such, but the embodiment in the building of artistic and other ideas which he has in mind and which are contained in his plan. The plan is a means to an end and not an end in itself. To deny originality to the artistic designs embodied in a building by attributing originality only to the plans which led to the building would be to give reality to the shadow and refuse it to the substance. As to the second contention . . . protection is limited to the *artistic* character or design embodied in the building and in the making of that character or design the builder plays no part. He, like his plans, is only part of the machinery employed in the production of the structure which embodies the design and the ideas of the architect. For copyright purposes the author of the architectural work of art is the author of the plans." The learned judge finally dismissed, on the facts as found, a " last ditch " argument that there was in any case an implied term in the contract of 1912 that the building owners should have a right to reproduce the original building plans in a later extension.

In a time of reconstruction of bomb damaged property this point has had considerable importance. For if damaged buildings are to be rebuilt in substantially their old form there may be a breach of copyright unless precautions are taken. It is indeed curious that the issue was not decided in the courts until 1941 but, no doubt, architects have been more ready to accept the compliment implicit in a repetition of their designs than to insist upon a legal right.

A Copyright Committee was appointed in 1951 to review the effects of modern developments in radio, television, and tape-recording, and the Bill now reaching its final stages in Parliament brings copyright up to date. The problem referred to above was laid before the Committee by the RIBA and the Committee's Report points out that, while it is common practice for architects to retain the copyright in their plans, this right should not entitle an architect to prevent the reconstruction of a building which has been damaged or destroyed. Clause 9 (10) of the forthcoming Act will therefore provide that where copyright attaches to a building it is not infringed by any reconstruction, even a reconstruction by reference to original plans in which there is copyright.

MOHLG REPORT

" Overall Planning Minister Needed "

A correspondent writes:

Duncan Sandys, the Minister of Housing and Local Government, presented the Report of the work of his Ministry for 1955 to Parliament last month. This report is, in essence, a catalogue with occasional explanatory notes. It lists money spent, houses built, subsidies paid, land acquired, grants given—but only the occasional word to show that perhaps somewhere in the depths of Whitehall there may be the odd soul with a comprehensive view of building and planning.

This is shown by the following extract relating to Development Plans. First it asserts that Development Plans, as well as their preoccupation with remedying the defects of environments created during the 19th Century have another objective:—to prepare for the future! This surely will startle all planners. It is, of course, pleasant to know that Whitehall has at last realised this, nearly ten years after the passing of the 1947 Act. But the statement following this truth gives further and sounder cause for hope: " Environment must be changed in harmony with the shifting pattern of national and local life . . . In the last two decades the whole basis of policy has been changed by the war, the transition from a relatively easy to a strained economy, the new system of education, higher standards of living, new products, new methods of production and rising demands for power, water and transport. The next few decades are likely to provide changes equally significant, and planning for the future, cannot therefore afford to be rigid; it calls for intelligent anticipation, experiment and continual revision of assumptions."

This is very sound advice indeed, and it is to be recommended to the Minister of Housing and Local Government, for if one searches from cover to cover of this closely printed document, there is very little sign that the Ministry itself is intelligently anticipating, experimenting or continually revising their assumptions. It is difficult to see just what the Ministry is doing in this way. It is true there is a brief reference to housing development work—17 lines of print in a document of 166 pages, but in a country which is overcrowded, which has an appalling transport problem, an incredible problem of urban redevelopment and of economic survival, one would have thought that one of the functions of Government was to see that there was some overall guidance in the use of our internal resources in land, manpower and materials. Moreover there is no mention in this report at all of the possible effects on our economy through the development of atomic energy, or the impact of automation upon employment and the location both of industry and commerce. In general, the Report is indicative of the chaos which at present exists in the overall planning field. There appears to be no authority or Minister charged with the responsibility of co-ordinating the various activities and development of other government departments, such as, Transport, Fuel and Power, Board of Trade, Ministry of Works, etc.

The complete confusion at the top is rapidly making nonsense of the efforts of local planning authorities to implement rational policies of planning in their area. Here in this government publication is the proof of Sir Patrick Abercrombie's recent assertion that planning in the regional and national sense is as dead as mutton. From the report it is difficult to realize that it is the Ministry of Housing and Local Government which is charged by Parliament for the planning of the country. It is quite scandalous that in the last 10 years the Ministry of Town and Country Planning has now become reduced to a small sub-department of a Ministry which appears to be nothing but a clearing house for all the activities tied up with Local Government administration. It is time that there was a Minister of cabinet rank with full powers and responsibility for overall planning, relieved of all local government administrative detail and finance. It is only by such means that there will be evolved any rational national planning policy capable of dealing effectively with the physical planning problems of this country.

RICS

Presidential Address

On November 12, Walter E. A. Bull, newly elected president of the RICS, gave his presidential address. Here are extracts from it.

The 1947 Act was an attempt to solve the twin problems of compensation and betterment. The search for effective formulae which would, on the one hand, obtain for the State the betterment to which it is assumed the owner is not entitled, and on the other, to make available to the owner compensation for injury that he has sustained, has been long and arduous.

The 1947 Act was based upon the principles enumerated in the report of the Uthwatt Committee, the most important being the concept of " good neighbourliness." By this principle it was held that under the common law a man was not free to do as he would with his land, if by so doing he interfered unreasonably with his neighbour's rights.

The value of real property, in so far as that depends upon its capacity for development, has been put in the keeping of the planning authority and well do some of them realise it. Nothing seems to me more unethical than the attitude of a planning authority which will adapt its planning consents so as to obtain for nothing any land that may be required for public purposes. A planning consent should be granted upon its merits, and should not be the subject of conditions requiring land to be ceded for a nominal sum only.

Even if it can be established that the refusal of consent should attract compensation, it does not follow that any will be paid. The 1947 Act took away development values and established a global compensation fund to be distributed according to principles which were, owing to the amending legislation of the 1953 and 1954 Acts, never propounded. The claims agreed under the 1947 Act are now attached to land to provide a limit up to which compensation, if the right to it be established, will be paid. Unfortunately the claims, being based on 1947 values, are inadequate for the purpose. Morover, they did not necessarily represent the full development value even with reference to 1947 values. If there were divided interests, the sum of the development values of those interests would be very unlikely to add up to the development value of the land freehold in possession, even if the owners of all the interests made claims. And if, as happened so frequently, no claim was made, there is then no attached fund upon which to draw. The original principle that the right to development value would be lost if no claim was made by a specified date was unfair; it is on a par with enacting that all who do not claim to be English will after a prescribed date be deported.

As we know, the financial provisions of the Act failed, but the situation created by the amendments of 1953 and 1954 are in some ways equally unsatisfactory. The landowner is in a no more happy position in respect of compulsory purchase than he is in respect of planning refusals. Two sets of values have been created, one the compulsory purchase price and the other the market value. As time passes and land increases in value because it attracts development value which it did not have before, the discrepancy between the two standards ever widens. The time must come when the two must be brought together again if this country's freedom is to be maintained.

There is, as has been said before by many another surveyor including the present distinguished President of the Chartered Auctioneers and Estate Agents Institute in his Presidential Address, only one basis for compulsory purchase which will restore confidence to the property market and do justice between the individual property owner and the community, and that is the basis of market value. A piece of land in the centre of a residential area may have its greatest value for industrial development, but it might well not be reasonable to permit industrial development or to pay compensation upon the basis of industrial value if development be refused. On the other hand, it may be equally unreasonable to limit the owner to that form of development which the particular heirarchy of planners in charge at the moment consider proper, or to refuse him compensation if the planners, in pursuit of whatever unattainable planning concept is for the moment fashionable, refuse him permission to develop at all. I suggest for consideration that a possible solution would be to value land on the alternative bases of existing use or prevailing use on the lines of section 85 of the 1947 Act, as may be appropriate in the circumstances of each particular case. This, however, would not solve the problem of undeveloped land in a green belt.

technical section

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.

9.59 design: general

MODULAR CO-ORDINATION

Modular Co-ordination in Building. (European Productivity Agency of OEEC. Obtainable from HMSO. 9s.)

As the ARCHITECTS' JOURNAL pointed out on October 18, the real value of this report lies in the decisions made on a proposed system of tolerances. These decisions were discussed at length by Bruce Martin in his talk to the Modular Society which was published in the same issue. Apart from this the EPA report contains disappointingly little that diligent followers of the Modular Society proceedings will not already be aware of. It is in fact, and does not pretend to be much more than, a summary of the ground covered by the countries participating in the European Productivity Agency project since its inception in 1953. But it is a very convenient summary, very clearly set out, and an impressive model of first class exposition.

The objectives of modular co-ordination are by now widely known in the building industry: to dimension building components (by which is meant anything, from a brick to a roof truss, which arrives on the site ready-made) so that they can be assembled to form a complete building without cutting and consequent waste. When a building element, *e.g.*, floor, wall or roof, is composed entirely of prefabricated components requiring no further site preparation, there is no doubt that such an objective needs to be achieved. It is, however, highly questionable whether, in fact, such wholesale prefabrication is more economical than conventional construction where only a proportion of the assembly is prefabricated and where prefabricated components are made to fit the whole by being linked with site-processed brickwork or joinery. The enthusiasm apparent in the report for wholesale prefabrication, and particularly the belief in economies to be derived from it, are greater than recent experience, in this country at any rate, can be held to justify. Quite apart from raising doubts about its objectivity, this causes the report to leave unexplored the economic consequences of the method of erection which it postulates for modular components. "On no account must components be placed tightly against each other, for the calculated clearances (*i.e.*, gaps between components) are then summated and appear at one place as a large gap." The logic behind this statement is indisputable. But whereas in wholesale prefabrication this gap is certainly large in relation to the desired equalised clearances, in more conventional construction it can so easily be made up by site-prepared brickwork and joinery as to be made negligible. With the techniques still commonly accepted there is little doubt that the cost of filling the gap by the latter method is less than the cost involved in avoiding it.

The objective of modular co-ordination has, however, only been achieved so far within "closed" systems of prefabrication, *i.e.*, components have had their dimensions co-ordinated so as to fit into the particular system to which they belong, but they cannot necessarily be replaced by components from another system. The reason is twofold: first, because the jointing methods may differ; secondly because the size differs. How to free components from the confines of a closed system so that they may be used without restriction, with as much interchangeability as in normal construction yet without cutting and waste, is the crucial problem modular co-ordination must solve if it is to achieve its objective. It is disappointing that a report summarising the work of eleven countries between Autumn 1954 and June 1956 should do no more than skirt the problem. It illustrates typical work from six countries, but without any accompanying explanation it seems that all are closed systems or in some measure restricted in scope. On jointing it makes only the somewhat obvious point that "generally, the straight section provides the greatest chance of co-ordinating one profile with another" and promises that "the study and collation of modular details . . . will form an important part of the work of phase II of the project."

But it is in the treatment of size co-ordination to achieve free interchangeability between systems that the report is most tantalisingly inconclusive. It states the need for "a coherent range of sizes designed purposely to cover the dimensions required and to be fully inter-related." Elsewhere it states that a systematic series of numbers must be used to select sizes in a range. Various number series are then explained, each with diverse arithmetical characteristics; but there is no readily intelligible example given of how such devices are applied in practice. It would have been helpful if at least one diagram could have shown how a range of window sizes could combine with a range of wall panel sizes to form various solid and void relationships in a wall assembly having any given modular dimension. Such an omission is an exasperating inconsistency in a report which can go so far in labouring the obvious as to include illustrations of a graph and of an ordnance map to show the purpose of a reference grid. The "thickness problem," which has baffled so many who have thought about the subject, is not even mentioned. Perhaps research has shown that it does not really exist. If so the fact is surely worth proclaiming.

If the tone of this review is one of disappointment it is because three or four years ago, when the Modular Society was founded, one might have got the impression that modular co-ordination was just around the corner. Ministers have even been asked in Parliament to instruct their departments to make use of it. This report, summarising as it does all that was known in early 1956, suggests that modular co-ordination is as far away as ever.

It is, however, quite indispensable for students of the subject, and it is invaluable in setting out the many conditions of manufacture and assembly which will need to be fulfilled if modular co-ordination is to be universally applicable. In these conditions

technical section

and in design technique, radical departures from existing practice are involved. They will have economic consequences. Will the second, fieldwork, phase of the investigation, now under way, prove objectively that the consequences are on balance as beneficial as previous enthusiasm has claimed, and will it find the answers to the many questions this first report has posed ?

16.126 materials: miscellaneous

BITUMINOUS PAINT

Black Paint (Tar Base). BS.1070:1956. (BSI. 3s.)

As happens with most British Standards specifying the *quality* of a product, this is chiefly for specialists. Nevertheless it is of some interest for the architect to know that three types of tar based paint are now covered: slow drying (24 hours), normal drying (8 hours) and quick drying (4 hours). Also there is an admirable appendix (which reads like a BRS Digest) describing how to use these paints. Two coat work on bare steel is given a life of approximately two years in most situations, but "considerably extended service can be obtained by applying a further coat within one year."

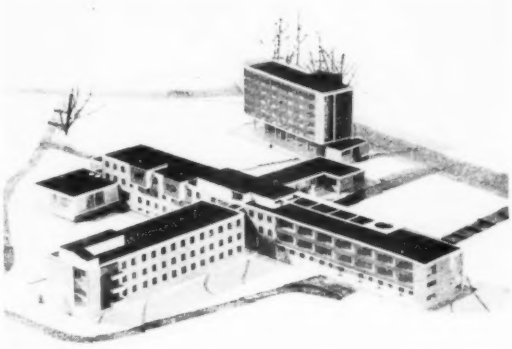
19.200 construction: details

PRECAST CONCRETE

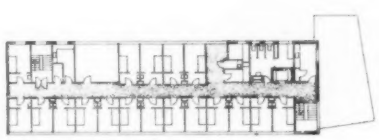
Precast Concrete in Russia. (Concrete and Constructional Engineering. September, 1956, pp. 495-499.)

Under the heading of "Automation in the Russian concrete factory" the JOURNAL published a report on a film shown under the auspices of the Reinforced Concrete Association earlier this year. This has been covered in great detail and illustrations from the film have been obtained. The article covers the complete precasting of framework and cladding.

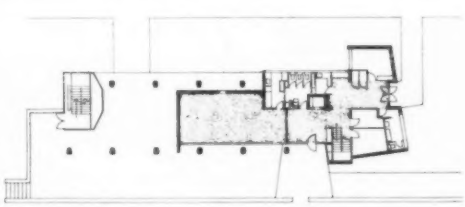
NURSES' HOME BUILT USING SLIDING SHUTTERING



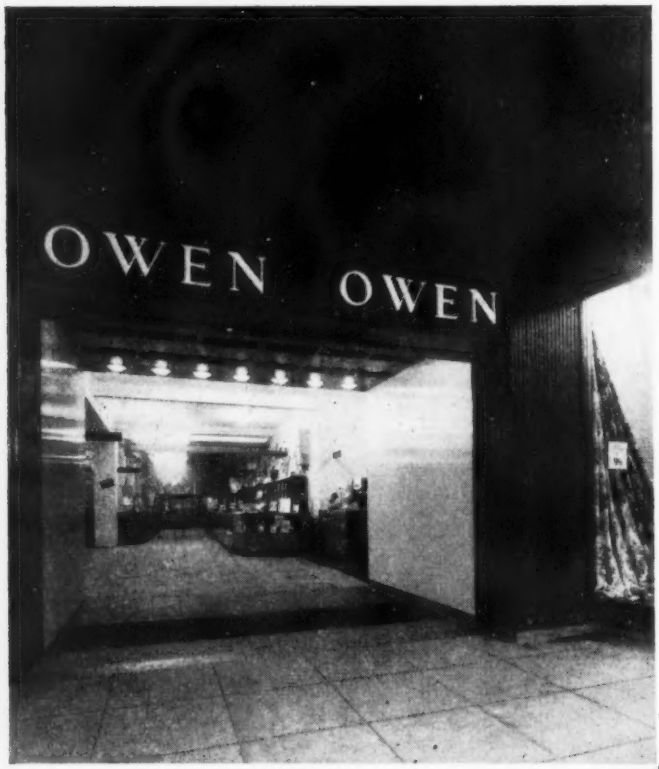
The nurses' home at the Victoria Hospital, Kirkcaldy, is part of a large extension scheme planned by the Scottish South-Eastern Regional Hospital Board. In the model above, the home for 88 nurses is the tall block in the background. On the ground floor of the home there is an entrance hall, a recreation room, and office and lavatory accommodation, the rest of the space being left open with free standing columns. The nurses' rooms are planned on five floors, the repetition of a simple unit resulting naturally in a cross-wall type of structure. The consulting engineers suggested that the cross-wall structure and outer walls could with advantage be built in reinforced concrete, using continuously-sliding forms operated by hydraulic jacks, a system already used in this country for constructing tall silos, but not hitherto used on buildings. The architects modified their design slightly to make this possible. The concrete work from the first floor up to the underside of the roof slab was completed in less than four days. The 4-ft. deep forms were constructed on the first floor, using British Columbian pine for the staves and redwood for walings, struts, and working deck. In order to ensure that the forms were self-clearing they were given a batter of $\frac{1}{4}$ in. as shown on the drawing overleaf. At the level of the top of the forms a working deck was constructed; from this was suspended a hanging scaffold to enable the concrete to be inspected and rubbed down on leaving the forms. Steel yokes with hydraulic lifting jacks above them (see diagram over) were fixed to the forms at the lifting points. Through each jack was threaded a 1-in. diameter high tensile steel jacking rod which rested on the first floor slab. Inside each jack is a pair of jaws which can grip the jacking rod and a hydraulically operated ram. The climbing motion of the jacks up the 1-in. diameter jacking rods is as follows: (1) Hydraulic pressure is applied to the jack, clamping the lower jaws to the jacking rod and releasing the upper jaws. (2) Continuing pressure operates the ram inside the jack, lifting the body of the jack which in turn lifts the metal yoke and the forms. (3) Pressure is released, allowing the upper jaws to grip the jacking rod. (4) The lower jaws are released and the ram is returned under the action of a heavy spring. This cycle of operations gives a travel of $\frac{7}{8}$ in. Two electrically-driven hydraulic pumps activate the 123 jacks required to lift the forms. Filling of the forms started at 9 a.m. on August 14, and sufficient concrete had been placed by mid-day to allow the first



Typical upper floor plan



First floor plan



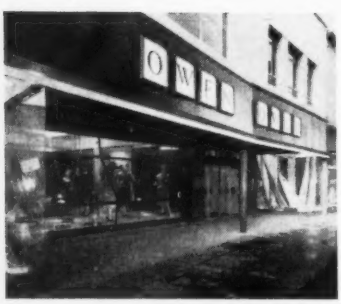
The effective use of sliding doors illustrated in the entrance to this Doncas store.

•

Door frames in alloy have a surround moulded hardwood panelling and the so houses heating and ventilating grilles.

ARCHITECTS. ROLF HELLBERG F.R.I.B.A. & MAURICE HARRIS F.R.I.B.A.

OUR DESIGN AND TECHNICAL SERVICE IS READILY AVAILABLE TO ASSIST IN THE DEVELOPMENT OF ALL TYPES OF DECORATING SCHEMES.



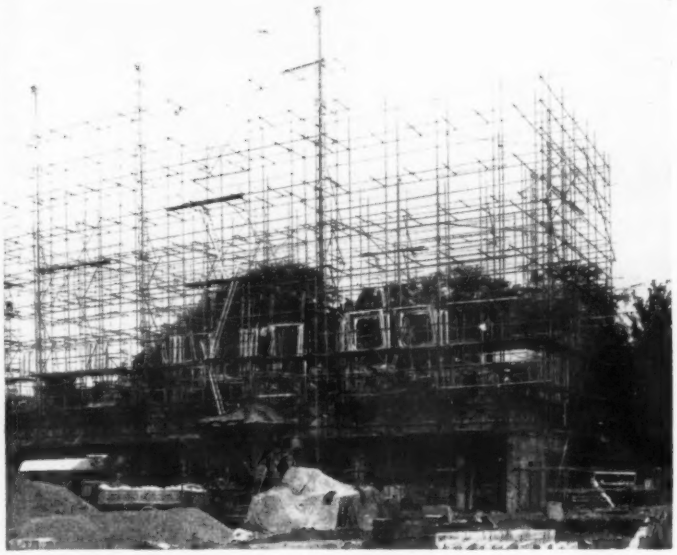
Harris & Sheldon Ltd.

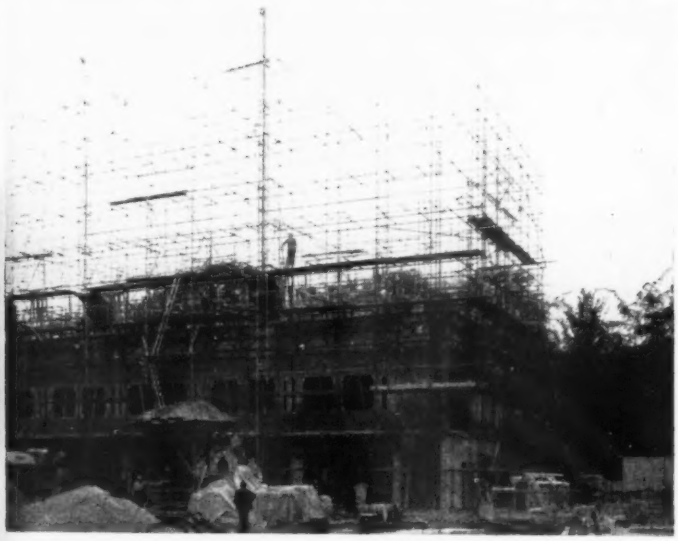
The organisation with a background of 75 years experien

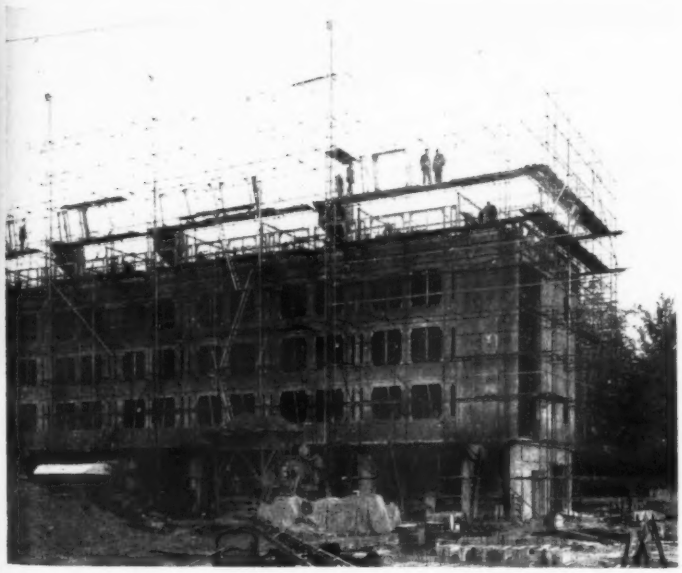
BIRMINGHAM · LONDON · GLASGOW · TORON

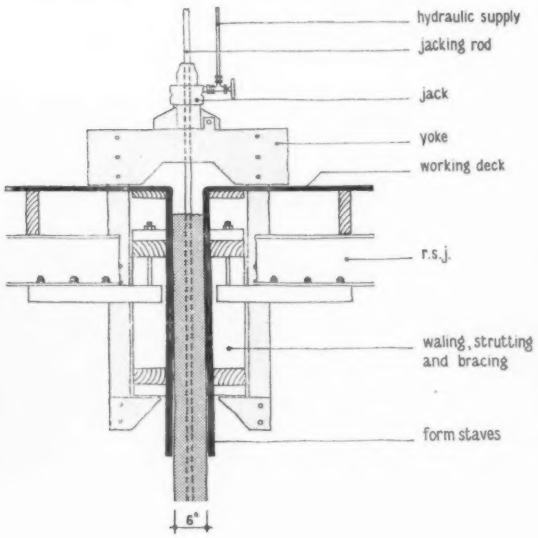
technical section

NURSES' HOME BUILT USING SLIDING SHUTTERING continued









lift of the jacks. From then on the jacking proceeded at an average rate of 7 in. per hour, until the evening of August 17, when the working platform had reached the level of the underside of the roof slab. The work was organized on a 24-hour basis in two shifts of twelve hours. Fifty-four men were employed on the day shift and 51 on the night shift. The concrete (1 : 1⅝ : 3½) was mixed at ground-floor level by two weigh-batching and mixing plants, and lifted by two hoists to hoppers on the working deck. From these points it was barrowed to the shutters. No special hardeners were used and vibrating was necessary only at a few isolated points. Normally a water/cement ratio of 0·45 was adopted. During a period of rain this was reduced and the rate of jacking slowed down. Reinforcing steel in all walls was kept to a minimum and carefully planned to facilitate placing. Some of the reinforcement was prefabricated into cages with welded connections to minimize the time required on the site for placing. The photographs on this page show the work at three stages; top, the forms placed ready to receive the first fill of concrete; centre, progress by the morning of the following day; bottom, placing the blocking-off frames for the fourth floor windows during the third day. The architect for the project was John Holt, Regional Architect to the Hospital Board, the architect in charge was Walter Scott and the assistant architect Alan Jamieson. The structural work was designed by Blyth and Blyth, and the quantity surveyors were James Gentle and Son.

technical section

THE HANDLING OF ARCHITECTS' INFORMATION 2

books and pamphlets other than trade literature

The author, the late Michael Ventris, O.B.E., begins this second instalment of his report* by discussing books: how to index them, how to decide which to keep on the shelves and (in large offices) by the drawing boards. Technical books, he thinks, should be weeded out after 10 years. Passing to periodicals, he goes into the vexed question of when to tear out (or cut up) and file and when to rely on indexing. He concludes that articles which are immediately useful should be torn out and filed, but that those which are only *potentially* useful should be left and retrieved by index. He laments the lack in this country of a systematic abstracting service for architects like those current in Germany and Sweden, also the lack of any general index covering *all* publications; and he concludes by suggesting a new classification system for all building information.

20. Thin pamphlets, magazines and research reports on building material and methods published by organizations other than HMSO require a consistent procedure for filing. They can either be included with trade literature (when the organizations will be indexed as "manufacturers"), or with technical cuttings (Section 37), or in a separate series of pamphlet boxes attached to the book collection.

21. Serial publications by official organizations are best kept together in boxes or binders suited to their size, notably:

Post-war Building Studies.
National Building Studies.
BRS Digests.
MOW Advisory Leaflets.
MOE Building Bulletins.
Government Circulars.
By-laws and Building Acts.
Set of RIBA and other forms of contract.

Books

22. All other books, thick enough to have a title on the spine, may in a very large library be arranged according to the Universal Decimal Classification (Section 12D). The appropriate numbers for each title can be found with some difficulty by using the ABC handbook* or past issues of the RIBA Library Bulletin, but the system needs a trained librarian to operate. In a small library it will be sufficient to divide the books into a number of subject headings, for instance:

Organization

A. General reference works and directories.
B. Architectural practice and procedure.
C. Building industry.
D. Building finance.
E. Costs and quantity surveying.
F. Building legislation.

Technique

G. Pure sciences, including mathematics, surveying, etc.
H. Building construction, general.
I. Structural engineering.
J. Specialist engineering: services.
K. Civil and highway engineering.
L. Building *materials*.
M. Design and construction of individual *elements*.
N. Building machinery and site operations.
O. Building operations under *trades*.
P. Demolition, repair, conversion.
Q. Building in special places and conditions.

Planning and design

R. Sociology and anthropometrics.
S. Town and country planning.
T. Building layouts and townscape.
U. Landscape architecture.
V. Planning and design of building types.
Subdivided under SCHOOLS, FACTORIES, etc.
W. Design of individual room types.
X. Architecture as a fine art; history, æsthetics.
Y. Furniture design.
Z. Other allied arts.

These headings correspond with those suggested in Section 54, where they are compared with the 28 headings of the AJ *Information Centre*.

Indexing of books

23. A *shelf list* of the library's books is useful as an inventory check. This is a series of cards arranged in the same order as the books stand on the shelves. In a small library it may be unnecessary to subdivide each subject section by further numbers or letters: all the books on *Materials* will simply have L on the spine, and both on the shelves and in the card index they will be arranged alphabetically by authors. In a large library it may be difficult for filing clerks or assistants to put back books in the proper order owing to ambiguity on who the author really is, or in what order his name should be put; it is usual to add letters or numbers to the classification, derived from the author's name and/or title, which give each book a distinctive *call number* by which it can immediately

* The first instalment was published last week.

* English version published by the Bouwcentrum, Rotterdam.

be located. Thus Handyside on *Building Materials* might on UDC have a call-number 691/HAN/B; and the whole of this would appear on the book-spine and on the card.

In large libraries such as the RIBA the shelf list itself forms a subject index to the books; but in order to know where to look for a given subject an alphabetical key (on cards, or in strip or book form) should be provided to the classification, *e.g.*

Building materials, general, etc. 691

A shelf list or catalogue which merely classifies the books by their *titles* does not, of course, constitute a complete subject index. It will not show that Handyside's book also contains detailed information on *plasters* or *bricks*, or that sections on *building materials* may appear within other books classified under other headings. The addition of such cross-references is an extremely laborious undertaking which no libraries in fact attempt in any detail. Key information sources might, however, be collected in a *selective subject index* for certain subjects (Section 53). Borrowed books should be booked out in some standard way (Section 15).

Composition of library

24. When a new office is set up on a limited budget, the basis of its library tends to be drawn from the picture books, reference books or students' text-books which have been accumulated by one or more of the staff. Where an existing office is organizing an Information Room, it probably already has a large stock of books and these merely need sorting and indexing. The problem of selecting a library from scratch rarely arises: the main problem is to ensure that basic works are not missing, and that useful new ones are added.

The office may allot a yearly sum (perhaps anything between £10 and £100) for new books, which the librarian orders on the advice of partners or of a library committee. For this purpose he keeps a check on books which may be useful for the office's work, drawn from Reviews in periodicals, MOW and RIBA library bulletins, RIBA Bibliographies, etc.

He may also be placed on the distribution list for publishers' catalogues (of which Batsford's *Building Technique Catalogue No.* 18, with 1,049 titles, is particularly useful), and arrange with a local bookshop for similar notice or the supply of books on approval. A useful guide to new publications is the *Information Digest* periodically published by the A & BN.

Large libraries may check on the usefulness of books, periodicals or services by keeping statistics of the number of times they are borrowed or used. The difficulty is to determine whether the user in fact got the information he wanted.

Many small offices are confined to 5 ft. run or less of textbooks or reference books: few large Information Rooms will need more than 20 ft. run, except in organizations which have the funds to buy books which are very rarely used. At the present rate of publication of technical books, industrial and scientific libraries would tend to double themselves in about 10 years unless material is ruthlessly weeded out after this period; this policy is followed in the MOW library, and should be imitated, within reason, in office and school libraries.

25. The library should collect the free HMSO sectional lists of government publications: of the complete range of 60, the most useful are 2 (MOE), 3 (DSIR), 30 (MOW), 61 (Building): the last is three years old and now reprinting. Monthly catalogues are available from HMSO at 2s. 6d. a year: orders for these, or for the supply of publications on selected subjects, may be left with Stationery Office bookshops.

British Standards and Codes of Practice

26. Copies of BS loose-leaf Handbook No. 3 (*British Standards for Building Materials and Components for Housing*) will be found in the library and in the drawing offices. The librarian writes for copies of the unabridged BSS and for Codes of Practice as they are required: only the very largest offices will keep a complete set, but the librarian should know where they may be consulted (*e.g.* at the MOW, Building Centre). The librarian can check the issue of new BSS through the Yearbook (12s. 6d.) and monthly lists, issued free to members of BSI, and the free sectional lists: he will be responsible for seeing that revisions and replacements are made in all the office copies of the Handbook.

Decentralized books in the office

27. Where the Information Room is conveniently central, it is best to keep all the books of the office in it; but where certain expensive books are in constant use in a particular section, "design room" or partner's office, these may have to go out on permanent loan to a separate set of shelves, perhaps similarly classified. Cards, possibly of a different colour, should record them in the shelf list.

Duplicate copies of certain basic reference books should be available in each drawing office: these might include:

BS Handbook No. 3
Specification
BRS Digests
MOW Advisory Leaflets
MOE Building Bulletins, etc.
Basic steelwork, drainage and sanitary ware and builder's merchants' catalogues
Spon's or Laxton's price books
Office Information Books (Sections 53a and 73).

Other useful books for personal use are:

ABT Diary
AJ Working Details
Spon's Practical Builder's Handbook

External library facilities

28. Where the office is near the RIBA or a large public or technical library, or *good* libraries of schools, technical colleges or allied societies, the Information Room will be able to rely on these for all less-often used books. The librarian should be familiar with the

technical section

contents and facilities of such local libraries, and where possible possess a duplicate of their catalogue (note that this does not exist for the RIBA). He may also keep a "union list" to show the nearest libraries in which copies of particular journals may be consulted, particularly of those used for references in the RIBA Library Bulletin; he may act as a channel for outside borrowing by members of the staff.

Periodicals

29. The number of journals taken by an office varies widely and is not necessarily proportional to its size. They fall into six main groups:

(*a*) Professional journals (RIBAJ, AAJ, etc.) received at home and brought in.

(*b*) English design and/or technical journals on the office's subscription list, which may include the "big five": AJ, *Architectural Review*, *Builder*, A & BN, *Architectural Design*. In a large library, a record book or cards are kept to show subscriptions, dates received, sent for binding, etc.

(*c*) Foreign journals, which can be selected from the RIBA's list for the Library Bulletin, or from those of bookshops like Tiranti's. *Forum*, *Architectural Record* and *Domus* seem the most widespread.

(*d*) Journals on allied subjects read largely by non-architect members of the office, *e.g.* on town planning, local government or engineering fields.

(*e*) Journals on outside subjects connected with specialized building types, *e.g.* shopfitting, hospitals, education.

(*f*) Free digests of trade information, such as *Building Equipment News* (Section 2).

(*g*) Periodicals circulated by trade associations (Section 20).

Circulation

30. Periodicals are generally circulated (with the help of an attached list of names) only to a small number of senior staff. In a very large department, or where a wider circulation is required for the most popular journals (or where one copy is wanted for immediate cutting and filing), two or more copies may have to be taken. Staff on the circulation list may be invited to tick items in some standard way in order to indicate:

(*a*) Cut out and file this.

(*b*) Record this name on the appropriate list.

(*c*) Write for further information on this.

(*d*) Should we have a copy of this for the library? etc.

If the librarian is experienced enough to know what different sections of the office are working on or interested in (Section 52), he can save the architects' time by marking on the circulation slip the items that he thinks they ought not to miss.

Storage of periodicals

31. On return to the library from circulation, periodicals are generally kept on "primary" shelves in chronological order for a fixed period before being cut up, bound, given away, or relegated to less accessible "secondary" storage. The size of each pile should not cover the whole period, but should be controlled by some fixed principle (*e.g.* 3-monthly periods for weeklies, yearly periods for monthlies) and the shelving made close enough to accommodate no more than this. One method of keeping a pile in chronological order is to paint a diagonal line, of a different colour for each period of time, over the spines: if a number has got out of date order, or into the wrong year, it shows up at once. A convenient arrangement is for the *latest* number of each periodical to be displayed on a shelf in front of its own piles.

32. Binding is expensive, and generally confined to the glossies, such as the *Architectural Review* or *Architectural Design*. The office must consider whether articles more than, say, 5 years old are likely to be consulted so often that a trip to another library would not be equally economical. If the AJ is bound, it is best to take a second copy in order to take advantage of its filability.

33. If space is short, the sooner each periodical is cut up for filing the better. There is, however, a general resistance to cutting up the glossies, so that technical sections (designed for filing) in such magazines as the *Architectural Review* find their way into the office information system much less readily than those in humbler journals. A compromise between full preservation and complete cutting-up is to remove the advertising matter from all issues and fix them together in sets of four in manilla folders.

Cutting up periodicals

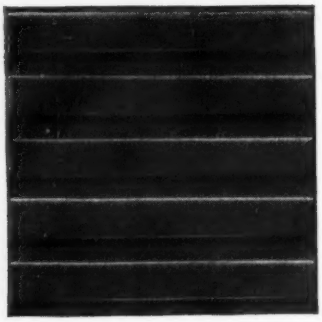
34. A fair proportion of offices do not cut up their periodicals at all, with the exception of the tear-out sheets in the AJ and A & BN. This may be due to lack of time or laziness, or because they believe in indexing rather than cutting (see Section 42).

If journals are to be cut up, then it is essential from the consumer's point of view that pages should be of a standard size; that articles should begin on a right-hand page and have a place for a filing title; that they are complete on the following pages, and not "continued on page 265" between a lot of advertisements; and that if they are designed for scissors-and-paste work they should not have valuable matter on the back. In April the AJ undertook an admirable revision of its layout designed to make filing easier: this was described in the issue for 12 April, 1956, pp. 336-7.

The items which are intended by the AJ for possible filing are the following, which can be considered together with similar sections of other journals:

35. *Information Sheets* (manufacturers' drawings and data in standard format). Special binders for these are available from the AJ, but they may equally be filed with trade pamphlets (Section 11), particularly if the same classification is used. The librarian will be responsible for making additions and corrections to the existing sets as they are announced.

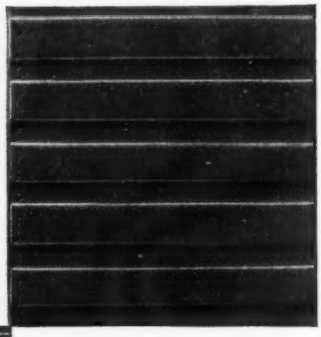
36. *Working details*, best kept in spring-back binders in the classification used by the AJ (and modifying the numbering of the A & BN details to conform). There

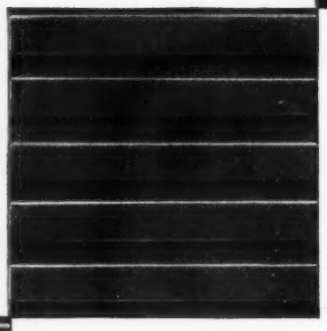


nothing is so quietly reliable as . . .

SUREFOOT
TILES

non-slip, heavy-duty rubber flooring





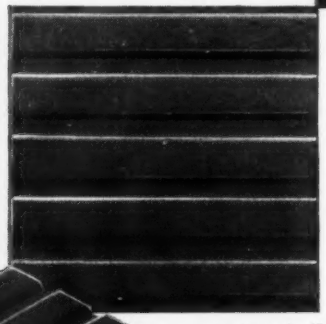
Typical Installations

FACTORIES
Traffic lanes, ramps, store rooms, loading bays.

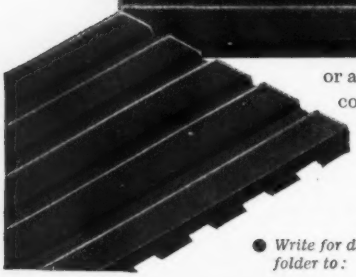
RAILWAY STATIONS
Booking halls, platforms, trucking ways, baggage rooms.

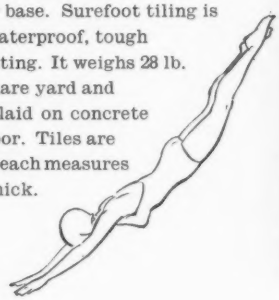
PITHEAD BATHS
Shower and changing rooms.

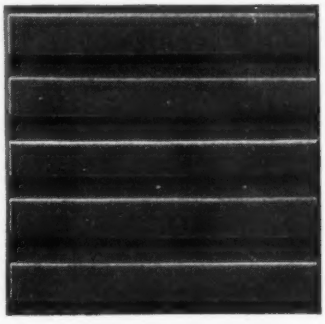
SWIMMING BATHS
Surrounds to pools and changing rooms.



Wet or dry . . . on the level or on the slope . . . Surefoot ribbed-rubber tiles form a robust yet quiet and resilient anti-skid surface. They may be laid as traffic lanes or as complete floor finishes. Besides being functional, the surface ribbing lends an attractive pattern to the floor. Dovetailed grooves on the underside of each tile ensure a firmly 'locked' setting in the mortar base. Surefoot tiling is fully waterproof, tough and lasting. It weighs 28 lb. per square yard and can be laid on concrete or any similar subfloor. Tiles are coloured black and each measures 18″ x 18″ x $\frac{7}{16}$″ thick.







● *Write for descriptive folder to:*

SEMTEX LTD
THE FLOORING SPECIALISTS

● *A Dunlop Company*

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HENDON 6543

6 SE. FT. 1

is considerable criticism of such Details in the profession, partly because of the evils of taking them cold, partly because some of the construction may occasionally be doubtful practice; but since they are designed for easy filing it is a waste not to take advantage of them.

37. *Technical articles.* The AJ technical articles are printed with classification numbers which are the same as those in the Information Centre (Section 41) but unfortunately different from those of the Information Sheets (Section 13h). Some offices, preferring to have all the information on a single subject (*e.g. Windows*) in a single place (see Section 43), give such technical cuttings their own classification and file them together with trade pamphlets; in a larger library it will be best to start a separate series of *technical cutting files.* If only the AJ articles are collected, it may be convenient to keep them in AJ numerical order in spring-back binders; but if they are combined with other material it is best to open a large number of files on individual subjects and to keep them in vertical filing cabinets. This makes it easier to be selective in borrowing. These *technical cutting files* may be divided on the AJ's numbering system, or else arranged in conformity with some overall subject classification used by the office (Section 54): but in that case it will be less easy to use the AJ's excellent yearly *Alphabetical Index to Information Centre and principal technical articles.*

38. *Illustrated buildings.* So far the AJ is alone in regularly publishing a cost analysis of illustrated buildings. If the office wishes to keep a separate file of such cost analyses, it really needs a second copy of the AJ in order to feed the general *building types cutting files;* unless cost-analysed buildings are kept in a different-coloured folder within the file pocket for each individual building type.

Most offices which cut out illustrated buildings keep them in folders in vertical filing cabinets in the same way as trade pamphlets. The classification may vary from office to office according to the building types they are interested in, and the detail in which they are studied. An alphabetical list of "English word" headings is easy to devise (*e.g. Airports—Banks—Churches,* etc) or the list made to conform to the periodical references in the Library Bulletins of the RIBA (logical but non-alphabetical) or MOW (UDC). The American Institute of Architects publishes a numbered system of its own as Doc. No. 261.

Some offices keep a separate folder for each year of each building type, and throw away most of a folder which is, say, more than five years old.

39. *The Industry* (review of trade products and literature). The sections may be cut out and pasted into a *products information book* (Section 2); but this is laborious, and most offices will use the service merely to decide whether to write for the trade literature itself.

40. Individual *advertisements* may also be cut out and filed with trade literature, but they are seldom sufficiently informative by themselves.

41. *Information Centre.* This consists of short reviews of new publications, articles, etc., for architects, and *abstracts,* prepared by specialists, of articles which have appeared in publications other than those taken by most architects.

Abstracts have a very wide use in the scientific world in helping specialists to keep up with the vast flow of books and papers in their own and related fields. They can be divided into two types:

(*a*) *informative,* which tell you the main conclusions of the article and may save you reading it, (*b*) *indicative,* which only tell you enough about it for you to decide whether you ought to read it. Those in the AJ *Information Centre* fall in the first category, but of course only cover a minute part of the field in a fairly random way. They also suffer from the disadvantage of having to be cut out in varying shapes and pasted in a book: hardly any offices treat them in this way. A better form is shown by the German and Scandinavian building abstracts, which are printed on pages which can be torn into standard 4 in. × 3 in. cards and card-indexed directly. The *Building Science Abstracts* of the BRS are too "scientific" for use in most architects' offices, but the entries of the MOW Library Bulletin, if cut from two copies and pasted on cards, will give a fairly full subject reference to technical articles and building types, arranged on the UDC. A general criticism of abstracts throughout the scientific world is the time-lag in preparing them; and an abstracting service providing a full cover is so expensive that it must have either government support or high subscription rates.

At the Royal Society's *Conference on Scientific Information* (1948) Bernal outlined a scheme whereby scientists would receive *merely* abstracts of articles appearing all over the world, of which full reprints would be available on demand from a National Distributing Authority.

A number of libraries in this country are already in a position to provide photostat copies of individual articles on demand, and the use of portable photocopying units such as the Contoura will make the architect, too, less dependent on holding complete issues of books and periodicals himself.

42. Mechanical aids to documentation which are used by large industrial and government information services, but beyond the reach of architects and builders at present, are:

(*a*) The supply and filing of whole articles (or books) as strips of microfilm or as 3 in. × 5 in. *microcards.* These carry the title and classification of the paper and a short abstract, in type legible with the naked eye, followed by micro-reproductions of the original pages which can be read in a viewer. This is the ultimate in library compactness.

(*b*) The transmission of reproductions of articles from one information centre to another by electronic means.

(*c*) The coding of subject classifications by punched holes on the edges or middles of the abstract or reference cards to articles, books or buildings. Several cross-references can be holed, so that cards which combine

technical section

two or more different subjects or peculiarities can be selected by such mechanical retrieval systems as Hollerith, Findex, etc. The classifications can also be coded as black dots which are scanned photo-electrically when sorting.

In an Information Centre of the future these techniques might lead to the virtual *automation of information*. One might ring up the information centre to ask for any information, say, on *aluminium schools* in Australia ; the information officer would operate a keyboard with the UDC numbers for *aluminium, school* and *Australia* ; the microcards comprising the complete information of the centre would be sorted for those sharing these codings ; the selected cards would have their articles transmitted electronically to a view or printer at the subscriber's desk.

Cutting versus indexing

43. In sciences where most new knowledge appears in the form of separate papers in a large number of serious scientific journals, and where the papers are always referred to by their date and page references within those journals, there is no particular call for the scientific library to mutilate the volumes. The journals are bound, and the articles on each subject are found by means of an efficient subject index or with the help of classified abstract cards.

One school of architects follows the same principle with architectural information ; refusing to cut up their journals, but relying on the journals' own indexes, on subject indexes kept in their own Information Room, or on the indexes of the RIBA. They argue that if a new technical problem comes up, or a commission to design an unfamiliar type of building, the relevant information will in any case not all be contained in the cuttings they happen to have torn out ; and they will be forced to make a proper search through all the publications to which they can find references.

The opposite school argues that information which has to be collected from a number of different places by means of an index will in fact remain unused ; they cut up everything they can lay hands on, and prefer to keep articles, trade literature, research pamphlets and their own notes on, say, *Windows*, all in the same file ; so that the whole subject can be studied from a single set of papers.

In a large information centre the amount of different papers on each subject, and the dozens of different sizes on which they come, makes such omnibus files very unwieldy to handle.

In most architects' Information Rooms there will have to be a compromise between indexing and cutting. Material from periodicals which is immediately useful for information or inspiration is most get-at-able if it is cut out and filed by subjects ; but material which is only *potentially* useful can be retrieved by means of indexes from whole periodicals in the office or in outside libraries when it is needed. The number of cuttings in a subject file needs to be carefully pruned. If you collect the six most important articles on *wall-cladding* together, they form a usable background to the subject ; if you collect a hundred, nobody knows which is worth reading first.

The indexes printed by technical journals themselves are not generally sent except on demand ; they are often, irritatingly, arranged alphabetically under the wording of the titles to the articles rather than according to their actual subject-matter ; and they suffer, of course, from the fact that each index only refers to a single periodical and a single year, whereas what is wanted for easy reference is a *joint cumulative index* to all the main periodicals for a period of several years. Such indexes are produced on a subscription basis in some scientific fields, particularly in the United States (*Industrial Arts Index, Index Medicus, Engineering Index*, etc.). A full subject index can be laboriously built up by cutting and pasting entries in the RIBA or MOW Library Bulletins on to cards ; the latter are also cumulated at half-yearly intervals. An alternative may be for the office to produce its own highly selective subject index to articles which seem particularly useful (Section 53b).

44. *Series of articles.* Where a succession of articles in a journal form a closed series (such as the AJ series on *Costs* or *Joinery*), it is best to bind them in a simple way and treat them as a book.

45. *Size of cuttings.* It is not enough to achieve a single standard size for all trade literature (BSS 1311 : 1955), and a single size for all periodicals, difficult though these are by themselves. They should both be the *same* size in order to be able to build up tidy files, and also the same size as normal letter-paper. In some continental countries trade literature, periodicals and correspondence are in fact all printed on A 4 (8¼ in. × 11⅝ in.), and in America Sweet's Catalogue, trade literature, the *Architectural Record* and note-paper are all the same size.

46. *School lecture notes.* Where schools produce cyclostyled lecture notes or technical notes, these can sometimes usefully be incorporated in an architect's files, provided their format and subject arrangement are designed for this possibility.

Answering queries

47. The librarian will help to look out specific sources of information asked for by architects, and also show them where to look for information on particular subjects ; if he is well-trained, he may himself look up or digest information and pass it on.

48. Often an architect does not know exactly the information that he wants, and the library layout must allow him to browse through the material himself if necessary. Information services which act at a distance, like that of BRS, can, of course, only answer questions if they are very exactly formulated.

49. *Enquiries to outside organizations.* The librarian should know where to go for information which is not already in the library. He may compile a directory of the most helpful organizations and of their publications. The bare bones of such a list is provided by the front pages of two successive issues of the AJ, and in appendices to various yearbooks and diaries. It is

technical section

hoped to produce an expanded version as a further product of this year's Research Fellowship.

50. A qualified architect librarian may act as the channel for all office enquiries to such organizations as BRS, etc. Alternatively job architects may be asked to pass on major items of information to the library so that they can be included in the *technical development files* (Section 61) or in circulars.

51. Each librarian may keep a personal record book of all enquiries made to him, as a check on action and as a future reference.

52. In order that librarians and information officers can appreciate what kinds of information are currently needed they should attend office meetings where the progress of design and development work is discussed.

A general index to library information

53. It may be necessary to provide a general reference manual to the library's holdings, in order to help the librarian and architects to find their way to answers on given subjects. This can take two forms:

(*a*) An analytical list of the main sources, such as HMSO publications, textbooks, technical cuttings, etc., showing where each is to be found, but without any extensive indexing by subjects. Copies of this can be kept in each drawing-office.

(*b*) A selective index, probably in loose-leaf form. This is necessary because at any given moment the up-to-date information on a given subject is probably not in one single place, but is subject to a wide "scatter" difficult to survey at a glance or for the non-specialist to evaluate. Such an index page for *fluorescent lighting*, for instance, would lead the architect to the BRS publications on the subject, to chapters in textbooks, to technical articles, to informative publications by manufacturers and trade associations; with brief notes on the particular slant and usefulness of each. The RIBA bibliographies fill some of this need, but are not sufficiently selective or informative. Such a subject index is beyond the resources of all but large Information Rooms, but it is worth considering whether it might be prepared by a group of specialists for yearly publication by some central organization. As part of this work, a detailed cumulative subject index to all HMSO publications would be useful, similar to that prepared by Colin Penn for the Architectural Press in 1946: such an index is very difficult to keep up to date with private resources.

54. Such a general subject index might be arranged simply under alphabetical headings (*Acoustics—Adhesives — Airports — Aluminium — Anthropometrics*, etc), or in a numerical classification such as that of the AJ Information Centre. A uniform subject classification for *all* information records (trade literature, technical files, books, cost analysis, bills and specifications) may be required by some offices. The UDC system is useful as *primary* classification for the flow of information between different countries and between central libraries and research organizations. It is too complex for office use, leading to very long numbers (*e.g.* 69.028.33 = *venetian blinds*); and it may be desirable to develop a *secondary* classification to cover merely the fields of building and architecture. I give below a suggested list of headings with cross references to the Brisch Classification, the UDC and the AJ Information Centre numbers.

	ORGANISATION	*AJ Inf. Centre*	*UDC*	*Brisch*
X	General reference works and directories	—	01/09	—
0-9	Architectural profession and practice	7, 8	72.00	—
10-19	Building industry and organization	—	69.00	—
20-29	Building finance; housing finance	—	333	—
30-39	Costs; quantity surveying	8	69.003	—
40-49	Building legislation	—	35	—
	TECHNIQUE			
50-59	Pure sciences: mathematics, surveying, etc.	—	5	—
60-69	Construction: theory, including modular	18	693/694	—
70-79	Structural engineering	18	624	—
80-89	Specialist engineering: services	22-26	696/697, 628	—
90-99	Civil and highway engineering	—	624/627	—
100-109	Building materials	10-16	691	20-39
110-159	Specific structures, assemblies, details, components, installations, finishes fittings arranged under *elements*	19-27	69.02, etc.	50-69
160-169	Building machinery	—	69.05	80-88
170-189	Building operations under *trades*	—	69.05, 693	02-08
190-199	Demolition, repair, conversion	—	69.059	—
200-209	Building overseas and in special conditions	—	69.03	—
	PLANNING AND DESIGN			
210-219	Sociology and anthropometrics	1	3	—
220-229	Town and country planning	2-6	711	71
230-239	Building layouts and townscape	4	711.6	71
240-249	Landscape architecture	—	712	—
250-259	Planning and design of *building types*	10	725/729	72-78
260-269	Planning and design of *room types*	—	643, 721.05	—
270-279	Architecture as a fine art: history, aesthetics	9	72.01/03	—
280-289	Furniture design	27	645	—
290-299	Other allied arts	—	73/77	—

It is suggested that the section for *elements* (110-159) should be the preferred place for filing all information on *specific* products and systems; trade literature on *bricks* would be filed here, and only theoretical studies on the composition of bricks under *building materials* or on the technique of bricklaying under *trades*. Specifications for boilers or for detailed heating systems would similarly be filed under *elements*, and only theoretical studies on the design of systems under *services* (80-89).

Conclusion

The first part of this blueprint for an office Information Room has dealt mainly with its methods of dealing with information from outside sources. The second half will discuss possible ways of making available information accumulated in the records of the office's own jobs.

working detail

SPIRAL STAIRCASE: LABORATORIES AT ENFIELD, MIDDLESEX

G. A. Jellicoe, architect

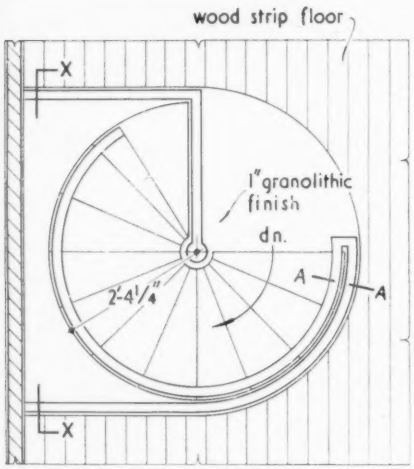
The newel of this stair comprises a 3 in. dia. m.s. tube which forms a permanent shuttering to a r.c. column cast inside it. The sequence of operations was as follows: first the tube was secured in position and the treads were threaded on. Next the shuttering for the quarter landing at the top was fixed, together with the reinforcement connecting the stair with the structure of the floor above, and the landing was cast using a similar aggregate to that used for the treads. Next, starting from the top, the balusters were threaded through the treads, a flanged sleeve serving as a spacer between treads and a screw, washer, nut and coverplate at the base of each baluster giving a means for adjustment. The handrail which is 1½ in. by ⅜ in. m.s. was then screwed to the balusters. The total cost of the stair was £130, exclusive of fixing by the contractor.

working detail

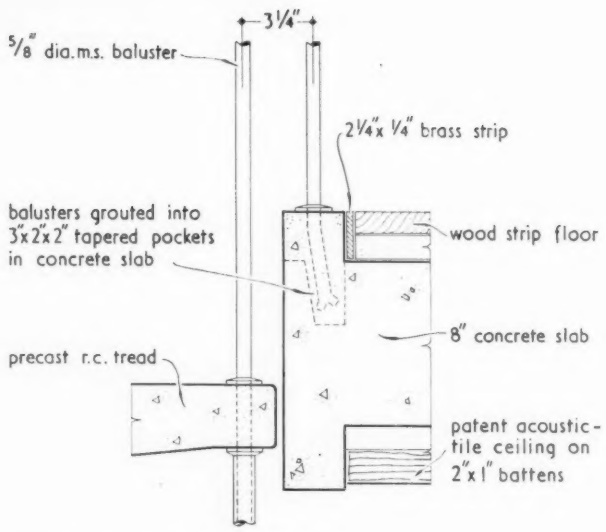
STAIRCASES: 25

SPIRAL STAIRCASE: LABORATORIES AT ENFIELD, MIDDLESEX

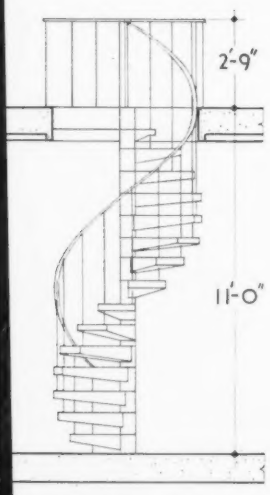
G. A. Jellicoe, architect



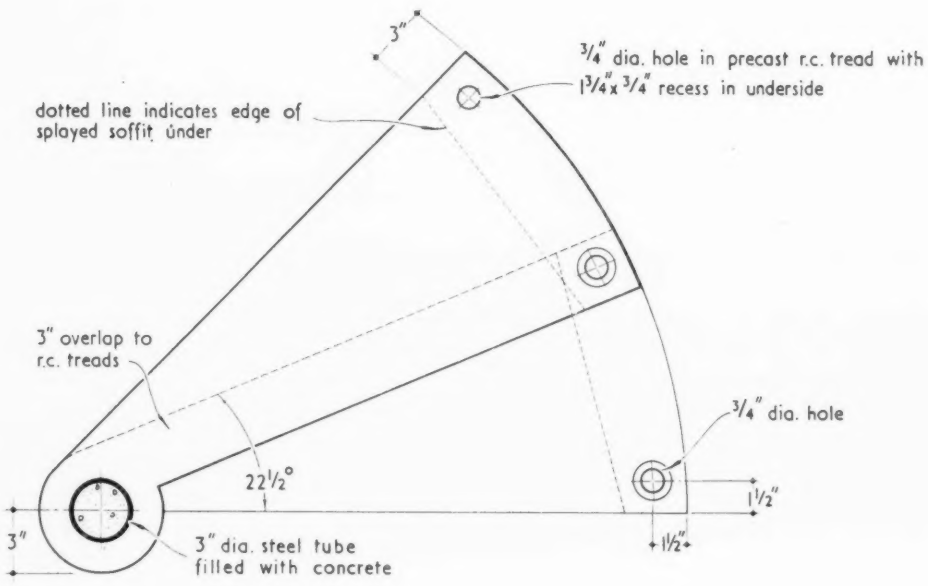
PLAN OF STAIRCASE. scale 3/8" = 1'-0"

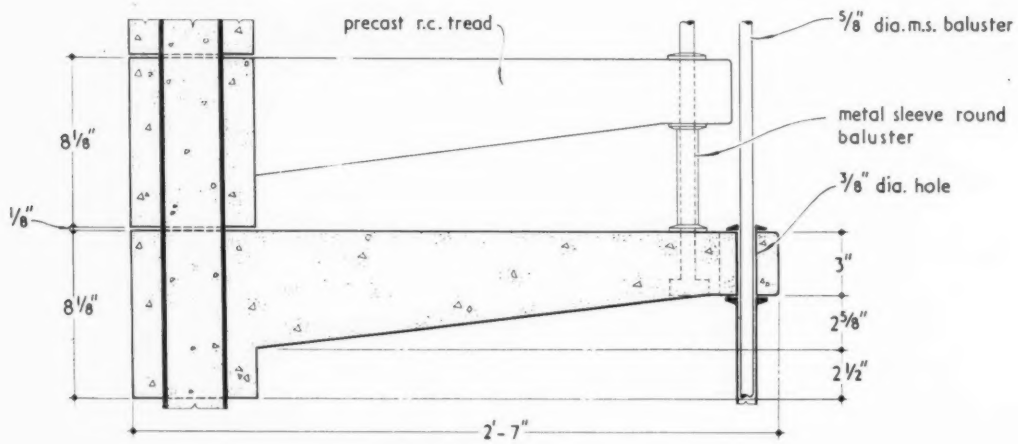


DETAIL AT A – A. scale 1 1/2" = 1'-0"



KEY ELEVATION OF STAIRCASE ON X-X. scale 3/16" = 1'-0"



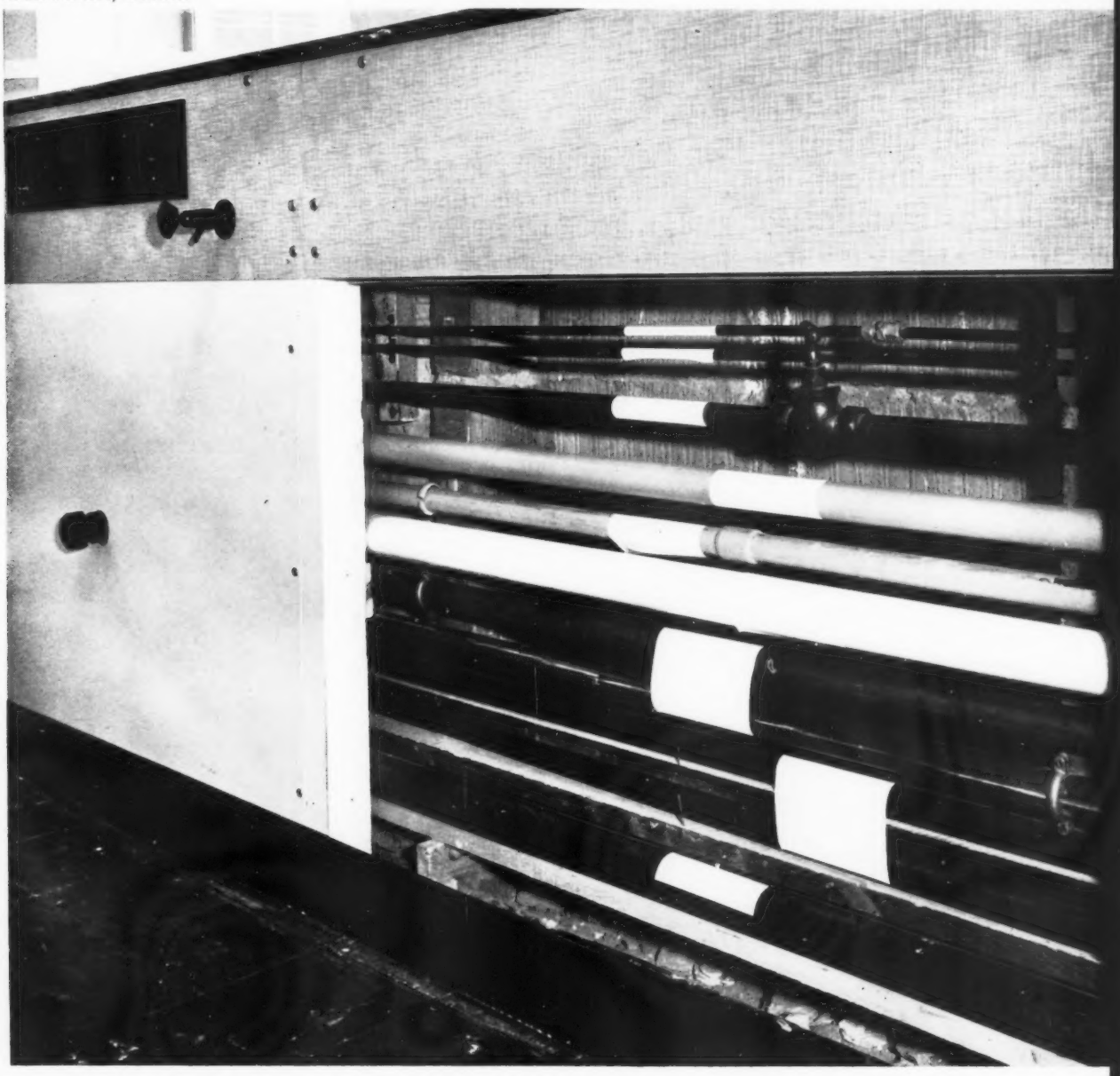


PLAN AND SECTION OF TYPICAL TREAD. scale 1 1/2" = 1' 0"

working detail

SERVICE DUCT: LABORATORIES AT ENFIELD, MIDDLESEX

G. A. Jellicoe, architect

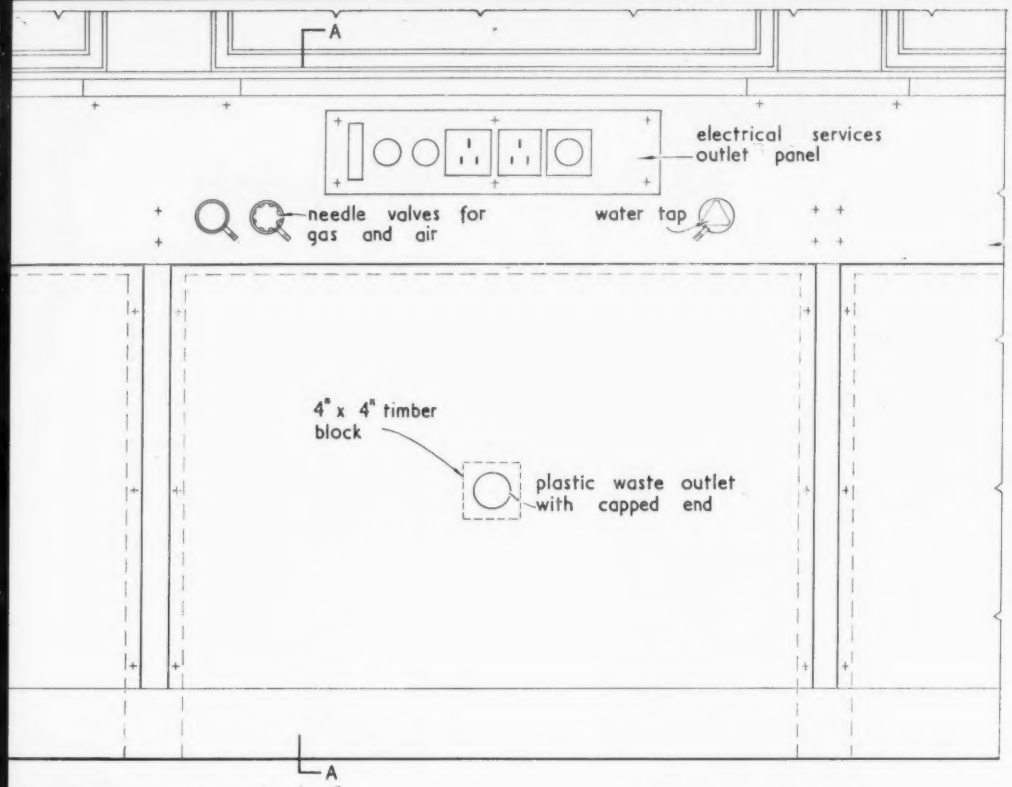


The chief interest in this detail lies in the materials used. Starting at the top, the sill is afrormosia, the panel immediately below (but which will be above bench height) is melamine plastic-faced plywood. Behind it, is a 6 in. by 6 in. m.s. duct carrying the electrical cables. The lower panel is hollow-core plywood painted, and the skirting is steel to match the steel partitions used in the laboratory. The pipes (again reading from the top) are first, two ½ in. dia. copper-alloy pipes carrying oxygen and hydrogen respectively, next six steel pipes of varying diameters carrying tank water, high-pressure gas, low-pressure gas, compressed air and two pipes carrying the flow and return of recirculated cooling water for use with laboratory furnaces. These pipes are painted blue for water, yellow for gas and white for air in accordance with BS. 1710: 1951. Last are three polythene pipes, two carrying "mixed bed conductivity water" (a high purity demineralised water) and the lowest of all carrying the laboratory waste. This last group has to be supported in layboards. The return of the lightweight concrete block walling serves the double purpose of providing easy fixing for the pipes and extra cover for the columns to satisfy the fire regulations.

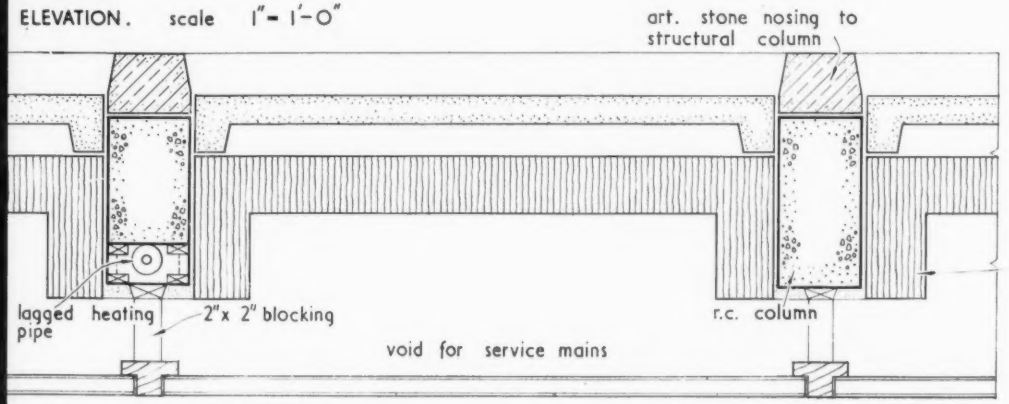
working detail

SERVICE DUCT: LABORATORIES AT ENFIELD, MIDDLESEX

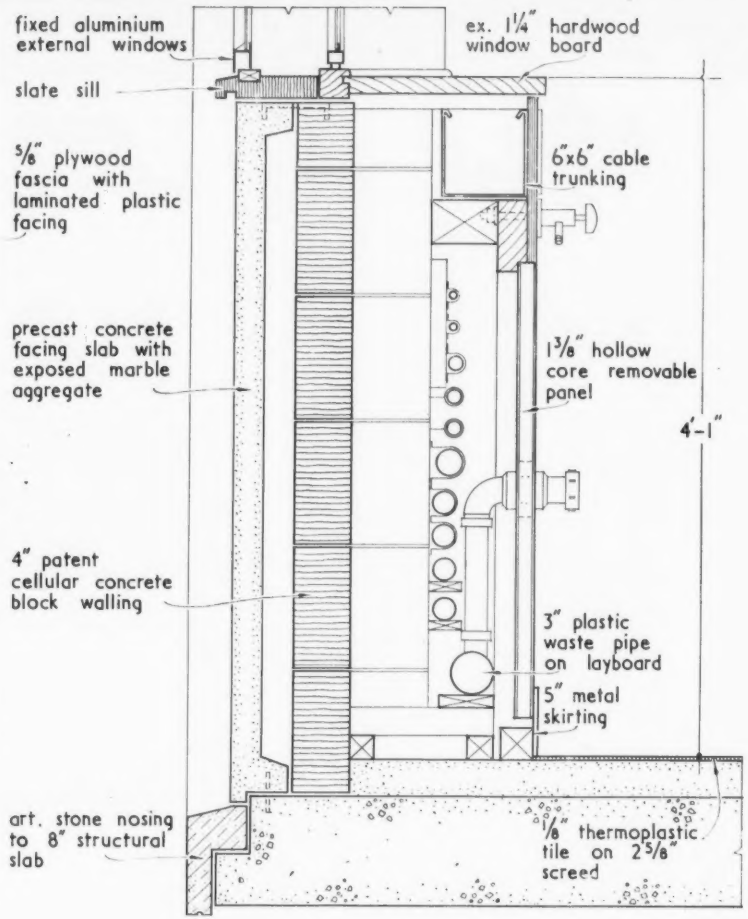
G. A. Jellicoe, architect



ELEVATION. scale 1"= 1'-0"

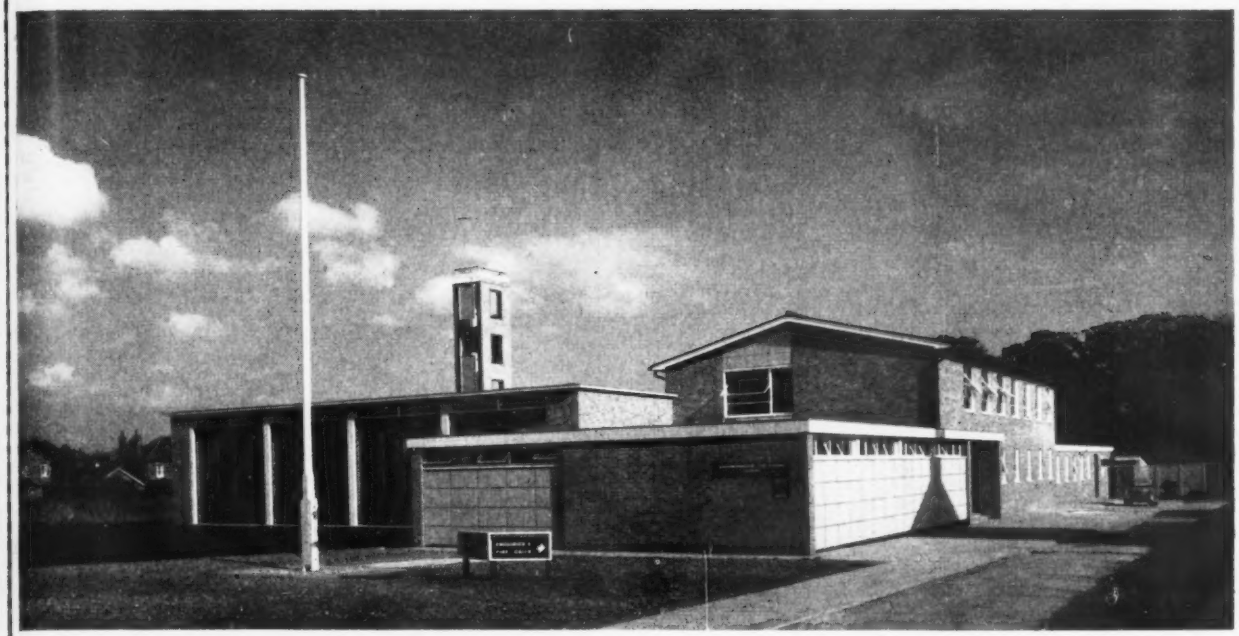


PLAN. scale 1"= 1'-0"



SECTION A-A. scale 1"= 1'-0"

BUILDING IN THE NEWS



Fire Station at Slough, Bucks

The Fire and Ambulance Station in Tuns Lane, Slough, designed by Frederick Pooley, County Architect, will be illustrated fully in a later issue of the JOURNAL. *On the left is the appliance room, with the drill tower behind it. In the foreground are the dormitories and the ambulance station. The dining and recreation rooms are on the first floor of the two-storey block. Behind the building, and divided from it by a large yard, is a 190-ft. long ambulance garage and repair shop.*

Contractors

Biological Products Laboratory, Weybridge, Surrey for the Ministry of Agriculture, Fisheries and Food (Pages 732-733) *Architects*: Chief Architect's Division, Ministry of Works, E. Bedford, C.V.O., A.R.I.B.A., *Chief architect*: A. Swift, A.R.I.B.A., *Senior architect*: A. M. Palmer, B.SC., A.M.I.H.V.E. *Senior Mechanical and electrical engineer*: G. H. Stewart, M.I., STRUCT. *Senior structural engineer*: K. W. Tranter, Controller of Supplies, Technical Officer. *General contractors*: Lavender McMillan & Co. Ltd. *Sub-contractors*: *Asphalt tanking*: The General Asphalt Co. Ltd. *Metal windows*: Aygee Ltd. *Hollow tile roofs*: Brick Flooring Construction Ltd. *Felt roofing*: Vulcanite Ltd. *Canopy and removable panels to ducts*: Alphamin Ltd. *Solid-cored flush doors*: Walter Lawrence & Son Ltd. *Terrazzo*: The Camden Tile Co. *Acid-resisting flooring*: Semtex Ltd. *Aluminium balustrading*: H. & C. Davis & Co. Ltd. *Cold cement glaze*: Robb's Cement Enamel Finishes Ltd. *Plastering & granolithic*: Alan Miln Ltd. *Painting*: Pilling Bros. *C. I. drainage & plumbing*: Building Installation Ltd. *Glazing*: Wootons (Croydon) Ltd. *Ventilation*: R. B. Stirling Ltd. *Electrical installation*: W. H. Gaze & Co. Ltd. *Heating*: Z. D. Berry & Co. Ltd. *Autoclaves, sterilizers, koch pots*: M. S. A. Ltd. *Incubators*: Chas. Hearson & Co. Ltd. *Cold rooms*: York Shipley Co. Ltd. *Dry freeze*: Usifroid et Cie. *Lifts*: Evans Bros. Ltd. *Electrical service casings*: Christy Bros. Ltd. *Gas taps & fittings*: Evereds Ltd. Water *stills*: Manesty Ltd. *Drying cabinets*: A. E. W. Ltd. *Drying ovens*: Thermal Equipment Co. Ltd. *Public address*: E. M. I. Ltd. *Lagging*: Kitsons Insulations Ltd. *Laboratory benching*: Norbury Joinery & Cabinet Works. *Stainless steel sinks*: Sissons *Venetian blinds*: W. Cooper & Sons. *Lino*: Oscroft & Partners.

Offices, 17/19, Foley Street, St. Mary lebone, London, W.1 (pages 730-731) *Architect:* C. H. Elsom, F.R.I.B.A. *Chief Assistant:* R. L. Nicholls, A.R.I.B.A. *Consulting Engineers:* S. H. & D. E. White. *Quantity Surveyors:* Veale & Sanders. *General contractors:* J. A. Tyler & Sons Ltd. *Sub-contractors: Structural steel:* Rubery Owen & Co. Ltd. *Floors and roof:* Caxton Floors Ltd. *Metal windows:* Brunswick Metal Casement & Engineering Co. Ltd. *Lifts:* Pickerings Ltd. *Heating:* J. H. Nicholson & Co. Ltd. *Electrical:* Leaf & Carver Ltd. *Pavement lights:* Luxfer Ltd. *Door furniture and balustrading:* Comyn Ching & Co. (London) Ltd. *Sanitary fittings:* Stitsons Sanitary Fittings Ltd. *Marble:* Art Marbles, Stone & Mosaic Co. Ltd. *Staircase glazing:* Steeles Ltd. *Bricks:* Broad & Co. Ltd. *Terrazzo:* Zanelli (London) Ltd. *Reconstructed stone:* Wiggins-Sankey Ltd. *Aluminium coping:* William Briggs & Sons Ltd. *Asphalt:* Durastic Ltd.

Announcements

PROFESSIONAL

Cecil Lush, A.R.I.B.A., has taken into partnership A. W. Lester, A.R.I.B.A. The practice will continue from Craven House, 121, Kingsway, W.C.2 (telephone Chancery 2332) under the title of Lush & Lester.

Kenneth Ward, A.R.I.B.A., has moved from 3, Finkle Street, Selby to new offices at 29a, Gowthorpe Selby (telephone Selby 580).

C. J. Cheale, L.R.I.B.A., F.I.A.A./S., M.INST. R.A., has changed his address to: 182, Maidstone Road, Chatham, Kent (telephone Chatham 3112).

Parker & Browne, A/A.R.I.C.S., Chartered Quantity Surveyors, of 71, Wimpole Street, W.1., have moved to new offices at Bank Chambers, 329, High Holborn, W.C.1 (telephone Chancery 3649).

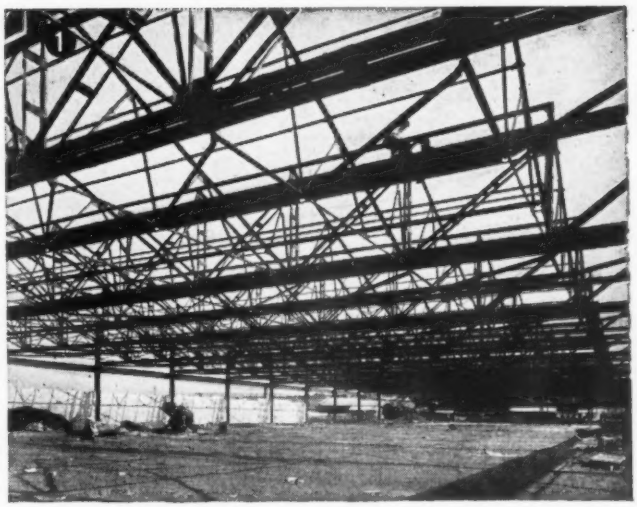
TRADE

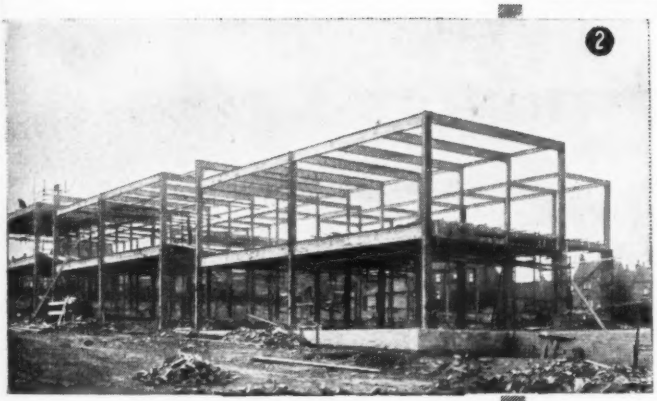
Allied Ironfounders Ltd., of 28, Brook Street, W.1. announce that D. Lovell has been appointed Sales Manager of the newly formed Oil Division. Mr. Lovell joined Aga Heat Ltd., one of the Subsidiary Companies, in 1948, becoming London Sales Manager in 1950.

Correction

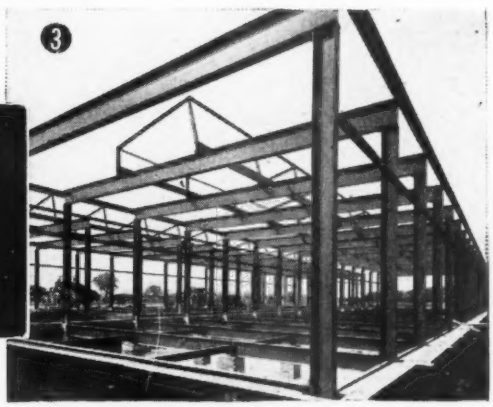
In the Contractors List for Sylvania-Thorn Colour Television Laboratories Ltd., it was incorrectly stated that heating and ventilation was done by J. Jefferies & Co. Ltd.,—this should have been J. Jefferys & Co. Ltd.

Design
Fabrication
Erection





1. New factory building for Messrs. William Cooke & Co. Ltd. of Rotherham. 300 ft. x 120 ft. span.
2. The County Primary School, Crosland Moor, Huddersfield.
3. College of Further Education, Grimsby, in course of erection. Stage 1.
4. The completed College. Stage 1.



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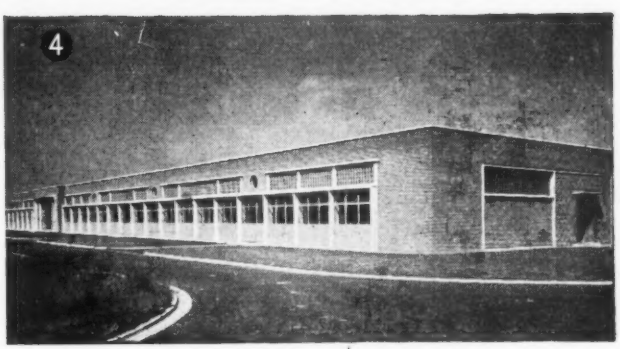
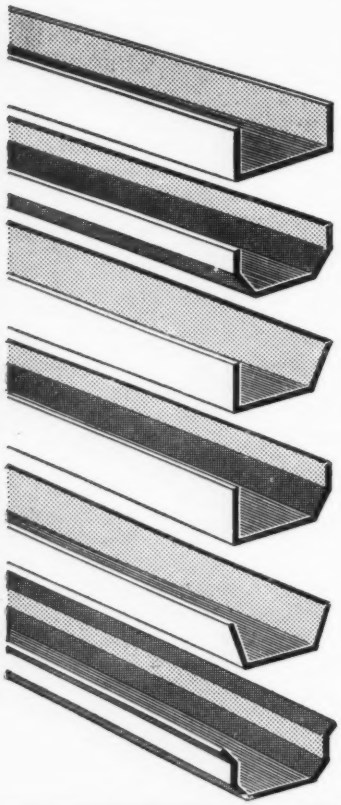
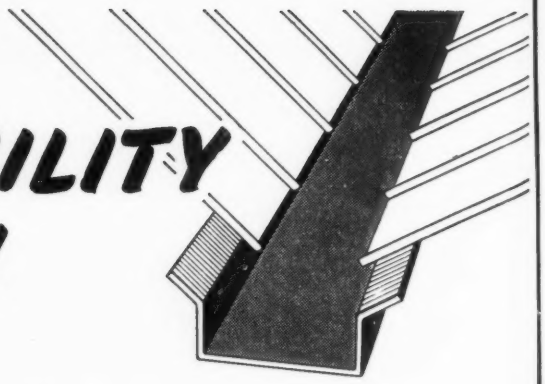




Where DURABILITY is Vital



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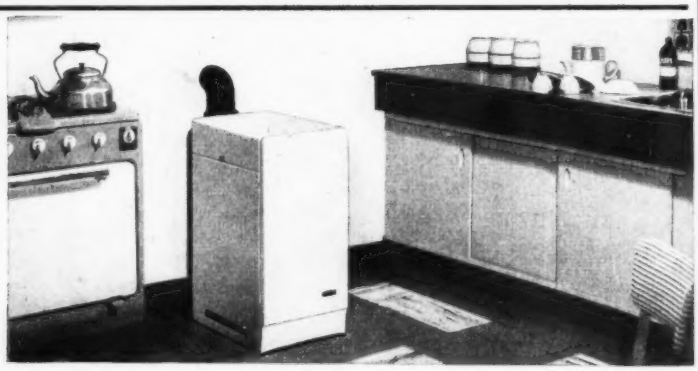

44

30

PRICE STABILIZATION

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It is at present available in two sizes; other models are being developed. Special 'glass'-lined waterways by a new process can be supplied for soft-water areas. Easy accessibility, foolproof controls and the fact that on first lighting from cold there is virtually no condensation mean that the 'Diplomat' can always be recommended with complete confidence.

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	Max. Gas Rate B.t.u/hr.	Max. Heat Output B.t.u/hr.
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DIPLOMAT 44	55,000	44,000

	Height	Width	Depth
DIPLOMAT 30	32½"	15"	27"
DIPLOMAT 44	32½"	15"	27"

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The 'Diplomat' Gas-Fired Boiler

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Available in white · cream · scarlet and viridian green

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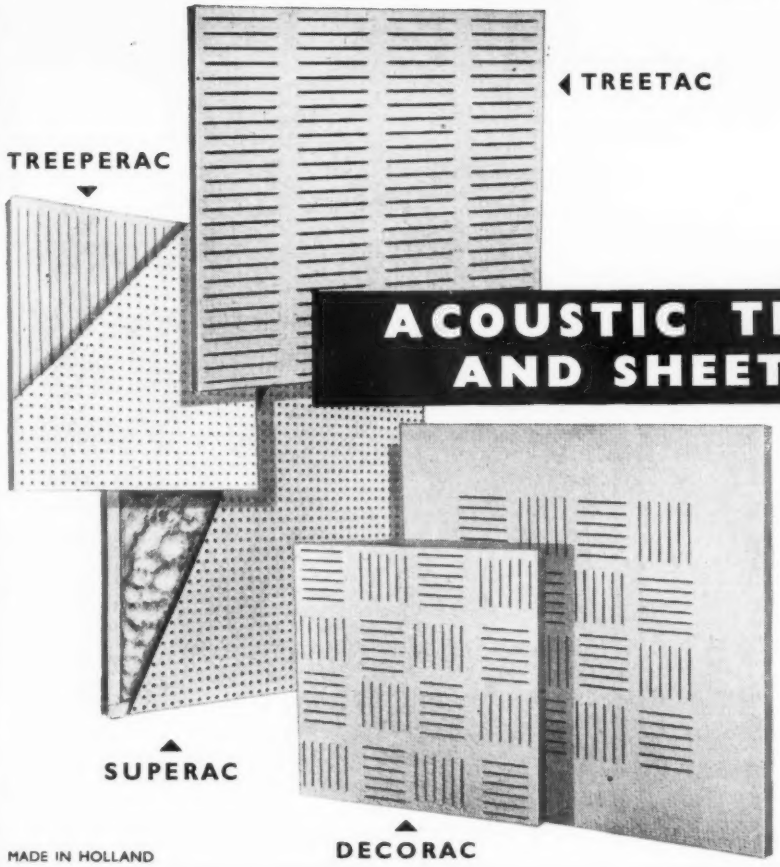

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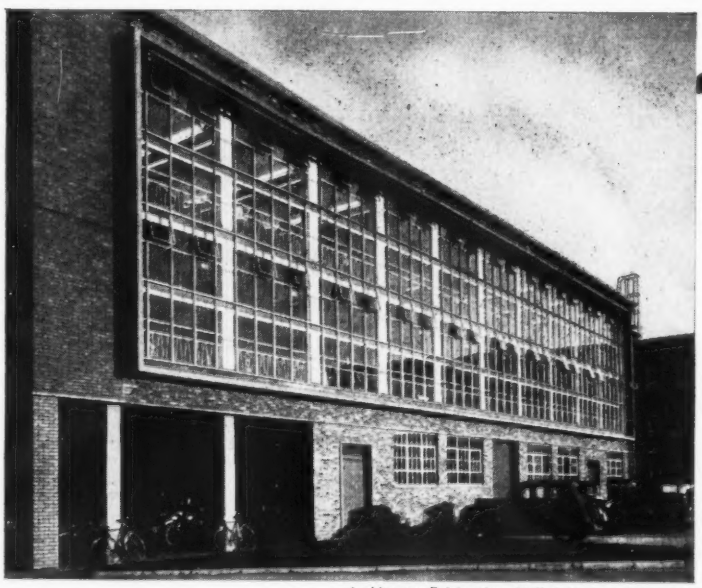

Architects: Fairbrother, Hall & Hedges, Edinburgh
General Contractors: Wm. Arnott McLeod & Co. Ltd.

Pictured above is the Drawing Office Window of the new Ferranti Research Laboratory at Edinburgh, where Teleflex Remote Controls are used throughout.

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

Public and Official Announcements

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

THE ARCHITECTS' JOURNAL RESEARCH BOARD invites applications for two Fellowships. The first will enable the holder to work on the following: Information for the Architect: What Does He Need and Where Will it Come From. This is a continuation of the Board's first Fellowship which has become vacant through the death of the holder, the late Michael Ventris, O.B.E. This Fellowship is open to anyone in the English-speaking world who has completed a course qualifying him (or her) for registration as an architect and has had three or more years' practical experience after qualifying.

The subject of the second Fellowship is open to the choice of applicants, the main condition being that its study must directly benefit the architect in practice. For the guidance of applicants, the following four subjects have been considered by the Board as fulfilling this condition, though it is not their wish that applicants should confine their choice to these: The Influence on Design of Building Contractors' Equipment; The Layman's Reaction to Architectural Style; The Effect of Rules and Regulations other than Building Law on Design in Cities; The Effect of Engineering Services on Design.

This second Fellowship is open to anyone in the English-speaking world who has completed a course qualifying him (or her) for registration as an architect, or who holds an academic or professional qualification of equivalent standing.

The value of each of these Fellowships, which are tenable for one year or some less period by arrangement, is £1,000, plus certain expenses. The successful candidate may be required to work at Edinburgh or Liverpool Universities, the Building Research Station, Garston, or the Architectural Association, London.

Further details and application forms are obtainable from the Secretary, Research Board, The Architects' Journal, 9, Queen Anne's Gate, London S.W.1. Last date for the receipt of applications is December 15, 1956. 915

THE CORPORATION OF GLASGOW
ARCHITECTURAL AND PLANNING DEPARTMENT
ASSISTANT ARCHITECTS
PLANNING ASSISTANTS
ASSISTANT QUANTITY SURVEYORS

Vacancies exist for a number of assistants. Minimum qualification, Intermediate Examination of the appropriate professional body. Salary scale £580—£1,100 per annum, with placing according to age, experience and qualifications.

Forms of application may be obtained from the Principal Administrative Officer, 20, Trongate, Glasgow, C.1.

A. G. JURY,
City Architect and Planning Officer.
4164

DURHAM COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT

Applications are invited from QUALIFIED ARCHITECTS for appointment on salary scale A.P.T. V (£814 17s. 6d. to £994 5s.).

The appointments are subject to medical examinations for the purpose of the Local Government Superannuation Acts, the Council's regulations and the National Joint Council's Scheme for the time being governing payment of salary during sickness, annual leave and other conditions of service.

Applications including the names and addresses of two persons to whom reference may be made must reach the County Architect, South Street, Durham, by 27th November, 1956.

J. K. HOPE,
Clerk of the County Council.
4466

PEMBROKESHIRE COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT

Applications are invited for the following appointments on the permanent staff:—

SENIOR ASSISTANT ARCHITECTS, A.P.T. Grade V (£795—£970 plus 2½%).

ASSISTANT ARCHITECTS, A.P.T. Grade IV (£710—£885 plus 2½%).

Commencing salary according to qualifications and experience.

Applicants should be members of the R.I.B.A. by examination or hold equivalent academic qualifications with experience of contemporary Architectural or Structural design.

The appointment which will be subject to the provisions of the Council's Superannuation Acts and the National Joint Council's Scheme of Conditions of Service, will also be subject to a satisfactory medical examination.

Forms of application can be obtained from the County Architect, County Offices, Haverfordwest, and should be returned, duly completed, to the undersigned not later than 8th December, 1956.

H. LOUIS UNDERWOOD,
Clerk of the County Council.

County Offices,
Haverfordwest.
7th November, 1956. 4467

COUNTY BOROUGH OF DERBY
BOROUGH ARCHITECT'S DEPARTMENT
QUANTITY SURVEYING STAFF:—

(*a*) A.P.T. Grade IV (£727—£907 per annum).
(*b*) A.P.T. Grade V/VI (£814—£1,107 per annum).

Commencing salary will be according to qualifications and experience.

Permanent superannuable appointments, subject to one month's notice and to medical examination. National Conditions of Service.

Application forms obtainable from and to be returned to the Borough Architect, The Council House, Corporation Street, Derby, not later than Monday, 3rd December, 1956.

G. H. EMLYN JONES,
Town Clerk.
8th November, 1956. 4473

BOROUGH OF WORKINGTON
APPOINTMENT OF ARCHITECTURAL ASSISTANT

Applications are invited for the appointment of Architectural Assistant in the Borough Engineer and Surveyor's Department at a salary in accordance with Grade A.P.T. III (£640—£765).

The appointment will be subject to the Local Government Superannuation Acts and be determinable by one month's notice on either side.

Housing accommodation will be provided if required.

Applications, stating age, qualifications, experience and particulars of past and present appointments, together with the names and addresses of two referees, should be sent to the Borough Engineer and Surveyor, "Stoneleigh," Park End Road, Workington, not later than the 26th November, 1956.

RUSSELL C. PHARAOH,
Town Clerk.

Town Hall,
Workington.
6th November, 1956. 4447

BOROUGH OF SHREWSBURY
BOROUGH SURVEYOR'S DEPARTMENT

Applications are invited for the post of ARCHITECTURAL ASSISTANT, A.P.T. IV (£710 × £35 —£885, plus 2½%).

Housing accommodation will be provided, if required, and removal expenses paid.

Applications stating age, qualifications and experience with the names of two persons to whom reference can be made should be submitted to the Borough Surveyor, Guildhall, Shrewsbury, by 21st November, 1956.

S. R. H. LOXTON,
Town Clerk.

Guildhall,
Shrewsbury. 4471

HITCHIN URBAN DISTRICT COUNCIL
SURVEYOR'S DEPARTMENT

Applications are invited for the appointment of ARCHITECTURAL ASSISTANT in the Surveyor's Department at a salary on Grade A.P.T. II (£609 17s. 6d.—£691 17s. 6d.). The commencing salary within the Grade will be fixed according to qualifications and experience.

Preference will be given to applicants holding the R.I.B.A. Intermediate Examination or its equivalent.

The appointment is superannuable and subject to the National Scheme of Conditions of Service.

THE COUNCIL WILL BE PREPARED, IF NECESSARY, TO PROVIDE THE SUCCESSFUL APPLICANT WITH HOUSING ACCOMMODATION.

Applications, stating age and experience, together with the names of two referees, must be received by the undersigned in envelopes marked "Architectural Assistant," not later than Monday, 3rd December, 1956.

Canvassing will disqualify.

W. WILSON,
Clerk of the Council.

Council Offices, Brand Street,
Hitchin, Herts. 4503

COUNTY OF CORNWALL
COUNTY ARCHITECT'S DEPARTMENT

The department has an increasing volume of new building work for the Education Committee, and applications are invited from qualified Architects and Quantity Surveyors for the following established appointments:—

(*a*) ARCHITECTS. Salary range £690—£970, plus 2½ per cent. recent award.

The commencing salary will be within the above grade, dependent upon the candidate's qualifications and experience. This salary scale allows for continuous progression to the maximum of A.P.T. V, subject to satisfactory service.

Architects required for these posts must have a progressive outlook, be willing to accept a maximum amount of responsibility and will work in Groups under the general supervision of the Architect in charge.

(*b*) QUANTITY SURVEYORS. Salary range £690—£970, plus 2½ per cent. Commencing salary as for (*a*) above.

Candidates should have experience in taking off for all types of buildings and, in particular, new schools. They will be responsible for site measurements, valuations, final accounts, etc.

The appointments are subject to the usual conditions of Local Government Service. Applications, accompanied by the names of two persons to whom reference can be made, should reach Mr. F. K. Hicklin, A.R.I.B.A., County Architect, County Hall, Truro, not later than Monday, 3rd December, 1956.

E. T. VERGER,
Clerk of the County Council.

County Hall, Truro.
9th November, 1956. 4513

WARWICKSHIRE COUNTY COUNCIL
ARCHITECT'S DEPARTMENT

Applications are invited for the following appointments:—

(*a*) SENIOR ASSISTANT ARCHITECTS, Grade A.P.T. V (£814 17s. 6d.—£994 5s.). Applicants must be competent designers, having a knowledge of modern methods of construction and be capable of handling large building projects from sketch plan stage to completion.

(*b*) ARCHITECTS, Grade A.P.T. IV (£727 15s.–£907 2s. 6d.). Applicants must be competent designers having a good knowledge of construction and be capable of handling medium sized contracts.

(*c*) ASSISTANT ARCHITECTS, scale £707 5s.–£861. The successful applicants will work in teams on large projects, but opportunity will be given to men with enthusiasm and ability to design and carry out smaller projects under the group architect.

The commencing salaries can be within the grades according to the ability and experience. The appointments are on the established staff and subject to the Scheme of Conditions of Service of the National Joint Council for Local Authorities and the Local Government Superannuation Acts, 1937-1953. Successful candidates will be required to pass a medical examination.

The Council is unable to offer successful candidates housing accommodation.

Applications are to be on forms which can be obtained from G. R. Barnsley, F.R.I.B.A., County Architect, Shire Hall, Warwick.

L. EDGAR STEPHENS,
Clerk of the Council
Shire Hall, Warwick. 4512

AMENDED ADVERTISEMENT
BOROUGH OF NEATH
APPOINTMENT OF ARCHITECTURAL ASSISTANT

Applications are invited for the above appointment. Applicants must have completed a period of training, had not less than two years subsequent experience in architectural work, have passed the Intermediate Examination of the R.I.B.A., and preferably some parts of the Final Examination.

The salary will be Grade A.P.T. III (£656 to £784), and the appointment will be subject to one month's notice on either side; to the Local Government Superannuation Acts, 1937 and 1953 and to the passing of a medical examination.

Applications, stating age, qualifications and experience, and giving the names of two referees must be received by the undersigned not later than 30th November, 1956.

D. KING DAVIES,
Town Clerk
Town Hall, Neath. 4511

COUNTY BOROUGH OF BARNSLEY
BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT
APPOINTMENT OF JUNIOR QUANTITY SURVEYING ASSISTANT

Applications are invited for the above appointment, at a salary in accordance with A.P.T. I (£543 5s.—£625 5s.)—II (£609 17s. 6d.—£691 17s. 6d.) THE POINT OF ENTRY WITHIN THESE GRADES MAY BE FIXED ABOVE THE MINIMUM.

Applicants should have had some experience in preparing bills of quantities, interim valuations and final accounts for housing and other building works.

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

HOUSING ACCOMMODATION WILL BE PROVIDED IF NECESSARY, AND 50 PER CENT. OF REMOVAL TRANSPORT EXPENSES WILL BE PAID IN APPROVED CASES.

Applications, stating age, present and previous appointments, qualifications, experience, etc., together with the names of two persons for reference, should reach the Borough Engineer, Town Hall, Barnsley, by Wednesday, 5th December, 1956.

Canvassing will disqualify.

A. E. GILFILLAN,
Town Clerk.
Town Hall, Barnsley.
November, 1956. 4508

ANTRIM COUNTY COUNCIL
PLANNING ASSISTANT

Applications are invited for the above position which will be remunerated on A.P.T. Grade VI (£880×£40—£1,080), subject to deductions under the Local Government (Superannuation) Act (N.I.), 1950.

It is the Council's policy to give special consideration to candidates who have served in Her Majesty's forces.

Applicants must be Corporate Members of the Town Planning Institute; an additional qualification in engineering, surveying, or architecture is desirable.

Applications, giving age and full details of qualifications and experience, together with the names of two referees, to be received by me not later than the 15th December, 1956.

W. S. HENDERSON,
Secretary.
County Courthouse, Crumlin Road, Belfast. 4509

BOROUGH OF WIMBLEDON
BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT

Applications are invited for an ARCHITECTURAL ASSISTANT, Grade A.P.T. IV, on the established staff. Salary £727 to £907 per annum, London weighting additional.

Applicants must be an Associate of the R.I.B.A. and have had at least 5 years' experience in an Architect's office. The appointment is subject to the National Scheme of Conditions of Service, the Local Government Superannuation Acts, and a satisfactory medical report. Applications, endorsed "Architectural Assistant," stating age, qualifications, all former Local Government Service, present and previous appointments and experience, period required to terminate present appointment, and the names of three referees, must be forwarded to the Borough Engineer and Surveyor by 1st December, 1956. Candidates must disclose to the undersigned if they are related to any member or senior officer of the Council. Canvassing disqualifies.

FRANCIS J. O'DOWD,
Town Clerk.

Town Hall, Wimbledon, S.W.19. 4510

COUNTY BOROUGH OF GATESHEAD

Applications are invited from qualified and experienced persons for the following appointments, which are subject to N.J.C. Conditions:—

SENIOR ASSISTANT ARCHITECTS, A.P.T. V (£814 17s. 6d.—£994 5s.). Applicants must be Registered Architects, and should be Corporate Members of the Royal Institute of British Architects. They should have had good experience in the design and construction of Public Buildings, Schools and/or Municipal Housing Schemes.

JUNIOR ARCHITECTURAL ASSISTANT, A.P.T., I-III (£543 5s.—£784 2s. 6d.). Applicants should have had previous experience in an Architect's office and must have passed the R.I.B.A. Intermediate Examination.

TOWN PLANNING ASSISTANTS, A.P.T. II (£609 17s. 6d.—£691 17s. 6d.). Applicants must have had not less than 3 years' experience on Development Plan Surveys and Development Control, and have passed the Intermediate Examination of the Town Planning Institute.

ASSISTANT QUANTITY SURVEYOR, A.P.T. II (£609 17s. 6d.—£691 17s. 6d.). Candidates should have passed the Intermediate Examination of the R.I.C.S. and should have a sound knowledge of Quantity Surveying in all its branches, together with experience in Measurement, Abstracting and Billing.

ESTIMATING AND COST CLERK, A.P.T. II (£609 17s. 6d.—£691 17s. 6d.). Candidates must have had a wide experience of costing and estimating for large capital and maintenance works, and be able to take charge of staff engaged on this work; they should also be able to price Bills of Quantities and have knowledge of site measuring.

Posts pensionable, subject to medical examination and one month's notice on either side.

FAVOURABLE CONSIDERATION WILL BE GIVEN TO THE PROVISION OF HOUSING ACCOMMODATION IN CERTAIN CASES.

Applications, on forms obtainable from the Borough Surveyor, Swinburne Street, Gateshead, 8, must be returned to him not later than Monday, 10th December, 1956.

C. D. JACKSON,
Town Clerk.

Town Hall, Gateshead, 8.
14th November, 1956. 4541

COUNTY COUNCIL OF ESSEX

Required on the established staff:—

(*a*) SECTIONAL ASSISTANT ARCHITECTS, Grade VII. Salaries not exceeding £1,230.

(*b*) ASSISTANT ARCHITECTS, Grade IV. Salaries not exceeding £907 2s. 6d.

(*c*) ASSISTANT ARCHITECTS, in Special Grade. Salaries not exceeding £861.

Candidates for appointments (*a*) and (*b*) must be Associates of the R.I.B.A., and for (*c*) must have passed Parts I and II of R.I.B.A. Final.

Commencing salary in each case according to qualifications and experience.

The appointments offer opportunities for design and supervision on a variety of buildings—colleges, libraries, day and boarding schools, police and fire stations and health buildings—and successful candidates will have much responsibility within the group system.

Application forms from H. Conolly, C.B.E., F.R.I.B.A., County Architect, County Hall, Chelmsford (state post for which form is required), to be returned with copies of three testimonials by 7th December, 1956.

Canvassing disqualifies. 4537

METROPOLITAN BOROUGH OF BATTERSEA

Applications are invited for the following permanent appointments:—

ARCHITECTURAL ASSISTANT, A.P.T. II (£595 × £20 to £675 per annum).

OFFICE JUNIOR, Architects' Section (Qualified General Division, £180 to £640 per annum, subject to certificates of efficiency).

To the above salaries are to be added recent national award of 2½ per cent., and also London weighting of £10 per annum under 21 years; £20 p.a. 21-25 years; and £30 p.a. 26 years and over.

Previous local government experience not essential. Work of the department includes public buildings and multi-storey flats.

Application forms from the Borough Engineer and Surveyor, Town Hall, S.W.11. Closing date: 10th December. 4540

CITY OF BRADFORD
ARCHITECTURAL & PLANNING ASSISTANTS

Applications are invited for the following superannuable appointments in the City Engineer and Surveyor's Department:—

(*a*) SENIOR TOWN PLANNING ASSISTANT. APT. IV (£727.15.0/£907.2.6). Post No. 14.

(*b*) ARCHITECTURAL ASSISTANT. APT. I (£543.5.0/£625.5.0) or APT. II (£609.17.6/£691.17.6) according to qualifications. Post No. 123.

(*c*) JUNIOR TOWN PLANNING ASSISTANT. Post No. 57. APT. I (£543.5.0/£625.5.0) or APT. II (£609.17.6/£691.17.6) according to qualifications.

Candidates for post (*a*) should have had experience in preparation of development and in the examination of planning applications in connection with current development. Must have a sound knowledge of the Town and County Planning Acts and Regulations and experience in preparing evidence in connection with Appeals. He should be A.M.T.P.I. and/or A.M.I.Mun.E., A.M.I.C.E., or A.R.I.B.A.

Applicants for post (*b*) should have had experience in the layout and design of housing estates. Candidates should have passed the Intermediate examination of the appropriate professional body.

Candidates for (*c*) should have had experience in surveying and in layout and design of housing estates. Candidates should have passed the intermediate examination of the appropriate professional body to qualify for APT. II.

All applicants should have completed their National Service. No housing accommodation can be provided by the Corporation.

Applications on forms to be obtained from the City Engineer and Surveyor, Town Hall, Bradford, 1, together with three testimonials, must be received by the undersigned by 13th December, 1956.

W. H. LEATHEM, *Town Clerk.*

Town Hall, Bradford, 1. 4565

CITY OF BIRMINGHAM HOUSING MANAGEMENT DEPARTMENT
CLEFT CHESTNUT FENCING

The Housing Management Committee of the Birmingham Corporation invites tenders for the supply and delivery of approximately 150,000 yards of 3′ cleft chestnut fencing, 30,000 yards of 3′ 6″ cleft chestnut fencing and 60,000 4′ 6″ stakes to be supplied during the twelve months commencing 1st February, 1957.

The attention of persons submitting tenders is drawn to the following points:—

(1) Delivery will be required in twelve equal monthly instalments, but deliveries can if it suits the supplier be made in advance.

(2) Tenders may be accepted for quantities less than the total amount specified, but such tenders must not be for less than 20,000 yards of fencing and 6,000 stakes.

Forms of tender can be obtained from the undersigned at 19-29, Summer Row, Birmingham, 3, and should be returned by the 10th December, 1956.

J. P. MACEY,
Housing Manager.
4554

COUNTY BOROUGH OF MERTHYR TYDFIL
PERMANENT APPOINTMENT OF TWO SENIOR ARCHITECTURAL ASSISTANTS

Applications are invited for the above appointments at a salary in accordance with Grade A.P.T. V of the National Scheme of Conditions of Service.

Applicants must be Associate Members of the Royal Institute of British Architects, and must have had good all round experience in the architectural work usually undertaken by the Local Authority. Planning experience would be an advantage.

Housing accommodation will be provided if required, and reasonable removal expenses of the successful applicant will be paid.

The appointment will be subject to the Local Government Superannuation Acts and to the passing of a medical examination. The appointment will be terminable by one month's notice on either side.

Applications, stating age, past and present appointments, qualifications and experience, together with copies of three recent testimonials, should be delivered to the undersigned not later than 12 noon on 8th December, 1956.

Canvassing in any form will disqualify.

T. S. EVANS,
Town Clerk.

Town Hall, Merthyr Tydfil. 4522

HAMPSHIRE

Applications are invited for the posts of ARCHITECTURAL/PLANNING ASSISTANTS on Grade A.P.T. III of the National Scales (£656—£785) in the County Planning Department, Headquarters Office, Winchester, and in the North-East Area Office, Basingstoke. Candidates must have passed the Intermediate Examination of the Royal Institute of British Architects or of the Town Planning Institute. They should be experienced and capable designers, and have some knowledge of Town Planning.

The appointments are pensionable and will be subject to satisfactory medical reports. In approved cases, the County Council will assist in meeting removal and other expenses.

Applications, stating age, education, qualifications and experience, together with a copy of one testimonial and the names of two referees, should reach the County Planning Officer, Litton Lodge, Clifton Road, Winchester, by 5th December. 4527

CITY OF BIRMINGHAM
CITY ARCHITECT'S DEPARTMENT

Applications are invited for appointments as ASSISTANT ARCHITECTS and ARCHITECTURAL ASSISTANTS in the three Architectural Sections of the City Architect's Department. The large programme of work within these Sections covers the planning, design and construction of Educational Buildings; various Civic Buildings; and all types of Municipal Dwellings, including multi-storey flats, together with ancillary buildings and shopping centres in connection with the Central Redevelopment Areas and other sites.

Vacancies exist in the following Grades:—

(*a*) ASSISTANT ARCHITECTS, Grade A.P.T. V (£814 17s. 6d.—£994 5s. per annum).

(*b*) ASSISTANT ARCHITECTS, Grade A.P.T. IV (£727 15s.—£907 2s. 6d. per annum).

(*c*) ARCHITECTURAL ASSISTANTS, Special Classes, Ad Hoc Scale (£707 5s.—£861 per annum).

(*d*) ARCHITECTURAL ASSISTANTS, Special Classes, Grade A.P.T. II (£629 17s. 6d.—£711 17s. 6d. per annum).

(*e*) ARCHITECTURAL ASSISTANTS, Special Classes, Grade A.P.T. I (£563 5s.—£645 5s. per annum).

Applicants for posts (*a*) and (*b*) must be Associate Members of the R.I.B.A. or hold equivalent qualifications, and for posts (*c*), (*d*) and (*e*) must be suitably qualified in accordance with the regulations of the National Joint Council for Architectural Assistants.

The commencing salary in all grades will be according to capabilities and experience.

The posts are permanent, superannuable, subject to a medical examination, and to one month's notice on either side.

Applications, endorsed with the heading of the post, stating age, present position and salary, qualifications and experience, together with the names of two persons to whom reference can be made, should reach the undersigned by not later than 14th December, 1956.

Canvassing disqualifies.

A. G. SHEPPARD FIDLER,
City Architect.

Civic Centre, Birmingham, 1. 4530

BISHOP AUCKLAND URBAN DISTRICT COUNCIL
ARCHITECTURAL ASSISTANT

Applications are invited for the appointment of an Architectural Assistant to work in the department of the Council's Architect, Surveyor and Engineer. The salary for the appointment will be in accordance with Grade II of the A.P.T. Division of the National Scales, commencing at £609 17s. 6d. per annum and rising by four annual increments to a maximum of £691 17s. 6d. per annum.

The appointment will be subject to the provisions of the Local Government Superannuation Acts, 1937-1953, and also to one month's notice on either side. If required, housing accommodation will be provided within a reasonable time after the appointment is made, but this must be vacated if and when the appointment is terminated.

Applications, stating age, qualifications, experience and present appointment, accompanied by the names and addresses of two persons to whom reference can be made, must reach the undersigned not later than Monday, 26th November, 1956.

R. W. BLYTHE,
Clerk of the Council.

Town Hall, Bishop Auckland.
12th November, 1956. 4525

The British Transport Commission invite applications for the post of

DESIGN OFFICER.

The Commission have recently appointed a Panel to advise them on the æsthetic and amenity design of new equipment for British Railways and other parts of their undertaking; the Design Officer will be responsible for the administration of the Panel's work, including the appointment and co-ordination of professional industrial designers. The salary will depend on qualifications and experience, but will not be less than £1,900.

Candidates should have proved ability in administration, preferably involving some form of design. They should possess a sound appreciation of industrial design and be familiar with recent developments in the design field. Professional qualifications in industrial design, architecture or engineering would be an advantage but are not essential. The selected candidate will join a contributory superannuation scheme.

Applications, giving full particulars, to Director of Establishment and Staff, British Transport Commission, 222, Marylebone Road, London, N.W.1, not later than Monday, 10th December. 4524

BERWICKSHIRE COUNTY COUNCIL
ARCHITECTURAL ASSISTANT required for County Architect's Department. Salary scale A. & P. VIII (£905—£980). Candidates must be Registered Architects and preferably Members of the Royal Institute of British Architects. The post is superannuable. House available.

Applications (three copies), stating age, qualifications and experience, accompanied by a like number of copies of three recent testimonials, to be lodged with the County Clerk, County Buildings, Duns, not later than 8th December, 1956. 4519

COUNTY BOROUGH OF CARLISLE

Applications are invited for the following posts in the City Surveyor's Department.

TWO JUNIOR QUANTITY SURVEYORS, A.P.T. Grade II (£595 × £20—£675).

Applicants should be experienced in Measurement of Works under construction and in Certification of Interim Payments, etc.

Forms from City Surveyor, 18, Fisher Street, Carlisle, returnable not later than 6th December, 1955.

H. D. A. ROBERTSON,
Town Clerk.
4507

COUNTY OF LEICESTER

(*a*) ASSISTANT ARCHITECT, £707 5s.—£861, or
(*b*) ARCHITECTURAL ASSISTANT, £656—£784 2s. 6d.

Candidates must have had some office experience, and for (*a*) have passed Parts I and II of the R.I.B.A. Final, or for (*b*) have passed the R.I.B.A. Intermediate. Lodging allowance and removal expenses may be paid to a married man. Apply by 5th December on form obtainable from County Architect, 123, London Road, Leicester. 4528

LONDON COUNTY COUNCIL
ARCHITECT'S DEPARTMENT

Vacancies exist for ARCHITECT/PLANNERS (salaries up to £817). Tasks include 3-dimensional planning within London's eight major Comprehensive Development Areas (including Stepney/Poplar, the South Bank, and Elephant and Castle) and other Redevelopment Areas.

The work includes the preparation of comprehensive layouts covering all the important areas of new public and private development throughout the County, and covers the whole field of planning technique.

Particulars and application form from Architect (AR/EK/ATP/1), County Hall, S.E.1. (907) 4543

DERBYSHIRE COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT

Vacancies for ARCHITECTS, A.P.T. Grade VI, salary £902 rising to £1,107 per annum. National Joint Council conditions of service. Pensionable posts. Canvassing disqualifies. Details and application forms from F. HAMER CROSSLEY, Dipl. Arch(L'pool.), F.R.I.B.A., County Architect, County Offices, St. Mary's Gate, Derby. 4566

LONDON COUNTY COUNCIL
ARCHITECT'S DEPARTMENT

Vacancies for ARCHITECTS Grade III (up to £987), and ARCHITECTURAL ASSISTANTS (up to £818), for widespread construction programme which includes houses, blocks of flats, schools of all types, and various public and industrial buildings. Application forms and particulars from Architect (AR/EK/A/2), The County Hall, S.E.1. (1189) 4544

COUNTY BOROUGH OF CARLISLE

Applications are invited for the following posts in the City Surveyor's Department:—

2 PRINCIPAL ASSISTANT ARCHITECTS, £727 15s.—£994 5s.

Applicants to be A.R.I.B.A., and preference will be given to those having experience in general architectural work on Municipal Buildings and Schools work.

Housing accommodation available if required.

Forms of application from City Surveyor, 18, Fisher Street, Carlisle. Closing date 10th December, 1956.

H. D. A. ROBERTSON,
Town Clerk.
4568

COUNTY BOROUGH OF SUNDERLAND.

Applications are invited for—

ASSISTANT ARCHITECTS—A.P.T. Grade IV (£727.15.0d. to £907.2.6d.).

Commencing salaries according to experience.

Particulars of the appointments obtainable from the Borough Architect, Grange House, Stockton Road, Sunderland.

Applications to be received by me at the Town Hall by 11th December, 1956.

G. S. McINTIRE,
Town Clerk.
4557

BOROUGH OF WALTHAMSTOW COMMITTEE FOR EDUCATION

Applications are invited for the appointment of ARCHITECTURAL ASSISTANT in the Office of the Education Architect, Mr. T. L. Rampton, A.R.I.B.A., A.R.I.C.S.

The commencing salary will be within the range £543.5s.9d. to £691.17s.6d. per annum (Grade A.P.T. I-II) according to qualifications and experience, plus London Weighting of £30 (age 26 and over) or £20 (age 21 to 25).

The post is superannuable and subject to medical examination.

Forms of application to be obtained from and returned to the Borough Education Officer, Town Hall, Forest Road, Walthamstow, E.17, within two weeks of the appearance of this notice. 4555

LONDON COUNTY COUNCIL
ARCHITECT'S DEPARTMENT

ARCHITECTURAL and SURVEYING ASSISTANTS required for BUILDING ACT and BY-LAW WORK in connection with the Council's constructional and fire-precautionary standards. Starting salaries up to £818 according to qualifications and experience.

Particulars and application form from The Architect (AR/EK/BCW/3), County Hall, S.E.1. (2223). 4559

COUNTY BOROUGH OF BURY

Applications invited from suitably qualified persons for appointment of SENIOR QUANTITY SURVEYOR, Borough Engineer's Department, A.P.T. Grade IV (£727 15s. to £907 2s. 6d.), superannuation, medical examination.

If required, provision of housing accommodation will be considered.

Applications, stating age, training, qualifications and experience, with names and addresses of two referees, must reach me by 3rd December.

EDWARD S. SMITH,
Town Clerk.

Town Hall, Bury.
12th November, 1956. 4529

COUNTY BOROUGH OF EAST HAM
JUN. ASST. PLANNING OFFICER

Grade I £530—£610. Borough Engineer's Department. Plus London Weighting. Salary above minimum and subsistence may be paid subject to conditions. Details and form from Town Clerk, E.6. Closing date 3rd December, 1956. 4546

COUNTY BOROUGH OF NEWPORT

Applications are invited for the appointment of PLANNING ASSISTANT. Salary in range £543.5.0 to £691.17.6 dependent upon qualification. A University Degree, preferably in geography or sociology, and/or previous planning experience is desirable. The post is superannuable.

Applications, with names of two referees, to Borough Engineer, Civic Centre, Newport, Mon., by 10th December, 1956. 4567

LONDON COUNTY COUNCIL
ARCHITECT'S DEPARTMENT

GRADE I (within scale £1,184—£1,353)
GRADE IIs (£987—£1,184)
GRADE IIIs (up to £987)
PLANNING ASSISTANTS (up to £818).

Staff required to fill newly created positions in the above grades in the PLANNING DIVISION for work in civic design teams engaged on redevelopment and replanning work associated with a substantial PROGRAMME OF ROAD IMPROVEMENTS. Starting rates according to qualifications and experience.

Particulars and application form, returnable by 8th December, from The Architect (AR/EK/PR/5), County Hall, S.E.1. (2224) 4570

GOVERNMENT OF NORTHERN IRELAND
ARCHITECTURAL ASSISTANTS

Applications are invited from Architectural Assistants with recognised training and fair experience for unestablished posts in the Chief Architect's Branch, Directorate of Works, Ministry of Finance.

The consolidated salary scale is £512, rising to £790. Starting point depends on experience, but the minimum for candidates who have passed the R.I.B.A. Intermediate Examination will be £610.

Preference will be given to candidates who served in H.M. Forces in the 1914-18 or 1939-45 wars, provided that such candidates are, or within a reasonable time will be, able to discharge the duties efficiently.

Application forms may be obtained from the Director of Establishments, Ministry of Finance, Stormont, Belfast. 4517

COUNTY OF LEICESTER

Offers invited for old pattern Double Elephant plan printing frame and a dye line developing machine. Articles may be inspected during normal office hours on application to County Architect, 123, London Road, Leicester, to whom offers should be sent not later than 30th November, 1956. 4504

BURGH OF HAMILTON
ASSISTANT ARCHITECT

Applications are invited for the above superannuable post from Associates of the Royal Institute of British Architects (or equivalent qualifications), with wide experience in post-war housing and civil building design, etc. Salary A.P.T. VI (£805—£870), with placing according to qualifications and experience.

Applications, giving age, qualifications and experience, together with three referees, should be lodged with the Town Clerk, Hamilton, by 5th December, 1956. Canvassing, either directly or indirectly, will be a disqualification. 4558

CORBY DEVELOPMENT CORPORATION
DEPUTY CHIEF ARCHITECT

Applications are invited for this appointment in the Chief Architect's department, at a salary within the range £1,295 × £55 to £1,625. The point of entry will depend on experience and qualifications.

The applicant should have had experience in the design and construction of large housing estates, neighbourhood centres, town centre buildings and factories, and in the administration of a busy office. Town planning experience would be an advantage.

Housing is available.

The appointment will be subject to superannuation under the Local Government scheme, for which medical examination will be required. Applications, endorsed "Deputy Chief Architect," stating age, education, training, qualifications, experience, appointments held and salaries, together with the names of two referees, must reach the undersigned not later than 3rd December, 1956.

R. F. BROOKS GRUNDY,
General Manager.
Spencer House, Corby, Northants. 4535

Architectural Appointments Vacant

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

ARCHITECTURAL ASSISTANTS required. State salary, age, experience, etc. Harvey & Scott, 2, Lynedoch Place, Glasgow, C.3. 4276

WEST END Architects require ASSISTANT for preparation of working drawings. Some office experience essential, together with a sound knowledge of building construction. State salary required.—Box 4049.

JOHN LAING AND SON LIMITED

INVITE applications for the following grades of ARCHITECTURAL STAFF for vacancies in the Architects Departments (Chief Architect: Sydney Greenwood, A.R.I.B.A.).

DEVELOPMENT ARCHITECTS & ASSISTANTS for the study and development of new forms of construction at the Research and Development Centre, Boreham Wood, Herts. All grades are required including qualified men and those seeking qualifications.

The following vacancies exist in the Architects Department at Head Office, Mill Hill, N.W.7:—

ARCHITECTURAL ASSISTANTS of Final or Intermediate R.I.B.A. standard, and some experience in one or more of the following:—office and industrial schemes, multi-storey flats and maisonettes, private and municipal housing.

JUNIOR ARCHITECTURAL ASSISTANTS who are studying for a recognised qualification and requiring practical experience.

ARCHITECTURAL DRAUGHTSMEN with adequate drawing office experience.

These positions offer excellent opportunities for advancement and a wide variety of work in a busy office. Pension Scheme. Five-day week. Canteen. Sports and Social Club facilities. Applications should be made in writing stating age, qualifications and experience to:—Personnel Manager (DA.1), John Laing and Son, Ltd., Page Street, London, N.W.7. 4421

SHOPFITTING DRAUGHTSMAN. Selfridges Limited have a vacancy for a senior shopfitting draughtsman in their architect's office. The work is varied and interesting. Permanent pensionable position for man under forty-five years of age. Staff restaurant. Five-day week. Apply in the first instance in writing stating age, experience and salary required to the Staff Manager, 400, Oxford Street, W.1. 4392

LEADING Timber Building Prefabricating Company requires for its Farnborough Office an ARCHITECTURAL DRAUGHTSMAN. Applicants should be quick and accurate with a contemporary outlook. Salary according to experience. Five-day week, pleasant working conditions, staff canteen. Apply in writing giving full details of age and experience to H. & H. Blacknell Ltd., Park Place, Pinehurst Avenue, Farnborough, Hants. 4396

ARCHITECT'S ASSISTANT, Intermediate standard. Varied and interesting work. About £520, according to experience.—Watson, Johnson & Stokes, 5, Victoria Square, Birmingham, 2. 4485

APPLICATIONS are invited for the following appointment:—

ARCHITECTURAL ASSISTANT,

of post-Intermediate R.I.B.A. standard, capable of carrying out surveys, preparing sketch schemes, working drawings, details and specifications. Age limit 35; 5-day week; dining facilities; travel.—Application, stating age and previous experience, salary required, etc., to Robert W. Ingram, A.R.I.B.A., Staff Architect, Currys, Ltd., 77, Uxbridge Road, Ealing, London, W.5. 4481

MULTIPLE Company in Midlands require in their Architect's Department a competent ASSISTANT. Good opportunity for capable man. 5-day week and Superannuation Scheme in operation.—Applications, giving details of age, qualifications, experience, and salary required.—Box 4478.

GEORGE WIMPEY & CO. LTD.

THE Architects' Department seek architectural staff enthusiastic to apply their knowledge to new construction techniques covering Houses, Multi-storey Flats, Offices, Schools and Industrial Buildings for contracts in the UK and Overseas.

Appointments range from ARCHITECTS to DRAUGHTSMEN with special interest to those of ability, recognising the value of the designer and technician as an integral part of the production team.

Appointments are on a permanent basis, with a 5-day week, at Head Office, Hammersmith.

Regional Offices at Birmingham and Newcastle have similar appointments (excepting 5-day week) for applicants interested in work in these areas.

Salaries will be according to qualifications and experience, and subject to satisfactory service, there is a Pension Scheme for those wishing to make a career with the firm.

Applicants should write giving brief particulars to E. V. Collins, A.R.I.B.A., Chief Architect, 27, Hammersmith Grove, London, W.6. Ref. R.131A. 4406

ASSISTANTS required for London office on interesting West African projects; prospects of overseas tours. Experience in tropical work desirable but not essential. Salary by arrangement.—Apply Box 4475.

CO-OPERATIVE WHOLESALE SOCIETY LTD. ARCHITECT'S DEPARTMENT, MANCHESTER SHOPFITTING DRAUGHTSMAN required, experienced in shop equipment and modernisation of interiors.
The position calls for the preparation of layouts and perspectives with a modern approach to store fitting problems.
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RILEY & GLANFIELD require male ASSISTANT, maximum salary £650. Work: church, industrial, housing and public house. Telephone CHA 7328. 4398

POST-INTERMEDIATE ASSISTANT required, in large London Office with widely varied practice. Lewis Solomon, Son & Joseph, 21, Bloomsbury Way, London, W.C.1. Telephone HOL 7082. 3152

APPLICATIONS are invited by the Architect to a Brewery Company for an Associate R.I.B.A. to act as his Deputy. The appointment offers abundant scope in the field of licensed property work. Salary according to experience. Contributory Pension Scheme in operation.—Full personal particulars to Fergus H. Frost, A.R.I.B.A., The Birkenhead Brewery Co., Ltd., 73, Oxton Road, Birkenhead. 4476

MESSRS. EASTON & ROBERTSON require ARCHITECTURAL STAFF who have had at least two or three years' office experience. Apply 53, Bedford Square, W.C.1. 4545

ASSISTANT required in the Architect's Department of a large Multiple Company. Experience of surveys of existing buildings, shop fittings and layouts an advantage. 5-day week, canteen facilities.—Apply, stating age, experience and salary required, to Box 4477.

BROWN, MOULIN AND ANTRUM require ASSISTANTS: salaries £500 to £700 per annum—apply 42, Russell Square, W.C.1. Telephone: LANGHAM 7065. 4560

ARCHITECT'S ASSISTANT for small, good class West End office, engaged in office, flat and house building. Five-day week. Box 4532.

ARCHITECTURAL ASSISTANT required in Wembley. Experience in design and construction of industrial buildings and office blocks. Write stating age, experience, and salary required to Box 4553.

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ASSISTANT ARCHITECTS required—capable of preparing working drawings and details from preliminary sketches. Applications stating age, experience, qualifications and salary required to Mr. R. C. Steel, A.R.I.B.A., Chief Architect, Co-operative Wholesale Society Limited, 90 Westmorland Road, Newcastle upon Tyne. 4549

ARCHITECTURAL ASSISTANT required, with about four to five years' office experience. Write or telephone giving full particulars, including age and salary, to Hasker & Hall, Architects, 13 Welbeck Street, W.1. (WELbeck 0061). 4561

SHOPFITTING DRAUGHTSMEN required—capable of site surveys, layout plans and details. Applications stating age, experience, qualifications and salary required to Mr. R. C. Steel, A.R.I.B.A., Chief Architect, Co-operative Wholesale Society Limited, 90 Westmorland Road, Newcastle upon Tyne. 4550

SUPERVISOR/AGENT for leading European firm in WEST INDIES. To take charge of number of firms' contracts in Georgetown. Salary $400 per month. ($=4/2d.) Free furnished accommodation. 3-year contract. Free passages both ways. Write for further details quoting reference OSS. 72/8 to O.T.S., 5, Welldon Crescent, Harrow, Middlesex. 4551

VACANCY FOR STAFF ARCHITECT
WE are a firm of Contractors developing housing estates in the Banbury area. The majority of the houses are different types, and we feel that an Architect employed full time on our staff would be a distinct advantage. The work involved is surveying and levelling, planning the layout of houses, planning roads and sewers, working out sections, obtaining estimates for the laying of roads, and supervising their construction. Suitable office accommodation is provided together with Secretary and printing equipment.
Will all applicants apply to the Managing Director, when salary could be agreed according to qualifications. Box 4533.

CLIFFORD TEE & GALE require ASSISTANTS with office experience to work with teams on interesting new industrial and commercial projects. Five-day week. Pension scheme available. Apply 5, Buckingham Palace Gardens, S.W.1. Tel.: Sloane 2296. Ref.: Mr. E. A. Day. 4562

MESSRS. JOSEPH, F.F.R.I.B.A., 10, Lowndes Square, S.W.1. Telephone: Sloane 2178. Require a practical and experienced ASSISTANT. Salary up to £1,000 p.a. according to experience. 4564

STAFF ARCHITECT capable of handling schemes for built-in furniture from West End Showroom. Must be competent draughtsman, prepared to accept responsibility and of good appearance and personality. Age limit 40. Good prospects and remuneration. Applications stating age, previous experience and salary required to Sales Manager, Peerless Built-in Furniture Ltd., Western Avenue, Perivale Greenford, Middlesex. 4534

IF you are an experienced DESIGNER-DRAUGHTSMAN and are looking for an interesting and congenial position this may appeal to you. We are a leading West End firm and our studio is being expanded and we have a vacancy. The work is extremely varied and covers everything from ship interiors to private houses. Please send us details of your experience, and salary required. Box 4521.

KEEN ARCHITECT required, able to work quickly, sketch designs and working drawings. First class opportunity for suitable candidate. Contract basis. References to Ashwell & Associates, 144, Hope Road, Liguanea P.O., Jamaica, B.W.I. 4523

JUNIOR ARCHITECTURAL ASSISTANT or pupil wanted urgently; good prospects, interesting contemporary work. Apply: John Radford, Chartered Architect, 25, Sidwell Street, Exeter. 4539

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ARCHITECTURAL ASSISTANT required by Spicers Ltd. Intermediate standard R.I.B.A. essential, A.R.I.B.A. desirable. Pension scheme. Write stating salary required to Personnel Adviser, 19, New Bridge Street E.C.4. 4506

IF you are interested in gaining practical experience there is a job waiting for a man of common sense and good draughtsmanship in the West End of London. Five-day week. Box 4531.

ARCHITECTURAL ASSISTANT required in West End office. Good opportunity for keen and energetic young man. Salary according to age and experience. Please apply in writing to Messrs. Sanders & Montague, F./A.R.I.B.A., 24, Harley Street, W.1. 4505

W. DAVID HARTLEY requires ARCHITECTURAL ASSISTANT immediately. Write giving particulars of experience and salary required to 4, The Grove, Slough, or telephone Slough 20926. 4502

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Other Appointments Vacant

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Earnings are unusually attractive, comprised of a good salary, commission, expenses, car, life assurance and pension, and participation in the Company's Share Bonus Scheme.

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EXPERIENCED ARCHITECT will assist profession in Home Counties and London area. Tracing, details, working drawings, specifications. Own office and facilities.—Box 4219.

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