

# THE ARCHITECTS' JOURNAL



## standard contents

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

## NEWS and COMMENT

*Astragal's Notes and Topics*

*Letters*

*News*

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*Societies and Institutions*

## TECHNICAL SECTION

*Information Sheets*

*Information Centre*

*Current Technique*

*Working Details*

*Questions and Answers*

*Prices*

*The Industry*

## CURRENT BUILDING

*Major Buildings described:*

*Details of Planning, Construction,*

*Finishes and Costs*

*Buildings in the News*

*Building Costs Analysed*

*Architectural Appointments*

*Wanted and Vacant*

No. 3279]

[Vol. 127

THE ARCHITECTURAL PRESS

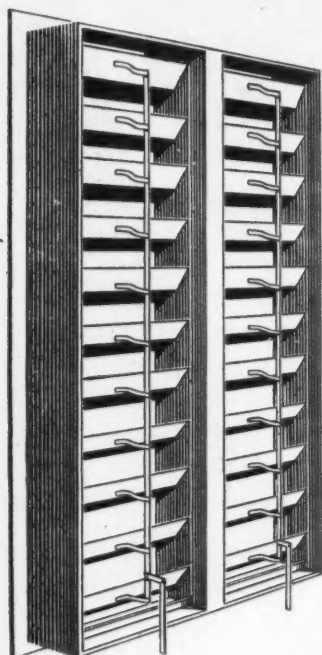
9, 11 and 13, Queen Anne's Gate, Westminster,  
S.W.1. 'Phone: Whitehall 0611

Price 1s. 0d.

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 Ig 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. 18, Adam Street, W.C.2. Whitehall 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                                        |
| MOE      | Ministry of Education. Curzon Street House, Curzon Street, W.1. Mayfair 9490                                               |
| 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 Asphalt 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. Abbey 5111                                      |
| 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                                           |
| NHBRCS   | National House Builders Registration Council. 58, Portland Place, W.1. Langham 0064/5                                      |
| 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.1. Holborn 2646                              |
| TCPA     | Town and Country Planning Association. 28, King Street, Covent Garden, W.C.2. Temple Bar 5006                              |
| TDA      | Timber Development Association. 21, College Hill, E.C.4. City 4771                                                         |
| TPI      | Town Planning Institute. 18, Ashley Place, S.W.1. Victoria 8815                                                            |
| TTF      | Timber Trades Federation. 75, Cannon Street, E.C.4. City 5040                                                              |
| WDC      | War Damage Commission. 6, Carlton House Terrace, S.W.1. Whitehall 4341                                                     |
| ZDA      | Zinc Development Association. 34, Berkeley Square, W.1. Grosvenor 6636                                                     |

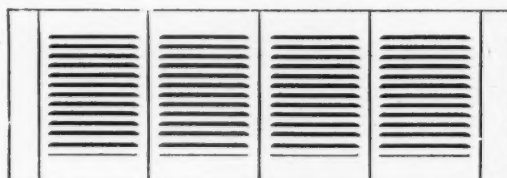


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(Right) Type LH 'Maxaire' Multi-louvre Panel with 3" flange.



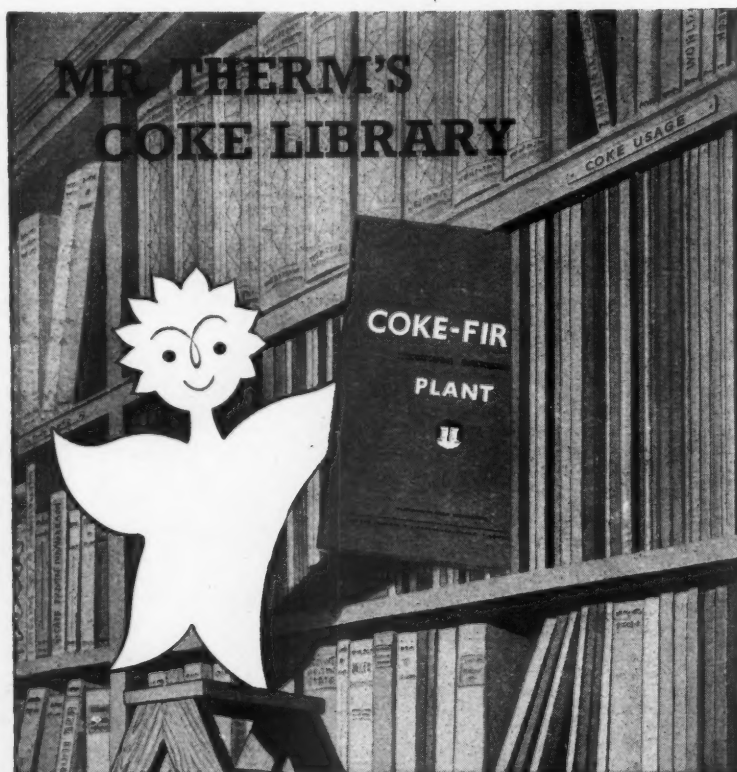
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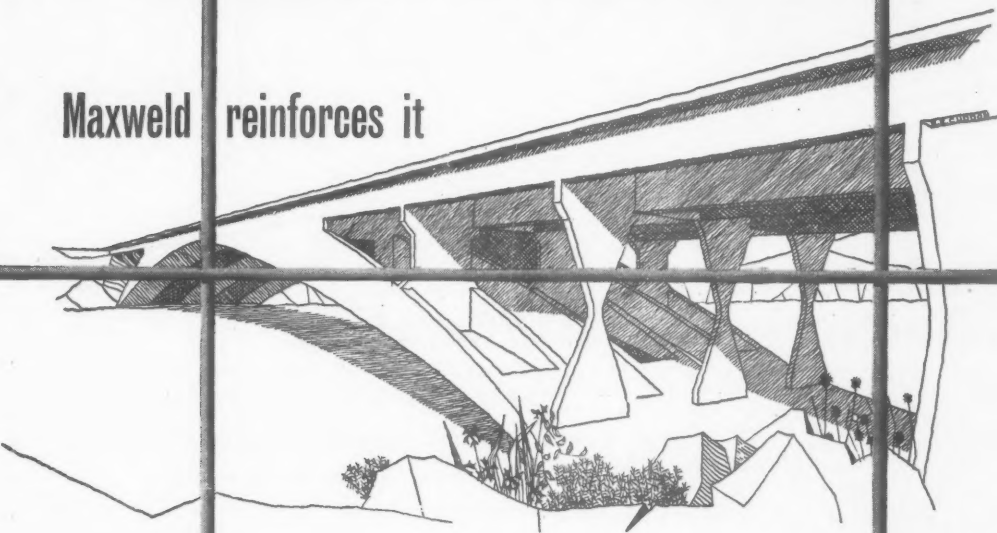








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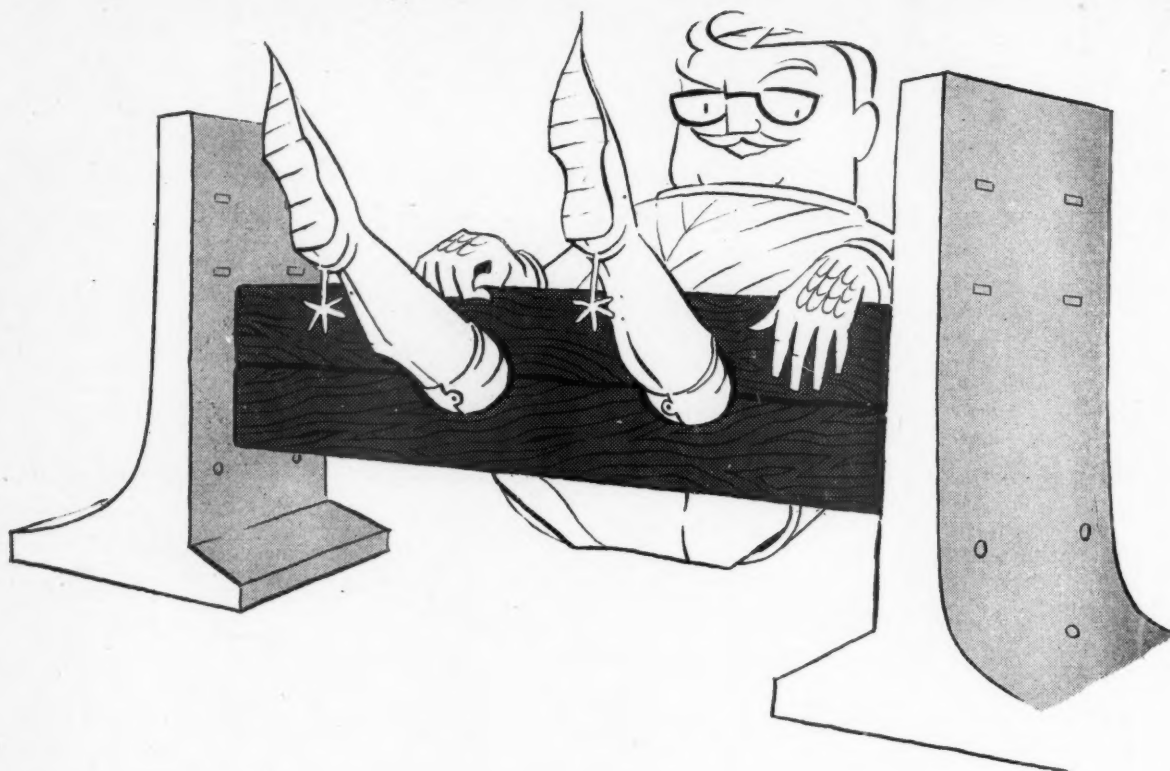
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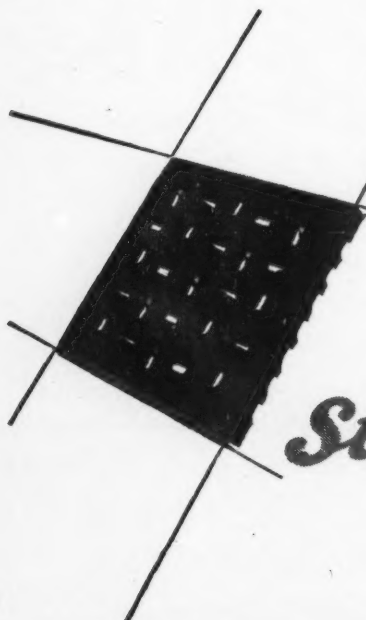




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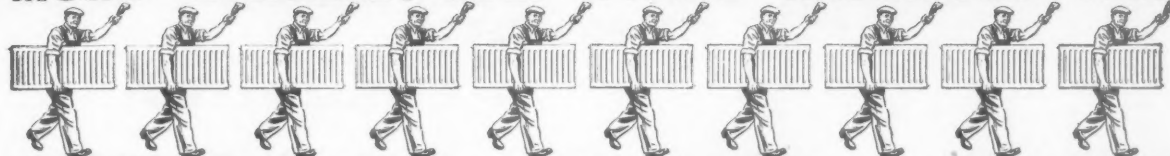
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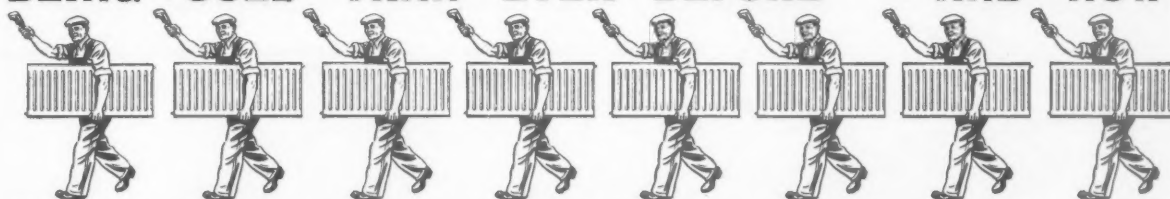
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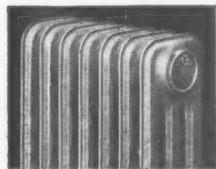


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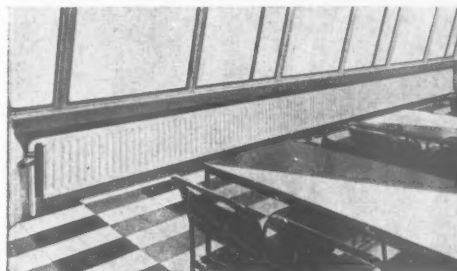
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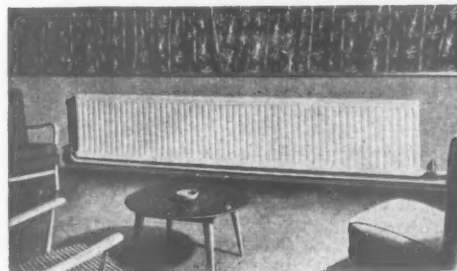


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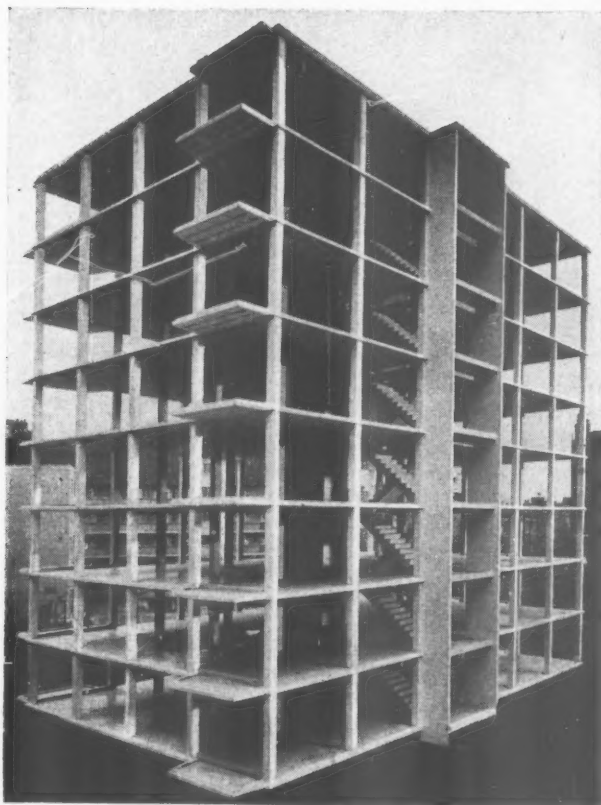
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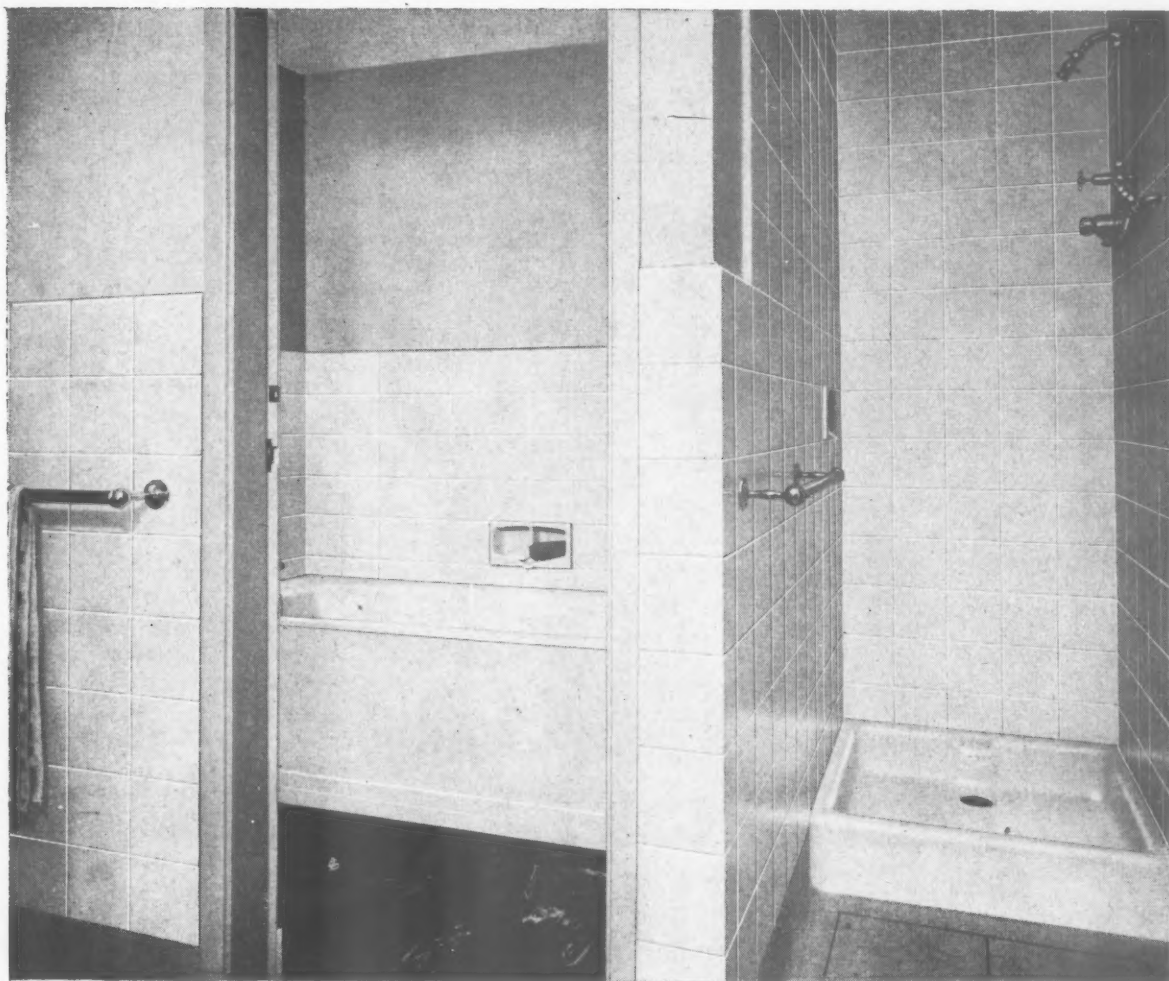
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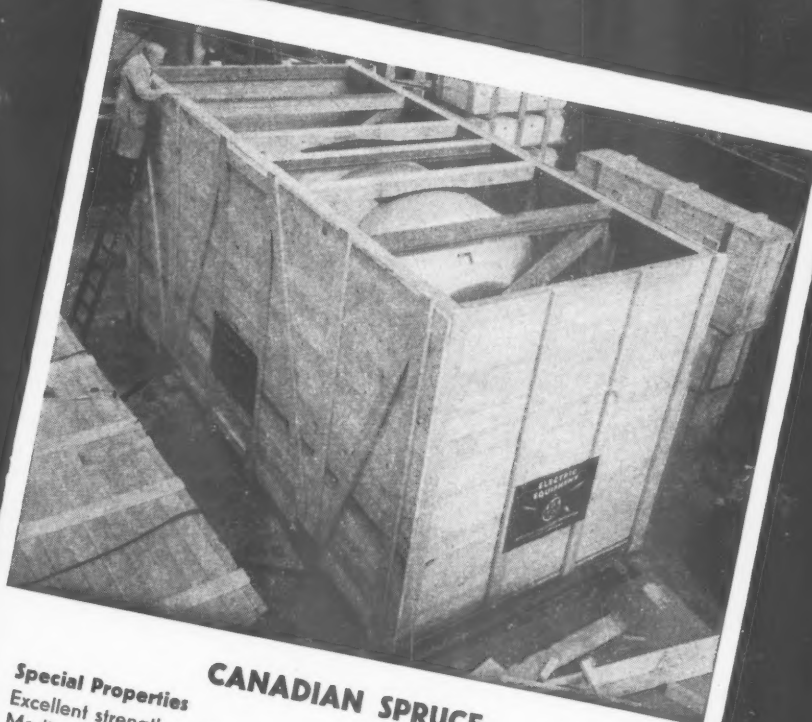






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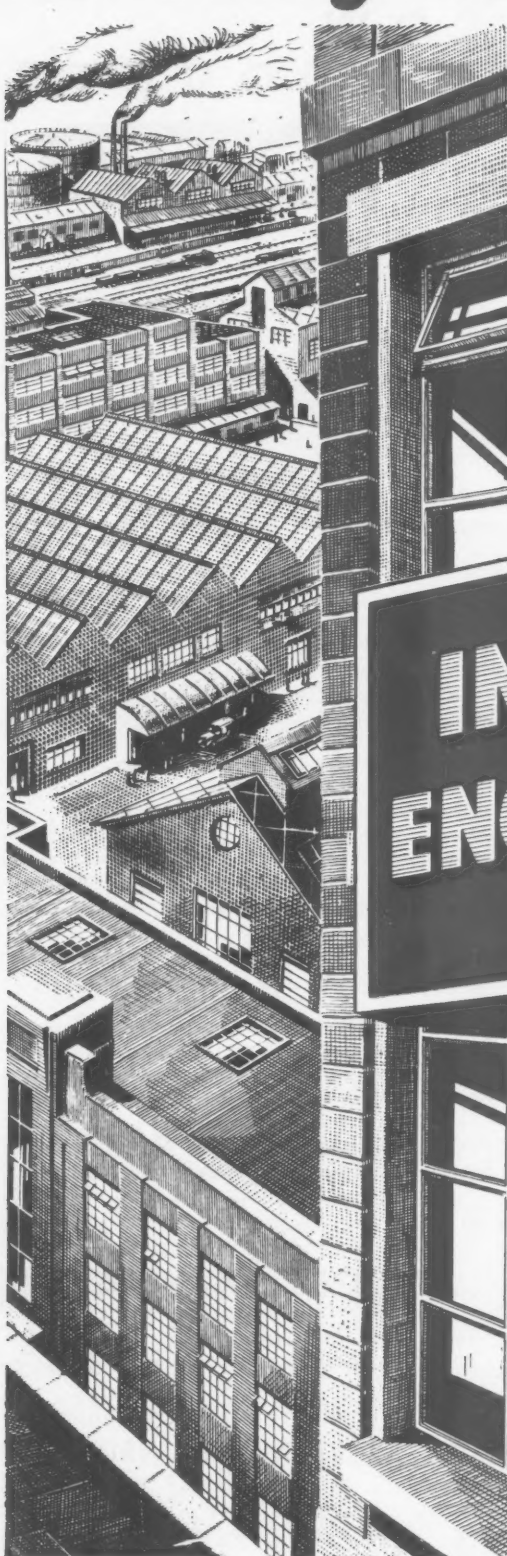
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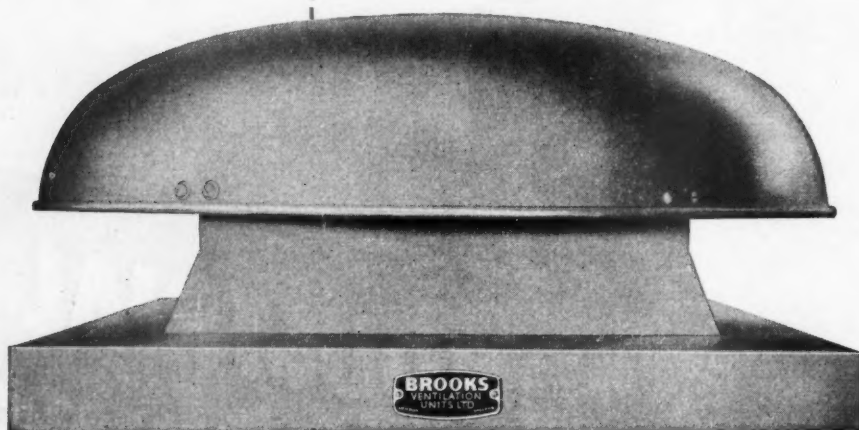
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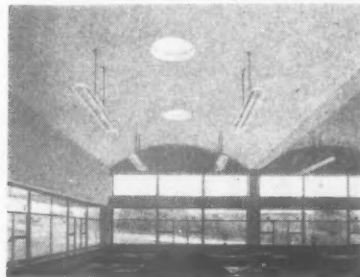
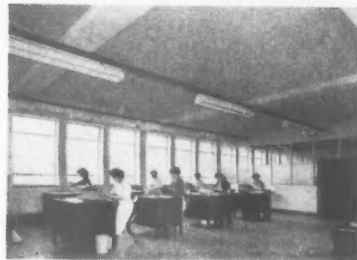
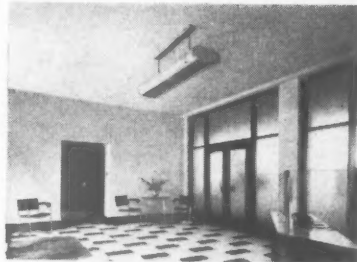
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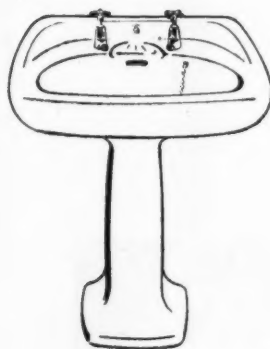
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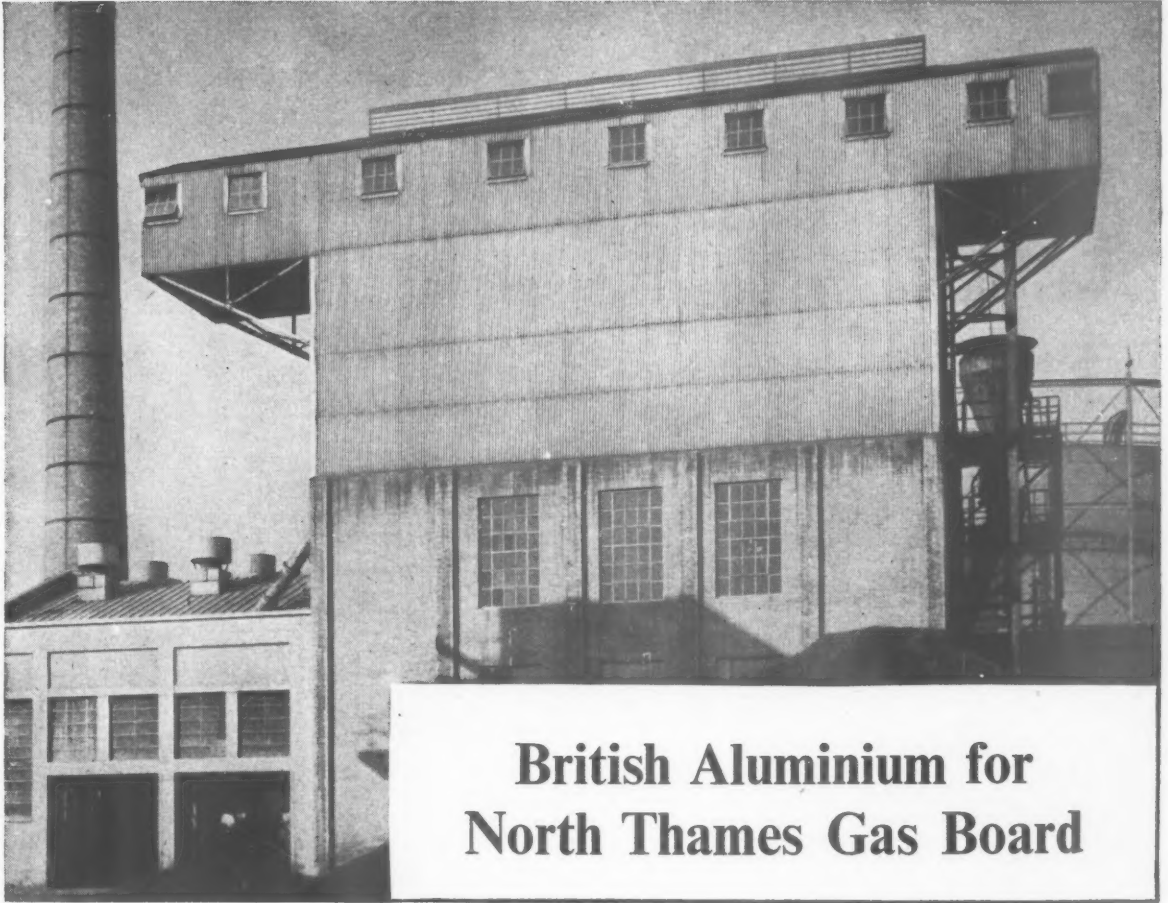
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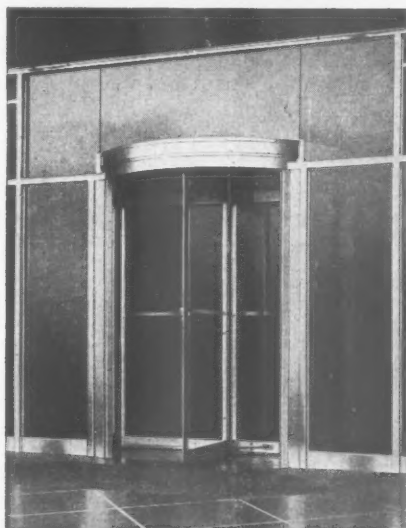
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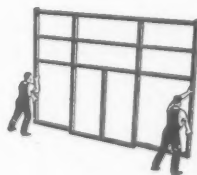
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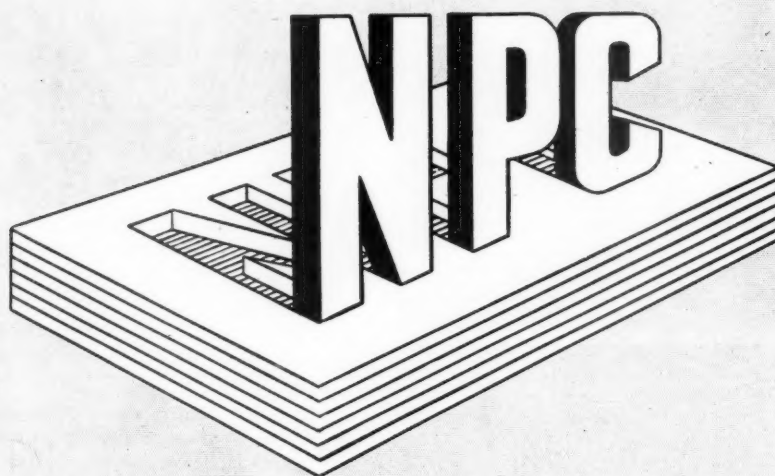


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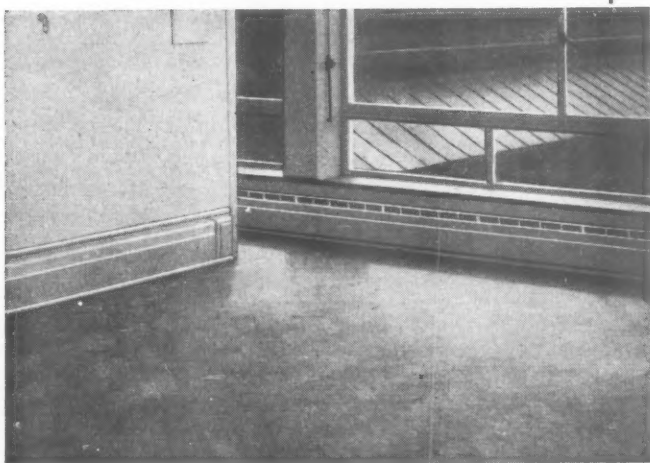
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Given the same soil, the same fertilizers, the same sunshine and rain; using, apparently, identical methods; two gardeners do not get identical results. One gardener grows perfect blooms in profusion but, try as he will, he can never tell you exactly how he does it. We say he has green fingers. But what really seems to have happened is that much he has learned over the years has become so completely part of himself that he does the right thing instinctively.



Something of the same kind seems to happen in engineering—with a whole works playing the gardener. It is not a question of craftsmanship in the old sense, for it occurs even on a production line. But in a works that has been making cable (for instance) for years, the right decision seems 'natural', being based on knowledge that is so much a part of past experience that it is taken for granted. This is one reason why a name with a long history can still mean so much.

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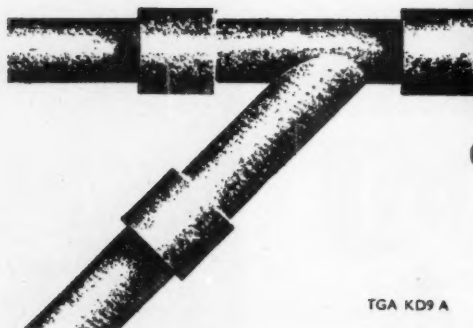
*for full information on the advantages of timber frame construction.*



# **THIS WINTER** avoid **setbacks to drain laying plans** by specifying **KEY** pipes

Key Pitch Fibre drainage pipes can be laid in all weathers. There are no hold-ups for frost, snow or rain because the simple system of jointing requires no cement or other sealing compounds. Precision-machined taper joints are tapped into place giving a perfect fit, so that the drain can be tested immediately on completion and the trench back-filled right away.

Plan now for this winter with Key Pitch Fibre pipes. They ensure that your building schedules do not fall behind while drain laying waits for the 'right' weather.



TGA KD9 A

**Get to know more about**  
**KEY Pitch Fibre Pipes**

### Smooth bore and clean joints

Key Pitch Fibre pipes have precision-machined taper joints which require no mortar or compounds. Combined with their smooth bore, this means a high flow factor, with no problems of root growth.



### No cracking through settlement

The resilience of pitch fibre pipes ensures that no cracking occurs under normal conditions of earth settlement. This also means that bedding concrete is unnecessary.



### Resistant to corrosion

Key pipes are vacuum-impregnated with pitch and are non-porous and resistant to normal effluent corrosives throughout their thickness.

### Maximum loan period

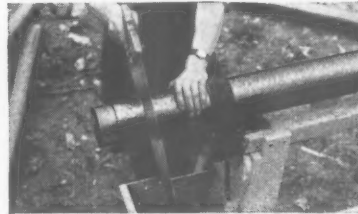
The 30-year loan period applies to all Key Drain pipes. Pitch fibre pipes have been used with notable success in the United States for over 50 years.



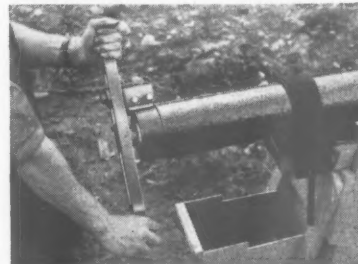
A piece of heavy timber is placed against the coupling and a length knocked home.



The precision-machined taper joints require no mortar or jointing compounds.



Short lengths of pipe can be cut with a coarse toothed handsaw.



A special hand lathe is used for cutting joints on short lengths.

### SPEEDING THE JOB - CUTTING THE COST

500 feet an hour is a modest rate for laying Key pipes. The simple system of jointing also ensures that the pipe can be laid in all weathers. Because there is no cement to dry out, the completed drain can be tested immediately and the trench back-filled without delay. When contracts must be carried out to a tight schedule these advantages are well worth bearing in mind. On a cost plus labour basis, pitch fibre pipes are cheaper per installed foot run than other drainage systems.

**THOROUGHLY  
TESTED AND  
APPROVED**

#### British Standard

Key pipes exceed the requirements of BS 2760/56 for Pitch-impregnated Fibre Drain and Sewer Pipes. This standard was approved by the Bituminous Products Industry Standards Committee consisting of representatives of Government departments and professional bodies, including the following:

Royal Institute of British Architects  
Ministry of Housing & Local Government  
Ministry of Works  
Institution of Civil Engineers  
Royal Institute of Chartered Surveyors  
D.S.I.R. - Building Research Station  
Institution of Public Health Engineers  
London County Council

#### Ministry of Health Model Bye Laws

Pitch fibre pipes are deemed to comply with M.O.H. Bye Law requirements.

#### Building Research Station Report

Key Pipes were tested by this body and given a favourable report.

#### Other approving bodies Federation Civil Engineering Contractors.

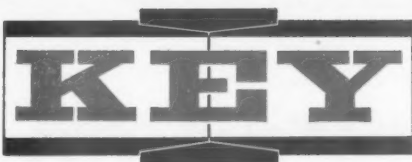
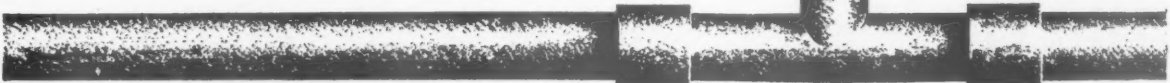
National Federation of Building Trade Employers.

Royal Society for the Promotion of Health.

Many local authorities have installed KEY pipes

Test Results  
Key pipes have been subjected to detailed physical tests.

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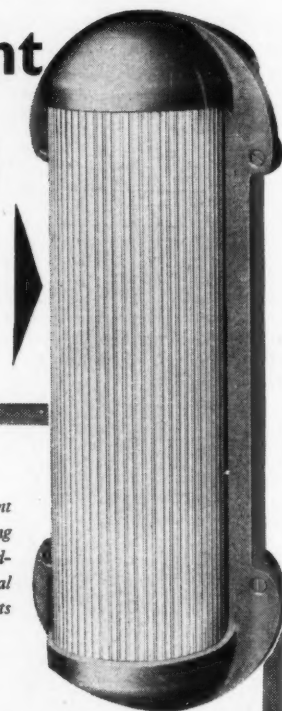


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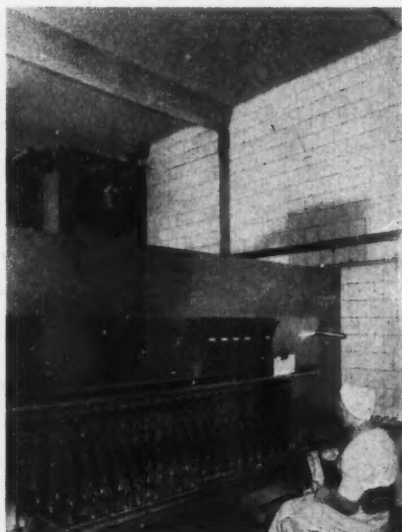
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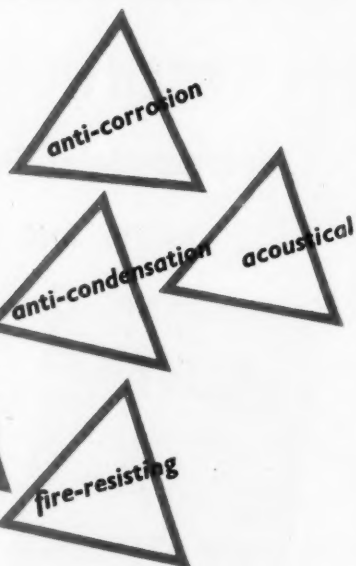


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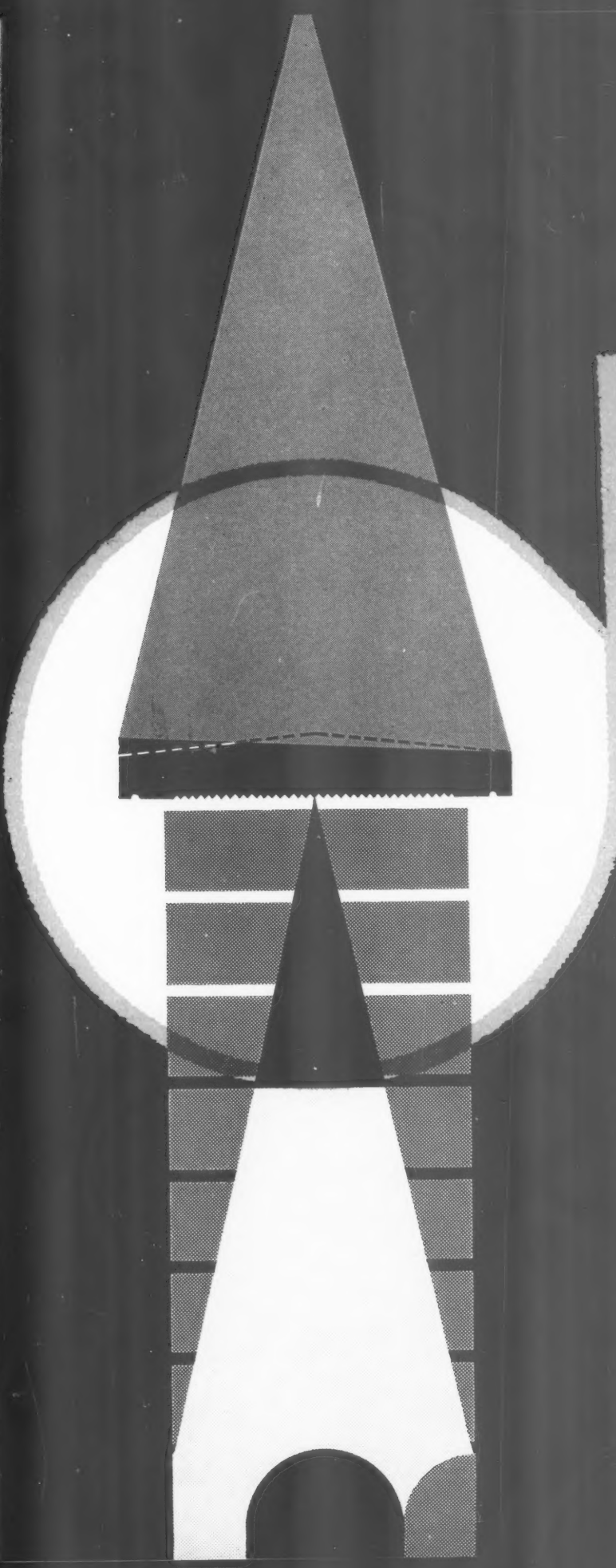
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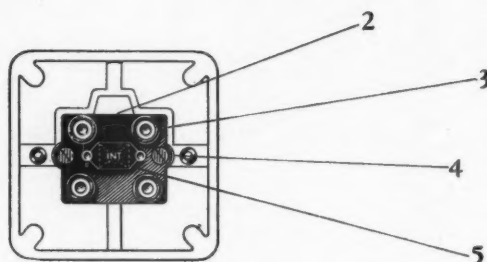
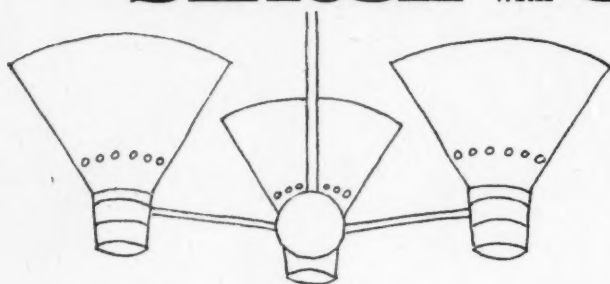
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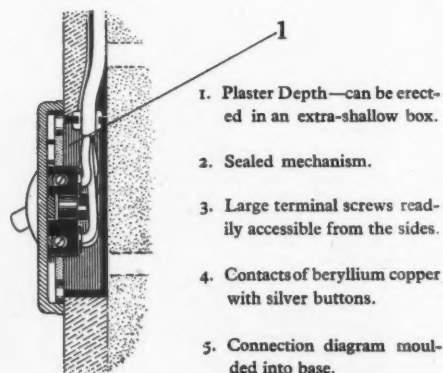
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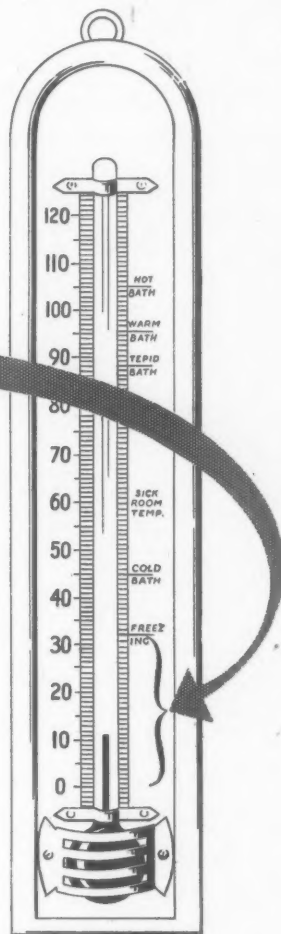
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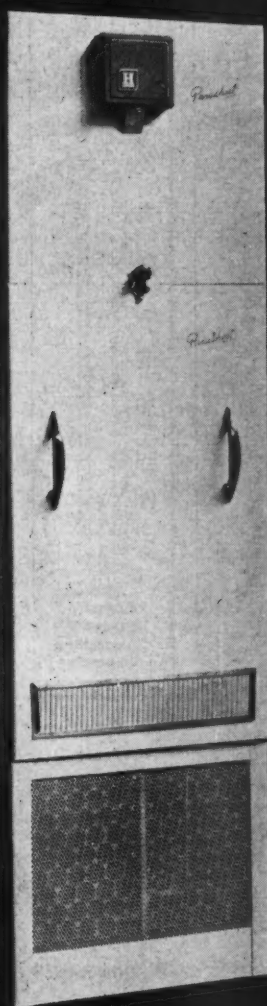
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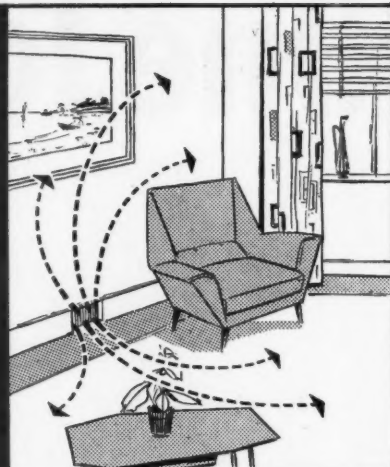
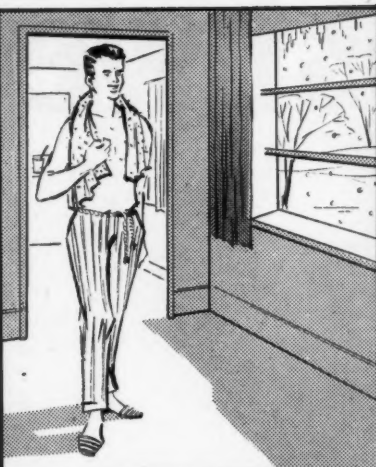
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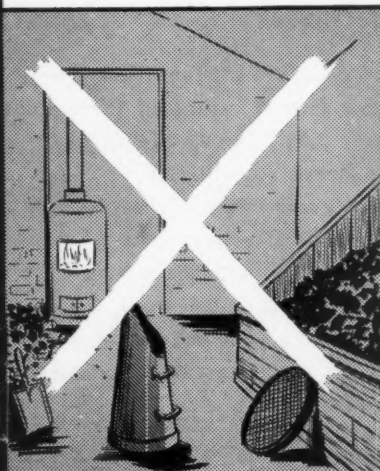


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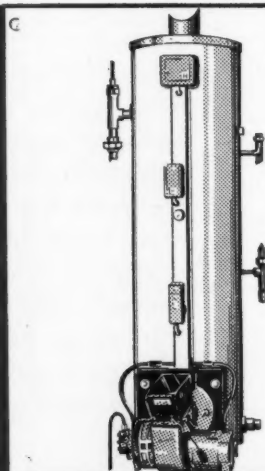
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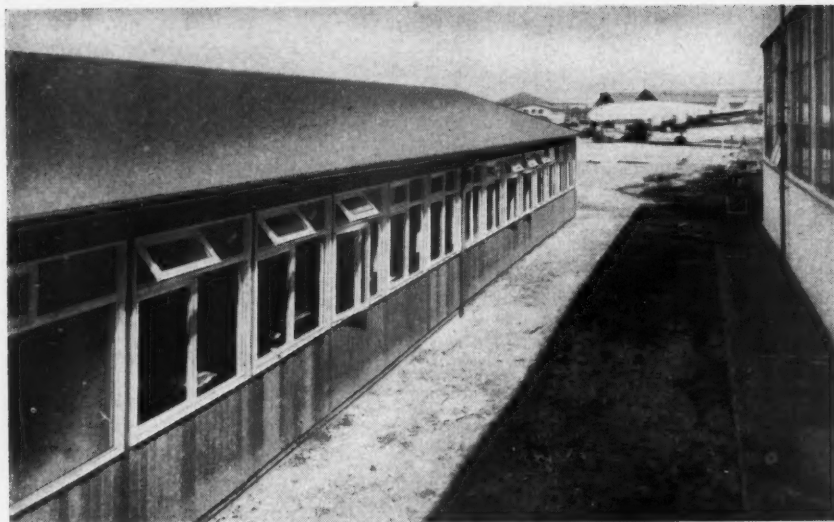
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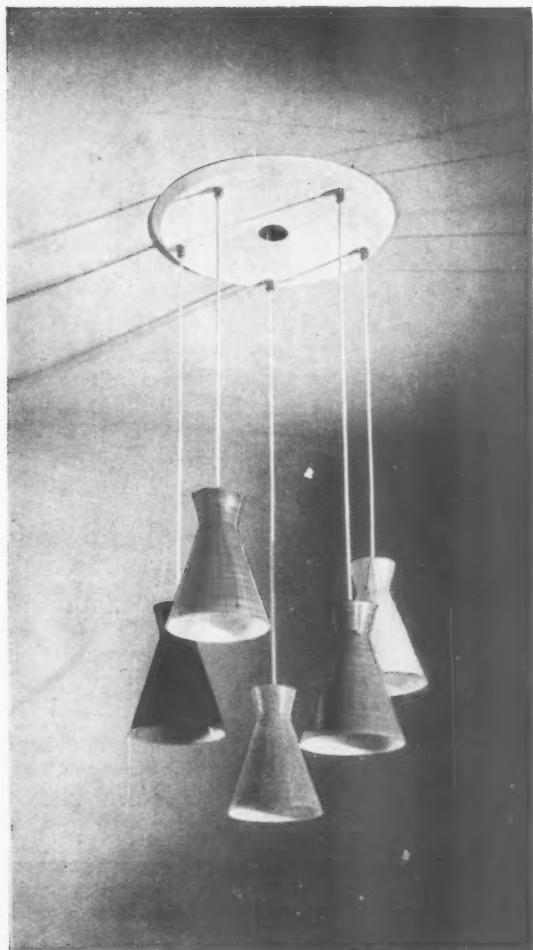
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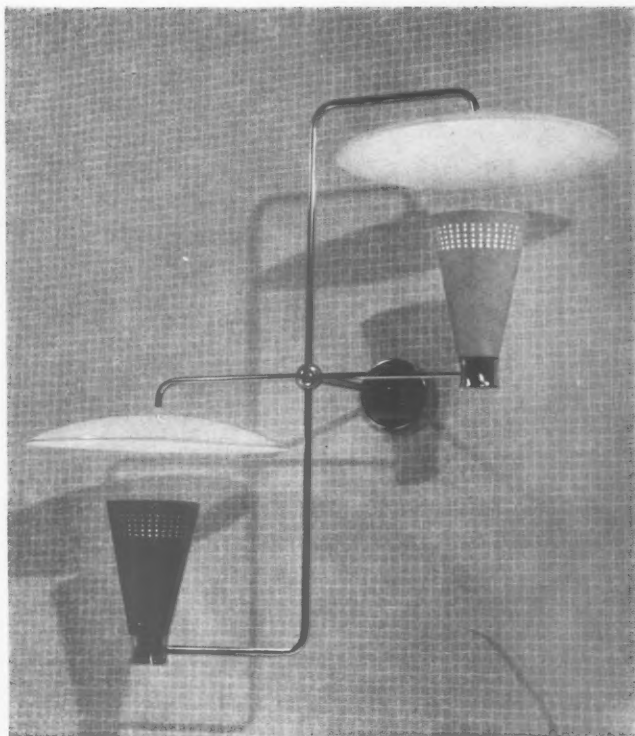
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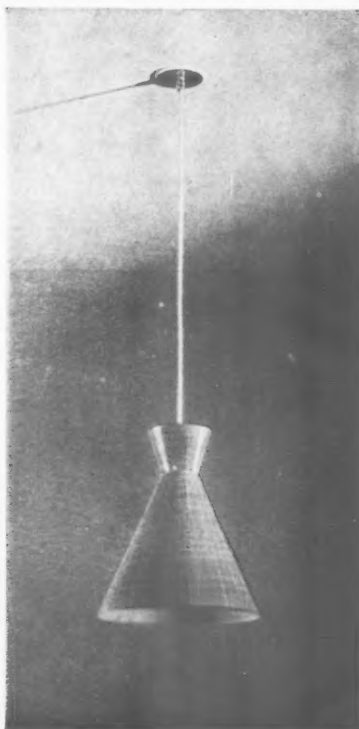


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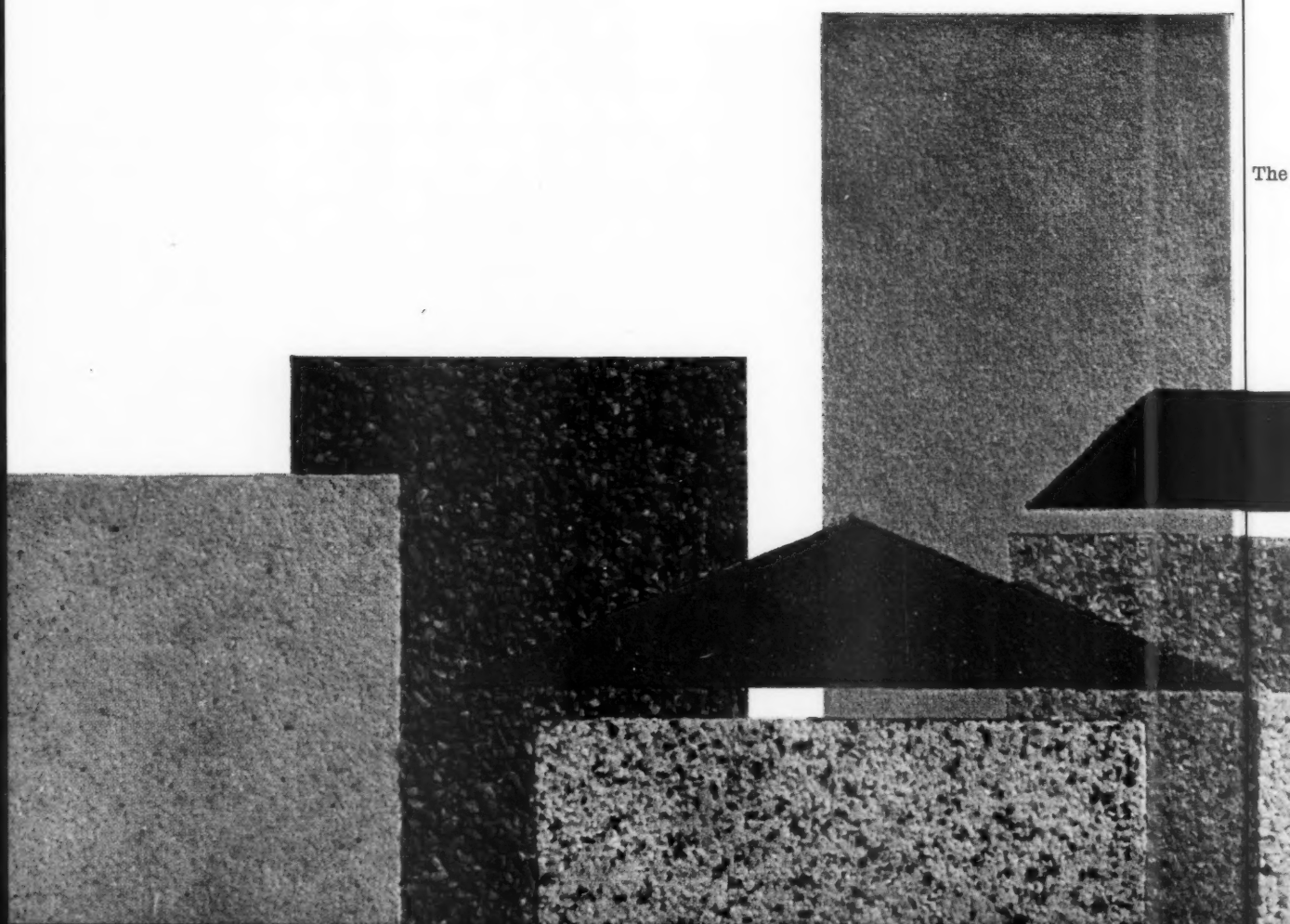
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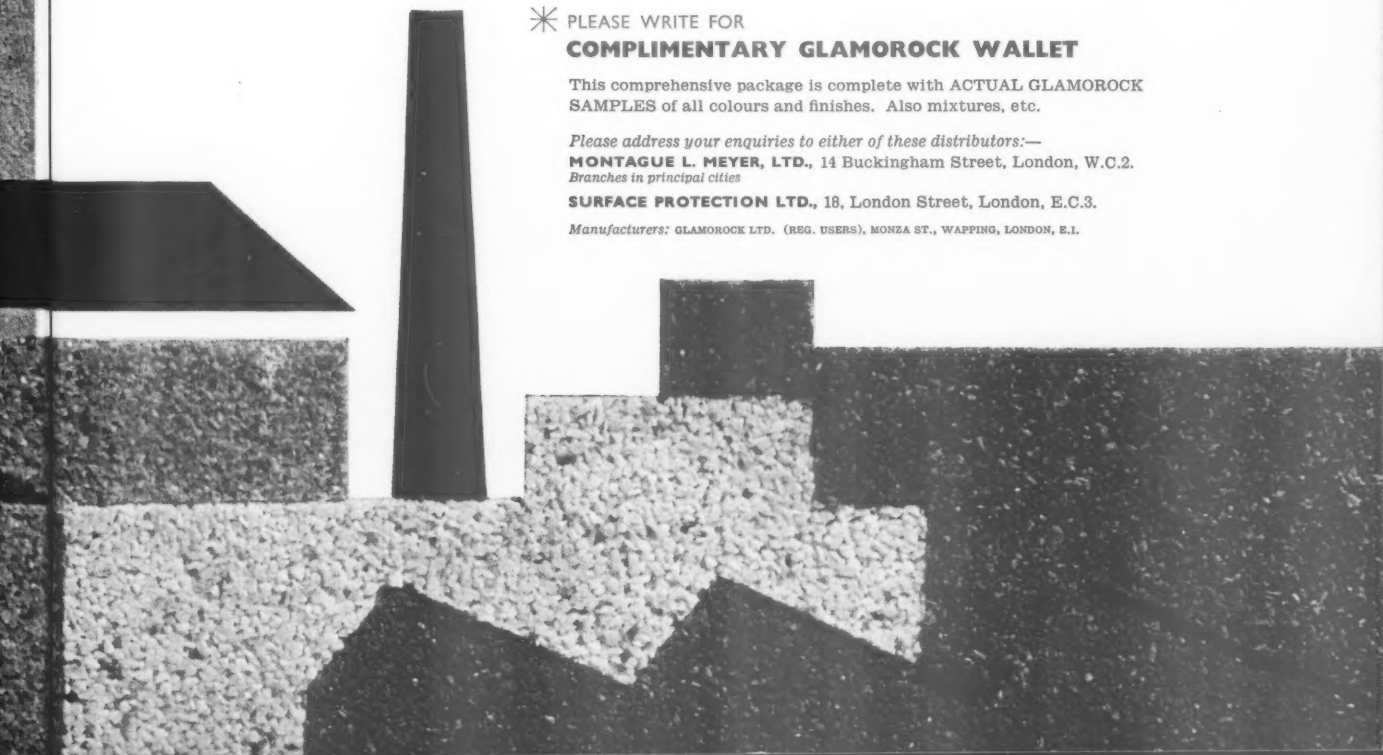
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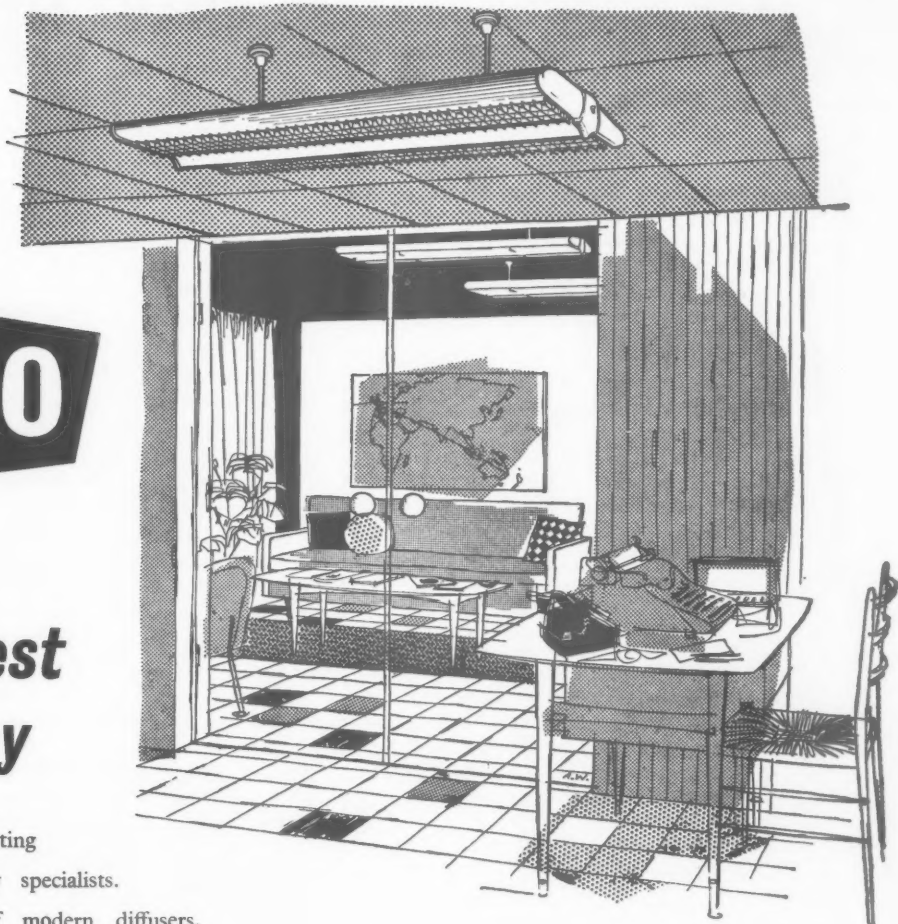
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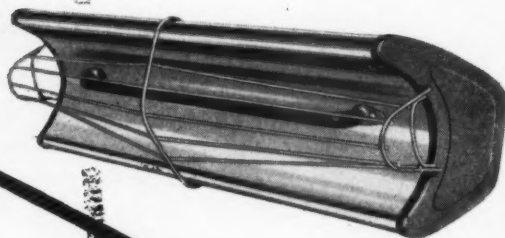
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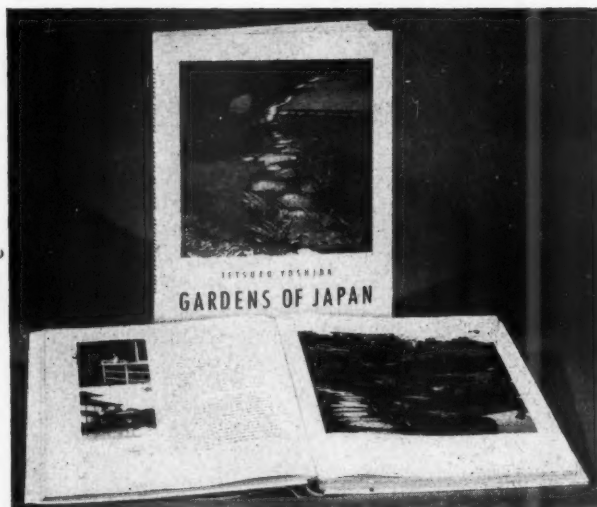
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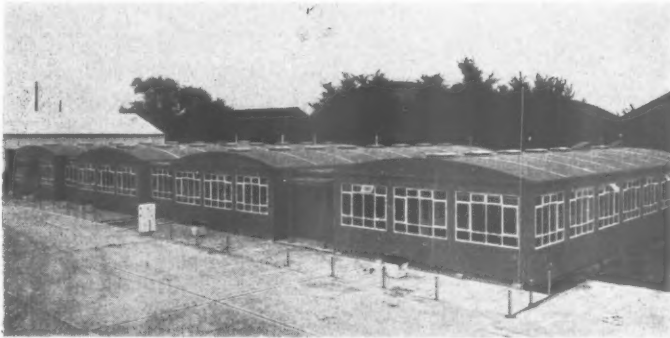
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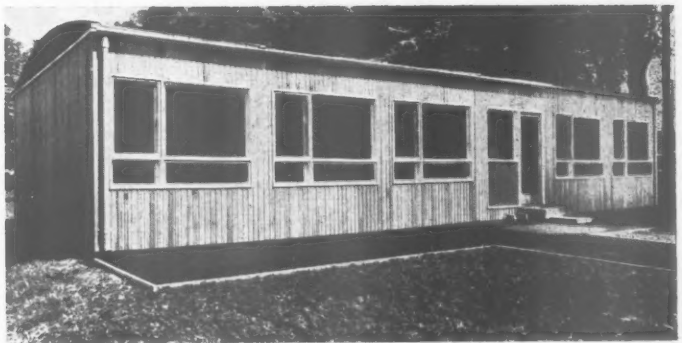
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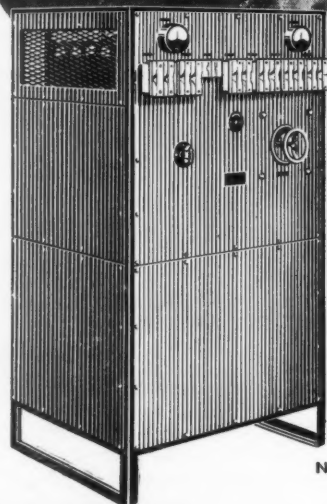
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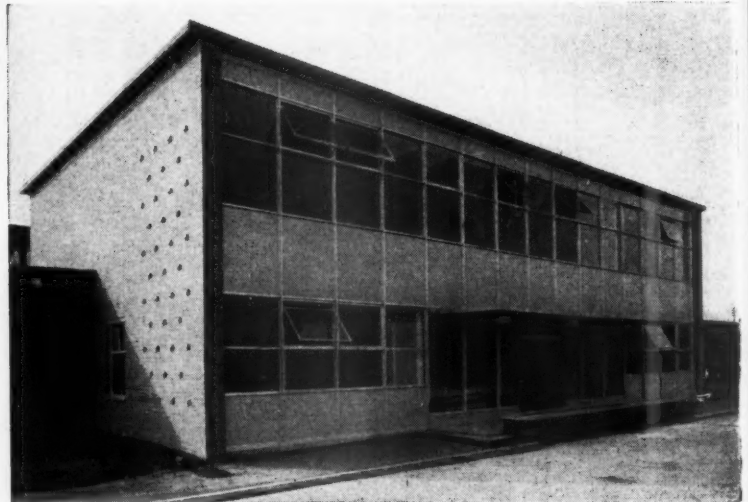
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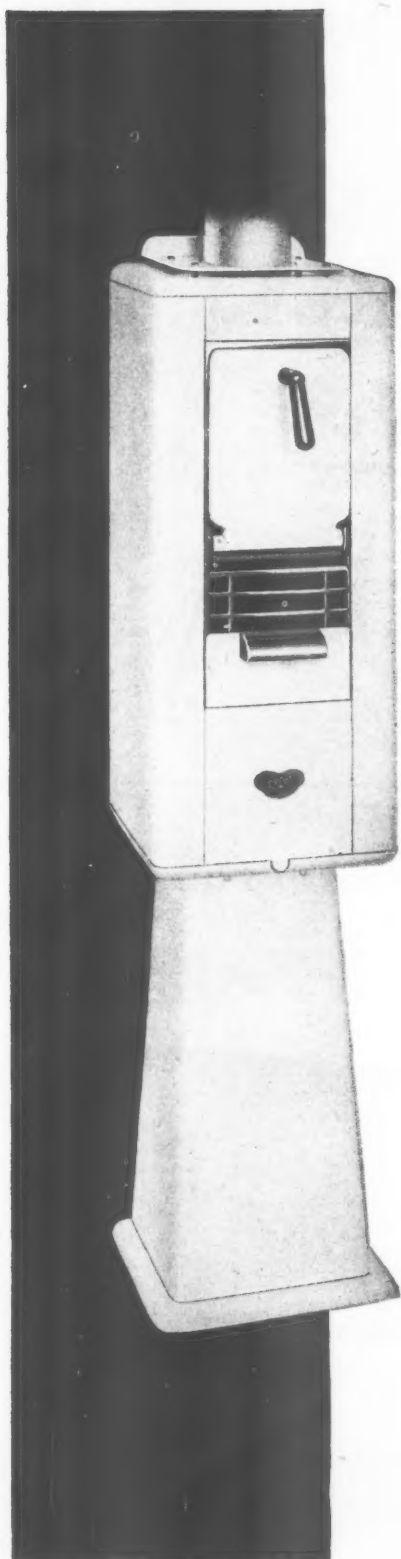
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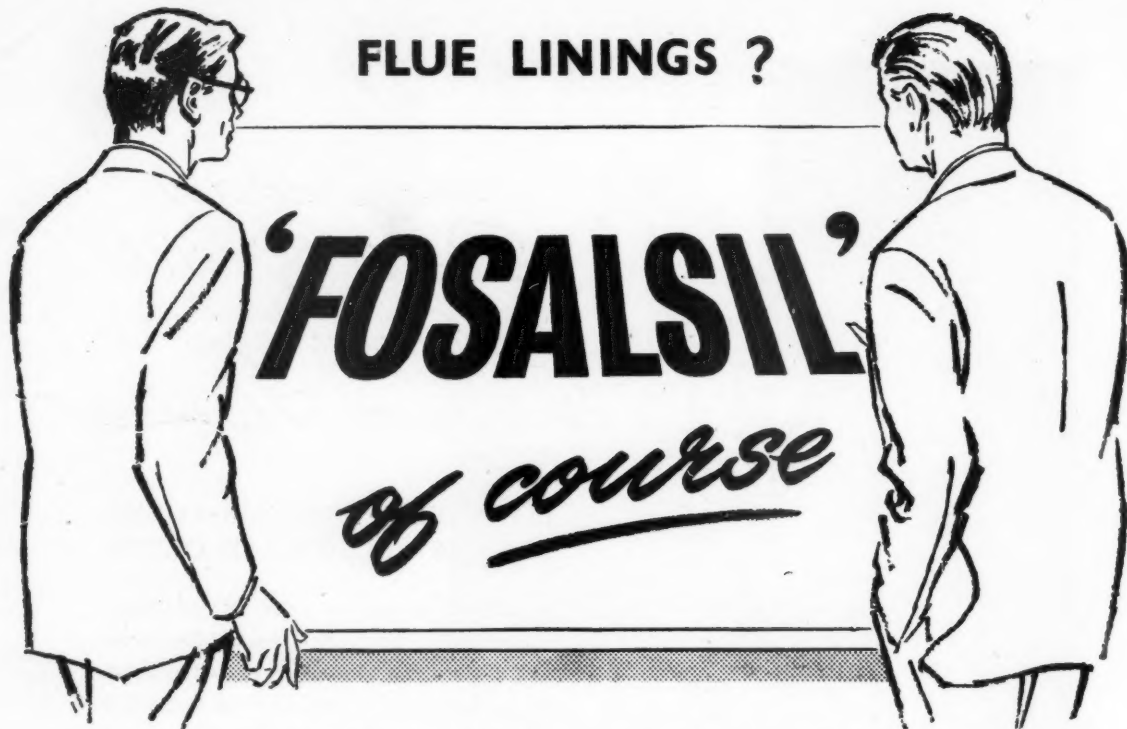
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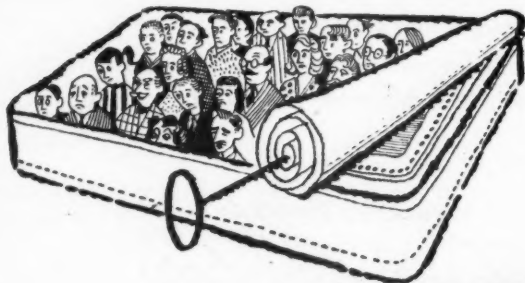
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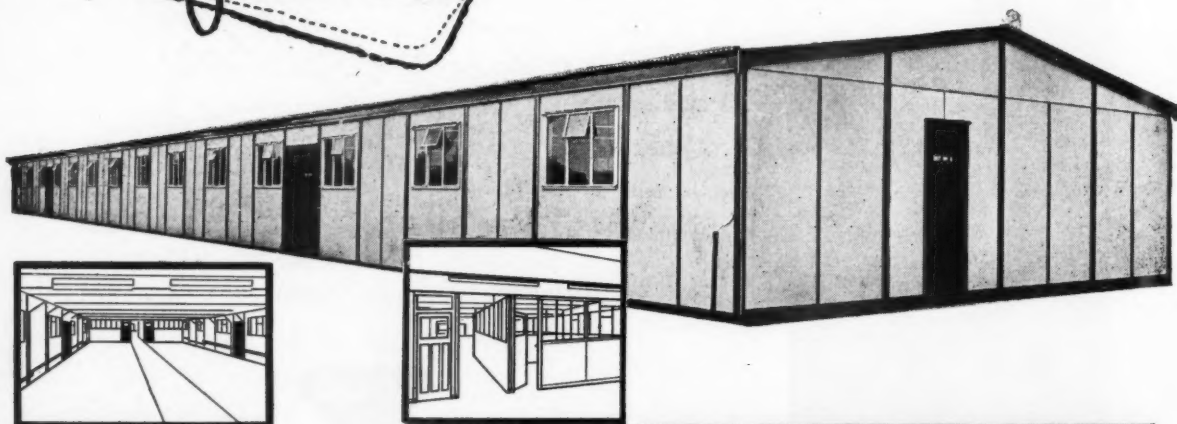


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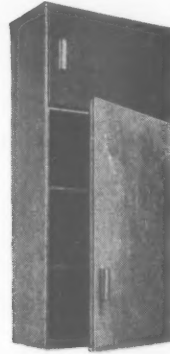
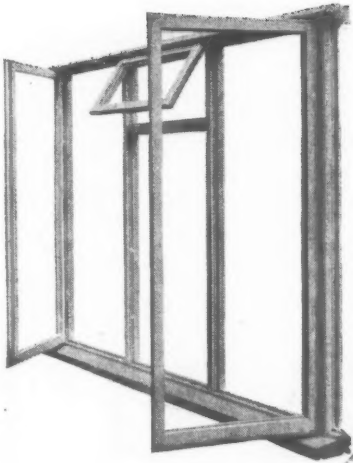
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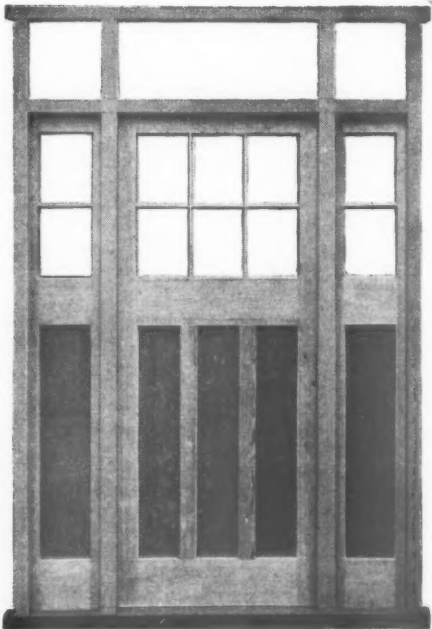
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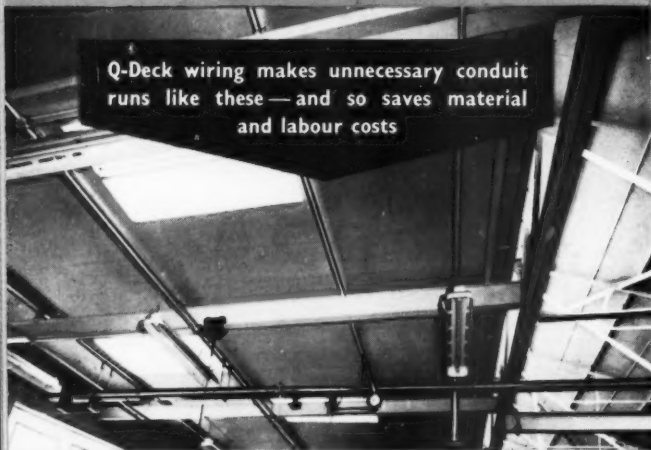
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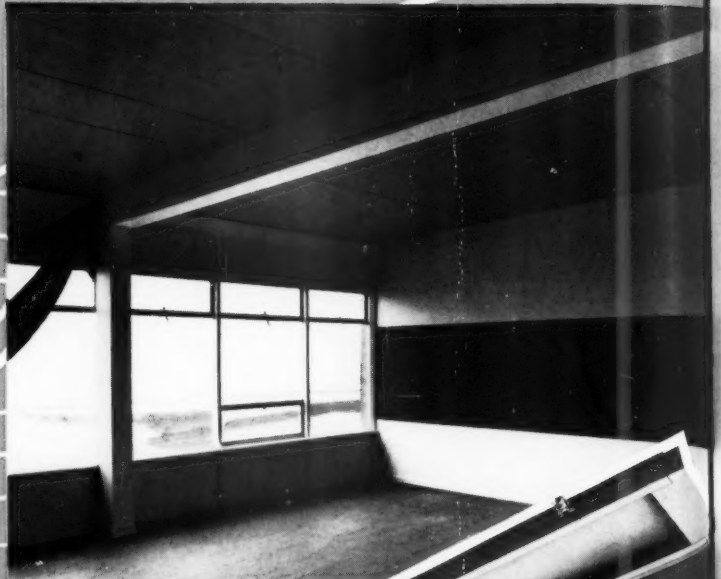
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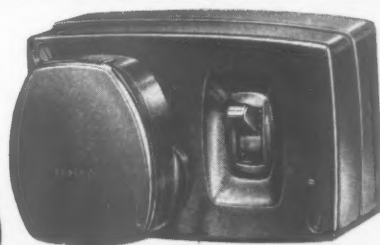
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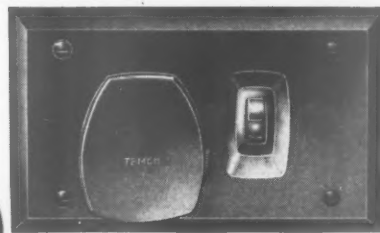
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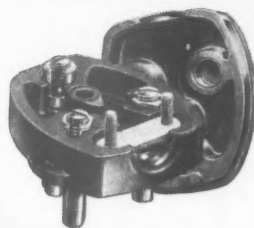
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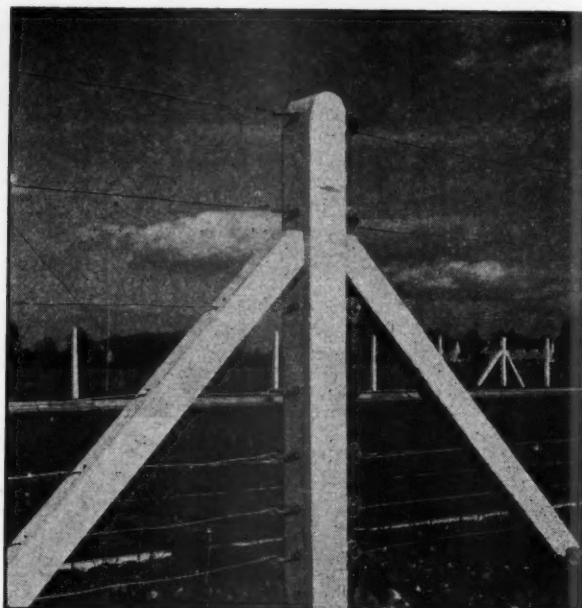
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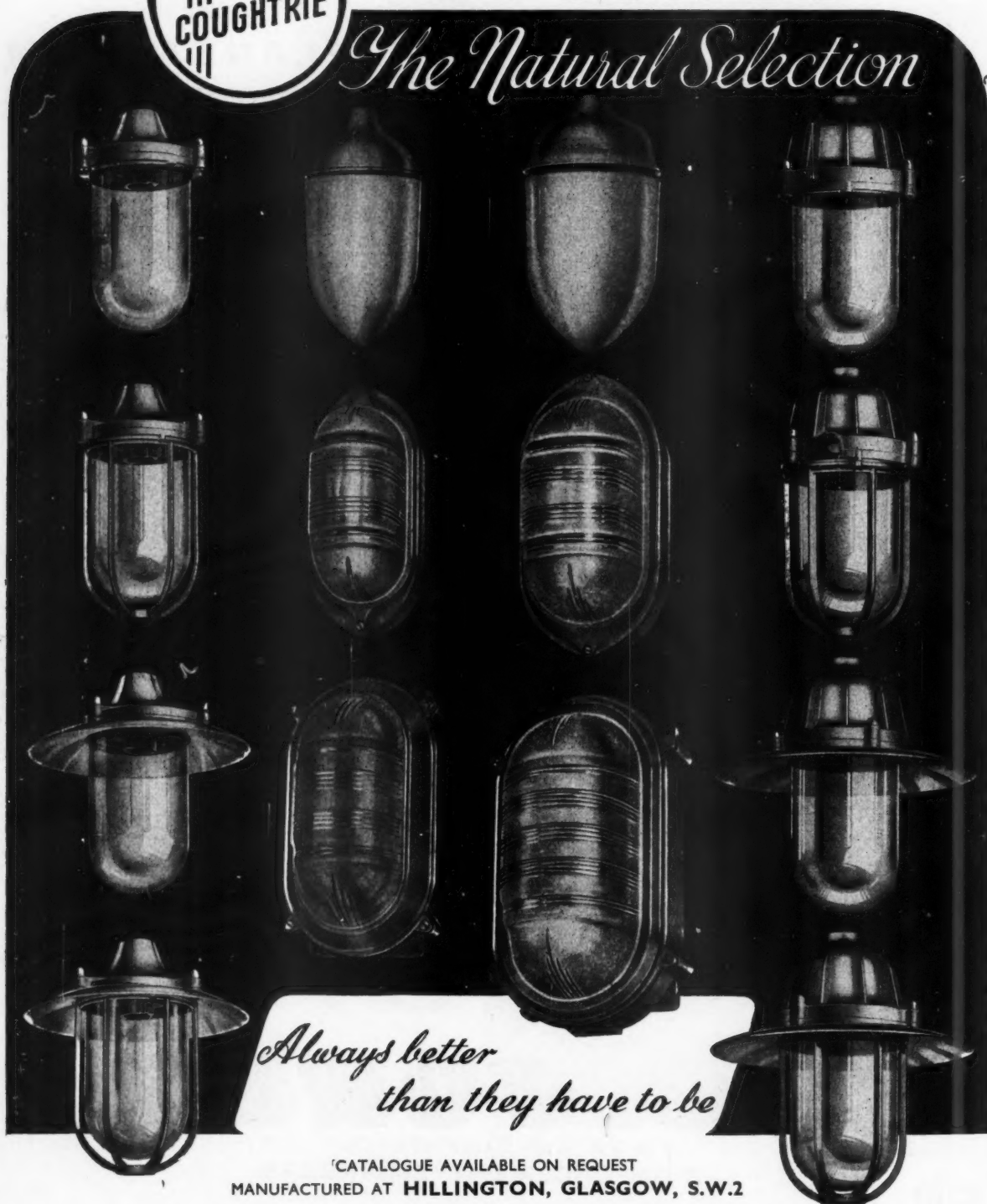
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New factory erected by North Western Industrial Estates Ltd., for Mullard Ltd., at Simonstone, Lancashire.  
*Architects:* F. J. M. Ormrod, B.Arch., Dip.C.D., F.R.I.B.A., M.T.P.I. and D. H. Mills, B.Arch., A.R.I.B.A., of Ormrod & Partners.  
*Contractors:* Holland & Hannen and Cubitts Ltd.  
*Heating & Ventilating Consultants:* Hoare, Lea & Partners.

## PORTABLE VENTILATION FOR MULLARD

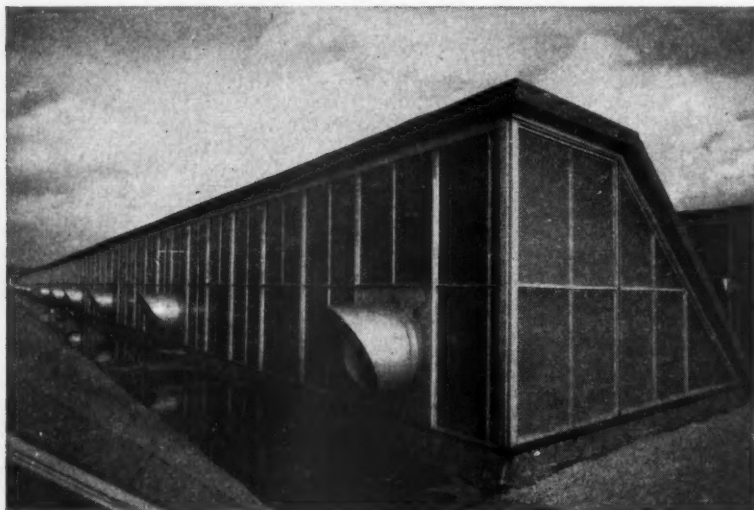
Ventilation is one of the crucial planning points in Mullard's new television tube factory at Simonstone. Special facilities have had to be arranged to disperse, as near its source as possible, the intense heat generated by several of the manufacturing processes. Furthermore, the locality of these processes will change from time to time, so the ventilation has to be movable as well.

The way the system works is ingenious: annexes built on to the east and west sides of the factory each house five powerful intake fans. These fans draw fresh air into a five feet high plenum over which the concrete floor of the production area is suspended. Ventilation inlets are installed in the floor at all stanchion points, and in areas where the heat is generated they

are fitted with inlet risers; elsewhere they are semi-permanently floored over.

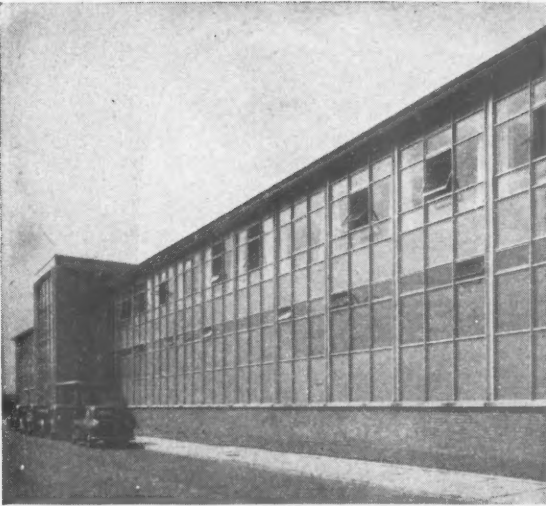
Extractor fans are set in the north light glazing at crucial points. The extractor fans are detachable and can be moved to new positions at any time and be replaced with panes of glass. Their function is to extract the heated air and dispose of it through the roof. In this way a constant flow of cool air disperses the heat immediately it is generated.

When the time comes for the situation of the hot processes to be changed, the extractor fans in the north light glazing will simply be moved to their new positions. The open ventilation inlets will be sealed and new ones unsealed in appropriate positions.

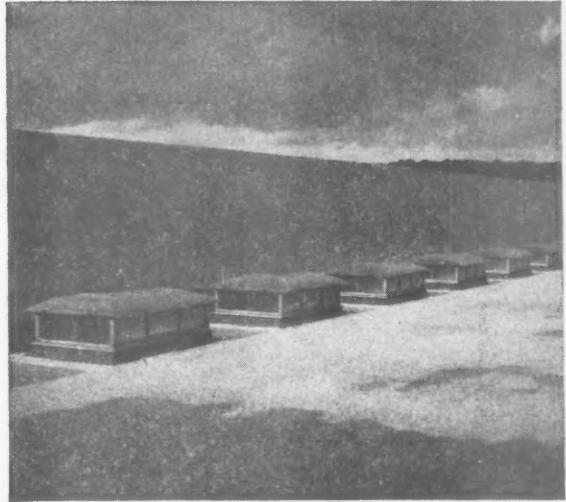


*Williams & Williams purpose made steel windows have been used for this unusual system of north light glazing. Research at the Chester factory was carried out in co-operation with the architect in order to produce a section sufficiently rigid to carry the fans, which impose considerable stress when they are in motion. The vertical placing of the windows affords maximum strength for the fans and meets Mullard's stipulation for the complete elimination of sky glare. Walkways between the bays facilitate maintenance and the redistribution of the extractor fans when the need arises.*

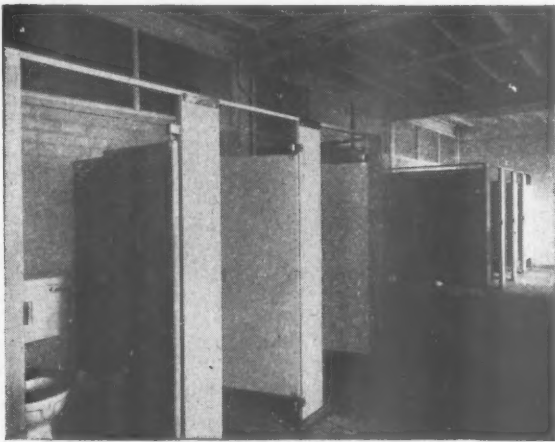




A  
C



B



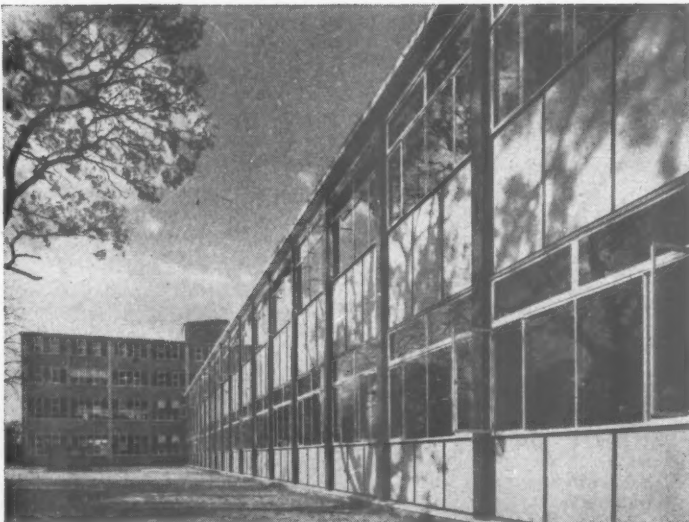
## THE ADMINISTRATION BLOCK

**A** Williams & Williams 'Wallspan', glazed with Williams & Williams purpose made aluminium windows, clads the exterior. Infilling is of blue-grey Plyglass.

**B** Williams & Williams Dome Lights add illumination to the top storey.

**C** Roften Toilet Cubicles have been installed throughout.

Aluminex Patent Glazing is used for roof lighting in one of the centralised service buildings. From these buildings, the multitude of services needed for the production of television tubes are carried on an overhead gantry to the factory, where they are run underneath the walkways of the roof to the points at which they are needed.



## MORE FOR MULLARD

Williams & Williams purpose made steel windows at Mullard's new research laboratory at Salfords, Surrey.  
Architects and Consulting Engineers:  
Norman & Dawbarn, F.R.I.B.A.

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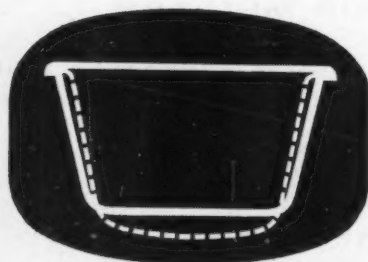
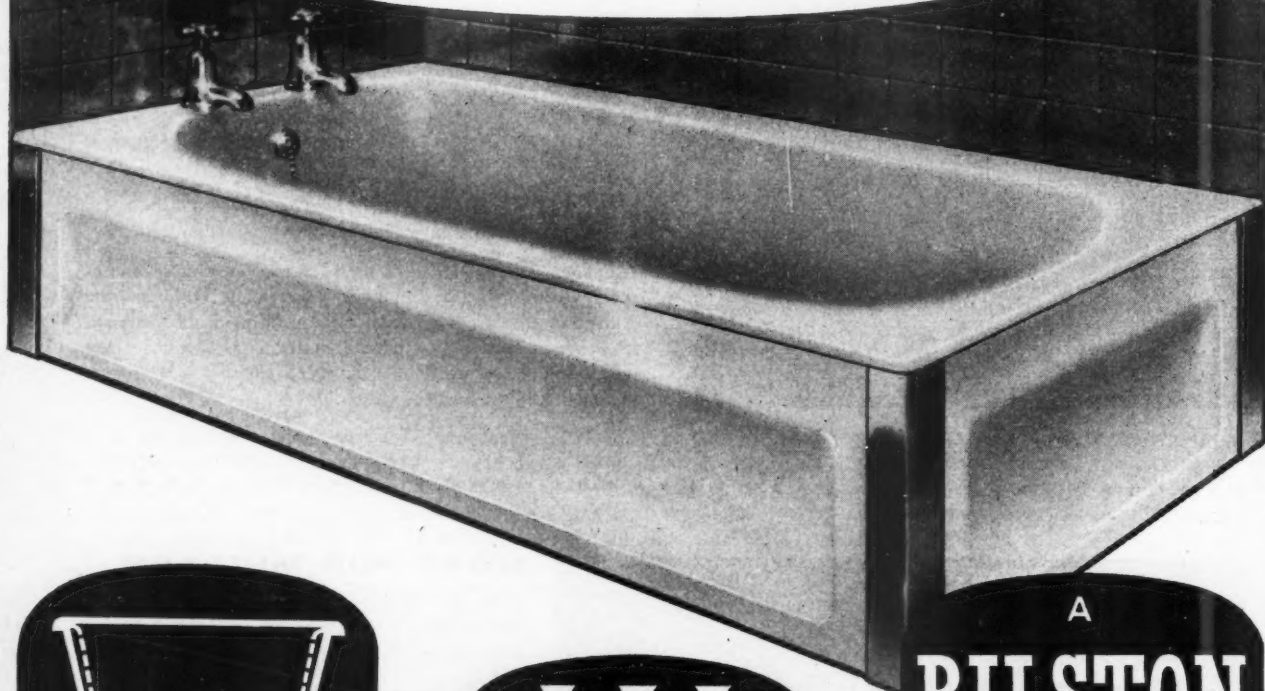


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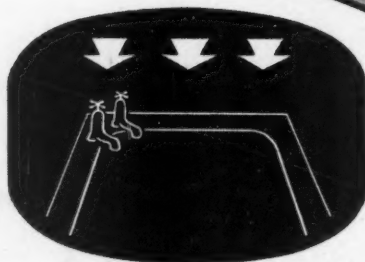
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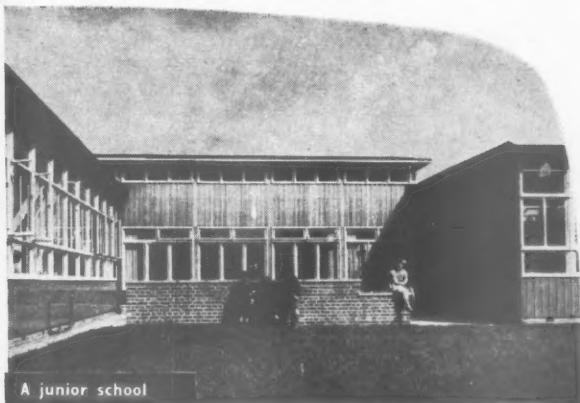
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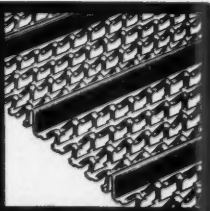
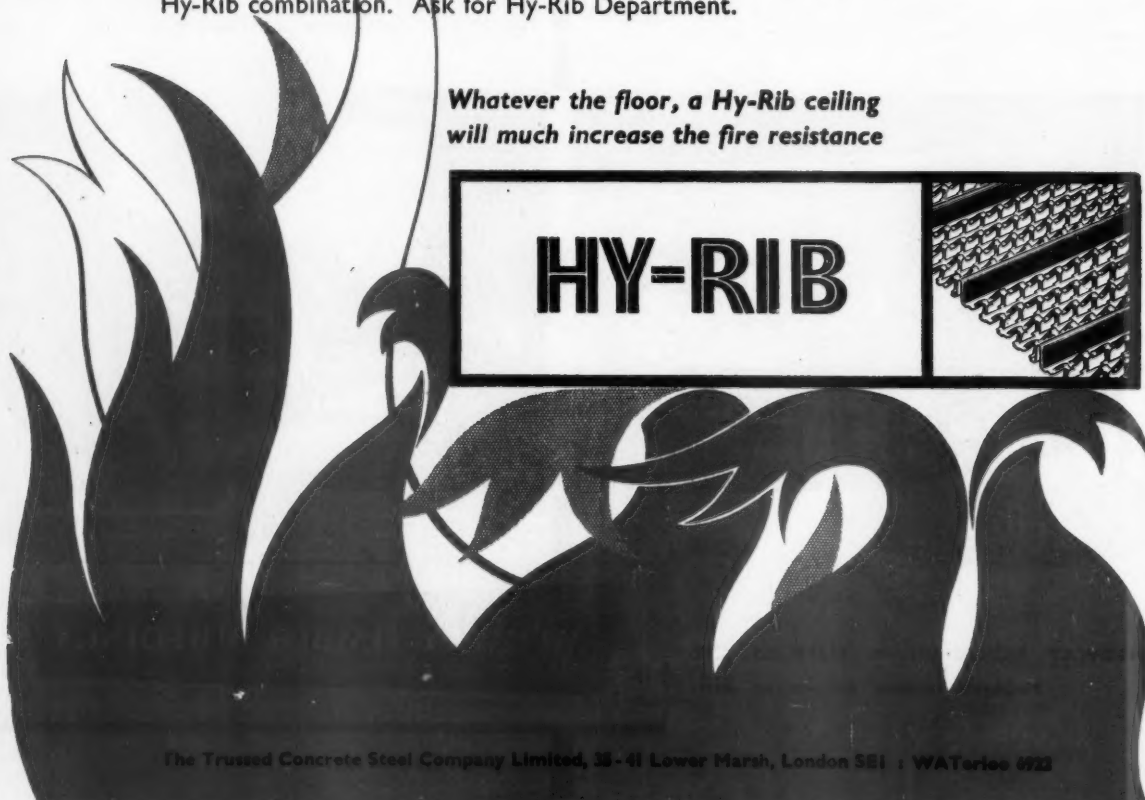
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## BRITISH UNIVERSITIES

*This week and next we are giving all the JOURNAL's pages to a survey of British Universities. An enormous programme of university expansion is now being laid down. Current expenditure on university building is over £12 million a year, and the student population is expected to increase from the present figure of 84,000 to over 106,000 in the next ten years.*

*In these two issues of the JOURNAL we are attempting to show, if necessarily briefly, what the conditions are like in which each university at present exists, to describe their problems and to illustrate some typical examples from each university's post-war building programme.*

*In addition, where possible, illustrations of the universities' development proposals, in terms of future buildings and layout, are given. The position as regards university growth is never static and the situation is constantly changing as plans are revised and programmes altered. Inevitably, therefore, some of the facts presented in an overall survey of this kind will be becoming out of date, but nevertheless this survey provides an unique comprehensive picture of the present state, in terms of building and planning, of the British universities. The articles on the universities have been arbitrarily divided between this and next week's issue of the JOURNAL. This week, the University of London, which is by far the largest, the University of Wales, and the Universities of Scotland are dealt with. Next week, the remaining universities of England will be described. This very considerable survey and study was undertaken by Elizabeth Beazley, A.R.I.B.A., who visited all the universities shown in this week's issue and wrote all the reports with the exception of London University, which has been analysed and described by Diana Rowntree, A.R.I.B.A.*



## A SURVEY OF

## British Universities: part I

We have no proof, but it seems reasonable to assume that the majority of the architectural profession's important clients are university trained. Once this meant Oxford or Cambridge. Perhaps, to the man in the street it still does, but it may not mean so for very much longer, as the other universities grow in size and develop their own faculties and their reputations for specialized research. The man from Oxford and Cambridge, however, will always have the considerable advantage of a long tradition of learning behind him, and three years in the ancient, collegiate calm of these universities may enable him to fit more easily into the social fabric of the nation than the same period spent in a Victorian mansion attached to temporary hutments in the suburbs of an industrial town.

The architect-planner's job for Oxford, Cambridge, and, perhaps, Durham and St. Andrews is straightforward, if extraordinarily difficult in execution. It is merely to prevent these universities fouling their nests, clean up any existing mess, and to add and replace as sanely, honestly, and imaginatively as did their predecessors two hundred years ago.

The architect-planner's job for the other universities is not so easy. The problems involved have been well stated by Lionel Brett in an article in the October *Architectural Review*: "London," he wrote, "has its dispersion and formidable site costs; Liverpool, slumridden, has to house a large displaced population before it can rebuild; Edinburgh has the George Square problem; Glasgow a chaotic existing layout; Aberdeen, Durham and Cardiff are split in two; Leeds, Hull, Leicester and others are committed to halls of residence miles away from their faculty buildings. Some, like Birmingham, Glasgow, Liverpool, Manchester, have formidably immutable and functionally unsuitable Victorian nuclei. Others, like Keele and Southampton, are still making do with huts and sheds. All presumably have less money that they would like and a very much faster expansion programme than they would have chosen."

These, in brief, are some of the problems. The task of the architect is not only to overcome these difficulties but to add a positive, hard-to-define factor to the solution—the essential quality of a university, to make it the place, as Brett wrote, "designed to produce (as far as possible) the Universal Man."

We see this problem for the young university and its architect as a particular challenge to the modern movement in architecture. There is a tremendously important compensating factor which the new university can acquire and which may be balanced against the advantages of the tradition and the beauties of the old. The new universities can be

functionally more efficient than the old. We do not mean functional in the misused sense to describe a stained, leaking, cold, draughty, concrete and glass box, but functional in the broadest sense of the word. Functional architecture today pays attention to the psychological as well as the physical needs of the user. It is a very much more an all-embracing art and science than the cranky, if brave, constructivist "functionalism" of the 'twenties and 'thirties. Modern architecture can provide economy of circulation, without inefficient planning, and economy of heating, lighting and maintenance. Modern architecture can provide higher standards of acoustics, sound and heat insulation and of day and artificial lighting, higher standards of space, structural strength, services and equipment than have ever been obtained before. And all within precise limits. It is in this awareness of the fundamentals of modern design that lies the difference between the modern architect and the traditionalist.

The modern architect can, if given the chance, show that, for the same amount of money spent, the modern design gives the better value, in terms of performance than the traditional one, as well as being quicker to build, and the result can be very much more interesting aesthetically, and more imaginatively and economically arranged on the site.

We mentioned above that it is likely that most architects' important clients are university trained. If modern architects are given the opportunity to design the new buildings in the new university development programme the profession's future clients will not only have a good environment in which to work, but they will have first-hand evidence of what modern architecture is. They will, therefore, be several steps along the path to becoming "good clients." It has been said often enough that an architect is handicapped if he is not stimulated by having a good client—by men who are visually conscious of their surroundings and anxious ceaselessly to improve their environment. These universities are producing thousands of clients. If the opportunity is given to modern architects to carry out the universities' building programmes, future students will be familiar, early on in their lives, with the potentialities of modern architecture, and they, in their turn, when acting as clients, will help to ensure that the principles of modern architecture are quickly spread throughout the nation by knowing what they are entitled to demand from their architect.

It is possible, of course, to over state the case as regards the efficiency of the modern architect in the field of university building. We are now only slowly accumulating a stock of knowledge about

university requirements, about the most efficient types of layout and the most economical types of building. And however much tradition, at Oxford and Cambridge, may teach us about the delights of collegiate planning, it has very little to offer in the way of *university* planning, because very few university buildings existed more than one hundred years ago. In this respect neither Oxford nor Cambridge have any advantage over other universities. The laboratories and lecture rooms in the centre of Cambridge, or along South Parks Road, Oxford, are as chaotically and dreadfully planned, respectively, as they are in Glasgow, Manchester or Liverpool.

In fact, we have only attempted consciously to plan and build complete universities during the last few decades, just as, in the same period, we have been attempting to plan and build new towns. We are slowly accumulating a stock of knowledge about town design, although it is still lamentably imprecise. Now a big programme of university expansion is under way and architects who once were closely watching town-building developments\* are now trying to formulate a desirable pattern for the layout and growth of universities.

The University Grants Committee has shown its awareness of the new problem of sudden and intensive university growth (which is so different from the casual sporadic development of pre-war years) by asking all universities to produce development plans. Those which have been produced, and released for publication, are illustrated in this and next week's JOURNAL.

It is hard, save for the *cognoscenti*, to say whether those plans are good or bad. The standards by which they are to be judged are still being formed. However, there are various items which can be considered as danger points, if not definitely as errors, in assessing the schemes.

For instance, the arranging of buildings symmetrically about an axis is dangerous if the plan shows more buildings so placed than are in the immediate building programme. A change of plans or a lack of funds may leave a formal arrangement incomplete, as at Birmingham, where Aston Webb's semi-circle of domed blocks remains unfinished, and consequentially Sir Hugh Casson's and Neville Conder's powers of ingenious planning are taxed to the full to retrieve from this inadequacy a pleasant and efficient layout. Readers will be able to discover two or three new university plans where this dangerous precedent has been set in this and next week's issue.

The informal layout is, therefore, an easier one to develop. It permits changes much more readily, and, if it evolves in the partially or totally enclosed courtyard manner, creates that inward-looking, collegiate or monastic atmosphere which is now associated with places of learning. And as for much of the year Britain is cold, wet and draughty, carefully orientated courtyards can give excellent protection from the weather. The danger is always that enclosure can block expansion.

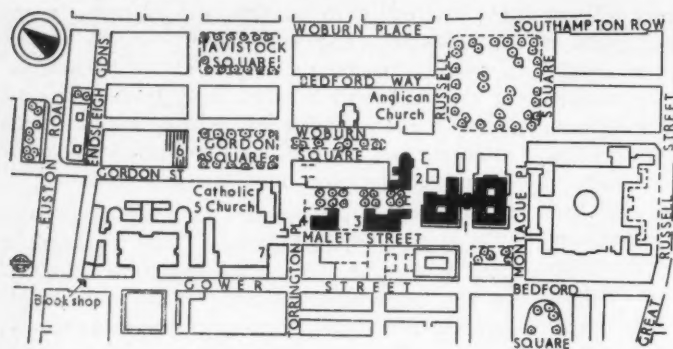
The alternative to quadrangular planning is the disposal of buildings independently of each other in a park—as has been attempted at Nottingham, and in the residential area of Birmingham. A good architect and a landscapist, working together could achieve much, but it is a method which would tax the modern architect more than any other.

Most universities agree that as many as possible of the students should live for as long as possible in halls of residence. This is due in part to a shortage of digs (now that economic pressure no longer forces so many housewives to let their spare rooms), part to a desire to keep students well and truly under control, and part because it is generally considered that the student gains enormously by leaving home and living with his fellow students and exchanging ideas. In many cases the act of living "in hall" is the student's first acquaintanceship with formal, civilized living. The potential danger in the university building programmes is the fact that shortage of space in the area zoned as a university precinct usually means that the halls are sited several miles away in suburbia. The bus and the bicycle are accepted as the normal method of transport. In several instances space could be found for halls if the principle of building high was adopted. Richard Sheppard & Partners, and J. S. Beaumont, in London and Manchester are most enterprisingly breaking new ground here, but one would like to see it adopted more generally. The student is one of the all too few categories of citizen who loses little by living in a tall block—provided it is near his work—and has as much chance to work and dream in his ivory tower, away from noise and bustle, as his colleague contemplating smooth turf in the cloistered calm of an Oxbridge quad.

In the recent number of the *Architectural Review* and in the foreword to an exhibition of university architecture called "Living and Learning" (which is now touring the universities) emphasis has been placed upon the importance of the *spaces between the buildings* rather than the buildings themselves. It is significant that all too often there is no money available to spend on these all-important spaces. Let the buildings be disposed never so carefully, if there is no money for trim, paving, and planting then the full effect is never achieved. We understand that the UGC is now giving thought to this problem.

Twelve million pounds a year is a great deal of money to spend. Are we, the nation, getting our money's worth? It is hard to say precisely, and will continue to be hard to say until the UGC's own architect's department is working properly. So far only one architect, Stanley Meyrick, has been appointed to advise the UGC. It is time he was given staff and a pilot university-building programme. It is only in some such way as this that we can be precisely informed as to whether the money is being spent wisely or not. It must not be forgotten that, so far, the technical information available for efficient university building and planning is still very scanty.

THE EDITORS



A plan of the London University Precinct.

KEY: 1. Senate House, Institute of Historical Research, School of Slavonic and East European Studies. 2. School of Oriental and African Studies. 3. Birkbeck College. 4. the University Union. 5. University College. 6. Proposed building for Institute of Archaeology. 7. Engineering School.

## London University



Above: the Precinct, stages 1 and 2, Senate House, Birkbeck College and the Union as they normally appear. Note drastic pollarding of plane trees (why?) in contrast to traditional Bloomsbury planes seen below, in the internal garden of the Precinct, stage 2, with the Catholic Church in the background. Note Georgian proportion of window openings, with glazing neither Georgian nor modern.



Though the University of London provides roughly one-fifth of the university places in the United Kingdom its name calls to mind no coherent picture. This is not surprising. Consider its history.

London University was originally the title of the College in Gower Street started in 1828. It was founded as an undenominational institution and to bring higher education within the reach of the less wealthy. It failed, however, to obtain the power to grant degrees and within a year was challenged by a rival establishment, King's College. This was set up by the Anglican and Tory interests as an answer to the "godless college in Gower Street." Reluctance of the government to give both colleges power to grant degrees led to the formation of the University of London, solely for that purpose in 1846, after which the godless college changed its name to University College.

This federal university now comprises 18 schools, 28 medical schools, and 10 research institutes. This is the core. Over and above this the University examines students from university colleges, technical colleges, correspondence colleges and other institutions in the United Kingdom, and from colleges overseas in special relation to it. Taking 1955 as a typical year, over 13,000 students were approved as candidates for external examinations. Nevertheless, in spite of its size and disseminated structure, and physical problems to be discussed further, centres of architectural coherence are beginning to emerge. It is clear that the external affiliations of this University require a unique amount of administrative space. The housing of the governing body, the Senate, has been a harrowing problem ever since the foundation. Since 1929 there is also a separate institution, the Court, which deals with finance, housed in the Senate House. Originally in Somerset House, the Senate moved in 1855 to Burlington House. The problem seemed solved when it built its own building in Burlington Gardens. However, in 1889 this building, with its exuberant statuary, was required by the government, and the University was persuaded to move to South Kensington where it occupied part of the Imperial Institute building. This was found not to be sufficiently central, and the University felt the need to own its own building. In 1920 the government bought land north of the British Museum and offered it to the University on the understanding that King's College would move there and vacate the building in the Strand. When King's College refused to move, this scheme foundered. Finally in 1927 the present site for the Senate House was acquired. All seemed set for architectural success. Lord Beveridge, the Vice-Chancellor, said:

"Nothing shall be built on the Bloomsbury site that is not beautiful. Nothing shall be built there that is not characteristic of London and of this age."

It was realized that everything depended upon the choice of architect, and the matter was taken so seriously that the choice was not finally made until 1931, when Dr. Charles Holden was appointed. With such enlightened sentiments, and the scheme in the hands of a single architect, it seemed fair to expect a building in the nature of a manifesto, London's first great modern building. Yet as seen now a generation later, this large stone pile, condemned to remain perpetually incomplete, has no place at all in the history of modern architecture. What went wrong?

Holden's plan was for a single building to run the whole length of the site, with a central spine and wings at right-angles to it. The construction was to be solid brick-work faced in granite and Portland stone. It seems to have occurred to nobody that to build up to 210 ft. in solid walling was not characteristic of this age. Such theoretical considerations apart, the scheme was brought to a standstill by an incredible failure of co-ordination. As Dr. Logan puts it in his "Introduction," "This type of construction is very costly . . . and proved to be beyond the means of the School of Oriental and African Studies and Birkbeck College which had been offered places on





*Above left: the School of Oriental and African Studies. Above right: model of the Institute of Archaeology and Classical Studies by Booth and Ledeboer.*

the Bloomsbury site." The University would appear to have a right hand which allocates building sites to the most democratic of 20th century institutions all unknown to its left hand which sanctions architectural schemes of Imperial splendour. Called upon to reconsider his ruined scheme Holden reversed his planning, as well as his constructional, policy. The northern half of the site is, therefore, laid out with individual brick-faced frame buildings round the periphery; the southern with a single stone-faced solid building, on a central spine. The building originally planned was the length of two Georgian squares and introduced an uncompromising new scale into the neighbourhood. The second instalment adopts this scale for the individual buildings, but places them around an open space in scale with Georgian houses.

With only two of these buildings complete came the second World War, which put an end to building expansion. Simultaneously, in the years 1939-50, undergraduate numbers increased from 13,000 to 18,000. Though the attempt to get all the major schools of the University concentrated in Bloomsbury had long been abandoned, the Court now set out to acquire as much property adjoining the University land as possible. By 1951 the University and University College owned the greater part of the area shown on the plan. Many of the houses on the site are temporarily adapted to University use. The Warburg Institute has been moved from South Kensington to the northern half of the original University area, and the building for the Institute of Archaeology and Classical Studies is going up on the north side of Gordon Square. The model of this building gives every indication that the University is emerging from the initial Bloomsbury architectural disaster and financing a genuine 20th century building. The disquieting thing was to see such a building sited in a Georgian road layout. However, the Ministry of Housing and Local Government approved the County of London Development Plan recommendation that the area on the plan be zoned as the University precinct, and in March, 1957, Professor Sir Leslie Martin was appointed to advise on the development of the area as a whole, so fears of a clash between Georgian and 20th century scales of development are premature.

Now, as in 1927, all seems set for architectural success. This is the historic moment to consider the precinct, the only useful time for anyone who cares to, to do so. These are the problems:

**TRAFFIC.** The present heavy traffic routes, shown on the plan, to the northern railway termini are inimical to any idea of a precinct.

**EXISTING BUILDINGS.** Buildings which will have to be incorporated in the plan include the warring halves of the Holden scheme, Booth & Ledeboer's building for the School of Archaeology and Classical Studies, the Catholic

Church on the University College site which happens to lie across Holden's main axis, the Anglican Church in the middle of one side of Woburn Square, and a bookshop on the corner of the University College site. The latter is entirely unimportant in the light of University College's architectural methods. The Catholic Church is not, in fact, an obstacle since a thoroughfare is not desirable on that axis, and the church is itself of far greater architectural sensibility than any other building within sight except some Georgian houses scheduled for demolition. Its intrinsic merits gain by contrast with the poverty of design of its new neighbours. The other church stands in a part of the precinct as yet unplanned, so it is not yet known if it will present a difficulty.

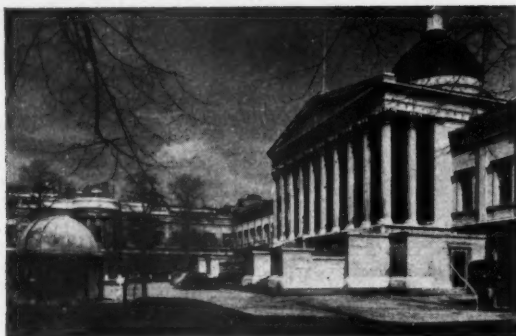
During the past 20 years comparisons have constantly been drawn between the felicities of Georgian planning and detailing, and alleged faults in the University buildings. This has gradually produced the impression in University circles that the critics are advocating anti-quarianism. The University feels that it is being urged to preserve as much as possible of Georgian Bloomsbury, and even to produce "Georgian-type" metal windows and facing materials. This is a total misunderstanding, and it cannot be too strongly asserted that there is no way back to the 18th century Bloomsbury. It is the sensibility, not the forms, that must be copied.

Much of the aesthetic chaos around the precinct stems from the coexistence of the contemporary scale of the remaining houses. This situation is temporary and unimportant although it has continued to be temporary for so long.

The dichotomy introduced by Holden himself is, as far as the individual buildings are concerned, incurable. But its attendant problems must be solved. The change from a single building with a solid spine to a group of buildings round an open space has totally invalidated the plan. Each part of the scheme insults the other. The huge Senate House building needs to be seen from a distance, whereas the open court of the second part of the scheme offers a viewpoint that should never have existed. Conversely, when viewing the second group of buildings from their internal open space the bulk of the Senate House is an outrage to the principles of large-scale planning. The immense areas of concrete and macadam that surround these buildings, and the formidable iron railings that succeed in keeping invaders off an astonishingly narrow strip of turf could be altered at little expense.

At the point in the plan where the policy changed and the solid spine building gives place to the congestion of high buildings round a narrow garden occurs one of the outstanding examples of subtopia in London. Here a service road was found necessary for the new buildings. The architect evidently clung to the convention that the noisy





*The original University College building, as seen today.*



*The rear of the University College.*



*The London School of Economics and Political Science. The main entrance to what was originally a spacious, well-lit college building, now a rabbit warren.*



*Two LSE buildings with someone else's building dividing them.*

street elevation was the "front" of his building, and service entrances must therefore be inside the enclosure. By present day standards this is a curious point of view, destroying as it does the natural precinct of the green square. Vans therefore have to drive in. If no gates had been put up, some of the heavy traffic that uses Malet Street as a route to the Euston Road might have used this route. Gates have therefore been provided, but are usually open, and the roadway through the centre of this imposing site has become a monumental service yard.

**PLANNING:** A problem that the University does not recognize as "architectural" has arisen with the coverage of so large an area within a residential neighbourhood with non-residential buildings. The indeterminate, semi-private character of the centre service road no doubt contributes to this. At weekends and at night all kinds of vandalism occur there. This is the moment to state problems, not to rush in with premature solutions. Nevertheless, there is so obvious a connection between this problem of vandalism in the deserted precinct and the university's crying need for halls of residence that this particular solution underlines itself.

The whole precinct area is fully occupied, both by Faculties of the university and by the existing tenants of the buildings. Wherever building development is contemplated, existing leases, or the temporary accommodation of members of the university, present an organizational problem. It was largely the magnitude of this problem and the task of keeping up with its day-to-day demands that engaged the full attention of the university organization and averted it from the pressing need for long-term and large-scale planning. This need is now met by the appointment of Sir Leslie Martin.

#### **University College**

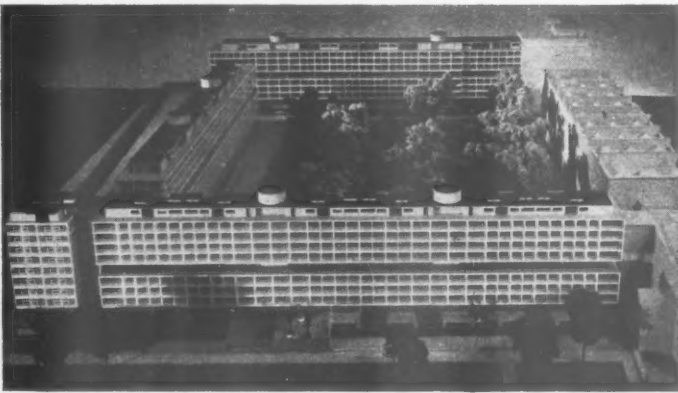
Though it forms part of the university precinct, University College is a separate (and earlier) foundation. Originally housed in William Wilkins's building, monumental in the Greek style, it now owns the greater part of the site, 5, shown on the plan. It does not own the bookshop on the NW corner nor the church in the centre, but this is of little importance. A direct hit by a bomb cost the college one-third of its accommodation, and it is not yet reconstructed.

There are 3,500 students. Considering this number, the extent of the bomb damage, and the large rectangular site, here would appear to be an opportunity for large-scale planning. The College, being entirely dependent for building upon its annual grant from the government, feels that it has not the capital resources to back such a policy. There is, of course, on this fully occupied site the very pressing problem of how to shuffle round the students' accommodation while building works are in progress. Both of these are invalid reasons for avoiding large-scale planning, since this does not imply larger units of construction. It is, however, the College's considered policy not to encumber future generations with long-term schemes at a time when scientific education is rapidly changing. The contention is that buildings may be outdated before they are paid for. This would seem valid if each five years' building programme were of a temporary nature. In fact, though conceived as individual buildings, they are of very lasting construction, and not outstandingly free in plan. Moreover, owing to the lack of any overall plan for the site, the LCC has no alternative but to enforce the existing plot ratio strictly, in the case of each individual building.

University College feels apparently that the freedom of future generations is further assured if the College does not allow itself to fall into the clutches of a single architect. Professor Richardson has made good the damage to the main block in what would seem to be lavish style. R. C. White-Cooper is allotted the task of adapting the humbler brick regions at the rear of the original stone building for use as refectories and kitchens, and a tea pavilion at the Shenley playing fields which will be men-



*Richard Sheppard and Partners' design for halls of residence for Imperial College in Princes Gardens, perhaps the most imaginative and progressive example of university design in London. Above, a study-bedroom; below, a model showing the halls forming a precinct on three sides of Princes Gardens. Each hall consists of a broad access gallery on the ground or fourth floor, from which lead staircases in the traditional manner to bed-sitting rooms, eight per floor (see also the JOURNAL for December 5, page 837).*



tioned later. Professor Corfiato is converting a hideous red brick building at the NE of the site, and preparing parts of the Engineering School at the SW corner. This has, however, to be approved in stages.

It must be nervous work submitting the design for a building where the left-hand corner and the lower centre portion of the main block have to be approved, and start, without the certainty that the entire elevation will ever take shape. One can sympathize with this architect's desire to protect his design from publicity. Professor Corfiato's new building is in reinforced concrete, clad in brick with stone facings. His previous building for the college, a little way along Gower Street, is stone faced. This section presumably aimed to "fit in with" University College, while the Engineering School in the Torrington Place block is "in character with" the rest of Gower Street. All this is extremely confusing.

#### **Imperial College of Science and Technology**

For 100 years there has been a second centre of University activity at South Kensington. Convenient as it is for museums, this region has the disadvantages of Victorian urbanism: formal buildings face outwards on to straight streets, broad but treeless. Behind these façades lurks all kinds of industrial squalor.

The Imperial College of Science and Technology is considering a scheme for the site between Exhibition Road and Queen's Gate, Prince Consort Road and Imperial Institute Road. The scale of this is something quite unprecedented for a part of London University. The difficulties that are being faced here are very much the same as the ones that daunt University College. On the Imperial College site the first task is to clear a remarkable clutter of buildings. The potential courtyard has for generations done duty as a vast back yard. Here, as elsewhere, there are several buildings which it is proving impossible to shift. One is an ugly but expensive block of flats. Another an inconveniently sited example of the genius of Norman Shaw.

Norman & Dawbarn were commissioned to prepare a scheme with Hubert Worthington who had for many years been the consultant architect to the College. The large scheme for halls of residence for the neighbouring site, Princes Gardens, was given to Richard Sheppard & Partners, with the highly original result shown above. When the Dawbarn scheme came before the Royal Fine Art Commission in 1955 they objected to the removal of the Imperial Institute Building. The RFAC was supported by the LCC, and the College was asked to prepare alternative schemes. As a result the government decided that the expansion of the Imperial College could only be carried out on the scale required if the Imperial Institute building were demolished, but that Colcutt's tower should, if possible, be retained. Subsequent schemes have developed the idea of retaining the tower, moving the Great Hall from the centre of the site, and planning the whole centre area asymmetrically. The result is to open up the site to form a precinct round the tower. If the architect's proposal to close Imperial Institute Road to the public and add its width to this precinctual space should be accepted by the

authorities involved—LCC, City of Westminster, Royal Borough of Kensington, and Ministry of Transport—we should at last see something of the university character that has hitherto been so conspicuously lacking in South Kensington. The scheme operates, as any good 20th century scheme must, with two separate circulation levels, one pedestrian and one vehicular.

The University's recognition for the need of an over-riding authority in planning the precinct brings us one step nearer the possibility of a master plan for an area where educational bodies other than the University are jointly involved. It is not merely that the Royal College of Music occupies a central position on the Imperial College's site. The Royal Colleges of Art and Music, although entirely separate administrations, form with the Imperial College a university in fact though not in name.

The special problem of London University is that normally its building projects have to be planned for sites already built on. Its task is not so much to build a University as to excavate one from the mass of live and dead existing building. The necessity always to act through committees slows things down. Neither committee decisions, nor the need for self-justification, are propitious to architecture. A similar, though distinct, problem is the need to build on sites the whole of which are normally in use. The organizational effort involved deters the officers of colleges from wishing to build.

#### London School of Economics

The extreme example of the college with a fully occupied site is the LSE. This School began in 1895 in John Street, Adelphi. In 1902, when Kingsway was laid out, it opened on a small part of its present site in Houghton Street. It now covers the whole site to a height of five storeys. Across the road it owns two further buildings, but, it should hardly be necessary to add, between them is a building under separate ownership. The cube of all this is now the equivalent of quite a large building, but each stage of the development has been seriously impeded by what went before. The final jigsaw arose simply because the scale of expansion was not foreseen.

Paradoxically this drastically restricted college does boast its own college architect. LSE is about to take over St. Clement's Press building opposite, but only on a lease. This simple, narrow building is well suited to adaptation but cannot provide all the accommodation the school would like, even for the present numbers of students. Full-time under- and post-graduate students number 1,800 to 2,000. Part-time students, about 700. Shortage of classrooms keeps the number in the average class up to 24, whereas 12 would be preferred. Tutors have to share rooms. There is acute shortage of typist rooms, of rooms for post-graduate research, and for the Union.

Manifestly, lack of space and higgledy piggledy development has not prevented the LSE from becoming a world-famous school of unique attraction. It is a phenomenon quite typical of London that this intellectual hub, that draws students from the ends of the earth, has no architectural existence at all.

#### King's College

King's College, faced with the necessity of expanding on a non-expanding site, solved the problem by constructing extensive laboratories underground. In the light of the plans for its further development submitted to the Royal Fine Art Commission this is seen to have been fortunate.

#### Individual buildings by other colleges and medical schools

In the years immediately following World War II all the available money went in urgent reconstruction. Among the few building schemes completed then were Wye College by Richard Sheppard & Partners and the Institute of Child Health by Easton & Robertson. The robust domestic style of Wye College was a new departure for

the University, but being in Kent not a particularly significant one for London problems. Unfortunately Easton & Robertson have not thought it suitable to repeat the bright brickwork and unpretentious manner of their Child Health building in later university schemes.

A large proportion of the money administered by the Court goes into additions and adaptations. There are, however, a number of individual buildings under construction. Nearest completion of the large schemes is Bart's Hospital Medical School by Easton & Robertson. This can now be seen fronting on to Clerkenwell Road to the north of Charterhouse Square.

The building shared between the Medical Research Council and Hammersmith Hospital Medical School has its first half complete, and the second part, which will raise it two storeys, is at the design stage. Basil Ward has chosen to express the complications of ownership on elevation although they do not affect the structural form. Payne & Lacey's building for Queen Mary College has one of its two large teaching blocks under construction. The structure, steel frame with concrete floors, is clearly expressed as a grid on the road-side elevation. This grid is faced in stone to tie up with the existing College Building, though the new building is so different from its florid predecessor that the stone can but underline the contrast. Each unit of the grid is divided elevationally into two unequal windows and a panel below faced in green slate. The mullion is to be faced in plyglass, coloured and possibly patterned. This building brings its own large scale to the neighbourhood. The careful detailing and preoccupation with texture produce a true street architecture that can be understood and savoured by the passer-by. The wings are, however, linked and topped off with a perfunctory symmetry that seems to speak a different language.

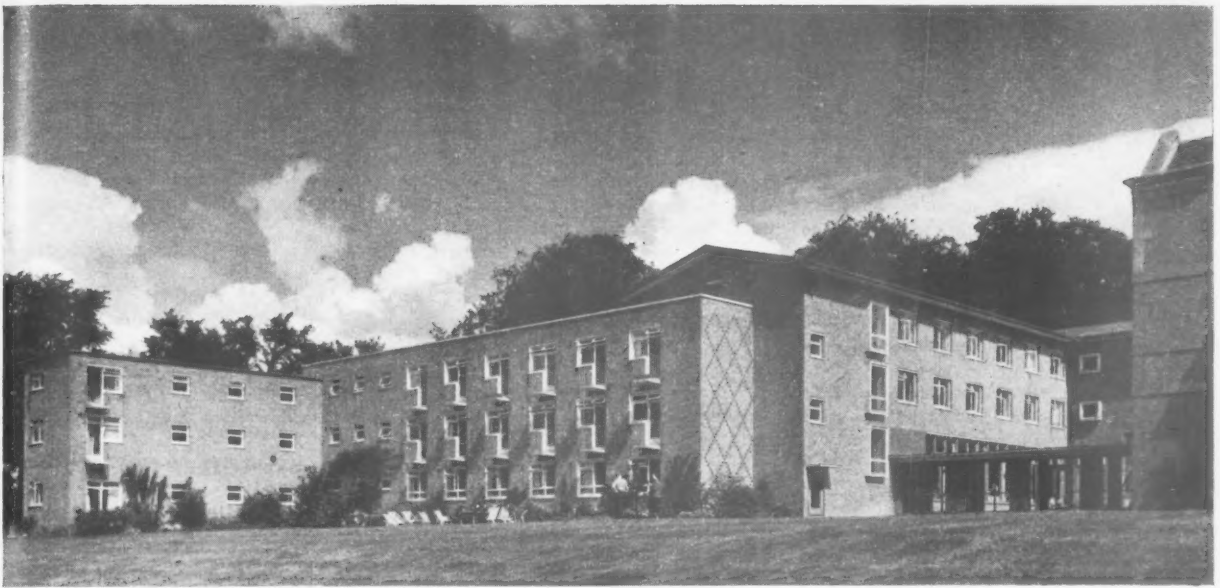
Lyons, Israel & Ellis's design for the Postgraduate Medical School to be built in the grounds of Hammersmith Hospital looks like avoiding this particular drawback. The design consists of a long block in pre-cast reinforced concrete frame and an interesting concrete building of tiered lecture theatres. It relies entirely on form. The units will be cast in china clay sand, which gives a glitter and a finish as light, it is claimed, as Portland stone.

The Field Station in Hertfordshire for the Royal Veterinary College is taking shape. The problem of disposing barns and laboratories in a fine park is a simple one. Devereux & Davies have used a commendable simplicity in the design of the brick and timber buildings, relying on traditional white fencing for decoration. At Shenley, also in Hertfordshire, White-Cooper & Turner have designed a Tea Pavilion for University College playing fields. Those testing elements, lattice beams and rubble walling, seem to be used for their proper purposes with dignity. Does the University allow its architects more freedom in the seclusion of Hertfordshire? Or is it simply much more difficult to design a successful building for a high-density town site than for casual country use?

#### Halls of Residence

The teaching schools of London University were originally thought of as non-residential colleges for Londoners. Now, however, it is the policy of the University to provide enough halls of residence for every undergraduate to have one residential year. The University is always on the lookout for sites that may fall vacant to the east of the precinct. Unfortunately the Borough of Holborn is equally in need of land for residential purposes. Plans are in preparation for an International Hall of Residence for the whole block on the south side of Brunswick Square. Imperial College has its large, impressive scheme in hand. University College, with its 3,500 students, has only hostels for less than 200 men and 130 women, but has acquired an island site off Fitzroy Street. These figures are a fair sample of the general situation. The enormous demand opens up an important architectural opportunity.

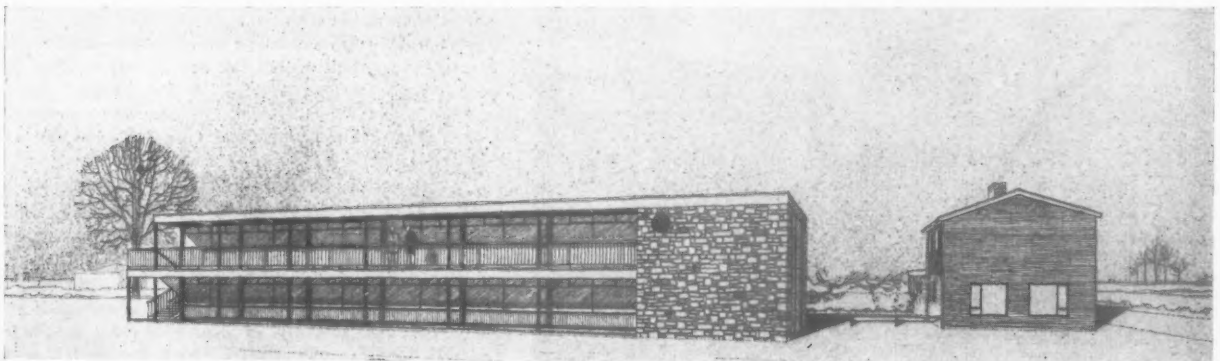




*Above: Wye College by Richard Sheppard and Partners.*



*Above: perspective of building under construction for Queen Mary College, Mile End Road, by Playne and Lacey. Below: perspective of tea pavilion at University College Playing Fields, by White-Cooper and Turner, a very different cup of tea from Gower Street.*



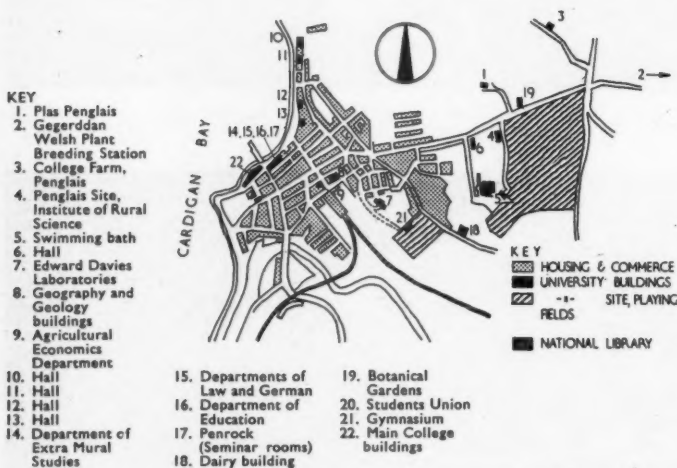


## University of Wales

The University of Wales is a federation of autonomous colleges and includes the National School of Medicine, Cardiff.

The Welsh, with their traditional respect for learning, were rather ahead of the English university movement in the nineteenth century, as they also were with their grant aided secondary education.

Meetings to found a college in Wales started in 1863 and tremendous work and energy went to establishing the idea and collecting funds. It happened that the following year a large hotel which was under construction in Aberystwyth had to be sold, and this was bought up for the first college building. There were, however, many struggles ahead before Treasury support and government recognition were given.

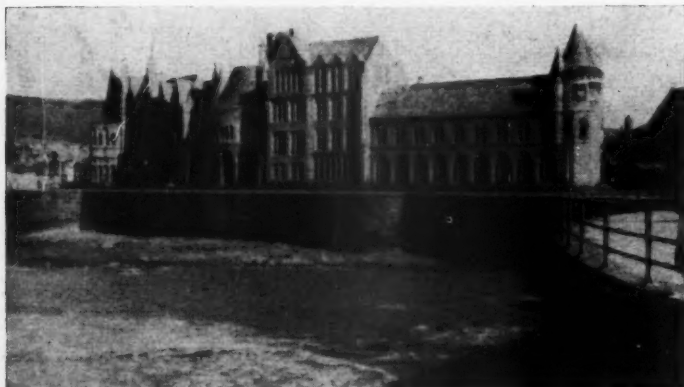


A map of Aberystwyth showing the disposition of existing University buildings and, on the right, two new campus at Penglais.

## University College of Wales: Aberystwyth

Aberystwyth is almost unique among the places which became university towns in the 19th century in having no industry. One wonders if it had not been for the initiative

The main university building in Aberystwyth, once an hotel.



of the individual who snapped up an hotel, whether a college ever would have developed here. Its isolation from the populations of both north and south Wales has given it individual character of a non-parochial type. Over a third of its students come from outside the country.

Aberystwyth was a fashionable resort during the last century, and today, being the nearest seaside town to industrial cities such as Wolverhampton, is particularly popular for day coach trips. The hinterland is farmland running up to the hills. With various college departments scattered about the town and a considerable proportion of the total town population academic, the university college is an important factor in the town's life. The college is distributed in the town and on the hill behind it.

The main building is now what was once a giant hotel right on the front—hence the name, the College by the Sea, Administration, arts departments, and some science are down in the town with this college building as their focus.

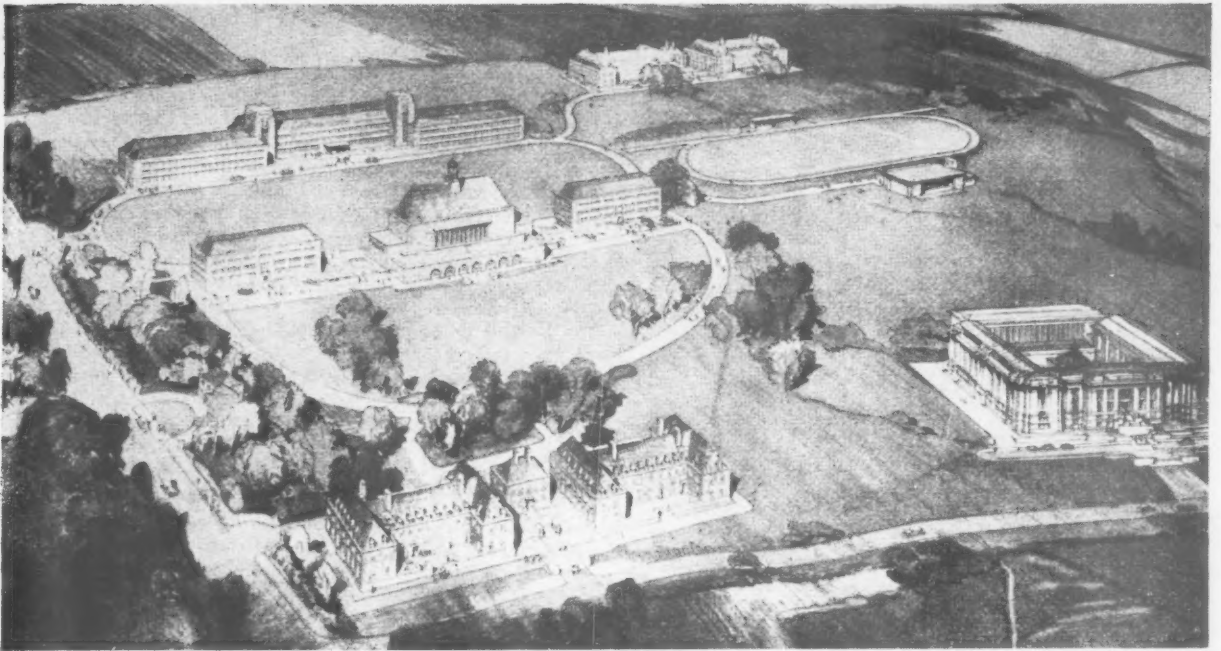
The college also owns about 450 acres on the hill above the town at Penglais. The eventual long term aim is to establish a campus up there and to withdraw from Aberystwyth. The site is 1½ miles from the sea.

There are pros and cons to any scheme and one has to weigh the obvious advantages against the change of character which is bound to occur when the life of the college no longer follows the pattern of a university town but is in itself a withdrawn community. A town of the size and type to be a truly university town is rare today and has special value. There are also the difficulties of what will probably be a long interim period when science is concentrated on the hill and arts by the sea. For instance, where then will the new Union be planned? Logically, taking the long term view, it should be at Penglais but, in a dominantly arts university college, this will probably not be the main student centre for many years.

The first great advantage of the hill site will be its proximity to the National Library, which was built before the last war, and is one of the few copyright libraries in Great Britain. The close co-operation of the librarians with the college is naturally greatly valued by the university.

The second advantage is the ample room for expansion. There is space for halls of residence as well as faculty buildings. This is particularly important when a college is withdrawn from the town, and few of our universities have room for it. The generous space on the hill site has one great danger—the temptation of too loose a development. In order to maintain that corporate sense of cohesion, a fairly closely knit scheme is generally desirable. Furthermore, a site on the west coast of Wales, with such splendid views over Cardigan Bay, also means exposure to the full force of the westerly gales. It is interesting to note that the traditional building sites in the Aberystwyth area appear to be on more sheltered land. Therefore it seems that the college buildings should themselves form sheltered outdoor spaces and should not be laid out in too grand a manner as isolated units. Shelter and protection will certainly be necessary to those living on this splendid but windswept campus. Tree breaks in belts and groups would also help. As student numbers have recently been revised there is no up-to-date plan for the development of this area available for publication. But the pre-war plan by Sir Percy Thomas & Son, which is shown here—and which is open to criticism on the above points—is what has been followed so far.

The residential tradition in Aberystwyth is strong. Of the 1,255 students, 589 are in halls of residence (about 50 of these being in hotels taken out of season by the college). The new men's hall at Penglais has very much a "Hall" as against hostel character. It lies well in to the side of the hill and its buff stone is sympathetic to the landscape. This, with the Institute of Rural Science (converted Plant-breeding Station) and the swimming pool, are the

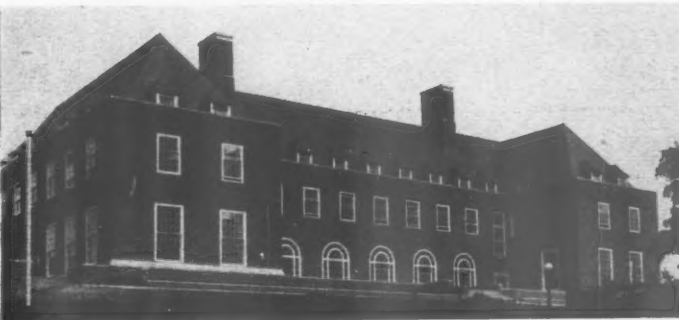
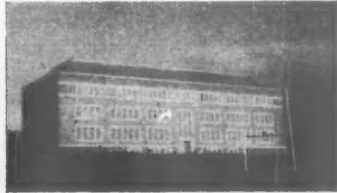
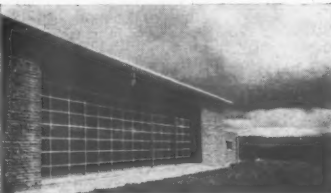


*Above: a sketch showing Sir Percy Thomas's prewar proposals for the new campus outside the town at Penglais. On the right is the National Library. Behind it is the swimming bath, which is shown finished below left. On the left is the Pantycelyn men's hall of residence with behind it the Institute of Rural Science. Both buildings—designed by Sir Percy Thomas and Son—are shown completed bottom, and below right. Right: the Welsh Plant Breeding Station, designed by the Ministry of Agriculture.*



**Buildings completed since the war**

*Pantycelyn Hall of Residence; Institute of Rural Science (conversion). Architects: Sir Percy Thomas & Son, P/P/A.R.I.B.A. Conversion of Gogerddan Mansion. Architects: Saxon, Smith & Partners, P/P/A.R.I.B.A. (Welsh Plant Breeding Station) Lord Milford Research Labs. Architects: Min. of Agriculture (E. Hodgson, A.R.I.B.A.). Biology block. Architects: Sir Percy Thomas & Son, P/P/A.R.I.B.A.*



only buildings on the site so far, so that they naturally seem rather aloof and isolated from the university atmosphere in the town. It is hoped that the college will be granted money for further buildings up here, and that these will knit together these rather lonely units.

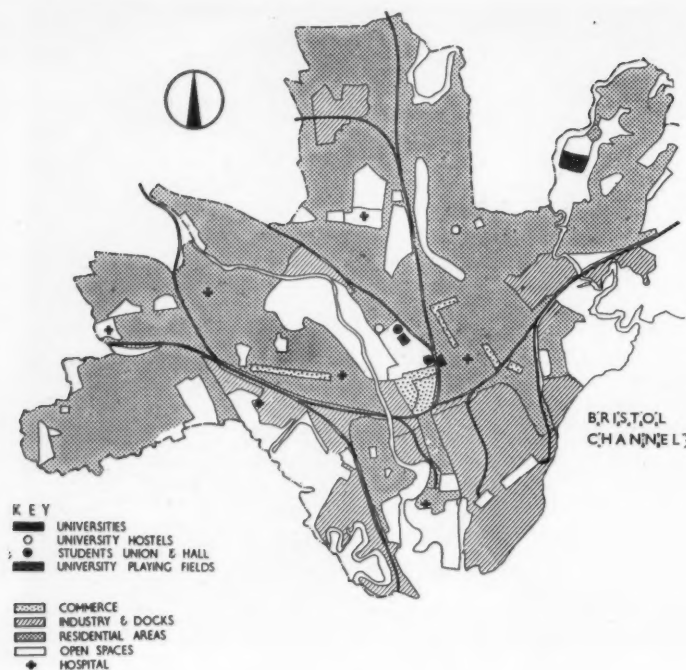
The Plant-breeding Station run in conjunction with the college is about three miles inland. The unpretentious Milford Laboratories seem the right scale to aim at for science buildings of this type, although architecturally they have a long way to go. There is no cinema foyer atmosphere which one is inclined to find in the circulation spaces of such buildings.

### The Welsh National School of Medicine, Cardiff

The Welsh National School of Medicine, in conjunction with the hospital authorities, propose to develop a new teaching centre. The medical school would be integrated with a hospital of 800 beds. A site has been acquired about three miles from the centre of Cardiff and although schedules of accommodation were completed four or five years ago the go-ahead is still needed from the Government departments concerned. This is impatiently awaited. It was originally intended to hold a competition for this centre but it is now felt that the time factor may not allow this. Sir Percy Thomas & Son have acted as consultants on site matters, schedules of accommodation, etc. The site which has been acquired is on high ground, conveniently accessible from the city, Swansea, and the Rhondda Valley. It is a mixture of open space and woodland. More young trees are waiting to be transplanted from the nurseries.

Meanwhile the College, apart from the completion of the institute of pathology, has stopped development since 1945 because of their plans for the new centre. It may be necessary to erect some accommodation in the near future as conditions are so cramped. By decanting certain departments, the new property might house a library, reading room and refectory and thus eventually be a commercial proposition when no longer needed by the school.

It is to be hoped that the school and hospital authorities will be able to make a start on their bold scheme in the very near future.



### University of Wales

## University College of South Wales and Monmouthshire:

# Cardiff

*Cathays Park, Cardiff, with the administration and arts portions of the university in the left foreground. The applied science buildings are just off the photograph to the left.*



The university college at Cardiff, founded 1883, is now sited in two main areas.

In the civic centre in Cathays Park is the New College, a large admin./arts/pure science building designed in character with the rest of the park which was originally laid out in 1904. Extensions here are really part of the original design although detailing has been simplified. Immediately to the north-west there is a triangular piece of ground which is also allocated for college purposes; it is probable that any development here would also have to be faced in Portland stone and conform in character with the original scheme for the whole civic centre.

The second area is that occupied by the applied science buildings in Newport Road about half a mile away. More of a contrast to the formal spaciousness of Cathays Park is hard to imagine. It appears congested and unplanned. A clutter of college and lay buildings are crowded round the original college buildings. However, new building here is conforming to a development plan (Sir Percy Thomas & Son—consultant architects) which envisages the whole site in college hands with faculty buildings opening on to a central quadrangle.

Architecturally it promises to be a more interesting area than Cathays Park where architects are tied by what exists. The new department of mining is an indication of the type of building to expect here. It is to be hoped that the Old College (originally the Infirmary) on Newport Road may survive as it would give historical weight and character to this site, but it is not a building that merits preservation if this will not fit happily into the general plan.

The Students' Union (whose original building in Cathays Place was bombed and has been rebuilt as an assembly hall) is now in Dumfries Place. This building—though far from ideal in itself—is well sited, being between the two main groups of faculty buildings.

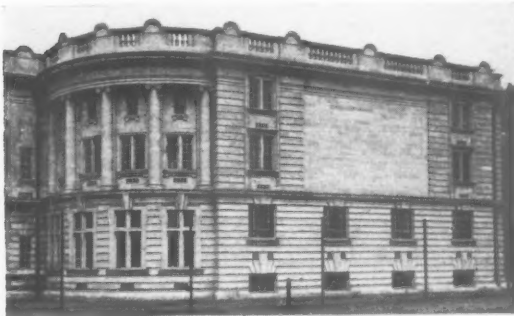
The College would like to build more halls of residence. Of the 1,700 students now at the college (target 2,000) 233 are now in halls. Sites in the town are being considered for this development. Birchwood Grange has recently been extended by a new wing for 60 students, and further extensions are planned here.

After negotiations with the Corporation, land for playing fields was acquired at Llanrumney—about four miles out. Considerable work, including a new pavilion, has been



completed here. The pavilion appears to have great charm and simplicity, its light balconies protected by deeply projecting eaves being particularly in character with its function.

Right: the new Department of Mining in the Newport Road area, designed by F. R. Bates & Son.



Above: the extension to New College, Cathays Park, designed by Messrs. Caroe & Partners and carried out since the war. Left: the rear of the Physiology building, and part of the Metallurgy block in the foreground—the Applied Science buildings in Newport Road.



Below: a new Hall of Residence by Sir Percy Thomas & Son. Bottom left: a sports pavilion at Llanrumney, the university athletics ground. Architects: T. Alwyn Lloyd & Gordon.



Consultant Architects: Sir Percy Thomas & Son, F/P/A.R.I.B.A.

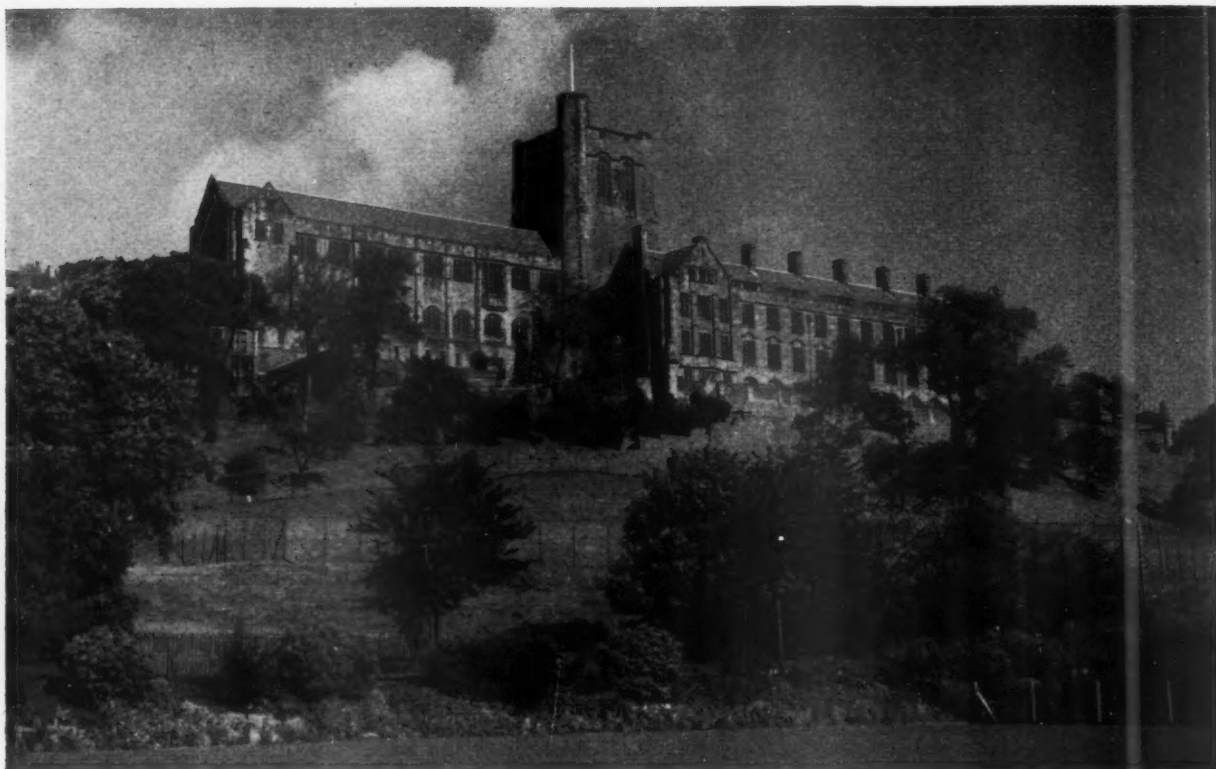
#### Buildings completed since 1945

New College extensions (Physics and Chemistry departments). Under construction, New College extensions (Zoology). Architects: Caroe & Partners, F.R.I.B.A. Union conversion—Dumfries Place; Assembly hall and lecture rooms on old Union site. Architects: T. Alwyn Lloyd & Gordon, F./A.R.I.B.A.

#### Old College site, Newport Road

Engineering and Metallurgy extensions. Architect: H. W. Fletcher, F.R.I.B.A. New mining block part 1, under construction—part 2. Architects: F. R. Bates & Son, F.R.I.B.A. Llanrumney sports ground pavilion. Architects: T. Alwyn Lloyd & Gordon, F./A.R.I.B.A. Birchwood Grange extension (called University Hall). Architects: Sir Percy Thomas & Son, F/P/A.R.I.B.A.





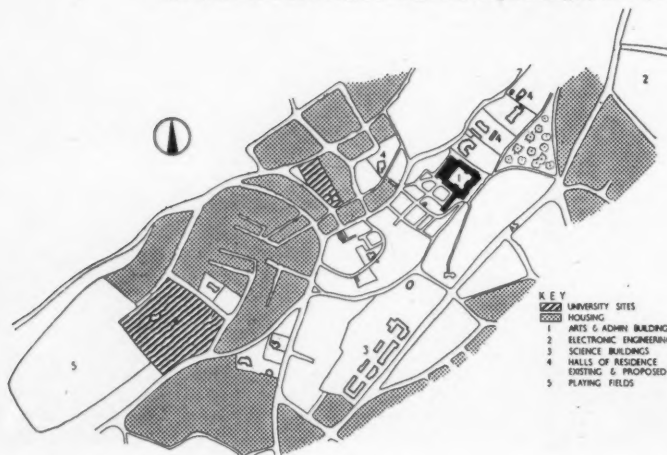
The Arts and Administration building from College Park, on the east of the university, and, right, the forecourt.

## University of Wales

### University College of Wales:

## Bangor

The college at Bangor which was granted a charter in 1884, is now housed in the stone Jacobean buildings designed for them by Hare at the beginning of this century. It is one of those places which is obviously a university. From the moment of entry into the forecourt of these Jacobean/Tudor buildings there is no doubt whatsoever that they are academic. They have a commanding site on the brow of a hill within the town and are developed on two sides of a forecourt and an inner quadrangle, the two-



storey buildings dropping away to five with the falling ground. Administration and Arts are centred here. Science is less fortunate as it has developed in a linear fashion on a strip of land along the A5 at the foot of the hill. This linear development is at present being tidied up and a scheme worked out to make the best land use now possible of the site. The department of forestry and botany have a large new building here. By process of demolition and temporary decanting of departments it is considered possible to find space for all science departments within this linear site with the exception of the Electronic Engineering Department. It is to be hoped that architectural cohesion will also be possible, as the restricted site does lend itself to departmental ribbon development unless very ingeniously co-ordinated. The Electronic Engineering Department is to have a new building on the site of the old warehouse now housing the department. This appears to be a modest design, with a minimum of wasted space. Both these science sites are within easy distance of the main college. The extensions to the arts department are envisaged in two blocks (library and tutorial rooms) which form a quadrangle with the existing entrance forecourt. This

seems an excellent idea. The college are concerned about the use of brick here (it will, they think, be an essential economy). One wonders whether a contemporary building partly in stone but largely in rendering, might not be more sympathetic to the existing buildings, than neo-Georgian brick. The present position of the entrance, on the corner of the forecourt, while unorthodox, might be successful if the two flanking façades were more firmly bound together. Halls of residence are mostly within easy reach of the College (which, by the way, is a very lively place and is open every day, including Sunday, until 10.30 p.m.). Bangor is very much a university town; like Aberystwyth, about 10 per cent. of the population are students. This number will increase; they have been asked to expand from 1,035 (present number) to 1,400.

Union activities are now centred in the college buildings, but a new Union is proposed on the slopes between the science buildings and the college. This will be a strategic position for all students. It is sympathetically sited, being placed among the trees, to one side, and will therefore not obtrude on to the slopes below the college.

The playing fields have a magnificent site above the college overlooking the town and the Strait. A new men's hall of residence is being completed there.

#### Major projects completed since 1945

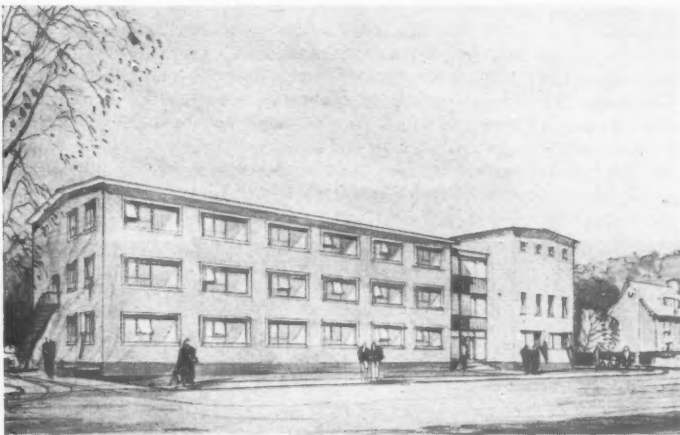
The second stage of *Neuadd Reichei* Men's Hall of Residence (approximate cost £100,000); extension to Department of Chemistry (approximate cost £100,000); Botany/Forestry building; extensions to departments of Zoology and Physics (approximate cost £450,000). Architects: Sir Percy Thomas & Son, P/P/A.R.I.B.A.

#### Future major projects (plans prepared)

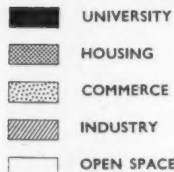
Second and third stages of *University Hall*; Women's Hall of Residence. Architects: Sir Percy Thomas & Son, P/P/A.R.I.B.A. New building for Electronic Engineering Department. Architect: S. Colwyn Foulkes, F.R.I.B.A. Extension of college library. Architects: Sir Percy Thomas & Son, P/P/R.I.B.A.



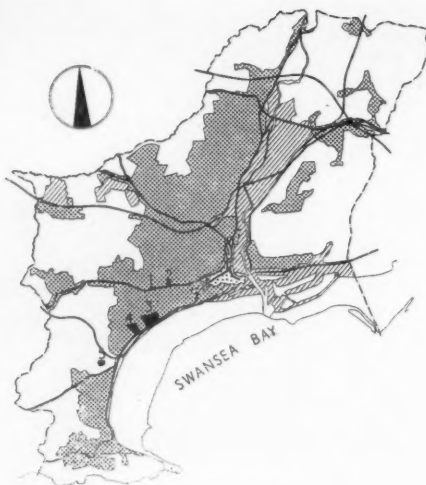
Top: the Department of Forestry and Botany (architect: Sir Percy Thomas & Partners) which forms part of the new science area to the south of the main university buildings. Left: the proposed Electronic Engineering Department, designed by S. Colwyn Foulkes. Above: Men's Hall of Residence, by Sir Percy Thomas & Son. Below: the proposed Arts and Library extension, by Sir Percy Thomas & Son, which forms a forecourt to the old university buildings.



## KEY



1. Beck Hall hostel
2. Students' Union
3. University College
4. Playing fields and baths
5. Neaudd Gilbertson hostel



## University of Wales

## University College

## Swansea

*Singleton Park, the site for Swansea College, from the air. In the foreground is the Natural Sciences building (Sir Percy Thomas & Son) under construction. A similar building, to house the administration and arts faculty will eventually be built beyond—see site plan. In the centre are the semi-permanent arts and science hutments and the pre-war library, with the Abbey building beyond. In the distance can be seen Swansea housing, and on the right foreground, the sea.*

Swansea, the youngest of the Welsh colleges, was founded in 1920, as a result of the findings of the Royal Commission on the University of Wales. The Corporation bought Singleton Park from Lord Swansea, and the Abbey building and 18½ acres of the grounds were allocated for college purposes. A further 15 acres were set aside for playing fields.

It is a splendid site overlooking Swansea Bay. The original house is pleasant Victorian gothic and it is set in parkland designed in the best traditions. The mild oceanic climate encourages particularly fine trees and shrubs and it is famed for rhododendron and magnolias. In fact, a setting more removed in character from the industrial city of Swansea is hard to imagine.

The first buildings to be erected were of a utilitarian type described as "semi-permanent." They have the great merit of being sited in a compact group close to, but not overpowering the house. Thus none of the site has been squandered. Before the war the only other new building was the library.

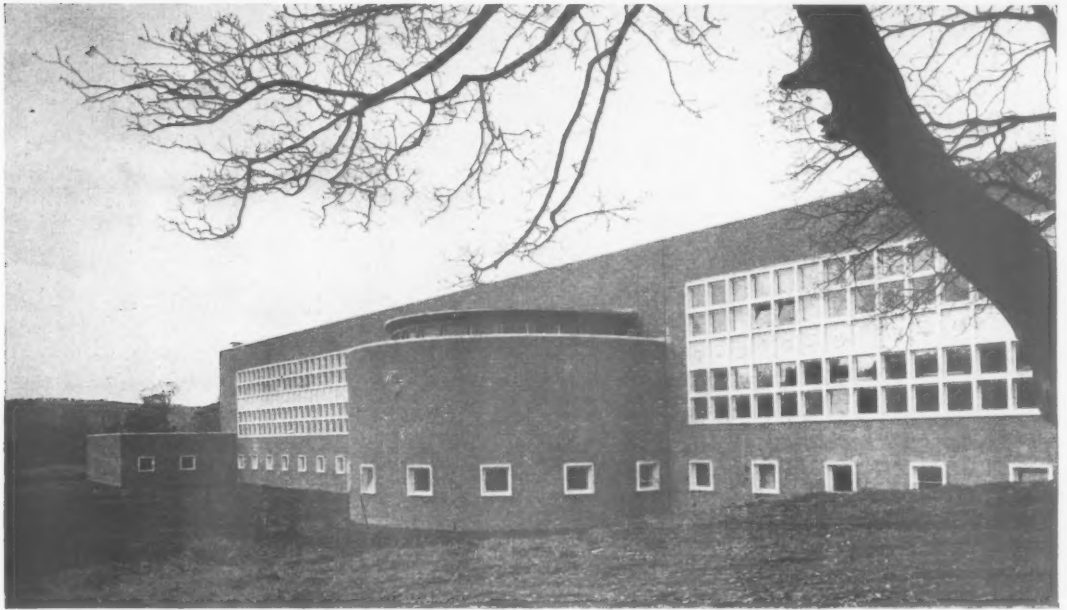
College numbers have increased far beyond the original expectations; given the funds, it is now proposed to increase from 1,000 to 2,500 students. A further 27 acres adjoining the original site have recently been given by the Swansea Corporation, and the consultant architect (Sir Percy Thomas) has prepared a development plan. Immediately to the west is the site for a new hospital.

The main idea of the new plan will be to concentrate all college activities in one area. Due to shortage of buildings on the main site, the college (like many others) suffers somewhat from the nine o'clock to five life—this is aggravated by the present siting of the Union which is in Sketty Road and not on the main site.

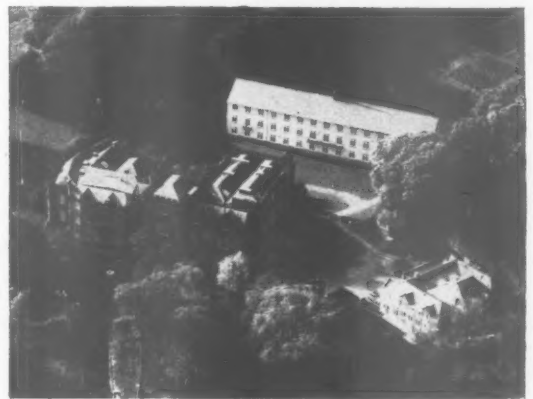
The core of the new plan is to be "College House" which is to house Union activities, staff house, and all college catering. This is to be on the axis of the new drive where a new admin./arts block will eventually balance the natural sciences department (already built). Accommodation for students (eventually about 800) is planned in a series of blocks (each containing about 200) which are arranged in a formal pattern to the north of the natural science building. The idea is that these students will eat in "College House" which will be the hub of all college







Above: the completed Natural Sciences building by Sir Percy Thomas.  
Below: the Gilbertson Hall, by Sir Percy Thomas & Son.



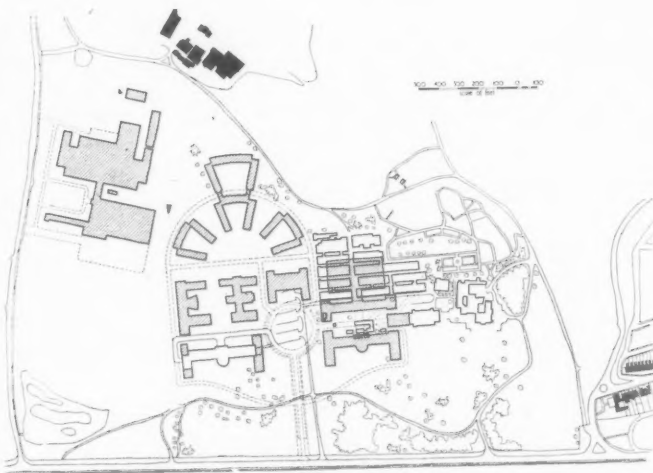
life. Economically this will have the great advantage of avoiding duplication of kitchens and refectories. It is proposed that as well as the cafeteria which will feed the large lunch-time population, there will be a certain number of refectories for formal college dinners. The college are also concerned that a certain number of the staff shall live on the site to balance the population. On a romantic parkland site a more appropriate solution would have been the free grouping of buildings in the tradition already established by the existing house and planting (which includes some particularly dominating mature trees). An example of this is the approach of the old drive which reveals the house gradually through groups of trees and shrubs in careful sympathy with the contours. The idea behind the new drive is, of course, precisely the opposite to this and relies on formal symmetry for its effect.

The more informal shapes of the physics and chemistry blocks shown in the aerial view appear more flexible to

the rather unforeseeable needs of the client than the balanced symmetry of other parts of the scheme.

The College recently completed an extension to Clyne Castle (now Gilbertson Hall) which they acquired by arrangement with the Corporation shortly after the war. This is an even more romantic and finely wooded site than Singleton and the new men's hall of residence has some character. The new wing is simple and is sympathetically sited behind the main house. Being a corridor plan it inevitably has a somewhat hostel character, but the individual rooms are pleasant and the views from some of them through fine hardwoods to the sweeping curve of Swansea Bay, are most uninstitutional.

Interior decoration in both new and old buildings has received particular care at Swansea and the results (up-to-the-minute *House and Garden*) make a refreshing contrast both in themselves and between the more traditional interiors in which many students lodge.



The Swansea College plan, showing proposed buildings (hatched), and existing development (white). The rigidly axial layout seems to fit uneasily into the site, an impression which is strengthened by a study of the aerial view left.

#### Major buildings since the war

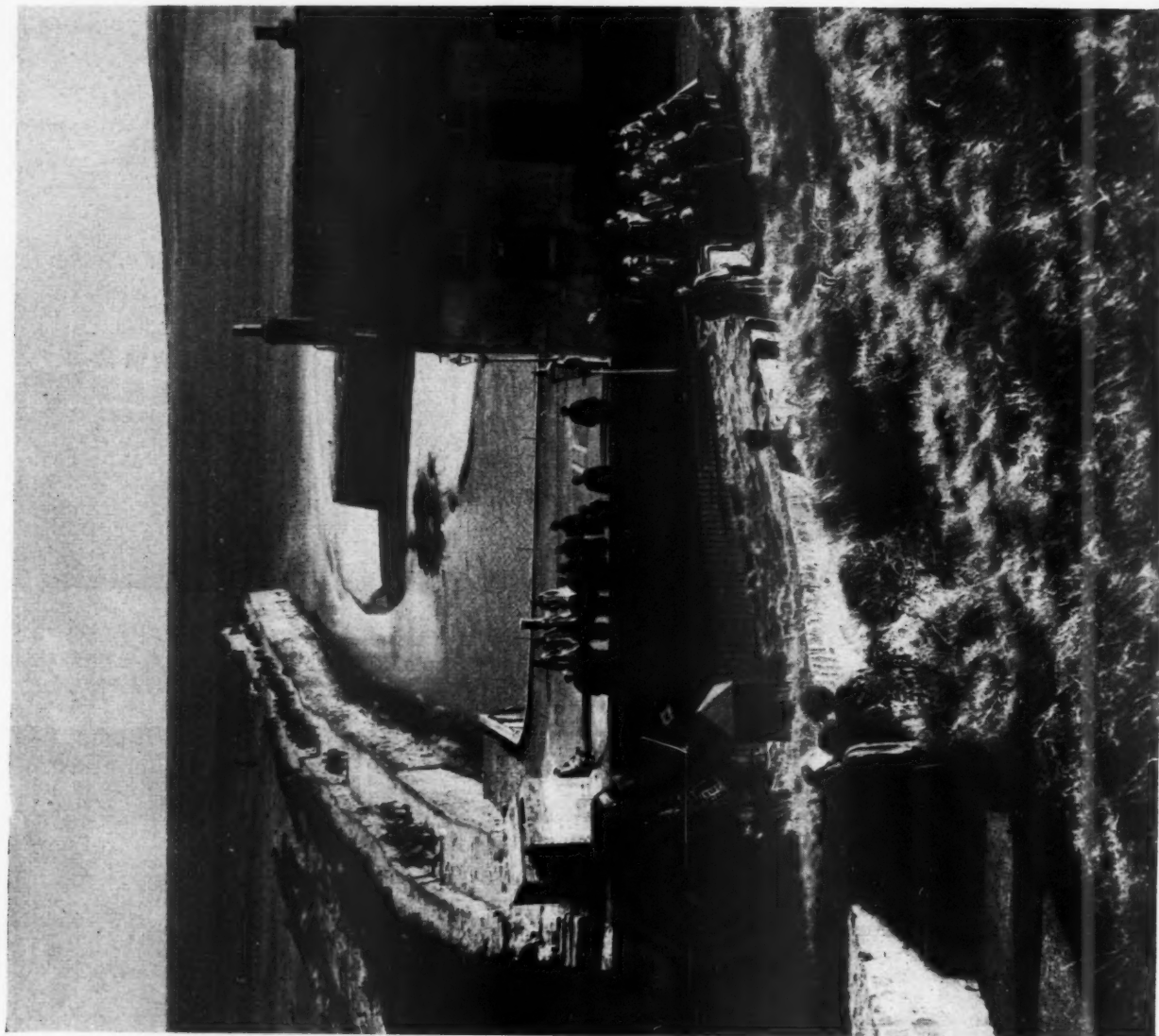
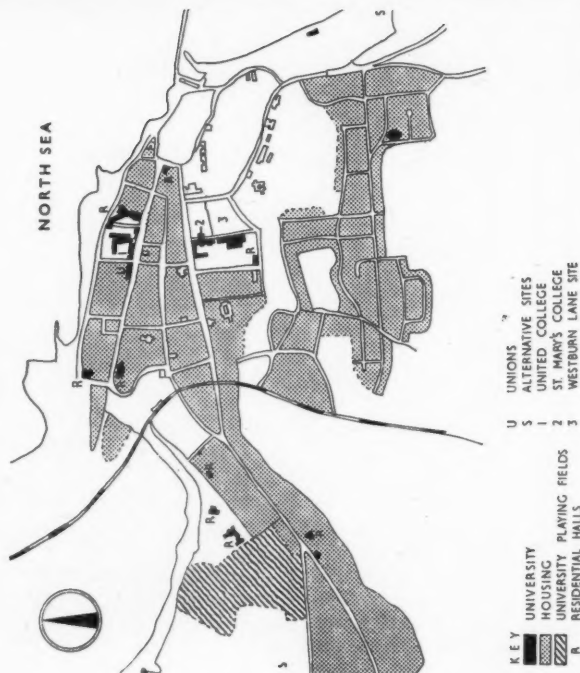
1956 Hall of Residence for men (Gilbertson Hall); 1956 Natural Sciences building (first stage); 1957 Chemistry building; 1958 "University House" (this building will be a general amenities building, including refectories, students union and staff common rooms); 1959 Natural Sciences building (second stage). Architects: Sir Percy Thomas & Son, P.P.A.R.I.B.A.

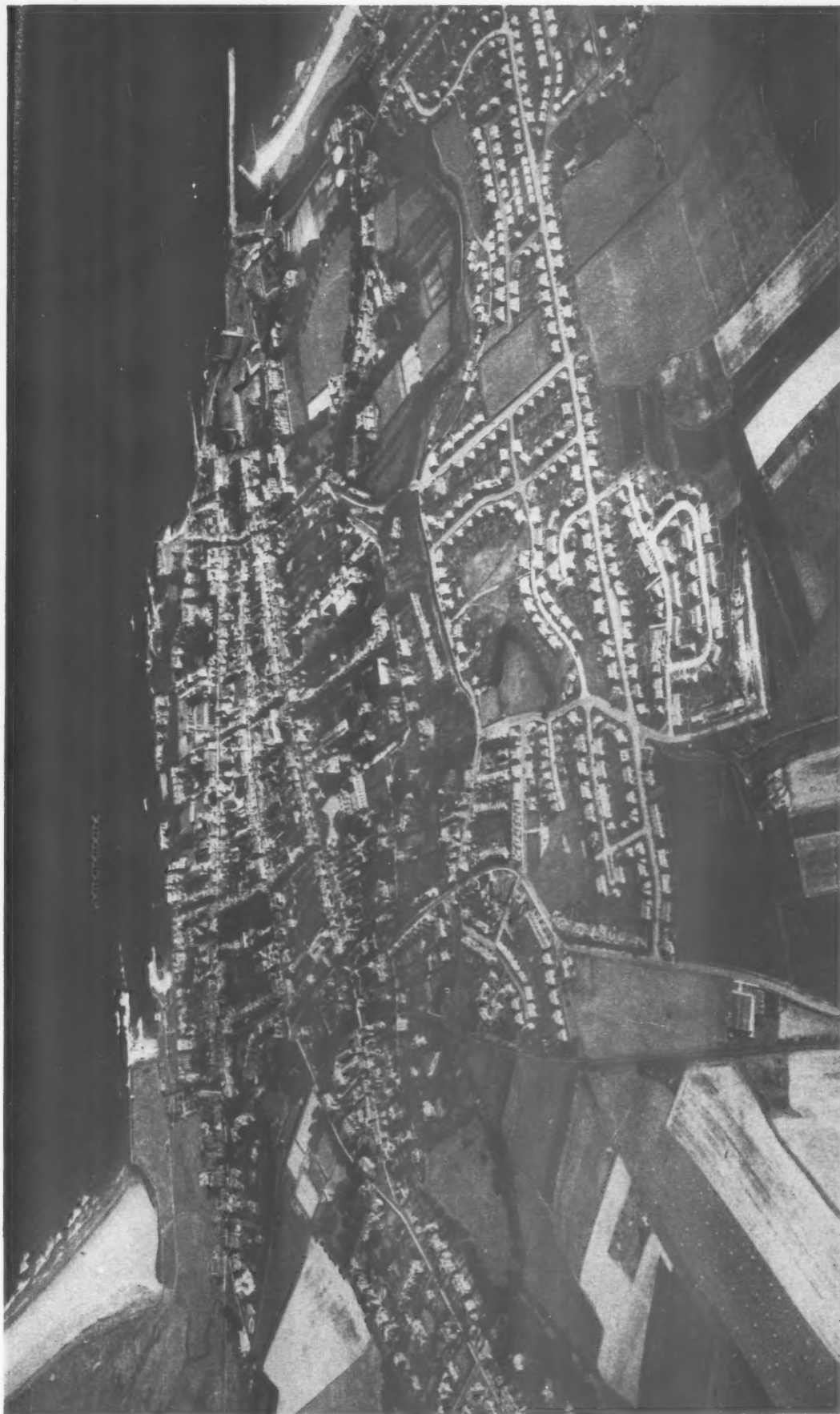


# St. Andrews University

St. Andrews might well be the envy of any British university. None of the obvious outside factors which compete with the university in our other towns seem to exist. It has no Cowley works; no through traffic problem (being at the end of a peninsula jutting out into the North Sea); The Royal and Ancient must be a peaceful neighbour, and the summer visitors are presumably at their peak when the university is down. A peaceful town if ever there was one. At ten o'clock one Sunday morning it seemed doubtful that the university ever existed, let alone be a subject for heated controversy. A few duffle-coated young men buying Sunday papers might be students. Otherwise it was grey and empty. Very pleasantly empty too. Sober stone houses wall-in the broad streets and narrow alleys (paved with setts, stone flags and cobbles and all the other right

*Right: red-gowned St. Andrews students on their traditional Sunday morning walk to the harbour.*



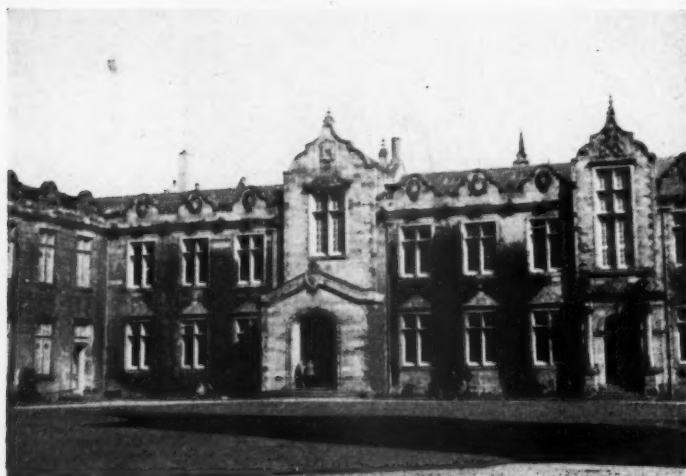


An aerial view showing most of St. Andrews, to be compared with the plan. The old university buildings can be discerned in the background, slightly right of centre. Nearer the camera, slightly to the right again, are the gardens bordering Westburn Lane, forming an area of three

acres on which the university wish to build new physics, maths, and science labs. This proposal has been, and is still, strongly opposed by the Burgh who wish the university to expand on sites on the outskirts of the town (see map opposite). The rather dreary sprawl of

housing in the foreground suggests further proof of the Burgh's unawareness of good principles of town planning.

## St. Andrews University: continued



*St. Salvator's College.*

*St. Mary's College.*



materials). A few collegiate and faculty buildings (mostly nineteenth century) fitted quietly into the general scene. The end of the long, wide, main street is closed by the silhouette of the cathedral ruins. The castle juts out over black, seaweed-covered rocks where curlew pick about at the edge of the tide. Townscape and seascape abound.

Suddenly, that Sunday morning, the grey stillness was disturbed by small patches of scarlet which began appearing out of doorways and alleys. First in ones and twos, then in half-dozens, and soon scores of scarlet-gowned students were converging on foot and bike on St. Salvator's, the university church. After the service several hundred of them dispersed in a purposeful way towards the sea. The girls had removed their mortar-boards and there was a festive air about the crowd. At the end of the headland it is possible to look down on a great curving stone pier which acts as a breakwater to the harbour. Students were streaming along it, their scarlet gowns brilliant in the sun against the flat wintry sea. (There is, at the moment, a committee sitting to decide on the precise shade of red for the woollen cloth from which these gowns are made—by medieval tradition they should be a rather bricky scarlet.) After some talk the students dispersed to hall and digs.

This description is given because the incident is such a clear expression of the corporate student life which planners are always striving to create that it seems worth noting when it is found. Here was no phoney, dragged-up tradition, but a civilized way of meeting friends, enjoying the sea air, and working up an appetite for Sunday lunch. It is impossible to say why this feeling of cohesion exists, but certainly size has a lot to do with it. St. Andrews is a place to walk about in (or bicycle about in, for those living at one of the further halls of residence), therefore things can be done as the spirit moves, without one having





*The new university offices, designed by J. Cunningham.*

to catch a bus or train back afterwards. Size in numbers is probably equally important, and it is good to know that the university has a firm policy here. Their distinctive gowns help too, because apart from being the most decorative addition any grey stone town could have (far more telling than any civic building, coat-of-arms, lamp-post, or memorial garden), these red figures sauntering or pedalling to and fro from lecture room to coffee house, to Union or digs, must remind each other as well as the passing visitor that this actually is a university. A garishly coloured muffler is not as effective.

Like nearly all universities St. Andrews are faced with the problem of where to expand, particularly in scientific departments and halls of residence. An inquiry has been held because the town development plan submitted for approval to the Secretary of State left this question unsettled. The university asked Sir William Holford & Partners to advise them on their development.

The present position (see map) is that the main faculty buildings are in the heart of the old town while the halls of residence are mostly more loosely scattered towards the perimeter where more can be accommodated. Therefore it is the faculty buildings that are the problem.

As the inquiry revealed, there seems to be two possible answers: either to concentrate teaching in the centre or to move some to the outskirts (the possible sites are about a mile from the centre of the town). If the latter course is adopted either the science departments will have to split (an extremely awkward arrangement, obviously uncondusive to good work and wasteful in time and energy), or eventually all the science departments will move out. This seems to be an answer reminiscent of the really regrettable state of Edinburgh university. If the science departments move, the students will soon need a coffee bar, a library, even a union building. Before long there would be an arts university and a science university leading their separate lives. Admittedly they would only be a mile apart, but the distance is not the point. St. Andrews as a corporate whole would be finished.

The alternative answer to the problem is to concentrate.

The area proposed for development is known as the Westburn Lane site. It is adjacent to the chief existing science departments—those now in the United College would move there and the Arts would be centred in the United College. It is about three minutes by alleyways from there to Westburn Lane and the Unions lie between. A glance at the map shows that this would certainly keep the heart of the town and university throbbing.

What are the objections? First from the householders. A few houses would have to go and others will lose part of their gardens. There are a few things more delightful than an established high-walled town garden stretching as a secret green oasis behind your street house. One would have to be inhumanly public-spirited not to protest. Some of these gardens are at present about 600 ft. long (the old long rigs which were once common as town gardens) but most of them have had pieces cut off already for one reason or another, and it seems that no one will be left with less than 180 ft.

Secondly, the opposition say, this is only the beginning—what next? You may want to become a much bigger university. To which the university reply that they refuse to become a big university. One of their chief characteristics is their corporate sense, feeling of cohesion, etc., and this would be lost if the numbers became too great. The present population is 1,200—1,300 expanding to a stated limit of 1,600—1,700. If this policy was changed, all university buildings would have to expand not merely science buildings and halls of residence. Further, money is limited—St. Andrews can only expect a proportion of the UGC grant as Queen's College, Dundee, is also part of the university. Therefore, they say, their plans have a realistic basis and a carefully considered future.

It seems to be a case of splitting the faculty buildings or building in a concentrated limited area, and necessarily upsetting the private individuals now living there. The outcome of the long and bitterly-argued planning inquiry was that the Secretary of State said, in effect, that the university's case for expanding in the centre was unanswerable and instructed the Burgh to take out a compulsory purchase order for the three-acre site in Westburn Lane. This the Burgh has refused to do, and they are going to test the decision of the special commission which held the inquiry in the courts. This delaying action may mean that the UGC grant to the university for scientific expansion will have to go elsewhere. The reluctance of the Burgh to abide by the decision is most unfortunate. The university has been in St. Andrews since the 12th century and is now the main reason for the town's existence. It is regrettable that the citizens cannot take a pride in having the university expanding in the centre of the town as a visible sign of the growing importance of its respected and most valuable asset. However, if and when the university is able to go ahead with its building programme it is to be hoped that they will make a really positive architectural contribution to the town. With notable early exceptions, such as St. Mary's College, the chief building era was 1890-1914 and the chief merit of most of these buildings is that they merge fairly well into the general picture (there are notable exceptions to this too). Gown, in turn, owes much to town for providing it with such an excellent stage for university life. This is the moment for the university to revert to its early tradition of positively contributing to architecture of the town instead of playing safe with revivals.

#### Buildings since 1945.

*New university offices (£58,000). Architect : J. Cunningham. Extension to halls of residence (£75,000). Architects: Gillespie and Scott.*

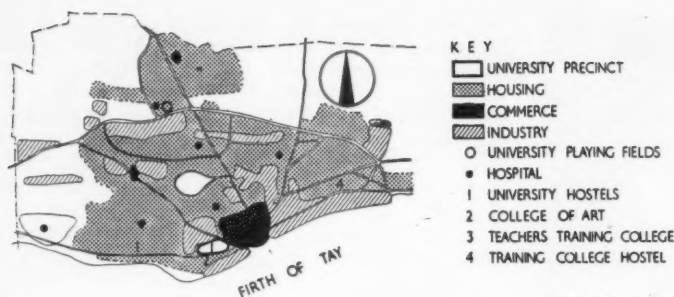
#### Under construction.

*Library extension (£85,000). Architects: Reginald Fairlie and Partners.*

#### In next quinquennium.

*Physics and Mathematics Departments.*





University of St. Andrews

## Queen's College, Dundee

A graduate from St. Andrews said there had been a danger of the university there becoming a girls' finishing school (fortunately that risk is now past as the number of men exceeds women again). Queen's has no worries of this sort, though doubtless a girl could learn a lot about life by quite a short stay in Dundee.

There could hardly be two more contrasting places. Dundee is a clanging, lively, seaport and industrial town. One expects to see a tram any minute, although actually they are no more. Still it is a tram-type town, with

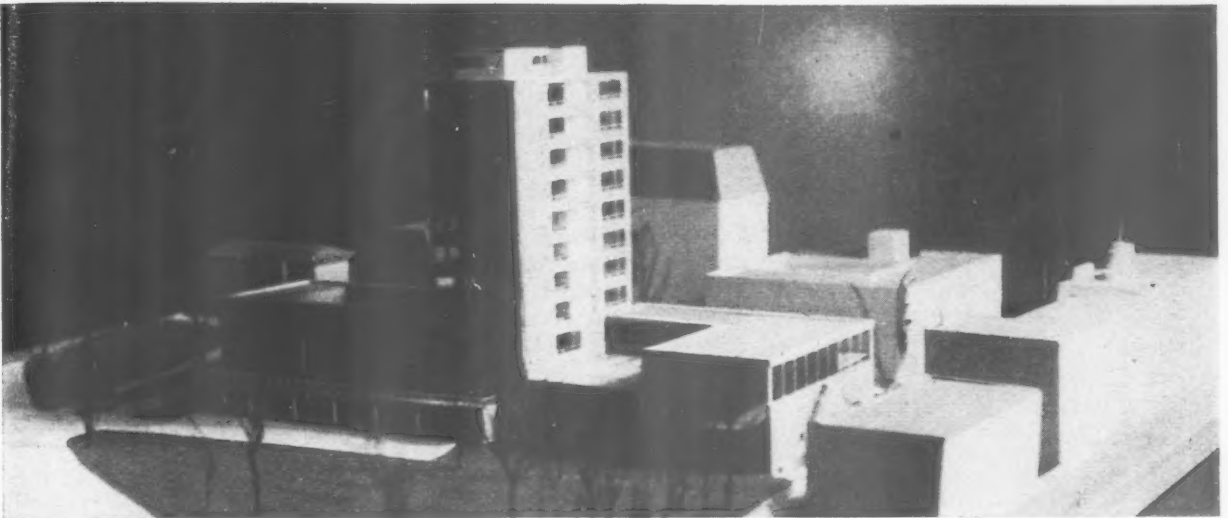
*Below: an aerial view of Dundee showing the area ringed in heavy outline in the plan above, which is to be the university precinct for Queen's College. In the foreground are the railway lines and housing which must be carefully redeveloped if the university area's fine views southwards over the Firth of Tay are to be preserved and improved. Just discernible, centre, is the new electrical engineering building, by Reginald Fairlie and Partners, a closer view of which is shown right.*

granite setts, steep cliffs of building, fish and chip shops, and occasional splendid romantic views over the smoke of the railways across the Tay estuary to the low hills of Fife (it has quiet, grey, residential streets too).

The university site to the north of Perth Road has one of the views. Given sympathetic treatment to the south of this road, the university might have a splendid outlook between point blocks of flats.

In the city development plan an area is outlined as a university precinct and all teaching departments will eventually be concentrated here. It is similar to that shown in the Dobson Chapman advisory plan for the town. The western part is zoned for future development and the new College of Art (separate from the University) is now being built there. The eastern part, which is to be developed first, now contains existing university buildings, new and old, tenements, an asbestos cinema, some new council houses and some pleasant terrace housing now converted into Halls of Residence. These buildings stand cheek by jowl in a formidable tangle. The tenement part seethes with children playing on scraps of waste land, with washing lines strung between windows above them. The precinct is bounded on the north by industrial development; to the east is the central area of the city; to the south the land falls away to the river but the development immediately south of Perth Road will be important (see above); to the west there is a good class,





The proposed library hall and teaching rooms (marked A on the site plan) designed by Robert Matthew and Johnson Marshall. The tower block will be 125 ft. high and will mark the university area in the town's skyline.

residential area of terrace housing where professors and staff are likely to live.

Professor Robert Matthew, of Robert Matthew & Johnson Marshall, has been asked to prepare a development plan for this area and Dundee seems to be one of the first Scottish university towns to have a comprehensive development scheme. They are also refreshingly positive in their architectural ideas.

This year a start is to be made on the new building which is to house offices, teaching departments and library. This includes a 125-ft. tower and will be the first university building reached when coming from the centre of the town. It should also look particularly fine from the river and from Fife to the south. This design, which is by Robert Matthew & Johnson Marshall, has been accepted, although it necessarily means pulling down some rather pleasant early Victorian houses at the start of the redevelopment—a sign of the energy with which Dundee are tackling their problems.

The siting of the new teaching hospital has now been fixed—it is to be on the outskirts to the west. Eventually the Medical School will be there. It seems a pity that Dundee could not have a high, new, hospital on some

more central site. It could make a contribution to the architecture of the town in a similar way to the university's tower. It would be central and convenient to both staff, patients, and students, and would avoid eating up more agricultural land.

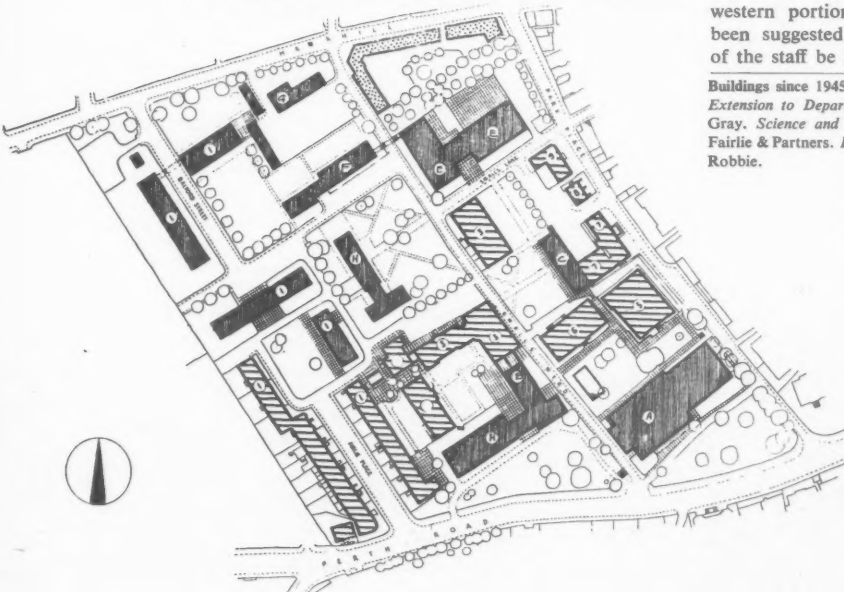
The College has now some 850 students, and a possible future increase is envisaged of as many again, mainly in the departments of physics, chemistry, electrical, civil, and mechanical engineering. The firm of Robert Matthew & Johnson Marshall are planning the development of the area in stages so that, despite the shortage of accommodation, continuity of the teaching programme is maintained, and to ensure that the overspill from the various departments and the students' union are housed. There is hardly any open space as the site now exists (see photograph) and the architects have decided that whenever possible both teaching and non-teaching buildings should adjoin gardens. A small botanical garden may be included in the centre of the precinct.

The scale of the redevelopment mainly to be small and informal. Buildings have been grouped around inter-connecting open spaces roughly quadrangular in shape (see plan). Parking space for 80 cars is envisaged, in order to keep university cars as far as possible off the narrow streets. A hall of residence for 125 students exists in Airlie Place, the close to be seen in the aerial view on the west of the site, and it is proposed to keep this western portion largely for residential purposes. It has been suggested that accommodation for senior members of the staff be provided in the halls.

Buildings since 1945.

Extension to Department of Chemistry (£110,000). Architect: T. Lindsay Gray. Science and Engineering Building (£150,000). Architect: Reginald Fairlie & Partners. Dental School (£57,000). Architects: Finlay Stewart and Robbie.

Left, the Robert Matthew and Johnson Marshall development plan for Queen's College.



#### KEY

(Existing buildings shown by heavy hatch, proposed buildings by light hatch)

1. Residential buildings.
3. Engineering.
5. Chemistry.
6. Medical School.
7. Dental hospital.
8. Education.
9. Dental school.

- A. Library, Assembly Hall and administration
- B. Chapel.
- C. Social sciences
- E. Engineering.
- F. Natural sciences.
- G. O.T.C.
- H. Students' Union and Refectory
- I. Unallocated and halls of residence

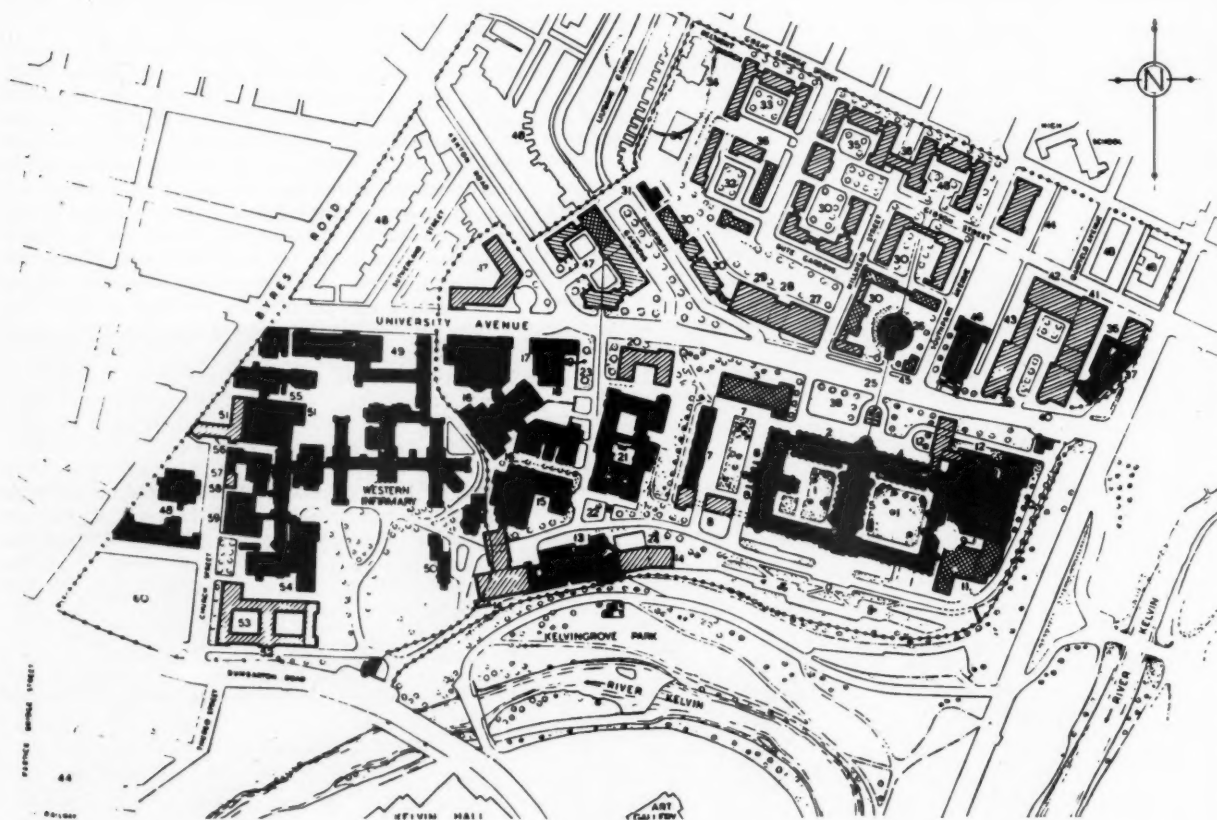
# Glasgow University

The university (founded 1451) moved to its present site in 1870 when Sir Gilbert Scott built them a massive pile in the early 14th century manner, only bigger and better. It has immense scale and a splendid, commanding site. Its principal deficiency is lack of room for expansion and later buildings have often been crowded in tightly with little hope for their expansion either.

After the war the university engaged Sir Frank Mears to report on the site and to prepare a development plan. This they published in 1951, pointing out that this did not mean it was officially adopted. (This is the plan illustrated, and although not correct in all details, is the most recent made.) The plan considers the present university site, together with the Western Infirmary which adjoins it as a teaching hospital, and the area immediately to the north

(residential) as a university precinct. Immediately to the south, and between it and the town centre, is the river Kelvin and Kelvingrove Park. This precinct has also been shown on the town development plan. To the west is Byres Road (sub-arterial). University Avenue, which splits the site, may eventually become an internal university road.

In Glasgow there is no problem of a split university as with few exceptions, e.g., veterinary and dental schools, the university buildings are within this precinct. The vast majority of students here have always been non-residential, so the siting of the halls of residence hitherto has been regarded as of relatively small importance. The problem is how to develop the precinct. Although the university hasten to point out that the Mears plan has not been adopted, it has so far been followed in broad outline. It is, in spirit, an extension of faculty buildings in the collegiate system of quadrangles and the university is buying up residential property within the precinct as it becomes available. It is obviously impossible to appreciate any plan in two dimensions, but it seems probable that if the idea of the Mears plan is followed a pleasant, though perhaps dull, series of courts could be produced north of University Avenue. But as the creator of the plan is dead, its three-dimensional realization is by no means a



Proposed redevelopment at Glasgow University. The existing buildings are shown solid black, the suggested new buildings are lightly hatched

and the suggested new buildings—first stage—are cross hatched.

## The original site

1. Scott building
2. Old University library
3. New University library
4. Museum
5. Bute Hall
6. Chapel
7. University houses
8. University club

9. Anatomy
10. Engineering—old
11. Engineering—new
12. Geography
13. Medical building
14. Medical extensions
15. Zoology
16. Chemistry
17. Old U.T. Corps

18. Workshops
19. Gymnasium—old
20. Mathematics on botany site
21. Natural philosophy
22. Medical court
23. Science court
24. Boiler house

- Hillhead sites
25. Central court

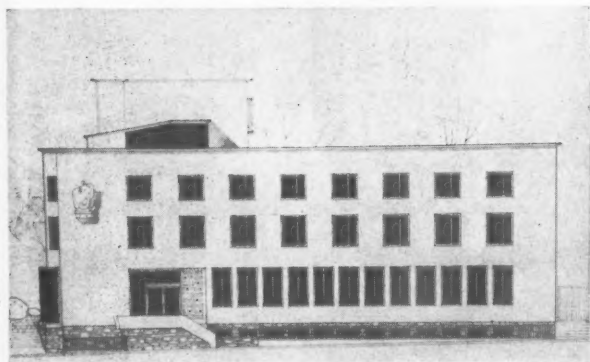
26. Reading room
27. University theatre
28. University music room
29. University art gallery
30. Arts teaching
31. Astronomy
32. New university houses
33. Staff residences
34. Staff recreation

35. University "rooms"
36. Garages-yards
37. Men's union
38. Women's union
39. Women's union—new
40. Cafeteria
41. New gymnasium
42. Swimming pool
43. Health clinic
44. U.T. Corps H.Q.

45. Master of works house
46. Wellington church
47. Biological departments
48. Reserve sites
- Western infirmary
49. Infirmary
50. New nurses' home

51. Old dispensary
52. New dispensary
53. Anderson's College
54. X-rays-massage
55. Pathology bacteriology
56. Path. and bact.
57. Gardiner institute
58. Surgery
59. Tennent institute
60. Social health





*Above : a view of Glasgow university from Sir Gilbert Scott's tower (part of his building, the University Club, can be seen in the foreground). Beyond are university houses (7 on site plan), the Natural Philosophy building (21) with its extension by Basil Spence and Partners on the right (close-up view, left); the chemistry building (16) designed by T. H. Hughes and D. S. R. Waugh, and its extension on the far right. This last is the area in which, it is recommended in the article below, a point block might have relieved the congested planning. Below : a corner of the new Chemistry wing. Far left : a proposed Arts building in University Gardens (30 on the plan) designed by W. N. W. Ramsay.*

certainty. One must also remember that there are now approximately 6,500 students and a possible increase to 7,500 is visualized.

The particular trouble spot within the first part of the precinct is the area occupied by the chemistry blocks and, to a lesser extent, by natural philosophy. This is a planners' nightmare if ever there was one—it is pre-Mears, of course. The site is congested, buildings are at extraordinary angles to each other, and building operations (and demolition) make it difficult to visualize the final picture. It is easy to be wise after an event, but one wonders whether some form of point-block, housing all these departments, might not have been the answer here. On the skyline it could act as a light foil to the solidity of Scott. Internally, its planning could be extremely flexible; practically, it could be economical, because building here must be on under-pinned mineral workings anyway and the area of underpinning would have been concentrated.

#### Building since 1945

*Completion of chemistry building. Architects : T. H. Hughes and D. S. R. Waugh, A.R.I.B.A. Extension to natural philosophy. Architects: Basil Spence & Partners, F.R.I.B.A. Extension to Zoology. Architect: J. Kiep Henderson & Gleave, P/P/F.R.I.B.A. Boiler house. Architect: J. A. Coia, F.R.I.B.A. Surgery. Architect: D. S. R. Waugh, A.R.I.B.A. Extension to anatomy building and Animal hospital, Garscube. Architect: J. A. Coia, F.R.I.B.A. 1957 engineering building. Architects: J. Kiep Henderson & Gleave, P/P/F.R.I.B.A. Future Arts building. Architect: W. N. W. Ramsay, A.R.I.B.A.*





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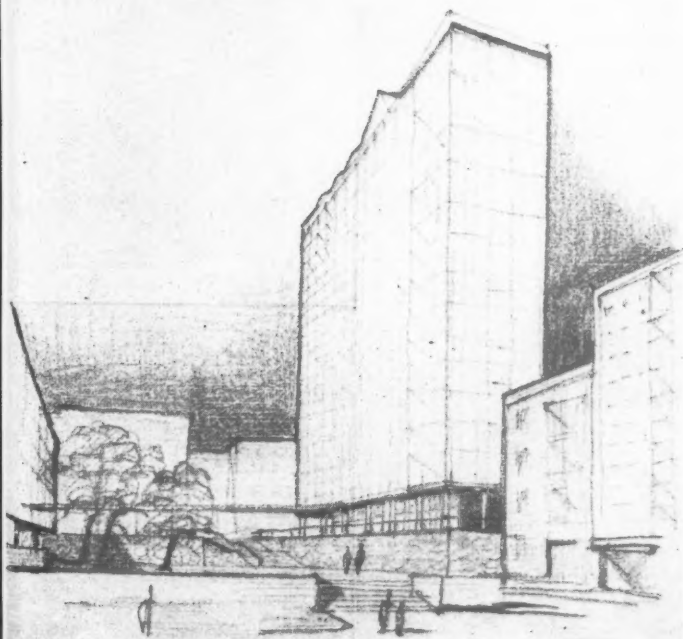
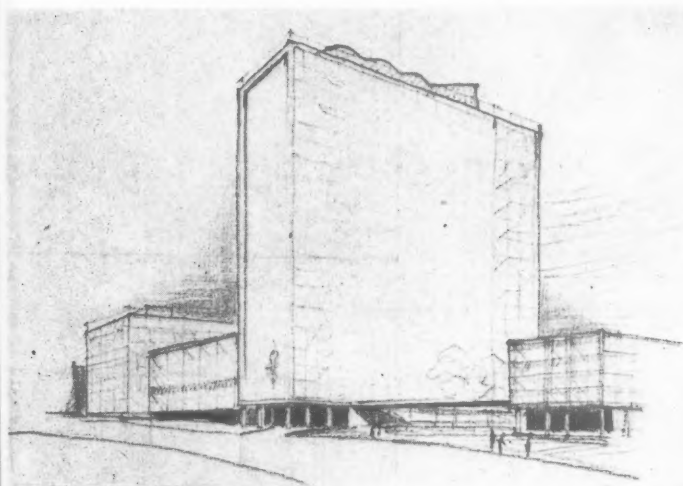
# Royal College of Science and Technology, Glasgow

This is a separate university college receiving grants from the UGC. Its links with the university are not of the kind which make its complete geographical severance any disadvantage.

Its buildings must be among the most solid ever constructed. From the red sandstone façade which looks out on to the trams of central Glasgow to the white-tiled light wells in the depths of the interior it seems the masonry



*Above: the existing buildings of the Royal College of Science and Technology. Left and below left: two rough sketches, by the consultant architects, Messrs. Wylie, Shanks and Underwood, showing tentative proposals for the redevelopment of the College with juxtaposed tower and low blocks.*



would stand for ever. This solidity has been reflected in the site development so far.

It lies in the Townhead district, the whole plan of which is at present being reconsidered. The land-use map here looks like a small scale multi-coloured patchwork quilt—tenements, hospitals, schools, graveyards, prison, and cathedral all jockey for position.

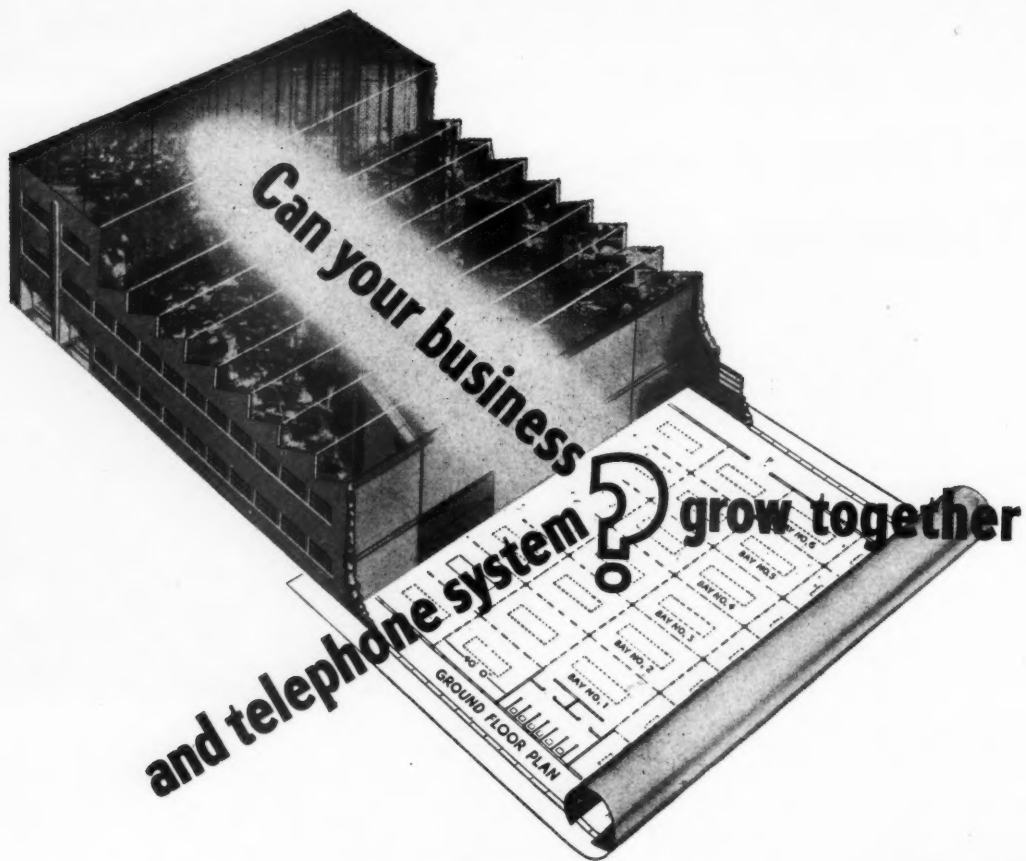
Considerable building has taken place in the college since the war—an engineering block worth about a million pounds, and a students' union half-way up, press in on the site. However, the clients' requirements have altered considerably since these were designed, and the architects are now preparing a new development plan, the chief point of which will be to build *high*. Things are very much in the melting pot, but it seems that the city planning department are thinking high too and it is the obvious way of relieving an extremely congested site which is probably going to take an additional 500-700 students in the next 10 years. The views from the roof of the existing building are dramatic, and the thought that about two-thirds of the occupants of the new building will see above the smoke and spires of Glasgow to the Clyde and the sea and the distant islands makes it particularly worth while. Within a considered skyscape design it could be a great asset to the city. Bold thinking on these lines could bring physical and æsthetic relief in an area which might otherwise suffer from the monotony of uniformly dense development of six- or seven-storey blocks. The consultant architects are Messrs. Wylie, Shanks & Underwood.

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*Residential Centre for management studies (£30,000). Architect: Albert Cordner; completed 1957—Engineering (£1,000,000). Architects: Wylie Shanks & Underwood.*

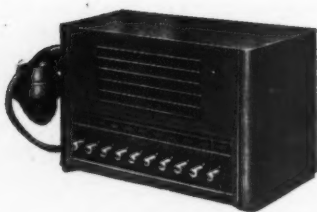
## Under construction

*Union building (£275,000). Architects: Wylie, Shanks & Underwood.*



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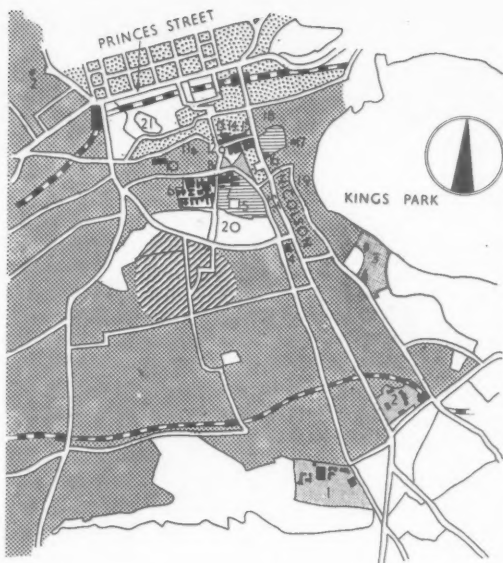
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14. University Staff Club
15. Adam House
16. Surgeons Hall
17. Pollock Institute
18. The Bridges
19. The Pleasance
20. The Meadows
21. Castle

## Edinburgh University

*The main university area in Edinburgh, which lies south of the Castle (top left). The quadrangle of Old College (1), designed by Robert Adam, is shown on page 28. Between it and the Royal Infirmary (2) are many of the University buildings, including the McEwan Hall (3) and George Square (4) the subject of controversy in university development.*

The major problem which Edinburgh has to face—that of a split university—has been overshadowed in the public mind by the George Square issue. This is only natural as the university themselves have given it much Press publicity. Wherever one goes it is impossible to escape the controversy. From the professors themselves (who, after all, are not particularly architecturally conscious as a race) to tweedy types in deerstalkers at the other end of the country, everyone has an opinion. This is a good thing, but unfortunately (through no fault of their own) their ideas are generally based on the George Square problem in particular, isolated from its context of university expansion in general.

To sort out the reason for the present position is not easy. The university was founded by the city and was given its charter in 1582, the original site being monastery land given by Mary, Queen of Scots. Here the Old College (Robert Adam) was later built. It now forms the administrative hub of the university and contains the library and some arts departments. Its rather forbidding quadrangle is alive with students and steeped in history.

This building could be regarded as the focal point of the university in the central area but not its geographical hub. The other dominating factor in this area is the Royal Infirmary which in its turn dictates the siting of the famous medical school. About one-fifth of the student population is medical. Between these two there are now various university buildings (e.g. McEwan Hall, Music Schools, Union building), and due east of the infirmary is George Square now chiefly university property housing small departments. Arts and medicine are now the chief faculties in the central area.

The second, and extremely important, area which is often forgotten is King's Buildings. This lies about two miles to the south and is a gigantic, unplanned campus of large science buildings, surrounded by housing on three sides, but with a golf course and magnificent views to the Pentland Hills on the fourth. It has reached such a size that there is now a second students' union here, which really seems to mean that Edinburgh has now a science univer-







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## Edinburgh University: continued

*The Old Quad, by Robert Adam*

sity here, and an arts university in the centre. In 1948 W. H. Kininmonth was asked (26 years too late) to prepare a plan for the King's Buildings area, but the university policy has undergone considerable changes since then. The present policy seems to be to withdraw eventually from King's Buildings everything except certain applied sciences such as agriculture (for which a new building is under construction) and engineering (for which a new building is now being designed).

With this background it is perhaps easier to see the George Square issue in its proper setting. The university, seeing the problems caused by the split are faced with that of reintegration in the centre, since they feel it would be wrong to uproot the university from the town and let it develop in the suburbs. This seems a wise and bold decision but it would have been less difficult to implement if it had been made sooner.

The other land uses in the central area are as follows: The Old College opens directly on to the Bridges/Nicholson Street, a north/south traffic artery and important shopping street. Immediately east of this is an area of mixed development containing some university buildings, a school, public baths, tenements, etc. This runs down to the Pleasance (a road designed in the Abercrombie plan

to become a major traffic artery which would relieve the Bridges of through traffic). Beyond the Pleasance is more university property (Pollock Buildings) and the land falls very steeply to Salisbury Crags and the great hill of Holyrood Park.

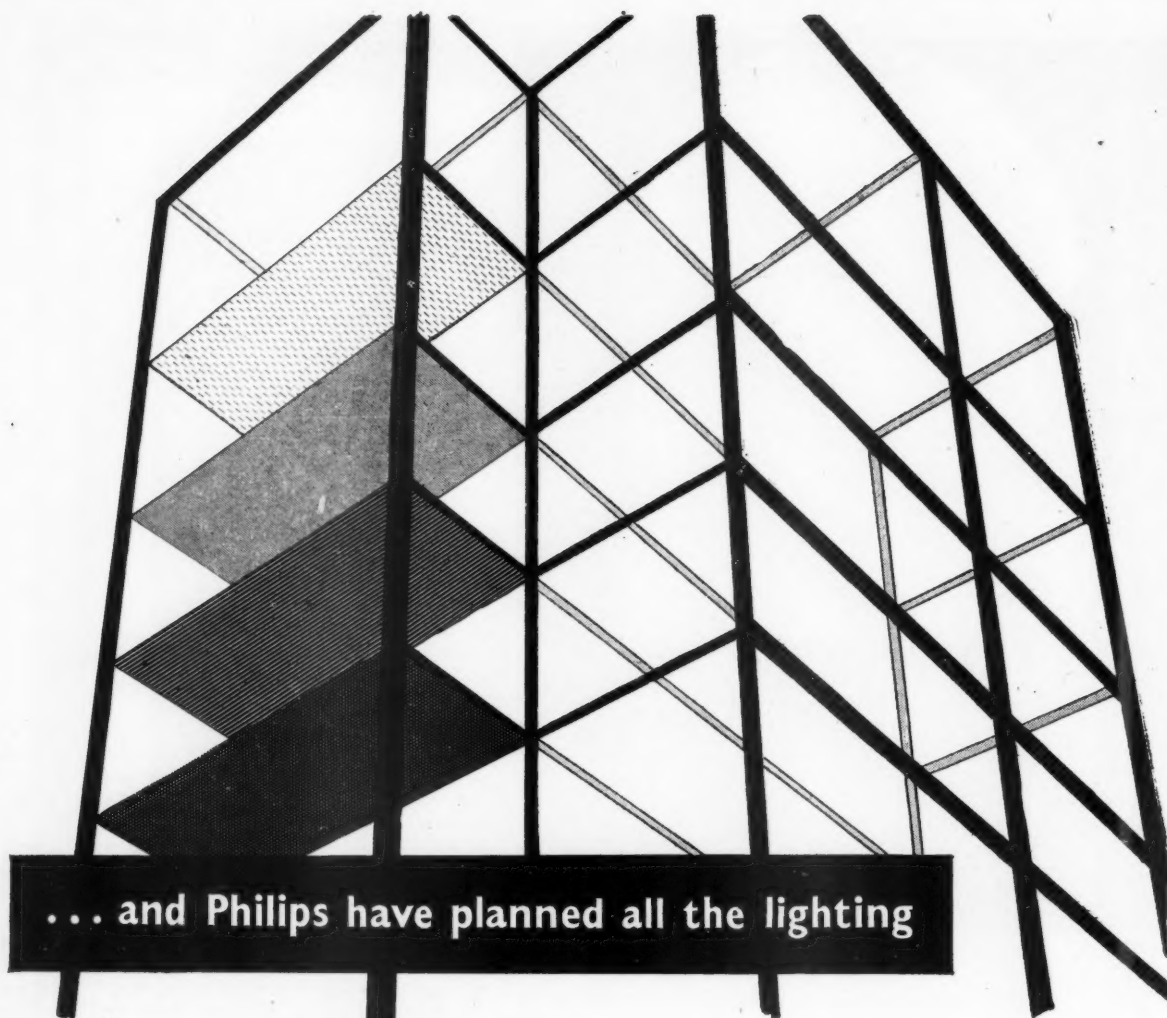
Immediately south of the Old College, to the west of Nicholson Street is an area of expensive commercial property including the Empire Theatre and shops. It has always been considered impracticable, economically, to try and acquire this property, even if it were thought to be convenient from other points of view. The frontage of shops in Nicholson Street would need to be maintained. The remaining area to the north of the Meadows and the east of the Infirmary is, apart from university departments in converted houses, largely residential, and contains George Square itself.

Historically the planning story starts with Dr. Charles Holden's pre-war plan which chose the George Square area for development. It was also decided that the north side of the Square (already containing a Victorian school) should be the site of the new medical school. Later, Sir Frank Mears was consulted on the possibilities of a scheme developing the land to the east of the Bridges, and leaving George Square intact.

In 1949, Sir Patrick Abercrombie's Edinburgh plan showed George Square redeveloped for university use. The medical school competition was also held and the winning scheme caused understandable concern among some citizens. The town development plan showed the Square as a university area; the development of the north side was eventually agreed after certain modifications were made to the medical school design. But the future of the rest of the Square was still uncertain.

It became obvious that the public was generally alarmed about the future of the Square, and some societies were pressing for an inquiry. In 1954, Basil Spence was personally appointed to prepare a development plan for the whole of the central area, and particular emphasis was laid on the George Square development, as it had caused so much controversy. This, though excellent in its way, has perhaps laid too much stress on one aspect of the scheme, although for economic and practical reasons it will be the first part of a large area to be developed.

Many sincere critics of the scheme have opposed it



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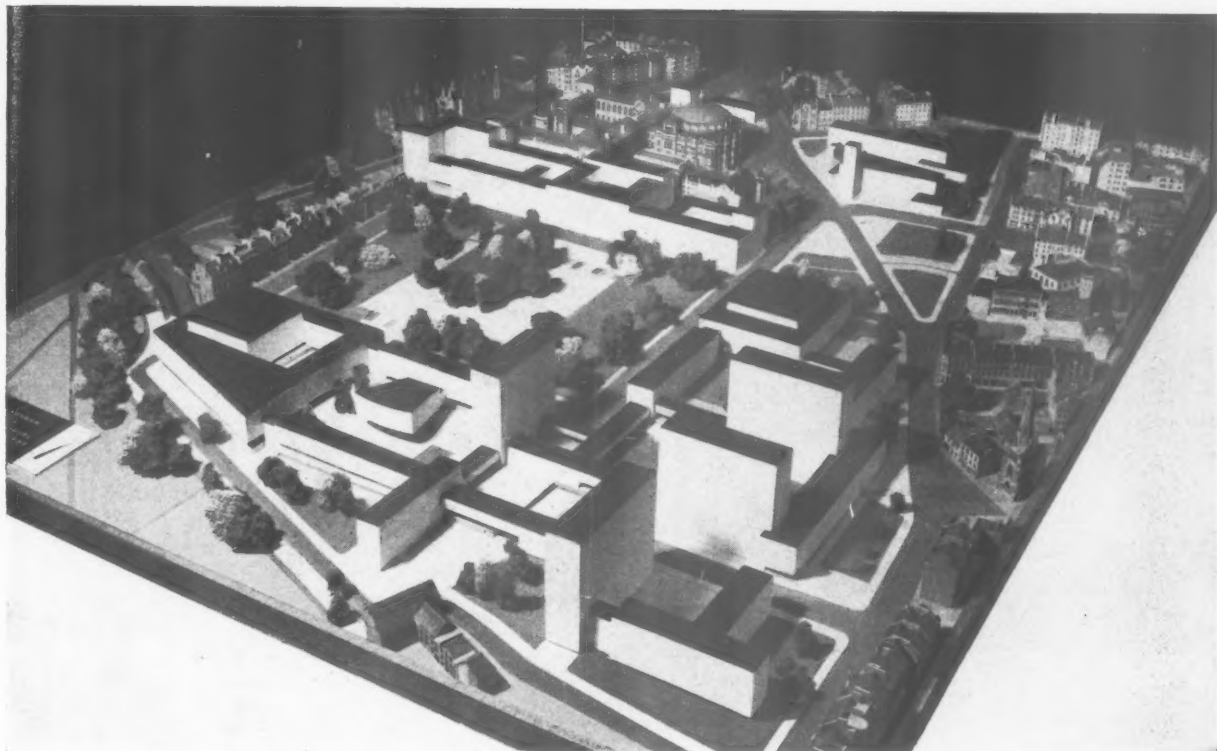


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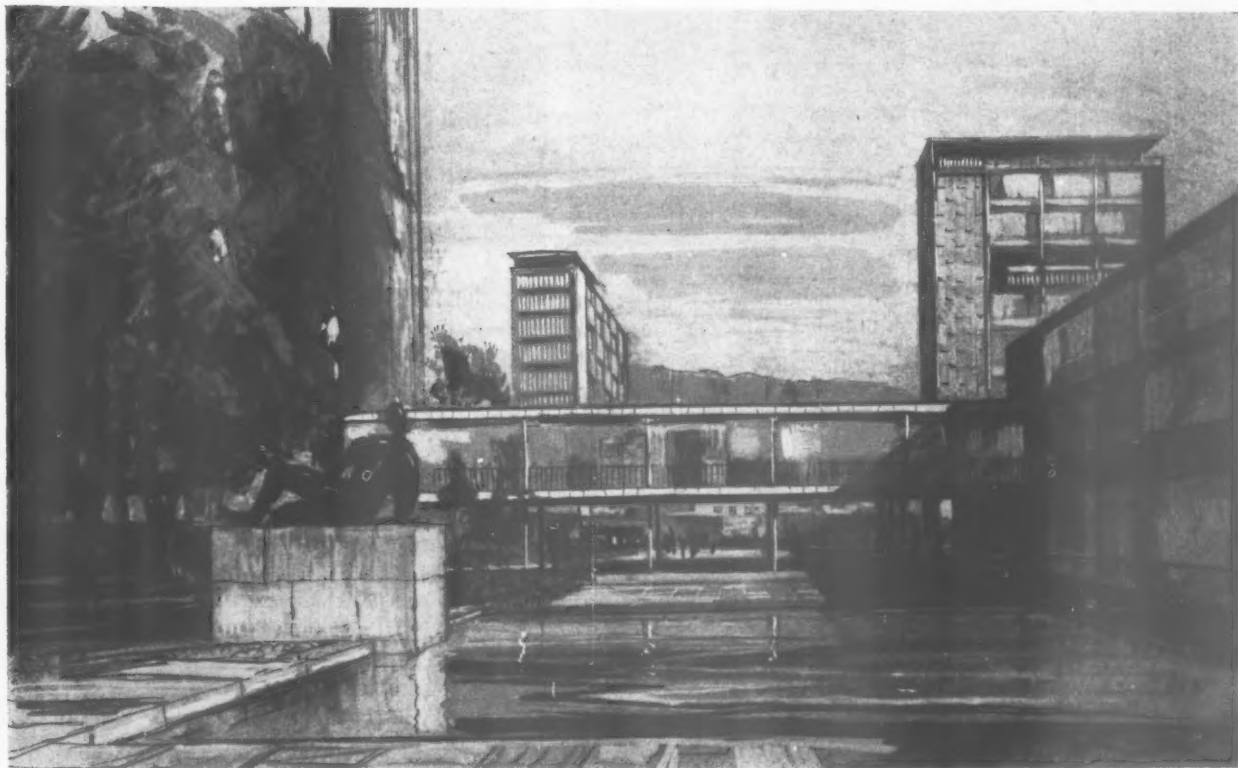
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## Edinburgh University: continued

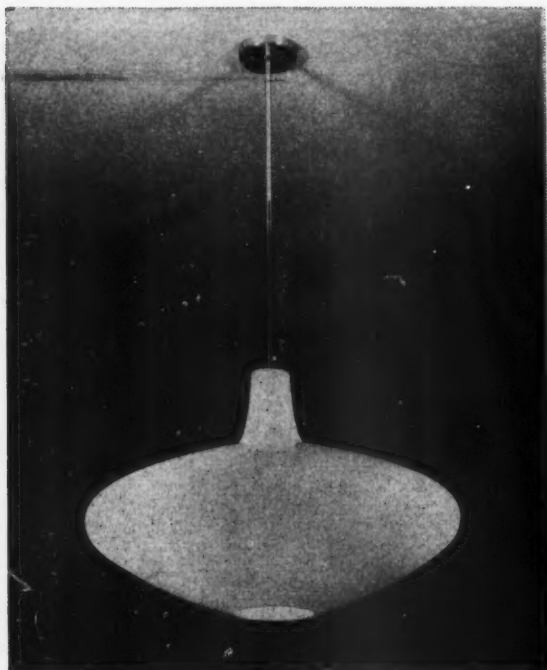


*Above: Basil Spence's suggested plan for the university area. It should be studied with the aerial view on page 27. In the foreground are the arts and science buildings; beyond, on the left, is the redevelopment of George Square, with the library on the extreme left. On the far side of the Square is an area for medicine, linking with the Royal Infirmary in the background. The domed building in the centre, background, is the*

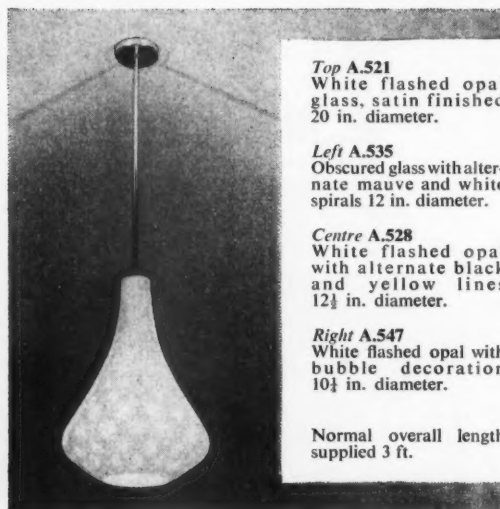
*McEwan Hall, the main assembly hall, with medical science behind. On the right, across the diagonally running Bristo Street, is the university chapel with the Union behind. Below: a sketch by Basil Spence of the proposed south side of George Square. The blocks on the two nearer sides of George Square are to be devoted to Arts Faculties, and are now being designed by Robert H. Matthew.*







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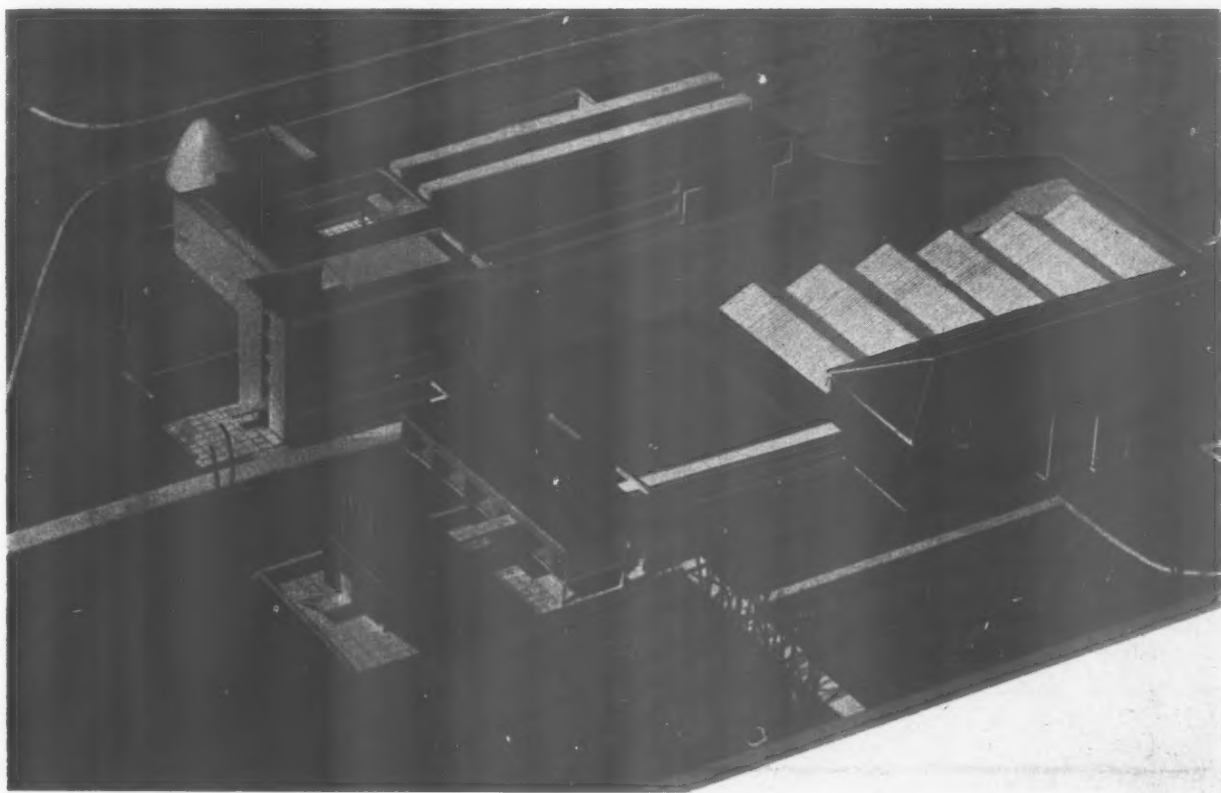
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## Edinburgh University: continued



*Above: an engineering building extension at King's Buildings designed by Robert Gardner-Medwin, and now under construction.*

because they feel the university are not exploiting the possibilities of the other parts of the central area (e.g. "The Mears" area and Bristo Street) but are developing George Square for reasons of expediency. If the university plans, showing the need for all these areas, were made public (as in outline they soon will be), much of

*Below, the King's Buildings site of Edinburgh University, numbered 1 on the site plan.*



the reasoned criticism would be dropped. The land uses considered are shown on the model, but the area to the east of the Bridges is not yet ready for publication (physics will probably be the first development here).

George Square itself is a very fine space bounded by quite pleasant but far from outstanding Georgian houses. It has mature trees in the centre and it is difficult, even in winter to appreciate the detail of one side from another because of its size, planting and the fall of the ground.

It certainly has great possibilities as a university square—on the lines suggested by Basil Spence—if surrounded by good contemporary buildings—which would also greatly improve the view from the meadows. The weight of traffic carried by Bristo Street will be an important factor in the development of this area. It would be a great pity if it were such that it tended to isolate the New Union, etc., from the new faculty buildings of the square.

The last major item in the university pattern of development is the siting of the halls of residence. Although these are scattered, a new major development is taking place at Salisbury Green where accommodation for 700 students is being provided in a semi-collegiate plan. The site commands splendid views of Arthur's Seat and is away from the smoke of the city but seems a long way from the faculty buildings, particularly now King's Buildings are to be greatly reduced in importance.

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*Medical school extension.* Architect: W. N. W. Ramsay, A.R.I.B.A. *School of Agriculture, King's Buildings.* Architects: A. Reiach & Cowan, F.R.I.B.A. *1957 Engineering extension, King's Buildings.* Architect: R. Gardner-Medwin, F.R.I.B.A. *1958 Veterinary building.* Architects: A. Reiach & Cowan, A.R.I.B.A. *1959 New Halls of Residence, Salisbury Green.* Architect: W. H. Kininmonth. *Arts building.* Architect: R. H. Matthew, F.R.I.B.A. *1960-61 Library.* Architect: Basil Spence, F.R.I.B.A. *1960 Second section of medical building.* Architect: W. N. W. Ramsay, A.R.I.B.A.

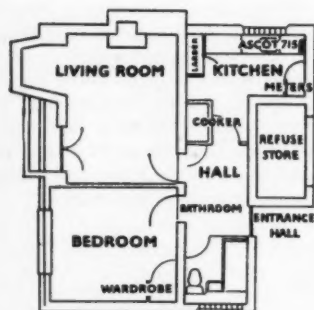


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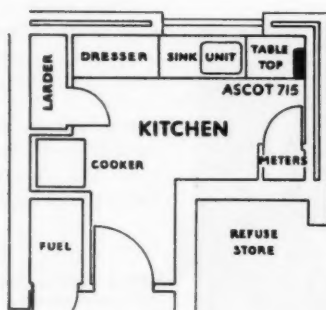
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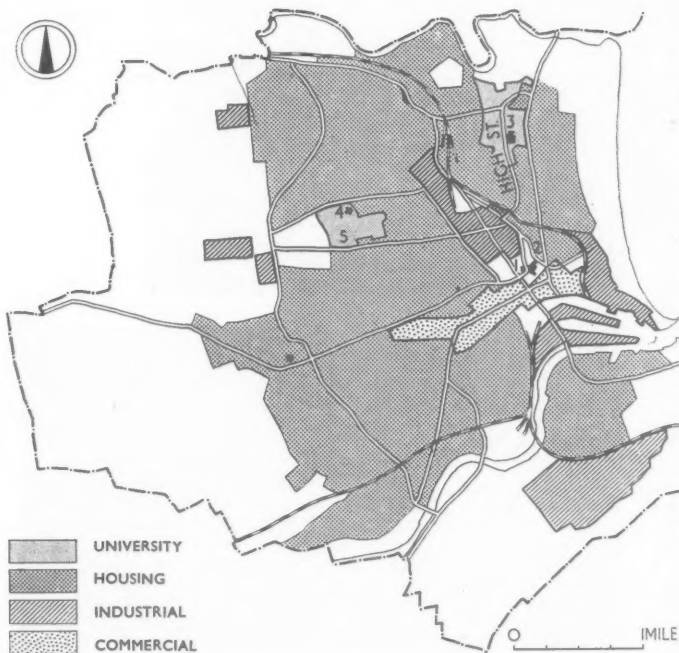
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## Aberdeen University

*The large building in the centre is Marischal College. On the right is King Street, which leads to Old Aberdeen and King's College (to the left of the smoke in the distance). The Union building is diagonally opposite the left-hand corner of the Marischal College.*



1. University Union. 2. Marischal College. 3. King's College. 4. University Medical Buildings. 5. Aberdeen Royal Infirmary.

Until comparatively recently Aberdeen consisted of two towns each with its own university. Today the area between is solidly built up and the dualism is only apparent to the outsider in the placing of the university buildings.

The New Town (which got its charter in the 12th century) is now connected with Old Aberdeen, the cathedral town on the Don, by King Street, the 19th century radial road to the north. The university in Old Aberdeen (now called King's College) was founded in 1494. The tower of the chapel is surmounted by a replica of the Imperial crown (in stone, it must have been a nightmare to construct) to symbolize the unity of Christendom.

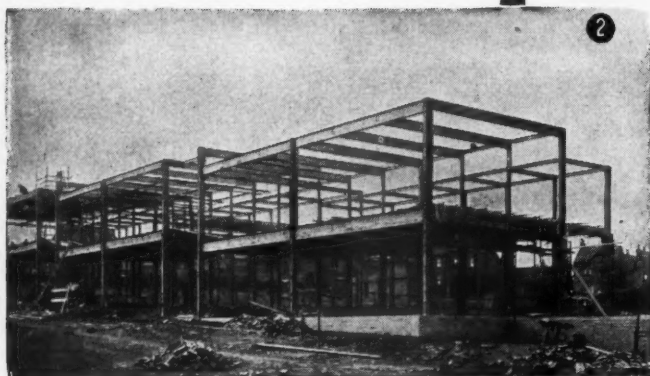
They did not take kindly to the Reformation and the port of Aberdeen felt it should have a more presbyterian minded college. In 1593 George Keith, Earl Marischal, founded Marischal College, endowing it with friary lands. Charles I was interested in uniting the two universities, but the civil war intervened and until 1860 they continued as separate entities. It is surprising that after nearly 300 years of independent existence the unification of the two presents so few problems.

A third factor in this organization is Forresterhill. Here the university and teaching hospital have a large site and extensive buildings which include the medical school.

Beyond these broad outlines it is a difficult relationship to grasp as the university do not have an overall development plan. However, the general policy seems to be to put all new faculty buildings (other than the medical school) in Old Aberdeen and gradually to withdraw from Marischal College. Old Aberdeen from the Chanonry



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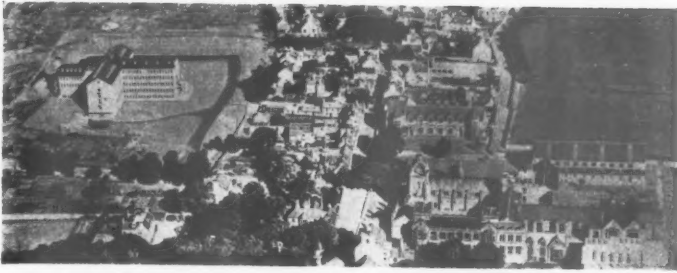
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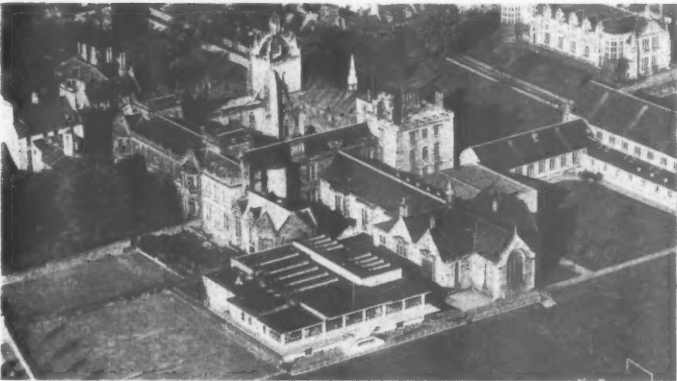
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## Aberdeen University : continued



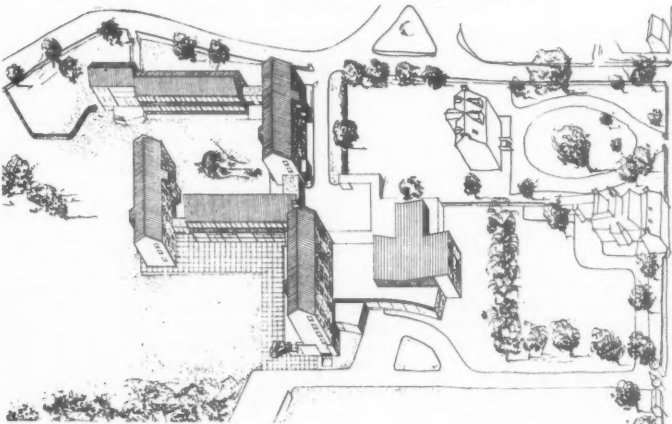
Old Aberdeen, with King's College on the right. On the left, starkly unrelated, is the new chemistry building by Pite Son and Fairweather.



Another view of King's College, showing a modern extension sited close against the old buildings, in contrast with the chemistry building, above, which stands isolated on the other side of the main road.

(pleasant detached houses round the cathedral), to King's College at the south end of the narrow High Street has a pleasant small-scale, village character. The university owns much of this property and are carefully restoring the old houses so that they can become staff residences. The open area on rising ground to the west is to be developed mainly for science buildings, but no plan was seen, either for this or the other parts of Old Aberdeen. A hostel site is being developed by Professor Robert H. Matthew to

A bird's-eye view of a hall of residence in Old Aberdeen, designed by Robert Matthew and Johnson Marshall, which is sited in the gardens below the chemistry block in the photograph at the top.



the south of Pite Son and Fairweather's simple and rugged new chemistry building. Architects must face endless aesthetic and practical problems caused by this lack of planning. Sympathetic integration of old and new buildings and the outside spaces they create will be extremely important. It will be sad if Old Aberdeen, which seems an ideal place for the university to concentrate, becomes a Come-to-Britain village with the quad of King's on one side and a draughty campus on the other. It well may. A glance at an aerial photograph shows the entirely different scale of the present surroundings of the new chemistry buildings and King's College, and even if the aesthetic results are waived this type of layout has its practical snags. The sense of sheltered enclosure given by the planners of King's and the High Street is only accentuated by the sound of the North Sea crashing down only a mile away. Up at the chemistry buildings the wind whips like a knife and one has to bolt for cover to escape the blast. However, this may be an exception; it is understood that the new hostel accommodation is planned in a less isolated manner, and maybe future science buildings are too. The Marischal area includes the Union and this seems illogical planning. At present there are 1,800 students of whom one-third work wholly or partly at Marischal, one-eighth at Forresterhill, and the rest wholly or partly at Old Aberdeen. The university will probably increase to 2,500 or more in the next 10 years and the policy is to put new faculty buildings in Old Aberdeen. Therefore Marischal must become less and less important as a teaching area. At present the Union certainly functions, although half the students do most of their work at King's (the distance—a 3d. bus ride or fifteen minutes' walk). The bus service obliges, for anyone going from King's to another part of the town has to change at Marischal, and as nearly everyone lives in digs, this automatically happens at least twice a day. Also catering facilities have been duplicated at King's for students working there. These two alleviating factors have eased the situation and somewhat fogged the issue, but development in Old Aberdeen is a long-term plan, and the Union must remain the hub of the students' life for many a day. Instead of planning a new union in Old Aberdeen substantial extensions (£50,000) are planned for the existing one. More refectories and more common rooms and reading rooms are being provided or planned in Old Aberdeen for the increase of students there. Whether the ultimate plan for the Union is on its present site, or in Old Aberdeen or a duplicate of facilities, is the unsettled problem for the future.

Those who have not seen Marischal College might wonder why the university stays there at all. Firstly, because it takes time and money to construct accommodation into which the departments now there could move. Again it is university property, and it is unlikely to decay, or find a prospective buyer, being the second largest granite building in the world (it is rumoured that they have tried to sell it without success). It is also full of architectural character and well worth a pilgrimage for any gothic revivalist—the 1840 part by Archibald Simpson has great charm. It will serve its purpose for office accommodation and museums for years to come. The Union, on the other hand, would surely find a bidder; it is a useful building on a valuable site.

## New buildings since 1945

Clinical medicine—Forresterhill extension; Chemistry building—Old Aberdeen. Architects: Pite Son & Fairweather. 1957 library wing extension—Old Aberdeen. Architects: George Bennett Mitchell & Son. Extension to chemistry (for Department of Statistics). Obstetric medicine unit—Forresterhill; Reconstruction in Marischal College. Architects: Pite Son & Fairweather. Library, stackroom, students common room, King's College. Architects: George Bennett Mitchell & Son.

## Next five years

Halls of residence—Old Aberdeen. Architects: Prof. Robert Matthew and Johnson Marshall, F.R.I.B.A. Medical physics unit. Architects: Pite Son & Fairweather. Extension to Students Union. Architects: Jenkins & Marr.



On November 28 J. M. Richards wrote a criticism of the Teachers' Training College at Birmingham, designed in the office of the city architect, A. G. Sheppard Fidler. Mr. Fidler replied on December 5. Here are two letters about the criticism, the first from the principal of the College.

SIR,—I have been very happy to read criticism by J. M. Richards in the JOURNAL for November 28, and I would like to say how grateful the Birmingham College is for the thoughtful criticism of the buildings it is happy enough to enjoy, together with the delightful photographs you managed to obtain.

I think it would be inappropriate, however, merely to enjoy the article without attempting to make clear the debt we, the occupants of this building, owe to the thoughtful care of the architects who were responsible for it. I imagine that it is rarely in projects of this size that time and trouble are taken at every stage to consult the people most concerned in the final purpose of the building. We have been privileged and we acknowledge our gratitude to our city architect and his staff.

Since one or two minor criticisms in your article derived from this very willingness to lend an ear to the college claims, it might be appropriate to say that, for example, the less than felicitous placing of sick-bay was entirely because of the college request; and similarly the central position of the library, which fortunately does not appear to be in the noisiest part of the building, was at our request. The acoustics of the dining hall, I am happy to say, seem to be extremely good for a building of this nature and the problem has been solved for this college.

I am sure that your critic was told when he visited the building how long ago the original plans were passed or rather the schedule of accommodation. Horizontal circulation in the hostels, 120 sq. ft. study bedrooms and common rooms sprang from an earlier conception than the present sometimes delightful plans I have recently been privileged to see. I was disappointed that no mention had been made of what I think to be the most thoughtful accommodation ever provided (and I have seen many new buildings in the last two years); the laundries provided in the two hostels owe everything to the imagination and foresight of our excellent architect and if, as you suggest, he has had occasionally to "win" a little space from other areas, every

student in college would assure you that the result is a happy one for them.

The common rooms in each hostel, which have not until now been able fully to be used, as you know the day to day study to have been conducted in other areas, are now very frequently in use. They are delightful rooms in which to hold the informal party for a group of students smaller than the whole hostel group. They are being used as recital rooms where the intimate nature of our string quartet performance or a piano recital can be appreciated to the full. They are used by societies such as SCM and the thriving literary society for their frequent meetings.

May I repeat our thanks for your excellent and well illustrated article and say how it has found favour not only with the college staff and students, but with all those people whose deep interest in the college has made the whole project possible.

MARGARET M. RIGG,  
Principal of the City of  
Birmingham Training College.  
Birmingham, 15.

SIR,—I would like to make a comment on the criticism by J. M. Richards on the Birmingham Teachers' Training College scheme, particularly referring to the hostel accommodation. My own experience has been that a hostel with a corridor access plan not only entails more square feet of plan for a given amount of study bedroom area, but is definitely more expensive per square foot to construct than the staircase access system.

The question of economy in the area of the common rooms does not affect this issue, as these are specified by area and the cost limits arrived at accordingly. I am quite sure that in this scheme much larger study bedrooms could have been provided within the same cost by eliminating the wasteful corridor area by designing around a staircase access plan. In both schemes the two staircases in one block are required, but in the staircase access scheme the connecting circulation is virtually eliminated.

Without seeing an area analysis of this scheme, I would suggest that if a staircase access scheme had been adopted study bedrooms of 165 sq. ft. could have been provided for the same total cost.

W. W. CHAPMAN, A.R.I.B.A.  
Herts.

## DIARY

*Announcement of Award of Prizes and Studentships.* At the RIBA, 66, Portland Place, W.1. 6 p.m. JANUARY 7

*Public Parking Garages.* Talk by Sir Herbert Manzoni, C.B.E., M.I.C.E. At the RIBA, 66, Portland Place, W.1. 6 p.m. JANUARY 21

*Design and construction of foundations and pressure shell of the 8 ft. x 8 ft. high-speed wind tunnel of the RAE, Bedford.* Lecture by J. F. Greinig, R. W. Horseman and A. N. Kinkead. At the ICE, 1, Great George Street, S.W.1. 5.30 p.m. JANUARY 21

*Modular Society.* Talk by Ernst Skarum, Head of the Building Section of the European Productivity Agency. At the RSA, John Adam Street, W.C.2. 7.30 p.m. JANUARY 27

*The Use of Copper and its Alloys in Building.* Talk by E. Carr of CDA. IIBDID meeting at the BCC, 13, Portman Square, W.1. 7 p.m. JANUARY 29

*Design in Tomorrow's Industry.* SIA Design Oration by Christian Barman. At the RSA, John Adam Street, W.C.2. 7 p.m. FEBRUARY 7

## NEWS

### RIAS

#### Travelling Fellowship

The Maclaren Travelling Fellowship, which amounts to £210, will again be awarded Royal Incorporation of Architects in Scotland in 1958. Applicants must be members or student members of the Incorporation and registered as provided by the Architects (Registration) Acts, 1931 to 1938. The successful applicant will be required to take an approved course of study in Europe or America.

Application forms and other particulars may be obtained from the secretary, RIAS, 15, Rutland Square, Edinburgh.

### BRIDGING THE GAPS

#### Joint Symposium at Alston Hall

A correspondent writes:—

"Bridging the Gaps" was the subject of a joint symposium of architects, quantity surveyors and builders held last weekend at Alston Hall, near Preston. This further exploration and discussion of points raised at last year's symposium, "Gaps in Building Know-How," was organized by the Preston, Blackburn and District Society of Architects, in co-operation with The Building Centre, the Lancashire, Cheshire and Isle of Man branch of the RICS, and the North-West Federation of Building Trades Employers.

William Allen (BRS), in his paper, *Trial and Error*, explained the functions and organization of the BRS and emphasized its policy of comprehensive coverage.

He suggested that the scientist had become too isolated and explained the classical form of research—the collection of information on a problem; the forming of a hypothesis; and finally the testing, elaboration and refining of the hypothesis. Anyone, he thought, could use the technique and could thus become a scientist. He spoke of the "tripartite mechanism" of modern society: first, the scientist who produces knowledge; second, the professions who use the knowledge gained; and third, the industry which makes and assembles. The industrial revolution had broken an essential interdependence of function and the three parts were brought up to be antipathetic. It was vital they should get together again.

No period had passed in which architectural originality was so intense. Much had been gained, but much lost; and innovation was often the result of an aesthetic idea. He upheld the philosophic view that there was "Nothing in imagination which had not previously been in sense" and that "intuition is only as reliable as the knowledge in the mind of the person acting intuitively." Innovators must know the point of departure. The collective will-power of architects had created a complete Curtain Wall industry. An aesthetic concept first, it had not saved money and was technically very difficult. As Thurber said:

"Get it right or leave it alone,

The conclusion you reach may be your own."

Conservatism was quite as bad as innovation. The cavity wall had taken 25 years to become accepted, and there was still opposition to thermal block walls. And yet abandoned conservatism might cost a great deal. A recent historical study of reinforced concrete buildings showed that exposed site concrete must be good, with full 1½ in. cover of reinforcement to assure un-

Continued on page 35

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working detail

BALCONIES: 25

BALCONY OVER ENTRANCE FOYER: OFFICE BLOCK IN LONDON, W.C.1

David Aberdeen and Partners, architects

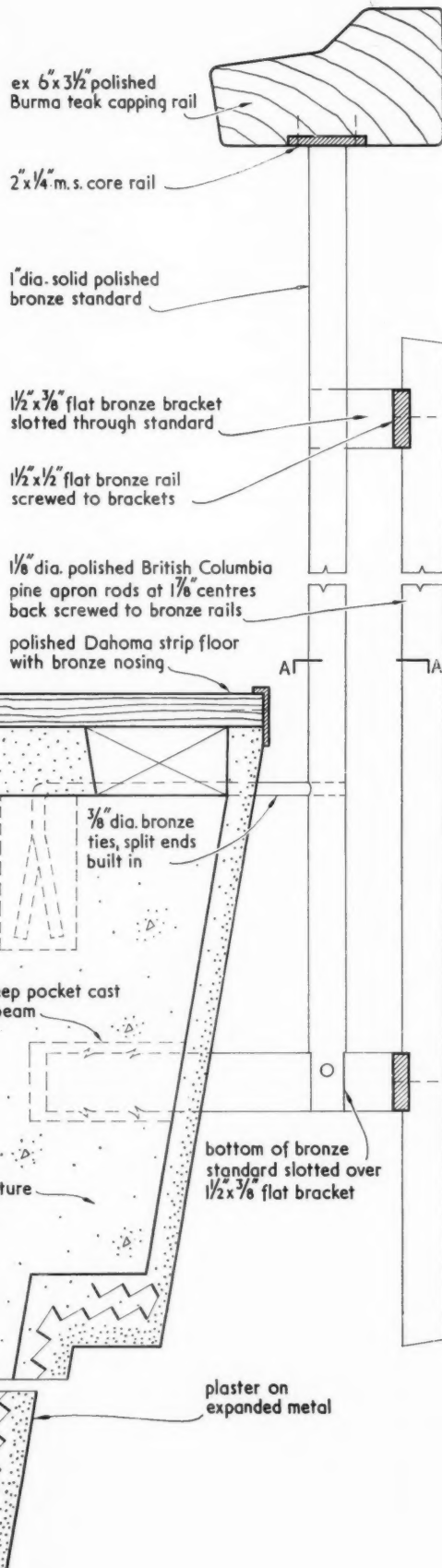
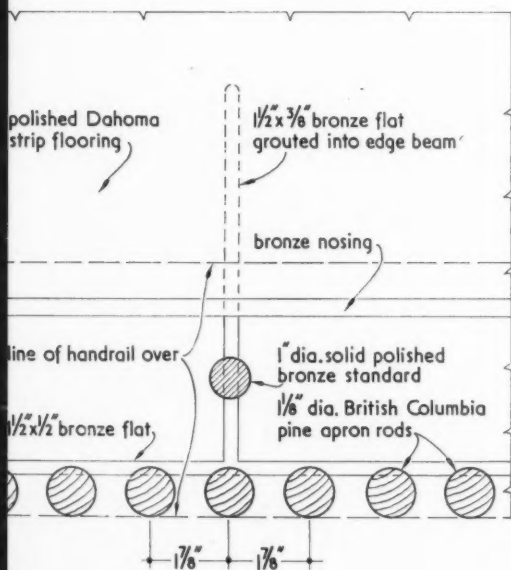
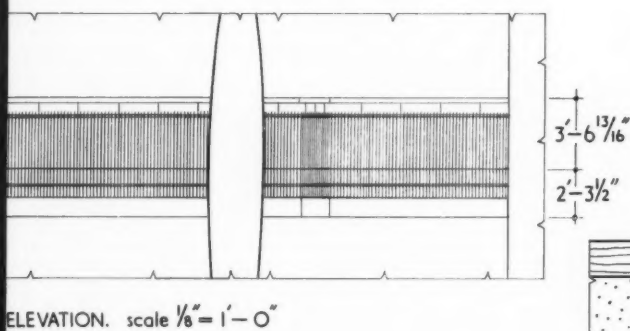
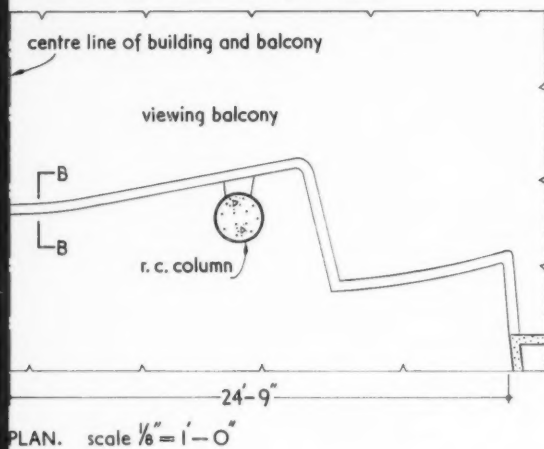


*The chief point to be made about this balustrade is the unusual "screen" effect obtained by carrying "apron rods" and supports clear of the balcony edge. This gives a neat uninterrupted floor edge (and one easy to clean); as the front face of the floor edge is painted white the clear line of the floor is thrown into further relief by the reflected light on the lower parts of the apron rods. Note also how well the close-spaced, round section vertical apron rods follow and express the curved shape on plan.*

## working detail

BALCONY OVER ENTRANCE FOYER: OFFICE BLOCK IN LONDON, W.C.1

David Aberdeen and Partners, architects



working detail

DOORS: 33

DOORS TO COMMITTEE ROOM: OFFICE BLOCK IN LONDON, W.C.1

David Aberdeen and Partners, architects



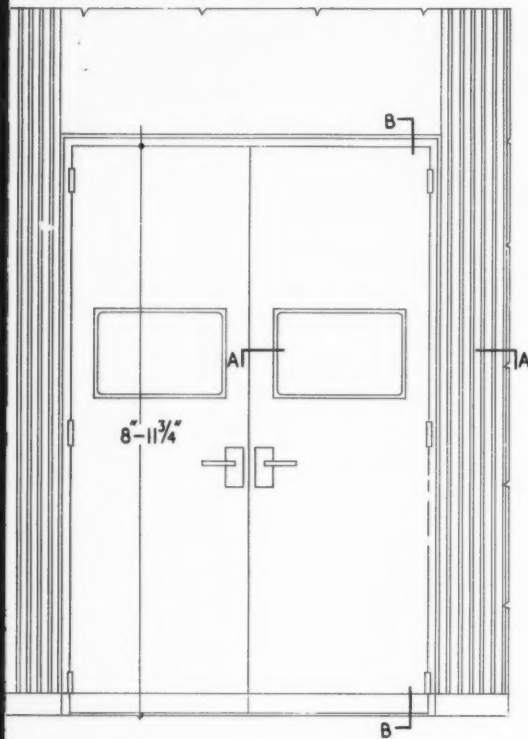
*Notice the effectiveness of the  $\frac{1}{16}$ -in. sinkings between the more important joins and the relations on the vertical plane between the door, the surround, the panel above the door, the Copenhagen slatting and the skirting.*



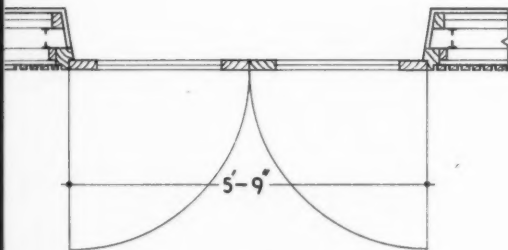
working detail

DOORS TO COMMITTEE ROOM: OFFICE BLOCK IN LONDON, W.C.1

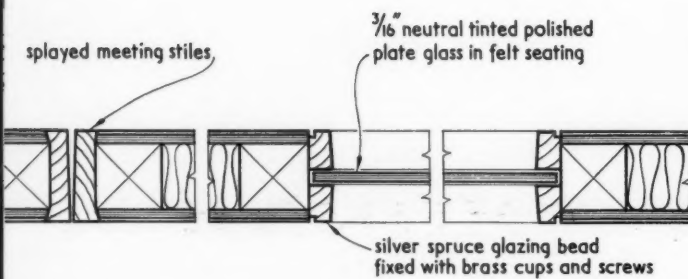
David Aberdeen and Partners, architects



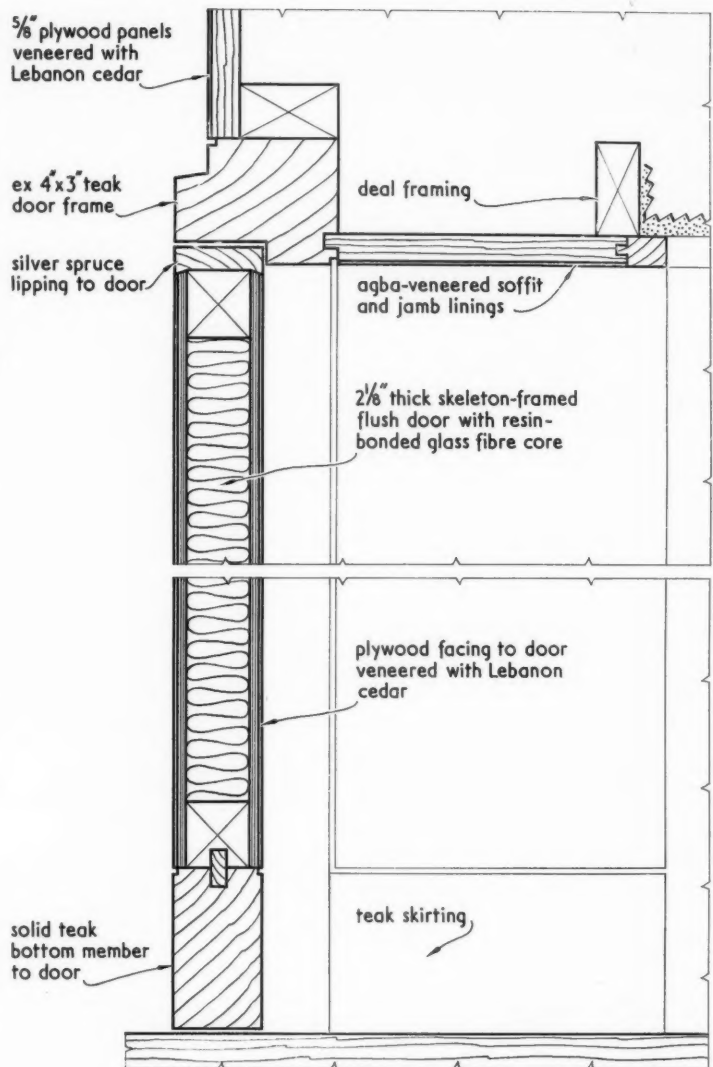
ELEVATION. scale  $\frac{3}{8}'' = 1' - 0''$



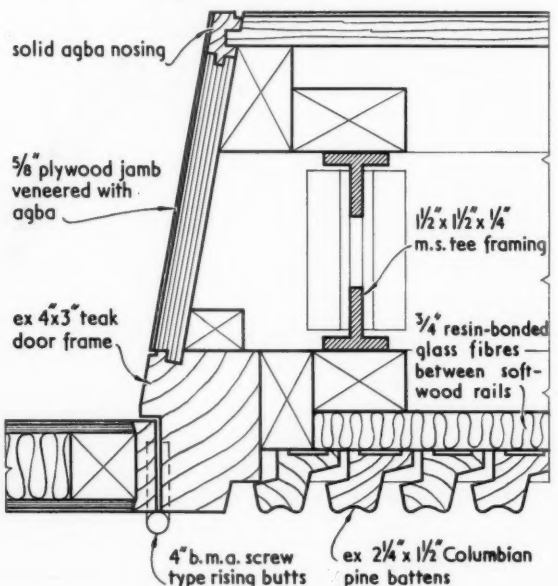
PLAN. scale  $\frac{3}{8}'' = 1' - 0''$



PLAN AT A-A. scale  $\frac{1}{4}$  full size



SECTION B-B. scale  $\frac{1}{4}$  full size





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## News continued from page 34

troubled life for upwards of 25 years. On costs, architects had learnt much, but builders could teach them more—to avoid complicated “bits of wallery,” to be consistent in construction, to realize the cost implication of differing plans. Architects were assessed by builders on their reputation for “buildability.”

Mr. Allen emphasized his conclusions with slides and finished a concentrated paper with a plea that the trilogy should get back into step and that all should feel that there was no moral justification in putting on the face of this earth anything which was not beautiful and efficient.

S. Johnson Marshall (formerly chief architect, MOE) opened his talk on *A Grammar for Modern Building* with a plea for building to become a combined operation. The industrial revolution, with its client business man, had separated the designer from the builder, he said.

He described his experience of the Hertfordshire schools programme from 1945 and suggested that the principles of organization applied there set the conditions for a grammar of modern building. The team, in addition to the architect, had been a willing, intelligent client. But the builder had been completely cut off by the system of competitive tendering. They had turned to the manufacturer, and evolved a system of standard components, to suit any condition of design and site. This had been developed by others and last year 25 per cent. of the schools programme had been built in systems of standard units. Results showed it would be possible to find a grammar of modern building, but the biggest handicap was an administrative organization which precluded contact with the builder. Mr. Marshall thought that until the highest authority abrogated standing orders as used by local authorities, there would be no

contact with builders and it would be extremely difficult to make a new grammar. It may also be that the architect must change and drop his impartial position, abrogate some of his independence and possibly take some financial risk. The builder should become more academic and be prepared to operate professionally.

Howard A. Close (Contracts and Legal Adviser to the NFBTE) read an interesting paper on *Bound by Contract*. He traced the development of the RIBA form, and said its strength rested in the fact it was an agreed document. It was an example of “disciplined freedom” in the true English tradition. Its advantages were obvious. Architects had a document which they could confidently advise a client to sign. For builders it meant all contracts were on a uniform legal basis and, from an educational standpoint, it was a standard in relation to which the contractual side of the industry could be studied.

Mr. Close dealt in detail on some important aspects of the contract which were sometimes overlooked. These included the importance of the date for completion, the difficulties of architects in granting an extension of time, and the difficulties in the valuation of variations.

K. J. Speakman-Brown (Quantity Surveyor) spoke on *Counting the Cost* and explained the factors affecting cost. At the risk of being dubbed diehard and reactionary, he felt that the quantity surveyor was the person to count the cost. He should do it from the start and should be with the architect at the first interview with the client. If this was the common practice, he would ask three questions:—How much do you wish to spend? When is the building wanted? Is the building wanted in stages? His object was to avoid wasted effort.

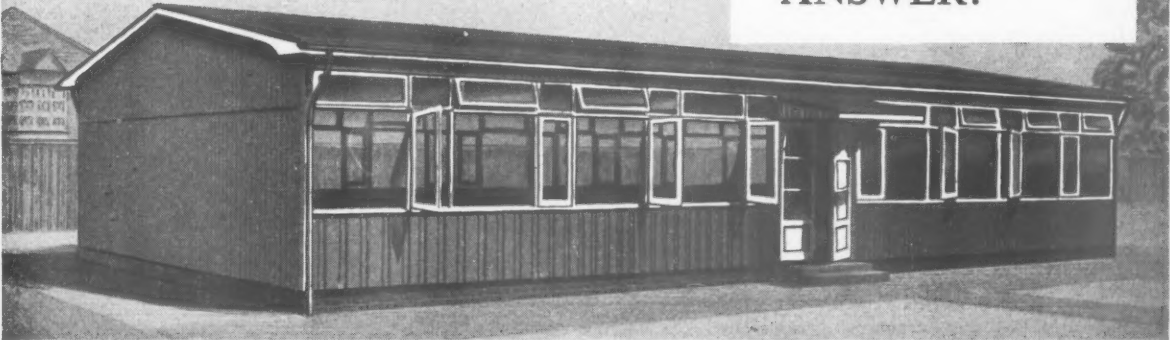
The cost was counted in six stages. Cost research; cost analysis; cost planning; tender; interim valuation; and a final

account. The speaker felt that the quantity surveyor's contribution was vital at each stage. Cost control during the contract was often overlooked and ideally each variation order should be settled as it occurs and an accumulative total kept. Builders should inform architects of instructions and circumstances affecting cost. Architects should weigh the full effects in cost of their instructions and retention moneys on a contract should be kept as low as possible. The speaker ended by saying ideally the final account should be a mere formality concluded well within the contractual time limits and helping to avoid the crippling weight of interest on borrowed money.

L. Statham (President of the North Western Federation of Building Trades Employers) led a discussion on *Profit by Experience* but first defined profit as the reward, or hope of it, which sweetens labour. The industry should work together as a team to our common profit. Experience should be shared and not locked away in confidential books and files. We could, with considerable profit, interchange our knowledge much earlier than we did. Two other bodies of experience could be brought into a similar symposium:—the client and the operatives of the building industry. Builders should restore the confidence the operatives of former days placed in the integrity of their employers, by explaining decisions which affect them.

Mr. Statham then put forward some points for discussion which sparked spontaneous contributions from the floor. Communication of experience within the industry was felt to be a failure and it was suggested builders should come back with a critique of jobs at post contract stage, possibly in published form. There was a plea that the education of operatives should be more contemporary but, as an educationalist pointed out, this depended on the type of examination question, which was largely the

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responsibility of the professions. Builders present thought that the settling of final accounts took too long, but quantity surveyors said they often had difficulties of getting the contractor to produce the information for the final account. Should contractors institute a quality inspection control within the organization?—it was felt they should, although Mr. Statham thought it was the job of a good boss to check this point. Fixed price contracts were difficult for sub-contractors who were unable to control timing of the operation in the face of rising costs.

Eric Bird (The Building Centre, London) concluded the symposium by summing up the papers.

The discussions after each lecture overflowed to dining room, lounge and bar, and one is left with an impression of a sincere desire on all sides to get together round, rather than across the table. One feels, however, the problems revealed will not be solved by an annual symposium. Although it does bring forward new thoughts on familiar problems and creates a climate of opinion, it also raises new questions for the future.

How are the builders to be brought into the team earlier than at present? Is the answer the abrogation of local authority standing orders as Mr. Johnson-Marshall suggested? If so, how can it be achieved?

Can the professional side of the industry do more to bridge the gap in the education of the skilled craftsman or will timber king post trusses still be taught in 10 years' time?

Should the sides of industry co-operate or integrate?

These are the sort of questions left in the mind and one wonders whether the impetus of a successful weekend could not be channelled into work by study groups of experienced members from all sides (busy though they may be), who could get their

sights on a much smaller target and, who knows, may get an inner if not a bull. Undoubtedly, attitudes change, but are they changing quickly enough or indeed as quickly as in other industries?

## LAW REPORT

### Remuneration for Estimates

If a builder is invited to tender for certain work, either in competition or otherwise, there is no legal implication that he will be paid for the work involved in arriving at his price. He undertakes this work as a gamble, and its costs are part of the overhead expenses of his business which he hopes will be met out of the profits of such contracts as are made as a result of tenders which prove to be successful. If the client decides not to proceed with the work at all the builders who tender are without a legal remedy.

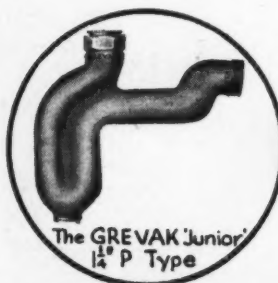
But a builder may not be without a remedy, according to the recently reported case of William Lacey (Hounslow) Ltd. v. Davis, if the builder's tender is sought and used, not to ascertain the cost of erecting or reconstructing some genuinely contemplated building project, but for some extraneous or collateral purpose for which the building owner may require it. In recent years builders' estimates have served purposes other than the sole purpose of ascertaining cost. Examples of such purposes are the use of estimates in relation to war damage claims, building licences, and town planning applications. This recent case shows that if estimates are obtained in reality for such purposes they should be

paid for, in default of agreement to the contrary, if the builder is not in fact employed to carry out the work.

What happened was that builders gave a tender for the rebuilding of premises as a shop with residential flats above. A licence in respect of these plans having been refused, the owner asked the builders to submit a revised estimate in respect of new plans. The builders undertook a considerable amount of work in preparing their revised estimate and in preparing further particulars required by the client for the War Damage Commission. Later, the builders complied with still further requests but the client eventually sold the premises instead of having them rebuilt.

In their action against the client the builders claimed remuneration in respect of the work done by them (with the exception of the work done on the original tender), this claim being based on what lawyers call a *quantum meruit* (literally, as much as he has earned). The point of a *quantum meruit* claim is that it is not based on a contract in the ordinary way. The claim really rests on the justice or merits of the case.

The judge decided in favour of the builders in spite of the argument that in so doing he "would be granting a new charter to builders for which no authority can be found in the books." Mr. Justice Barry said: "The old-fashioned purpose of an estimate may become an almost subsidiary one, and builders may be called on to perform all kinds of services and to provide all kinds of information quite unconnected with the submission of a tender. I find it difficult to think that any injustice will result if building owners, who obtain the benefit of all these services on the understanding that a contract is to be given, should be required to make some payment for them if they subsequently decide that the contract should be withheld."



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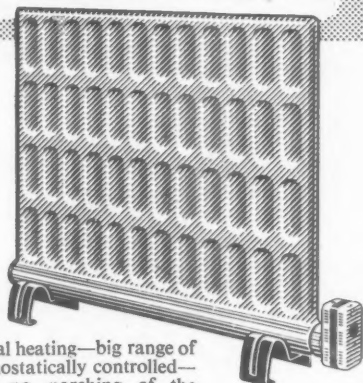
Architect: F. C. P. West, Esq., A.R.I.B.A., M.T.P.I., Chief Architect  
Cwmbran Development Corporation.  
Contractor: Messrs. Gee Walker Slater Ltd.

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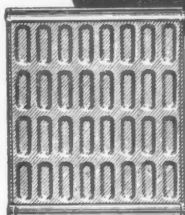
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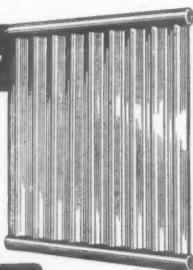


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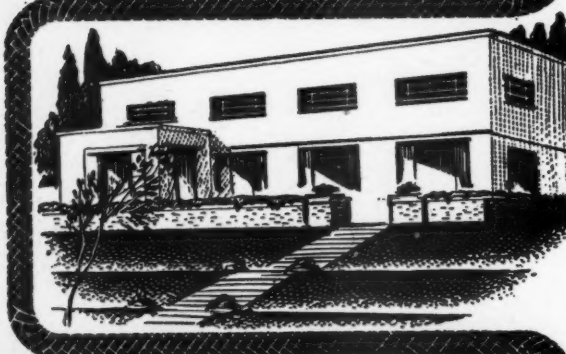
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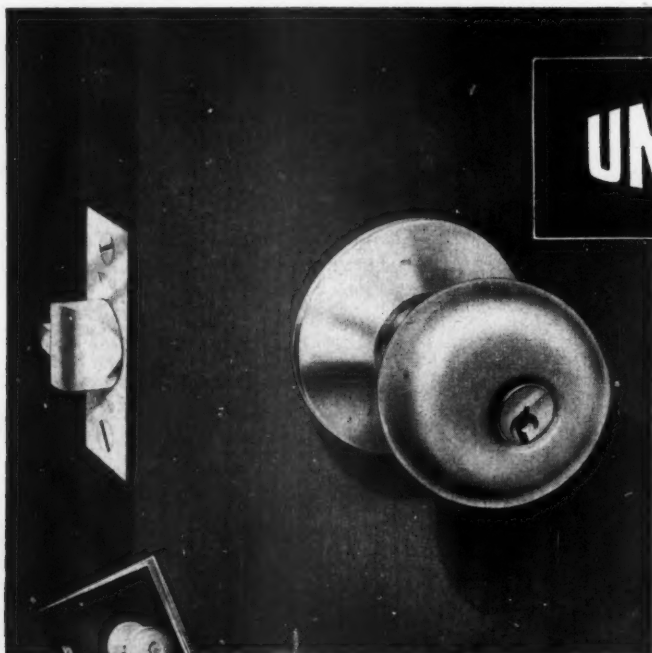
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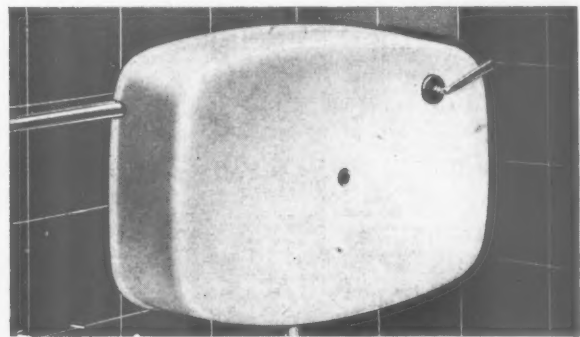




Fordham 'Cleanline' Cistern Low Level Model



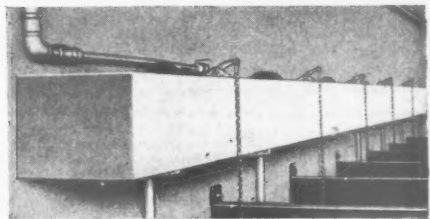
Fordham 'Cleanline' Cistern High Level Model



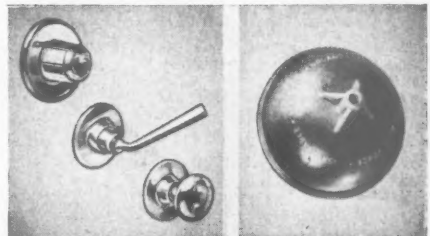
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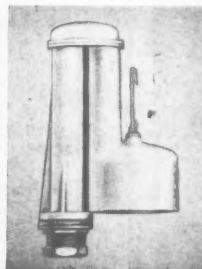
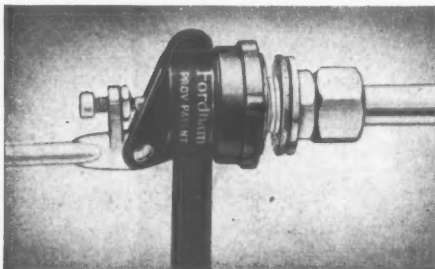
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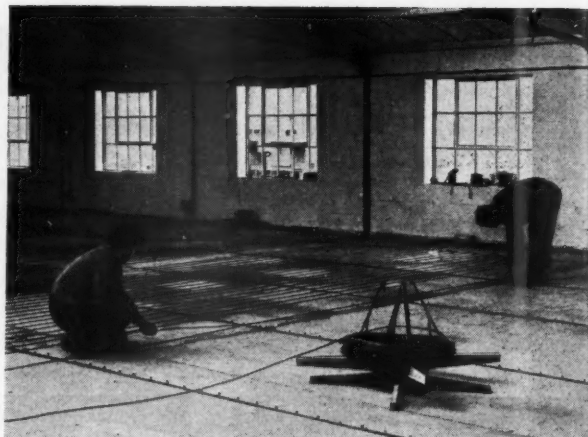
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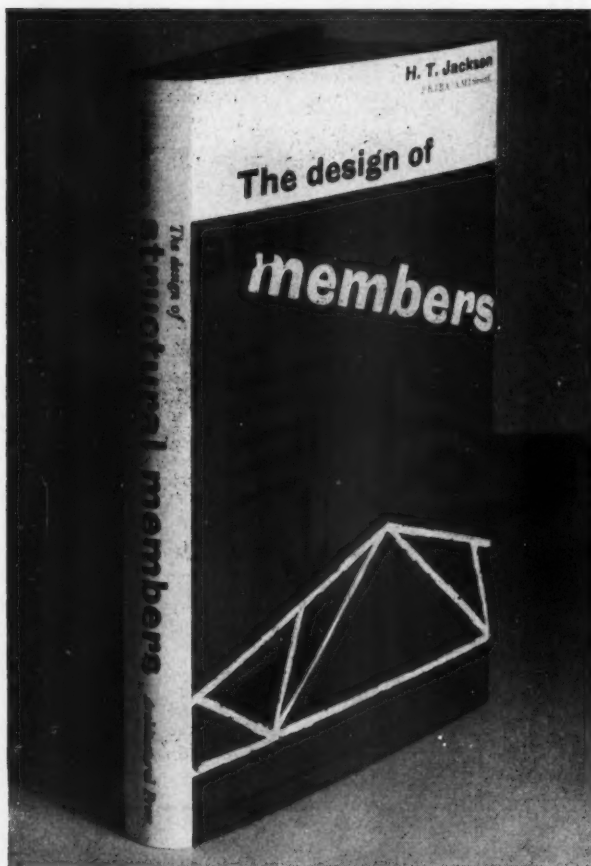
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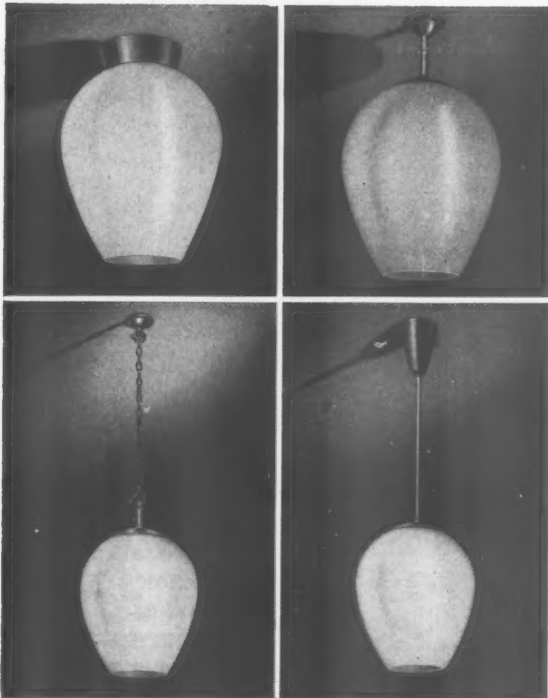
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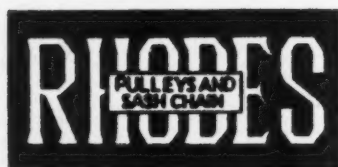
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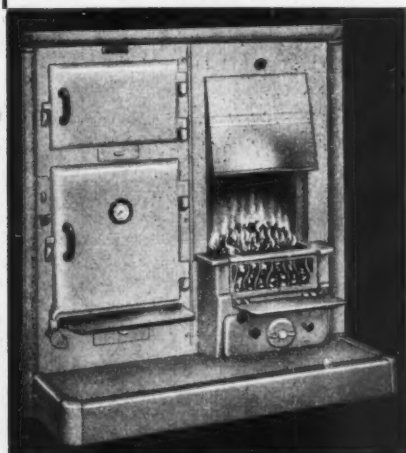
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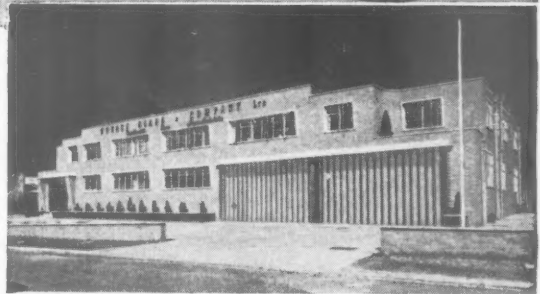
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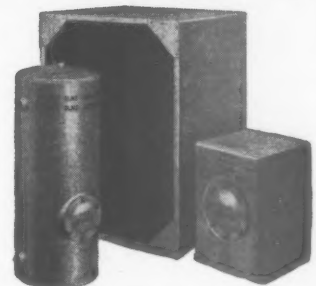
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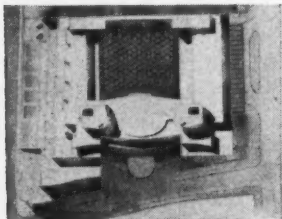
## TUC

## Brasilia

## Street Lighting

## December Architectural Review

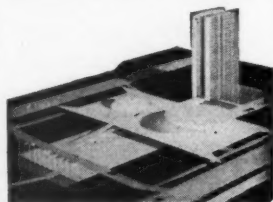
Design for public and administrative functions will form the subject of the two most important features in the Review for December. The *TUC Memorial Building*, designed by David Aberdeen, which is only the



Airview drawing of David Aberdeen's *TUC Memorial Building*.

second public building of consequence to go up in London since the War, will be described

and illustrated for the first time in complete form, and a supporting article in *Skill* will examine in detail the finishes and mechanical equipment that make this one of the most lavish buildings—outside the commercial field—of recent years. The other major feature is concerned with *Brasilia*, the projected new capital city for Brazil, typically grandiose and Latin-American in conception, but more likely than most such schemes to achieve completion. Sir William



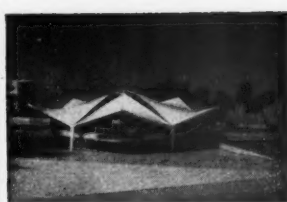
Oscar Niemeyer's design for the Congress Building at Brasilia.

Holford who was one of the jury who assessed the competition for the new capital's plan, introduces the project and its site, discusses the competition, and adds a few words by way of introduction to the brilliant and unconventional winning scheme, by Lucio Costa father of Brazil's modern movement, whose report is published in English for the first time. Another father of his art, John Britton, founder of English topographical studies, will be the subject of an historical article by Peter Faraday, and the bicentenary of the birth of the great neo-Classical sculptor Antonio Canova is celebrated by one of England's leading neo-Classical scholars, F. J. B. Watson, with a chronicle of English visitors and admirers at the sculptor's studio in Rome. Gordon Cullen will tackle one of the most vexed and debated problems of outdoor detailing, *Street Lighting*, in terms of distribution and siting, as well as the design of equipment, and interiors to be described include the IBM offices and the Garden Centre, both in new office blocks in Wigmore Street. Foreign reports will cover the *Triennale di Milano*, and the *Berlin Interbau* exhibition, and regular features like the *Counter Attack Bureau* and Robert Melville's provocative art-criticism will continue.

## Preview

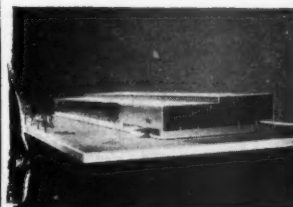
## January Architectural Review

Each New Year, the Review devotes an entire special issue to a survey of what the leading architectural offices in Britain have in hand on the first day of the year.



Assembly Hall of a girls' comprehensive school at Southwark. Architects, Chamberlin, Powell and Bon.

The view presented by *Preview* is an extremely varied one; the buildings it covers range from a pub to a synagogue, by way of schools, universities, colleges, hostels, hospitals, factories, office blocks, churches, airports, planning schemes, housing layouts, a market and a seaside pavilion; and the offices and architects responsible for these projects-in-progress read like a directory of the country's top talent (as indeed they are)—the L.C.C., the Ministry of Works, ACP, T. P. Bennett and Sons, Bridgewater and Shephard, James Cubitt and Partners, Llewelyn Davies, Easton and Robertson, Frederick Gibberd, Erno Goldfinger, Gollins Melvin and Ward, Sir William Holford, Arthur Ling, Sir Leslie Martin—and so on down the alphabet to Yorke, Rosenberg and Mardall.



Factory at Wokingham. Architects, Yorke, Rosenberg and Mardall.

The reflection in *Preview's* mirror may prove flattering or alarming, but even where there appear to be grounds for satisfaction at the design of the buildings themselves, the environments into which they are being fitted still leave much to be desired, and though this is beyond the architect's control, it is not exempt from the watchful eye of the *Counter Attack Bureau*, whose month by month vigilance will be maintained even in this special issue.

## Churches

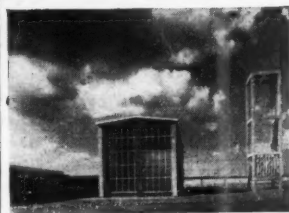
## Adam &amp; Berkeley

## Lettering

## February Architectural Review

The variety and scope of the buildings illustrated, and subjects discussed, in the February issue will be catholic, even for the

Review. *Three Churches* around Coventry by Basil Spence will show what the imaginative use of a modicum of rationalisation can



Church at Bell Green, Coventry, by Basil Spence & Partners.

do even for a church building programme; the spectacular *Teatro de los Insurgentes*, designed by Alejandro Prieto exhibits Latin-American design at its most exuberant and effective; while Erno Goldfinger's precise *Office-block* in *Albermarle Street* is the kind of building our cities sorely need. Historical studies will re-examine aspects of eighteenth-



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century architecture: *Bishop Berkeley's* contributions to architectural theory will be the subject of an article by Marcus Whiffen, while a sheaf of papers on *Robert Adam* by various hands will include some unknown Clérissieu drawings from Russia. Gordon Cullen will complete his set of townscape studies for Bristol University with an analysis of *Trowbridge*, and Jacqueline Tyrwhitt will examine the planning of *Fatehpur Sikri*, the ideal city of Akbar the Great, somewhat in the manner of Sir Hugh Casson's memorable studies of Peking. In *Skill*, John Sharp will complete his survey of methods and materials in *Architectural Lettering*, *Design Review* will continue to note worthwhile new products and equipment, while the *Interiors* include new showrooms, by Design Research Unit, an officers' mess for the U.S. Air Force, and an ingenious conversion of a house near the docks in Hull.

The annual post-free subscription rate payable in advance is \$3.50 sterling; in U.S.A. and Canada \$10.50; elsewhere abroad \$8.10.

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(b) TWO ASSISTANT ARCHITECTS (Housing and General Section)—Special Grade.

(c) ASSISTANT QUANTITY SURVEYOR—Special Grade.

(d) TEMPORARY CLERK OF WORKS (Housing)—A.P.T. Grade I.

The commencing salaries will be fixed within the scope of the grades stated according to qualifications and experience, i.e. Special Grade £750-£1,030 p.a. and A.P.T. Grade I £575-£725 p.a.

Applicants for appointments (a) and (b) must have passed the final examination of the R.I.B.A. and those for appointment (c) the final examination of the R.I.C.S.

Housing accommodation may be made available if required.

The appointments will be subject to one month's notice on either side and to the provisions of the Local Government Superannuation Acts. Successful applicants will be required to pass a medical examination.

Applications stating age, education, qualifications, full particulars of training and experience, together with copies of two recent testimonials, should be sent to the undersigned not later than Monday, 20th January, 1958, in envelopes endorsed with the name of the appointment applied for.

A. NORMAN JAMES,  
Town Clerk.

Town Hall, Dewsbury.

17th December, 1957. 8355

## COVENTRY CORPORATION

## ASSISTANT PLANNING OFFICER, A.P.T. II

(£725 x £30-£845) additional £26 on salary up to £795 in certain circumstances. Appointment within grade according to experience and present salary, if appropriate. To be responsible for all tracing and plan work within Planning Division and supervision of tracing staff. Also for various administrative procedures connected with submission of compulsory purchase orders. Knowledge of this work, high standard of draughtsmanship and ability to control staff essential. Housing accommodation in approved cases. Removal expense loan available. Application forms etc. from City Architect, Bull Yard, Coventry, returnable within 10 days of publication. 8367

## COUNTY BOROUGH OF BURNLEY

Applications are invited for the under-mentioned appointments in the Borough Engineer & Surveyor's Department:—

(a) SENIOR ARCHITECTURAL ASSISTANT—Special Grade (£750-£1,030).

(b) ARCHITECTURAL ASSISTANT—Grade I (£575-£725).

(c) DISTRICT BUILDING INSPECTOR—Grade I (£575-£725).

Applicants for appointment (a) must have had considerable experience in all types of Municipal work and applicants for all three appointments must hold appropriate qualifications. In respect of appointment (c) preference will be given to applicants who have had experience in a similar capacity. The commencing salary in each case will be fixed in accordance with experience and qualifications.

Provision of housing accommodation will be considered if required.

Forms of application may be obtained from the Borough Engineer, 22/24 Nicholas Street, Burnley, to whom applications should be returned not later than Saturday, 18th January, 1958. 8381

## CITY OF BIRMINGHAM EDUCATIONAL

## COMMITTEE

## COLLEGE OF ARTS AND CRAFTS

## BIRMINGHAM SCHOOL OF ARCHITECTURE

Principal: MEREDITH W. HAWES, A.R.C.A., A.R.W.S., N.R.D.

Director of the School of Architecture: DOUGLAS JONES, Dip.Arch.(Lpool), F.R.I.B.A.

Applications are invited for the full-time post of SENIOR LECTURER in the School of Architecture. Salary Burnham (Further Education) Scale for Senior Lecturers—men £1,350 x £50-£1,550.

Forms of application and further particulars may be obtained from the Principal, College of Arts & Crafts, Margaret Street, Birmingham 3. Closing date 17th January 1958.

E. L. RUSSELL,  
Chief Education Officer.

8366

## PETERLEE DEVELOPMENT CORPORATION

## CHIEF ARCHITECT'S DEPARTMENT

## APPOINTMENT OF TWO ASSISTANT

## QUANTITY SURVEYORS

Applications are invited for the appointment of TWO ASSISTANT QUANTITY SURVEYORS on the Corporation's Salary Grade VI (£902-£1,107).

Applicants should be up to the standard of the Final Examination of the Royal Institution of Chartered Surveyors and be capable of preparing Bills and Final Accounts.

The appointments, which are superannuable are subject to the Corporation's Conditions of Service and will be terminable by one month's notice on either side. The successful applicants will be required to pass a medical examination. Housing accommodation will be available if necessary.

Applications, stating age, experience, qualifications and giving the names of two persons to whom reference can be made should reach the undersigned not later than Saturday, 18th January, 1958.

A. V. WILLIAMS,  
General Manager.

Shotton Hall, Old Shotton,

Peterlee, Horden.

Co. Durham. 8382

## COUNTY BOROUGH OF SOUTHPORT

Applications are invited for the appointment of an ASSISTANT QUANTITY SURVEYOR (Special Scale £750-£1,030) in the Borough Architect and Town Planning Officer's Department.

Candidates must have passed the Final Examination of the R.I.C.S. (Quantities Division).

Consideration will be given to the provision of housing accommodation if required.

Application forms obtainable from the Borough Architect and Town Planning Officer, 99/100 Lord Street, to be returned by 15th January, 1958.

R. EDGAR PERRINS,  
Town Clerk.

8345

## SURREY COUNTY COUNCIL

Applications invited for following appointments:—

1. ASSISTANT ARCHITECT GRADE IV, £1,025-£1,175 p.a. plus £30 p.a. London Allowance.

Must be A.R.I.B.A.

2. ARCHITECTURAL ASSISTANT GRADE II, £725-£845 p.a. plus L.A. up to £30 p.a. Must be of good general training, pref. given those who have passed Inter. R.I.B.A.

Full details, present salary and 3 copy testimonials to County Architect, County Hall, Kingston, as soon as possible. 8348

## HERTFORDSHIRE COUNTY PLANNING

## DEPARTMENT

## PLANNING ASSISTANT (Architectural)

Successful applicant required for work upon Town Centre schemes. Must be A.M.T.P.I. An architectural qualification or experience in design would be an advantage.

Salary, Special Grade, £750 x £40 to £1,030 p.a.

Application Forms from: The County Planning Officer, County Hall, Hertford.

Closing date: 17th January, 1958. 8383

## CITY OF CHESTER

## DEPARTMENT OF CITY ENGINEER

## ARCHITECTURAL ASSISTANT.

Applications are invited for the post of SENIOR ARCHITECTURAL ASSISTANT. Salary at a high level within the new Special Grade. Candidates should have passed the R.I.B.A. Final Examination, should have had good training and be well experienced in re-development work and flat design.

Housing accommodation will be available for successful applicant if required.

Applications with two testimonials should reach City Engineer, 49, Northgate Street, Chester, by Wednesday, 15th January, 1958. 8394

## OLDHAM EDUCATION COMMITTEE

Applications are invited for the post of ARCHITECTURAL ASSISTANT in the Schools Architect's Department on the Special Grade (£750-£1,030).

This post, which offers excellent opportunities for responsible and interesting work, will be primarily concerned with the design and erection of the second phase of a new College of Further Education.

Applications should be addressed to the Director of Education, Education Offices, Union Street West, Oldham, and received not later than 13th January, 1958. Full details of age, qualifications and experience should be given together with the names of two referees. 8390

**WORCESTERSHIRE COUNTY COUNCIL**  
**COUNTY ARCHITECT'S DEPARTMENT**  
Applications are invited for the post of **BUILDING INSPECTOR** Grade APT. 1 (£575-£725) to deal with maintenance and minor alterations in a section of the County under the supervision of a senior architect.  
Applicants must be able to prepare estimates and specifications for maintenance, painting and minor alterations and to supervise works in progress.  
Forms of application should be obtained from L. C. Lomas, F.R.I.B.A., County Architect, 14, Castle Street, Worcester, not later than 6th January, 1958. (A135) 8377

**KENT COUNTY COUNCIL** requires a **PRINCIPAL QUANTITY SURVEYOR** to take charge of the Quantity Surveying Section of the Building Department under the County Architect.  
Candidates should be members (preferably Fellows) of the R.I.C.S. They will have to deal with the financial and contractual aspects of large building programmes and should have wide experience of such work and of the supervision of quantity surveying staff. Salary within the Scale £1,200-£1,515. Application forms and further details obtainable from the County Architect, Springfield, Maidstone. Closing date 20th January, 1958. 8367

**THE ROYAL INCORPORATION OF ARCHITECTS IN SCOTLAND**  
**MACLAREN TRAVELLING FELLOWSHIP**  
The above Fellowship, which amounts to £210, will again be awarded in 1958. Applicants must be Members or Student Members of the Incorporation and registered as provided by the Architects (Registration) Acts 1931 to 1938. The successful applicant will be required to take an approved course of study in Europe or America.  
Application forms and other particulars may be obtained from the Secretary, R.I.A.S., 15 Rutland Square, Edinburgh. 8368

**NORTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD**  
**PRINCIPAL ASSISTANT ARCHITECT** (Scale II) required to take charge of major division of work in Regional Architect's Department. Must be Member of Royal Institute of British Architects; be familiar with all types of hospital design and construction; and have administrative ability. The Board are engaged on a number of new building schemes including several new hospitals.  
Salary scale £1,150-£1,350 per annum plus £50 London Weighting.  
Apply, giving age, qualifications and experience with names of two referees to Secretary, North West Metropolitan Regional Hospital Board, 11a, Portland Place, W.1, by 13th January, 1958. 8371

**HAMPSHIRE COUNTY COUNCIL**  
**TECHNICAL ASSISTANT** required in the South-West Area Planning Office at Lyndhurst, A.P.T. Grade II (£725-£845). Candidates should have passed the Intermediate Examination of the T.P.I. or of a related professional body and have had experience with a Local Authority. The appointment is pensionable and subject to a satisfactory medical report. In approved cases the County Council assist with 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 Clerk of the County Council, The Castle, Winchester, by January 31. 8386

**CITY ARCHITECT'S OFFICE, MANCHESTER**  
Applications invited for appointment on the permanent staff of a **SENIOR ASSISTANT QUANTITY SURVEYOR**, salary A.P.T. IV, £1,025 to £1,175 per annum. Candidates must have considerable experience in the preparation of Bills of Quantities and Specifications, interim valuations and settlement of final accounts for all class of local authority building work. Forms of application from City Architect, P.O. Box 469, Town Hall. Closing date 17th January. 8363

**CORPORATION OF LONDON**  
**CITY PLANNING OFFICE**  
**REQUIRE**  
**PLANNING ASSISTANT**  
£950-£1,175 in five increments  
Applicants should be A.M.T.P.I. and A.R.I.B.A., and have experience in research, planning Surveys and Development Plan work.  
Point of entry on salary scale dependent on age and experience. Local Act Superannuation. Medical Examination.  
Applications with details of age, training, experience and present salary and copies of two recent references, to City Planning Officer, 55/61, Moorgate, London, E.C.2, within 14 days. 8361

**KENT COUNTY COUNCIL**  
**ASSISTANT ARCHITECTS** are required for work on the Council's extensive building programme which includes schools, colleges, old people's and children's homes, clinics, fire and police stations and other public buildings. Candidates should be capable of accepting responsibility and displaying initiative, within a group system, in the design and control of building projects, and possess experience and ability in current problems of design and control of costs.  
Salaries within Scale £750 x £40-£1,030 a year. Commencing salary according to qualifications and experience. N.J.C. Conditions of Service. Further details and application forms from County Architect, Springfield, Maidstone. Closing date 28th January, 1958. 8370

**YORKSHIRE ELECTRICITY BOARD**  
**No. 4 (LEEDS) SUB-AREA**  
**SECTION LEADER (CIVIL AND BUILDING)**  
Applicants should be experienced in the design and detailing of new buildings and in the conversion of existing buildings.  
Experience in the preparation of Bills of Quantities and Estimates is essential and applicants must have the ability to design simple reinforced concrete or steel structures.  
The successful applicant will be required to supervise staff engaged on the above work and should hold an appropriate qualification.  
Salary—Schedule D. Grade 4. £895/20/995 per annum.

Applications, giving full details of age, qualifications and experience, together with the names of two referees, should be forwarded to the Manager, No. 4 (Leeds) Sub-Area, Yorkshire Electricity Board, Bramhope, Nr. Leeds, not later than January 13, 1958. 8385

# **Architectural Appointments Vacant**

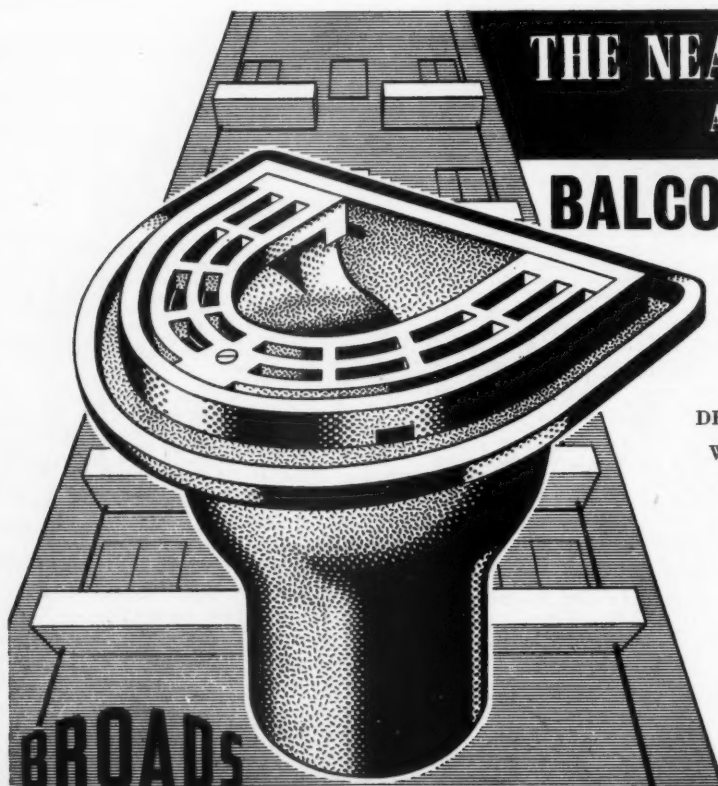
4 lines or under, 9s. 6d.: each additional line, 2s. 6d.  
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**W. S. ATKINS & PARTNERS** announce that they have a vacancy for a **CHIEF ARCHITECT**, who will be responsible for an Architectural Department with a staff of over 50 engaged on civil and industrial projects, including nuclear power stations. Applicants must be members of the Royal Institute of British Architects and have had wide experience, including control of staff. There is a contributory pension scheme.—Applications, giving full details of age, experience, etc., to Personnel Manager, 158, Victoria Street, S.W.1. 8285

**OPPORTUNITY** for advancement occurs for young man of Intermediate or better standard as **SECOND ASSISTANT** in country practice.—Reply to Box 8281.

**WEST END Architects** require at once **ASSISTANT ARCHITECT**, age 28-35, for responsible position, good designer preferably with experience of large industrial contracts. Salary according to qualifications. Box 8330.

**ARCHITECTS' ASSISTANTS** required immediately. Intermediate/Final standard. Salary according to experience. Five-day week. Staff Canteen. Pension Scheme. Applications in writing, giving full details of age, experience and salary to Personnel Department, **BRITISH HOME STORES LTD.**, 129, Marylebone Road, London, N.W.1. 8362



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**CO-OPERATIVE WHOLESALE SOCIETY LTD. ARCHITECTS' DEPARTMENT, MANCHESTER**  
APPLICATIONS are invited for the appointment of ASSISTANT ARCHITECTS with experience of work on commercial and industrial projects, capable of preparing working drawings from preliminary details. Five-day week in operation. Applications stating age, experience, qualifications and salary required to G. S. Hay, A.E.I.B.A., Chief Architect, Manchester 4. 8276

**QUALIFIED ARCHITECT** required to manage Architectural Department of Consulting Engineers' Industrial and Structural practice near Kingston-on-Thames. Experience must include all aspects of industrial negotiations, planning and design. He should also be fully experienced in the design of Buildings in London and the London Building Acts. This position offers great opportunities for an Architect with a commercial outlook and an eye for competitive design. Salary range £1,200/£1,500 p.a. Apply, giving age, experience and salary required to Box 8339.

**EXPERIENCED ARCHITECTURAL DRAUGHTSMAN** required to assist in design office of Group of well known Industrial Development Companies. Must have extensive experience in industrial layout, design and construction of Industrial Buildings, London Building and the London Building Acts. This appointment will go to a man with a practical and economical outlook, but with a flair for outstanding line. It is an interesting and progressive position in offices near Kingston-on-Thames. Apply, giving age, experience and salary required to Box 8340.

**ARCHITECT'S SENIOR ASSISTANT** required in City Office. High standard of draughtsmanship essential. Capable of carrying through large office projects. Five-day week. Luncheon Vouchers. Long term employment for right man. Salary £1,000/£1,200 per annum. Write Box 8350.

**ARCHITECTURAL DRAUGHTSMAN.** To control extensive programme of Aluminium Curtain Walling development. Experience an advantage but initiative and originating ability essential. This is an exceptional opportunity for an ambitious man to progress to a senior executive position. Write full details, age, experience, salary required to Managing Director, Ajax Architectural Products Ltd., Lower Sydenham, S.E.26. 8343

**ARCHITECT'S DRAUGHTSMAN** required in City Office. Capable of quick detailing. High standard of draughtsmanship essential. Five-day week. Luncheon Vouchers. Salary £850 per annum. Write Box 8351.

**ASSISTANTS** required for London office, intermediate standard, with two or three years' office experience. Salary according to experience. Telephone CHAncery 3526. 8352

**ASSISTANT**, Intermediate standard, required immediately for varied and expanding practice, good prospects. Reply stating age, experience and salary required to Laurence J. Selby & Partners, 79 High Street, Southend-on-Sea, Essex. 8349

**BASIL SPENCE & PARTNERS** have vacancies for one Senior and one Intermediate Standard ARCHITECTURAL ASSISTANTS in their Edinburgh Office. Write stating salary required to 40 Moray Place, Edinburgh, 5. 8341

**ARCHITECTURAL ASSISTANT** with at least four years' office experience required. Medium size office, varied work. Write or telephone, giving full particulars, age and salary, to Hasker & Hall, L.F.R.I.B.A., 13 Welbeck Street, W.1 (Welbeck 0061). 8342

**DAVID NYE & PARTNERS**, 7 Victoria Street, S.W.1, require immediately an ARCHITECTURAL ASSISTANT of at least intermediate standard having some office experience. 8338

**BRIGHTON** architect with small busy practice immediately requires live SENIOR ASSISTANT (30-40) mostly for domestic development. Surveying, levelling, specifications essential. Commencing salary £850 per annum. Box 8344.

**ARCHITECTURAL ASSISTANTS.** Applications are invited by the London Co-operative Society, Ltd., for positions as Architectural Assistants, the Building Works Department, Whitta Road, Manor Park, London, E.12. Pension scheme. Paid sickness and holiday schemes. Intermediate R.I.B.A. standard required. Commencing salary £647 per annum. Write Staff Office, L.C.S. Ltd., 54, Maryland Street, Stratford, London, E.15. endorsed "Architectural Assistant." 8360

**BUSY** Office in Kensington requires ARCHITECTURAL ASSISTANT approaching Intermediate, with 3/4 years' office experience, good draughtsman and sound knowledge of construction essential for work on Licensed premises.—Apply: Mayell, Webb & Hart. Telephone: FRE 8596. 8373

**ASSISTANT** of Intermediate standard, with office experience, good draughtsman, required for work on Flats and Houses. Please state experience, age and salary required to: R. Jelinek-Karl, F.R.I.B.A., 22, Chancery Lane, W.C.2. 8365

**JUNIOR ARCHITECTURAL ASSISTANT** required. Intermediate standard, varied work, mainly domestic. Drawing ability essential.—Kelham & Hart, A.A.R.I.B.A., 31, Broad Street, Stamford, Lincs. 8364

**ARCHITECTURAL ASSISTANT** required by London firm engaged mainly on factory, warehouse and office developments. Salary £800 to £900. Apply Box 8369.

**ARCHITECTURAL ASSISTANTS** required. Intermediate standard, for work in connection with housing, etc., must be capable of preparing working drawings, details, etc., should be conversant in the use of a level. Apply to A. E. A. Prowling Ltd., 127, High Street, Ruislip, or phone for an appointment: RUI 4084—Planning Dept. 8358

**TREHEARNE & NORMAN, PRESTON & PARTNERS** have a vacancy for an ASSISTANT. Salary according to experience and qualifications. Apply: 83, Kingsway, W.C.2 (HOL 4071). 8357

**ARCHITECTURAL ASSISTANT** required in London Office for preparation of working drawings and supervising work in progress. Apply giving age, experience and salary required to Box 8366.

**ARCHITECTURAL ASSISTANT** required for busy West End office. Salary according to age and experience. Apply in writing to Messrs. Sanders & Montague, F.A.R.I.B.A., 24, Harley Street, W.1. 8379

**ARCHITECTURAL DESIGNER.** Opportunity arises for man of outstanding ability to join a fast expanding organisation in the architectural aluminium industry. Successful candidate will be required to take entire charge of the Company's programme of development and design of aluminium Curtain Walling, Windows, Entrances, etc., for home and export. This is an exceptional opportunity and a top level appointment for a keen ambitious designer able to handle a vast expansion programme. Write fullest information in confidence to Managing Director, Ajax Architectural Products Ltd., Kangley Bridge Road, S.E.26. 8387



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**ASSOCIATE**, aged 32, educated Sherborne & A.A., 5 years' experience in London practice, in charge of handling projects, now looking for responsible post in provincial practice with view to partnership. S. or S.W. England preferred. Capital available. Box 8228.

**ASSOCIATE**, 7 years' varied commercial and specialist experience, car owner, requires position with responsibility and future. Box 8335.

### Other Appointments Vacant

4 lines or under, 9s. 6d.; each additional line, 2s. 6d.  
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**PERSPECTIVES**. R. Myerscough-Walker would like a free-leave SETTING-UP DRAUGHTSMAN. Please write Newfarm, Chilgrove, Sussex. 8354

**SHOP FITTINGS**. Applications requested for position (in Scotland) of SHOP FITTINGS SUPERVISOR, conversant all aspects of Shop Fitting Work including details, Costing, and with outstanding ability in Contemporary Design, Lay-out and Presentation. Box 8354.

**SENIOR ESTIMATOR** required, experienced in estimating, negotiating and finalising large contracts in Prefabricated Timber Schools, Industrial Buildings, and ancillary works. Applications giving full particulars of previous experience and indicating age and salary required to Frank W. Toogood Ltd., Ashton Vale, Bristol, 3. 8353

**SHOPFITTING DRAUGHTSMAN** required to work on large store development programme in Herts. £700/£775. London applicants receive housing priority.—Box 8375.

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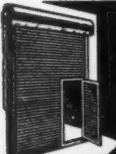
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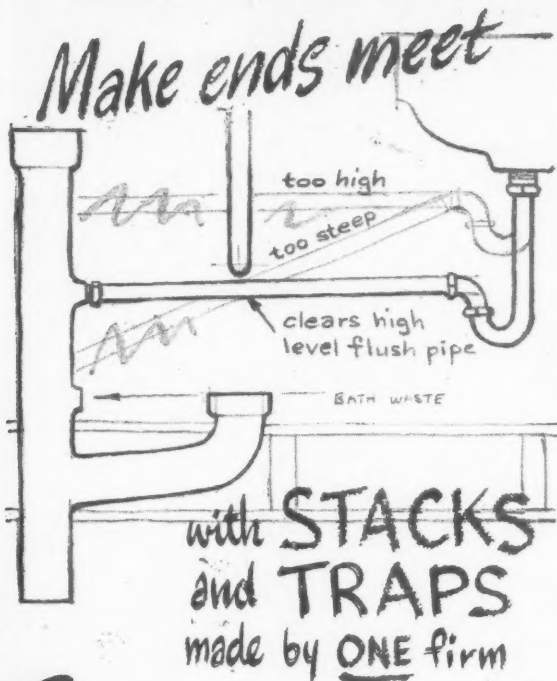
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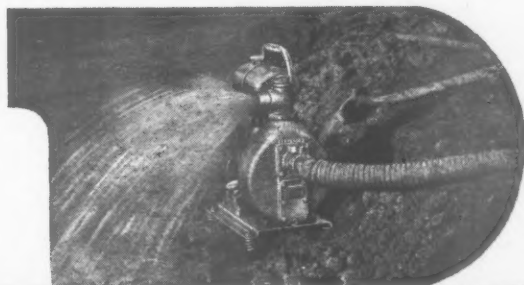
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