

THE ARCHITECTS' JOURNAL



standard contents

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

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CURRENT BUILDING

Major Buildings described:

Details of Planning, Construction,

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Architectural Appointments
Wanted and Vacant

[No. 3257] [Vol. 126]

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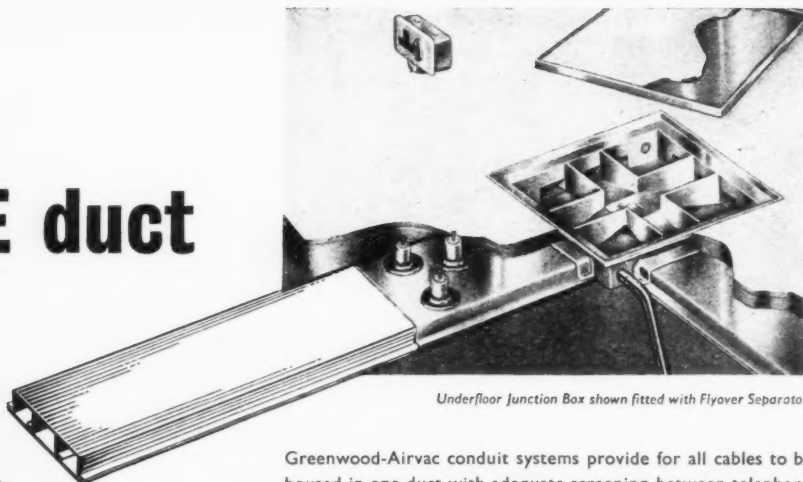
Registered as a Newspaper.

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

IHVE	Institution of Heating and Ventilating Engineers. 49, Cadogan Square. Sloane 1601/3158
IIBDID	Incorporated Institute of British Decorators and Interior Designers. 100, Park Street, Grosvenor Square, W.1. Mayfair 7086
ILA	Institute of Landscape Architects, 2, Guilford Place, W.C.1. Holborn 0281
I of Arb	Institute of Arbitrators. Hastings House, 10, Norfolk Street, Strand, W.C.2. Temple Bar 4071
IOB	Institute of Builders. 48, Bedford Square, W.C.1. Museum 7179
IQS	Institute of Quantity Surveyors. 98, Gloucester Place, W.1. Welbeck 1859
IR	Institute of Refrigeration. Dalmeny House, Monument Street, E.C.3. Avenue 6851
IRA	Institute of Registered Architects. 47, Victoria Street, S.W.1. Abbey 6172
ISE	Institute of Structural Engineers. 11, Upper Belgrave Street, S.W.1. Sloane 7128
LDA	Lead Development Association. Eagle House, Jermyn Street, S.W.1. Whitehall 7264/4175
LMBA	London Master Builders' Association. 47, Bedford Square, W.C.1. Museum 3891
LSPC	Lead Sheet and Pipe Council. Eagle House, Jermyn Street, S.W.1. Whitehall 7264/4175
MAFF	Ministry of Agriculture, Fisheries and Food. Whitehall Place, S.W.1. Trafalgar 7711
MOE	Ministry of Education. Curzon Street House, Curzon Street, W.1. Mayfair 9400
MOH	Ministry of Health. 23, Savile Row, W.1. Regent 8411
MOHLG	Ministry of Housing and Local Government. Whitehall, S.W.1. Whitehall 4310
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
NHBRC	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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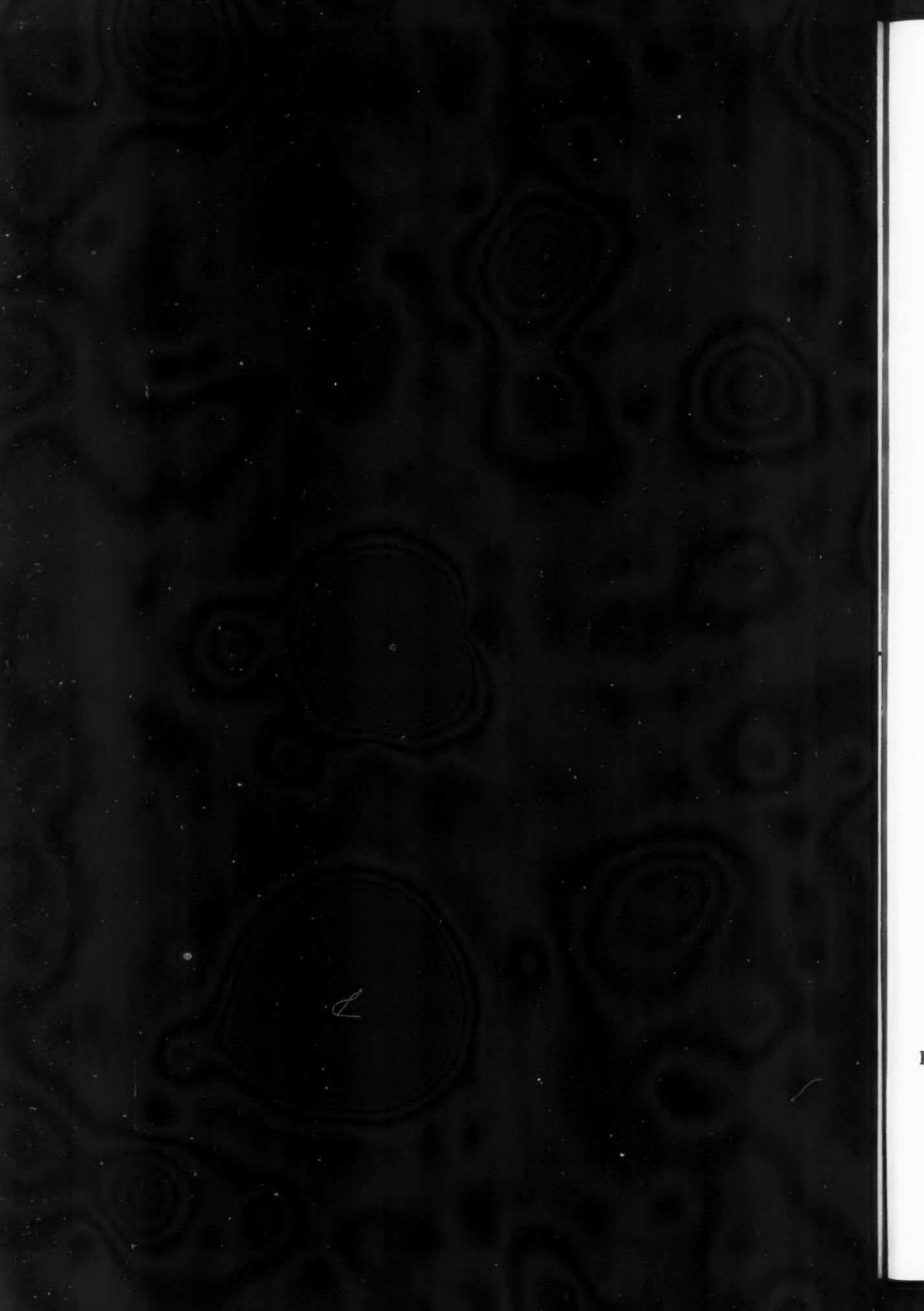
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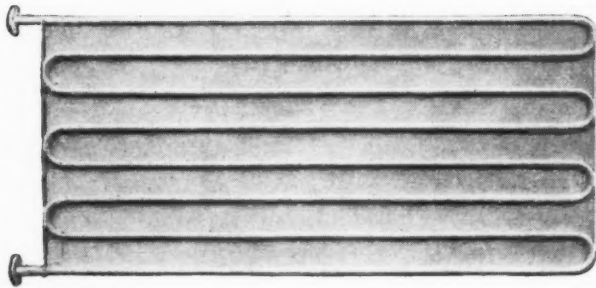
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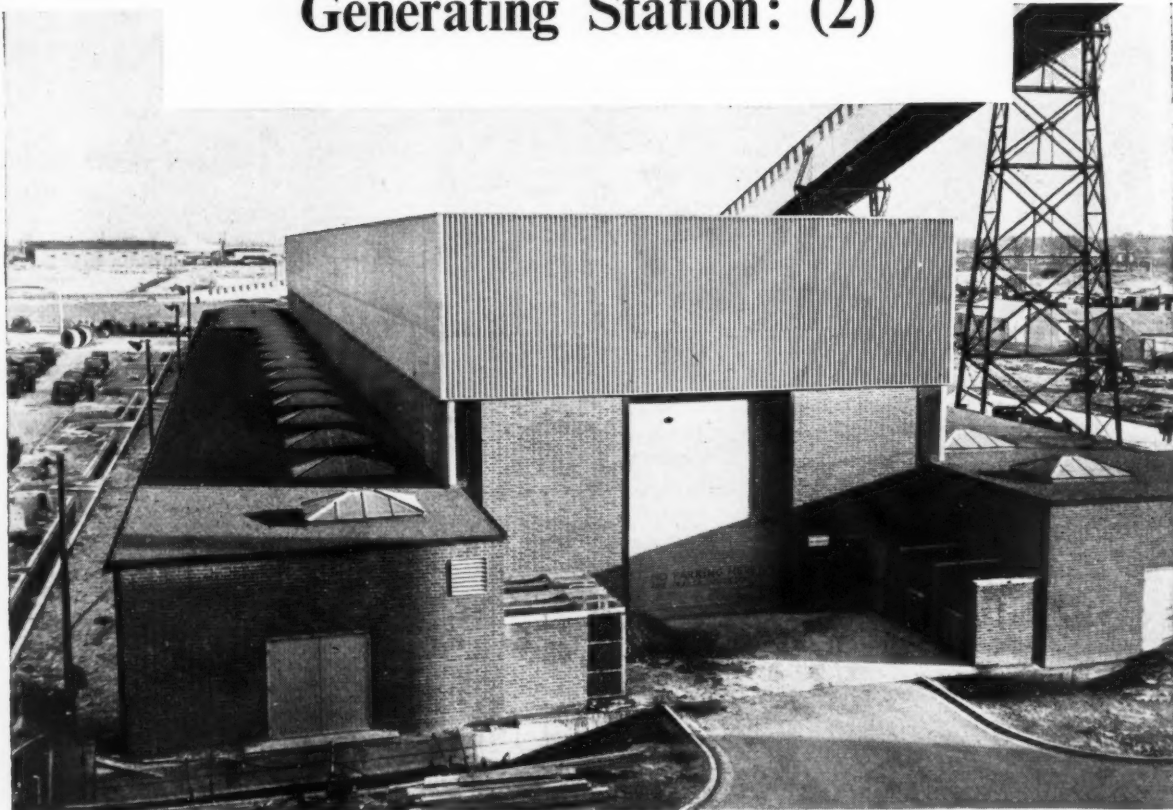
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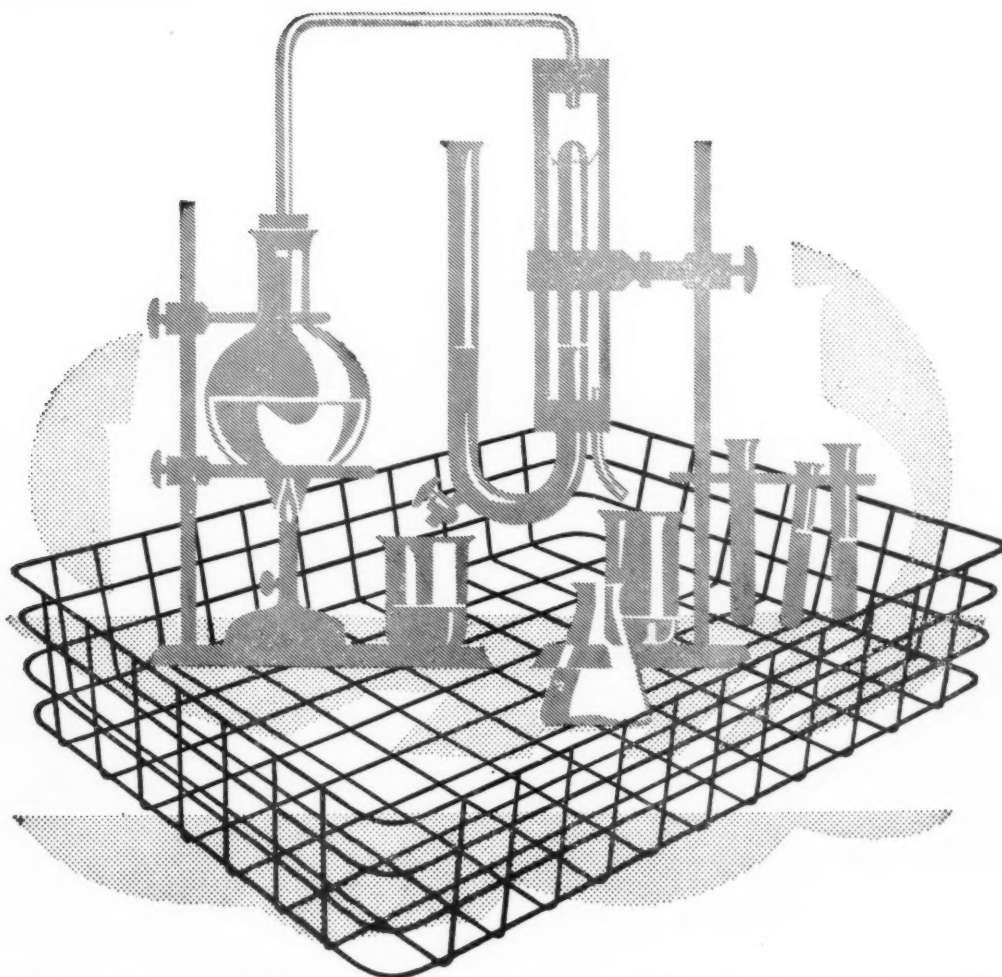
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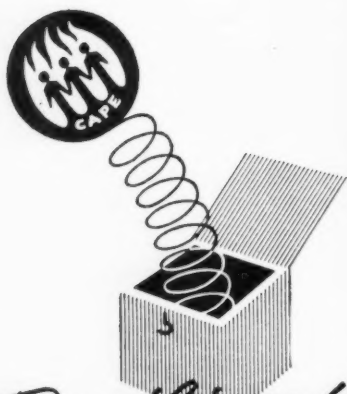
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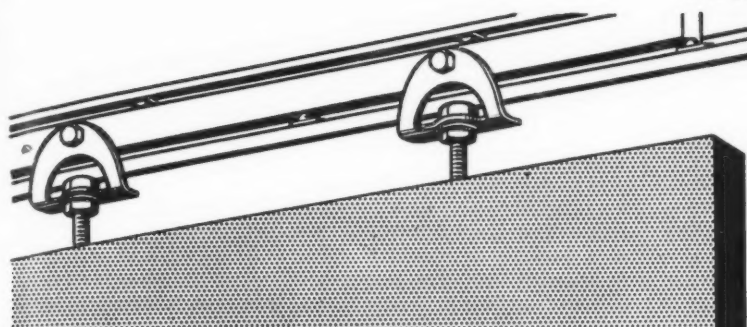
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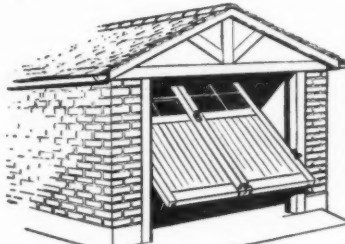
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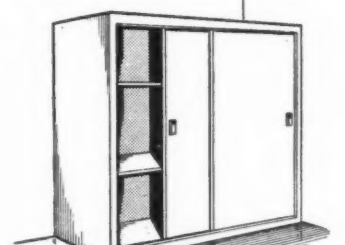
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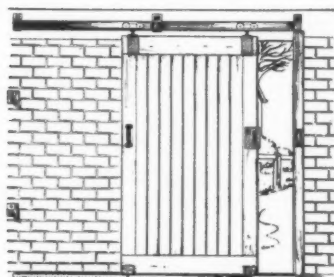
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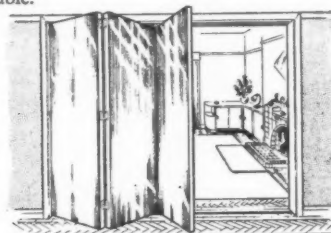
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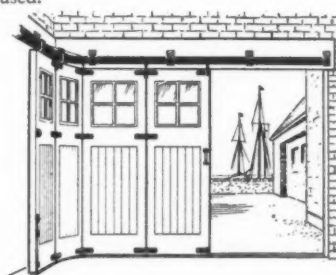
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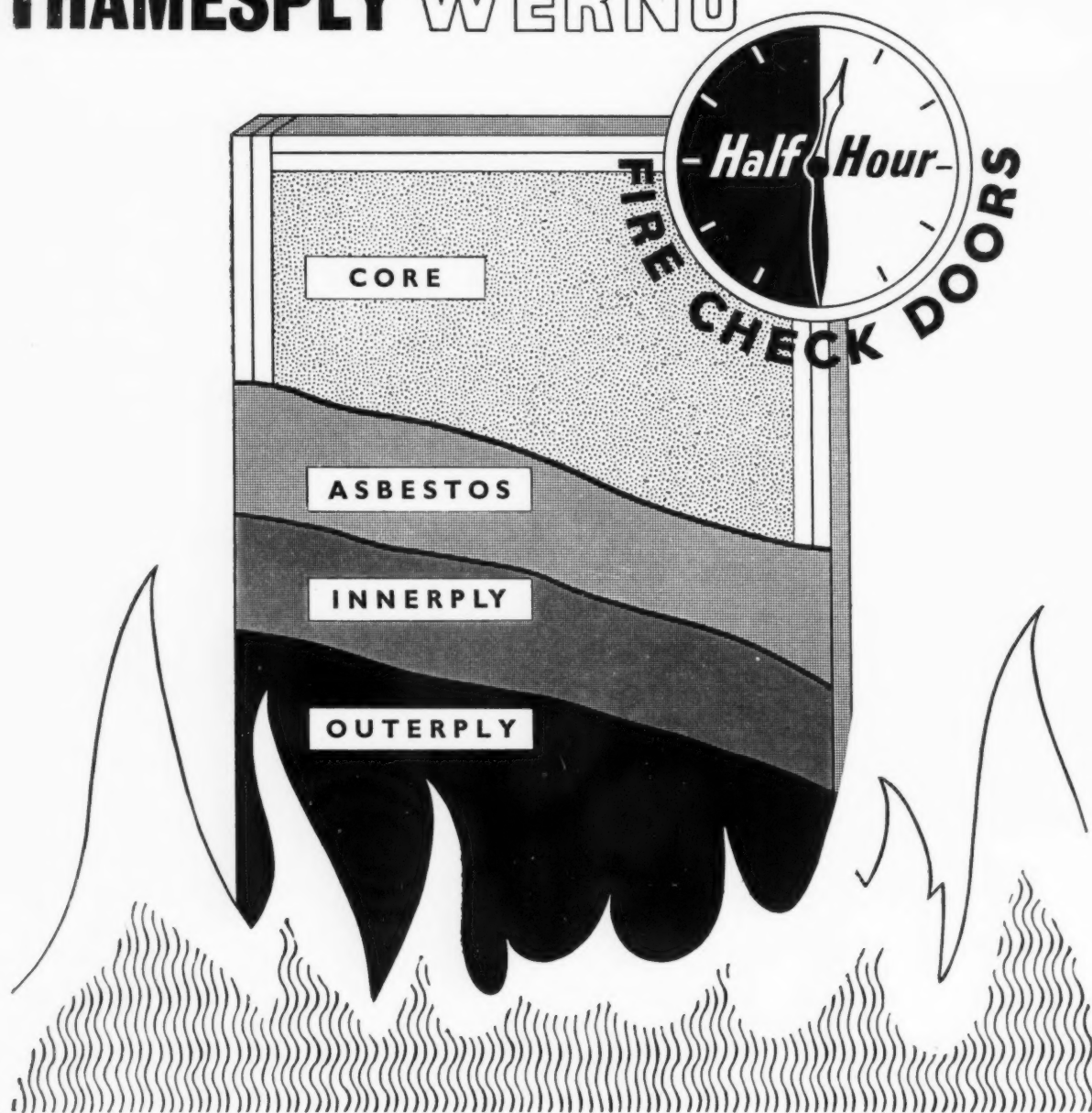
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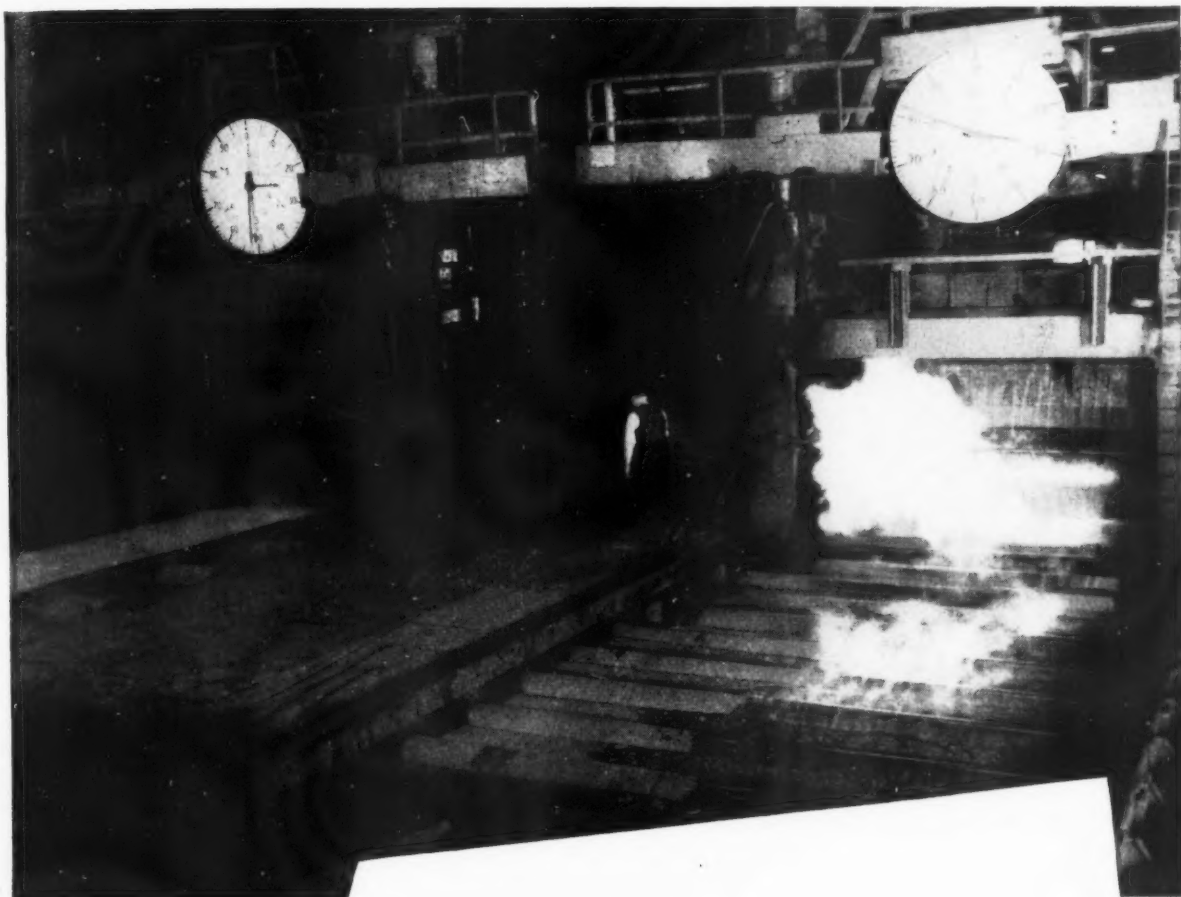
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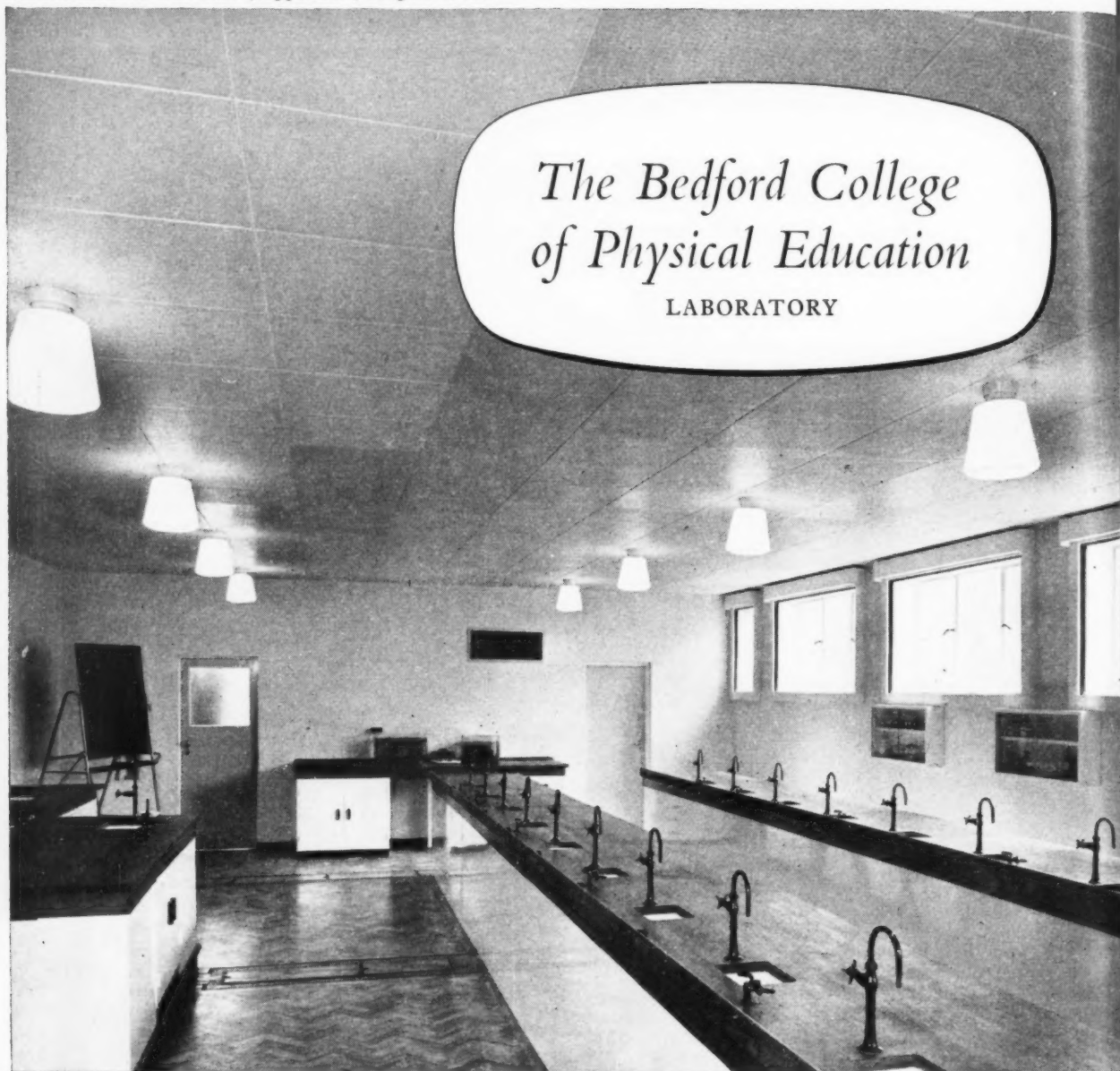
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'U' values have news value...

prices
... away was
... votes to 34 at the
... Liberal Federation conference
which ended at Southend yesterday.

Miss Eva M. Haynes, who moved the resolution, said that she had been fighting a personal war "ever since the uselessness of distributing coupons began." She urged housewives to tear the coupons up and to refrain from buying any of the products which "purported to give anything away."

"Surely no one to-day believes that these firms are philanthropists," she said, "and that they are giving something away? The cost of all these schemes is borne by the consumer and is included in the price of the article before the selling price is fixed. It is your money that manufacturers are wasting in this profligate fashion."

The conference was thrown open to anybody who wished to "let off steam" about a pet complaint. The first delegate to reach the microphone objected to "opalescent, incandescent, sight-destroying, inartistic, crude coloured socks" worn by young people to-day, and the string of complaints which followed ranged from the "infiltration" of American programmes on Independent Television to the bus conductors who bring a bus away before you have

INSULATION IN FACTORIES

GOVERNMENT TAKE OVER BILL

FROM OUR POLITICAL CORRESPONDENT

The Thermal Insulation (Industrial Buildings) Bill, a private member's measure introduced by a Conservative M.P., Mr. Gerald Nabarro, is now to be sponsored by the Government and is likely to become law this session. The Bill will provide that all new industrial buildings equipped for space heating must be insulated against loss of heat if they are erected after 1958.

The Bill was introduced under the 10-minute rule in the House of Commons and was given its second reading on March 19. It has been awaiting its turn for consideration in standing committee.

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The Times, May 24th, 1957

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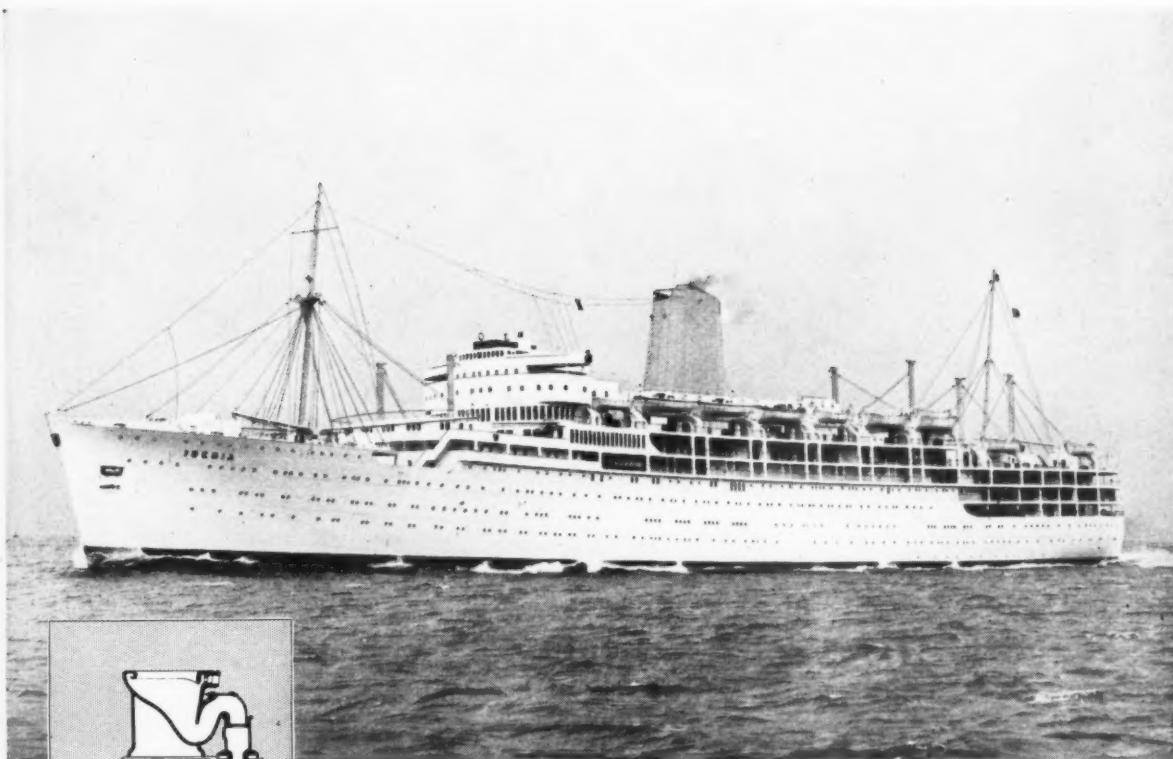
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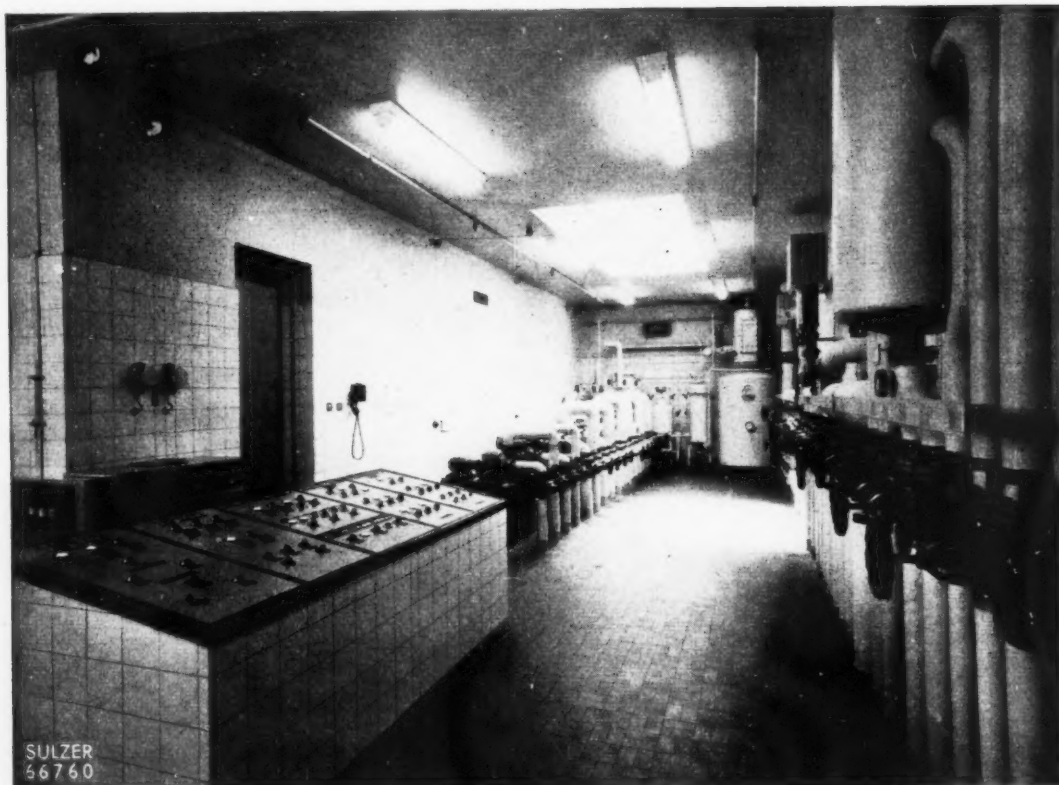
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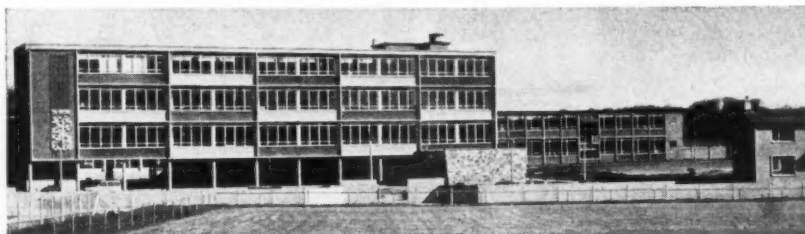


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AUCHMUTY SECONDARY SCHOOL, GLENROTHES. ARCHITECT: Peter Tinto, A.R.I.B.A., A.M.P.T.I., (Chief Architect, Glenrothes Development Corporation.) CONTRACTORS: Chas. Gray (Builders) Ltd., Dundee. Reinforced concrete frame: facing panels under windows, Cullamix Tyrolean Finish; concrete facing bricks: Reinforced concrete shell roof and prestressed concrete stair treads also included in construction. Cost per pupil place: £230. Cost per sq. ft. of floor area: 56s.



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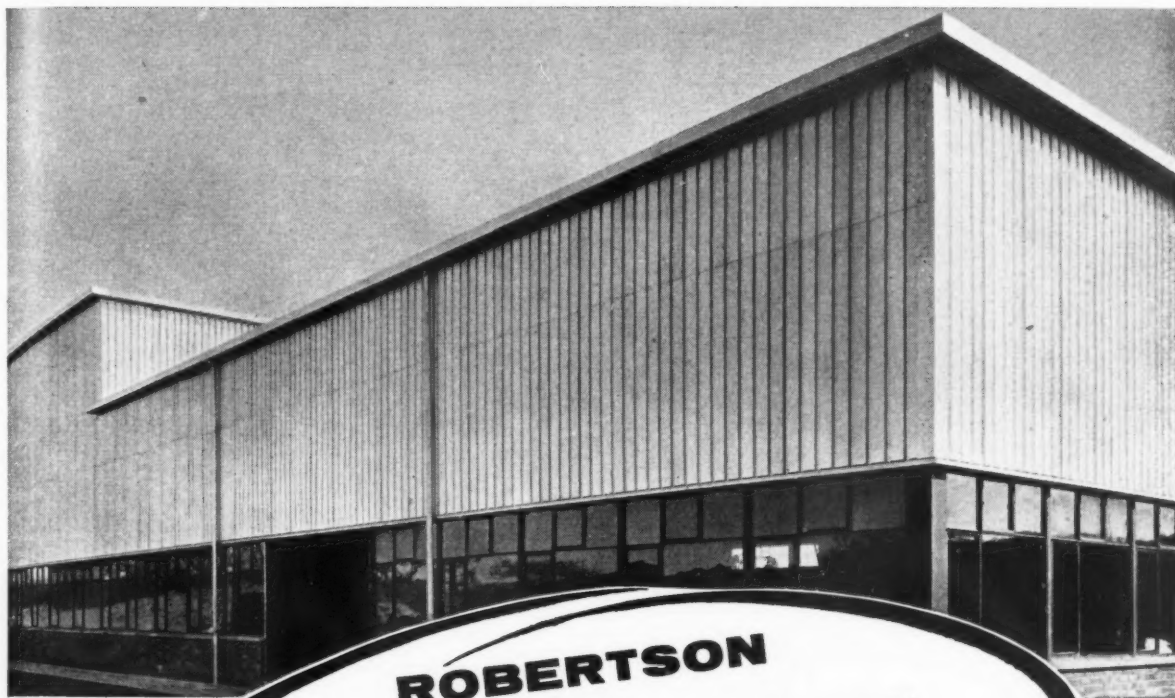
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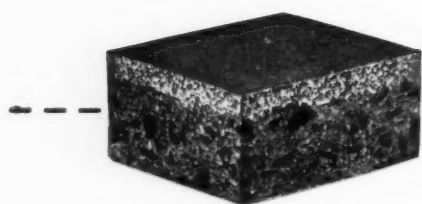
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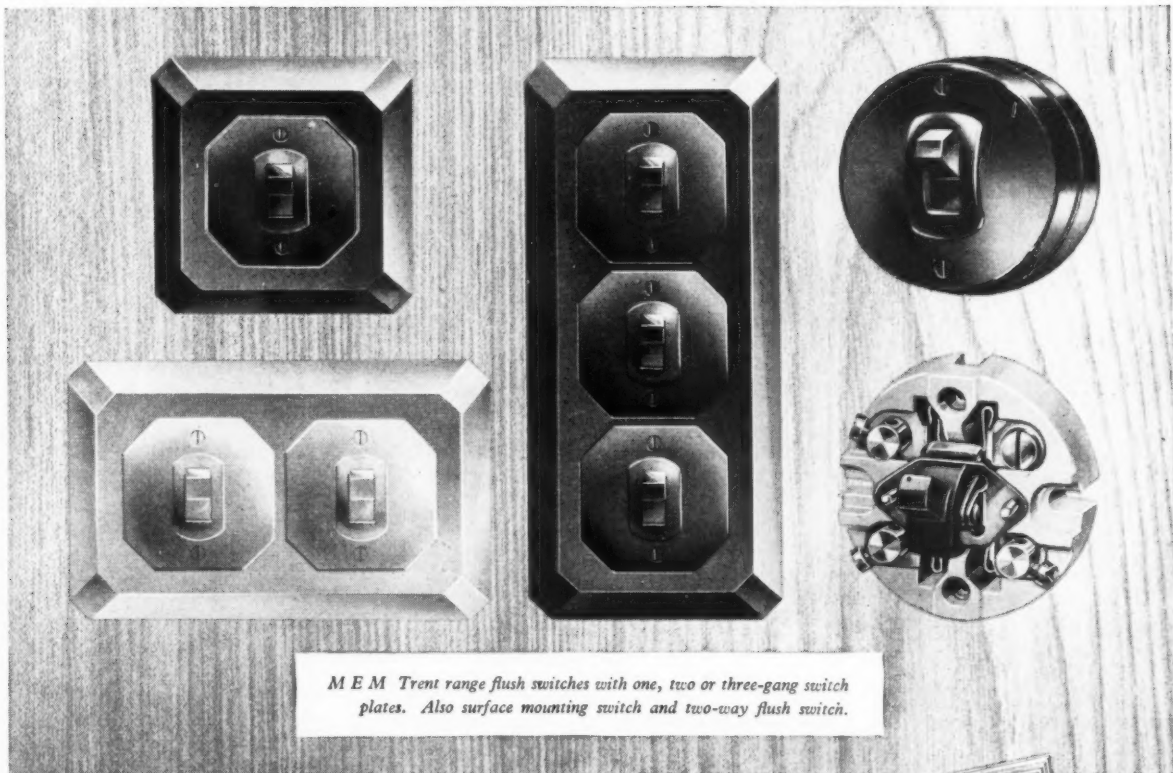
*Stelcon Floors are made in steel plate form or with a top surface of steel chippings in concrete—which means they are exceptionally tough, hard-wearing and free from maintenance bills. They are literally steel clad... see!

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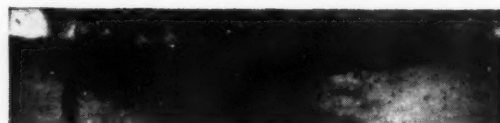
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A specification for Key Pitch Fibre pipes means a dependable drainage system with many important advantages. More and more leading architects and consultants are adopting this modern specification where greater efficiency in service, lower costs, and speed of installation are all seriously considered.

A typical run of Key pipe on a Wolverhampton housing site. This scheme has been designed and carried through by the Wolverhampton Corporation under the supervision of the Borough Engineer and Surveyor, and Director of Housing, W. Mercyn Law, M.B.E.



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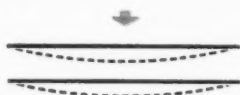
Smooth bore and clean joints

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.



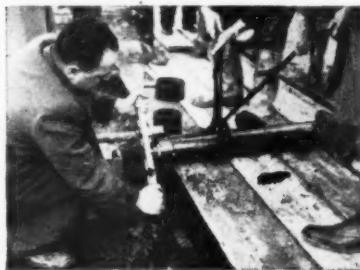
A piece of heavy timber is placed against the coupling and a length knocked home.



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
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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:

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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.

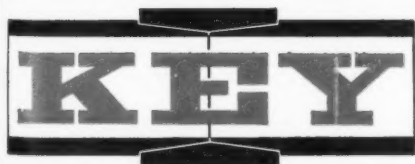
Royal Society for the Promotion of Health.

Many local authorities have installed KEY pipes

Test Results

Key pipes have been subjected to detailed physical tests.

Also specify **KEY** Underfloor Ducting and cable Conduits

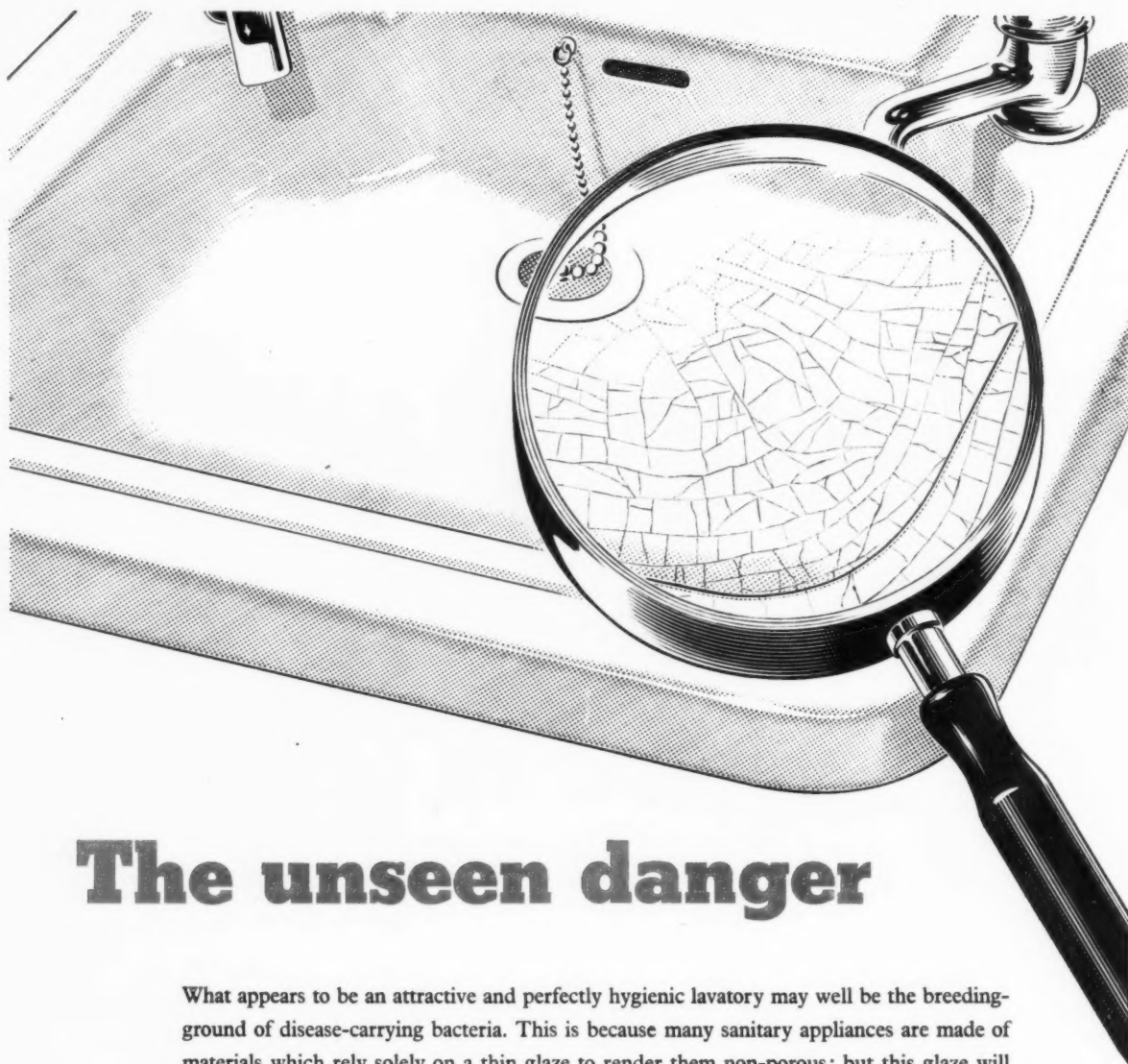


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The unseen danger

What appears to be an attractive and perfectly hygienic lavatory may well be the breeding-ground of disease-carrying bacteria. This is because many sanitary appliances are made of materials which rely solely on a thin glaze to render them non-porous; but this glaze will craze after a period of use, and the way is then open for germs to enter and contaminate the absorbent body of the appliance. There is no such danger in **"Standard"** Sanitary Appliances because they are made only of **Vitreous China** which is fired at considerably higher temperatures than "ordinary ware" until it is completely vitrified, forming a solid, impermeable mass that does not depend on the glaze to keep it non-absorbent and hygienic. The glaze is, in fact, added only to obtain an attractive finish; furthermore, only on **"Standard"** Sanitary Appliances does the glaze, due to great skill and care in manufacture, form a perfect amalgam with the body of the appliance. For this reason, the glaze is guaranteed against crazing.

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made of **VITREOUS CHINA**



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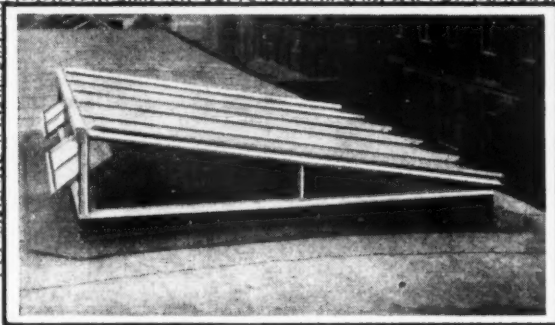
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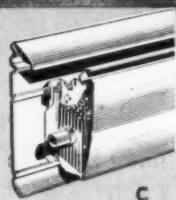


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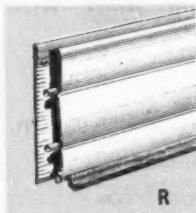
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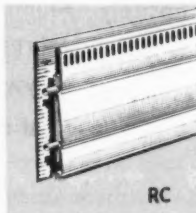
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ARE THREE
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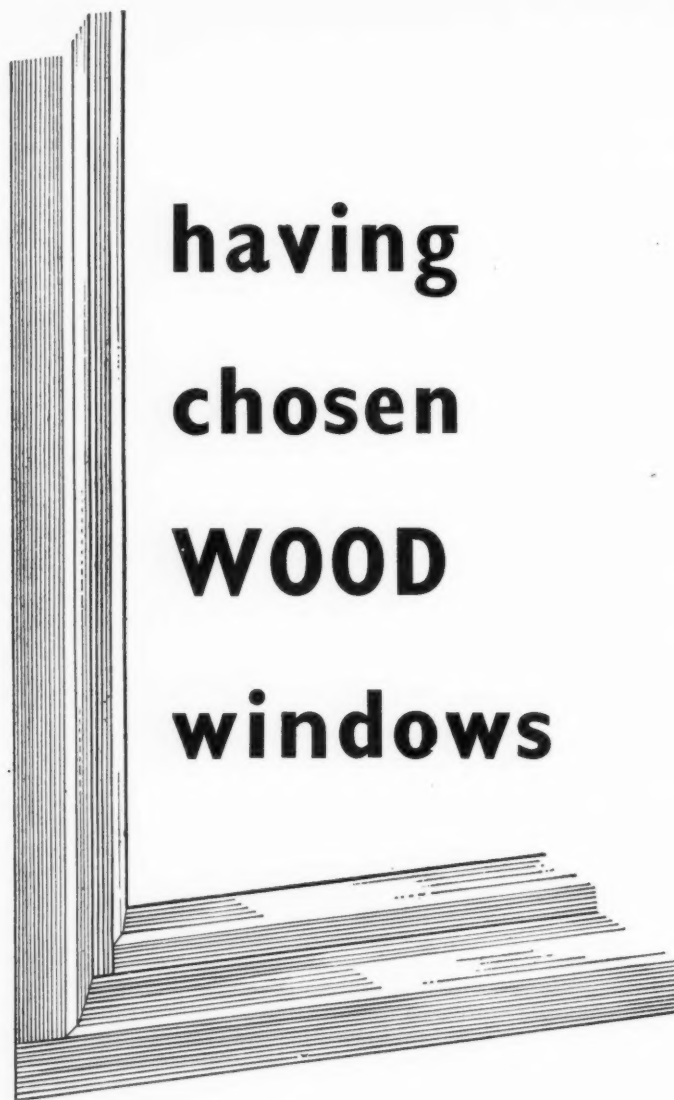
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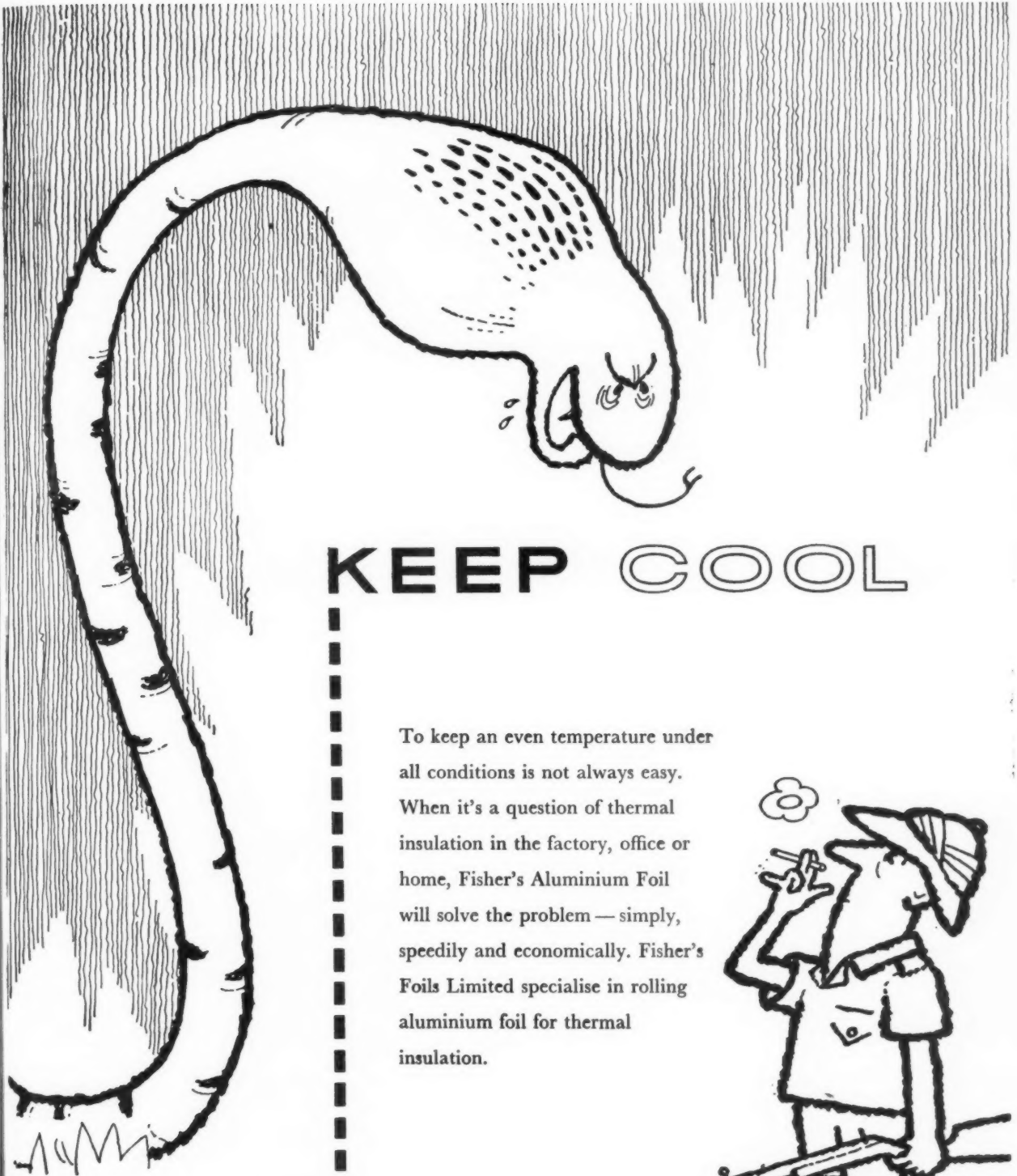
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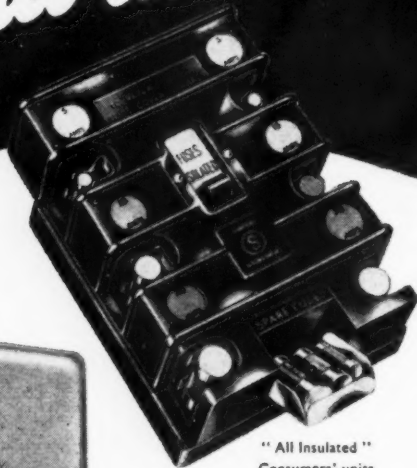


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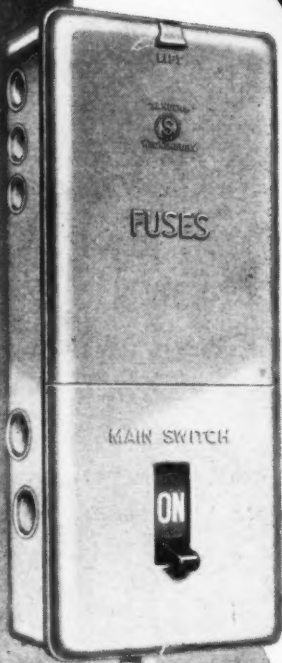
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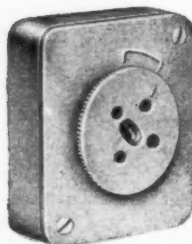
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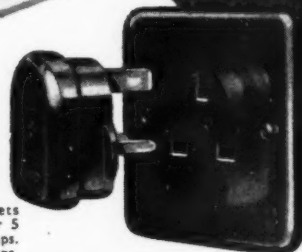
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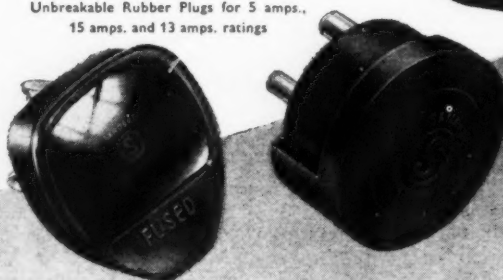


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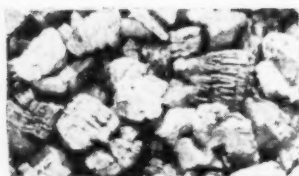
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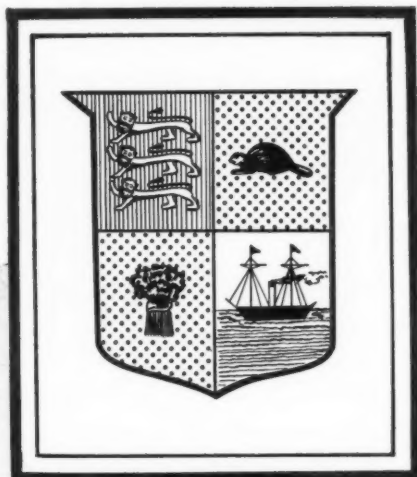
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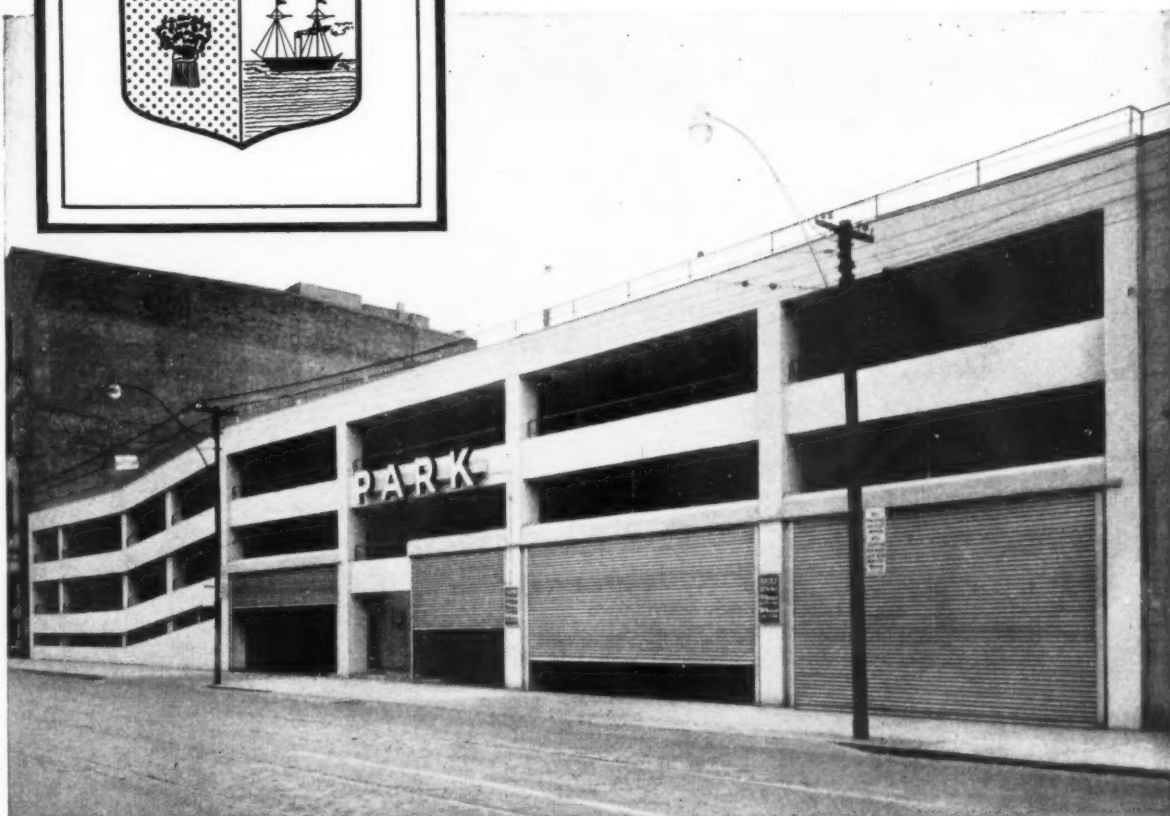
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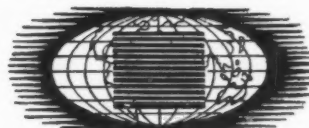
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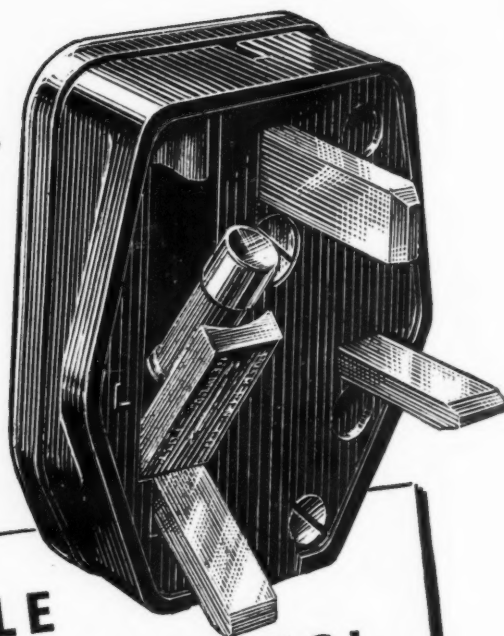
S. & B.

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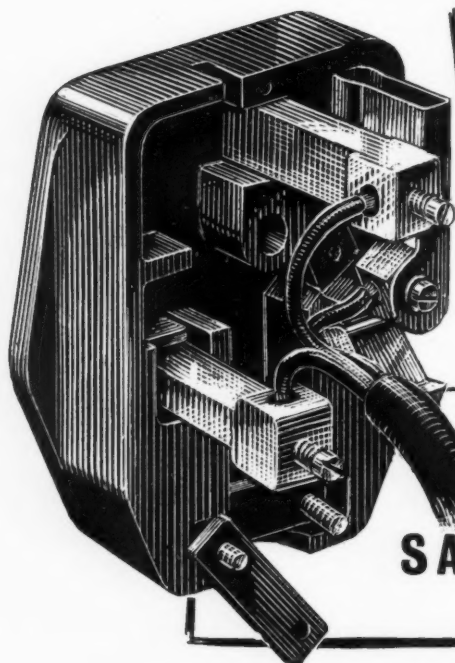
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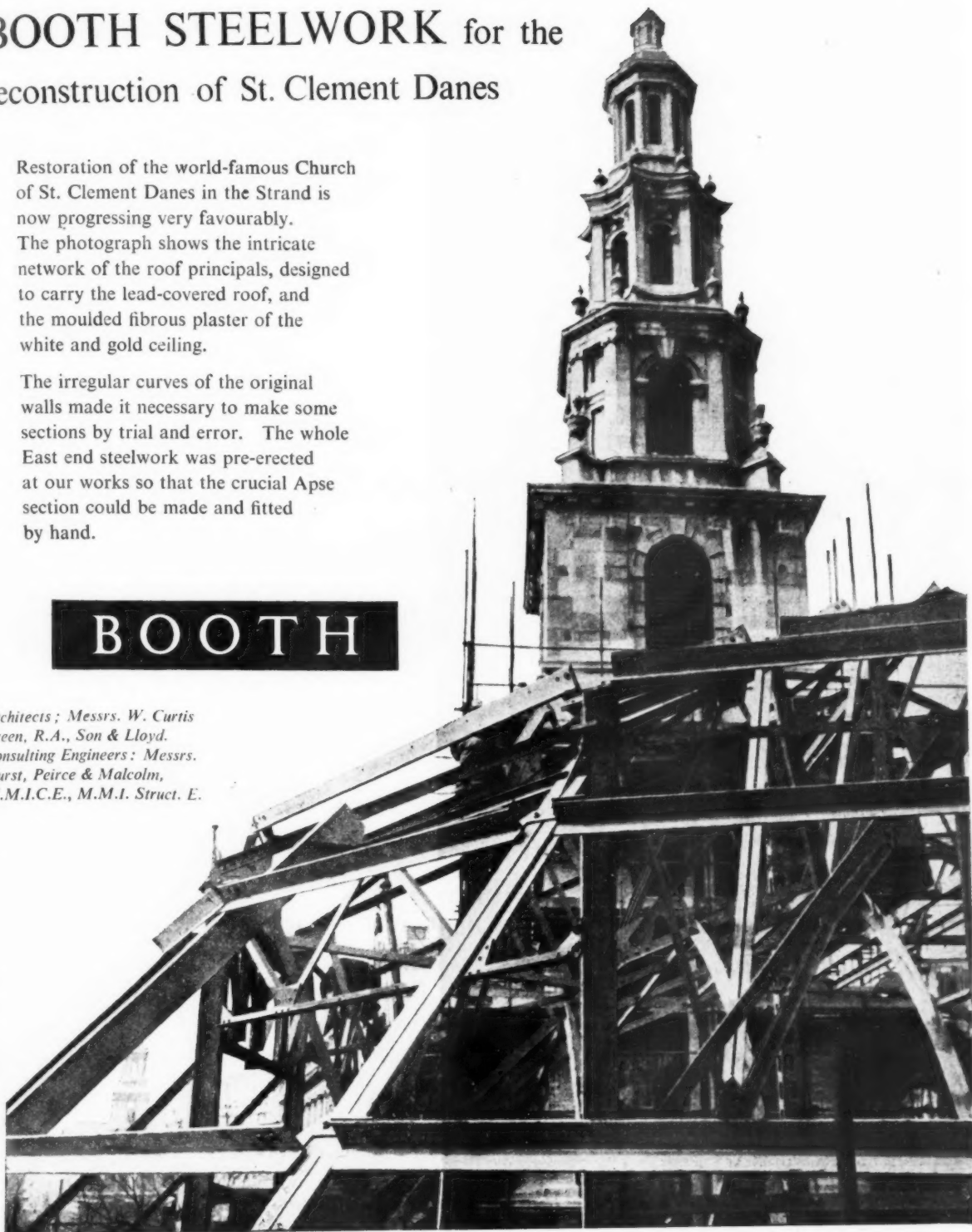
BOOTH STEELWORK for the reconstruction of St. Clement Danes

Restoration of the world-famous Church of St. Clement Danes in the Strand is now progressing very favourably. The photograph shows the intricate network of the roof principals, designed to carry the lead-covered roof, and the moulded fibrous plaster of the white and gold ceiling.

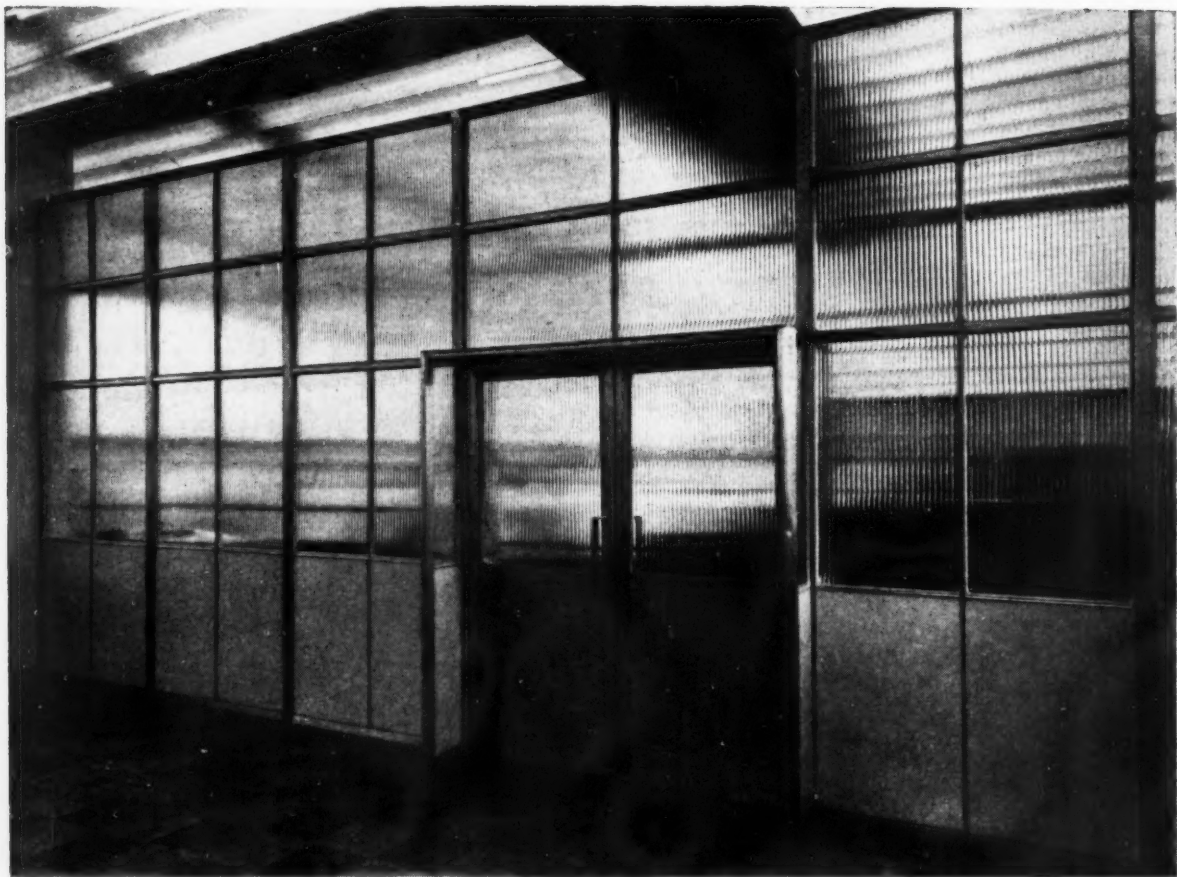
The irregular curves of the original walls made it necessary to make some sections by trial and error. The whole East end steelwork was pre-erected at our works so that the crucial Apse section could be made and fitted by hand.

BOOTH

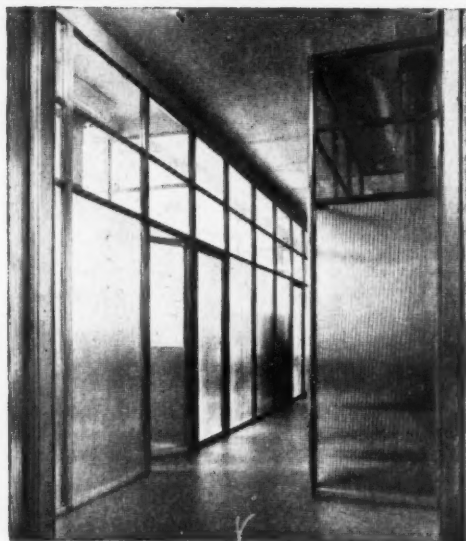
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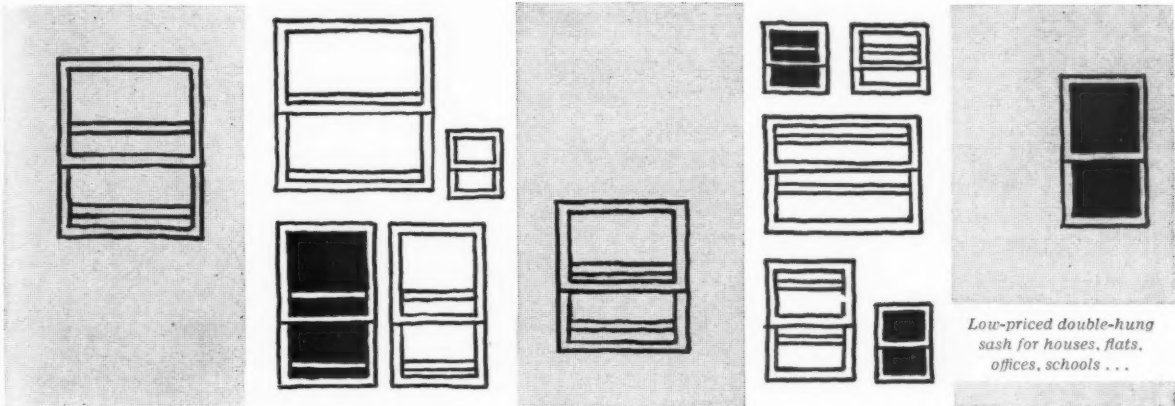
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AP293



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It is primarily the new design that brings about this new low price; because there is no counterbalancing mechanism and, therefore, no need for bulky hollow jambs to house it. Also, there are several new, cost-saving techniques on the assembly line.

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2. No glazing: windows are despatched ready-glazed *ex works*.

3. Next-to-no building-in: windows are completely prefabricated and assembled at the works; mounting is by wood-screws in Rawlplugs set direct into the masonry: no sub-frame.

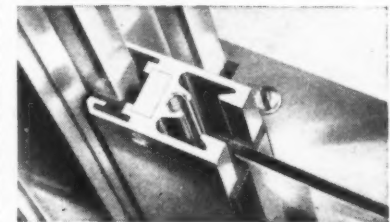
Maintenance costs are almost abolished. The only repair ever likely to be necessary would be the replacement of a broken pane of glass. This is no trouble. One rail of the sash is just unscrewed and a new pane slid into place.

Standard sizes or Purpose-made

ALOMEGA Windows are available for inspection at any Williams & Williams Area Office or merchant stockist, and are made in the following standard sizes:

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Type 34, 3'8 $\frac{1}{2}$ " x 2'8 $\frac{1}{2}$ "	Type 44, 3'8 $\frac{1}{2}$ " x 3'5 $\frac{1}{2}$ "
Type 15, 4'8 $\frac{1}{2}$ " x 1'2 $\frac{1}{2}$ "	Type 25, 4'8 $\frac{1}{2}$ " x 1'11 $\frac{1}{2}$ "
Type 35, 4'8 $\frac{1}{2}$ " x 2'8 $\frac{1}{2}$ "	Type 45, 4'8 $\frac{1}{2}$ " x 3'5 $\frac{1}{2}$ "
Type 16, 5'8 $\frac{1}{2}$ " x 1'2 $\frac{1}{2}$ "	Type 26, 5'8 $\frac{1}{2}$ " x 1'11 $\frac{1}{2}$ "
Type 36, 5'8 $\frac{1}{2}$ " x 2'8 $\frac{1}{2}$ "	Type 46, 5'8 $\frac{1}{2}$ " x 3'5 $\frac{1}{2}$ "

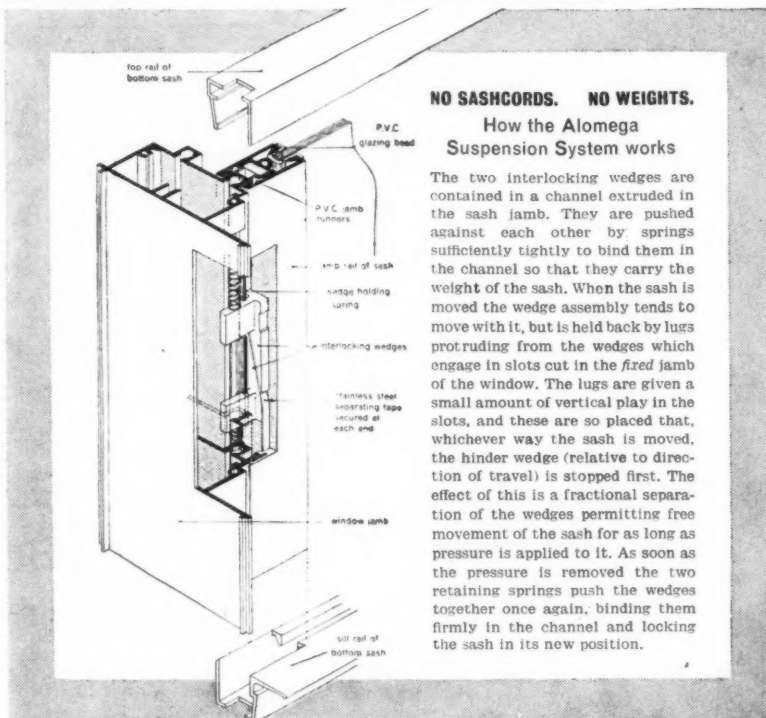
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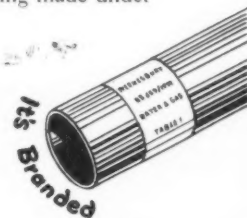
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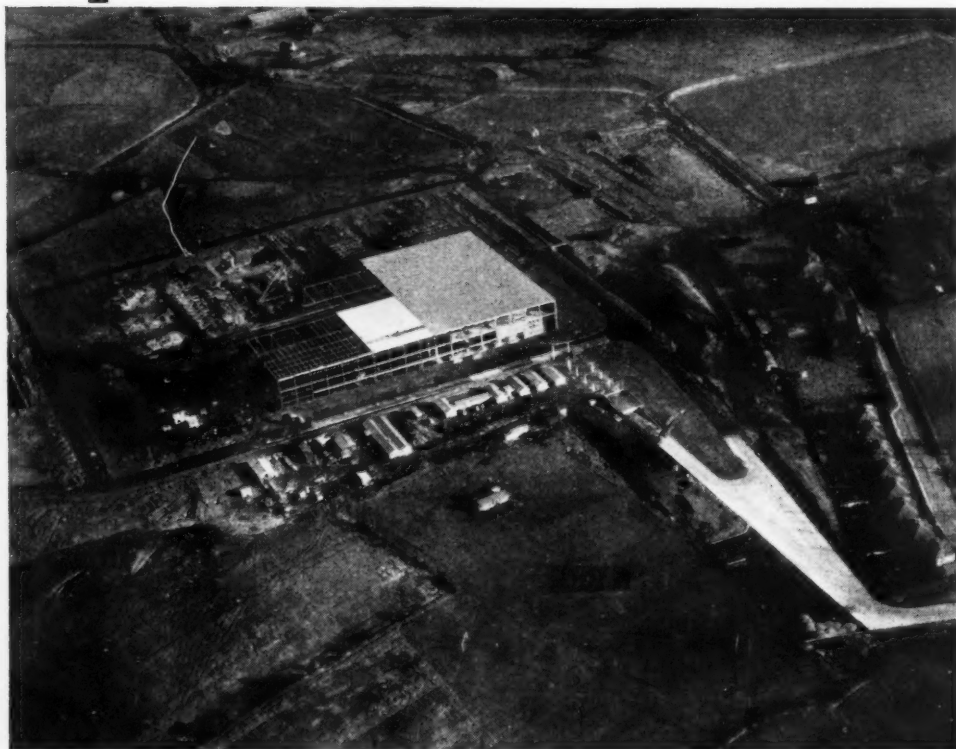


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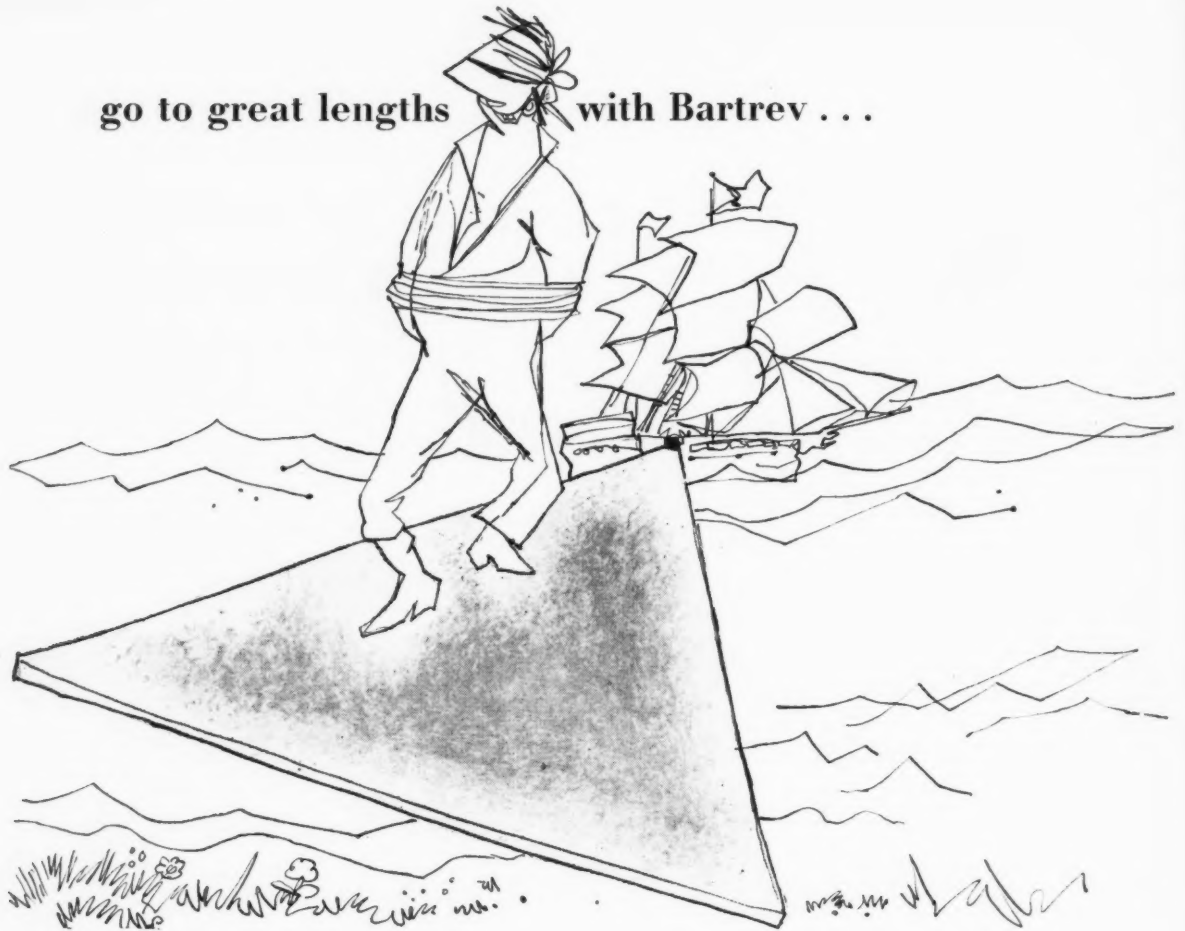
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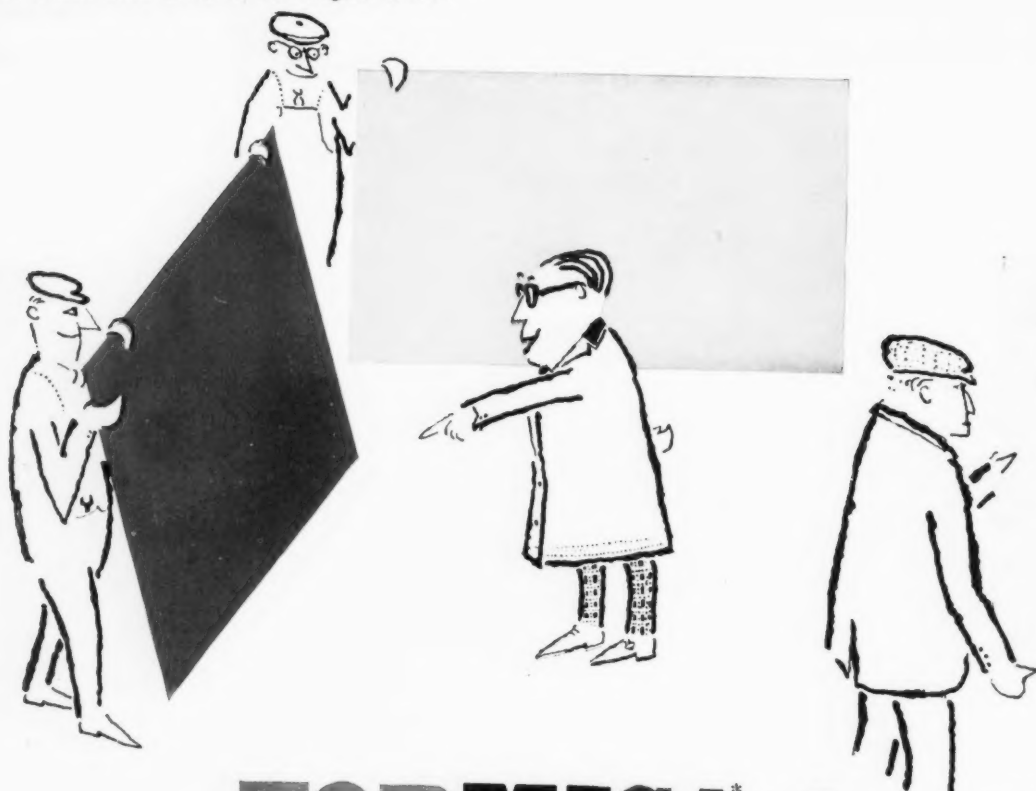
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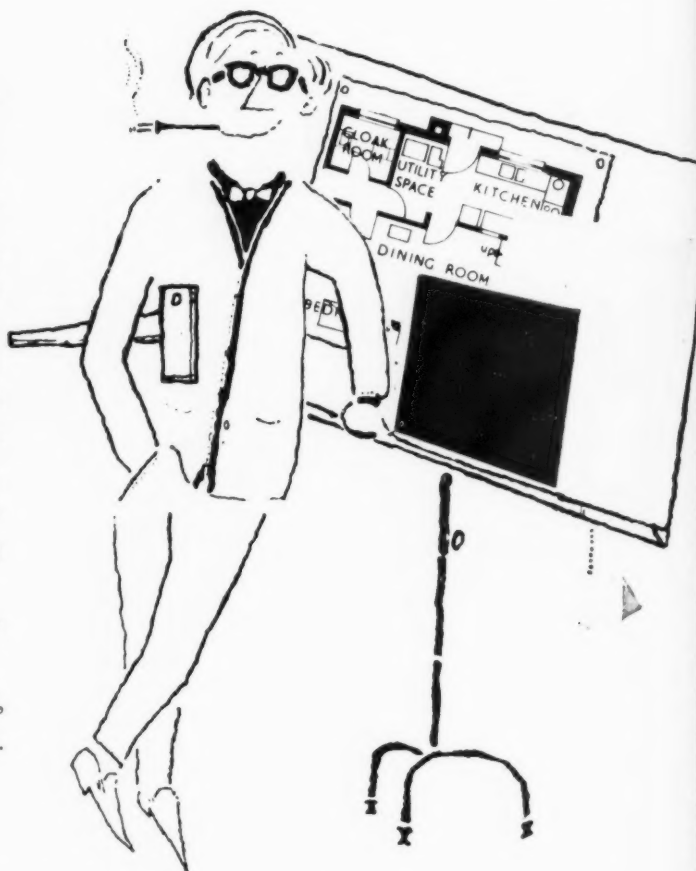
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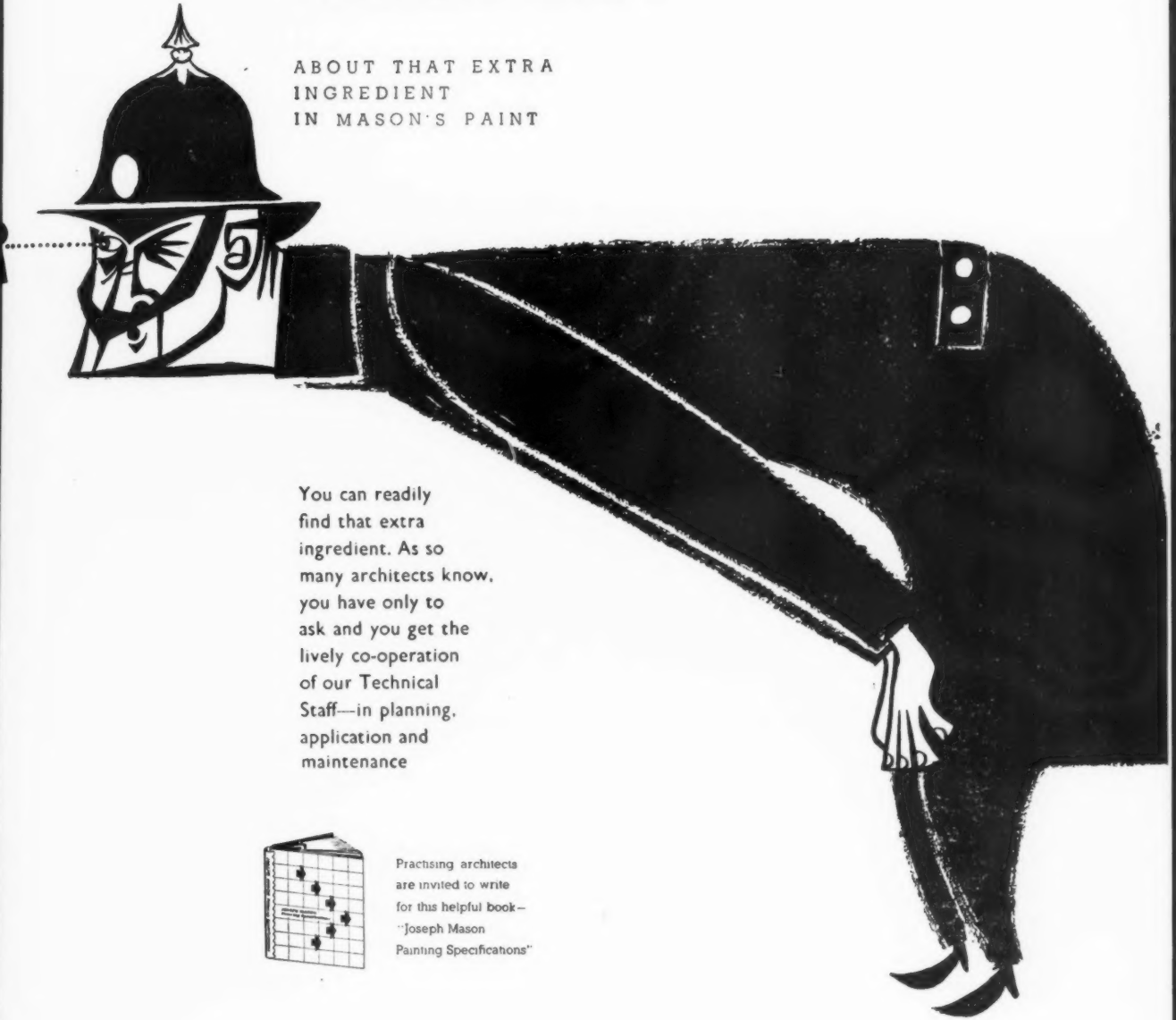


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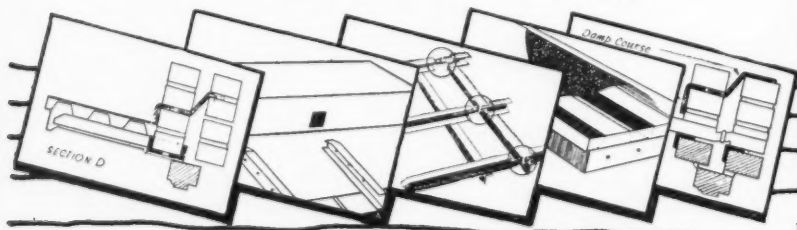
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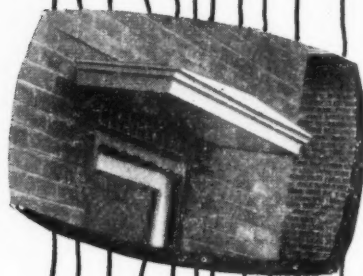
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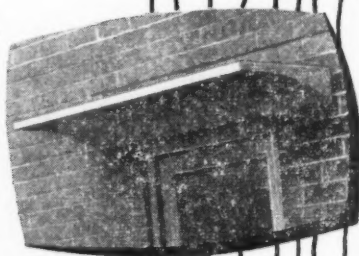
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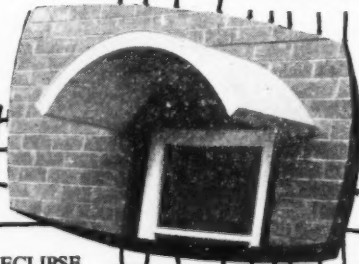
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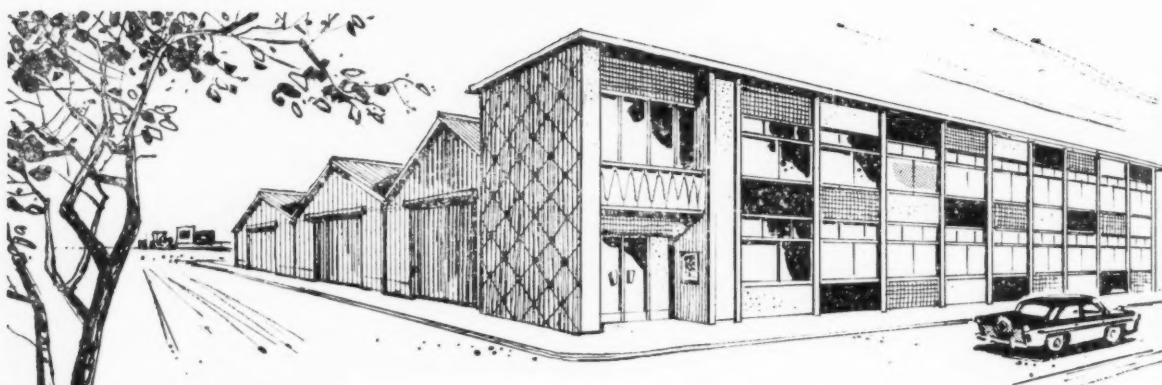
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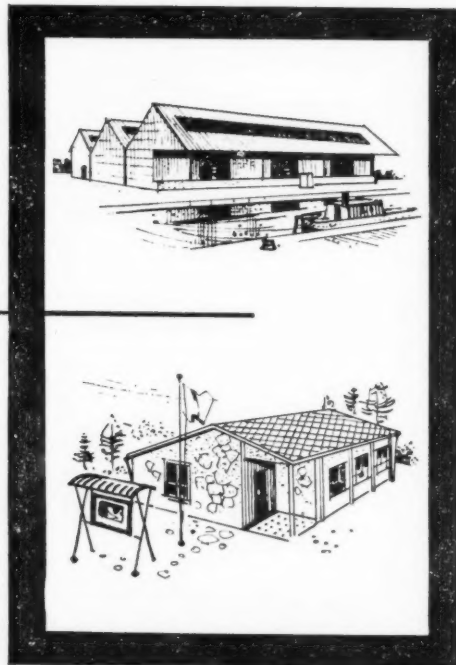
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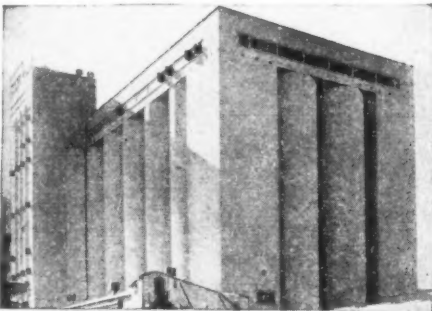
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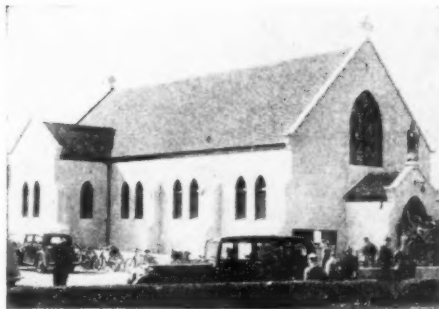
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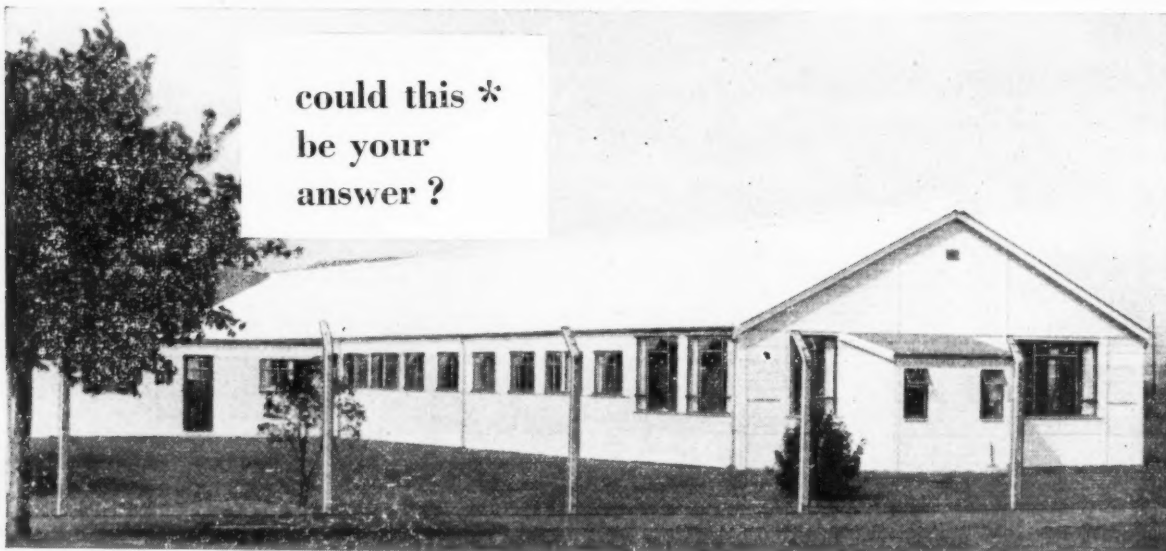
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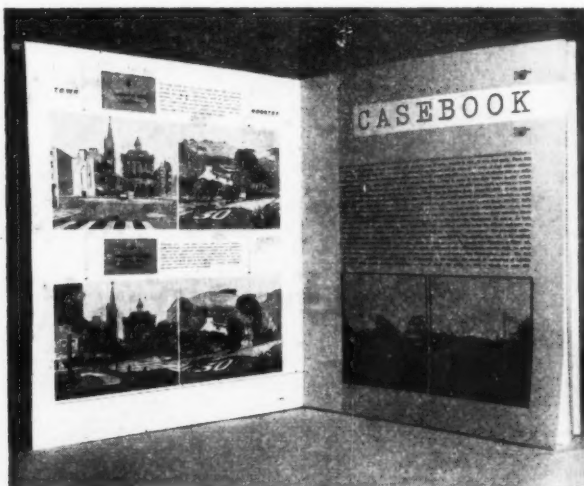
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—against subtopia—

BY IAN NAIRN

THIS BOOK, a reprint of the December 1956 Special Number of the *Architectural Review*, is the sequel to *Outrage*, the book which showed what we are doing to the face of Britain in the name of 'progress', 'amenity' and the 'national interest.' Its revelation of decaying towns, pockmarked countryside and anonymous suburbs shook the press to the extent of 1,100 column inches of special feature and review space, shattered the complacency of many, opened the eyes of many more; the word then coined to describe this squalid mess—subtopia—has become part of everyday speech.

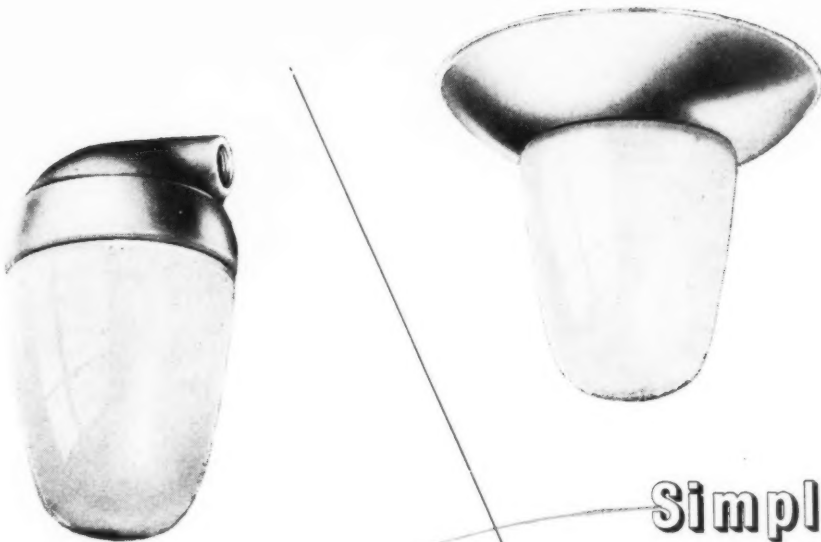


The response to *Outrage* proved that there were plenty of people who recognised the mess and who were prepared to do something about it. What they lacked was ammunition: examples of the right way to do things; arguments to refute theories tossed about by the apostles of inertia to save themselves from the necessity of thinking; a common-sense vocabulary for things which are either dismissed as intangible or served up in woolly abstractions. This book provides all these; it is not a set of pious resolutions but a true counter-attack. If your worry is tree lopping, look at page 381; if badly designed lamp-posts, turn to the designs on page 393; if your housing estate looks like a desert, the reasons are given on page 409; if you want to know why planning doesn't stop subtopia, and how it could be reformed, see page 431. There are forty pages of photographs showing well-designed and well sited examples of every kind of object; at the beginning there is a simple four-point common-sense sequence for sane design which can be applied straight away to see what is wrong with any street—the one outside your window, for instance, or the one which contains your office or your pub. This sequence isn't high-flown or obscure; it can be understood in half an hour, and it is described on pages 355-360.

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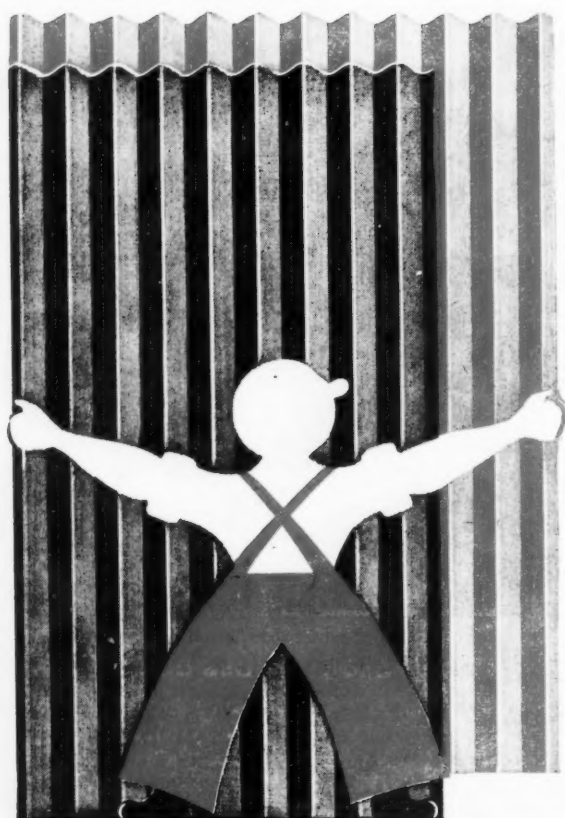
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Hardly cricket, what?

Cricket? Cricket? Never thought I'd live to see the county clubhouse turned into a Crystal Palace.

Reed Millican of course?*

No need to ask. Whole place reeks of 'em. 'Specially the bar. Must admit those "Old Masters" mirrors in pink and blue and gold showin' "W.G." and Co., stirred old memories.

Where's Featherstonehaugh?

Gone to telephone Newcastle 28383... tell 'em it's sacrilege.

Think they'll worry?

Why should they? Chairman wrote Millican last week... everyone delighted. impeccable taste... asked him to accept honorary membership.

Pair of spectacles for Featherstonehaugh, eh?



.. ARTISTRY IN



GLASS



THE ARCHITECTS' JOURNAL

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NOT QUITE ARCHITECTURE

LAST SIGHT OF AN OLDISH MASTER

An unkind observer has unkindly observed that current US eulogies of a certain native genius are explained by a desire not to be rude about his latest building in case it's the old so-and-so's last. Something similar applies with Juan Manuel Fangio, and while decent, patriotic, wop-baiting Englishmen went to Aintree lately to see a green car win a major *Grand Prix* for the first time in twenty-four years, yours truly went along chiefly because it might be the last chance to see the Old Master, whose retirement has been impending for eighteen months or more.

*

As it turned out, it was not a Fangio day, and he bumbled around in a dying Maserati, until he retired at about two-thirds distance in sixth place, just after being overwhelmed by Moss in the course of his ultra-sonic recovery from the back of nowhere. He should worry, though—he has enough championship points in hand to be pretty sure of collaring the world title for the fifth time this year.

*

All the same, it was astonishing to see how much attention he managed to attract, in spite of the derring-do that was being derring in the first three places. Practically every lap the crowd and the newsreel cameramen honoured his passing, and Fangio, clowning a race he was unlikely to win and might not even finish, waved graciously in acknowledgement, picked his teeth (apparently), cleaned his windscreen, his goggles, fiddled with the cockpit ventilator, and generally made like Bernard Shaw at home to the popular press.

*

It was a nice performance—he has more



Time To Stifle The Planning Officer?

Is it time that our system of planning control was changed? When the question was raised last week at the Institute of Contemporary Arts, everyone answered "yes"—everyone, that is, except E. G. Doubleday. Mr. Doubleday, who is seen in action above, is Hertfordshire's non-architect planning officer. In that role he has found that planning controls help to give the "arrogant young architect" a sense of responsibility to his client. Nobody else at the ICA meeting seemed to share that view. Indeed, Peter Shephard (seen in the same picture) said that the worst thing about control was the harm it could do to young architects. But Mr. Shephard was not against every form of control. He was on the side, led by Lionel Brett (top right) and Percy Johnson-Marshall, who believed that some detailed control was necessary, but argued that the key thing was to put architects in charge of it. On the other side were those, led by Peter Smithson (seated in picture with Ian Nairn) and Eric Lyons (seen right, making his forceful and passionate speech from the floor), who conceded the need for some functional controls, but demanded the complete exemption of architects from the control of elevations—or, in Smithson's case, from any aesthetic control. Somewhere in between stood those, like W. G. Howell (picture above Eric Lyons) who would submit to briefing by planners before designs were begun, but would not have designs submitted for approval when they were done, or those, like Ian Nairn, who would relax controls in the suburbs and retain them in the country. The ICA meeting is reported on page 168.

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star-quality than the rest of the championship table put together—that probably concealed a triumph of his greatest virtue: the ability to sit things out. As like as not, the same car would have folded in ten laps under anyone else, but Fangio combines with his incomparable sense of the dynamics of a fast moving car, a mastery of *sitzfleisch*, the ability to sit tight and persuade a disintegrating engine, transmission or suspension to stay in one piece.

It was this ability that saved Mercedes from disgrace in 1954, which was also probably Fangio's greatest year. When anyone else drove the Silver Arrows that year they were as fragile and erratic as the Ferraris and Maseratis (whatever *Picture Post's* panic-squad may have squealed about "invincible Merces," it was only in '55 that they were really reliable) but when Fangio took one in hand it finished, usually first. Twice that year—at Monza and at Silverstone—I saw him turn in placings that were literally single handed, in the sense that the rest of the Merces had faded with the opposition, and also in the sense that he had to use his right hand for much of the distance to hold the gear-lever from jumping out of mesh.

This, plus fortitude, plus the sense of where the car is going and why, make him the greatest driver I have seen in action, but he has something else as well—the aforementioned star-quality. Ascari may have been as good, but he drove like a grocer and made good motoring look dull, whereas with Fangio one is in a class with Drobny or Zatopek, or—in another field—with Jimmy Stewart or Spencer Tracy. The qualities are the same, trouper temperament, the resources of experience, the margin of ability, and that certain something that comes to the happy few with the first grey streaks on the temples.

REYNER BANHAM

Niall Montgomery, who contributes from time to time to our 'Not Quite Architecture' column, has written a Dublin news-letter this week. It appears on page 173.

DIARY

Historic Churches Preservation Trust. Exhibition at Charing Cross Underground Station. UNTIL AUGUST 5

Thomas Telford Bicentenary Exhibition. At the ISE, Great George Street, S.W.1. 10 a.m.—8 p.m. (including Saturdays and Sundays). UNTIL AUGUST 10

Design in Plastics. Exhibition at the Design Centre, Haymarket, S.W.1. Monday to Saturday, 9.30 a.m. to 5.30 p.m. UNTIL AUGUST 10

Mr. Therm at Home. Gas Council exhibition at the Tea Centre, 22 Regent Street, S.W.1. 10.30 a.m. to 6.30 p.m. UNTIL OCTOBER 4

The Editors

A BUILDERS' BAUHAUS

THE report of the study group on the proposed College of Advanced Technology* has now appeared. Its opening pages are promising: "Training policies must look beyond the sectional interests. . . ." "The key to this advance lies in entirely new concepts of building education . . . the need for an early collective approach to training."

The proposal is that the college will consist of five schools—of Building Administration and Technology; of Architecture; of Surveying; of Structural Engineering, and of Town Planning. The School of Building Administration and Technology would occupy, the report says, "something of a central position in the college, to give the whole establishment a sense of direction" and to be a "channel of communication with the main body of building education in other colleges." Paragraphs dealing with the Schools of Surveying and Engineering, and references to the National Certificate and Institute of Builders examinations appear to accept present kinds of knowledge and approach in these fields. The study group is aware of the "danger of the narrowness of technological studies" and so gives to the School of Architecture the task of providing "liberalizing studies."

The proposal for a college which unites all, or nearly all, the separate specialist building skills is a welcome recognition of the need for integration at the formative student age. This report is, of course, a first sketch of the project, the success of which will depend greatly on detailed organization, but two aspects call for comment now. First it does not sufficiently emphasize the need for integration of the five schools in *technical* studies—especially in the earlier years. The 19th century notion of "liberal studies" to heal the gaps of overspecialization is surely inadequate to provide that common technical-cultural language we so badly need.

The second point concerns the study group's decision that the building school is to lead. Let us admit that the managerial and technical competence of architects does not always match the leadership that the profession claims, and agree with the study group on the "need for a re-assessment of the complex responsibility of the architect as leader of the building team." But surely leadership, the unifying element in the new college, should be in the hands of those who, by tradition, take a comprehensive view of the whole building process, and by function co-ordinate the "separate sectional interests"? The ultimate purpose of building technology is to provide buildings appropriate to the needs of those who work and live in them. An assessment of those needs is the architect's job. It is he, not the building administrator and technician, who should "give the establishment a sense of direction."

* Report on the proposed College of Advanced Technology in Central London. Advisory Council for Higher Technological Education, Tavistock House, South Tavistock Square. 2s.

COST PLANNING IN THE LCC

The LCC recently announced that "full cost planning is being introduced in the architect's department, for pre-contract work." The Council hopes that closer association between architects and quantity surveyors at the design stage will not only help to ensure that the best and most economical use is made of new and traditional techniques, but will also improve financial control. To carry out this work fourteen additional positions for quantity surveyors are being advertised.

This is immensely encouraging news, on which Hubert Bennett, the LCC Architect, and his staff are to be congratulated. There are now—so far as we know—three major official practices (MOE, Herts and LCC) who support cost planning officially. How soon will it be before the MOW and the MOHLG take the plunge?



WHY NASH MUST STAY

From any viewpoint based on utility, humanitarianism or social justice, the Regent's Park terraces must go. Any preservation of the terraces will be on æsthetic grounds and we might as well be frank with ourselves, and the opposition, about it. The terraces and the park are worth having for what they do for the looks of London, not what they do for the inhabitants of Albany Street. The visual pleasure they give will be enjoyed by many who are not ratepayers in either Mary-

lebone or St. Pancras, and it will probably be pointed out that they are being maintained, like the Health Service, for the benefit of foreigners at the expense of the great British taxpayer.

But they are also one of the few points at which London looks anything like a capital city, and the only conceivable doubt as to their future should be what will go on inside them, not whether or not they shall stand. And stand they must, not because John Summerson says that present-day architects can't do as well (see the report of his broadcast plea on page 166), but because they are worth having in their own right, and as they are. This appears, in fact, to be an opportunity for a rather "U" variant of the Stockton experiment.

HOW HIGH MEANS DOLLARS?

How many dollars is Hyde Park worth? That seems to be one of the vital questions to be answered by those who will decide whether to allow the proposed skyscraper hotel to be built in Park Lane. When the House of Lords debated the issue last week, Lord Strabolgi argued in the hotel's favour that it would bring in \$30 million a year from American visitors, and urged the necessity to "give the customer what he wanted." ASTRAGAL is all in favour of giving American or any other visitors the best of accommodation, and enough of it. But it

will be a bad day when a decisive factor on an issue affecting the beauty of a London park is the number of dollars that can be brought in by altering its appearance. If the skyscraper is to be authorized, it should be on its own merits.

*

The announcement in the same debate that a public enquiry is to be held by the Minister of Housing and Local Government before a final decision is reached should, incidentally, provide a test case on the issue of æsthetic control. For those who object to the hotel are doing so on two grounds: the first is town-planning, in the sense that it will cause congestion, but the second is æsthetic, in the sense that its bulk and appearance will spoil Hyde Park.

AA LOSES MIESIAN CALM

The AA are again giving us a most stimulating annual exhibition. The "slant" is no doubt different from other years but the result is of that same high order which earns the AA an international reputation, not merely as a school of architecture but as a research centre in design. The successful schemes this year are nearly all on a very big scale and although few could or would be built just as they are, it is the quality of creative thinking of a very high order which makes the ex-AA student such a useful architectural citizen after a few years of practical experience.

*

In the past the exhibition has been arranged by staff or students. This year it has been done by the Council. If the theme is a somewhat artificial one with a CIAM flavour ("Home, Community and Work") the scale of the projects is certainly worthy of so grand a title.

*

The prophets are changing. The Miesian calm is fading with the disappearance of the post-war *Angst*, to be replaced by the greater visual stimulants of Corb. Nervi, Niemeyer and a *soupçon* of Aalto, with Gaudi and expressionism to spice the pot. Indeed there is distinct *nostalgie pour l'aube de siècle*. The John Dalton Group's "High Paddington" is positively Kharkov-constructionist, while there are shades of Saint Elia in such schemes as Khareghat and Walker's "High

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Paddington" (a charming scheme apparently aimed at combating man's cosmic fright of height) and Reynold's excellent S.P. Depot—whatever S.P. is.

The only tedious thing about the exhibition is finding out what the projects are and who they are by. (There is a curiously reptilian O.T. —Ocean Terminal?—which has no name.) What one misses most this year are the interesting perspectives—difficult I know with such large schemes—and finished models. However, there is a charming model of ateliers in icing sugar by Tony Matthes which was no doubt baked in the well-known Matthes bakeries.

*

Draughtsmanship is generally high and there are a number of those excellent measured drawings of railway carriages and lighthouses so reminiscent of 19th Century steel engravings which are peculiar to the AA. And, as I have hinted, one can pick one's style according to one's taste, particularly if it is early 20th Century. There is even a sort of Peabody Trust hostel for students, while one student (Price) has achieved the most unlikely marriage of Osbert Lancaster and Peter Smithson in a public house.

UNFAIR TO TELFORD

You probably know that the bicentenary of Thomas Telford is upon us, and that there is an exhibition in its honour at the "Civils" in Great George Street. ASTRAGAL, who yields to none in his admiration for Telford and his work—even to the extent of making a pilgrimage-crossing of the Chirk aqueduct, and a devotional tour of his pretty bridges in Shropshire—would be happy to yield to anybody where admiration for this exhibition is concerned, for something has gone sadly astray.

*

The organisation of the show was in the hands of Richard Buckle, who did the celebrated Diaghileff jamboree. Somehow the techniques of over-presentation and collateral art-work that portrayed Diaghileff larger than life, seem to reduce Telford to post-card size—if that. Given the relatively small space that the Civils made available to the show, it seems a pity that nearly a quarter of the floor should have been lost to a large, but uninformative mural, and an idiotic sculpture-



"Hit my foot again and out you go!" Astrid Zydwor's heavy-handed glorification of Telford. Has any architect ever been made to look such a ham actor?

group of Telford making ham gestures over a grovelling navvy.

*

The space would have been far better employed in giving the exhibition screens more horizontal spread, and getting some of the exhibits down to eye-level (what is the point of drawing attention to "invention and variety in bridge building" if the illustrations are too high and too small for us to see any difference between the bridges?). And the money could have been better employed in providing many more models, and a lot more light, better directed, at the documents under glass.

BETJEMAN DOES A DIMBLEBY

What's wrong with the BBC's Television series, "An Englishman's Home?" It was reasonable to expect a good deal of agreeable entertainment from a tour of English home life conducted by John Betjeman, but up to the seventeenth century it has been pretty heavy going. Clearly the producers were unhappy about the first programme, when we visited Berkeley Castle in Gloucestershire, and found it peopled by actors wearing fancy dress and a state of sullen embarrassment at having nothing to say and little to do except stare at a roast peacock. If someone had even shown us how to carve the bird

there might have seemed more point.

*

This experiment demonstrated that dressing people up in kirtles and lernpipes stimulates imagination as little as dressing a waitress in a Tudor cafe in a mob cap. It would have been easier to picture the bloody and brutish life at Berkeley in the Wars of the Roses without these prim figures. Evidently this was recognised, for at Castle Ashby—Lord Northampton's Elizabethan residence—there was no fancy dress last week. Instead we saw some little Northamptons, looking terribly solemn and well behaved (one hopes they are not usually like this) showing Mr. Betjeman a few of the house's amazing accumulation of treasures. Mr. Betjeman breathed an equally solemn and well-behaved "Thank you!" to the Sixth Marquess. It seems a little silly for a man of Mr. Betjeman's distinction to appear awed by a bed Queen Elizabeth slept in, or even—as he exclaimed at Castle Ashby—by "seven hundred years of inheritance through the male line!" So perk up, Mr. Betjeman, when you get to Uppark next week (August 8), and leave the reverent note to Mr. Dimbleby, who thrives on it. We like our Betjeman dry and sparkling.

ASTRAGAL

CRITICISM

What Readers Think

Here are some readers' letters, and a reply by Erno Goldfinger, about Mr. Goldfinger's office block in Albemarle Street.

SIR.—Mr. Richards's criticism (July 18) of the offices in Albemarle Street raises two points on which one feels that more information would be of interest, but in both it is difficult to comment with certainty because of the absence of any dimensions on the illustrations.

Mr. Richards emphasizes that maximum use of space was essential as this is among the most costly land in London, yet he appears to accept, without serious question, the setting back of the whole building by 2 ft. 6 in. when regulations would apparently have permitted only the top storey to be recessed. It would appear that this means a loss of something like 5 per cent. of total usable space of the whole building. It would be interesting to know whether this was discussed with the clients, and whether they were both sufficiently enlightened knowingly to forfeit this in the cause of aesthetics. Incidentally, will the "regained floor space" of the bay windows be any use as office space if it is one step up from the main floor area?

The modelling of the front elevation is certainly interesting. Could the architect state whether the modelling resulted from a study of day lighting or whether it really arose because of a desire for its appearance. Without accurate sections, including the buildings across the street, it is not possible to judge accurately, but it seems very doubtful whether the amount of light reflected from the set back "shelf" can make any appreciable difference. The area of reflecting surface is not large and, fully exposed to dust and dirt, its reflection value surely is not very high. If it is deliberately designed as a reflector, is any provision made for easy cleaning? The illustrations do not make this clear. It seems probably that the recess over the lower part of the windows does more for the quality of the lighting by cutting down the amount of light immediately inside the window than it does for the quantity by its reflection via the ceiling.

London. CECIL C. HANDISYDE (A.R.I.B.A.)

Mr. Handisyde raises two questions: the first relates to the setting back from the building line; the second to the distribution of light inside the building by means of "photobolic-screens." The two are to some extent inter-related as the setback of the upper stories helps considerably with the light distribution.

I will answer the second question first, as the other raises a number of problems which necessitate some airing.

Light distribution, by means of "photobolic-screens" was used by me for the first time in 1939—in my houses at Willow Road, Hampstead—on the north east facade. The results obtained there in the quality of light induced me to use the same methods when building the schools for the London County Council in Hammersmith and Putney. There, all classrooms and assembly halls are treated in the same manner. The main result, as correctly assumed by Mr. Handisyde, is the even distribution of the light, the increase in "quality."

Of course there will be no increase in the "quantity" of light falling on to the building and to be distributed. On the contrary some light will be lost in the process of distribution through screening and through absorption in the reflecting surfaces; but the essence of good lighting in work places is the even distribution of light: quality more than quantity. In buildings lit laterally (and not by skylights) and provided

with horizontally quasi-uninterrupted windows, it is essential to cut the light near the windows and to throw it deeper into the centre of the building, thus evening out the lighting factor.

The "photobolic-screens" at Albemarle Street are of anodised aluminium and are cleaned at the same time as the windows. They reflect a lot of light on to the ceiling and hence deep into the building and when covered with brown paper (experiment tried) the centre of the building darkens. This problem of reflected light is of great importance, and the BRS has done interesting work on this subject.

As to the question which comes first, the chicken or the egg, the aesthetic consideration of the facade or the practical one of light distribution, this simply does not arise. My facades (and the rest) are composed exclusively of "utilitarian" elements, functional and structural, and all these elements are used, to the best of my ability, primarily to obtain architectural (may be aesthetic) effects.

Mr. Handisyde's other question relates to the set back of the building—but raises two other questions:

1. Loss of floor area.
2. Enlightenment of clients.

First of all there seems to be some misunderstanding as regards which floors are set back. Not all floors are set back but only the top five floors, the ground floor covers 100 per cent. of the site (and the basement even more, as it extends under the pavement). Through setting back the top five floors, not a single (permissible) square inch was lost. If the clients had agreed to lose floor space for so-called "aesthetic reasons," I would not consider them enlightened, but idiots, and myself the same. The main contribution to architecture of a client is to formulate a precise programme, in order to enable the architect to solve it precisely, and this, my clients have done admirably.

The problem in the case of an office block (and many other buildings) is to enclose the greatest number of square feet of usable office space, within the smallest number of cubic feet of buildings. This, incidentally, is also in the national interest: anything else is squandering our resources. Of course, all this works in conjunction with the safeguards of town planning, building acts, by-laws, etc.

The floor area of a building in London is governed by the plot ratio, or by the rule that the volume of a new building can be 10 per cent. more than the one it replaces. In the case of Albemarle Street, the plot ratio was 3.5 to 1, the site 3,236.4 sq. ft., which would have given a permissible floor area of 11,327.4 sq. ft.: therefore the second alternative, of using the pre-war volume as a basis, was adopted which enabled us to put on 16,680 sq. ft. gross area giving a net area of 11,976.11 sq. ft.

To put Mr. Handisyde's mind at ease, I can confess that I have disclosed this matter to my clients. As to the setback 2 ft. 6 in. of all the five upper floors, the building as it stands is inscribed precisely into the light angles specified by the London County Council. Had I not set back all the floors I could not have used the permissible floor space, as the top floor would have been cut back. The structure of the facade would have been confused and complicated.

The bay windows, which form part of the directors' offices and board rooms, are, I understand, the delight of my client's tenants... not by square inches alone. I must agree with Mr. Handisyde's opening remark that more precise drawings and dimensions would be a great help in this series. To conclude, I would like to know how Mr. Handisyde arrived at his estimate of "5 per cent. usable space lost."

ERNO GOLDFINGER

SIR.—Mr. Richards tells us that the purists will criticize Erno Goldfinger's most elegant

design in Albemarle Street because he has visually rolled two buildings into one—crossed a party wall without saying so.

If he is right—then out with purity! and with those who would equate it with virtue, for in this case it was surely the right thing to do.

He also tells us that this building "owes its distinguished character largely to the refined detailing of a number of extremely frank structural statements," and although I am in complete agreement as to the refinement there seems to me to be more involved than frank structural statements.

Could one not, with equal truth for instance, say that its success lies in its modelling, its proportions and the choice of materials?

London.

J. S. LACEY (F.R.I.B.A.)

OTHER LETTERS

H. M. Pearson

J. R. B. Green, A.R.I.B.A.

To Where Indeed, Forsooth?

SIR.—To where has the beauty of British architecture departed? On all sides contemporary buildings seem to consist of greater, higher, and more flaunting parallelepipeds. It matters not whether they be schools, offices, or public places—all look the same. Even Battersea Power Station has more gracious lines than these modern unfeeling monstrosities.

True—the carven state of architecture has lapsed for ever. But never before have there been available to us the wonderful range of new materials, and new techniques. Little wonder you so rightly criticized the proposed British Embassy in Washington.

To man is given the ability to create. Modern architecture is childish, for it fails to convey the childlike simplicity of wonder and beauty. Let our architects now give us a thing of beauty that will endure for all time.

Weymouth.

H. M. PEARSON.

Restrictive Practice

SIR.—It appears that vendors of land for development as estates are able to lay down their own planning regulations. The extracts below are from an estate agents' handout for a site to be developed on the outskirts of a county town in Southern England.

"Conditions and Restrictive Covenants on plots at . . .

1. 1 detached house on each plot.
2. Minimum cost of house at May, 1957 prices £3,250 excluding garage, paths, fences, etc., and site.
3. All houses of bricks with tiled roofs and alternative finish to be approved by vendors.
4. Plans to be approved by vendors and 2 gns. fees per plan for approval.
5. Front boundary to be 9 in. brick wall 1 ft. 6 in. to 2 ft. 6 in. high. Site boundaries to be close boarded fencing or chain link fencing 4 ft. 6 in. high, rear boundaries close boarded fencing 6 ft. high where it abuts on main road and elsewhere chain link fencing 4 ft. 6 in. high, etc. . . .

Negative planning does not only appear to be the prerogative of local authorities who should do more to encourage the private developer towards imaginative use of materials and layouts, particularly as in this case the old part of the town is a very good example of the use of rich and varied materials achieving thereby an atmosphere of live-ness and charm. And why the cost restriction when we should be trying to build houses more economically or is this compulsory "keeping up with the Joneses"?

Dartford.

J. R. B. GREEN.



BBC

A Plea for Nash

A public subsidy to find the millions of pounds required to put the Nash Terraces in Regent's Park into habitable condition was recommended by both Sir William Holford and John Summerson in the BBC's "Panorama" programme last week.

Both spoke with horror of the possibility that in four years' time, when the leases fall through, these terraces might be pulled down because, after years of neglect by the Commissioners of Crown Lands, they would be too expensive to repair—or to alter in the very extensive ways that would be necessary to make them into modern dwelling places.

Sir William described them as a magnificent architectural panorama and the only piece of real town planning existing in London. They surrounded, he said, the finest town park in the world, and were an essential part of its beauty and magnificence.

At the same time he recognized that as houses they were completely obsolete for living in, far too large for ordinary families today, and in an appalling state of disrepair.

Asked by commentator Woodrow Wyatt why these obsolete houses should not be pulled down and replaced by well-designed modern terraces, John Summerson shrugged hopelessly as he replied, "Well . . . you know what we should get." Many modern architects, he added quickly, were very good and clever—brilliant, but they did not touch the imagination.

He thought the price of repairing and converting the terraces should be estimated and the work undertaken backed by a public subsidy.

Sir William Holford thought that modern architects had never had the problem put to them of using their knowledge and skill on a job like this. Let the problem be set and let modern architects tackle it and show how much they can keep. You can't put a price on the value of this park, he concluded.

Woodrow Wyatt summed up the feeling of the experts and of the two members of the public who merely lived in and perhaps enjoyed looking at houses, when he said, "If we're prepared to pull down these Nash terraces, we'll pull down anything."

TCPA

Dispersal Policy

The Town and Country Planning Association has published the following statement of policy on dispersal to new and expanded

towns: The transfer of industry, commerce and population—jobs and people together—from the big overcrowded cities to new and expanded country towns is proceeding far too slowly. Unless the whole process is speeded up, slum clearance and city redevelopment must be seriously held back. It is officially accepted that 2 million people, requiring 600,000 houses, should be transferred from overcrowded towns, such as London, Birmingham, Manchester, Liverpool, Leeds, Sheffield, Bristol and others. So far, fewer than 40,000 houses (for 130,000 people) have been built in the London new towns and in expanding towns such as Worsley (Lancs), Bletchley (Bucks), and Swindon (Wilts). About 50,000 more can be expected in the existing new towns and in the agreed town expansion schemes.

But 30,000 houses a year are needed. This means that further new towns and many more town expansion schemes should be started immediately. The existing new towns are outstandingly successful in every way. They are highly efficient industrial units. Financially, they represent a very profitable national investment. The Development Corporations building them are extremely effective organisations. Present and proposed town expansion schemes are hampered by insufficient financial aid and fears of the small towns of a high rate burden.

It therefore recommends: (1) The Ministry of Housing and Local Government should indicate which country towns ought to be expanded. (2) Further new towns should be started. (3) London, Manchester, and any other big city wishing to build a new town itself should be permitted to do so—but the site should be beyond the city's green belt. (4) A special development corporation should be set up to expand a number of towns simultaneously—for example, in East Anglia. (5) In other cases of town expansion, an advisory body should be set up to prepare plans and guide the development.

EAST LOTHIAN

Planning Exhibition

A correspondent writes: Exhibitions of planning or architecture which have material really worth exhibiting are rather rare these days. A recent one, however, which illustrated the endeavours, methods, and range of activities of the East Lothian County Planning Department, was extraordinarily well equipped materially—and methodically as well for that matter, in that its impact was clear, sharp and most practically designed for the lay public.

The exhibition was appropriately sited in the Outlook Tower (Patrick Geddes' headquarters in the more purely pioneering days) near Edinburgh Castle and it exploited its minimum budget and borrowed screens to maximum effect. Incidentally, East Lothian's planning staff of five do themselves give such value for money that while one hesitates to think in terms of "exploitation" it is certain the cost of this department to the County Council (1.97d. on the rates, or 0.02 per cent. of the total annual expenditure) represents a very minimum budget for the achievements of this extraordinarily enthusiastic group.

The cork-backed screens were so arranged and titled as to demonstrate that what is often thought a mysterious and rather frightening function is in fact a highly beneficial public service aiding both development and preservation—at any rate in this case. Record drawings, reports and photographs in normal use were generally captioned in manuscript on yellow card, and on pink card for work mis-done or still not done. The improvements injected under powers of aesthetic control were interesting and remarkably propitious as, for instance, in the "modified design to a new shopfront

in an early 19th century building—showing how a bold approach is sometimes better than a partial attempt to retain the architectural features of the building." The new housing around the harbour at Dunbar by Basil Spence & Partners, perhaps the most successful post-war scheme in Scotland, is another example of what is possible under the aegis of this particularly enlightened planning authority.

The county is unusually fortunate in containing some of the finest examples of Scottish vernacular style and it is many thanks to the vigilance of Frank Tindall, County Planning Officer, not only that they are still with us but that their environment does not compromise their unique quality. The screens on landscape and townscape show the careful thought applied to textures and colour, the progress of an imaginative planting programme, and by photo montage several curious quirks that "might have been"—including the effects of 25-ft. lighting standards in Haddington High Street. In Screen No. 9, "advertisements and overhead lines," one could see that the majority of new overhead line routes approved in the County since 1951 have been changed to some extent by the authority's interest in landscape. (A new 33 kilowatt line was diverted from A1 and Tyne valley, and at Spott village it was luckily persuaded off the main street as was proposed by the ubiquitous Electricity Board). Further points of interest included the performance record for average time taken to determine applications (3.8 weeks of the two months period allowed), the promising progress of specially designed children's playgrounds (including fixed wooden play equipment and, in one case, an old steamroller), and some housing layouts of which the most notable was that at Tranent—broadly on Radburn pattern with two-storey houses at 17 houses to the acre.

What has been done—and that is evidently a great deal—has been well done, and one only wishes for more planning officers to show the enterpriser of Mr. Tindall in arranging events of this kind. Planning exhibitions too often amount mainly to half hearted expositions of statutory maps in connection with the development plan, apparently exaggerating the cloak of secrecy which the public presumes usually to surround the operation. This was an exhibition with a difference; one to delight Ian Nairn, slightly to console the architect brutally bruised by aesthetic control, and certainly one which greatly encouraged this correspondent.

MOHLG

When is a Very Tall Building?

Henry Brooke, the Minister of Housing and Local Government, adopted a cautious attitude towards the building of "skyscrapers" when asked in the Commons recently by Mr. Gower to state the Government's policy on limited experiments with skyscrapers in greater London and the major provincial cities. He said: "The factors that have to be taken into account are relationship of the building to neighbouring buildings or open spaces, the effect on skylines, the ratio of floor-space to the site, the impact on traffic and the provision to be made for off-street parking. If all these matters can be satisfactorily resolved I see no objection to a tall building in the right place. If by skyscrapers Mr. Gower has in mind buildings very much taller than anything that has yet been approved, I think we have to approach the matter with caution. The factors to which I have already referred would apply, and the difficulty of securing a satisfactory result would increase with the height of the building. But I would not rule out even a very tall building on principle."



DO PLANNING CONTROLS NEED REVISION?

J. M. Richards (standing in the photograph) took the chair last week at a discussion on planning controls which was held at the Institute of Contemporary Arts. The speakers on the platform were (left to right) Peter Smithson, Ian Nairn, Lionel Brett, Percy Johnson-Marshall and Peter Shephard. The public explosion of views by these speakers, and by architects in the audience, follows a session of private meetings organized by a number of young architects who are tired of being humiliated by planning officials, and equally tired of waiting for the long expected report on controls by a RIBA committee. Below left is a section of the audience, listening to a planning officer, E. H. Doubleday, as he speaks about the value of planning control to "arrogant young architects".

An astonishingly large and youthful audience gathered at the Institute of Contemporary Arts on Tuesday night last week to hear an all-star cast performing on the subject of "planning controls," and to hear themselves perform—if they could catch the chairman's eye. Most of them had clearly been apprised that this meeting was the

opening shot in a public campaign inspired by a group of younger architects to end what was variously, and confusingly, termed aesthetic, elevational or architectural control. The views represented, on or off the platform, ranged from the patronising satisfaction with things as they are expressed by E. H. Doubleday, the Hertfordshire County Planning Officer (specially invited to trail his coat before an infuriated architectural audience), and a hot-headed architect (also from Herts) who was prepared to sweep away not only the aesthetic controls but every other control as well, allowing speculative builders to rip as they pleased. In between there was every shade and gradation of view, and the meeting failed to produce the clear-cut answer that its chairman, J. M. Richards, tried to obtain by confining it to the simple issue of for or against "aesthetic controls." He himself declined, at the end, the chairman's traditional rôle of summing up the discussion (so confusing as almost to defy summing up), but he gave the last round to the opponents of "aesthetic control" by throwing his weight not only against all controls except those which regulated the use of land, but even apparently, against advertisement control.

Sartorial Outrage

It seemed, when the meeting began, as if we were going to be deprived of the pleasure of hearing Ian Nairn, but no sooner had the chairman remarked on his absence than he sauntered in, a living proof in his open-necked shirt that whatever his views on control over architects, he did not accept aesthetic controls over aesthetically angry young men.



J. M. Richards optimistically opened the meeting by announcing that he did not think there would be any discussion about the fact that planning must involve some degree of control, a point on which he was sadly disillusioned long before the meeting was over. The subject, as he saw it, was the control exercised by planners or planning legislation over the architect's design of buildings.

Bait for Brett

The meeting had, incidentally, been called originally to discuss a report of an RIBA committee of which Lionel Brett is chairman. The report, however, has not yet been published, and J. M. Richards dangled a bait before Lionel Brett by remarking innocently that it would be interesting to know why it had not been published, what had happened to it, and when it would be published. Neither Lionel Brett, nor anybody else, swallowed the bait, and the questions went unanswered. It is a fair guess, however, that the conclusion of the report is the same as that come to by Lionel Brett in his speech, that architects are the right people to control architecture.

LIONEL BRETT had to overcome, also, the initial difficulty that his views have changed substantially since he denounced aesthetic controls as "censorship" in an RIBA paper some years ago. He explained his desertion from the "down with control" camp by saying that while it might be that one became keener on controls as one grew older, he liked to think that he had learned something. Unlike some of those who followed him, Lionel Brett did not admit to any confusion of thought. He ridiculed the idea that there was any parallel between the control of buildings and the control of isolated works of art, and he dismissed as out of date the idea that the country could be divided up into beauty spots (which were controlled) and the rest (which were not). The choice, therefore, was simply control, or no control.

The Octopus, the Beast and the Wide Boy

His case for control, in a nutshell, was that we had to prevent the spivs wrecking our environment. The last generation of architects and of interested people had devoted itself to the Octopus and the Beast, to restricting free and unfettered enterprise in the world of building, and if we were suddenly to tell the people whom we had educated that we were wrong, it would be extremely difficult not to relapse into barbarism. We would be told that there was some kind of folk art that could not express itself if the appearance of buildings were controlled: but that was all nonsense. It was not folk art but a kind of spiv art exploited by the wide boy and the clever chap that was behind the supermarket and the motorcar industry. Planning he regarded as essentially an educative process until the people were ready to express themselves, but this temporary educative process needed terrific sensibility and a very special training: the right kind of people were not doing it, nor were there enough of them. This led Lionel Brett to his real point:

that architects should unite, not to say "scrap the controls" but to campaign to get the controls into the right hands—and these were, of course, the hands of architects. There were more bad architects than good, but architects were, on the whole, the best people to do architecture. Planning had to be split into two: two-dimensional regional planning, which was the sphere of the scientist, and three-dimensional local planning, which was the sphere of the artist, and of the architect.

RFAC Equals HRH

It was characteristic of the whole discussion that even PETER SMITHSON, the only platform speaker to come out boldly against aesthetic controls, said that he was looking to the meeting to help him make up his mind on this very question. As he saw it, an aesthetic veto had been entrusted to four groups: the local councillors (representing the pop art of two generations ago), the town planning officer bureaucrats (representing the taste of Professor Reilly), the advisory panels of architects condemning or advising other architects (representing the lowest common denominator of county architect) and the Royal Fine Art Commission (representing the taste of the ruling class). This description of the RFAC caused J. M. Richards to bow gracefully—a gesture which was repeated when Peter Smithson added that the RFAC represented basically the taste of the Queen. Peter Smithson was prepared to submit work to a client, and to the councillor, representing the non-architect who had to be won over by the glamour of the project itself, by persuasion and argument to accept the architect's view. What he was not prepared to do was to change the taste of the prototypes of Professor Reilly, the advisory panels and the RFAC. The job of having to sell one's soul to those people inhibited design to such an extent as almost to make it impossible.

What were the results of "democratic control"? Peter Smithson could see only two, neither of them positive: one was more ribbon development than before the war, the thing it was aimed to prevent, and the other was continuous bickering between architects, resulting in a loss of prestige. What would happen if we did away with it? Peter Smithson could see nothing but good: the architect would have to assume the personal responsibility that had been shifted on to the planners, and the architect would be able to concentrate on the problem instead of having to please everyone. Mr. Smithson argued too, that detailed small-scale aesthetic control was absolutely irrelevant, and made no difference to the total environment. He recognized the need for the community to control certain practical things, like sign-posting main roads, but upheld the ethical right of the genuine designer to freedom from control.

PERCY JOHNSON-MARSHALL weakened his arguments for control by their flippant presentation. But in essence his speech was a plea for architects to come into planning

to co-operate with the planners in city design, and to accept some responsibility for the failure of the public to understand what it was all about. The chap next door, Mr. Marshall had found, was a reasonable chap who was not itching to turn down architects' designs, and was capable of being educated when approached in the right way. The problem of planning was to make our cities worth living in and looking at; for this a close degree of co-operation between planners and architects was essential.

The Timid Anarchist

PETER SHEPHEARD, on the other hand, was a visible disappointment to the anti-control majority, which was shocked to hear him say that, although temperamentally an anarchist, he did not get angry when told by the LCC to go away and do it again: he did it again, and it was always so much better the second time.

He had thought at one time that aesthetic control—but not control of floor space indices, light protractors, density, land use, zoning, advertisements and things of that kind—could be abolished. But the need for exceptions in special areas had driven him to conclude that on the whole control had done a great deal of good. Unlike Peter Smithson, he did not think that speculative building was worse than before the war. And he staunchly defended advertisement control, which was, after all, aesthetic, holding out the road from Como to Venice as an awful warning of the fate in store for us if control were abandoned. He had two suggestions: the first would be to limit controls to things that were not directly aesthetic, avoiding wrangles over elevations and whether roofs should be flat or pitched. The second would be to get the right people in charge, though the difficulty was that not only were there not enough good people to go round, but if they were good they did not want to sit in offices controlling other people's elevations. But the worst thing about control was the harm it could do to young architects. The young architect starting off with his first job, a house for a business man who was afraid that it was modern and would not work, had every right to complain when it was thrown out by the planning committee, very often acting through a panel of architects.

Dead Pan Among Black Kettles

IAN NAIRN plunged, in his dead-pan staccato manner, into what he called "a fairly bloody-minded contribution," opening with a declaration of neutrality between the controllers and the anti-controllers, and leaning first to one side then to the other. He detected a lot of very black kettles around (though he did not specify where), and sweepingly indicted the planning committees for having some of the queerest people who said, "I know what I like, and you had better build it." But he thought that some of the unsuccessful applicants were architects trying terribly hard to be little Mieses or Corbs, when what the

country wanted was just some honest building. He could see the position of Eric Lyons and good modern architects whose time was wasted for several months with arguments, but he could also see the position of an alert planning officer who knew his job.

The trouble was that in present planning legislation the aesthetic control was often the only weapon the planners could use in the fight to do the right thing in the right place. Even the faintest chance of getting the vernacular was more important than getting half a dozen Wogensky houses around the place. As the present position was making the worst of both worlds, he suggested a compromise. In the suburbs, behind a landscape screen, one would be free to build what one liked. In the town, control could be reduced to specifying the building line and the number of storeys, except in places like Bath. In the open country the system should remain as it is.

"The Ministry is Fairly Intelligent"

At this point Ian Nairn ran into some opposition, by claiming that if an architect building a single house in the country had a clear idea of what he was doing, he would win an appeal because the people at the Ministry were fairly intelligent. But if he had no clear idea, the planning committee's ideas were as good as his. If one wanted to relieve architects of planning control, one should look at the work of 90 per cent. of the profession, and if conditions were imposed on the architect, he should exploit the conditions as Peter Smithson had been doing at Watford.

W. G. HOWELL, the first to enter the contest from the floor, stressed the difference between what he called control pre-briefing, and control after the design had been made. Control before briefing by the authority or the client was a jolly good challenge to the architect. But after one had designed a thing, to have people who did not design buildings telling one the job had appalling consequences, including the client's loss of confidence and battles between architects. Pre-briefing was the best way out in special areas. He argued, also, that there was no case for detailed control of architects: if this were abolished, the appalling affect on young architects with new ideas might be mitigated.

Arrogance in Architects

Then came E. H. DOUBLEDAY, the Hertfordshire County Planning Officer, to accuse the meeting of self-pity, of saying "leave the architect alone: he is the chap who can do everything right, and everybody else is wrong." He also detected a feeling of arrogance. He had worked town and country planning when there were no controls, under the system some of the speakers had advocated, and it had been perfectly horrible. He advised people to engage architects, but it was awfully disappointing when the people came back to him and said "we can get absolutely nowhere. The architect's designed something I don't want, and refuses to alter

it. He says I must accept this design, or he's walking out."

There was a period, added Mr. Doubleday, when the young architect came out of school, when he was at his most arrogant, knowing all the answers, full of enthusiasm and ready to put the world to rights in five minutes. During that period he might be taught that there was a responsibility to the person who was paying for his design. Sooner or later he would jolly well have to listen to what the client wanted, or he would have to go under. They had 6,000 applications a year, and in less than 100 did they say anything about the elevations. So far as possible they let people go their own way, but occasionally they had to say "I am afraid the public interest comes into it."

ERNO GOLDFINGER thought the platform, except Peter Smithson, was wishy washy. Control of technical and measurable matters like densities and light angles was very desirable, but when it came to architectural control, aesthetic control, he just did not understand it. Did town planning officers and local surveyors really have the cheek to pose as art historians before the work of art had been created? It was not possible. Nor could he see how the committees had the impudence to arrogate aesthetic control to themselves.

Down with Everybody!

COLIN GLENNIE, in an eloquent outburst, cried "for God's sake let's be positive and not negative." He denounced town planning committees, Ian Nairn, the RFAC, John Betjeman, Duncan Sandys and the Civic Trust as negative, for wanting to retain things as they are or to put them back as they were. If all the effort put by distinguished men into saving the Albert Bridge, which was useless, had gone into ensuring that a more worthy bridge was put up in its place, that would be a beginning to the kind of growth our cities required. If Ian Nairn would stop showing pictures of twee little cottages and show the new landscape of power stations, roads and steelworks we would be getting somewhere.

This speech was applauded by Mr. COLLINS, architect planner Hertfordshire, who reminded the meeting that very large applications for speculative development in the green belt had been prevented by control, and asserted that layouts submitted by architects as well as builders showed no improvement since the 1930's.

The next speaker, whose name was inaudible, was a private architect who had just returned in a state of depression from a trip to Tilbury which had made him feel that planning control was absolutely necessary, but had been muddled all over again by the meeting. In designing for spec builders he had been helped by the planning authority in fighting clients who wanted typical 1930 designs. Could there not be legislation to ensure that all building work was carried out by registered architects?

At this point J. M. Richards tried to pull the meeting back to the question of "aesthetic control," and asked speakers not to talk about everything.

What Kind of Control?

But HELEN ROSENAUER plunged back into history with reminders that architects had always been controlled by the patron or the authorities. It was flogging a dead horse to ask if we wanted controls: the question was, what kind of control?

WALTER BOR, an LCC architect and planner, thought that Lionel Brett was right to distinguish between regional planning and urban design. Many of the restrictions which architects had experienced originated in the fact that urban design was done by other experts. The answer to the problem of the young architect was to relinquish architectural control in suburban areas where the young architect got his first jobs. He could see no purpose in perpetuating pure aesthetic control which forced architects into accepted safe standards, and would like to see the efforts of architect planners diverted from dealing with other people's elevations to three-dimensional planning.

Making-Do with Queen Anne

JOYCE LOWRY, House and Garden, also asserted that aesthetic control was discouraging people tremendously from building. The agonizing business of getting permission and going to the Minister on appeal broke their backs. In the end they bought a nice Queen Anne house and converted it because they couldn't face the compromise.

LESLIE GINSBURG pleaded for "no control without creation." In the majority of planning offices control and creation were separated. In the county office aesthetic control was done by an architect specially appointed, usually a frustrated architect who was not himself doing real architecture. In the county boroughs, with the exception of London and Coventry, control was in the hands of the city surveyor or engineer, and the city architect only got the titbits of planning to handle. This was an impossible cleavage.

Planners are Never Helpful!

ERIC LYONS struck an emphatic note in the discussion with his first words: "I am not at all confused." To him the issue was very simple; architects could not practise their art when they had to look over their shoulders at even a well-intentioned town planning officer. The good town planning officer was the man who left him alone, who treated him as a responsible architect with as great a responsibility as his, and gave him the context for his building. But, unfortunately, it didn't work that way.

The defenders of control invented various ways of mitigating it, so that it was not quite so offensive. But every time one came up against the simple fact that if it was to be administered creatively, one had to have creative architects to administer it—and that was a contradiction in terms. He had come along to be rude about town planners, but that was unfair for they were victims of a machine they did not create. They con-

cerned themselves with this absurd problem of whether windows should have sash bars, or be this or that shape. Town planners tended to slide past this by saying "we are very good to very good architects." But never had he had anything but trouble, and never had he had any helpful contribution, from town planners.

End the Private Political Game!

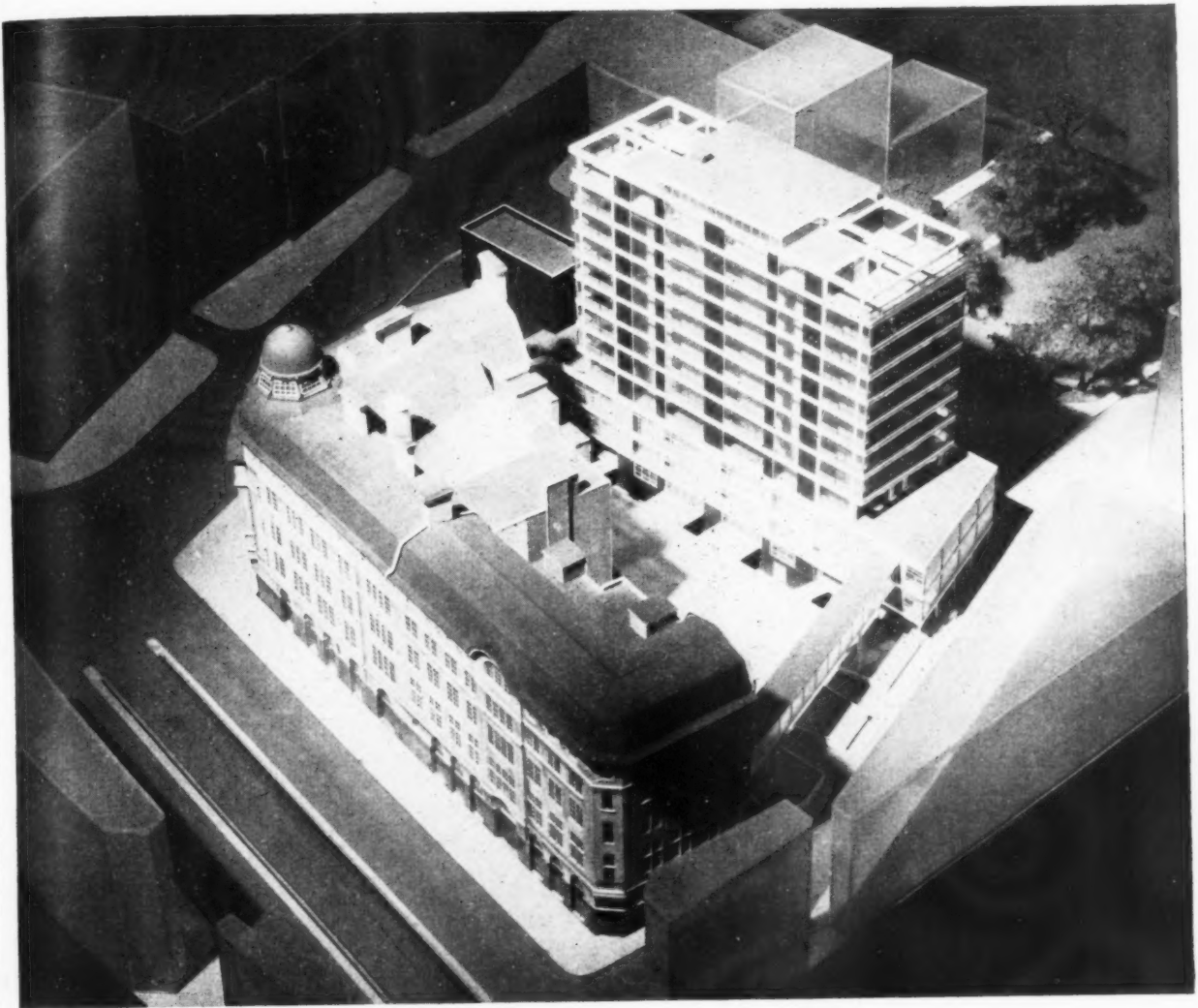
If there was any outcome of this meeting, it should be to agree that town planning control of elevations had failed. If the RIBA would allow some representation from its members, and not make this a private little political game between the town planners, the City Architects and various vested interests, then we might get somewhere.

REYNER BANHAM, the last speaker, advised the meeting, as one who was not an architect but well disposed towards them, that if they wanted to get this thing through, they would have to think of a better way of presenting it. To a lay ear listening from the floor it sounded like just another internal sectarian squabble in a trade union—and that was very largely what it was.

A Disappointing Shouting Match

J. M. RICHARDS expressed his disappointment, as chairman, that the meeting had become a shouting match between architects and planners, because they were all really trying to do the same job. But the planners were not trying quite so hard as the architects. Somehow planning had ceased to be creative activity, and planning, if it was to mean anything at all, had to be a positive thing with the job of organizing order out of chaos. It had got into the position that it was merely one of the obstacles that had got to be overcome if anything creative was to be done. If we could get planning back on the rails, and get planners who felt they were creative individuals, the differences between architects and planners would melt away. The last thing we wanted was a quarrel between the two on the quite irrelevant grounds of taste. He was also rather horrified by all the talk about the need to control advertisements. What was wrong with advertisements, except in certain places? He was not sure that even the advertisements that lined the main road from Verona to Venice did not represent the kind of vitality we were looking for. He had an uneasy feeling, when architects talked in a superior way about things that should be controlled, that they were simply in favour of the things being controlled which they were not asked to design. He was on the side of abolishing all controls except those that were necessary for regulating such things as the use of land. Otherwise, we had to accept and respect the elements with which we were faced, even including the speculative builder and the advertiser. And there the meeting ended, after a brief reply by Lionel Brett, who pleaded with the architects to realize that planning was on the side of life.

NEW LCC EDUCATIONAL BUILDINGS



The building projects illustrated on this and the following page show the increasing variety of buildings now being designed by the schools division of the LCC Architect's Department (Architect to the Council, Hubert Bennett; Deputy Architect, F. G. West; Schools Architect, Michael Powell; Deputy, G. F. Horsfall). The model above shows the remodeling and extension of the Central School of Arts and Crafts on a small 0.72 acre site in Southampton Row, another view of which is seen, left, from the north side of Theobald's Road. The accommodation for the Central School, and accommodation

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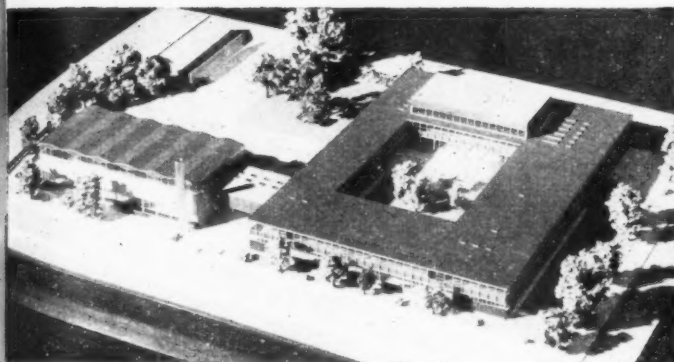
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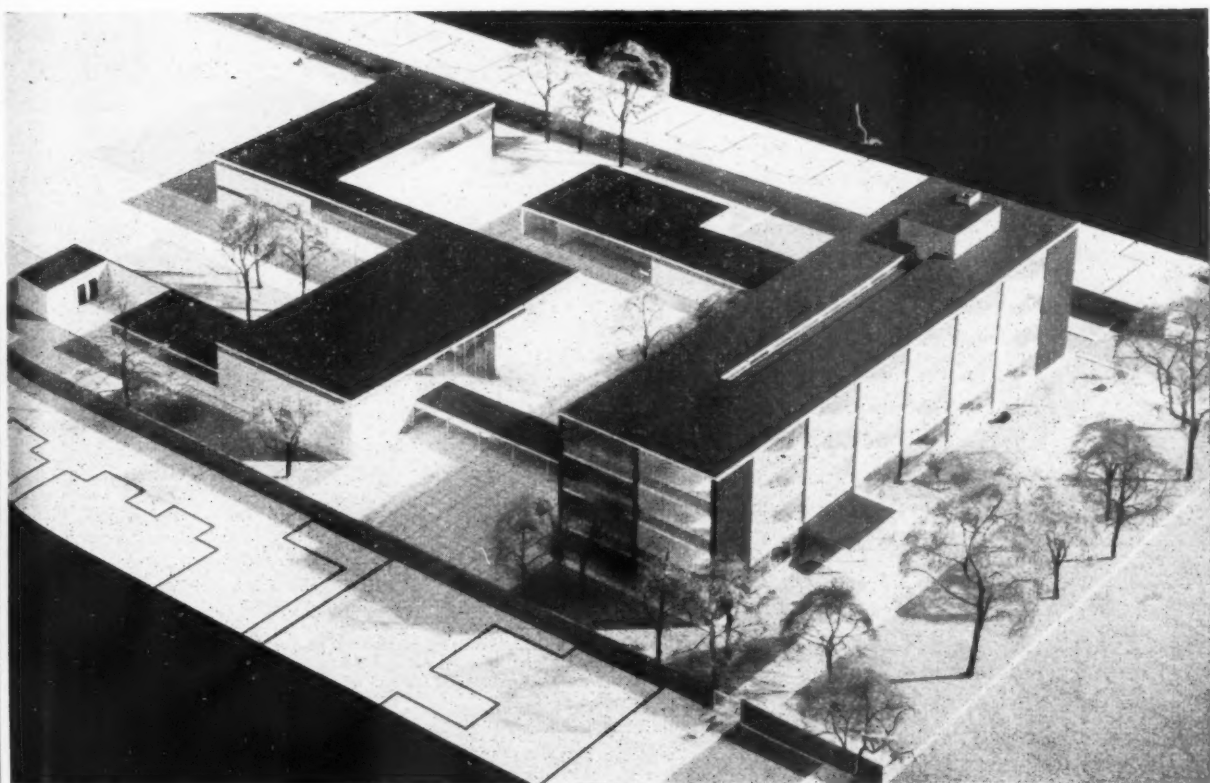
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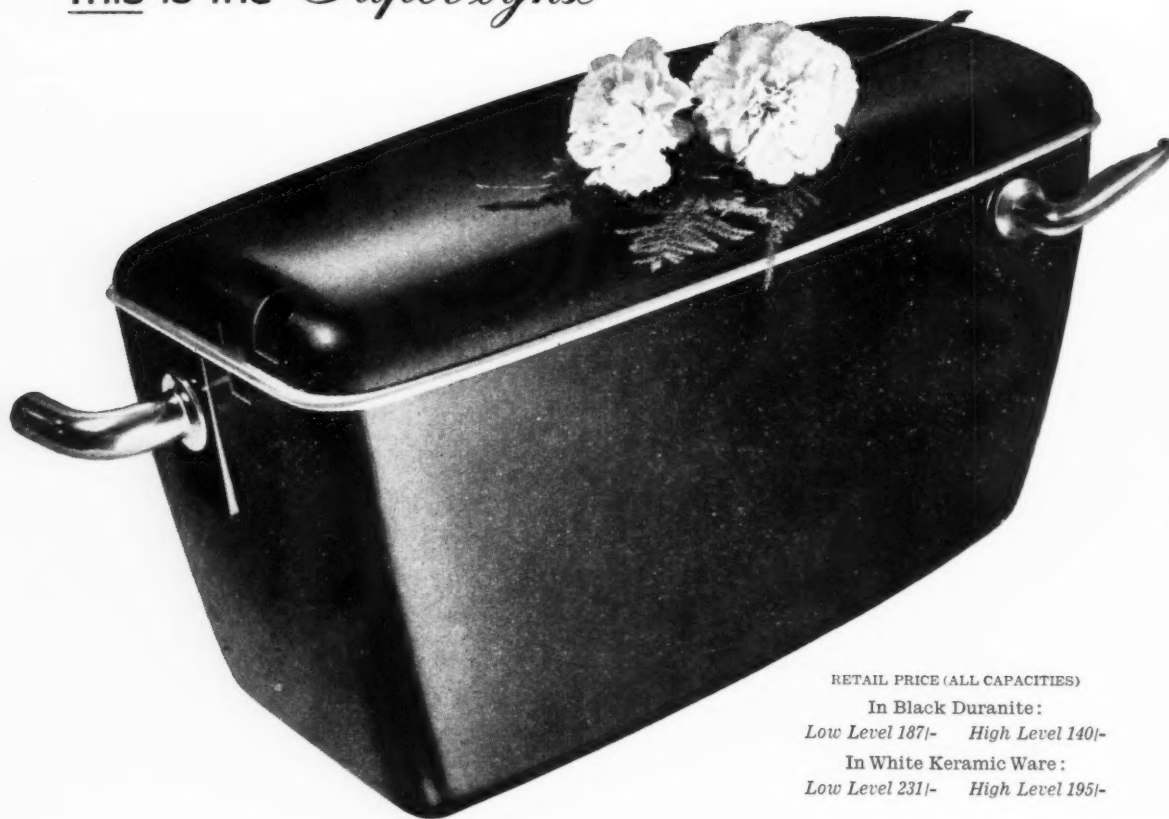
NEW LCC EDUCATIONAL BUILDINGS: continued



common to both colleges, will be provided in the lower five storeys of a 12-storey block fronting Red Lion Square with a 380-seat theatre sited at the north end. This block, seen left from Red Lion Square, is linked to the existing building by two totally enclosed bridges. The main accommodation for Princeton College rises seven storeys higher, served by lifts from the Princeton College entrance hall in Red Lion Square. The main entrance to the Central School remains in its present position at the corner of Theobalds Road and Southampton Row. The model, below left, is of new buildings for the Brixton Day College, replacing most of the existing buildings but retaining some trees and an internal garden. The aim has been to combine the feeling of lightness and air of a modern building with the traditional atmosphere of the collegiate quadrangle. Below: a model of the first stage of Clapham County College. Here, too, the aim has been to create an intimate college atmosphere, screening the unattractive houses on the north and south boundaries by disposing the buildings to form internal courtyards, and giving the main 4-storey block a fine view over Clapham Common. The architects in charge are, Central School, R. S. Skilling; Brixton Day College, B. A. LeMare; Clapham County College, J. G. H. D. Cairns.



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Introduced several months ago, the 'Super-lynx' has been enthusiastically received by architects, builders and plumbers. Not only because it is super-efficient, not only because it is super-smart, but also because it is guaranteed for 5 years. Inside and out the 'Super-lynx' really is an outstanding job—one which you will be pleased to specify for initial installation or for replacement. High and low level models are available in extra high gloss black Duranite and white Ceramic ware. The low level model has gold-lustre beading, operating lever and flush pipe. The high level model has a gold-lustre lever mechanism and beading, and chain with coloured acrylic handle. Matching flush pipe for the high level model can be supplied at extra cost. The 'Super-lynx' is fitted with the rustless, unbreakable, silent flush-at-a-touch 'Kingfisher' syphon mechanism. Powerful flush syphon to B.S.S. 1125 and water works specifications. Capacities 2, 2½ and 3 gallons.

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W.C. Suites. Full details and trade terms from: **Division A, Shires & Co. (London) Limited, Greenbottom Works, Guiseley, Yorks.** (Also at London, Stoke, Birmingham & Glasgow).

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DUBLIN NEWS LETTER

By Niall Montgomery

In the writer's youth, when tram predictably followed horse, a proposal for the separation of Ireland was put forward in a student magazine of which the owner-editor-publisher and staff, unlike the magazine, is still, to his disadvantage, alive. Divers were to get down on to the continental shelf and to play their blow-lamps on the roots, thus allowing the entire tray of priceless peat, trout, Guinness, racehorses and playwrights to float out into the Atlantic. In the second part of the proposal, Ireland, with millions of out-board motors mounted on the edges, was to become a fully-licensed pleasure-dome and speed trials were envisaged having as their object the creation of tidal waves aimed at the occasional engulfment of (a) England, (b) the United States of America. Part One is a great success: sea, just now, is what Ireland is at nothing else—but certainly not architecture.

Early this year there was that game of most unmusical chairs, a General Election; old familiar faces have been replaced by old familiar faces and there is a new progressive policy, best summed up in the words: "My father made your yoke heavy, and I will add to your yoke." Whip-happy, scorpion-haunted, the natives mounted a Festival in May. Plays by Yeats, Synge, O'Casey were ensconced, imported Milanese gave us the Heeneys, (Pooch and Ross), the miraculous Jean Vilar and his Chaillot-based Theatre National Populaire put on Balzac's Waiting for Godeau, *Le Faiseur*. Nothing was spared—unscheduled entertainments were (1) withdrawal of the food subsidies, (2) minor bread riots, (3) the clocking, at an official garden party, of a playwright by a hotel manager and (4) the arrest of one of the Festival producers on a charge of producing for profit a play alleged to be indecent, Mr. T. Williams's *The Rose Tattoo*.

Architecture? The word "hospital" is not now spoken aloud; tower-cranes shiver in builders' deserted yards, empty beds yawn in immaculate wards, architects in ditto offices. Health has reared its ugly head for good and all, there has even been talk of a nation-wide hunger-strike—for purely dietetic reasons.

Such architecture as is almost secretly practised is in the design and erection of office buildings. A site running from the corner of Fitzwilliam Square down Pembroke Street—all in the eighteenth century area which various bodies have asked the Corporation to preserve—is being thus developed. The design has been created by Professor Desmond FitzGerald and the

Index to the AJ's cost analyses

Here is an index to the cost analyses which have been published in the JOURNAL since the first one appeared on February 24, 1955. Under each of the main headings the buildings are listed in order of appearance.

Type of building	Architect	Date published
Churches		
Coventry	Lavender, Twentyman and Percy	30.5.57
Factory buildings		
Factories and Offices (Hilmer), Industrial area, Stevenage New Town, Herts.	D. P. Reay and L. G. Vincent	31.3.55
Standard Telephones Factory, Edinburgh Way, Harlow, Essex	Frederick Gibberd and Victor Hamnett	26.5.55
Peterlee Industrial Estate, Durham. (Jeremiah Ambler Mills)	Sir William Holford and Partners	15.9.55
Silentbloc Factory, Manor Royal, Crawley, Sussex	J. M. Austin-Smith and Partners	6.10.55
Wallisdown Road, Poole, Dorset	Farmer and Dark	17.5.56
Warehouse and Processing building, Witham, Essex.	Chamberlin, Powell and Bon	14.6.56
British Tabulating Machine Co., Stevenage, Herts.	L. G. Vincent	6.9.56
Paint Factory, Hemel Hempstead, Herts.	Ove Arup and Partners	20.12.56
Corset Factory, Shrewsbury	W. Marmorek and L. Weaver	24.1.57
Boiler House, MAFF Research Inst., Pirbright, Surrey	Westwood, Sons and Harrison	14.3.57
Warehouse and offices, Nottingham	J. M. Austin-Smith and Partners	18.4.57
Warehouse and offices, for Heinz, Cardiff	Grenfell Baines and Hargreaves	28.3.57
Allen and Hanburys Ltd. Ware, Herts.	Dunham, Widdup and Harrison	23.5.57
Universal Grinding Wheel Co. Ltd., at Stafford	Edward D. Mills and Partners	13.6.57
Health buildings		
Vale of Leven Hospital, Alexandria, Dumbartonshire	J. L. Gleave (John Keppie and Henderson and Gleave)	3.11.55
Gooseacre, Health Centre, Welwyn Garden City, Herts.	C. H. Aslin, County Architect	2.2.56
Admission Unit, Fairmile Hospital, Wallingford, Berks.	Powell and Moya	19.4.56
Radiotherapy Department, Edinburgh	John Holt	27.12.56
Houses (private)		
West Mersea, Nr. Colchester, Essex	Richard Finch	30.6.55
Hertingfordbury, Herts.	G. Woodward	19.7.56
Digswell, Welwyn, Herts.	M. Lee	30.8.56
House conversion, Scarborough, Yorks	J. G. L. Poulson	10.1.57
Housing (multi-storey)		
Osnaburgh Street, Regent's Park, N.W.1	Davies and Arnold	29.12.55
Fitzhugh Estate, Wandsworth	J. L. Martin, LCC Architect	29.11.56
Maisonettes	Study by R. O. Whittington	26.7.56
Laboratories		
Hostel and Laboratories, Institute of Horticulture, Pershore, Worcestershire	Richard Sheppard & Partners	26.4.56
Television Laboratories, Enfield, Middlesex	G. A. Jellicoe	15.11.56
Petroleum Laboratories, Egham, Surrey	P. A. Cranswick	14.2.57
I.C.I. Welwyn Garden City, Herts.	E. D. Jefferiss Mathews	25.4.57
Markets		
Cattle Market, St. Oswald's Road, Gloucester	J. V. Wall, City Architect	3.5.56

Continued on page 174

HOPE'S WINDOW WALLING

FOUR METHODS providing scope for varied design



1 WINDOGRID

Basic verticals are standard rolled steel flats capped by 'top hat' section in extruded aluminium. Ideal where an unbroken flat surface is wanted. Casements, infilling panels and double glazing can be introduced as required.



2 PRESSED METAL

Infinitely adaptable, the main verticals and horizontals can be formed to any practical profile. Depth of projection and width of main members may be varied to provide elevational relief. All types of casements, infilling panels and double glazing can be accommodated.



3 LOK'D BAR SASH

Galvanized steel window units coupled together with appropriate mullions and transoms: an economical form of window walling for modules up to 4' 0".



4 PATENT GLAZING

A useful form of window walling for industrial buildings. Maintenance costs negligible.

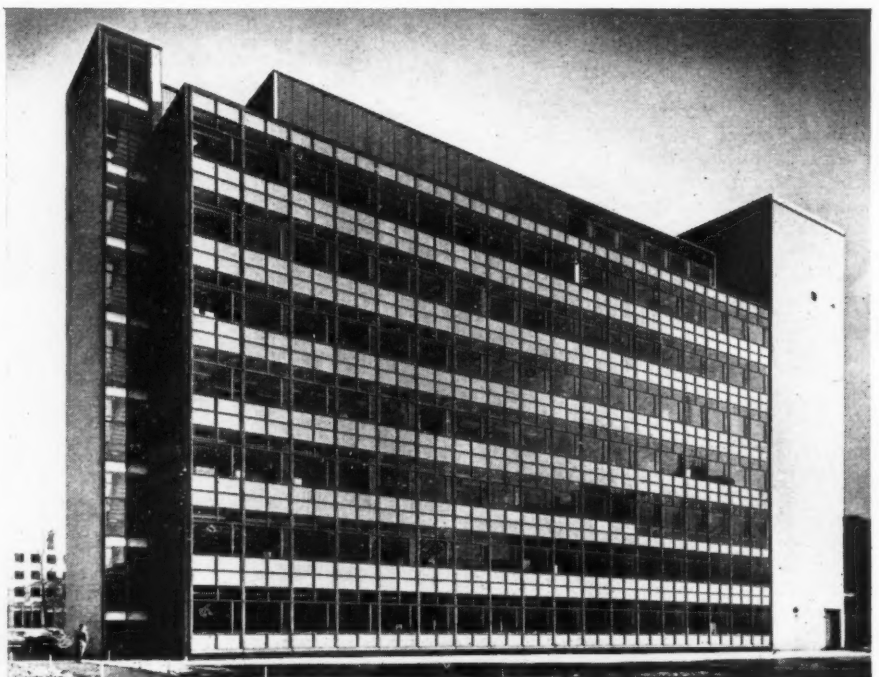
Module: usually 2' 0"
Span: up to 10' 0"

ALL FOUR METHODS NOW ON VIEW AT THE BUILDING CENTRE, LONDON, W.1

The photograph illustrates one of HOPE'S Window Walls 91' 0" high and 162' 0" long which was assembled from 126 separate units of specially designed Pressed Steel Sub-frames containing casements and insulated panels. The south elevation is similar in all respects.


North Elevation of JOHN THOMPSON DORRANCE LABORATORY OF BIOLOGY & FOOD TECHNOLOGY, MASSACHUSETTS, INSTITUTE OF TECHNOLOGY, CAMBRIDGE, MASSACHUSETTS.

Anderson & Beckwith Architects



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MEMBER OF THE METAL  WINDOW ASSOCIATION

Dublin News Letter continued from page 173

Government-sponsored Arts Council have approved his specification of imported hand-made bricks for the job. Thus will the beauty of the square be preserved, while at the same time a shrewd kick in the teeth is issued to local brick-making and block-making interests. The merchandise manufactured by the consortium for whom the offices are being built is, need one add, cement.

People who deplore effects created by the Irish with gunpowder simply haven't seen what has been done here with cement, water and a few grains of sand. Water, the quality that makes one insular, is, as Philibert de l'Orme says, the Sarpego and Sciatica of architecture. Plasterers do not agree. Their Society has banned the spraying of acoustic plaster on to new walls which have not first been rendered, floated and set, promises to close down all buildings served up without such mayonnaise. It is a pathetic ukase: Time's finger is on the wet trades—any day now the knitting women will be counting them into the dehydrating plants.

But, wet or fine, the Transport Workers too must have new offices, where but on the waterfront, between the overhead railway bridge and O'Connell Bridge: newspaper photographs of the model show a tall Mies-er-able tower of purest ivory. It should look well beside the Custom house, for the railway too has been handed over to the knitting women, its rolling stock are numbered, its bridges shall be brought down, the river's mouth shall once again be seen, hallelujah.

And, speaking of mouths, a representative in a parliament in the United States of America complained that the location proposed for his country's new offices at Dublin is a slum. Poor whites in the Tobacco Road he refers to, Ballsbridge, mostly have telephones, built-in motor cars, fitted overdrafts, carpets, skirts, etc., which latter they gather about their ankles at the thought of the new neighbour, Ambassador Scott McLeod, shortly to arrive for the hunting season—witches please note. Mr. Johannsen is to design the Embassy.

And, speaking of foreigners, the Arts Council—see above—paid for an exhibition, called *Eglises de France Reconstituées* which was shown at the Royal College of Maynooth in June and July. Maynooth, a constituent college of the National University, is the centre of Roman Catholic Episcopal government. The ugliness of most of the churches built in Ireland recently is terrifying: those who did not go wondered if the French had anything worse to show? Those who did didn't.

A government commission is enquiring into the effects of the great plague, income tax, and there is perhaps a possibility that an expenditure tax may replace it. The admiring citizen realizes that the government has its ear to ground, fears only the zeal which may drag the entire head under the sand with consequent familiar epiphany of a parliamentary Rump.

Cost analyses published in the Architects' Journal continued

Type of building	Architect	Date published
Offices		
Wallisdown Road, Poole, Dorset	Farmer and Dark	10.3.55
Industrial Area, Stevenage, Herts	D. P. Reay and L. G. Vincent	31.3.55
Edgware Road, Hendon, N.W.9	Walter and Eva Segal	28.7.55
Chiswell Street, E.C.1	Handiside and Taylor	21.6.56
Dock Labour Board, S.E.1	Frederick Gibberd	18.10.56
		25.10.56
Hypothetical office building	Stillman and Eastwick-Field	24.1.57
		25.4.57
Offices and warehouse, Nottingham	J. M. Austin-Smith & Partners	18.4.57
Public buildings		
Police Headquarters, Talbot Road, Stretford, Manchester	G. Noel Hill, County Architect	5.5.55
Church Hall, Chessington, Surrey	Kenneth Wood	11.8.55
Community Hall, Roe Green, Hatfield	Lionel Brett and Kenneth Boyd	1.9.55
Police Headquarters, Wellington	C. H. Simmons, County Architect	1.11.56
Fire and Ambulance Station, Slough, Bucks	F. B. Pooley, County Architect	31.1.57
Police Headquarters in Earl's Court Road, W.8	J. I. Elliott	9.5.57
Fire station at Gloucester	J. V. Wall, City Architect	18.7.57
Public library at Beaconsfield, Bucks.	F. B. Pooley, County Architect	25.7.57
Schools (assembly halls)		
Great Offley, Herts.	Woodroffe, Buchanan and Coulter	7.6.56
Gymnasium at Bedford College, Bedford	S. V. Goodman County Architect	10.1.57
Schools (primary)		
Sugar Hill, Newton Aycliffe, Co. Durham	Grenfell Baines and Hargreaves	29.9.55
South Bolton Gardens, S.W.5	Chamberlin, Powell and Bon	13.9.56
Crawley, Sussex	Woodroffe, Buchanan and Coulter	5.4.56 and 24.5.56
Ladyloan Avenue, Glasgow	A. Buchanan-Campbell	30.8.56
Stevenage, Herts	Samuel Morrison and Partners and C. H. Aslin, County Architect	18.10.56
Hackenthorpe, Derbyshire	Samuel Morrison and Partners and F. H. Crossley, County Architect	18.10.56
Church of England, Bexhill, Sussex	Hilton and J. M. Wright	14.3.57
Alderman's Green, Coventry	Architects' Co-Partnership	2.5.57
Schools (secondary)		
Barnet Lane, Barnet, Herts.	C. H. Aslin, County Architect	24.2.55
Remington Road, Parsons Cross, Sheffield	Basil Spence and Partners	24.3.55
Durrington on Sea, Worthing	Architects and Building Branch MOE	4.8.55
Bellingham Road, Catford, S.E.6	J. L. Martin, LCC Architect	25.8.55
Burleigh School, Wellfield Road, Hatfield	Architects' Co-Partnership	8.9.55
Broad Lane, Coventry	Architects' and Building Branch, MOE	13.10.55
Herne Bay, Kent	Lyons, Israel and Ellis	24.11.55
The Parks, Bargate Road, S. Belper, Derbyshire	Architects and Building Branch, MOE	15.12.55
Mayfield (Comprehensive), Putney	Powell and Moya	2.8.56
Abbey Road (Comprehensive), Coventry	A. G. Ling, City Architect	28.2.57
Lyng Hall (Comprehensive), Coventry	Architects and Building Branch, MOE	28.2.57
Shops		
Shops and maisonettes, Basildon, Essex	Noel Tweddell	8.11.56
Department Store, Southampton	Yorke, Rosenberg and Mardall	6.12.56
Shops and maisonettes, Coventry	A. G. Ling, City Architect	21.2.57
Department Store, Portsmouth	T. P. Bennett & Son	13.9.56
Technical colleges		
Miskin Road, Dartford, Kent	E. T. Ashley Smith, County Architect	28.4.55
Transport buildings		
Potters Bar Railway Station, Middlesex (rebuilding)	M. M. Powell and R. T. Walters (British Railways)	8.12.55
Airport, Edinburgh	R. H. Matthew	5.7.56
Garage and showroom, Aylesbury, Bucks	Wallis, Gilbert and Partners	11.4.57



Wadsworth Passenger Lifts are running on mercury - vapour

An electronically-controlled mercury-vapour rectifier replaces the motor-generator set as a winding motor power source for the latest Wadsworth 'Static' variable-voltage lifts.

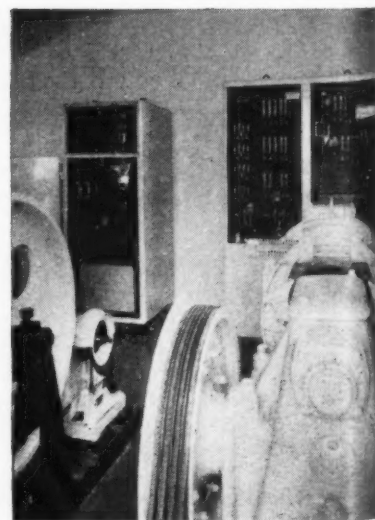
Static V.V. eliminates the installation and maintenance costs of continuously running machinery; precise electronic control gives swift smooth acceleration and accurate approach to the floor.

An entirely British development, Wadsworth Static V.V. has been chosen for office buildings, technical colleges, concert halls and luxury flats, on the basis of its outstanding performance, modest installation requirements, and overall economy, both in this country and overseas. Making lighter demands on control gear than any other drive, a number have also been supplied for heavy duty industrial applications.

'Generator-less' V.V. deserves your investigation. Technical information is available.



In the machine-room illustrated, the rectifier cubicle can be seen on the left. The arc between graphite electrodes and a pool of mercury in an evacuated vessel possesses rectifying properties, and the static mercury-arc rectifier has replaced rotating machinery in many applications, converting a.c. to d.c. with smaller power loss and greater reliability. For lift drive the d.c. voltage supplied to the lift motor is controlled electronically, using rectifiers incorporating auxiliary electrodes. Several features of Wadsworth rectifier drive are protected by patent.



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THE INDUSTRY

This week Brian Grant reports on glass-fibre sinks and baths, a new range of taps with plastic handles, a fuseboard and a small, pneumatic door closer.

GLASS FIBRE SINKS AND BATHS

Glass-fibre reinforced laminated plastic sink units and baths are now being made by Wemyss Woodhouse Ltd. The material has, of course, considerable structural strength and is at the same time sufficiently resilient to keep breakages of crockery to a minimum, while the low thermal conductivity of the material keeps the washing-up water hot for a longer time. Combined sink and draining board units are made in various sizes from 34 in. by 14 in. at £4 19s. 6d. to a large unit with a double bowl and a double drainer, measuring 84 in. by 21 in., at a price of £29 4s. Installation in existing buildings is particularly easy as the material is easily cut with a hacksaw or drilled with an ordinary hand drill. Existing pipe runs can therefore be easily accommodated and if taps are wrongly placed for the standard holes in the sink the units can be supplied without holes and the necessary cutting done during installation. (Wemyss Woodhouse Ltd., Talbot Road, Rickmansworth, Herts.)

PLASTICS HANDLED TAPS

Designed by John Barnes, F.S.I.A., the new Coronet range of taps has melamine plastic tops produced in seven standard colours as well as black and white. Half-inch taps are available for basins and for sinks and there is a three-quarter-inch version for use with baths. The illustration shows the bib model for sinks, the other two being of the usual pillar type. (Everead & Co. Ltd., Surrey Works, Smethwick 40, Staffs.)

DISTRIBUTION FUSEBOARDS

During the last few years the manufacturers of electrical gear have made a point of easy wiring, and have allowed a reasonable amount of space inside boxes and switches. It is still true to say, however, that the

average electrician needs double length fingers with two extra universal joints, for although more space is a good thing, there is still not always enough for really easy working. The new Sandaline range of fuseboards provides the most sensible answer yet to this problem. As the photograph shows, the backplate has keyhole slots, and only the top and bottom plates are in position while the wiring is being carried out, so access is almost unrestricted. When wiring is complete a box-shaped aluminium door and frame is screwed to the top and bottom plates; one of those simple ideas which becomes glaringly obvious as soon as someone does it.

The boxes can be supplied with either rewirable or cartridge fuses, and in sizes up to 12 ways triple pole and neutral. (Wm. Sanders & Co. (Wednesbury), Ltd., Falcon Electrical Works, Ridding Lane Wednesbury, Staffs)

SMALL DOOR CLOSER

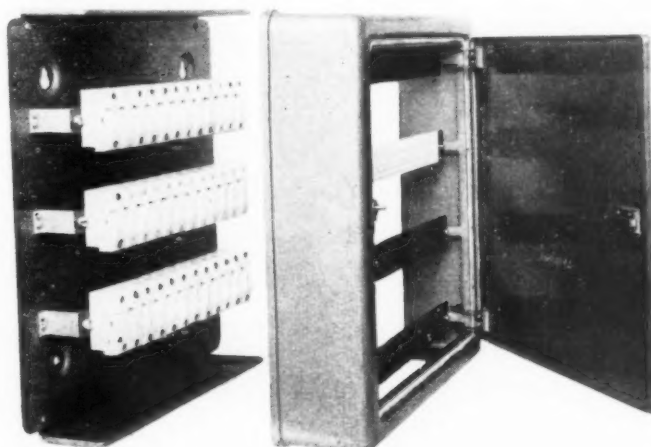
Some considerable time ago I was sent a sample of the Robel Standard door closer, a small pneumatic model which seems most suitable for domestic work. Some eighteen months ago I fitted it to the door of my kitchen, where, at a very rough estimate, it must be used between 30 and 40 times a day. With the average pneumatic closer one expects to have to do a certain amount of fiddling with the adjustment, but the Robel has been untouched since



One of the new Coronet taps, with melamine plastic handles.

November '55 and the closing speed seems to be exactly what it was. A further advantage is that there is a sliding stop, fixed with a thumbscrew, which allows the door to be locked in any open position and makes life simpler when two hands are needed for trays and suchlike. The fitting is a neat and inconspicuous piece of design, and at a price of 37s. it seems exceptionally good value. (Robel Products Ltd., 25 New Walk, Leicester)

The Sandaline distribution fuseboard.





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INFORMATION
CENTRE

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

7.60 practice
MODEL-MAKING

The Modern Architectural Model. T. W. Hendrick, FRSA. (Architectural Press Ltd. 16s.)

As two-dimensional elevations of modern buildings become more and more meaningless to the layman, architects are relying increasingly on models for presentation. A book on the subject of model-making for architects is therefore to be welcomed. Mr. Hendrick's book deserves a special welcome: it is delightful to read, it contains a mass of information on little-known materials and techniques, often borrowed from other trades and professions such as the shoe industry and dentistry, and there is a comprehensive list of suppliers. It should find a place on the bookshelf of every architect who is interested in this subject.

There are only two serious omissions. The first is that no mention is made of the economics of model-making. Models made outside the architect's office by professionals are expensive, usually prohibitively so. Even when made inside the office the process is far more expensive in time than is generally recognized, and some guidance on this would be appreciated. This is linked with the second point, which is that the manner of constructing model buildings (as distinct from baseboards, etc.) advocated by the author is often unnecessarily solid and expensive. It involves an "armature" of $\frac{1}{4}$ -in. plywood and 1-in. square softwood, jointed and glued together, and afterwards clad with card, paper and other materials. This may be justified for "exhibition" models which will be subject to great wear and tear, but for small models, for convincing the average client, good results can be obtained using only card and balsa wood in stressed-skin

form, as basic structure—a technique now developed to perfection in our better architectural schools and possibly evolved from that of making model aircraft.

9.62 design: general
BUILDING MATERIALS IN ASIA

Survey of Housing and Building Materials in Asia and the Far East, 1956, United Nations Economic Commission for Asia and the Far East, Bangkok 1956. (HMSO. 9s.) Two questions arise in connection with all architectural tasks in the tropics:

1. Have tropical countries different materials?
2. Do our known materials behave differently under tropical conditions?

The answer to both questions is "yes." We know that the range of materials is usually smaller, and that it includes unfamiliar items such as laterite or bamboo. We know also that extreme changes in humidity, fungi, termites and other pests, long periods of intensive sunlight, and the acceleration of chemical processes through the combined action of heat and moisture, subject materials to stresses unknown in Europe. That is as far as our knowledge goes, at least our book-knowledge. Building research has had a late start in the tropics, and the list of publications on materials is meagre.

The UN has taken an important step to improve this situation by the publication of a *Survey of Housing and Building Materials in Asia and the Far East*. It deals with the first of our two questions, and touches also the second.

The first part of the UN publication presents a general review of the building material situation, part of it in form of a table. Architects will find this table (pp. 5 to 127) most useful for quick reference. Materials are grouped according to their use in rural or urban areas (or in both) and according to the frequency of their application in the arid or humid regions of Asia. This grouping illustrates strikingly how much the use of building materials is governed by climate. Organic materials, timber, bamboo, thatch, and matting predominate in the warm/humid regions of Asia, while the hot/dry, arid zones are confined to unorganic materials such as stone, mud, or concrete. In the Monsoon regions where eight or nine dry months are followed by three or four of intense rains and high humidity, builders use combinations of organic and unorganic materials. The UN survey rightly links building and housing methods to the ratio of forest areas to populations (Table I). Timber, bamboo, and other organic materials can be considered as "the natural and predominant building materials," if the forest areas of a region exceed about $1\frac{1}{4}$ acre per head.

Part II of the survey contains summaries of the situation in nineteen Asian Countries. These summaries form the bulk of the book. Each begins with a short paragraph of general information on the country and its people. This is followed by lists of common materials and in many cases by bills

of quantities (with prices) for typical small houses. In the summaries for the technically more advanced countries, manufactured building materials and components, their raw materials, uses, and distribution are discussed. The Indian summary contains *inter alia* an excellent and concise essay on the Indian bamboo resources, and on their use as building materials. There are some forty illustrations of house types (including inevitably three from Chandigarh roofs, bamboo and palm leaf mats, wall construction methods, indigenous brick and lime kilns and the like. There are three useful appendices, but surprisingly, no index. Even without it, this is a most useful reference book. A plea to the UN is recorded to give us similar surveys for other parts of our tropical world.

10.159 design: building types
SCHOOL KITCHENS

Design of School Kitchens. Amendment No. 1 to MOE Building Bulletin No. 11. (HMSO. 4d.)

This is a revised version of Appendix 2 of the original Bulletin which gives a table of equipment, storage and staff accommodation. Whereas the old table gave slightly different figures for Primary and Secondary schools (apparently on the basis that secondary school children eat just that much more), the new lumps both together and applies the secondary school figures to both. There are also a few differences in the notes, the chief of which is that the family dining organisation with 6 children to a table has proved too expensive and the Ministry now plans for 8 children to a table.

23.226 heating and ventilation
FUEL STORES

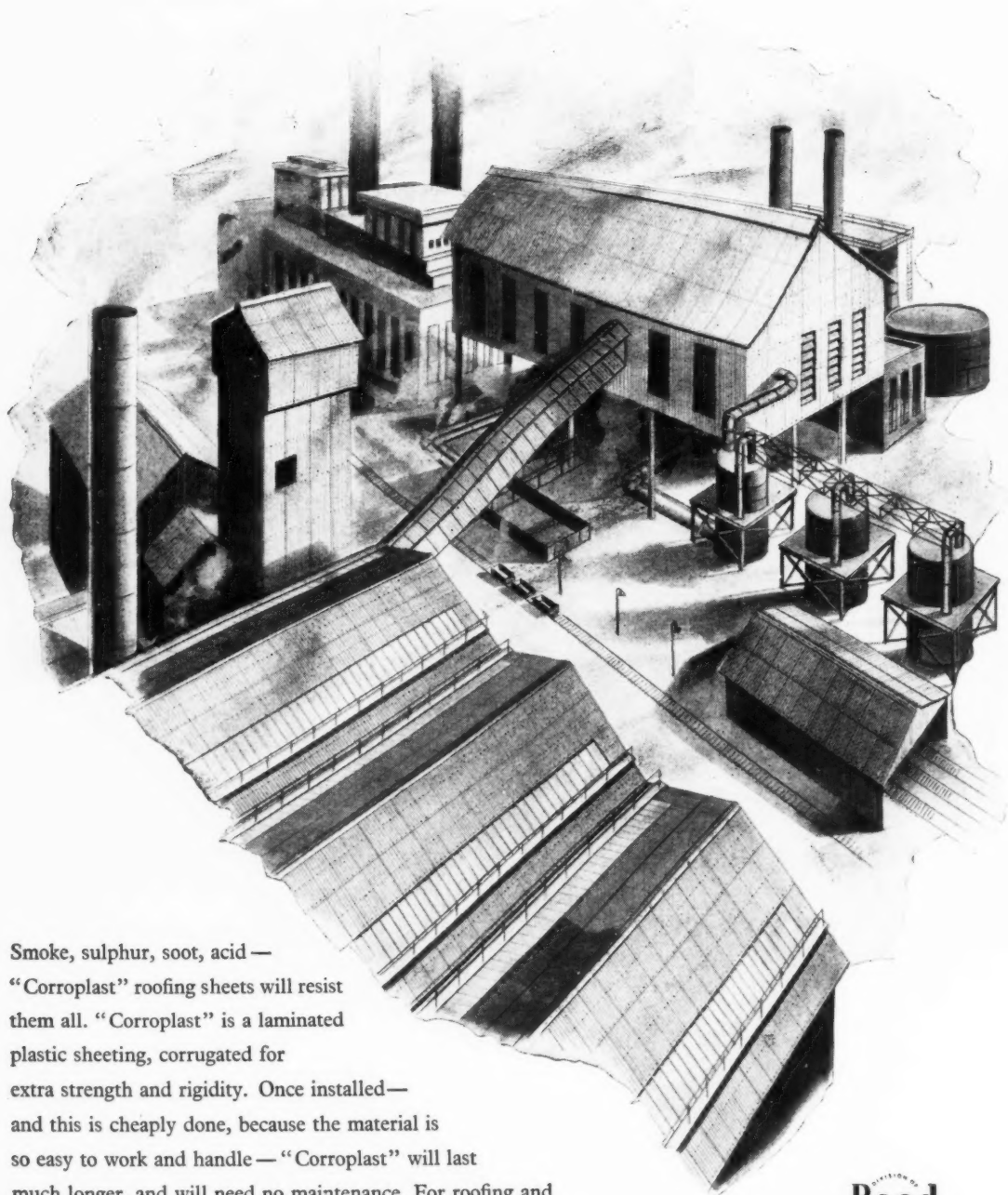
The delivery and Storage of Solid Fuel in Flats. (Coal Utilisation Council, 3, Upper Belgrave Street, S.W.1 and Institute of Housing, 50 Tufton Street, S.W.1. Free.)

Though architects may feel that flats and heating by solid fuel are incompatible, they must recognize that the decision on what fuel to use is often taken out of their hands and that, whatever its disadvantages, solid fuel is still the cheapest method of providing a given amount of heat in a given space. The problem of storing fuel has become more acute with the transference to smokeless fuels (which are more bulky) and with the tendency to build higher. For this reason the London Regional Committee of the CUC and the London Branch of the Institute of Housing set up a Joint Committee to investigate, and this Report is the outcome. Among the more interesting points made are that the minimum storage should be for 6 cwt. of coke or four weeks' supply, whichever is the greater, and that stores should be of the bin, not the walk-in type, with a 2 ft. by 2 ft. delivery hatch (to permit the insertion of the whole mouth of the sack and thus a level fill), the sill of the delivery hatch being not lower than 4 ft. 6 in. from the floor (to give the maximum storage space).

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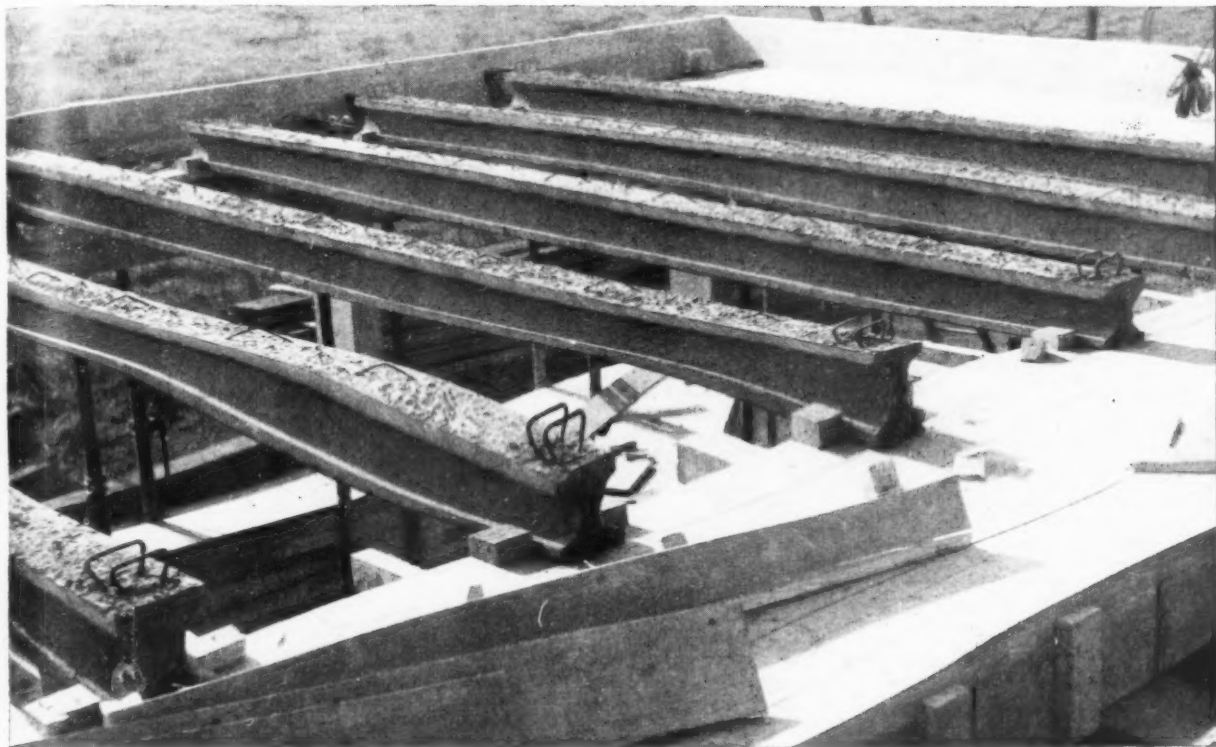
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C.3

technical section

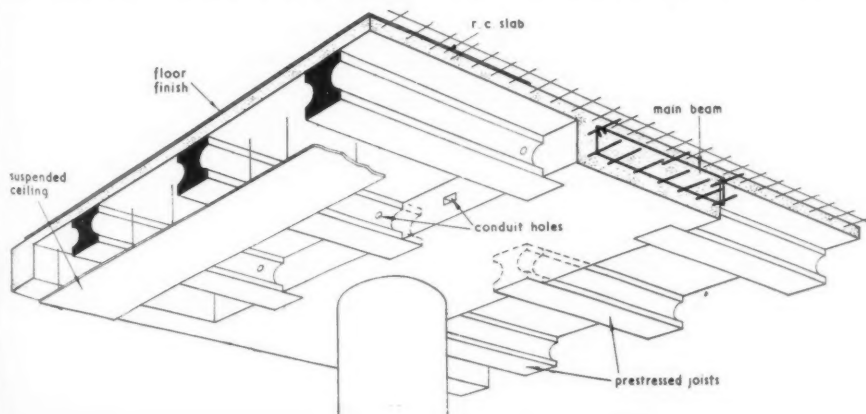
SHALLOW BEAM CONSTRUCTION WITH PRESTRESSED BEAM UNITS



In the design of multi-storey office blocks the demand for structural systems of the flat slab type is making itself felt, and a number of manufacturers of proprietary systems have made attempts to meet it. The illustrations on this page show such a system, which has been designed by C. J. Pell & Partners, consulting engineers for the construction of Regina House, a ten-storey office building in Edgware Road. It makes use of Pierhead precast prestressed beam units, bearing on in-situ reinforced-concrete beams of a depth equal to the combined depth of the units and structural topping. Pierhead Ltd. have developed the system for general use. The drawing below, shows the general arrangement of main beams, pre-stressed units, and structural topping. The detailing of the junction

between the prestressed units and the main beam has been given particular attention, and continuity of reinforcement is achieved by means of stirrups protruding from the upper surface of the units. These are visible in the photograph, above, which shows the ends of the units placed in position on the shuttering of the main beams. The length of the spans in each direction depends to a great extent on the general layout, as each bay is considerably affected by the bays adjacent. A typical size of bay for a 10-in. deep floor, however, is 20 ft. by 25 ft.; these spans may be increased by up to 5 ft. for a 12-in. deep floor. Advantages of the system are said to be simpler and quicker shuttering, freedom of partition layout, easy service runs, a gain of one storey in ten due to shallow depth,

longer spans and free column spacing. The average weight of a 10-in. deep floor is 60 lb. per sq. ft. A full-size typical bay has been tested to $1\frac{1}{2}$ times the design load and the results found satisfactory.



Isometric diagram of floor showing relationship of precast beams to in-situ beam and slab and the incidence of conduit holes.



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technical section

19 CONSTRUCTION: DETAILS

the corrosion of metals in buildings

On March 21 last, a symposium was held on the corrosion of metals in buildings by the Corrosion Group of the Society of Chemical Industry. We have therefore asked an architect, James Kennedy, to read through the papers and to summarise the parts of them which he felt to be interesting. There were six papers in all. Two of them were general: one on non-ferrous metals by F. E. Jones of BRS, the other on ferrous metals by J. C. Hudson of the British Iron and Steel Research Association and F. Wormwell of the Chemical Research Laboratory. The remaining four were more specific, Philip Halstead of the CCA speaking on the corrosion of metals in contact with concrete, R. W. Bailey and H. G. Ridge of ZDA speaking on Zinc, S. Baker and E. Carr of CDA speaking on Copper, and E. H. Laithwaite and E. W. Skerrey of British Aluminium Co. Ltd. speaking on Aluminium. Though the symposium made little change to the advice given in B.S. CP.231 (1952) and BRS. Digest No. 64 (March, 1954) it added significantly to our knowledge of finishing coats to ferrous metals.

A symposium of this kind is valuable, first, because it provides an opportunity for a gathering together of knowledge, and, second, because it provides an opportunity of checking in what respects our knowledge has increased. Corrosion is not, perhaps, a subject on which spectacular advances are to be expected, and when we come to tot up the balance sheet for this one, we find that the amount of strictly new information is small; nevertheless, in matters to do with maintenance a small detailed change in advice may mean a considerable saving in money.

Corrosion can be caused in a metal by its specific properties (physical and chemical), by stress produced in it during manufacture (or afterwards), by exposure to external or internal atmospheres, by contact with

other building materials, and by contact with water.

Table 1 gives, with the metals arranged in alphabetical order, brief details of their reaction to atmosphere and their resistance to other materials or agents. Whilst Table 2 lists, again but briefly, the reactions of the metals when in direct contact with concrete, together with some notes regarding protective measures when applicable. Both tables have been compiled from statements made in all the papers as, fortunately, facts did not differ and opinions only seldom. In addition to the tables, further remarks are given in the following paragraphs concerning individual metals with some general notes given first.

If the whole structure is kept dry, the fight against corrosion is practically won, as it is damp conditions, no matter from what source, which are the primary reason for failures. Once again in this digest this is mentioned because it cannot be too highly emphasized, and as water cannot be avoided on external surfaces, then it must be got rid of as quickly as possible or the metals fully protected.

Corrosion is often particularly pronounced on sheltered horizontal surfaces, such as under eaves, where the evaporation of condensed moisture is retarded. It is necessary to counter such conditions by the provision of an additional coat of paint, if possible a special water-resistant finishing paint, if the original design does not permit alteration.

It is important to consider all types of exposure and not merely the exposure to external atmosphere, which seems to be the first, and only, thought of by so many people. The analysis of water is a subject all too often neglected by architects and the information, usually so easily obtainable, would help in the correct designing of water systems, both hot and cold, making them trouble-free instead of being the expensive failures they so often are.

Aluminium

Although the youngest of the sheet metals used in cladding, aluminium has advanced far in recent years, in spite of the handicap of having instances of failure in post-war years owing to the fact that aluminium alloy was manufactured from scrap sources with copper in it. Other failures are mainly attributable to the fact that insufficient attention was paid to the type of alloy used for the purpose.

There are many grades and alloys available and the right one must be used for the purpose for which it is intended. Specialist advice is easily obtainable and should be sought as to the grade or alloy to be used. Given effective protection where it is appropriate, and the design properly considered, trouble should be non-existent.

Details of good design include the avoidance of dissimilar metals contacts, crevice conditions (if such are unavoidable, pack with a barium chromate jointing compound or similar) and avoidance of exposed horizontal surfaces. Primary alloys only should be used for structural work.

Whether structural or sheet metal, all fully heat-

technical section

Table. Resistance to corrosion

Metal	Atmospheric resistance	Resistance to other materials or agents
Aluminium	Fairly high, providing that the oxide protective film is maintained but when pollution is high this may not be for long and surface corrosion must be reckoned with.	Good in respect of rainwater but bad when required to take bathroom and kitchen wastes (washing compounds containing soda usually at fault). Can be dangerously low when used in conjunction with some other metals, particularly copper. In Portland cement resistance is moderate only; very low indeed in magnesian and high calcium limes, relatively high in retarded hemihydrate plasters. Resistance lower under wet conditions. Fair against flue gases and smoke except under very severe industrial environments. Certain timbers when wet will set up corrosive action. Protection with bituminous paint is effective.
Copper	Very high, following formation of protective film of basic sulphate or of basic chloride when near the sea.	Requires protection (such as a bituminous preparation) against rainwater made acidic by flowing over slate or tile on which vegetable growth such as algae, moss or lichen is present. And from cedarwood shingles. Foamed cement has caused many failures through presence of ammonia. Flue gases and smoke will attack only under severe conditions. In cement and lime mortar joints, when used as a damp-proof course, only very slightly attacked.
Iron and steel	Low without protective coatings unless under ideally dry conditions.	Low in contact with other metals, in particular copper and galvanised steel owing to electrochemical corrosion. Timber tends to corrode steel and when in contact surfaces of both materials should be painted.
Lead	Very high, following formation of a dense protective film of basic lead carbonate or sulphate.	Requires protection, in same manner, as copper, against acidic rainwater. Acetic acid fumes attack strongly. Coating by paint or separating materials with bitumen felt against wood corrosive action is necessary and in any case timber should be well seasoned and maintained in dry condition. Alkalis of lime and cement attack, particularly under wet conditions, and bitumen protection is important. No accepted rules for different soil conditions so protect pipe thoroughly—safe practice.
Zinc	Fair, owing to fact that protective film of basic zinc carbonate formed is not sufficiently dense to be of real value. Sulphur is main enemy attacking this film and forming soluble zinc sulphate, so in clean atmosphere the resistance is going to be higher and under seaside conditions stands up better than other materials providing that sulphur pollution is not possible. Conditions of high humidity, particularly tropical, set up corrosion in form of white powder.	Requires protection against acidic waters as did copper and lead. Lime, Portland cement mortars and concrete will all slightly affect zinc and bitumen protection is recommended. In same manner salt in bricks must be protected against. High resistance when used as a protective covering to steel; nevertheless a considerably heavier coating than is now ordinarily given seems essential for satisfactory service. Must not be used with copper. Protection needed in conjunction with certain timbers, oak and western red cedar in particular. In soil stands up well except in abnormally acidic or alkaline soils. High resistance reported to industrial gases and fumes.

treated alloys must be painted, after degreasing, using a zinc chromate primer first with the important proviso that it should only be applied under dry conditions. Red lead primers should not be used. Finishing paints recommended include those with a neoprene or bituminous base. In all instances, pretreatment of degreasing and priming is necessary before painting.

Galvanizing, cadmium plating or nickel-chrome plating will all help to resist corrosive action but cannot be relied upon to avoid galvanic effects completely. Steelwork in contact with aluminium (sheeting fixed to mild steel purlins, for example) should be sprayed with aluminium and not zinc, but full precautions against bimetallic contacts should be observed in any case. Particularly must copper and copper-rich alloys be kept from direct contact; insulation to stop the adverse effects can be obtained by using bituminous materials or plastic ones providing that the plastic is of a nature that will not deteriorate. An underlay of inodorous felt or building paper under sheeting is recommended and aluminium alloy nails, screws or bolts only used for fixing. The material should be kept dry in store and contaminated

condensation conditions must be avoided at all costs. In store or in use, damp conditions make electrochemical corrosion more likely to occur.

It is considered false economy to use too thin a sheet as some allowance for initial weathering should be made, with the consequence that 20 s.w.g. has been found to be an economic general-purpose gauge. Not everyone agrees that the appearance of the initial surface weathering is acceptable. As with copper, the material, in form of sheet for cladding purposes, does become work-hardened.

The painting of rain-water goods is not considered necessary by the authors of the paper on aluminium (except in the case of alloy DTD.424 used in severe marine or industrial conditions), but the experience of the Building Research Station suggests that such goods should preferably be painted new, using a chromate primer, rather than allowing surface corrosion, then cleaning and painting. The BRS believe that a better-looking and probably longer-lived paint coating will result.

There seems little doubt that the use of this metal for "curtain walling" and similar purposes is going to increase greatly. If the tone of the paper which con-

technical section

Table 2. Metals in contact with concrete

Metal	Reaction	Remarks
Aluminium	Vigorous in initial stage when mix is wet but gradually lessening to only slight when in dry concrete.	Claim that use of high alumina cement, alleged to be alkali-free, eliminates corrosion. Sheet aluminium when in contact requires bituminous paint protection but solid aluminium requires none.
Copper	Nil.	Only trouble occurs if ammonia is present which sometimes occurs when nitrogenous foaming agents have been used in manufacture of lightweight insulating concrete.
Iron and steel	Nil and in fact relies upon concrete for its protection and will rust if exposed to air and moisture. In damp conditions alone, corrosion will result. Sea water, even with recommended min. 2-in. cover concrete, will affect metal. Electrolytic action, direct not alternating current, does cause corrosion and insulation is necessary.	Seriousness of any corrosive action is stressed because, usually, the metal is load bearing or otherwise constructionally important. Attached members must be protected and by methods which will combat alkaline reaction of adjacent concrete. Clinker aggregates, not permitted in Gt. Britain, are a source of corrosion owing to sulphur content. Calcium chloride, used for hardening and acceleration of settings, should be limited. Other chlorides, sodium-, magnesium- or potassium-, used for increasing strength have no effect on the metal. Anti-corrosive measures in the form of coating for steel include use of dense mortar, cement-containing paints with water-proofing admixtures, slurries of lime and cement with casein or bone glue. Bitumen paint causes lack of bond between steel and concrete. Note that in pre-stressed work it is very important to avoid surface rusting or other corrosion as a greater proportion of the working cross-sectional area is affected.
Lead	Very slight initially but progressively worsens under damp conditions	Protection gained by coating with bitumen.
Zinc	Slight—whether concrete is wet or dry. Protection advisable but not essential. Solid zinc is likely to cause spalling of concrete.	Infrequently used in direct contact although zinc coating is used as protection for steel (see Table 1). Bitumen recommended as simple protective covering for zinc conduit or for sheeting in direct contact with concrete or mortar.

cerned this material in particular is taken as the criterion, then its demand is likely to be phenomenal.

Copper

Copper has a very high corrosion resistance and the familiar green patina (not to be confused with "verdigris") is a protective layer formed by the action of sulphurous fumes in the atmosphere. The first reactions result in a black tarnish layer, due to formation of copper sulphides and oxides, but further changes take place and a basic sulphate is formed in the form of the insoluble green layer on the surface giving complete protection to the copper from the atmosphere. In marine areas the salt helps to produce a basic copper chloride forming the patina in such instances. Artificial patination is seldom satisfactory for large surfaces but can be obtained on small objects.

The more copper is worked the harder and less ductile it becomes, which is one of the reasons that copper sheeting must have adequate support in order that the confined flexing of the sheet, due to expansion and contraction, may prevent fracture by fatigue. Tarred felt, as opposed to inodorous felt, is preferred as an underlay.

The movement which occurs in copper should be allowed for when copper pipes are buried in plaster or cement renderings by wrapping the piping in paper to allow for temperature change movements.

Internally, copper pipes develop an oxidized layer which protects the metal against pitting. Pitting does,

however, occur occasionally and causes premature perforation but this has nothing to do with the internal oxide layer or the external green patina but, instead, can usually be traced to the annealing process in manufacture. BS 659 stipulates steps to be taken to avoid the dangers of carbonaceous films being formed during manufacture.

Large-scale water softening plants, which serve copper pipes, need special attention owing to the free carbon dioxide and specialist advice should be sought.

A complaint against the use of copper, as a flashing for example, is that it does cause blue or green staining on adjoining materials such as brick or stone, but usually more careful designing will obviate this trouble and once the protective coating has been formed no further staining is possible.

Iron and steel

The importance of ferrous metals has no need to be stressed but what, apparently, has to be stressed is the need of architects to think more about what the metal is capable of resisting with regard to corrosion. It is mainly a matter of common sense involving the intelligent application of two guiding principles: good design and careful protection.

An example quoted is that there is little value in applying a bitumastic paint to steel gutters unless they are first treated with an inhibitive priming paint (e.g. red lead in linseed oil) and allowed to harden for 14 days before putting on the bitumen paint. The use of

technical section

galvanized steel rain-water goods is to be recommended in preference, however. The zinc coating of such goods and of items as steel windows should always be done at the works.

Water services are a cause of anxiety at all times and besides care in design and construction it is necessary to see that there is care in use, for over-heating of water causes calcium compounds to be deposited. Such deposits are to be avoided but to do so means that the temperature should be kept below 175° F. (80° C.) by thermostat control.

Cast iron radiators are to be preferred to sheet steel water radiators in open circuit systems owing to difficulty of protecting inner surfaces of the sheet steel adequately. Sheet steel radiators can well be used in closed heating systems or in electrically heated units filled with oil.

Vitreous enamel is mentioned as being one of the best and most resistant of coatings providing its vulnerability to mechanical damage is fully appreciated.

Galvanized roofing sheets do not always get the treatment they deserve! New sheets should be allowed to weather, if the circumstances permit, or a pretreatment primer should be applied before painting. An alternative to the primer, which should be of the zinc chromate/phosphoric acid/synthetic resin types, is to put the sheets through a suitable hot-phosphating process. Two coats of paint should be applied and preferably in alkyd or phenolic medium.

Old sheets should have any rusted areas cleaned with scraping and wire brushing thoroughly and then painting with mixed red lead and white lead priming paint (BS 2523:1954) followed by at least one good coat of finishing paint. For the repainting of ferrous metals in general it is first necessary to prepare by cleaning down, applying a phosphoric acid wash, washing with hot water, then priming and painting two coats. All open joints to be sealed with putty, well worked in.

Zinc

This material if used correctly has a long life and is a sound financial investment, but as with every other material it must only be used in the right places; protected where necessary and with use of adjoining materials fully considered.

Fuel oil has a high sulphur content and the change-over from solid fuel to oil furnaces is increasing the amount of sulphur in the atmosphere and this is not helpful to untreated zinc. It is important to ensure that chimney heights are considered in relationship to any zinc if there is likely to be sulphur discharge. The first cost for use as a roofing material makes it strongly competitive with alternative materials, but this advantage might well be quickly lost.

Providing pretreatment can be carried out well it is a simple matter to protect zinc sheeting or zinc-coated steel by painting. Mordant primers or an etching primer can be used but the simplest and best is a calcium plumbate paint which has good corrosion resistant properties in its own right. It is suggested that sprayed and sherardized zinc surfaces should not be painted with lead paint.

The use of zinc for protection of steel windows and of metal door frames is well known and the British Standard recommendations are for zinc coatings weighing not less than 1.5 oz. per sq. ft. of surface applied by hot-dip galvanizing process, metal spraying or electro-deposition. It is the weight of the protective coating which is important and not the method of application. This coating, if followed by two coats of paint, with pretreatment, will provide a first class protective scheme. The British Standards Institution recommendations for sheeting and for rainwater goods is not up to this figure although that amount of zinc is now considered by many to be necessary on all such surfaces. Those architects who suffered from the war-time and post-war restrictions on the weight of zinc which could be used will not disagree.

The metal which must be avoided in contact with zinc is copper. Zinc protects aluminium in the galvanic series of metals and, therefore, it is safe to use zinc galvanized nails, for example, when fixing aluminium sheeting.

Water supply systems must be fully considered and water analysis will indicate whether the water is very soft, in which case it is required to be treated, as scale-forming salts in it will be insufficient to provide a protective layer within the pipes. Treatment will also be necessary with water which has a high content of free carbon dioxide. Use of the modern synthetic detergent means that the slime which formed in waste pipes, when soap was used, is not present and, in consequence, the zinc protective film which the soap helped to build up is more likely to be destroyed.

The electrochemical reaction resulting from steel filings or drillings being left in the bottom of a galvanized tank is well known but from the number of reported failures little heed seems to be taken.

Conclusions

Many people are concerned with the problem of resistance of metals to corrosion but much practical investigation is still needed. With regard to metals in concrete more basic information is needed on the subject, as much is a matter of speculation, and it is the duty of all architects to supply any useful information to those who can best use it.

With regard to painting, the stand-by reference, to date, has been the Building Research Station Digest, No. 64, of March, 1954, *Painting Metals in Buildings*, together with British Standard Code of Practice CP 231 (1952), *Painting*. This last is understood to be under revision but the Digest can be considered to be still up to date. In the papers from which this digest is made it has been made clear that lead paint should not be used for zinc sprayed or sherardized surfaces, but in BRS Digest No. 64 this was not so definite. At that time it was stated that there was insufficient evidence with regard to calcium plumbate as a corrosion-inhibiting paint, but its value as such is now fully accepted. The finishing coats for ferrous metals were described rather vaguely but, as will be seen above, views as to the types are now more specific.

building illustrated

PRIMARY SCHOOL

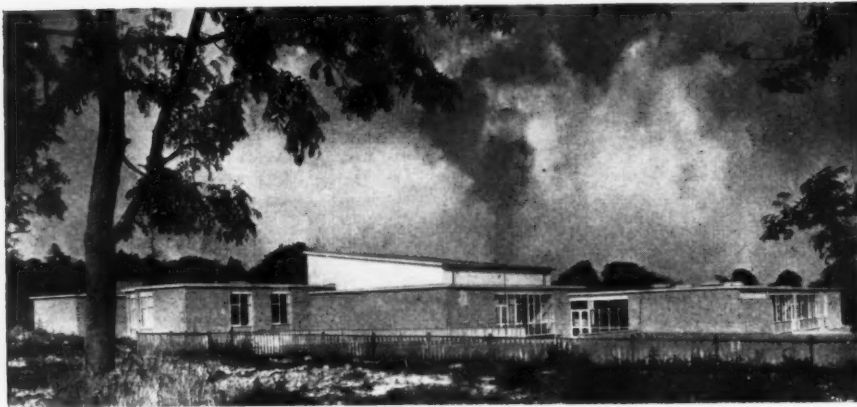
in MITCHELL WALK, AMERSHAM, BUCKS. by chief architects' department, M.O.E. in collaboration with the county architect, BUCKS. C. C.; architects-in-charge J. S. B. COATMAN, MARY B. CROWLEY, DAVID L. MEDD and C. E. D. WOOSTER; quantity surveyors J. NISBET, P. F. BOTTLE and DORIS G. HUNT, M.O.E.

In designing this development project the MOE set out to study the sort of environment necessary for junior education. The thoughts of educationalists, architects, administrators and the personal observations of children at work have been collected and examined. Traditional building technique has been assimilated with great sensitivity of detail and scale.

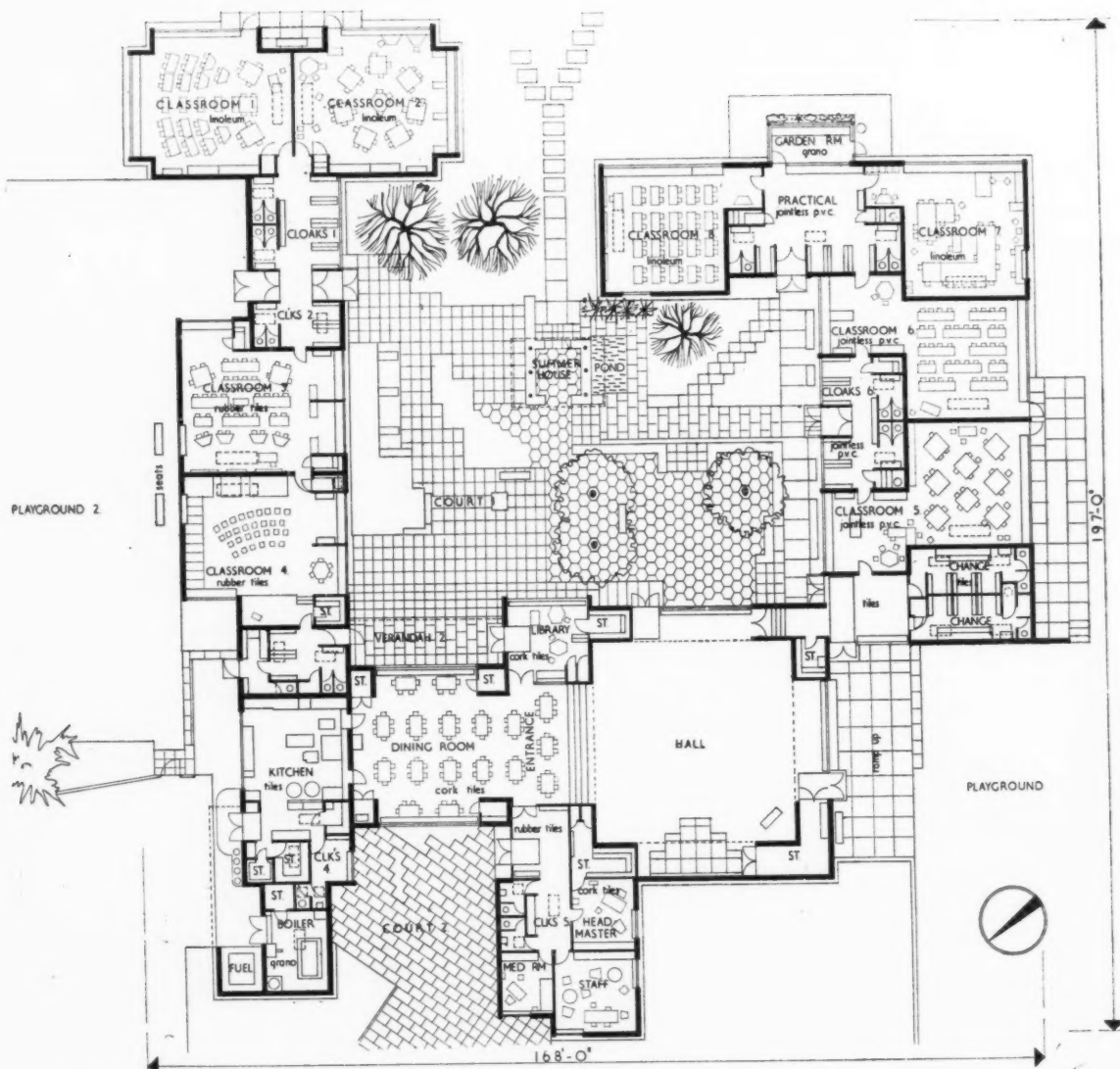
Viewpoint 1: the school entrance looking from the north.



building illustrated



Viewpoint 2: view from the west from Mitchell Walk. The school entrance with staff rooms is on the left, the assembly hall is in the centre and a wing containing four classrooms is on the right. Brickwork is a mild stock facing. The upper part of the assembly hall is clad with vertical plain edge boarding in 8-in. face widths, with a cover strip over the joints. All is painted with three coats of gloss oil. Softwood was used rather than hardwood not only for economy's sake, but because the sparkle can be regained with each re-painting in the maintenance programme.



Ground floor plan (Scale: $\frac{1}{4}$ " = 1' 0")

analysis

CLIENT'S BRIEF : his stated requirements

The brief of a development project differs from that of other schools by being less detailed or final. The details, e.g. of room sizes, inter-relationship of spaces, etc., evolve as a result of the investigation process. In this case there was a thorough investigation of the needs and practice of junior schools.

SITE : topography, surroundings, access, planting

Situated on the suburban outskirts of Amersham it is surrounded by fairly typical spec. built housing with a certain amount of mature planting in gardens. There is a slight slope from north to south. A bearing stratum of sandy clay soil is approximately 1 ft. 9 in. with a capacity of 1½ tons per sq. ft. No water table was encountered. Access is via an unmetalled secondary road on the north-west boundary of the site.

PLAN : general appreciation

Single storey design with classrooms grouped around a central courtyard, itself designed to be a working area and a social centre for the school community. The classrooms vary in design, the size and layout being influenced by the ages of the children they serve. Classroom groups have their own entrances, cloaks and sanitary accommodation. The assembly hall is planned without the traditional stage axis and can be used in conjunction with the music and meals space to give a total area of 3,000 sq. ft. Changing rooms for both sexes are provided with foot showers.

MAIN CONSTRUCTION : general appreciation

Traditional construction of external load bearing cavity walls carried on strip foundations and load bearing internal partitions supporting r.s.j. and timber joist roof construction. Roof covering is felt on chipboard decking with insulation board ceilings with a backing of mineral wool.

cost per sq. ft.	s	d
preliminaries and insurance	2	3
contingencies	1	4

STRUCTURAL ELEMENTS

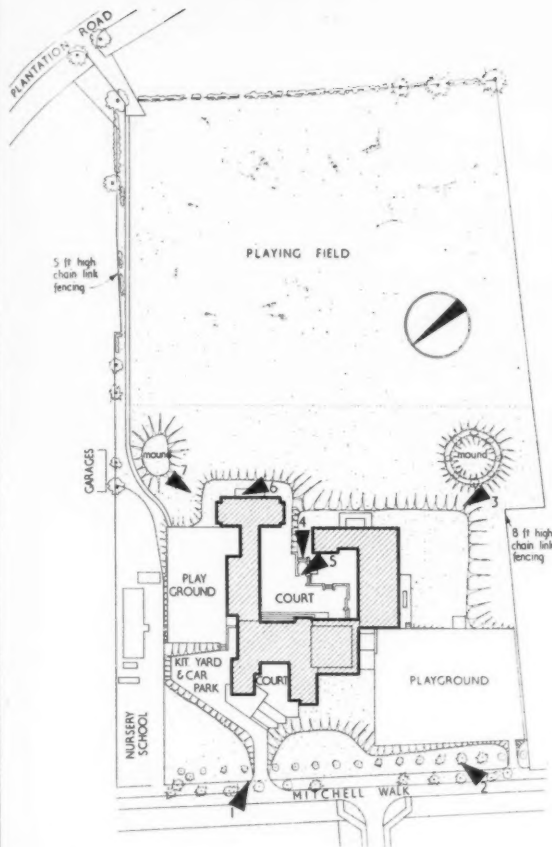
Work below ground floor level 4 10½

Concrete strip foundations carrying load bearing walls usually 1 ft. 3 in. wide × 7 in. thick, bottom of foundation 1 ft. 9 in. below ground level. Average 9 in. of hardcore below ground slab of sandwich construction, 3 in. and 2 in. thick, with No. 126 fabric reinforcement and ½-in. coal tar pitch membrane. Concrete downstand edge beam to retain hardcore 3 in. thick and maximum 2 ft. 1 in. deep.

External walls and facings

2 10½

Generally cavity wall construction. Outer skin of 4½-in. mild stocks, 2½-in. cavity, inner skin of 4½-in. clinker concrete blocks. Stud walling in four isolated panels and at high level to form deep fascia to assembly hall roof. Faced with ¾-in. softwood vertical plain edge boarding in 8-in. face widths with cover strips over joints. Reason: Boarding



Site plan showing photographic viewpoints

Viewpoint 3: the two projecting classroom wings from the south. The small projection is the garden room. This leads off the practical room which separates the two classrooms for children aged 10-11. On the extreme left of the near wing, cladding is of vertical boarding. This is used as an external material wherever walls do not need to be load bearing or where windows are not required. Boards are painted blue, BS 7.084 and the cover strips white.



building illustrated



Viewpoint 4 (below): the central courtyard is contained on two sides by the classroom wings and on the other by the assembly hall, library and dining space. It is planned not merely as something to look at but as a social amenity—a place to be used for work and play, and from nearly all the school there is a view inwards towards this focal point. Planting is only just commencing but when mature will enhance the various ground textures, patterns and changes in level, which already add up to an area of considerable charm. Note the use of the external sunblind to the library. Viewpoint 5 (left): another view of the courtyard showing the fish pond and the summer house. Heights of low walls are organized to complement the fixed seats provided. Classroom groups are all provided with their own entrances; three of these open off the courtyard. Access from the assembly hall to one of the classroom wings is under the covered way in the background of this photograph. Pavings are hexagonal or rectangular 2-in. pre-cast concrete flags.



analysis

s d



Viewpoint 6 (above): external windows everywhere are complete panels from floor to ceiling. This simplifies the brickwork and gives a clean statement of function. Frames and fixed lights are in first quality joinery softwood with opening lights and doors in B.C. pine. The panel below sill height is an insulated cavity construction faced on both sides with plywood. The fascia above the windows is also plywood. All surfaces are painted with three coats of gloss oil. Viewpoint 7 (below): view, from the east, of the wing containing classrooms for the younger children. The re-entrant corners and recessed verandah in the centre are formed by the shallow projecting bays in the rooms.



was used where the perimeter was non-load-bearing or was not required for windows. It reduced the area of brickwork, is a quicker form of construction and helps keep costs down. Softwood was used so that its sparkle could be renewed with repainting.

	solid wall	0.518
Ratio	—	—
	floor area	1

Windows and doors (external)

4 9

Windows and doors are built as complete panels of the external walls, running from floor to ceiling and varying in size between 5 ft. 6 in. wide × 10 ft. high, (giving a side hung casement and fixed light and a louvred ventilator and fixed light at hopper level or a pair of double doors), and 23 ft. 6 in. wide × 10 ft. high with a range of opening lights. Frame and fixed lights are in first quality joinery softwood, opening lights and external doors are in B.C. pine. Panel below sill is of cavity construction insulated and ply faced. Fascia is of plywood and Swedish ironmongery is nickel plated. Side hung casements have friction hinges. Finish 3 coats oil colour. Timber windows were chosen because it has been the architects' experience that they are cheaper than metal, easier to handle from the point of view of contrast glare (i.e. frames can be moulded), thermal insulation is better and timber is generally more in keeping with this type of work.

Louvred ventilators were used because with a drop rod system they are easier to control and provide 100 per cent. ventilation when fully open.

	openings	0.425
Ratio	—	—
	floor area	1

Roof construction

7 2½

Generally roofs are formed by joists of dimensions varying with span, but always at 2-ft. centres. They are carried by load bearing walls or r.s.j. lintels, which again vary in size. Ceilings are supported by 2-in. × 1½-in. timber hangers spiked to joist at 4-ft. centres and dropping 2 ft. to carry 2-in. × 1½-in. ceiling bearers and noggings. 8-ft. × 4-ft. × ¾-in. chipboard decking with aluminium foil facing rests on the roof joists and is weatherproofed with built up felt having a spar finish. The upstand timber clad portion of the assembly hall roof consists of a series of timber posts at 8-ft. centres formed of two 4-in. × 2½-in. carrying 6½-in. × 2-ft. plywood box beams spanning 40-ft. 4-in. × 2-in. joists are notched over the beams to carry decking and finish as for the other roofs. There are intermediate post and ledged braces between the boxbeam posts all joined with bolts and timber connectors and carrying 2-in. × 1½-in. timber rails and noggings for the vertical boarding. The system employed leaves a clear roof space for services travelling in either direction. Area 16,488 sq. ft.

Rooflights

9

The rooflight is softwood framed with ½-in. rough cast wired glass. Iroko sills rest on 6-in. × 2-in. kerbs which are built up off the chipboard decking. Although the rooflight is continuous above, the actual openings in the ceilings are 1 ft. 8 in. ×

building illustrated



A period of research into junior education led to the emergence and acceptance of the basic idea that children grow through this period from near infants to near adults. Consequently the child's environment must reflect this gradual change and at the same time rooms must remain flexible so that different teachers can use them in different ways. The types of activities required were reading, drawing, writing, painting, small scale drama, study of natural objects, work with live animals and craft work. These activities would not necessarily be carried out by a whole class but by smaller groups working on their own. In the plan this is reflected by the informal layouts of the rooms which have as a basis of a large area with various bays and small spaces leading off. There are four groups of rooms, giving eight classrooms each serving 40 children. Above is a general view of classroom 2 serving children of 7-8 years old. The basis of the design is a clear space with three broad shallow bays opening off it. The physical difference between the formal space and the group areas is slight, for these young children still need some security. The

children are sitting on a continuous window seat. The two other bays contain work benching and a sink. The pendant light fitting, hung 5 ft. 3 in. from the floor, was especially designed for this school and has a white painted spun metal shade. The tungsten lamp is contained within the open-ended polished copper cylinder. Polyester fibre curtains give good diffusion and transmittance of light with control of glare. Floor material is jointless P.V.C. and ceiling perforated and plain hardboard sheets. Colours on the small right angle wall between the windows are white and bright pink, BS 1.022. Opposite page, top, is a corner of the room with a store for reference books. Louvred ventilators have been used because they are easy to control (with drop arm system) and provide 100 per cent. ventilation when fully open. Side hung casement windows have espagnolette fixings and friction hinges. Wall benching has open tray drawers for children's belongings. Colour on the wall behind the bookshelf is blue, BS 7.084. Left, is a general view of classroom 4 for children aged 8-9. It has a clear space of around 580 sq. ft. and the bays, opposite, bottom, have a sharper definition and contain sinks and wall benching. The roller blind is of woven plastic material with good diffusion and high transmittance. Natural material is introduced by the use of softwood boarding on studs and rails. The studded rubber floor was chosen for quietness and cleanliness.



analysis

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1 ft. 8 in. separated by a series of baffles. Depending upon the span of the roof joists these baffles can contain a joist or are empty. The cheeks of the rooflight are formed of hardboard secured to the 2-in. \times 1 $\frac{1}{2}$ -in. noggings or bearers carrying the ceiling and to the roof joists above. The junction between the cheeks and the ceiling panels is covered by a 1-in. \times $\frac{3}{8}$ -in. \times $\frac{1}{8}$ -in. aluminium angle. Area 355 sq. ft.

Glazing

1 0 $\frac{1}{2}$

24 ozs. glass to internal fanlights. 32 ozs. and $\frac{1}{4}$ -in. G.W.P.P. to internal doors. 24 ozs., 26 ozs., 32 ozs. C.S.G., $\frac{1}{16}$ -in. P.P. and $\frac{1}{4}$ -in. G.W.P.P. and $\frac{1}{16}$ -in. rough cast to windows and external doors. 26 ozs., $\frac{1}{4}$ -in. P.P. to internal glazed screens. Horticultural glass to garden room.

PARTITIONING

Internal partitions

1 9 $\frac{1}{2}$

Load bearing, 4 $\frac{1}{2}$ -in. and 9-in. brickwork, 3-in., 4 $\frac{1}{2}$ -in. and 9-in. lightweight concrete block. Plastered except in stores, where fair faced. Non load-bearing, 3-in. and 4 $\frac{1}{2}$ -in. lightweight concrete block plastered. 3-in. \times 2-in. studs and rails finished with $\frac{1}{2}$ -in. T. & G. boarding or plasterboard. Glazed h/w screens between entrance hall and dining area, library and dining area, garden room and practical area. Hardwood framed double sliding folding screen 22 ft. 4 $\frac{1}{2}$ in. wide in dining area is formed of two sets of doors with a 12-in. space between. The screen separate from the middle with the actual sliding portion being the h/w posts with the leaves hinged to them. The posts slide in a track contained in a h/w block which can be lifted out and reversed to give a flush floor.

Reasons and comments: Vertical boarding is used as a simple panel from floor to ceiling to give a warmth and interest inherent in the natural material; it is left with a natural finish. Some small areas of studding are clad with plasterboard to avoid bonding at right angles in block walls. The sliding folding screen creates a sound insulated music room of 700 sq. ft. out of the 1,000-sq. ft. dining area.

AREA

Structural

4 $\frac{1}{2}$ -in. brick	15 sq. yards
9-in. " "	72 " "
3-in. clinker	13 " "
4 $\frac{1}{2}$ -in. " "	53 " "
9-in. " "	359 " "

Non-structural

3-in. clinker	252 sq. yards
4 $\frac{1}{2}$ -in. " "	115 " "
Softwood stud	34 " "
Glazed screen	21 " "
Sliding folding partitions	20 " "

Internal doors

1 7 $\frac{1}{2}$

51 single and 9 double doors. Flush doors skeleton framed softwood faced with beech veneered plywood and hardwood lipping. Glazed hardwood framed doors. All doors in softwood frames. Swedish ironmongery is nickel plated with locks in suites. All doors finished with a matt synthetic finish.



building illustrated



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W.c. doors and partitions

3½

22 cubicles. Skeleton framed 1½-in. softwood doors, plywood faced and painted gloss oil. Softwood frames holding ½-in. plywood division panels painted gloss oil.

FINISHINGS

Wall finishes

1 2½

Generally gypsum plastering. 6-in. × 6-in. white glazed wall tiling in kitchen, behind handbasins and in shower rooms. 6-in. × 6-in. white glazed wall tiling with decoration applied by further burning processes, behind classroom sinks and drinking fountains. Softwood and hardboard wall panelling to servery wall in dining area. Plasterboard on studding in small isolated areas.

Reasons. Uses of traditional load-bearing materials leads to an acceptance of traditional finishes. The 6-in. × 6-in. decorative tiles are used in positions where splash backs are normally required. Different patterns and pictures add interest and colour and help to identify areas which often tend to look like sculleries in some schools. The softwood and hardboard panels are used as purely decorative treatment to the servery end of the dining room.

Floor finishes

4 9½

Generally cement-sand screed 1:3. Total thickness of all floor finishes, 1½ in. Jointless P.V.C. in classrooms 5, 6, 7, 8 and ancillary areas. Linoleum in classrooms 1, 2 and ancillary areas. Studded rubber tile in classrooms 3 and 4. Polished cork tile in Assembly Hall, dining space and staff rooms. 6-in. × 6-in. quarry tiles in showers and kitchens. Skirtings are hardwood, jointless P.V.C. and quarry tile. Fibre link mats are contained within M.S. mattwell frames. Steps are finished with a rubber nosing.

Reasons. Changes in floor finishes help the slight change in character from classroom to classroom which is educationally desirable. The architects consider that the studded rubber tile is the most successful. It is quietest and does not show, as do the others, black marks from rubber shoes. Cork tile has the richness of timber but is much quieter.

Ceiling finishes

1 11

2-in. × 1½-in. softwood bearers carrying 1-in. mineral wool insulation dressed over them and equal areas of perforated and plain hardboard sheets 4 ft. × 2 ft. Gypsum plasterboard sheets are used in stores and ⅝-in. and ½-in. asbestos sheets with a sprayed asbestos finish in the kitchen area.

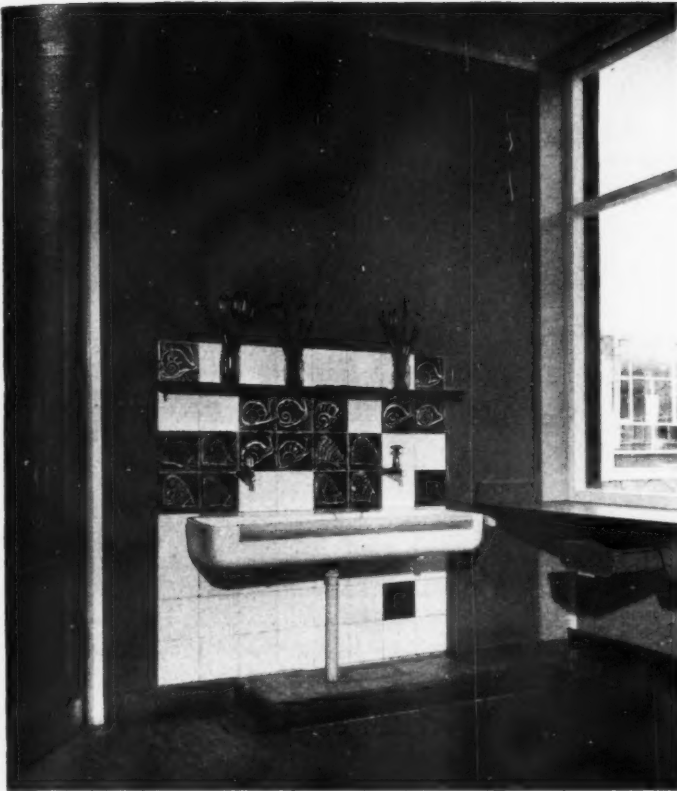
Reasons. Mixture of plain and perforated boards gives reasonable sound absorbancy compatible with cost. Sprayed asbestos finish in kitchens is a good sound absorbent and because of low thermal conductivity helps to eliminate condensation and increase thermal insulation. It is also, of course, incombustible.

Decorations

2 9½

Internal. All softwood, hardboard and metal surfaces painted three coats oil colour. Hardwood two coats plastic polish, wall plaster two coats plastic emulsion paint. Plasterboard ceilings one coat flat oil sprayed on. Hardboard ceilings two coats flat oil sprayed on.

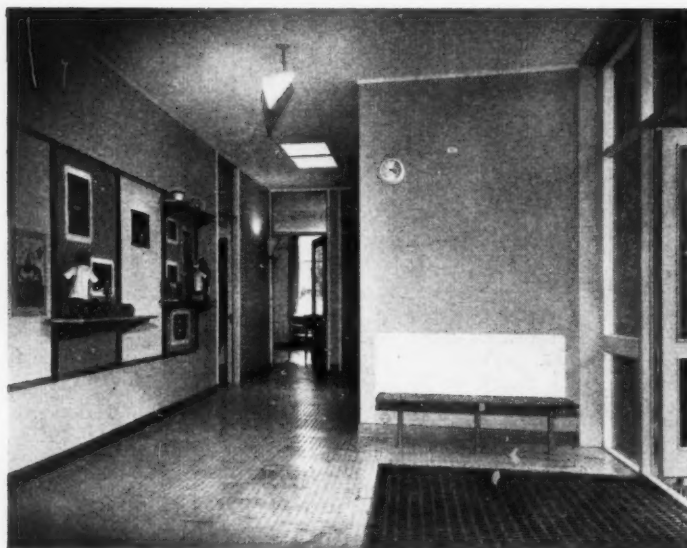
Reasons and comments. Models were used to help in the selection of colours and considerable regard was paid to reflection factors and wall uses. All



Opposite page, top, is a general view of classroom 7 for children aged 9-10. The practical area in the background is farther away from the main space because at this age the children assume greater responsibility. Above is a detail of a classroom sink in this room. Specially designed for this school, but soon in general production, it is 5 ft. 1 in. by 1 ft. 3 in. by 6 in. and served by two taps. It can be used by several children at the same time. Brown and white decorative tiles, designed by Dorothy Annan, are ordinary white glazed tiles: the decoration is applied by further burning processes. Wall around the sink is grey-green, BS 5.059. Opposite page bottom, is a view of classroom 8 for children aged 10-11. These two classrooms, for children preparing for secondary schools, are separated by an independent, self-contained practical room with a garden room leading off (below), where messy work can be done. It is provided with a rough concrete potting shelf and a grano floor. Practical room floor finish is jointless P.V.C. The furniture throughout, designed by the architects, is partly based on anthropometric data from B.S.I. work and partly on personal observations. Positions of shelving, display boards, pegs, door handles, mirrors, etc., are all organized from this study and the result is a coherent sense of scale, aesthetically acceptable, and in no way leaning towards dwarf "prettiness."



building illustrated



Above left: there is nothing formal or grand about the entrance hall. At the far end of the short corridor are the headmaster's, staff and medical rooms. The wall above the bench is painted with two coats emulsion deep yellow, BS 0.001. The softwood vertical boarded backrest is white gloss oil. The bench is h.w. veneered and lipped blockboard on m.s. legs. Floor is studded rubber. Above right: sanitary accommodation for classrooms is standard throughout the school, each sex for each group of rooms having two w.c.'s and three handbasins. The drinking fountain has a splashback of 6 in. by 6 in. white glazed tiles which have been decorated by further burning processes by Dorothy Annan. The design is extremely lively, with a dark blue line on a blue and yellow background. Note the very neat bottle trap below the drinking fountain, which is one of a range of pre-formed fittings used throughout the school. Below left: the assembly hall is a multi-purpose area and was required to provide space for drama and social functions and at the same time to give a sense of community, because junior children are being made aware of a school as a social environment and not simply an establishment

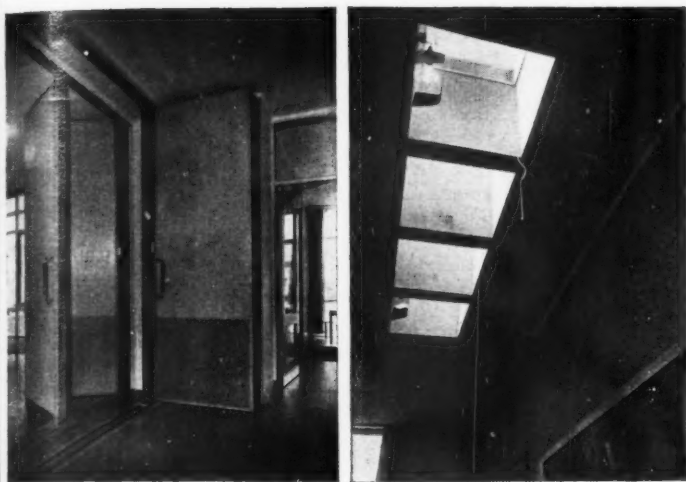


for teaching. There is a clear space of 40 ft. by 40 ft. with three long bays 23 ft. by 6 ft. opening off. On the fourth side, steps lead to the dining area. This can be used in conjunction with the hall to give a total area of 3,000 sq. ft. Climbing ladders, frames, ropes, etc., can be attached to the 5½ in. by 1½ in. hardwood rail, which is continuous around the whole room. Concealed in this rail is a curtain track of Swiss manufacture carrying thick woven curtains of light grey, dark grey and yellow stripes, which can be moved around to serve any function required of it. Below right: it was noticed during the period of research that there was rarely any organized means for children to change for P.T. Within the cost limit it was decided to provide some sort of accommodation no matter how minimal. In fact the rooms are very adequate and fulfil a double purpose, being used as drying rooms in wet weather.



analysis

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The dining area above the assembly hall is approximately 1,000 sq. ft. The area serves two purposes, for by the use of a double-leaf sliding-folding screen (above left) a 700 sq. ft. music room can be created which is virtually sound insulated from the assembly hall. The leaves are hinged posts which are the actual sliding parts and move on an inverted V rail contained within a hardwood block which can be taken up and turned round to give a flush floor finish. The two sets of doors vary slightly in construction—the nearest having facings on both sides of 4-mm. hardwood veneer plywood with $2\frac{1}{2}$ -in. thicknesses of plasterboard strips and a core of $\frac{1}{2}$ -in. glass wall. The farthest doors have one face of plywood, two thicknesses of $\frac{3}{8}$ -in. plaster board strips glued together, $\frac{1}{2}$ -in. glass wall and $\frac{1}{2}$ -in. insulation board facing. There is a 12-in. air space between the two sets of doors. Above right: a chalk board lit by a rooflight. The actual light is Georgian wired glass held in a softwood frame on iroko sills on upstand 6-in. \times 2-in. kerbs and is continuous. From the rooms, however, rooflights always appear as 1-ft. 8-in. \times 1-ft. 8-in. openings separated by baffles. Depending upon the direction of the span these can contain a roof joist. The baffles help to prevent glare. Cheeks are hardboard secured to the ceiling bearers and the roof joists, and the junction with the ceiling is covered with an aluminium angle. The artificial lights are silvered bulbs which have a spread of light five times as wide as it is deep and illuminate the chalk boards.



The small staff room has a pleasant quiet atmosphere. Walls are finished with a very slightly patterned light grey wallpaper and the floor is cork tiled. Wall behind the pin-up is painted light blue. Cupboards are softwood framed with birch veneered plywood doors and a blockboard top, all finished with two coats matt synthetic polish.

colours were chosen from the Archrome Range No. 2 which contains 54 colours from BS2660. Ceilings and reveals to roof-lights generally light grey, BS9.099 with white cornice, assembly hall ceiling deep yellow, BSo.001. Walls are generally in light colours, display areas light grey, BS9.093, preferentially lit chalkboard areas are grey, BS9.099 with occasional uses of grey-green, BS5.059 and small areas of bright pink, BS1.022 and blue, BS7.084.

FITTINGS

Cloakroom fittings

4½

320 shoe locker units with peg rails and coat hooks.

Fittings

1 7

General: Timber blind box outside library. 155-ft. run of window seat of veneered blockboard with h/w lipping on m.s. legs 60-ft. run of hardwood shelving above classroom sinks. Hardwood benches, peg rails and hooks supported on m.s. posts, in changing rooms. Softwood sheiving to stores 660 ft. super. Cine screens and housing in dining room ceiling. Swiss manufactured curtain track and fittings.

Kitchen: Shelving, worktops and pedestals in dry store, vegetable preparation and store and wash-up area. Glazed screen between wash-up and kitchen. Counter fitting with skatewheel conveyor unit. 7 kitchen cupboards. Supervisor's table and locker, staff lockers and cold room insulation.

Built-in furniture

2 3

Softwood framed cupboards with plywood facing in staff room, headmaster's room, and medical room. 158 ft. run of $5\frac{1}{2}$ -in. \times 1½-in. hardwood wall rail in assembly hall. Chalkboard and display panels 137 yd. super. Wall benching 206 ft. run. Sun blinds: woven plastic fabric, polyester fibre and some cotton. Potting slab of rough concrete 17 ft. run.

SERVICES

Plumbing, external

2½

3-in. diameter aluminium rainwater pipes all taken to a deep borehole.

Plumbing, internal

1 0½

530 gallon capacity galvanized mild steel cisterns in tank housing over kitchens. Hot and cold water supply generally through copper tubing. Pre-formed copper wastes painted are used below sanitary fittings. Reasons. Cleanliness of appearance and speed of fixing.

Sanitary fittings

1 0

71 fittings in white glazed fireclay. Classroom sinks are special fittings designed for this school but are now being generally manufactured. The sink is 3 ft. 6 in. long \times 1 ft. 3 in. wide \times 6 in. deep, is served by two taps and can be used by several children at the same time.

Gas installation

1 0

8 points in the kitchen and serving the gas boiler in black steel tubing.

Electric installation

2 7½

283 light points and 32 power points. 240 volt 3 phase 50 cycle per second through P.V.C. cables insulated and sheathed. General light fittings are

analysis

s d

an inverted white plastic cone with tungsten filament lamp. Pendant fitting as local points in bays 5 ft. 3 in. high. Light fitting positions designed to give 10 lumens per sq. ft. on the working plane. Switching is independently organized so that lights can be put on in areas where the natural light fails first. Reasons. The plastic fitting was chosen because it has a low surface brightness, 45° cut-off, good upward and downward light and is cheap and easy to clean. The pendant fitting which is specially designed for this job gives a greater sense of intimacy and personal responsibility for children using areas where activities occur on a "long term" basis often without constant supervision.

Heating installation

6 0½

Heating: Thermostatically controlled warm air system. Hot water is circulated by pumps from automatic oil-fired boilers to heat exchanger units. Temperature criteria 62° F. when outside temperature is 32° F. Air changes three per hour. Average calculated "U" value of walls 0.30 and of roofs 0.25.

Kitchen ventilation

1½

Designed in accordance with the design data in Building Bulletin 11 the ventilator is 12 ft. x 4 ft. and similar in construction to the rooflights. The upstand walls on the long side have louvred vents and provide natural ventilation without any mechanical extract. The kitchen ceiling is lined with sprayed asbestos cement which as well as being a sound absorbent helps in the elimination of condensation.

Drainage

1 6½

Salt glazed stoneware pipes under buildings. Salt glazed stoneware fittings. Pitch fibre pipes elsewhere. Manholes in 9-in. brickwork.

Playgrounds and paved areas

3 1½

Tarmac. 2½ in. on 1 in. bed of ashes on 3-in. bed of hardcore. Pavings. Hexagonal and rectangular 2-in. precast concrete on 3-in. concrete bed on 3-in. hardcore.

$$\text{Total net cost} \frac{\pounds 44,975}{15,127 \text{ sq. ft.}} = 59 \cdot 5\frac{1}{2}$$

TIME SCHEDULE

Drawings and research	646 man days
Tender date	January 14, 1956
Work commenced	March 12, 1956
Work completed	January 9, 1956
Type of contract	RIBA

COST SUMMARY

Type of school	Two form entry Junior
No. of places	320
Floor area	15,127 sq. ft.
Area per place	47.27 " "
Net cost	£44,975 2s. 7d.
Net cost per place	£140 10s. 11d.
Net cost per sq. ft.	59s. 5½d.
Gross cost	£51,774 0s. 0d. (which includes £1,000 for playing field preparation under a separate contract)
Gross cost per place	£160 5s. 7½d.

PLAN ACCOMMODATION

	Area in sq. ft.	% of total	Area per place
General and practical classrooms (including assembly hall etc.)	9,710	64.5	30.34
Teaching store	430	3.0	1.34
Dining (excluding dining-teaching area)	460	3.0	1.44
Pupils' storage and sanitary accom.	1,293	8.5	4.04
Administration	2,124	14.0	6.64
Circulation	1,110	7.0	3.47
	15,127	100.0	47.27

COST COMMENTS

This contract was negotiated, the contractor being nominated early in the design stage and accepting his share of the responsibility for the ultimate cost.

The project was cost planned on the lines of the method suggested by MOE Bulletin No. 4 (second edition). A self-imposed cost limit of £145 per place was worked to (the Ministry's cost limit stood at £154 per place at this time). The area per place of 46.6 sq. ft. gave an allowable cost per sq. ft. of 62s. 3d. An allowance of 5 per cent. for design and price risks amounting to 3s. 1½d. was reserved, leaving a design target cost of 59s. 1½d.

Cost checks were made, during the design stage, of each element. The quantity surveyor prepared copies of approximate quantities, and unpriced copies of these were sent to the contractor for his independent costing. Where significant discrepancies appeared, the team met periodically to discuss the operational methods, etc., upon which the prices had been calculated. These meetings not only enabled agreements on prices to be reached, but proved to be a valuable means of stimulating the exchange of ideas by all parties and of avoiding later misunderstandings.

The preparation of the cost plan and the cost checking procedure involved the quantity surveyors for a total of 95 man-days, spread evenly over a period extending from the 12th to the 35th week of the architects' programme. A full report of the cost planning of this project is included in a forthcoming MOE Bulletin devoted to this school.

The table on page 195 shows the comparison between the cost plan, the final cost check and the cost analysis of the tender. The differences between the elements in the first and second columns indicate the flexibility of a cost plan, which allows the allocation of costs to the elements to be adjusted according to changing requirements and circumstances (note particularly ceilings and external works) provided that the total is not exceeded.

The major differences between the second and third columns (e.g., windows and external works) were the result of known specific changes, which were effected by the architect in collaboration with the quantity surveyor and contractor, subsequent to, and in the light of, the final review of cost checks. It will be noted that only 4d. of the total reserve of 3s. 1½d. has, in this instance, been used up.

CONTRACTORS

Clerk of works: A. Monk. *General contractors:* Walden & Son (Henley) Ltd. *Sub-contractors. Flooring:* Haskel Robertson Ltd. *Roofing felt:* William Briggs & Sons Ltd. *Central heating:* Weatherfoil Heating Systems Ltd. *Electric wiring:* Herbert Lascelles. *Furniture:* E.S.A. Ltd., Spencer, Heath & George Ltd., Kingfisher Ltd., Geo. M. Hammer & Co. Ltd., Olympic Gymnasium Co. Ltd., Woodley Eng. (Ltd.). *Sum blinds:* Deans Blinds Ltd.

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working detail

WALLS AND PARTITIONS: 50

ENTRANCE SCREEN: PITHEAD BATHS AT DUDLEY, WORCESTERSHIRE

Richard Sheppard and Partners, architects



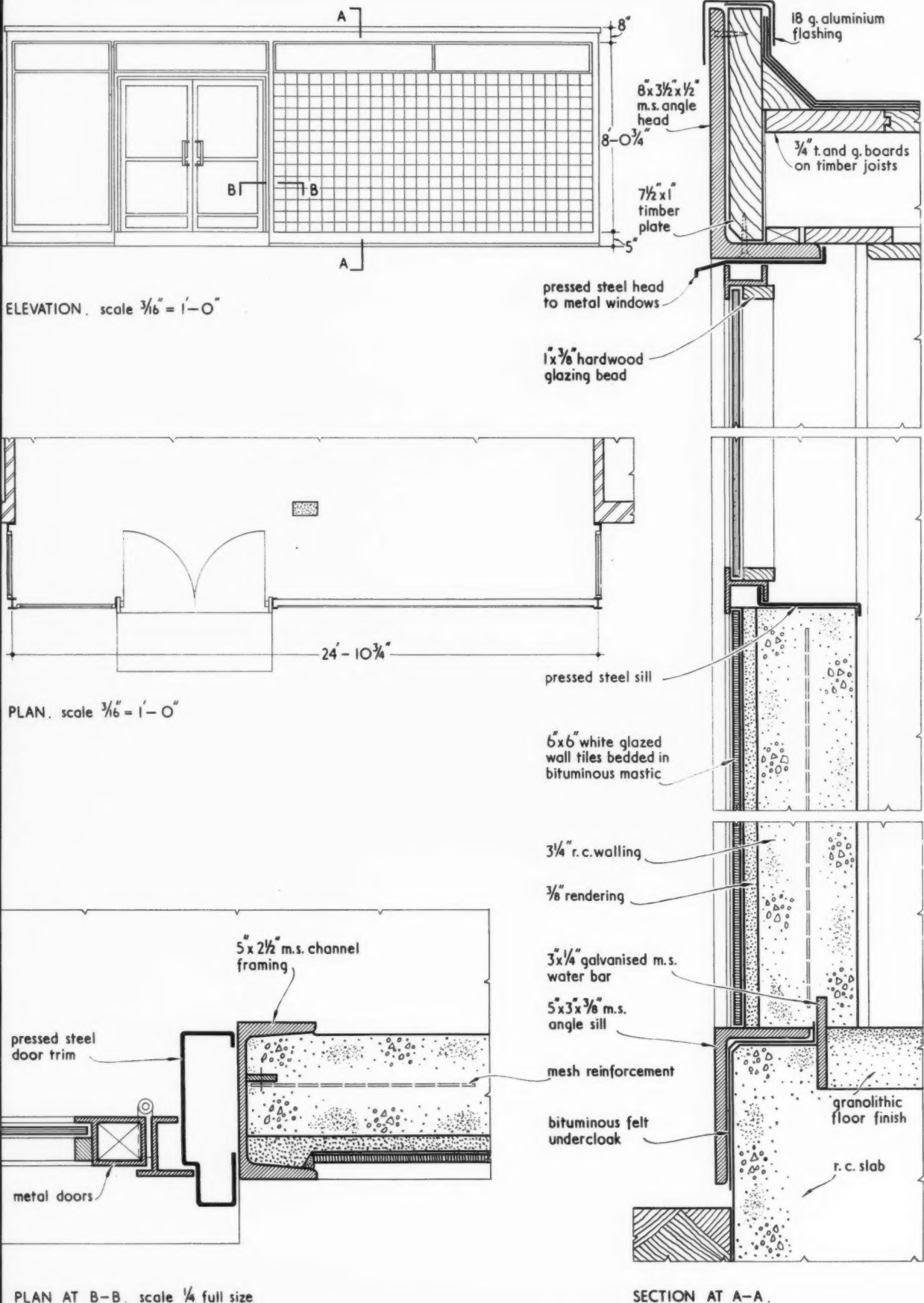
Though the greater part of the wall area of this entrance bay is solid, it remains a glazed wall in intention and affords an interesting example of the use of "industrial type" finishes for this class of work. Note, for instance, the use of a 5-in. by 3-in. by $\frac{3}{8}$ -in. m.s. angle as a sill and the all-welded m.s. structural frame (including an 8-in. by $3\frac{1}{2}$ -in. by $\frac{1}{2}$ -in. m.s. angle to serve as lintel, fascia and upstand). Note also (though it does not figure in the drawing on the reverse) the removable eggcrate scraper which serves as a step.

working detail

WALLS AND PARTITIONS: 50

ENTRANCE SCREEN: PITHEAD BATHS AT DUDLEY, WORCESTERSHIRE

Richard Sheppard and Partners, architects

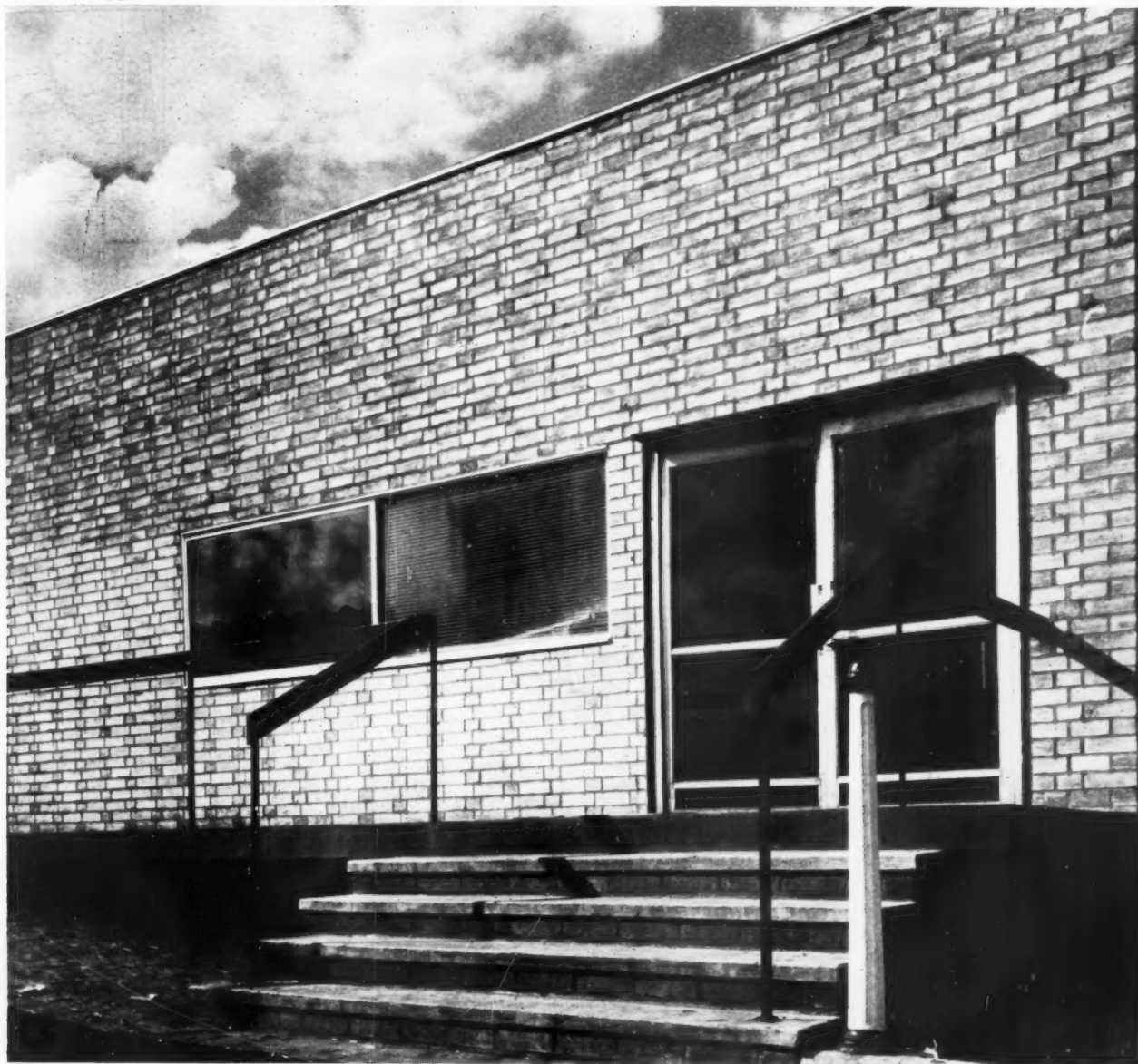


working detail

DOORS: 28

ENTRANCE DOORS: PITHEAD BATHS AT DUDLEY, WORCESTERSHIRE

Richard Sheppard and Partners, architects

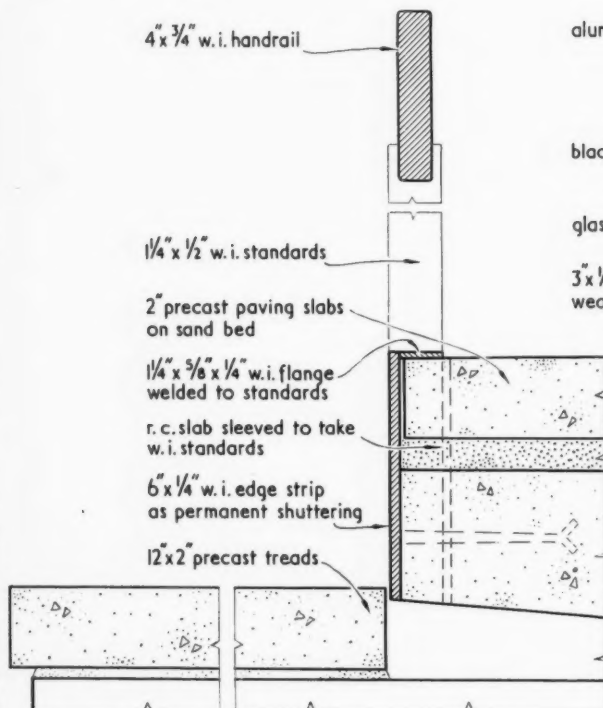
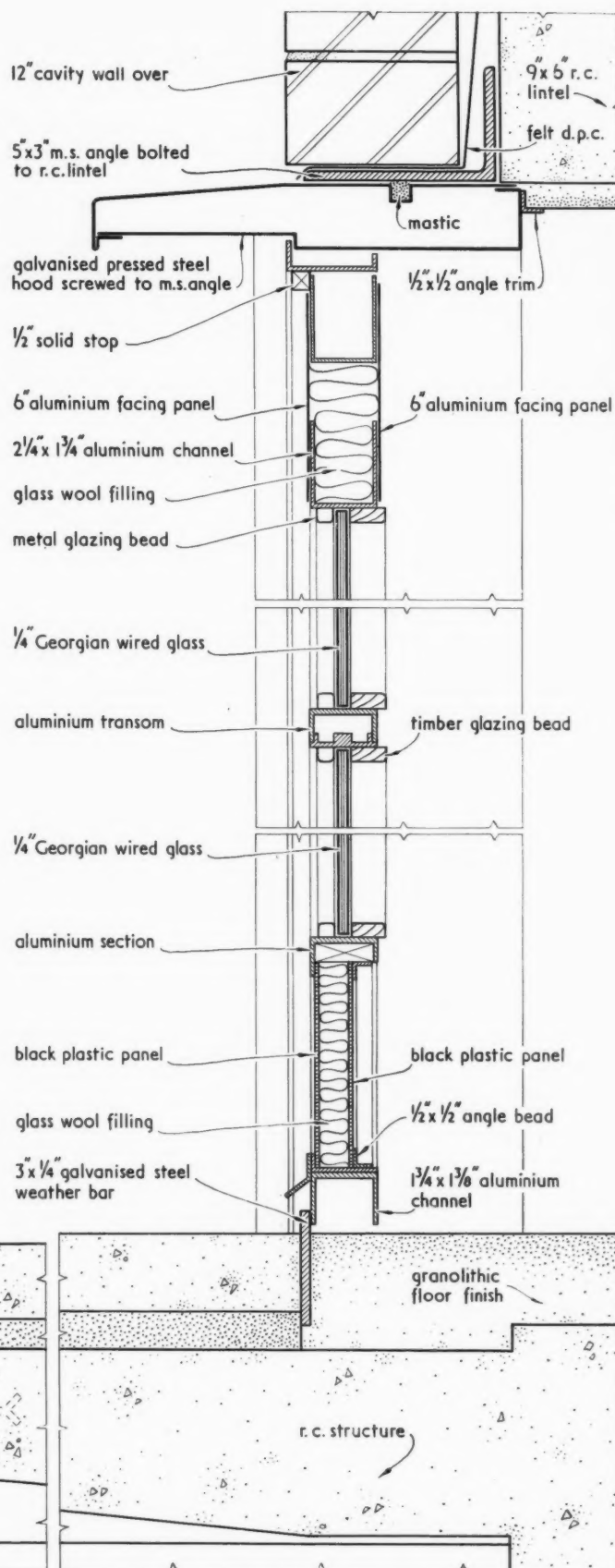
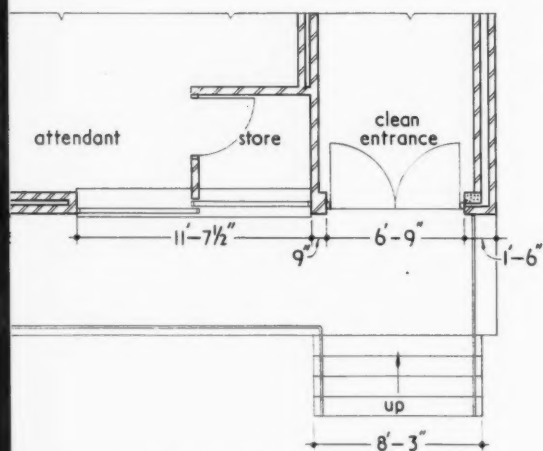
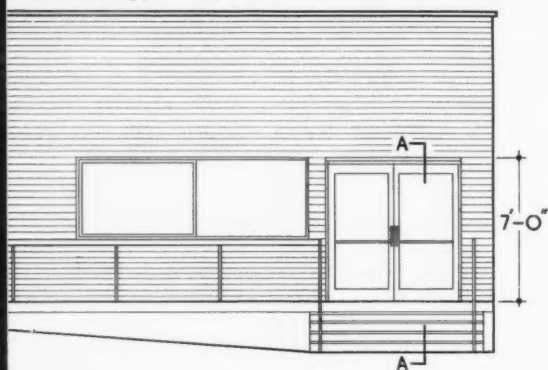


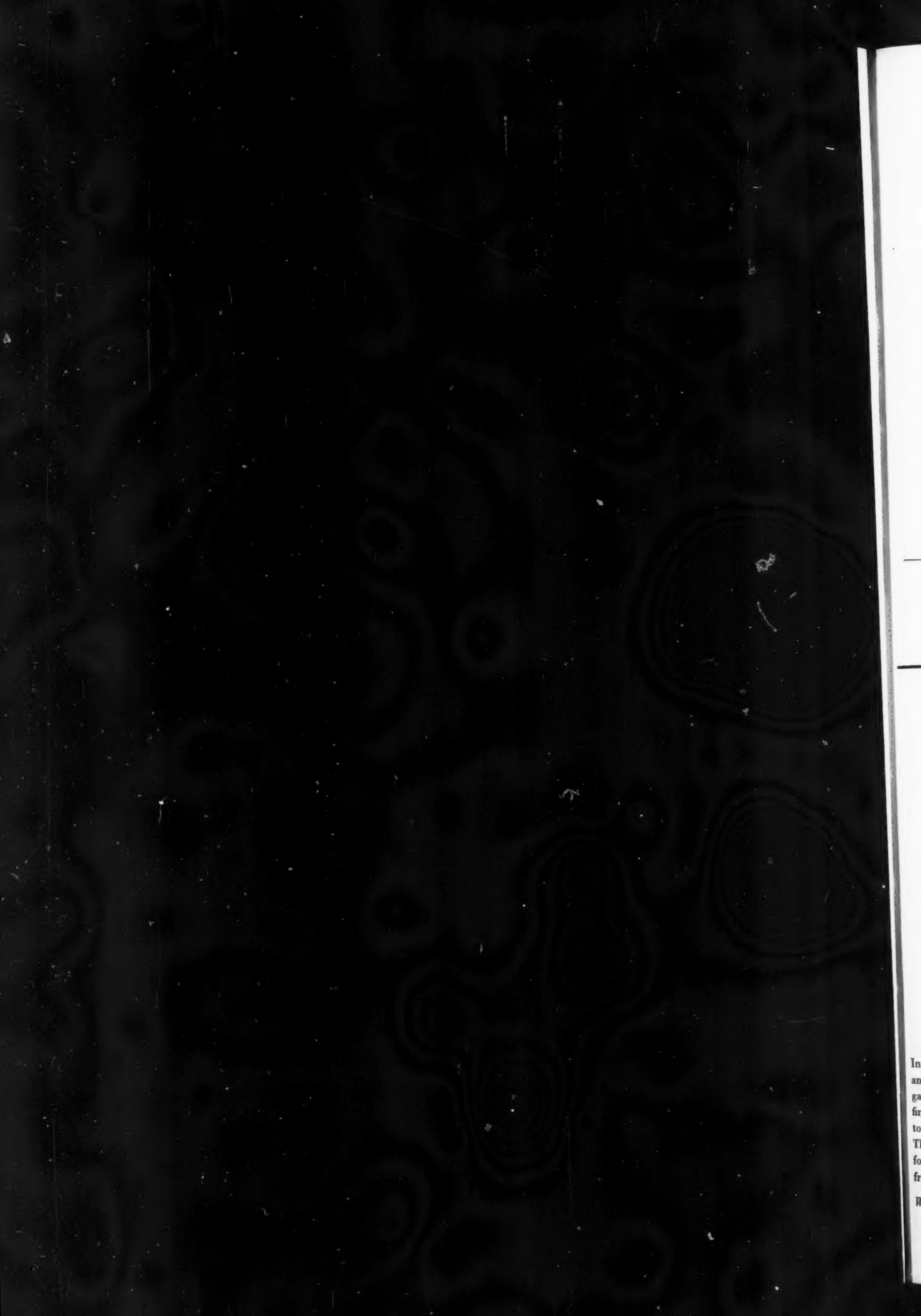
There are a number of unusual uses of materials in this Detail which combine to produce an effect of sombre neatness fitting to this class of work. Notice, for instance, the solid 4-in. by $\frac{3}{4}$ -in. wrot iron handrail and the 6-in. by $\frac{1}{2}$ -in. wrot iron edge strip to the terrace carried through to form the riser of the top step: also the black plastic kicking-plate in the built-up aluminium door and the galvanised pressed steel hood.

working detail

ENTRANCE DOORS: PITHEAD BATHS AT DUDLEY, WORCESTERSHIRE

Richard Sheppard and Partners, architects

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



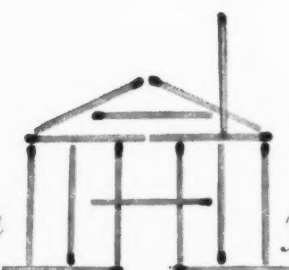
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analysis

SCHOOL AT AMERSHAM, BUCKS

Table showing the differences between the cost plan, the final cost check, and the cost analysis of tender (see cost comments on page 194).

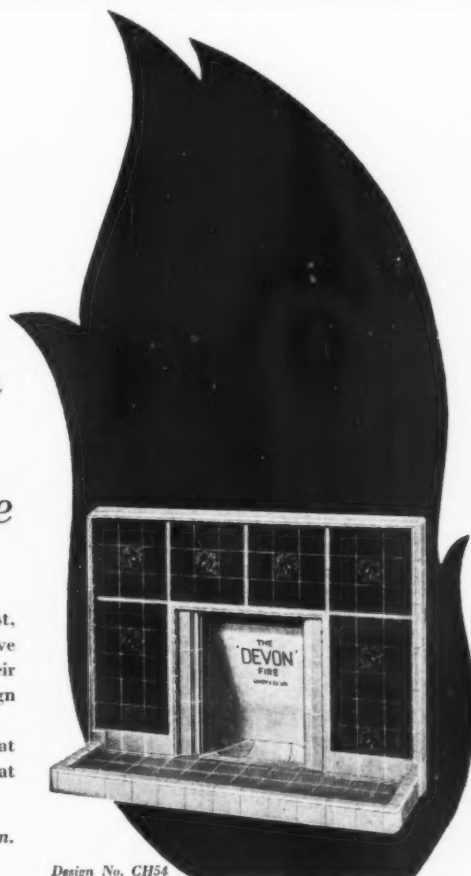
Element	Cost plan s d	Final cost check s d	Cost analysis of tender s d	Element continued	Cost plan s d	Final cost check s d	Cost analysis of tender s d
Preliminaries and insurances	1 10	2 0	2 3·1	Floor finishes and skirtings	3 10	4 7	4 9·6
Contingencies	1 4	1 4	1 3·9	Ceiling finishes	1 0	2 4	1 11·1
Works below G.F.L.	5 6	4 10	4 10·5	Decorations	2 2	2 4	2 9·3
Frame	—	—	—	Fittings	3 10½	3 11	4 2·6
External walls and facings	3 6	2 9	2 10·6	Plumbing (external)	6	2	2·2
Windows and external doors	3 9	2 10	4 9·0	Plumbing (internal)	1 6	1 2	1 0·7
Roof construction	8 0	8 0	7 2·8	Sanitary fittings	1 3	1 2	11·9
Roof lights	9	8	9·1	Gas installation	1	1	1·0
Upper floor construction	—	—	—	Electrical installation	2 3	2 3	2 7·7
Staircase	—	—	—	Heating installation	6 3	6 4½	6 0·2
Glazier	1 0	10	1 0·3	Drainage	2 0	2 0	1 6·3
Internal partitions	2 3	1 9	1 9·6	External works (net)	2 9	4 4½	3 1·2
Internal doors	1 7	1 8	1 7·4	Kitchen ventilation	5	3½	1·2
W.c. doors and partitions	6	3	3·5				
Wall finishes	1 3	1 3	1 2·7				
					59 1½	59 2½	59 5½

Match  your design
with a **DEVON** fire

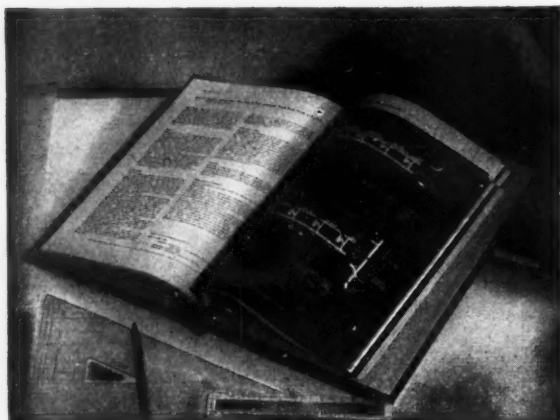
In the look of a room, so much depends on the fireplace. You know your own design best, and you know what sort of fireplace is likely to do most for it. DEVON, thinking of this, have gathered together an unbelievably wide range of different tile and faience surrounds for their fireplaces. The tiles are all specially made and individually checked, and there's a design to suit every kind of good taste.

The Devon fire itself is handmade, too, from thick, first-quality clay which retains heat for hours after the fire has gone out, making it very easy to relight. It spreads heat from a low level, and uses remarkably little fuel.

Write for fully illustrated catalogue, to Candy & Co. Ltd. (Dept. A24) Newton Abbot, Devon.



Design No. CH54



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TO JUNE, 1957**

REPRINTS

All Information Sheets published since the new series was started in October, 1947, have been reprinted. Specially-designed binding cases to hold approximately 100 Sheets may be obtained at the price of 6s. 0d. each. (Postage 6d.)

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Announcements

PROFESSIONAL

Ronald Leach, A.R.I.B.A., has commenced practice at 163, Canterbury Road, Westgate-on-Sea, Kent (telephone Thanet 31048), and at Herne Bay, where he will be pleased to receive trade catalogues, etc.

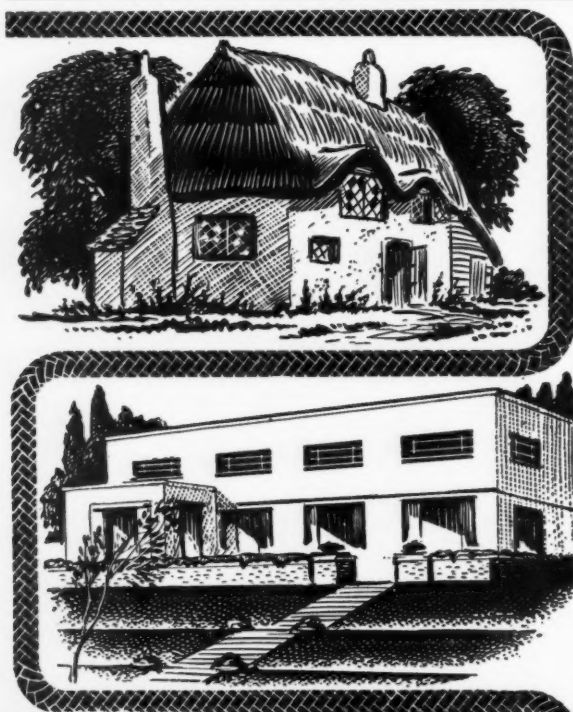
The partnership of George Fairweather and Partners has been dissolved by mutual consent but George Fairweather, F.R.I.B.A., will continue to practice at 28-30, Wigmore Street, W.1 (telephone Welbeck 5489). Eric Rheinberg, A.R.I.B.A., and Geoffrey L. Cannon, A.R.I.B.A., have taken David Morgan, A.R.I.B.A., into partnership and are now practising under the name of Cannon, Morgan and Rheinberg, from 38a, Beaconsfield Road, St. Albans, Herts (telephone St. Albans 57596).

TRADE

Bill Switchgear Ltd. have now arranged independent premises and area branch facilities under the managership of J. Ballentine at 23 Bedford Street, Belfast (telephone Belfast 27384).

J. Gliksten & Son, Ltd. have opened an office for the distribution of hardwoods at Kingston-upon-Hull.

William Townson & Sons, Ltd., of Bolton, manufacturers of Cygnacrete concrete constructional and architectural products, have acquired the design, manufacturing and marketing rights of Orlit (Lancashire) Ltd. The new subsidiary company, Orlit (Lancashire) Ltd., will retain its name but all future business will be transacted from the Townson offices, Higher Swan Lane, Bolton (telephone Bolton 1840).



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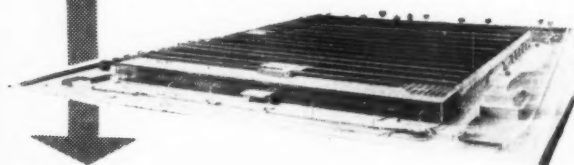
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August Architectural Review

The year-round English draught makes *Weather-stripping* a subject of perennial interest and in the August issue of the Review, Peter Whiteley will make a study of the products available for remedial work on both doors and windows, as well as the kind of preventive design that is better than even the best of cures. Two hotels of outstanding interest will be described and illustrated; the *Malmen*, by Wallander and Varhelyi in Stockholm, and Louis Erdi's *Coachotel*. A creative and broadminded approach to a vexed question, outdoor publicity, will be outlined in the new proposals for *Advertising in Stevenage*, and the social and architectural problems

of building new *Urban Nuclei* in rural areas will be considered in an article by Hilda Selem on recent re-settlements in Italy, and a study of Richard Llewelyn Davies' and John Weeks' rebuilding programme for *Rushbrooke*



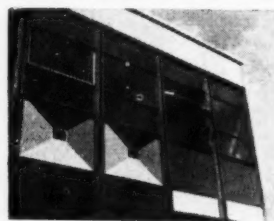
Model of a village at Rushbrooke, Suffolk, by R. Llewelyn Davies and John Weeks, to be illustrated with pilot houses.

in Suffolk. Historical features in this issue will cover the early romantic days at the Weimar *Bauhaus*, whose expressionist and religious fervours are recalled by Helmut von Erffa; a sheaf of notes on out-of-the-way aspects of Italian architecture, and a study of Bernardo Bellotto's four magnificent views of the mysterious *Wilanow Palace* outside Warsaw, now on view at the Whitechapel Gallery. In *Skill*, the *Interior of the Month* will be the new offices for the Orient Line, and in *Design Review*, John Blake will survey recent developments in wallpapers and furnishing fabrics.

Curtain Walls Roman and Gothic Shepton Mallet

September Architectural Review

A major feature of the Review's *Machine Made America* issue, and rapidly becoming a dominant topic in discussions of the economics, technics and aesthetics of building today, *Curtain Walling* will bulk large in the September number of the Review. Michael



Curtain Walling detail of the new BEA terminal now under construction off Cromwell Road, Kensington.

Brawne will contribute a full scale study of the potentialities and perils, scope, materials and methods of this fully industrialised means of clothing buildings, while in *Skill* there will be a supplement on some of the products and systems that are available on the British Market. Also in *Skill* will be new Jaeger shop *Interiors* by Dennis Lennon, as well as *Design Review* and other regular departments. Aspects of the diversity of English nineteenth-century architecture are covered by Hugh Honour's account of the improbable *Roman Church at Everingham*, in Yorkshire, whose decorators were a suitably incongruous combination of Yorkshire and Rome, and a narrative of the building activities at *Strawberry Hill* of Frances Waldegrave, recounted from original sources by Osbert Wyndham Hewett, author of a recent full-dress biography of Lady Waldegrave. September *Townscape* features will deal with *Shepton Mallet*, whose multi-



House in the lower town Shepton Mallet

level town-centre will be discussed by Gordon Cullen, and *Hampstead Garden Suburb*, source of so much good and so much evil in English planning, whose status after a half-century of existence will be evaluated by Ian Nairn. And, as usual, the *Counter-Attack Bureau* will give the latest battle-bulletins on the continuing fight against Subtopian blight.

Universities Staircase Arcadia

October Architectural Review

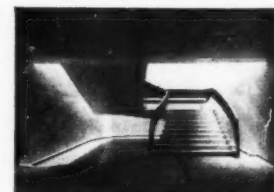
Vexed by conflicting interests and lack of comprehension of the issues at stake, the design of *Universities* has become a prob-

lem that excites passion and prejudice, rather than constructive thinking. In the October number of the Review, Professor Pevsner and the Hon. Lionel Brett will attempt to put the problem back on a realistic basis in a special feature covering both the historical growth of *universities* and their present needs, emphasising the diversity of concepts, both in organization and architecture that the term embraces. Two articles in the same issue will deal with problems of architectural lettering; Nicolette Gray



3-D. shop lettering in Dublin.

contributing a study of *Lettering in Three Dimensions* and *Skill*, surveying the design of *Fascia Boards*. Also in *Skill* will be an illustrated description of Arne Rudberger's stunning staircase for the MEA department store in Stockholm, and other recent structures to be illustrated will include a small house by Sir Hugh Casson on the South Coast, and another well-designed adjunct to a department store—G. A. Jellicoe's roof garden on top of Harvey's at Guildford. Two historical features will deal with developments in the first quarter of the present century: Ian Nairn's delayed study of *Hampstead Garden Suburb* is now expanded into a larger study of



Staircase at the MEA store, Stockholm.

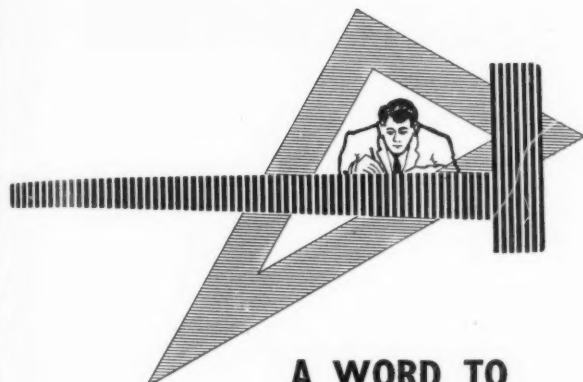
Arcadia as a place to dwell in and Reynier Banham will investigate the implications of recent publications on the position of *Mondriaan* both as a pioneer of modern design, and as a model to be set up for emulation by architects in the future. Robert Melville's survey of art exhibitions will continue, and *Marginalia* will maintain its running commentary on world architecture.

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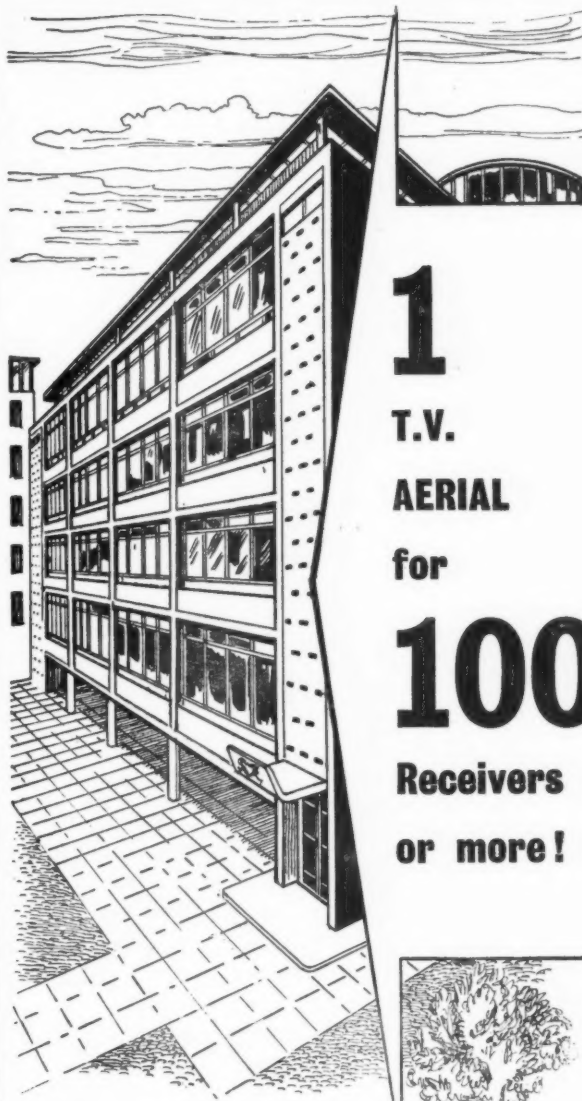
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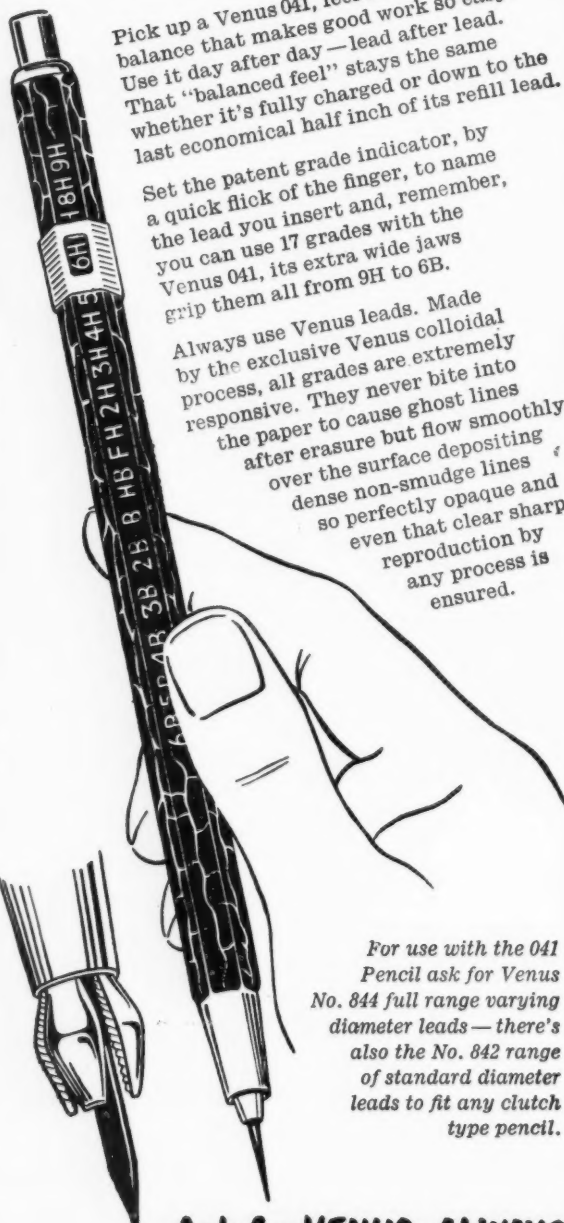
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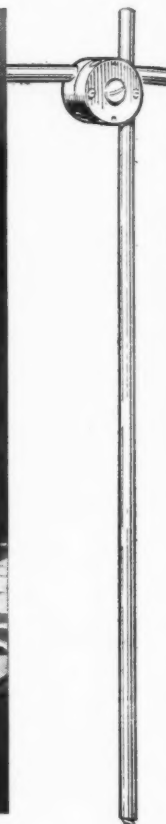
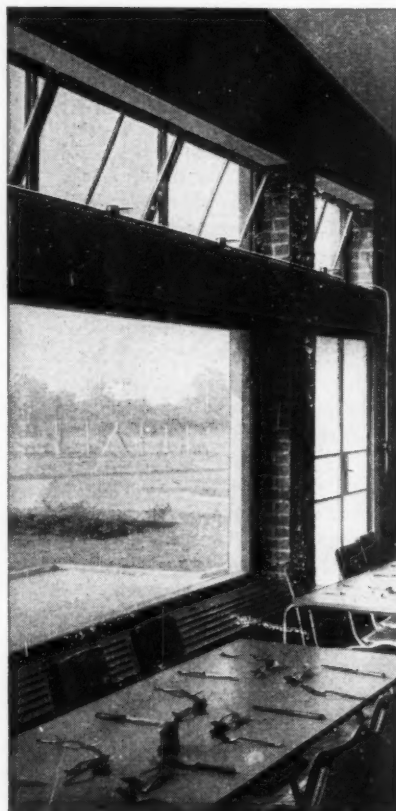


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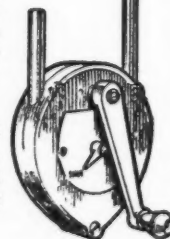
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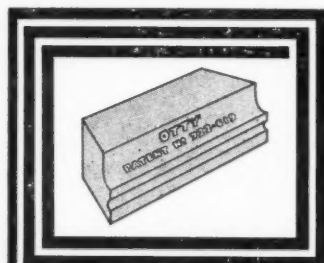
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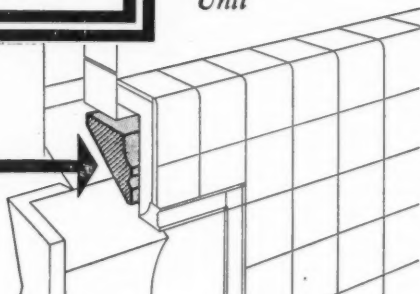
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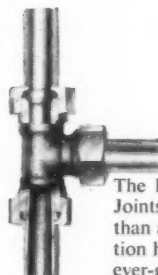
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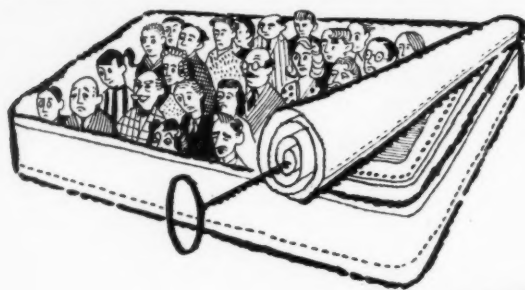
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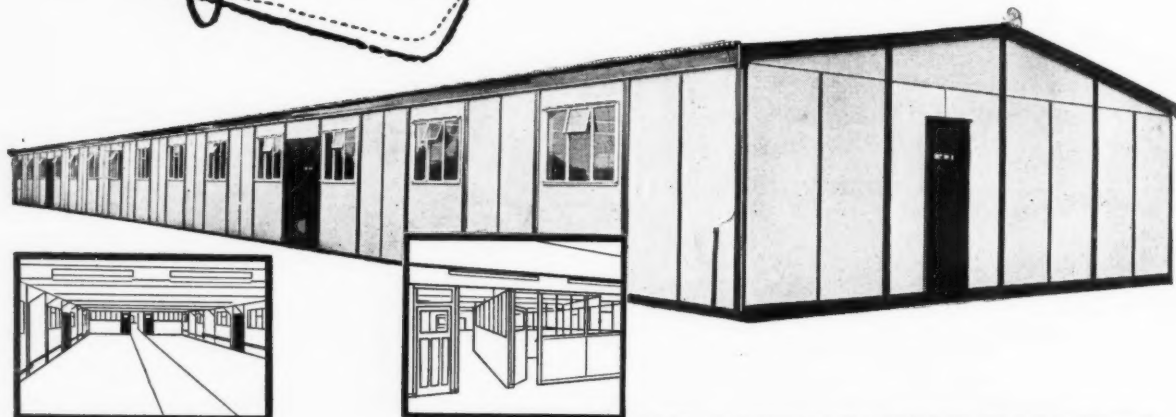
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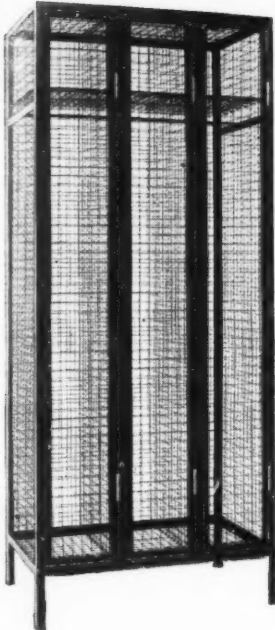
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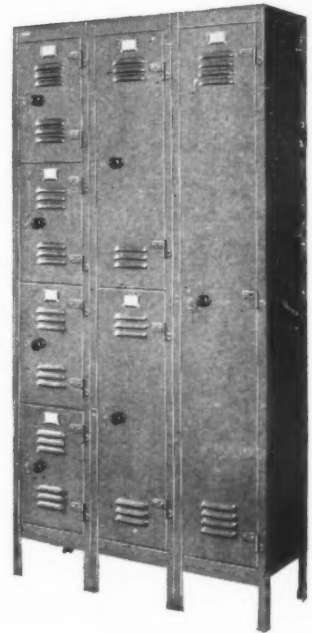
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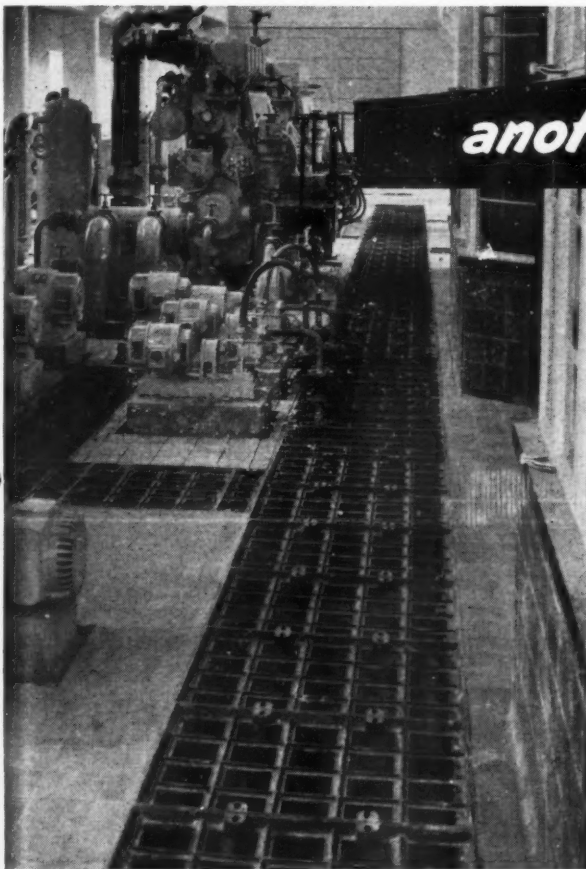
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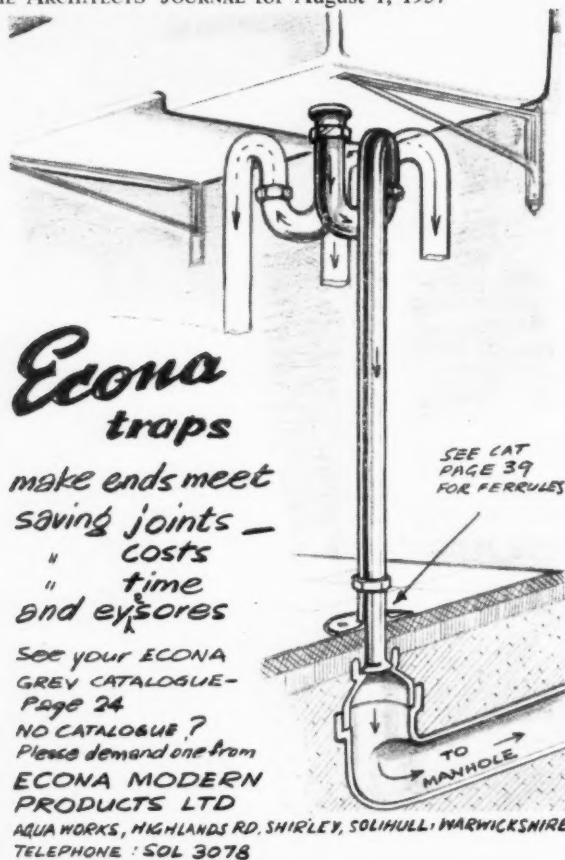
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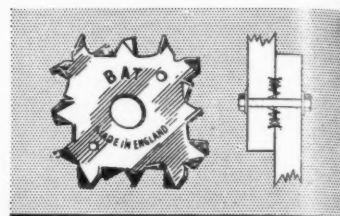
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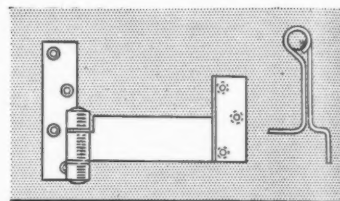
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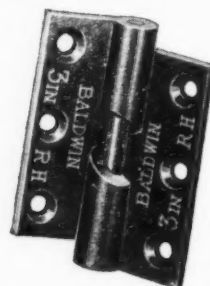
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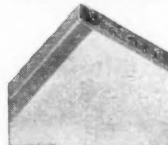
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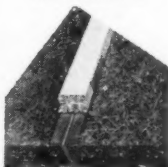
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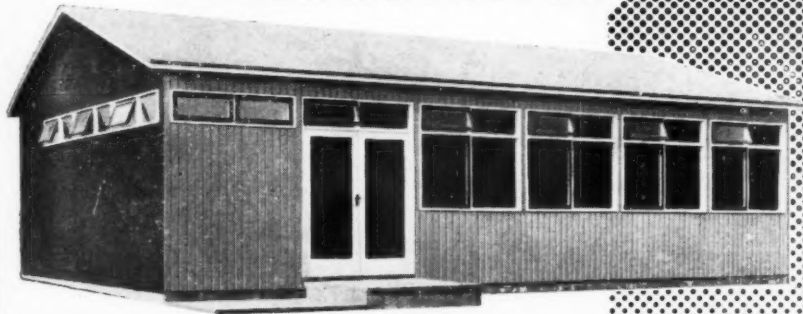
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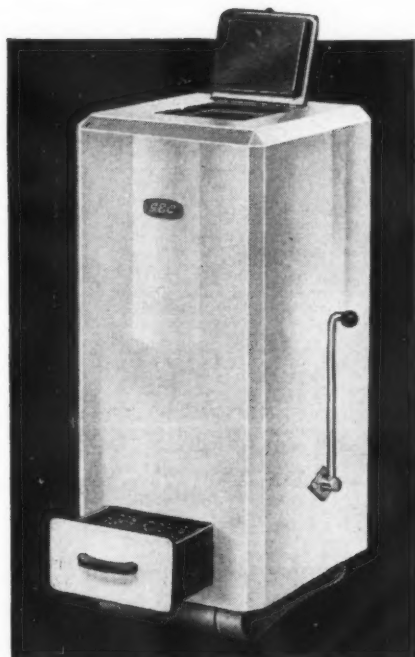
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CLASSIFIED ADVERTISEMENTS

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

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

Public and Official Announcements

30s. per inch; each additional line, 2s. 6d.

LONDON COUNTY COUNCIL ARCHITECTS' DEPARTMENT

Selections for appointment are now being made from students at architectural schools who will take their final examinations this summer. Starting salary up to £676. Vacancies also for ARCHITECTS of experience at starting salaries up to £1,036. Full programme of houses, flats, schools and many other interesting buildings.

Application forms and full particulars from the Architect (Ref. AR/EK24/572), The County Hall, S.E.1. (895) 6290

CITY OF CANTERBURY

Applications are invited for the temporary appointments of ARCHITECTURAL ASSISTANTS, Grade A.P.T. II (£609 17s. 6d.—£691 17s. 6d.).

Applicants must have passed the R.I.B.A. Inter. Examination.

The successful candidates will be engaged on the design and erection of a new Technical College. This project, which is in the early stages of design, offers considerable scope for initiative and experience both in design and construction. Work on the College is likely to extend over a number of years.

The commencing salary will be fixed within the Grade according to ability and experience.

Applications, together with the names of two referees, must reach the City Architect and Planning Officer, Mr. J. L. Berbers, A.R.I.B.A., A.M.T.P.I., not later than Saturday, 10th August, 1957.

Canvassing will disqualify.

J. BOYLE,
Town Clerk.

Municipal Buildings, Canterbury. 6998

COUNTY COUNCIL OF THE WEST RIDING OF YORKSHIRE APPOINTMENT OF DEPUTY COUNTY ARCHITECT

Applications are invited from Fellows or Associate Members of the Royal Institute of British Architects for the post of DEPUTY COUNTY ARCHITECT, at a salary of £2,270, rising by three annual increments of £105 and one of £55 until a maximum of £2,640 per annum is reached. The appointment will be subject to the provisions of the Local Government Superannuation Acts, 1937-1953, and the successful applicant will be required to pass a medical examination.

The person appointed will be expected to have first-class architectural experience, but will be particularly required to undertake technical administration.

Forms of Application, together with particulars of the terms and conditions of the appointment, may be obtained from the undersigned to whom applications should be submitted not later than the 26th August, 1957.

BERNARD KENYON,

Clerk of the County Council.

County Hall, Wakefield.

July, 1957. 6997

AIR MINISTRY require workers-up in Quantities Division London, must be fully experienced and competent to work-up entire bills of quantities. Preference holders C & G. (Quantities), O.N.C., or equivalent technical qualification. Salary range £660 at age 26 to £980 starting pay dependent on age, qualifications and experience. Pensionable and promotion prospects. Five-day week. Over three weeks leave a year. Applicants normally should be natural born British subjects. Write, stating age, qualifications and previous appointments including type of work done to P.E.104 Manager P. & E Register, Ministry of Labour and National Service, 1.6, Tavistock Square, London, W.C.1. No original testimonials should be sent. Only candidates selected for interview will be advised. 6781

CITY OF WINCHESTER

Applications are invited for the post of ARCHITECTURAL ASSISTANT in the City Engineer's office (C. C. Stepien, A.R.I.B.A., Chief Assistant Architect). It is essential that the applicant should be a neat and accurate draughtsman and have had previous experience in an architect's office. Salary, according to experience, will be within Grade II of the National Scales, and the appointment is subject to the Local Government Superannuation Act.

Applications, stating age and details of experience, together with the names and addresses of two referees, should be addressed to the City Engineer, Guildhall, Winchester, and should reach his office not later than Monday 12th August, 1957. Canvassing, either directly or indirectly, will disqualify.

R. L. McCALL,
Town Clerk.

Guildhall, Winchester.

17th July, 1957. 7000

LONDON COUNTY COUNCIL— ARCHITECTS' DEPARTMENT EXPANSION OF QUANTITIES DIVISION

Applications invited to fill about 50 positions of quantity surveyor. R.I.C.S. qualification at appropriate levels desirable, but consideration given to those with sound practical training.

Salaries as follows:—

Grade I Assistants up to £1,410

" II " up to £1,240

" III " up to £1,635

Technical Assistants up to £817

Starting point dependent upon qualifications and experience.

PRE-CONTRACT DUTIES (COST PLANNING)

Re-organisation of the Pre-Contract section to provide a cost planning service.

Applicants should have (in degree appropriate to grade applied for) experience in current building techniques and pricing with ability to (a) undertake elemental analysis of bills of quantities, (b) prepare estimates both from preliminary and detailed drawings, and (c) advise architects on comparative costs of alternative forms of construction and finishes and all matters related to the economics of building during preliminary design and development stages of educational, housing and other building projects. Vacancies, 3—Grade I, 8—Grade II, 4—Grade III.

POST-CONTRACT DUTIES

Preparation and settlement of final accounts for major contracts comprising interim valuations, measuring, pricing and working up.

Vacancies, 1—Grade I (responsible for group of staff); 4—Grade II, 5—Grade III; also 10 technical assistants for working up and/or junior measuring functions.

PREPARATION OF BILLS OF QUANTITIES

(for schools, housing and general works).

Senior takers-off, workers-up capable of junior taking-off and workers-up.

Vacancies, 1—Grade I, 3—Grade II, 3—Grade III for working-up and junior taking-off and 3 technical assistants for working-up.

Application forms and particulars from the Architect (AR/EK/41/57), County Hall, S.E.1.

returnable by 26th August, 1957. (1415) 7014

LINDSEY COUNTY COUNCIL PLANNING DEPARTMENT

Applications are invited for the following appointments:—

(a) ASSISTANT A.P.T. Grade III and Special Grade (£656—£861).

(b) ASSISTANT A.P.T. Grade I (£543 5s.—£625 5s.).

Candidates for (a) must have passed Intermediate Examination of T.P.I. and have experience in surveys for and preparation of Town Maps. Promotion from A.P.T. III to Special Grade will be dependent on officer passing T.P.I. Final and having 5 years' experience. Own car to be provided for official journeys, for which an allowance will be paid at essential user's rate for cars not exceeding 10 h.p. or 1199 c.c.

Candidates for (b) must have completed a 3-year period of training in planning, architect's or surveyor's office, comparable with the recognised requirements for the Training of Municipal Engineers, and be good draughtsmen.

Superannuation and N.J.C. conditions of service as approved by the County Council. Canvassing will disqualify. Relationship to any member or senior officer of the Council to be disclosed in writing by applicants.

Applications, with particulars of training, experience, and names of two referees, to County Planning Officer, The Castle, Lincoln, not later than 7th August, 1957. 7012

BOROUGH OF BLYTH

Applications are invited for the following vacancies:—

(a) CHIEF ENGINEERING ASSISTANT. Salary A.P.T. IV. £727 15s. p.a., rising by annual increments to £907 2s. 6d. p.a. Applicants should have experience in Municipal Engineering and hold a recognised qualification.

(b) JUNIOR ARCHITECTURAL ASSISTANT. Salary A.P.T. II. £609 17s. 6d. p.a., rising by annual increments to £691 17s. 6d. p.a. Applicants should be of Intermediate standard.

The appointments are subject to the Local Government Superannuation Acts, the scheme of Conditions of Service of the National Joint Council, one month's notice on either side and the passing of a medical examination.

Applications, suitably endorsed, must be delivered to the undersigned with names of two referees not later than 15th August, 1957.

Canvassing will disqualify, and applicants should disclose relationship with any member or official of the Council.

HOUSING ACCOMMODATION WILL BE PROVIDED IF REQUIRED.

EDWIN W. CARTER.

Town Clerk.

Dinsdale House, Marine Terrace.

Blyth, Northumberland. 6986

BOROUGH OF SWINDON APPOINTMENT OF PLANNING ASSISTANT A.P.T. IV

Applications are invited for the appointment of a Planning Assistant A.P.T. IV (£727—£907) in the Planning Department of the Borough Engineer. Candidates should be fully qualified, and should have had experience of housing layouts, and Central Area Redevelopment schemes.

Housing accommodation is available.

Applications, on forms to be obtained from the Town Clerk (Civic Offices, Swindon), must be returned by 17th August, 1957. 7066

BOROUGH OF BEXLEY

FIRST ASSISTANT ARCHITECT

Applications are invited for this appointment within Grade A.P.T. IV (£727 15s.—£907 2s. 6d. per annum), plus London weighting.

Candidates should have experience in Schools and Housing projects and must have passed the Final R.I.B.A.

Forms of application and conditions of appointment obtainable from the Borough Engineer, West Lodge, Broadway, Bexleyheath, Kent, to whom completed applications must be returned by 19th August, 1957. The Council may be prepared to assist in the provision of housing accommodation. Canvassing will disqualify.

ARTHUR GOLDFINCH,

Town Clerk.

7040

CANNOCK RURAL DISTRICT COUNCIL

CHIEF ARCHITECTURAL ASSISTANT

Applications are invited from Associate Members of the R.I.B.A. for the above permanent post on the staff of the Engineer and Surveyor. Salary Grade A.P.T. IV (£727 15s.—£907 2s. 6d.).

The starting salary will be fixed at a point within the Grade, depending on the qualifications and experience of the successful candidate.

Housing accommodation in the form of a self-contained maisonette will be available, if required, at a reasonable rent. Travelling allowance will be paid on essential-user scale. It is the Council's usual practice to operate the assisted car-purchase scheme, where necessary, and to assist with removal expenses.

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

Applications, giving full details of age, qualifications and experience, together with the names and addresses of two referees, to reach the undersigned by Wednesday 7th August, 1957.

JOHN P. ROBERTS,

Clerk of the Council.

Council Offices, Penkridge, Stafford. 7039

HAYES AND HARLINGTON URBAN

DISTRICT COUNCIL

Applications are invited for:—

(a) ASSISTANT ARCHITECTS (£707 2s. 6d. p.a.) within Grade A.P.T. IV, i.e., £727 15s.—£907 2s. 6d. p.a.

(b) ARCHITECTURAL ASSISTANT within Grade A.P.T. III, i.e., £656—£784 2s. 6d. p.a., plus appropriate London "weighting" in each instance, 21-25 years £20 p.a., 26 years and over £30 p.a.

Candidates for (a) must be capable of preparing sketch designs, full working drawings, specifications and supervision of building contracts, etc., and preference will be given to applicants who have passed the examination for Associateship of the R.I.B.A.; (b) must possess good architectural experience and have passed the Intermediate Exam. R.I.B.A. Housing accommodation will be made available for two of the appointments, 5-day week. Further particulars and conditions of service and form of application available from the undersigned, which when completed must be returned by 12th August, 1957.

GEORGE HOOPER,

Clerk and Solicitor.

Town Hall, Hayes, Middx. 6972

STAFFORDSHIRE COUNTY COUNCIL COUNTY PLANNING AND DEVELOPMENT DEPARTMENT

Applications are invited for appointments as PLANNING ASSISTANTS on A.P.T. Grade III-IV (£656—£907 3s. p.a.) and JUNIOR PLANNING ASSISTANTS on A.P.T. Grade I-III (£543 5s.—£784 2s. 6d. p.a.) in the Headquarters office at Stafford and the area offices at Lichfield, Newcastle-under-Lyme and Sedgley. The grade and salary for each type of appointment will be determined on appointment according to qualifications and experience.

Applicants should have experience in an Architects' Engineers or Planning Department and should be suitably qualified. The successful candidates will have the opportunity for varied experience in the work of a planning department and for further professional training.

The Council are prepared to grant lodging allowances of 35s. per week for a period of six months and second class railway travel home every two months during the initial six months to married applicants maintaining a home outside the geographical county. Consideration will also be given to the granting of financial assistance in appropriate cases towards removal expenses.

Applications giving details of age, education, qualifications, present and previous appointments, experience and the names of two persons to whom reference may be made should be sent to D. W. Riley, County Planning and Development Officer, 41a, Eastgate Street, Stafford, not later than 14th August, 1957.

Relationship to any member or senior officer of the County Council must be disclosed.

T. H. EVANS,

Clerk of the County Council.

7070

ARCHITECT required by the National Coal Board for their Divisional Headquarters, Edinburgh. Salary £700 + £30—£1,000 p.a.; qualifications—A.R.I.B.A. The point of entry will depend on qualifications and experience. The work involved covers a wide and interesting field, including Pithead Baths, Medical Centres, Canteens and Social Centres. Applications, giving full details of age, education, qualifications, experience, present post and salary, to the Divisional Chief Staff Officer, National Coal Board, 3, Eglinton Crescent, Edinburgh, 12. 7067

BOROUGH OF WIDNES APPOINTMENT OF HOUSING MANAGER

This is a new appointment. The maximum salary, according to experience and qualifications, will be within the range £1,300-£1,500 per annum, to be reached by four annual increments of £50. The Council require, as a minimum qualification, Associateship of the Royal Institution of Chartered Surveyors or its equivalent.

In the case of applicants who, in the opinion of the Council, possess exceptional qualifications for this post, the Council are prepared to offer a higher maximum salary.

Further particulars from me. Closing date Monday, 26th August, 1957.

FRANK HOWARTH,
Town Clerk.
7059

SHEFFIELD REGIONAL HOSPITAL BOARD ARCHITECTURAL DIVISION APPOINTMENT OF PRINCIPAL ASSISTANT ARCHITECTS

Applications are invited from Registered Architects who have passed the requisite examinations, for three appointments of Principal Assistant Architect (Scale II), within the salary scale £1,115-£1,350 per annum.

The persons appointed must have had wide experience in a senior capacity, preferably in hospital work, and will be responsible to the Regional Architect for all hospital building schemes in the areas allocated to them, which may include major projects.

Applications giving full details of training, experience, qualifications, etc., to be submitted to the Secretary to the Board, Fulwood House, Old Fulwood Road, Sheffield, 10, not later than the 17th August, 1957.

**CARSHALTON URBAN DISTRICT COUNCIL
ARCHITECTURAL ASSISTANT.** Engineer and Surveyor's Department. Must hold R.I.B.A. Intermediate Examination Certificate and have had good training, be experienced in detailing and be a competent draughtsman. Salary within scale range £509 17s. 6d.-£691 17s. 6d., plus London weighting (£30 at age 26).

Carshalton has a population of 63,000 and has a large and varied programme of building works. Application forms, obtainable from the undersigned, must be returned, with names of three referees, not later than 19th August, 1957.

Canvassing will disqualify.
C. H. DURRANT,
Clerk of the Council.
The Grove,
Carshalton, Surrey. 7078

ISLE OF ELY COUNTY COUNCIL COUNTY ARCHITECT'S DEPARTMENT

Applications are invited for the following appointments:—

- (a) SENIOR ASSISTANT ARCHITECTS, Grade A.P.T. VI (£902-£1,107).
- (b) SENIOR ASSISTANT ARCHITECT, Grade A.P.T. V (£815-£994).
- (c) ASSISTANT ARCHITECT, Special Grade (£707-£861).

Applicants for (a) and (b) must be A.R.I.B.A. or equivalent with previous experience.

Applicants for (c) should have completed parts I and II of the R.I.B.A. Final or Special Final Examination or to have completed a course at a School of Architecture.

Appointments are subject to the National Joint Council's Scheme of Conditions of Service, the Local Government Superannuation Act and to passing a medical examination.

Applications giving details of training and experience, together with the names of two referees, to be sent to the County Architect, County Hall, March, Cambs., not later than Tuesday, 20th August, 1957.

R. F. G. THURLOW,
Clerk of the County Council.
7062

COUNTY BOROUGH OF WAISALL PUBLIC WORKS DEPARTMENT

Applications are invited for the appointment of ASSISTANT ARCHITECT, Grade A.P.T. V at a commencing salary of £922 10s. rising by annual increments to a maximum of £994 5s.

Applicants must be A.R.I.B.A. The post is superannuated and the person appointed will be required to pass a medical examination.

Applications, giving the names of two persons to whom reference may be made, and stating age, present position, salary, qualifications, and details of experience should be submitted to the undersigned not later than Friday 16th August, 1957.

M. E. HABERSON,
Borough Engineer and Surveyor.
Council House,
Walsall,
22nd July, 1957. 7071

ARCHITECTURAL AND BUILDING DRAUGHTSMEN

Applications are invited from Draughtsmen who have had experience in the preparation of working and detail drawings of ancillary buildings to power stations to join a section engaged in this work at Westminster.

Ample opportunities to gain knowledge of and for advancement in this important national work, with visits to site before and during construction. Superannuation scheme and good working conditions with canteen facilities on the premises.

Salary ranges: from £635 to £910 p.a.

Apply by letter to: Divisional Secretary, Central Electricity Authority, London Division, Generation House, Great Portland Street, W.1, or by telephone, Museum 6844, extension 240, for application forms. 7092

CITY OF BIRMINGHAM EDUCATION COMMITTEE COLLEGE OF ART AND CRAFTS APPOINTMENT OF PART-TIME LECTURERS IN THE SCHOOL OF PLANNING

1. GEOLOGY AND GEOGRAPHY IN RELATION TO TOWN AND COUNTRY PLANNING.

One or two lecturers may be appointed to undertake the evening course. Applicants should be qualified Geographers holding a University degree; knowledge of current planning techniques in relation to these subjects would be useful and lecturers would be expected to be currently engaged in research in relation to human, historic or regional aspects of geography. Fee: £1 16s. per lecture.

2. DESIGN IN TOWN AND COUNTRY PLANNING AND DRAUGHTSMANSHIP.

Studio master for one morning per week (3 hours) required to teach draughtsmanship, map work, planning techniques and to lecture on architectural design. Applicant must be a qualified Architect and Town Planner. Fee: £3 12s. 6d. per morning.

3. TOWN PLANNING THEORY AND PRACTICE (Evening Course).

Applicants must be qualified Town Planners, preferably with a University degree, and in addition qualified in some subject other than architecture. They should have had general planning experience with local government and should be currently engaged in it. Fee: £1 16s. per lecture.

4. SOCIAL AND ECONOMIC ORGANISATION (Evening Course)

(a) Applicant should hold a University degree, be a qualified Town Planner, and have experience of planning research in the social and economic field. (b) Applicant should hold a University degree, be qualified in the social sciences, and have been engaged in research of a sociological nature. Fee: £1 16s. per lecture.

Application forms obtainable from College of Art and Crafts, Margaret Street, Birmingham, 3. Closing date 19th August, 1957.

E. L. RUSSELL,
Chief Education Officer.
7093

COUNTY BOROUGH OF CROYDON ARCHITECTURAL ASSISTANT

Applications are invited for the appointment of an Architectural Assistant to work under a Section Leader on housing schemes and multi-storey flats. Salary scale £573 to £814 per annum, commencing according to experience and progressing, if suitably qualified, to £891 per annum. If necessary the Corporation will endeavour to assist with living accommodation at a full economic rent.

Further particulars and application form from Borough Engineer, Town Hall, Croydon.

Closing date 14th August, 1957.

E. TABERNER,
Town Clerk.
7080

NORTHAMPTON RURAL DISTRICT COUNCIL ARCHITECTURAL ASSISTANT

Applications are invited for the above appointment on either the Higher General Division scale (£184 10s.-£512 10s. per annum) or Grade A.P.T. II (£609 10s. 6d.-£691 17s. 6d. per annum) according to qualifications and experience.

Applicants for Grade A.P.T. II appointment should have passed the R.I.B.A. Intermediate examination, or its equivalent at one of the recognised schools of architecture and have had a sound general experience.

The principal work will be preparation of improvement schemes for Council Houses although from time to time, new works will be involved.

The appointment is subject to the Local Government Superannuation Acts, the National Conditions of Service, a satisfactory medical examination, and termination by one month's written notice, on either side.

Applications, endorsed "Architectural Assistant" with personal details and details of experience and qualifications, together with names of two referees to be sent to the undersigned by 14th August, 1957.

CLIFFORD E. JONES,
Clerk of the Council.
7094

BOROUGH OF MORLEY HOUSING COMMITTEE ARCHITECTURAL ASSISTANT

Applications are invited for the position of Architectural Assistant in the Borough Engineer's Department, salary Grade A.P.T. III (£656-£784 2s. 6d.). Previous Local Government experience not essential.

The appointment is subject to the National Scheme of Service and Local Government Superannuation Act. The successful candidate will be required to pass a medical examination.

Consideration will be given to the provision of a house if needed.

Applications, stating age, qualifications and experience, together with two recent testimonials, and endorsed "Architectural Assistant" to be delivered to the Borough Engineer, Town Hall, Morley, not later than Thursday, 12th September, 1957.

E. V. FINNIGAN,
Town Clerk.
7085

CITY OF NAIROBI APPOINTMENT OF CHIEF PLANNING OFFICER

Applications are invited for the above-mentioned post in the City Engineer's Department. The appointment is a permanent established post and the consolidated salary scale is £2,360 x £60 to £2,600 per annum.

The successful applicant will be responsible for the Town Planning Section of the Department. Applicants should be Corporate Members of the Town Planning Institute and in addition hold a recognised qualification in architecture, surveying or engineering. They should have had extensive similar experience with local planning authorities, be accustomed to supervising staff and to attending meetings of committees. Full particulars of experience and of responsibility in present and previous posts must be included in application.

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

Application forms together with a summary of main Terms and Conditions of Service applicable to the appointment, are available on request from the East African Office, Grand Buildings, Trafalgar Square, London, W.C.2, and applications on such forms should be addressed and endorsed "Application for Employment" so as to reach the Establishment Officer, P.O. Box 30037, Nairobi, Kenya, not later than 27th August, 1957.

Canvassing either directly or indirectly will be a disqualification.

JOHN RISEBOROUGH
Town Clerk.
Town Hall,
P.O. Box 30075,
Nairobi. 7096

THE SOUTH WALES ELECTRICITY BOARD require an ARCHITECTURAL DRAUGHTSMAN at the Head Office of the Board, St. Mellons, Cardiff.

Salary: Schedule D, Grade 6 (£595/£715) of the N.J.B. Schedule.

Applications stating age, present position and salary, qualifications, experience and three referees should be addressed to the Secretary (Establishments Section) to arrive by 19th August, 1957.

R. G. WILLIAMS,
Secretary.
St. Mellons,
Cardiff. 7083

COUNTY BOROUGH OF OLDHAM APPOINTMENT OF ARCHITECTURAL ASSISTANT

Applications are invited for the above appointment within the salary range of £707 5s.-£861, commencing salary according to qualifications and experience.

National Conditions and Local Government Superannuation Acts apply. Housing accommodation available if required.

Applications suitably endorsed and naming two referees should reach me not later than Tuesday, August 13th, 1957.

A. L. HOBSON,
Borough Engineer & Surveyor.
75, Union Street, Oldham. 7084

BOROUGH OF LUTON

- (a) SENIOR ENGINEERING ASSISTANTS.
- (b) SENIOR ARCHITECTURAL ASSISTANTS.
- (c) SENIOR QUANTITY SURVEYING ASSISTANTS.

A.P.T. V (£814 17s. 6d. to £994 5s.).

- (d) ENGINEERING ASSISTANTS.
- (e) ARCHITECTURAL ASSISTANTS.
- (f) QUANTITY SURVEYING ASSISTANTS.

Gen. Div. (£184 10s.) to A.P.T. IV (£727 15s.).

Applicants for senior posts must be fully qualified.

Commencing salary for (d), (e) or (f) in accordance with experience and qualifications, applicants holding Intermediate qualifications appointed in A.P.T. IV.

Large constructional and development programmes offers a variety of work and experience. Housing provided and removal expenses paid.

Application forms for (a) and (d) from Borough Engineer returnable by 12th August, and for (b), (c), (e) and (f) from Borough Architect, Town Hall, Luton, returnable by 19th August.

**SURREY COUNTY COUNCIL
COUNTY PLANNING DEPARTMENT**

Applications are invited for the following appointment:—

At the South-East Area Office, Reigate, One PLANNING ASSISTANT, A.P.T. Grade III (£656 to £784 2s. 6d.). The post carries an essential user car allowance and is third in a staff of nine in a varied Area.

Applications stating age, experience and qualifications together with the names of two persons to whom reference may be made should be lodged with the Clerk of the Council not later than 16th August, 1957.

**County Hall,
Kingston-upon-Thames. 7061**

WILLENHALL URBAN DISTRICT COUNCIL JUNIOR ARCHITECTURAL ASSISTANT

Applications are invited for this appointment. Salary grade A.P.T. I (£543 5s. to £625 5s. per annum). Applicants must have had experience in an Architect's Office but not necessarily in local government. Appointment terminable by one month's notice on either side and subject to the National Scheme of Conditions of Service and Local Government Superannuation Acts.

Applications stating age, qualifications, if any, experience and names and addresses of two referees should reach the Clerk of the Council, Town Hall, Willenhall, Staffs, by 17th August, 1957. 7095

INVERNESS COUNTY COUNCIL invite applications for the following supernumerary appointments:—(a) **CHIEF ARCHITECTURAL ASSISTANT**, not less than 40 years of age, salary £1,200 per annum; (b) **ASSISTANT ARCHITECT**, salary £930—£1,005 per annum; (c) **SENIOR PLANNING ASSISTANT**, salary £875—£950 per annum; (d) **DRAUGHTSMAN**, salary according to age, £355 per annum at age 21, rising to maximum of £535 per annum. Applicants for (a) and (b) must be Associate Members of the Royal Institute of British Architects, and for (c) Associate Members of Town Planning Institute. Applications stating age, training, qualifications and experience with copies of recent testimonials to County Clerk, County Buildings, Inverness, by 9th August. 7079

WORCESTERSHIRE COUNTY COUNCIL ARCHITECTS' DEPARTMENT
Appointment of **ASSISTANT ARCHITECT**, Special Grade (£727 5s.—£861).
Forms of application and further particulars may be obtained from L. C. Lomas, F.R.I.B.A., County Architect, 14, Castle Street, Worcester, not later than 10th August, 1957. CW 831. 7047

Architectural Appointments Vacant

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Applications are invited for the following appointments:—(a) **SENIOR ASSISTANT ARCHITECTS** with experience of work on commercial and industrial projects (salary range £620 to £975 per annum). (b) **ASSISTANT ARCHITECTS** capable of preparing working drawings from preliminary details (Salary range £550 to £820 per annum). There is a five-day week in operation and both appointments offer prospects of upgrading. Applications stating age, experience, qualifications and salary required to G. S. Hay, A.R.I.B.A., Chief Architect, Co-operative Wholesale Society Ltd., 1, Balloon Street, Manchester 4. 6023

YOUNG ARCHITECTURAL ASSISTANT (male) required in West End office. Write stating age, experience and salary required. Box 6683.

ARCHITECTURAL ASSISTANT required in busy London Office with varied practice. Good salary and prospects for suitable applicant. Five-day week. Write, giving particulars of age, qualifications, experience, etc., to Box 851 c/o 7, Coptic Street, W.C.1. 6376

LONDON office with widely varied practice urgently requires all grades of **ASSISTANTS**, preferably with London experience. Five-day week. Lewis Solomon, Son & Joseph, 21, Bloomsbury Way, London, W.C.1. Holborn 6108. 6531

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NORTH AND PARTNERS, Chartered Architects, with large and varied practice, require a capable experienced ASSISTANT for drawing office, salary by arrangement. Reply: 40, Broadway, Maidenhead, Berks. 6573

ARCHITECTURAL ASSISTANT of Intermediate R.I.B.A. standard required in varied practice in Croydon. Good draughtsman with practical knowledge of building construction essential. Salary according to experience. Apply Hugh Macintosh & Partners, 33, High Street, Croydon. 6568

ASSISTANT, Intermediate standard, required, busy West End office. State age, experience, and salary required.—Box 6046.

JUNIOR ARCHITECTURAL ASSISTANTS required in the Architect's Department of Multiple Retail Company, Birmingham Area. Applicants must have had sound architectural training up to Intermediate standard, and are required to prepare working drawings and details under supervision of senior staff. Salary within the range of £500 to £700 p.a. Five-day week. Staff canteen and pension scheme available. Replies to Box 6763.

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SENIOR ASSISTANT required of Intermediate/Final standard in Croydon office. Varied practice of interesting work. Good draughtsman and sound knowledge of construction essential, together with ability to manage jobs. Five-day week. Salary according to experience. Apply George Lowe & Partner, 4, High Street, Croydon 3608/9. 6851

ARCHITECTURAL ASSISTANT for busy private office. Applicants need not necessarily be qualified, but starting salary would depend on experience and ability. The work is interesting and mainly connected with Industry.—Apply, stating age, experience, salary required, to: A. J. Elder, A.R.I.B.A., Grosvenor Buildings, 65, Albert Road, Middlesbrough. 6932

SENIOR ASSISTANT required in busy West End office of Scherrer & Hicks. Must be prepared to take responsibility on interesting new projects. Salary up to £900, according to experience.—Full particulars to 19, Cavendish Square, London, W.1. 6927

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ASSISTANT required in southwest country practice. Intermediate standard. Office experience unimportant, but good knowledge of building construction and conscientious attention to detail essential. The work consists mainly of small private housing, and preference will be given to applicants having a special interest in this type of work. A liking for country life is also important, and an aptitude for practical building would be an advantage. Help can be given with family accommodation if needed, after a probationary period. Starting salary up to £400 according to ability, with prospect of early advance upon proof of reliability. Write giving fullest possible particulars to Alec H. Joy, M.A. B.Arch., A.R.I.B.A., Victoria Place, Kingsbridge, Devon. 7020

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ARCHITECTURAL ASSISTANT required, Intermediate standard, for varied practice.—Apply in writing, stating salary and experience, Smith, Williams & Harmer, Chartered Architects, 13, De Montfort Street, Leicester. 7068

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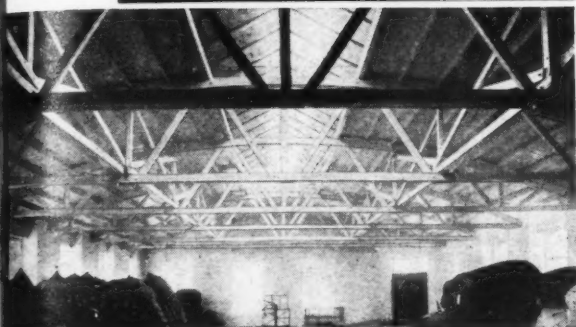
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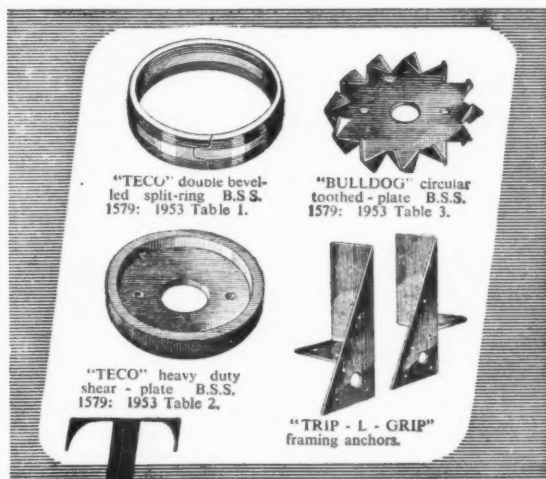
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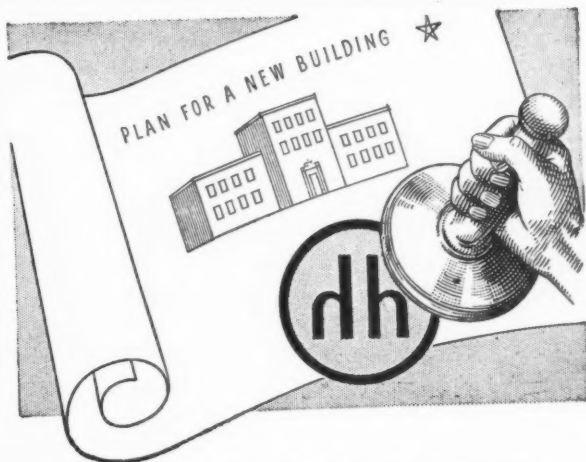
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