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The Architects' Journal September 13, 1981 Vol. 134 No. 11 1a.

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[6] Building Type

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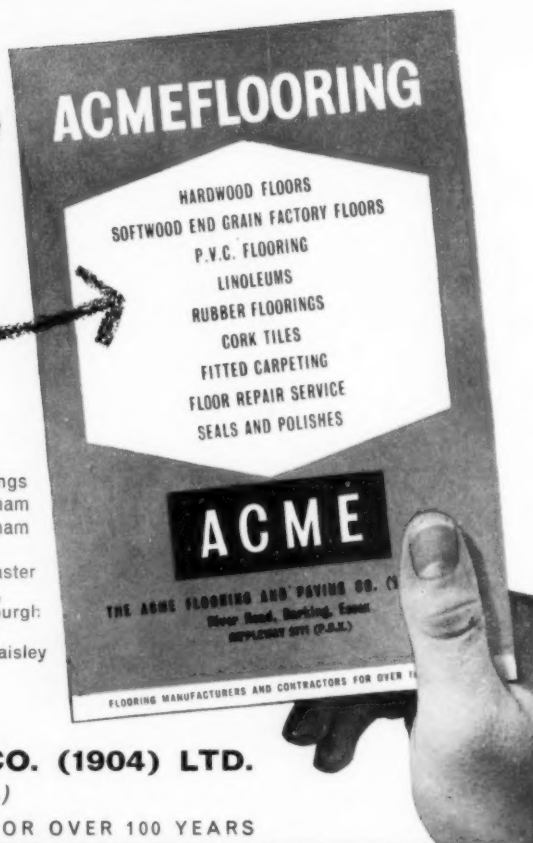
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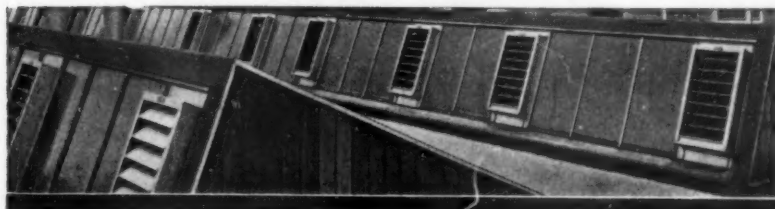
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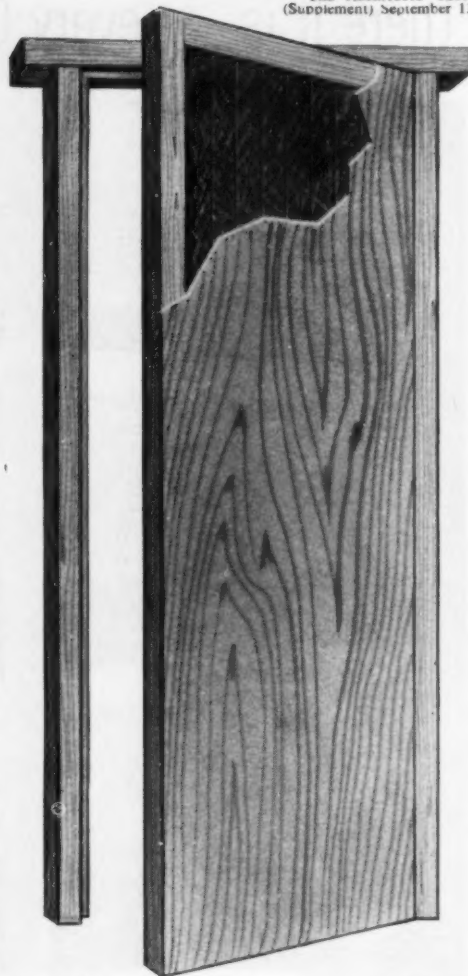
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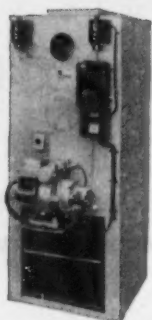
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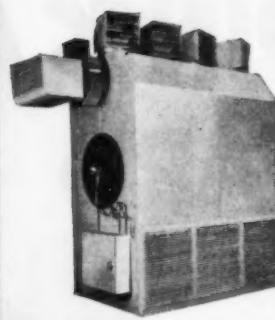
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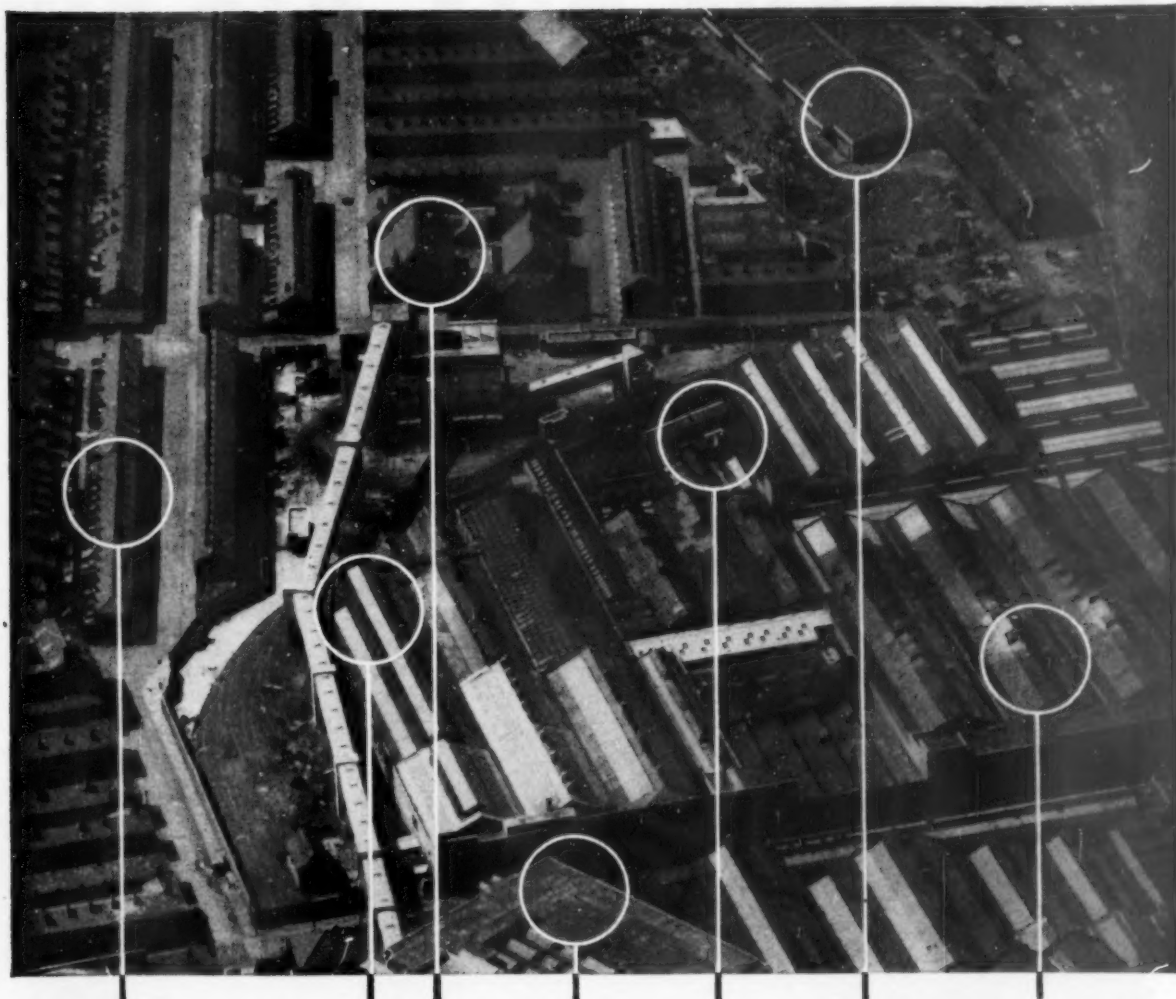
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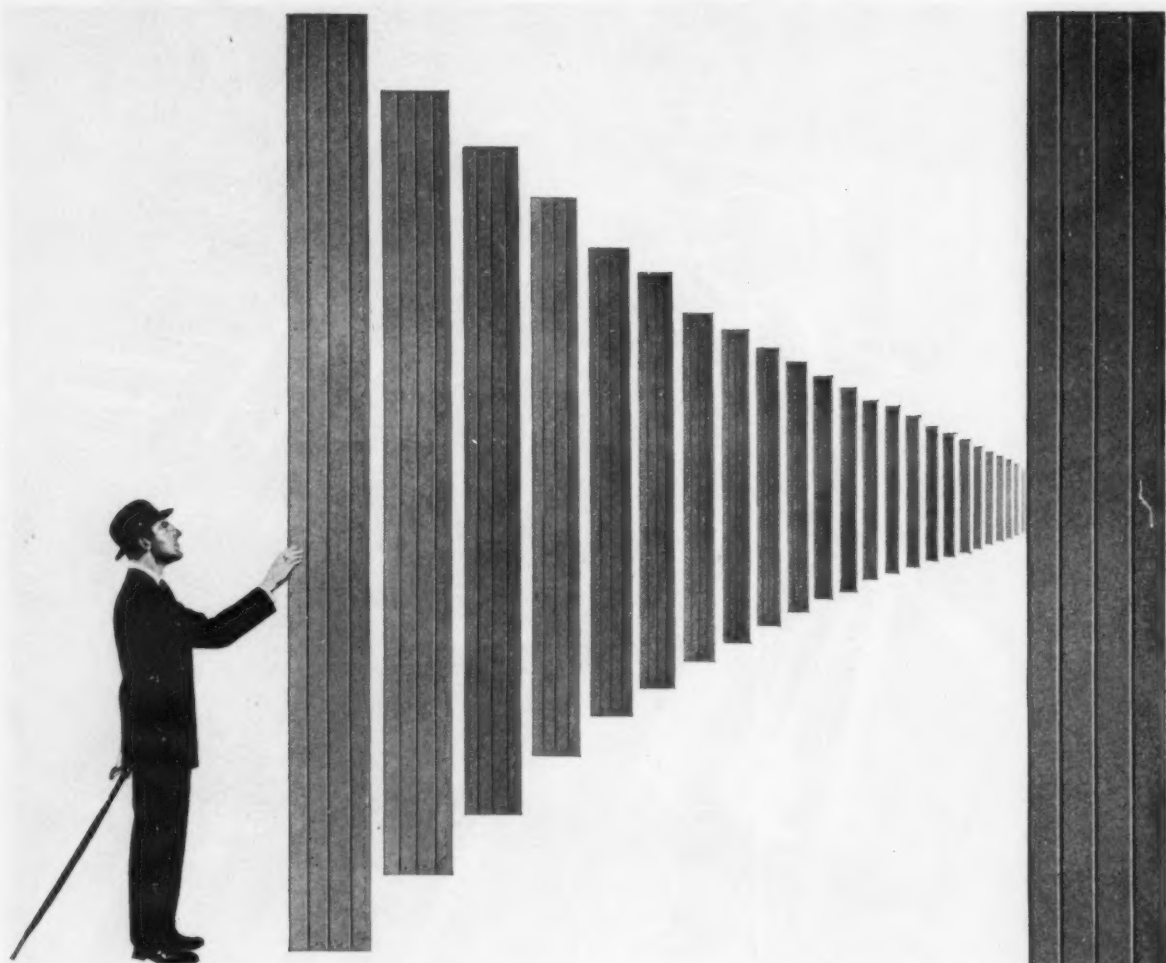


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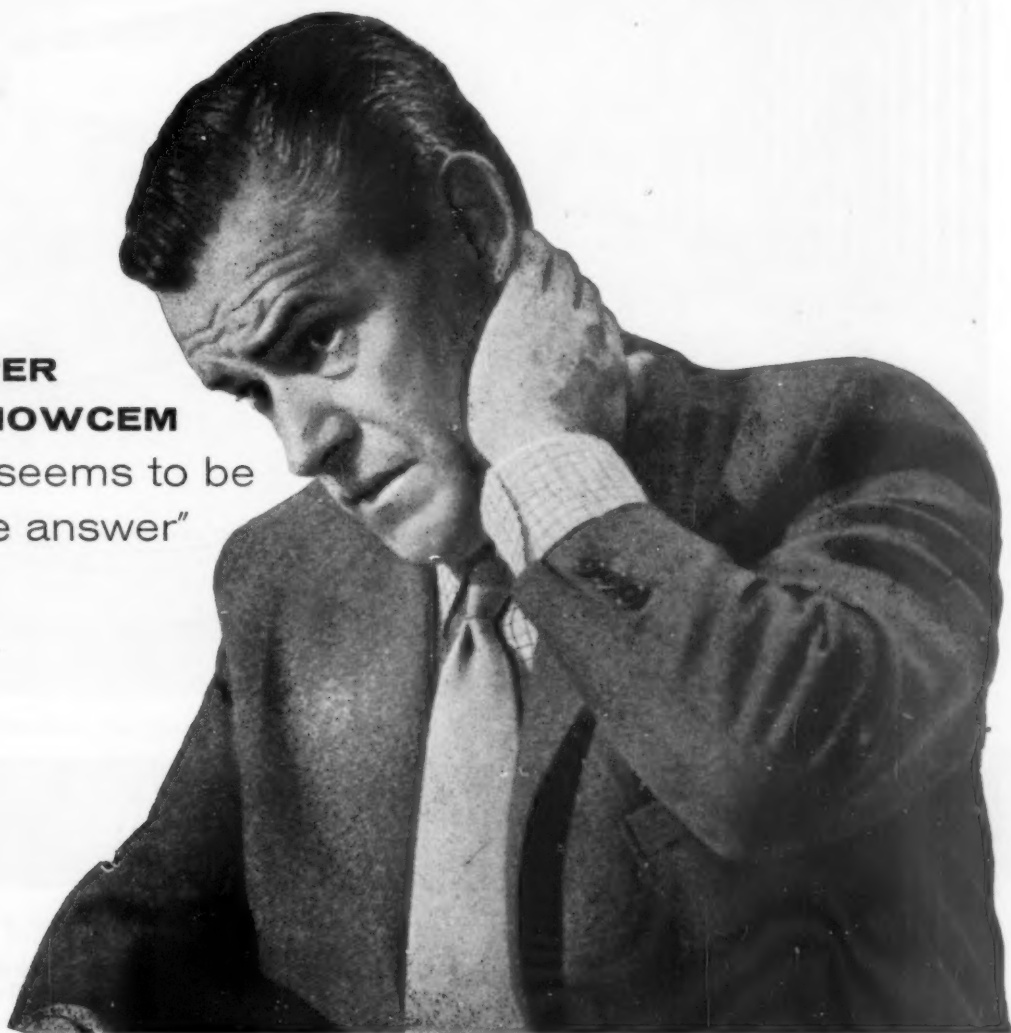
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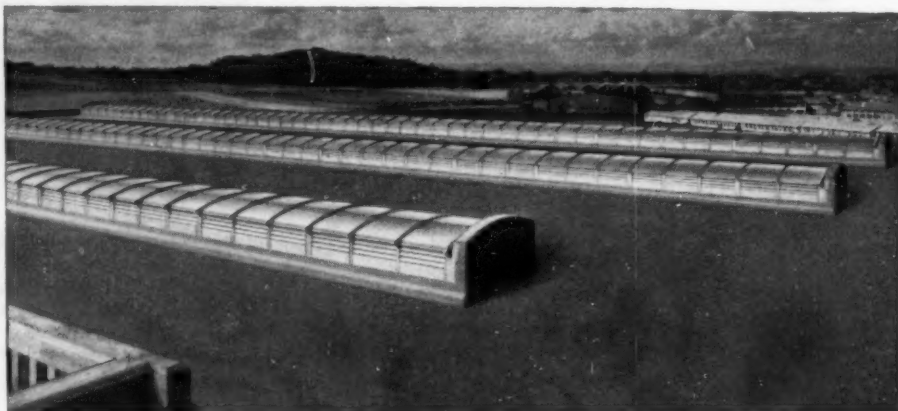
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(Technical Leaflet RL1/2)

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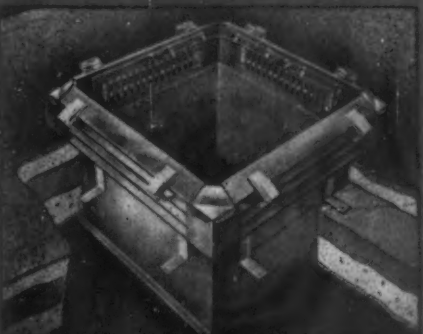
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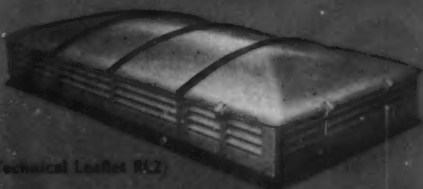


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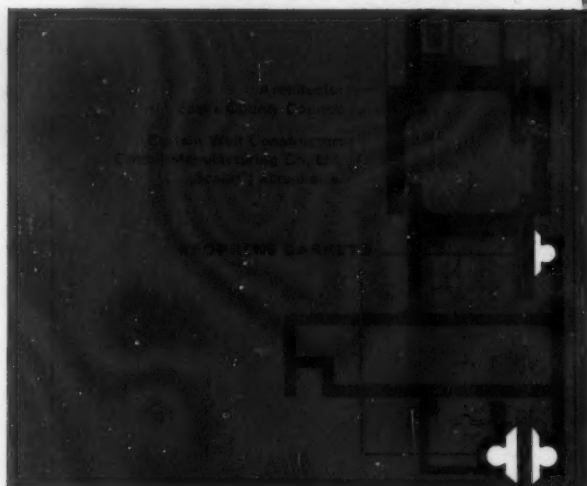
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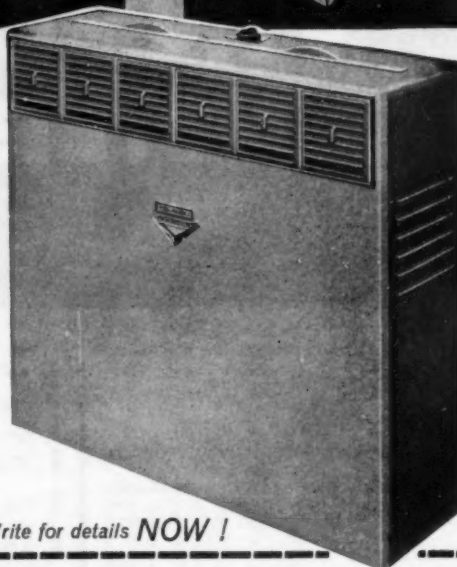
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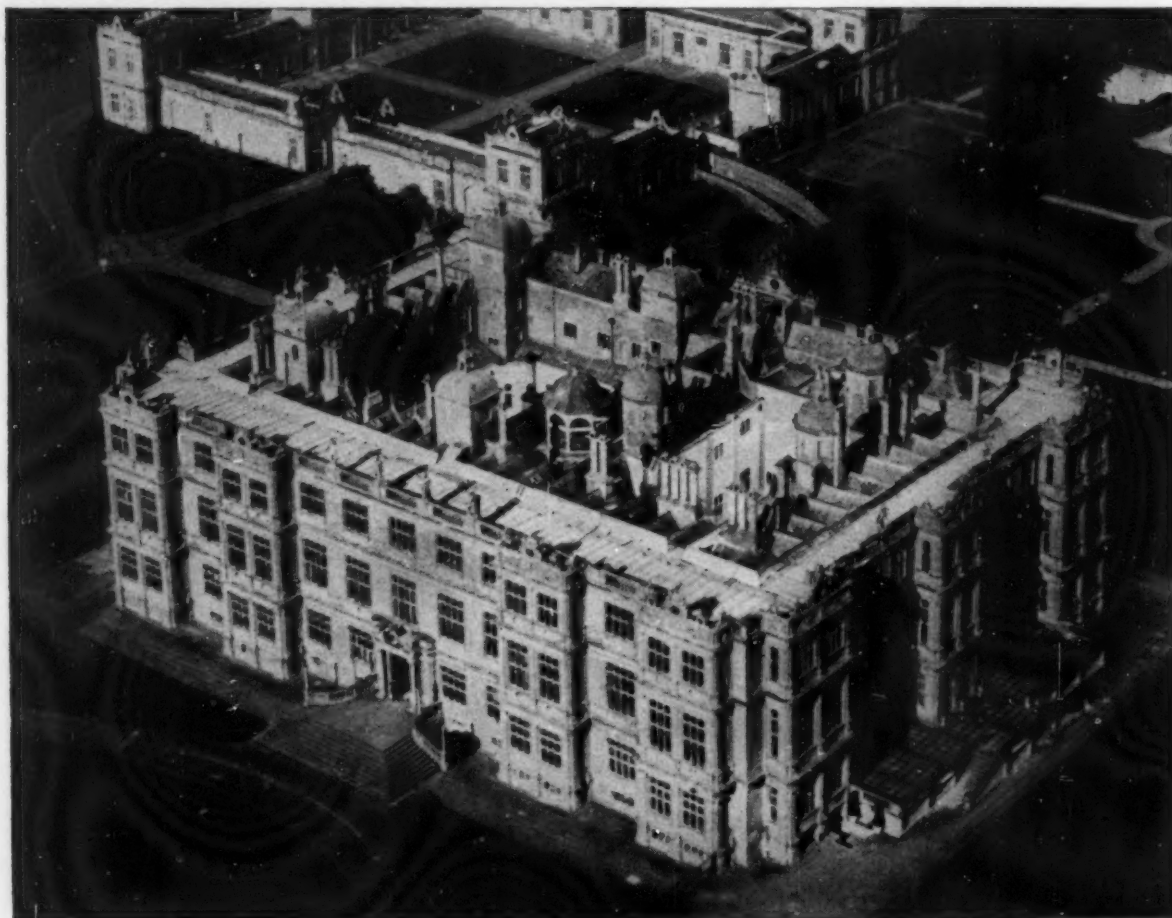
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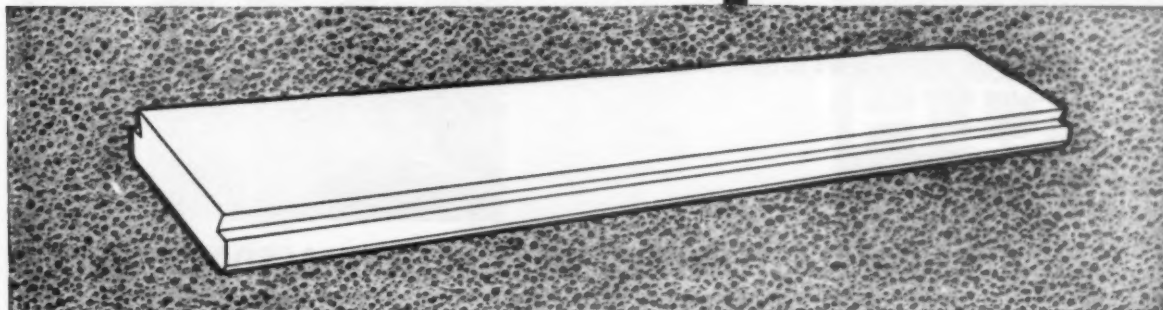
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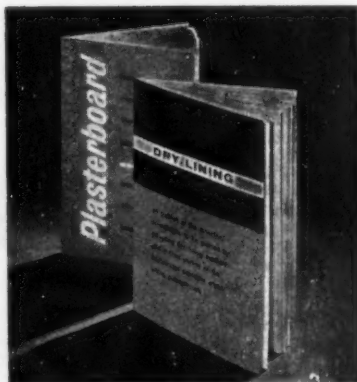
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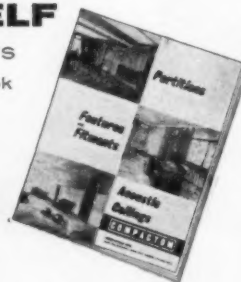
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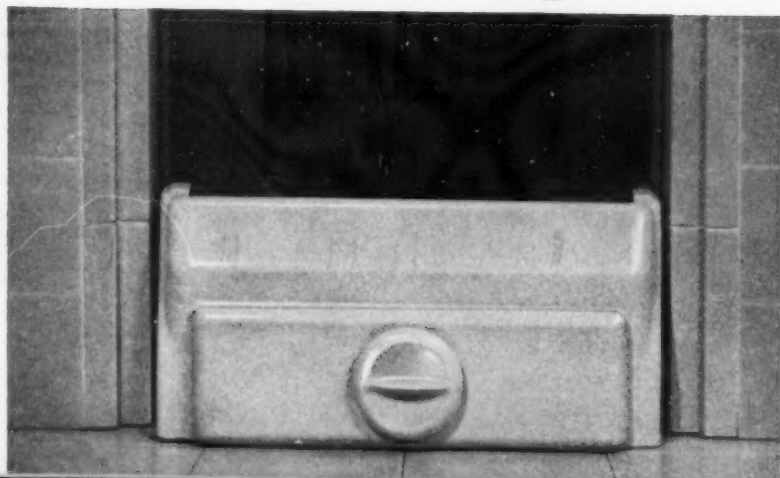
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P.6385



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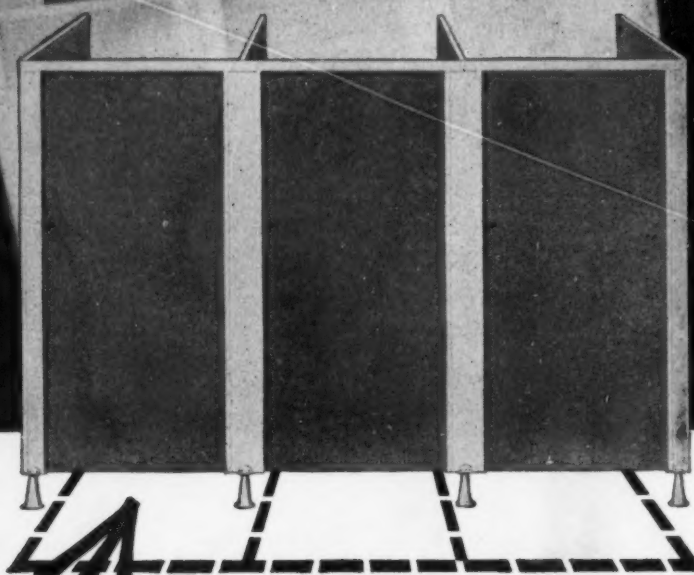
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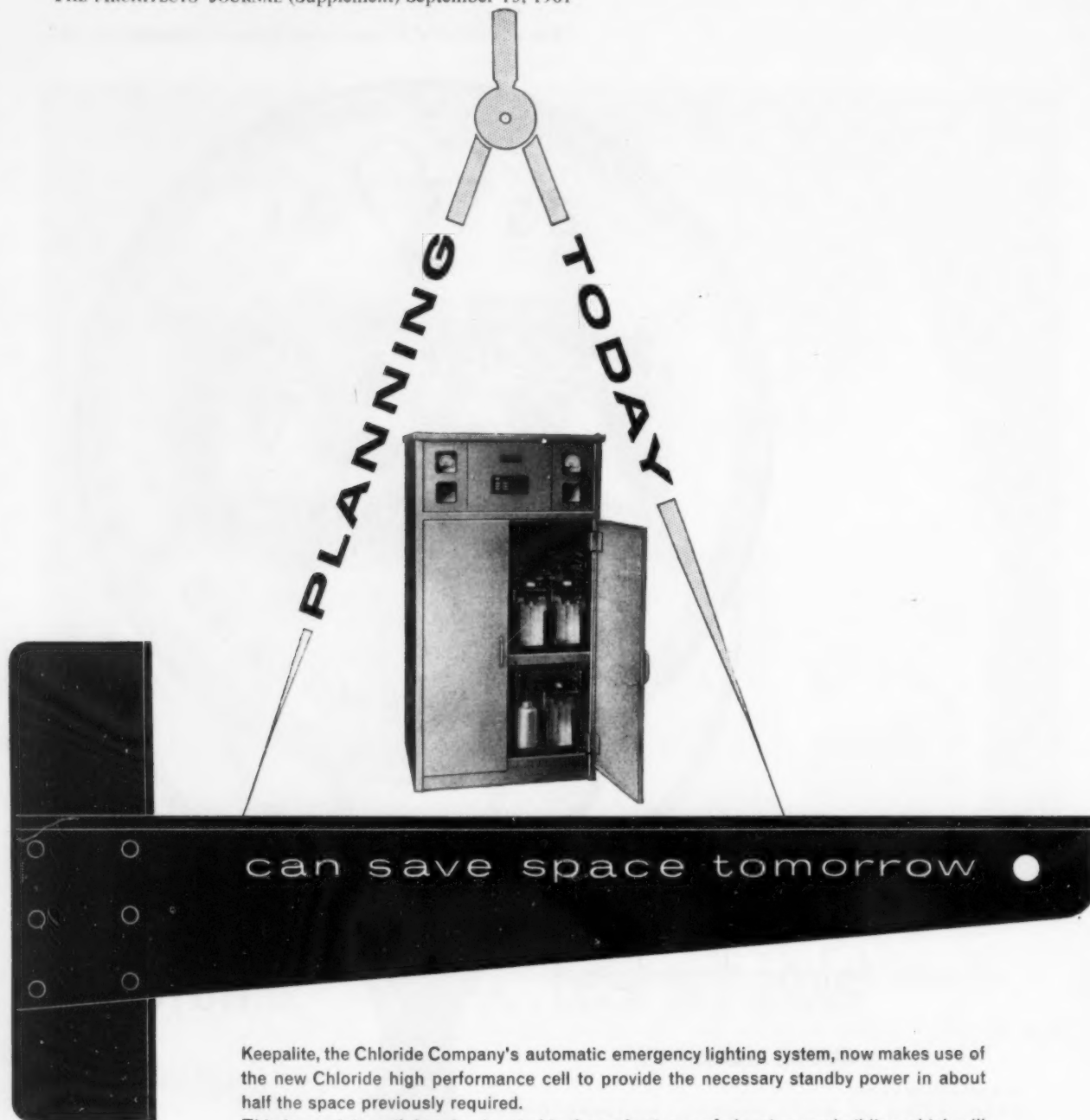
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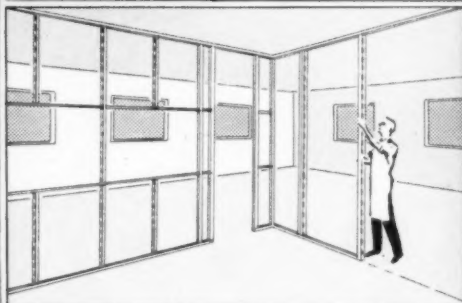
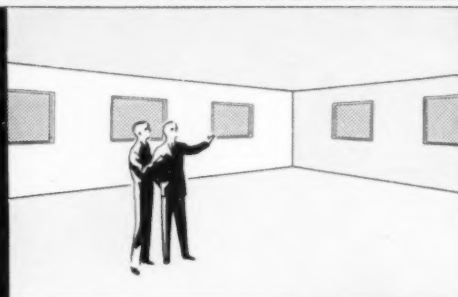
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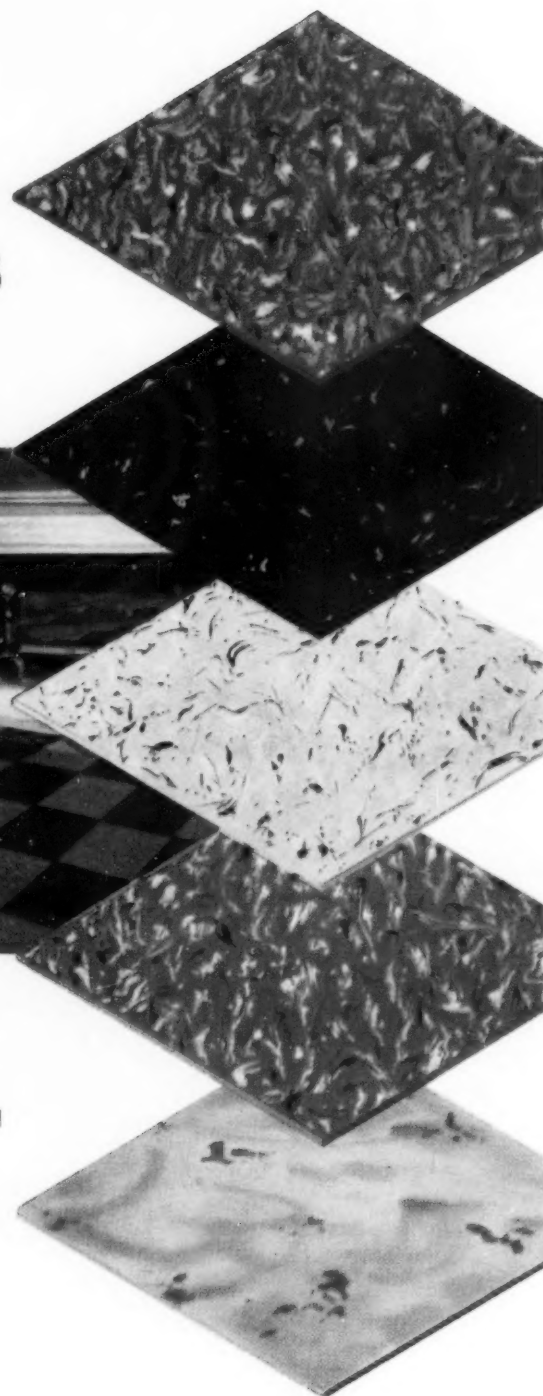
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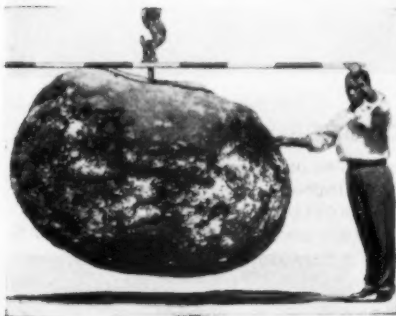
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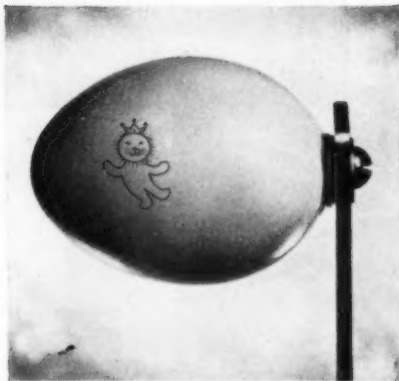
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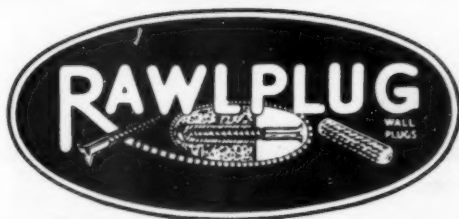


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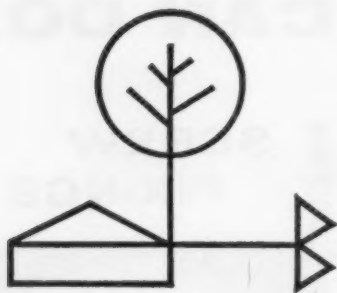
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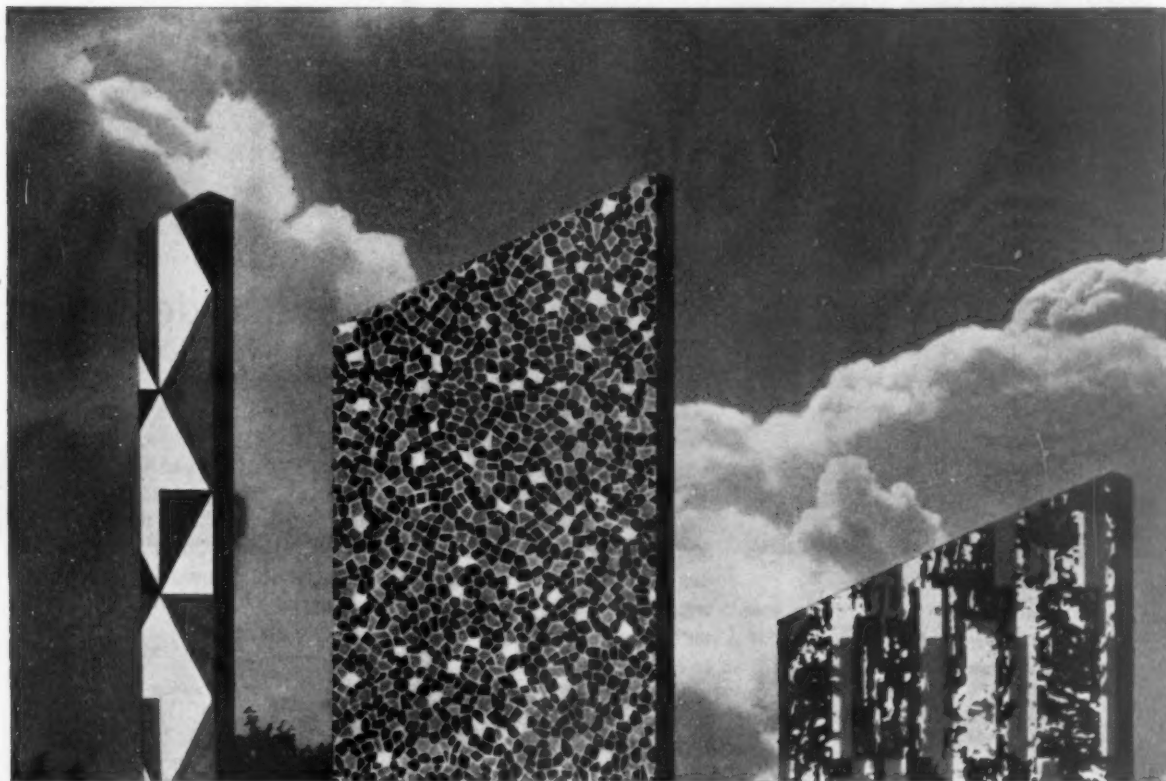
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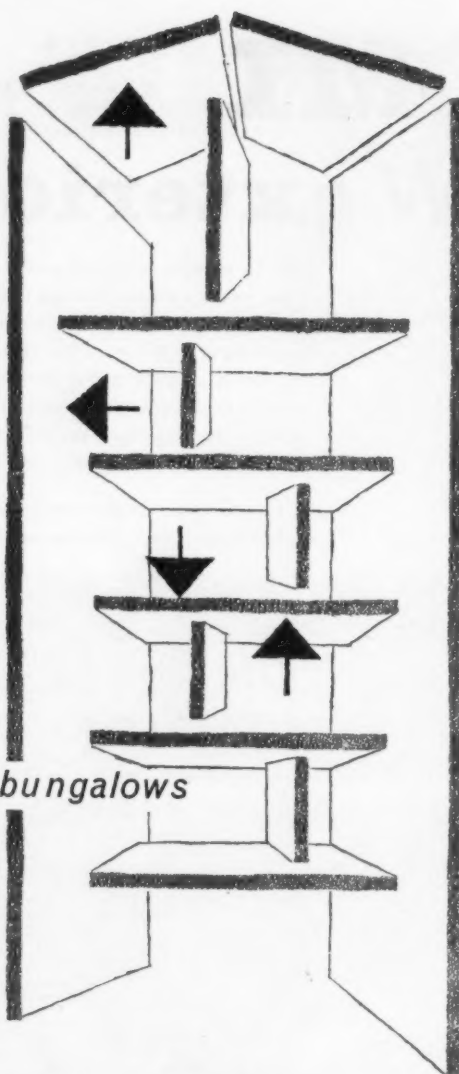
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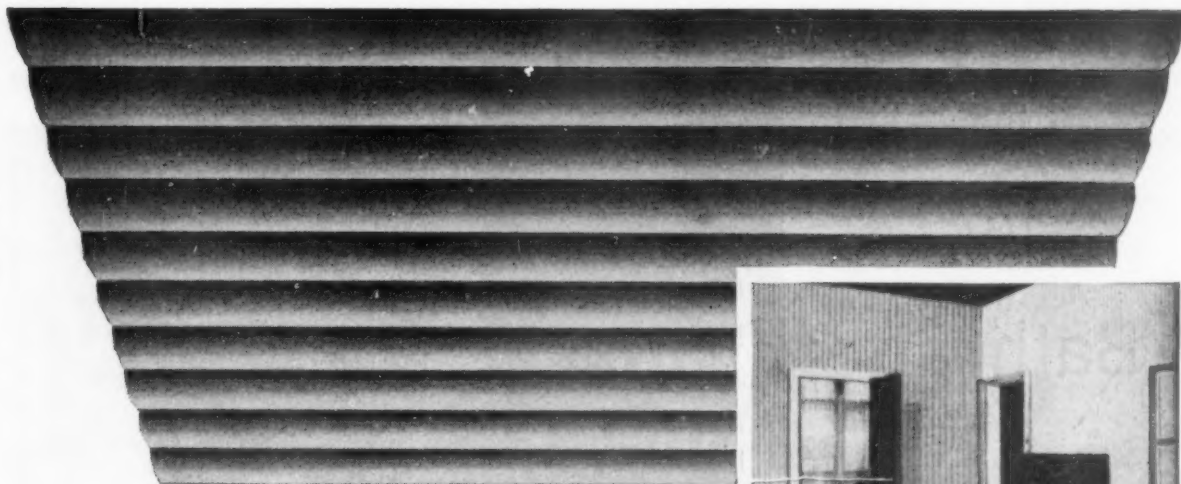
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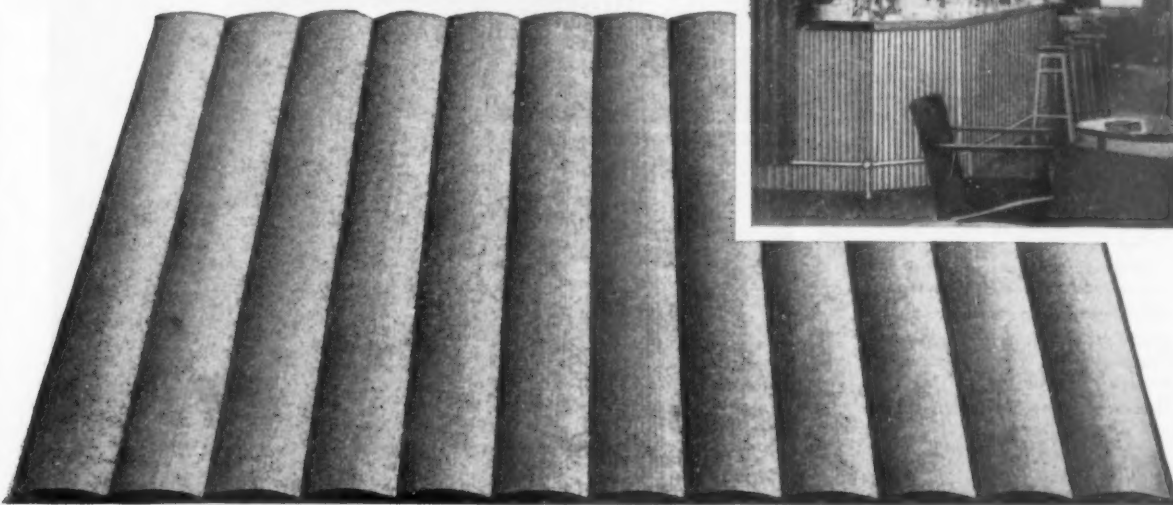
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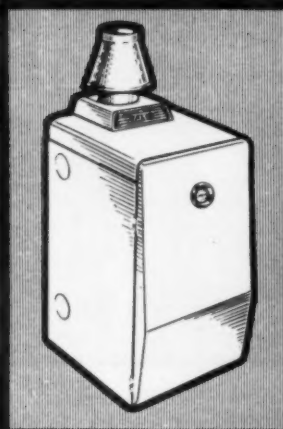
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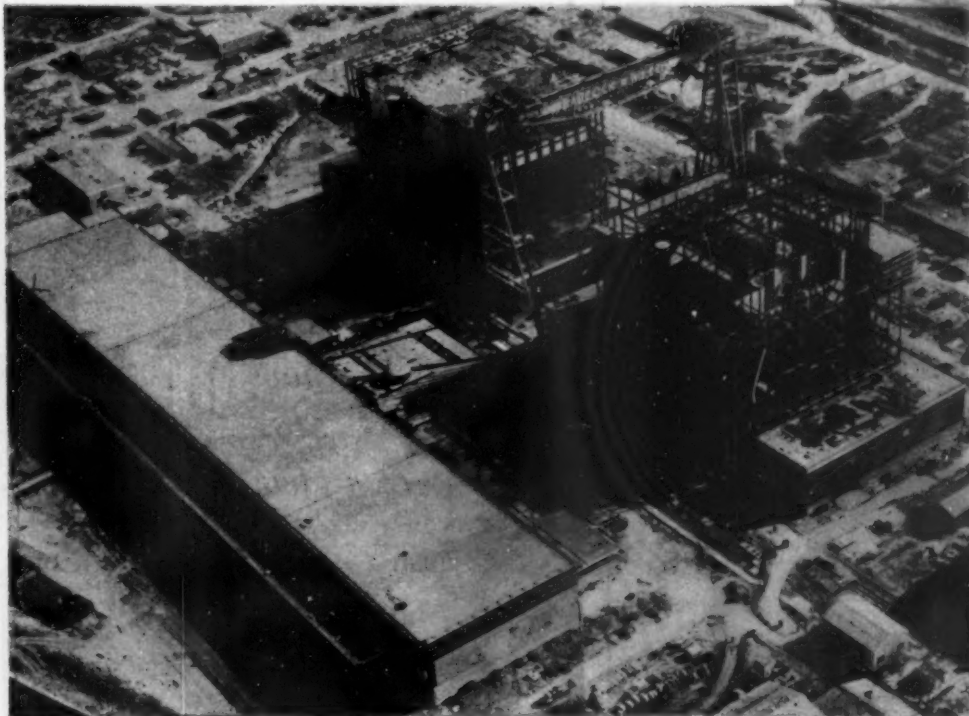
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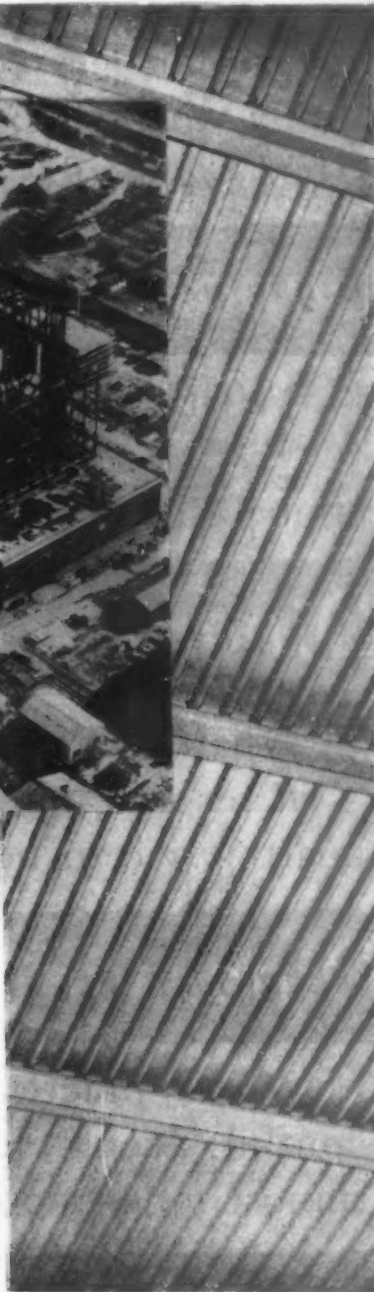
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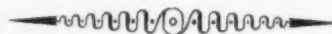
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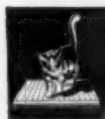
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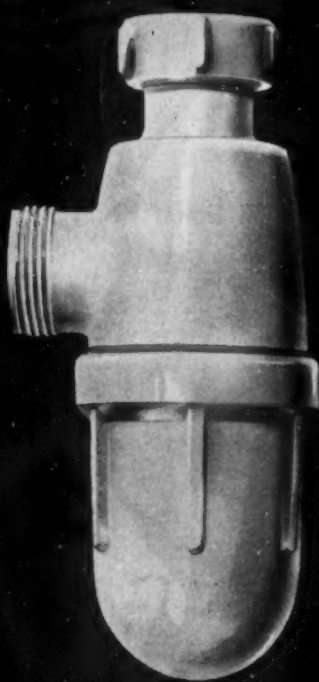
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The GREVAK MONITOR in Cast Brass

- ★ Completely resistant to induced and self-siphonage.
- ★ No anti-siphon pipework required.
- ★ Maintains seal against flow of over 100 galls./min.
- ★ Removable base for easy cleaning.
- ★ Available in natural brass or chrome finish.
- ★ Size 1½" B.S.P. with 'P' or 'S' outlet.

GREVAK anti-siphon traps



The GREVAK MONITOR in Hostalen

- ★ Identical anti-siphon safeguard as Brass.
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- ★ Resistant to acids and detergents.
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- ★ Available in White and Off-White finish.
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GREVAK SENIOR

Heavy duty pattern anti-siphon trap for commercial use with 'P' or 'S' outlet available in cast iron, brass and lead. Brass and Cast Iron are bitumen coated internally.



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This anti-siphon Bath trap with 'P' or 'S' outlet has no equal. The 1½" size being only 5½" deep, fits above the floor line with bath feet giving 6½" clearance. Available in cast iron, brass, copper and lead with or without overflows.

"GREVAK" ANTI-SIPHON TRAPS are fully patented.

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THE ARCHITECTS' JOURNAL (Supplement) September 13, 1961

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Thermal/Acoustic panels hardboard faced

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Can be fixed to battens or joists at up to 2 ft centres

For economical installation, T/A panels can be nailed or screwed to battens or joists at up to 2 ft centres. For a suspended ceiling, the Bowater T/A 1 metal fixing system is available. Whatever fixing system you specify, hardboard splines are supplied to make sure you set a level ceiling.

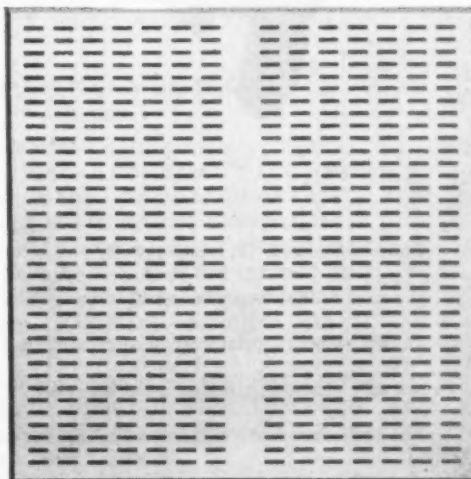
Pre-decorated at no extra cost

Panels are supplied emulsion painted to any colour in the B.S. colour range, and can be permutated with a wide choice of finishes: smooth or leathergrained hardboard, either perforated or in the new slotted version.

More information is yours by return of post

Send for the new "Quick Guide to Bowater Module Ceilings." It tells you a lot more about the T/A panel—and it deals with our Dry Construction panels and our brand-new Versatile too.

NEW SLOTTED T/A PANELS*



Slotted T/A panels are available from 8/- each. The illustration on the left shows them being fixed with aluminium alloy concealed fixing clips. This method allows space for services to be installed above the panels.

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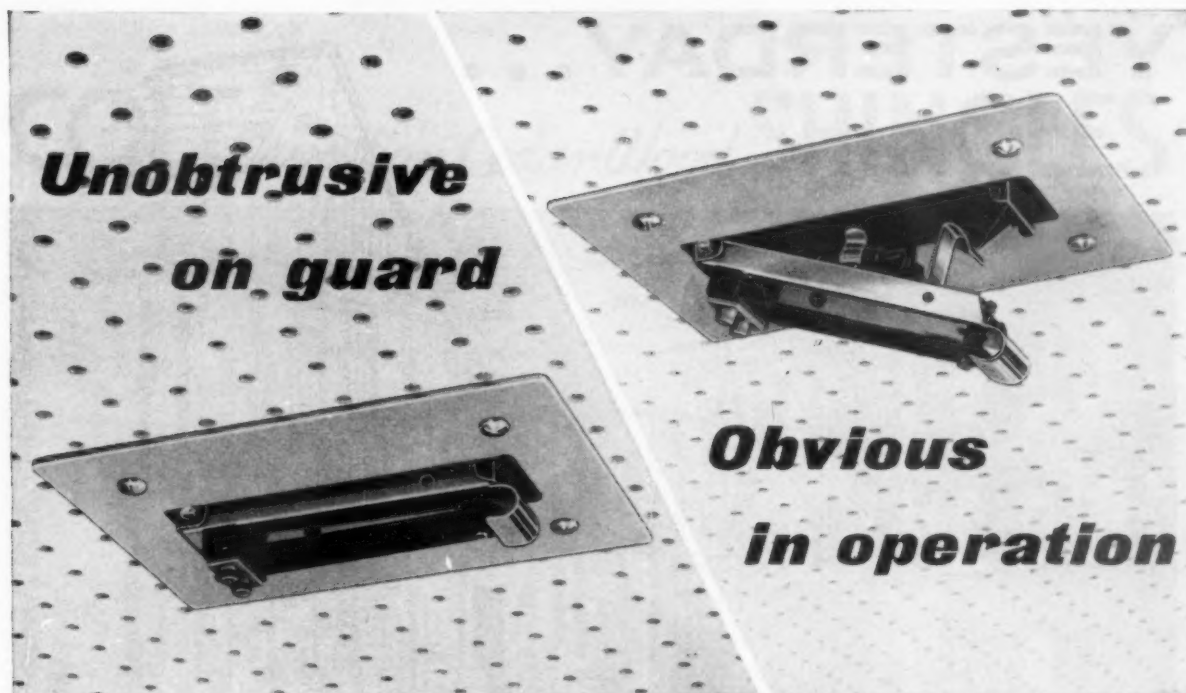
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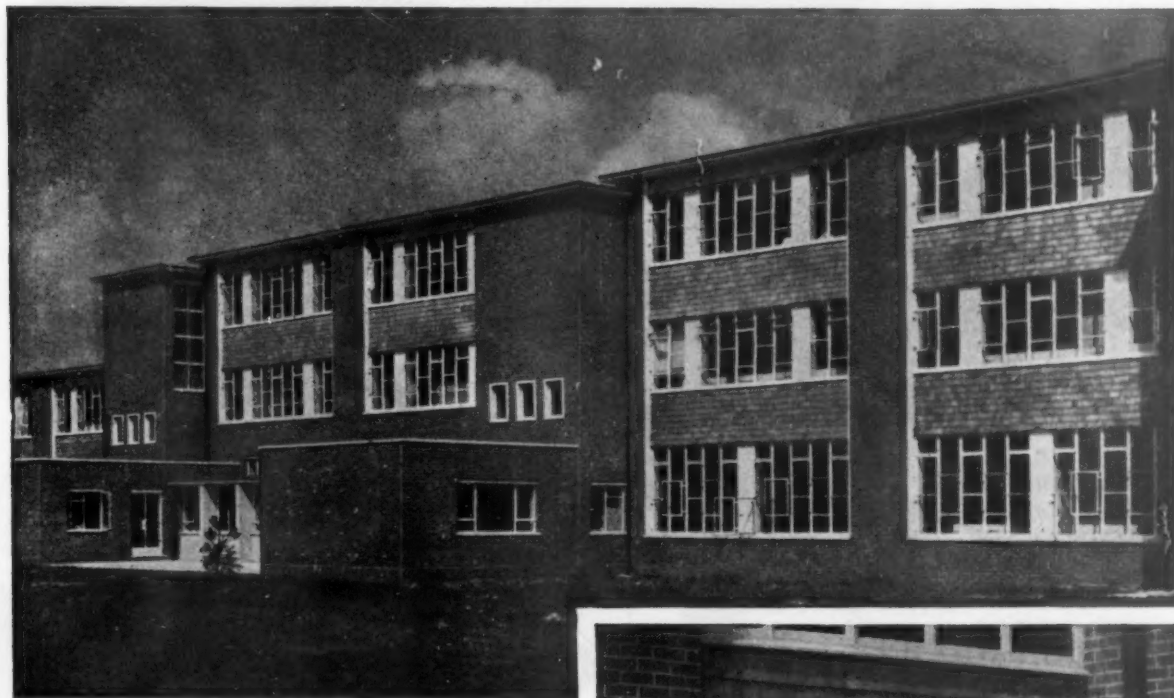
PACIFIC COAST HEMLOCK has a high strength-to-weight ratio and is available in long lengths, precision machined to uniform cross section. Surfaced Hemlock makes for accuracy and labour economy on the building site, whether it is employed for traditional house carcassing or Western frame construction. With these qualities — plus ease in handling and good woodworking properties — it is the perfect choice for off-site component structural units. Don't gamble — specify **PACIFIC COAST HEMLOCK** for homes which offer the security your clients will value over the years.



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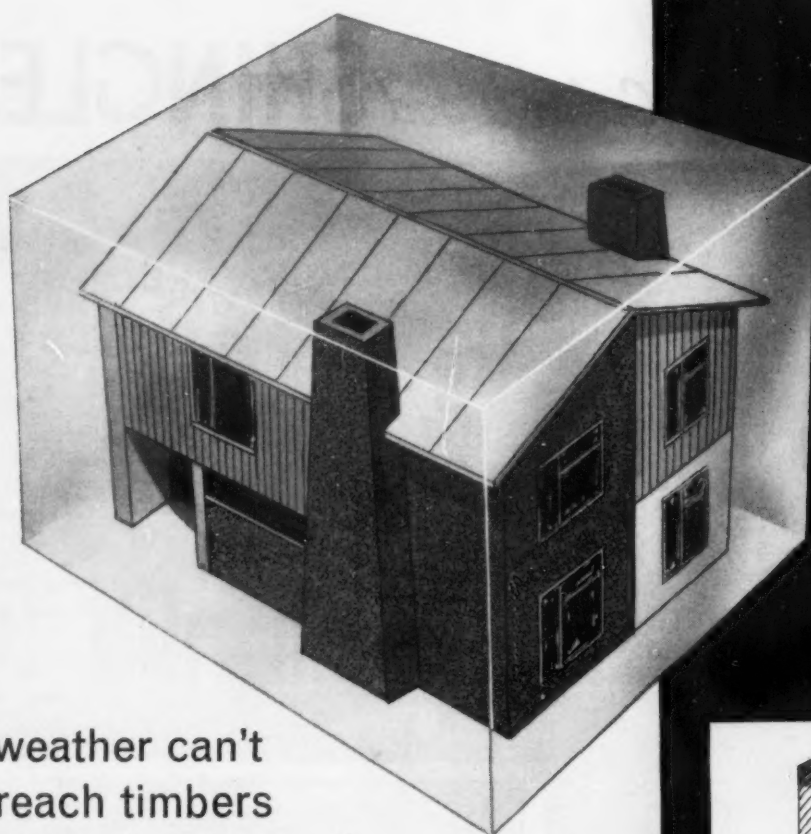
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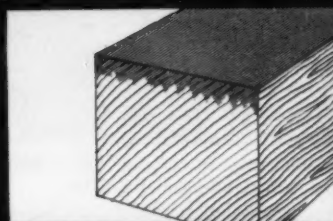
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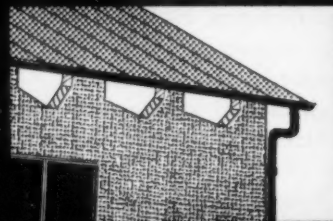
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See Barbour Index File No. 15



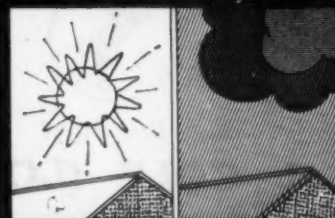
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Weatherseal sinks right into the pores of the wood, forms a *sealed-off*, watertight surface.



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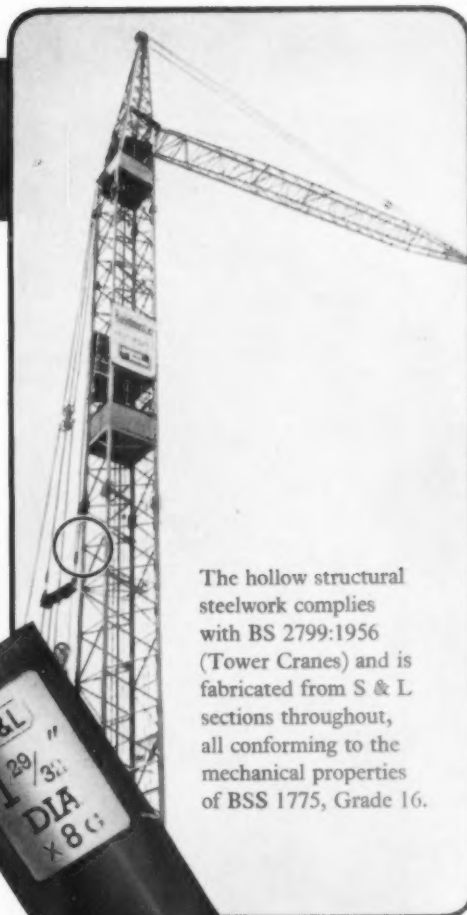
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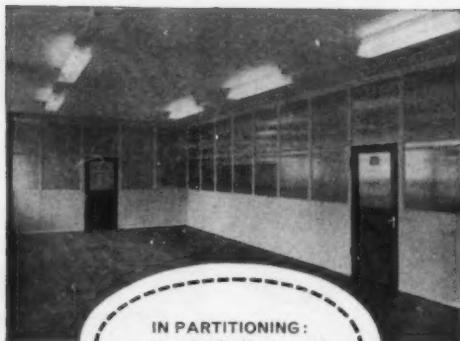
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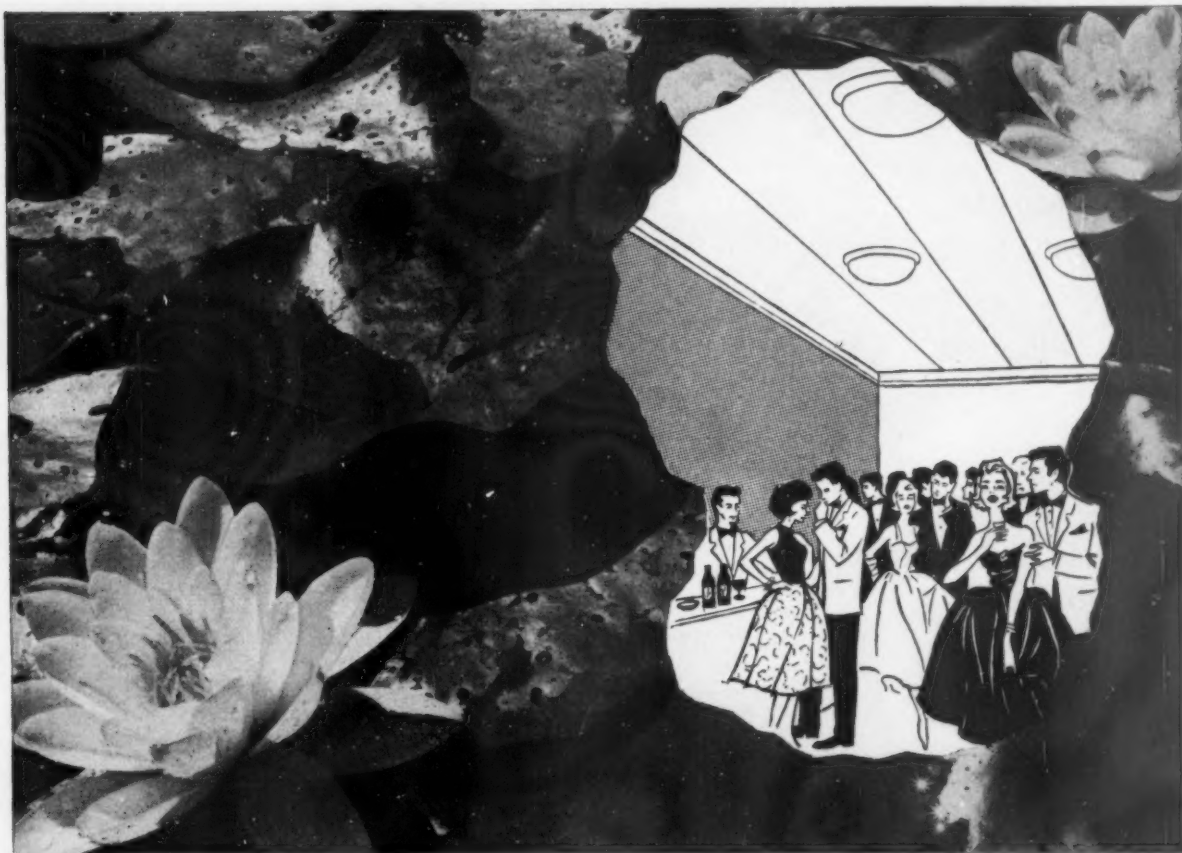
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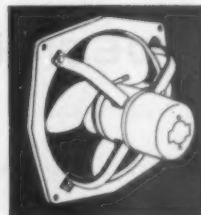
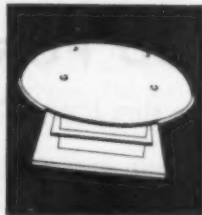
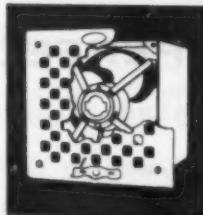
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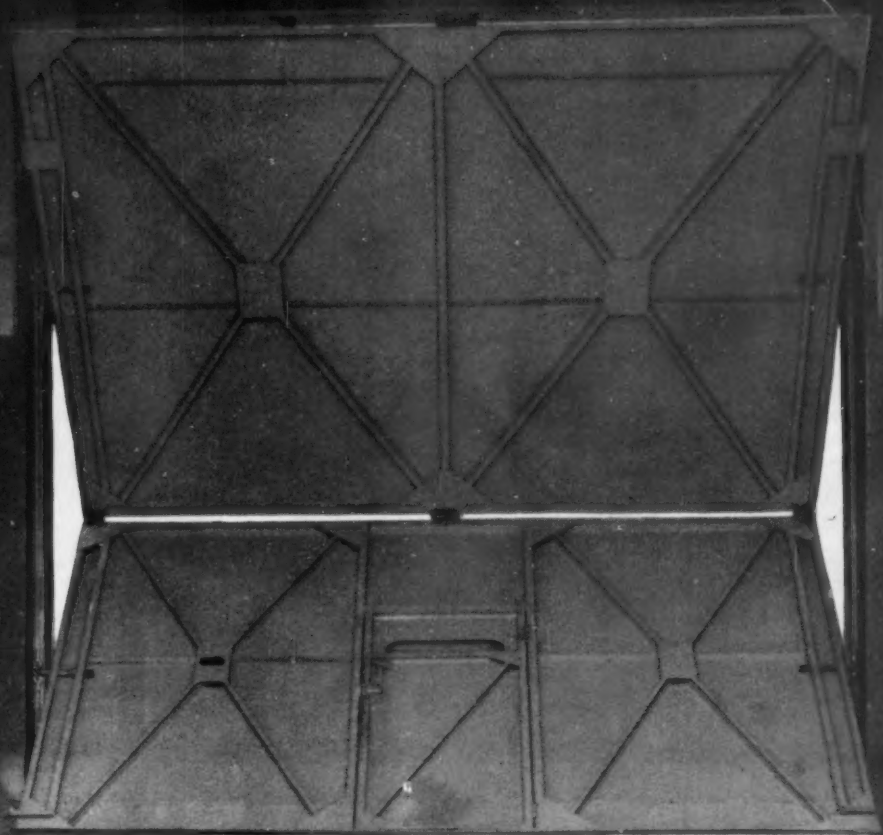


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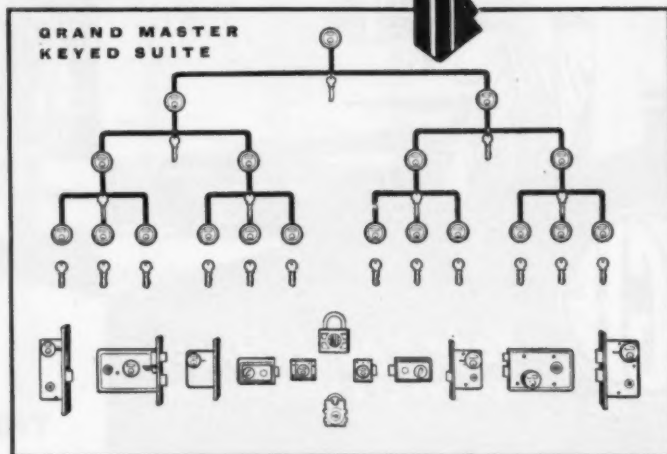
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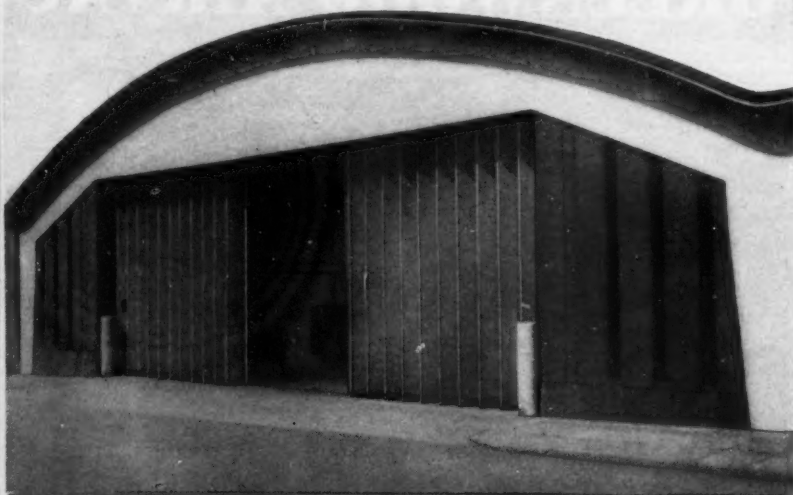
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Barbour Index
File No. 30



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† Delrin is the trade name for Du Pont acetal resin.

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"Textra" designed by Jose Bonnet. M 1027 shown to scale.

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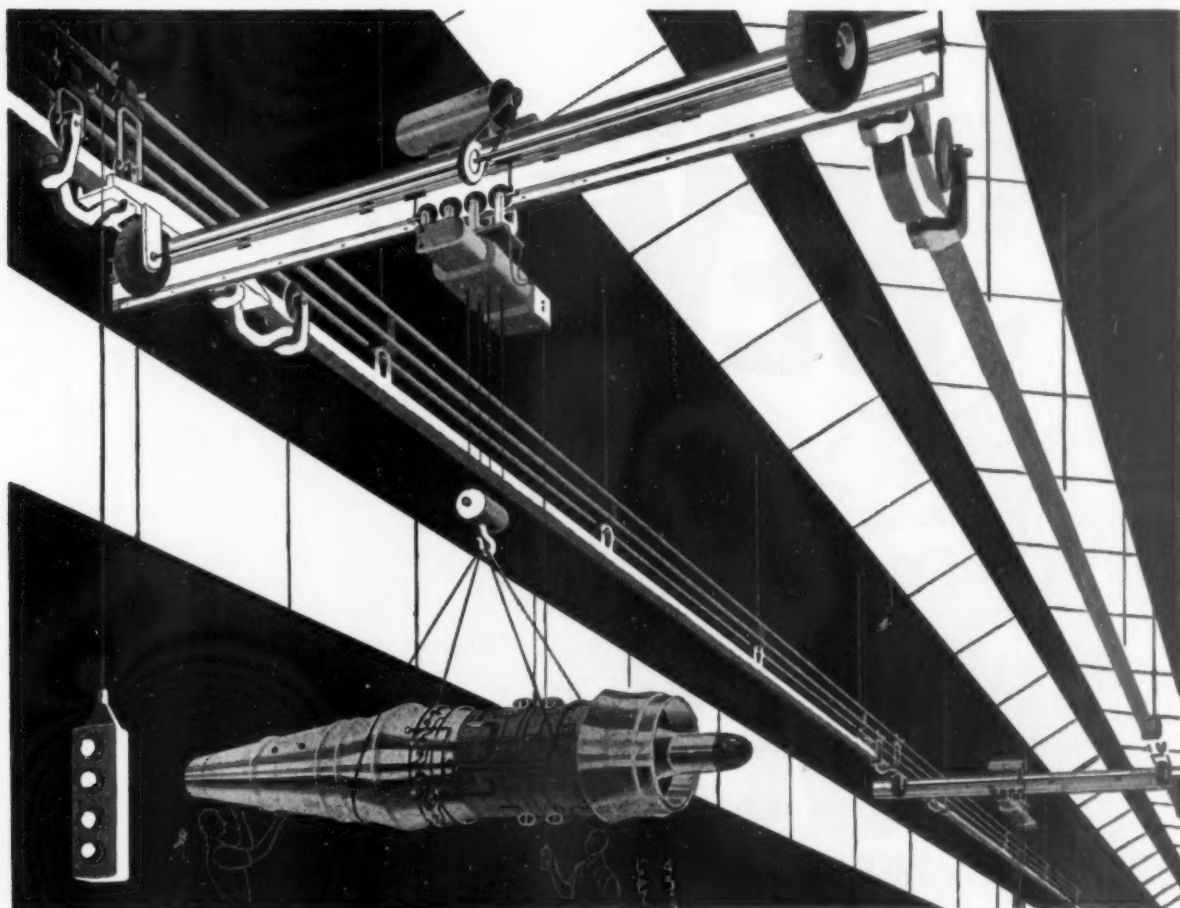


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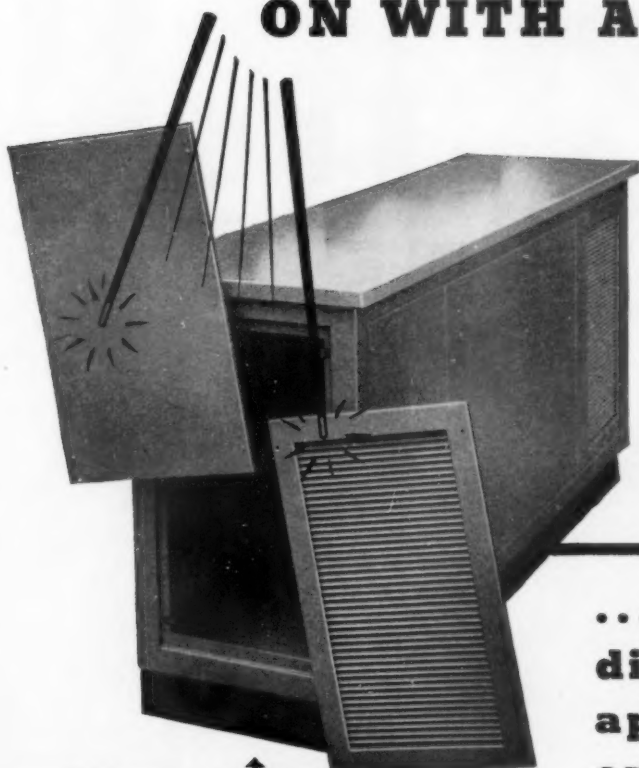
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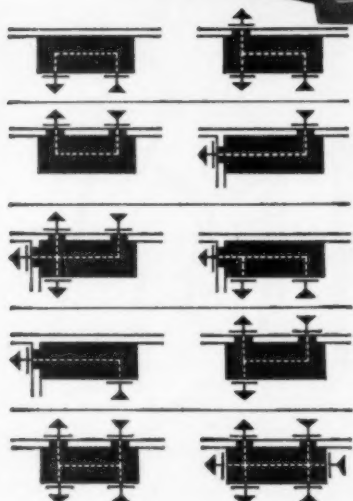
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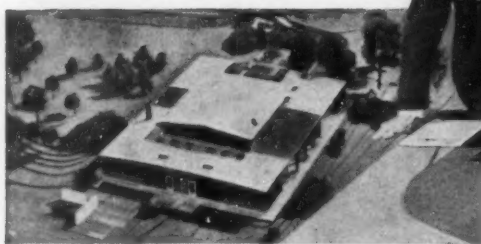


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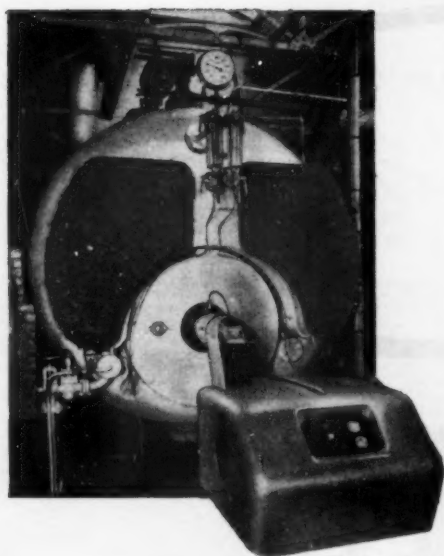
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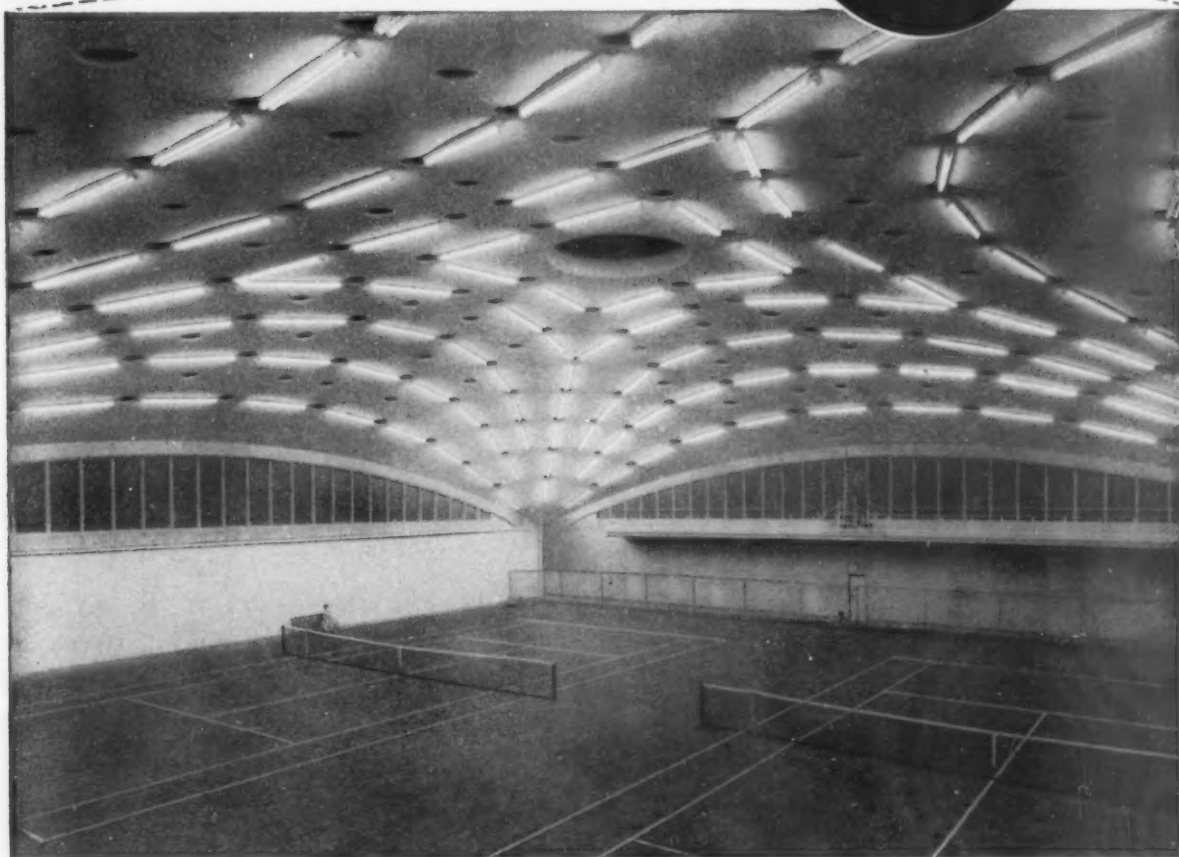
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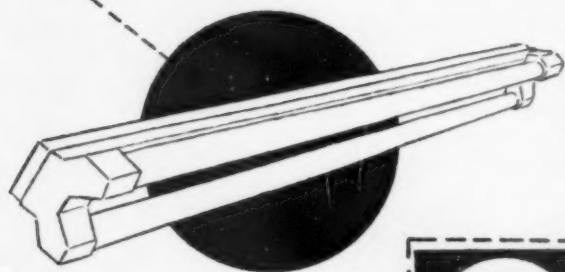
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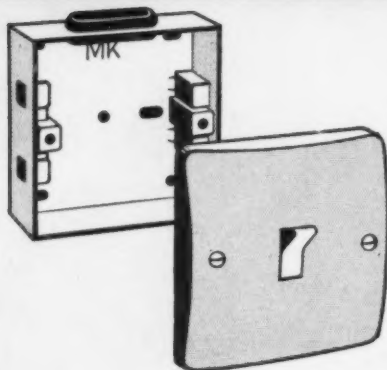
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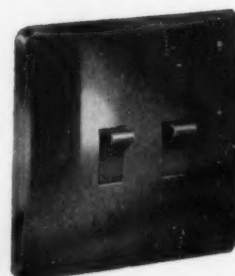


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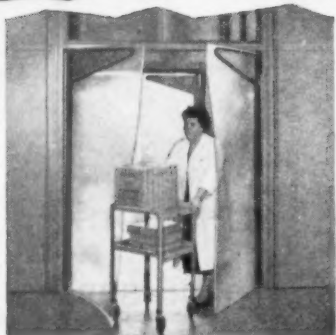


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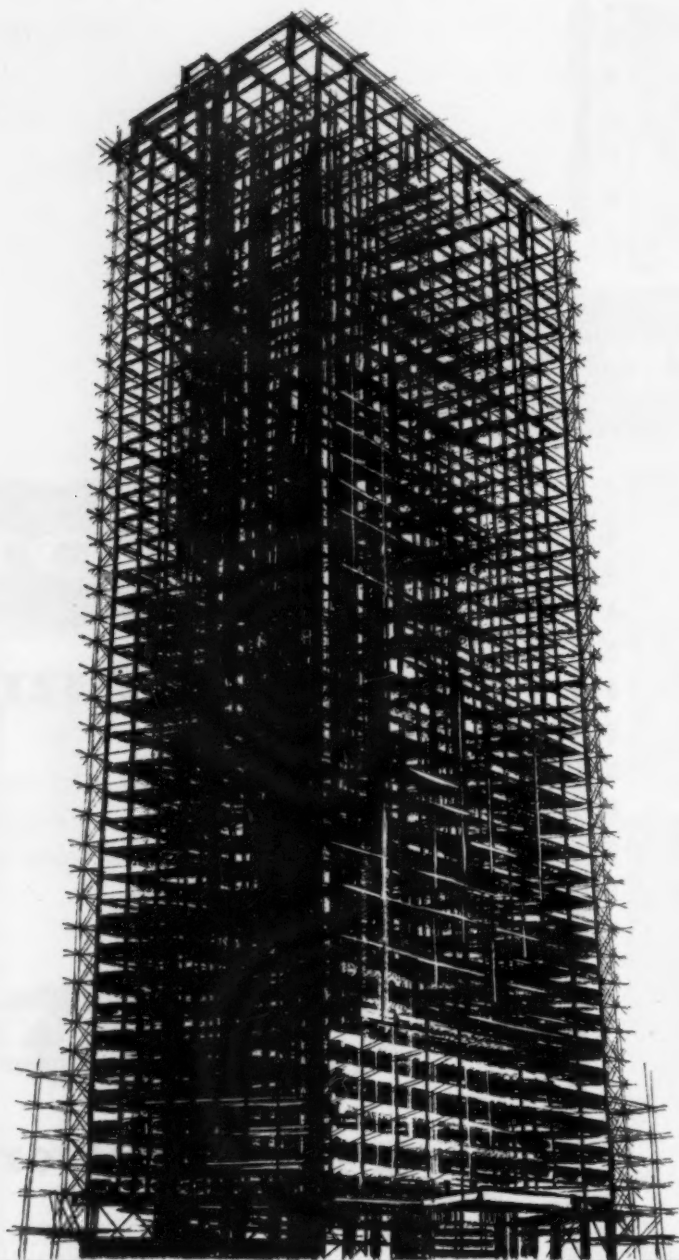
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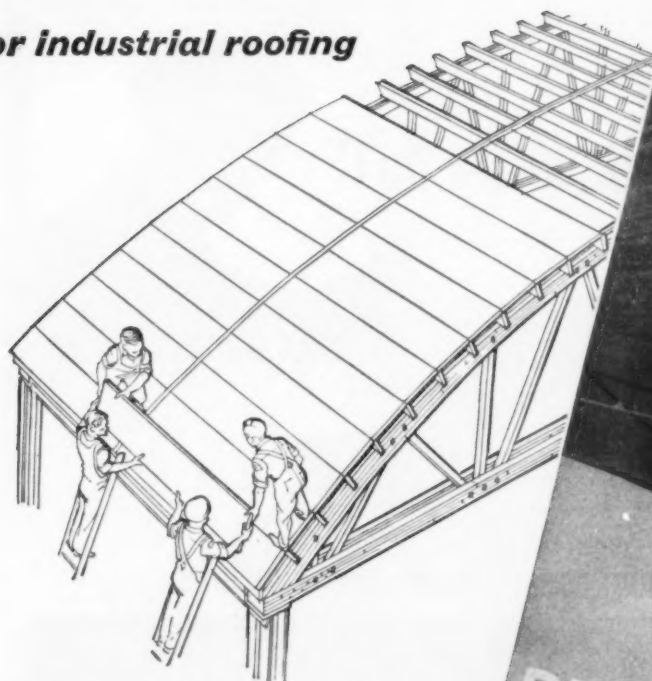
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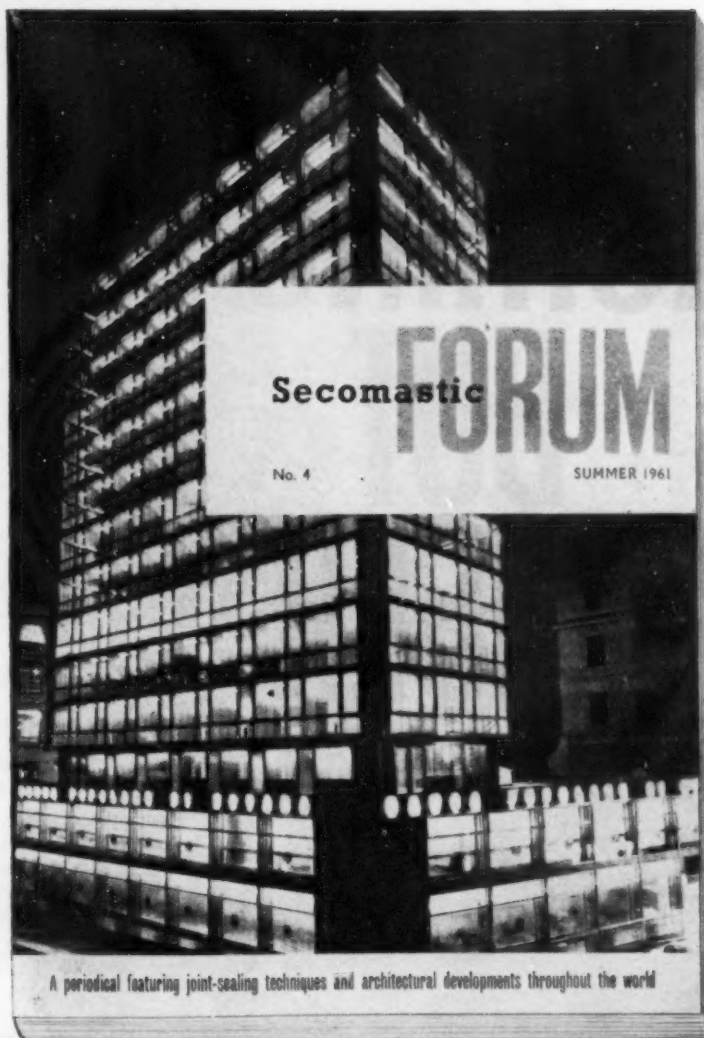
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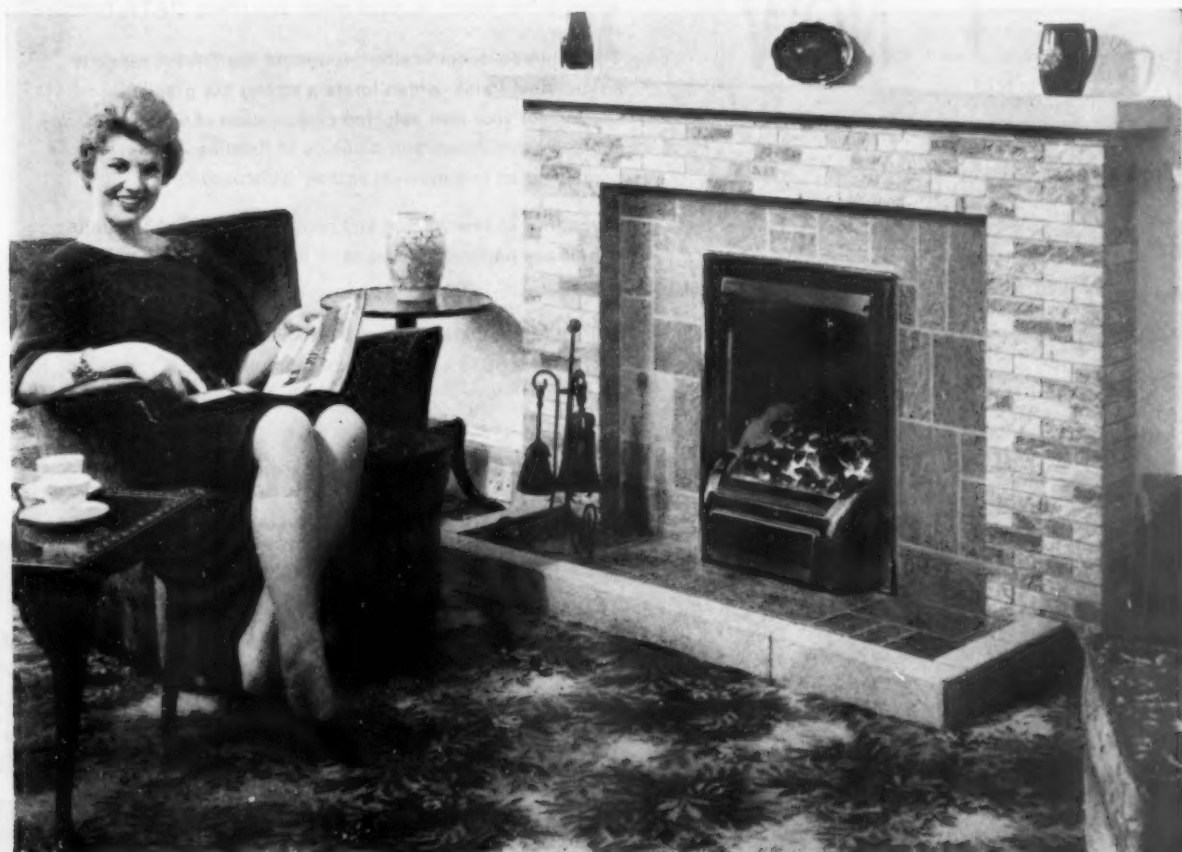
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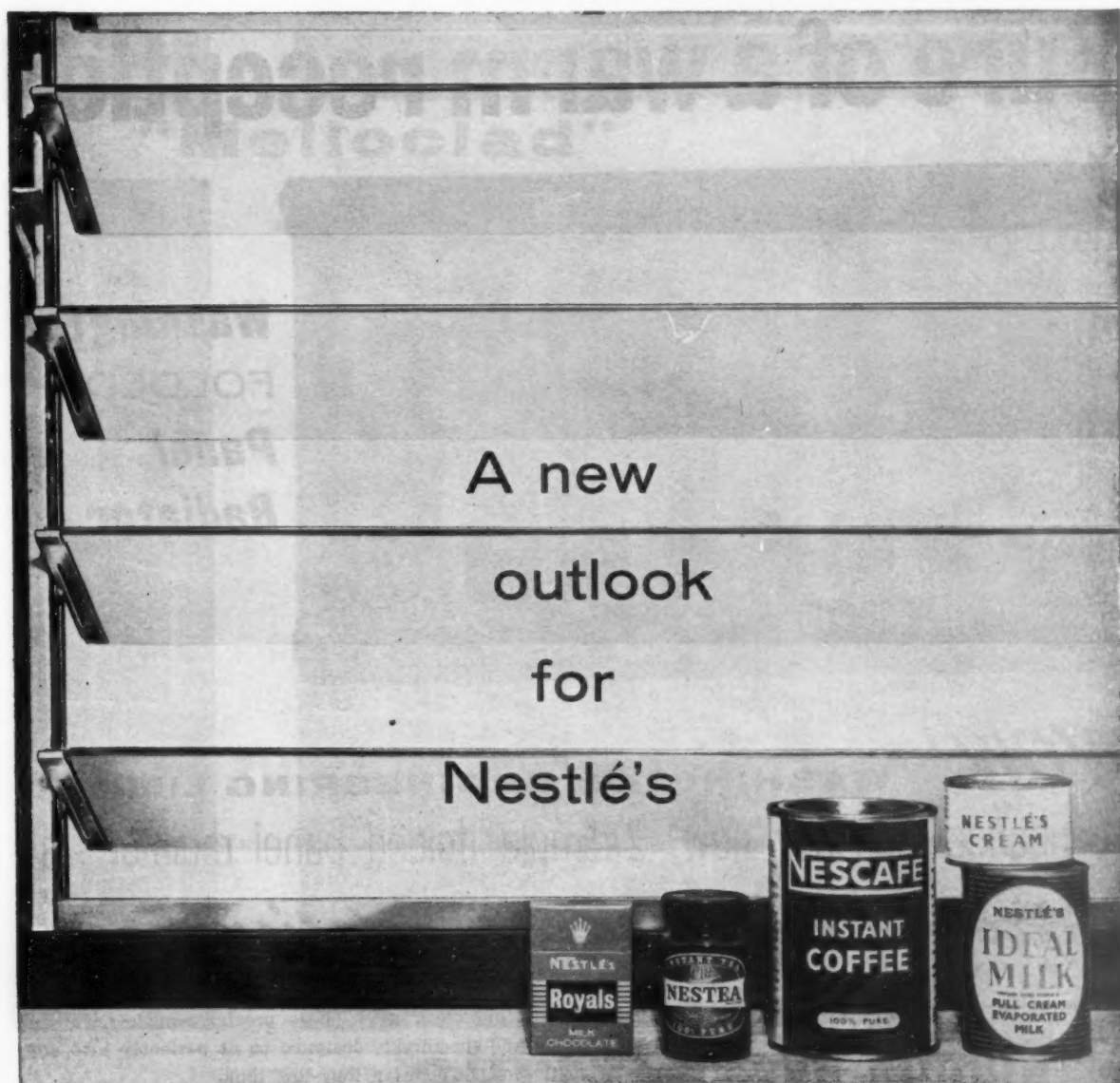
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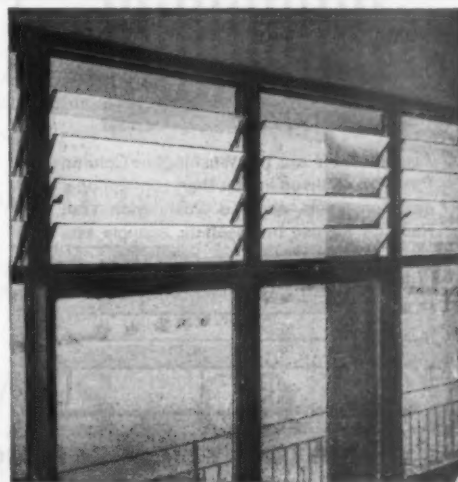
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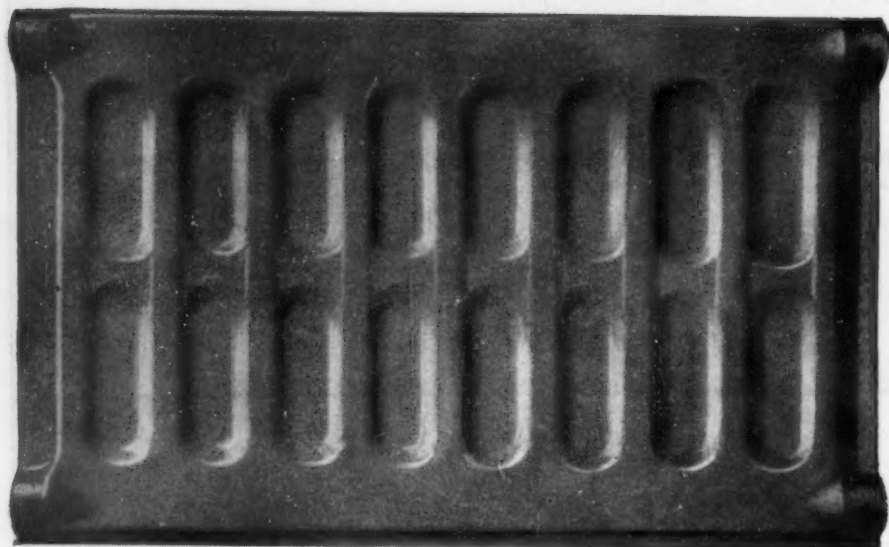


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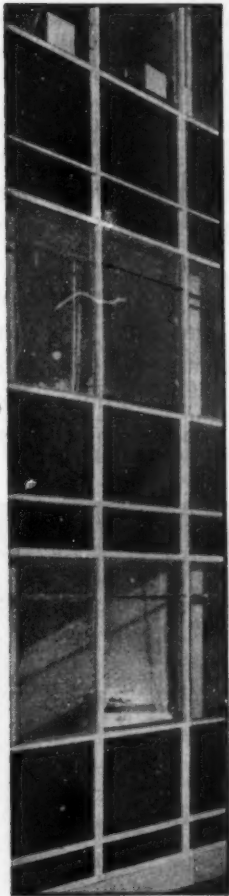
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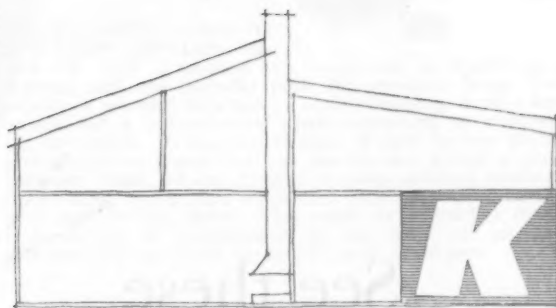
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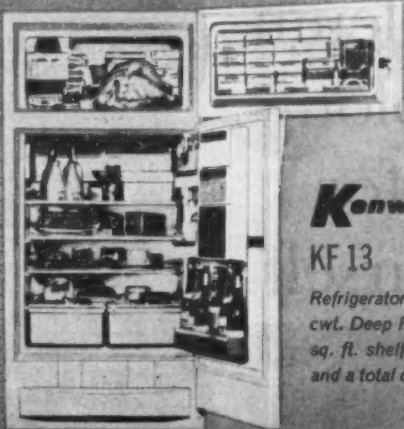
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The magnificent Kenwood Norge Refrigerator/Freezers almost make kitchen larders obsolete! Each is a complete food storage unit...with separate deep-freezer cabinet as big as many ordinary refrigerators, and a larder-sized main refrigerator compartment, which is entirely self-defrosting. These handsome two-in-one models meet the growing demand for real home deep-freezing and larger capacity refrigerators in a single, compact unit.





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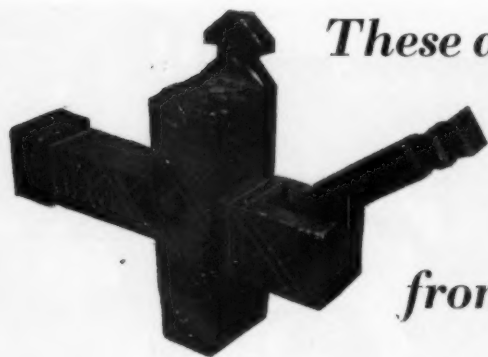


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These ancient Locks have been withdrawn from service . . .



ANCIENT EGYPTIAN LOCK. This illustration is of a copy of what was perhaps the first lock ever made. The original lock came from Egypt and is of the period 2000 a.c. These early locks were made of wood and fixed on the outside of the door. The horizontal beam is the bolt which can be moved to and fro in the body by the key when the key has correctly raised the pins which secure it. To do this the pegs on the key must be right in number, size and positions. The modern pin tumbler lock is constructed on the same principle.

ANCIENT STEEL LOCK OF THE XVTH CENTURY.

This lock $17\frac{1}{2}'' \times 13''$ is mounted in a wood frame to revolve on a pedestal, and was probably made for semi-flush fixing. The security is provided by a box of wards. Operation is by a key outside and a non-removable handle resembling an elaborate key bow inside. By one turn of either of these the four sliding spring bolts are drawn back and the top and bottom pivoted bolts are tilted. All are retained in these unlocked positions by a hinged spring plate inside. The staple for fixing on the door jamb is not shown. This would be a box-like fitting large enough to accommodate all the bolts and provided with slots through which the pivoted bolts would pass.

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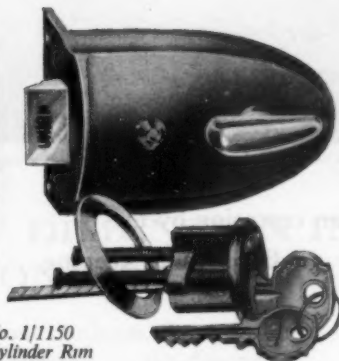
Set No.
1/3200
Adam
Design



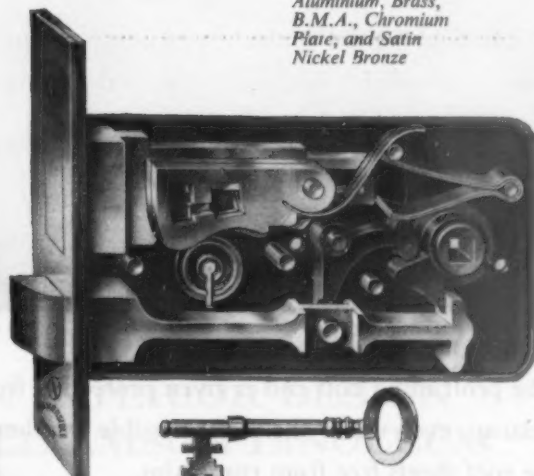
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B.M.A., Chromium
Plate, and Satin
Nickel Bronze



No. 1/1150
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No. 1/1001 Two, three,
four and six lever
Mortice Locks



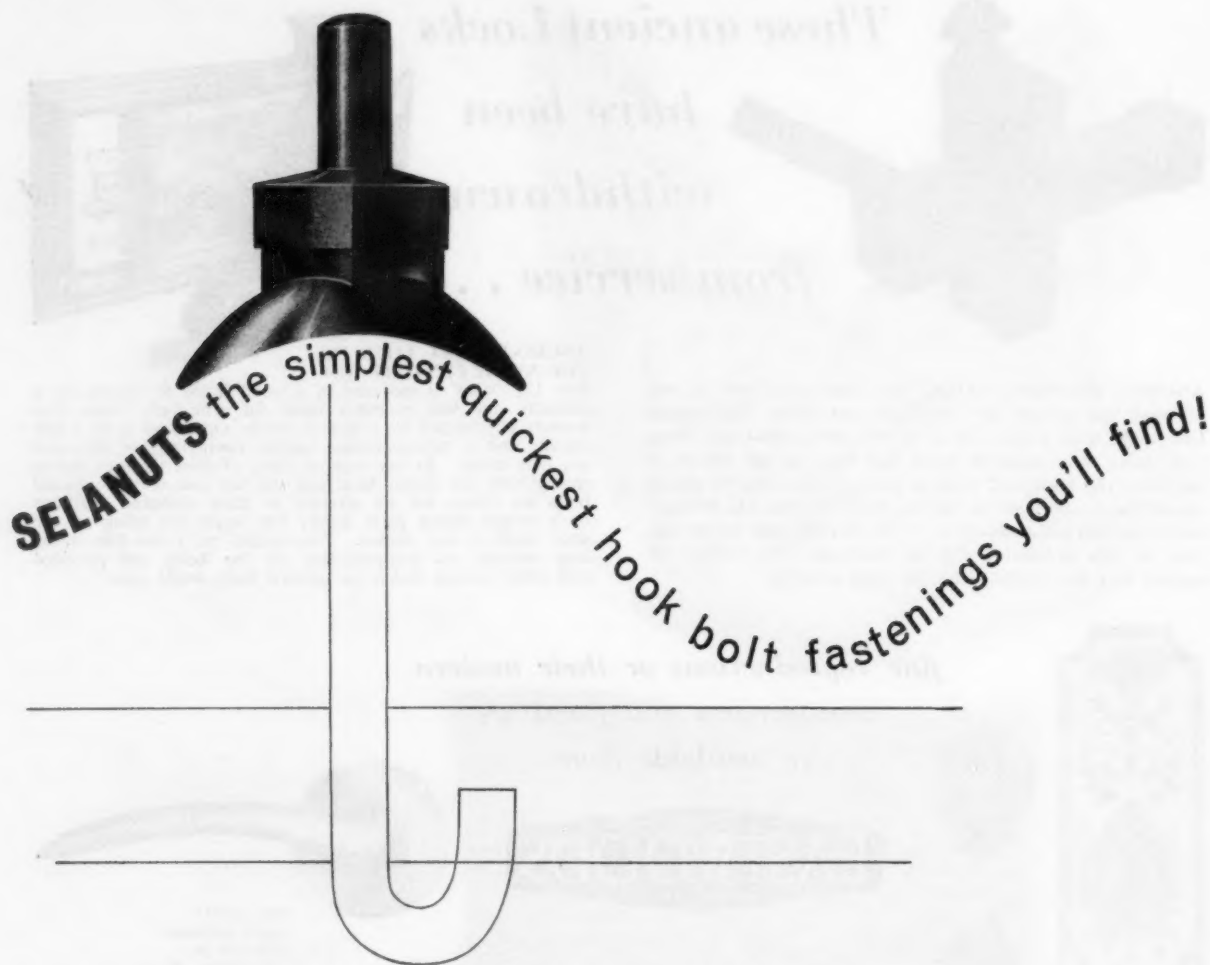
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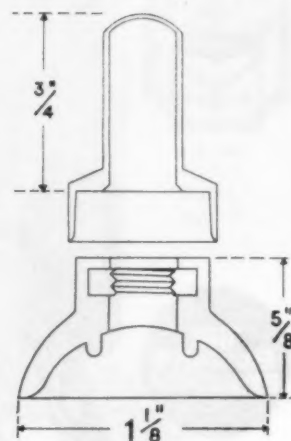


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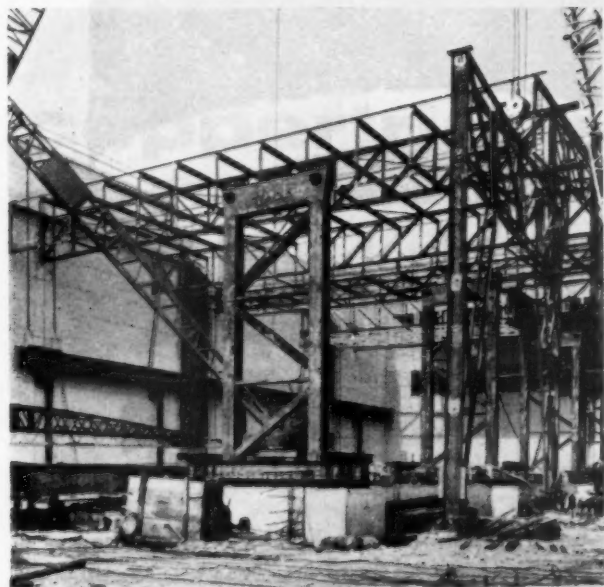
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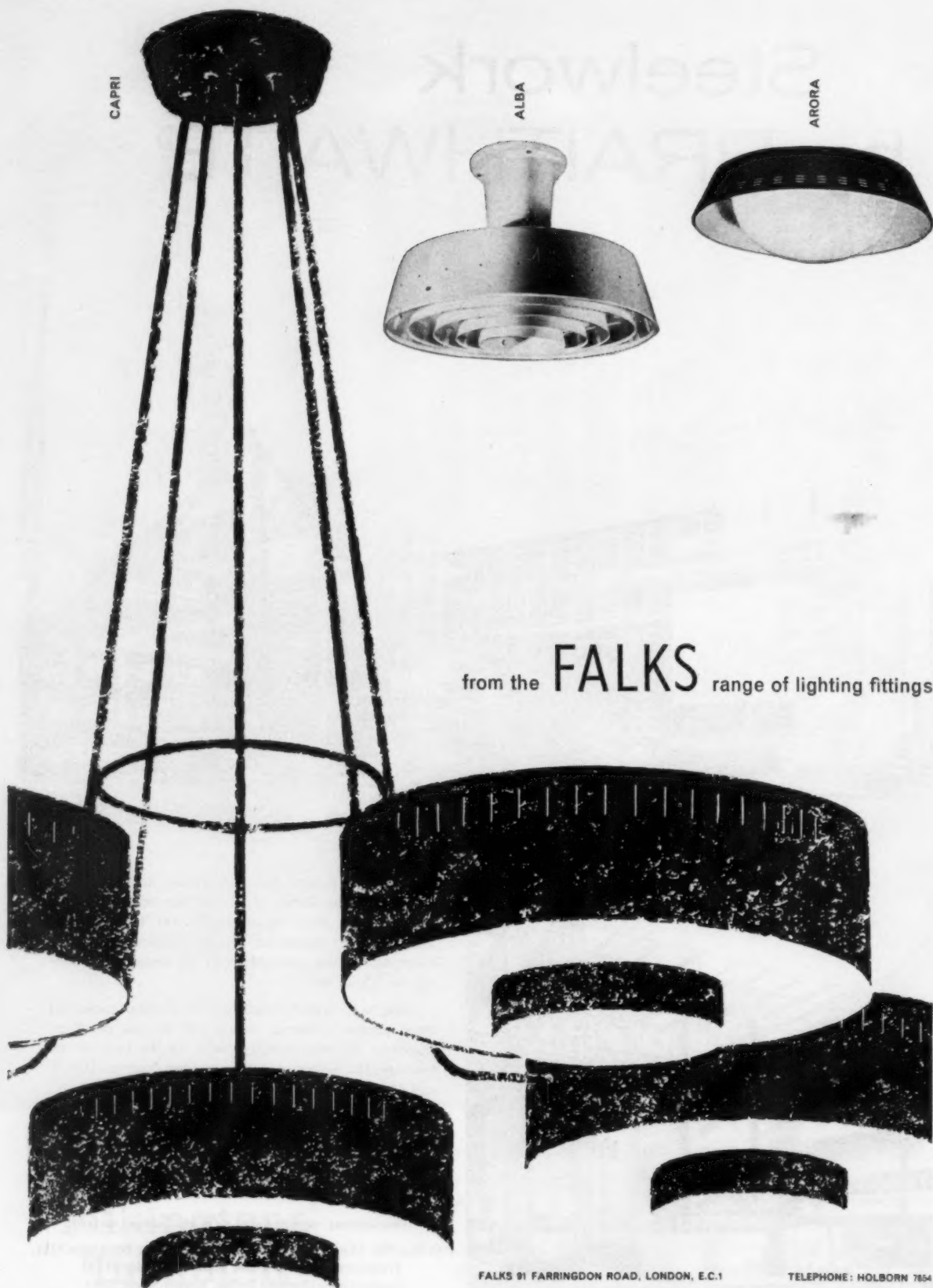
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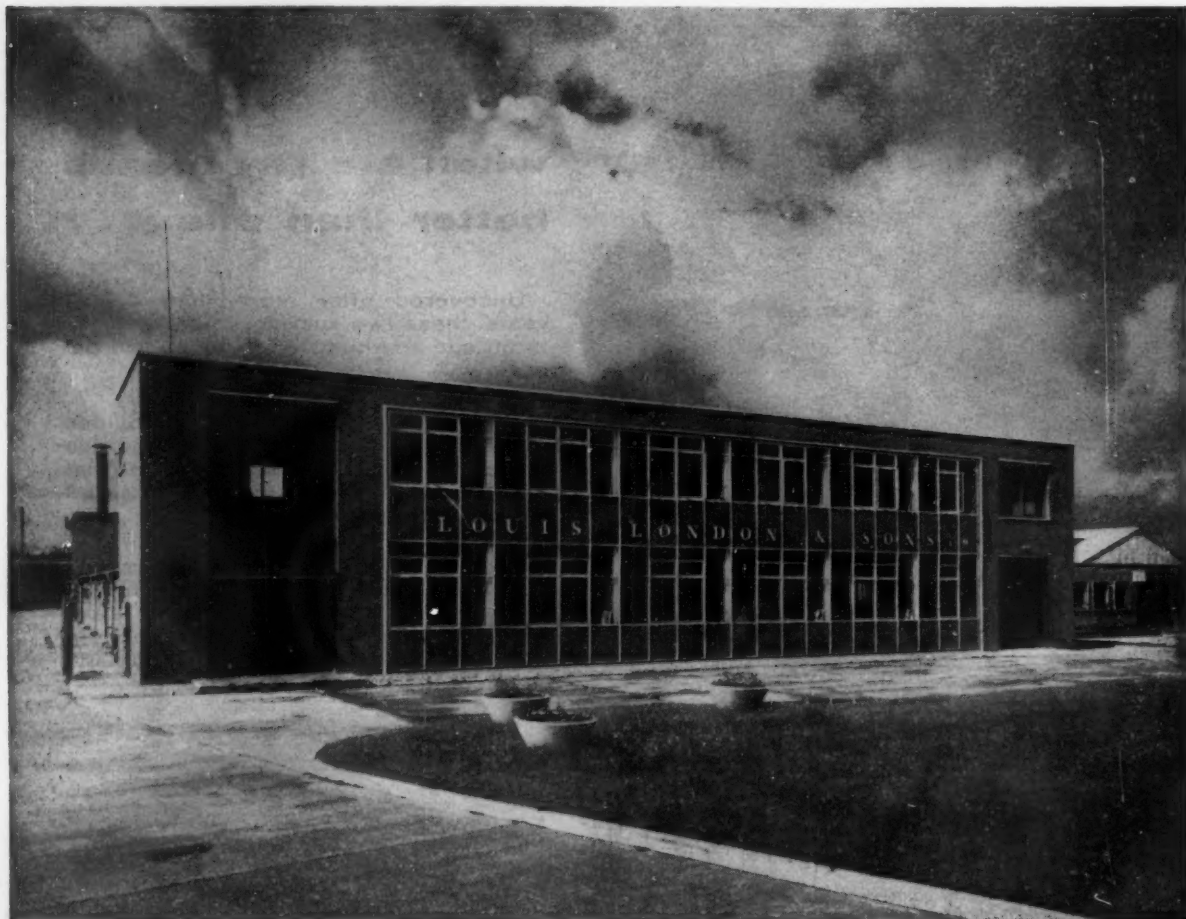
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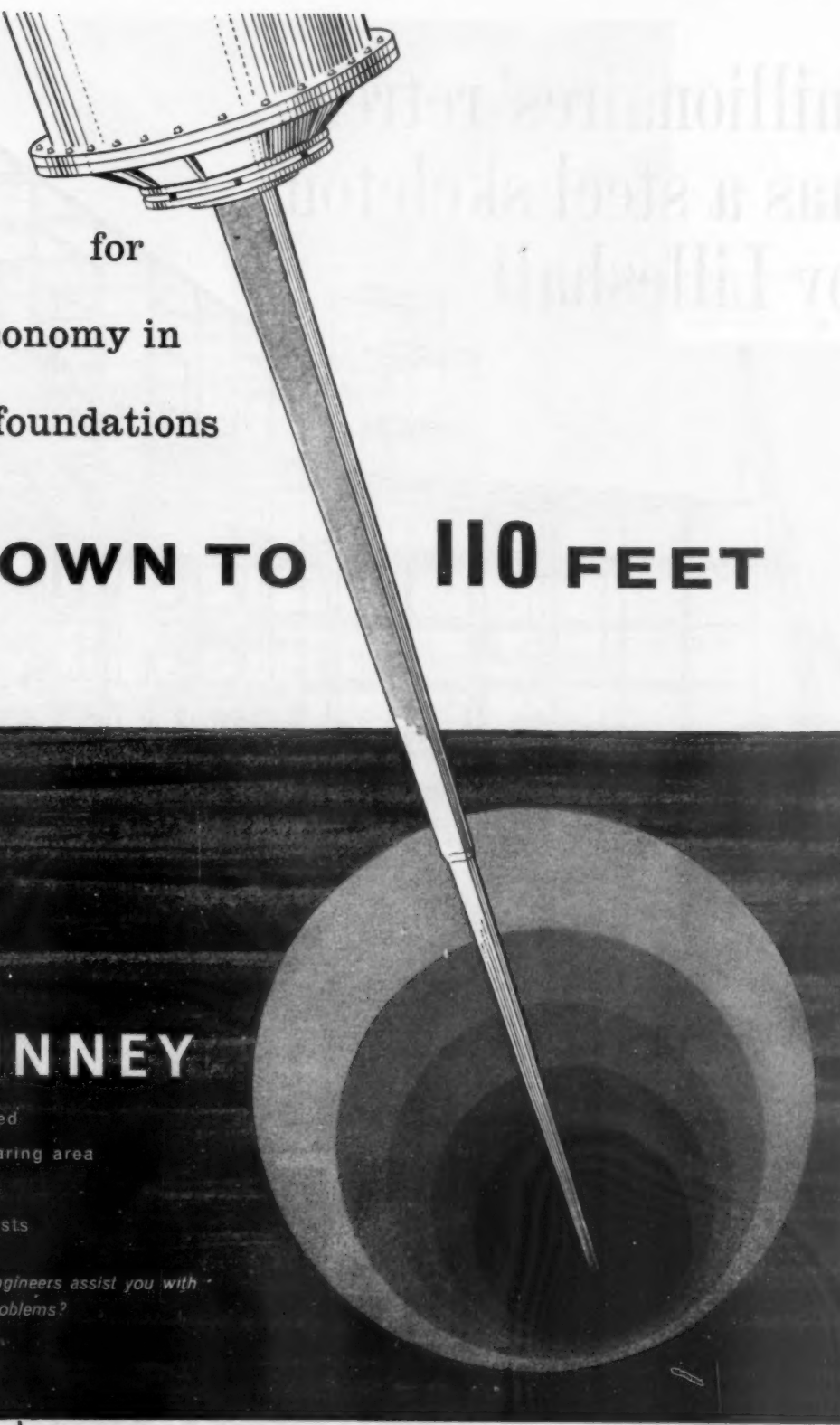
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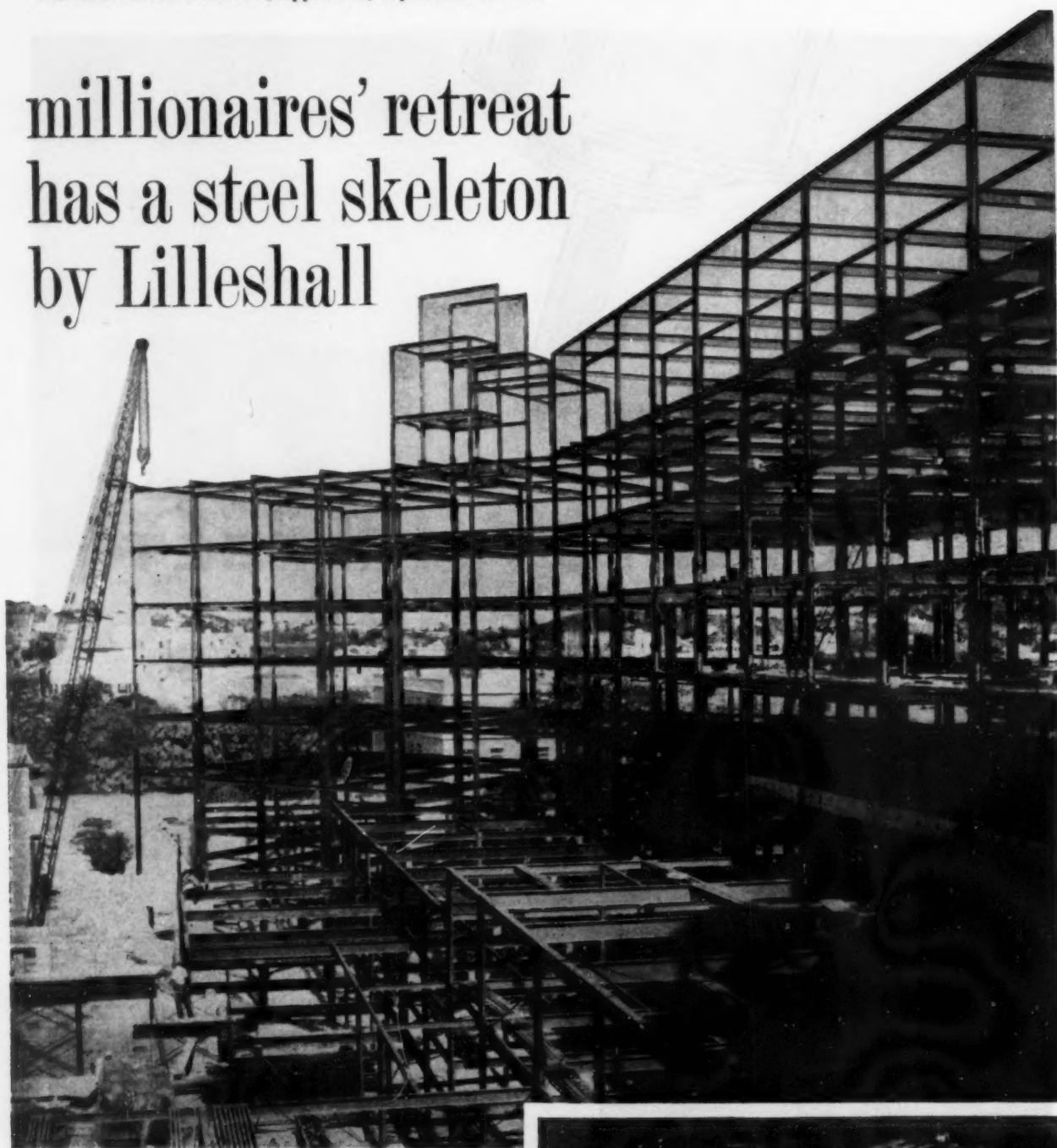
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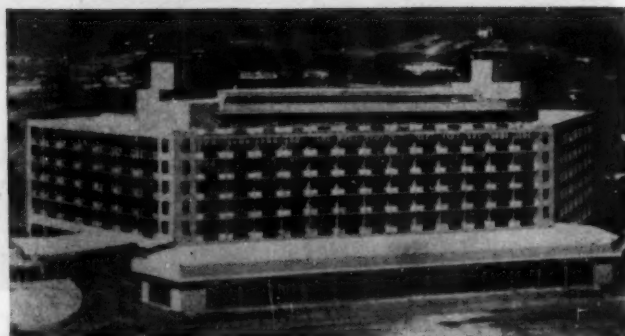
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millionaires' retreat has a steel skeleton by Lilleshall



The steel-framed structure of the new super luxury Bermudiana Hotel at Hamilton, Bermuda, fabricated and supplied by The Lilleshall Company Ltd. An artist's impression of the completed hotel, which dominates the local landscape, is shown on the right. Architects: Fitzroy Robinson & Partners, London.

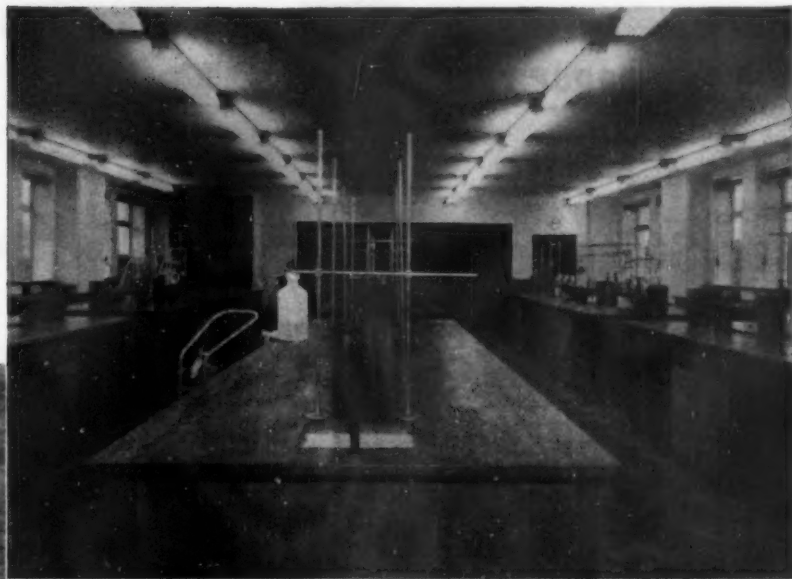
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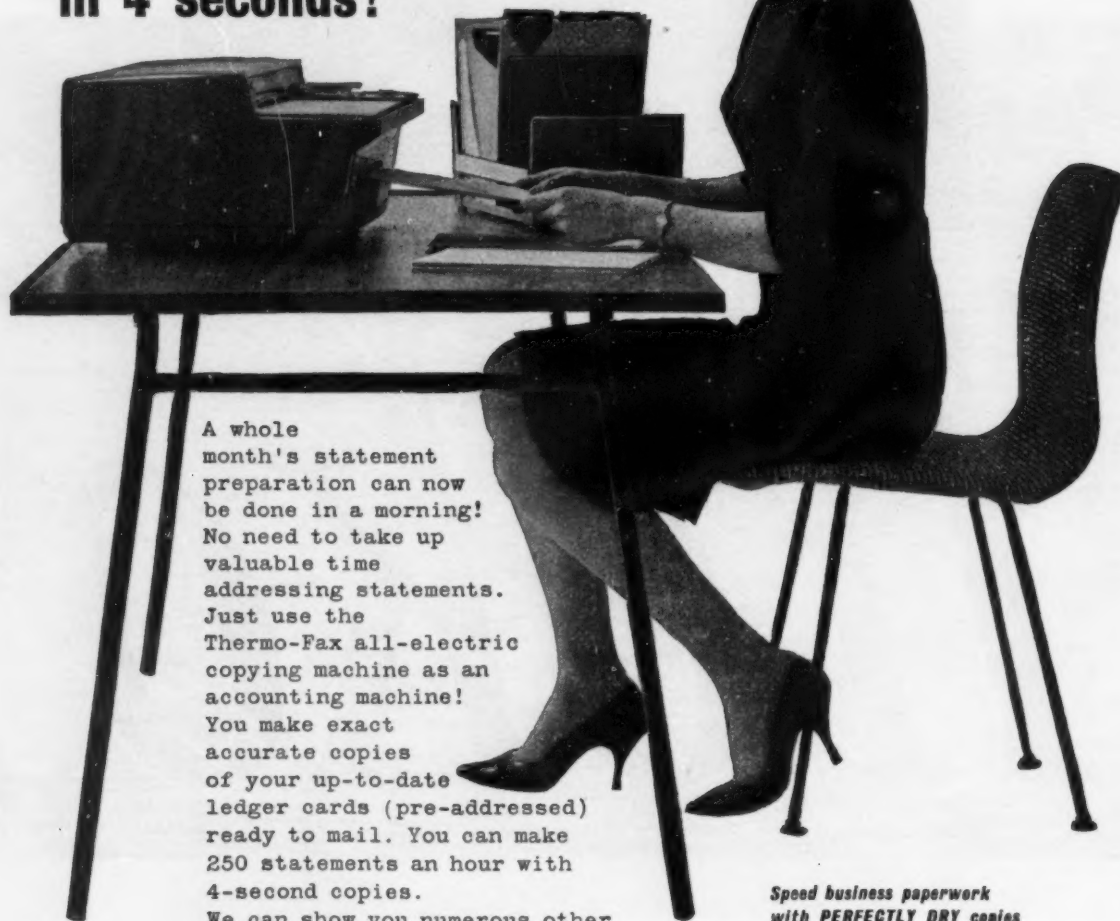


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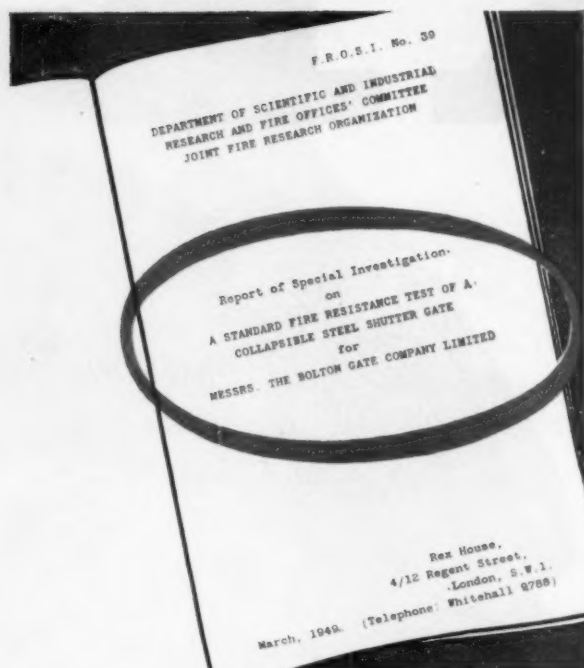
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AJ15



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AJ 381

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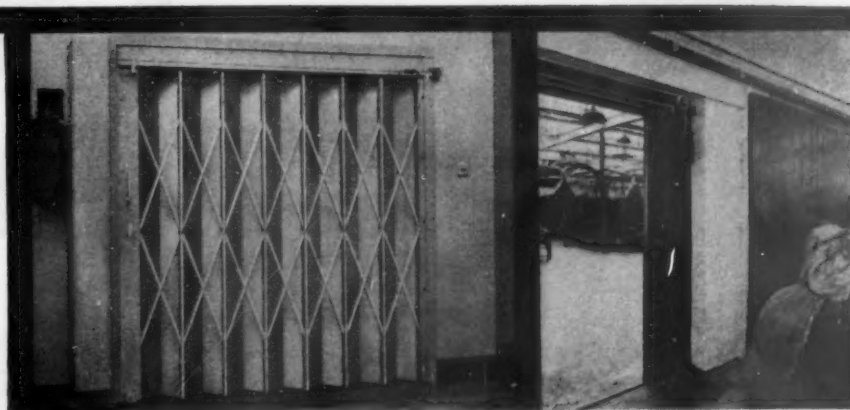
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Right: One single leaf Fire-proof Shutter Door fitted with automatic closing gear at British-American Tobacco Co., Ltd., Liverpool.

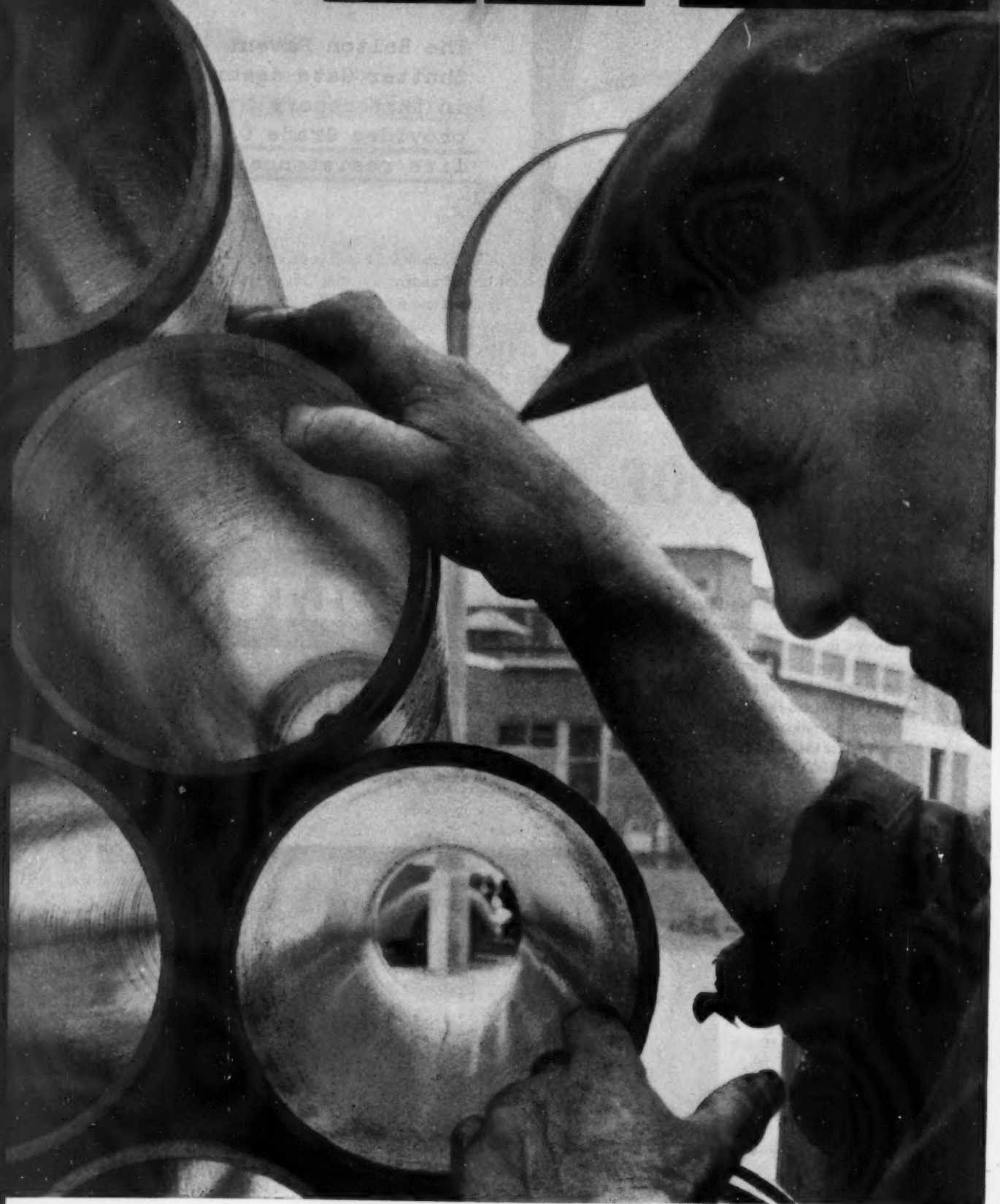
Extreme right: One of two Fire-proof Shutter Doors which close automatically in the event of fire. Installed at The India Mill (Darwen) Ltd.



BG 381

THE ARCHITECTS' JOURNAL
(Supplement) September 13, 1961

IXE



BORE FINISH

Key Pitch Fibre Drainpipes have an exceptionally smooth bore. The couplings that join them present no obstacle to the flow of liquid. So the liquid flows more readily. It reaches the all-important self-cleaning velocity at a flatter gradient (and discharges faster at the same gradient) than in other types of pipe. So you can plan shallower trenches (or use a smaller bore pipe) with Key. You may be able to connect to an existing manhole instead of constructing a new one. You will certainly save on excavation costs and drainlaying time. Worth looking into, these Key pipes!

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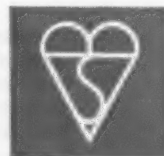
KEY

Pitch Fibre Drainpipes

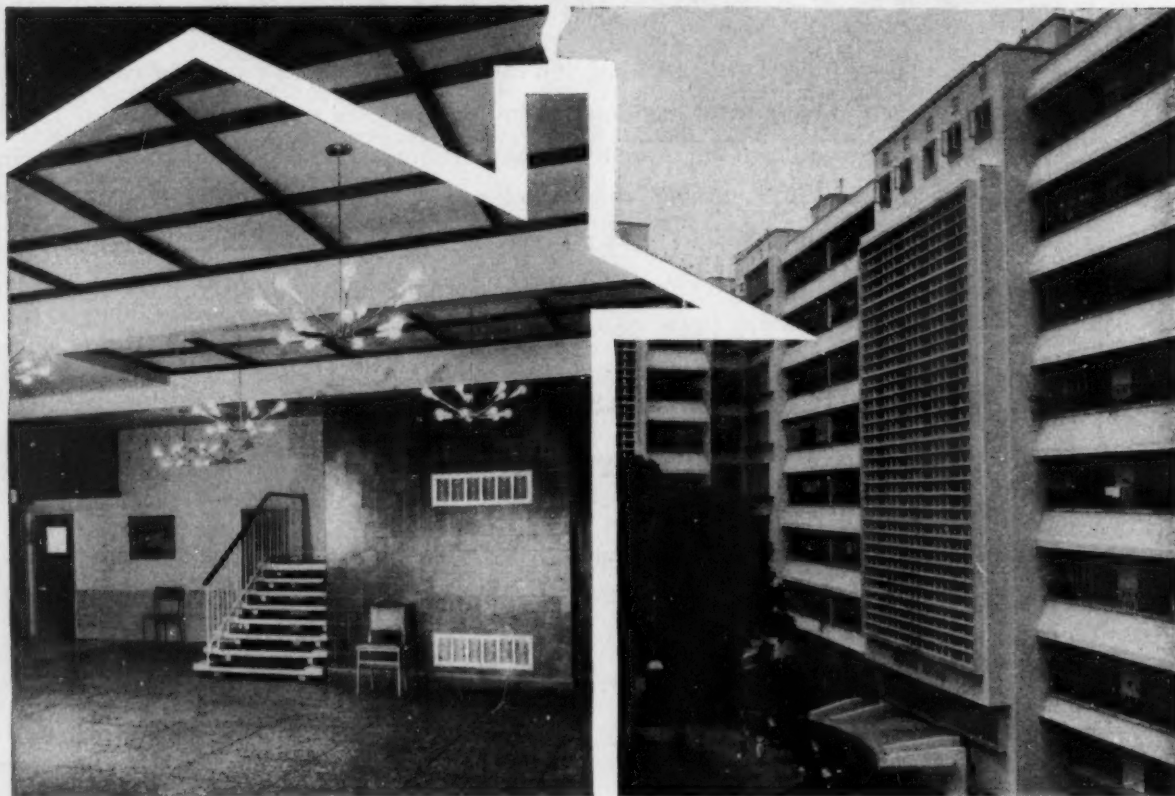
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THE ARCHITECTS' JOURNAL for September 13, 1961

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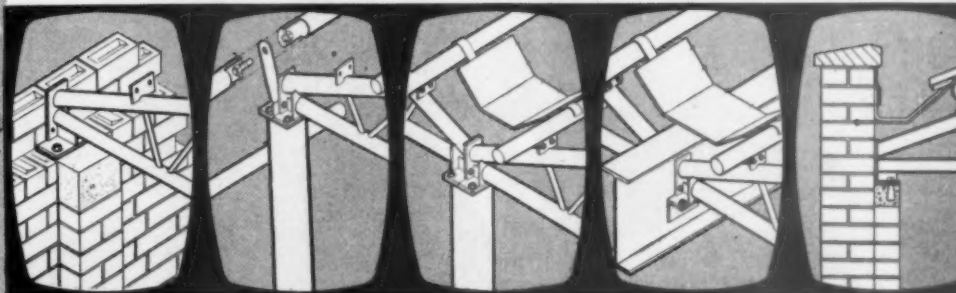
Truss landing on brick pier

Truss landing on steel column

Truss landing on valley column with valley gutter

Truss landing on valley girder with valley gutter

Truss landing on boundary wall with gutter



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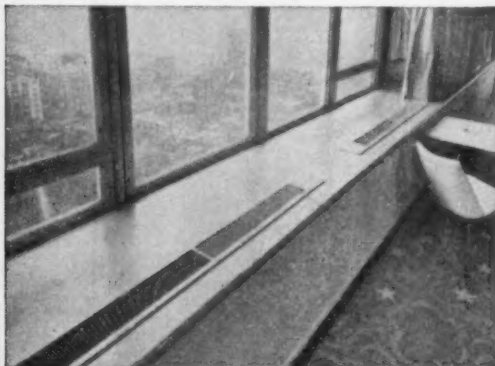
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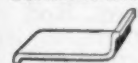
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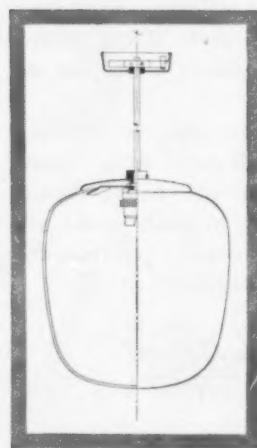
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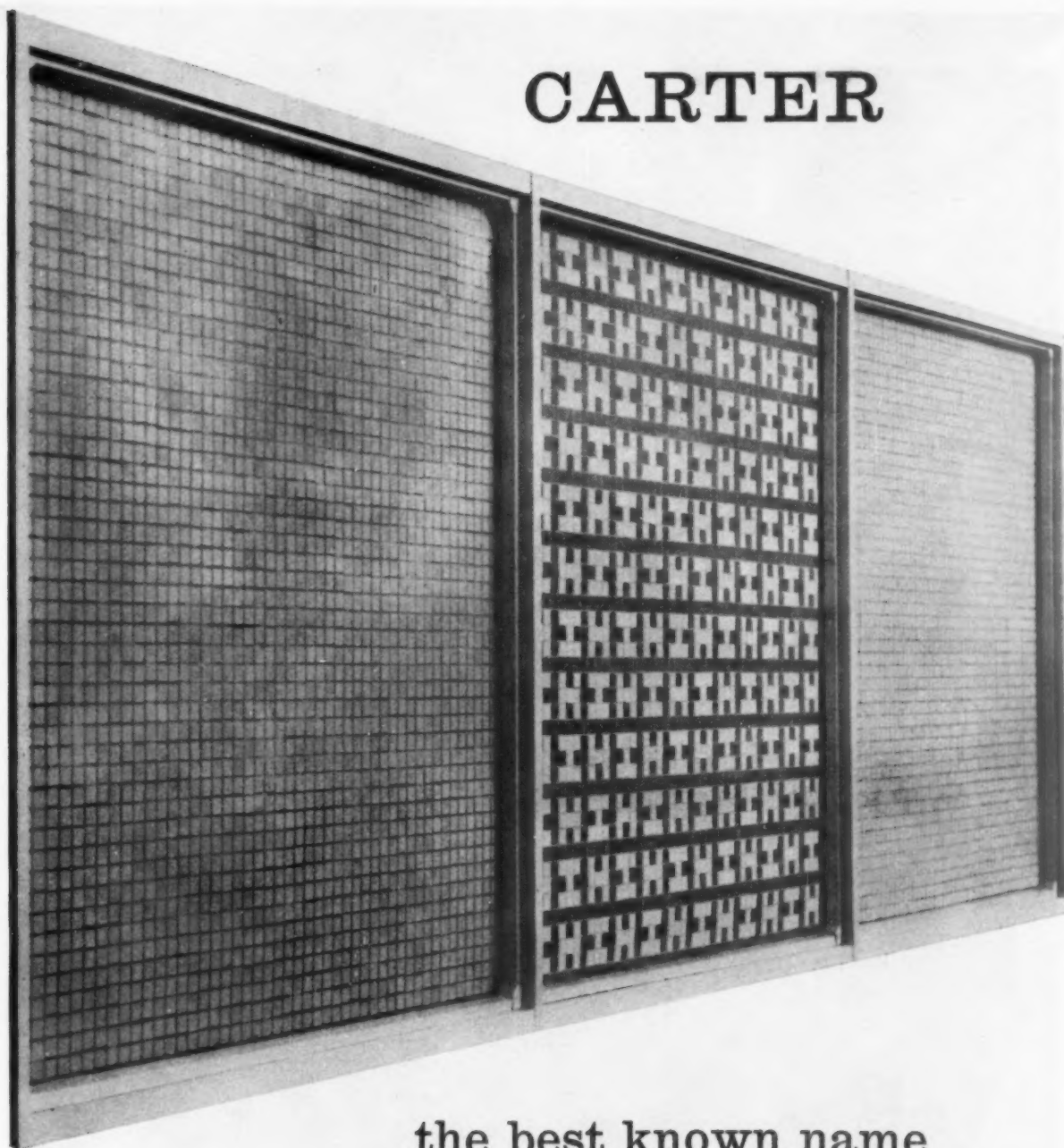


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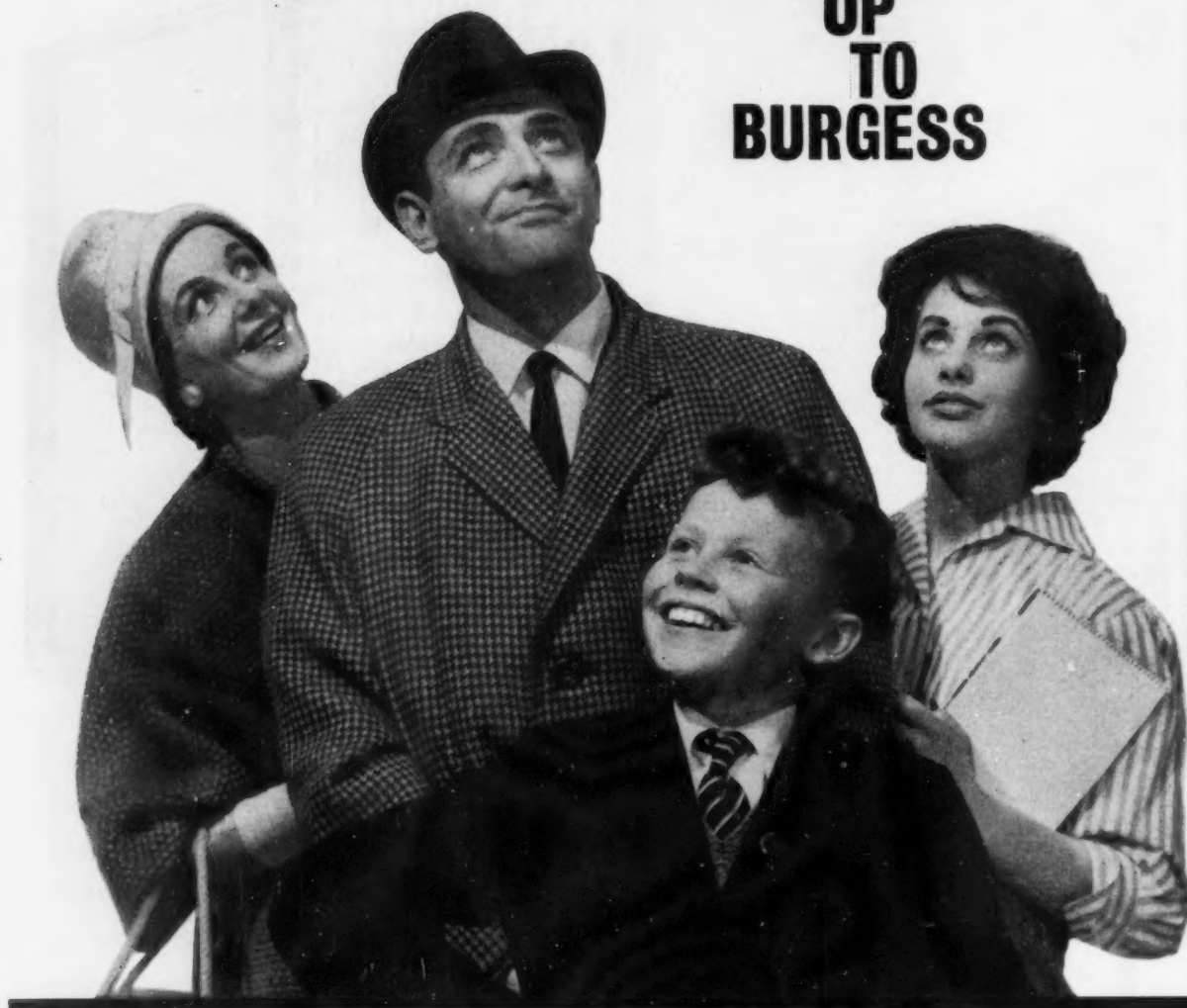
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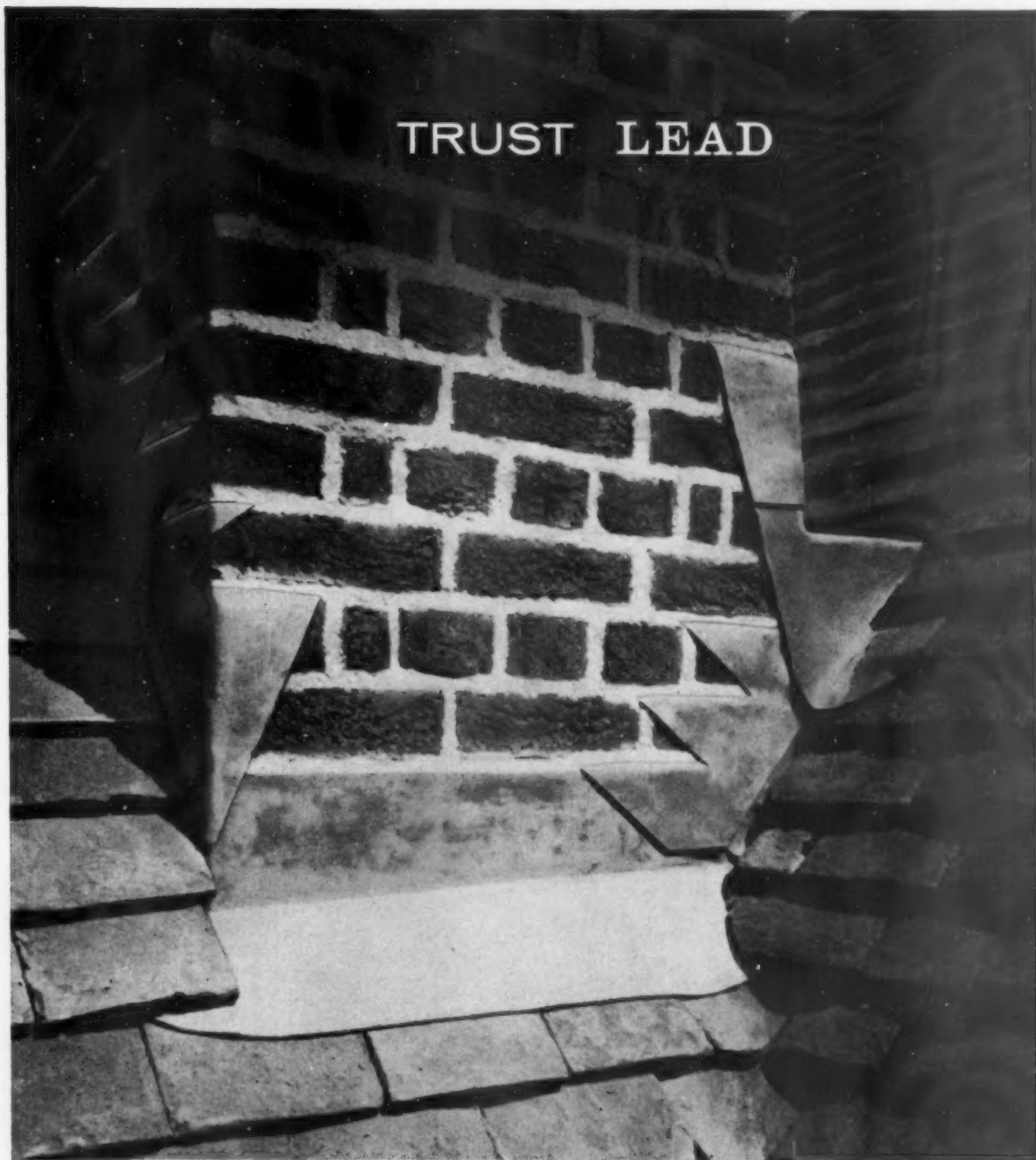
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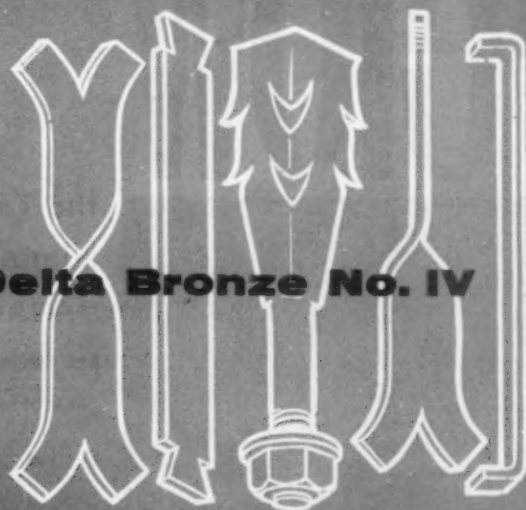
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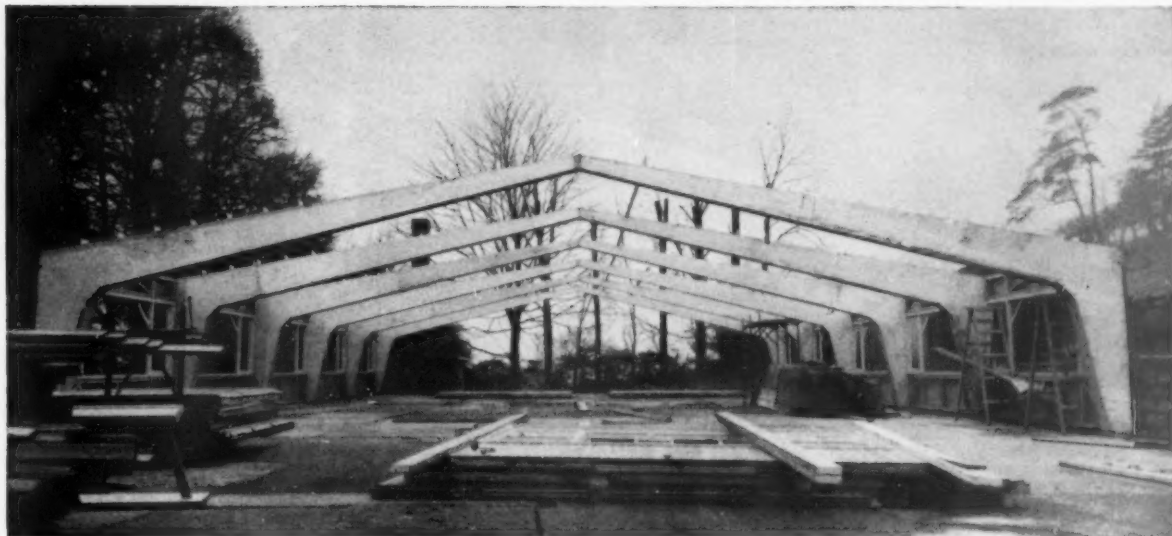


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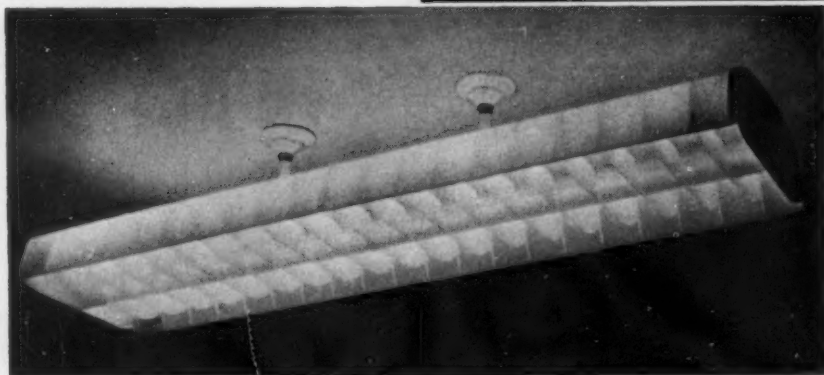
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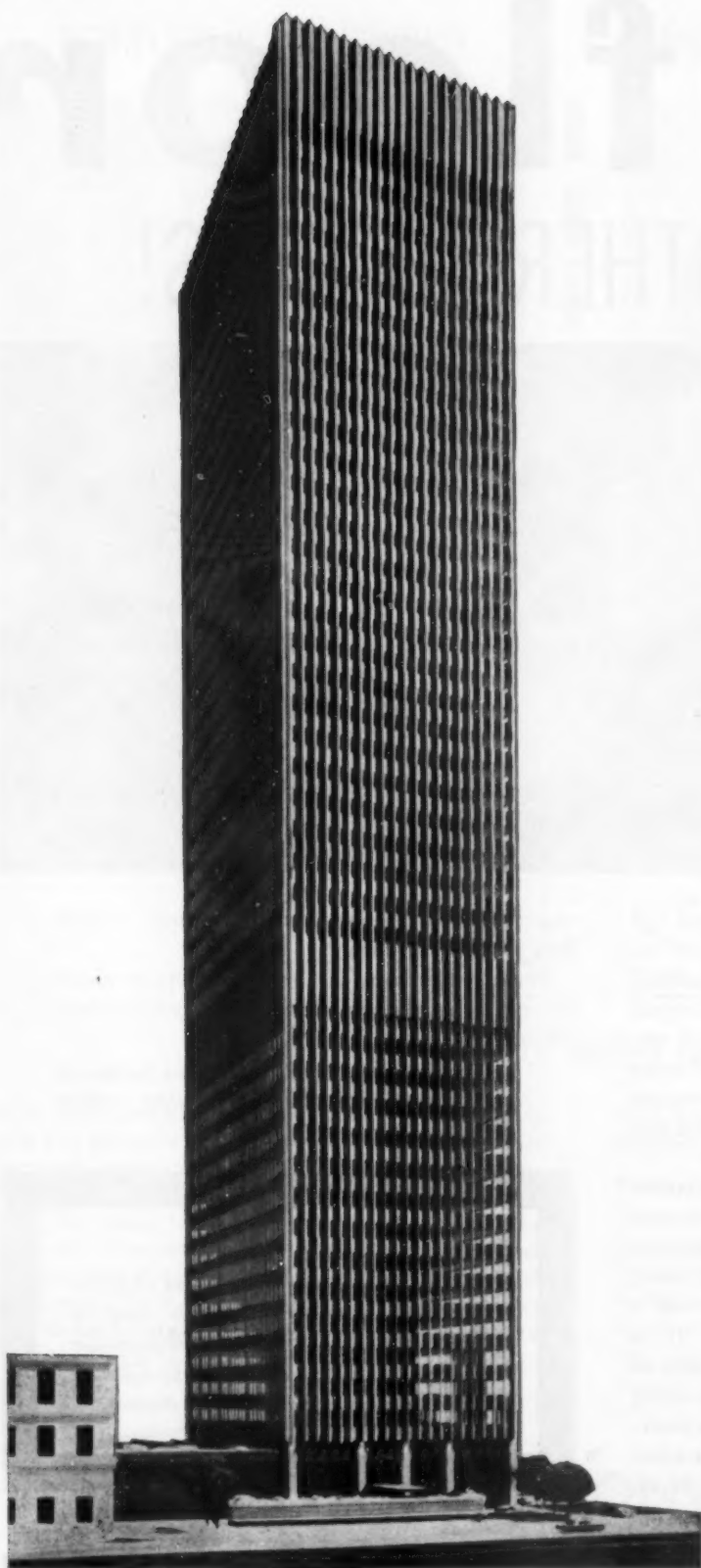
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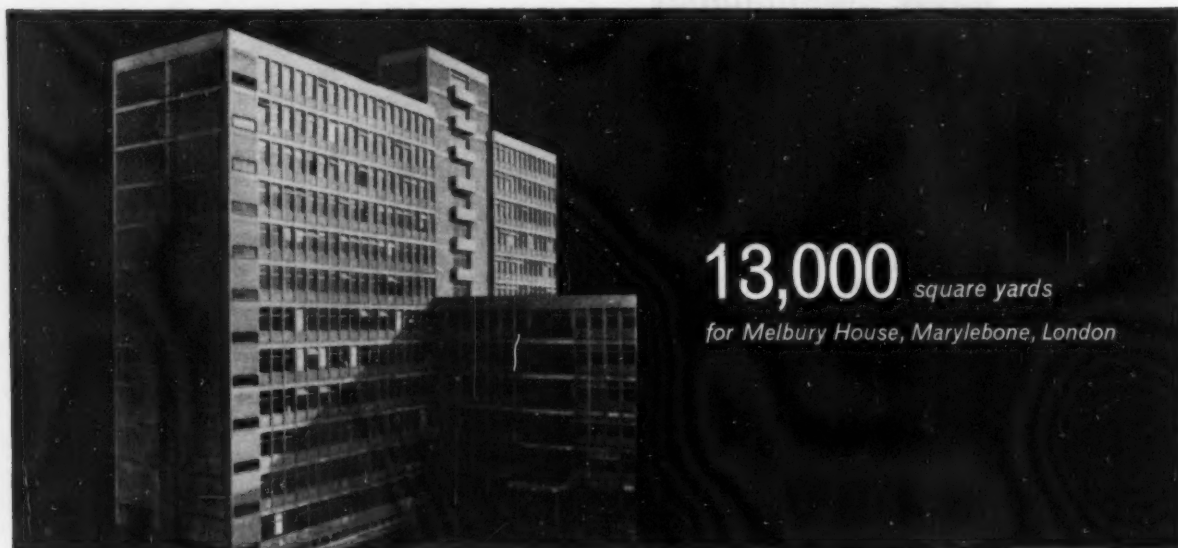
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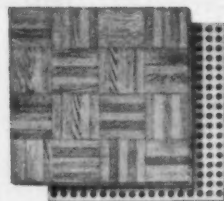
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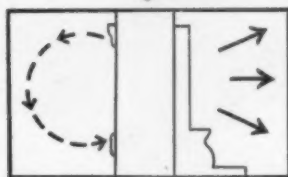
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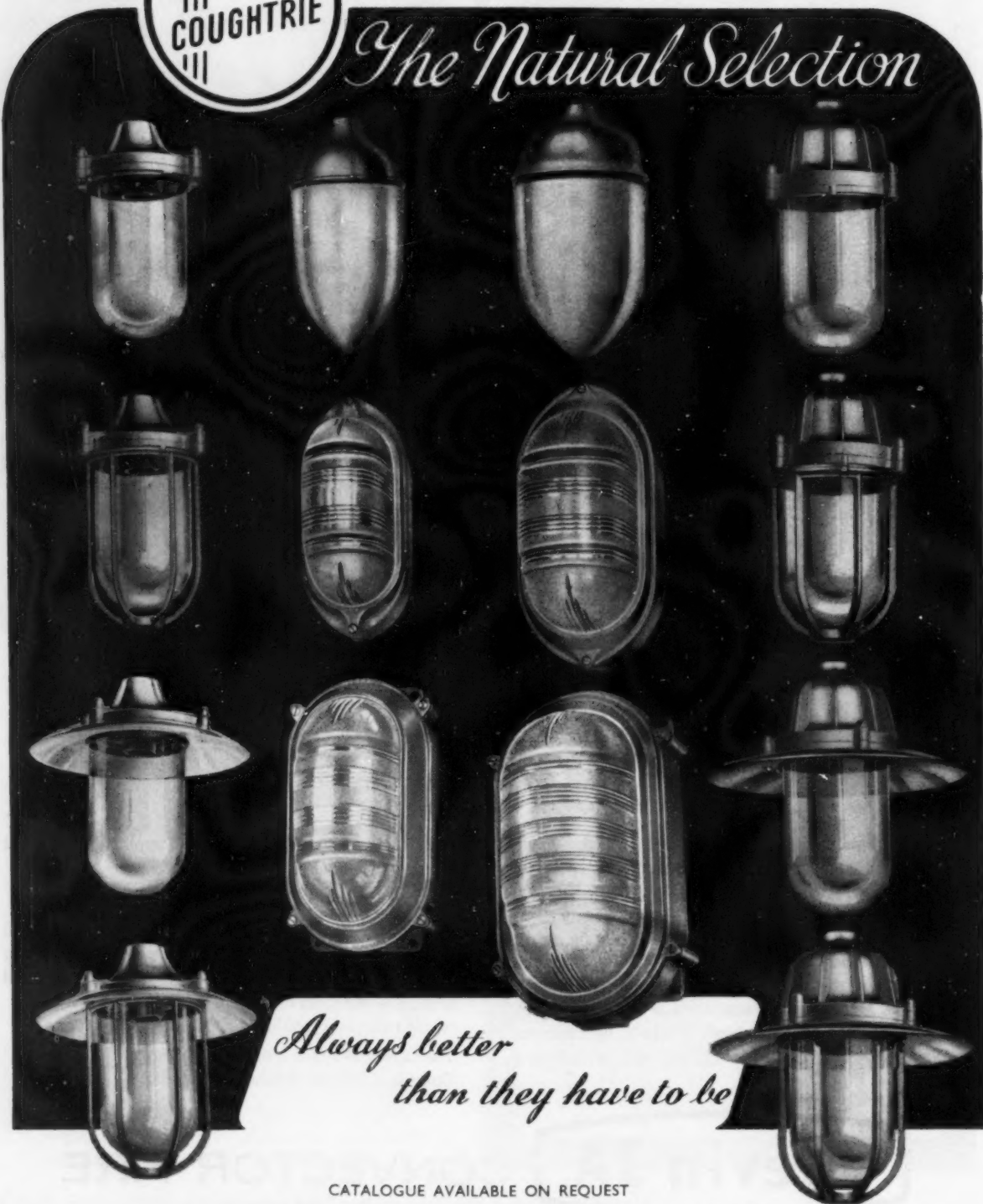
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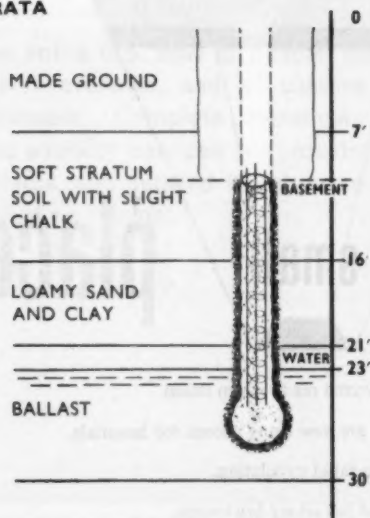
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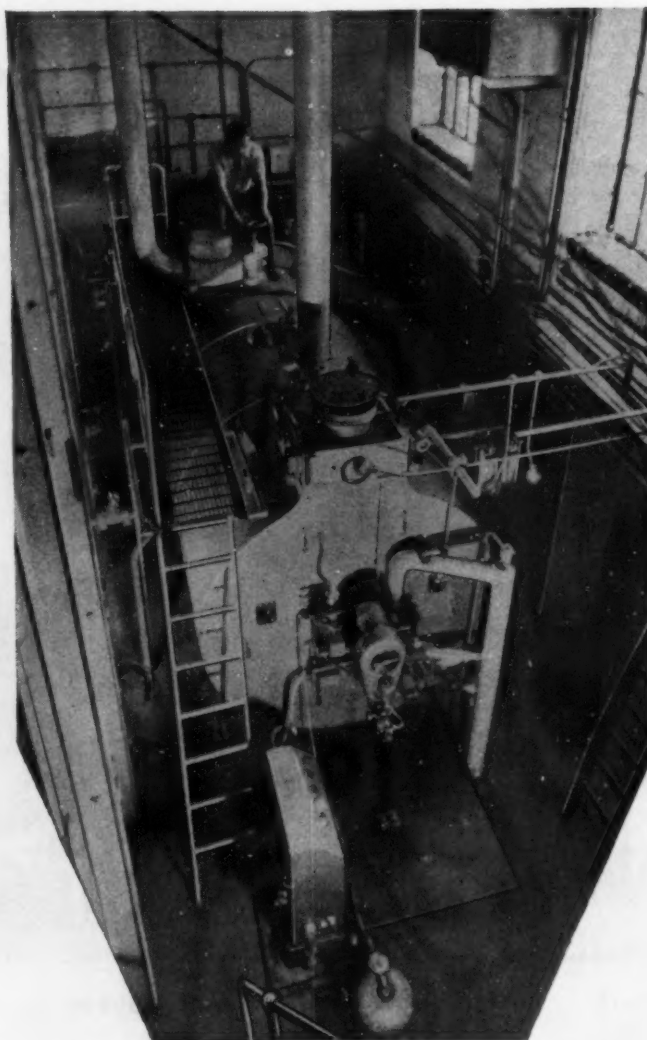
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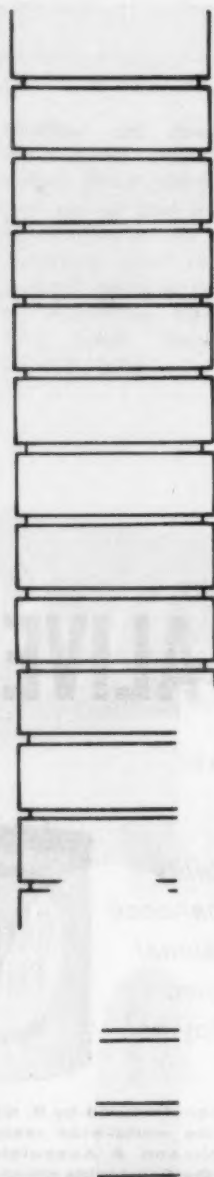
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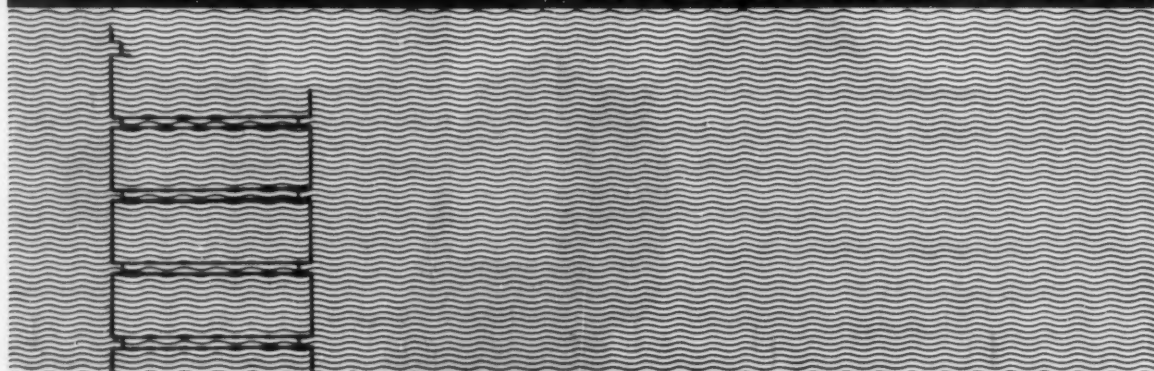
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The Architects' Journal

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NOT QUITE ARCHITECTURE

Have chocolate, will ramble

Next time you want to escape try a national park. Skyros and Sardinia are more fashionable, but not more satisfactory.

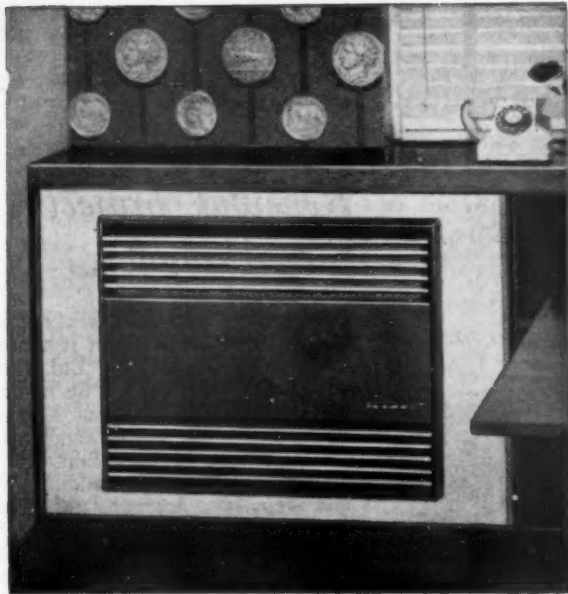
Try walking, for instance, from Towyn over Cader Idris to Dolgellau. The trip takes several hours so buy apples and chocolate. Admire the Welsh shop girls in the grocers—slight, dark haired, very dark eyed—real archetypal Britons, fugitives once from Romans, Saxons or Danes. Nowadays they wear a costume of blue nylon.

From Towyn ride the Tal-y-lyn light railway into Snowdonia National Park. Where the track ends you walk, first of all through Abergonolwyn, tight packed, black packed in its valley bottom as if the buildings were cubist boulders tumbled from the steep surrounding hills. This, in National Parks language, is access country: it is also a land of the occasional jarring note.

A lane leads northwards from Abergonolwyn, over a mountain shoulder and into the next valley. Its pavement is sunk between banks of slates, all striated like reams of untrimmed purple paper. High on slopes above the bracken grows in continental shapes, relief maps of the Great Nowhere. Farther on, the banks are succeeded by new-mown hedges and verges. Pink foxgloves abound, now with only their topmost flowers left, their tall stems dipping and bending in the wind like hooded cobras.

Pigs poke wet snouts into the road in front of a stone farmhouse: opposite is a red telephone box, urban and ridiculous. The lane wriggles on past the ruined ramparts of Castel-y-Bere, perched above the valley floor on a rocky outcrop. Llewllan the Great, Edward I and the Ministry of Works built them and what is attributable to whom is hard to judge. Two good arches remain, both with flat slate voussoirs and boulder keystones.

On to Llanfinghandel with an Edward VII letter box, a chapel and nothing else. The



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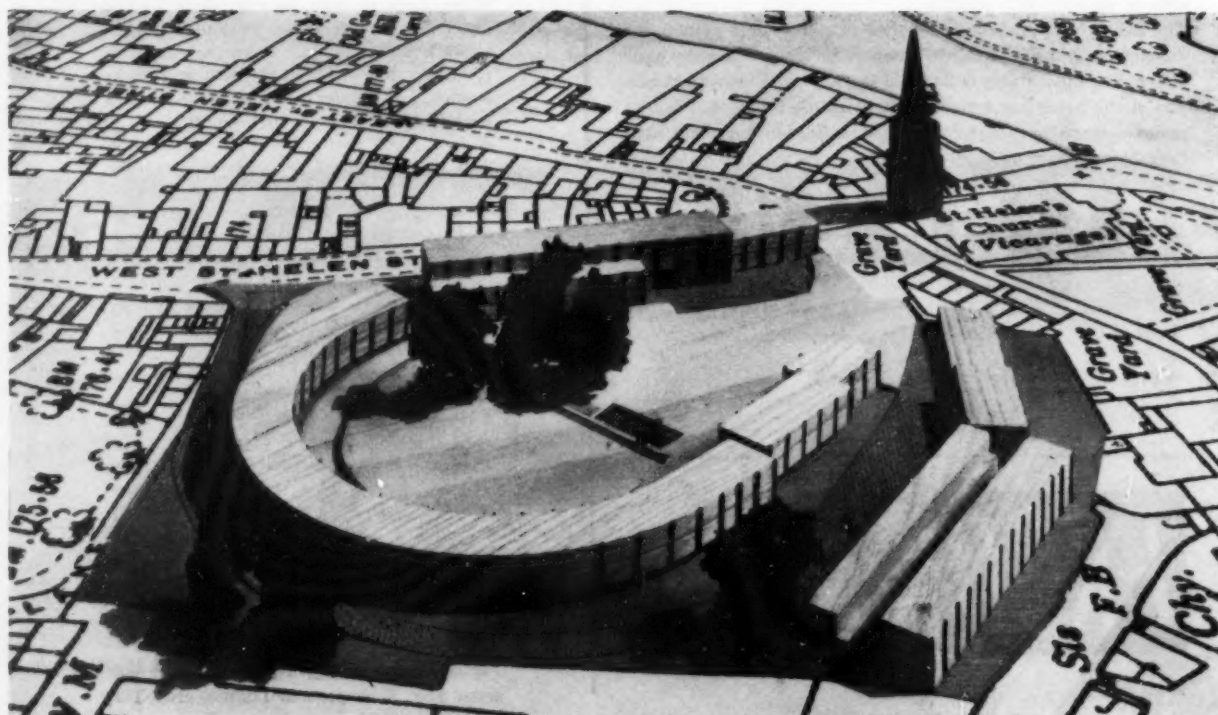
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Renewal project for Abingdon

This crescent and terrace of, mainly, two-storey terraced houses is a project designed by Townmaker Ltd. (architect, Tom Hancock) to fit modestly into a site in the centre of Abingdon which is ripe for renewal, and to take full advantage of the beauty of the old town. Hence the buildings have been kept low, accepting the general roof level of the town, and only the block of maisonettes and flats along West St. Helen's Street have taken advantage of a fall in the ground to rise to $2\frac{1}{2}$ storeys, with an arcaded first storey over the pavement. The crescent crosses the axis of the splendid spire of St. Helen's Church, of which most houses will have a fine view. Each dwelling will have a garage/workroom area, either at a lower level approached by a ramp, or facing onto the parking square which provides a turning point for vehicles using the peripheral road round the site. Above, St. Helen's Church, from West St. Helen's Street, with new arcaded block on right; below, model of the project from the west.



letter box has a mean mouth $5 \times \frac{1}{2}$ inches (so untypical of the grandiloquent Edwardians) and admonishes "Letters Only." It hardly seems necessary. Slate headstones surround the chapel; inside are pews and a bier. Like Hamlet, the place seems much obsessed by death.

At Tyn-y-Fach, where the paved road peters out, there is a new house of alien brick and some whitewashed cottages. A girl waves from the ugly house: the cottages are deserted and beautiful.

Cader Idris, 2,927 feet high, looks distant, black and gloomy. The track towards it passes a red marble monument to the instigator of the British and Foreign Bible Society and leads through several farm gates. One is made of metal tubing—a kind of prison symbol, two are of wood and invite you to sit on them and swing your legs; all three have powerful concrete hinge-posts.

The track gives way to a path and the path ends in a fan of sheep runs. The Ordinance Survey calls it "rough pasture"—they must do aerosurveying: it's bog! Here is the frontier between access and escape country. The only sounds are bleating sheep and tumbling water. Sparring rams charge brow to brow, their horns clicking like billiard balls.

Walk and walk, pause to catch your breath. Eat chocolate for energy, go in zig-zags to reduce the gradient. Why do men climb mountains? Because they are there? Rot! Down in the valley bottom is a leaping stream—splashes of white amid the grey-green-purple. Beside it is a derelict cottage, just a slate shell and a chimney. Back towards Castel-y-Bere the hedges resemble ribs on a green leaf. A big cloud is blown up the valley and obliterates everything, as its ragged underside races in wraiths up the slopes.

Scramble a bit farther and the mountain's flank ends at the brink of a black walled cwm. Hundreds of feet below is a lake. The wind whistles across the precipice; spit and your spittle goes twenty feet out before dropping. Sheep lie in nooks at the edge, *enfants du paradis* in a natural amphitheatre.

The peak is over a little to the east and up another 400 feet. At the top are rocks and a concrete cairn: the cloud is thicker there and nothing else is visible.

The way down is hard at first, a scree walk, then an amble through rough moorland redolent with gorse and heather. No sign of coniferous forest, no sign of transmitter towers or high voltage transmission lines, no sign of tents. It hardly seems possible in so small a country.

At Llyn Gwernan there is an inn where cars and people begin and where civilisation captures you again. But escape was so complete that it's welcome and the beer tastes wonderful.

Signs of humans along the walk were one fruit gum carton, some white directional arrows, an indistinct shout in the clouds, the triangulation cairn and one scattering of orange peel—not bad in an age of leisure, rambling and conspicuous jettisoning. Perhaps it is because people are getting cars and prefer motoring.

T. BENDIXSON

The Editors

INTRODUCING THE SFB ELEMENTAL DESIGN GUIDES

This week's cover, which we hope aroused interest and curiosity, shows the lateral filing system now being built up in the AJ office using the sfb classification which is the basis of our forthcoming Information for the Architect Supplement which starts publication next month. Today we publish, starting on page 367, an article by our two Research Fellows in charge of the whole project, in which their programme is outlined.

A PLAN TO MAKE PLANNING WORK

Yet another plan for controlling land use without nationalisation? Or perhaps it would be more realistic to describe the plan published this month by Socialist Commentary and drawn up by a distinguished group of town planners, architects and economists (and summarised on p. 368), as a plan to nationalise land by slow degrees—a triumph for the inevitability of gradualness.

The fact that plans to enable planning to work, as more than a holding operation, continue to be produced, is a measure of how unsatisfactory our present planning machinery is, and the Socialist Commentary proposals are a welcome advance on any previous effort to give the community control of the use of its land, and to ensure that the community benefits from its development.

As the report recognises, the financial provisions of the Town and Country Planning Act, 1947, did not work. "On the one hand it required that the market in land should continue to work on the supply side; on the other hand it withdrew all incentive to the supplier to sell. So the market virtually collapsed." But the result of the 1953 Act's abolition of the Development Charge was that "the enormous boom in building and rebuilding in the late fifties has not profited the community at all."

Now comes this new, ingenious suggestion that buildings should be recognised as having a useful span of life (normally eighty years, unless they are "of exceptional quality or value, architecturally or otherwise"), during which the owner holds a "statutory lease," and at the end of which he is compensated for the land (but not the building, which is of nil value). It will be interesting to see whether this scheme for what might be called "creeping nationalisation" is adopted by the Labour Party leadership.

Other proposals contained in the plan will be more familiar to our readers, for we have pressed for some of them: a Ministry of Town and Country Planning having control over location of employment, house building and communications; regional planning authorities to replace the present out-dated county structure; major roads and transport to be integrated with land use planning and town design. . . .

We welcome these ideas as our own chickens coming home to roost.



EERO SAARINEN

The death of Eero Saarinen at 51 brings to an untimely end one of the most meteoric architectural careers of our time. If in the fifties the architect joined other career men as a hero figure, Saarinen was both responsible and archetypal.

A *cause célèbre*—Chicago-Tribune Competition—brought him to America in 1923. His father Eliel's design arrived after the awards had been made but was generally conceded to be a "winner." The postal conditions had been vague and a special prize was awarded. Consequently Eliel accepted a commission to design and later erect Carnbrook Academy, Michigan—an institution dedicated to the preservation of the Arts and Crafts movement in general and the works of Carl Milles in particular. It became a sort of centre for Scandinavian artists in the US.

Eero went into partnership with his father in the mid-thirties after passing through Yale school of architecture. Long before he became internationally known they had together built up a family practice in the mid-West. The buildings of this period are what one might expect—competent and rather dull—and it is not surprising that Eero insisted on carving out an independent career, which he did largely through his

ability to win competitions. The war hardly upset this, since, though working for OSS in Washington he continued to enter and win competitions as well as design much of the furniture for which he gained a great reputation. However, his most famous and perhaps best design, General Motors Technical Centre, came to the firm in the normal course of practice and was postponed and revised on a larger scale when Eliel was in retirement.

The series of buildings which made Eero internationally famous—they include the Kresge Auditorium Mit, Yale Hockey Rink, Chicago Law School, PWA terminal and two embassies—were almost all built or designed in the fifties. Saarinen was above all a designer and deliberately organised his office to avoid the burden of administration and job drawings; which is not to say that his office drawings were not far better detailed than most working drawings. This technique, while allowing the full and fresh concentration on design problems also permitted him to treat each one as a new challenge. It has been said that "he was always *en charette*," certainly his clients came to expect unique solutions.

If on the one hand the greater richness of present day architecture owes much to Eero Saarinen's refusal to be shackled by the Miesian aesthetic, which he regarded as a necessary purgative, he is also a little responsible for the frenetic seeking after novelty for its own sake which seems to be marking the architecture of the sixties.

PLANE WORDS

Connoisseurs of jargon will have been interested to hear, during Farnborough air display week, about "noise as a design parameter." I'm told this is something to be pleased about: it means that noise output is now a ponderable part of aircraft design. And no doubt this in turn means that the industry realises that if aircraft get much noisier, people may decide to do without them. Apparently the jets on airliners were originally conceived for military use, which are wasteful and loudmouthed like everything else military. The next lot will have civilian "by-pass" engines and will be less heavy on fuel and ears. Later on atten-

tion will be given to the noise made by the jet planes' compressor blades and their intakes. But don't imagine this means that life will be quieter. It simply means that the noise from any individual plane won't get worse as the plane gets bigger and faster. The total noise will get worse if traffic gets thicker, so don't rush off to buy cheap property near London airport.

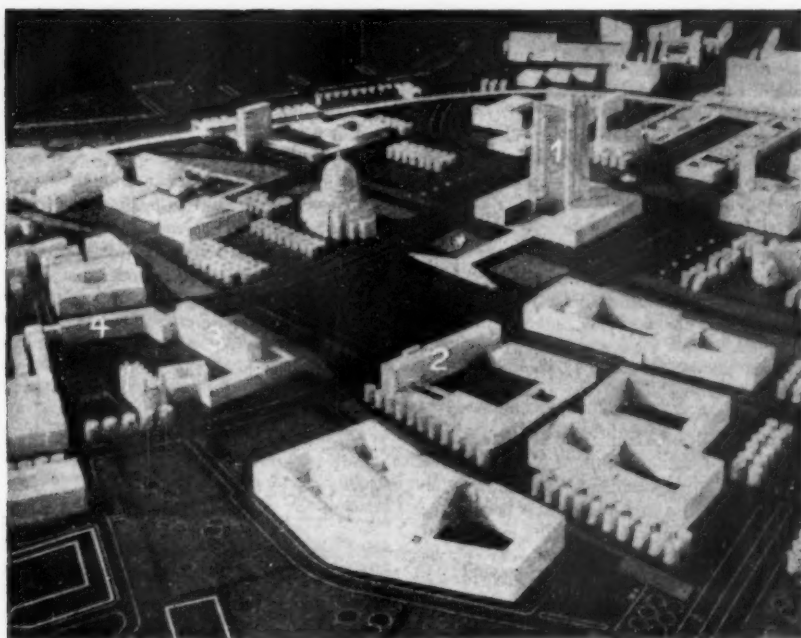
QUICKER PACKS

Were you hoping that this year's Packaging Exhibition at Olympia would be displaying openable butter packs, boxes that don't have to be assaulted until they reveal their contents (who said we can't buy broken biscuits nowadays?) and detergent powders that don't burst through the cardboard on a wet sink? If so, you are unlucky. This year the emphasis is on speed of packaging: it seems that in one hour you can have eleven thousand chocolates wrapped, three thousand slabs of corned beef canned or 8,500 eggs sorted and tucked away (as I watched all this, a nightmare voice in the back of my mind asked "Will you take it with you, sir, or shall we send it?"). Otherwise there's not much new. Fifty per cent of packaging is still done with paper or board, though plastic films and containers are catching up and glass is still going strong. Colour printing on most surfaces has improved, often with disastrous results because it is allowed to run riot, without the restraining hands of graphic designers. And a lot of thought, you'll be glad to think, is being given to ways of keeping the smell of printers' ink out of your blancmange powder.

Just to put us in sober mood there was a stand reminding us of the importance of packaging on the Common Market. I was told that a coloured pack that would go down very well in the Arctic regions might be no good at all in the Mediterranean countries. It might even be necessary, someone said, to design packages for illiterate people. Looking round at the exhibition I should have said this was no problem at all.

NO USE MOPIN'

Why are the Quarry Hill flats at Leeds shedding their cladding so alarmingly? When Mopin, the French engineer, was



The replanned Alexander Platz in East Berlin, recently published by the East German Press. 1, New Government offices, 2, HQ of State Council—work has begun, 3, Ministry of Foreign Affairs, 4, The Opera Café, facing the Opera House on Unter den Linden. See "Homes or Homicide?"

consultant for them he had already used a light steel frame with precast facing slabs at Drancy. And nothing has gone wrong there, unless the French have done a little patching up on the quiet. Anyway, the council has chosen to do a ten-year temporary repair job instead of spending £2m. for repairs. With an atom bomb going off every day or so, you can hardly blame them.

HOMES OR HOMICIDE?

Talking of which, before we get too worried about slab fall-offs and atomic fall-outs, had you noticed the recent outburst of building and town planning in East Berlin? Isn't it a comforting sign that if the homicidal maniacs now in charge of the world's affairs could just be held down for a minute, peace might break out after all? The model of one of these schemes the replanned Alexander Platz which was recently published in the East German Press is not easy to understand, since it is made of that candyfloss foam so popular east of the iron curtain, which gave such an air of dowdiness to the recent Soviet Exhibition. But it does show a breakaway from the false front architecture of the Stalin Allee. While generally undistinguished, the detailed replanning of Alexander Platz surprisingly recalls Mies' *Hors de Concours* entry in the famous competition of 1928.

MOOB*

Early in their investigations into school building, the Estimates Committee heard all about CLASP†. After that they asked almost every witness for views about the Consortium. Representing the unions, Sir Richard Coppock said "I do not know this institution at all. I know we import buildings from Sweden and export buildings to Australia. Some firms have gone broke doing that. I know the consortium in atomic energy and for building generating stations . . . my interest in them is nil."

*

And Peter Trench, speaking for the employers, saw a threat. "There is a tendency, he said, "for the architect or building owner to start putting his finger into various parts of the production plan which I think is the prerogative of the builder and this I think is going to be dangerous from the point of view of cost." But one of the features of the CLASP method is that delivery dates for components ordered in bulk are often arranged long before the contractor is appointed for the particular job, and this has been an important factor in speeding up erection. The sort of parochialism expressed by Peter Trench, whether from architects or

* Mind our own business

† Consortium of Local Authorities Special Programme

contractors is, in fact, a barrier to quicker and cheaper building. But much of the reaction against the Consortium method may well be due to this rather ominous word itself, and the sooner an alternative is found the better.

SLAP WITH WET FISH

Have you heard of the architects' office where an assistant runs a brothel on the side, a female assistant was seduced in the middle of a building inspection and the principals keep dashing off to Paris leaving incompetent youngsters to run jobs? Fact or fiction? As far as I know, fiction, though the author of this television fancy, John Arden, was an architectural assistant before he turned to playwriting. Mr. Arden is sometimes worth taking seriously (he showed a rare, fresh mind in *Sergeant Musgrave's Dance*), but he had me laughing in all the wrong places in this latest BBC piece, *Wet Fish*, which is about the troubles of a fishmonger who decided to go contemporary and have his shop rebuilt. Maybe I don't know architects well enough. After all, the correspondent of *The Times* (television *not* architecture) found it "almost wholly realistic—variations of remarkable subtlety on a basically conventional theme." Anyway, before we protest let's be glad that we are now in enough to be so dramatised. Could the RIBA's PRO now get us worked into *Beyond the Fringe*?

BUILDING MATTERS

I have sometimes made unkind remarks about the BBC's "Building Matters" on Network Three, but I feel very much more unkind about the decision not to bring the programme back this autumn, and unmollified by a vague promise from the programme planners that it may be revived later.

This series was not good enough: there was too much an air of "do it yourself," in keeping perhaps with the other hobbies that get a look in at this time of day on the air, and far too little about real problems of building today. But the point is to improve it, not stop it.

Apparently the RIBA was never consulted about this programme, and therefore never made any suggestions for improving it: about time, surely, that some advice on the subject went to the BBC, whether it is asked for or not.

ASTRAGAL

LETTERS

*Dennis R. Owen,
ARIBA, ARICS*

R. Stafford Smith

R. R. Alexander, DA, ARIBA

A Nuffield for Euston?

SIR: May I make a suggestion which could possibly help in preserving Euston Arch (incidentally it isn't an arch)?

At the moment we are talking in terms of the £190,000 necessary to remove the arch to another site. If this sum of money is not available at the moment perhaps we could spend considerably less as a first stage and still save the arch.

Presumably the Government are prepared to provide the funds to demolish the building, and that would be no small amount. What then would be the *extra* cost, at this stage, of carefully dismantling the whole structure and storing the stone until we can afford to re-erect it? Not a staggering sum, surely?

There is rail transport to hand and heaven knows there must be acres of land owned by British Railways which is now wasteland, within a small radius of Euston—I can think of one enormous triangular piece to the north of Chiswick High Road, to mention one.

The stone will not deteriorate for being stored in the open for a few years—Temple Bar is an excellent precedent for just what I suggest—and in due course, when the railways are producing fabulous profits, we can have our gateway back.

DENNIS R. OWEN

St. Albans

Cotton, Clore and Cambridge

SIR: I have read with considerable interest the views and conclusions contained in Mr. Senior's article in your issue of August 16. Having just returned from America, where I found there was great interest in the planning problems of Cambridge, it is encouraging to find that the future of this charming city is at last being given the serious consideration by our own professional journals which its character and traditions surely merit. May I make one or two comments on the article and on the problem as a whole?

The University, in its memorandum on the Cambridge Plan issued last December, set out two basic aims for the future planning of the city. The first—"to maintain and enhance the character of Cambridge as a University town"—can surely cause little

dissension. The second—"to create in Cambridge a regional centre capable of meeting the needs not only of the city, but of a wide area surrounding the city"—may possibly cause some debate.

Whether the rural campus or the jostling town forms the better environment for University education is too wide an issue to be dealt with in this short letter, but the University by adopting this second aim clearly indicated that whatever their views on this specific point might be, they considered the interests of the city as a whole dictated that the regional function must be accepted. If this view is correct it demands positive planning of a high standard if the damaging effect of piecemeal development is to be avoided.

What does the acceptance of a regional shopping centre in Cambridge imply? The modern shopping centre as we know it in this country and in America, has been made possible and is nourished by the mobility of the shopping population both by public transport and now increasingly by private cars. This is not, however, the basic reason for its existence. This lies firstly in the insistence of the shopping population on the widest possible selection from which to choose, and secondly in that the regional centre contains better non-shopping facilities to occupy the leisure time of the shopper once the purchases have been made.

Whilst a wide choice can, as far as food is concerned, be met by the supermarket in the neighbourhood centre, a similar choice in a variety of non-food sales can only be provided by grouping large numbers of shops and stores within a regional shopping centre. Such centres, in turn, carry with them the inevitable problems of access and car parking. Nor does the pattern in America show any indication that this trend is likely to alter. In fact, very much the reverse.

The tremendous in-migration to the metropolitan areas in America, coupled with the breakdown of mass transportation and the fantastic increase in car ownership, has given rise to the suburban regional shopping centre and the erosion of the importance of the old down town centre.

Despite the fact that these new centres are very often as big or bigger than our own regional centres (some serve upwards of 500,000 people in over 1,000,000 square feet of sales space with parking for 5,000 or 6,000 cars immediately adjoining) the old down town area is again exerting its draw of wider choice and better facilities, and efforts are now being made to revitalise these down town centres by improving the mass transportation systems and by all the techniques of modern road engineering.

A study of Cambridge shows that the existing shopping centre, hemmed in as it is by the ring of University and College buildings, cannot meet the space requirements of a modern regional shopping centre, and the road pattern in the central area as a whole is incapable of dealing with the present flow of traffic let alone the tremendous increase which must be anticipated during the next two decades. This is not entirely surprising, since, when the College/University ring was formed, the area which it enclosed and the road pattern which it included served the

needs of a local population a fraction of its present size, and a region limited by the distance a horse could travel.

Cambridge is fortunate, however, in having an area—the City Road area—big enough to deal with a regional shopping centre and its car park problem and well served with access roads, and yet near enough to the historic centre for use to be made of existing city facilities. Of equal importance is the fact that the area as a whole is ripe for redevelopment. We must hope that those concerned seize this opportunity, and carry out a piece of comprehensive development of which both the city and the country can be proud.

R. STAFFORD SMITH

Cambridge

Size of drawings

SIR: I am in complete agreement with the use of A1 and A2 drawing sizes as against my system, which was devised before the use of A series sizes was advocated in this country, and described in my article published on July 8.

I am rather more concerned about the views expressed by some correspondents that drawing sizes generally are too large and should be developed to suit the draughtsman's comfort, e.g. 16½ in. high by 35 in. long.

Surely in the days of adjustable boards, draughting machines, etc., this is a minor consideration? I have found that small scale drawings, and particularly those which have been reduced in height, do not lend themselves to the preparation of detail drawings since they very often necessitate the use of smaller scales than are acceptable, resulting in a lack of clarity.

The choice of scale should be determined by the complexity of the subject and I would stress the following points made in my article dated June 1, regarding the advantages of the larger scale drawing:—

- (1) Even though larger it can be more quickly prepared since acceptable accuracy and clarity can be more easily achieved.
- (2) Lettering can be larger and therefore more readable on the site.
- (3) Bold drawings are easier to read under site conditions and last longer on the print.

Referring to Mr. Crowther's letter of August 30 regarding the use of pre-printed sheets, my experience of these is that the quality of the tracing paper seems to deteriorate for pencil drawings. For this reason we have a pre-printed backing sheet and the draughtsman can trace the standard block in a matter of seconds. The standard block I use differs from Mr. Crowther's in only two respects, namely:—

- (1) The contractor normally stamps the drawings on the date he receives them and therefore a "Date Received" space is most welcome.
- (2) I find that the record of outgoing prints never seem to be kept up to date when recorded in book form and that the simplest and most permanent method is to provide the record on the drawing.

ROBERT R. ALEXANDER

Aberdeen

NEWS

BASA

Conference at York

This conference marked a new phase in the development of BASA. During the past the Association has hammered out a broad attitude to architectural education, the stages in development being marked by successive conferences; Cambridge, Bristol, and, most important, Oxford. BASA now stands ready to turn its attention to the implications of this policy in detail, and the conferences from York onwards will consider particular aspects arising from putting principles into practice.

The interim report of BASA makes this clear, "... we will turn hereafter to the detailed implications and their applications. . . ."

This report thus forms a connecting piece between previous conferences and the papers at York during the week end of September 1-3 and should be read by those concerned with architecture and architectural education in particular.

Two major events at York confirmed the new maturity of BASA. First, Professor Llewelyn Davies and John Weeks chose the conference as the place to make the first detailed policy statement for the new Bartlett School at University College, and second, BASA now feels able to make recommendations for a square deal for students by the RIBA.

The first is published in full in the BASA Supplement in this issue (pp. 387-394).

The other main papers will be published in the JOURNAL during the next few weeks. Dr. Chapman discussed the methods whereby the joint work of architects and sociologists can help to define user requirements on a broad scale, but his paper also showed that devising answers to these requirements was not yet within the scope of the social sciences, since these must at present be based on value judgments.

Henry Swain described the method used for preparing the architect's brief for a comprehensive school, as an illustration of the CLASP system of defining User Requirements. In particular he emphasised the need for the architect to involve himself directly with the client in order to grasp his real "needs and not wants." This paper was deeply felt, and the obvious humanity and sympathy of Henry Swain's approach must surely account for much of the success of CLASP.

The third main paper, by Professor Llewelyn Davies and John Weeks, took the form of a policy and programme for the organisation of the new course at the Bartlett School. This was in fact a major seminal statement on architectural education—one that has been awaited for some time and that will arouse wide controversy and comment. The ideas are intricate and unfamiliar, but they were expressed with such clarity and precision that the impact on the conference was catalytic. It is clear that this paper will become a landmark and that developments at the Bartlett will continue to be watched with admiration and apprehension during the next few years.

The discussion groups covered many aspects of user requirements, and all the final reports reflected the need for more information, communication, and explanation of the relationship between student and teacher, client and architect, and research and practice.

Finally the conference considered the relationship between BASA and the RIBA. Matters submitted for active consideration by the executive were that student fees should be used to provide student facilities; that the student class should be enfranchised; and that students must be represented by elected student members on the RIBA Council. The fact that BASA now considers itself capable of defining its future policy towards the Institute is of major importance and augurs well for the future of both education and the profession as a whole.

PETER COWAN

TPI

Summer school at Reading

When the Schuster Committee urged the need for a Planning Staff College, the Town Planning Institute pointed to its annual summer school as a serviceable substitute. It still falls short of being that, but it comes closer to the next best thing than any of the regular get-togethers staged by comparable professional bodies.

Its standard of living is plainer—too plain, on occasion, for an aldermanic scholar—and of thinking higher. Always held at a university, it maintains the relaxed but earnest atmosphere of an extra-mural course. Its weakness (and its strength) is that the written papers, far from constituting its educational backbone, are never so coherent in theme, so consistent in quality, or so relevant to the pressing problems of the day as the discussions that go on from morning to midnight in formal and informal study-groups, coffee-table coteries and bar-room encounters. This report, which deals only with some of the written papers given at the current summer school in Reading, is thus in the nature of a ground-clearing operation: the harvest will be reaped next week.

Professor P. Sargent Florence, in the opening paper, gave an economist's account of the causes of "conurbationisation," of its varying prospects of future development, and of what can and cannot be done about it. Why, in particular, is the West Midlands (define it how you will) growing much faster than the other provincial conurbations, though it alone lacks ready access to imported and domestic raw materials?

Professor Florence explained that some industries are by nature highly localised; that where such industries settle, producing a concentration of consumers, consumption-goods industries and service trades will settle too; that the substantial growth based on this combination will automatically be sustained by the proliferation of those more specialised services (such as wholesaling and publishing) which can flourish only in populous centres; but that the pace of this growth in each conurbation will depend on the

national rate of growth of the industries in which that conurbation specialises. Once this process has started it is cumulative, because the nucleus of localised industries endows the conurbation with economic advantages for technically connected and complementary industries—advantages which decisively outweigh the obvious drawbacks of congestion and distance from raw materials—and because the larger the town the higher the proportion of workers needed in service employments.

All the conurbations, therefore, must tend to become more populous (though not necessarily within their present boundaries), and to spread over a larger area (though not necessarily by continuous expansion); and in all of them the service trades (including most office employments) must grow faster than elsewhere. But some of them have already grown bigger than they need: they contain factories and offices which derive no necessary advantage either from juxtaposition to the localised industries or from the immediate presence of a large population. These conurbations could be diminished—gradually—by the dispersal of such workplaces to new sites within their dependent regions. (Population can normally be relied on to follow men's jobs, and women's jobs to follow population, though these trends are modified by climatic attractions.) Professor Florence ended with a plea to the keener planners not to abandon, and even turn against, good ideas just when they have been, with great labour, brought to the point of administrative implementation.

How the London County Council now plans the dispersal of jobs and people to new and old towns was described by John Craig, head of the Town Development Division of its Architect's Department. The Hook project, with which he dealt at length, is now dead, of course; but the researches undertaken and the methods evolved by the self-contained section set up to plan it are helping to solve the more complex problems raised by the large-scale expansion of Basingstoke and Andover.

The team included architects, planners, architect-planners, surveyors, an engineer, a quantity surveyor, a sociologist-statistician, an economist, a landscape architect and a small administrative section, with consultants to advise on major matters of landscaping and road traffic. When this unit got to work, said Mr. Craig, "I must confess that I saw overall planning in a new light, opening up fresh opportunities for the future, also providing an answer to those inter-professional difficulties which sometimes become the bugbear between planning and achievement."

The Hook plan was based on complete separation of traffic from pedestrians, saturation provision for off-street car parking very close to the central shopping area, and covered accommodation for at least one car per family at home. There was a moral in Mr. Craig's picture of the bold planner standing at Ludgate Circus in 1900 and deciding that future development must be based on separate stabling for two horses per family. But there is also a moral in the benefit we should now be deriving from the

conversion of these stables, if they had been provided, into garages.

Mr. Craig argued that the way to master the motor car was to make full provision for it: then only could we have "a town with motor vehicles, not a lot of vehicles with slices of no-man's-town between." But this provision must be made in such a way that the town centre could be integrated with the surrounding residential areas by a foot-path system, not marked off from them by a black belt of asphalt surface-parking like a modern moat. Only in the perimeter areas of a new town should there be a form of neighbourhood centre, the team decided; and its edges should be so planned that it could not spread beyond its original boundaries. For the same reason an attempt should be made to get the original population balanced in respect of age, family structure and employment.

The speaker was convinced that town expansion, though inevitably a slow process under existing legislation, was the only answer to many of the difficulties besetting both London itself and some of the smaller towns in its dependent region. Large schemes were financially difficult, but small ones consumed no less time and scarce skill; moreover, small schemes were less likely to justify the necessary expenditure on roads and central areas. It was, in fact, the feasibility of road and central-area improvements that determined the ultimate practicable population, and hence the area to be developed. In this connection Mr. Craig deplored the hindrances to the evolution of a satisfactory central-area scheme imposed by the rigidity and two-dimensional limitations of an approved Comprehensive Development Area Plan. In the design of residential layouts the LCC team was aiming at "near perfect" sunlight orientation for living-room and garden, an area of complete privacy inside and outside each house, segregation of pedestrian and motor traffic, and what Mr. Craig called "identity"—the delicate architectural balance which enables each house to register as a separate family dwelling place, though bound within the discipline of the whole. This, he emphasised, was an organic consideration, not a matter of applied decoration. It called for a re-examination of the house plan, of traditional materials and of detailing if it was to be achieved within acceptable cost limits.

In a delightfully provocative paper Mr. Eric Lyons further explored this need for new kinds of urban housing; but for him it was primarily a need "to examine some of the old values of urban life and interpret them in qualities that are compatible with modern living conditions." He had no use for such new-fangled notions as the cult of the individual, tailor-made, "one-off" house, garden-city gentility, semi-detachment or the cottage image. He found it not surprising that our best architects had failed to give their best on housing, in view of the layman's snobberies and prejudices about house design ("the only branch of architecture he feels at home in"), of the building societies' stubborn opposition to modern architecture, of building by-laws based on nineteenth-century health myths, and of

aesthetic control under the Planning Acts.

Looking back to the eighteenth century, "that great period of English domestic architecture and town building," he observed that the essential factor was the urban scale achieved by group-design. Repetition, essential to the economic use of land and of modern building techniques, need not imply dullness if visual diversity was sought through varying spatial relationships and experiment in the arrangement of squares and courts.

As to internal layout, Mr. Lyons had no more respect for householders' views on convenience and comfort than for market research. "Few people," he declared, "learn anything much after a lifetime of living in a house, except, perhaps, how to adapt themselves to an outmoded and basically inconvenient arrangement of rooms, spaces, equipment and so on." The service hatch was a particular target of his scorn. But it was the handling of external spaces that he regarded as the most important and most neglected aspect of our housing environment. The basic necessity here was that the various elements should combine to form a whole—which the existence of rear gardens made difficult. "The soft furnishings of nature," he contended, "should not be used to obscure spatial relationships but to define and enhance them, which means that the spaces must be right to start with." All this called for the spending of more money—on higher standards of space, equipment and finish within dwellings and on the provision and maintenance of common garden areas between them.

Mr. Lyons made a special plea for high-density, low-height flat development as an economical change from the fashionable tall block. He concluded with a general appeal for the renewal of the "bad lands and twilight areas," as the only means of making our towns workable and worth living in, and hence as the only alternative to a rejection of urban values.

DEREK SENIOR

SOCIALIST COMMENTARY

A policy for town and country planning

Five architects—W. G. Howell, Hugh Morris, Alison and Peter Smithson and John Voelcker—were members of the group, along with town planners and economists, which has been responsible for threshing out and presenting the new Policy for Town and Country Planning published in Socialist Commentary this month, and now reprinted as a separate document ("The Face of Britain: A Policy for Town and Country Planning," 1s. 6d., from 11 Gt. Russell St., London, WC1).

Recognising that "at the heart of nearly all town planning problems lies the question of the land—its ownership, its price and the compensation to be paid either for compulsory purchase or for the refusal of planning permission" the group puts forward a plan for dealing with this problem, which has been thought through much more thoroughly

than the recent proposal of the Labour Party Executive for a Land Commission to purchase the freehold of building land, which was part of the party's latest policy statement, "Signposts for the Sixties."

Key to the Socialist Commentary plan is that the freehold interest in all land should be vested, from a determined date, in a public authority; that each building would be given a statutory "life" according to its age, condition and suitability for purpose, and that former freeholders would hold the land under statutory leases for the remainder of the statutory life of the building, after which the land and buildings would revert to the owning authority.

The plan includes provision for compensation, safeguards for owner-occupiers to whom, says the document, "the community owes . . . a guarantee of protection," and a suggested procedure for providing land at low cost, or free, for socially necessary, non-profit-making uses, such as schools, roads, parks, hospitals, and so on.

"One of the paradoxes of our age is that speculative developers can invest millions in pulling down and replacing relatively modern buildings in good condition, while property owners continue to draw rent from slums and rotten property of every kind which has long outlived its useful life," says the document.

"It is one of the objects of our plan to compel property owners to cease to regard buildings as immortal and to recognise that buildings wear out, should not yield rent for ever, and should be replaced at the end of their useful life by up-to-date buildings. This is the central feature of our proposals. "From the vesting day, when the law nationalising freeholds comes into force, a public owning authority . . . (the regional planning authority is suggested) . . . would become the ground landlord. The existing users of the land and buildings, whether owners, tenants or sub-tenants, would continue in occupation . . . all leases and sub-leases would remain in force. There would be no immediate changes or upsets, except in the land market—and in the value of the shares of property companies."

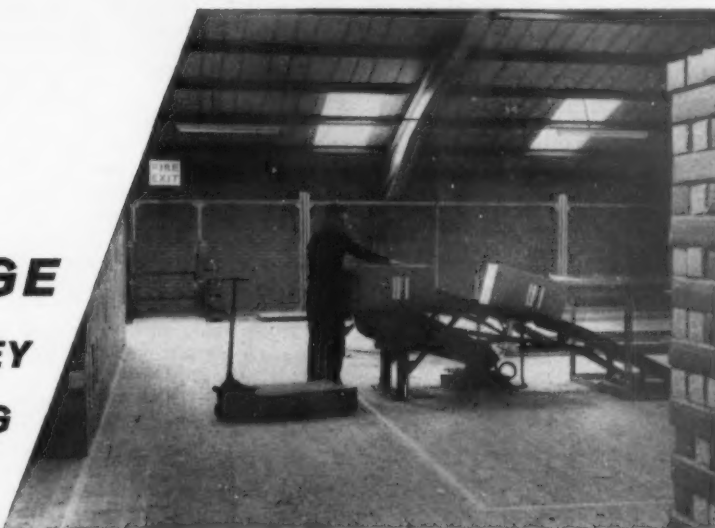
A systematic valuation of all property, beginning with the older buildings, would be made, spread over years, in the course of which the "reasonable life of each building" would be assessed, and called its "statutory life," which would range "from nil up to a maximum, say eighty years, on the principle that eighty-year buildings have normally reached the end of their life and should only be continued in use if they are of exceptional quality or value, architecturally or otherwise."

The former freeholders, it is suggested, would continue to hold their land as statutory lessees for the "statutory life" fixed by the valuers, at first without payment of rent, until at the end of lease the land and buildings reverted to the owning authority.

"All statutory leases (except for . . . non-profitable public or semi-public property) would incorporate a rent revision clause which would enable the owning authority, at intervals of seven years, to fix rents that would recover a share (we suggest 50 per

2 LEVEL STORAGE

IN A SINGLE STOREY
BUILDING



The open plan of the storage platform.



Ground floor plan facilitates mechanical handling.

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STORAGE PLATFORMS

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floor area for

MORPHY-RICHARDS

This new Morphy-Richards building could contain over half a football pitch! Within its 4 walls, a Kee Klamp storage platform 233 ft. x 105 ft. and 12 ft. 5 in. high, completely free-standing, provides 24,000 sq. ft of floor area at a loading of 150 lb. per sq. ft. with free access to the equivalent storage area beneath. Planned and erected by "Kee Klamp" engineers, it is another example of "Kee Klamp" storage know-how which is so much in demand today. Advice on any problem of storage freely available.



Free access to ground floor stores.

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cent) of the increase in the land values for the community."

Only at the end of the statutory life of a building would compensation be paid for the loss of the freehold, which would be assessed on the value of the site (not the building, as this would have come to an end of its useful life), plus a percentage of the increase in value since the vesting date.

"Existing owner-occupied houses would be dealt with in the same way as other property," suggests the report. "A statutory life would be assigned to them and the owner would hold the house on a statutory lease at a rent of nil."

At the end of the statutory lease, two alternatives are suggested: if the building were in an area of obsolete property which the planning authority wished to redevelop, the owner would be paid compensation based on the freehold value of the land and buildings as at that date; otherwise the statutory lease would be renewed on the same terms as before. "If at any time the owner wanted to sell, the price paid by the buyer would reflect his expectation of receiving compensation at the end of the lease."

The advantages of this scheme, Socialist Commentary points out, would be: that it offers a total and permanent solution, embracing all land at the same time; it collects a share of the increased land values for the community; it leaves no loopholes for evasion as in the 1947 Act; it facilitates urban renewal, first by making it easier to plan the redevelopment of large areas, and second by giving the owning authority flexibility in fixing ground rents for new development; it removes the difficulty of excessive compensation on compulsory purchase or refusal of planning permission; it would deflate and redistribute land values; it would enable planning authorities to base the timing and execution of their plans on sound planning principles; it would spread the payment of compensation over eighty years, and it would safeguard the position of the owner-occupier, the small shopkeeper or industrialist.

This plan is preceded by a clear, brief statement of the need for planning, followed by an excellent summary of town and country planning since it started in this country in 1943 (in which the efforts of the post-war Labour Governments, and the Conservatives in the 10 years since 1951 are summarised and compared).

The report then turns to "the four basic problems of town and country planning in Britain today": the employment problem—too many jobs in London and south-east England compared with the rest of the country; the building problem—where and how do we build, and what; the transport problem—to be solved by a comprehensive plan for all forms of transport, as part of the responsibilities of a new Ministry of Town and Country Planning; and land ownership and land-values. All these, Socialist Commentary's group consider, can only be solved if a Ministry of Town and Country Planning is established, with "responsibilities . . . far greater than those of the Town and Country Planning Ministry under the 1945 Labour Government. It should

have supreme control over planning for location of employment; for house building, and for communications."

This report is certain to find its way into the discussions of the Labour Party annual conference next month, for which more resolutions on land speculation have been put forward than on any other subject except peace and nuclear disarmament. And it should considerably influence the Party's decisions, the more so because here are a number of cogent, root-and-branch proposals emanating from a highly respectable, Gait-skellian source.

The group which worked out these policy proposals consisted of: R. W. G. Bryant, formerly of Coventry town planning department; David Eversley, senior lecturer in Economic History at Birmingham University; Peter Hall, lecturer in geography at Birkbeck College; W. G. Howell, architect; Lewis Keeble, senior lecturer in town planning at London University; Malcolm MacEwen; Robin Marris, Cambridge economist; Hugh Morris, architect; D. L. Munby, reader in economics and organisation of transport at Oxford University; D. Searle, chartered valuer; Graeme Shankland, Alison and Peter Smithson, all architect planners; Betty Trevena, town planner; John Voelcker, architect, and Peter Willmott, deputy director of the Institute of Community Studies. Of these, the actual document now published was written by Peter Hall, Malcolm MacEwen and Peter Willmott, after many protracted and sometimes heated sessions.

HOMEFINDERS

New Homes Show

"There is no other show which fulfils the same essential purpose for house-hunters and there is nowhere else in Europe where details can be obtained of so many new estates and properties"—from the press handout.

This Show at Central Hall, Westminster, last week presented for examination by those interested the workings and elements of suburban sprawl. The latest advances were marked up like a tactical exercise on the exhibitors' maps. The culture represented here goes right through from brochures and exhibition stands up to the New Home. The layouts and plans, the furniture, fittings, lighting and layout of the exhibition flats were nearly all a negation of our sensible English tradition of doing things well and comfortably to fit our climate and our insularity. The whole show and all it represents has nothing to do with architecture and little enough to do with planning. It induced in one architect a curious unreality as well as concern for the future.

Questioning many agents (*homo sapiens suboptentis*) elicited that "the house-hunters" choose "value" not "style"; that costs are the same for "traditional" and "contemporary" but slightly more for the "Georgian," but they are reluctant to say what costs are; that "style" is usually decided by the Planning Committees and their advisers. In B——n only traditional (i.e. grotesque) is apparently allowed. In S——p weak contemporary style is

favoured. It is difficult to criticise the exhibited designs on any formal basis, but they were almost all mediocre.

The house-hunter is probably right to choose on "value." By "value" is meant "specification, facings, fittings" etc. site, distance to station, distance to shops, nearest town (it is usually a euphemism to say that an estate is *in* a town), class of neighbouring properties, distance to London (50-mile radius, giving a conurbation of 7,500 square miles!).

Sites are described with feeling and their "features" are enumerated. It seems odd that people do not yet realise that the "natural beauties" depart when their New Homes arrive. Indicators of aspect are rarely shown on site plans or on any drawings and it is assumed that almost any house can face whatever direction the site plan indicates.

Comments made by salesmen were that the hot weather had kept people away the first day; that the Squeeze, Berlin and the H. Test may slow things down. Estate Agents make up a proportion of the Show and have, of course, a good sales device in it. House-hunters learn details of mortgages, insurances and such abstract but expensive matters, and this is a useful service.

It is almost impossible to give a critical analysis of the New Homes on show but various trends, nothing radical, could be observed—more terraced houses, some of three storeys, being built, more flats. More property will be rentable. Heating depends more on electricity and gas and less on solid fuel. Higher standards of sound and heat insulation are evident in the best schemes and there are better details in layout, built-in furniture etc. Flue-type ventilated internal bathrooms and w.c.'s are at last, a full 30 years after most of Europe, being used in a very few designs. The plan types, however, in spite of occasional "split-levels" remain the same and have the old faults: ill-considered rooms and circulation space, awkward doors and draught enforcing window positions, difficult staircases, etc.

The old virtues (which architects have the unfortunate reputation of not being able to master) remain; economical construction, designs which anyone can build, weather tightness, sensible window sizes can openings and fairly non-art interiors. The designs are geared to the clumsy, involved production process and are logically difficult to fault if the usual omitted factors are omitted. One or two projects have built-in Residents' Associations to administer and maintain them and this is a hopeful sign.

The better schemes were those in which the units are large enough (terraces or flats) to add up to at least some sort of space and relationship to site and it is in these schemes that the architect has had a little control. There was no sign in the whole Show of any concern with traffic segregation or indeed about the motor vehicle at all. The footpath and the play area and other natural meeting places for the inhabitants are not of any importance to the speculator. All the thinking and advances in planning are ignored. The possible beginning of another great coast and country sprawl could be discerned in one or two holiday houses at low cost,



The Cable New Homes or similar "contemporary"

Although more civilised in detail and easier to run and furnish the "contemporary" house or bungalow cannot add up to reasonable grouping or site utilisation. The "contemporary" estate is as boring in its variety as the "traditional"

The Drewery and Drewery or similar "traditional"

The semi still has its staunch supporters and this "traditional" style represents a considerable volume of the whole spec. field. It must still have the willing co-operation of some planning authorities, although their *raison d'être* was positively to change the thinking represented by this design



The Kanada holiday chalet

The possible beginning of a chalet boom which could ruin great tracts of the country. Pressure for this sort of accommodation will be immense in the next decade and it is essential that the problem be met and dealt with positively. The design of each unit will be much less important than the clustering and containment of the "camps" etc.

Interior of the "Albany" house.



and this Show did not give any real hope for the renewal and expansion of our towns by private enterprise.

The fact is that house-hunters (unhappy young people) have no real choice of environment. Their choice of site is dependent on commuting distance and method, their house will have a plan which forces them probably to furnish and live in a certain way. No significant difference is apparent in the designs and plans apart from one or two town houses, patio bungalows, etc. The "individuality" of the "styling" leads to boredom.

It was difficult, except in a few cases, to discover the men responsible for the designs, but almost every unit, from the most to the least grotesque had been designed by an architect. It is a saddening thought. It is hard to measure the missed and evaded opportunities for integration of this great spec boom, but this Show reflects a failure of nerve of a whole generation.

PRESERVING OXFORD

To many cars for the green belt

Oxford is suffering not only from too many cars for its roads, but from too many cars being manufactured, and when an MOHLG inquiry opens on September 27 into the county's future development plan, the planning authorities will ask for restriction to the further expansion of the motor industry in that area.

To call attention to the importance of this proposal the Oxford Preservation Trust last week issued a report on the Oxford Green Belt which points out the growing and alarming dependence of the area on heavy engineering, which account for half the increase in jobs in the area between 1951 and

1958. In the ten years since 1951, the population of Oxford has grown more than twice as quickly as the national average (by 12.2 per cent against an average of 5.3).

There never was any particular reason for establishing the motor industry in Oxford, the report points out, as all raw materials and most of the labour force come from elsewhere, but "it seems unlikely that the industry will ever be removed though there is every reason to do so. It is therefore ever more important to limit any further expansion of the British Motor Corporation in the Oxford area. There being no sites large enough in the city, any large factory expansion can take place only in the green belt." BMC has been asking for planning permission for a large spare parts depot between Oxford and Kidlington: the Trust wants the depot no nearer than Didcot.

ROYAL MILE

Edinburgh architects panel

Peter Womersley is to be the executive architect of a plan being prepared for consideration by Edinburgh's City Council next month by a panel of architects set up by the Edinburgh Architectural Association.

The panel consists of John Holt, secretary, Professor Robert H. Matthew, Ian Lindsay, and Peter Ferguson, and Mr. Holt said last week that they intend to make the Royal Mile "worthy of the city's number one street" although the task would be a formidable one.

The plan is expected to involve the alteration of shop fronts, signs and street furniture and will suggest a colour scheme.

FDC

Furniture and ergonomics conference

The Furniture Development Council is holding a weekend conference to discuss how ergonomics are related to the furniture industry, at Loughborough College, from September 29 to October 1, where Dr. W. F. Floyd, head of the department of ergonomics and cybernetics at the college, will demonstrate the work already in progress.

DIARY

Interview with Lewis Mumford: by Graeme Shankland, BBC Third Programme, 9.15 p.m.
SEPTEMBER 16

International Caravan Exhibition: Earls Court.
SEPTEMBER 20 TO 30

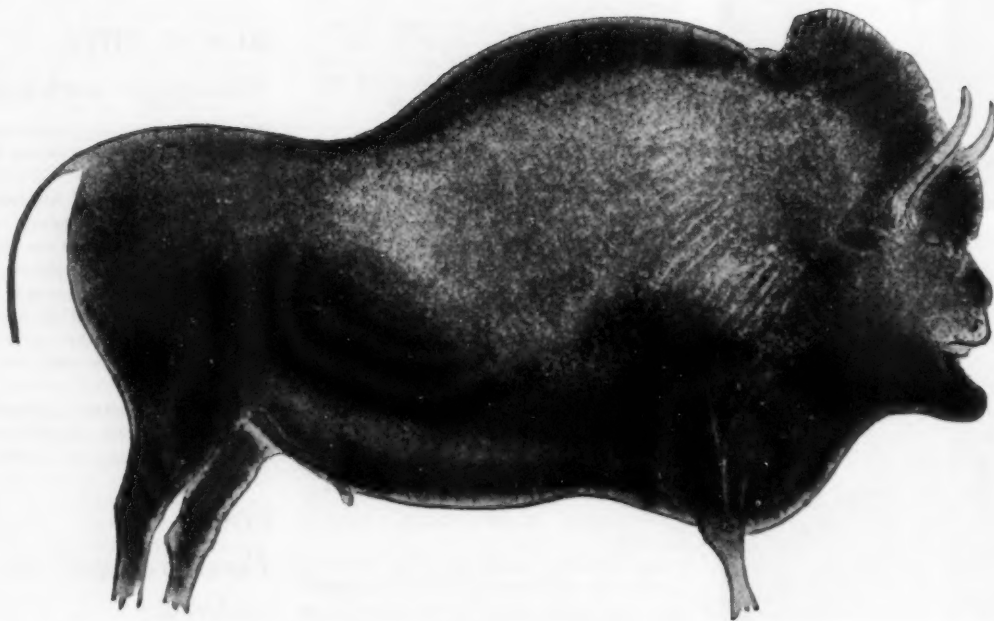
Heating, Ventilation and Air Conditioning Exhibition: Olympia.
SEPTEMBER 26 TO OCTOBER 6

Mexican Architecture: Building Centre.
UNTIL SEPTEMBER 19



and an "A" frame type ex. USA indicates the sort which architects may well design. The really terrible shack variety will probably have the greater appeal, and take over from the static caravan home if present law is amended.

Certainly densities are going up following the increases in land values, especially around London, but the patterns, apart from one or two examples, look as banal as ever



*Reproduced by permission of the Institut
de Paléontologie Humaine, Paris*

An engraved and painted red and brown Bison probably not less than 20,000 years old. It is to be found in the cave at Font-de-Gaume, Dordogne, France. This and other paintings were most beautifully copied by Abbe Breuil during the first few years of this century. It is believed that in these decorated caves certain rites were performed by prehistoric man intended to aid him in his hunting.



The Bison is represented in cave art more than any other animal and must have been of special significance to prehistoric man as, indeed it was to the founders of Concrete Limited when they chose a Bison as a trade mark to represent the "speed" and "strength" of precast concrete. Concrete Limited today are the largest structural precast concrete specialists in the world. London *Whitehall* 5504 Birmingham *Midland* 0331 Leeds *Leeds* 73211 Glasgow *City* 3292

On October 4 the AJ introduces what is probably the most important contribution that could be made to modern architectural practice: a continuous and progressive library of information arranged according to the Sfb classification. In this article the AJ Research Fellows appointed to organise the library describe the foundation on which it is laid

AJ Information Library : Elemental Design Guides

Statement of intent

The strength and social consequence of a profession depend on its knowledge. Conversely, if its knowledge, or ability to organise knowledge, is faulty, then its function will be more difficult to perform and results proportionately less effective.

For many years this has been one of the roots of the architect's problem. The very nature of the profession calls for a continuing awareness of a rapidly growing body of information and the time has long since passed when the architect could carry this knowledge in his head or even find it readily. Indeed, in recent years the rate of growth of the body of useful and necessary information has increased so rapidly that the practitioner is frequently unconscious of the existence of vital data.

In an attempt to combat this problem the JOURNAL established a Research Foundation in September 1955. The particular task of the Foundation was to sponsor research into "the organisation of existing knowledge for practical application by the profession" and in January 1956 the first AJ Research Fellow, Michael Ventris, OBE, was appointed. His subject for study was "Information for the architect: what does he need and where will it come from?" and before his tragic death in September 1956 he had analysed the flow of information into offices, and discussed the classification, handling and storage of trade and technical literature.

Following Michael Ventris's assessment of needs, Dargan Bullivant was appointed to the Fellowship and in September 1959 presented the first results of his research: proposals for a standard building classification. This system (which has become known as the sfb system) is not the work of Dargan Bullivant alone, but is the result of an international committee, the International Building Classification Committee (IBCC) set up for this purpose by the International Council of Building (ICB) of which Dargan Bullivant is a member. At its 1957 Congress in Rotterdam the ICB gave its formal approval to the sfb system which thus received the backing of the most authoritative international organisation. Its general international adoption was recommended and the RIBA is about to publish a definitive

sfb Filing Manual.

It is of course one thing to produce a method of organising information and quite another to propose means of implementing this method, and this was the next task which the JOURNAL's Research Foundation undertook. The information required by the architect is merely a tool—one of the means to an end, which is the building itself. But, in common with all tools, quality can only be attained by careful and intelligent use which, in architecture, is the design process. A recent BRS Digest has successfully made a rational analysis of this process: "Designing any building is essentially a matter of making a long series of choices—choices about ends and choices about means. The former will be a dual responsibility of designer and client and will embrace the purpose the building is to serve, the character it is to have, and any restrictions within which the designer must work. The latter will be the designer's responsibility alone and will embrace the detailed planning, the form and details of the structure and such things as the services to be installed and the finishes. The completed design will record the designer's choices as a set of instructions that will enable someone, perhaps as yet unknown, to construct the building. It must contain in embryo the whole building, though still only as an idea."

By accepting the concept of the design process as a series of decisions, it follows that the next stage in the organisation of information for the architect is to give him guidance on the method of making decisions. This need, linked to the elemental breakdown of the building suggested by the sfb classification, formed the basis of the present research programme and in June of this year Geoffrey Hutton and Michael Rostron were appointed to the Fellowship in order to carry this programme to fruition.

Starting on October 4, 1961, the JOURNAL will include, in addition to its usual contents, a weekly supplement on one sfb building element. The core of the supplement will be a detailed check list of design procedure linked to a selective list of bibliographic references. In addition, each supplement will contain a technical article on one

list, a sample page of which is illustrated below. This will give coherence to the whole series and will enable the architect, as he becomes familiar with the arrangement to check each design process speedily and with confidence. The contents of each check list, to which the AJ has given the name "Elemental Design Guide" to avoid confusion with other types of check list, will be arranged in the order A to E shown below:

A DATA REQUIRED

1. *Objective.* This part will deal with requirements imposed on the element. It will include data relating (where appropriate) to:

- site, including existing services
- adjacent elements, features or services
- environment
- climate
- loading
- legislation
- liaison with authorities

2. *Subjective.* This is concerned with data relating specifically to the element determined partly by (1) and partly by the function of the element. It will include such items as:

- client requirements
- thermal qualities
- cost
- strength
- maintenance data

B BASIC DESIGN DECISIONS

Generally concerned with the *form* or *layout* of the element as a whole and will lead naturally from A. The nature of this section will be such that sufficient information has been absorbed and necessary decisions made to enable sketch design to begin.

C DETAIL DESIGN (WORKING DRAWING STAGE)

The design of each part of the element is here considered in detail. Sections A and B have collected and partly assimilated all relevant data and enabled draft detailing to be started. This section is intended to cover the remaining design up to the completion of the working drawings.

D SPECIFICATION

A check list of specification headings.

E CONTRACT STAGE

This section will vary for different elements within very wide limits. It will be concerned with such items as:

- final selection and appointment of contractors and/or suppliers
- erection procedure
- programming
- supervision
- completion
- final inspection

The elemental design guide is compiled by listing all

the steps the architect must take stage by stage when designing the element. These steps are indicated in the first column of the sample sheet (see page 373) and can be used on their own as a rapid check when designing. Individual steps in the design process are simplified in the second or centre column giving the considerations which should be born in mind at each step. In many cases these may seem self-evident but only by the complete analysis of the design process in its logical sequence can the user be satisfied that no point has been overlooked.

In those instances where further information or design knowledge is required on any particular step, the third column will contain the essential references to text books, British Standards, Codes of Practice, published articles, byelaws and building acts, etc., or if necessary actual information to avoid further reference. Authors will grade their references by means of a system of "stars" as follows:—

* General reference of value to every architect (or which he may wish to possess).

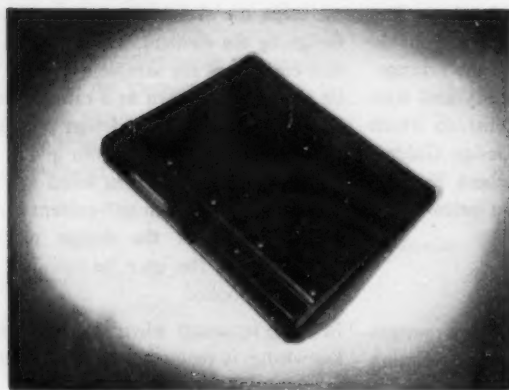
** Specialised reference normally used by consultants or by architects with special knowledge of particular aspects of building.

*** Highly specialised references and research papers which would not be of value to an architect unless working with a consultant.

Obviously all references to a particular step cannot be given and the object has been to choose the simplest, most up-to-date, authoritative and accessible references in each case, and authors have been asked to comment on these where necessary to indicate their scope and value. Where no useful reference is known by the author, this fact will be stated and if possible design information given.

Because of the nature of the elemental system of describing building construction there is some overlapping of subject matter between individual design guides. For example between sfb (11) Ground: General dealing with soil mechanics and (14) Roads, Paths and Paved Areas, where subsoil considerations occur. In general, however, references have been made to other check lists for detail information on particular design aspects of an element properly considered under another heading, and only brief requirements stated. References between check lists are given to the sfb elemental title and section number.

The elemental design guides themselves will be subjected to a period of trial use before publication, this will vary but in normal cases will not be less than two or three months each. A number of official and private offices, large and small, are co-operating during this trial period and it is believed that their criticisms, together with the comment made by other specialists who have read the guides, will enable the author to produce a final version for publication which is as broadly based as possible. At least nine separate professional criticisms of each check list will be made in addition to those by the editors engaged in the project. Every effort is thus being made to ensure the reliability of the "tool for design" which the AJ is putting into the hands of the architect. All tools, however, have achieved



The Agrippa Binder.



their known shape by continuous use and development, and in the same way it is not expected that this initial approach to the problem of design method will be perfect, nor will the information and references remain without revision, and the experience which is gained by continuous use will enable this instrument of design to be improved.

The elemental design guide forms the first section of the AJ Element File as the key to the design of the element, the remainder will form the basis of a file providing design and product information which will assist the architect in making his basic decisions.

The technical article will give further information required for the design of the element and can be joined by others on the same subject as these are published.

Following the guide and technical article will be a number of Information Sheets giving concise design or product data. Details of new series of information sheets will be published in the AJ for September 20.

Each AJ Element File will be completed by informative detachable advertisements, each classified under the sfb system, and relevant to the element. The co-operation of advertisers is being sought in producing advertisements which give basic essential information in a simple concise way, enabling an architect to assess the suitability of alternative products and materials at an early stage in his design and as an extension of the considerations laid out in the elemental design index.

The Architects' Journal Element Files in use

It is intended that the Element Files to be published weekly for the coming year will be continued by additional series on other sfb headings to form the nucleus of additional files. The 49 issues to be published as from October 4 this year are however felt to be basic to the design problem.

It is thought that architects will wish to use the present series in two ways:

(a) The complete set of Element Files as published

bound in a compact durable way for continuous use by the drawing board during the design process.

(b) Each element file as the core of a file in the office library dealing with that particular element.

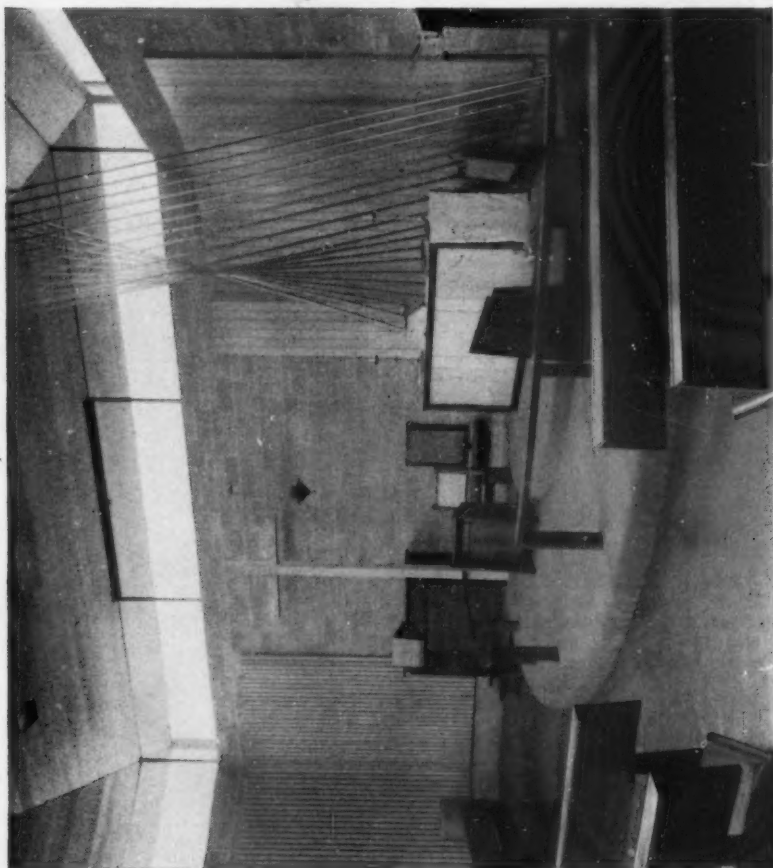
In some cases of course it may be desired to use the information in both ways. Method (a) simplifies cross reference between elements and gives the job architect a conveniently handled body of essential data. Method (b) enables the elemental check list to function as a key to filed information.

A special loose leaf book binding is recommended by the AJ for those architects who consider that method (a) is the most satisfactory way of using the files. This has been chosen with great care from the available binders of this type and, though expensive, is considered to be by far the most satisfactory for the purpose in mind. The binder is of Swedish design and, as can be seen in the photograph, is of exceptionally strong construction, the whole of the spine being formed in pressed metal. Of A4 size, the binder is a type which can be filled to capacity, yet can be opened flat for reference at any point and single sheets extracted if necessary.

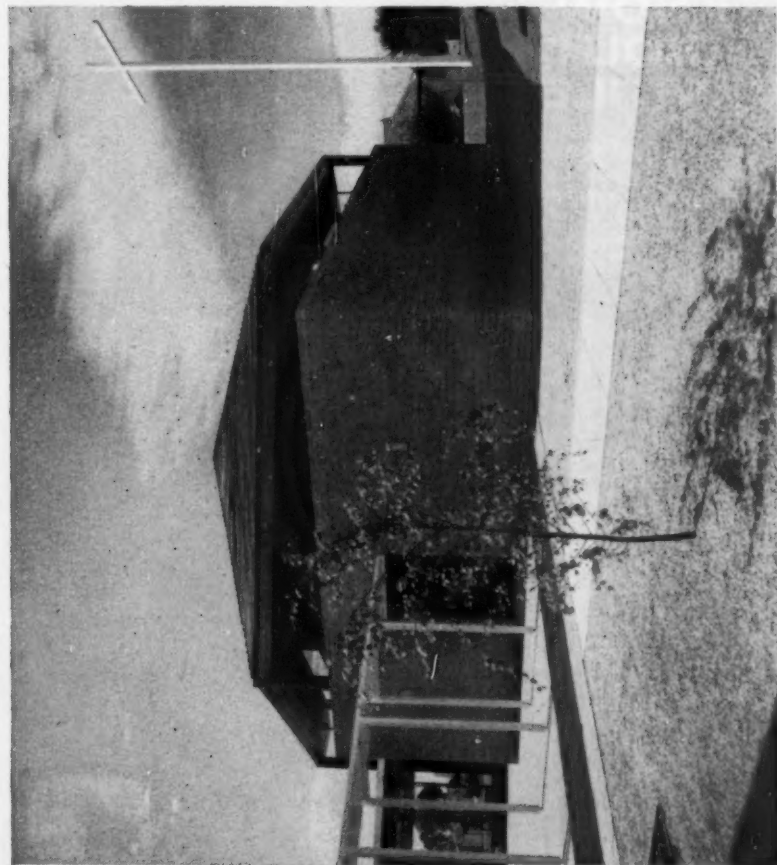
The recommended file is the Agrippa file, and further information will be given shortly.

Conclusion

Readers of the AJ will appreciate the concern the Editors have for the proper presentation of information for the architect. The whole question is bedevilled by the multiplicity of sources, types and forms of information now available, and we feel that this new approach to the problem of giving the architect correct and reliable references will be invaluable when his time is most limited—during the early stages of design. Modified in the light of practice, it is believed that this new design procedure together with the universal use of the sfb classification will lead to the more efficient utilisation by the profession of the available information, and help to demonstrate some of those points at which gaps in knowledge exist.



Designed by Arthur A. Bunbury & Associates, this new church at Melbourne is in line with the current trend in ecclesiastical architecture towards a closer and more intimate grouping of the congregation around the altar. Hexagonal on plan, it provides seating for 190, with room for another hundred in the narthex. The roof is an independent steel-framed structure, finished with a stepped copper roof. There is a continuous clerestory window round the building beneath the overhanging eaves. The external walls are of grey Beslite stone blocks, smooth-faced internally and split-faced externally. The narthex, in the form of a large covered space, not only can be used as an overflow but provides room for gatherings other than services. At the same time there is a covered way linking the church with a kindergarten hall



Australian church

DECORATIVE CEILINGS



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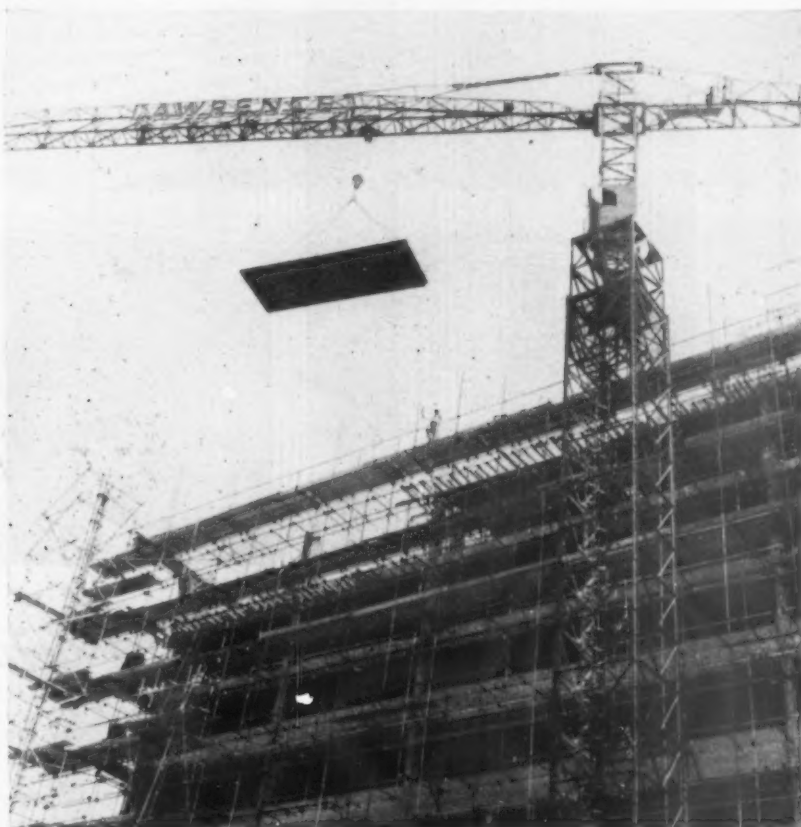
THE INDUSTRY

This week Brian Grant describes prestressed concrete floor panels, multicolour finishes, drinking fountains, wallpaper specifications, a small solid fuel boiler, a leaflet on lighting fittings, louvered air inlets, and a one-pipe radiator system

Prestressed concrete floor panels

A new method of using prestressed concrete floor slabs has been evolved by C. J. Pell & Partners and Fram Reinforced Concrete and is now being used in a 10-storey block in Middlesex Street, E1 (Petticoat Lane to you) where floors are going up in less than a week, as against the two or three weeks which would have been necessary with normal methods. The slabs weigh up to 2 tons each and take anything from 5 to 15 minutes to hoist into position. Each slab consists of two or three prestressed ribs with a 1-in. reinforced topping and two or three side walls, forming a box-like panel which is 7 ft. 6 in. wide and 22 ft. long, with a depth of 10 in. The panels are placed in pairs side by side on the formwork with gaps of about 12 in. between each pair. The channels made by these gaps act as shuttering for the reinforced concrete tie beams which are poured with a 2-in. *in situ* topping to form the final structural floor. The panels have been designed for cranes to lift at the maximum weight, and also to meet the shortages of carpenters available for shuttering work.

It should be mentioned that the slabs can only be used economically on buildings with floor areas of about 25,000 sq. ft. or more, and whose construction has been carefully planned in advance. The panels have a minimum fire resistance of one hour. (The Fram Group Ltd., 27, Ashley Place, London, SW1.)



Upper, hoisting Fram concrete floor slab

Lower, Niger drinking fountain

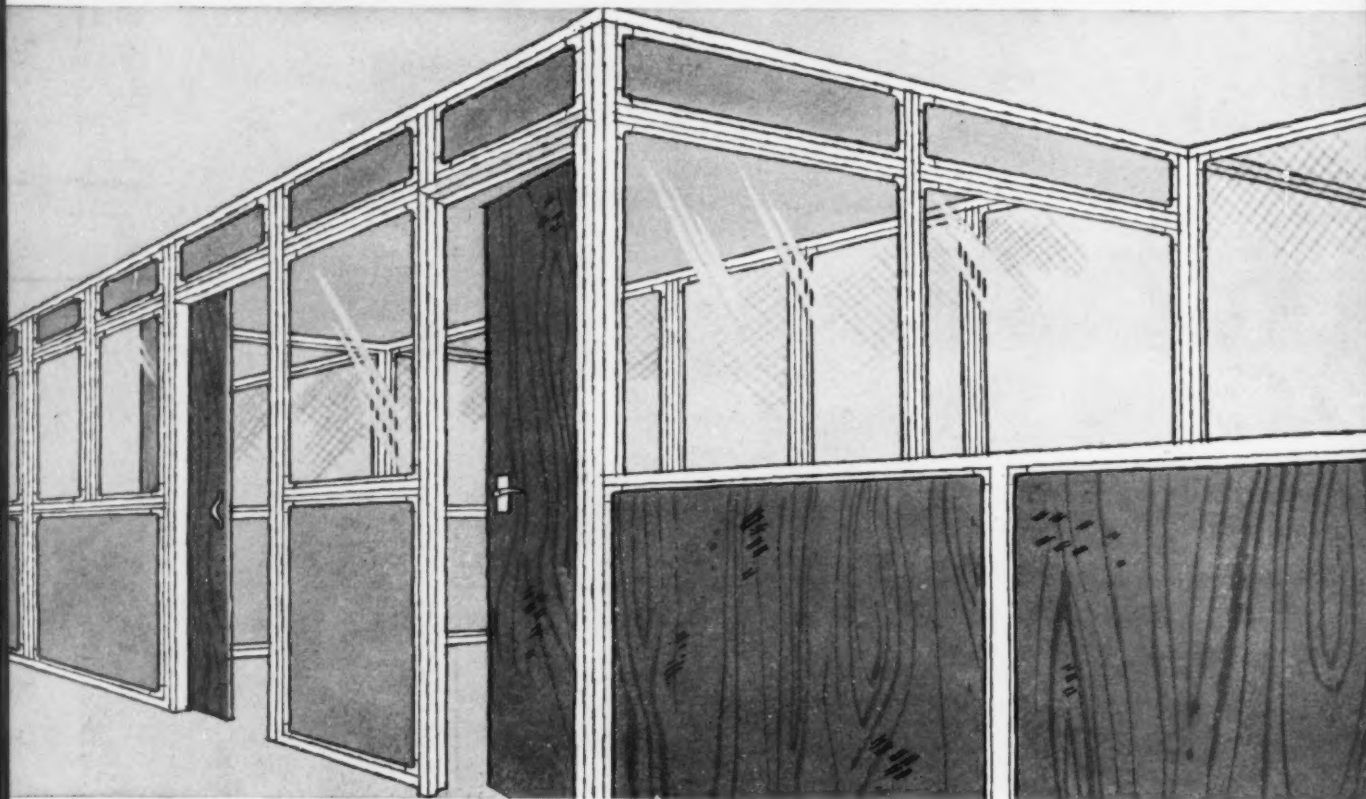
Multicolour finishes

Porterfleck multicolour paint which is applied in a single spraying operation was reported in these notes when it was first introduced some considerable time ago. Two recent leaflets show the range of 40 standard colours and of 20 softer colours which are now also available. The new colours have the same anti-static dirt repellent qualities as the original material. (Sissons Bros. & Co. Ltd., Bankside, Hull.)

Drinking fountains

The illustration on the left shows the new Niger drinking fountain by Johnson Fire-clay. It has an easily cleaned bowl measuring about 11½ by 8 inches. It is not possible for the user to put his mouth on the jet, which is moreover set at such an angle that any water falling from the user's mouth drops

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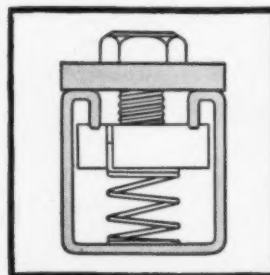
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clear so that no contamination is possible. The jet is also set above the overflow level of the bowl, so that it cannot become submerged. The support bracket is a separate fitting on which the bowl can be turned through a right angle if it is to be fitted parallel to the wall. (*Johnson Fireclay Co. Ltd., Excelsior Works, Cliffe Vale, Stoke-on-Trent.*)

Specifications for wallpaper

The Wallpaper Manufacturers Association has recently issued a revised version of its specifications booklet, which was first produced some years ago. The booklet starts off with a series of notes on different types of wallpaper, and the purposes for which they are suitable, plus tables giving the number of pieces of paper needed for rooms of different size. Then follows a purely technical section on methods of dealing with such things as damp walls, efflorescence and mould growth, and draft specifications for papering on different types of plaster, wallboards and sheeting, as well as on old papered surfaces, distemper or paint. A publication which should turn out to be much more useful than one might think at first glance. (*The Wallpaper Manufacturers Ltd., Architects' Department, 19/21, Mortimer Street, London, W1.*)

Small solid fuel boiler

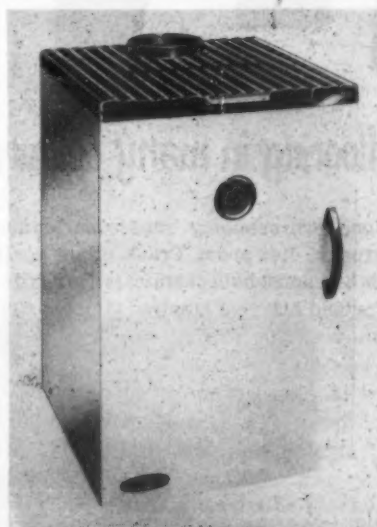
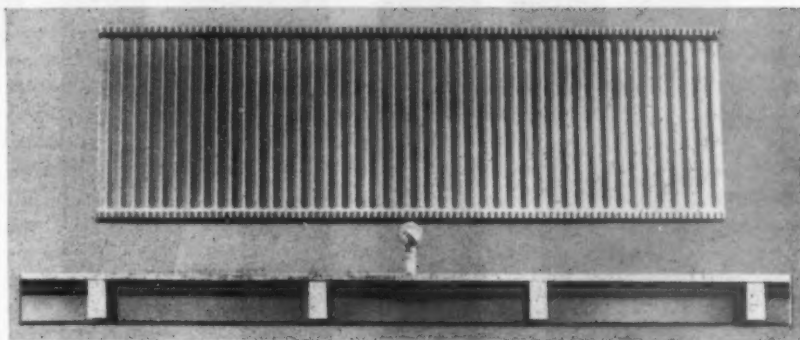
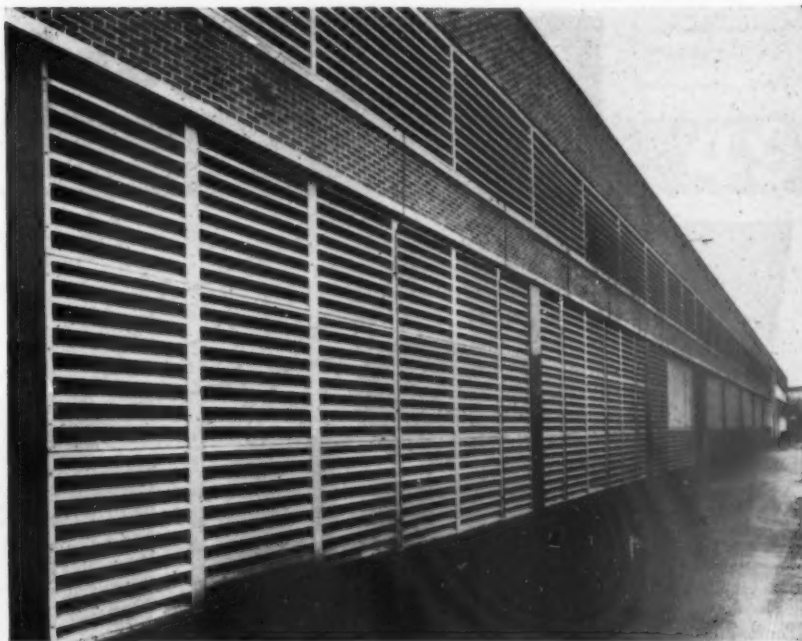
Glow-Worm have recently introduced a new Junior boiler with an output of 10,500 B.t.u. per hour. It is thermostatically controlled to give a water temperature between 120 and 180 deg. F. and will provide domestic hot water for the average household with only two fuellings per day and a total consumption of about 1 cwt. a week, or slightly more if a small radiator and towel rail are used as well. The boiler is well insulated and the standard finishes are white, cream, blue and green. Price is £27 4s. (*Glow-Worm Boilers Ltd., 47, Hatton Garden, London, EC1.*)

Lighting fittings

A new leaflet from Holophane gives details of the Louvrelens range of fittings, which have a "focusing" type of light distribution for use over shop counters or where high intensities are required such as hospital theatres. The fittings have 6 or 12 in. diameter lenses and are designed for lamp wattages from 100 to 300. (*Holophane Ltd., Elverton Street, London, SW1.*)

Louvered air inlets

Robertson Thain make a considerable range of ventilators for factory roofs, and have now introduced a new adjustable louvered air inlet made from heavy gauge aluminium. The ventilators are suitable for installation in sheeted walls, brickwork or glazing, and are made in two standard widths of 22 and 46 inches, and in heights from 4 ft. to 7 ft. 9 in. by 5 in. increments. The inlets give easy positive control of incoming air and the airfoil section of the louvres provides a weathertight unit when they are fully closed. The louvres are linked together and are pivoted in nylon bushes: they can be



Top, Robertson Thain louvered air inlets

Middle, Bekon one-pipe radiator system

Bottom, Glow-worm boiler

operated direct by hand, by remote control gearing, or electrically in gangs, when automatic humidity or temperature controls can be incorporated as well. Bird or insect guards are also available. Purpose made fixed blade inlets are also produced, and the blades can be of plastic coated steel sheet in a range of colours if aluminium is not suitable. (*Robertson Thain Ltd., Ellesmere Port, Cheshire.*)

One pipe connections for radiators

The illustration above shows the Bekon one pipe radiator system and its method of application to a small bore installation. The connection to the ring water main is made with a special tee piece having inside it a small tongue projecting into the water stream. The connection is made with a single pipe having two internal water passages to provide a flow and return circuit through a control valve. The radiators are also modified internally to allow for inlet and outlet at the same point. The system has certain limitations in that it would almost certainly be too difficult to bend the twin pipe connection on the site, but in any layout which can be more or less standardised it should be possible to make quite a saving in installation costs, and at the same time the whole thing looks neater. (*Bekon Supplies Ltd., Beaconsfield, Bucks.*)

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Contract administration

contract instructions

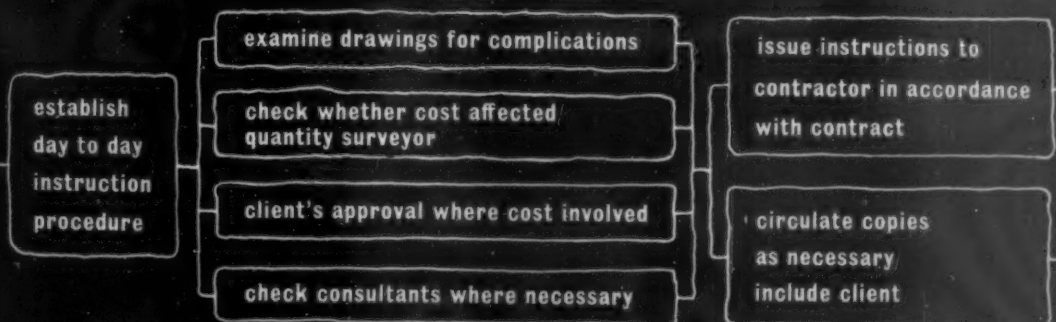
49

It is important that throughout the course of the work the client and the quantity surveyor are kept fully informed on all instructions given to the contractor. Under the terms of the contract a specific procedure is laid down for this in terms of the method of instruction and the time allowed for confirmation. It is important that duplicates of these letters of confirmation shall be sent to the client as well as the quantity surveyor in order that throughout the course of the work he is fully aware of the implications of any of the instructions. These may be variations to the contract; they may affect the price, and the time in which

the contract will be carried out. However small they may appear in terms of an instruction from architect to contractor, they may have far-reaching results in terms of client's requirements or complications to the terms of the contract. Alternatively they may incorporate something which the client does not require but had omitted to mention in his brief or even serve to remind him of something else that he needs to have considered.

There is a difficulty. On the assumption that you have made all your major decisions with the client before the contract is placed, the running of the contract should involve very little

correspondence with the client direct. You must, however, inform him of decisions taken from time to time in the course of the work and of any discrepancies, variations or other difficulties. Because of these, it is unfortunate that all the correspondence seems to be confined only to things which, in the eyes of the client, are going wrong. This inevitably leads to an increasingly difficult situation between architect and client unless the point is made quite clear in early correspondence that this is the case, and that there is rarely any necessity to correspond for the sake of doing so when things are going right.



Contract administration

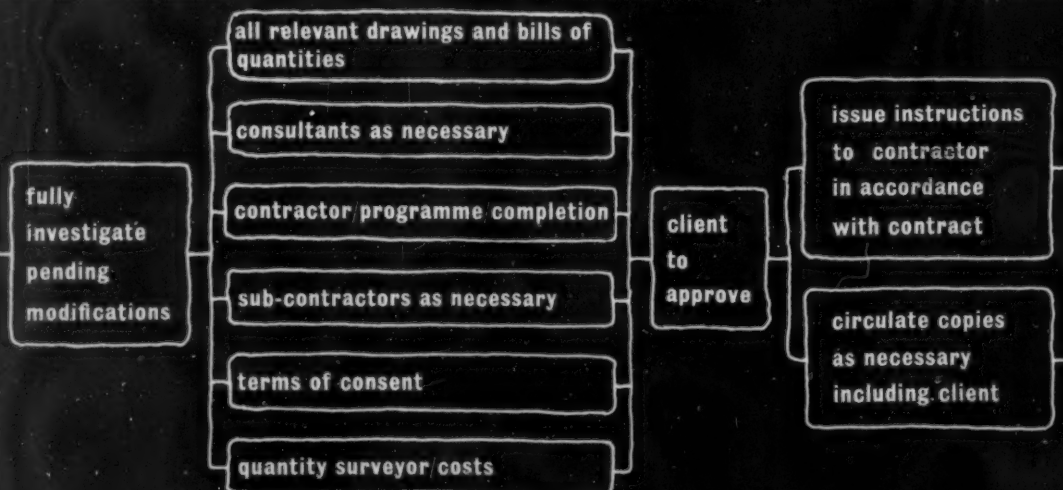
client's modifications

50

It is inevitable that during the course of the operation someone (who may be the client) will want to make modifications and these will be brought into effect in the form of a normal contract instruction after proper investigation by the architect. The file copy of the instruction should be noted with the reason for modification in order that any extra cost or extension of time is fully recognised and noted in the final account. It is the architect's duty to advise the client if the modification is likely to cause considerably more complication than is at first evident and to warn him of the possible results

before issuing the instructions. A change which seems to be only a simple operation to a client when looking at a small scale drawing may have repercussions on the complete services system for the building, may be the critical point in the fire check arrangements or, though a simple building operation, may require the repositioning of the contractor's hoist system for the whole building. It is essential, therefore, that a thorough check of all drawings, schedules, bills of quantities and site works is made before advising your client. Against this it should be remembered, regrettably that from a

client's point of view it may be considerably cheaper for him to change his mind during the course of a contract than it would be to have the work completed incorrectly and then a modification carried out independently. Even so, the client should be warned that an extension of time carries with it an extension of plant hire costs, insurances and, in some cases, preliminaries in the bills of quantities, and that liquidated damages, operating from the original date, will now operate from the extended date and may be rather harder to establish unless the modification is almost inevitable.



Contract administration

variations and extensions

51

Any instructions which involve a variation in cost or which may affect the length of time required for the contract should be established quite clearly at the time, in accordance with the terms of contract, in order that they are not left to be argued about at the end of the works. This is an obligation you have to both the client and the contractor in administering the terms of the contract. It is important, however, that variations in time should not be accounted in terms of cost where preliminaries are involved until the final settlement of extension at the point of practical completion. This procedure ensures that as the work progresses an accurate cost account and time schedule can be maintained. It gives you the opportunity of assessing in advance any action which may need to be taken in adjusting time

or cost of operations.

Subsequent settlements made from time to time should be noted in site meeting minutes and copies distributed to your client, the quantity surveyor, the clerk of works and the contractor.

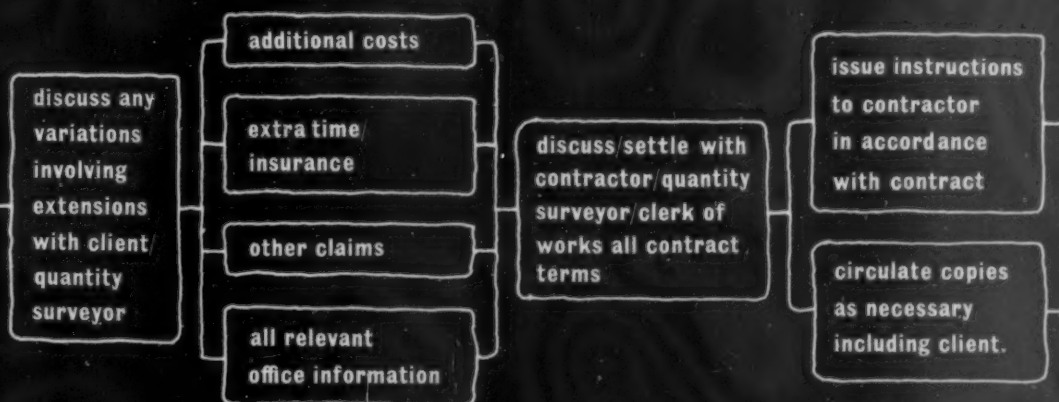
If it is not possible to settle these amicably during the course of the contract and the relationships which are necessary for the maintenance of good progress and workmanship are likely to be prejudiced, settlement of extensions can be made retrospectively.

Where an extension of time is granted in accordance with the appropriate clauses of the Articles of Agreement the attention of the contractor and client should be drawn to the necessity to extend their respective insurances.

Where a client is tempted to save wholesale sums in the contract against in-

creased spending elsewhere on works, he must be warned that the contractor tendered under the conditions printed in the bills and on works as noted on the drawings. The removal or omission of measured work does not relieve the client of his obligation to pay the percentage profit which the contractor could have expected on that section of the work. If he is likely to want to have the work done at a later stage, he would be best advised to leave it in the contract in the first place.

Similarly when ordering work which automatically carries an extension of time you must warn your client that it has been possible for a contractor to claim for being kept on site longer than he had anticipated.



Contract administration

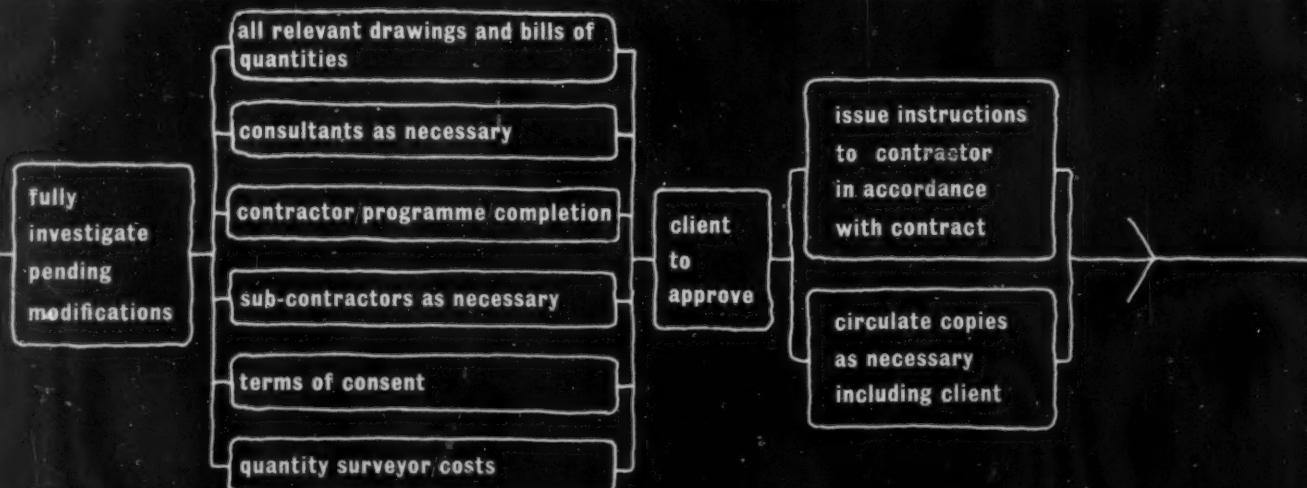
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Contract administration

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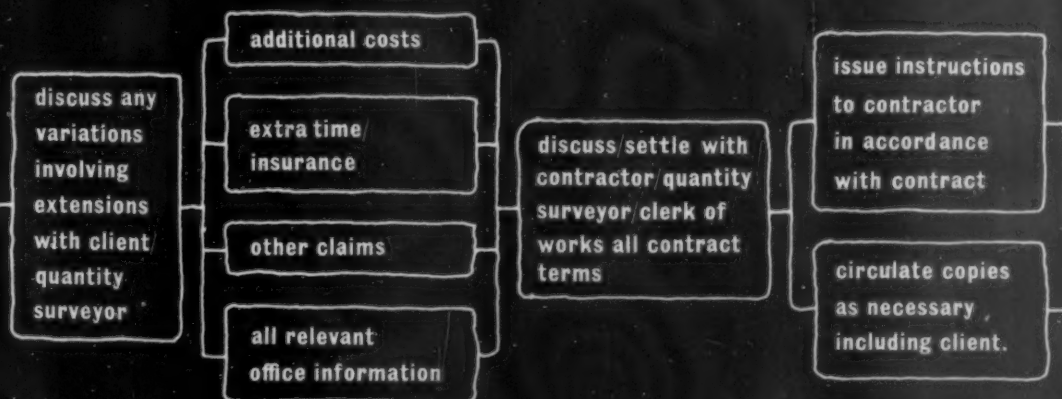
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Contract administration

site progress photographs

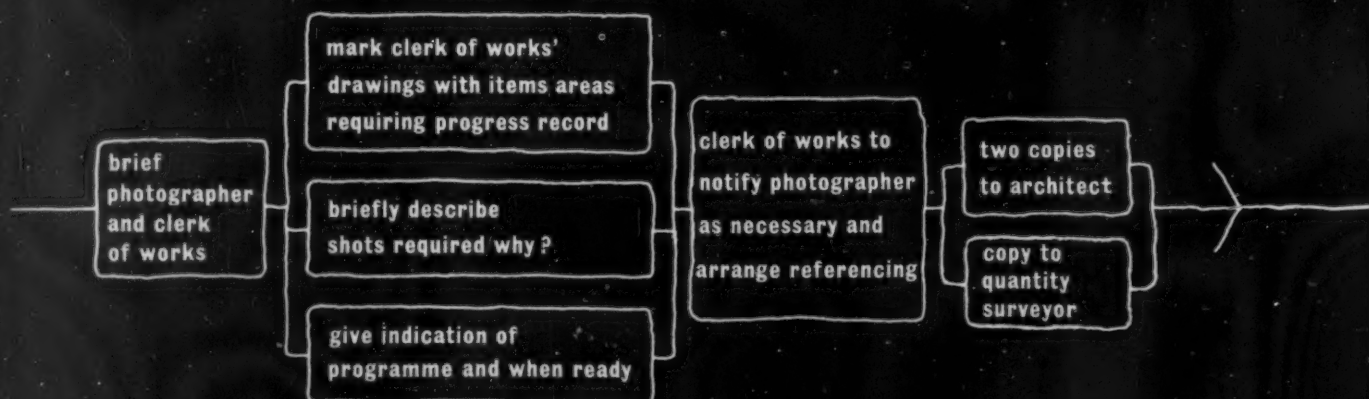
52

However many site visits have been made during the progress of a job, it is rarely possible to remember accurately what particular sections of the work looked like on previous visits. It is even more difficult when the building is complete and impossible once the client's stamp is put on it by occupation and use.

For maintenance purposes, therefore, the client would have to rely principally on the drawings which are deposited with him and which show the general construction and service runs, etc. It

is, however, inevitable that during the course of the work minor modifications will be made on site which do not affect the building and are not incorporated on the drawings but which are done for any number of reasons. A complete photographic record of the works by a well-briefed photographer should be kept throughout the work which, while dealing with site progress on the general carcass work for the architect and quantity surveyor's records, are also specifically related to such services or other work which will be covered by

later work. These should be taken at regular intervals to form a comprehensive record of hidden work, type of construction and pipe runs related to it with all access positions, bends, etc. They should be dated and carefully referenced to the appropriate section of building. The architect and quantity surveyor should have copies throughout the course of the work and at the end of the contract a complete set should be forwarded to the client for his records and maintenance purposes.





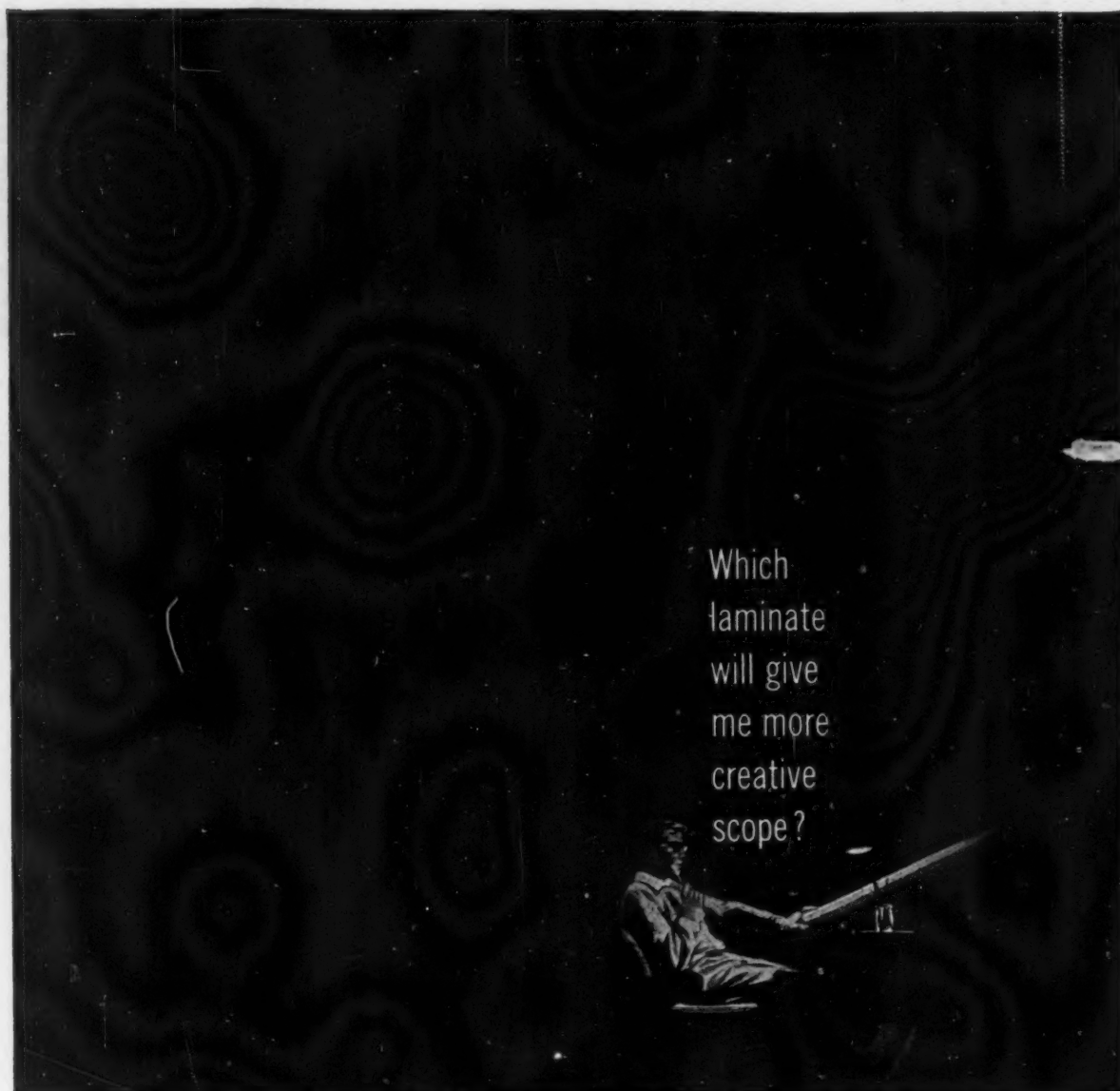
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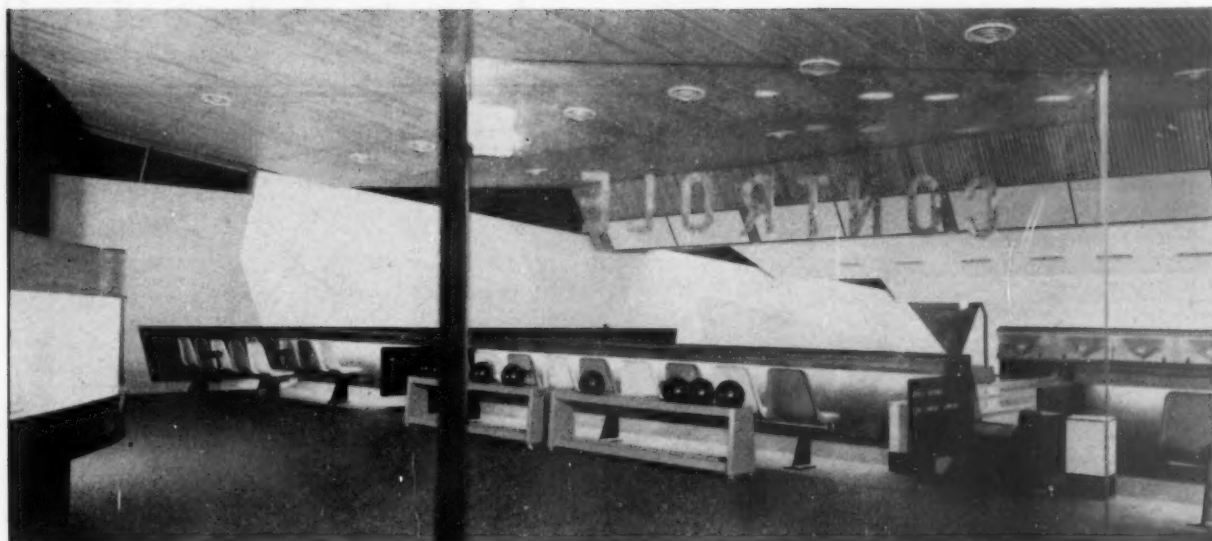
NAME

ADDRESS

AJ. 15

JTB No. (95)

UDC No. 725.84



Main concourse, looking towards the lanes, which are at a lower level

Bowling Alley and Restaurant

at MEYRIN, GENEVA
 architects FREI, HUNZIKER & ASSOCIATES
 partners in charge KEVIN CAMPBELL
 JAKOB HUNZIKER
 structural engineer PIERRE TREMBLET
 contract and site control EMILIO LUISONI
 RAOUL MEZZANOTTE

interior design GUY DE HERDT
 LOUIS MARTIGNOLI
 sculpture HENRI PRESSET
 consultants:
 electrical G. ALBIN
 catering EDWARD FREYTAG

This is one of the first bowling alleys specifically designed for this purpose to be built in Europe

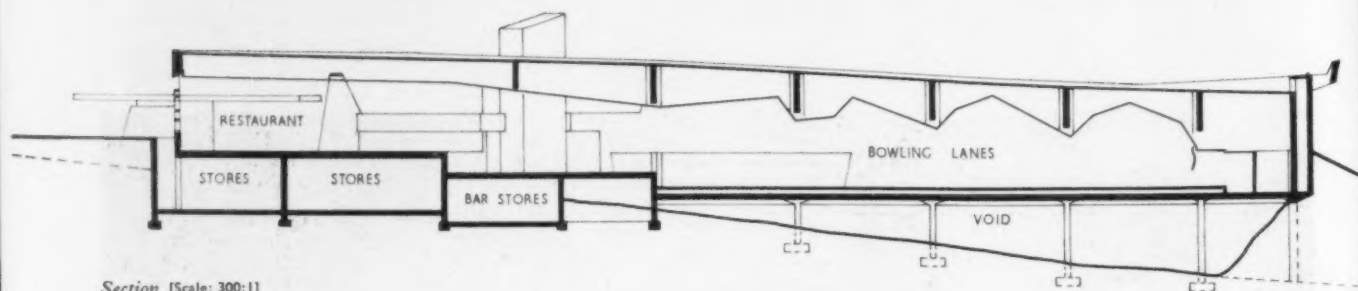
The clients are an American firm who have recently started the distribution in Europe of equipment they manufacture for bowling alleys, the chief feature of which is the complete mechanisation of such things as the resetting of the pins, the return of the balls and the recording of results. They required a building which would not merely function as a normal 12-lane bowling alley, but as a centre for the demonstration of their equipment and the training of staff.

In addition, a restaurant was required, capable of serving quick meals during the middle of the day to office workers in the area, and becoming at night an eating place of sufficiently high quality to attract patronage from the centre of Geneva. It was not, therefore, to be regarded as a mere ancillary to the bowling alley, but as a partially separate entity capable of being sub-let to an independent proprietor. The site is in the outskirts of Geneva with frontage on to the Route de Meyrin, a major route northwards out of the city. Together with an adjacent office block the bowling alley is the first element to be completed of a comprehensive development scheme consisting largely of offices, planned by the architects. As a first step a road has been laid into the area from the Route de Meyrin.

This first part of the development adjacent to the main road was restricted to single-storey buildings, and has been visualised by the architects as a series of rectangular blocks,



Block plan: (Scale: 1600:1)



Section (Scale: 300:1)



Building as seen from the main road



Painted concrete fascia runs round all four sides of the building

each one being identified by a sculptural feature or publicity wall.

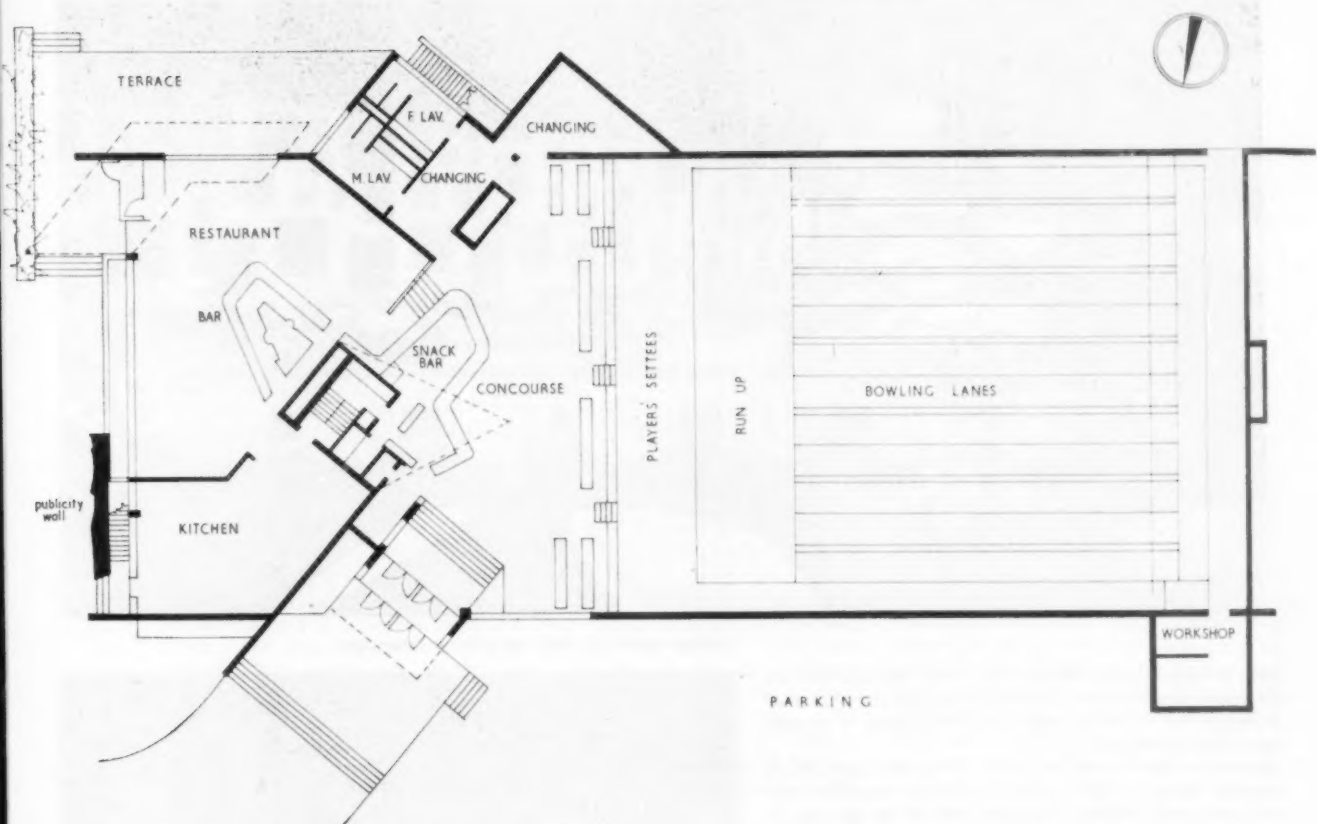
The site, because of its frontage, had definite advantages from the point of view of attracting clientele, but the ground sloped away relatively steeply to a small stream, which raised obvious difficulties.



North-east corner of building, looking towards main entrance

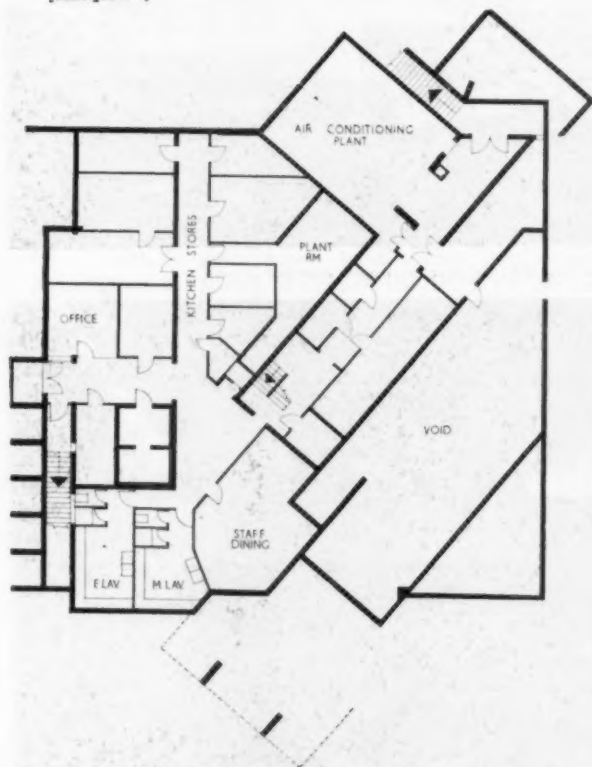
Two main considerations dominated the planning. First, two quite different types of accommodation, the bowling alley and the restaurant, had to be housed together in one structure, and from the client's point of view there would be advantages if the two could be spatially linked, with the restaurant, at least in part, overlooking the bowling lanes. Second, the problem of the downward slope of the site had to be overcome.

Linking the two types of accommodation was made difficult by the marked contrast in their physical requirements. The bowling lanes automatically dictate their volume, as a single low, long and uninterrupted space, with only artificial lighting. In contrast the restaurant was completely free in its



Main floor plan

[Scale: 3/320 : 1]

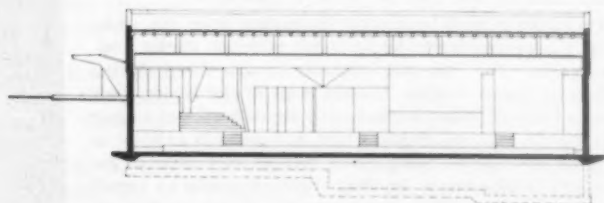


Basement plan [Scale 3/300 : 1]

planning, but needed to be closely related to the exterior for easy access and self-advertisement. The bowling concourse was used as the link between these two quite different spaces.

Bearing in mind that a considerable amount of fill would be required to establish a suitable level for the site, and to reduce foundation costs to a minimum, the building has been sunk into the ground. By this means it became possible to avoid fill over the whole plan area of the building, earth being banked up against the walls to create the new levels.

It thus became an obvious solution to arrange the main interior in a series of descending levels, with the restaurant about 2 ft. below the ground outside, the intermediate concourse a further 3 ft. down, and a final step down of another 2 ft. 6 in. to the bowling lanes. This allows the whole of the interior to be immediately apparent from the entrance, and for the restaurant to overlook the bowling. This integration is emphasised by the continuity of the folded plane of the suspended ceiling. Over the bowling lanes this is of absorbent insulation board, shaped to house fluorescent



Cross section through lanes



Restaurant with lowered dining bar in foreground

tubes so that although they provide direct lighting, they are not visible to the bowlers. Over the concourse and restaurant it changes to deal strips with open joints, again to provide some sound absorption.

The scheme relies for its success on the use of a high level of artificial lighting in the bowling area, where windows were not permissible, so that it appears dark in the daytime in comparison with the restaurant. There is a complete reversal at night, when the brilliance of the bowling area is in sharp contrast to the restaurant, with its soft, low-level lighting.

The side walls, floor, and intermediate supporting columns which carry the building are in reinforced concrete. A deep concrete fascia runs round the entire building at eaves level, to act as a stiffener, and to carry the timber trusses of the roof, which is finished with two layers of plastic sheeting, bonded in bitumen, on tongued and grooved boarding. Roof insulation is provided by a glass wool quilt on 2-in. strawboard. The roof is shaped so that the entire drainage is taken to a single concrete funnel at the lower end of the building.

The main inlet of the air conditioning system is immediately over the bowling end of the lanes, and there are two lines of extract, one above the spectators' seating, the other over the concourse snackbar. Care has been taken to ensure that the pressure in the restaurant is slightly higher than in the kitchen, where there are extracts directly over the cooking equipment.

The sketch design was started in June 1959, at that stage with only a space left for the restaurant. Drawings were submitted for planning approval two months later, and work started on the site within another two months. As is usual in Switzerland, there was no general contractor, each part of the work forming a separate contract. The responsibility for such matters as programming, co-ordination of trades, and quantities therefore rested with the architects.

There was some delay because the request from the client for the restaurant to be included occurred during construction. The job also virtually closed down during December and January, because most of the labour force were seasonal Italian workers, who are only allowed to stay in the country nine months a year, and prefer to go home in the winter months. Some minor changes were made to the client's requirements in May 1960, requiring a small addition to the building, but despite this the job was finished last October.



Snack bar serving the concourse, with main entrance beyond



The bowling lanes

BASA

Monthly supplement

The BASA Editor
The Building Centre
Store Street
London WC1

CONFERENCE AT YORK

Excitement at the vitality and relevance of the discussions at the BASA York conference (September 1 to 3) was expressed by a number of speakers, but in retrospect the strongest impression is that of the consistent pattern which ran through from the first main paper to the last discussion group report. As one report followed another it became clear that the similarity in overall values and specific conclusions indicated far more than good pre-conference planning.

Throughout the conference there ran the theme of reawakening social conscience, the ability—and hence the duty—of the architect to form and control the physical environment of our changing society. This duty springs from social, not artistic, considerations. In fact, as Professor Gardner-Medwin remarked, architecture as an artistic pursuit is OUT: the architecture of the future must “begin and end with *people*.” This emphasis on the large-scale control of environment can only lead to both architects and students thinking more strongly in terms of work in city and county council architects’ and planning departments—where the greatest opportunities for widespread control exist.

Within this overall context there ran two further themes—those of communications and methodology.

Much of the failure of architecture today was traced to failures in communication among architects, between architect and client, and between the architect and the public as a whole. “Efficient communication between people depends on their reciprocal perceptions of each other being sufficiently matched or true” (Dr. Jane Abercrombie). No real contact can occur while architect, general public and client speak in different terms. The remedy lies in education of the public, both through mass media, and through actual reconstruction of the environment, and also in the re-education of the architect in the terms of reference and attitudes of the public. Both forms of re-education raise great problems, but much could be achieved in the broadening of the architects’ perception by the incorporation of schools of architecture in university communities, with the wider range of social contacts there available.

Both the process of architectural design and the means of communication between architects depend on the establishment of a viable methodology. This would not only allow the architect to assess the needs (user requirements) of his client in a clear and logical way, but also facilitate the transfer of this information into architecture. The architect can only work effectively in a design team when he shares with his colleagues a common understanding of aims and methods.

This methodology can only spring from radical revisions in the education system and the value of limited undergraduate participation in research work was impressed on the conference by the two final discussion groups. The wider implications of research into architectural and environmental problems will only be realised when some pattern is given to this research. Some central clearing house for information on research projects must be established as a prerequisite of co-ordinated control and promotion.

The conference felt a heavy duty rested with the RIBA in this respect, along with the already defined responsibilities to enlighten the public and revise the system of architectural education to meet these new horizons.

One contribution to the conference was generally agreed to be outstanding—that of Professor Llewelyn Davies and John Weeks, and in view of its interest and importance we have held over all other material until our next supplement to enable us to print this contribution in full.

COMMENT

The conference consisted of three main papers taking up most of Saturday, with discussion groups in the evening reporting to the conference on Sunday, when administrative business was also settled. The importance of the conference as a stimulus for new ideas and as a critic of old was stressed by this arrangement.

These BASA conferences always represent the climax of a year’s activity, and have many and complex functions that run parallel with the general aims of BASA. At the highest level high powered individuals express ideas about fundamental problems concerning architectural education—and the BASA conferences, alone at present, provide a platform free from the political and social pressures which are frequently present in discussions within other organisations. These ideas, advanced in the main papers of the conference, are followed by discussion groups, which are usually led by specialists in some particular field related to the theme of the main papers. It is in these discussion groups that the vital work of the conference goes on. It does seem strange that after so few conferences BASA has managed to evolve both the right priorities with regard to main papers and discussion, and the right number and type of people in a discussion group to create a sympathetic atmosphere for creative student participation. Another very important function of BASA conferences is that they provide a vehicle for getting to know the problems of other students, and more specifically they provide a link between schools, BASA representatives and the central executive. One of the problems of a new BASA sub-committee is how precisely to relate the activities of the central executive with the interests of the schools. At a preliminary meeting before the conference, it was agreed that the building up of personal associations with representatives from all over England would provide a firm basis for a real and workable relationship; and, although various methods were suggested for implementing this, it is only at conferences that these links can be established at present.

The York conference, which extended over three days, began informally on Friday evening, when a general discussion was held. On Saturday morning Dr. Dennis Chapman of Liverpool University, department of social science, presented a paper on “People,” in which he underlined the extent to which

sociologists were unable to give reasoned judgments due to the present embryonic state of sociology. As long as social influences defy measurement many of the architect's questions must go unanswered.

This somewhat disappointing paper threw little light on the extent to which the sociologist can help the architect.

In the afternoon Henry Swain of Nottingham county architects department talked about "Building for People." He explained the method of study used for the Nottinghamshire schools, where the problem had been treated as a specific problem. However, it was dismaying to hear yet further evidence of the lack of co-operation in research into architectural programmes, to hear him asking questions which should long ago have been answered and published with the much more powerful (although more abstract) tool of systematic research; indeed this method is so rare that Henry Swain could reject the need for systematic research in the name of a romantic "sympathy."

After tea Professor Richard Llewelyn Davies and John Weeks presented a paper entitled "Educating for Building." The educational method they described implies much deeper intellectual involvement in all factors contributing to building design. The method was criticised on the grounds that the student would find it difficult to synthesise the studies, but surely it is precisely this that is the job of the architect—to co-ordinate the elements into a whole when designing.

The discussions took place on Saturday evening in groups of about ten, who reported back their findings to the full conference on Sunday afternoon.

The recommendations and conclusions reached in the discussion groups show that the subjects were well chosen, for taken together they present a segment of the whole range of the factors in design. They imply a widespread social and political change which will have to occur if any real contribution is to be made by the architect and, indeed, if buildings of value to people are to be built to any extent at all.

Lewis Mumford has indicated this before, and the BASA discussion groups have put forward consistent proposals which can enable an architect in practice to design buildings which relate to the needs of the changed society.

CHRIS GOODWIN, JOHN CHALMERS
MICHAEL CASSIDY, BILL THOMAS



EDUCATION FOR BUILDING

Report on the new Bartlett course prepared by Richard Llewelyn Davies and John Weeks

Argument on the philosophy and basic principles for the education of architects and others concerned in building has been going on for some time. We think that the time has now come to proceed from thought to action, to decide what in practice we must do about these questions, and do it.

We have now been at the Bartlett School of Architecture for one year. We have reached a number of conclusions and decisions and taken certain actions. In this paper, we intend to state our conclusions, and describe our actions. We shall not attempt to argue closely the rights and wrongs of what we are doing, as we shall not have time to do so. It will be seen, however, that what we are doing does relate to the philosophy which one of us put forward not very long ago.* We expect to be challenged as to the reasons for what we are doing in discussion, and we are prepared to answer then.

A boy entering a school of architecture today will not become a qualified architect for seven years, and will not reach the height of his career for 20 years. Before deciding what to do about his education, assumptions must be made as to what the future role of the architect in society is going to be. No one can be certain how this will develop, but it is our duty to make the best guess we can. It can be taken as certain that in 20 years, architectural practice will not be the same as it is today, and education designed for today's conditions is certain to be wrong.

We consider that if the architectural profession is to survive the next 20 years it will of necessity have had to come to terms with the building industry. Today, the vast majority of architects are working for clients, and contract and tendering procedure—whereby the

building is fully described before the builder tenders—has cut off our profession effectively from building experience in design. We believe that in the future, the profession will need to see to it that architects are engaged in substantial numbers in working in close relation with the construction industry. This is already the case in engineering. One part of the engineering profession works as consultants, i.e. for clients, but the other part works on the production side. Men can move freely from one to the other, and the profession as a whole is able to keep in touch with the developing techniques of production. We therefore feel that architects must be trained so that some can continue in practice in the present manner, but others can play a part on the industrial side. We see no difference in the quality of the man required for these two roles, or in the level or quality of his training. Both will have to be first class professional men, as well educated as their opposite numbers from other professional backgrounds. We therefore reject the idea of the two-tier profession, in the sense that there might be two different grades of architect.

On the other hand, we believe that there will be in the future a sub-professional group, the building technicians, who will take part, with architects, in design and in building. This has occurred in Sweden, and the use of sub-professional assistants is established practice in this country in professions other than architecture. These groups will be recruited from boys who, either do not meet the entrance requirements for the profession, or who opt, as many can be expected to do, for a shorter training leading to immediate employment.

The man who intends to go into a profession accepts a long period of training, and often comparatively low wages at the beginning of his professional life, while he is still gaining experience. He accepts this because, in the long run, he will have an oppor-

* *The Education of an Architect*, by Richard Llewelyn Davies. An Inaugural Lecture delivered at University College, London, on November 10, 1960, and published for the College by H. K. Lewis & Co., Ltd., and in AJ, 17.11.60.

tunity to go further than the man who has embarked on a sub-professional career. But it would be very wrong to exclude the latter from participation in building and design, where there is an obvious need for him.

But training for a sub-professional career cannot be linked to the education of the professional man, because the latter must inevitably start much further back with basic science, whereas the former skips this stage, and goes straight to a training in a particular expertise.

Our profession today, by comparison with others, is under-educated, even uneducated. We have allowed ourselves to drift into methods of training which are not education at all, and until very recently we have been prepared to accept entrants to the profession with far too low an educational standard. It is lamentable that schools of architecture in universities have for so long conducted courses which were so low in standard of entry, that at the completion of five years at a university, the student could not sit for a degree.

Our conclusion is that we must devise an academic course for architects, which is the equal of that taken by any other professional person. This, in itself, implies that we must be prepared to limit entry to those with high enough school results to take such a course. We also think that to be an effective architect twenty years from now, a man will need to have high intellectual qualities in addition to artistic ability.

During the five years for which he studies, the student has to receive professional training, as well as his education. Traditionally, these two elements have been mixed up, and no attempt has been made to divide them. We think they should be divided, and that education should come first in time, to be followed by professional training.

At the Bartlett we now have a degree course which lasts for three years. This completes the education, as opposed to the professional training, of the future architect. This sequence is closely paralleled by the arrangements for other professions, and it is astonishing to us that it has not been done before in architecture. We consider that the educational element, which we see as a three-year course, can only be effectively provided within a university, but we see no reason why the later period of two years' professional training in the more applied aspects of architecture should not, to some extent at least, be provided outside the university.

The three-year course at the Bartlett leads to a degree in architecture, either a BA or a BSc. In common with other academic courses, its object is not simply to impart knowledge to the student, but also to exercise his mind, and teach him to think and express himself. In addition, it also attempts

to develop, or at least to free, the imaginative abilities of the student as a designer. The courses which the student follows differ considerably from those traditionally taken.

Let us first take the new subjects which we have introduced. In the first year, students take a course of lectures and seminars on aspects of biological science in relation to architecture. These lectures are given by teachers from the Departments of Anatomy, Physiology and Psychology in the College, and deal with growth and form, human perception and generally with the human being in relation to his environment. At the same time, they take a course in environmental physics, which includes laboratory work and deals with light, colour, heat transfer, sound transmission and sound reduction. This course is given by a physicist.

In the second year, the students take a course of lectures and seminars on aspects of social science as related to architecture. The topics dealt with include social geography, social anthropology and social psychology, and again the lectures are given by teachers from the appropriate departments, including Dr. Jane Abercrombie, who is speaking to you at this conference.

We have taken the view that to make these new courses worth while, they must be taken seriously. More harm than good can be done by introducing such major topics in the form of a few lectures unrelated to the rest of the course. A good deal of time is therefore devoted to these new subjects. The students will have to do work on their own, such as laboratory experiments, or essay writing, in addition to attending the lectures and seminars.

One other new subject has been introduced into the first year. This is a course which we are conducting jointly with the Slade School of Fine Art, designed to exercise the students in the appreciation of the significance of line, shape and volume, considered in isolation from known objects. In this course, small groups of architects will work together with groups of painters and sculptors, undertaking the same exercise. At present, this course is confined to the first year, but we may in future extend it and prolong it through the whole of the three-year degree course.

We may now turn to the subjects traditionally taught. Let us consider history of architecture first. Until very recently, this was taught as a branch of design, indeed in many schools it really formed the basis for design instruction. Historical forms were seen as live elements of architecture, and the understanding of these forms therefore presented itself as something on a par with all the rest of the teaching—as something which provided the young architect with the tools of his trade. If the teaching of architectural history is seen in this way, we can see why the

lectures were always given by architects, often by the leading members of the school staff, and rarely, if ever, by historians. Today, we no longer look on past architecture as a mine of form, so what part does the teaching of architectural history play in our curriculum? We think that its value depends on finding a way to bring it into clear relation to the problems facing the student, and the architect of today.

This means, first of all, dropping the usual attempt to give a comprehensive, chronological account of all styles from Stonehenge to neo-liberty. Instead we must find teachers, recruited from the professional historical disciplines, who will make it their business to trace the way architects and designers have reacted, in each age, to the problems of design. Later on, when we discuss the studio course in design, we describe a sequence of study: first the study of form in relation to an individual human being, second the study of form in terms of material and structure, and third building in relation to the human community, the city and the country. These are the headings under which we feel the history course must in future be organised if it is to make its proper contribution to an architect's education.

The course in theory of structures is given by professional engineers, but fundamental understanding of structure is so very vital to architects, that it is not enough to bring in an engineer, even from a neighbouring university department, to give a course of lectures. It is really necessary to recruit on to the staff of a school of architecture a teacher who is himself an engineer, but has become orientated towards architecture to such an extent that he is willing to devote himself wholly to the teaching of his subject to future architects. This we have done at the Bartlett. The students now take two courses which run in parallel throughout the three years. One is mathematical and will take them as far in the treatment of the mathematics of structure as an engineering student would go in a three-year course. Side by side with this, they take a course which deals mainly with shape in relation to structural performance. The purpose of this course is to help the student to bridge the gap between the mathematical concepts of structure and the choice of form in design. We set great store on the teaching of the theory of structures in depth, which we think is fundamental in architecture. On the other hand, we have eliminated the time-consuming instruction in out-of-date and elementary methods of calculation which played such a large part in the curricula of the past.

Similarly, we are trying to convert the courses in practical construction from the old rule of thumb approach on to a more scientific basis. The changes we are making here are only beginning, but we want to treat these subjects very



Members of the present and next executive committee: front row, left to right, Hilary Chambers, ex-president, Chris Sayers, secretary-elect, Kenneth Claxton, secretary, Chris Musson, president, John Tempest, president-elect, Michael Cassidy, editor of BASA Supplement. Back row, John Hugo, new committee member, W. G. Argyle, assistant secretary-elect, Keith Edmead, new committee member, Nigel Gough, assistant secretary

largely as the physics and chemistry of building materials rather than the rules and wrinkles of traditional craftsmanship. The architect of the future has to be equipped to choose between building elements produced by industry, to evaluate the claims of new materials. By and large he will not himself control the detailed design of these elements which will be evolved within industry by design teams with a wide range of expert knowledge. While some architects may find themselves working for the industries which produce these components, as members of design teams, they will be better prepared for such work by a thorough grounding in the relevant sciences than they would be by learning a great deal about constructional details, which will inevitably be out of date by the time they enter into practice.

The courses which we have described will take up a lot of the students' time. We have mentioned one or two things which we have been able to cut out. We have also cut out one whole course: "Theory of Architecture." Traditionally lectures on this topic were given by the head of the school, and considerable weight was attached to them. In our view, there is no such subject. "Theory of Architecture" is like the Portuguese Man o'War. This is a marine object, long believed to be a jellyfish. It was eventually discovered to be a collection or colony of different animals, all previously well known and of no particular interest, but huddled together and swimming about, giving the appearance of being a creature in its own right.

The Bartlett Degree Course, in so far as the didactic part of teaching is concerned, therefore covers a range of basic sciences and arts and is comparable with the three-year degree course given in the older universities, and taken by men intending to go into a wide variety of occupations. We expect that some students will take our degree course who do not intend to be architects, but who will be employed in other related walks of life, as administrators, or in business. We shall be glad if this is so, but the vast majority of the students will, of course, be archi-

tecs. These students, once they have got their degree, will still have a further two years of study ahead of them. This will take the form of a course leading to a diploma, which will be planned to give exemption from the final examination of the RIBA. The diploma course will be very much more specialised. There will be no further teaching in the basic degree subjects, which we have been describing. Indeed, there will only be two compulsory courses taken by postgraduate diploma students. These will be, first, the studio course in architectural design and construction, about which we shall be saying more later. The other will be a course in building economics and management. The course in building economics and management will include the subject at present known as professional practice, but we hope it will go very much further. We want it to fit the architect to give really responsible and wise service to his client, and to contribute usefully to building production and management. Building today is very big business, both for the client and for the contractor; architects who are illiterate in business and management will have little future in 20 years' time.

Apart from this course which all postgraduate students will take, there will be no other lectures, but a range of optional courses from which the student will be able to select one or two appropriate to his particular talents and interests. Five years is really too long to pursue a general course in a subject as wide as architecture. We are certain that a well-planned and intensive three-year basic course is needed for all architects, but we think that beyond this point, students should be free to get down in greater detail to one or other aspect of the subject, rather than continue under a general system of instruction. We also believe that, at this stage, he will gain more, in the development of his mind and abilities, by taking one or two subjects in depth, rather than by spreading his studies over a wide area. There will only be a few students pursuing each subject so we shall hope to have a member of staff responsible for each

course. He will plan each students' studies individually, arrange for him to take appropriate lectures in the college or elsewhere in the university, recommend a course of reading, examine the progress of his work and comment on it, and generally prepare the student so that he can present a thesis or take an examination at the conclusion of the course.

We feel that there is not a great deal of room for debate as to the form and content of the degree course. We believe that it would be in the best interests of the profession if all future architects could take a degree course covering the basic arts and sciences relevant to architecture. We believe that this initial three years' education should really take place in a university. But we feel that diversity in the last two years of the student's course, not only within an institution such as the Bartlett School, but as between a variety of different institutions is highly desirable. The final two-year diploma course which we have described is the sort of course which can well be provided inside a university, but we think there are other forms which this two-year period of professional training could well take.

For example, we feel that the Architectural Association School in London is very well placed to give a first-rate course during the final two years of a student's training. We can imagine the development of other postgraduate institutions providing a variety of courses. For example, it would be possible for the great architectural offices, such as that of the LCC to provide something for postgraduate students, comparable with what the teaching hospitals provide for the medical student. Generally speaking, we see it as the role of the university to provide the education of architects, and the role of the profession, in one form or another, to provide the postgraduate professional training.

From the national point of view, there is logic in this idea. The result of the Oxford Conference which raised the standard of entry to the profession to two advanced level subjects, taken with the new regulations concerning grants



Top left, Dr. Dennis Chapman, who gave a paper on "People," enjoys a break for refreshment with Percy Johnson-Marshall and Hugh Morris, who led the discussion groups on "The Architect's View of the Client" and "Information into Building." Lower left, the new president, John Tempest. Right, delegates listening to a paper in the converted-nave lecture theatre of the York Institute

to university students, means that every student now eligible for the profession will also be eligible for a grant which would support him at a university. There will, therefore, be an increasing demand for university places in architecture. But there is a major shortage of university places, and it is well known that this shortage cannot be met for many years to come. Hence, it is of the greatest importance to make the fullest possible use of available university places and time in the best way for architectural education. What we propose is that the universities should deal with education, but that professional training, which comes at a later stage, could, for many students, be dealt with outside universities.

So far, we have said nothing at all about the most important part of the architect's training, that is the design course in the studio. The studio is traditionally the place where the student learns to be a designer. We believe that the physical and social conditions of the studio are far and away the best feature of the traditional school of architecture. We think the studio provides a setting for instruction which is exceptionally effective, and which we must take great care not to lose. This is not to say that we think the studio is made full use of at the present time.

No other students work under quite the same conditions as students of architecture. Our students have a place of their own in the studio, and remain in close association with a group of their fellows during the whole of their stay in the school. This is a situation with great social dynamism, it promotes debate and discussion, and the students often teach one another a great deal

more than they learn from the teachers. We believe that we should be careful not to destroy this educational powerhouse. For this reason we do not propose to break down the year system, because we think that the continued association of one group of students over the course is more potent than putting together in one studio a mixed bag of different age groups, some of whom leave every year to be replaced by new entrants. We are not certain about the maximum size for a studio group, but we are inclined to think it may be best for it to be about 25, perhaps sub-divided into two groups of about 12 each. Inter-relation between individuals is easier in small groups, but there is also a need to have a certain mass of students together, in order to generate a really strong impetus in a school or in a year. However, we need to know a lot more about these matters before we can reach a firm conclusion. Studio work on design projects is the accepted technique for training in design. The traditional studio subject by which this training is given, was really an attempt to reproduce within the schools of architecture, something like the conditions of apprenticeship. The studio master plays the role of the architect, with the students playing the role of apprenticed pupils. The studio master puts the problem, the students try to solve it, and the master then shows them how to do it better, out of his superior wisdom and experience. As a reaction against the fanciful and extravagant subjects set as exercises by the Beaux-Arts schools, most schools of architecture in more recent times have laid much emphasis on making their programmes "realistic." Real sites and, if possible, real clients are

found and, the whole exercise is made to resemble as closely as possible a private architect's commission in real life. But this resemblance is only skin deep; the exercise is not real; for one thing, the amount of time to be devoted to it is completely out of scale with what would be deployed in real life; for another, the criteria by which the results are judged are not those which would operate in a real life situation. We consider that the traditional studio subject has a bad influence on the development of the student's attitude to design and is responsible for many of the false and unreal attitudes which architects display in later life. It encourages the student to attempt to act as a designer and reach a total conclusion with an utterly inadequate understanding of the problems he is supposed to tackle. It also lays disproportionate stress on the need for the architect to produce a wholly new and original solution. It is as a result of this training that architects so often design without really understanding the needs of their clients in depth, and why they feel impelled, even when designing a bookshelf, to turn it into a strong personal statement.

There is no reason why studio teaching should establish this false atmosphere. We feel that until near the end of the course, at least, each studio exercise should be limited in scope, and certain aspects of the problem should be excluded from consideration. This exclusion must be overt and explained by the student. We are planning our studio course in two parts, the three-year degree course followed by a two-year course for the post-graduate diploma. During the degree course all the programmes are to some degree limited in scope, although they gradually increase in complexity.

In the first year the exercises are focused on the problem of space in relation to the individual human being—which could be roughly symbolised as the design problems of the Gagarin capsule. The student has to study the geometry, or syntax, of architectural space and also its vocabulary, i.e. the sizes used for human activities. He also studies the manner in which a spatial envelope affects a human being physio-



Left, Chris Musson, president, and Jeremy Hodgson, treasurer, keep an eye on things from the platform. Right, discussion group, on Research, not beer. Kenneth Claxton, Caro Smith, Mrs. Peter Cowan, and Peter Cowan

ally and psychologically, and the psycho-physics of light, heat, and sound.

During the second year we introduce, in addition to the problems just described, the question of materials and structure. In this year all designs are presented with sufficient working details to show the building can be built. The student has to study the design implications of materials—the brickishness of brick, the structural morphology of concrete—and programmes are focused to bring out how design can stem from an understanding of materials and structural form.

In the third year we add another aspect, the relationship of design to the social use of buildings. This involves the relationship of buildings to one another, to the city and the landscape, and to their use by families and communities. By the end of the third year the student will have studied in some depth the fundamental aspects of architectural design, and will have had some exercise in balancing them in multifaceted projects. During the later, post-graduate, course the student must be exercised in the more complex and professional aspects of an architect's work. These include the problem of obtaining a brief from a client body, the use of research and scientific data, and the design implications of mechanical engineering, building method and industrial production.

We don't know in detail how we are going to organise this course, it will not be started for two years. But we plan to develop a strong link with practice through our relationship to a group of large public offices. Three such offices are already sending us part-time studio teachers on a regular basis. We hope that this will develop into an arrangement that will give our post-graduate students an experience comparable with that given to medical students by a teaching hospital. This will never be achieved by just going into an office for the vacation, it involves a much more planned and intensive effort by the office than has yet been attempted.

In a school of architecture, no matter what structure the course is built round, the drawing board remains the most important instrument of com-

munication between the student and his tutors. An important part of his education occurs at the drawing board when the student, his tutor and the drawing confront each other. In the criticism room there is a similar confrontation but each participant holds a more fixed position, the student stating his, his drawings fixing it unambiguously, and his tutors reacting to it. Success or failure of communication is explicit at the criticism, but has actually occurred in the studio, perhaps with neither the student nor the tutor being aware of the degree of success or failure. Communication presupposes something to communicate; if one of the protagonists has nothing to communicate, he should leave the school; a curriculum, no matter how good, cannot buoy up and carry with it either students or staff who cannot swim.

The important part played by studio contact is the possibility it gives of wide ranging discussion: lectures must be focused pretty accurately on a particular aspect of the curriculum, and are primarily didactic. Studio contact has more in common with the analyst's couch, and their primary aim should be, as in analysis, to show the student to himself.

It is necessary here to expose the central problem facing students and staff alike in a school of architecture. Assuming that architecture can be taught (and this has to be assumed, otherwise schools should close at once) it is possible to discuss *what* should be taught as well as *how*. If by "architecture" you mean a style, or good manners, or structural honesty or some other moral dogma, this is easy. You define your rules, give the student an exercise, tell him where he has gone wrong, mark his exercise and the whole situation is clear. We cannot do this. We do not think that the Torre Velasquez is evil; that Ronchamp could be improved by a mite more structural clarity; or that "back to Futurism" is a particularly relevant cry. But a student who believes these or any other statements must realise that in any statement about architecture he is saying something about only a *part* of architecture; we

believe that development of a student's creative ability should begin with analysis of his own dogma. If a student can see why he has taken his decisions and his reasons can be shown in relation to their relevance or otherwise to the problem he faces, the way is open for him to start to reason consistently all the way through his solution.

No student, or architect, can reason his way through to a creative solution—something beyond reason is implicit in creation—but as in any discipline, creative effort in architecture is more likely to be fruitful when it arises from deep knowledge of the factors operating in the situation. In the process of creation the student is in the end himself wholly responsible for his own acts; he should therefore be fully aware of his own reading of the problem, see himself what aspects of it he accepts, what he rejects, and then himself decide in the knowledge what he is in fact accepting and rejecting whether this is likely to lead to an architecture which has inner consistency. In the studio therefore, we do not only try ourselves to understand what the student is doing, but we try to *show him* what he is doing and get him to decide whether this is what he intended. There are many techniques for inducing self-awareness. The traditional criticism, in which the student defends his project to a group of students and teachers is a good one. Another is for the teacher to pose his own personal judgment as a challenge to that of the student, but this must be done in the form of an argument between equals, not of a master telling a pupil what to do.

In the end, whether we ourselves like the result is irrelevant and we do not judge the student on this basis. We can therefore loathe or love the result, and say so without casting down or elating the student. We look for technical proficiency, a consistent basis for design decisions, and truth to his own premises as to the order of importance of the various aspects of his problem. We are training him in a technique which we believe to be a basis from which he can make architecture. But in the end, he is alone.

BASA SECRETARY'S REPORT

The essential and foremost aim of BASA is the necessary reform of the existing educational system. We have now reached a stage at this Conference where BASA is on the threshold of a positive constructive synthesis of the content of that education.

At the Bristol and Oxford Conferences last year, we were asking ourselves "What is Architecture?" a question that many architects fear, and refuse to answer; perhaps we ourselves have been groping for the answer; this was good, for in doing so we have seen the faults in many philosophies. It is by necessity a mammoth task—to see clearly through the prejudices and emotions which have accumulated around the problem.

With this (York) conference we have clearly reached a basis for future policy and perhaps an ultimate educational charter.

To stimulate the present impulse BASA will now increase the frequency of conferences and will publish the results more quickly. For the first time we have compiled a comprehensive report—that of the Oxford Conference in September 1960—which runs to some 100 pages and is indicative of the progress made by the association in the past year. It will be distributed to all schools and is on sale at 5s. a copy to any individual. It is a year since we held our last conference and during that time we have tried to consolidate ourselves not only in respect of our facilities but also in terms of recognition by students and professional bodies.

As we determine our educational policy, facilities and services of BASA will relatively increase in importance. This year we have tried to consolidate and increase the original nucleus of facilities.

At Oxford it was decided to extend or form the following services:

- (a) Vacation work abroad.
- (b) Travelling exhibitions.
- (c) The lecture pool.
- (d) The AJ Supplement.

In addition to these BASA has this year undertaken several other important tasks, these were principally:

- (a) BASA contribution to the IUA Congress.
- (b) Realisation of the schools facilities questionnaire.
- (c) A tour of schools to gain first hand information on how they work and are administered.

In addition to the above, BASA is continually in liaison with the RIBA on many topics, including co-operation between the two bodies on an official basis.

We have also started to publish a series of pamphlets the first being an explana-

tion of the Association itself. We have helped in many problems such as the finding of jobs in London, advice on the formation of student associations and grant enquiries.

Lastly one item which is interesting is the fact that the association is being recognised by other bodies. For instance the National Association for Mental Health has recently asked us to assist them in mounting an exhibition at their annual conference next April. This will cover the physical environment of mental health clinics with drawings and photographs of clinics completed over the last few years and also student attempts at solving the many problems involved. Rodney Mace will cover this more fully in his own report.

TRAVELLING SLIDE EXHIBITION

These have been perhaps the most difficult to arrange due to the fact that the organisation is mainly done by representatives in the individual schools. The arrangements of the circuits are done by regional representatives as agreed at Oxford; this has resulted in the circuits being at different stages of development largely due to the calls of school work and the variation in individual capability of the representatives. To stimulate this activity BASA has offered a 50 per cent subsidy for the production of slides.

However, the number of slides collected in each circuit by a given date next term will be circulated in the hope that other schools would be prompted to complete their collections.

LECTURE POOL

Present organiser of the lecture pool is Graham Lees at the Bristol RWA School.

The principle of the pool is to provide schools of architecture and other student organisations with subsidised lectures of a national standard with the best school in each area acting as a centre for surrounding schools and allied societies.

The lecture pool has been working for several months and was initially used by the Bristol School with success. They reported that in practice the scheme works well. As a result many schools are intending to make use of the scheme. This service is open to all schools and other societies and it is up to them to make use of it.

PUBLICATIONS

In addition to the monthly supplements in the AJ, the association has published an explanatory pamphlet on BASA itself. It is also our intention to publish relevant information to help student societies and individuals and we are in the process of compiling information on the following subjects which are not covered comprehensively by other bodies:

A complete list of films and slide lectures available from public authorities and industrial concerns which will be of particular interest to architectural students.

A comprehensive list of scholarships and study courses available at home and abroad.

A list of past theses, authors and addresses for the use of students.

A definite policy for reorganisation of the relationship between the RIBA and the students of architecture.

We hope to become a clearing house for all kinds of co-ordinated information.

SPECIAL ACTIVITIES

The most notable obvious achievement is participation in the IUA Congress held in London during July; the organising committee was headed by past president Hilary Chambers, and consisted mainly of representatives of the London Schools. This committee arranged hospitality and accommodation for foreign students and held an exhibition for student work at the RIBA. A selection of this exhibition is on view at the Institute of Architecture, during this Conference and until the end of September.

Particular thanks must be given to Hilary Chambers, and also to Rodney Mace who carried out the exhibition organisation. This Committee did a great deal of work making the greatest possible use of a limited budget. Important educationally, was a meeting held during the Congress between British and overseas lecturers and architects, which will probably lead to an organised attack on the problems of architectural education on an international scale.

The second achievement of BASA this year was the realisation of the "Schools Facilities Questionnaire." The majority of the analysis was done by Bob Saunders lately assisted by Hector MacDonald.

The returns were good but as the initial number of architectural schools is relatively small we had hoped for a 100 per cent return; in fact we received only a 75 per cent response which was somewhat disappointing in the circumstances. Failure to return the questionnaire was due to two reasons, refusal of co-operation by school administrations and secondly apathy by student groups.

RIBA RELATIONS

BASA relations with the RIBA have been many and varied. At the annual Criticism of Student Prizes at the RIBA earlier in the year Sir William Holford clearly indicated that the RIBA would be sympathetic to co-operation between the two bodies.

Subsequently BASA presented Gordon Rickets, Secretary of the Institute, with proposals suggesting co-operation which would be of mutual benefit. Unfortunately the RIBA were not as

co-operative as we had hoped. They would only assist BASA in a fragmentary and unrecognised manner on the basis of contact between individual members. However, we are persevering as we feel that there are many fields in which BASA can be of positive assistance to the RIBA and vice versa. We wish to present to the RIBA the whole question of student fees.

TOUR OF SCHOOLS

The reasons for the tour were to bring students into awareness of BASA and its aims and facilities and to make a first hand assessment of the individual schools.

The organisation of these visits is split regionally, each representative of the central executive visiting the schools in his area and reporting back to the central committee afterwards. In this way BASA hopes to dispose of the image of isolation.

So far 14 schools have been visited; as a result three new schools have joined BASA and relations generally have improved.

We hope to publish a report on our findings late this year and BASA hopes to continue this intimate contact in the future.

CONCLUSIONS

As I stated above, this year has been largely one of consolidation, and this process has made the Executive realise that the organisation and structure of BASA have been virtually static since its inauguration almost four years ago. Several immediate shortcomings have become obvious and it has been necessary to undertake a complete reconsideration of BASA administration and constitution.

To this end a "Sub-Committee on Organisation and Procedure" has recently been set up. This is intended to be a permanent standing committee and has held a number of preliminary meetings to determine its organisation and terms of reference. The sub-committee will be advisory, but Executive control over it will be only nominal—for it to function properly it must be essentially objective and free from internal "politics." The object of the sub-committee will be to keep an eye on organisation, procedure and general policy with a view to avoiding inefficiency and faulty directions of policy.

KENNETH CLAXTON

FACILITIES REPORT

The questionnaire was drawn up by Hilary Chambers (Past President of BASA with the aim—as stated on the cover—to find out exactly how schools are equipped with libraries, studios, workshops, etc., as the first move in initiating a campaign to improve school facilities.

I was asked to analyse the answers given by the various schools.

These questionnaires were difficult to interpret owing to the indifferent way that some were answered and to some ambiguous questions that were posed. The results are, therefore, of necessity limited and at times possibly inaccurate. A number of questions have been ignored in my analysis where they are ambiguous or where an insufficient number of schools have answered.

The preparation of a report such as this seems far too ambitious for BASA to attempt in an amateur way. The preparation of statistics, their analysis, and conclusions therefrom, requires a competent team including a statistician. This team would need to have adequate funds and the authority to insist on the information required being furnished by all the schools.

In this case, of the 45 schools asked to answer the questionnaire only 22 replied in the first instance. By selecting only the RIBA recognised schools it was possible eventually to get 22 out of the total of 29 completed which enabled some form of comparison to be made. Bearing all this in mind, it is possible to make one or two broad statements under the group divisions as in the questionnaire—A to H.

It can be seen that there are great differences between the various schools' facilities, accommodation, type of staff and teaching methods, which warrant a fuller investigation. It is recommended that the RIBA instigate a complete survey similar to the Survey of Architects' Offices. The information obtained by this questionnaire could well be used as a brief to obtain a more analytical insight into the state of our schools of architecture, the objective of their courses, their methods of selecting students and staff, and the apparent apathy and despondency which appears amongst the majority of these.

It is hoped that this initial investigation will be accepted as a serious attempt to look into present conditions and that the matter will not be allowed to rest here.

BOB SAUNDERS

Report on Contact with National Association for Mental Health

BASA has recently been approached by the National Association for Mental Health with a view to the mounting, during their annual conference at the London School of Economics next April, of an exhibition of the present physical conditions of Child Guidance Centres throughout the country. Also it is intended to organise within schools of architecture some form of competition for the design of a Child Guidance Clinic. The results of this competition would be mounted at the exhibition along with plans and photographs of recently completed clinics.

It is intended that this "competition" should be organised on a regional basis, each school receiving its detailed programme briefing and directions from the local Child Guidance Clinic. The actual form of the "competition" is as yet undecided, but it is hoped to include it as an academic scheme in either the 2nd or 3rd year autumn or spring term curriculum.

Due to relatively limited exhibition space it will only be possible to accept one scheme from each school. The selection of these schemes will be done jointly by School staffs and the staff of the Child Guidance Clinics concerned. By this means it is hoped to make more apparent the variations in opinion that exist in the Child Guidance world as to the requirements of physical environment, and to stimulate some action to improve what are in most cases at the moment appalling working conditions.

RODNEY MACE

VACATION WORK REPORT

It was decided at the Oxford Conference to continue BASA's efforts with vacation work abroad, in spite of earlier lack of enthusiasm.

It was found on investigation that IESTI ran the existing successful service of exchange.

BASA saw no reason for duplication of that service and has subsequently become affiliated to that society.

IESTI will make arrangements for any student who's school is affiliated, with BASA supplying the return places for foreign students. BASA's lists will be forwarded to IESTI this January and the service will be in operation by the summer vacation of 1962.

BASA has also had an increasing number of enquiries for jobs in London. A publication on jobs available in private offices and public authorities will be circulated to the schools later this year. It is hoped this will be of assistance to the student and will shorten a certain amount of correspondence.

There are many different opportunities available to students thro' such international organisations as UNO and the United Nations Association. Next summer we hope to have lists available of such opportunities.

It would seem that undoubtedly the best jobs abroad are still found through personal contact, and this must be so because architects are not willing to risk giving employment to an unknown quantity. After all, some kind of interview usually precedes any appointment and the best we can give may only be a letter of recommendation.

BASA should like to build up a directory of the international scene as students have seen it, and we would like students who have worked abroad to let us know of difficulties they have met and how they have overcome them, how they found their work and to make suggestions as to future opportunities.

ROGER CLARKE

working detail

COVERED WAYS AND CANOPIES: 35

ACOUSTIC CANOPY: ABBEY IN BATH

Hugh Creighton, architect; Richard Hobin, consultant engineer for the Timber Development Association Limited

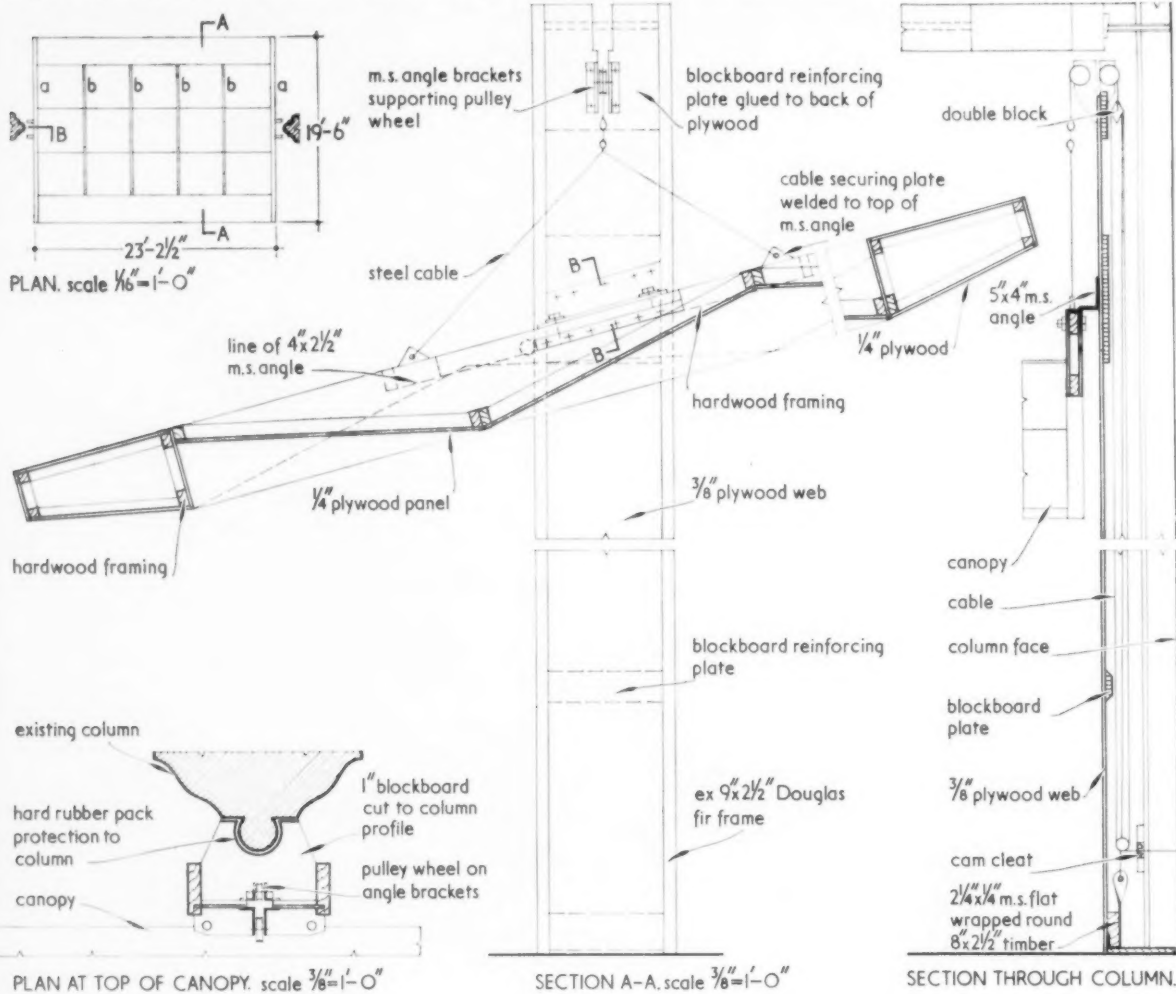


This detail is of interest as it shows that major acoustic modification is possible in a monumental building where orchestral performances are to be held but not often enough to justify any permanent fixtures: the canopy and supports are demountable.

working detail

ACOUSTIC CANOPY: ABBEY IN BATH

Hugh Creighton, architect; Richard Hobin, consultant engineer for the Timber Development Association Limited



TELEPHONE CUBICLES: UNDERGROUND STATION IN ATHENS

P. Vasiliades, Bogdanos and Kokolades, architects; I. Pervolarakis, designer. (Material supplied by G. Urégian)

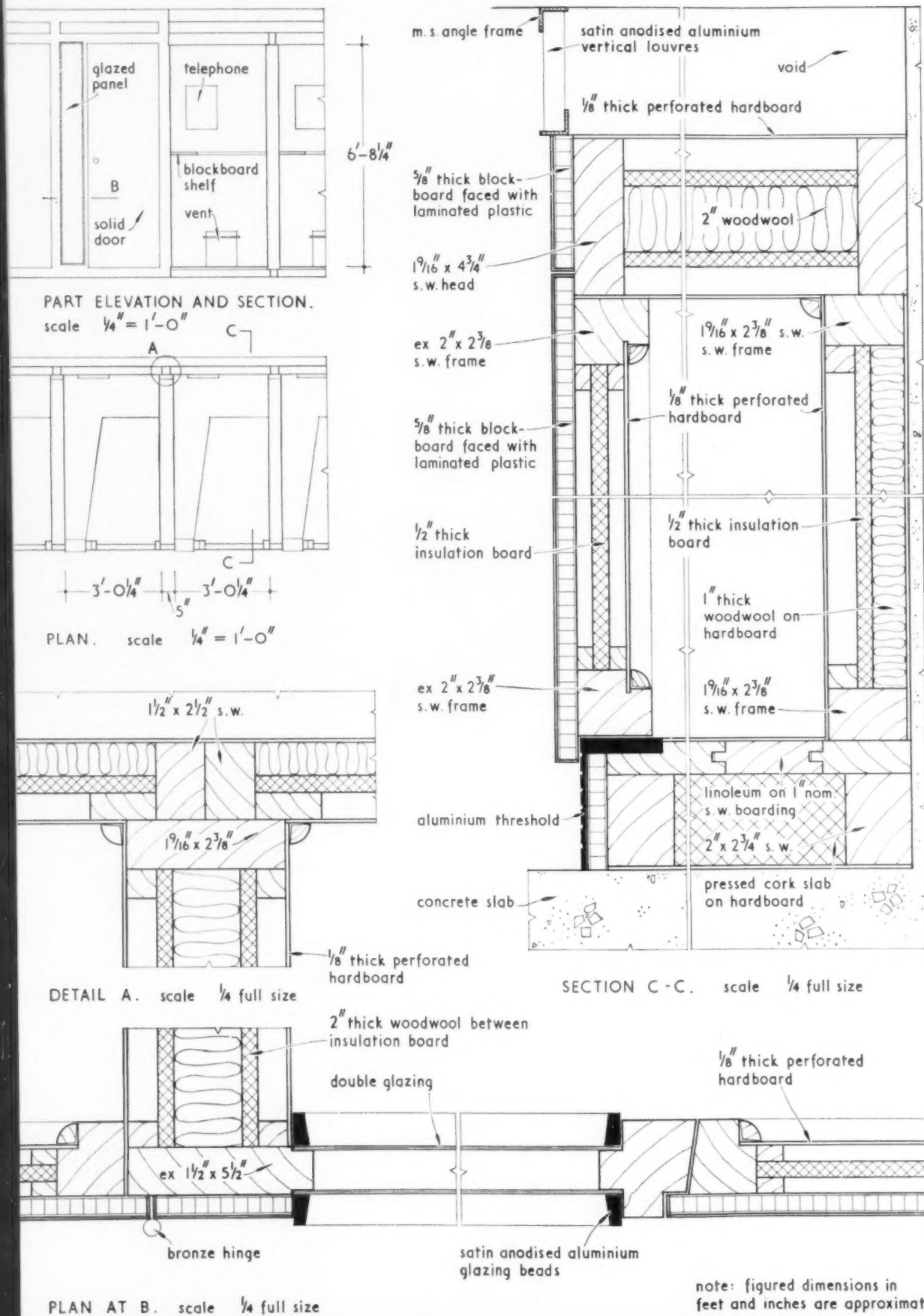


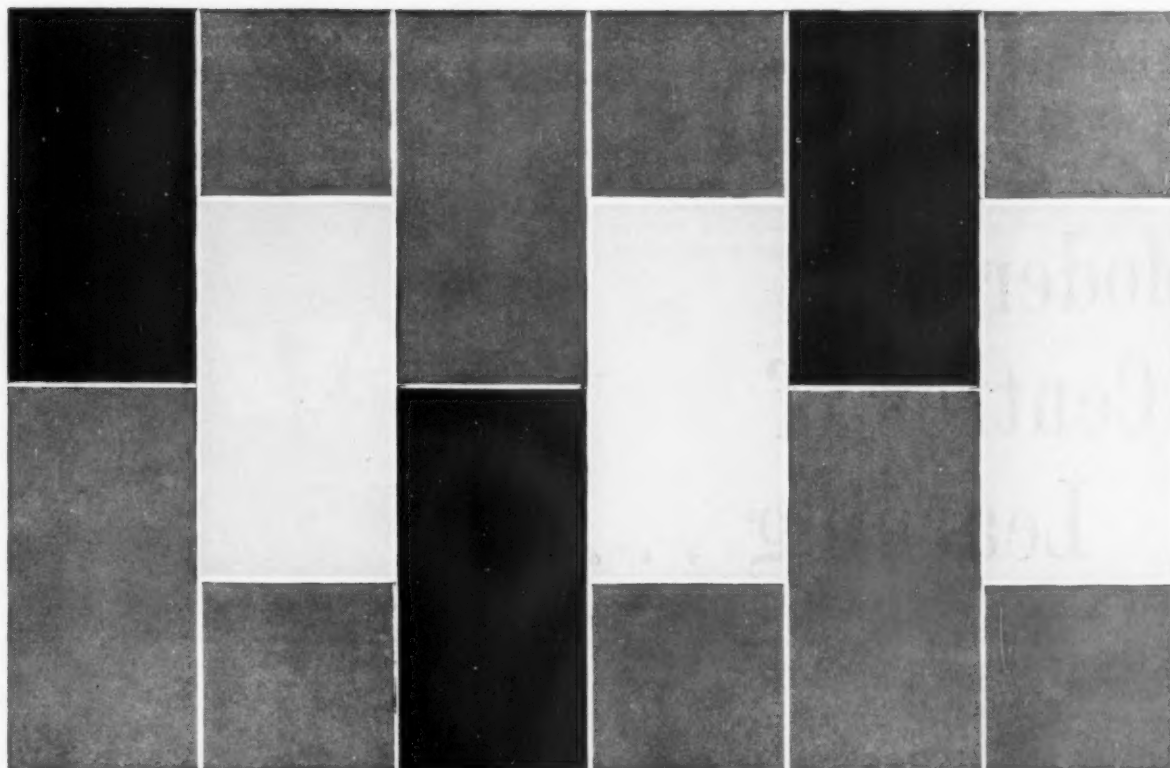
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TELEPHONE CUBICLES: UNDERGROUND STATION IN ATHENS

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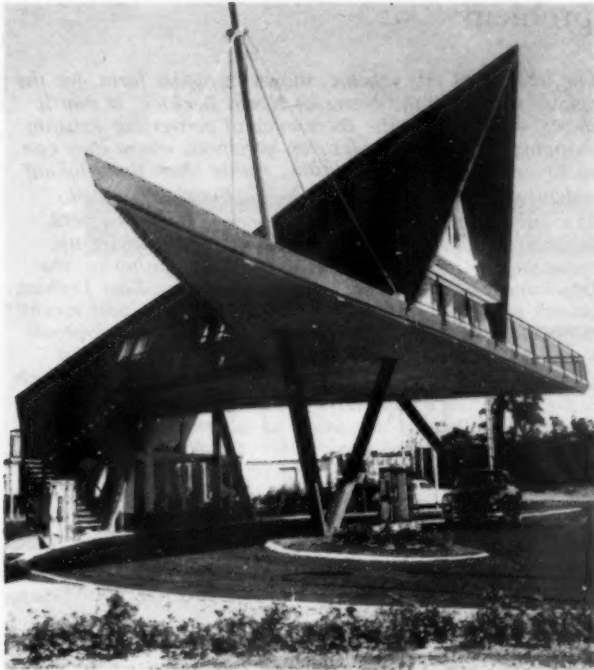
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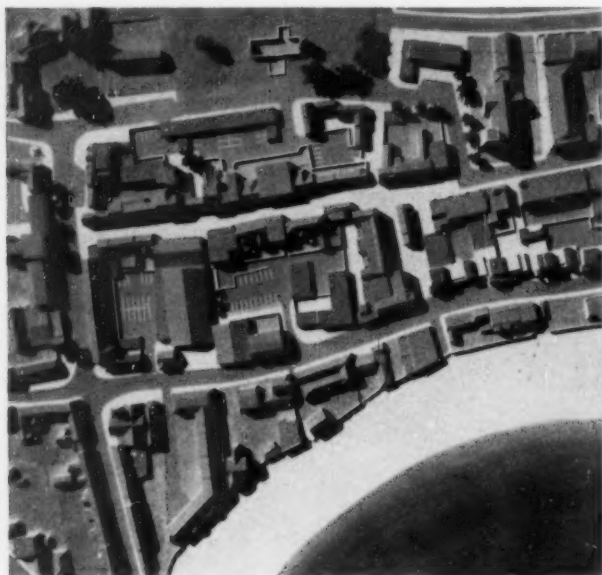
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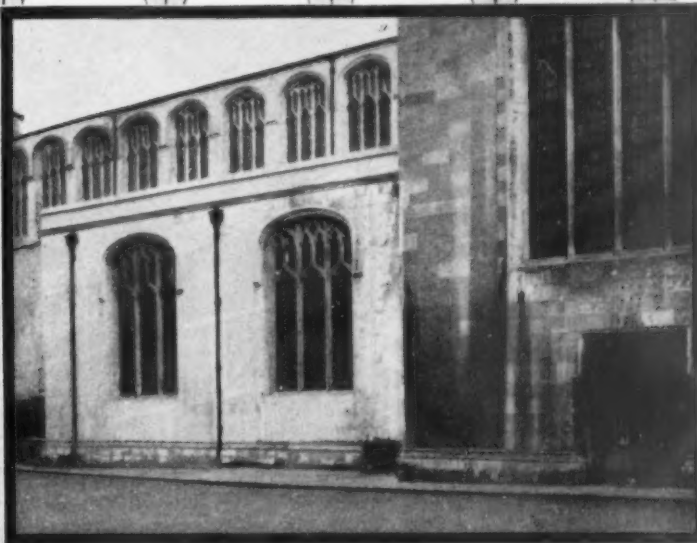
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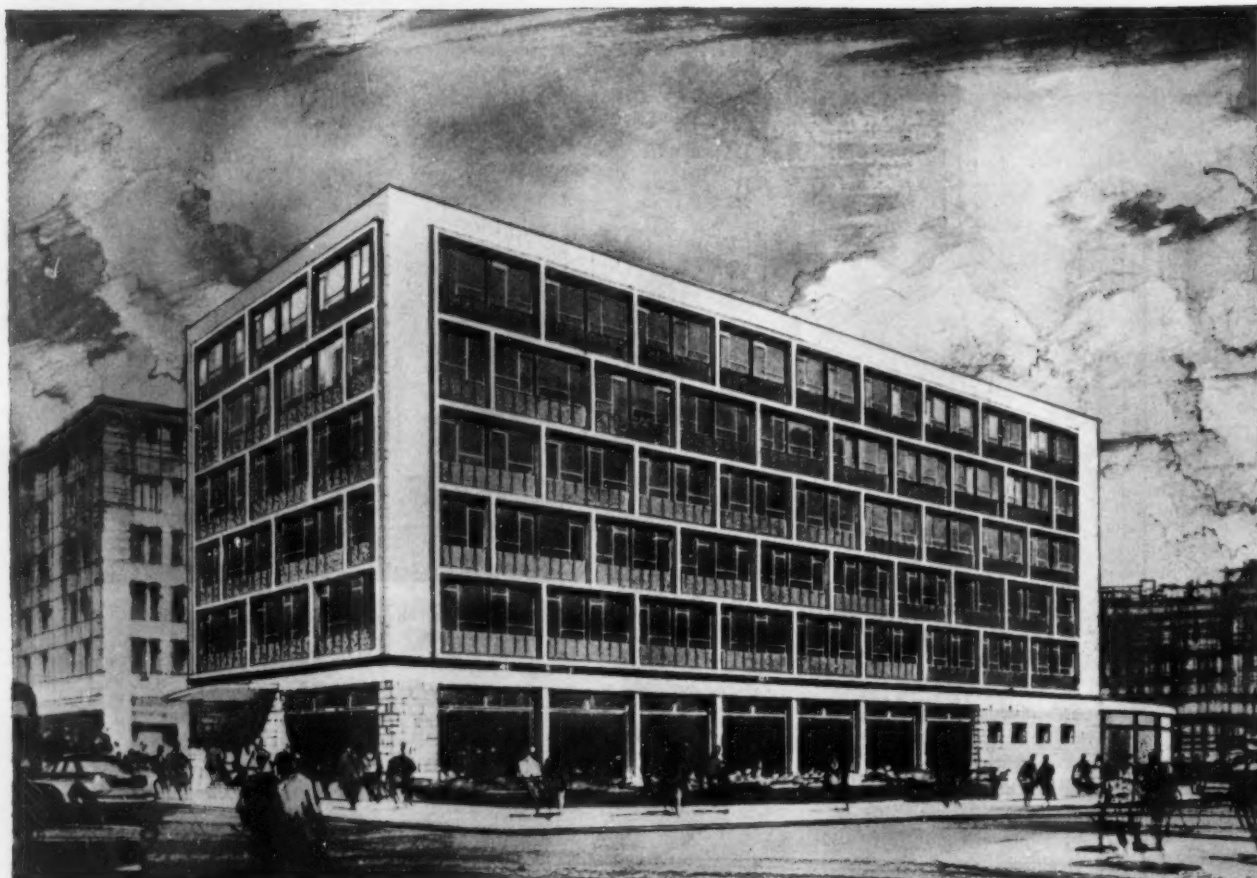
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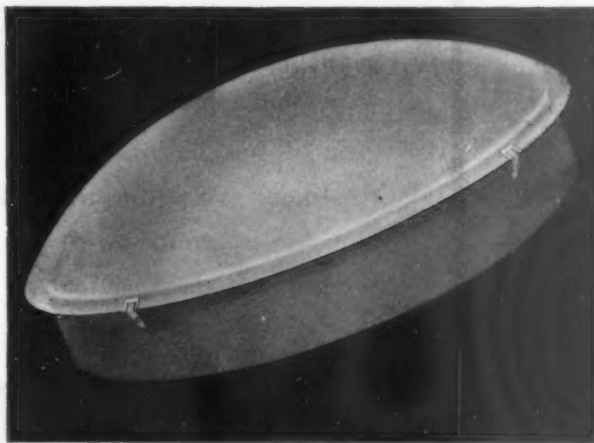


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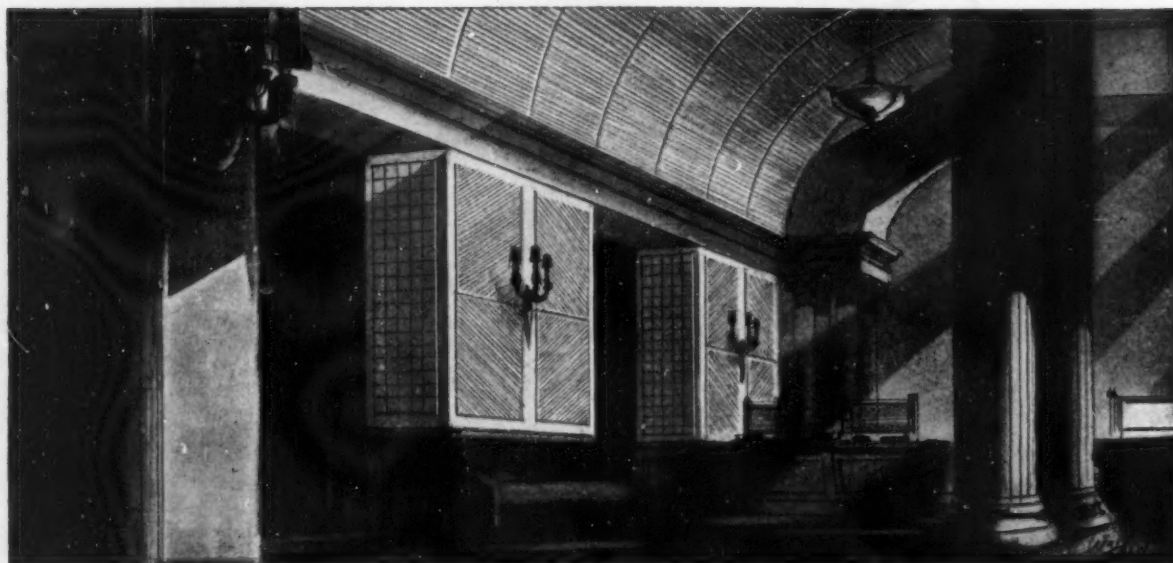


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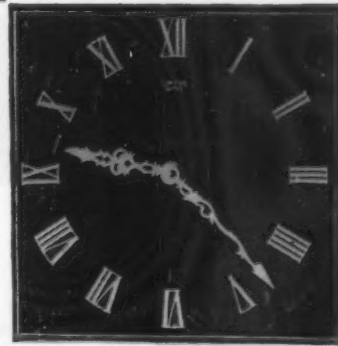


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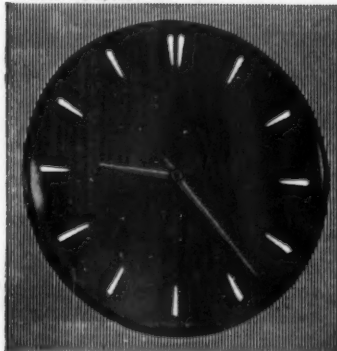
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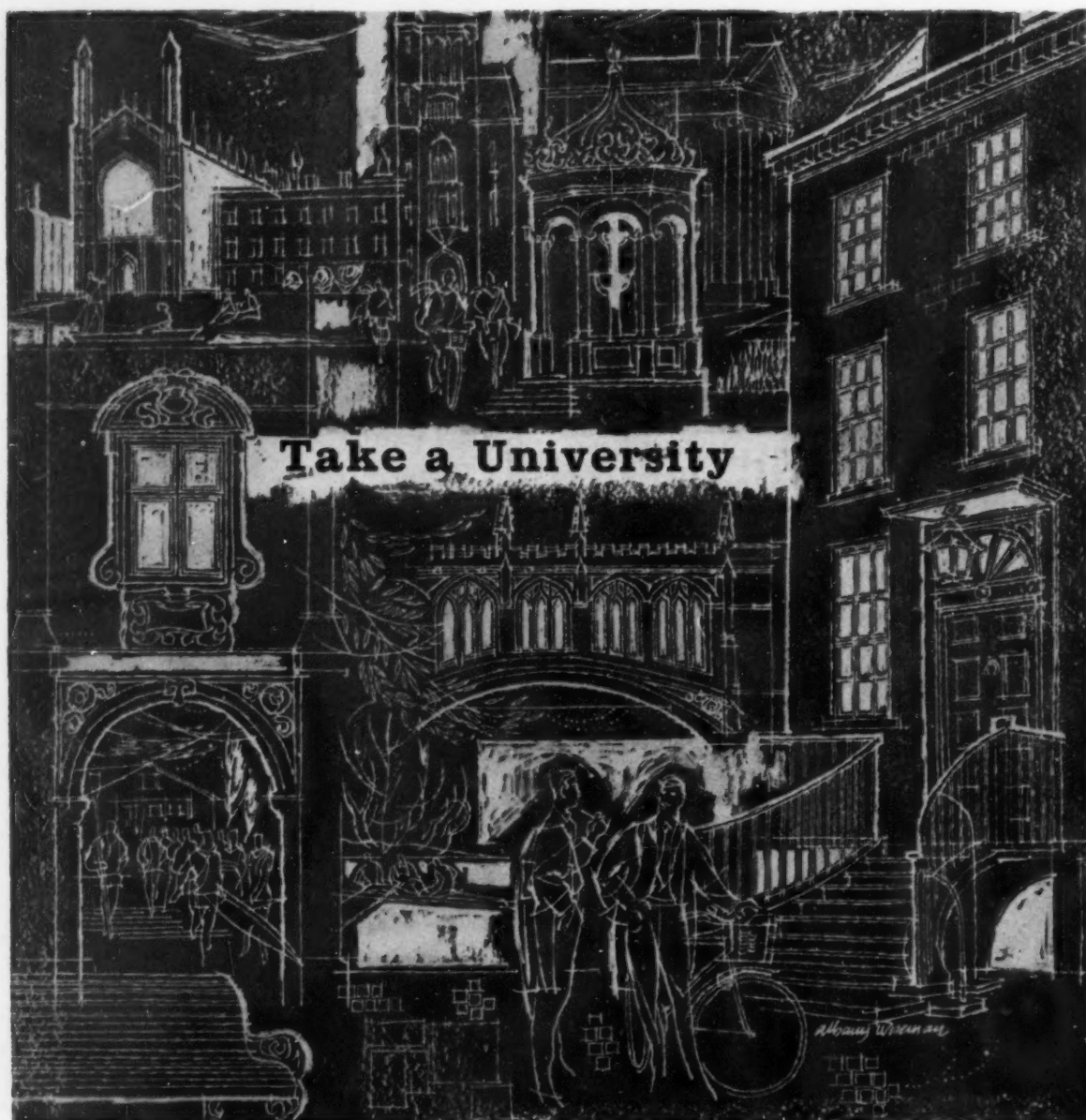


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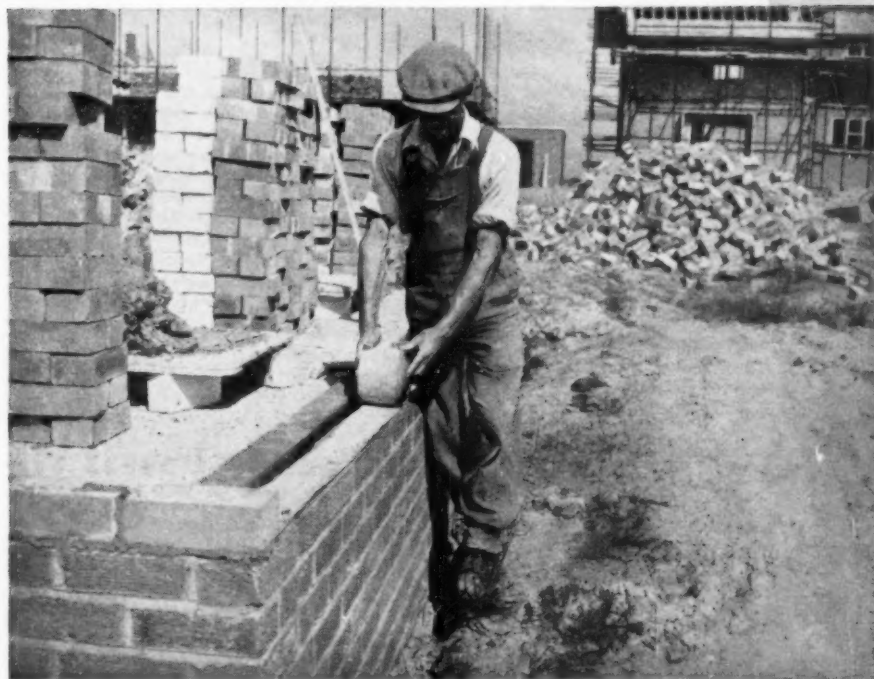
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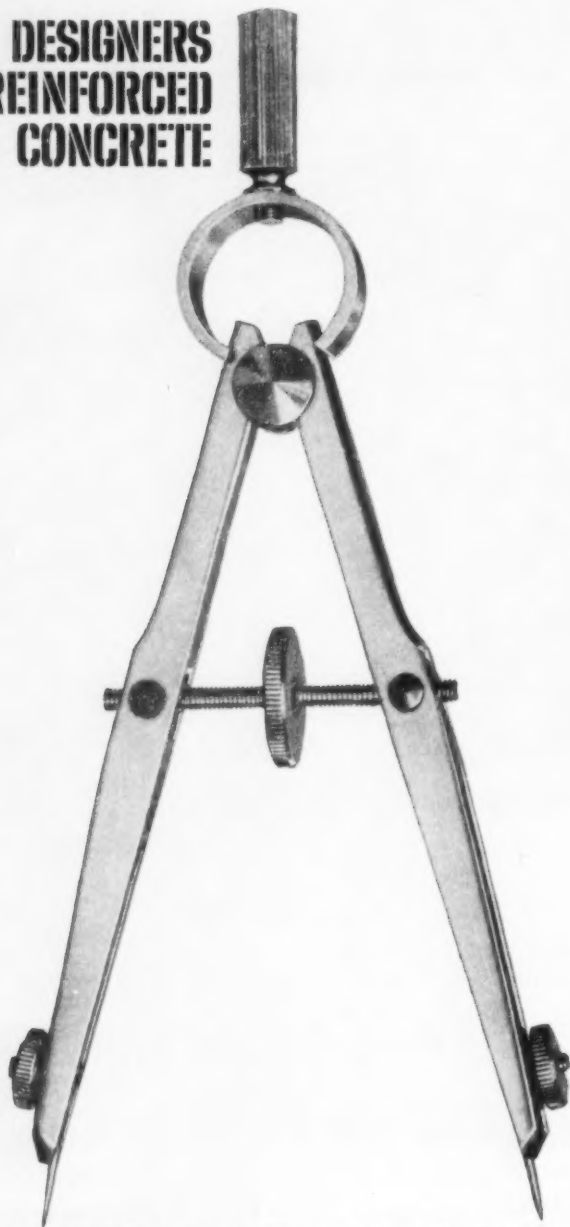


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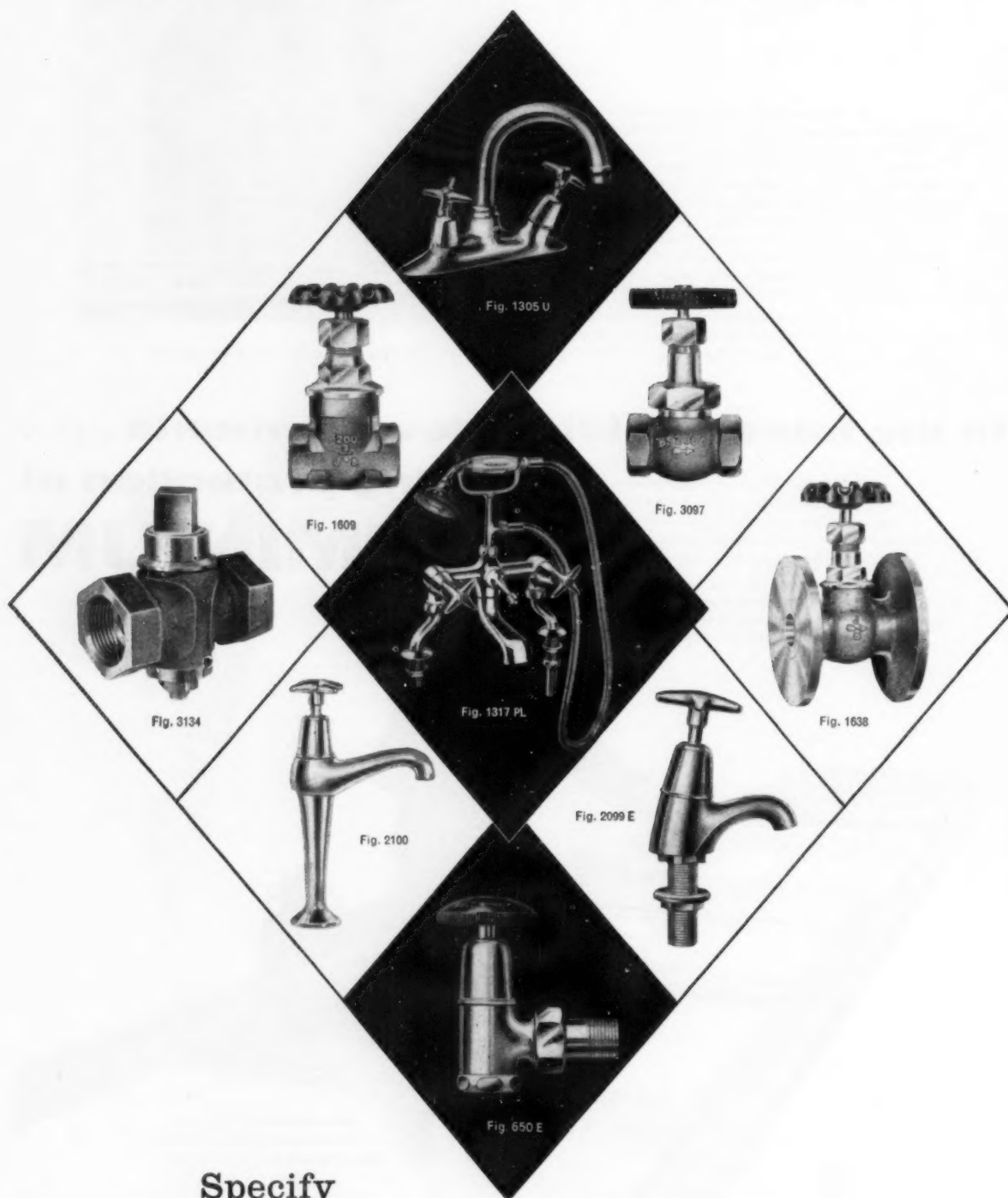
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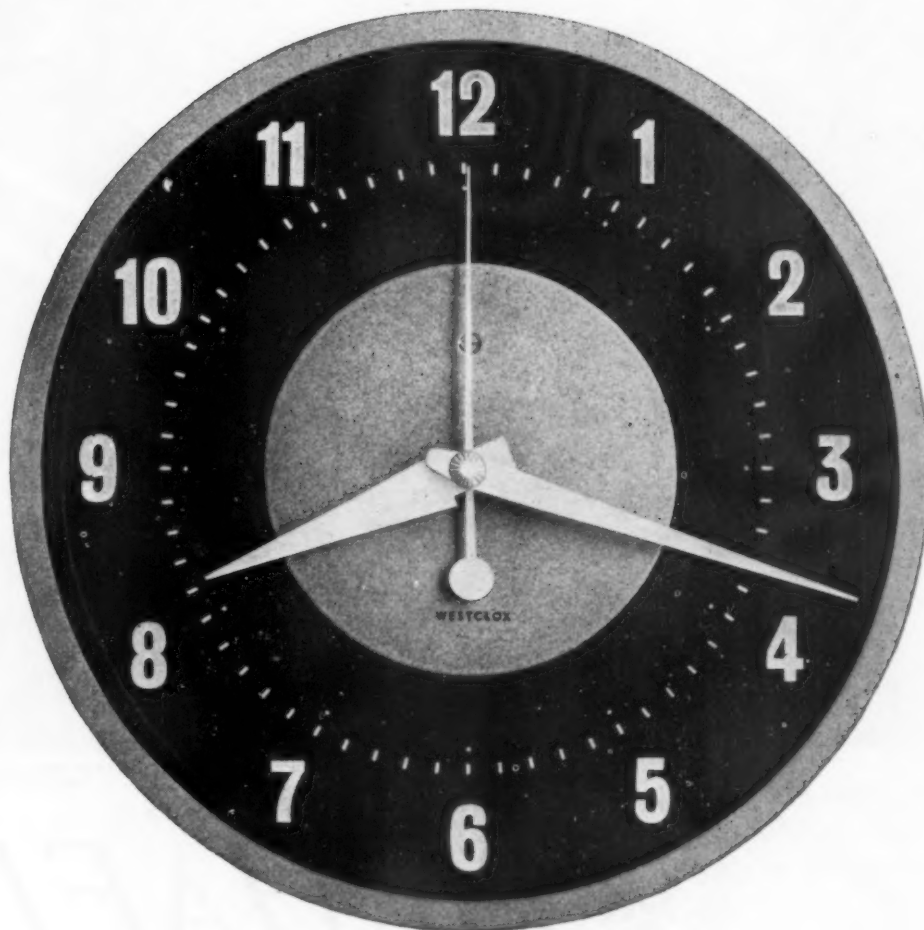
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
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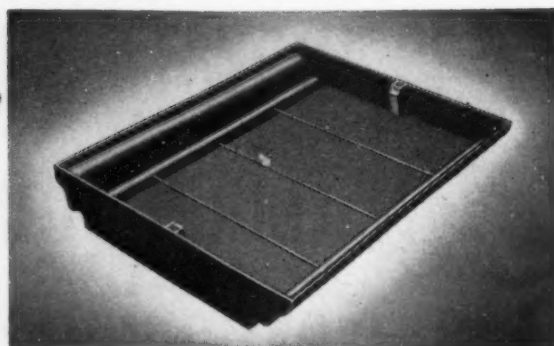
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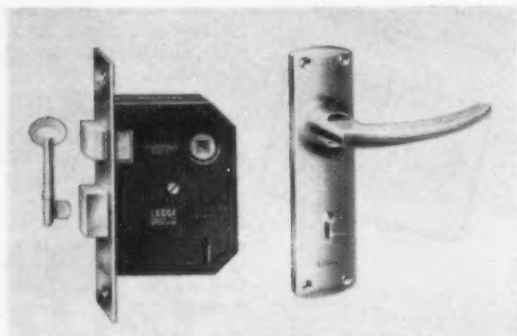
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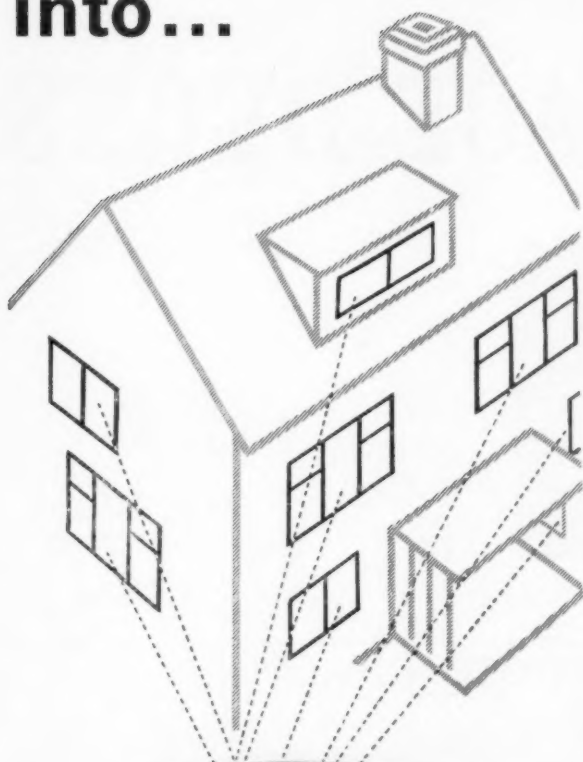
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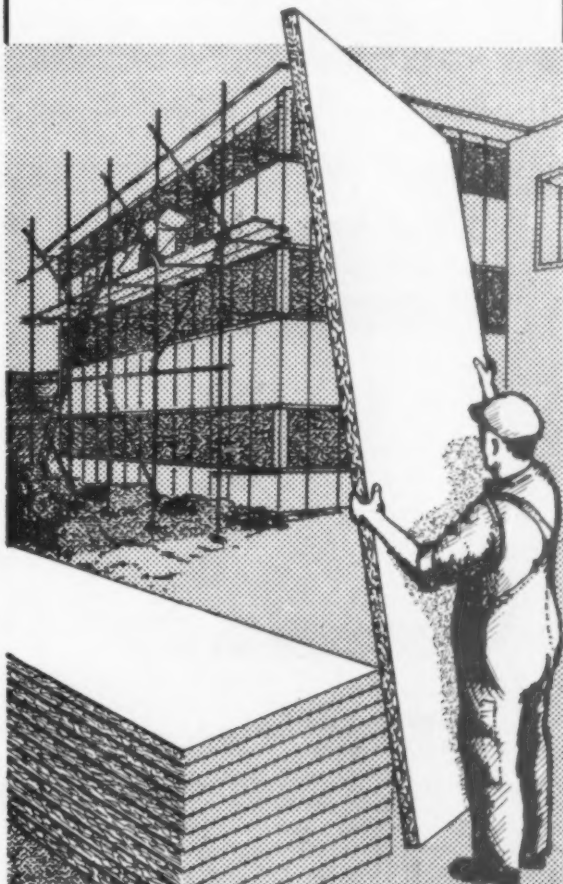
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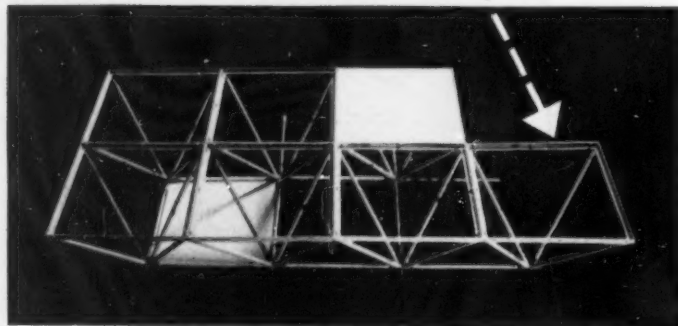
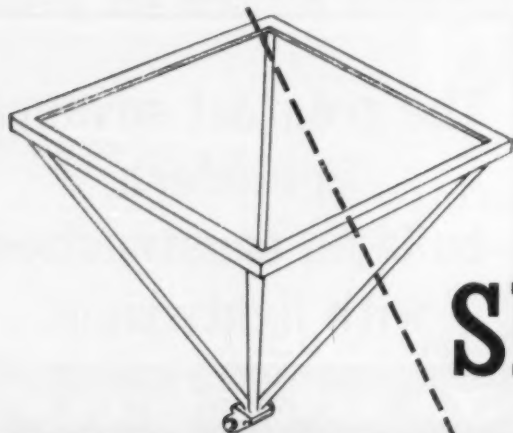
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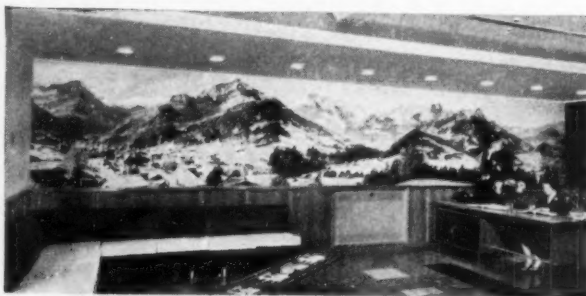
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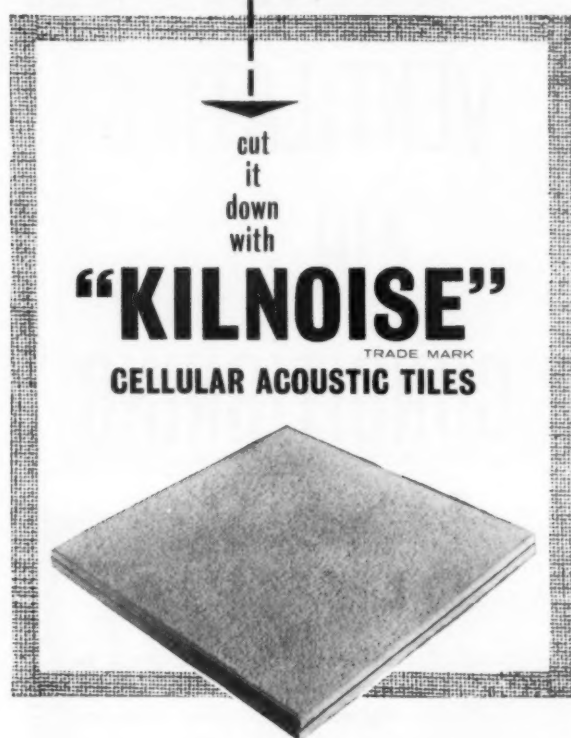
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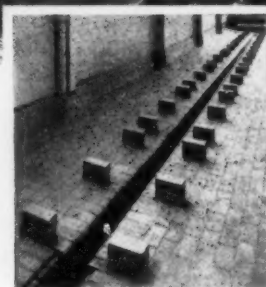
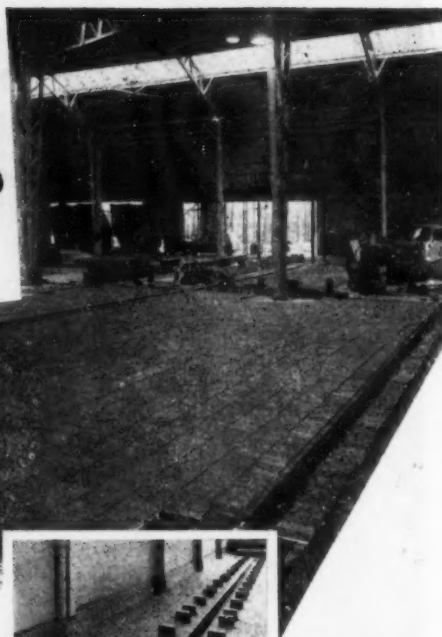
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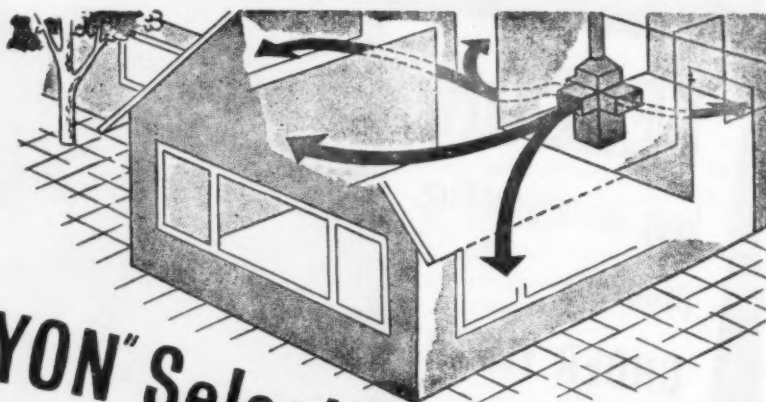
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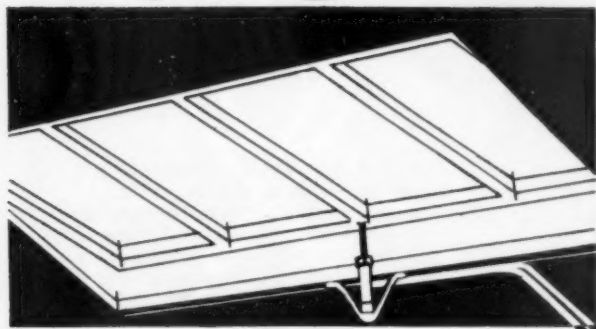
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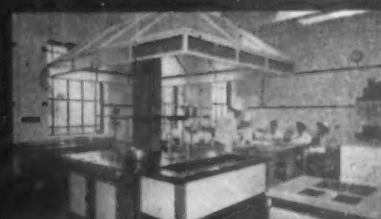
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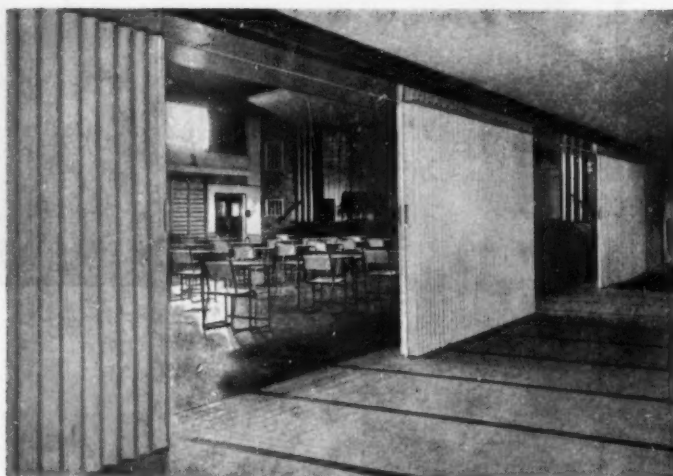
* *British Journal of Industrial Safety*, Summer 1960

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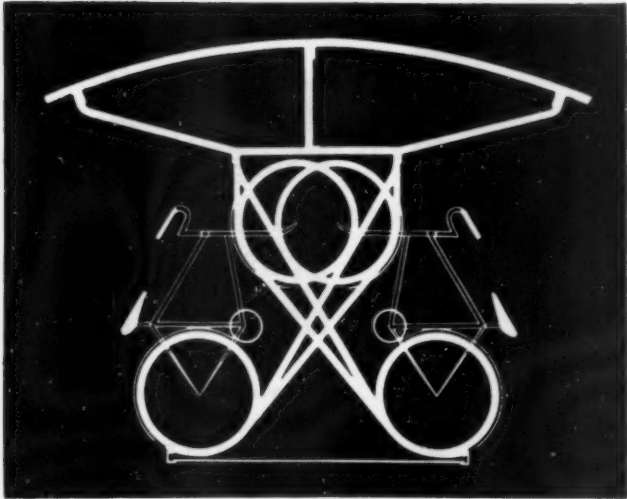
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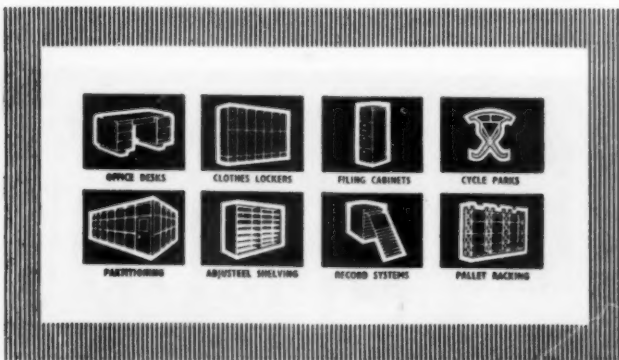
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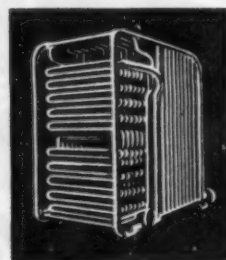
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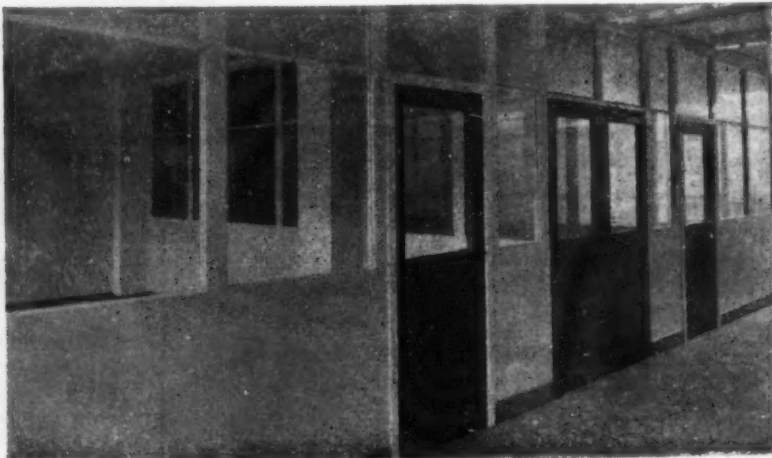
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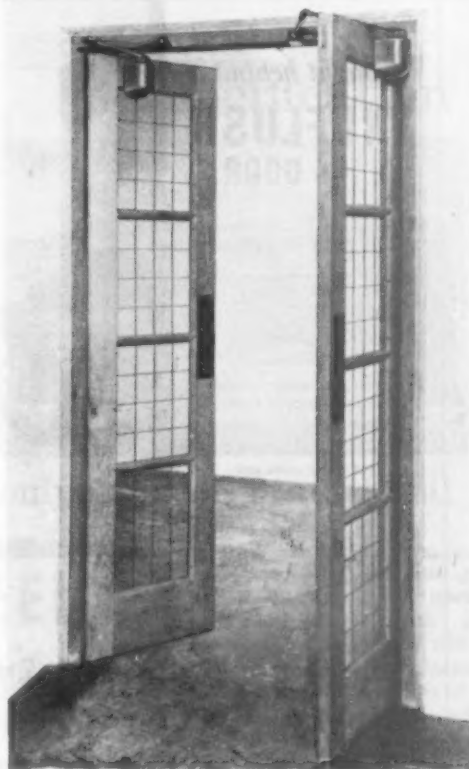
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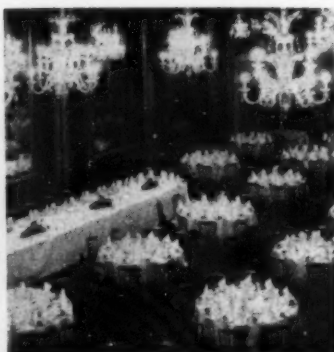
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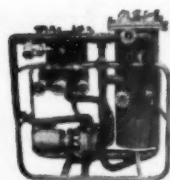
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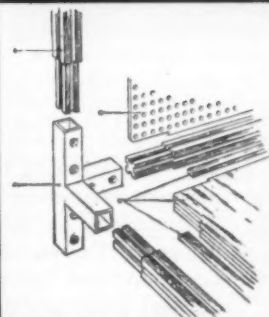
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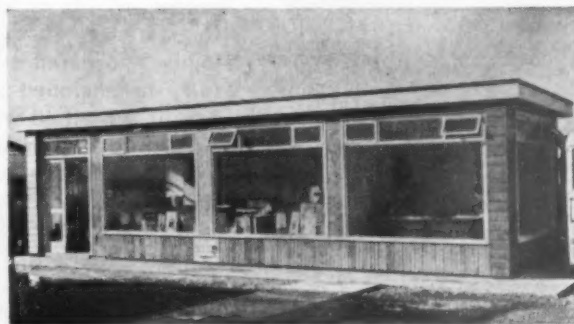
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We believe that a neglected field of advertising lies in the preparation of informative advertisements. This is the field where the most response to an advertisement can be expected from a responsible, professional reader. In our policy of providing information for the architect we want to give every encouragement to advertisers to produce concise, logically ordered material, in tabular, drawn or diagrammatic form, fully dimensioned and annotated where necessary.

This is a method which has been successfully demonstrated by the AJ's Information Sheets. Advertisements that present information in an acceptable, authoritative way will be preserved by readers.

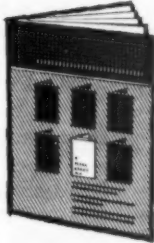
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In particular, The Architects' Journal seeks the co-operation of all the advertisers in its forthcoming series of supplements, which, commencing on October 4, will provide within a year the nucleus of a personal library (based on the SfB filing system) for every architect. Easily detachable, the supplements will deal with a different building element each week, and contain a check list, design information, references and information sheets. We hope manufacturers will see the value of making their own contribution to this library by providing as much informative advertising as possible for each subject dealt with. Such advertising being an integral part of the supplement can be easily filed by readers as information complementary to the editorial. If any advertiser or his advertising agent seeks advice or further information on this we will be pleased to give it.

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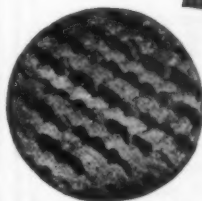
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COUNTY ARCHITECT'S DEPARTMENT

The Department has been reorganised this summer and most of the new posts have been filled; with the last stage of the reorganisation the following posts are now available:

Assistant County Architect, Scale 'D', £1,710-£1,915, to take charge directly under the County Architect of building work for five Committees. Car Allowance.

Architects A.P.T.V. £1,310-£1,480. Four senior job architects are needed to handle major projects through all stages from brief to final account within group system. Scope for suitable architects to undertake specialised studies and development work.

Quantity Surveyor A.P.T.III, £960-£1,140, to take prominent part in the work of a team providing full quantity surveying services for major contracts.

Quantity Surveyor A.P.T.II, £815-£960, to assist in the work of the team mentioned above.

Training Scheme.

A limited number of architectural and quantity surveying students can be accepted in an attractive training scheme supernumerary to the main establishment. Good facilities for study and experience; good promotion prospects at Intermediate and Final levels; Students must be eligible for probationship R.I.B.A. or studentship R.I.C.S. Removal expenses and lodging allowance paid in approved cases.

Write or telephone to Bernard Adams, A.R.I.B.A., County Architect, or F. P. Goodsman, A.R.I.C.S., Chief Quantity Surveyor, at the County Architect's Department, The Crescent, Taunton, for details, pro forma for application and information about the way the office is developing. Telephone Taunton 3451. Applications to arrive by 25th September, 1961.

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

AIR-MAIL SERVICE available on request. In response to requests from a number of Overseas subscribers for air-mail delivery of Public and Official Appointment details and Other Appointments Vacant, we have been pleased to arrange that cuttings of all such classified advertisements appearing in the A.J., shall be despatched by air-mail each week. The cost of this special service to Overseas subscribers will be 5s. for four weeks (i.e. 3d. for each additional week) and prepayment should be sent by subscribers wishing to take advantage of this service. The charge we are making represents only the actual cost of the postage involved.

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Candidates for (a) must be members of the R.I.B.A. have had sound experience and be capable of acting as Group Leaders on an extensive programme of education buildings. Candidates for (b) must be members of the R.I.B.A. have had considerable office experience and be capable of taking charge of contracts from inception to completion. For (c), should be members of the R.I.B.A., have had office experience and be capable of taking charge of small contracts. Lodging allowance and removal expenses may be paid to a married man. Apply on form obtainable from County Architect, 123, London Road, Leicester. T9044

SURREY COUNTY COUNCIL

Applications invited for appointment of ASSISTANT ARCHITECTS on GRADE IV (£1,140-£1,310 p.a. plus £45 p.a. London Allowance). Must be A.R.I.B.A. and have had experience in preparation of drawings and specifications, and be capable of assuming responsibility for medium to large scale contracts.
Full details, present salary and three copy testimonials, preferably one from present employer, to County Architect, County Hall, Kingston, as soon as possible. S9051

RUTLAND COUNTY COUNCIL

APPOINTMENT OF ASSISTANT ARCHITECT

A.P.T. IV (£1,140-£1,310)
Applications are invited from qualified Architects to work on a varied programme of new buildings.

Details of age, qualifications and experience, with names and addresses of two persons to whom reference may be made, to be sent to the County Architect and Planning Officer, T. Brian Kennedy, A.R.I.B.A., M.T.P.I., County Offices, Oakham, not later than 28th September, 1961.

A. BOND,

Clerk of the County Council. S9154

LANCASHIRE COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT
ARCHITECTURAL ASSISTANTS

(within the salary range £645-£960 according to experience and ability)

Applications are invited from Architectural Assistants for appointments to the permanent staff of the County Architect's Department, which is engaged on a large and varied programme of major projects.

Applicants should have attained at least Intermediate R.I.B.A. standard and, within this stage of qualification, have a reasonably varied experience.

Application forms and details of appointment obtainable from the County Architect, P.O. Box 26, County Hall, Preston, should be returned by 29th September, 1961. S9146

LANCASHIRE COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT
SENIOR ASSISTANT ARCHITECTS

(N.J.C. Scale "B", £1,505-£1,670)

Applications are invited from experienced Architects for posts on the permanent staff. The County Council has a large and extremely varied building programme, and posts will be filled by men of initiative, imagination and a fair for sensitive design.

Applicants are expected to be Registered Architects, as well as Associates of the Royal Institute of British Architects and, if appointed, will be able to claim a disturbance allowance up to a maximum of £125, a facility offered by the County Council to cover the expenses of removal and other associated costs.

Application forms and conditions of appointment are obtainable from the County Architect, P.O. Box 26, County Hall, Preston, returnable by the 29th September, 1961. S9145

LANCASHIRE COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT
ASSISTANT ARCHITECTS

A.P.T. V (£1,310-£1,480) and A.P.T. IV (£1,140-£1,310). (Starting salary according to experience)
Applications are invited from qualified ARCHITECTS of initiative, keen on design and modern structural methods, to work on a large and varied programme.

If appointed, applicants will be able to claim a disturbance allowance up to a maximum of £125, a facility offered by the County Council to cover the expenses of removal and other associated costs.

Application forms and details of appointment, obtainable from the County Architect, P.O. Box 26, County Hall, Preston, should be returned by the 29th September, 1961. S9147

PEMBROKESHIRE COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT

Applications are invited from members of the R.I.B.A. for ASSISTANT ARCHITECTS Grades III and IV A.P. & T. Division.

Applicants must have had a good experience in architectural design and building work under construction and possess sound administrative ability.

Conditions of appointment and forms of application may be obtained from the County Architect, County Offices, Haverfordwest, and must be returned to him not later than September 23rd, 1961.

H. LOUIS UNDERWOOD,

Clerk of the County Council.

County Offices,
Haverfordwest,
28th August, 1961. 9179

BOROUGH OF SOLIHULL
APPOINTMENT OF QUANTITY SURVEYOR

Applications are invited from Quantity Surveyors with suitable qualifications and experience, for an appointment as ASSISTANT QUANTITY SURVEYOR in the Architects' Section of the Borough Surveyor's Department at a salary in accordance with A.P.T. Grades III-IV (£960-£1,310 per annum) commencing according to experience and qualifications.

The Borough, which has a population of approximately 96,000 and which is still expanding rapidly is an Excepted District for Education, and in April last assumed delegated powers for Health and Welfare Services. It has also been recommended for County Borough Status by the Local Government Commission for England. There is a considerable programme of varied capital work on hand and to be undertaken in the future.

The appointment is subject to the usual Local Government Conditions of Service, to a satisfactory medical examination, and one month's notice on either side.

In appropriate cases the Council will assist in the provision of housing accommodation as soon as possible and the whole of an officer's removal expenses will be paid subject to 12 months' service.

Applications, giving full particulars as to age, qualifications, and experience and past and present appointments, together with the names and addresses of two referees, should be submitted to the Borough Engineer and Surveyor, 90, Station Road, Solihull, not later than Saturday, 16th September, 1961.

W. MAURICE MELL,

Town Clerk.

Council House, Solihull. 9165

CITY OF PERTH

Applications are invited for the post of ASSISTANT ARCHITECT in the Burgh Surveyor's Department at a salary within the scale £1,150 x £50 to £1,350 per annum with placing according to qualifications and experience. Applicants must be Associate Members of the Royal Institute of British Architects. Housing accommodation will be provided if required.

Full details of the post may be obtained from the Burgh Surveyor, 15, Tay Street, Perth. 9259

THE UNIVERSITY OF MANCHESTER

Applications are invited for the post of LECTURER IN ARCHITECTURE from candidates with professional membership of the Royal Institute of British Architects and not less than three years' of practical experience. Salary on a scale £1,050 to £1,650 per annum; initial salary according to qualifications and experience. Membership of the F.R.S.U. and Children's Allowance Scheme. Applications should be sent not later than September 30th, 1961, to the Registrar, the University, Manchester, 13, from whom further particulars and forms of application may be obtained. S9140

COUNTY BOROUGH OF NORTHAMPTON
SENIOR ASSISTANT ARCHITECT

A.P.T. IV V (£1,140-£1,480)
Applications are invited for this appointment for Schools, Municipal Buildings and other projects.

Commencing salary will depend upon ability and experience and full particulars of the appointment and application form, returnable by 27th September, may be obtained from the Borough Architect, Guildhall, Northampton.

C. E. VIVIAN ROWE,

Town Clerk. 9243

ARCHITECTURAL ASSISTANT

An Architectural Assistant is required by the West Midlands Divisional Coal Board at their Divisional Headquarters, Himley Hall, Dudley, Worcs. Salary within a scale rising to £935 per annum.

Applicants must preferably have passed the Intermediate R.I.B.A. or have had considerable practical experience.

The Office is engaged on a programme of varied and interesting work of industrial, office and welfare nature and offers scope for applicants with a progressive outlook.

Application forms from Divisional Chief Staff Officer, West Midlands Divisional Coal Board, Himley Hall, Dudley, Worcs., quoting ref. A.J., to be returned by 27th September, 1961. 9256

BOROUGH OF LEYTON
(IN THE COUNTY OF ESSEX)
COMMITTEE FOR EDUCATION
APPOINTMENT OF ARCHITECTURAL ASSISTANTS

Applications are invited for the under-mentioned appointments:

ARCHITECTURAL ASSISTANT, Grade A.P.T. III, £960-£1,140 plus annum plus London weighting.

JUNIOR ARCHITECTURAL ASSISTANT, Grade A.P.T. I, £645-£815 per annum plus London weighting.

The successful applicants will be employed by the Essex County Council and will work in the School Architect's Section of the Borough Engineer & Surveyor's Department, Town Hall, Leyton, E.10. Five-day week is operated.

Details and forms of application from the Borough Education Officer, Education Offices, Kirkdale Road, Leytonstone, E.11, to whom they should be returned within fourteen days from the appearance of this advertisement. 9245

COVENTRY

Applications are invited for the following architectural posts:-

(a) GROUP ARCHITECTS, Scale "B" (£1,470-£1,670).

(b) ARCHITECT, A.P.T. V (£1,310-£1,480).

(c) ASSISTANT ARCHITECT, A.P.T. IV (£1,140-£1,310). Final R.I.B.A. including Prof. Practice.

(d) ARCHITECTURAL ASSISTANT, A.P.T. III (£960-£1,140). A.P.T. II (£815-£960); A.P.T. I (£645-£815). According to qualification experience.

Projects include varied types of educational and welfare buildings, multi-storey redevelopment and suburban housing.

Housing accommodation in approved circumstances, or up to 95 per cent. advance for house purchase. Removal expenses loan. Five-day working week.

Application forms from Department of Architecture and Planning, Council House, Returnable by 25th September. S9225

CORPORATION OF KIRKCALDY
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ASSISTANT ARCHITECTS

Applicants must be A.R.I.B.A., and have a contemporary outlook on the design and layout of housing and other local authority buildings and the ability to supervise and control large scale contracts. Salary Scale up to £1,325 with placing according to age and experience. Housing accommodation available. Posts pensionable. Medical examination. Canvassing direct or indirect disqualifies. Declare relationship to member of Council or Chief Official. Applications, stating age, details of training, qualifications and experience, with names and addresses of two referees, to the Burgh Engineer and Planning Officer, Town House, Kirkcaldy, by 29th September, 1961. S9221

GLENROTHES DEVELOPMENT CORPORATION

ARCHITECT (A.R.I.B.A.) required for a variety of work including Housing, Industrial, Shopping and Commercial Buildings.

The vacancy offers an excellent opportunity to an Architect with imagination and enthusiasm.

Salary up to £1,480 per annum according to experience. House to rent available.

Applications to Secretary and Legal Adviser, Glenrothes Development Corporation, Glenrothes, Fife. 9232

BUCKS COUNTY COUNCIL

Applications are invited for the following appointments in the County Architect's Department: ASSISTANT ARCHITECTS, A.P.T. Grade V-£1,310-£1,480 per annum.

These appointments are superannuable and subject to medical examination.

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

Applications on forms provided, must be returned by Monday, 18th September, 1961.

F. B. POOLEY,

County Architect.

County Offices, Aylesbury, Bucks. 9184

ARCHITECTS AND MAINTENANCE SURVEYORS. Pensionable posts for men and women at least 25 and under 35 on I.L.B.I. (extension for regular forces service, Overseas Civil Service, established civil service and temporary Government service as Architect or Maintenance Surveyor). Candidates must be registered Architects or, alternatively, for Maintenance Surveyor posts, have achieved Corporate Membership of R.I.C.S. (Building Section), or have passed examinations necessary for attaining Corporate Membership. National salary £936-£1,258 according to age, rising to £1,430. Promotion prospects. Write Civil Service Commission, 17, North Audley Street, London, W.1. for application form quoting S.60-61. 9300

WARWICKSHIRE COUNTY COUNCIL COUNTY PLANNING DEPARTMENT
Applications are invited for TWO posts on Grade A.P.T. III/IV.

Applicants must have experience of development plan work and will be engaged on the Plan review. They should be qualified professionally and will be stationed at Warwick where all planning work is undertaken.

The commencing salary in each case will be according to experience and qualifications. The posts are subject to the provisions of the Local Government Superannuation Act and to a medical examination. Financial assistance will be given towards removal expenses.

Applications, together with the names and addresses of two referees, should be sent to J. J. Brooks, County Planning Officer, Northgate, Warwick, not later than Saturday, 23rd September, 1961.

L. EDGAR STEPHENS,
Clerk of the Council.

Shire Hall, Warwick. 9244

ARCHITECTS

The Northern Ireland Housing Trust has vacancies for ARCHITECTS, Class I "A" on scale £1,564-£1,950. Candidates must be Associates of the Royal Institute of British Architects.

The persons appointed will be required to contribute to a superannuation scheme which allows for the transfer of benefits in local government schemes in suitable cases.

Housing accommodation may be arranged for married candidates.

Please apply not later than 22nd September, 1961, giving details of age, education, qualifications and experience, including present post and salary to the General Manager, Northern Ireland Housing Trust, 12, Hope Street, Belfast, 12. Please mark envelope 33/96. 9239

ARCHITECTS BOROUGH OF TOTTENHAM MIDDLESEX (Population 116,000)

Applications are invited from Architects who wish to be engaged on extensive schemes or urban renewal including layouts for housing estates and shopping precincts, the design and construction of tall flats and other domestic buildings, public buildings and school work.

(a) SENIOR ASSISTANT ARCHITECTS, J.N.C. "A" - £1,310 to £1,565 per annum.

(b) ASSISTANT ARCHITECT, A.P.T. Grade IV - £1,140 to £1,310 per annum.

(c) ARCHITECTURAL ASSISTANTS, A.P.T. Grade II - £815 to £960 per annum.

All appointments will be to the established staff and commencing salaries will be according to experience and ability. London weighting (£15 to £45) is payable in addition to posts (b) and (c).

Applicants for posts—
(a) and (b) should hold a final professional qualification;
(c) should have passed R.I.B.A. Intermediate Examination or equivalent.

Five-day week; part removal expenses reimbursed; staff restaurant facilities.

Application form, obtainable from the Borough Engineer and Surveyor (A.J.), Town Hall, N.15, should be returned to him not later than 30th September, 1961.

M. LINDSAY TAYLOR,
Town Clerk. S9220

NORTH RIDING COUNTY COUNCIL ARCHITECT'S DEPARTMENT

A vacancy on the Quantity Surveying Section of the Established Staff has created an opportunity for an applicant who has the necessary drive and initiative to work on a varied programme for all Committees of the Council.

SENIOR QUANTITY SURVEYOR

Salary A.P.T. V (£1,310-£1,480)
The successful applicant will work under the direction of the Chief Quantity Surveyor, and will have opportunities for administration and expanding his knowledge of cost planning and cost control: should be A.R.I.C.S.

Application forms may be obtained from the County Architect, R. Allport Williams, M.B.E., R.Arch., F.R.I.B.A., County Hall, Northallerton. Completed forms should be returned to the Clerk of the County Council, County Hall, Northallerton, by 27th September, 1961.

ROBERT A. WOTHERSPOON,
Clerk of the County Council. S9304

BOROUGH OF RAWTENSTALL APPOINTMENT OF CHIEF ARCHITECT

Applications are invited for the above permanent appointment at a salary within A.P.T. V (£1,310-£1,480 per annum). Applicants should be members of the R.I.B.A.

The appointment will be subject to the provisions of the Local Government Superannuation Acts, the National Scheme of Conditions of Service and the termination by one month's notice by either side. Housing accommodation will be available.

Applications, including names and addresses of two referees, should reach the undersigned not later than Monday, the 25th September, 1961. Canvassing will disqualify. Any relationship to members or senior officers of the Council must be disclosed.

COLIN CAMPBELL,
Town Clerk.

Town Hall,
Rawtenstall,
Rossendale,
Lancs. 9264

FIFE COUNTY COUNCIL

Applications are invited from QUALIFIED ARCHITECTS to fill a vacancy in the COUNTY ARCHITECT'S DEPARTMENT, COUNTY BUILDINGS, CUPAR. Candidates should be associates of the R.I.B.A. Housing needs may be met. Salary Scale: £1,230/£1,535 per annum and placing may be given according to age, experience, etc. Superannuation Scheme. Applications, stating age, experience, qualifications, present position and salary, accompanied by copies of recent testimonials to the undersigned not later than 23rd September, 1961. No canvassing.

MATTHEW POLLOCK,
County Clerk.

County Buildings,
Cupar, Fife. 9284

ISLE OF ELY COUNTY COUNCIL COUNTY ARCHITECT'S DEPARTMENT HEATING ENGINEER

Applications are invited for the post of HEATING ENGINEER.

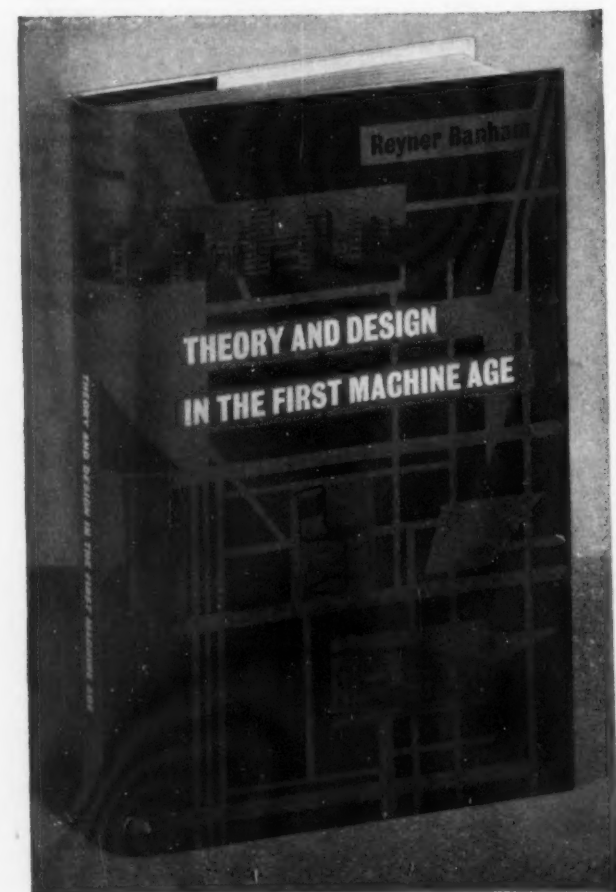
Salary will be within Grade A.P.T. V (£1,310-£1,480) with Essential User car allowance.

Applicants must be A.M.I.H.V.E.

The post will be subject to N.J.C. Conditions and the passing of a medical examination.

Application forms and further particulars may be obtained from the County Architect, County Hall, March, to whom they must be returned by not later than Monday, 9th October, 1961.

R. F. G. THURLOW,
Clerk of the County Council. S9276



THEORY AND DESIGN IN THE FIRST MACHINE AGE

REYNER BANHAM

IN THE FIRST THIRTY years of the twentieth century, architects made a tremendous effort to adapt themselves and their art to a new set of circumstances—life in a Machine Age. The whole theory of architecture was brought under scrutiny—some of it for the first time since Antiquity—in a wave of self-examination unparalleled in the history of art. Not only was a new climate of ideas created, but the Masters of Modern Architecture—Gropius, Mies van der Rohe, Le Corbusier and others of less fame but no less interest—used their writings to justify their buildings, and their buildings to confirm their theoretical writings. Dr. Banham's subject covers not only a mass of theoretical writings—much of it unknown to English readers—but also buildings, projects, industrial designs, painting and sculptures—many of them illustrated in an English-language publication for the first time. Dr. Banham shows how one unifying theme finally emerges from this melting pot of exciting designs and excited discussion—the heme of a Machine Age Architecture; the architecture of the International Style, as the historians term it; Modern Architecture with its white walls, flat roofs and big windows, as the man in the street understands it. Into the growth of this theme went many highly inventive designs, which the author illustrates and analyses; many and varied publications, ranging from the scholarly to the scandalous, from which he quotes extensively, showing not only how the theories are related to the finished products, but also how the theories—and even the theorists—are related to one another.

The size of the book is 8½ × 5½ in. 340 pages including over 150 half-tone and line illustrations. 45s. net, postage 1s. 9d. The Architectural Press, 9-13 Queen Anne's Gate. S.W.1.



Brixton School of Building

FULL TIME COURSES in Architecture, Building, Decorating and Painting, Structural Engineering and Surveying.

SANDWICH COURSES in Structural Engineering and for Higher National Diploma in Building cover six months' study at the College and six months' experience in industry each year, for a period of four years.

PART TIME AND EVENING COURSES: Courses for National Certificates and for examinations of the Royal Institute of British Architects, Town Planning Institute, Royal Institution of Chartered Surveyors, Institute of Builders, Institution of Civil Engineers, Institution of Structural Engineers, Institution of Public Health Engineers, Institute of Quantity Surveyors, and Institute of Plumbing; also for National Diploma of Design and Incorporated Institute of British Decorators and Interior Designers, City and Guilds of London Institute Courses in Building Crafts.

ADULT AND POST ADVANCED COURSES in Building Administration and Higher Technology.

ENROLMENT—11th-15th September, 1961 (Full-time and part-time day courses). 18th-22nd September, 1961 (Part-time evening courses).

ARCHITECTURAL ASSISTANT

required by

KODAK LIMITED

The work will cover design and layout of industrial and office buildings and the preparations of working drawings. Candidates should be qualified to Higher National Certificate in Building or equivalent.

Advantages of joining Kodak Limited include excellent pay and working conditions, a generous Pension Plan, a voluntary part contributory Life Insurance Scheme, together with an annual wage dividend.

Please apply:—

Men's Personnel Department,
Kodak Limited (Factories),
Harrow, Wealdstone, Middx.

Quoting JAW/4

New Ideal Homesteads Limited

ARCHITECTS and ASSISTANTS

who are interested in the DESIGN, RESEARCH and DEVELOPMENT of Multi-storey projects and Contemporary Housing schemes, are urgently required by this progressive company.

SALARIES UP TO £1,650
according to experience

Apply in confidence to Chief Architect,
61 SOUTH STREET, EPSOM, SURREY.

or ring Epsom 1144



National Provincial Bank

is planning a considerable long term building programme and ARCHITECTS are required in the following categories:

PRINCIPAL ASSISTANT ARCHITECT,
qualified with at least 10 years' experience.
ASSISTANT ARCHITECTS,
qualified with some previous experience.
ARCHITECTURAL ASSISTANTS,
recently qualified or Intermediate.
ARCHITECTURAL DRAUGHTSMEN,
heavy architectural drawing experience.

There are also openings for:

QUALIFIED MECHANICAL ENGINEERS.
MECHANICAL ENGINEERING DRAUGHTSMEN.

Please write, stating age, experience, qualifications and salary required to:

B. C. SHERREN, F.R.I.B.A., CHIEF ARCHITECT,
NATIONAL PROVINCIAL BANK LIMITED,
BOX No. 34, 15 BISHOPSGATE, LONDON, E.C.2.

Additional facilities:

Non-contributory pension and other benefits.
Canteen facilities. London Allowance.
Three weeks' holiday to most grades.

COUNTY BOROUGH OF DEWSBURY
DEPARTMENT OF BOROUGH ARCHITECT
AND BUILDINGS SURVEYOR
Applications are invited for the following appointments within the scope of the grades stated:—

- (a) ASSISTANT MAINTENANCE OFFICER—Miscellaneous Grade VI (£760-£825).
(b) CLERK OF WORKS—A.P.T. Grade I (£645-£815).

The provision of housing accommodation will be considered if required.
Applications for forms and particulars of appointments to A. G. Beckett, A.R.I.B.A., A.M.T.P.I., Borough Architect and Buildings Surveyor, Town Hall, Dewsbury. Closing date 22nd September, 1961.

A. NORMAN JAMES,
Town Clerk.

Town Hall,
Dewsbury.
22nd September, 1961. 9229

BOROUGH OF WOOD GREEN
APPOINTMENT OF ARCHITECTURAL
ASSISTANT

Applications are invited for the above appointment on the permanent establishment of the Borough Engineer's Department in A.P.T. Grade III (£960-£1,140) plus the appropriate London weighting allowance.

Applicants must be fully qualified architects and have had experience in the preparation of plans, drawings and other details associated with local authority housing schemes and other works. The Council may make housing accommodation available to the successful applicant, if desired. The appointment is subject to the Local Government Superannuation Acts and to medical examination.

Applications, stating age, qualifications, experience and names and addresses of two referees, must reach the undersigned by the 25th September, 1961.

G. W. PLATER,
Town Clerk.

Town Hall,
Wood Green, N.22.
7th September, 1961. 9255

CITY OF OXFORD
DEPUTY CITY ARCHITECT AND PLANNING
OFFICER

Applications for this appointment invited from qualified Architects who should preferably hold a town planning qualification and have had wide local authority experience in both fields. The Department is primarily responsible for all architectural work and the planning functions of the Council. Salary scale £1,860-£2,120 (N.J.C. Scale "E"). Car allowance.

Application form and conditions of appointment to be obtained from the City Architect and Planning Officer, Town Hall, Oxford. Closing date 10th October, 1961.

HARRY PLOWMAN,
Town Clerk.

FIFE COUNTY COUNCIL
DRAFTSMEN required for COUNTY ARCHITECTS' DEPARTMENT. Salary Scale: £640/£975 per annum. Placing on the scale may be given according to experience, qualifications, etc. Housing needs may be met. Superannuation Scheme. Applications, stating age, experience, qualifications, with copies of recent testimonials, by 22nd September, 1961, to the County Clerk, County Buildings, Cupar, Fife. 9283

BOROUGH OF EALING
TOWN PLANNING ASSISTANT: A.P.T. IV (£1,185-£1,355 inclusive)

Candidates should possess a recognised qualification in town planning, surveying, architecture or engineering.

Preference will be given to candidates with appropriate town planning experience, but qualified persons with some knowledge of town planning will be considered.

The post is mainly concerned with control of development, and the successful candidate will gain wide experience of the work of a large Borough where considerable development and redevelopment are taking place.

Full particulars and application form from the Borough Engineer, Town Hall, Ealing, W.5. Closing date 30th September, 1961.

E. J. COPE-BROWN,
Town Clerk.

Town Hall,
Ealing, W.5. 89302

STEVENAGE NEW TOWN

Stevenage Development Corporation invites applications for the appointment of ASSISTANT PLANNER in the Chief Architect and Planner's Department at a salary in accordance with New Town A.P.T. Grade IV/V (£1,140-£1,480).

Candidates should be Members or Associate Members of the Town Planning Institute and should have had a general experience in planning. The work consists of general and neighbourhood planning in the new town as well as dealing with statutory planning applications.

Living accommodation may be available in due course in an appropriate case.

Applications, giving full details and the names of two referees, to be sent to the Chief Administrative Officer, Daneshill House, Danestrete, Stevenage, Herts, not later than Wednesday 27th September, 1961. 9299

CITY OF LIVERPOOL
ARCHITECTURAL & HOUSING DEPARTMENT
APPOINTMENT OF ARCHITECTS

Applications are invited for the appointment of:

- (a) CHIEF ASSISTANTS (ARCHITECTURAL), Scale "C" (£1,560-£1,825).
(b) ASSISTANT (ARCHITECTURAL), A.P.T. IV/Scale "A" (£1,140-£1,565).

Commencing salary in accordance with qualifications and experience.

Applicants should be Associates of the Royal Institute of British Architects or hold equivalent qualification. The posts give wide opportunities for personal initiative.

Further particulars and application forms returnable by 30th September, 1960, from the City Architect and Director of Housing, Blackburn Chambers, Dale Street, Liverpool, 2.

The appointments are superannuable and subject to the Standing Orders of the City Council. Canvassing disqualifies.

THOMAS ALKER,
Town Clerk.

Municipal Buildings,
Dale Street,
Liverpool.
August, 1961. 9296

NATIONAL COAL BOARD
NORTH EASTERN DIVISION
Require in Architects Branch at Conisbrough, nr. Doncaster.

(a) ARCHITECTS to act as Leading Assistants to Section Architects. The work covers wide and varied fields and all stages of projects. Qualification—A.R.I.B.A. Salary £900 x £35-£1,250. (Quote AA.647 A.J.)

(b) ARCHITECTURAL ASSISTANT. The work is varied and interesting, covering sketch plan, working drawing and construction stages. Salary £785 x £30-£1,100. (Quote AA.648 A.J.)

(c) ARCHITECTURAL ASSISTANT TRAINEE. Applicants must have five subjects (including English and Mathematics and preferably Art) at G.C.E. "O" level, two subjects at "A" level, and be prepared to study for the examinations of the R.I.B.A. Previous experience desirable. Salary 90s. 6d. at 16 years, rising to 220s. (Quote AA.649 A.J.)

All posts are superannuable, and carry concessionary coal entitlements. Five-day week, canteen.

Write for application forms, quoting references shown above, to Staff Department, 16, South Parade, Doncaster, by 22nd September. 9292

BOROUGH OF DOVER
APPOINTMENT OF ARCHITECTURAL
ASSISTANT

Applications are invited for the appointment of Architectural Assistant (Grades A.P.T. I/II, £645-£960) on the staff of the Borough Engineer, Surveyor and Water Engineer.

Preference will be given to applicants who have passed the Intermediate R.I.B.A. Examination or its equivalent at one of the recognised Schools of Architecture, but architectural draughtsmen with experience in the improvement of houses and the conversion to flats will be considered.

The successful applicant will commence on a stage within the grades mentioned, according to experience and ability.

Applications for assistance in regard to housing accommodation will be considered.

Applications, stating age, qualifications and experience, with the names and addresses of two persons to whom reference may be made, should be delivered to the Borough Engineer, Brook House, Dover, not later than Monday, 2nd October.

JAMES A. JOHNSON,
Town Clerk.

New Bridge House,
Dover. 9295

LONDON ELECTRICITY BOARD
SENIOR DRAFTSMAN

Applications are invited for the above position in the Board's Southern District at 54, Bengeworth Road, London, S.E.5.

Applicants should have had a good general and technical education and possess the Ordinary National Certificate or its equivalent and be capable of supervising Engineering Draughtsmen and other Drawing Office staff. They should also have had experience in building construction including reinforced concrete design, be able to prepare working drawings and structural calculations in connection with the conversion of existing premises into transformer chambers, together with the layout of electrical equipment and cabling.

The post is graded under Schedule "A" of the National Joint Board Agreement as Class "J," Grade 10-£1,090 to £1,215 per annum, inclusive of London Allowance.

Applications, stating age, qualifications and experience, should be sent direct to the Manager at 54, Bengeworth Road, S.E.5, within fourteen days of the publication date of this notice. Please quote ref. PER.V.3327 A. 9286

LONDON COUNTY COUNCIL
ARCHITECTS' DEPARTMENT

ARCHITECT PLANNERS (up to £1,500) with drive, enthusiasm and a creative approach, wanted for work on planning schemes, especially in Central London, the County's thirteen Comprehensive Development areas, and in association with major road projects.

Form and particulars from Robert Bennett F.R.I.B.A., Architect to the Council (EK/A/2495/9), County Hall, S.E.1. 9272

CHESTERFIELD RURAL DISTRICT COUNCIL
ASSISTANT ARCHITECT

A.P.T. I-IV, £645-£1,310
Applications are invited for the above appointment in the Department of the Engineer and Surveyor. The salary will be according to qualifications and experience.

The appointment is subject to the National Scheme of Conditions of Service, Local Government Superannuation Acts and the passing of a medical examination. Housing accommodation will be provided in appropriate cases and removal expenses will be paid.

Applications, giving details of age, qualifications and experience, together with the names and addresses of two referees, should be delivered to the Clerk, Rural Council House, Saltergate, Chesterfield, by 25th September, 1961. 9251

BOROUGH OF WATFORD

Applications are invited for the following posts in my Department:—

(a) ASSISTANT QUANTITY SURVEYOR—A.P.T. III (£960-£1,140), capable of "taking off" for medium size works and all other Quantity Surveying works.

(b) ASSISTANT QUANTITY SURVEYOR—A.P.T. I/II (£645-£960). The commencing salary will be fixed according to the qualifications and experience of the successful applicant.

Applications to the undersigned by Monday, 18th September, 1961.

F. C. SAGE,
Borough Engineer & Surveyor.

Town Hall,
Watford. 9253

METROPOLITAN BOROUGH OF STOKE
NEWINGTON

Appointment of ASSISTANT ARCHITECT (A.P.T. IV-£1,140 to £1,310 plus £45 L.W.)

Applications are invited for the above appointment in the Architectural Section of the Department. Applicants must be Associate Members of the R.I.B.A. with at least three years' experience since qualifying. A contemporary outlook with first class ability in design and construction is essential.

The present work of the Department includes multi-storey flats and public buildings, together with design of a new swimming bath.

Housing accommodation cannot be provided. Forms of application obtainable from me and returnable not later than 30th September.

TOWN CLERK.

Town Hall,
Stoke Newington. 9275

CITY OF LEEDS
CITY ARCHITECTS' DEPARTMENT

Applications are invited for the following appointment:—

Post.
ASSISTANT PRINCIPAL ARCHITECT (Housing Section), Grade SO/A. Salary Scale: £1,455-£1,565.

Applicants must be suitably qualified, have had a wide experience in all types of housing development including multi-storey flats, etc., and will be considered on their capability for design, experience and contemporary outlook. The appointment is superannuable—medical examination.

Application forms, obtainable from the undersigned, are to be returned by 12 noon, Monday, 25th September, 1961.

Canvassing disqualifies.

J. R. SHERIDAN-SHEDDEN,
City Architect.

Priestley House,
Quarry Hill,
Leeds 9.

1st September, 1961. 9285

BOROUGH OF CROSBY
CAPITAL WORKS PROGRAMME

Applications are invited for the appointment of an ARCHITECTURAL ASSISTANT in accordance with A.P.T. III the commencing salary depending upon qualification and experience.

It is the Council's policy to assist in the provision of Housing Accommodation upon satisfactory proof of need.

Five-day week in operation.

Applications on forms obtainable from the Borough Engineer and Surveyor at the address below must be received not later than 27th September, 1961.

Canvassing will disqualify.

HAROLD O. ROBERTS,
Town Clerk.

Town Hall,
Waterloo.

Liverpool, 22.
4th September, 1961. 9274

COUNTY BOROUGH OF DEWSBURY
DEPARTMENT OF BOROUGH ARCHITECT
AND BUILDINGS SURVEYOR

Applications are invited for the appointment of a CLERK OF WORKS at a salary within the scope of A.P.T. Grade I (£645-£815).

The provision of housing accommodation will be considered if required.

Applications for forms and particulars of the appointment to A. G. Beckett, A.R.I.B.A., A.M.T.P.I., Borough Architect and Buildings Surveyor, Town Hall, Dewsbury. Closing date 22nd September, 1961.

A. NORMAN JAMES,
Town Clerk.

Town Hall,
Dewsbury.
5th September, 1961. 9288

SAINSBURY'S

Food Distributors & Manufacturers
desire to make the following new appointments in their

Building and Engineering Division

Blackfriars, London, S.E.1. These vacancies are caused by the continued expansion of the Division particularly in connection with work on large new self service stores. Commencing salary will depend upon age and experience. All posts are permanent and pensionable.

ARCHITECTS

The selected applicants will be in charge of a section and responsible to the Manager of the Architects Department. Commencing salary £1,500 to £1,850.

ASSISTANTS

in The Architects and Shop Planning Departments

Applicants should be of intermediate R.I.B.A. standard or equivalent with some practical experience. Applicants for the Shop Planning Department should have some experience of shop fitting work. Commencing salary £900 to £1,350.

CLERK OF WORKS

for visiting contracts within 150 miles of London. Lodging away from home will be necessary for part of the week. Salary £1,150.

Applications giving full details of age, qualifications and experience should be addressed to—

The Personnel Manager (B & ED),

J SAINSBURY LTD

Stamford House Stamford Street Blackfriars SE 1

BRITISH RAILWAYS

LONDON MIDLAND REGION
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REQUIRE

ASSISTANT ARCHITECTS

Architects are required for work in London on the redevelopment of major stations and for general work in connection with the London Midland Main Line Electrification Scheme and Modernisation Plan.

Vacancies exist in the following grades:—

SENIOR ASSISTANT ARCHITECTS

£1,350/£1,560

LEADING ASSISTANT ARCHITECTS

£1,230/£1,350

ASSISTANT ARCHITECTS

£1,070/£1,145

ASSISTANT ARCHITECTS

£945/£1,020

ARCHITECTURAL ASSISTANTS

£290/£855

All applicants should be qualified members of the R.I.B.A. and should preferably hold the diploma of a recognised School of Architecture. For senior positions it is essential that applicants have had experience of the control and direction of staff.

Applications will be considered from newly qualified members of the R.I.B.A., unqualified assistants with experience and juniors wishing to enter the profession who have the necessary academic qualifications.

Superannuation Fund. Five-day week and concessionary rail travel.

When applying, quote reference No. 122 (AJ) giving qualifications, age, experience and salary required to:—

W. R. Headley, A.R.I.B.A., A.A. Dipl.
Regional Architect
Chief Civil Engineer's Office
British Railways, London Midland Region
Stephenson House, 67/87 Hampstead Road
London, N.W.1

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By Order of Her Majesty's Principal Secretary of State for the War Dept



TWO IMPORTANT AUCTION SALES TO BE HELD IN
LONDON, ON THURSDAY, 28th SEPTEMBER, 1961

WARLEY BARRACKS with Recreation and Parade Grounds BRENTWOOD, ESSEX

21½ ACRES

with
PLANNING CONSENT
for
OFFICE DEVELOPMENT

Attractively wooded rural setting, yet easily accessible and close to London. Ideal for an enterprising scheme of decentralised offices.

EXTENSIVE ROAD FRONTAGES ALL SERVICES AVAILABLE

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only 21 miles North East of London and 14 miles North of
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on a

GROUND AREA OF 4 ACRES

Extensive Concrete Yards and Road Frontage. Excellent
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All Main Services.

*For further particulars apply
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WIMPEY

ARCHITECTS and ASSISTANTS

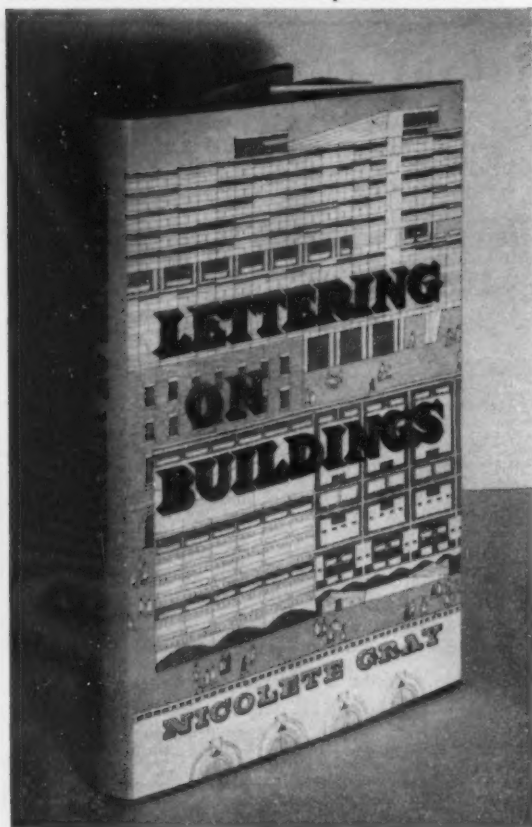
The Architects' Department's current programme covers all types of commercial, industrial and domestic building projects.

Appointments are available for a wide range of experience, particularly for ARCHITECTS and ASSISTANTS who appreciate the contribution good design can make towards efficient construction and are interested in applying cost knowledge to detailing.

Appointments on a permanent basis are immediately available at Head Office with good progressive salaries for the right men. Five-day week, with three weeks' holiday.

Applicants should write to:—

E. V. Collins, A.R.I.B.A.,
Chief Architect,
George Wimpey & Co. Ltd.,
27 Hammersmith Grove,
London, W.6.



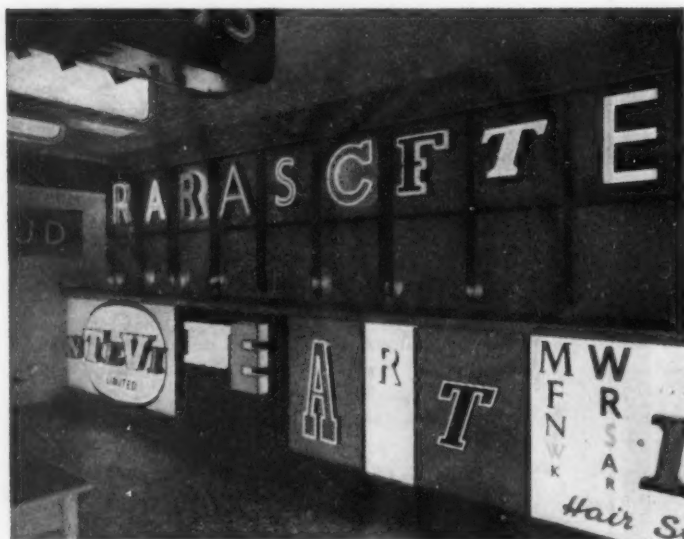
Nicolette Gray

LETTERING ON BUILDINGS

THIS IS THE FIRST BOOK to deal with lettering as applied to all kinds of buildings. The author, an internationally acknowledged authority on the history of letter forms, breaks new ground in this study of the relationship between lettering and architecture itself: her aim is no less than to create a new approach to the subject, to get away from doctrinaire ideas. She first examines and illustrates the history and development of letter forms from Roman times to our own day. This examination leads her to outline a comprehensive theory of lettering which may serve as a starting point, a new way of looking at problems and possibilities for the present and the future. Her theoretical approach is illustrated by, and throws light on, many existing nineteenth- and twentieth-century examples of all kinds of lettering *in situ*; and she thus demonstrates how present-day architects and designers can successfully tackle the task of integrating lettering on and in all kinds of buildings. 'My hope for this book', says the author, 'is that it may help to bring lettering back into the full life of the modern movement. . . .'

Size of book 9 x 5½ in. 192 pages with 270 halftone and line illustrations. 25s. net, postage 1s. 2d.

The Architectural Press, 9-13 Queen Anne's Gate, S.W.1



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AIR MINISTRY WORKS ORGANISATION requires QUANTITY SURVEYING ASSISTANTS Grade III at R.A.F. and Ministry of Aviation stations throughout the United Kingdom. The work includes abstracting and billing, site measurement and preparation of estimates.

Salary, which is dependent upon age, qualifications and experience, ranges from £749 (age 23) to £988 National Rate (max.) in Grade III. There are pension prospects and also opportunities of advancement to numerous posts in the higher grades, viz.

Technical Grade II: £988—£1,128 123 posts
Technical Grade I: £1,128—£1,388 42 posts
Technical Grade B: £1,388—£1,602 8 posts
Technical Grade A: £1,482—£1,747 5 posts

Vacancies occurring in these higher grades are as a rule filled by promotion of existing staff.

Overseas tours for which special allowances ranging at present up to £1,800 p.a. are payable in addition to a higher salary. Financial assistance and time off allowed for recognised courses of study leading to higher qualifications. Five-day week with 18 days paid leave a year initially.

Applicants, who must be natural born British subjects, must hold O.N.C. (Building or Builders Quantities) or equivalent and had good experience under Quantity Surveyor or Building Contractor. Knowledge of W.D. Schedule an advantage. Forms from Manager (F.E.2), Ministry of Labour, Professional and Executive Register, Atlantic House, Farringdon Street, London, E.C.4. Candidates selected will be interviewed in Air Ministry, London and certain expenses reimbursed. Only applicants selected for interview will be advised.

S8923

BOROUGH OF STOCKTON-ON-TEES

Applications are invited for the appointment of an ASSISTANT ARCHITECT at a salary of A.P.T. III (£960—£1,140). Housing accommodation will be provided for married persons.

Applicants should give details of qualifications and experience to the Borough Architect, 28, The Square, Stockton-on-Tees, not later than the 23rd September, 1961.

JOHN B. HAWORTH,
Town Clerk.

Municipal Buildings,
Church Road,
Stockton-on-Tees.

9282

COUNTY BOROUGH OF BURNLEY

Applications are invited for the appointment of a JUNIOR ARCHITECTURAL ASSISTANT, A.P.T. Grade I/II (£645—£960 per annum), in accordance with the National Scale of Salaries.

Applicants should hold suitable qualifications and the commencing salary and grade will be fixed in accordance with experience and qualifications.

Forms of application may be obtained from the Borough Engineer, 22, Nicholas Street, Burnley, to whom applications should be returned not later than Friday, the 29th September, 1961.

C. V. THORNLEY,
Town Clerk.

9311

BOROUGH OF KIDDERMINSTER BOROUGH ENGINEER & SURVEYOR'S DEPARTMENT

(AMENDED ADVERT.)

Applications are invited for the position of ASSISTANT ARCHITECT, Grade III (£960—£1,140). Applicants should have a good experience in design and construction and preference will be given to those who have passed the Intermediate Examination of the A.R.I.B.A.

The Council have an interesting programme of work including redevelopment and multi-storey housing.

Housing accommodation if required.

The appointment will be subject to the Local Government Superannuation Acts and the National Scheme of Conditions of Service.

Applications, stating qualifications and experience, accompanied by the name of two referees, should be delivered to the Borough Engineer and Surveyor, 110, Mill Street, Kidderminster, not later than 27th September, 1961.

J. L. EVANS,
Town Clerk.

Town Hall,
Kidderminster,
September, 1961.

S9307

BOROUGH OF THORNABY-ON-TEES

Applications are invited for this permanent and superannuable post from persons who have passed the R.I.B.A. Intermediate Examination. Local Authority experience preferred but not essential.

There is a wide variety of work in the Department including housing and ancillary development on a new neighbourhood unit of about 500 acres.

The starting point on the grade will be above the minimum and dependent on qualifications and experience of the successful applicant. Half removal expenses will be paid and housing accommodation offered.

Applications, stating qualifications and experience and giving names and addresses of two referees, to the Borough Engineer, Town Hall, Thornaby-on-Tees, not later than 27th September, 1961.

A. STOCKWELL,
Town Clerk.

S9313

BOROUGH OF MALDEN AND COOMBE BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT

Applications are invited for the appointment of JUNIOR ARCHITECTURAL ASSISTANT, Grade A.P.T. II (£815—£960 per annum, plus London weighting).

Application on forms to be obtained from John Apse, A.M.I.C.E., Borough Engineer and Surveyor, Municipal Offices, New Malden, Surrey, should be returned by not later than Monday, 2nd October, 1961.

HAROLD E. BARRETT,
Town Clerk.

Municipal Offices,
New Malden,
Surrey.

9308

COVENTRY

Applications invited for ARCHITECTURAL BUILDING SURVEYOR ASSISTANT:—
A.P.T. III: £960—£1,140 p.a.
II: £815—£960
or I: £645—£815

according to experience/qualifications e.g. appropriate stage professional examination, Higher National Certificate, etc. Including work as building technician, analysing/standardising schedules/specifications for building components/fittings/furniture.

Housing accommodation in approved circumstances. Removal expenses loan. Five-day working week.

Application forms from Department of Architecture and Planning, Council House, Returnable 25th September.

9314

COUNTY BOROUGH OF WOLVERHAMPTON

BOROUGH ENGINEER'S DEPARTMENT
Applications are invited for the following appointments:—

ASSISTANT ARCHITECTS
(a) Salary Grade A.P.T. V: £1,310—£1,480.
(b) Salary Grade A.P.T. IV: £1,140—£1,310.
(c) Salary Grades A.P.T. I to III: £645—£1,140 (according to qualifications and experience).

Appointments subject to National Scheme of Conditions of Service, Local Government Superannuation Acts, and medical examination.

Housing accommodation and car allowances may be made available for (a) and (b). Successful (married) candidates will be paid removal expenses.

Five-day week.
Applications, with the names and addresses of two referees, should be sent to the Borough Engineer, Town Hall, Wolverhampton, by 2nd October, 1961.

9315

HALTEMPRICE URBAN DISTRICT COUNCIL

Applications are invited for an ARCHITECT in the Engineer and Surveyor's Department.

Candidates must be members of the R.I.B.A. and have suitable experience in the development of Council housing and other Council properties.

The commencing salary will be fixed within the scale Grade A.P.T. 4 (£1,140—£1,310 p.a.) according to qualifications and experience. The successful applicant will work directly under the Engineer and Surveyor.

The appointment will be subject to one month's notice on either side; to the provision of the Local Government Superannuation Acts; to National Conditions of Service and to satisfactory medical examination.

The Council is prepared to consider, if necessary, the provision of housing accommodation.

Applications, giving the names of two referees, should reach the undersigned not later than first post on the 27th September, 1961.

A. B. GLASSPOOL,
Clerk of the Council.

Anlaby House,
Anlaby

E. Yorkshire.

9312

Tenders Invited

36s. per inch; each additional line 3s.

BOROUGH OF EALING

Tenders are invited for the Redecoration of Northolt Grange Library, Yeading Lane, and Redecoration and minor repairs at Hanwell Library, Cheriton Road, Hanwell, W.7.

Details from Borough Engineer, Town Hall, Ealing, W.5.

Closing date of tender: 29th September, 1961.

E. J. COPEBROWN,
Town Clerk.

S9295

Architectural Appointments Vacant

3s. per line; minimum 12s. Box Number, including forwarding replies, 2s. extra.

ARCHITECTURAL ASSISTANT. Man or Woman with some office experience required for interesting country practice. L. H. Bond and R. W. Read, 44, Castlegate, Grantham. TC8851

£1,000 / £2,000 p.a. will be paid to experienced competent ARCHITECTS by a private practice in the City of London. The work will be primarily on the drawing board on new and interesting projects of magnitude. A high standard of design and detailing ability is required. Please apply in writing to Box TC9360.

LANCHESTER & LODGE urgently require ARCHITECTURAL ASSISTANTS of all grades. Work includes hospitals, laboratories, universities, offices, housing, etc. Write full particulars or ring for interview: 10, Woburn Square, W.C.1. MUS 0845-6-7. TC7248

A FEW vacancies still left for experienced and confident ARCHITECTS to fill positions of responsibility in a growing and varied practice with industrial and commercial work throughout the southern half of the country. Applicants must have initiative as well as architectural ability to carry through contracts up to £100,000, working directly with Principals but with minimum supervision. Apply in writing to Thomas Mitchell & Partners, 20 Bedford Square, London, W.C.1. TC7443

BRYAN & NORMAN WESTWOOD require ASSISTANT ARCHITECTS. Salaries up to £1,200. Apply to 21 Suffolk Street, S.W.1, Trafalgar 1106, or 5 Balfour Road, Weybridge, Surrey. TC9600

£850-£1,600. ARCHITECTURAL ASSISTANTS required. Long term prospects. Non-contributory pension and life assurance schemes. Five-day week. Telephone or write: Ronald Ward & Partners, 29, Chesham Place, Belgrave Square, S.W.1. Belgrave 3361. TC6105

ARCHITECTS' ASSISTANT required, up to Intermediate standard, to work on large and interesting projects. Salary within range £600—£800. Applicants must be good draughtsmen, with sound knowledge of detailing. Please write giving full particulars of experience, age, etc., to: F. W. Beech & E. Curnow Cooke, F./L.R.I.B.A., 15, Dix's Field, Exeter. TC8706

HOWARD V. LOBB & PARTNERS require ASSISTANT ARCHITECTS. Salaries would be between £750 and £1,250 per annum. Please write to 39, Gower Street, W.C.1. TC7789

WOLVERHAMPTON. Norman & Dawbarn require an ASSISTANT in their Midlands Office. This position could afford useful experience of small and medium size jobs in a young but expanding office, with possibility of later transfer to London Office or overseas if desired. Minimum two years' office experience required if qualified, four years' if Intermediate. Excellent working conditions, five-day week, three weeks' leave, L.V.s, etc. Write or phone 7 Portland Place, London, W.1 (Langham 8011), or Heanton House, Salop Street, Wolverhampton (Tel. 27387). TC8548

CAPABLE ASSISTANT, with ability and experience, to deal with work from sketch plan to final account stages, offered senior position with good salary in London head office of well-established firm. Apply Box TC8816.

ARCHITECT, with minimum five years' office experience, competent in design and administration of contracts, required for well-paid position of responsibility in London office. Apply Box TC8815.

ASSISTANT ARCHITECTS with Site experience, initiative and design ability, required as GROUP LEADERS immediately. Salary according to experience. Qualification, although advantageous, not essential if other qualities are present. Raymond Spratley & Partners, 9, Hertford Street Park Lane, W.1. GROSvenor 7912. TC8817

ARCHITECTURAL ASSISTANTS of all grades, particularly Intermediate standard, required on varied and interesting projects. High salaries will be paid in accordance with skill or experience of applicant. Lewis Solomon, Kaye & Partners, City 8811. TC5970

£800-£1,600. LIVERPOOL and YORK offices

require ARCHITECTS and ASSISTANTS with the experience, drive and design ability to handle Church, College, School and Industrial projects from preliminary sketch to final account.

WEIGHTMAN & BULLEN
76, Rodney Street, Liverpool 1,
and Acomb House, Front Street, York.
FIVE-DAY WEEK, BONUS & PENSION
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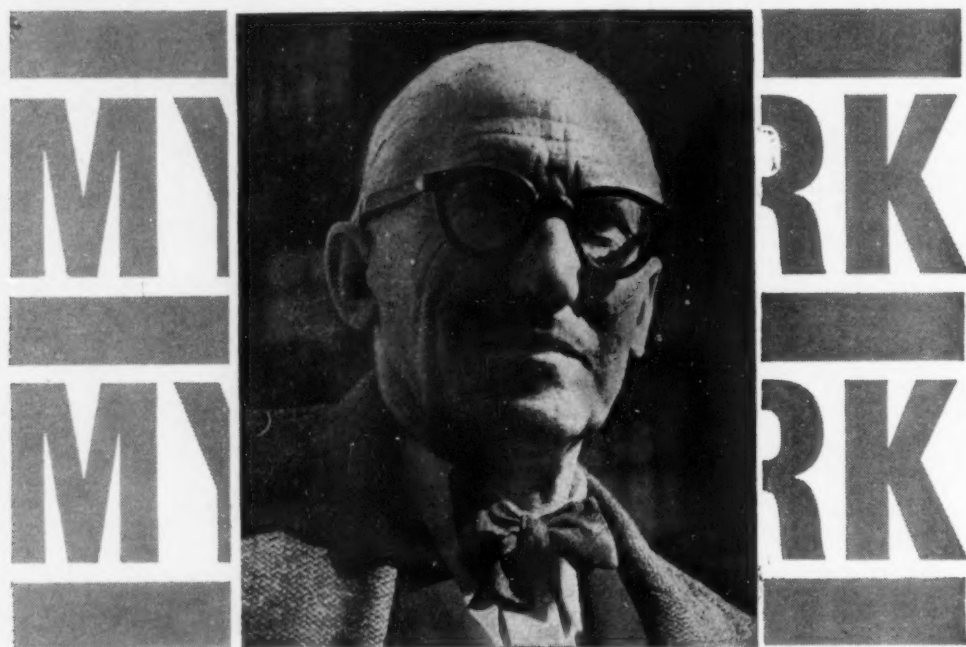
SOUTHAMPTON. ASSISTANT of at least Intermediate standard required to help with projects in Hampshire and the Isle of Wight. Apply to E. M. Galloway & Partners, F./A.R.I.B.A., 10 Portland Street, Southampton. TC9098

QUALIFIED ARCHITECT required for permanent position in Architects Department of progressive Brewery Company. Sound training and experience together with an interest in interior design essential. The Company operates a Pension Scheme with substantial benefits. Five-day week. Write giving age, salary required and full details of training and experience to Box S9105.

SEELY AND PAGET have immediate vacancy in their City Office. Near Final R.I.B.A. standard with experience. Successful candidates will be placed on appropriate scale of salary commensurate with qualifications and experience. Holiday arrangements respected. Write at Cloth Fair, E.C.1, or Telephone MET 8511. TC8401

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Candidates should have experience in surveys of existing buildings, land survey and should be able to prepare working drawings for structural alterations and the layout and equipping of large and small offices.

Age 23/27 years. Salary would be based entirely on age, experience and qualifications. There is an excellent Pension Scheme.

Applications, which will be treated in confidence, should be addressed to:—

Personnel Recruitment D.D.,
Shell International Petroleum Co. Ltd.,
St. Helen's Court,
Gt. St. Helen's,
London E.C.3.

MANCHESTER CORPORATION

ENGINEERS & PLANNERS

Grades JNC 'B' (£1420/£1670) and APT V (£1310/£1480)

Engineering appointments offer experience in an extensive programme of design and construction work including highway improvements, new major roads and bridges, main drainage, airport extensions and new roads and sewers on housing sites.

The Planning appointments offer practical experience in comprehensive redevelopment schemes in central areas and in large scale new residential development projects.

Applicants must be appropriately qualified.

Housing Accommodation and Removal Expenses

Applications giving details of age, qualifications, and experience, together with the names of three referees, to the

City Surveyor, Town Hall, Manchester, 2



ARCHITECTS

The United Power Company Limited recently formed to amalgamate the interests of ATOMIC POWER CONSTRUCTIONS LIMITED and G.E.C.-SIMON CARVES ATOMIC ENERGY COMPANY LIMITED has vacancies in the Central London Offices for Architects interested in industrial buildings and keen to work as members of a team, consisting of Civil, Mechanical and Electrical Engineers on the development of major industrial buildings.

Applications giving full details of age, qualifications, experience, etc., should be sent to:—

THE PERSONNEL MANAGER

(Ref. AJ/202)
P.O. BOX 90
28 THEOBALDS ROAD
LONDON, W.C.1

£950-£1,500. ARCHITECTURAL ASSISTANTS with imagination and designing ability required to assist with large and important new developments in the central London Area. Telephone or write: Trehearne & Norman, Preston & Partners, 63, Kingsway, W.C.2. HOLBORN 4071. TC9115

VACANCY in office of architect dealing with work of big multiple company as ARCHITECTURAL ASSISTANT, Intermediate or Junior. Post requires keen interest in contemporary design and modern methods with opportunities to develop responsibility. Good salary, informal office atmosphere, luncheon vouchers. Apply Nadine Beddington, F.R.I.B.A., 301-307 Oxford Street, London, W.1. HYD 1037. 9240

BARTLETT & GRAY NOTTINGHAM. have a few vacancies for ARCHITECTS and ARCHITECTURAL ASSISTANTS for varied programme at home and overseas. Five-day week. Pension and Life Assurance scheme. Salary by arrangement. Write or ring for appointment. No life histories required before interview. 14-16, Bridgford Road, West Bridgford, Nottingham. 88711/2/3. S9246

CITY ARCHITECT, with growing office, requires ARCHITECTURAL ASSISTANTS of all grades, qualified and unqualified, and ARCHITECTURAL DRAUGHTSMEN for work on an interesting programme. Salaries as follows:— Senior Assistant Architects, qualified, up to £1,600 p.a. Assistant Architects, qualified, up to £1,400 p.a. Intermediate Standard, up to £1,100 p.a. according to experience. Architectural Draughtsmen, from £500 to £800 p.a. Non-contributory Pension Scheme, good holidays and many other valuable benefits. Please write stating age, qualifications, experience to Box S9234.

PROGRESSIVE City Architect, with rapidly expanding office, requires ARCHITECTURAL ASSISTANTS of all grades, qualified, unqualified and ARCHITECTURAL DRAUGHTSMEN, to carry out interesting projects. Modern, well equipped offices, non-contributory pension, generous holidays. Please write to Box S9235, stating age, qualifications, experience and suggested salary.

GOLLINS MELVIN WARD & PARTNERS 15, Manchester Square, W.1. have vacancies for ARCHITECTURAL ASSISTANTS. Telephone WEL 9991. TC9189

OXFORD OFFICE requires ASSISTANT ARCHITECT to fill position of responsibility. Commencing salary £1,000 per annum, dependent upon qualifications and experience. Urgent that applicant can commence at an early date. Details to Box S9222.

FREDERICK GIBBERD, ARCHITECTURAL ASSISTANTS, Final and Intermediate. Interesting work, excellent experience for anyone wishing to succeed in architecture. Salary according to ability. Five-day week. Pleasant and well organised office. Write giving full details: 8 Percy Street, W.1. S9242

ARCHITECTURAL ASSISTANT, R.I.B.A., Intermediate standard, in Plymouth office. The range of work is wide, and the appointment is not temporary. Full details of age, experience and salary required to Box 9241.

C. H. ELSOM & PARTNERS have vacancies in their Victoria office for ARCHITECTS at all levels of experience for work on town centre redevelopment, schools, housing, commercial buildings and hotels. Superannuation scheme and luncheon vouchers. Applications in writing only please, giving brief details to 10, Lower Grosvenor Place, London, S.W.1. S9231

SEVERAL ARCHITECTURAL ASSISTANTS required up to Intermediate and Final standard in progressive Hampstead office. Five-day week. Experience on flat design necessary. Please apply B. Newton, A.R.I.B.A., M.R.S.H., of 307 Finchley Road, N.W.3. Tel: SWI 5152. S9238

AMBITIOUS ARCHITECTS—there are interesting vacancies which may attract you in this City of London office. A fairly free hand will be given in the development of some new projects. 1.5s. State and Non-contributory Private Pension schemes. Generous salaries. Apply Box 9236.

£800-£1,500. plus an agreed quarterly bonus. Senior and Junior ARCHITECTURAL ASSISTANTS urgently required for work on modular buildings in general private practice. Telephone: HAMPSHIRE 5396. TC9230

ARCHITECTURAL ASSISTANTS, Senior and Intermediate, required in London and Reading offices on interesting projects. Good working conditions. Salary range £850-£1,250. Apply Eric G. V. Hives and Sons, 46 Queen's Road, Reading. S9228

MANCHESTER, ASSISTANTS with initiative wanted, qualified, unqualified and intermediate standard, capable of handling a wide variety of interesting contemporary schemes from sketch plans to final accounts.

Five-day week.
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Bonus system.
Pension scheme.

Salary £800-£1,300 or by arrangement depending on ability. Mather & Nutter, A.A.R.I.B.A., Canada House, 3, Chepstow Street, Manchester, 1. S9250

INTERMEDIATE/FINAL ASSISTANT required for varied and interesting work including tall buildings. Medium sized progressive office giving scope for initiative. Study time allowed. Office Regent's Park area. PRIMROSE 5157. S9265

SENIOR and Fourth ASSISTANTS required to work in purpose-built architects' offices on all types of projects in all parts of the south and east. Please apply to Ronald Leach, A.R.I.B.A., 24, Strete Court, Canterbury Road, Westgate-on-Sea, Kent. S9263

ARCHITECTURAL ASSISTANT with at least three years' office experience required to work on expanding programme of school and church work. Bruxby & Evans, Chartered Architects, 41/42 Bluecoat Chambers, School Lane, Liverpool, L. S9258

TRIPE & WAKEHAM, Chartered Architects, require ASSISTANTS with 2-3 years' office experience to work in their London Office on interesting projects both in this country and abroad. Salary by arrangement. Telephone WELbeck 7744 or write to 16, Fitzhardinge Street, London, W.1, for an appointment. S9257

FARMER AND DARK have some vacancies for QUALIFIED ARCHITECTS, age 25/35, preferably with office experience for varied and interesting home and overseas work. Five-day week. Apply to Romney House, Tufton Street, S.W.1. Tel: ABBey 6311. S9256

WATERLOO, Competent and experienced ASSISTANT of Intermediate to Final standard interested in conscientious design detailing and supervision, and looking for a progressive and permanent position in a small and individualistic office, with good working conditions. Salary £900-£1,000. Telephone Waterloo 4362/3 or write Box 9258.

J. GODFREY-GILBERT & PARTNERS, 3, The Broadway, Wimbledon, S.W.19. Telephone No. WIM 6131, urgently require ASSISTANT ARCHITECTS of Intermediate or Final standard with office experience. Good salaries and prospects. Work in London, Bognor Regis and Bombay. S9301

FIRST-CLASS ASSISTANT, A.R.I.B.A., required in busy London office. Good prospects and excellent salary to right man. Write stating age, salary and experience to: A. J. Fowles, F.R.I.B.A., 10, Great James Street, Bedford Row, W.C.1, or telephone CHANCERY 2469, for appointment. S9297

ASSISTANT ARCHITECTS who like to preserve their own identity in their work are required urgently for rapidly expanding London practice. Salary £1,000 to £1,200. Write with full details to Guy Biscoe, 5 and 6, Staple Inn, Holborn, W.C.2. 9291

DISPLAY DEPARTMENT of engineering company requires keen, energetic ASSISTANT for production of designs and working drawings for exhibition stands, demonstration models, and displays, generally to assist with liaison, production and erection. State age, experience, salary required to Staff Employment Office, C.A.V. Limited, Warple Way, Acton, W.3. 9227

ARCHITECT'S ASSISTANT required, up to Intermediate standard, to work on large and interesting projects. Salary up to £800. Applicants must be good draughtsmen, with sound knowledge of detailing. Please write, giving full particulars of experience, age, etc., to: F. W. Beech and E. Curnow Cooke, F.L.R.I.B.A., 15, Dix's Field, Exeter. TC8706

ARCHITECTS in Watford, London and Glasgow require ASSISTANTS of Intermediate/Final R.I.B.A. standard for work on interesting commercial and industrial projects. Salary range: £800-£1,250. Quarterly bonus scheme. Non-contributory pension scheme. Apply Box TC8120.

ARCHITECTS with busy practice in Brighton require ASSISTANTS with practical experience for varied work. Salary up to £750 per annum. Five-day week, pension scheme, etc. Box TC5848.

THE following vacancies occur in Bristol for:—
(1) **SENIOR ASSISTANT ARCHITECT** £1,200-£1,400.

Applicants must be qualified and have had post graduate experience, or have had ten years' experience.

(2) **ARCHITECTURAL ASSISTANTS** £750-£1,200.

Applicants should have had several years' experience in an Architect's office and be capable of producing working drawings and details with the minimum of supervision.

Salaries progressive on merit; permanent pensionable positions. Applications stating full details of qualifications, experience, age, etc., should be forwarded to the Senior Architect, Box S9287.

SOUTH EASTERN ELECTRICITY BOARD

APPLICATIONS are invited for the following appointment in the Surveyor's section, Engineer-in-Chief's Department, at Area Board Headquarters, Hove, Sussex.

ASSISTANT ARCHITECT, Salary £1,250 x 435-£1,355 under N.J.C. grade 7. Applicants should be registered architects with experience in the preparation of schemes including showrooms, offices, stores and garages. Preference to applicants who are associates of the R.I.B.A. or I.A.A.S. Superannuable.

Applications, quoting AJ and naming two referees to Surveyor, Seeboard, 10 Queen's Gardens, Hove 3, Sussex, by 27th September, 1961. 9289

CONTEMPORARY minded ARCHITECTS and ARCHITECTURAL ASSISTANTS are needed to work on interesting large projects. Good salaries, permanent posts. Surrey office. Apply Box D.444, c/o Jackson's, 54 Old Broad Street, E.C.2. 9267

KINGSTON-UPON-THAMES, SENIOR ASSISTANT required (male or female) for interesting and varied work. Salary up to £1,150 per annum for suitable applicant. Pleasant and congenial office conditions. Five-day week. Applications in writing only giving full particulars. Donaldson & Co., Architects, 75 London Road, Kingston-upon-Thames. TC9281

WE require experienced ARCHITECTS for Design work on varying projects of considerable size and interest covering Domestic, Industrial and Commercial Buildings. Permanent and progressive appointments with commencing salaries up to £1,550 per annum for five-day week in West London. Please write in confidence to Box 9278.

A CAPABLE ARCHITECTURAL ASSISTANT required. Must have good planning experience with residential development. Good post for the right man. Apply in writing in the first instance to: Post for Architectural Assistant, A. C. Draycott, 8-14, South Street, Lancing, Sussex 9277

SENIOR ARCHITECTURAL ASSISTANTS with good design ability and site experience required for interesting jobs. Excellent prospects for those capable of carrying responsibility. Profit sharing and Pension Schemes available. Good salary range comparable with age and experience. Apply in writing to Beard, Bennett, Wilkins & Partners, 101, Baker Street, London, W.1. S9270

SIR BASIL SPENCE requires qualified ASSISTANTS, preferably having experience of University work. Five-day week, luncheon vouchers. Salary up to £1,500 according to experience. Write to Sir Basil Spence, R.A., 1, Fitzroy Square, London, W.1. S9269

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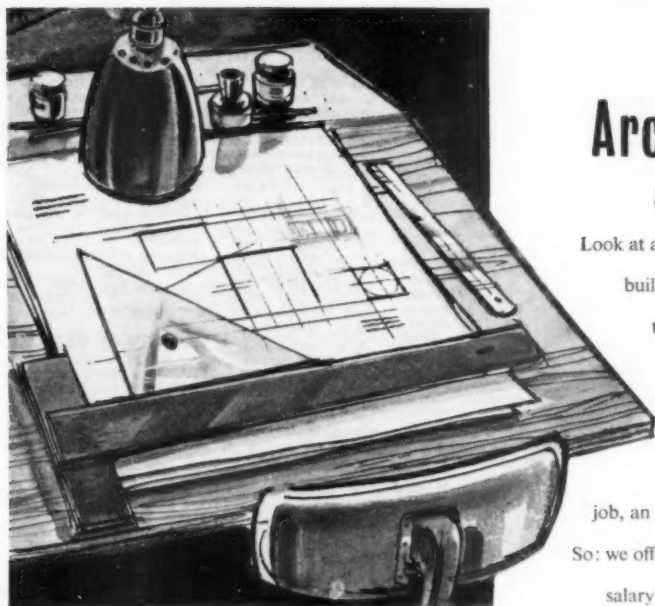
Written applications should be addressed to:—

The Group Personnel Officer,
ALBERT E. REED & CO. LTD.,
Larkfield, Nr. Maidstone,
Kent.

quoting reference AA/AD 61. 9303

ARCHITECTURAL ASSISTANTS required in Bury Bloomsbury office with varied practice. Good salary and prospects for suitable applicants. Five-day week. Write giving full particulars of age, qualifications, experience, etc., to Box 918, c/o T. Contic Street, W.C.1. TC5647

SENIOR ARCHITECTURAL ASSISTANTS Large Office has a limited number of vacancies for Senior Architectural Assistants, salary range £900-£1,500, to undertake work of a varied and interesting character. Merely with particulars of experience to Box TC6875.



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THE ARCHITECT

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It is implicit in the function of this Section that it should co-operate easily with other technical staffs both inside and outside the Chief Engineer's Department.

The work is interesting and varied and will include site development with multi-storey R.C. and steel frame buildings to house manufacturing plant and all ancillaries such as offices, laboratories, amenity and welfare buildings.

Five day, 37½ hour week. Pension and Profit Sharing Schemes in operation.

Apply briefly, quoting reference No. 5128X to the Division Personnel Manager, Imperial Chemical Industries Limited, Plastics Division, Bessemer Road Welwyn Garden City, Herts.

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A leading Company in the field of office automation is looking for an **EXPERIENCED DESIGNER WITH ARCHITECTURAL TRAINING.**

His work will include designing new office and showroom interiors, and exhibitions, together with the detail and administrative work necessary. He must be capable of dealing with contractors and able to administer a heavy schedule of work.

This job has considerable prospects for a man of genuine talent, enthusiasm and drive.

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Ferguson House Marylebone

Five storey office block
Architect:
Clifford Culpin,
O.B.E., F.R.I.B.A., M.T.P.I.
Consulting Engineer: W. V. Zinn

The sculptured panel at
Ferguson House,
Marylebone Road,
by Estcourt J. Clack, F.R.B.S.
depicts Charles Dickens
with characters from some
of his novels



In April of last year work was completed on Ferguson House on the site formerly occupied by Devonshire Terrace, the one time home of Charles Dickens.

The new office block comprises five storeys and basement and contains nearly 47,000 sq. ft. of office space with a staff restaurant and a car park for 24 vehicles at the rear. The frame is of reinforced concrete and the upper storeys are faced externally in London stock brickwork.

At ground level there are facings of Empire stone and rough-axed granite panels below the windows. The interior of the building, which is heated by a low-pressure radiator system from gas-fired boilers housed on the roof, has exceptionally clean lines. There are no beam projections and all services have been grouped in concealed centralised ducts.

The building was erected for the Laing Development Company Limited by John Laing Construction Limited.

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