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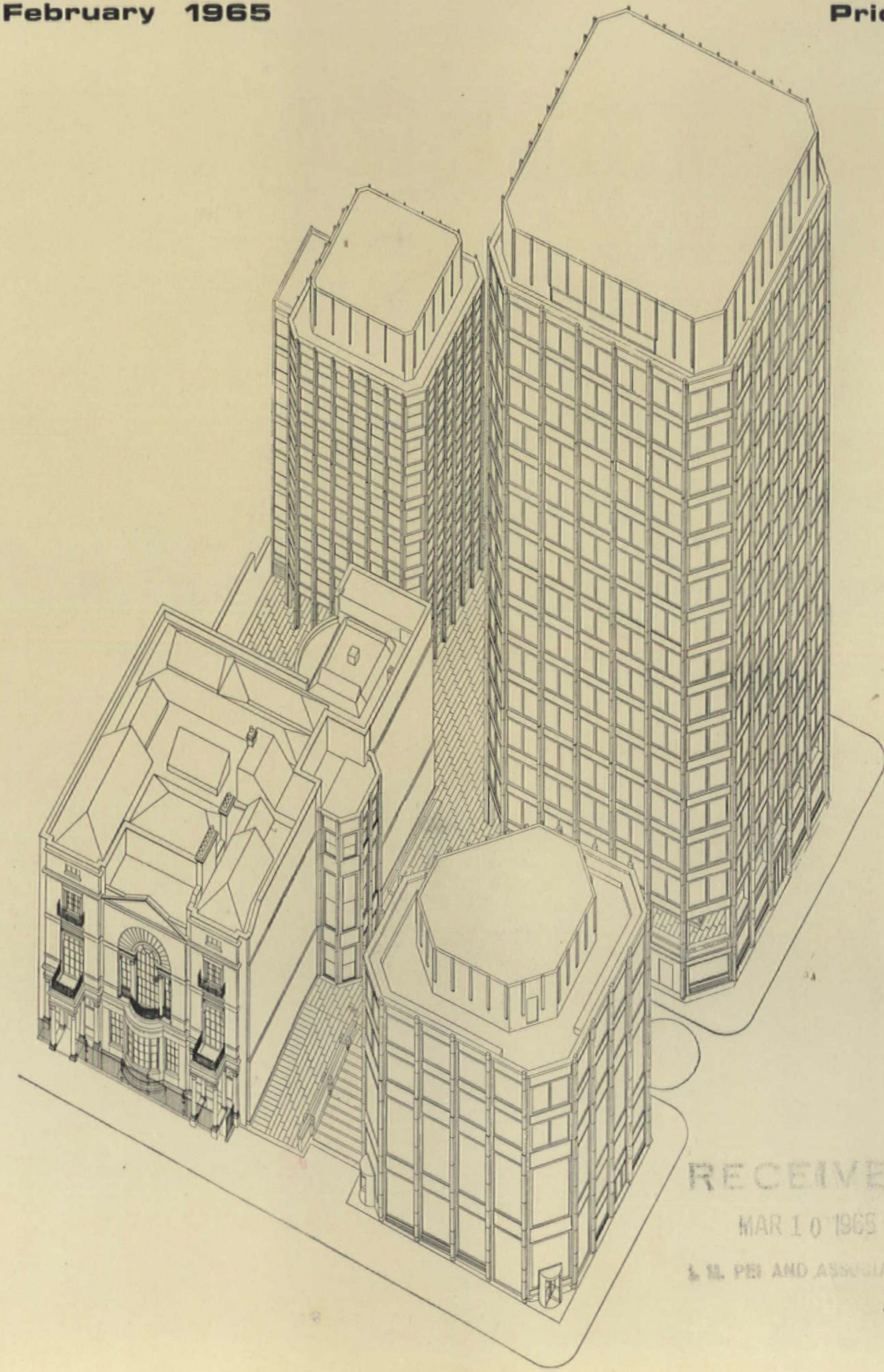

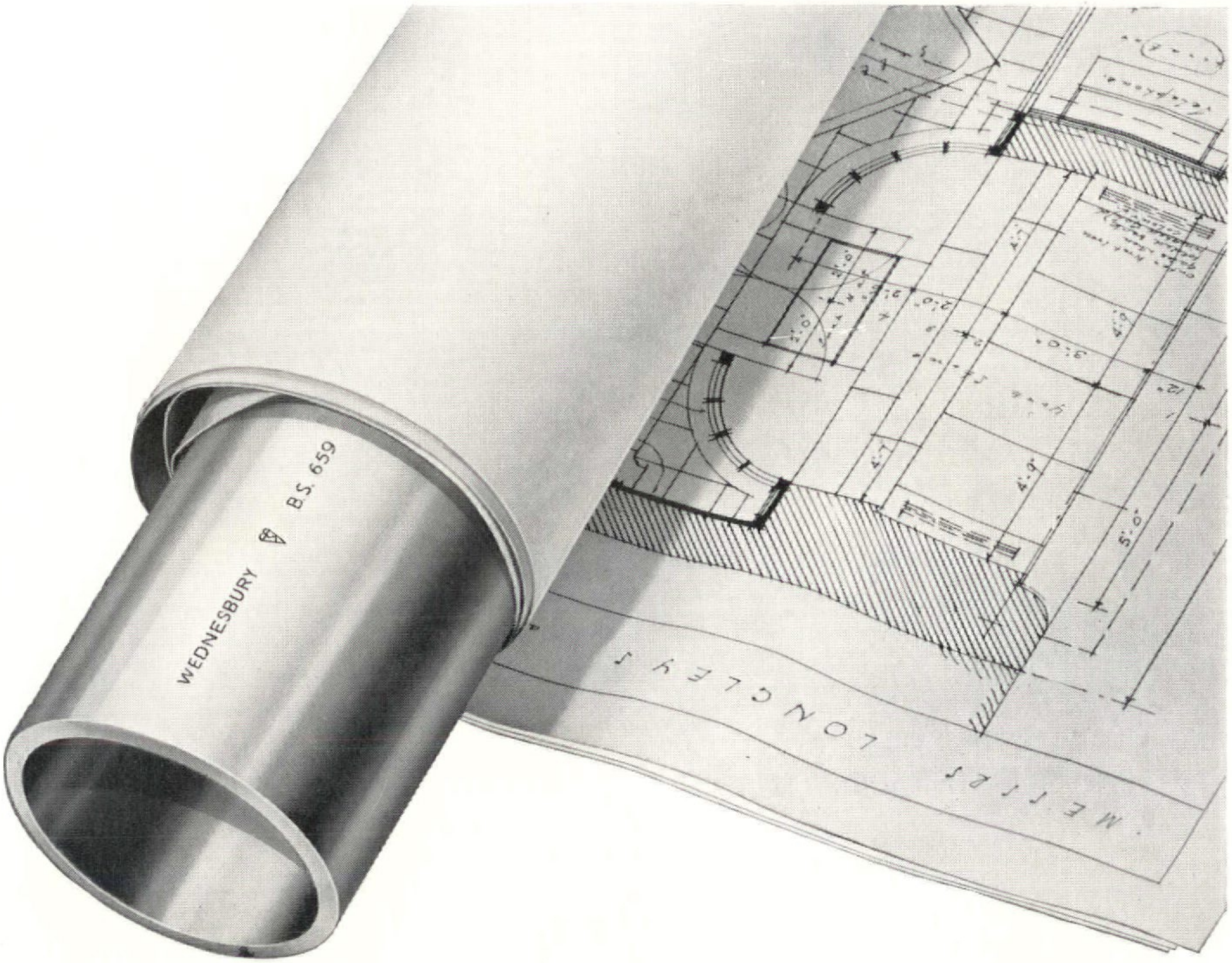
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Ideas and language

N. Patricios

In 'The Metabolists of Japan' (Oct. 1964) Günter Nitschke indicated the Oriental view on change, Zen's principle of the relativity of all existential phenomena, and the reflection of these in Japanese architecture. Although we in the West pay lip service to the concept of change in planning and architecture, we have not produced any theories of fundamental importance to match that of the Metabolists. Team 10 here in Europe see the problem of change as developing freer open systems of linked building complexes in contrast to the tendency of contemporary architecture to produce closed forms, and in cities by attaining urban comprehensibility through clarity of organization. It is the intention here to put forward the proposition that our language pattern is, in the main, a screen which prevents us from fully comprehending change, as well as being at the root of dualisms.

Language. European languages have substantial unanimity in their structure due to their common ancestry, particularly on the intellectual side which is derived from a background of Greek and Latin. The phenomena of the world are in a continual state of flux, yet these languages force us to deal with the dynamic situation by means of a finite number of discrete words. Western intellectual Man originally had no choice, in order to facilitate the development of thought, but to separate out of the apparent confusion of natural processes qualities which were seemingly permanent and unchanging. These static concepts which still form a major part of our languages have become fixed and cease to correspond to the dynamics of nature—what is static cannot account for process.

European languages, then, analyse the world largely in terms of distinct objects and events corresponding to thing-nouns and action-verbs respectively, and these 'have' in turn properties—adjectives and adverbs. This bipolar vision which sees the world as a collection of distinct things is not inherent in nature as shown by philosophers from Plato to Bergson, and thinkers such as Wittgenstein and Ayer in our century. Benjamin Whorf[1] illustrated this view in that when we say 'A light flashed' in describing the action 'to flash' we use two classes of words (noun and verb), yet in reality the flashing and the light are one and the same thing. His reason is that we make the facts fit the notation of our language simply because our verbs must have substantives in front of them. Similarly the statement 'I hold it' on reflection shows that 'hold' is no action but a state of relative position, and yet we think or even see it as an action because our language formulates it that way.

Whorf's hypothesis that the pattern of a language one habitually uses influences the way one perceives the environment is similar to the view held by Sapir[2] that the 'real world' is to a large extent unconsciously formed by the language structure of a particular people. This relativity principle that different linguistic backgrounds would cause a shift in the picture of the world has not been refuted or substantially demonstrated due to the lack of comparative studies. The few studies carried out, however, indicate that we place a high value on verbal data in relation to perception and cognition, as indicated in the ability to recognize and remember colours according to the availability of specific colour names. Chichewa, a language related to Zulu, has two past tenses, one for past events with present results and one for the past without present results. These people would have a different view of time from us as 'I ate' (*a*) in their language would mean 'I am not hungry'; 'I ate' (*b*) would mean 'I am hungry'. The fact that the Japanese language has two subjects in contrast to our one would probably slightly alter our respective views of phenomena.

The concept of change as transition in patterns of relationship in physics has been found to be more valid and realistic than any other, and what is significant is that it was realized through working not with linguistic media but with mathematics and other symbolic systems. As an understanding of change is vital in this era of accelerated development, this new concept of change (derived from the work of L. L. Whyte[3]) can usefully be applied to the relatively macrocosmical level of planning. In elaborating on the concept here the limitations of everyday language as shown should be kept in mind—the use of a tool, whose nature is static and is characterized by a subject-predicate division, in describing a dynamic process.

Because of our linguistic background we tend to think of change by the analogy of motion. Thus we see rural depopulation in Britain after the Industrial Revolution as a movement of people from the countryside to towns, and similarly the present shift of population from north to south as a movement of entities. Change, however, should not be considered as being the relative motion of entities but as a transition in the pattern of distribution, in these cases due to new functional requirements in the economic, social and physical environments of the nation.

This new concept of change can be highlighted by an analogy with the process of estimating housing demand. Until a few years ago the number of houses required in the future was estimated on the basis of a change in the total size of population—that is a movement from a certain figure to a higher one. However, as Cullingworth[4] has shown, the change in size is not important; but the change in the age-sex structure of the population is directly related to housing demand—that is the change in the pattern of relationships is pertinent.

Few would disagree with the description of a city as a process which is changing continually. These changes are revealed in a sequence of phases in which one form is substituted for another form in the continuum of growth, differentiation and decay. Whitehead[5] considered form generally as the organization of a certain structure to serve a certain end. Structure, according to Whyte, can be regarded as being the effective pattern of relationships in any situation. However, in the hierarchy of relationships, the underlying functional patterns of the individual elements constituting a city are more important than the individual elements which only serve to mark or anchor the patterns. In perceiving the city this principle is confirmed by Lynch[6], who showed that people in the three cities he studied rely primarily on the pattern formed between certain elements, and wherever the relationships were weak the image of the city would be weak. If there was little or no pattern people would organize a coherent pattern out of the disorder in order to reduce disorientation and avoid a sense of anxiety or terror.

Besides the physical form of a city we can derive the social form, the economic form, and the political and administrative forms. But due to the limitations of language as an intellectual tool, at present we have no means of expressing these related forms into a coherent, meaningful and unitary whole. At each level then, the problem of growth and transition in the contemporary city can, with our limited means, become clearer by realizing its form through structure—i.e. the organization of the functional pat-

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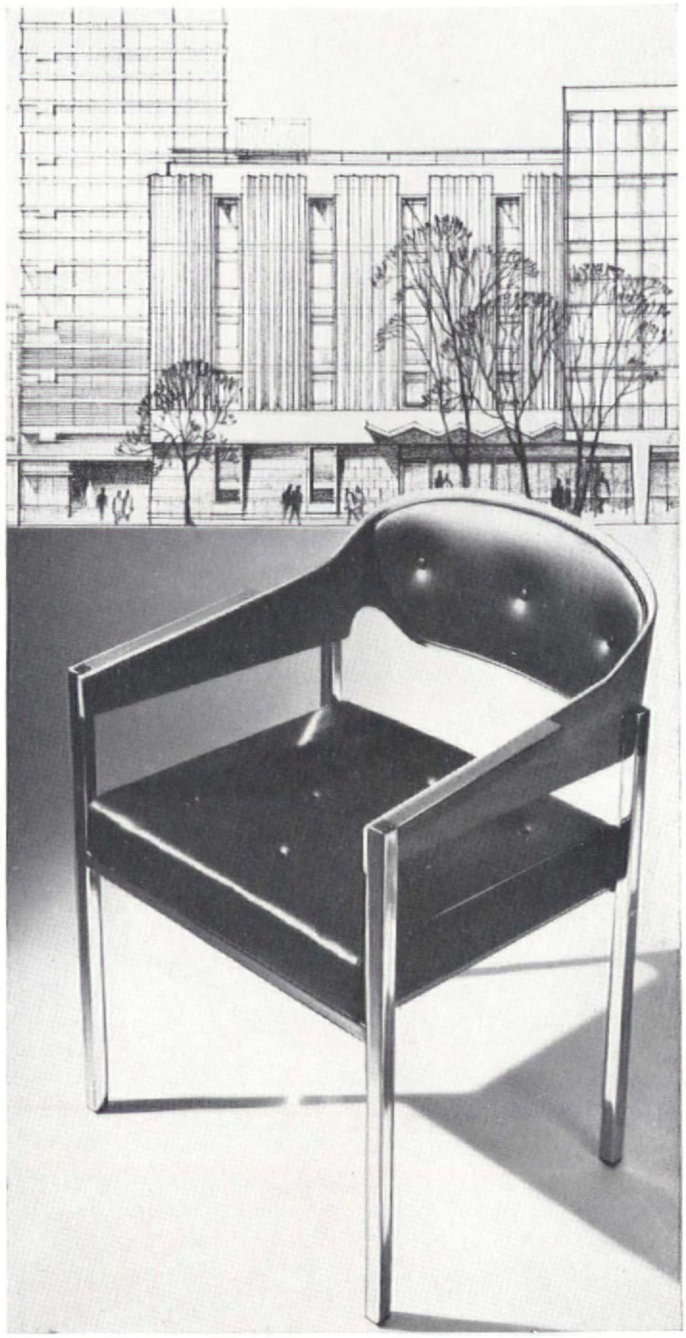

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terns serving a certain end. Fundamental understanding of the dynamic city must begin with the ultimate structural pattern in the hierarchy of structure, this view being similar to Team 10's idea of infrastructure.

Dualisms. A further consequence of language ignoring or repressing interrelations has led to dualisms such as organism/environment, space/time and town/country. Each entity is thought of as an independent principle whereas they are both essential complements of a unitary whole.

Because the system of classification in our language requires a division of phenomena into classes, a thing is either X or Not-X; it cannot be both; it cannot be neither; and no compromise can exist. As soon as there is a classification we have yes or no, in or out, up or down, each explicitly exclusive of one another. We notice the differences yet ignore or repress the relationships. Again we emphasize the difference between 'heads' and 'tails' but forget the coin of which they are the two polarities. Eastern civilizations however attempt to see through the fallacious interplay of 'pairs of opposites' and perceive them as polarities which complement and balance each other in a unified whole.

Where the notation of our language prevents us from fully comprehending that the polarities of any class belong together and cannot do without each other, it is suggested that until a satisfactory method of indicating complementary aspects of unitary entities is achieved, that the two polarities be coupled together with a hyphen. To a certain extent this has been done with space-time and this temporary rule, it is hoped, would prevent us from forgetting relationships such as that of a curve which has a convex side must also have a concave side.

Complementary elements serve to define the other and this has led many scientists to suggest that an organism cannot be defined operationally except in relation to its environment and vice versa. Man-environment would then become a notion similar to the concept of field in physics, where the relationships are not of interaction but of transaction. The dualism of organism-environment is seen particularly in the design of zoos where, but for a few exceptions, animals are denied any resemblance to their natural habitat and caged or limited to artificial enclosures.

Much has been written on the subject of space-time, but Kant's idea of categories of space and time taken as categories of perception and thought have never entered into scientific thought. Of interest here is Whorf's comparison of our concept of time and that of the American Hopi Indian. We cut, measure, and divide time as if it were a ribbon and consider it as having a spatial quality—linear, one-dimensional, uniformly and perpetually flowing and divided into past, present and future. The apprehension of 'space' is probably the same for all people in the world, but the concept of 'space' is linguistically determined. The Hopi language is characterized by verbs, that is there is only one class of words for all kinds of events, which always include both space and time, for neither of them is found alone in his conception of the world. His language permits thinking in terms of space-time as his verbs have no tenses. The dichotomy we face is whether to continue designing space-time in a traditional manner, which is essentially a category of our language, or heighten experience by introducing people to new kinds of space-time, such as the mathematical idea of topological 'space' which depends only on relations between objects in space-time and not on the nature of the respective objects.

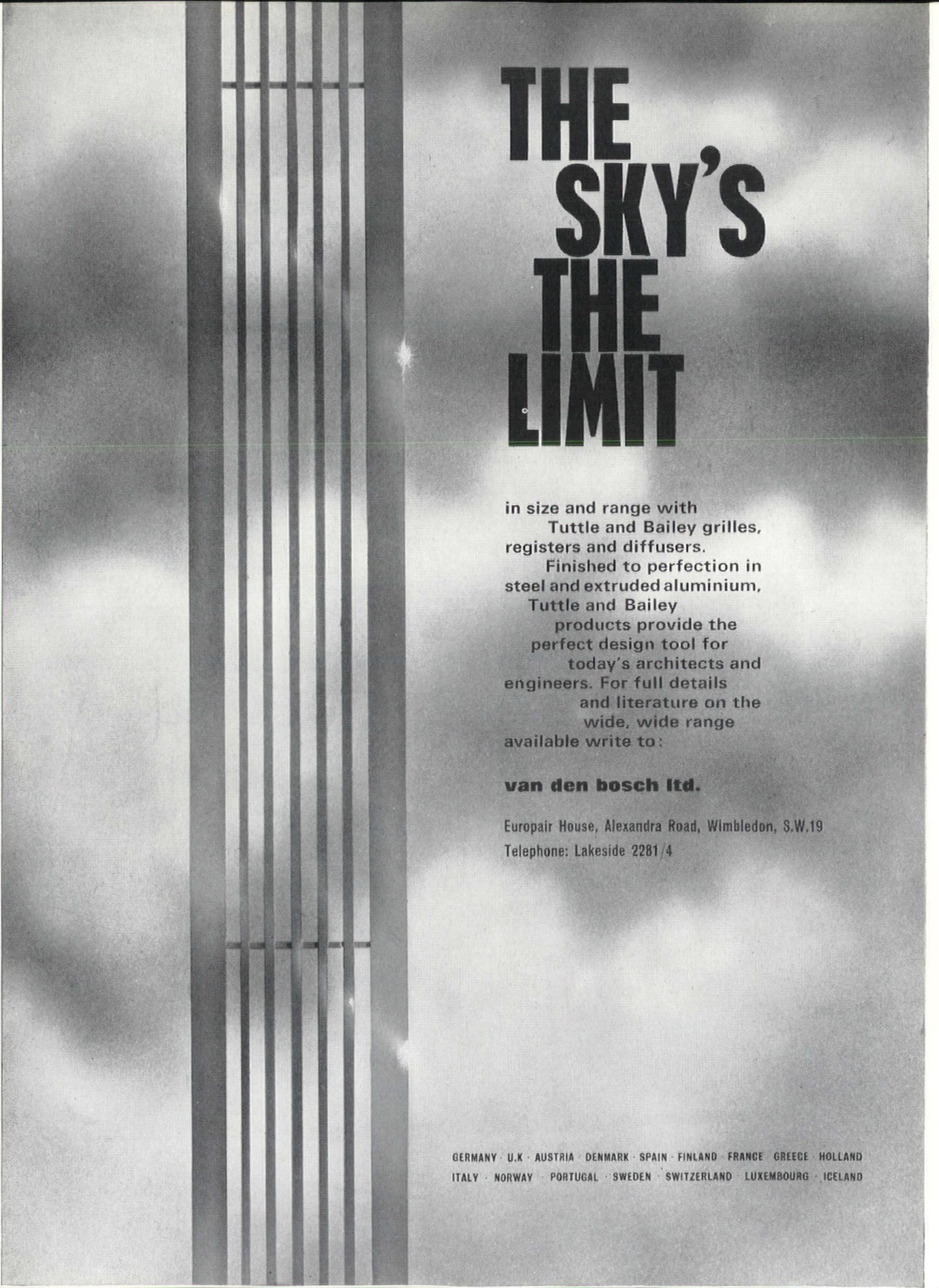
The Hellenic polis was conceived as consisting of a built-up area related in a positive way with the surrounding countryside. This is in contrast to our present idea of a city as being merely the built-up area with the negative Green Belt as a separate entity. We could overcome this dualism of city-country by realizing that they are both an essential and complementary part of a unitary conception of a city.

These three dualisms illustrate the limitation of our language, its static nature, the necessity of considering that apparent opposites are not independent principles but complementary polarities, and our failure to realize the dynamic relationships in processes. With these aspects in mind we see that an ecological system of man-environment and town-country will be in equilibrium when they are in a steady state (as compared with the static final state of the New Town concept) which appears to be constant but is maintained by a continuous change—an inflow and outflow of people and materials. A dynamic morphological outlook of town-country would require radical rethinking of our present static conceptions of structure and function. The biologist von Bertalanffy[7] conceives structures as slow processes of long duration while functions are quick processes of short duration in any type of system, which he defines as a complex of interacting elements. By applying these dynamic principles to the system of city-country we see the pattern of relationships of its elements at any stage in 'time' as being similar to a still photograph taken at the particular point in the space-time continuum. A 'cinematic' view of the city-country would show the slow and long cycles of patterns of relationships (structure) superimposed by the immediately apparent quick and short cycles of patterns of activities (function).

Conclusion. The importance of fundamental thinking on the nature of language in relation to perception and cognition is emphasized by the evidence obtained from studies in aphasia (loss of the capacity for linguistic thinking). These have shown that abstract thinking in terms of concepts, the basis of Western thought, is impossible without language and that language is necessary for analysis and synthesis. As designs, events and decisions become more complex our ability to achieve higher levels of abstraction to solve problems necessary to perform our duties, is severely handicapped by the limitations of language. It is no accident that the two sciences which are the most highly developed (physics and chemistry) are those in which most use of symbolic language is made, thus avoiding the ambiguities and impreciseness of ordinary language. The latter's function was and is to classify and arrange the stream of sensory experience to achieve a certain order in the world, to communicate by means of accepted conventional signs, and to form the basis of cognition.

What is required is extensive investigation, with linguistic limitations in mind, into the proper use and meaning of words and the relationship of words to ideas. The need for a new system of organizing ideas has had little attention paid to it as our language is automatic and operates at the unconscious level similar to the process of breathing, which we are only aware of when we are choking.

1 Carroll, J. B. (ed.) "Language, Thought' and Reality". Selected writings of B. J. Whorf
2 Sapir, E. "Language".
3 Whyte, L. L. "Accent on Form".
4 Cullingworth, J. B. "Household formation in England and Wales". *T.P. Review* (31: pp. 5-26, 1960).
5 Emmet, D. M. "The Philosophy of Alfred North Whitehead".
6 Lynch, K. "The Image of the City".
7 Bertalanffy, von L. "Problems of Life".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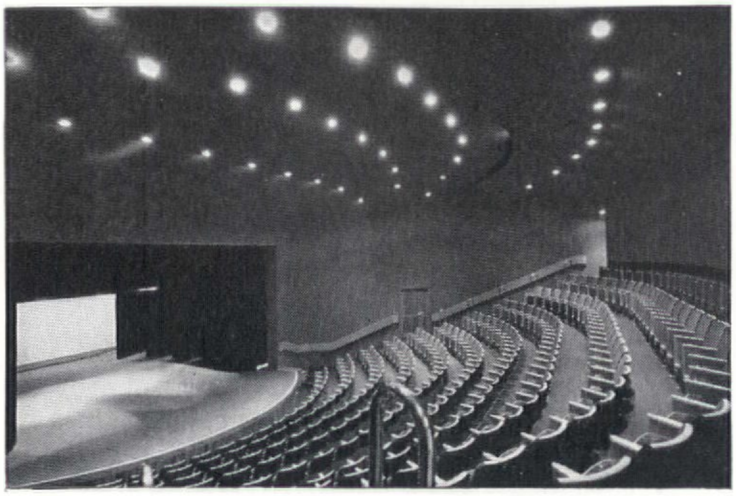

Vår Teater *one of the nine Childrens' Theatres in Stockholm. Described in* "Tabs" *Vol. 21. No. 1. A few copies of these back numbers are available on request.*

University of Waterloo Arts Building, Ontario
Architects, *Messrs. Shaw & Moffatt, Toronto. Details of this Open Stage appear in* "Tabs" *Vol 21. No. 2.*

Once upon a time only a very few architects were ever involved in designing a theatre. Today the general practising architect can expect to find one specified at any time in the list of requirements for a new school or university building; in hotels or civic halls.

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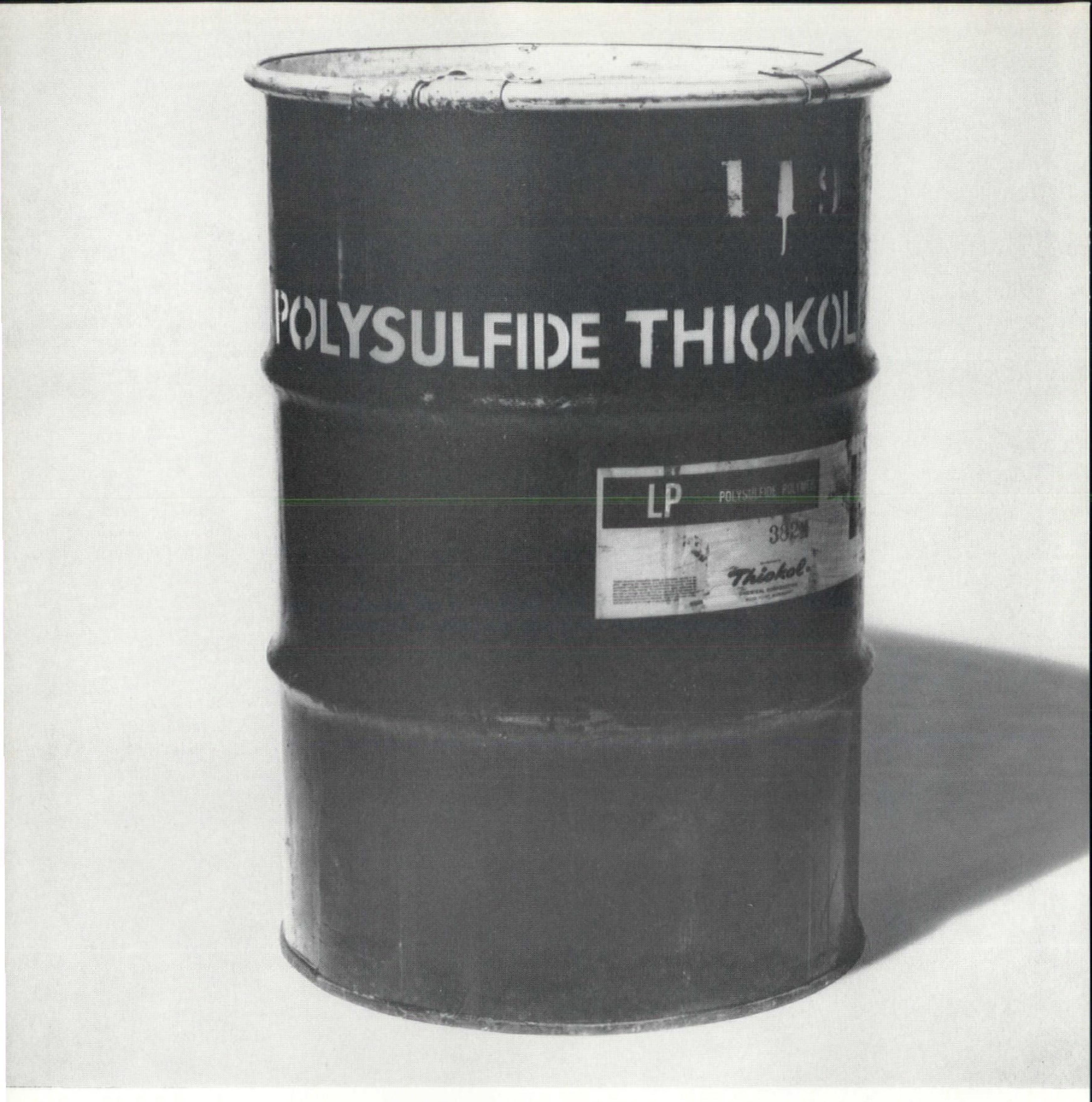
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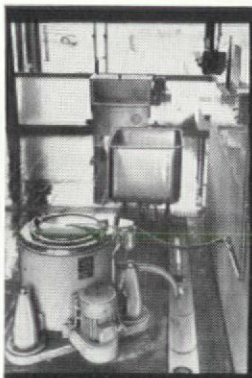
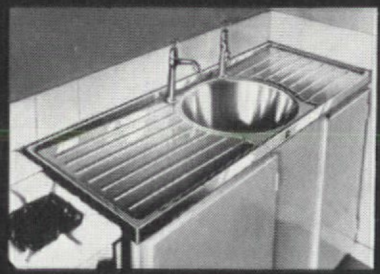
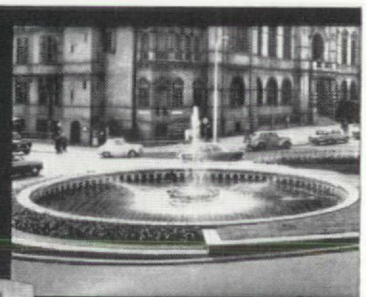


The Park Hill Development Scheme, Sheffield.



The Goodwin Fountain, Sheffield.



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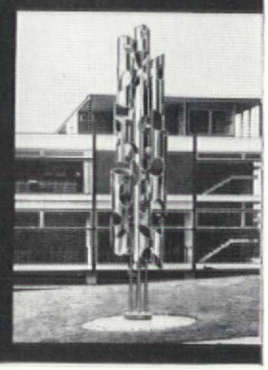

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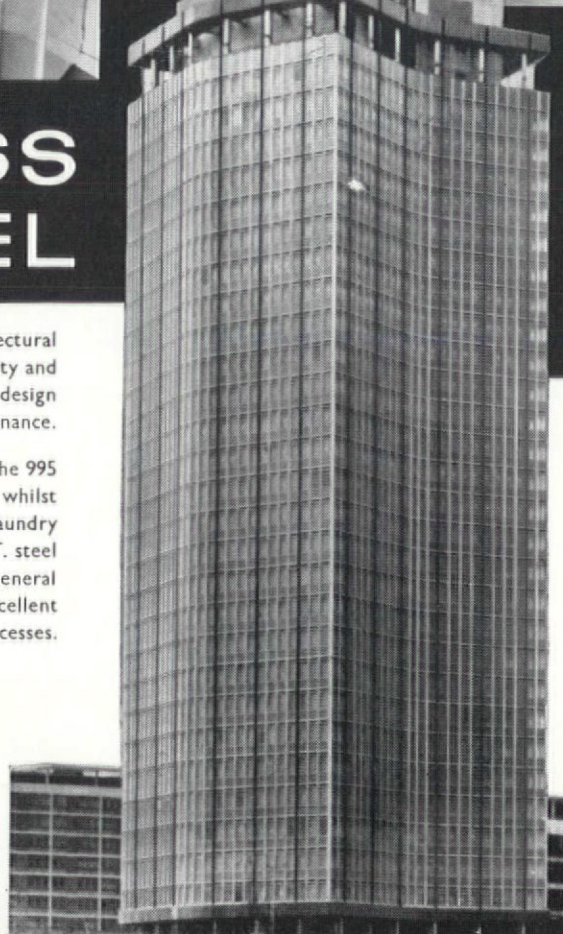

Millbank Tower, London. Architects — Ronald Ward & Partners.

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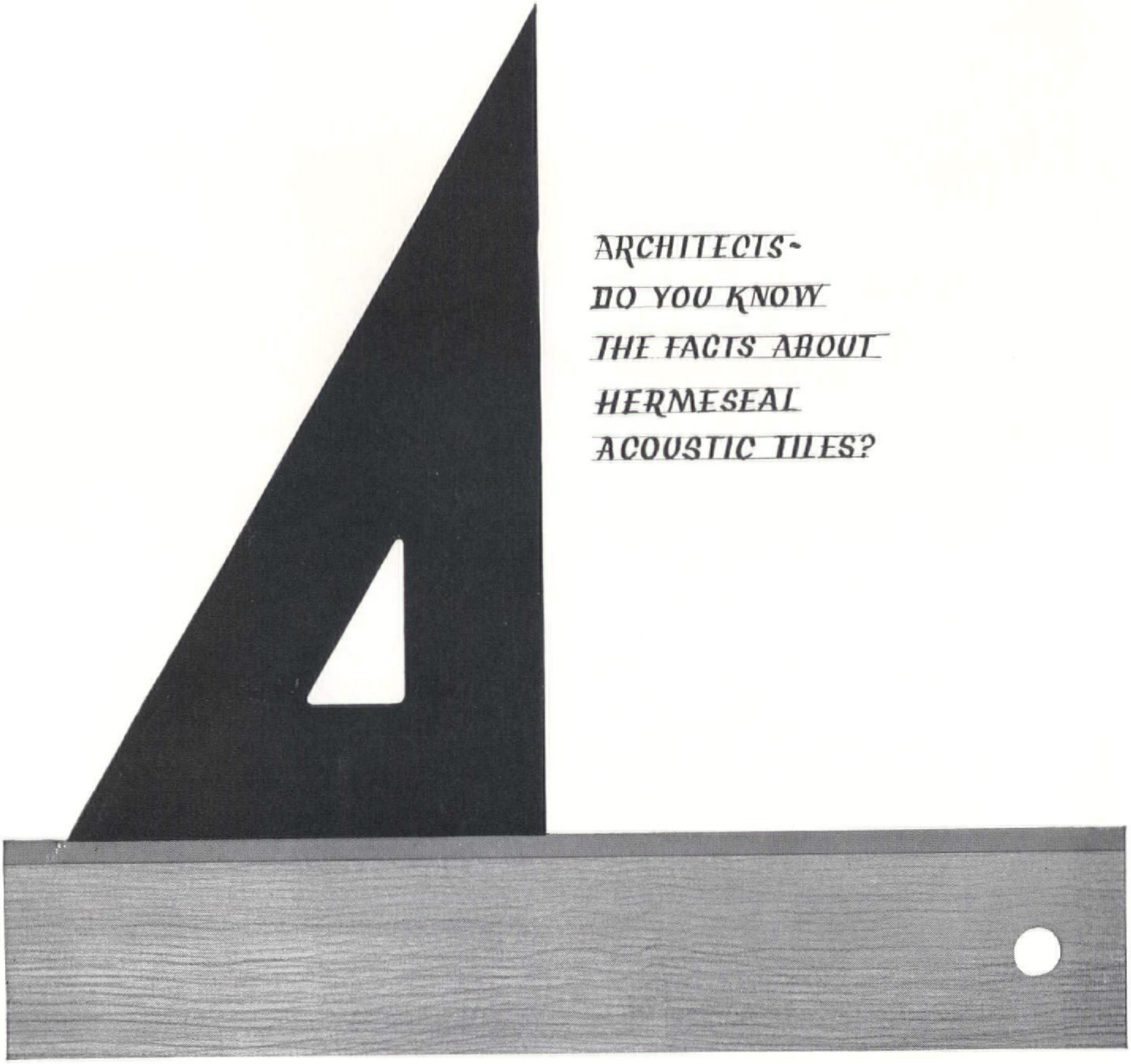

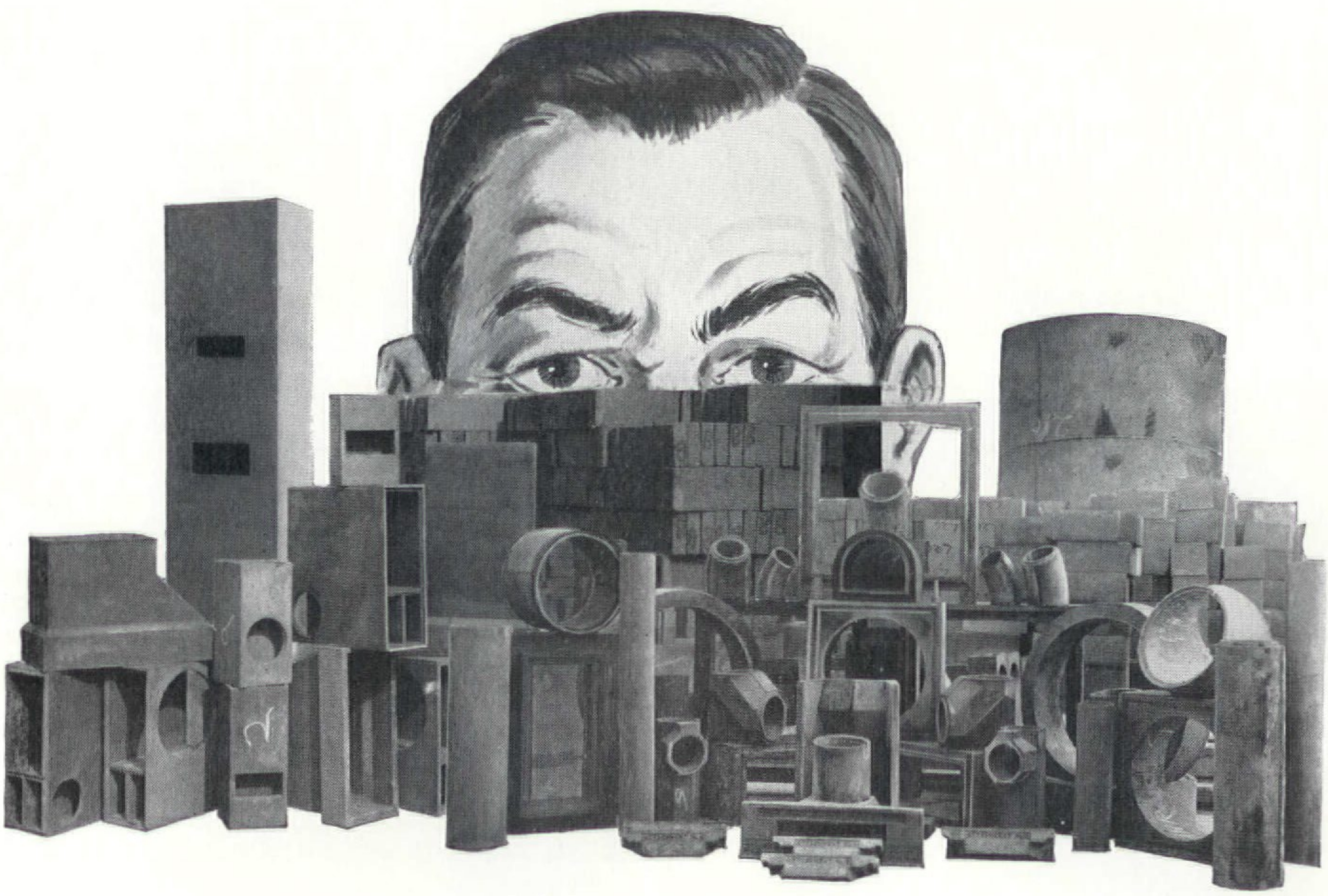

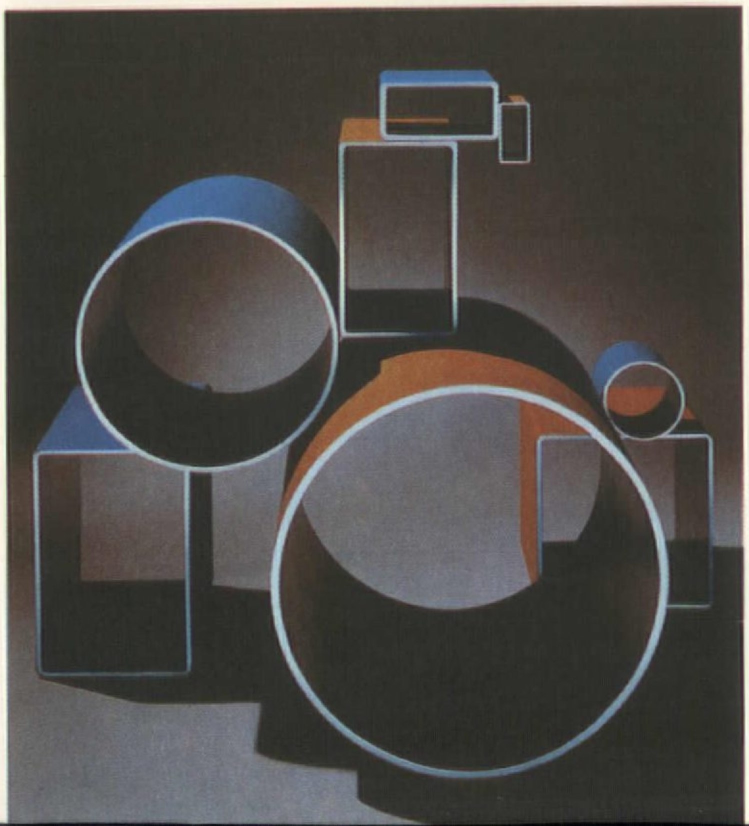

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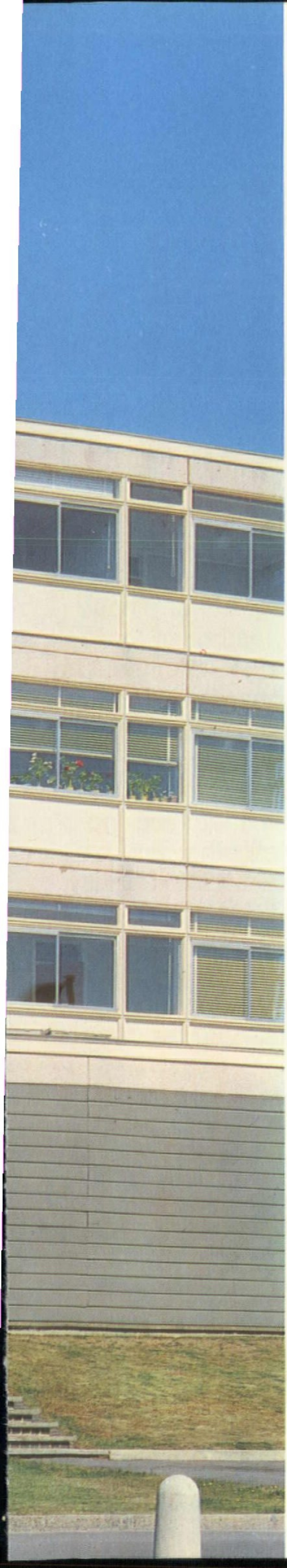

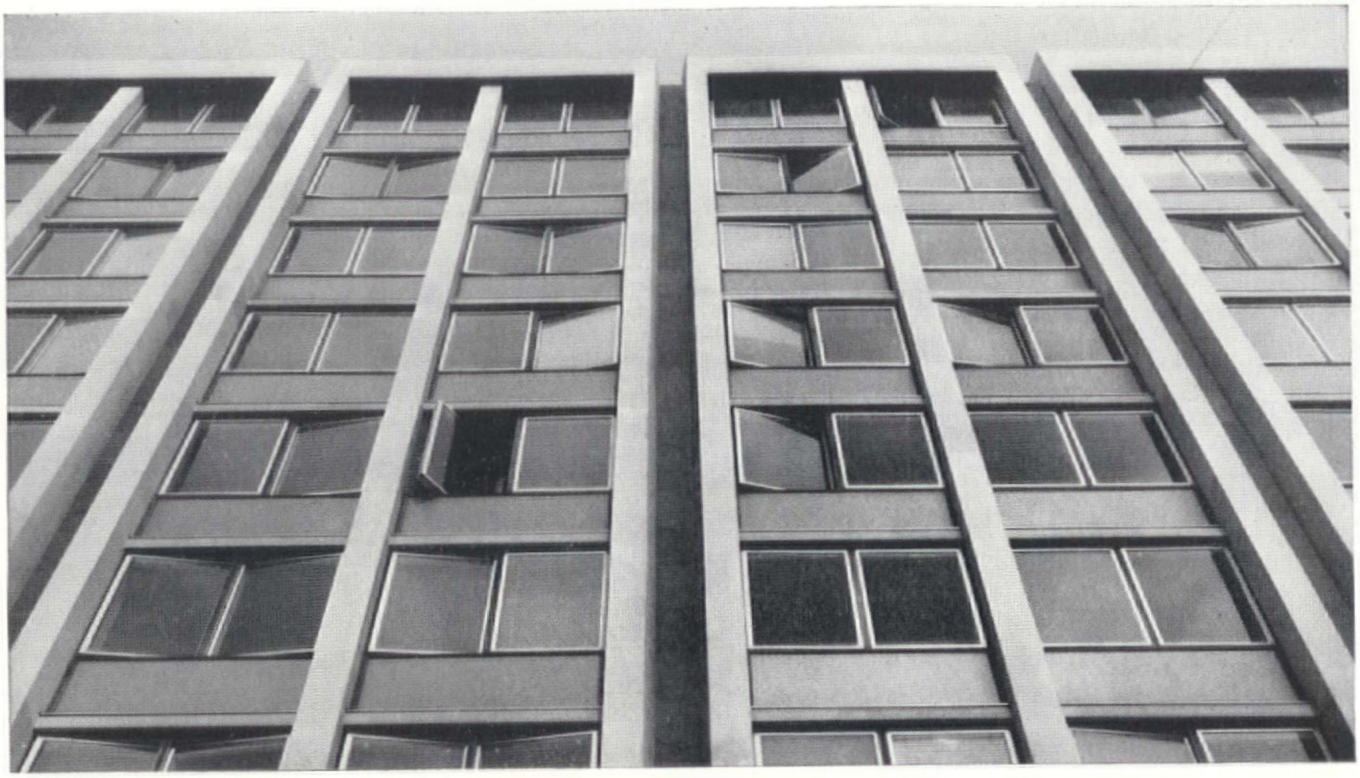

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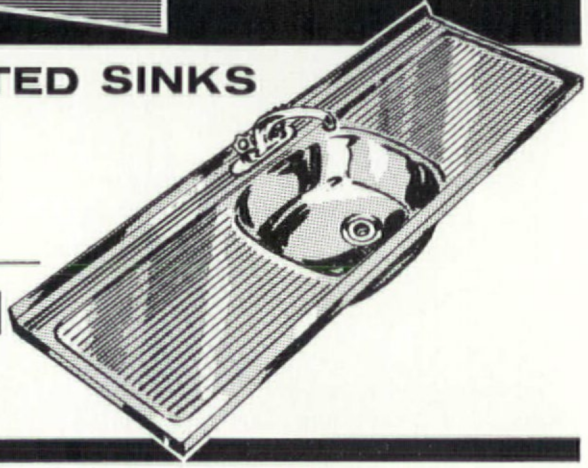

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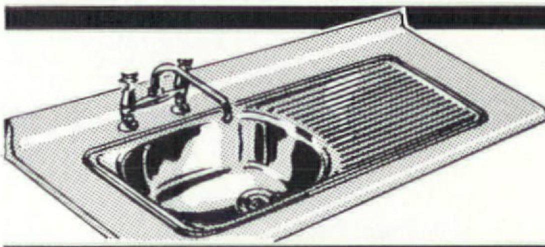

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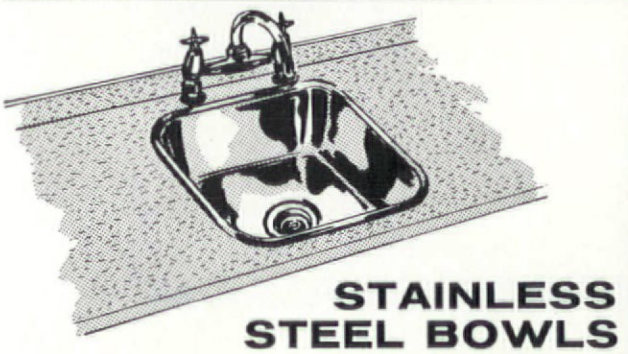

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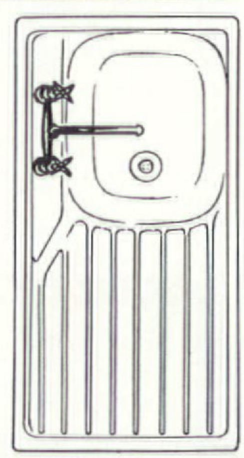

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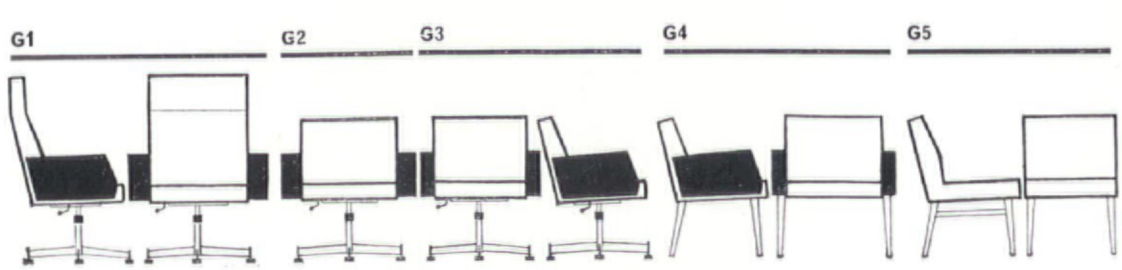

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GASKET GLAZING

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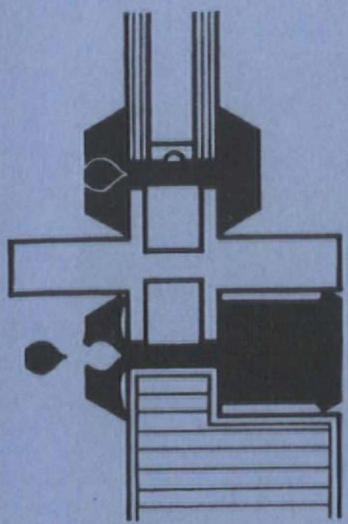


FIG. 1

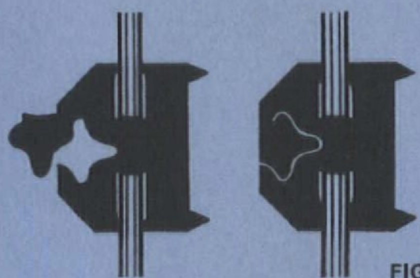


FIG. 2

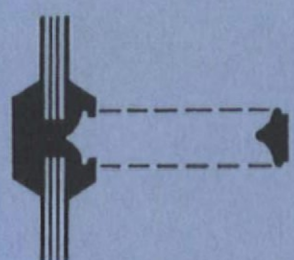


FIG. 3

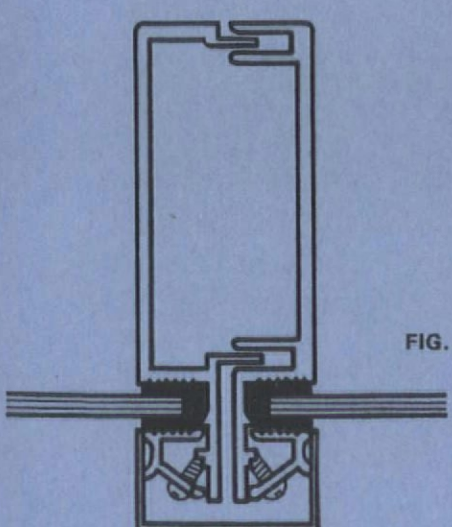


FIG. 4

Among the many changes taking place in the building industry today, gasket glazing is important and because of its bearing on the development of a progressive glass industry, has an obvious place in this series.

Historical

In the transport industries the use of flexible extrusions, usually rubber or rubber-based, has been common for 30 years or more. But in building their use is comparatively recent. In Britain, in fact, gasket glazing is little more than a few years old.

In the United States, the technique was first introduced, in a building, in the toll booths of the Pennsylvania Turnpike in 1949. Its first major application (Fig. 1) was in the "zipper" type used in the curtain walling of Eero Saarinen's Technical Centre for General Motors, Detroit, finished in 1956. In Britain, its first large-scale use was in London's New Zealand House, by Sir Robert Matthew, Johnson-Marshall & Partners, finished in 1963. (Fig. 6.)

Principles

The principle of the gasket is the simple one of an elastic substance resisting pressure from an external force. In glazing, the gasket reacts against the pressure bead with sufficient force to make it conform tightly to its adjacent materials (glass, panel or frame) to both hold the various elements in place and provide a durable weathertight seal.

Advantages

Flexible gaskets have notable advantages. They are easy to install. They should need no cleaning off after installation and no second visit, no maintenance, painting or replacement over a long period—if at all. They can be used regardless of weather conditions. Within reason they have no shelf or pot life. They offer the designer considerable freedom of detailing when compared with other methods of weatherproofing and sealing a building. They simplify replacement of broken panels and glass and very often, depending on frame design, allow this to be done from within the building itself.

Assembly

As in any other industrialised process, the use of gasket glazed units demands very careful attention to detail throughout the various stages. The most important factor to be guarded against during assembly is dirt. It must be cleaned from the surfaces forming the weatherseal to prevent water being drawn into the small gaps it causes, by capillary attraction. Such action usually leads to the accumulation of dust in the seal which can progress until a free path is created that causes seal breakdown.

Experience has shown that the shaping of a straight extrusion to fit around a rectangular glass introduces problems at the corners. Mitres and cemented corners can be used but are not always satisfactory. A solution is to pre-form the gasket and mould the corners before assembly leaving only one joint to be made. This should be in the centre of the top side where it is most protected from the weather.

Materials

A properly designed gasket of sound material must maintain a tight seal despite various movements of the joint from factors such as wind, settlement, vibration etc. It must accept thermal expansion and contraction even when the adjacent materials with which it is used have different coefficients of expansion and contraction. This is usually the case with metal or masonry structural members on one side and glass, metal, or panels, on the other. Also, the gasket must not deform permanently under load and must be durable enough to withstand sun, rain, ozone, pollution, abrasion, heat and cold, oils 'and other destructive factors.

It is important that any relative movement between the glass or panel and the frame is accompanied by distortion of the gasket alone and not by the sliding of the surfaces forming the weatherseal.

Neoprene and Butyl

Such demands as those above limit the choice of materials at present available to neoprene and butyl rubber compounds. The elastomer neoprene is currently favoured because it has a balanced combination of the properties needed for reliable performance and, because it has been in use since 1932, it has a history of durability proven by experience. It is markedly superior to natural rubber used as a building seal. It can support compressive loads of up to 1000 psi without permanent deformation. If it does deform permanently under heavier loads, such deformation is slight—about $\frac{1}{32}$" to $\frac{1}{16}$" per inch of gasket thickness. Most of this deformation occurs within the first few days of the load being applied.

The manufacturers of neoprene claim a life of from 25 to 50 years. But against this, however, must be weighed the consideration that such life can only be achieved if the extruded compound contains at least 50% by weight of the basic rubber hydrocarbon and no crude or reclaimed material—also, provided that the gasket is not subjected to tensile stresses. Butyl rubber is a more recent introduction and does not yet have the same popularity as neoprene.

Coloured Neoprene

Neoprene suitable for use in building is made only in black. Extrusions can be made, however, in a wide range of colours by the application of hypalon synthetic rubber. This is done during the manufacture of the seal and produces a vulcanized skin over the extrusion—an additional weathering factor.

GASKET GLAZING

Dense and Sponge Neoprene

In the first instances the gaskets used in building were of the dense variety of neoprene which could perform structural or loadbearing functions as well as acting as a seal. The last 5 years, however, have seen the introduction of closed cell sponge neoprene which is very suitable for use in extrusions whose main function is to seal and which have no structural purposes.

Speaking generally, sponge neoprene has all the attributes of dense neoprene, particularly in resistance properties, but, due to its makeup, its mechanical characteristics differ. Being cellular, sponge neoprene has less compressive strength but, by the same token, is more compressible so that, under compression in a joint, it conforms more closely to adjacent materials it is sealing, but with less pressure needed. Also, it is more likely to compress around irregularities than to bridge them. Another important advantage, is that it will accept greater tolerances than with dense neoprene.

In assembly it requires little surface preparation, can be spliced easily with cold-setting neoprene adhesive and needs no clean-up. Most varieties of neoprene sponge gaskets are available in various shapes and sizes and, again within reason, there is no limit to the shelf life. Some of the systems that use neoprene sponge seals use those with pressure-sensitive or dry-back adhesive on one side to hold the seal in position during the assembly of the window or panel. Others are designed to fit precisely into a predetermined position on the frame.

Applications

Neoprene seals are of three main types — H-section, V-section and I-section. Figure 1, already mentioned, shows the zipper, or self-locking, gasket used at the GM Centre, Detroit, which is structural and where compression is achieved by forcing an oversized strip of harder neoprene into a channel in the gasket. Figure 2 shows a refinement of this gasket to reduce the number of separate components—that of the IBM Building, Rochester, Minnesota, by Eero Saarinen & Associates—where the gasket and filler strip are joined along one edge of the groove and the filler strip is sufficiently oversize to compensate for the extrusion of both parts in the same grade of material. Both the above extrusions were made by the Du Pont Co. Ltd. Figure 3 shows a typical H-section extrusion for single glazing made by Marley Extrusions Ltd., Sevenoaks, Kent.

The other main type of dense neoprene extrusion is that of the U channel, fingers, or bulbs, which require an external source of pressure, usually a movable metal pressure bead, to force the gasket into compression as the screws are tightened. The first major use of this technique was in the Arrival Building of the John F. Kennedy Airport (Idlewild), New York, by Skidmore Owings & Merrill, shown in Figure 4. In Figure 5 is shown a detail of a window incorporating a U-section extrusion of a similar type by Henry Hope & Sons Ltd., Birmingham.

The practical difficulty of getting very large sheets of glass into position without disturbing a U-section gasket is such that the system has been modified into the strip system in which one strip is cemented lightly to the upstand of the frame and the other to the glazing bead to hold them, the strips, in position during assembly. In New Zealand House (*op cit*) this system was used (Figure 6) to fix $\frac{3}{8}$″ glass panels 9 ft. high and 18 ft. wide on the ground floor. The drawing is based on one by Howard Clayton-Wright Ltd., Wellesbourne. The gasket itself cannot move out of place during relative movement of the glass and the frame as it is retained by matching saw-tooth ribs and channels on the framework and gasket. The gasket has a taper on the side in contact with the glass which provides the thickest section, and, therefore, most compression, at the sight line where the immediate weatherseal is required. Pressure is derived from the direct thrust of the set screws on the inner bead and the seal is further improved by a pressure-break groove in the gasket face.

Figure 7 shows the first major usage of neoprene sponge seals 5 years ago in the Holy Cross Hospital, Chicago. The seals were tapes with adhesive to hold them in position during assembly. Of particular note are the snap-in pressure stops. Such snap-in designs can be used readily with sponge seals, but are generally impractical with solid seals because of the amount of pressure required to force the bead into place.

Figure 8 shows an interesting variation of the preformed U-section "rubber band" principle. Usually gaskets with this cross section are made slightly smaller than the glass sheet and are snapped around the glass before it is set in the frame—compression being obtained by snap-in or screwed bead. In this diagrammatic detail of the new terminal building at La Guardia Airport, New York, the pressure bead is *rotated* into position, making it easier to position.

Useful supplementary information on gasket glazing is given in the short article on Flexible Extrusions in Glazing, published in our Glass and Windows Bulletin No. 1. Our Technical Sales and Service department at St. Helens should be approached for further information on gasket glazing or, in fact, any aspect of glazing.

FIG. 5

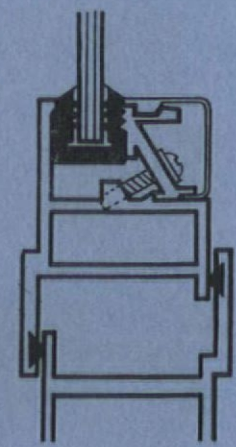


FIG. 6

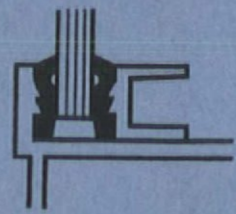


FIG. 7

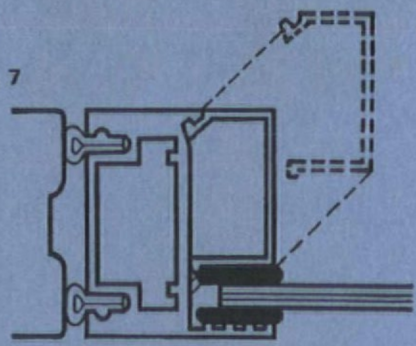
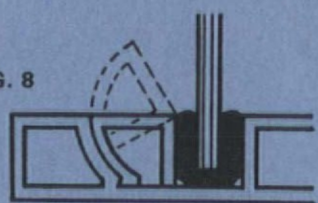


FIG. 8



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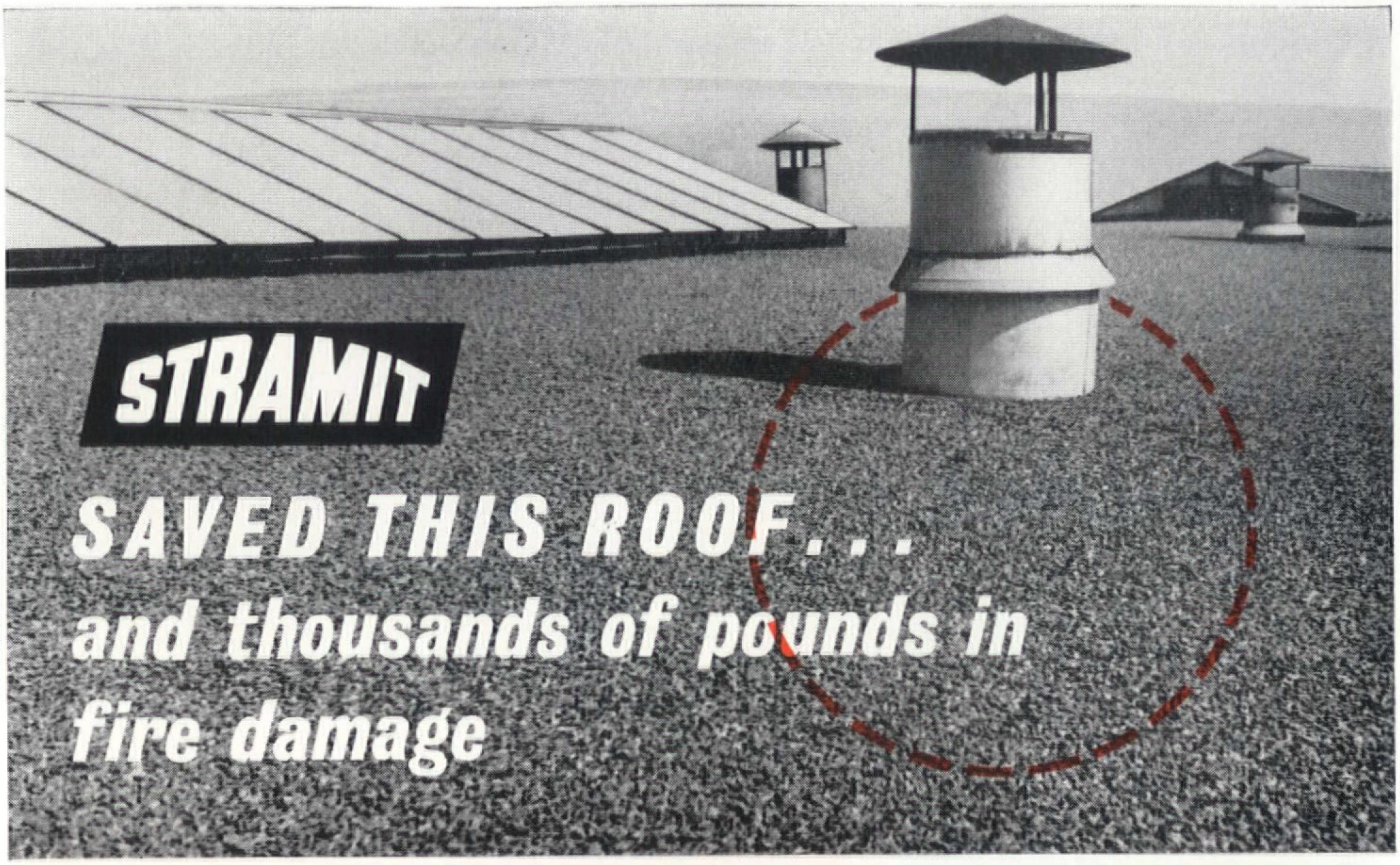
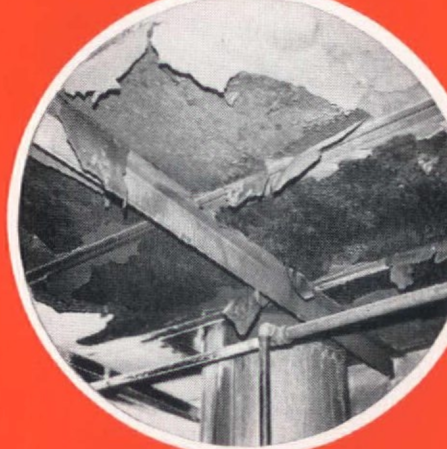


This is the roof of the polishing and spraying shop in a furniture factory, immediately after a fire in which highly inflammable solutions turned the workshop into an inferno. The area outlined was directly above the outbreak, yet the Stramit Class I Roof-Decking, supported by steel-tees, resisted the fire so effectively that the bituminous felt weathering was completely unharmed—not even a bubble was raised!

Below we show the underside of the same area directly above the outbreak. As can be seen, the damage sustained was entirely superficial: the asbestos paper liner had burnt away in places, *but the Stramit slabs were only slightly charred on the under surface.* To restore the workshop ceiling, it was only necessary to clean the surface of the Stramit slabs and reline with asbestos paper.



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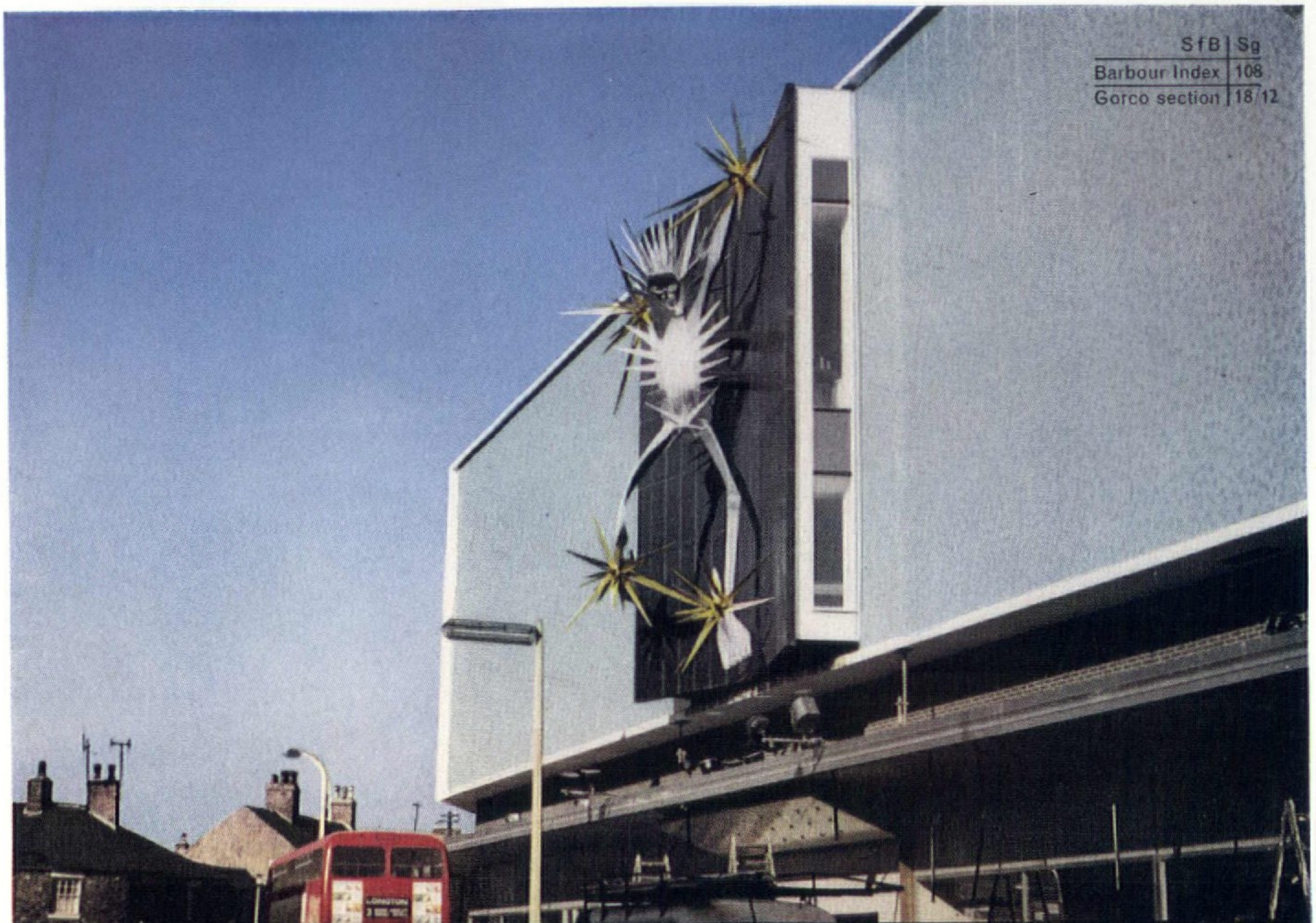

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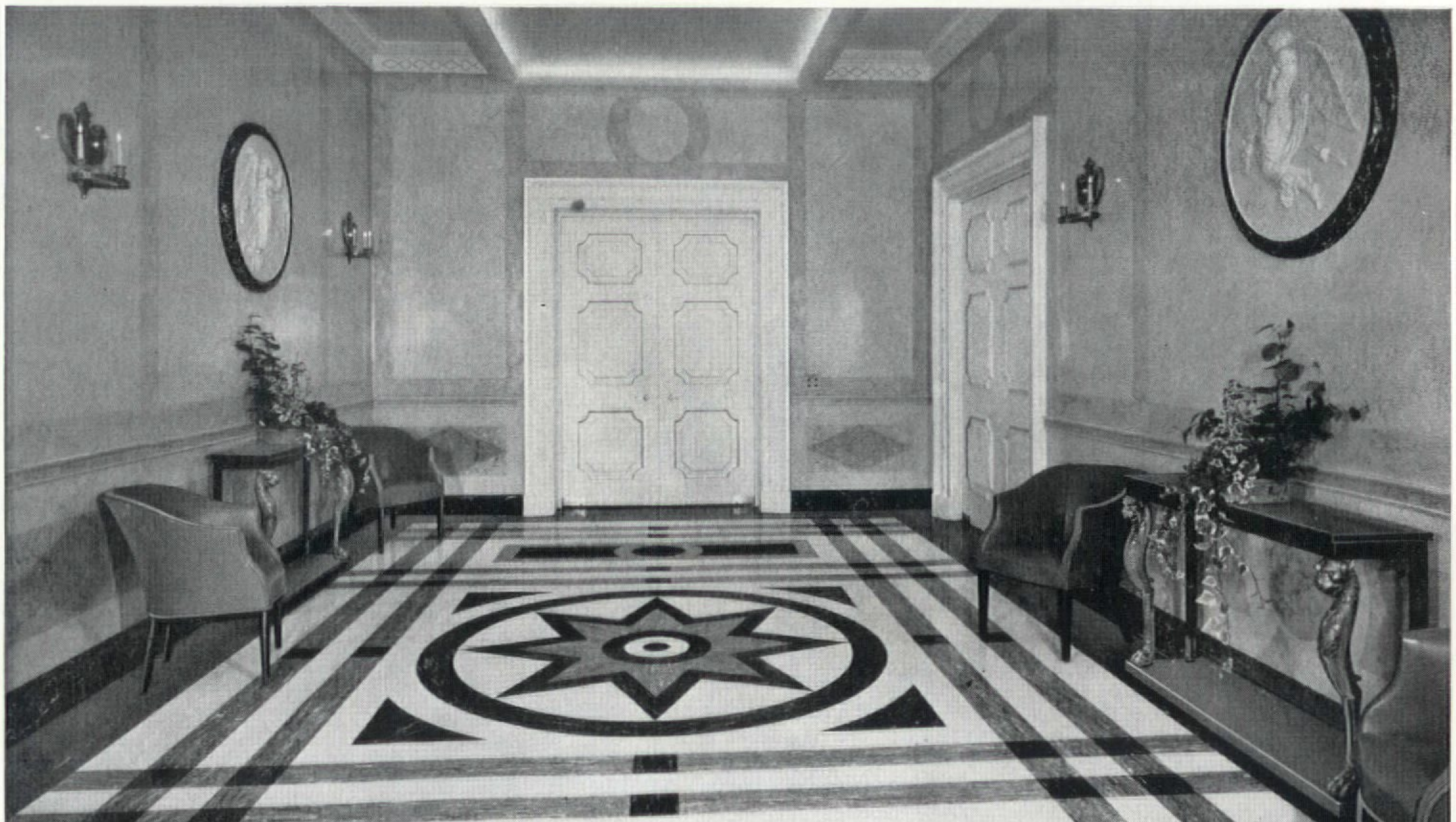

Amtico Renaissance Flooring in the Entrance Hall to
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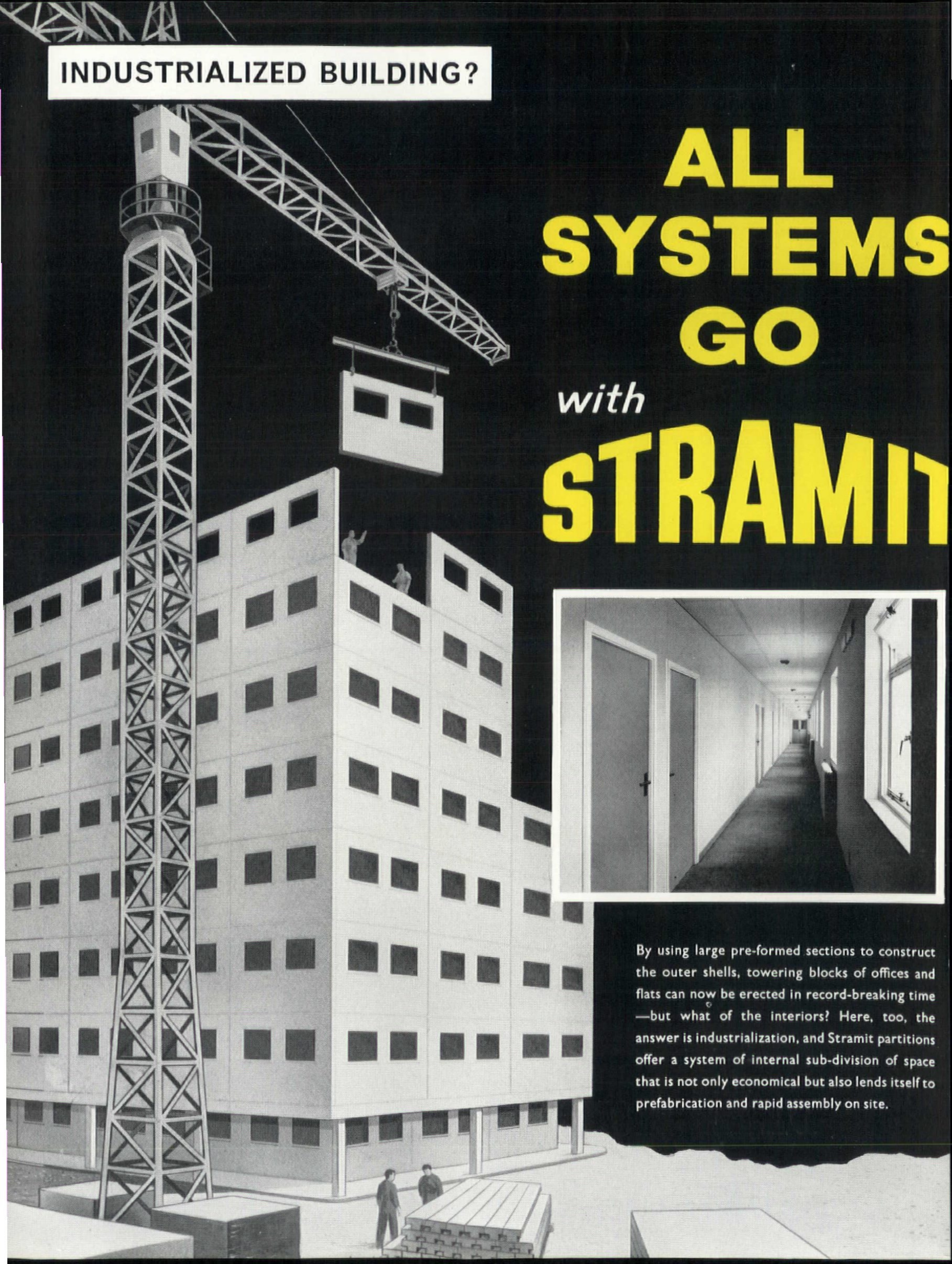
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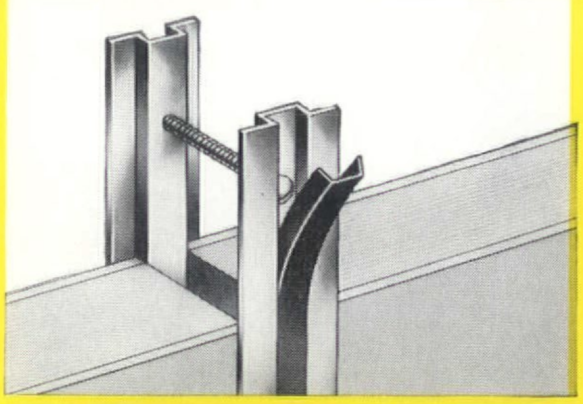
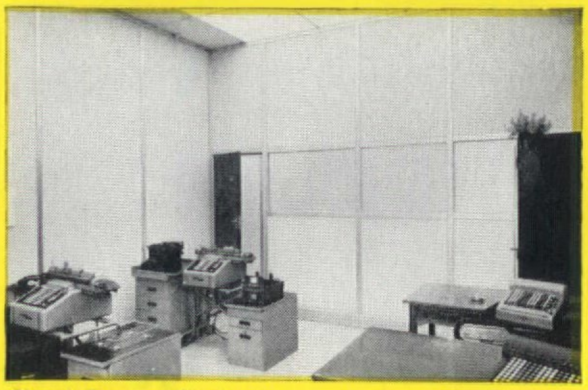


Detail showing construction of partition using aluminium sections and hardboard-faced Stramit-core panels. Note plastic-insert which conceals bolt-heads.



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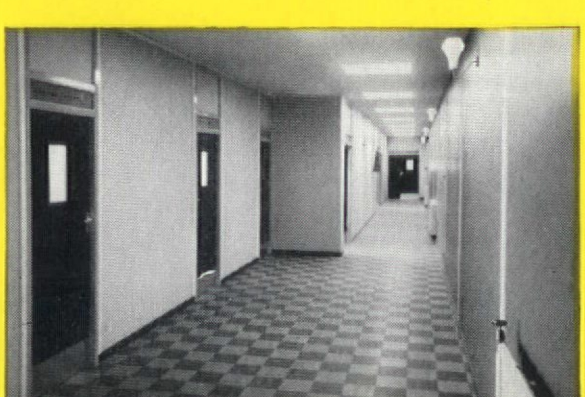
LITERATURE: Comprehensive Technical Brochure STC.1004 available on request. Barbour Index File No. 225 or Gorco Bureau Section 21/7.



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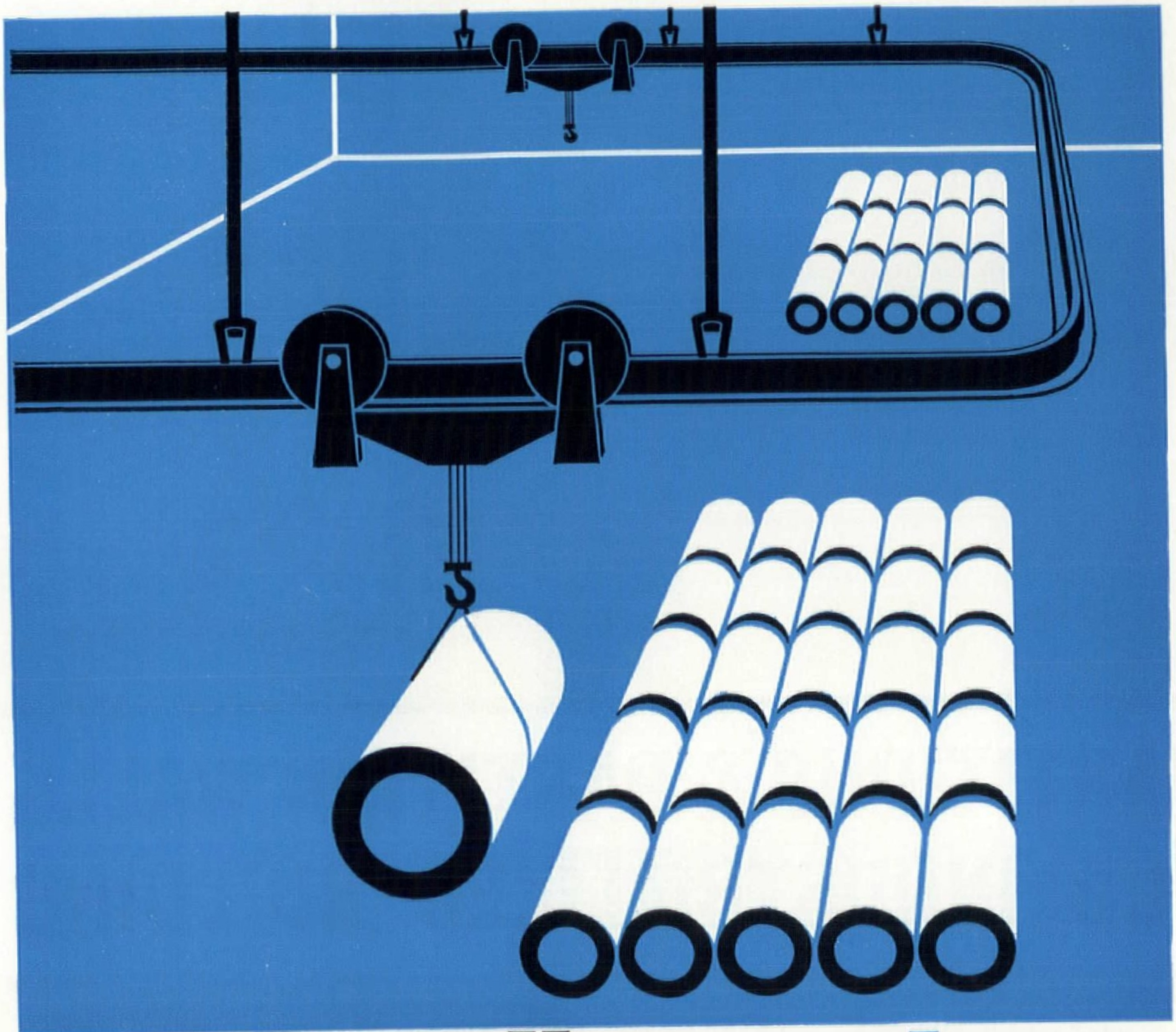

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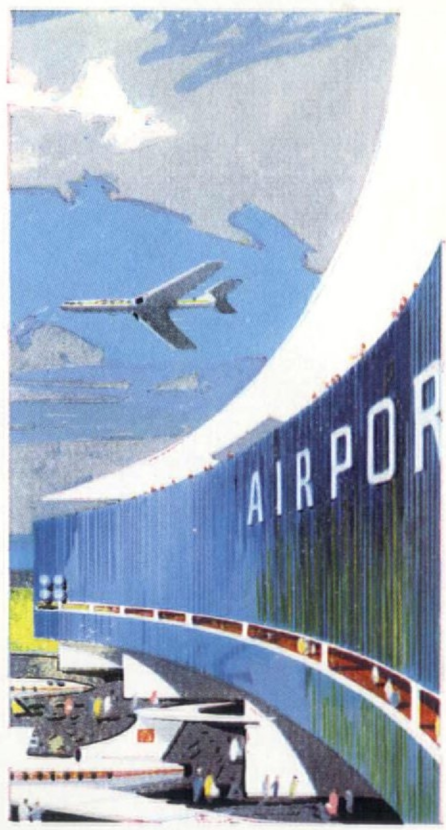

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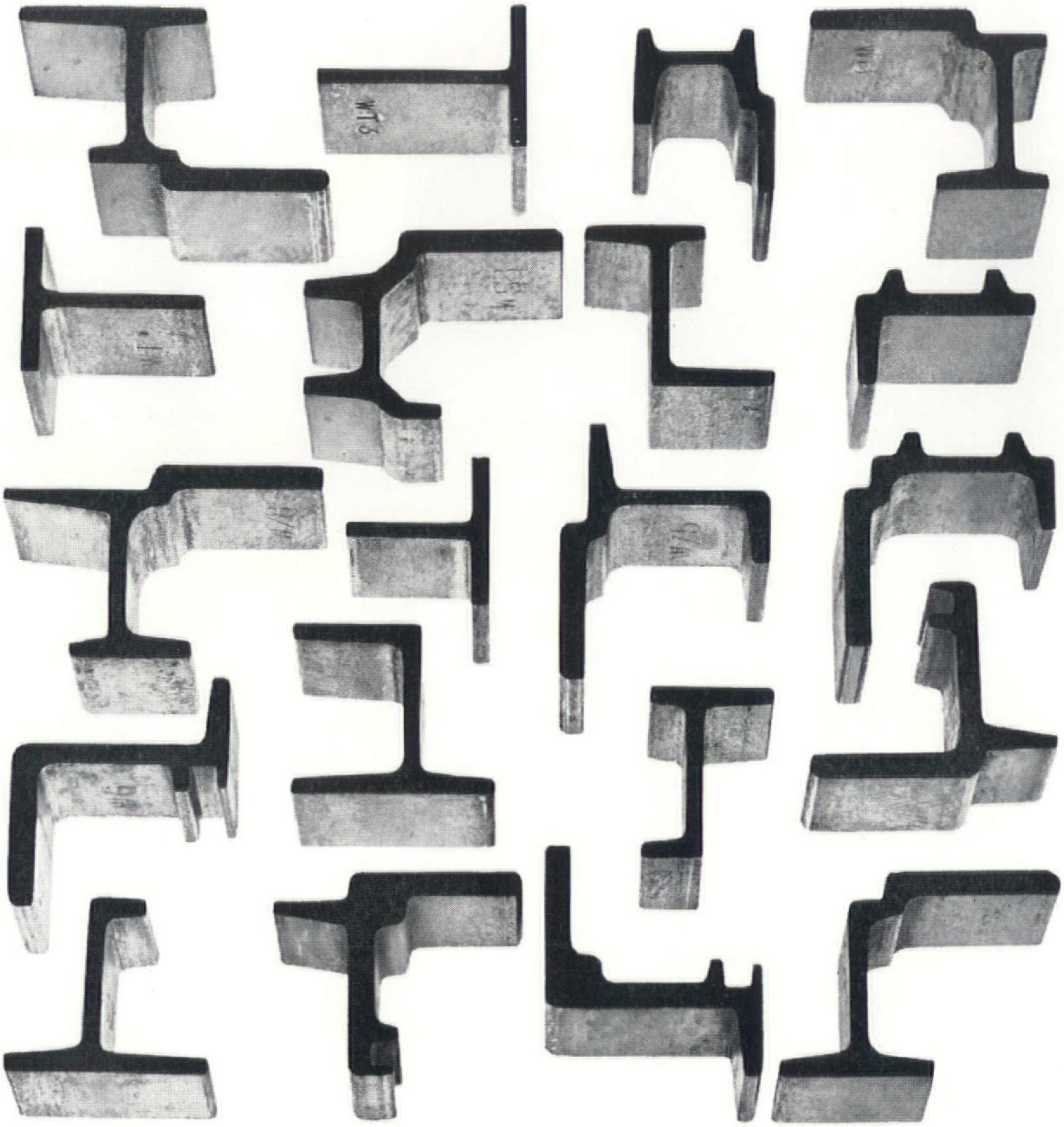

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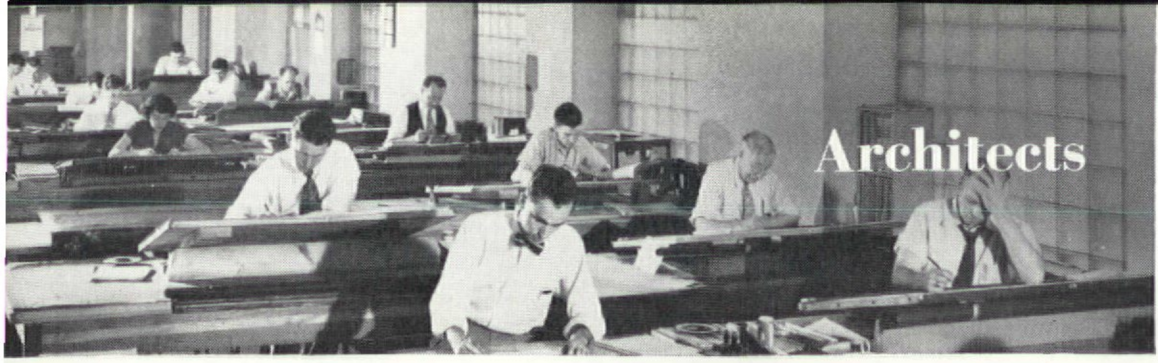

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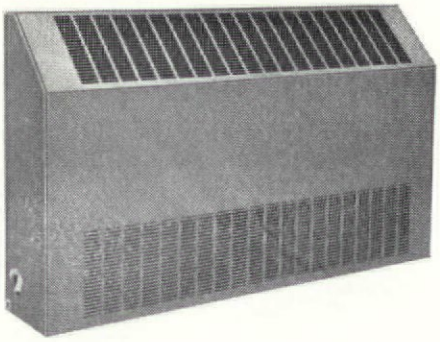

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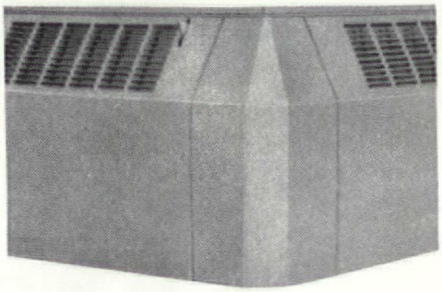

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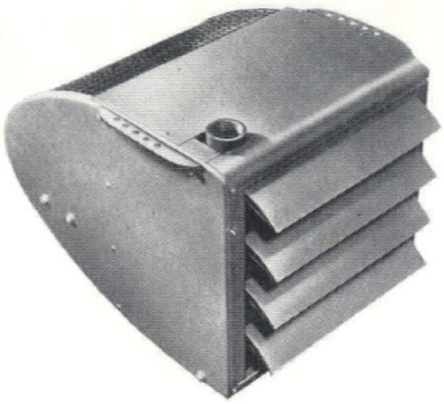
uniflow



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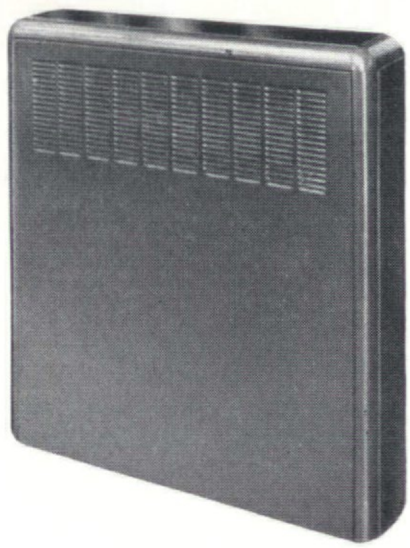

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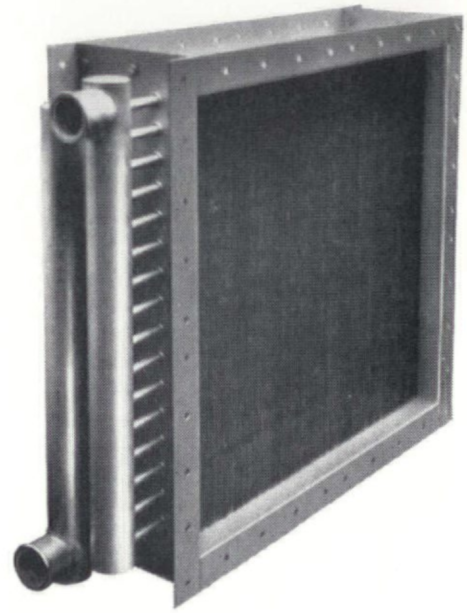
coils



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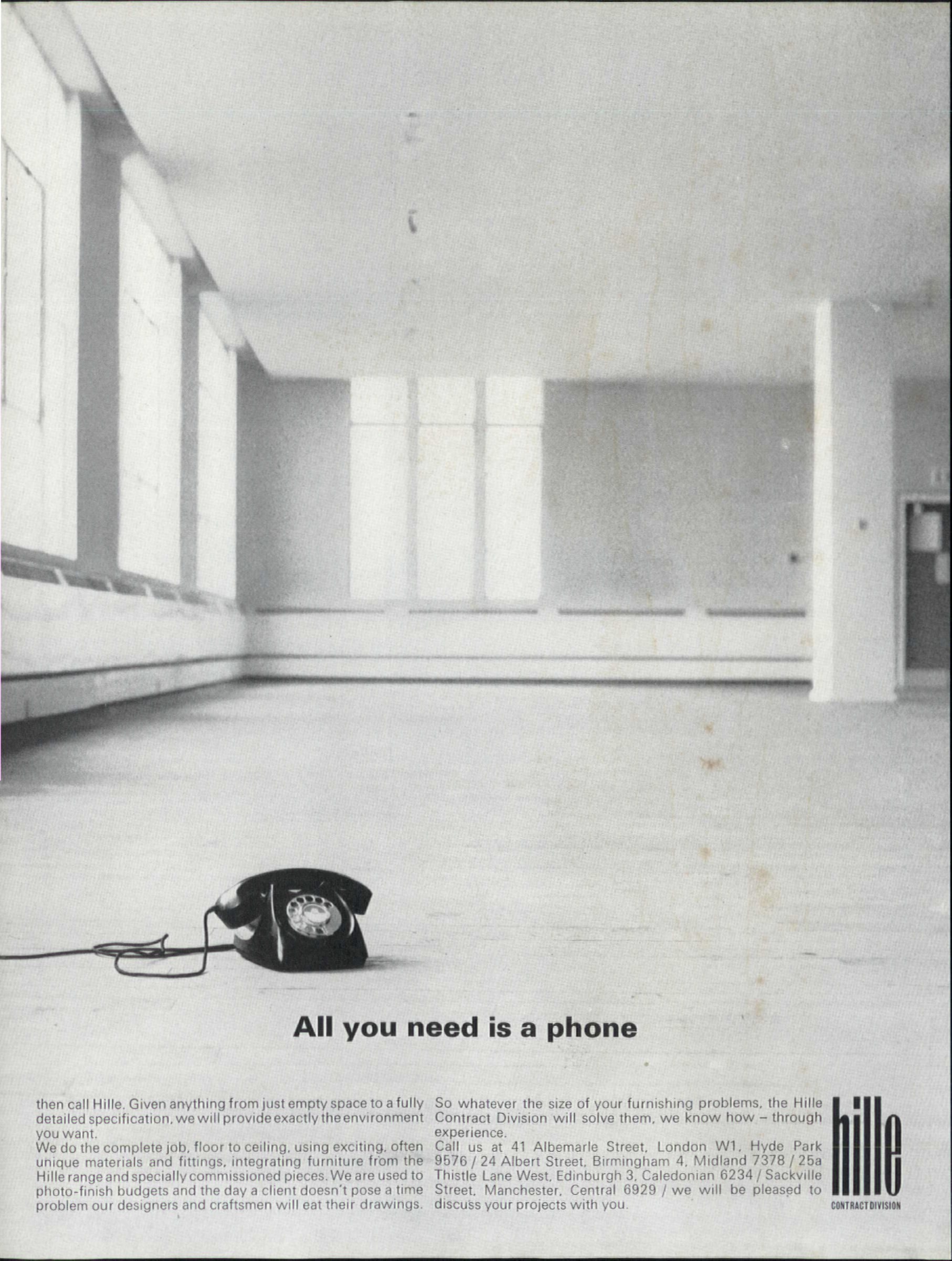
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UK news

Terence Bendixson

Royal Gold Medal

This is a modest month. Its measure is indicated by the way Kenzo Tange's National Gymnasium for the Olympic Games at Tokyo **1** rises above everything else on these pages. The Queen and the RIBA have awarded him the Royal Gold Medal for architecture for 1965. The medal is 'not for any specific building', but the Gymnasium, with its soaring Mendelssohnesque beam-wall, is the building being talked about. Some excellent drawings of it appeared in the first issue of the revamped, colourful *RIBA Journal* now being edited by Malcolm MacEwen.

Suburbanform

The architectural preference for physically linked forms and the corresponding unfashionability of scatter means that less than enough effort goes into designing honest-to-god suburbs. This group of buildings at Halesowen in Worcestershire **3**, blessed with an interesting site, shows how effective scatter can be when carefully handled. The architects were Remo and Mary Granelli with Miall Rhys Davies. The blocks vary in height through three, four, five and ten floors, with the high ones being at the top of the hill. There are some oddities of fenestration and orientation but, given mature landscaping, this promises to be a place one would not mistake for some other neighbourhood on the other side of the town.

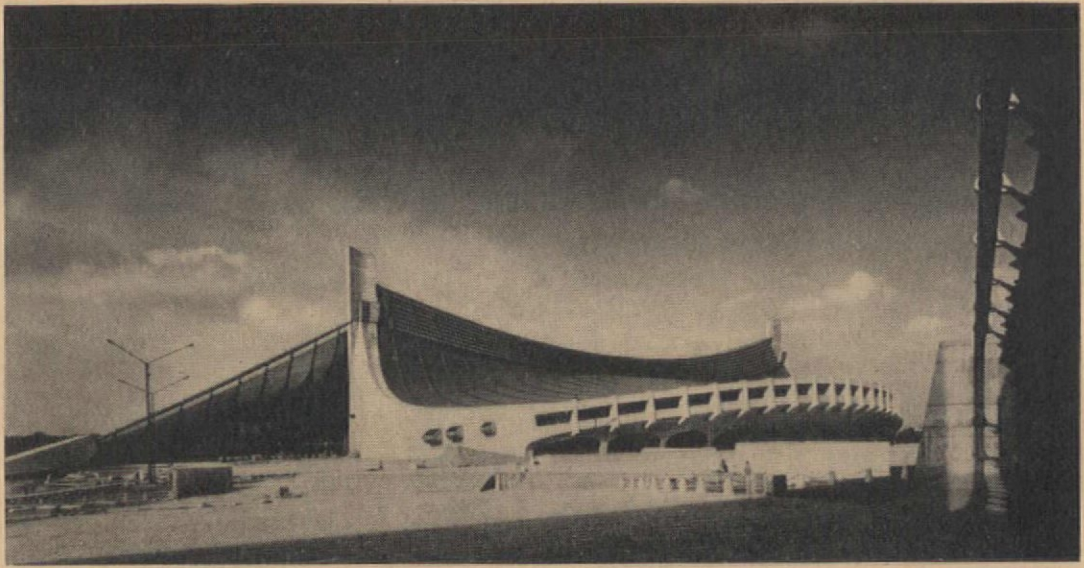
South Eastern Society

The South Eastern Society of Architects held an exhibition at the RIBA and in their brochure Sir Donald Gibson pointed out that they will have to gird their loins to carry out whatever plans for the south east emerge. On the showing of the exhibition the future region will be tidy and well-mannered but no wonderland. However, one or two things caught the eye. A block of flats at Bournemouth by Bader and Miller might almost have been built in 1939, but for one or two giveaways like the slab handrails to the main steps. The facing material is white Japanese mosaic; there are two three-bedroom flats on every floor and a penthouse with sea view at the top.

John Voelcker's offices for Swanscombe UDC in Kent are more modish, **2**. The council chamber is to the right, the administrative offices to the left. In the offices U-plan brick piers provide structural support, recesses for storage, ducts and a tentative definition of work places for each occupant.

A much larger office is the HQ **4** (page 55) for Dr Barnado's homes at Barkingside, Essex, by Ian Fraser and Associates. The external structural system of the big building will be made up of columns with a flint aggregate exposed by shot blasting and heavily scratched precast

continued on page 55



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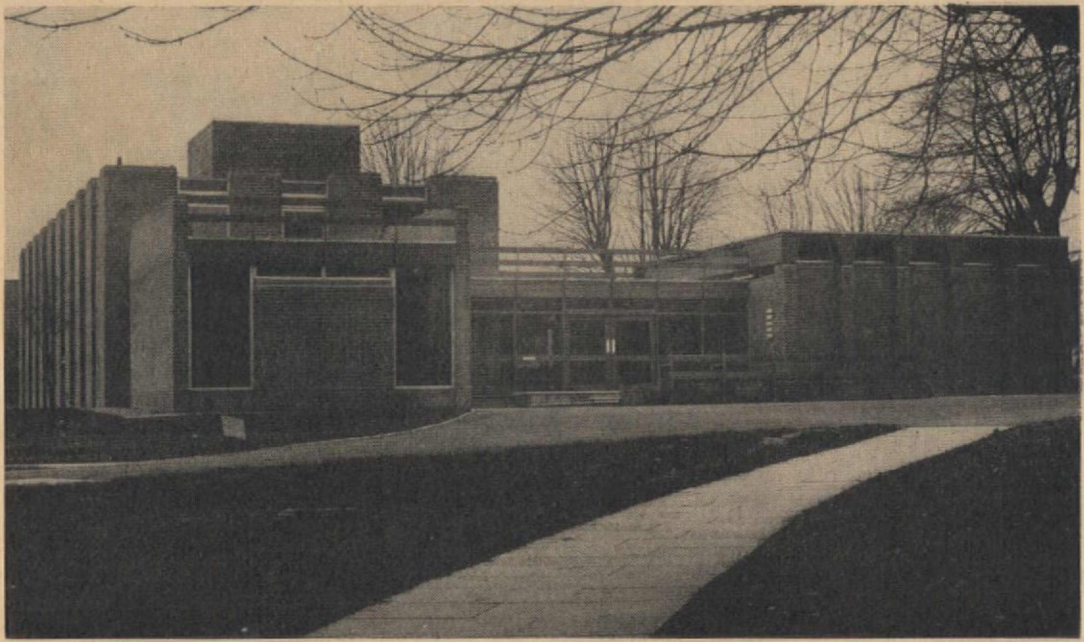

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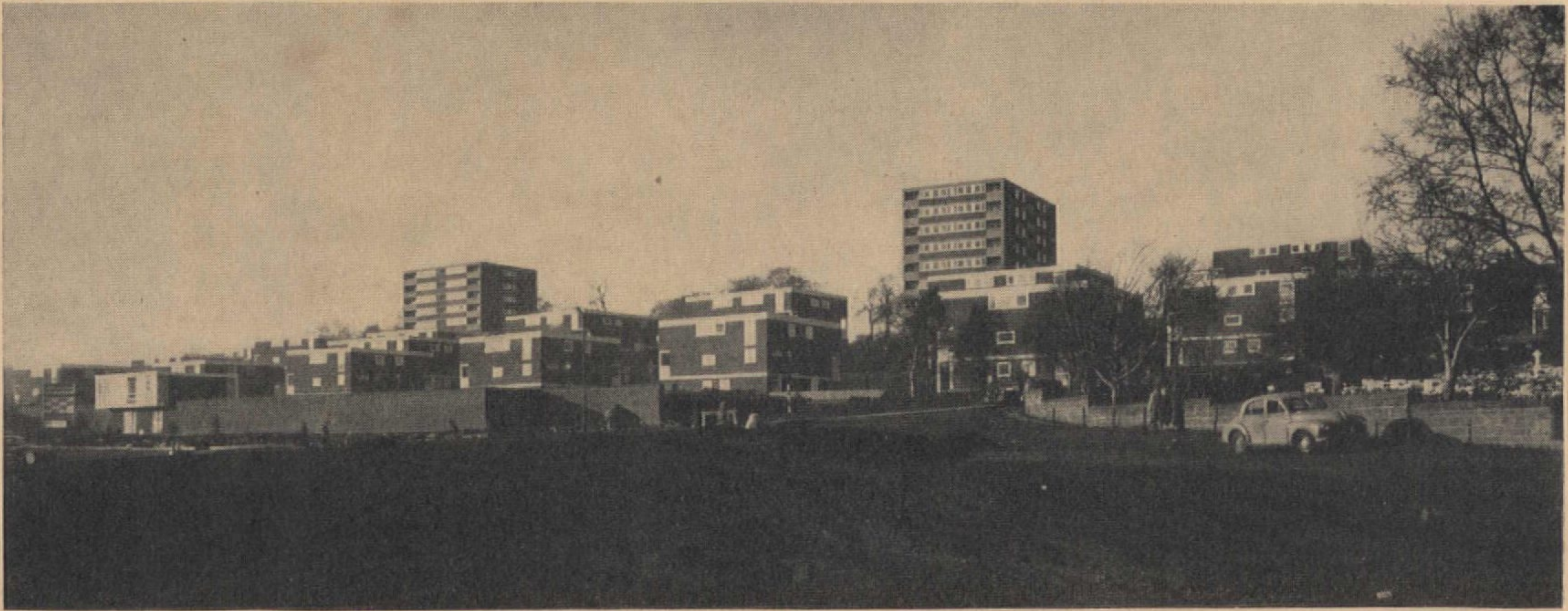

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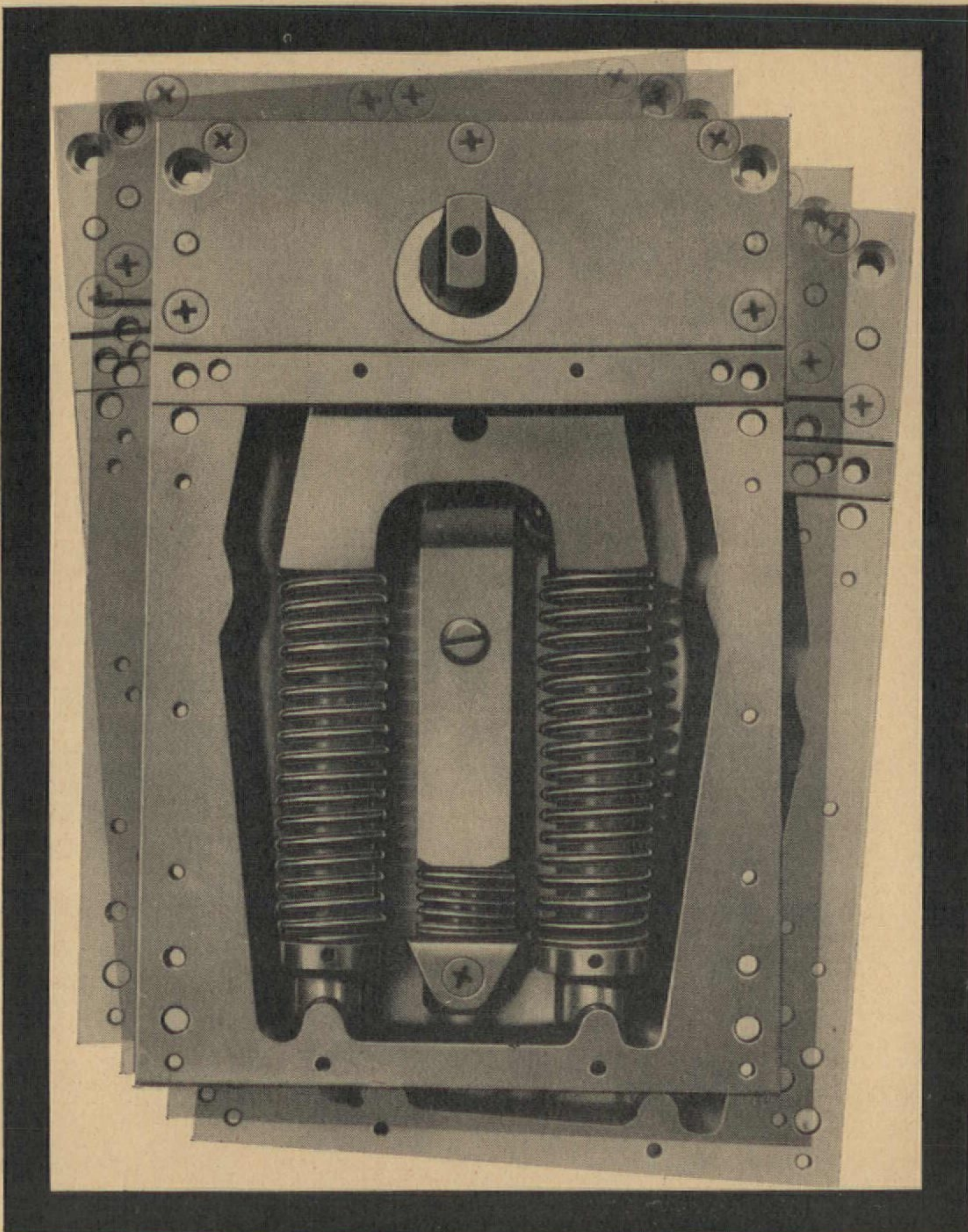

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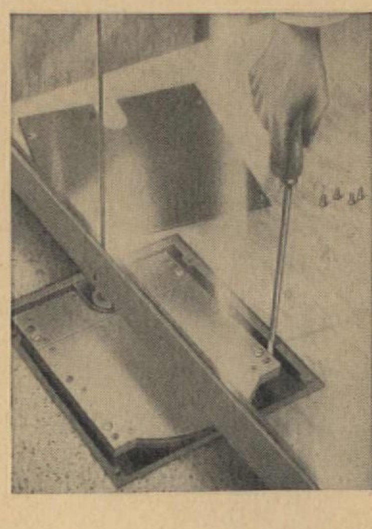

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What is your opinion?

The Maison des Beaux Arts, Paris, recently convened a meeting of the editors of the leading monthly magazines of architecture of France, Switzerland, Italy and Britain to discuss among themselves and, later, with the students from the Ecole Nationale Supérieure des Beaux Arts, the ideal content of an architectural magazine. There was a certain amount of agreement among the editors about their approach to the problem, but much confusion of opinion among the rest of the participants (the 'consumers').
It is the opinion of the Maison des Beaux Arts that architectural magazines are not publishing what readers require these days. Since it is our desire to serve the Profession as fully as possible, we would be very interested to hear your views on this matter. What do *you* seek in a monthly magazine like *AD*?

UK news/continued

spandrels. The low building, which is a kind of postal sorting office for appeals work, will have top glazed monitor lights carried down the external walls.

Speedways

Elegance has never had much of a look-in on British motorways but, judging by Lancashire's latest addition to the network, the Preston–Lancaster stretch of the M6, the tide is beginning to change. Snowhill Lane Bridge **5** was designed in the office of James Drake, Lancashire County Surveyor and Bridgemaster. It really catches the elastic sensation of motorway cruising. Unfortunately the deadeningly narrow central reservation still holds sway at the pinch-penny Ministry of Transport.

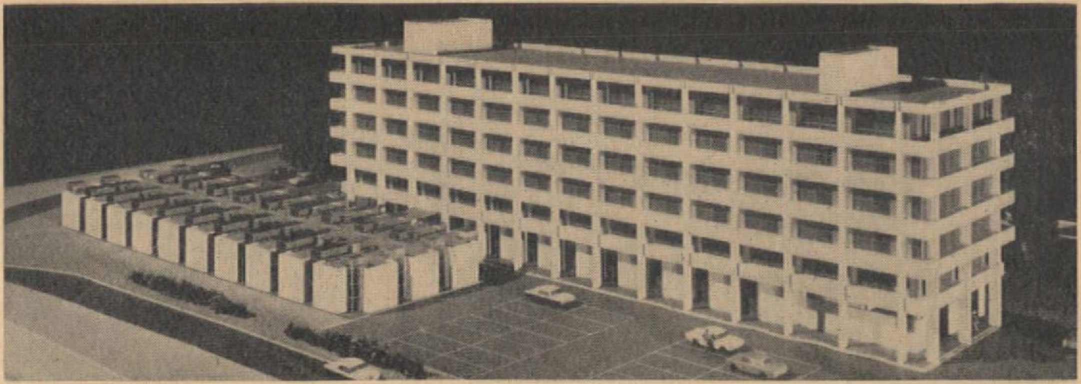
Doughnut town

Dawley new town on the banks of the Severn in Shropshire has reached master plan stage. The hummockiness of the site—a relic of eighteenth and early nineteenth century coal mining—although once thought a snag has been ingeniously harnessed. The town's housing areas will be clumped in clusters of about 8000 people and deployed in a ring about the town centre and town park, **6**. People will live within walking distance of a selection of shops and services—surgery, church, two pubs, chemist, supermarket—but are mostly expected to drive to the town centre. There will be a comprehensive system of safe footpaths and a bus service for those who do not drive, but the basic assumption is that Mr and Mrs Dawley will own a car and want to use it. John H. D. Madin and Partners did the master plan, which has now been taken over by Ceri Griffiths, chief architect and planning officer to the Development Corporation, for detailed work on housing and the town centre. Richard Crossman, Minister of Housing and Local Government, has hinted that Dawley's population will go up to a quarter million. The present target is 90,000 plus. This will require some reconciling.

Chapel

Most religious buildings in Britain seem to suffer from the worst sort of over design, but the non-denominational chapel **8** for a hospital at South Ockendon, Essex, happily manages to walk the razor's edge between self-assurance and stridency. It is a rectangular building, the glazed walls of which are set behind free-standing and interlocking screen walls. The zig-zag fascia expresses the ceiling of the hall, but as usual the chairs dominate the resulting pattern until one sits down. How much better it would be if churches could have sumptuous rugs for people to sit on!

The Architect and Building News, 51/1964



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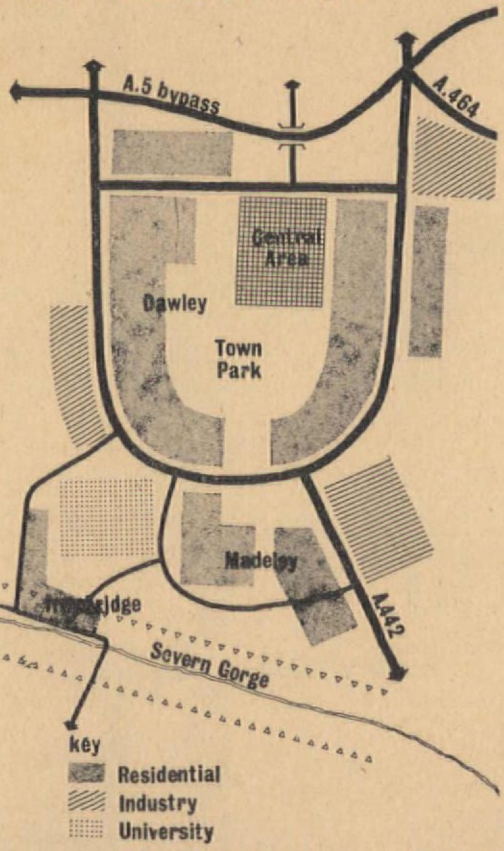

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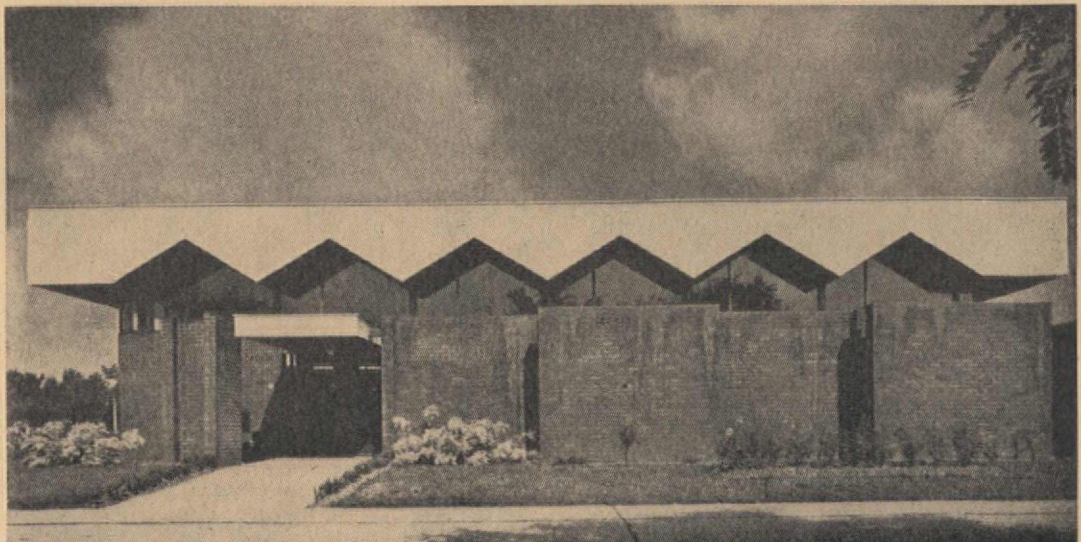

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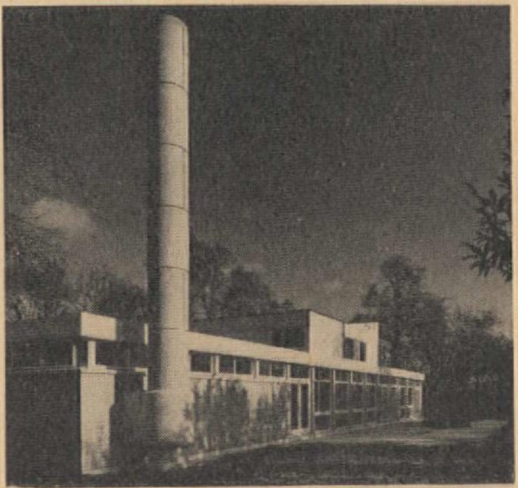
Rehabilitation

Mental care is an aspect of our society that is slowly acquiring its own architecture. A hostel **7** at Hayes Park, Middlesex, by Richard and Margaret Finch, is for people *en route* from mental hospital to home life or for those who need a change to avert mental crises. The Middlesex Officer of Health envisages such a building in every neighbourhood. This one has 30 beds arranged singly or in threes. There are three sitting-rooms to permit a variety of social activities, a flat for a warden and a bedsitter for an assistant.

Photo: Colin Westwood

5



7


BEDFORD

World news

France

'Habitat' Study 1, 2

The designers Daniel Chenut, Annick Doltelonde, Henri Planacassugne and René Starger have produced a 'grille d'étude de l'habitat'. This study which has been under way in various forms since 1959 has now been published by the French magazine *Techniques et Architecture*, No. 6, September/October 1964. This study corresponds very neatly to a number of similar isolated projects, and works, presented or realized on various occasions during the past 40 years; to numerous expanding house projects (c.f. Wogenscky's 'Mex' house); to dental and bathroom equipment recently designed at the Hfg, Ulm; to 'La Maison Suspendu' of Nelson; and to the Maison de Verre of Chareau built 34 years ago.

Spain

Madrid Opera House

If ever the competition system should fall into disuse through failing to produce good results the international competition for the Madrid Opera House will surely be remembered as the turning point—not to say as the all time low. It is hard to imagine anything more architecturally decadent than the premiated design for the new Madrid Opera House. In an age of great decadence this is a hard judgement. Professors Eiermann, Gio Ponti and Pierre Vago have a lot to answer for as the only members of the jury with international standing. The first prize **3** went to Poland, to Professors Jan Bognslawski, Bohdan Gniewiewski, and Marcia Bognslawski—may the coming generation forgive them! The second prize **4** went to Berbera (Madrid) in collaboration with Holzmeister (Vienna)—the third **5** to a Spanish team, Arangnen, Corrales, Paredes, de la Sota, Molezún, all of Madrid. In short a collection of monstrous premiated and unpremiated buildings, out of which only one scheme possesses any redeeming features whatsoever, a vintage expressionism that at least is vigorously operatic. For the rest, and for the winner one can only hope that the sponsors of the competition have illusion of satisfaction.

L'Architecture d'Aujourd'hui, November 1964.

Holland

Housing, Amsterdam

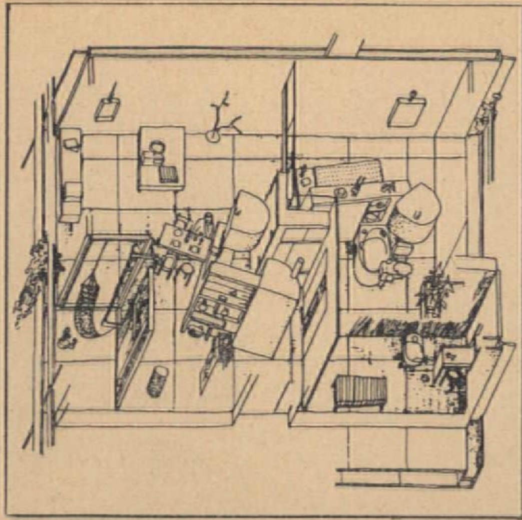
Evidently the time has come to bring the Brinkman housing for Spangen up to date. One continuous line leads from Brinkman, through Van de Vulgt to today's office of Van den Broek and Bakema. What is essentially a development of the 'streets in the air' housing at Spangen will now be built at Buikslotermeer near Amsterdam **6**.

Techniques et Architecture, No 6, Sept/Oct 1964

Italy

Europrefab

In 1962 the first international prefabrication congress was held in Milan. The final motion of this congress proposed that the national prefabrication organizations of European countries should be united in an international Federation. The result of their motion was an international meeting held in Milan in November last year. The British representative at this second meeting was Mr P. A. Denison of Cape Building Products Ltd, representing both the B.C.M.A. and the N.F.B.T.E.



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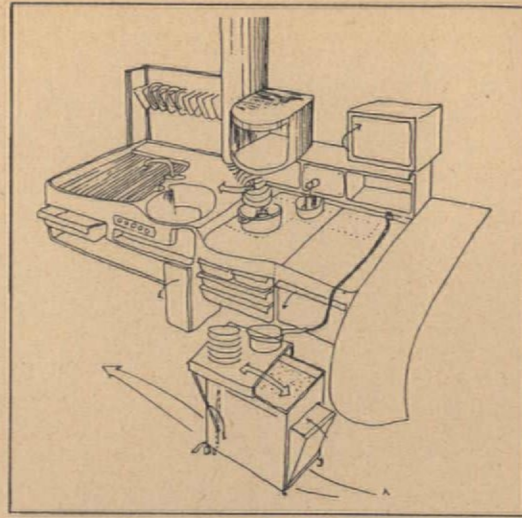

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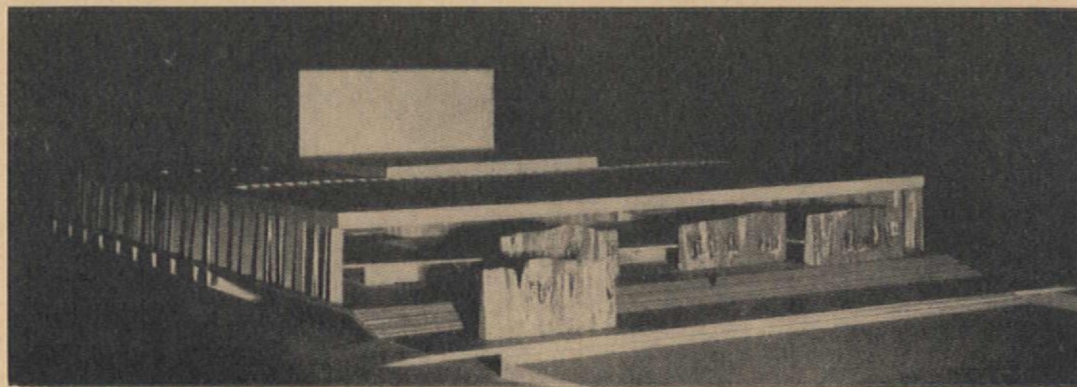

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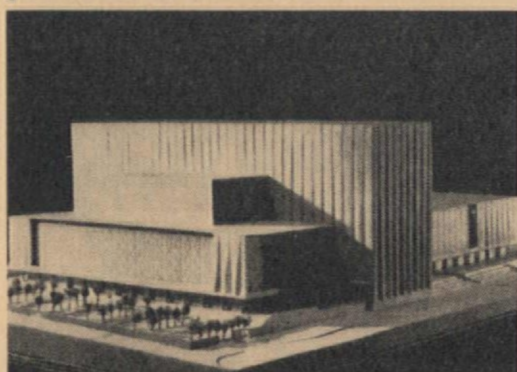

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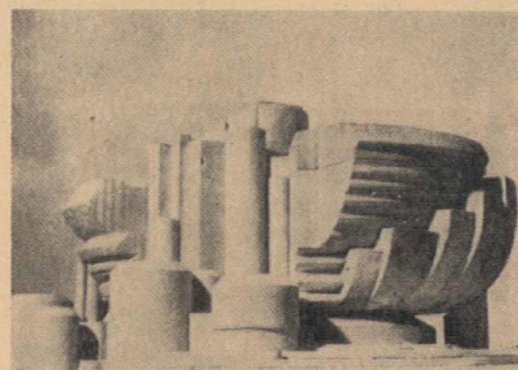

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Germany

Philharmonie, Berlin

The architectural integrity of the 'Philharmonie' and its subsequent success technically and acoustically, now compels us to come to terms with the work of Hans Scharoun. Scharoun could have so easily become virtually another of those lost figures of the thirties. But for his vitality and longevity, his capacity and opportunity to endure and remain in Berlin, his 'Philharmonie' might never have been built. He has achieved his 'master work' at a time of life when experience befits but age rarely bestows the capacity of 'creativity'. To assess Scharoun's work at its best it now becomes necessary to consider not only his Breslau housing of 1929 but also his concert hall of 1964. His many renderings of architectural fictions since 1919 have now at last been realized into the light-filled, floating, almost immaterial architecture that Scharoun has for so long visualized. The 'Philharmonie' is in many ways an heroic fulfilment of dreams—for so long dreamt in the wilderness by Häring and by Scheerburt amongst others and by the intimate circle of Taut's 'Der Glasserne Kette' of which Scharoun was always an active member.

L'Architettura, July 1964

6

7

State Library, Berlin

In their separate careers Scharoun and Mies have always paralleled each other, representing as they always have and still do, two extreme poles of architectural thought. Now at the end of their careers an attempt is once again being made to group their actual work, and hence their separate modes of thought, into an environmental whole. This time the whole is dominated by the presence of Scharoun, whereas previously at Stuttgart in 1927 Mies was in control at a time when their views on architecture had more in common.

Now Scharoun is adding a further element to the Tiergarten composition, which already holds in juxtaposition the Philharmonie and Mies's exhibition hall for twentieth century art. The new element is Scharoun's State library **8** for which he has been commissioned as the result of a competition.

8

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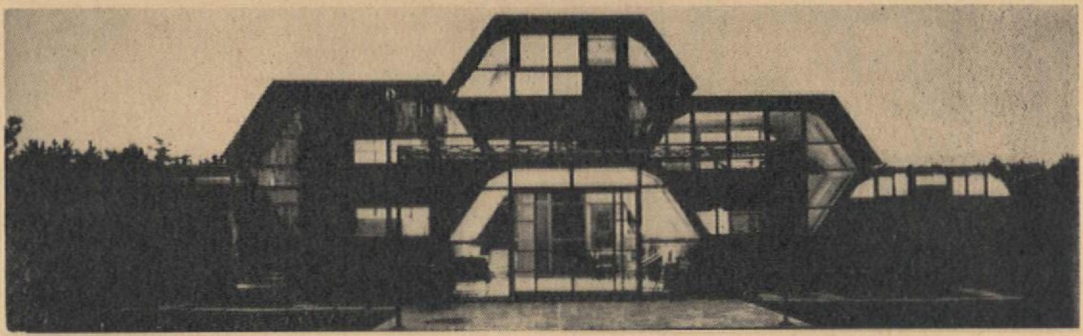

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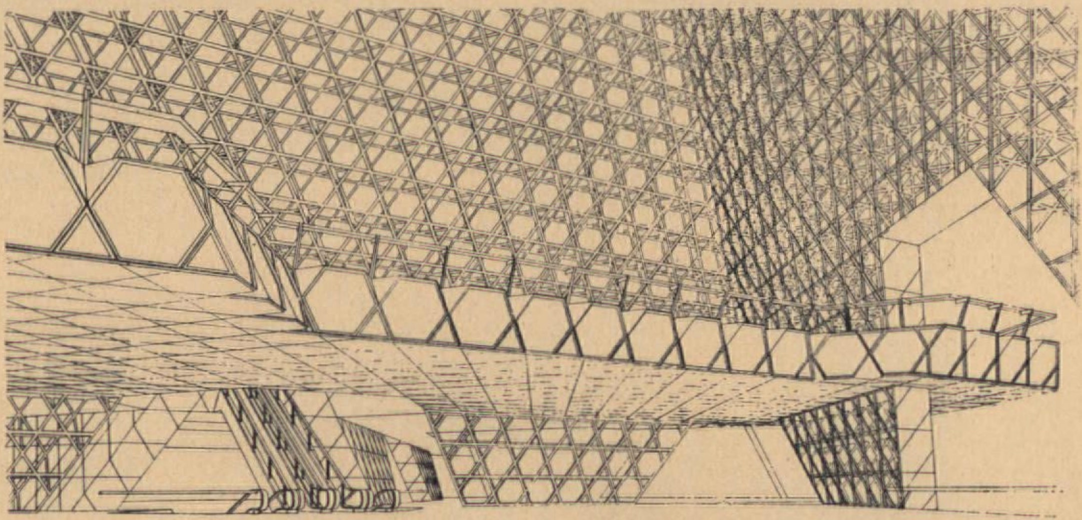

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Finland

Printing works, Tapiola

The printing works reviewed in *AD* 1964, by the architect Aarno Ruusuvuori has now been built. For simplicity and strength this would be hard to beat.

Arkkitehti Arkitekten 7.8, 1964

Israel

Prefabricated housing

The prototypes for these prefabricated houses were first built in Israel **10**. Now they have been officially adopted by the Israeli Ministry of Construction. This is an extremely flexible type of unit, designed to be self-stacking and supporting; the inclined surfaces form planes on which to erect staircases directly. The designer this time is I. M. Goodovitch. Similar notions have been developed in the past by other Israelis, Schein, Friedman and Neumann to mention only a few.

Techniques et Architecture, No 6, September 1964

USA

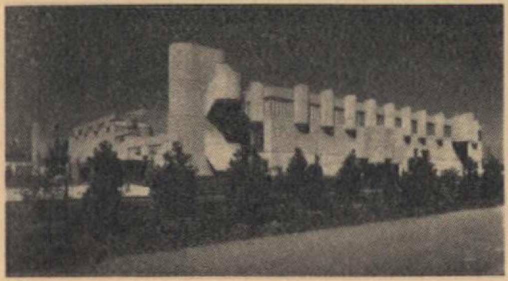
Pharmaceutical Centre, N.Y.

Recently Paul Rudolph gave a talk to the students of Princeton School of Architecture entitled 'Whither Rudolph?' The theatrical exterior of this Pharmaceutical Centre **12, 13** prompts one to ask just this question. Each successive Rudolph monument makes one wonder if the author has any clear conception himself.

Canada

Expo '67

The Canadian World Exhibition scheduled for 1967 promises to feature at least two structures of significance for the future. The first, Habitat '67 by Moshie Safdie and his associates, was featured in our December issue last year. The October issue of the *RAIC-L'IRAC Journal* published drawings of the second **11**, the theme buildings for the 'Expo' by the consulting architects Affleck, Desbarats, Dimakopoulos, Lebensold and Sise and the architect Thomas Ewing Blood. These buildings are based upon the use of the truncated tetrahedron as a structural unit throughout. Both Habitat '67 and these buildings stand to test the possibilities of a number of conceptions hitherto only seen as projects, such as Kahn's City Hall or Gerstel's housing schemes for Israel.



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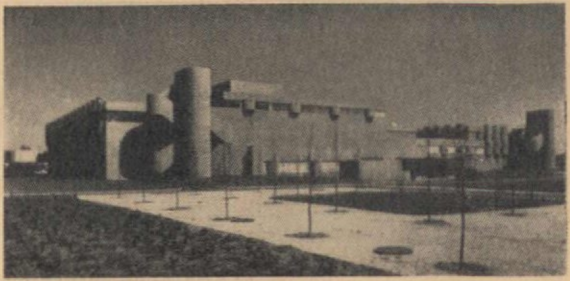

13

Wrighton Californian Contract kitchen units for all 500 homes

For this luxury development, now under construction, Eastwoods Froy Limited have planned Wrighton Californian Contract kitchens, specially designed by Nigel Walters, F.S.I.A. The Californian Contract range, based on Wrighton's long experience and research, strikes the perfect balance between high quality and low cost. Among its many outstanding features is the exclusive DECPOL glass-like polyester finish to exterior front surfaces. Eastwoods Froy Ltd. are specialists in kitchen planning and the distribution of Wrighton kitchen units. For colour brochures, suggested layouts and quotations, architects and builders are invited to contact Eastwoods Froy Ltd. at the address below.

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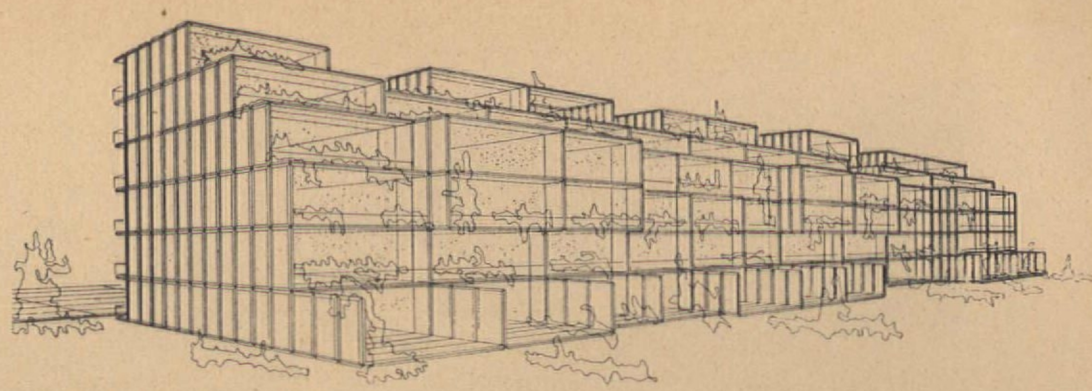
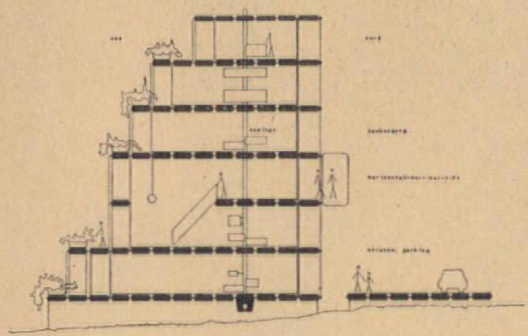
WRIGHTON

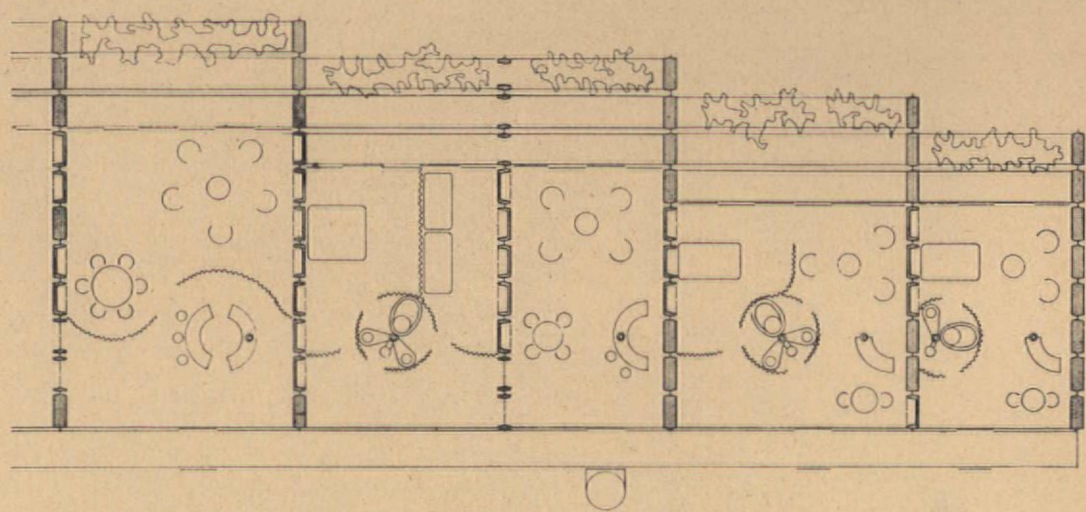
Prefabricated aluminium housing

Since 1963 Willi Ramstein has been with the Alu Swiss AG, Zurich, working mainly on industrialized housing systems, employing plastics and, naturally enough, aluminium. His elegant projects for a tower with suspended flat units and a mobile theatre for the UIA theatre competition have already been published in *Ulm* magazine, as have his continuum of patio houses based on standard panels supported by tension cables, and the terrace houses illustrated here, which are made from standard aluminium trays filled with Polyurethane. They show how inventive and lively he remains as a designer even under the inhibiting influence of a large industrial organization.

Ulm, 10/11

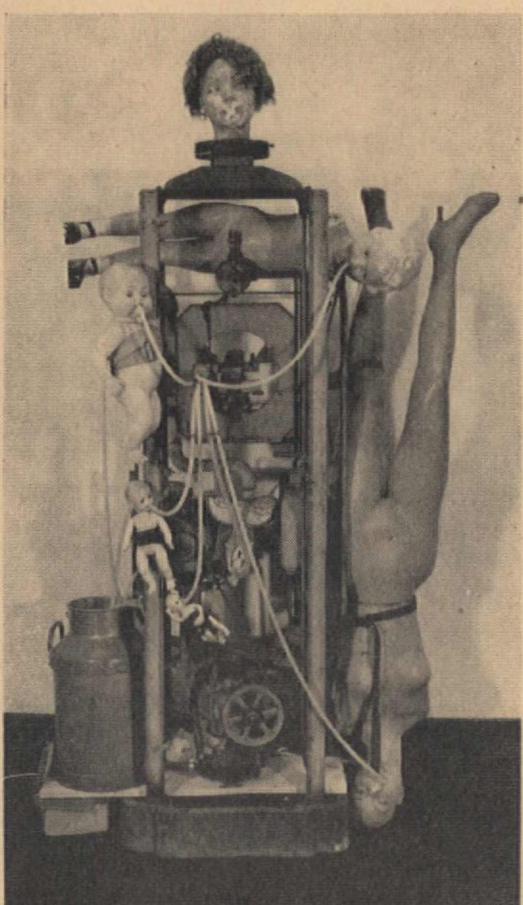






Art

Satire in art



A great deal has been said in the past about the relationship of art and architecture, and art and mass media; but few people have drawn any parallels between art and the theatre. Happenings are, of course, theatrical manifestations in so far that a semi-planned event takes place in front of an audience and is limited in location and in time. But as far as single works of art are concerned which are not incorporated into a theatrical convention, only Bruce Lacey has so far (and probably quite unconsciously) explored this field. Originally Lacey conceived his robots which were ingeniously programmed to make various movements and sounds as mechanical actors which appeared with him in *An Evening of British Rubbish*. Later on, after discovering that images of this sort were shown in the USA in galleries as works of art, Lacey decided to treat them in this way and to have an exhibition. That was two years ago and he showed at Gallery One.

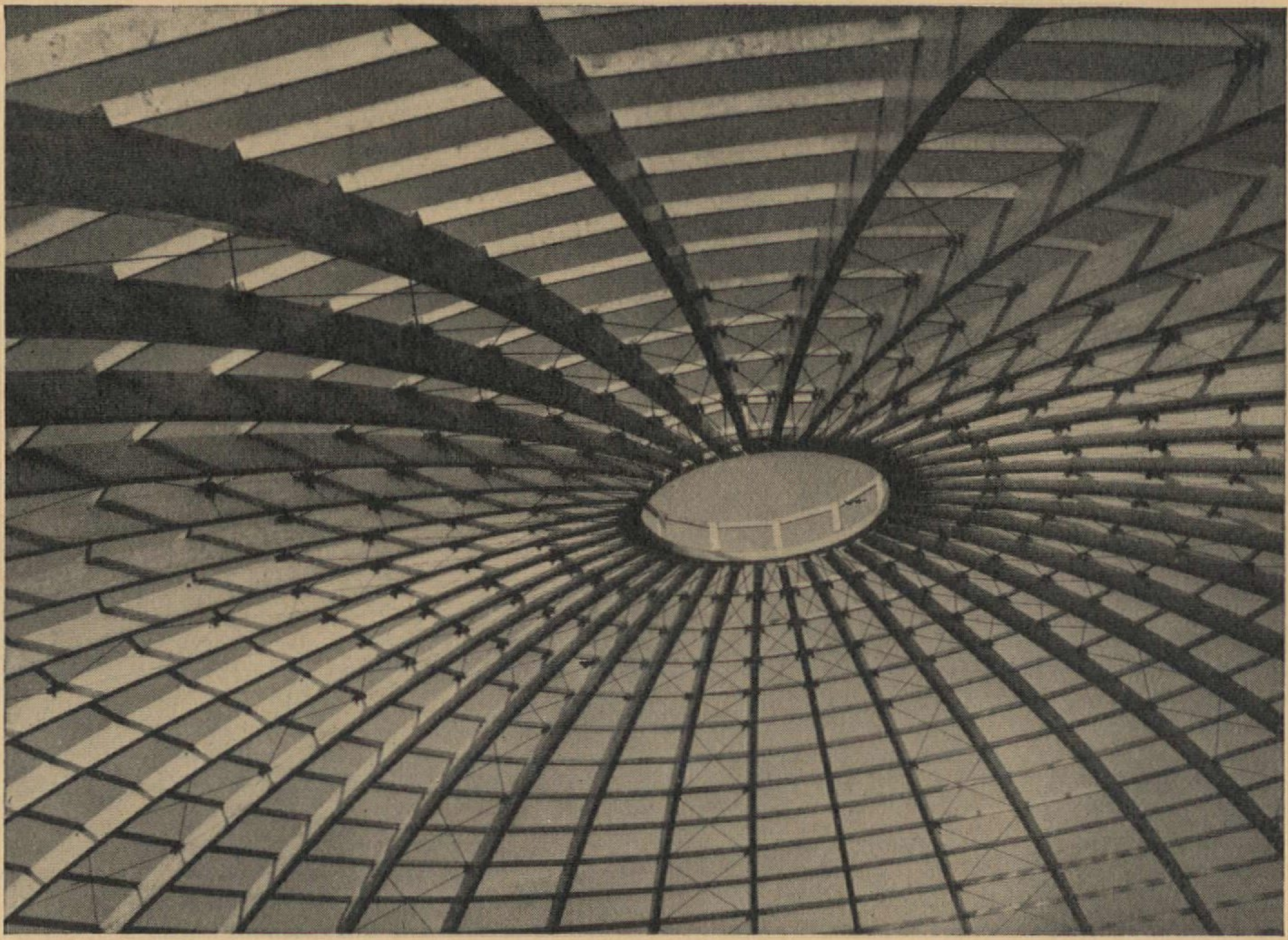
In January, an exhibition of his works opened at Marlborough New London Gallery. Of the 16 works most of them were programmed and performed a number of preselected functions on time switches. The themes were mostly about some aspects of social problems, dealt here with a great deal of imagination with overtones of satire. The works express Bruce Lacey's personal view of the world and his fears about such problems as overpopulation, the inadequate distribution of wealth, God as a gambling machine, drug addiction, the problem of old age, surburban suicidal rooms, people with radio-controlled brains, colour bar, and business men with money like blood flowing through their body. The ingenuity of these sculptures is not only expressed in the relationship of the images he uses, but also in the purely technical skill employed in making these robots perform a number of extremely complex functions.

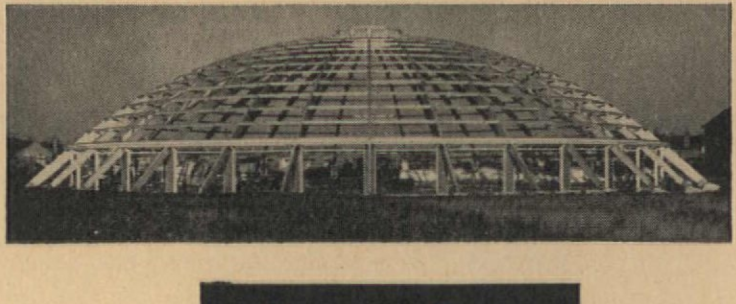
The majority of Lacey's sculptures deal with the things he hates and fears. Most of them are cautionary works which embody the misgivings he has about man and his future. The only 'love' sculpture is entitled 'Motherhood'. This is a conglomeration of female dummies and numerous dolls of different sizes connected together with transparent tubes through which passes milk of magnesia. The mother is feeding all her children, but in the usual way that Lacey sees the world some get more milk than others. One exceptional work is entitled 'The Institution'. Here an old age pensioner sits in a chair in a room just big enough to contain him. The postcards attached to his body represent happy memories. Other equipment consists of a medicine cupboard, a gas ring and a fried egg. When the man dies the room can be turned on its side and becomes a coffin. The white paper doily trimmings round the edge are already there. 'Boy, Oh Boy, am I Living' shows a man provided with artificial limbs, including one that is self-powered. His brain is radio controlled and the state is sending him happy thoughts.

Lacey is not involved with aesthetics. His work is the visual embodiment of a personal philosophy which in one sense is perhaps simple and naïve, but, on the other hand, expresses something that touches us all. His tragi-comic approach against the background of today's art situation bears the mark of complete originality.

Jasia Reichardt

1
Motherhood: metal, plastics, electrics, etc. 84in × 36in × 18in





Dans ce numéro

Le groupe 'Economist' *Page 63*

Ce groupe d'immeubles fut commandé par le journal l'Economist et fut le résultat d'un concours limité, pour recevoir les rédacteurs ainsi que le Service des Renseignements de l'Economist (une organisation de recherche économique).

Lorsqu'il avait d'abord été question à l'Economist de cette construction, celui-ci ne contrôlait que l'emplacement au coin de Bury et Ryder Streets. Etant donné que les Autorités de l'urbanisme répartition devant se faire entre les ont imposé une proportion de 5:1 la résidences, l'usage commercial ainsi que les bureaux, dès le début il était évident que pour recevoir ces trois types de façon adéquate il serait nécessaire de s'étendre jusqu'à Bury Street et d'avoir une façade entière sur St. James's Street. Un accord fut conclu avec le Boodles Club comme quoi leur établissement (qui occupait une maison dans Bury Street) serait reconstruit pour constituer la partie résidentielle. La partie commerciale donnerait sur St. James's Street et recevrait les anciens magasins, une banque et quelques bureaux.

Les objectifs principaux étaient:

1. La construction d'un groupe d'immeubles compatibles avec le style 18ème siècle de St. James's Street tout en respectant les nécessités d'espace du 20ème siècle.
2. Donner un espace libre et une vue complète accessible au public ainsi que le début d'un système plus large pour la circulation des piétons et celle des autos, selon la tradition de St. James's.
3. D'ordonner le désordre actuel des immeubles arrière et offrir une vue agréable à tous ceux qui travaillent dans l'immeuble.

Ces objectifs furent atteints grâce à un immeuble pour chaque usage avec lumière at vue de tous les côtés.

Les immeubles sont groupés autour d'une cour silencieuse 'la Plaza' qui sert de passage aux piétons pour sortir et entrer et qui relie St. James's Street à Bury Street. La Plaza est légèrement sur-élevée par rapport au niveau général du trottoir et grâce à une légère pente à travers l'emplacement l'accès des véhicules se trouve à un niveau plus bas dans Ryder Street.

Structure

Les nouveaux immeubles sont tous du type de construction à dalles plates en béton armé avec fondations sur pilotis.

Système de revêtement

L'espace disponible sur cet emplacement est limité, le matériau devait donc être clair pour réfléchir la lumière dans les sortes de cours entre les immeubles. On a donc choisi la pierre de Portland car elle remplit ces conditions et l'on a essayé de contrôler l'écoulement des saletés portées par l'eau sur la pierre par un système de gouttières sur les rebords et le long des colonnes on peut ainsi prévoir le genre de désagrégation des façades.

Extérieur de la construction

Les trois nouveaux immeubles sont recouverts de pierre de Portland avec fenêtres et bandes en aluminium filé grises et émaillées. La pierre est fixée sur des pointes du béton et retenue par des griffes. Les bandes d'aluminium recouvrent tous les joints entre la pierre et le béton.

La tour—25 St. James's Street

L'immeuble est conçu sous forme d'un cercle de bureaux autour d'un centre de services. Le module est de 3 m. (avec pour base une pièce pour deux personnes) avec d'autres meneaux à 1,5 m. La surface de chaque étage est de 4.500 pieds carrés.

Les objectifs dans la conception des bureaux étaient:

1. D'obtenir des conditions de travail maximum en prévoyant des espaces de travail calculés anthropométriquement, avec un maximum d'espace pour la disposition, des possibilités de rangement individuel et les services à distance commode en même temps qu'un bon éclairage et un contrôle adéquat du bruit.
2. De prévoir un système de services qui soit intégré à l'architecture de telle manière que les sources de lumière, chaleur, ventilation, énergie et communication sont intégrées discrètement.
3. De prévoir un système de rangement et de classement parfaitement intégré pour éviter le désordre habituel d'unités sans aucun rapport les unes aux autres—portemanteaux, classeurs, placards, etc.
4. De concevoir une organisation interne basée sur la 'pièce pour deux personnes' tout en prévoyant un maximum de communication entre les pièces et les services ainsi que plusieurs types de bureaux pour donner une possibilité de choix aux administrateurs et aux originaux.
5. Atteindre une impression d'espace et utiliser cet espace.

La banque—23, 24, 26, 26A St. James's Street

La géométrie de cet immeuble est disposée à un angle de 45° par rapport à celle des autres immeubles. Le module est de 3 m. sans subdivisions. La surface de chaque étage est de 1.500 pieds carrés.

Au rez-de-chaussée il y a deux magasins dont l'un a aussi une entrée sur la Plaza. On atteint la salle de banque au premier étage (ceci est le piano nobile at visuellement un prolongement de la Plaza) par les escaliers roulants au coin de St. James's et de Ryder Streets. Au deuxième et troisième étage se trouvent des bureaux. Au niveau de la Plaza il y a aussi un petit kiosk et une entrée séparée pour les escaliers et l'ascenseur des locataires.

La salle de banque

A partir du hall d'entrée au niveau de la rue les escaliers roulants s'élèvent dans l'espace public—l'espace autour du cœur est contenu par un fer à cheval de comptoirs. Les colonnes et les murs sont recouverts de mosaïque en verre blanchâtre et bordée d'une bande ocre.

Immeuble résidentiel—27 St. James's Street

Le module structural de cet immeuble est de 1,5 m. La surface] de chaque étage est de 1.500 pieds carrés. L'établissement du Boodles Club occupe du premier au troisième étage. La plupart sont des chambres à une personne avec salle de bains individuelle pour les membres désirant passer une nuit à Londres. Du quatrième au septième étage il y a un appartement à chacun des étages. La ventilation et la machinerie de l'ascenseur sont sur le toit.

In dieser Nummer

Die Economist-Gruppe *Seite 63*

Diese Gebäudegruppe wurde in Auftrag gegeben von der Zeitung 'The Economist', als Ergebnis eines begrenzten Wettbewerbs, um die Redaktion und den Economist Intelligence Unit, eine Wirtschaftsforschungs-Gruppe, unterzubringen.

Zu Beginn der Bauplanungen war 'The Economist' nur in Besitz des Baugrundes an der Ecke Bury- und Ryder-Street. Da die Planungsbehörden das Verteilungsverhältnis 5 : 1 zwischen Wohn- und Geschäftsraum einschließlich Büros festgelegt hatten, war es schon bald klargeworden, daß, um die drei verschiedenen Raumgruppen angemessen unterzubringen, es erforderlich werden würde, sich entlang der Bury-Street auszudehnen und eine vollständige Front nach der St. James's-Street zu haben. Es wurde eine Vereinbarung mit dem Boodles Club getroffen, wonach ihre Räume, die ein Haus in Bury-Street einnahmen, neugebaut werden sollten, und zwar als ein Bestandteil der Wohngruppe. Die Geschäftsgruppe sollte an der St. James's-Street liegen, um schon bestehende Läden, eine Bank und einige Büros unterzubringen.

Die Hauptrichtlinien waren:

1. Eine Gebäudegruppe passend einzufügen in den den Rahmen des achtzehnten Jahrhunderts der St. James's-Street und gleichzeitig das Raumbedürfnis des zwanzigsten Jahrhunderts deutlich vor Augen zu führen.
2. Offene Räume und Durchsichten für das allgemeine Publikum zu schaffen und gleichzeitig ein getrenntes System von Fußgänger- und Verkehrswegen anzufangen, ähnlich dem, wie es für St. James's Tradition ist.
3. Die Verschachtelungen der Hintergebäude aufzulösen und allen in diesen Gebäuden Arbeitenden offenen und angenehmen Ausblick zu schaffen.

Diese Richtlinien wurden erfüllt durch die Schaffung getrennter Gebäude für die einzelnen Zwecke, mit Licht und freier Aussicht rundum.

Bauweise

Die neuen Gebäude bestehen alle aus Eisenbeton-Flachstücken auf Hohlpfeilergründung.

Verkleidung

Da der zur Verfügung stehende Baugrund klein ist, mußte das Verkleidungsmaterial hellfarbig sein, um das Licht in die hofähnlichen Zwischenräume zwischen den Gebäuden zu reflektieren. Es wurde Roachbed-Sandstein wurde dafür gewählt, da er diese Bedingung erfüllt, und gleichzeitig wurde versucht, den Abfluß des vom Wasser mitgeführten Schmutzes durch ein System von Kanälen an den Brüstungen und entlang den Säulen zu regeln, sodaß die Wettereinflüsse voraussehbar sind.

Umfangskonstruktion

Die drei neuen Gebäude sind alle mit Roachbed-Sandstein verkleidet und mit kaltgepreßten, grau emaillierten Aluminium-Leisten und- Fenstern versehen. Der Stein ruht auf Vorsprüngen des Betons und wird durch Klammern gehalten. Die Aluminium-Leisten bedecken alle Fugen zwischen Stein und Beton.

Der Turm—St. James's-Street 25

Dies Gebäude ist geplant als ein Ring von Büros um einen zentralen Versorgungskern. Die Maßeinheit ist 3,20 m (Grundeinheit des Zweimannraumes) mit weiteren Pfosten auf 1,60 m. Die Grundfläche ist 430 m² je Stockwerk.

In gleicher Höhe mit der Plaza liegt die Eingangshalle, zurückgesetzt von der Außenwand, und das Pflaster reicht bis an den Innenkern. Die Büros nehmen das erste bis dreizehnte Stockwerk ein. Das vierzehnte Stockwerk umfaßt eine Wohnung und eine Raumgruppe für einen leitenden Angestellten. Darüber liegen die Maschinenräume für Lüftung und Aufzug.

Die Richtlinien beim Entwurf der Büros waren:

1. Beste Arbeitsbedingungen zu schaffen durch anthropometrisch entworfene Arbeitsflächen mit größter Grundfläche, individuellen Vorratsräumen und entsprechenden Versorgungseinrichtungen, zusammen mit guter Beleuchtung und einem hohen Grad von Lärmschutz.
2. Ein Versorgungssystem zu schaffen, das mit der Architektur in solcher Weise verbunden ist, daß die Quellen für Licht, Heizung, Belüftung, Kraft und Telefon einen harmonischen unauffälligen Teil der Architektur bilden.
3. Einen geschlossenen Aufbewahrungsraum zu schaffen, der das übliche Durcheinander von verschiedenen Dingen, wie Garderobenständer, Karteikästen, Aktenschränken, Vorratsbehältern usw. ausschaltet.
4. Eine innere Organisation zu entwerfen, auf der Grundlage des Zweimannraumes, mit besten Verbindungsmöglichkeiten zwischen Einzelräumen und Abteilungen, und dadurch eine Reihe von Büroformen zu schaffen, die den Wünschen der leitenden Angestellten und allen Sonderwünschen entsprechen.
5. Ein Maximum an Raumgefühl und Raumnutzung zu erreichen.

Das Bankgebäude—St. James's-Street 23, 24, 26, 26A

Die Geometrie des Gebäudes steht um 45° versetzt gegen die der anderen Gebäude. Die Maßeinheit ist 3,20 m ohne Unterteilung. Die Bodenfläche der einzelnen Stockwerke beträgt 143 m².

Im Erdgeschoß sind zwei Läden, von denen der eine auch einen Ausgang auf die Plaza hat. Die Bankhalle im ersten Stock (das 'piano nobile' und sichtmäßig eine Verlängerung der Plaza) hat seinen Zugang durch Rolltreppen auf der Ecke der St. James's- und der Ryder-Street.

Das zweite und dritte Stockwerk enthalten Büros.

Die Bankhalle

Von der Eingangshalle in Erdgeschoßhöhe gehen Rolltreppen in den Publikumsraum—die Fläche um den Zentralkern, begrenzt von der hufeisenförmigen Schalterreihe.

Die Säulen und Wände sind verkleidet mit weißlichem Glasmosaik, abgesetzt mit einem ockerfarbigen Streifen.

Wohngebäude—St. James's-Street 27

Die Maßeinheit für die Gebäude ist 1,60 m. Die Bodenfläche je Stockwerk ist 143 m². Die Räume für den Boodles Club nehmen das erste bis dritte Stockwerk ein. Es sind zumeist Einzelschlafräume mit eigenem Bad, für Mitglieder, die eine Nacht in London bleiben wollen.

Der vierte bis siebente Stock enthalten je eine Wohnung. Belüftung und Aufzugsmaschinen sind auf dem Dach.

The Economist and the Haupstadt

Kenneth Frampton

The Economist development demands to be considered not only as a building in its own right but also as a demonstration of a general principle through which an appropriate urban environment might eventually be realized. This development has been built as the result of conscious and expressed aims on the part of both the client and the architects, to meet the exacting requirements of a complex brief, to produce a building of our time, capable of fulfilling precise functional and environmental demands, and to redevelop an urban site in such a manner as to respect both the scale and the form of an existing but 'mutilated' eighteenth century street. These original aims have largely been achieved and the architects deserve the highest praise and credit for realizing such aims on a difficult and restricted site, in an area where both architectural and social values are conservative in the extreme. In effect, all concerned imposed the condition that the existing scale of St James's Street should not be violated and their demand was ingeniously met, by the adoption of a 'parti' in which the site was developed in depth.

The result was an asymmetrical composition comprising three separate buildings each of different height and each housing entirely different accommodation. These inherent differences in height and accommodation permitted the lowest of the three buildings, the bank building, to be set directly on to St James's Street frontage. There can be no doubt that this strategy has paid off; for the bank building, as it now stands, more than adequately maintains the architectural properties of the street and at the same time mediates perfectly between the Fey eighteenth century façade of Boodles and the more monumental, neo-classic disposition of Brooks's Club opposite. Equally successful for St James's Street and for the development as a whole, has proved the decision to create a new datum in the form of the plaza level above the natural fall of the ground, thereby effectively raising and hence opening up the interior of a cramped site, to the streets that surround it on three sides.

It is worth noting the means by which this openness has been achieved. Firstly, no doubt, through an early decision on the part of the client to persuade Boodles Club to join in the development, thereby obtaining a somewhat larger site to play with; secondly by the decision to establish a raised artificial level as a device with which to combine and service three disparate elements; and finally by the decision to locate the highest and most bulky element on the only remaining open corner of a rectangular site set well back from the St James's Street frontage. Undoubtedly the Economist development does imply a new and valid pattern for the urban renewal of this particular locality, for while it maintains the frontage of St James's, and hence its architectural continuity as a street, it at the same time postulates, by opening up the site in depth and section, a viable alternative to our current habit of blindly redeveloping piece by piece the solid infill of an existing street pattern, irrespective of whether this piecemeal infilling provides adequate contemporary standards of servicing, lighting and traffic segregation.

It is to be regretted that Alison and Peter Smithson have not as yet produced and published, a hypothetical scheme for the redevelopment of the whole of the east side of St James's from the Economist site down to Pall Mall. The urban implications of this their one-off development may well never bear fruit, if it is not made abundantly clear how this one solution could be used by society as a point of departure from which to make a more appropriate pattern of local redevelopment. On this issue the planning authority is for once in a position in which it could in spite of inherent political difficulties play a more responsive, realistic and less bureaucratic role.

The city planning office of Rotterdam has for long been proud of its creative flexibility, of its ability on occasions to allow the propositions of private architects to modify the city plan where the overall result is considered to be of mutual benefit. The Economist development could provide an opportunity for a similar 'feed back' process to be started here. Apart from anything else it would afford a way of evolving a more positive three dimensional plan for central London.

The LCC planning authority, by virtue of its own consent and cooperation (for which incidentally it has been publicly praised by the architects), now finds itself in the possession of a 'model' upon which certainly the redevelopment of one side of St James's could be based; if not that of a much larger area, bounded by St James's on the west, Piccadilly on the north and Pall Mall on the south. It is already implicit from the east–west pedestrian route now established across the plaza of the Economist site that a new car-free irregular and continuous pedestrian network could be easily distributed over the whole area, bridging from plot to plot across existing streets wherever necessary. How far east to extend such a network would be a matter for future discretion and construction to determine.

The Smithsons belong to a responsible and growing body of privately practising architects in this country who whenever possible produce dual and multi-level solutions, either in large projects or in isolated building commissions, thereby offering to society at least the opportunity to build up, through intelligent addition, a more meaningful system of distribution and development. The recent residential building for Caius College, Cambridge, by Sir Leslie Martin and Colin St John Wilson is just such a building, unfortunately in this instance erected on a site that offered little scope for subsequent addition. In St James's there is at least adequate scope for addition, if only future developers can be persuaded to cooperate, as nothing of overawing consequence bounds the Economist site on either the east or the south until one encounters the dubious venerability of St James's Square and Pall Mall. Indeed this scheme is more open to such exploitation than many others as it could easily be extended down to Pall Mall, without seriously disrupting the existing frontage of St James's, thereby allowing for a long interim period when both the present and the artificially created pedestrian levels would be required to be maintained as equally important.

The Economist may well prove to be of limited use as a more general model for urban development, precisely because as built, it is a highly pragmatic solution to a very particular problem. It is certainly questionable whether it would be legitimate to stud the whole area with towers of limited and varying height, each site being 'opened out' in turn like an oyster shell, as part of a process of piecemeal development. Most of the unbuilt work of the Smithsons to date suggests that, faced with a commission to design an extensive urban area they would, on balance, opt for a continuous linear development of restricted height to be built over a continuous multi-level network of pedestrian servicing and parking facilities. (cf. their Golden Lane Housing and project for Sheffield University, etc).

However, once one looks at the Smithsons' proposals for the Berlin Haupstadt competition of 1958, it becomes evident that the Economist development is a built part, or even the full size 'mock up' of a unit within an overall proposition first made by them for the centre of Berlin. Most of the elements of the Haupstadt scheme are present within the Economist development. The use of a high pedestrian deck or network with both up and down escalator access, the provision of two shopping-cum-pedestrian levels, with the existing vehicular street pattern at or below the lowest shopping level; the use of office towers to make direct vertical plastic reference, through access at each level to both of the pedestrian levels. In all fairness it must be admitted that these elements only occur in a modified form in the Economist and then strictly speaking only in the bank building. Similarities between the Economist and that Haupstadt scheme extend even to the tentative detailing, shown in the Haupstadt perspectives where the corners of the square office towers are shown chamfered, a detail to be later incorporated into the Economist on the practical grounds of gaining maximum site coverage while maintaining lighting standards.

If both the Haupstadt proposal and the Economist are each to be regarded as related general models for the furthering of the built environment, then we are justified in questioning more closely the actual processes that would be or have been involved in their realization. The Smithson Haupstadt scheme has the superficial appearance of being much more plastic and free than the realized geometry of the Economist, although there is no real reason to suppose that the Haupstadt proposals would not have been achieved in an equally disciplined manner.

The issue at stake here and an important aspect of our appraisal is to examine the system of form and space making adopted within the Economist itself and the implicit relations thereby postulated to exist legitimately between our present society, its technology and the means in which it uses this technology to create form. One is reminded of the Miesian dictum that it is not a question of 'what' but 'how', and of the Peter Smithson inversion of this, that it is not a question of 'how' but 'what'.

The question of 'what' has been built on the Economist site is an interesting one to pursue, for in attempting an answer one immediately appreciates the value of asking 'how'. The question as to 'what' can at one level be answered all too simply, that is three separate buildings, comprising a 4-storey bank building, a 15-storey office tower and an 8-storey residential tower, all on a raised podium housing parking and servicing beneath. To ask in effect 'how' is in this instance perhaps more revealing. Both towers have the same generic form i.e. both are comprised of similar structural systems and possess the same square plan with chamfered corners. Yet one is effectively twice the height of the other, with a different floor to floor height arising from entirely different accommodation. These radical differences in both overall and storey height as well as in accommodation, no doubt prompted the architects to halve the structural module of 10ft 6in adopted for the remainder of the site. Hence the residential block was handled as a diminutive, scaled-down version of the main tower, with a structural module of 5ft 3in. This highly mannered solution has not made the differences in accommodation any more explicit; on the contrary it has rendered any such differences virtually unimportant. The narrower structural bay was certainly not derived from the accommodation at all as it is patent from the plans that the residential rooms would have fitted quite naturally into a 10ft 6in division. Nor can the indifferent and random architectural quality of Bury Street truly justify such a scale change.

The question of integrity of expression with regard to accommodation simply does not arise. It is suppressed by the interplay of scale set up between the two 'towers'. This change of scale between the two buildings has resulted in a giant *trompe-d'œil* with which one is only to experience further perceptual difficulty as one enters the centre of the plaza. In the centre of the plaza, the 'photographic' reduction in scale of the residential block *vis-à-vis* the main tower has the optical effect of 'zooming' this block away from the observer, with a consequent dramatic enlargment in the apparent space of the plaza. This perceptual sleight-of-hand is brilliant but not in the last instance felicitous, for the observer does not remain rooted in the centre and on moving around he quickly discovers the deception. Once the illusion of the residential building has been exposed, the whole assembly is open to a 'theatrical' interpretation and this interpretation does not help in sustaining belief in the true monumentality of the major office tower. Seeing may be believing, but once one has been duped, a state of 'visual trust' can only be re-established with considerable difficulty. The roach-bed Portland stone cladding which is ingeniously used as a 'skin façade' virtually throughout the site, is unfortunately also open on occasion to a theatrical interpretation particularly in the main entry hall to the offices beneath the tower. In this space the sense of a prestige entrance is not sustained by the feeling that one is very definitely backstage, that is behind a 'scenery' façade of Portland stone that either faces out of the site altogether or towards the effective centre of the whole composition. This difficulty is avoided in work of Mies where a clear distinction is always made in terms of module, between the infill façade, or overall skin and the supporting structure; a distinction which enables Mies to finish all round the faces of support columns where they stand free at ground level.

Other detailing throughout the site is equally consistent and also on occasion open to a theatrical interpretation. This is disquieting as the declared aim of the designers has been to produce a deliberately dry and didactic building, an aim in which they have very largely succeeded. Nonetheless the appliqué mullions to the plant rooms at roof level, and the styled up dining bay to the existing Boodles Club, ('Boodles's stake in the game') are a little questionable as didactic precepts.

The Economist development considered as a didactic building emphasizes once again the present crisis in architecture; the problem as to the legitimate process through which we should create form and enclose space at this time both for the society of the present and the immediate future. This question immediately involves an inherent conflict of values. The conflict of the material with the immaterial, the monumental with the flexible, the static with the dynamic, and the hand made with the products of mass production.

It could be argued that the Economist legitimately looks to the future where it incorporates successfully industrialized products and processes, and conversely that it legitimately looks to the past in the classicism of its simple geometric order. The distinction between industrialized and hand-made products is not always easy to determine. However, on this score the Economist can certainly claim to its credit, for the future, the precast concrete columns of its structure, its extruded aluminium windows, its highly sophisticated system of services, its flexible partitioning, its built-in office equipment and its pre-fabricated, pre-packed escalators.

The only remaining issue is the dubious moral question of the appropriateness of the invented forms to their actual use and to their possible production by industrial process. Of course in a one-off job it does not matter in practice, unless there is vast scope for repeat, whether the forms are actually mass produced or not. It is justifiable, however, to test a didactic work against such moral criteria and on this ground the Economist falters. However consistent its forms may be within their particular architectural context, at that point where they become mannered, inappropriate, or intractable to industrial production, they tend towards the erection of a hermetic aesthetic which has little relation to the means by which forms are generally made outside the confines of the work.* In that the balustrading of the Economist plaza approximates unreasonably in both size and plan profile, to the major structural supports for the buildings themselves it tends towards such a closed aesthetic. This problem is largely avoided by Mies through the extensive use of appropriate standard sections and extrusions however much they may be welded and sand blasted finally into a state of virtual, and in this respect superficial, hand-made refinement.

A further conflict is also evident in the actual evolution of the design which has to be faced in almost every commission—that is the conflict between the standards which the designers initially recommend and those which they are finally forced to accept through the exigencies of economy and bureaucracy. The Smithsons' original sketch for the plan and section of the offices is in many respects preferable to the solution finally adopted—out of reasons of overall economy and maximum site coverage. The omission of the original diagrid open concrete lattice floor with suspended ceiling below, has no doubt resulted in a loss of certain standards—but it will have certainly achieved great economy by reducing by at least 14in the floor-to-floor height on each level. The structure now is not so elegant, the lighting and services are now not quite so evenly distributed and internal views across the total width of the tower from office to office are now no longer possible, as the double glazed clerestorey panels to the partitions were finally omitted. Although the clear layering of contours in the office space has been lost together with a certain continuity of surface, at least in one respect the amenity of the section has been considerably improved over the original by the provision of a continuous perimeter work bench. The overall 'racetrack' solution around a central core provides an ideal working community ring for the individual offices of which the Economist editorial is largely composed. A single, and on occasion, double banked barrier of filing cabinets, situated immediately under the transparent clerestorey air-conditioning ring duct separates the working spaces on the outside from the corridor and provides a solution almost as integrated and effective as the original diagrid proposal. Certain other enforced economies incurred through no fault of the architect are unlikely to pay off in the long run; this stricture particularly applies to quality of finish adopted for flexible internal partitioning.

In their Haupstadt competition the Smithsons provided social and shopping elements on two pedestrian levels one above the other. A parallel arrangement on the Economist site is in practice rather inadequate socially and one wonders in retrospect about the quality of the social activity that the architects envisaged for their Haupstadt pedestrian high level roof decks. Certainly the vistas from these open and apparently empty roof decks would be awe-inspiring and so indeed would be the weather. It could be argued that the equivalent of these decks in the Economist development is the plaza itself and here it is as potentially empty as the decks of the Berlin project. Although it is provided with a small kiosk this unit will hardly engender as much social life as would have resulted from the introduction of a small restaurant or bar at this level. This is regrettable although obviously there was no room for any public unit of large size here, and it is clearly sensible that the main restaurant is situated below plaza level opening on to Ryder Street.

At all events the Economist is a remarkable building. An objective assessment of it can hardly be made by anyone at this time. Its stylistic and organizational innovations are beyond question, yet without the Chicago School it would never have been born in this form. It is dependent on the 'acropoli' of the ancient past, a little perhaps on Sitte and certainly upon a direct line of modern development that leads from Sullivan to Mies, through to the architect's own work.

To my mind the most successful public space and total structure within the whole Economist development is the bank building that fronts on to St James's. Within this building the 10ft 6in structural bay of the tower has been permitted to become distorted through the exigencies of a corner site and the demands of the problem. Equally so within this structural frame the floor levels have been manipulated to accord with required ceiling heights of the different spaces, the shops, banking hall offices, etc., while respecting the architectural demands of the street. It seems to me at least, that both the dining bay added to Boodles and the ladies' residential club at the rear of the site would have been improved had they been handled within the same grid in an equally free manner. The classicism of the whole site would have been maintained and the present rather disturbing mannerism would have been avoided. The banking space is the heroic space of the whole site having vistas on to the plaza, St James's and Ryder St. It participates fully in the whole site and is elegantly, simply and richly detailed to match this central role. One may entertain rather reactionary doubts about the reactionary frieze incorporated in the mosaic facing of the central core, but this fails to distract from the excellence of the whole space. Indeed, it is perhaps only in this one-space and structure that the spirit of the Chicago School, of an 'objective' architecture, is fully invoked.

* c.f. Konrad Wachsmann's remarks on the building site in 'The Turning Point of Building' page 118.

1

The Economist group St James's Street, London

Architects: Alison and Peter Smithson

Associate architect: Maurice H. J. Bebb

Assistants: George Kasabov, Tim Tinker, Ivor Prinsloo, Chris Woodward

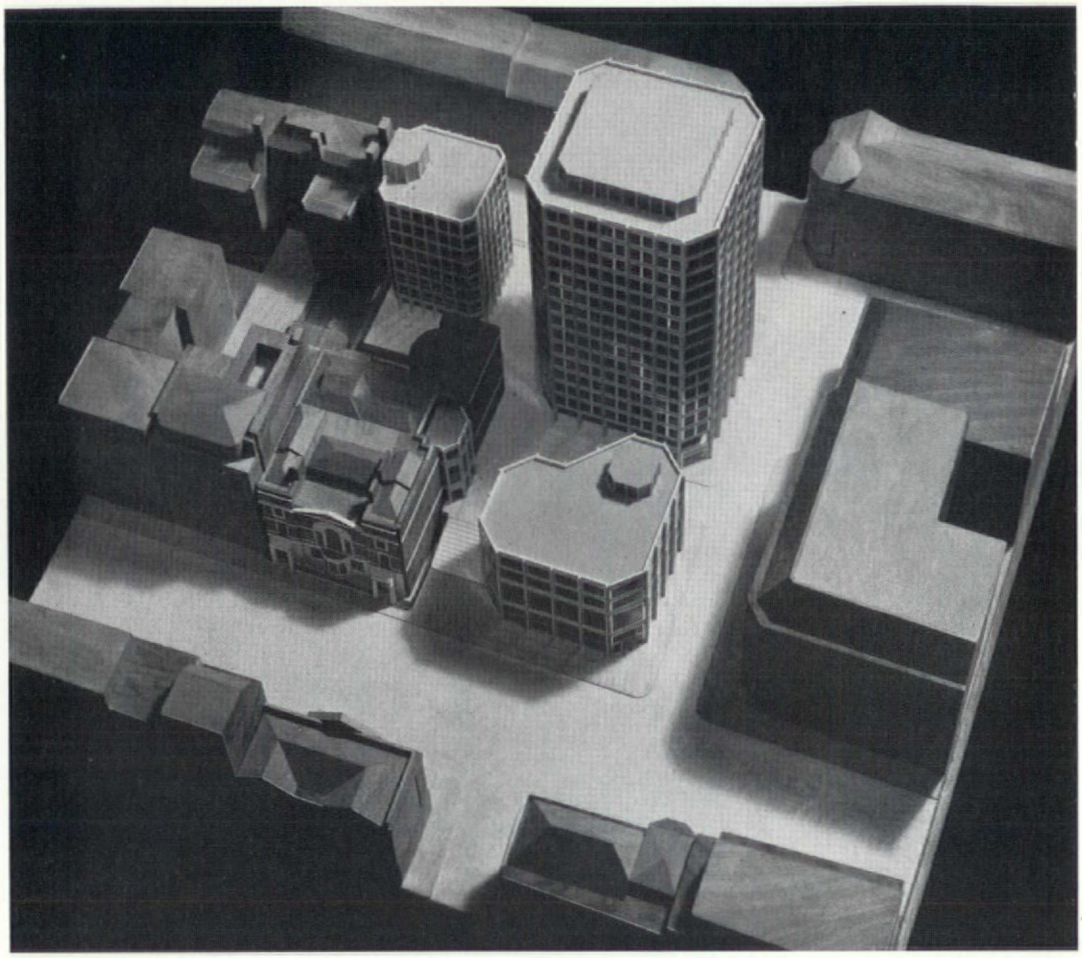
Quantity surveyors: Gardiner and Theobald; (bank contract) F. H. Wood and Partners

Structural engineers and general contractors: Sir Robert McAlpine & Sons Ltd.

Acoustic consultant: Arthur Aldersey-Williams of Associated Architects and Consultants

Surveyor: Gordon Tomalin

1
The Economist tower is in the foreground to the right, with New Zealand House beyond, and St Paul's in the far distance
Photo: Carapetian



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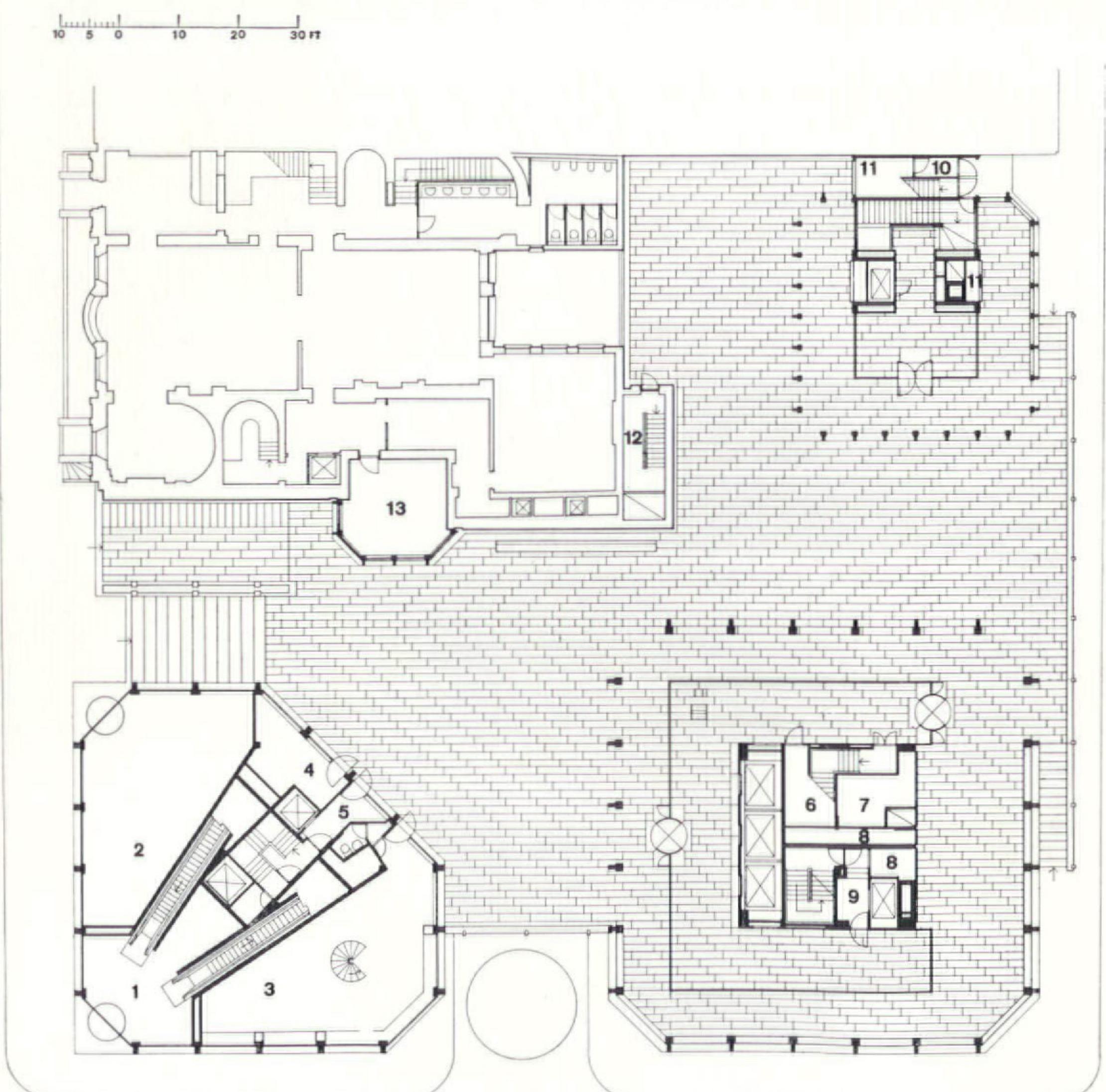

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The problem

This group of buildings was commissioned by *The Economist* newspaper, as a result of a limited competition, to accommodate their editorial staff and the Economist Intelligence Unit (an economic research organization). Details of the brief were worked out late in 1959 and design began in earnest at the beginning of 1960.

When *The Economist* had originally considered building, they were only in control of the site on the corner of Bury and Ryder Streets. As the Planning Authority had laid down a plot ratio 5 : 1 with a proportion of residential and commercial use as well as offices, it had become obvious early on that, in order to house the three types of accommodation adequately, it would be necessary to expand up Bury Street and have a complete frontage on to St James's Street. An agreement was reached with Boodles Club, whereby their chambers (which occupied a house in Bury Street) would be rebuilt, to form a part of the residential component. The commercial accommodation would face St James's Street, to house existing shops, a bank and some offices.

Planning and shape

St James's Street slopes down from Piccadilly towards St James's Palace. The essential character which one associates with this district is due to a great extent to the few remaining eighteenth century buildings—mostly clubs such as Brooks and Boodles. These four-storey buildings had set the original square proportion of the street. Subsequent seven-storey development, dating from the turn of this century, dwarfed these fine buildings and tended to make a tall corridor of the street. They also overcrowded the backs so that a large proportion of all rooms looked out on to small and dingy areas.

The other feature of this district is the pattern of alleyways, arcades and courtyards which provide pedestrian ways through and into the building blocks.

In this context, the principal objectives of this design were:

1. To make a group of buildings compatible with the remaining eighteenth-century scale of St James's Street which at the same time makes a virtue of the impact of twentieth century volume requirements.

continued on page 67

1
Photograph of the model of the scheme

2
Plan at plaza level. $\frac{1}{32}$ inch scale
1 upper part bank entrance hall
2 upper part of shop 1
3 first floor of shop 2
4 kiosk
5 lettable office entrance hall
6 porter's room
7 vent plant to below plaza 1
8 areas
9 fireman's lift lobby
10 bin store
11 vent plant room
12 Boodles new service stair
13 card room

3 & 4
St James's Street before and after the development

5
View of the tower from the junction of Duke Street, St James's and Ryder Streets

6
View south down St James's Street after development

Photos: 1 Maltby. 3 Kasabov. 5 Brecht-Einzig. 4 & 6 Carapetian

3

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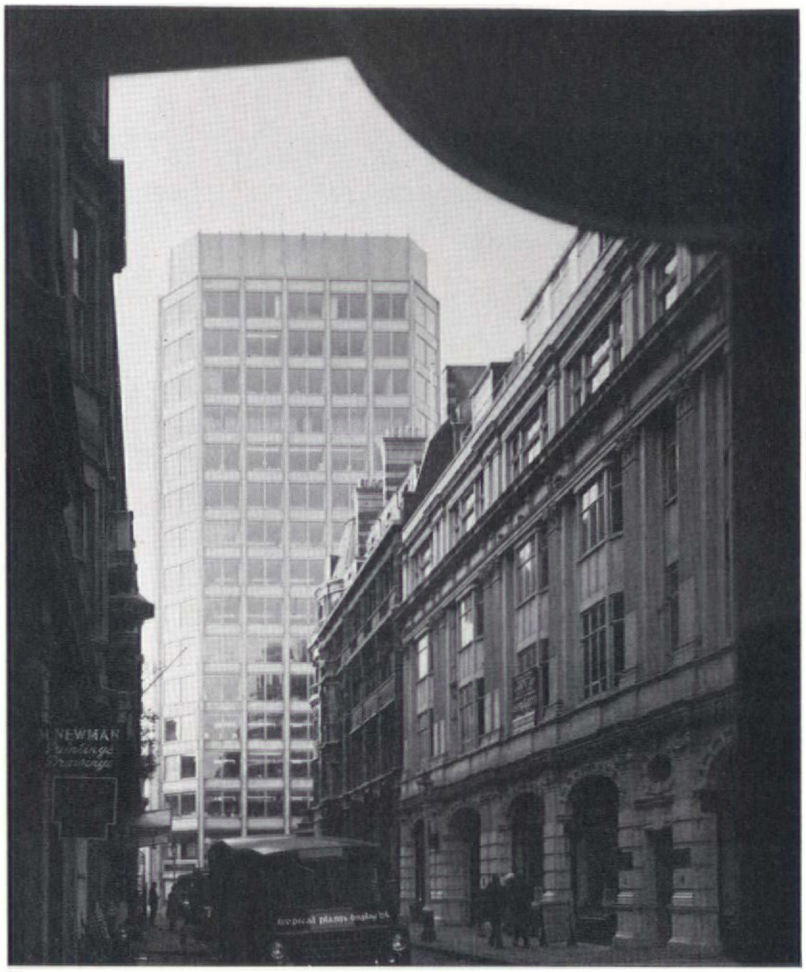

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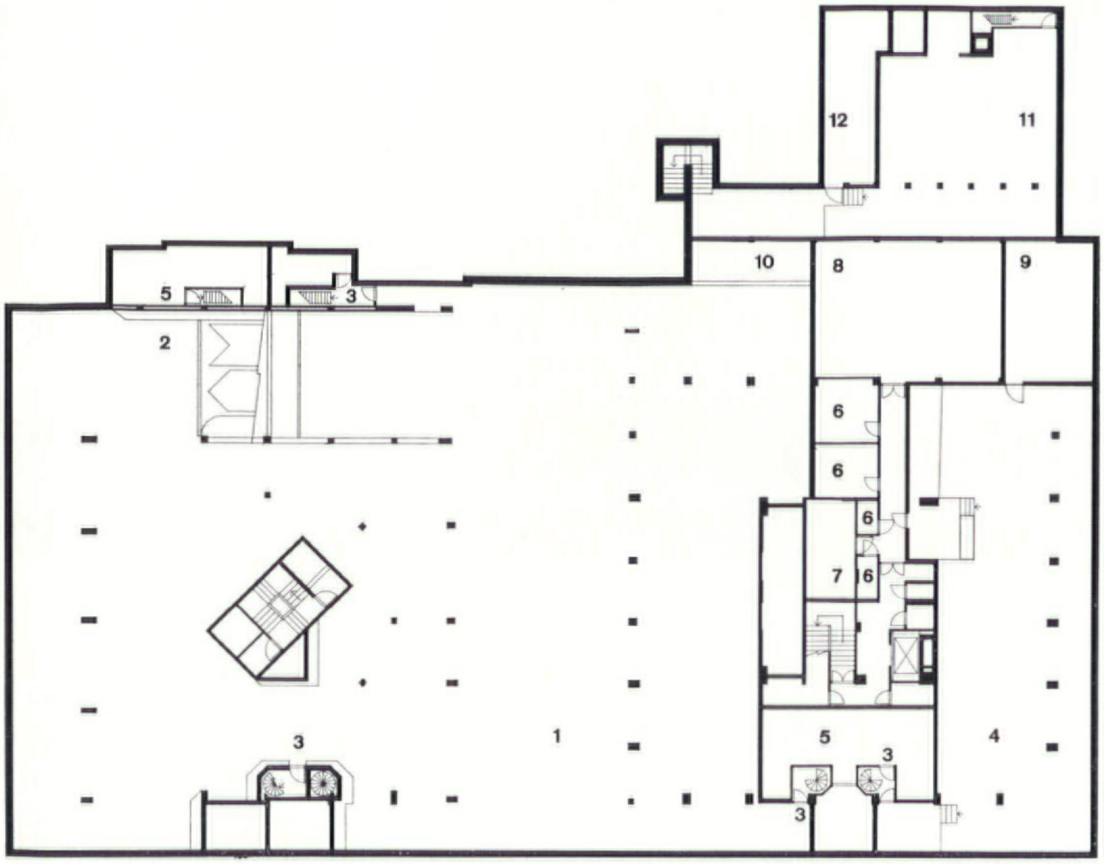

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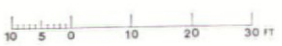

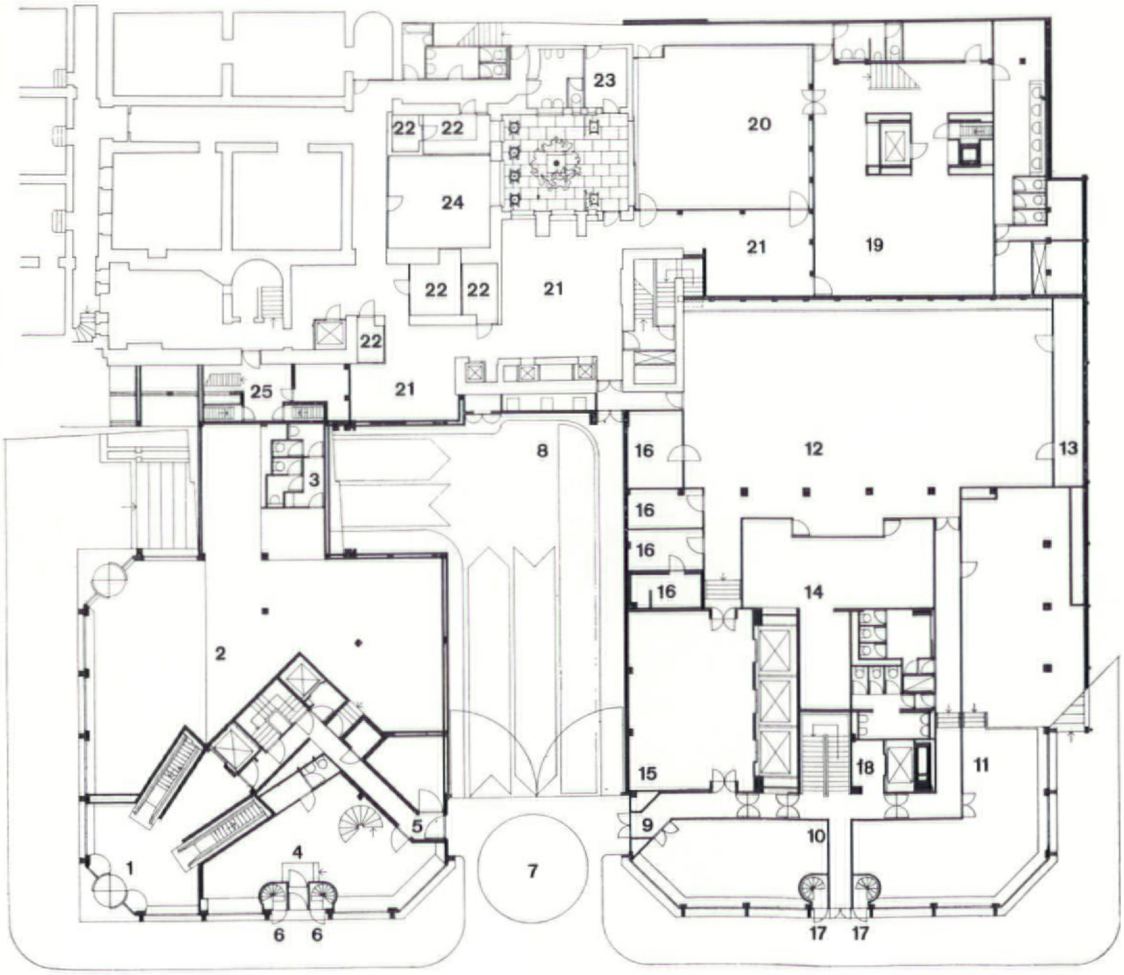

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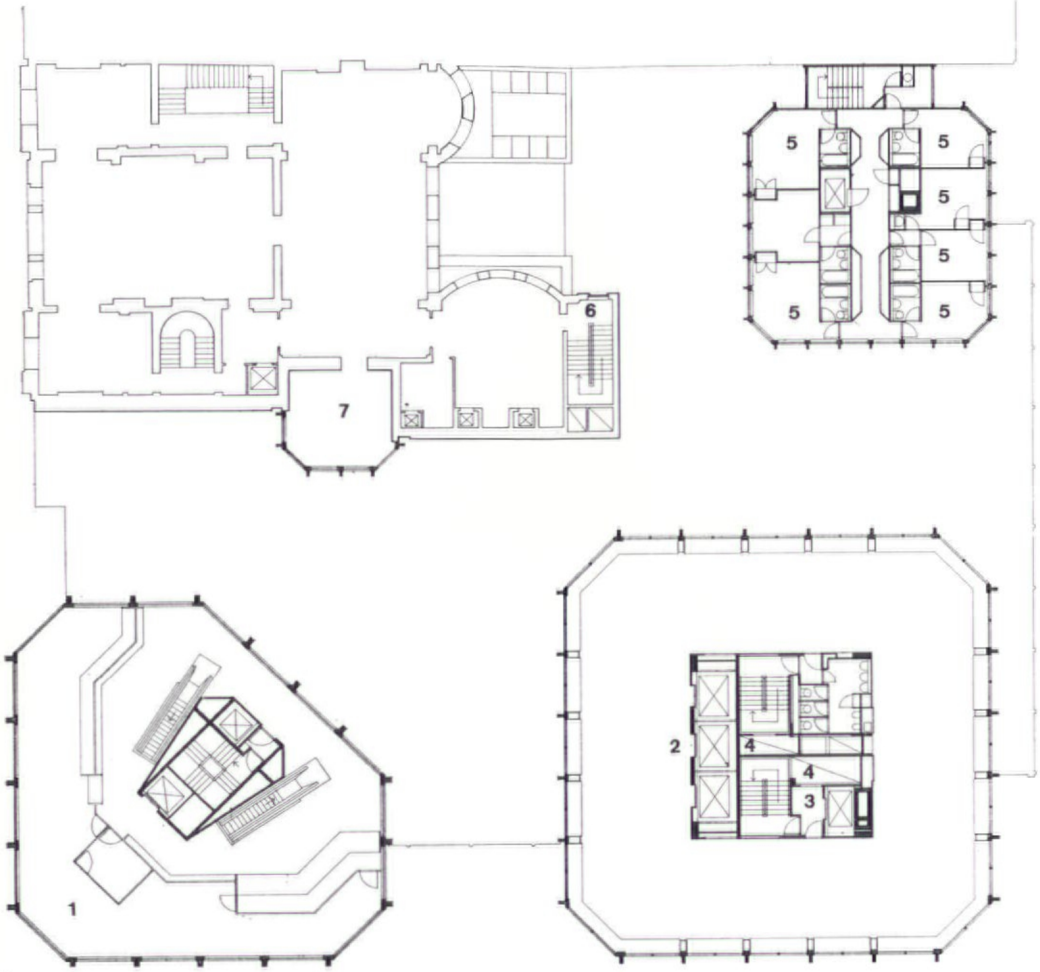
1
Below plaza level 2, basement
1 garage
2 garage entrance ramp
3 escape stairs
4 'The Economist' boiler house
5 transformer rooms
6 store
7 switch rooms
8 telephone room
9 oil storage
10 garage vent plant
11 Boodles boiler room
12 oil storage

2
Below plaza level 1 pavement level plan
1 bank entrance hall
2 shop 1
3 lavatories
4 shop 2 lower floor
5 service entrance
6 basement escape stairs
7 turntable lay-by
8 garage ramp
9 service entrance
10 post room
11 duplicating room
12 dining room
13 plant room
14 kitchen
15 bar
16 stores
17 basement escape stairs
18 fireman's lift lobby
19 bar
20 dining room
21 kitchen
22 stores
23 stewards' room
24 staff dining room
25 basement escape stairs

3
Typical floor plan
1 banking hall on first floor
2 'Economist' office floors
3 fireman's lift lobby
4 areas—residential building floors 1–3
5 Boodles chambers floors 1–3
6 new service stairs
7 dining room

4
Top floor plan
bank floor 3, floor 2 similar
1 office space
2 reception lobby
3 tea room
4 cleaners' room
tower floor 14
5 reception room
6 study
7 secretary
8 dining room
9 kitchen
10 bedroom
11 separate flats
residential building floors 4–7 flats
12 living room
13 bedrooms
14 kitchen



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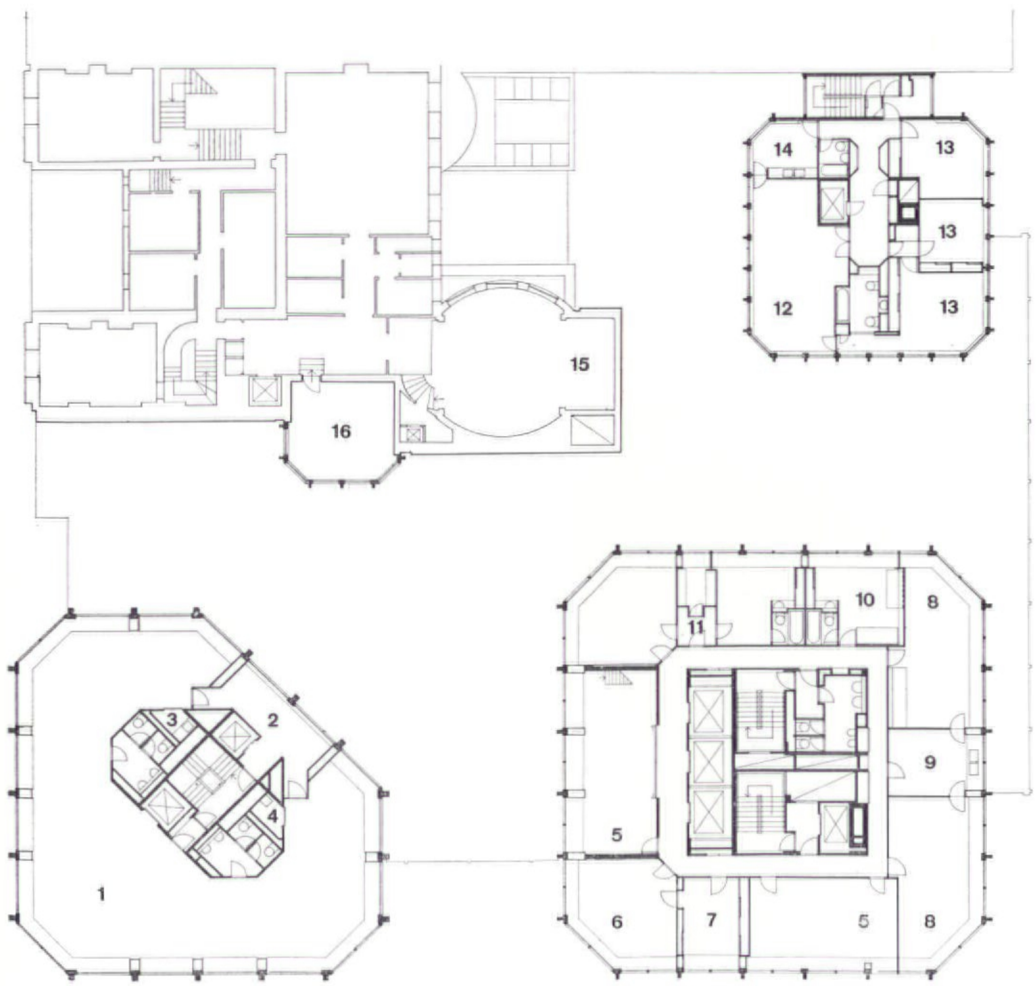

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continued from page 64

2. To provide open space and through views, accessible to the public at large, and the beginning of a wider system of separated pedestrian and traffic routes, similar to that traditional to St James's.

3. To tidy up the clutter of the present back premises and give a decent open outlook to everyone working in the building.

These objectives have been achieved by the device of providing a separate building for each use, with light and view all round.

The buildings are grouped round a quiet courtyard, 'the Plaza', which provides a pedestrian way through and into the site, linking St James's with Bury Street. The Plaza is raised slightly above general pavement level, and, by reason of the slope across the site, vehicle access is at a lower level in Ryder Street. The total site area is 19,600 sq ft.

The bank building in St James's Street is deliberately restricted to four storeys and the eighteenth century proportions of the adjacent Boodles Club and Brooks opposite have been mirrored. Behind this are *The Economist* tower and residential buildings, which, although more bulky than the bank, have been designed so that the scale is reduced progressively from building to building, expressive of the different uses which they house. This change of scale, from the wide busy St James's Street back to Bury Street, also ensures that the whole complex ties in appropriately with the general hierarchy of building and movement.

The bank building—23, 24, 26, 26A St James's Street

The geometry of this building is set at 45° to that of all the others. The module is 10ft 6in without any subdivision. Floor area is 1500ft^2 per floor.

On the ground floor are two shops one of which also has an entrance off the Plaza. The banking hall on the first floor (this is the 'piano nobile', and visually an extension of the Plaza) is reached by escalators from the corner of St James's and Ryder Streets.

The second and third floors are offices. At Plaza level there is also a small kiosk and a separate entrance to the stairs and 'tenant's' lift.

The vertical circulation is unusually elaborate because of special clients requirements. Martins Bank, who had occupied the site previously, required some offices on the second floor and a service area below the Plaza, as well as their banking hall. All this has to be served by a private lift for security reasons, so that the rest of the offices are reached by a separate ('tenant's') lift from the entrance at Plaza level.

The means of escape from the upper floors is by a single internal open wall staircase with ventilated lobby approach. This staircase is permanently vented at the top. The top floor is in fact over 42ft above street level. However, as the volume of accommodation is small, ramp access has been provided so that a 42ft wheeled fire ladder can reach the top floor from the Plaza.

The tower—25 St James's Street

This building is planned as a ring of offices around a central service core. The module is 10ft 6in (the basic two-man room) with further mullions at 5ft 3in. Floor area is 4500ft^2 per floor.

At Plaza level the entrance hall is set back from the perimeter and paving flows in up to the core. Offices are on the first to thirteenth floors. The fourteenth floor contains a flat and an executive suite. Above this are the ventilation and lift plant rooms.

The core contains two staircases approached from the lobby, ventilated by separate internal areas. One of these is the main fire fighting stair, and its lobby which serves the fireman's lift, is also ventilated by the larger area and contains the dry riser. These areas are 50ft² and 25ft² respectively; they are completely unobstructed at the top and have air inlets at Plaza level to provide a flue effect for smoke dispersal. The statutory size for such areas has been enlarged since this building was approved.

On the south-west face of the core are three high-speed lifts with pipe ducts situated on either side of the lift-shaft. On the outside of these are the main electrical ducts. Ventilation ducts are placed centrally behind the small area. Male and female lavatories are on alternate floors and tea-making recesses open off the corridor on the north-east.

The core is set back further from the perimeter on the south-west so as to provide extra waiting space by the main lifts.

Residential building—27 St James's Street

The structural module for this building is 5ft 3in. Floor area is 1500ft² per floor. Chambers for Boodles Club occupy the first to third floors. Most of these are single bedrooms, with individual bathrooms, for members wishing to spend one night in London.

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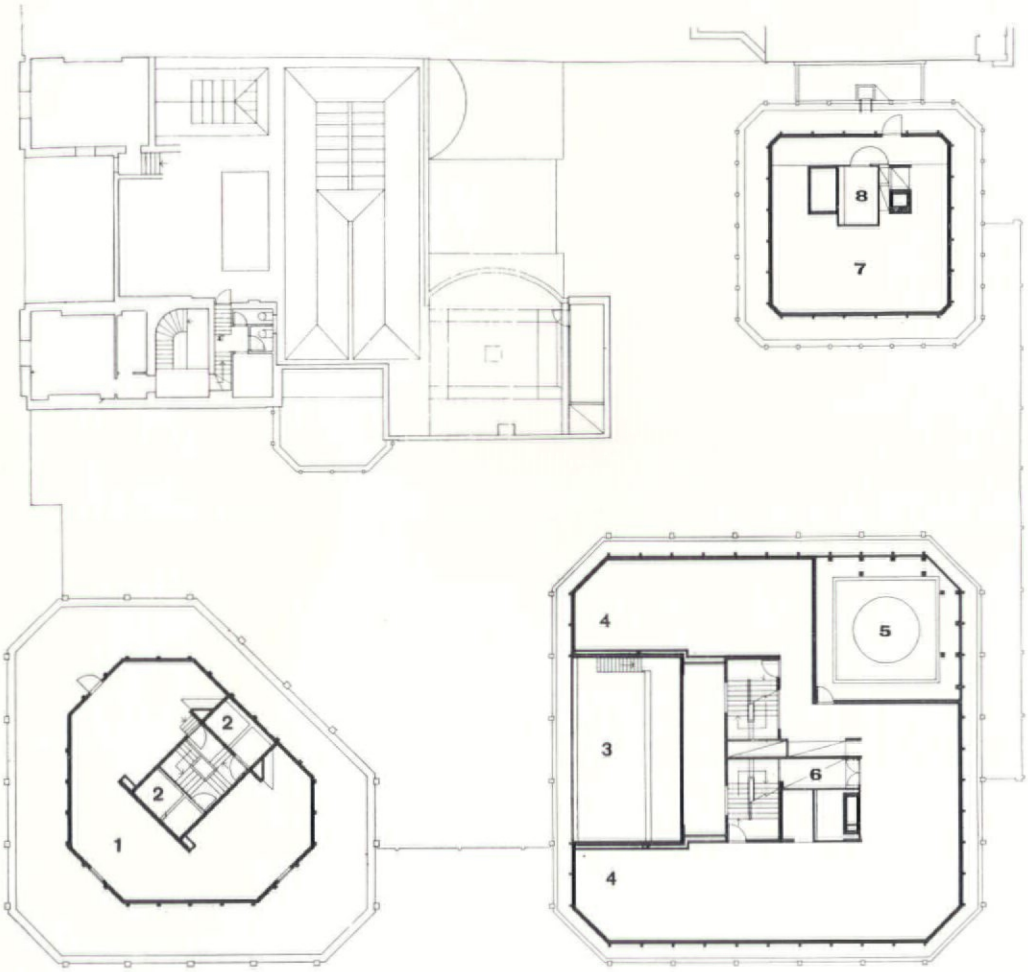

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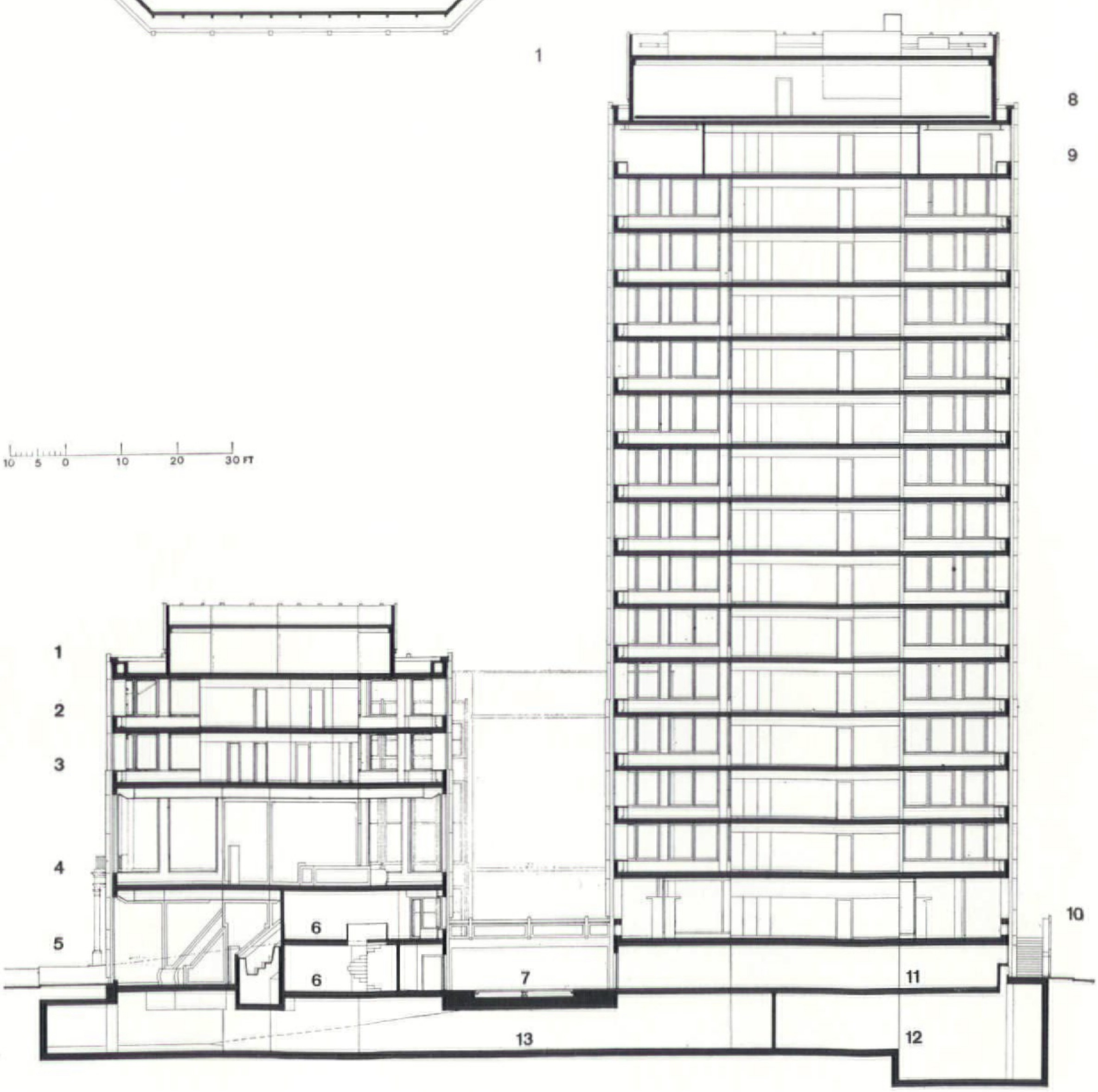


1
Plant room level plan
1 bank plant room
2 lift motor rooms
3 upper part of reception room
4 plant room
5 cooling tower
6 areas
7 plant room
8 lift motor room

2
Section
1 bank plant room
2 lettable office floor
3 bank office floor
4 banking hall
5 bank entrance hall
6 shop 2
7 turntable and service entrance
8 tower plant room
9 fourteenth floor residential
10 plaza level and entrance halls
11 below plaza one level
12 tower boiler rooms
13 garage

3
View of the whole development from Park Place
Photo: Henk Snoek

3

continued from page 68

The fourth to seventh floors have one flat on each. Ventilation and lift machinery are on the roof. The escape stair is reached through an open balcony where are located the rubbish chute and dry riser.
The entrance hall at Plaza level also serves the Boodles Club Ladies' Annexe below.

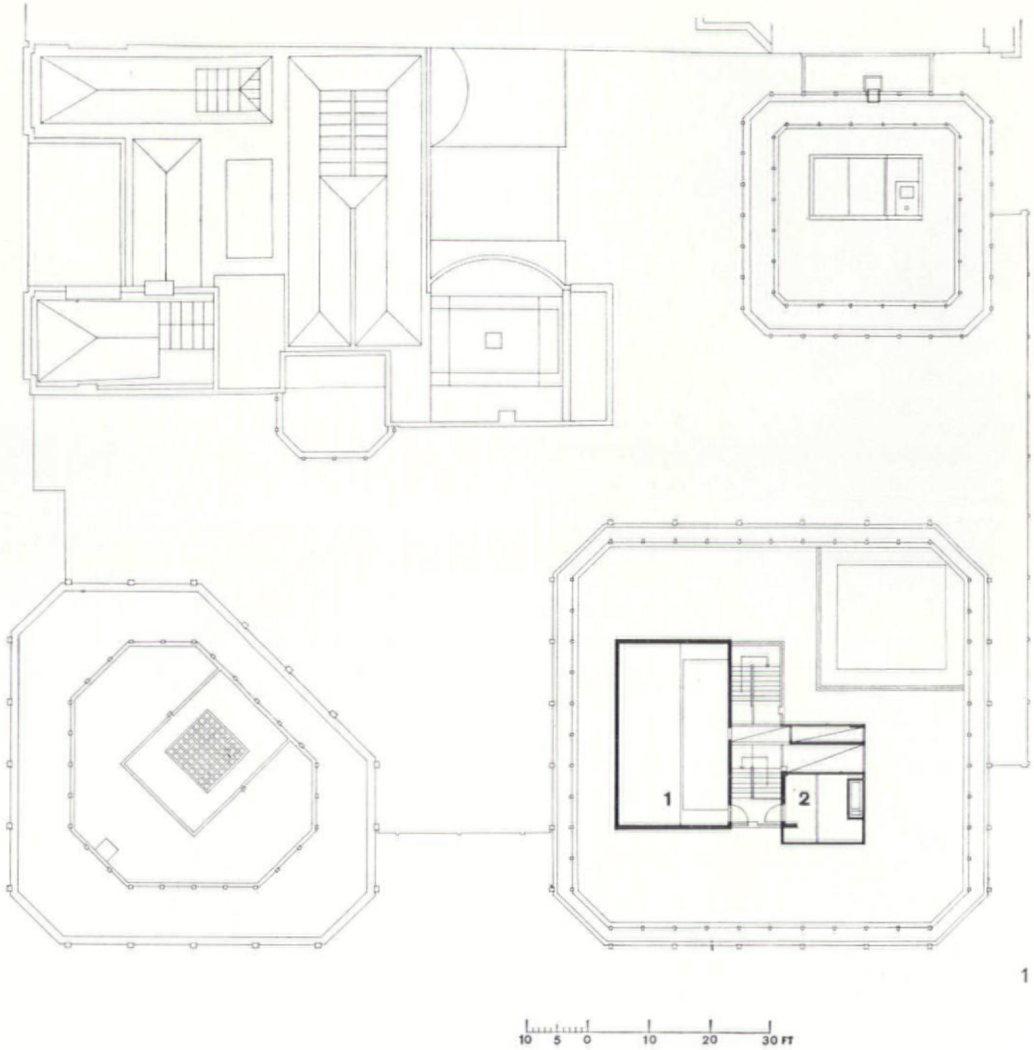
Below plaza

All the 'one-off' uses have been confined to this area. At Ryder Street level is the service entrance to the tower, the bank and Boodles Club. The local authority insisted that the lay-by be provided with a turntable so that no vehicle need back out into the street. This entrance is also the way into the two level garage which has space for 52 cars.
On the same level there will be a public restaurant, together with a bar, which will be used at lunch time by the office staff. Under the residential building is the Boodles Ladies' Annexe. The boiler rooms, etc., are on the level below this.

Boodles Club

Here the service area at the back had to be reorganized and rebuilt. The south flank has been refaced and a new bay window added as an extension to the dining room on the first floor, with a card room at Plaza level and a bedroom on the second floor.

continued on page 73



1

2

1
Roof plan
1 main lift motor room
2 lift motor room

2
Section
7 dining room
8 tower plant room
9 fourteenth floor residential
10 plaza level and entrance halls
11 'Economist' duplicating room
12 tower boiler room
13 telephone room
14 office floors 1–13
15 residential plant room
16 flat
17 Boodles chambers
18 Boodles ladies' annexe
19 Boodles boiler room

3
Plaza steps and ramp on St James's Street; revolving door provides entry to Shop 1

4
Plaza looking towards the St James's Street steps

5
Steps up to Plaza from Bury Street

6
The office tower and residential building from the north end of Bury Street

Photos: 3 Kasabov. 4 & 6 Carapetian. 5 Brecht-Einzig

3

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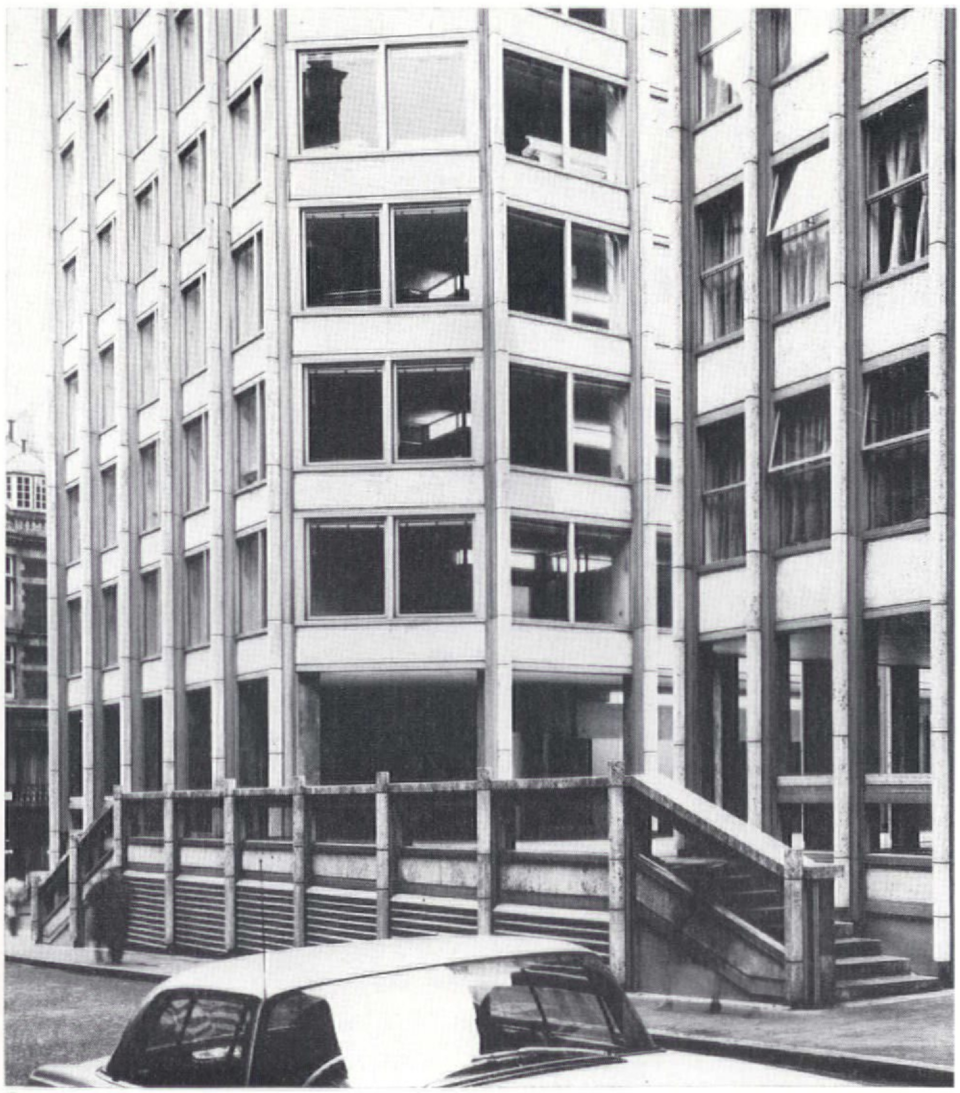

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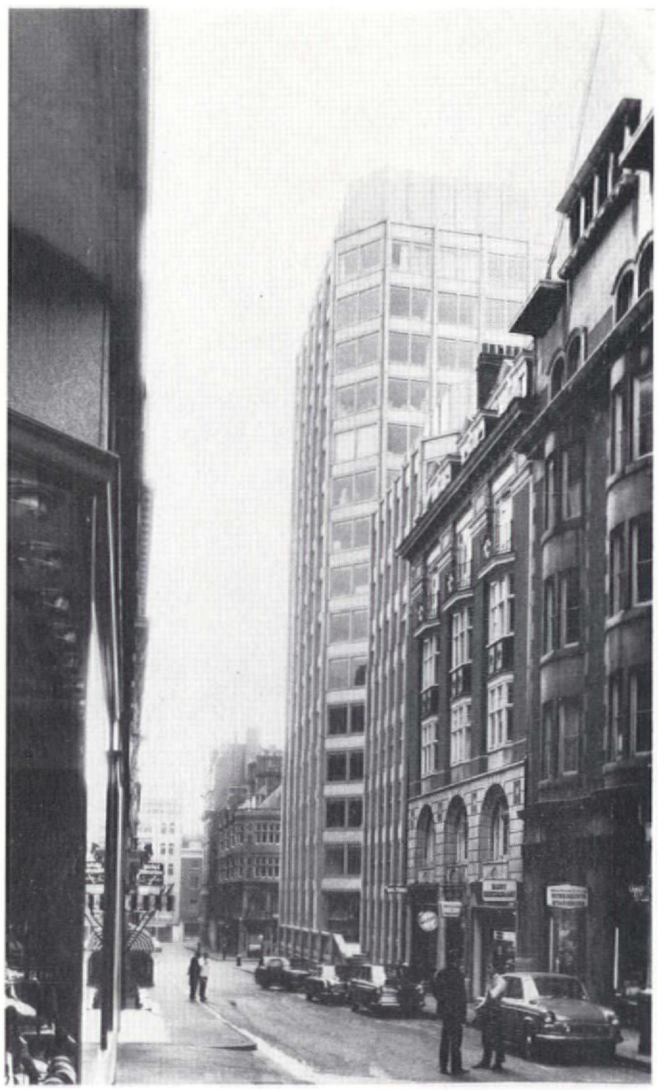

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1


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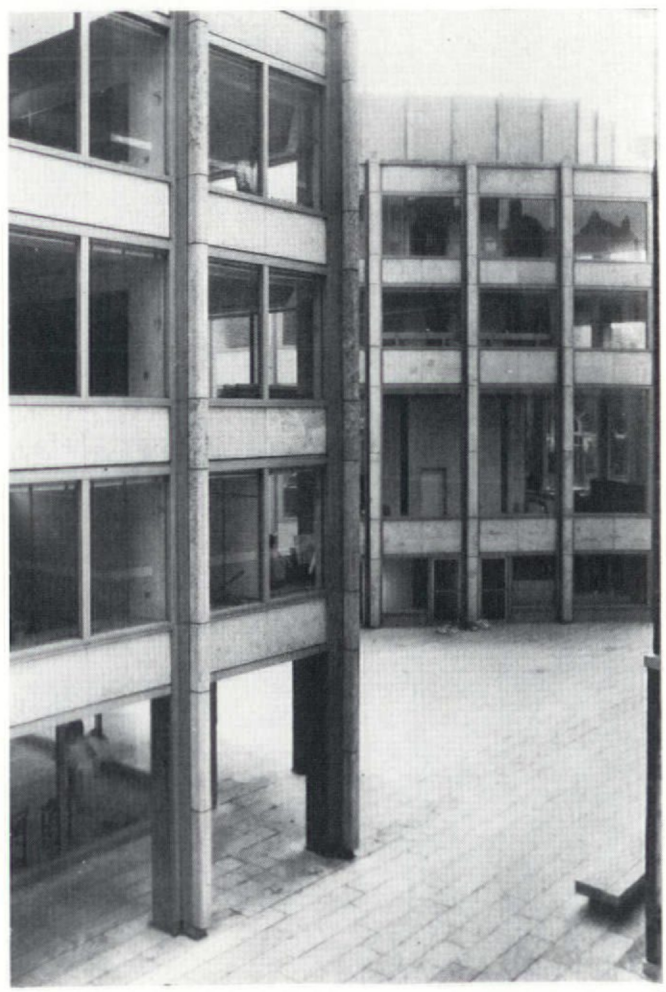
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Office design

The design springs partly from general considerations of office use and partly from the specific organization of *The Economist* newspaper and Intelligence Unit. These organizations have a preponderance of two-man groups working together in small departments, each with an executive in charge.

The principal objectives governing this aspect of the design were:

1. To achieve optimum working conditions by the provision of anthropometrically designed working surfaces, with maximum layout space, individual storage and convenient services, together with good lighting and a high standard of noise control.

2. To provide a service system which is integrated with the architecture in such a way that the sources of light, heat, ventilation, power and telephones form an appropriately unobtrusive part of the architecture.

3. To provide a fully integrated storage and filing system having a sufficient range of capacity to avoid the usual clutter of unrelated units—coat racks, filing cabinets, storage cupboards, etc.

4. To devise an internal organization based on the 'two-man room', while allowing maximum communication between rooms and departments, and providing a range of office types to give individual choice of accommodation to executives and eccentrics.

5. To achieve a maximum sense of space and use of space.

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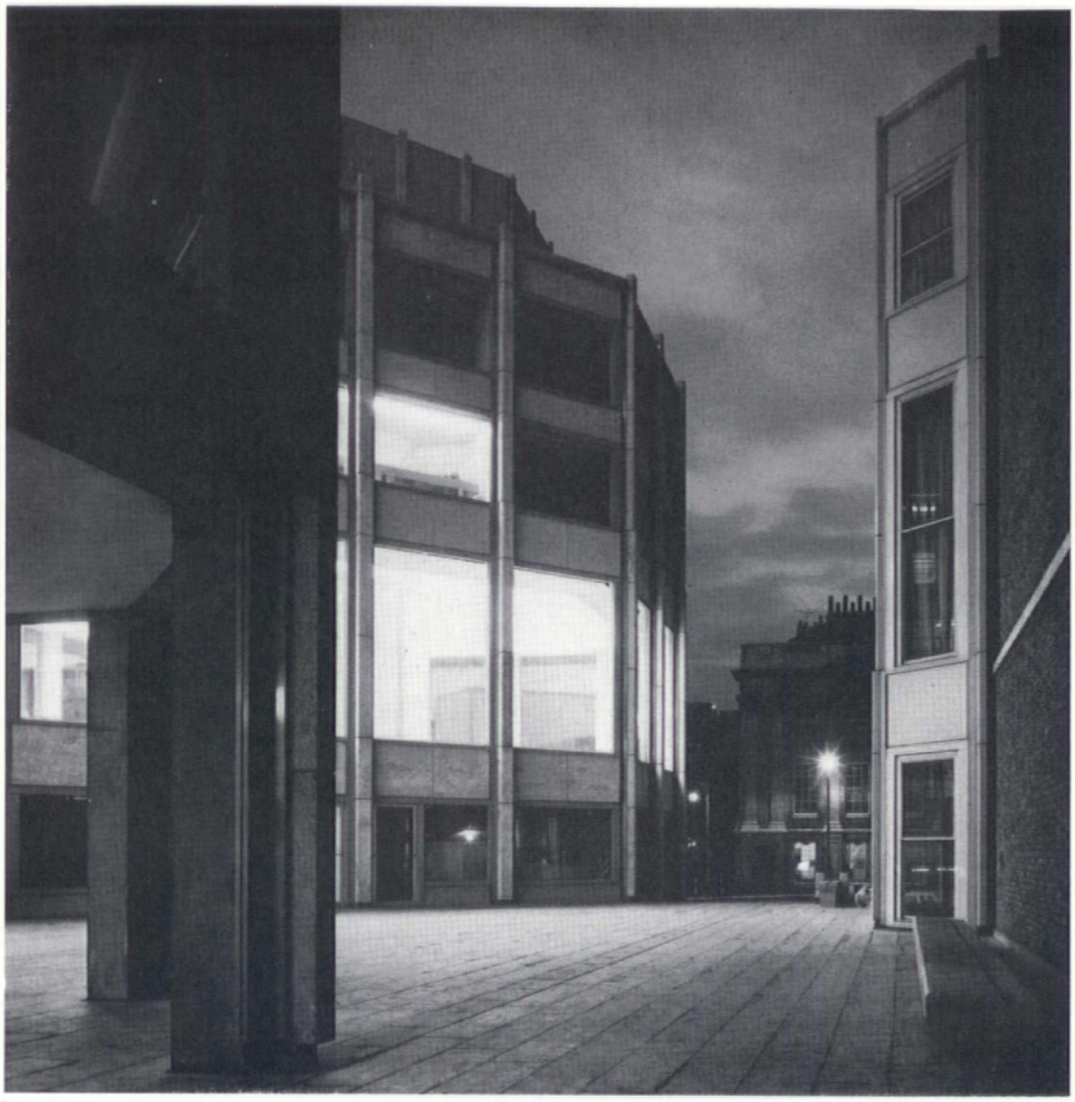

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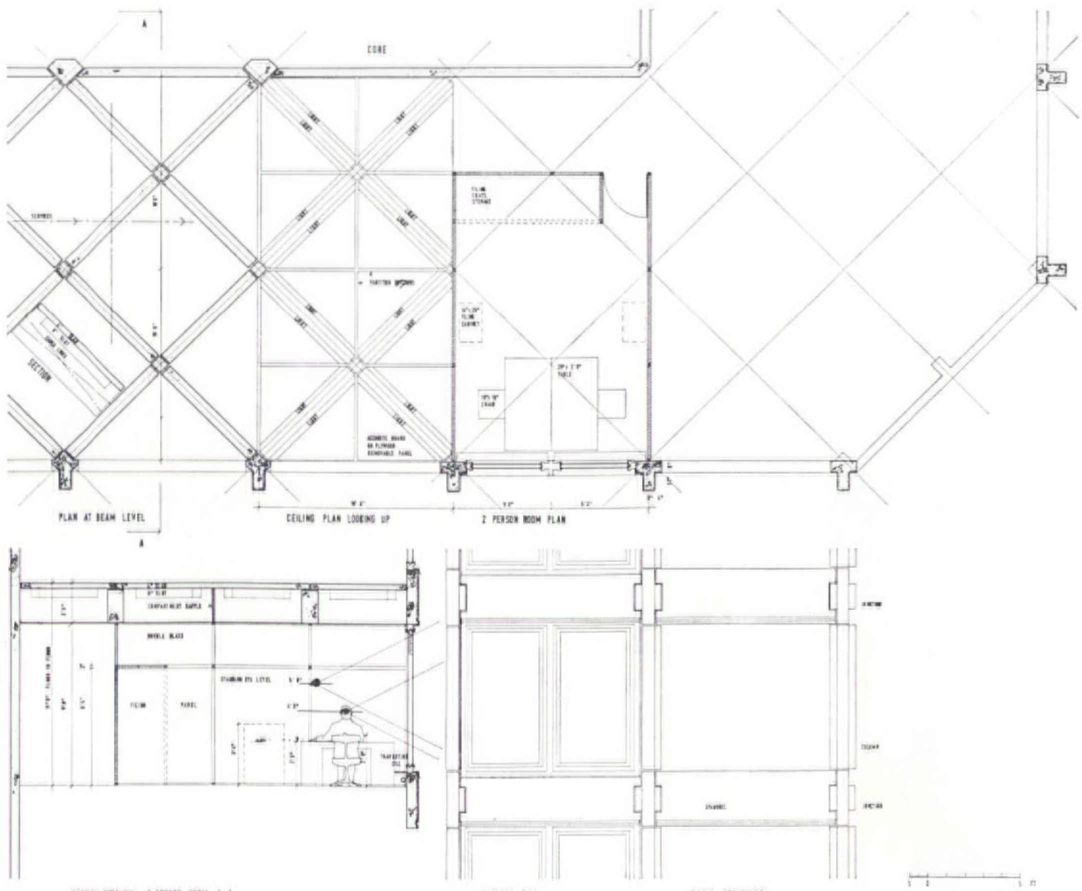

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1
Plaza; steps and ramp with view to St James's Street

2
Brooks's Club in St James's Street from the plaza

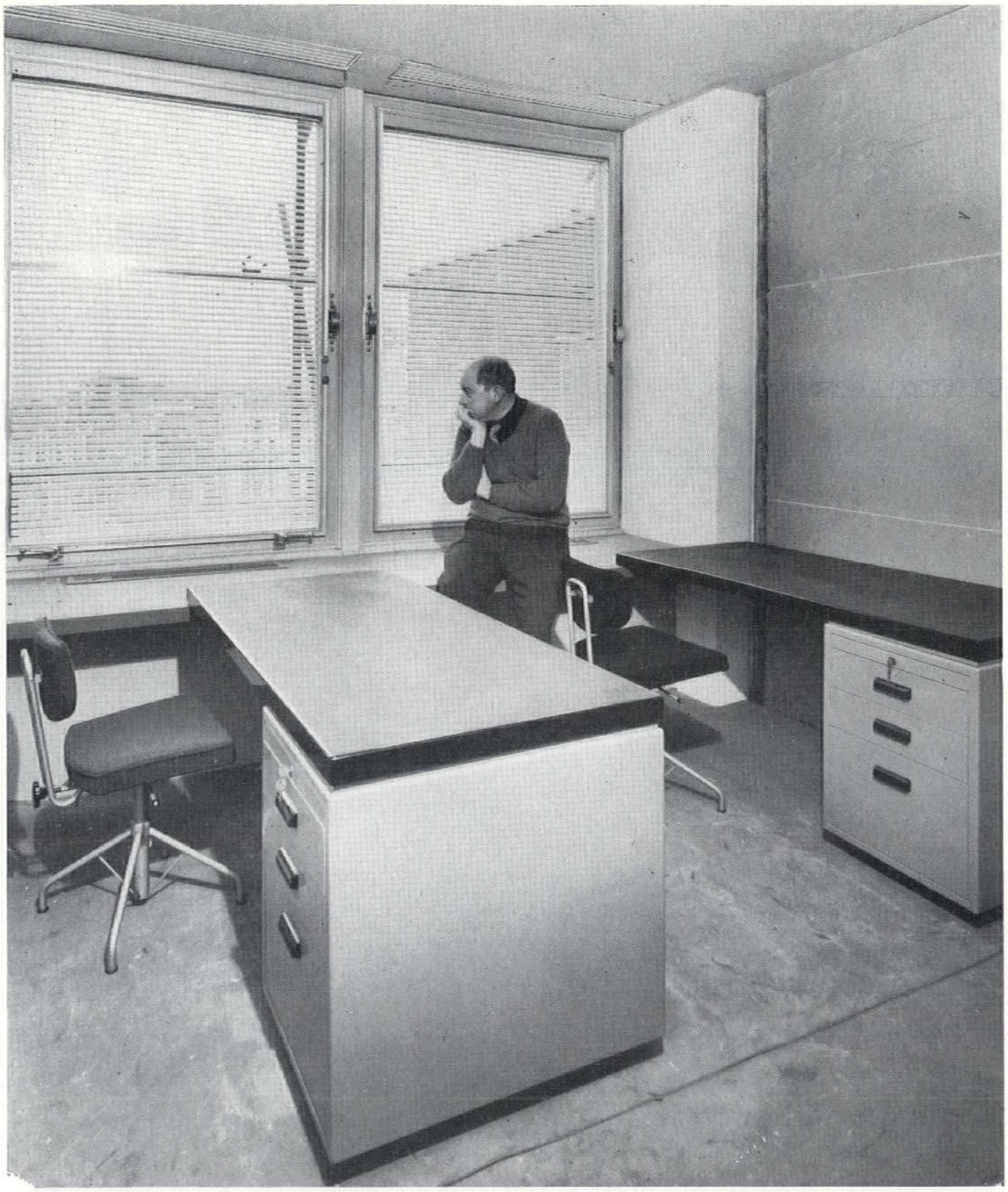
3
Plaza; space between the residential building on the left and the back of Boodles Club

4
Plaza; view from the residential building towards the bank

5
The plaza at night

6
Original exploratory sketch for office tower

Photos: 1 & 2 Kasabov. 3 Brecht-Einzig. 4 Carapetian. 5 Henk Snoek



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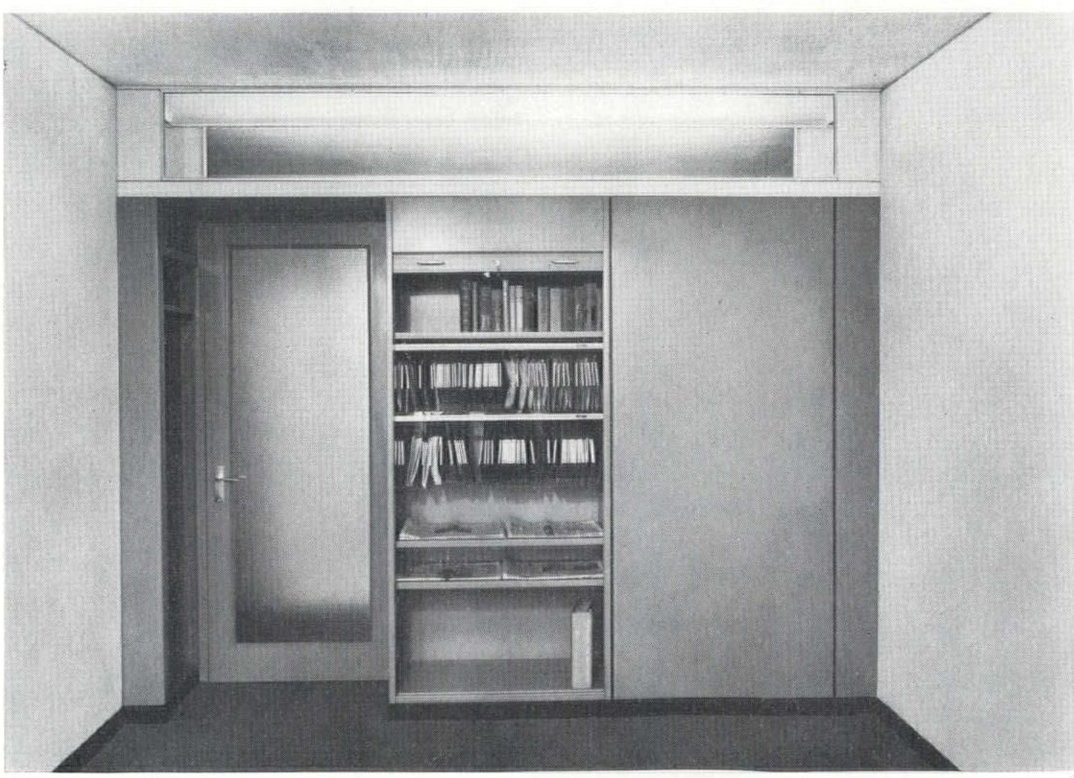

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continued from page 73

Office design (continued)

1. Desk and window board:
Most people prefer their desks to be both near and at right angles to the window. Thus the 25in high window-board is extended past the air-conditioning unit, to provide a typing-cum-layout surface, which also forms the support for one end of a standard 28in high adjustable desk and obviates the need for any other support, besides a single standard filing cabinet pedestal. The resulting 'L' shaped unit is the most satisfactory form for general work.

2. Services:
On the window-board next to the air-conditioner grille are the power sockets. The telephones are connected below.
Artificial light comes from three sources:
(*a*) The light/vent trunking at the back of the offices provides indirect light to both the offices and to the corridor. It contains three rings of fluorescent tubes which can be controlled separately.
(*b*) A continuous perimeter ring of fluorescent lights, in purpose made diffusers, with individual switches in each bay.
(*c*) Tungsten desk lights.
The light/vent trunking is a white painted, pressed metal duct with glass sides which hinge to open on the corridor side for cleaning and lamp maintenance. Air is extracted from the offices through grilles in its base.

3. The filing bank
This is an adjustable metal storage wall, between the offices and the central corridor, which fits below the permanent light/vent trunking. It consists of the following elements:
(*a*) Coat lockers, incorporating a sound baffle, which fit below the extract grilles in the light/vent trunking and prevent sound transmission from office to office.
(*b*) Glazed door and frame.
(*c*) Standard Roneo lateral filing cabinets. These have extra pressed metal backs, packed with plasterboard for sound insulation.
The lateral filing cabinet was selected as being the only commercially available unit which can accommodate a large variety of storage requirements within a single modular cabinet. This system also uses up the minimum floor area for any given amount of storage. The cabinets can be arranged so that they open either into an office or into the corridor or alternatively be double banked to provide access from both sides.

4. Side wall partitions and shelving:
These demountable partitions are made of three skins of ½in plasterboard mounted on wood frame with a horizontally packed straw core. They are fixed by wedges, against battens on continuous rubber pads to ensure a positive air-tight seal. All edges are trimmed with an aluminium angle and intermediate joints are wet-filled. There is provision for a standard glazed door in place of one modular panel and for adjustable metal shelving on the same 3ft 0in module.

5. Office organization and layout:
On any floor 60 per cent of the office space is on the straight sides of the building and 40 per cent in the corner. Thus the bulk of the 'two-man-offices' which require the large storage capacity provided by the filing bank, are on the sides. The corners, on the other hand, can be divided to form a variety of rooms, ranging from the full corner for top executives to a small half-bay office—a larger range of room types than is possible in an orthodox rectangular block.

continued on page 78

1
First mock up—incorporating centre pivoting, opening double glazed windows

2
Final mock up—light/vent trunking with filing bank under. A coat locker is situated on the left of the door
Photos: Maltby

Pages from the maintenance manual produced by the architects for 'The Economist'

3
Office tower plans; left showing possible room widths and right, specimen office layouts

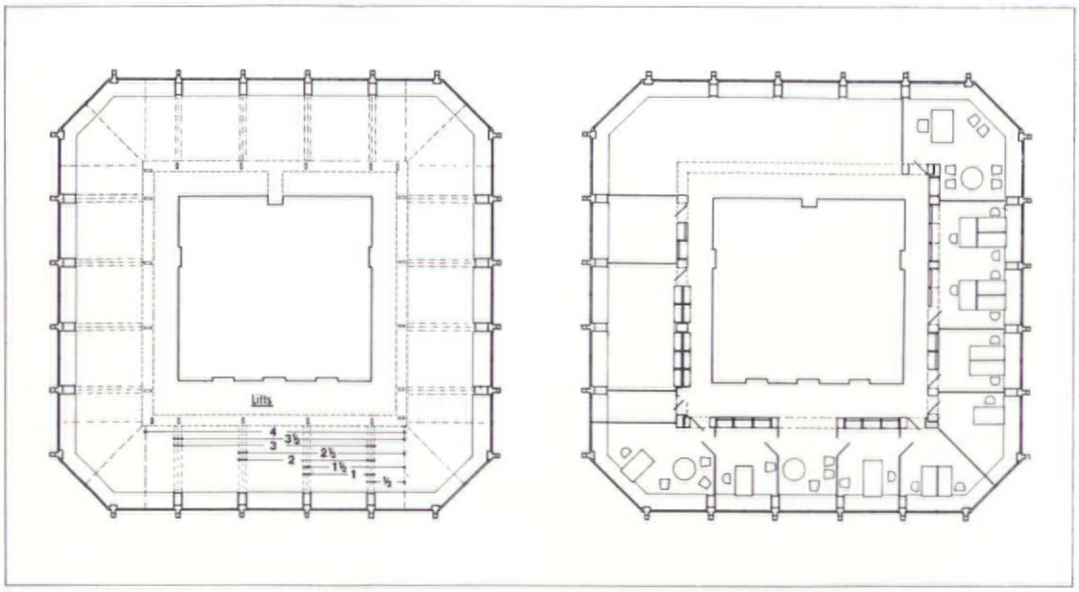
4
Detail of office layouts showing possible filing bank arrangements including corner condition. Dimensions show corridor, filing bank, office depth and working surface width

5
Filing bank components and joint detail

6
Demountable side wall partitioning system

7
Side wall storage

8
Side wall partioning details



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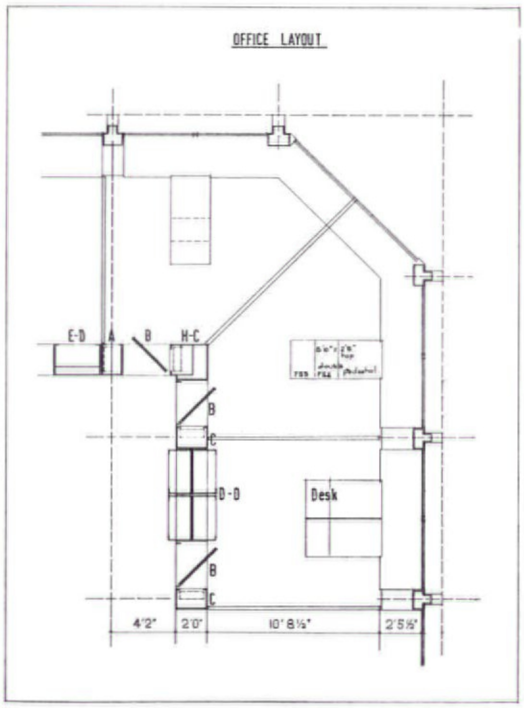

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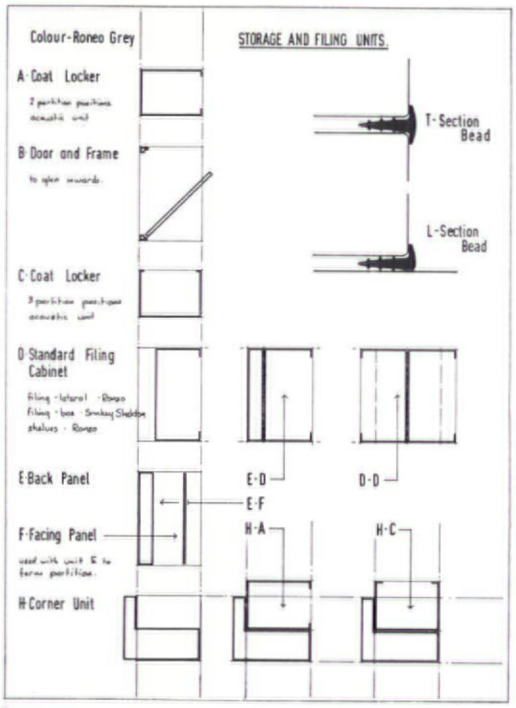

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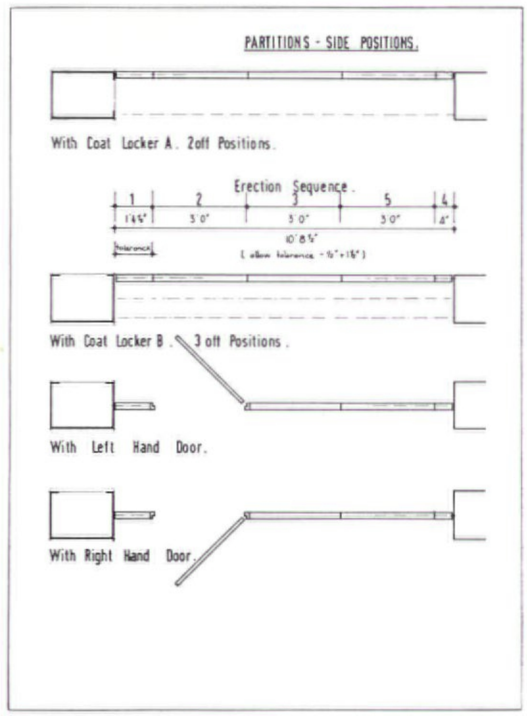

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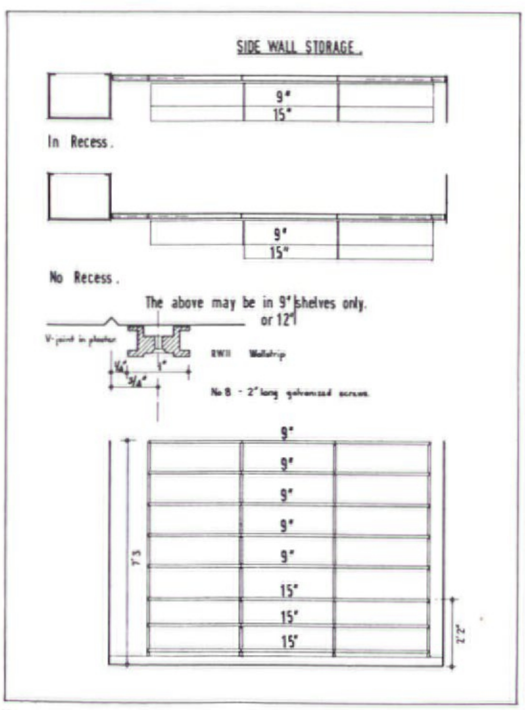

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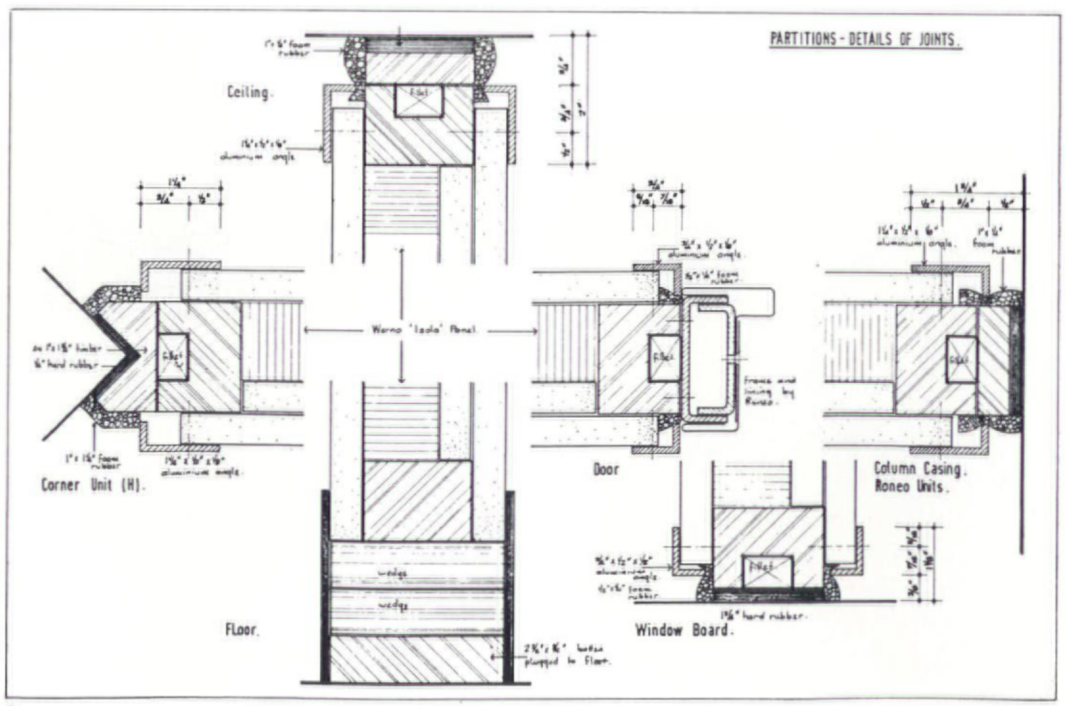

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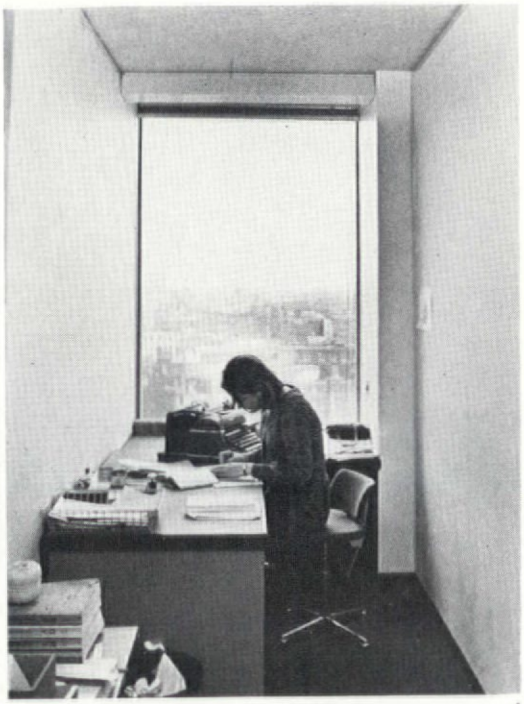

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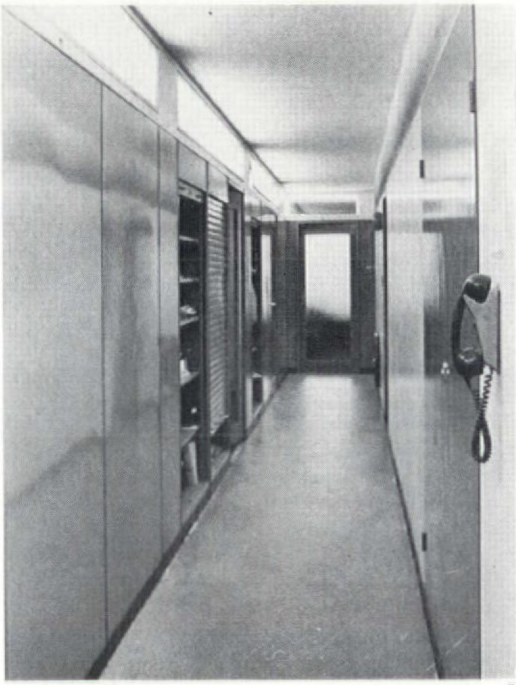

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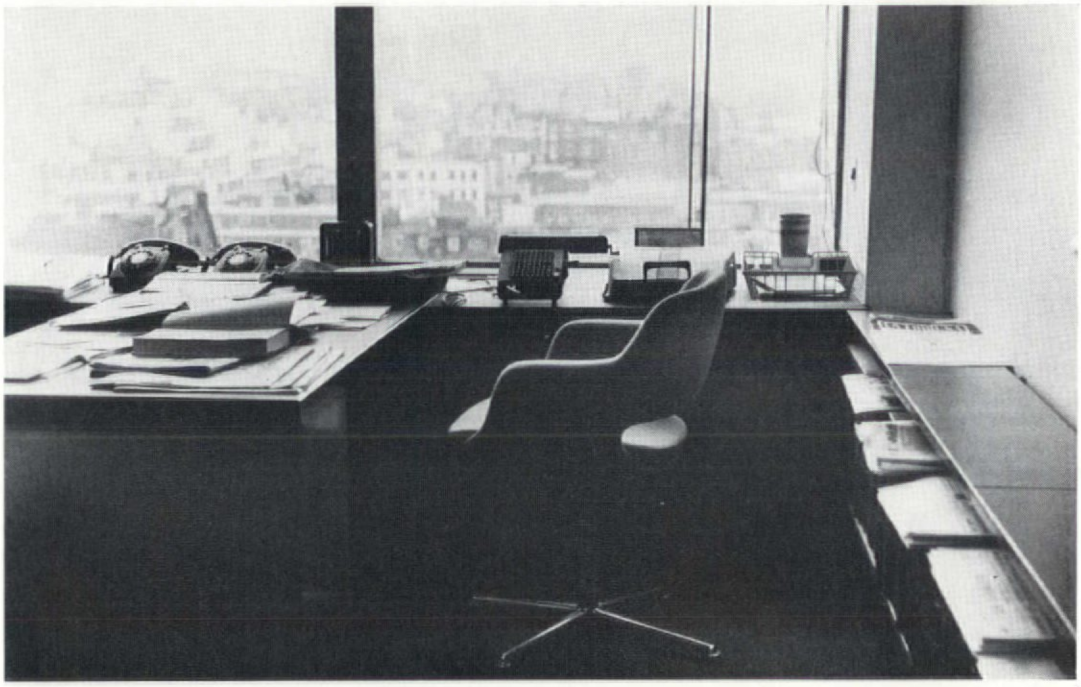

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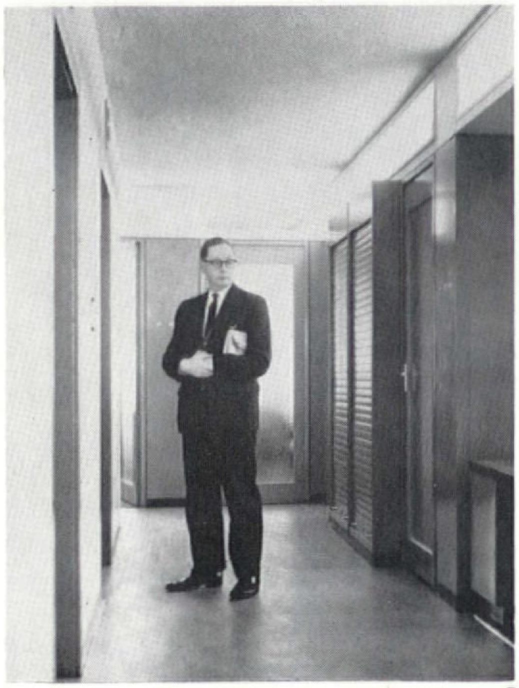

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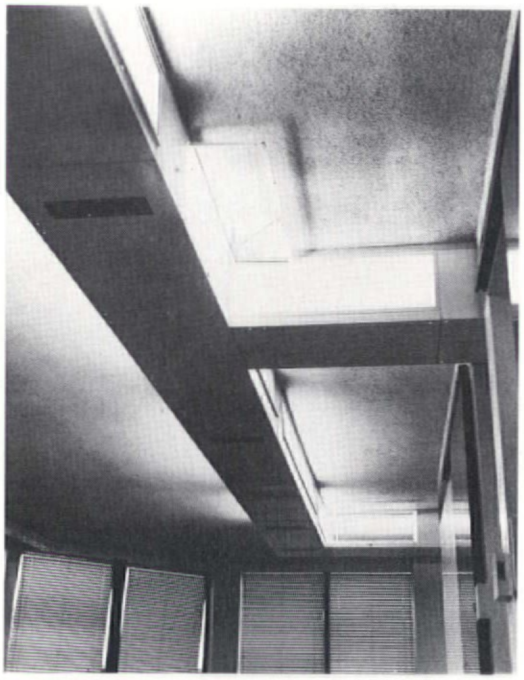
6

Office floor-room sizes to a basic module of 10ft 6in c/c

This table refers to drawing 3 on page 75

No. of units	Room sizes
½	4ft 6½in 5ft 1½in 5ft 8½in
1	9ft 1in 9ft 8in 10ft 3in 10ft 10in 11ft 5in
1½	15ft 0½in 15ft 7½in 16ft 2½in
2	19ft 7in 20ft 2in 20ft 9in 21ft 4in 21ft 11in
2½	25ft 6½in 26ft 1½in 26ft 8½in
3	30ft 1in 30ft 8in 31ft 3in 31ft 10in 32ft 5in
3½	36ft 0½in 36ft 7½in 37ft 2½in
4	42ft 0in



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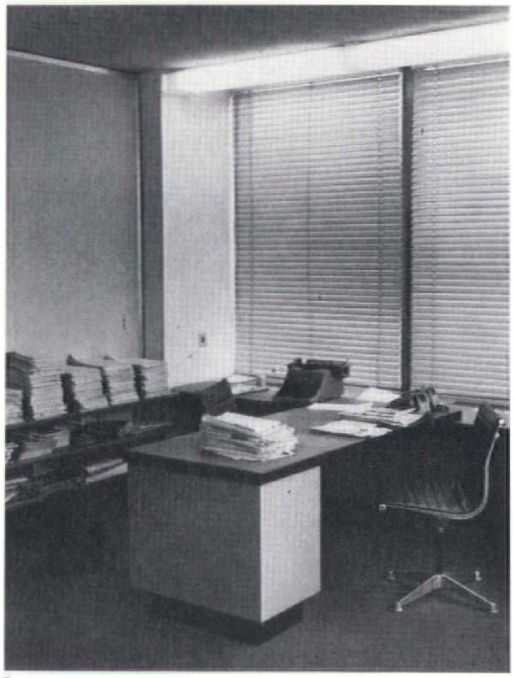

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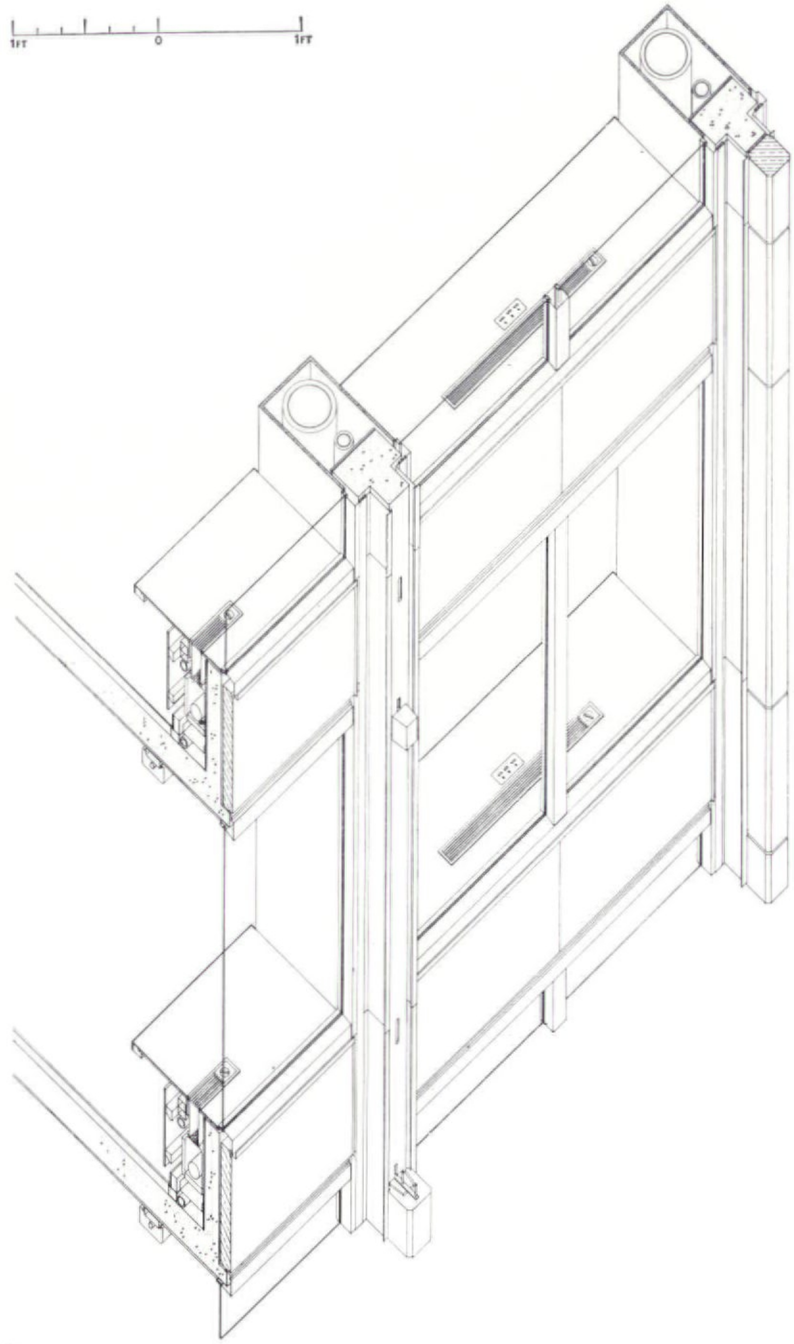

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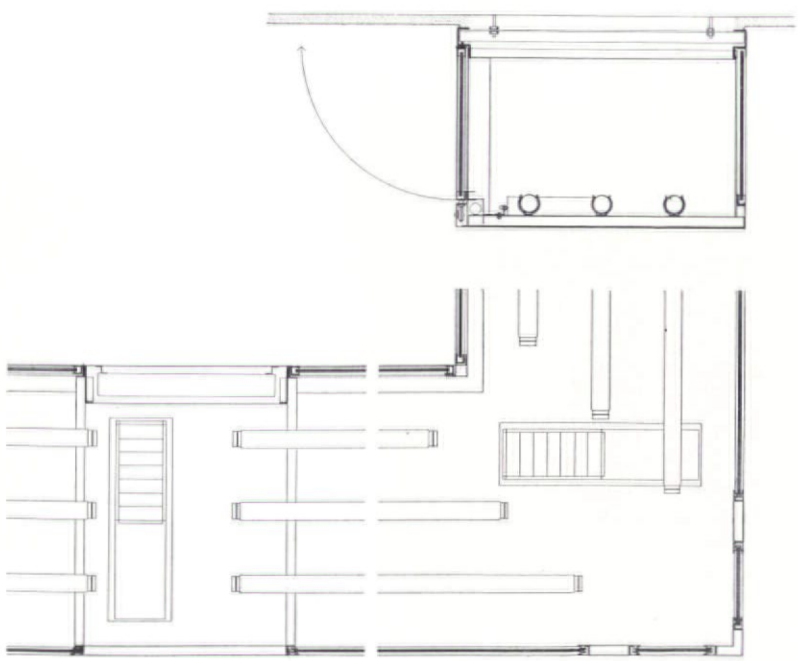

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1
A half bay office

2
A corner office

3
Corridor with single bank filing cabinets

4
Typical office with side wall shelving

5
Corridor in front of lifts with double bank filing cabinets

6
The 'Economist' library with the 'Compactom' system of movable shelving cabinets

7 & 8
Photograph and detail of light vent trunking

9
Typical office with special fluorescent diffusing fitting over window

10
Office tower; axonometric showing perimeter construction

Photos: 1, 2, 3 & 6 Carapetian. 4 & 5 Kasabov

continued from page 74

Cladding system

The space available on this site is small, which suggested that the cladding material should be light coloured so as to reflect light into the courtyard-like spaces between the buildings.

This material also had to be capable of being worked in large units, which could sustain the scale of the building and provide an obviously support-cladding architecture, more or less in the way that the columns and entablatures are applied to the outside of the structural frame of a Roman amphitheatre.

Roach-bed Portland stone was chosen as it fulfils these conditions and an attempt has been made to control the flow of water-borne dirt over the stone by a system of gutters at the cills and down the sides of the columns so that the final weathering pattern over the façades is predictable.

It is hoped that the building, so far as colour is concerned, will eventually resemble Archer's Church, St Paul's, Deptford, that is, with a strong black and white contrast according to orientation (*The Economist* tower has the same orientation as the tower of this church).

On the new Boodles bay window the cladding is of cream painted precast concrete, to pick up the painted stucco on the front of the club.

Structure

The new buildings are all of reinforced concrete flat slab construction on bored pile foundations. All floors and retaining walls below ground are without tanking with 1ft 0in minimum thickness. The foundations around the perimeter of Boodles Club required very careful treatment and were underpinned by means of Fondadile piles.

Above Plaza level the in-situ slabs span from perimeter spandrel beams on to the central core. The perimeter columns were precast in two-storey high units and set out alternately, in order to speed up construction.

Except for the new bay window, which is of similar construction to the towers, the new work in Boodles is of brick, with a concrete wall on the south flank covered by a brick skin. This wall is tied back into the old building to form a retaining wall in place of an adjoining structure.

Roof plant rooms have external walls of 8in load-bearing thermalite blocks tied at the top with a concrete ring beam. They are roofed with 'Siporex' aerated concrete slabs.

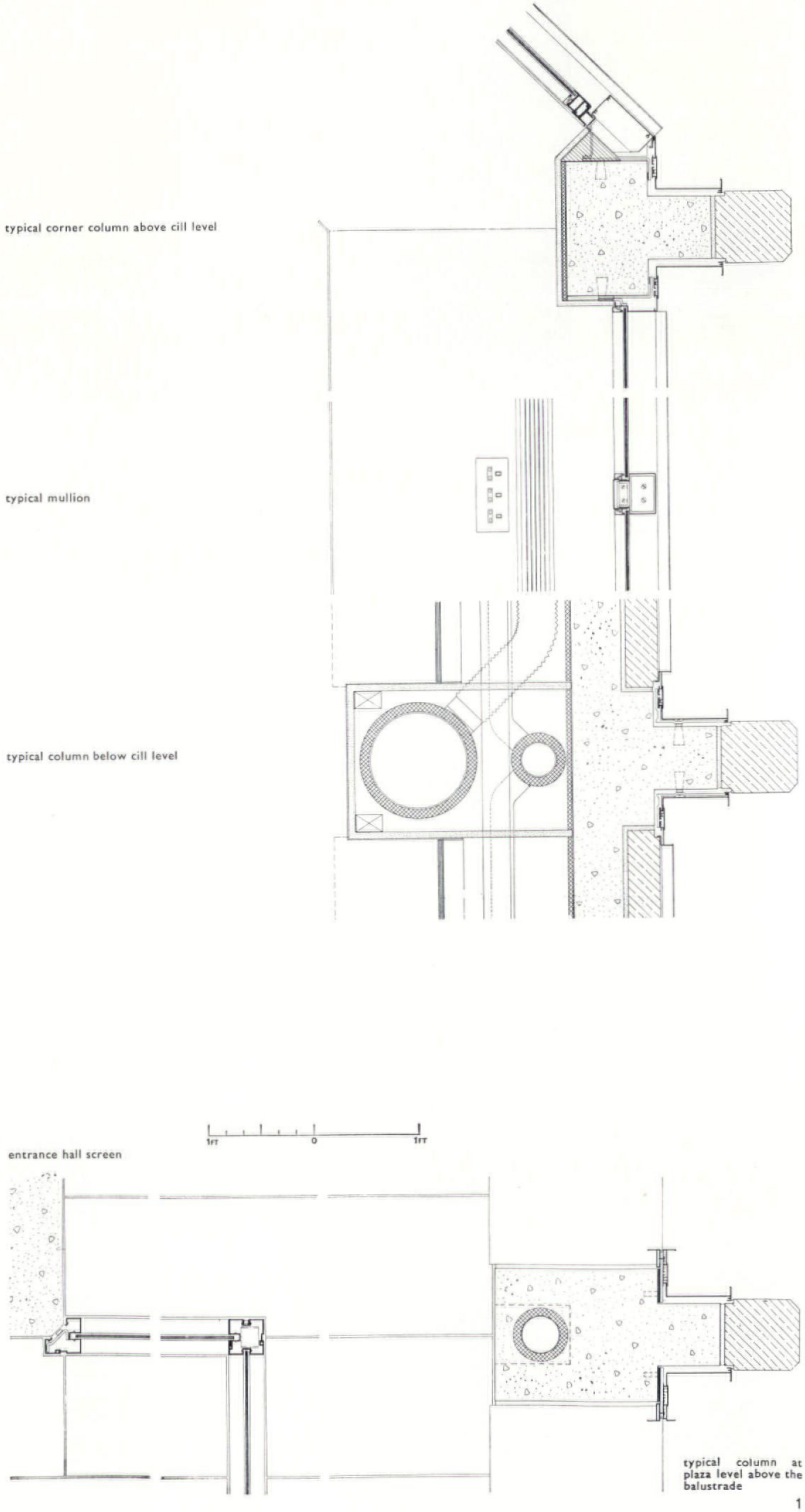
Perimeter construction

The three new buildings are all clad with roach-bed Portland stone with grey stove enamelled, extruded aluminium trim and windows. The stone is fixed onto nibs on the concrete and held back by 'Abbey' anchor cramps. The concrete behind the stone is painted with a rubberized sealer to form a waterproof membrane. The aluminium trim covers all junctions between stone and concrete.

On the new Boodles bay window cladding is of cream-painted precast concrete panels. The aluminium trim and windows are also stove-enamelled cream.

On the air-conditioned tower and Bank Building all the windows are glazed direct to the aluminium trim, except for those on the corners, which have top hung opening lights in steel frames. On the residential building and Boodles bay, however, there are top hung aluminium windows and sliding sashes respectively. The

1
Economist tower; $\frac{1}{16}$ FS plans of perimeter construction



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aluminium is fixed by galvanized steel brackets bolted to the reinforced concrete and there are cast aluminium junction pieces between units.

The entrance hall screens are of stove-enamelled aluminium sections with a steel core. All external doors are glazed in anodized aluminium frames, including the revolving doors to the tower, which are in solid anodized aluminium shields, on a steel and wood framework.

Plant rooms are rendered and painted. The rendering is broken up into panels by stone mullions at 5ft 3in centres.

The Plaza paving is of 3in thick reconstructed Portland stone slabs, in ½in bedding, over ¾in asphalt and screed laid to falls. All steps and special stones by the entrances are of natural stone.

Internally all outside walls and columns are insulated by ½in expanded polystyrene sheet. In the offices there is a timber window board, covered with linoleum and with an edge trim of hard plastic. Below this is the air-conditioning induction unit and a two-tier ring duct housing electrical power and telephones. The front access panel is of painted ½in plywood.

The vertical air-conditioning ducts and water pipes are housed behind the columns in fibrous plaster casings. At Plaza level the water pipes, which come up from the boiler house, are recessed into the enlarged columns.

The perimeter fluorescent light above is purpose made and has a moulded plastic diffuser hung on a pressed steel tray.

Internal construction

All permanent walls are either of high-density concrete block, in positions where sound insulation is important (i.e. for separation between the rooms of the residential building), or of Thermalite lightweight concrete blocks, where a high level of fire resistance was required (i.e. in the core of the office tower). In all instances these walls have been plastered and finished with a flush 3in Keenes cement skirting divided from the walls by a steel square-nosed bead. Steel beads are also used on all junctions with door frames, etc., and on arrises.

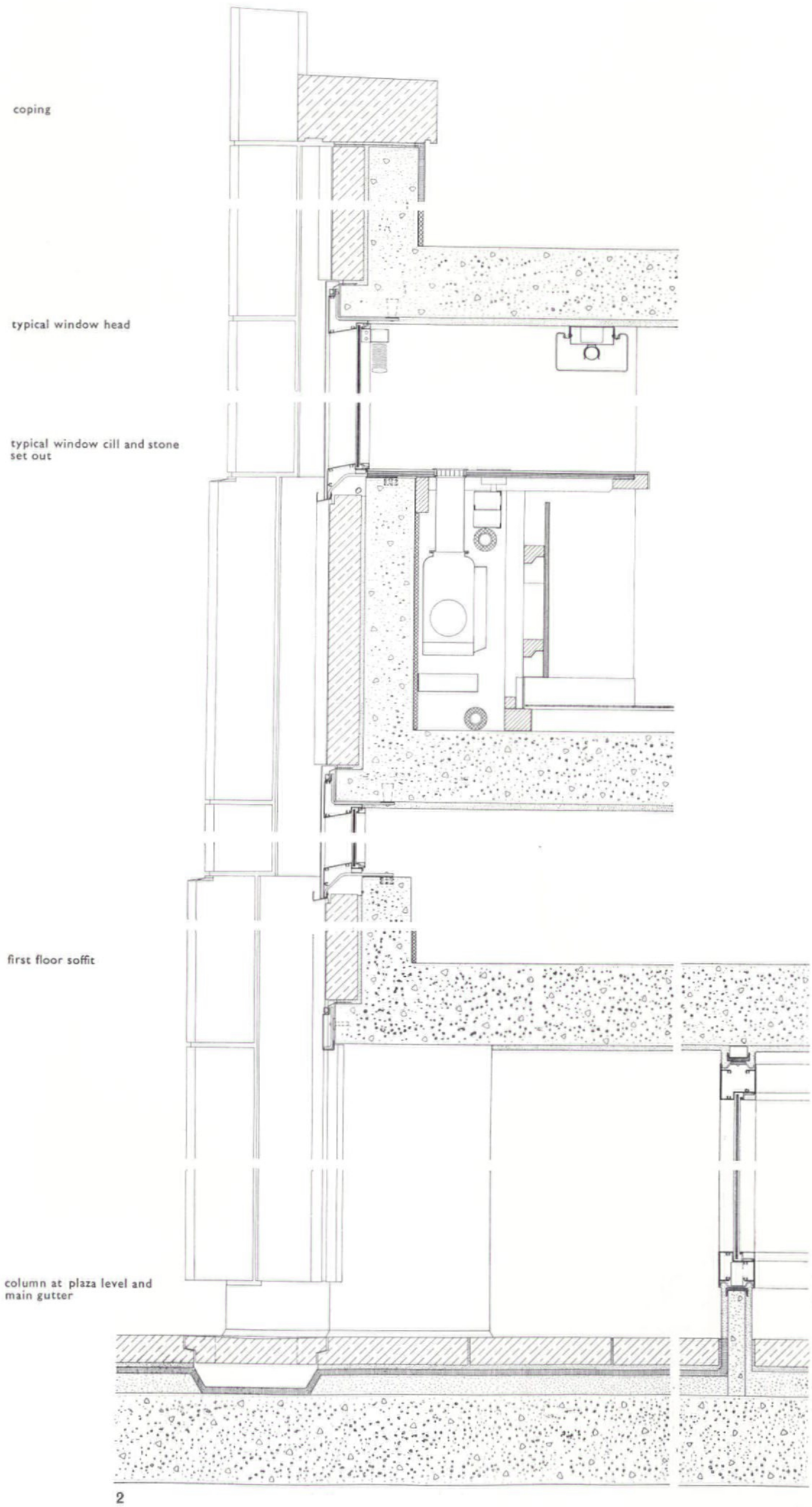
In *The Economist* tower walls, above 7ft 3½in—door frame height—and ceilings are covered in Thistle acoustic plaster left unpainted.

In the tower all flooring in the core is light grey terrazzo. The other buildings have terrazzo in all lavatories and bathrooms, but granolithic screed in other service areas.

In all offices where impact noise needs to be reduced there is either carpet or foam-backed PVC flooring.

continued on page 82

2
Economist tower: $\frac{1}{16}$ FS section showing perimeter construction



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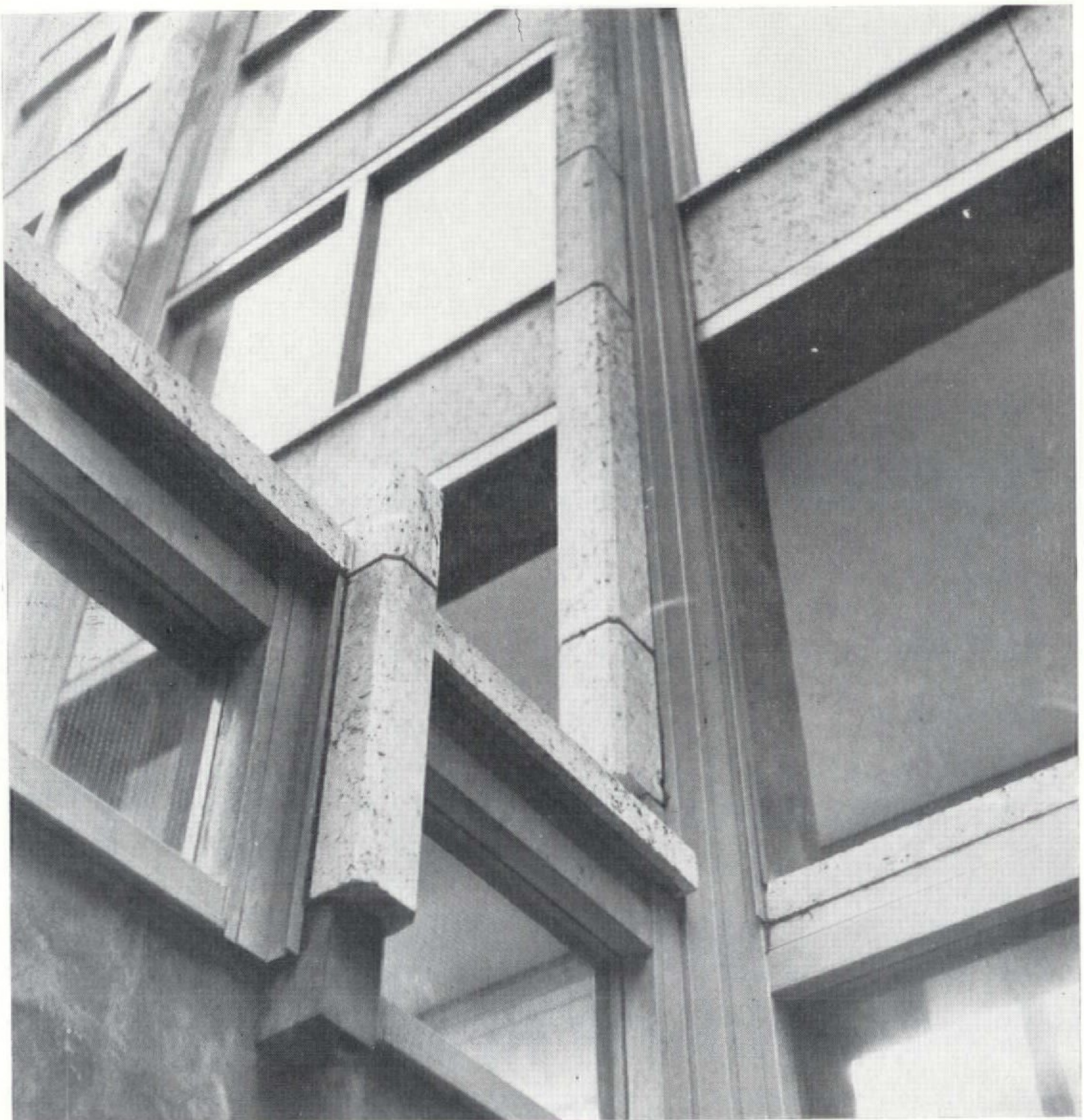

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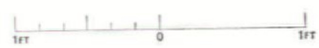
1
Detail of junction between balustrade over the garage entry and column of tower

2
Detail of Bury Street plaza balustrading

Photos: 1 Kasabov. 2 Snoek



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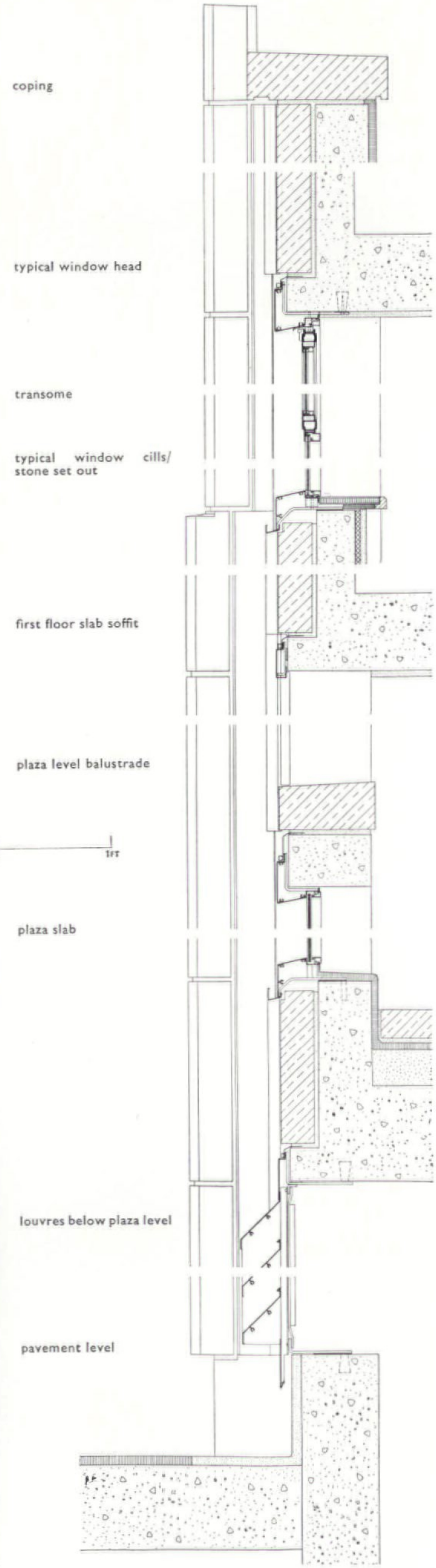
3
Residential Building. $\frac{1}{16}$ FS section perimeter construction.

4
Boodles Club. $\frac{1}{16}$ FS detail of perimeter construction to new bay window.



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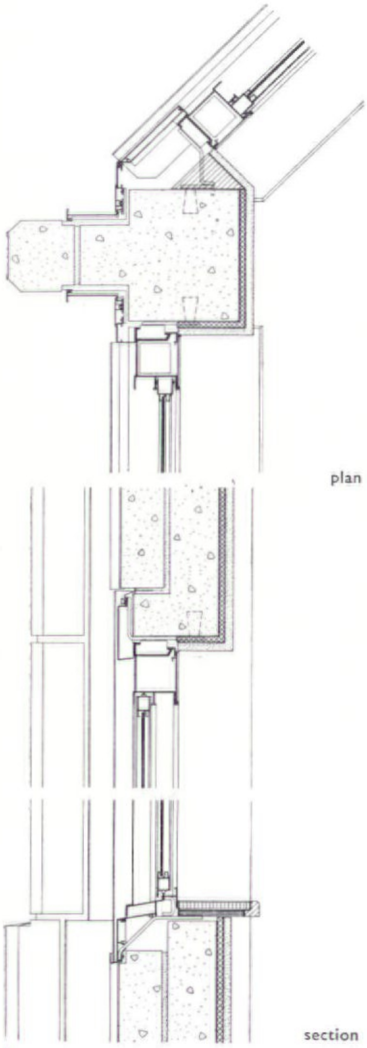

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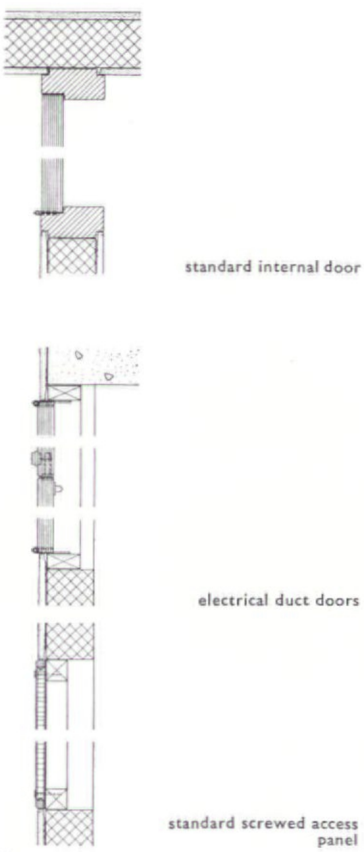

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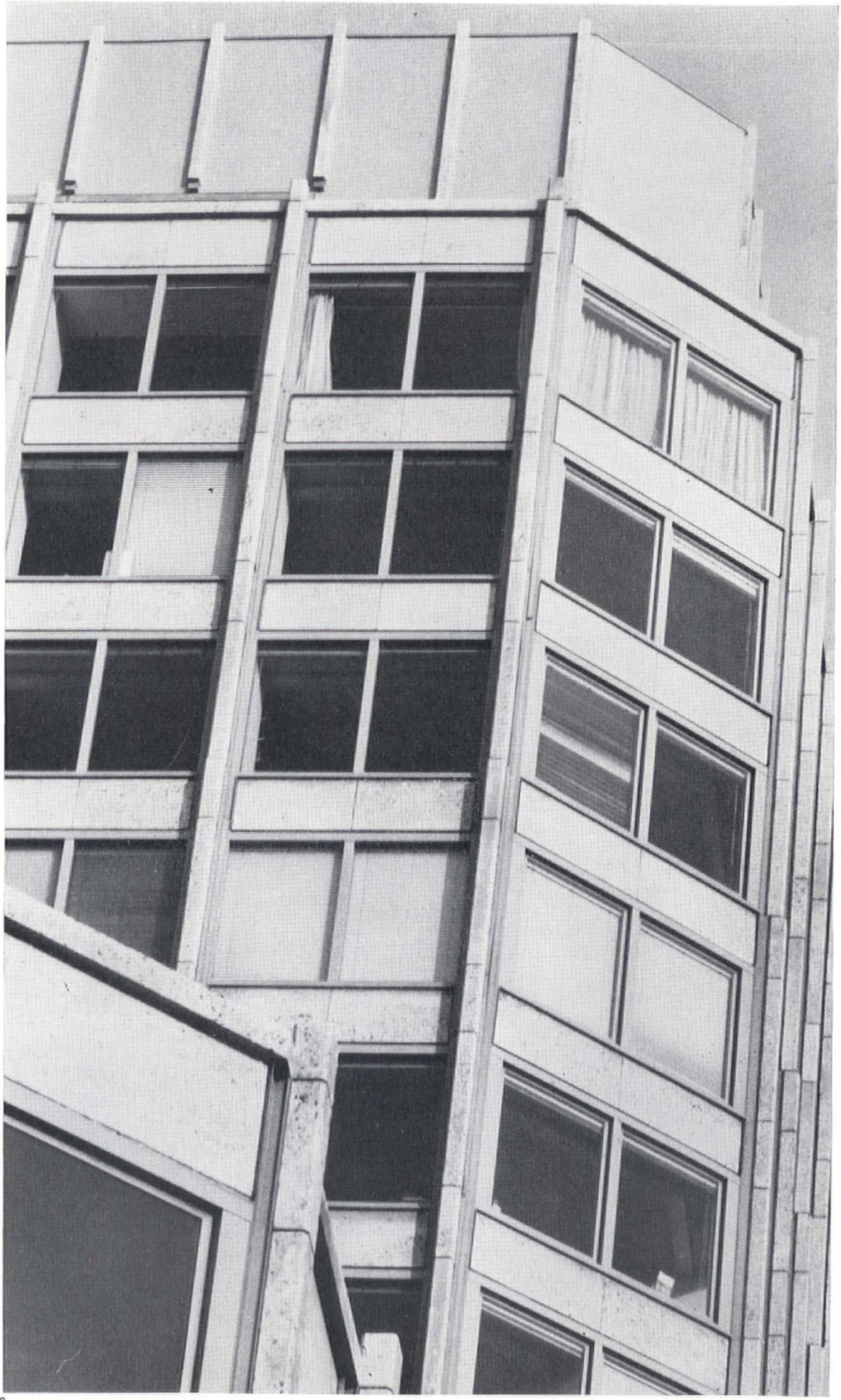
5
4 FS typical internal details
6
Detail of tower skin and roof superstructure
Photo: Carapetian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continued from page 79

Heating, ventilation, cooling

Economist tower and Bank building

Both these buildings are served by a single boiler room, below the tower, which houses the two oil-fired heating boilers (5,750,000 BTU/hr each), one HWS boiler (1,500,000 BTU/hr) and two refrigeration compressors (125 tons capacity each). The latter are connected to the cooling tower on the roof.

The air-conditioning plants are separate and sited on the roof of each building. *The Economist* tower, in addition to the plant serving the 1–13th floor offices, has an independent plant serving only the 14th floor residential suite. The system is designed to provide a temperature of 68°F (50 per cent RH) in winter and 75°F (35 per cent RH) in summer.

Air is drawn in at roof level, filtered, brought to the right degree of humidity and temperature and distributed to each of three zones (NE and NW faces, SW face and SE face).

From here air is ducted down the inside of the perimeter columns and discharged through 'Velovent' induction units under each window. This air is always a little hotter than is needed to maintain room temperature and it is mixed with cool air, induced from the room through cooler batteries in the units, to produce the temperature that each individual requires. The supply of chilled water for the cooler batteries is controlled manually at each unit and is piped up the columns, next to the air droppers, from the boiler house. At night, when the air is turned off, hot water is pumped through these pipes so that the Velovent units act as ordinary convectors.

In the banking hall the Velovents are in the ceiling and discharge through diffuser grilles.

Air is extracted from the offices through the light/vent trunking which connects to the vertical extract in the core. Twenty-five per cent of the air is re-circulated through the whole system.

Control is by external thermostats, located in each zone, to compensate for the heating or cooling effect due to direction of wind and sun. All the controls are pneumatic, which are both cheaper to install and easier to maintain than the conventional electric ones.

The residential building and Boodles Club

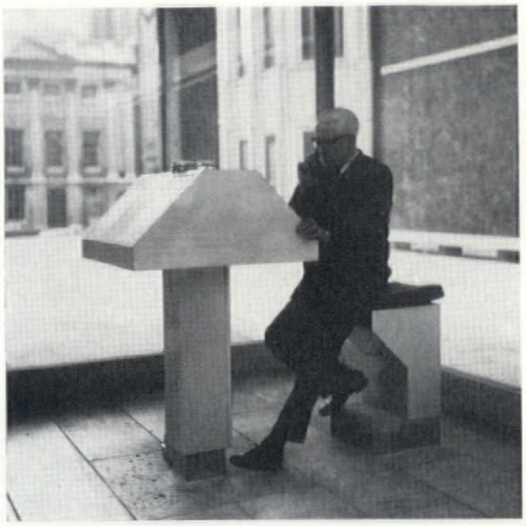
These buildings have been provided with a separate boiler house for ownership reasons. This house accomodates two heating boilers of 1,642,000 BTU/hr capacity each and one HWS boiler of 1,302,000 BTU/hr capacity. An accelerator fan is fitted at roof level so that the flue gases discharge at 100 fpm, in order to counteract any down-draught caused by the tower.

Heating is by means of radiators and there is natural ventilation except for the internal bathrooms in the residential building.

Plaza and below

The tower entrance hall is heated by six recirculator units mounted on the ceiling in a special pressed metal housing, designed in conjunction with the lights.

The restaurants, bars, etc., below are mechanically ventilated through plant rooms at Plaza level, where the air is filtered, heated or cooled and then discharged at high level in these rooms. The air is extracted up to the top of the tower and residential blocks, through the cores of these buildings, in order to dissipate all foul air at high level. The extract from Boodles'



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kitchens is also discharged from the roof of the residential block for the same reason.
The tower boiler room has a mechanical supply system to provide adequate air for combustion and the garage a mechanical extract with natural supply.

Lifts

In *The Economist* tower there is a bank of three gearless high-speed lifts and a single fireman's lift. The former operate at a speed of 500 fpm, serving 16 floors. They are operated on four separate programmes (balanced up and down working, up peak working, down peak working and intermittent working) depending on the time of day. Cars are finished in grey Formica panels with stainless steel faceplates and white stove enamelled roof. (This is the standard finish for all lifts.) The latter is a geared lift, operating at 300 fpm and serving 17 floors. It is operated on a simplex collective system and there is a firemans' call switch at street level.
The residential block has a geared lift operated at 200 fpm and serving nine floors. The control is simplex collective.
The Bank building has two geared lifts operated at 100 fpm with automatic push-button control. There are also two 'unit construction' escalators, 32in wide running at 100 fpm with an angle of inclination of 35°. These were brought to site already assembled, and installed in approximately seven days. They are finished in aluminium with white plastic laminate side panels.

Window cleaning cradles

On the tower there is a power-operated cradle running on the roof of the plant room. The two-man gondola is entered on this roof and then swings out over the side of the building. The arms of the cradle are fully retractable.
The Bank and residential buildings each have a manually operated cradle, fixed at parapet level. There is one gondola which is shared between them and connected to the hangers at street level.
continued on page 84

1, 2 & 3
Tower entrance hall

1
Porter's console and seat

2
Revolving doors to Bury Street

3
Main plaza entrance and lifts

4
Interior of 'Economist' art department

5
Light fitting and ceiling heating unit to tower entrance hall

6
Wash hand basin, soap dispenser and special mixing tap designed by the architects

7
Interior of tower staircase

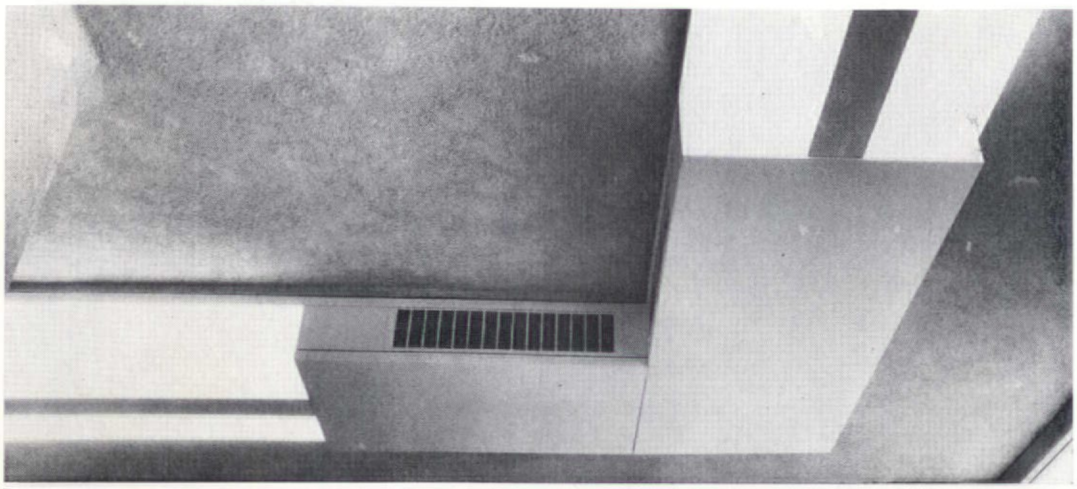
8
Back of core accomodating from left to right, cleaners' cupboard, recess for automatic appliance, and wash up sink. The trunking returns into the main vertical extract in the core

9
Core wall, hose reel and fire alarm

10
Residential building, internal corridor to Boodles bedrooms

11
Tower 14th floor, double height reception room with stair to gallery

Photos: 1, 6, 8 & 10 Kasabov. 2, 4, 5, 7, 9 & 11 Carapetian. 3 Brecht-Einzig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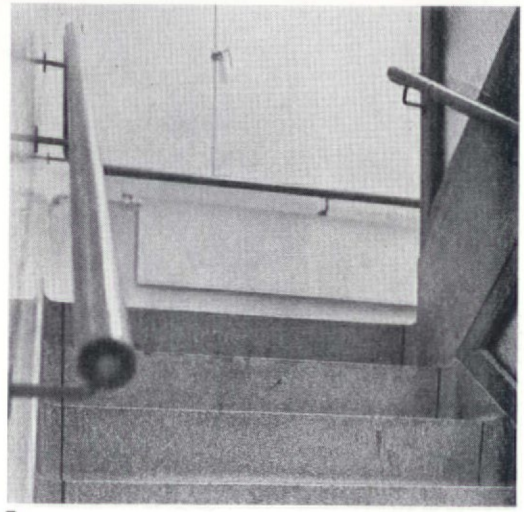
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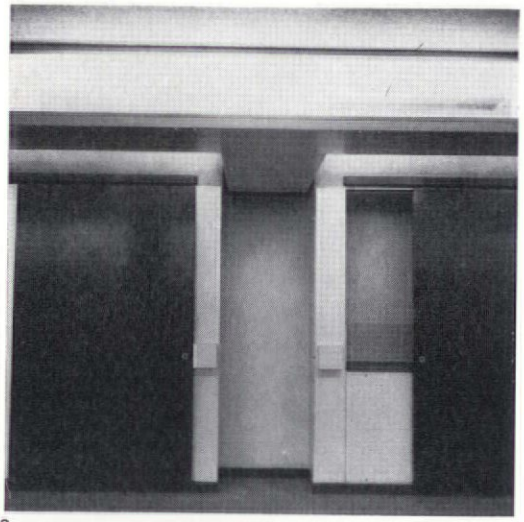
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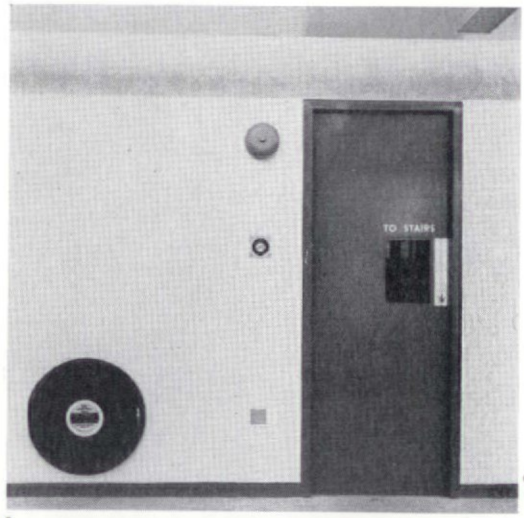
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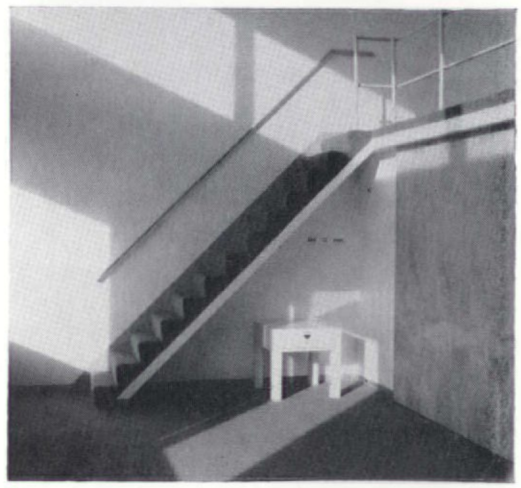
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continued from page 83

The Banking Hall, 25 St James's

From the street level entrance hall, escalators rise into the public space—the area around the central core, contained by a horseshoe of counters. Behind these counters is a large open space for the staff, planned freely to accommodate future expansion or change of work methods.

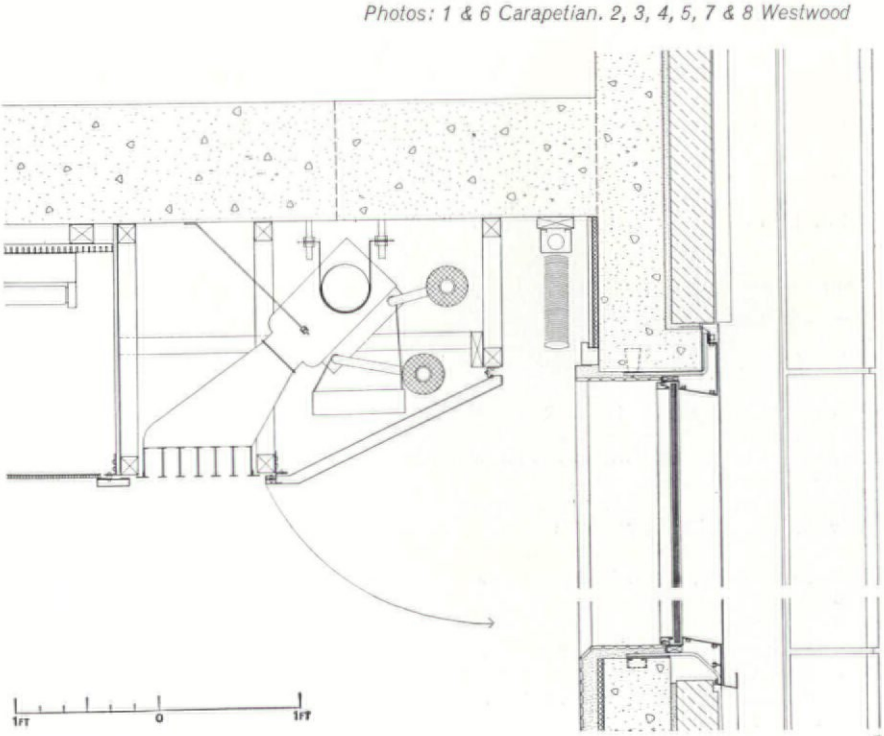
The dark walnut counters have 4ft 8in high screens which hide the inevitable mess of papers at desk level, while allowing a full view to the outside of the building.

Beginning at the top of the 'up' escalator, the counter has provision for five cashiers, writing desk positions, an interview room, an enquiries counter and, finally, a 'conference' counter for six persons. The latter is for the 'foreign and securities' business, which forms a large part of the work at this branch. As this sort of business usually takes some time, the counters are designed for sitting down and relative privacy has been achieved by means of a system of folding screens, which either form 3ft 6in wide carells, or are shut so that the clerks can work behind undisturbed, while the outside is used as a writing desk.

The columns and walls are covered in off-white glass mosaic trimmed with an ochre band.

In order that the banking hall could be appreciated as a single volume, the ceiling has been designed as a homogeneous surface, stretching all around the central core. It consists of two elements:

1
View of the bank building from the tower; banking hall, bank offices, and lettable office space over
2
Banking hall: $\frac{1}{16}$ FS section through illuminated ceiling perimeter and typical window cill detail
3
Banking hall counter
4
Bank entrance hall
5
Banking hall behind the counter
6
Bank counter. The counter is equipped with folding screens which form into carells
7
Night view of bank
8
The bank manager's office
Photos: 1 & 6 Carapetian. 2, 3, 4, 5, 7 & 8 Westwood



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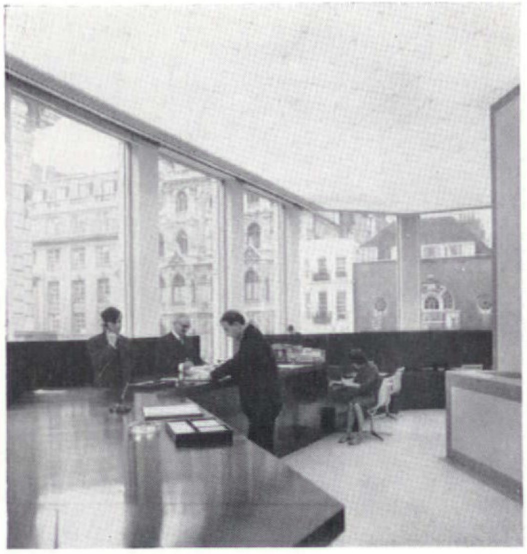
1. A perimeter air-conditioning ring which houses standard 'Velovent' units inside white pressed metal casings (outside this there are electrically-operated venetian blinds on S.E. and S.W. faces).

2. An illuminated ceiling which is made up of 2ft 0in square panels suspended by hangers at each corner. A fine eggcrate panel system allows noise to pass through it and be absorbed in acoustic tiles above. However, no eggcrate has a sufficient cut-off angle to conceal the fluorescent lights when looked at from the street below. So a thin plastic diffuser has been placed over the panels. This is made of Melanex sheet 0·002in thick (usually used as draughting film) which is sufficiently fine to allow sound to pass through it. Each sheet is fixed by small magnets which contact onto steel grub screws set into the corners of the eggcrate.



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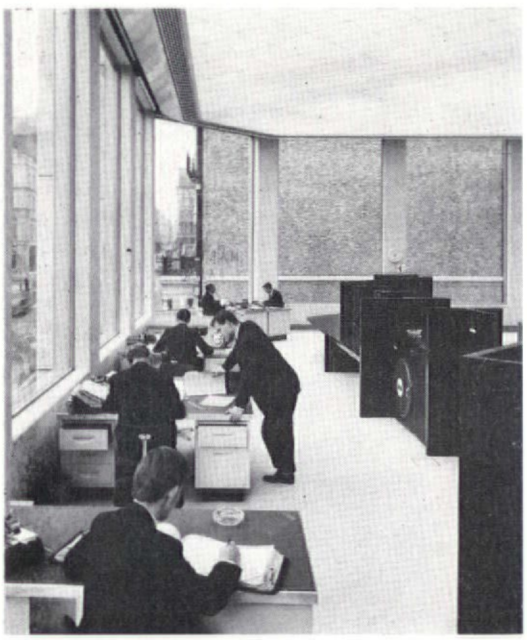

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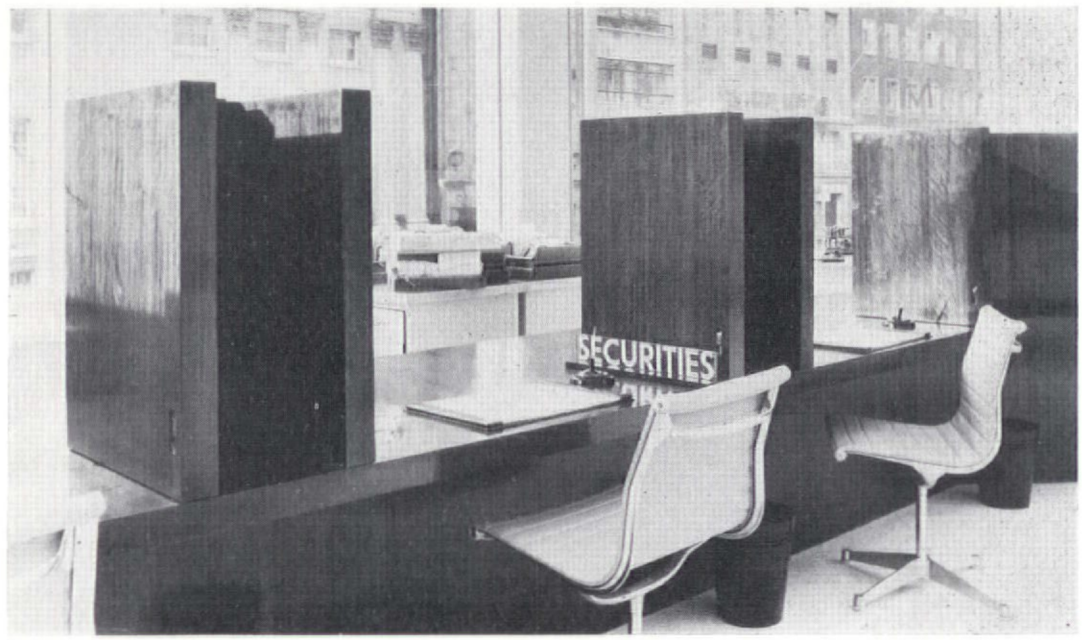

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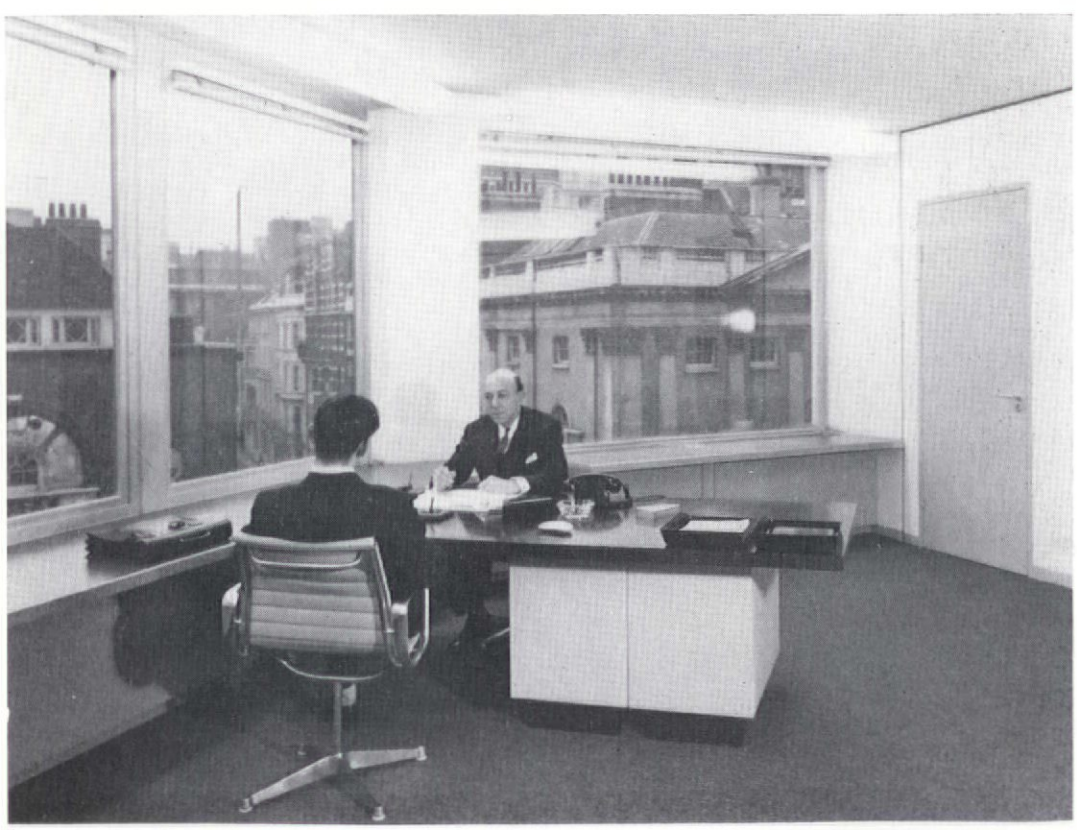

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Noise reduction in The Economist building

Report prepared for the architects by A. G. Aldersey-Williams (of Associated Architects & Consultants)

It is not the purpose of this note to give even an outline of the properties of sound, but as there is so much confusion on this matter, it is necessary to describe very briefly the terms and units used below. Every sound—or noise—has two variables: one is the intensity and the other is its frequency distribution. These two variables are of equal importance, so that no single-number description of a sound is adequate. The unit of sound intensity level is the decibel (dB), and the intensity level of a sound in dB

$$= 10 \log \times \frac{\text{actual sound intensity}}{\text{reference sound intensity}}$$

As this unit is logarithmic, it will be seen that two sounds of equal intensity added together do not give a total level equal to the sum of the two intensities—the total sound level is only 3 dB (10 log 2) higher than the intensity of one sound. Thus in controlling noise, there is no purpose in reducing one component of the total noise to a value much lower than any other component. The average audible frequency range is from 20–20,000 cycles per second (cps), so that theoretically to describe a sound fully it is necessary to know the intensity in dB at every frequency. However, for noise control purposes, it is sufficiently accurate to divide the frequency range into eight octave bands and to give the decibel level in each of these bands. The limits of the octave bands are 20–75, 75–150, 150–300, 300–600, 600–1200, 1200–2400, 2400–4800, 4800–10,000 cps. The frequencies above 10,000 cycles are generally omitted since with the noise sources encountered in buildings they are unimportant. There are also practical difficulties with measuring these frequencies.

Commonly, there is also confusion between the variability of sound that can be measured by instruments and those that are assessed subjectively. Noise, which is generally defined as unwanted sound, is itself a subjective term. The other subjective term used below is loudness, which is not exactly the same as intensity since it also depends on the frequency distribution of the sound.

Thus a minimum description of any sound—or any sound reduction value—is an intensity or noise reduction value, both measured in dB in each octave band.

Criteria

Since there is no reliable evidence to show that noise directly affects the working efficiency of people in offices, the accepted criteria for maximum noise levels are based on the amount of interference with speech communication that can be tolerated. This is obviously a measure of the indirect effect of noise on efficiency, and it has also been found a reasonable assessment of the annoyance the noise will cause. Any sound, to be clearly audible, must stand out above the levels of the ambient sound—the background noise—in the same frequency range. The frequency range covered in normal speech is between 200 and 7000 cps, but the frequencies that contribute most to intelligibility are in the 600–1200, 1200–2400 and 2400–4800 cps bands, so that noise in this frequency range will cause the most interference with speech. In fact, the average of the decibel levels in these three octave bands (called the speech interference level—SIL) can be used as a measure of the intelligibility of speech over a given distance. For example:

SIL	Distance for word intelligibility at normal voice level	Subjective noise rating for private offices
25 dB	80ft	Very quiet
35 dB	27ft	Quiet
45 dB	9ft	Moderately noisy
55 dB	3ft	Noisy

On this basis, the SIL chosen for *The Economist* offices is 35 dB.

At frequencies above and below the SIL limits, the maximum desirable levels are determined on a basis of equal loudness and annoyance. Since the ear is not as sensitive at low frequencies, this permits a progressively higher intensity as the frequency becomes lower, but if no part of the background noise is to stand out objectionably, the increase must be gradual. The resultant level in all octave bands is known as the noise criterion (NC), and for NC 35 the intensity levels are (dB in octave bands):

20–75	75–150	150–300	300–600	cps
63	55	47	41	dB
600–1200	1200–2400	2400–4800	4800–10,000	cps
37	35	33	32	dB

The background noise level should also be continuous if it is not to cause annoyance, and for this and other reasons given below, the background level should not be permitted to drop below NC 30, the intensity levels for which are:

20–75	75–150	150–300	300–600	cps
60	51	43	37	dB
600–1200	1200–2400	2400–4800	4800–10,000	cps
32	30	28	27	dB

Partitions

The minimum noise reduction function of partitions between private offices is to insure that conversation should not be intelligible in the adjacent room. This does not mean to say that the conversation will be inaudible in the adjacent room; this is a far stricter requirement, which, although it may be desirable, cannot be obtained with partitions that can be easily moved. The requirement of speech privacy is the converse of speech intelligibility described above. In this case the noise reduction through the wall and the background level in the receiving room combine to form a 'speech interference level' which must be sufficiently high for nil or negligible intelligibility.

The partition construction recommended for *The Economist* building is adequate to meet this requirement for a background SIL of 35 dB, but if the level of background noise drops below a SIL of 30 dB, the partitions will not give acceptable privacy.

Air conditioning noise

The source of air conditioning noise is primarily the fans, but the noise caused by air flow through grilles and jets may also be objectionable if the velocities are high. In a building with sealed windows, the air conditioning system must obviously be operating the whole time the building is in use. Thus the noise from it should provide the continuous background level that is required. This continuous air conditioning background noise, which generally has a frequency distribution reasonably close to that of the noise criteria, is the reason why air conditioned office buildings are acoustically more satisfactory than naturally ventilated ones. The average noise level over a day may not in fact be any quieter in the air-conditioned building, but because it is continuous it appears quieter. This effect is similar to raising the threshold of hearing or to a uniform degree of deafness in the occupants of the offices, so that all other noises must be that much louder before they are as noticeable.

However, it is likely that in certain parts of the building the noise from the air-conditioning system will require quietening to bring it down to the maximum criterion levels. Equally, it is important that this noise should not be permitted to fall below the minimum NC 30 levels.

External noise

The other major noise source that may contribute to the general background noise level is traffic in nearby streets. With normal construction this enters a building mostly through the windows, even if they are sealed and double-glazed. Reduction of the noise in passing through the glass depends on its thickness and, in the case of double glazing, on the width of the air space. The reduction also depends to a large extent on the effectiveness of the seal—so much so that well-sealed single glazing may have more reduction than an indifferently sealed double window.

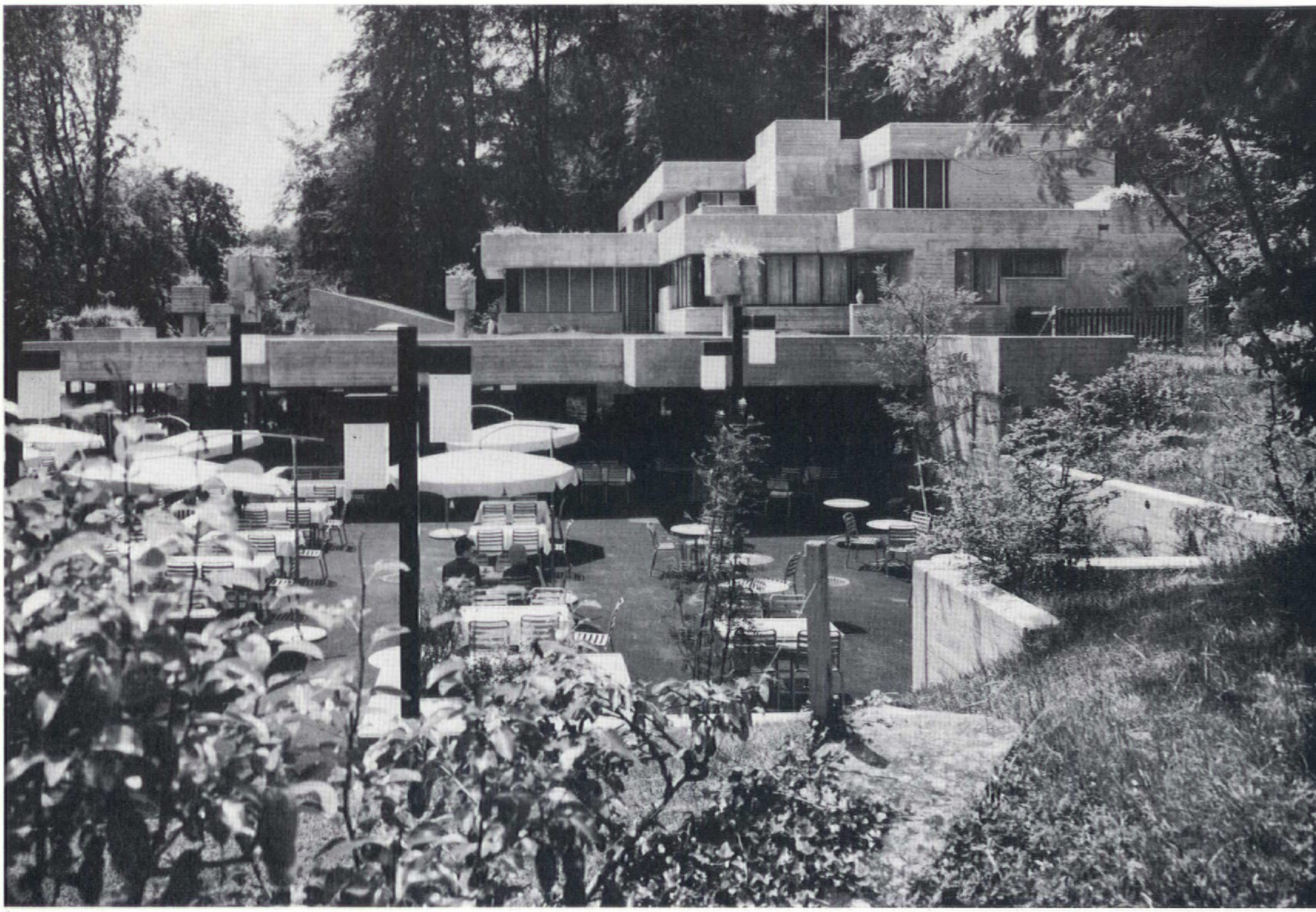
Traffic noise, although more or less continuous, fluctuates in level, particularly in one-way streets. Furthermore, superimposed on this general fluctuation there is at times a peak level caused by a particularly noisy vehicle, horns, etc., which in addition to raising the level temporarily may also alter the frequency distribution of the noise appreciably. The levels of traffic noise are therefore difficult to assess. Should the peak values be taken, the average value, or the levels that are exceeded for only 10 per cent of the time? In the cases that follow, this last noise level, based on a calculated value for the peak vehicle flow in St James's Street, has been used. This is a little above measured values obtained in Pall Mall by Marlborough Gate.

With the double glazing that was originally proposed, the traffic noise in the offices would have been well below the minimum background level given earlier, but nevertheless some of the peak noise levels would probably have been noticeable.

With single glazing of $\frac{1}{4}$in glass, the calculated traffic noise levels are a little below the background level and will not therefore contribute to the total unless the air-conditioning noise is below the minimum level. Rather more of the peak levels will of course be noticeable, but these are of too short a duration to have any effect on the background level. The main reason why the noise conditions in the building are no worse with single glazing is the distance of the building from the traffic noise.

This report served as a basis for the design in *The Economist* tower and similar criteria were applied to the other buildings.

All details of the air-conditioning, the partitions, etc., were checked to ensure that the level of insulation against air-borne noise was achieved. Structure-borne noise was eliminated at source. Thus all vibrating machinery, such as pumps fans, etc., have been isolated on flexible rubber mountings or, as in the case of the lift motors and vent plant, they have been placed on floating floors over fibreglass. The lifts, in particular, received detailed attention. In the tower the guides were mounted so as to allow $\frac{1}{32}$in movement in all directions and this has reduced any rumble to well below the ambient noise level. In the residential building, where the lift is next to the bedrooms, the guides have been rigidly fixed to a steel cage, running the full height of the shaft, which is itself isolated from the structure by rubber mounts to allow $\frac{1}{4}$in movement in all directions.



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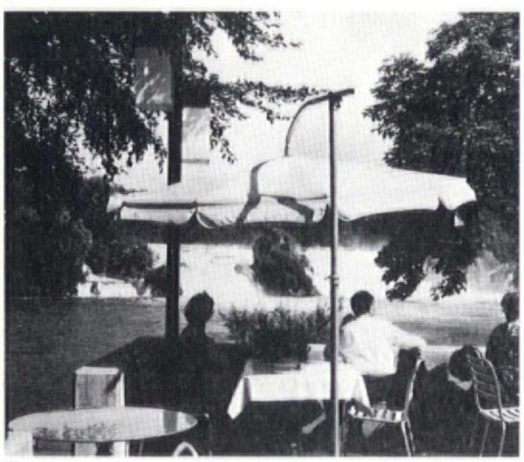


2

Restaurant, Neuhausen, Switzerland

Forderer & Zwimpfer

1
General view of the restaurant

2
View of the Rhine falls from the restaurant terrace

3
Section through the restaurant

All photographs are by Brecht-Einzig

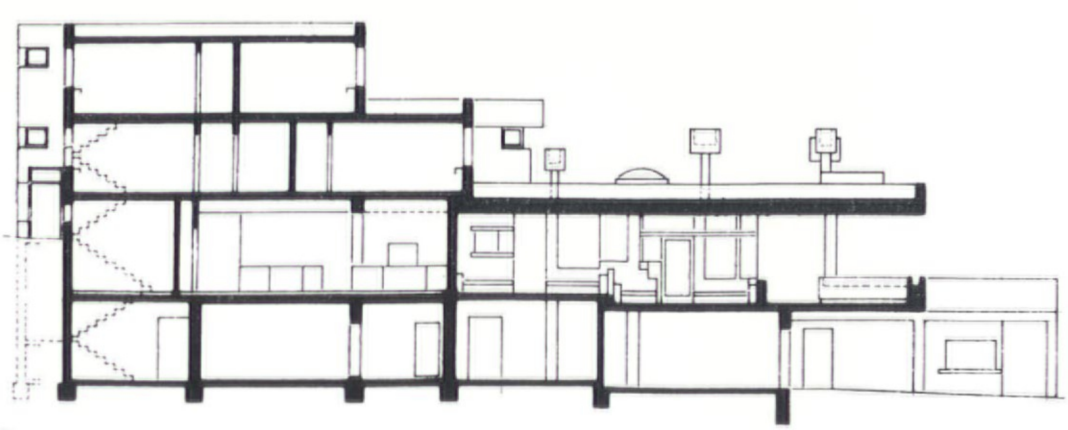
This restaurant has been built adjacent to the Rhinefalls at Neuhausen, Switzerland. The restaurant seats 150 within the structure and 200 on the garden terraces outside. The building is planned on four levels on a sloping site gently falling south-east towards the main road and the falls beyond.

The lower ground floor below the restaurant accommodates garages and a kiosk for public use, as well as the main restaurant, and lavatories, and air raid shelters, etc.

The ground floor accommodates the restaurant proper, the outside terraces, kitchen and servery. The upper two floors provide rooms for the staff—plus two managerial flats, one for each of the managers of both the kiosk and the restaurant on the first floor.

The building is of exposed reinforced concrete structure throughout, including the walls and the floors. The window frames throughout are in painted timber; the walls of the restaurant are lined in unstained fir. The benches, window sills and all other parts liable to receive much use are in beechwood. The restaurant floor is finished in black/brown parquetry, while the servery is finished in polished black/grey eternit.

The staff rooms and flats have been plastered throughout and painted white, the floors of these areas being finished in linoleum. This scheme was designed in the offices of Forderer, Otto, and Zwimpfer, at Basel.



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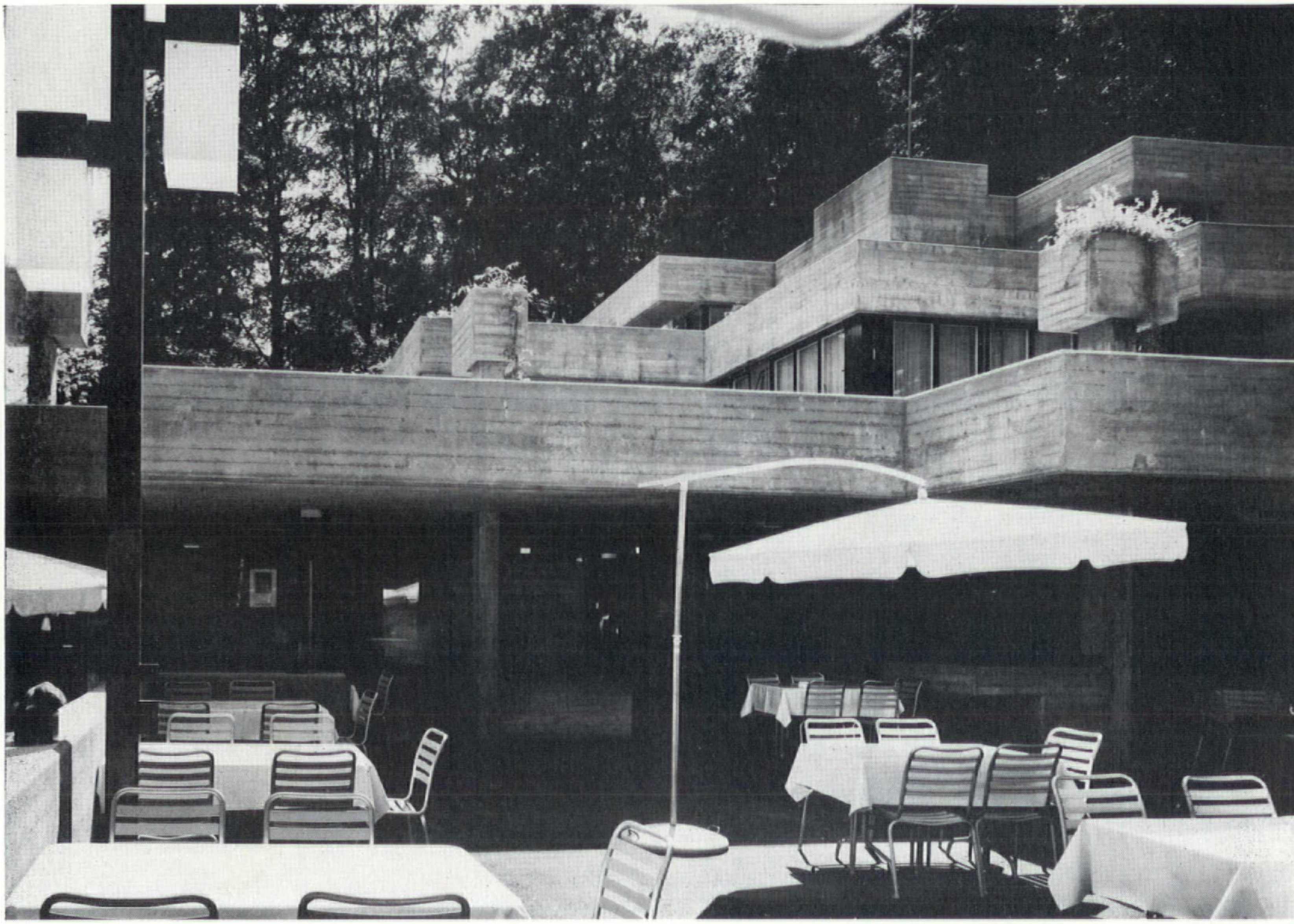

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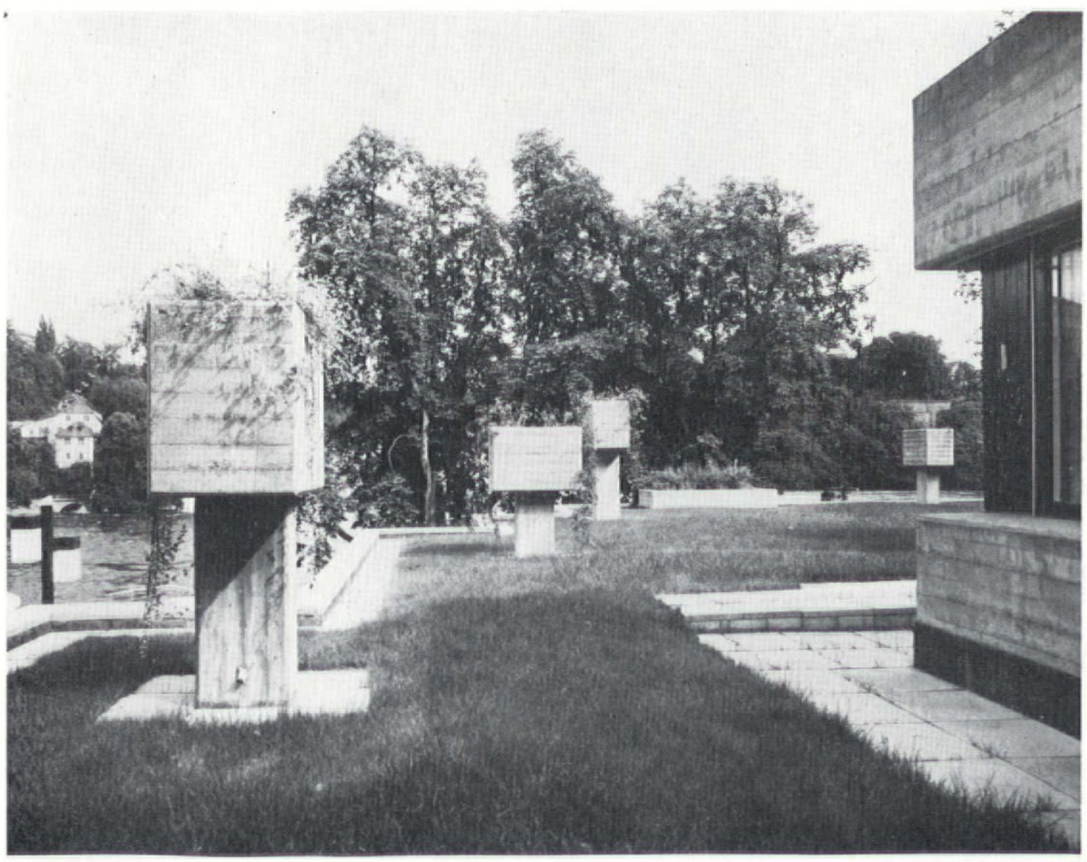

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1
View of the restaurant from the terrace
2
Roofscape at first floor level
3
A general view of the restaurant at night
4
Ground floor plan of the restaurant
13 restaurant
14 servery
15 kitchen
16 chef's office
17 pot wash
18 cold store
19 pantry
20 storage
21 garden terrace

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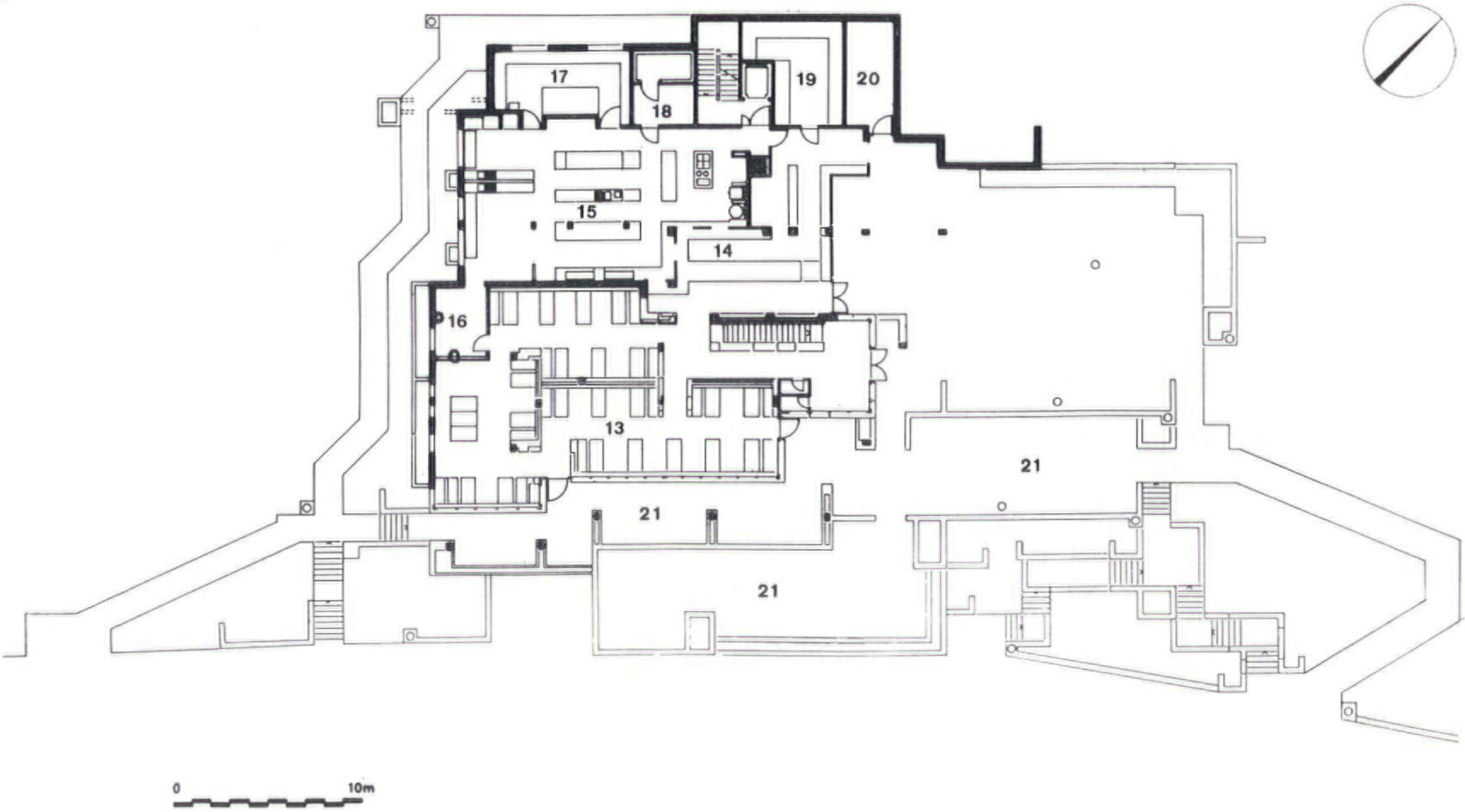

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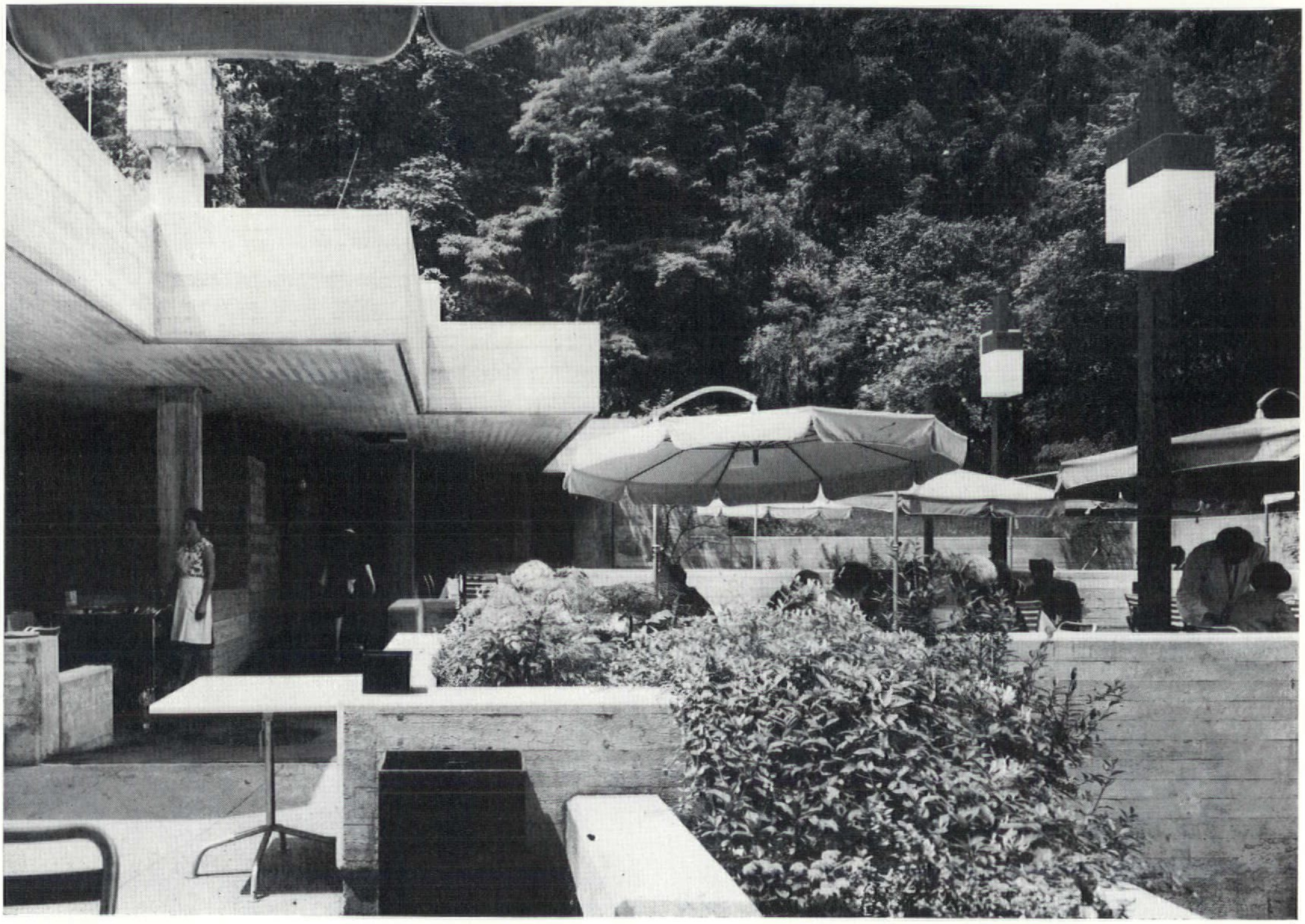

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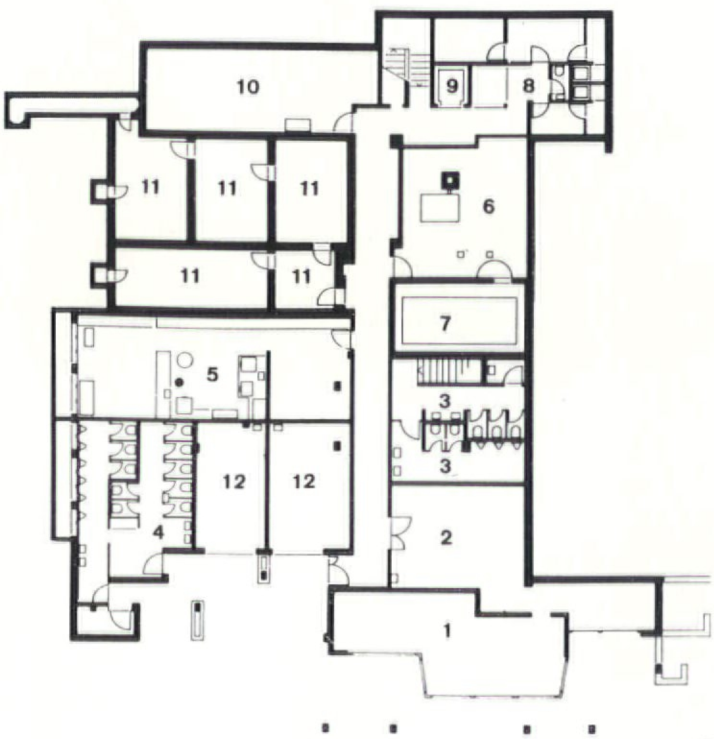

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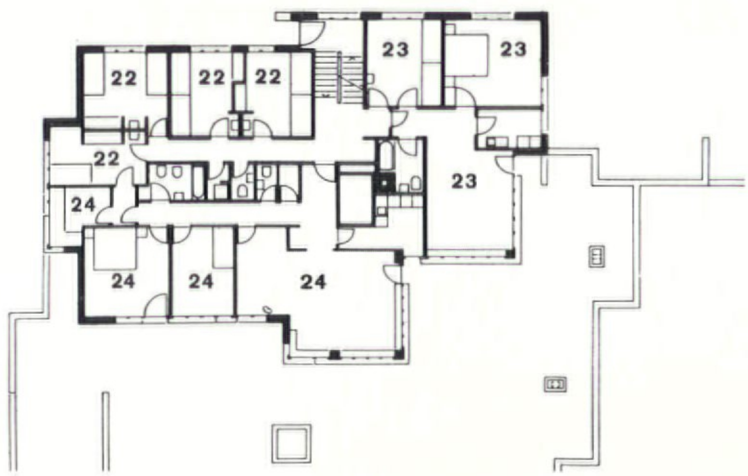

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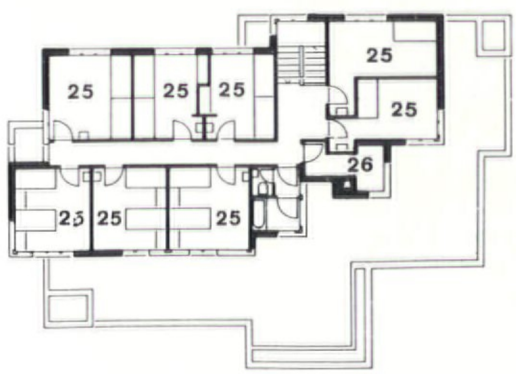

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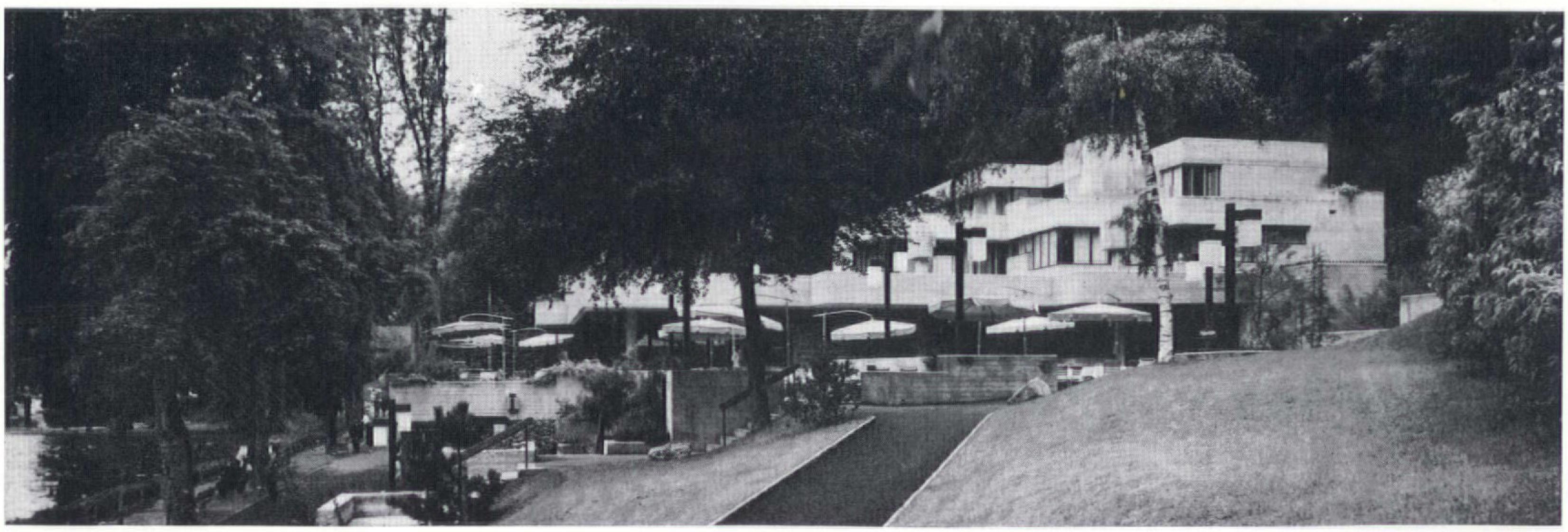
1
Detail of garden terrace and restaurant

2
Basement floor plan
1 kiosk
2 kiosk store
3 restaurant lavatories
4 lavatories
5 food preparation
6 heating chamber
7 oil store
8 service area
9 service lift
10 cellar
11 air raid shelters
12 garages

3 & 4
First and second floor levels respectively
22 staff rooms
23 kiosk manager's flat
24 restaurant manager's flat
25 staff bedrooms

5
View of the restaurant from the south

6
View of the restaurant from the east



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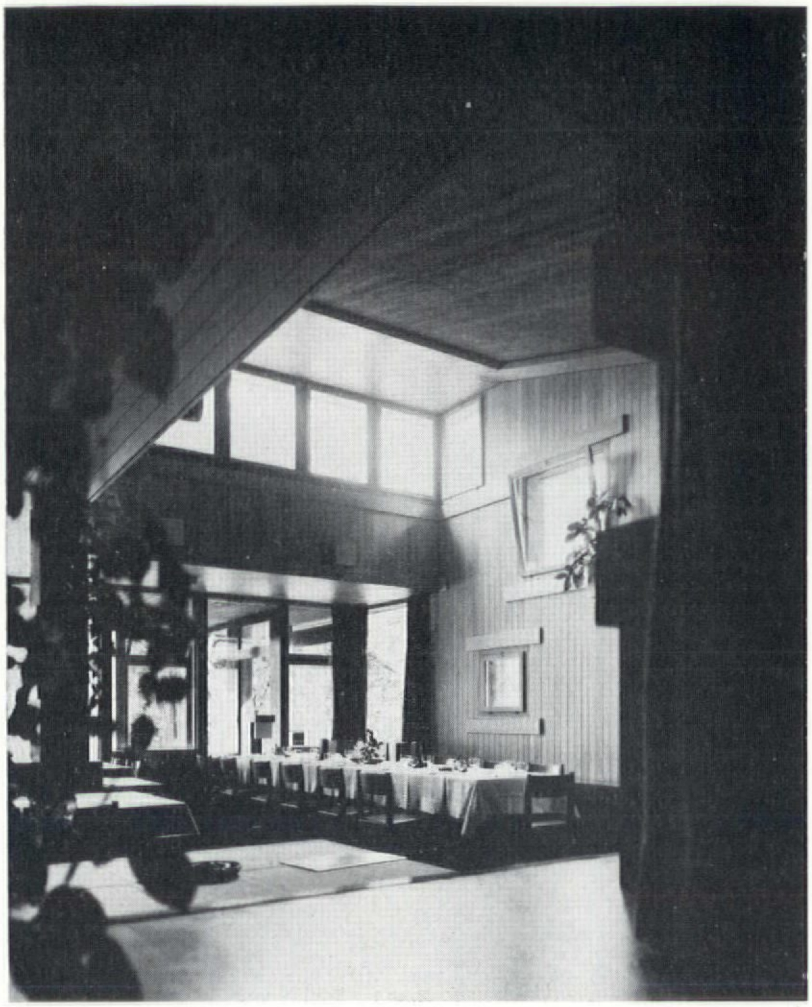

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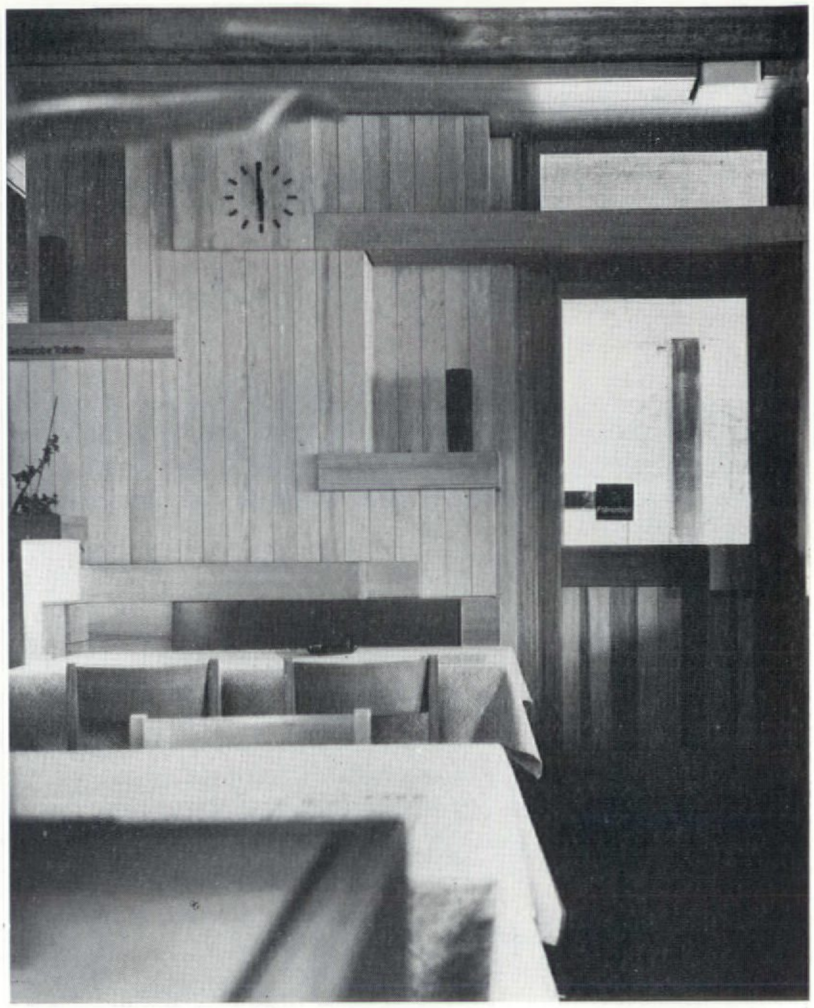

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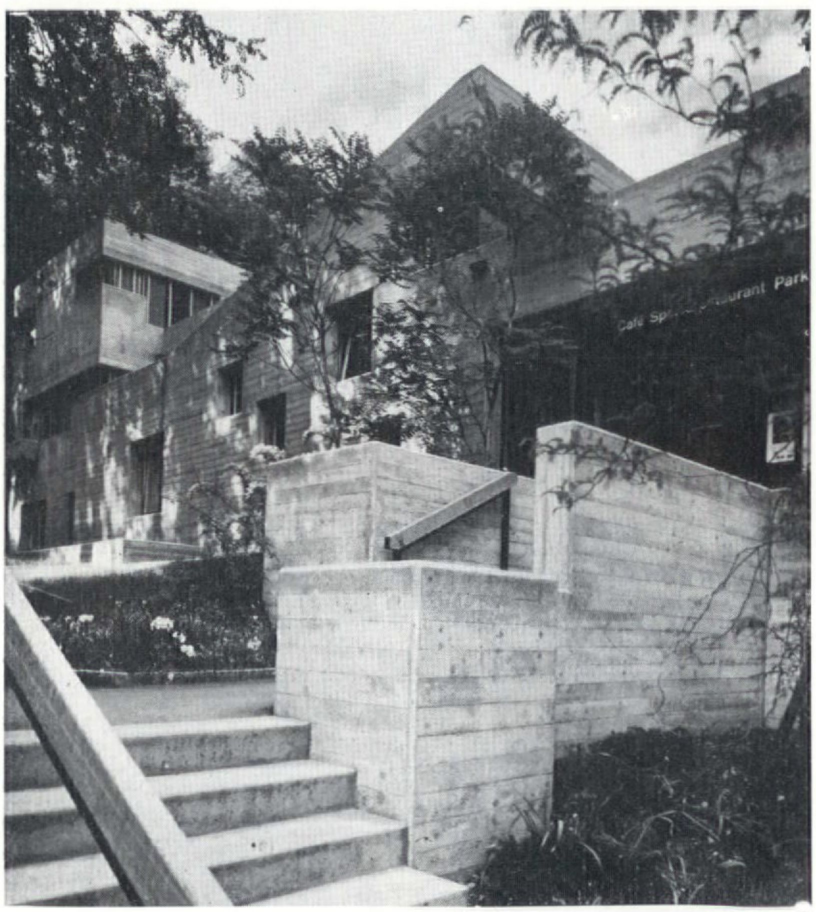
Interior high part of restaurant

2
Detail of restaurant interior showing wooden lining

3
High part of restaurant and restaurant entry from the south

4
Entrance to the restaurant from the garden court on the north east



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Ahm residence, Harpenden, Herts.

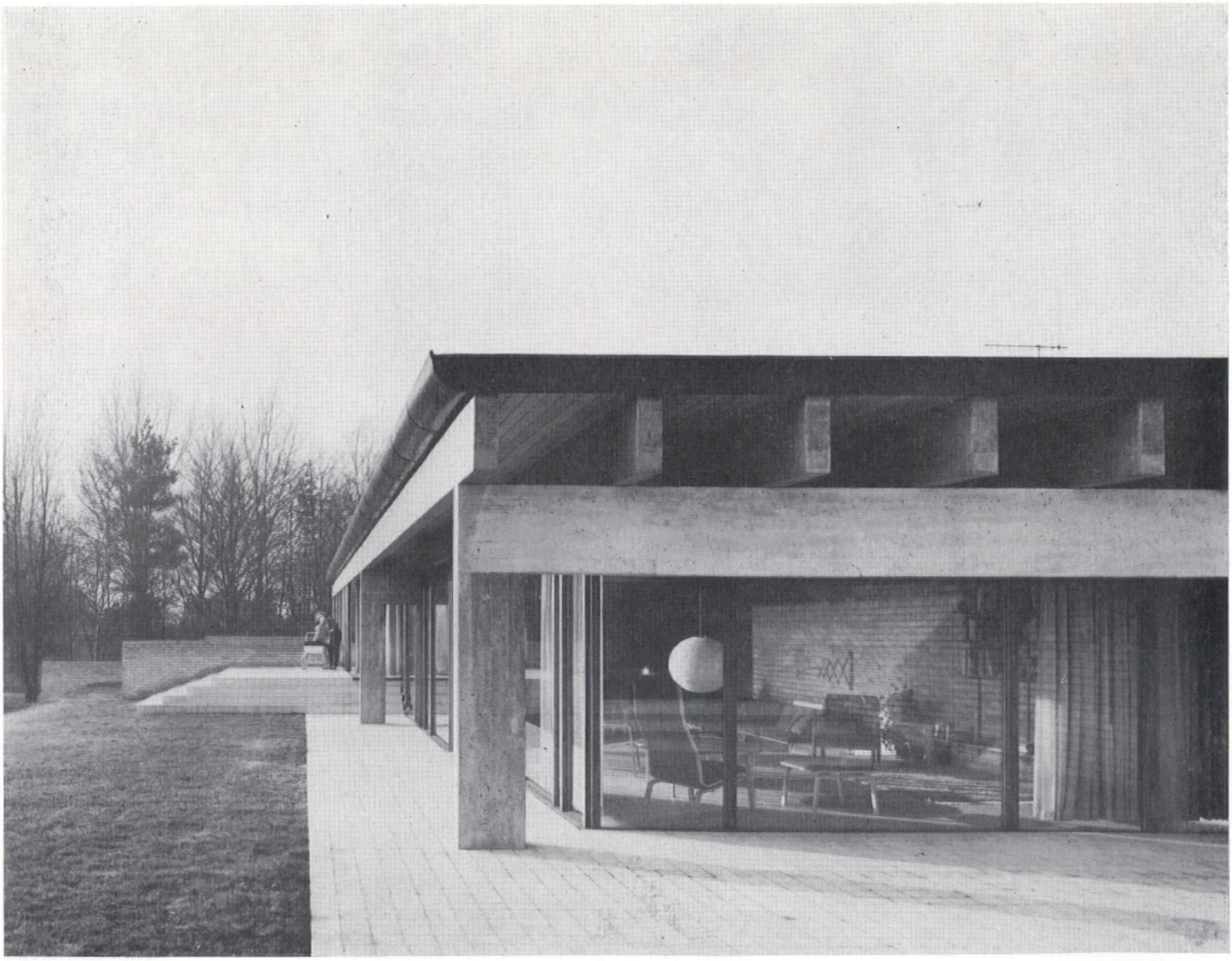
The house is built on one acre of land. The main factors governing the design were the shape and the orientation of the site, together with the slope of the site towards the road—about 5ft in 100ft.

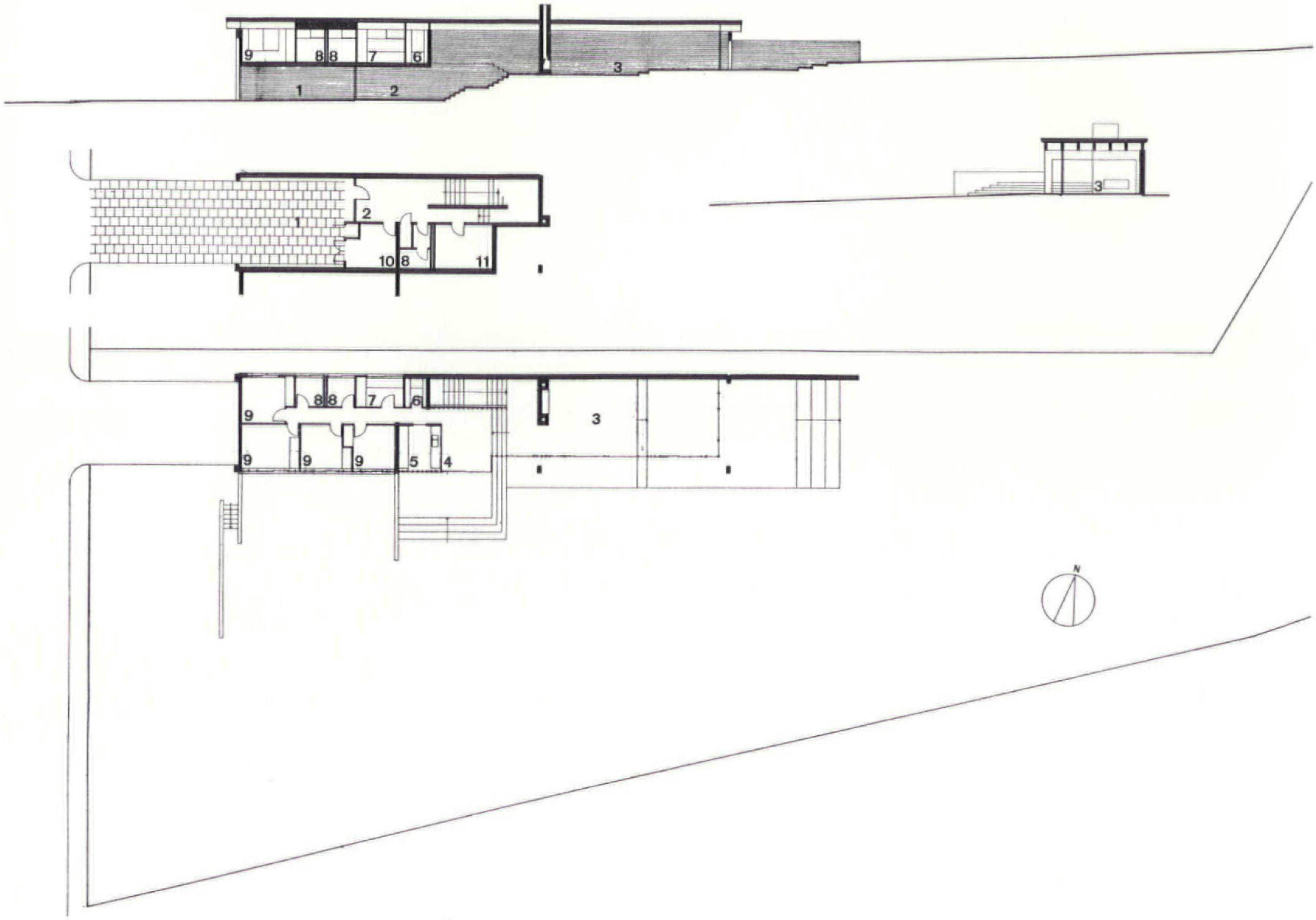
The intention was to create a house which was simple in shape and simple to build, using an absolute minimum of materials and these were to be exposed in their natural form. It was to have an open plan and an efficient central heating system. The space was to merge with the terrace and the garden. It was hoped that the cost would be reasonable, though the criterion was simplicity and durability rather than absolute minimum price.

The house is 102ft long and 20ft wide. The structure is simple, with four frames unevenly spaced to suit the plan; one is formed of a split brick cross wall, the other three are reinforced concrete frames with horizontal beams 2ft deep by 9in wide and two legs 1ft 6in by 9in wide. The tops of the frames are level and carry prestressed concrete beams 20in deep by 6in wide, spaced at 3ft 4in centres, with spans varying from 22ft minimum to 40ft maximum. The dining-room/bedroom floor consists of Siporex planks spanning 20ft in the transverse direction of the house on two 9in brick walls. A 9in brick wall extends the full length of the house on the north side the full height from floor to soffit of the beams. Another 9in brick wall forms the edge of the dining room terrace and runs along the bedrooms, turning a right angle at the end of the house to form a wall shielding the garden from the road. The top of the wall is at sill level for the high section of the house, forming a parapet for the bedrooms, whilst the kitchen, dining room and the whole living room section have glass from floor to soffit of beams on the south side of the house, extending to the east end of the building.

Epoxy resin glues have been used extensively to glue timber to concrete, and the mullions, cupboards and roof boards and the aluminium curtain rails are all glued to the concrete. The roof consists of boards top and bottom and rests on the beams. The finish is 'built up' with three layers of felt and granite chippings. The roof falls 4in towards the gutter on the north side. The gutter and the fascias on the other three sides are in copper.

The materials are brick, concrete, timber and glass. The floor finish is white ceramic tiles throughout the house, including the terrace. The carport is paved with concrete slabs. The brick is Woodham buff. The concrete is in situ reinforced or precast, prestressed with lightweight Siporex for the bedroom floor. The





1

Plans and sections

1 carport
2 entrance
3 living
4 dining
5 kitchen
6 store
7 laundry
8 bathroom
9 bedroom
10 tool
11 spare room

2

Night view into living room from the south

3

View from south

4

View from the south-east

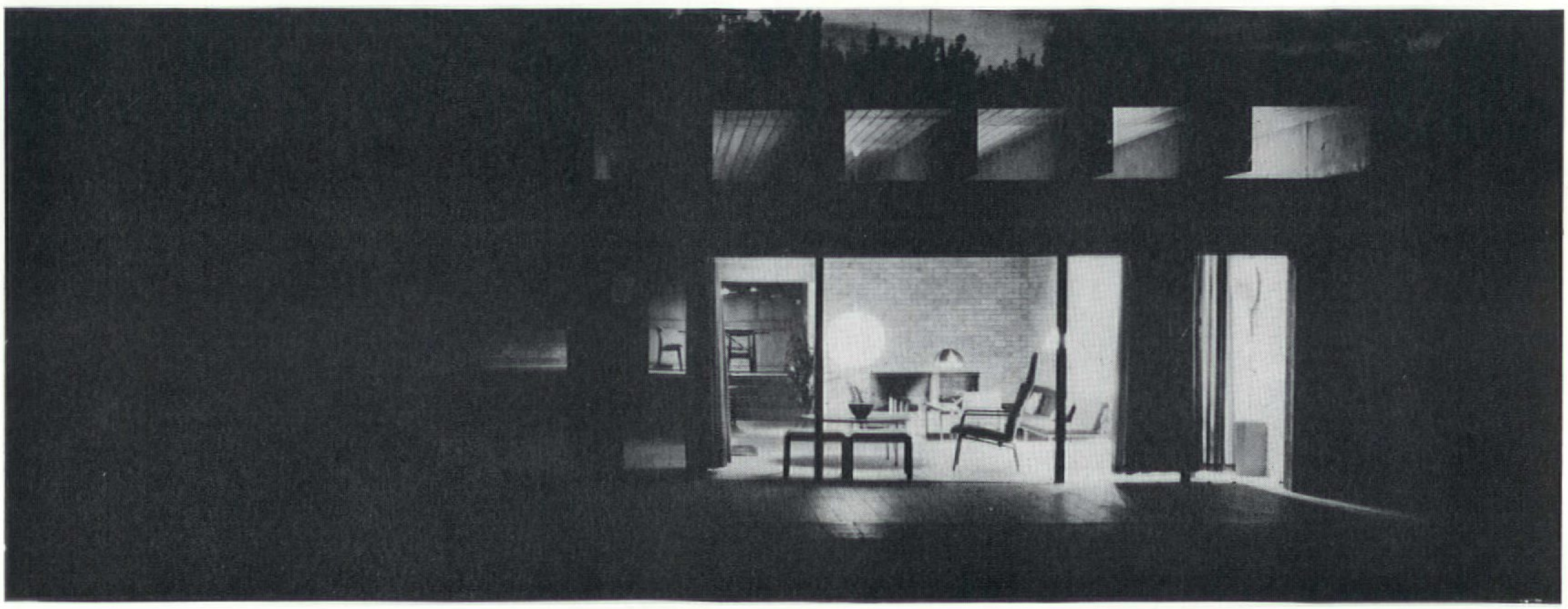
5

Garage and steps to upper level at west end

6

The south-east corner showing the main roof support

Photos: Henk Snoek



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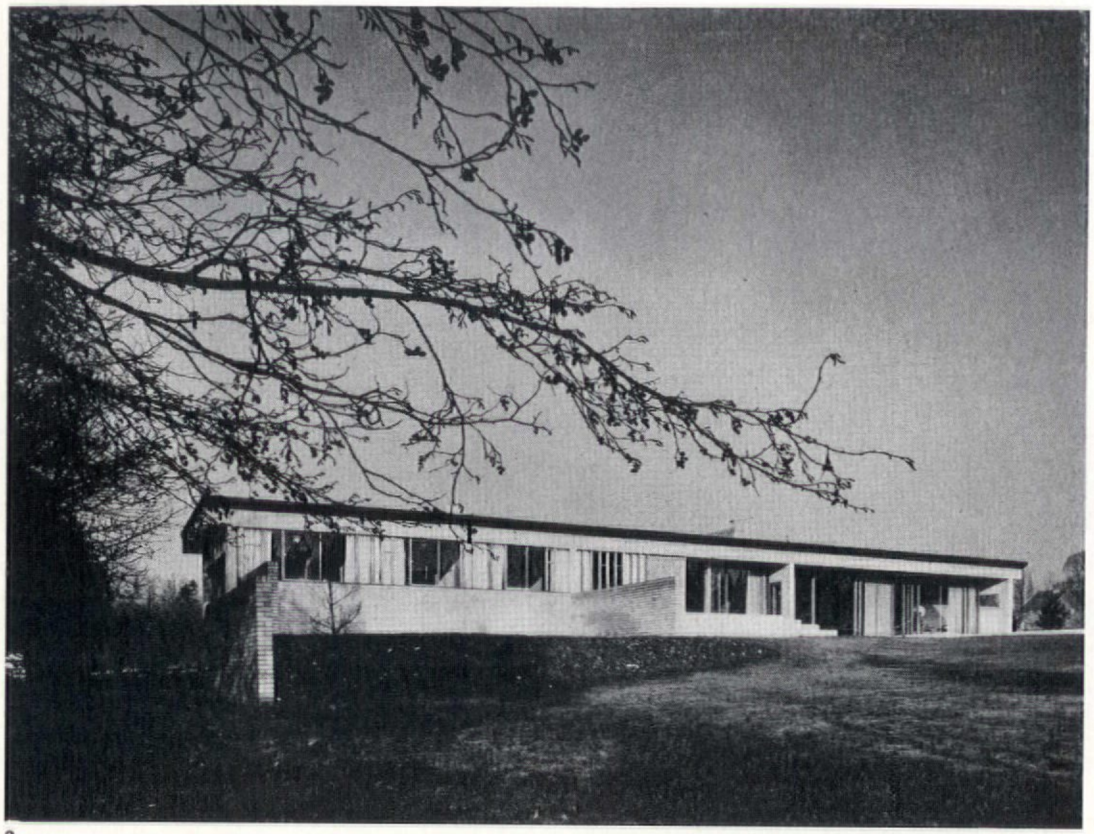

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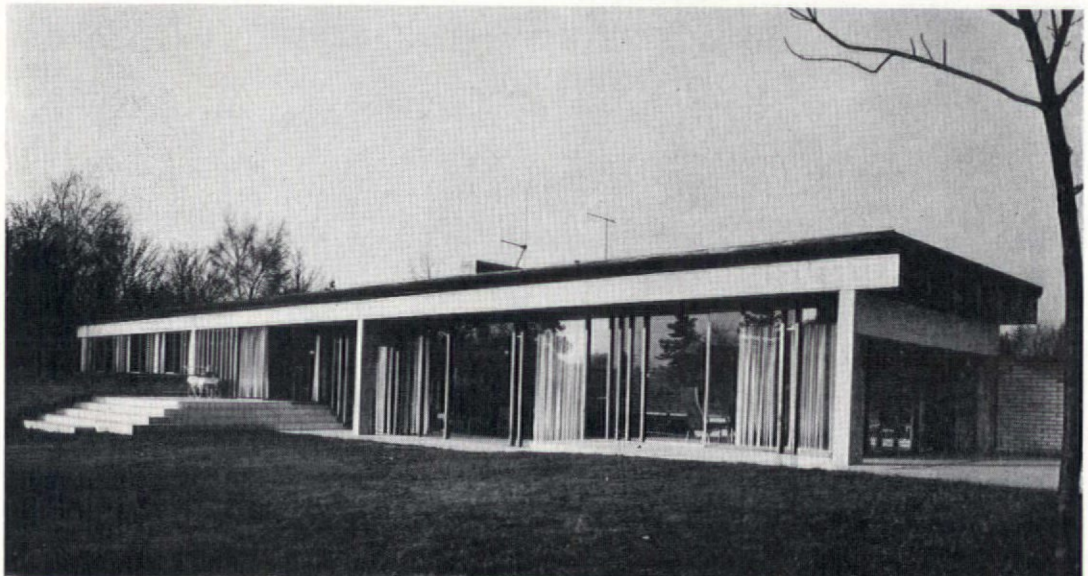

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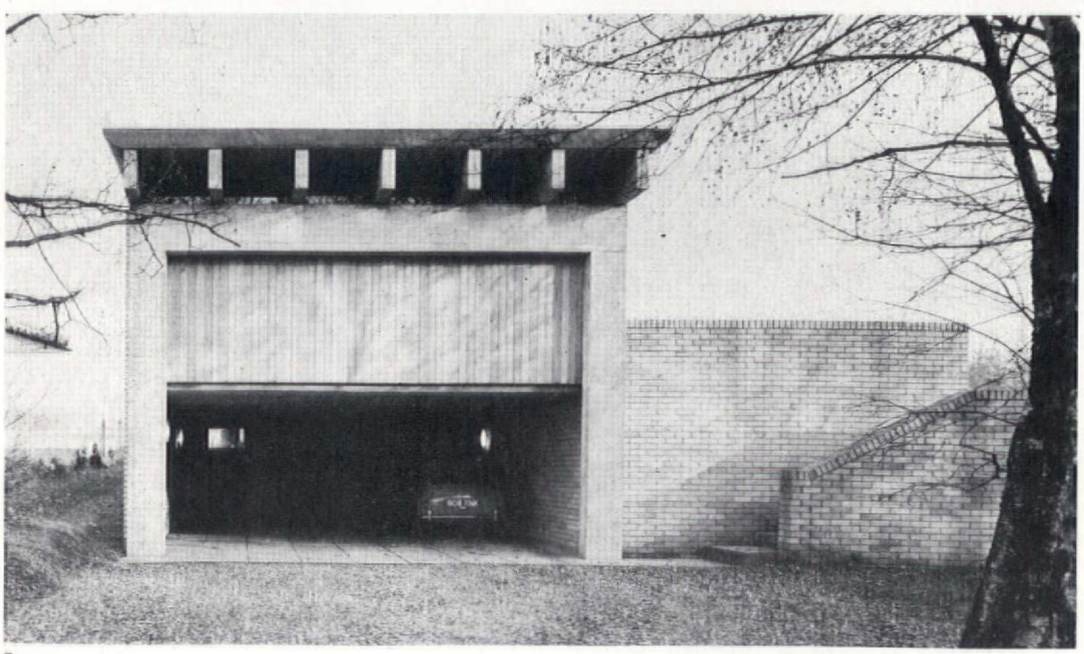

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finish of the in situ frames is rough boarded, whilst the precast beams are finished smooth almost like marble. The Siporex floor slabs are 9in. Siporex has also been used for partitions in the bedrooms and bathrooms. Here it is 3in or 4in thick and covered with hessian painted white. The soffit of the floor slabs is painted light grey. This is the only paint used in the house and no plaster whatsoever has been used. Maintenance cost is thus reduced to a minimum.

The timber is teak for all outside mullions and Columbian pine, quarter sawn, for the ceiling and all the joinery. The glass is double except in the opening areas and in the bedroom section. Where appropriate, glazing is directly into concrete. The floor tiles are white Swedish fully vitrified ceramic tiles with white jointing made from white water-repellent cement.

Under-floor heating is provided by water running in copper coils. The oil-fired boiler is in a separate room under the steps from the hall and provides 90,000 BTU's maximum. The 600-gallon oil tank is also in the boiler room, while the hot water cylinder is built into a drying cupboard in the bedroom section. Floor panels are individually controlled, but operated manually because of the large inertia in a floor heating system. There is an open fireplace in the living area, for burning logs only. Plumbing is in copper and completely built in with no pipes visible.

6

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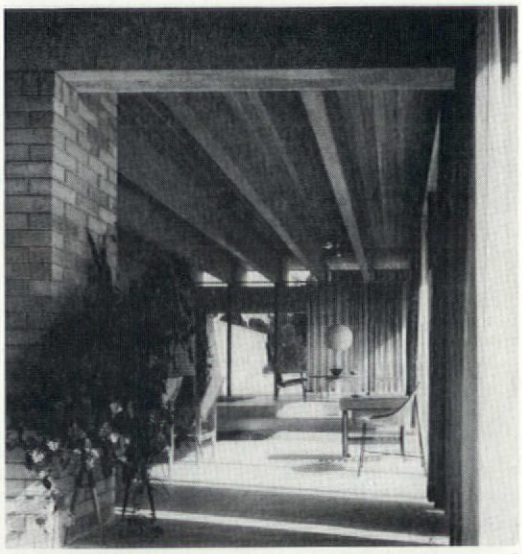

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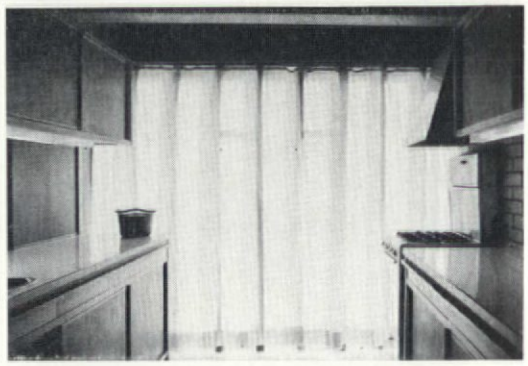

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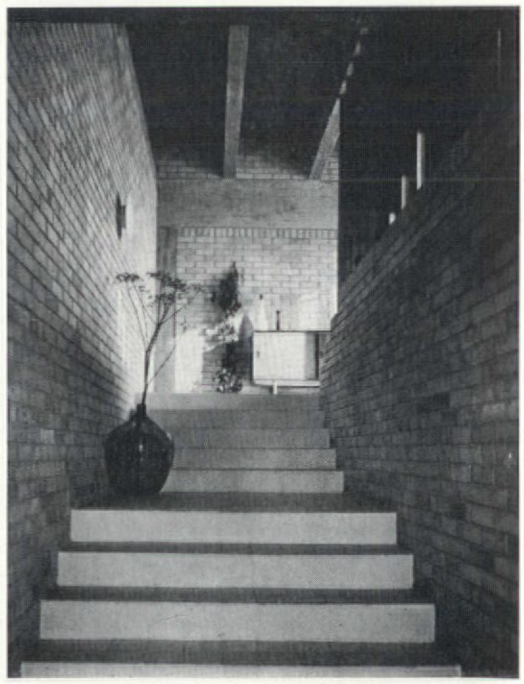

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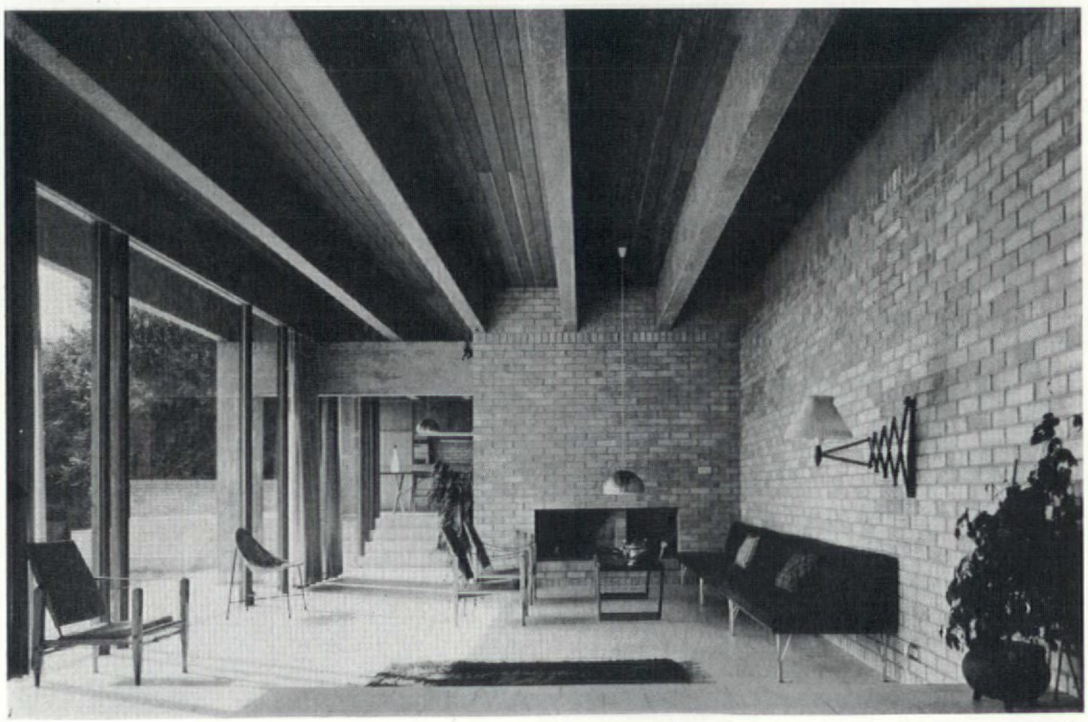

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1
Children's bedroom

2
Living room from the dining room

3
Dining room, looking towards the living room

4
Dining room from the living room showing extension of floor levels beyond the glass external wall.

5
Kitchen

6
Access stairs from the entrance hall to the living area

7
Living room looking towards the dining room

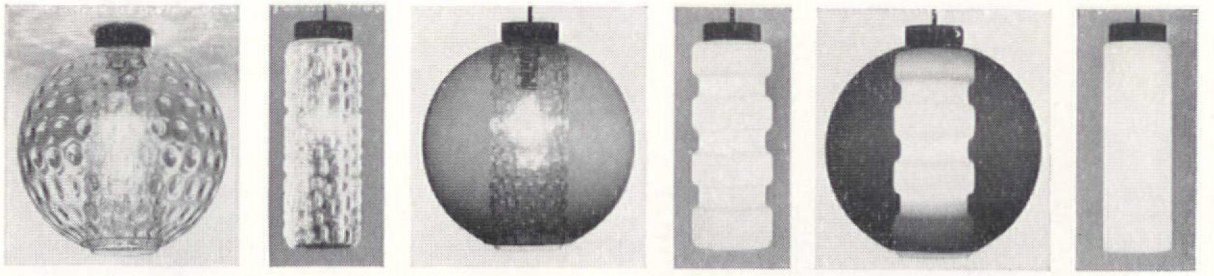
Photos: Henk Snoek

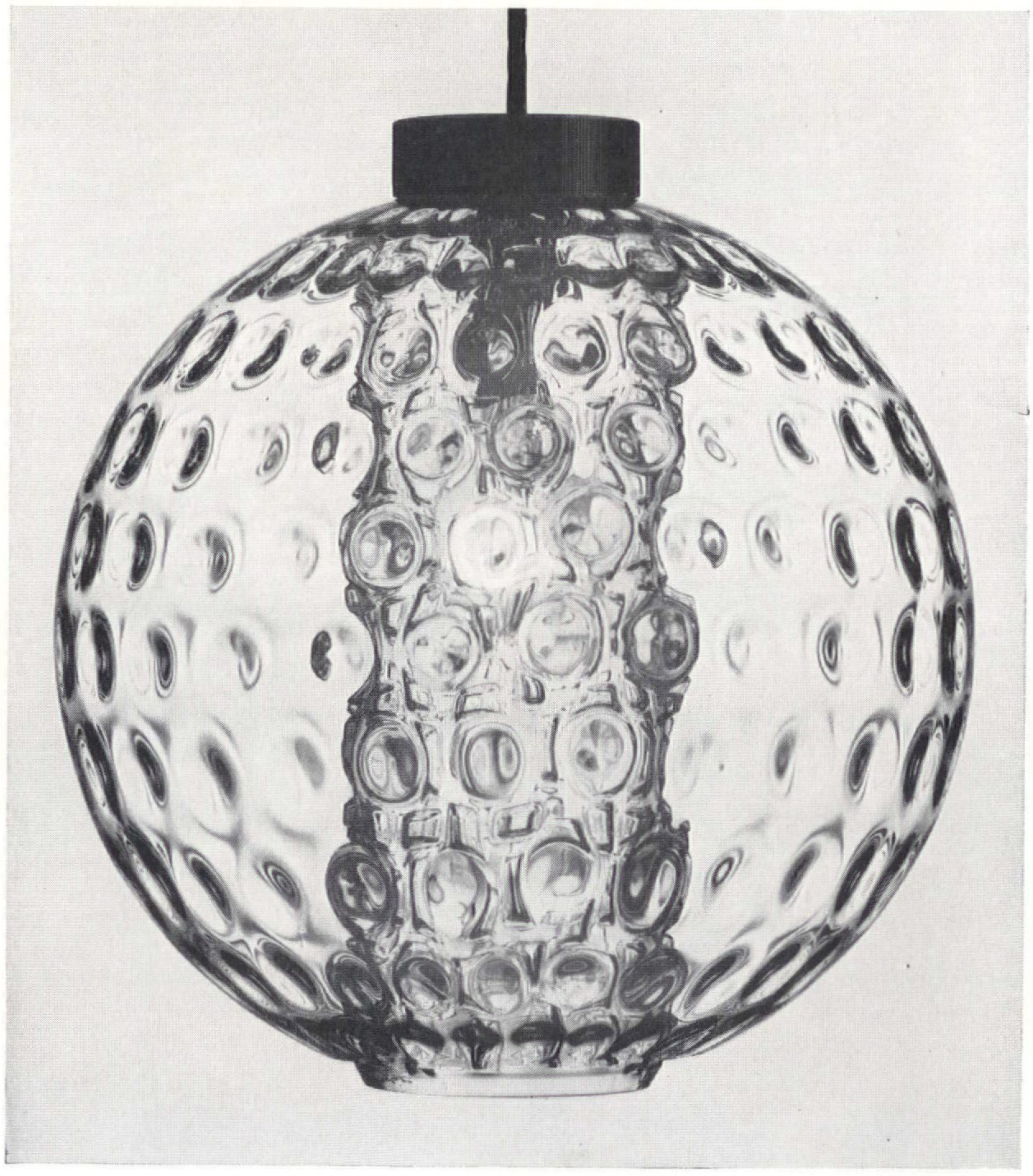
atlas introduce

Atlas MODERN, a new range of tungsten fittings using toned, crystal and opal glass, that offers a multitude of interesting combinations : including a related group of elegant reflectors in copper and aluminium.

A catalogue folder, giving full colour range, dimensions, and details of new simple suspension system, is available from Atlas Lighting Limited, Thorn House, Upper Saint Martin's Lane, London, W.C.2.

A subsidiary company of British Lighting Industries Ltd.





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This prominent new administration building in Hamburg is permanently sealed against the weather with 85,000 feet of Neoprene gasketing. Even with its 2,000 windows, the 18-storey 'Deutscher Ring' can withstand wide variations in temperature because Neoprene seals let both metal and glass expand and contract freely. For the architect, preformed gaskets made with Neoprene provide a design freedom unhampered by gasket considerations, and a neat finished appearance. For the contractor, they mean easy installation. For the client, they save construction time and material, and they require no maintenance during the life of the building. For a seal that won't crack, dry out, harden, soften or set, architects throughout the world are specifying Neoprene—the synthetic rubber which is highly resistant to sunlight, oxygen, ozone and ageing. To find out more about these versatile, permanent building gaskets, just complete and post the coupon below—or look at file No. 384 in the Barbour Index.

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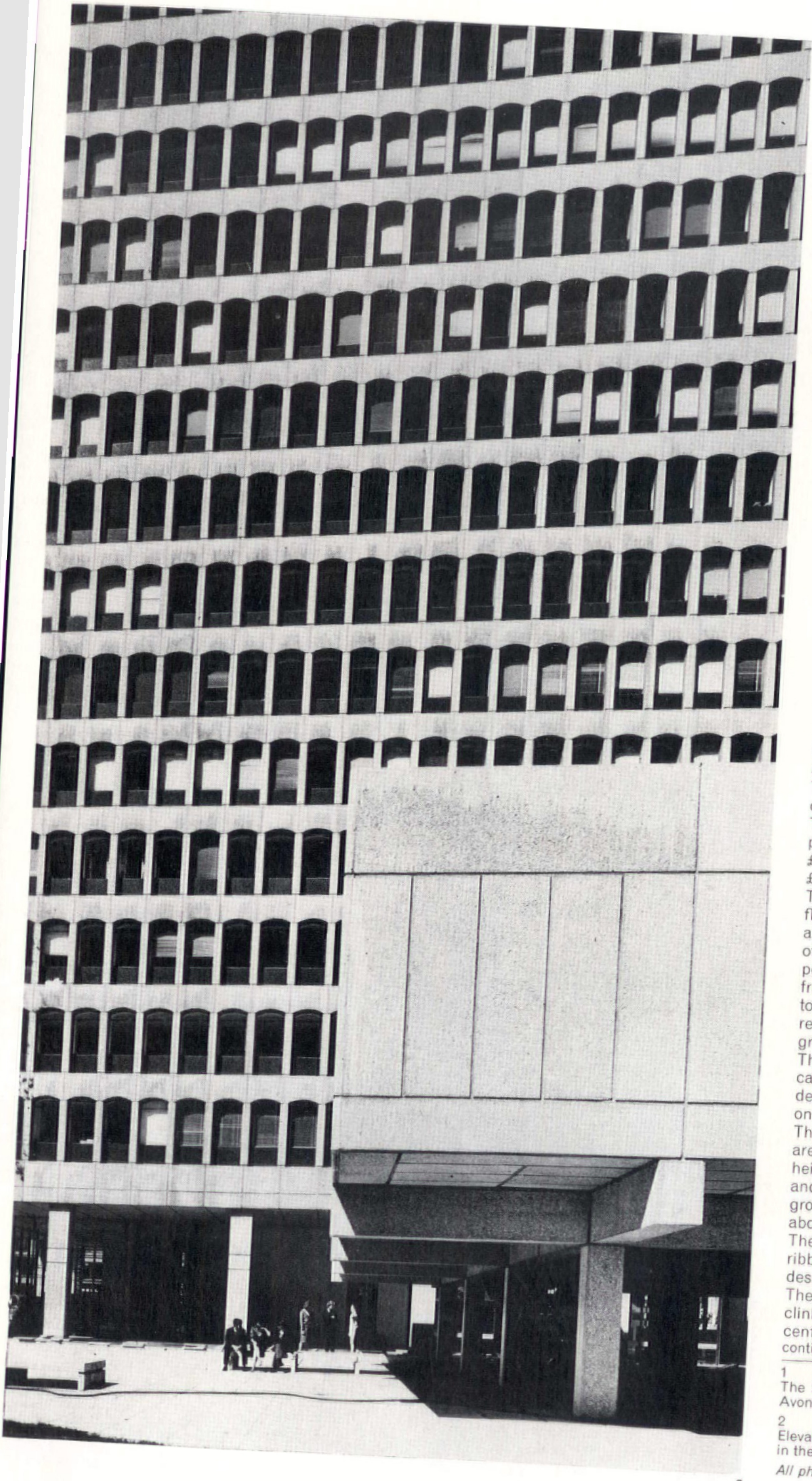

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Robinson office building, Bristol

John Collins (Group architect, E. S. & A. Robinson [Holdings] Ltd.)

Colin Beales (job architect) with A. J. Penrose, M. G. Smith, C. Bennet, M. Stroud

The E. S. and A. Robinson Group, for whom this new headquarters has been built, is one of the largest packaging organizations in the world, and comprises some 40 companies in the United Kingdom and overseas.

The building had to be capable of taking 1000 people, including adequate car-parking, dining and conference facilities for owner occupation, and provision to lease some floor area for a short time if required. The building was to be simple and economic in capital cost and maintenance. The island site of 1½ acres includes four fifteenth century houses and a church and churchyard. The total floor area is 224,647ft² and the price per foot super excluding external works was £7 9s. 0½d. or, including external works, £7 10s. 2d. The total cost was £1,686,407 9s. 1d. The buildings comprise a 200ft tower block of 15 floors and a single floor conference wing attached. A basement extends over the full area of the original site, with retaining walls to the perimeter. The tower block is a reinforced framed structure with a total weight of 31,000 tons which is carried on large cylinder under-reamed foundations, extending 50ft below ground level to the hard-bearing marl and rock. The reinforced walls to the central service core carry a total weight of 13,000 tons and are also designed to resist the total wind forces imposed on the building.

The perimeter columns or structural mullions are precast concrete members in two-storey heights, positioned alternately between floors and at 5ft centres. The head of one unit is grouted and dowelled to the bottom of the one above.

The floor slabs are 10ft thick and designed as ribbed floors spanning 25ft, some panels being designed to span as a flat slab in two directions. The coffers are generally constructed of hollow clinker blocks 1ft 10in square to provide ribbed centres of 2ft 1in.

continued on page 100

1
The 200ft high building on a site close to the River Avon dominates the commercial centre of Bristol

2
Elevation of the tower block with the conference wing in the foreground

All photographs: C. & E. Photography

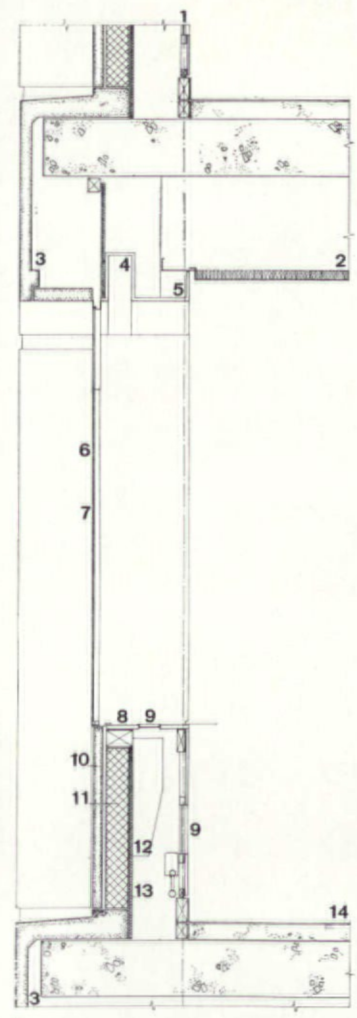
1

1
The pedestrian deck seem from churchyard. Concrete slabs provide seating and are on the 5ft planning grid

2
Close-up view of the tower block precast concrete cladding units finished in Carrara marble chip, their load being transferred to the structure at each floor level

3, 4
Detail vertical and horizontal sections through the cladding
1 grid line
2 suspended ceiling
3 pre-cast concrete cladding
4 blind box
5 preformed arch in fibrous plaster
6 $\frac{1}{4}$in plate glass
7 bronze window frame
8 sill
9 metal grill
10 $1\frac{1}{2}$in mosaic block
11 4in concrete block
12 induction unit
13 $\frac{1}{2}$in expanded polystyrene
14 3in overall floor finish
15 precast concrete structural mullion
16 metal louvred grill
17 precast concrete facing
18 duct every fifth mullion
19 fibrous plaster casing

2



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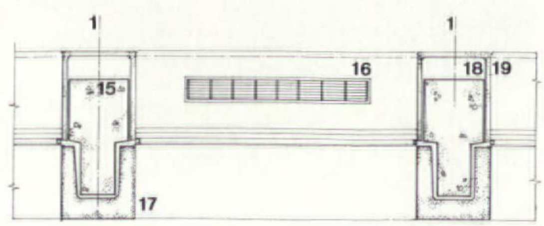

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Photograph by courtesy of D. S. Associates (a member of Allied Industrial Designers.)

Who says this design concept is so excitingly different

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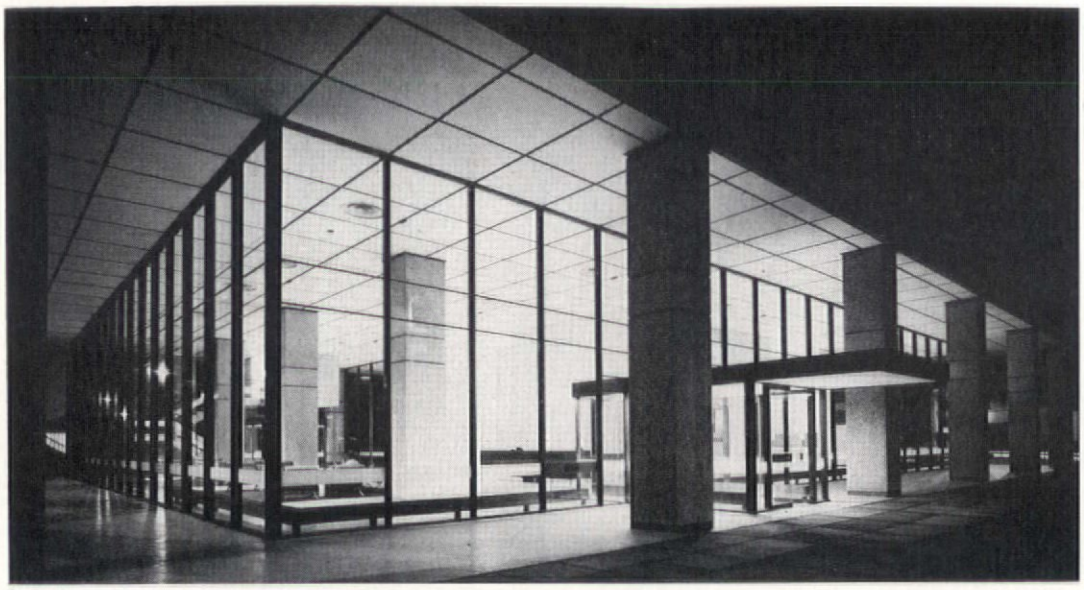


1

1
Ground floor area at night, showing one entrance lobby. All framing to glass is bronze

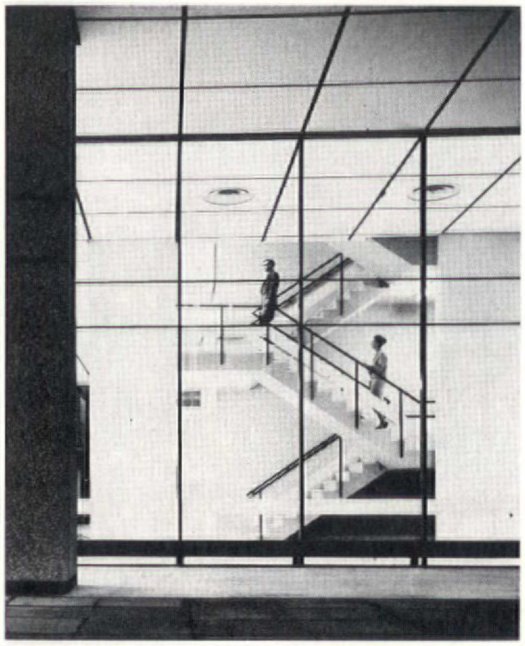
2
Ground floor reception area with tan leather 'Barcelona' chairs on seaweed colour carpet. The floor is cream/white terrazzo with 5ft planning grid joint lines. The ceiling is white plywood panels containing air diffusers and spotlights, with black recessed joint on grid lines. Convector casing is of bronze

3
One of two identical staircases used as escape stairs, with standard detailing from top to bottom; black ebonized handrail, white bottom rail, black steel supports and terrazzo precast treads. The concrete flights were precast on site and dropped in by tower crane

4
View through ground floor lift lobby. All lift architraves are stainless steel. Walls are covered with PVC cloth, the lift shafts clad in orange PVC from basement to roof. This is the only strong colour used in building and is for identification purposes. The main ducts are finished with white PVC at this level

5
Typical open plan office area. A standard desk range is used throughout, modified slightly by the architects to suit the clients' requirements

2



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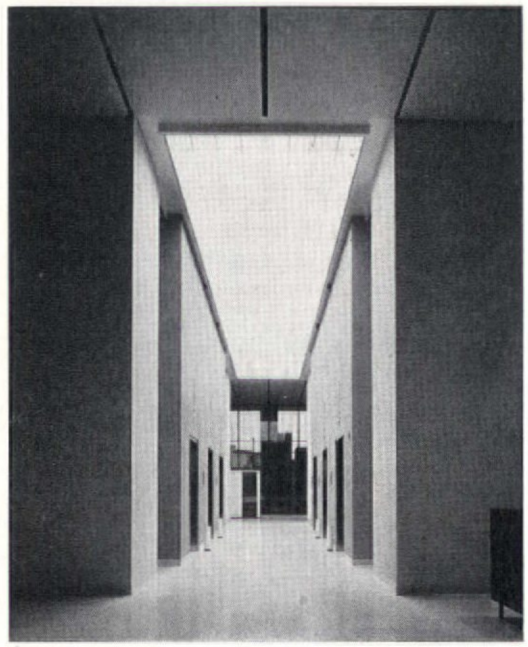

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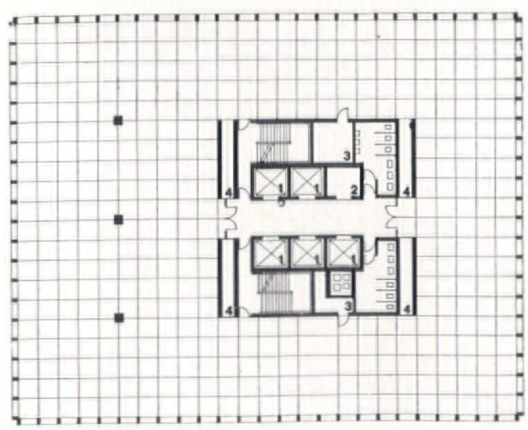
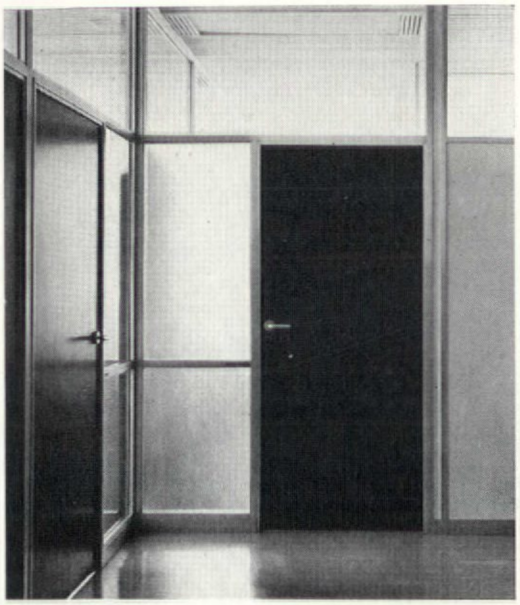
6
Typical floor plan
1 lift
2 cleaners
3 store
4 duct

6





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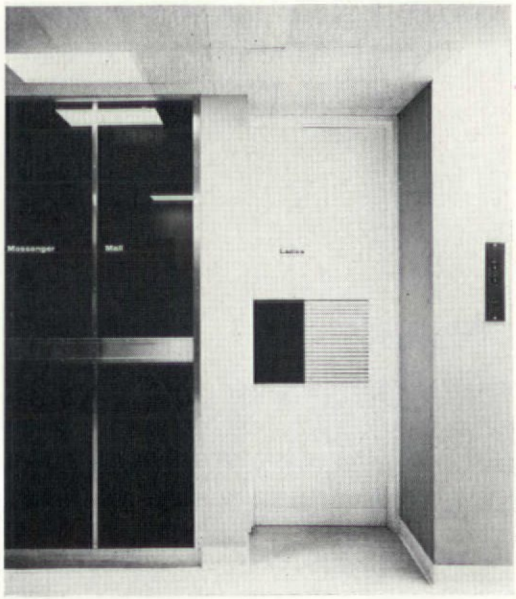

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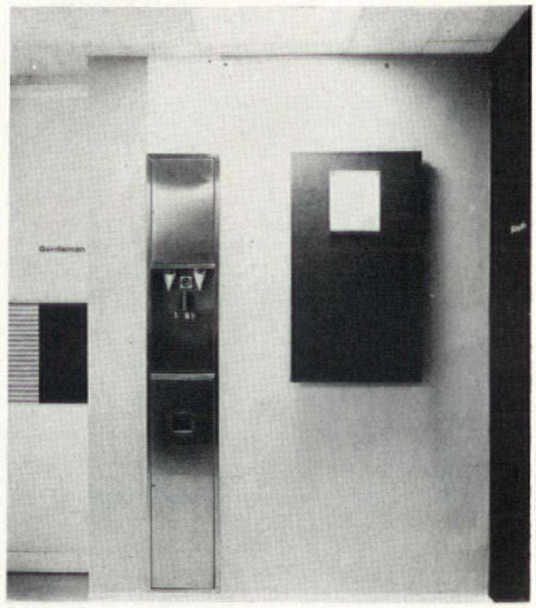


3

4

1
Standard aluminium partitioning conforming to 5ft 0in ceiling grid. Some offices are double glazed for sound insulation within standard partitions. All glass above 6ft 6in is clear. Generally walls between offices are solid, PVC covered. Corridor walls 5ft 0in × 6ft 6in obscured glass panels. Aluminium door furniture designed by the architects. Note access trap to underfloor three-compartment steel duct running all round floors—three ducts per 25ft floor width

2
Letter chutes with stainless steel framing and dark grey glass infill. All swing doors have colour coded plastic push plates. PVC skirtings used throughout the building. All lettering in building is 'Letraset' with protective spray finish. A standard type-face has been adopted throughout

3
Stainless steel chilled water dispenser designed by architects, incorporating two of clients' products ('Lily' paper drinking cups dispensed from top unit and disposable paper sack for soiled cups in bottom unit). This unit and adjacent notice board are standard fixtures in all lift lobbies except on ground floor

4
Exhibition area on sixth floor for clients' customers. Designed by Ron Ford in collaboration with the architects. The stands are constructed from teak uprights on the 5ft module with standard supermarket track and shelving. Graphic/colour panels de-mount easily for display change. The standard ceiling grid is replaced by teak strip to take uprights, and the spotlights are integrated into the standard ceiling panels

continued from page 97

The building is clad with precast concrete panels finished in Carrara marble chip, their load being transferred to the structure at each floor level.

The city fire brigade and local authority agreed to use the central core with no external fire stairs, provided the core had two-hour fire resistance. The fire brigade can take control of one lift on emergency power when required. A fire detector system is installed throughout and connected to the local fire station.

A three-compartment steel underfloor ducting is provided on all floors for telephone, electrical and buzzer systems. Connections are made easily to suit desk layouts.

Compressed air is supplied to design studios on floor 7.

Special extract ducts are used in conjunction with office machinery giving off ammonia fumes, etc.

Gas is supplied to the main kitchens and two small kitchenettes.

Ceilings on floors 1–10 (excluding lift lobbies and toilets) have acoustic 4ft 10in × 1ft 7in steel trays stoved white with mineral wool infill. Three trays make up a 4ft 10in × 4ft 10in grid with a 2in exposed steel suspension grid between, which is suspended at 5ft 0in centres from the structural floor. Ductwork, electric distribution trays, call system and fire detector system all suspended from the same grid. Light fittings interchange with the ceiling trays. Air is extracted through the ends of the light fittings. Fire detector heads and air diffusers are also incorporated in ceiling trays in standard positions.

Ceilings on floors 11–13, lift lobbies and conference wing, have acoustic 1ft × 1ft mineral fibre tiles suspended from metal grid with light fittings incorporated.

On these floors, block partitions are generally used, running through to concrete slabs. Ceilings 'float' 2ft clear of walls and air is extracted through this gap.

Ceilings to kitchens, cloakrooms and toilets are 2ft square bevel-edged asbestos insulating board panels screwed up to suspended metal grid.

Demountable partitions have standard aluminium framing based on a 5ft horizontal module. Solid panels have composite core faced both sides with PVC cloth. Obscured glass panels are single or double glazed as required. Clear glass is always used above 6ft 6in.

Materials and colours are kept to a minimum: white Carrara marble aggregate precast panels; dark green/grey mosaic infill panels; bronze windows, bronze framing to ground floor entrance lobbies, etc.; concrete paving, walls and seats.

The building is fully air-conditioned.

Quantity surveyor: E. T. Wraight, FRICS.

Main contractor: Sir Robert McAlpine and Sons Limited.

Consultants: (Structural) Structural Design Department, Sir Robert McAlpine and Sons Limited; (heating) Group Engineers, E. S. and A. Robinson (Holdings) Ltd. in collaboration with Sir Robert McAlpine and Sons Limited and G. Graneck and Associates, Toronto; (electrical) Group Engineers, E. S. and A. Robinson (Holdings) Limited in collaboration with Sir Robert McAlpine and Sons Limited; (acoustic) W. Hines and Partners; (graphic) R. Ford.

Design notes

Contract Furniture Catalogue

The more guidance that the architect can have in choosing furniture the better. In November we welcomed the COID's furniture catalogue. Now we draw attention to the catalogue recently issued by *Architectural Design's* publishers, The Standard Catalogue Co. *Contract Furniture Catalogue* is an A4 production showing the products of some four dozen manufacturers subdivided under nine headings, with cross-references of every conceivable kind. There are also indexes of manufacturers' names and addresses and trade names, as well as a separate price list. Unlike the COID catalogue, there is not a standard form of presentation of information; nor have the products shown been subject to scrutiny by a selection committee. However, most of the furniture is of a reasonably good design standard.

The catalogue will be published twice yearly to ensure that its information is up to date.

26 Bloomsbury Way, London W.1

Polypropylene chair

A tubular steel chair with the seat and back unit in moulded polypropylene has been launched by Pel Ltd. **1–3**, after over two years of research and development in conjunction with the Dutch designer, Alexander Philippus (who worked with Pel staff designer, Harry Potter), the General Electric Company Ltd. (Moulded Plastics Division) and ICI, whose 'Propathene' polypropylene has been used. The Philippus/Potter chair was evolved with a very heavy capital expenditure in terms of research, development and tooling.

Alexander Philippus, who is managing director of Buisbank N.V. of Holland, manufacturers of tubular steel furniture, was one of the first in Western Europe to use polypropylene, a thermoplastic material discovered in Italy in 1954. His 233 chair, launched in 1961, is manufactured under licence in the United Kingdom by Pel Ltd.

Some of the outstanding properties of polypropylene are its strength, despite its light weight, mouldability, stability at temperatures up to 135°C, resistance to oils, acids, alkalis and organic solvents and its available colour range.

Polypropylene's most important qualities to furniture designers are its strength and flexibility.

British Standard recommendations for chairs suggest that a space should be left between the lumbar support and the effective seat surface to enable the user to sit fully into the chair, thereby obtaining maximum support from the back rest. In the Philippus/Potter chair this requirement is achieved by introducing a hole, which also provides a convenient hand grip **3**. This hole, a complication in moulding, has been successfully used as a ring gate feed, which is subsequently removed by a heated shaped knife.

It was envisaged that the chair could have a universal application if seating comfort could be provided in any of the three recognized seating attitudes, and for this reason the height of the back was increased to support a more relaxed posture. Within the limitations of published and anthropometrical data and calculating practice, moulded shells of minimum uniform thickness were produced initially and then subjected to a test programme in the Pel Development and Design Section. A simulated loading of a seated person was applied to the shell and stress plots taken of both the inner and outer surfaces. These plots showed exactly where and how the sections should be increased in thickness. Subsequent mouldings, still light in weight, were produced incorporating these modifications which successfully controlled the flexing characteristic to provide maximum comfort. Finally, the mould itself was photo-etched to reproduce a fine grain finish to the seat moulding.

The chair shell is available in four colours—light and dark grey, light blue and scarlet. The upper surfaces are textured and with an anti-static element, dust attraction (a common fault of most thermoplastics) has been greatly reduced.

The attachment of the seat to the frame presented a major problem because normal thread or self-tapping screws driven into moulded bosses on the shell were considered to be mechanically unsatisfactory because of the flexibility of polypropylene.

A satisfactory solution was found by GEC plastic engineers, who developed four undercut spigots integrally moulded with the shell which engaged through holes in the tubular frame and were secured by acetal resin locking collars **1**. The spigot and ring dimensions were developed from pilot tools. The load tests on the pilot tools showed that each of the spigot/collar assemblies required a force of 350lb pull to remove the collars.

The chair is available with frames made from round tube (PP1), taper tube (PP2) and square section tube (PP3). All versions stack. The load-bearing feet fit flat on the floor and are made of HD polythene.

Frames are available in stove enamel within the range of Pel standard finishes, or can be coated with epoxy resin plastisol or fused nylon in a limited range of colours; the two latter finishes are tough and durable with a remarkable resistance to impact and abrasion.

The overall dimensions of the chairs so far introduced are: height $32\frac{1}{4}$in, seat height $17\frac{1}{2}$in, width $19\frac{3}{8}$in, depth 20in. A stack of 8 measures 53in × $19\frac{1}{2}$in × 23in.

Weight of the $\frac{3}{4}$in diameter mild steel parallel wall and taper tube versions (PP1 and PP2) is $8\frac{1}{4}$lb and that of the $\frac{5}{8}$in square section model (PP3) is $8\frac{1}{2}$lb.

An integral self-linking and locking device is an optional extra for all models.

A trolley is also available for moving a stack of chairs with the minimum of effort.

The PP1 retails at 56*s*. 3*d*. with a stove enamelled frame.

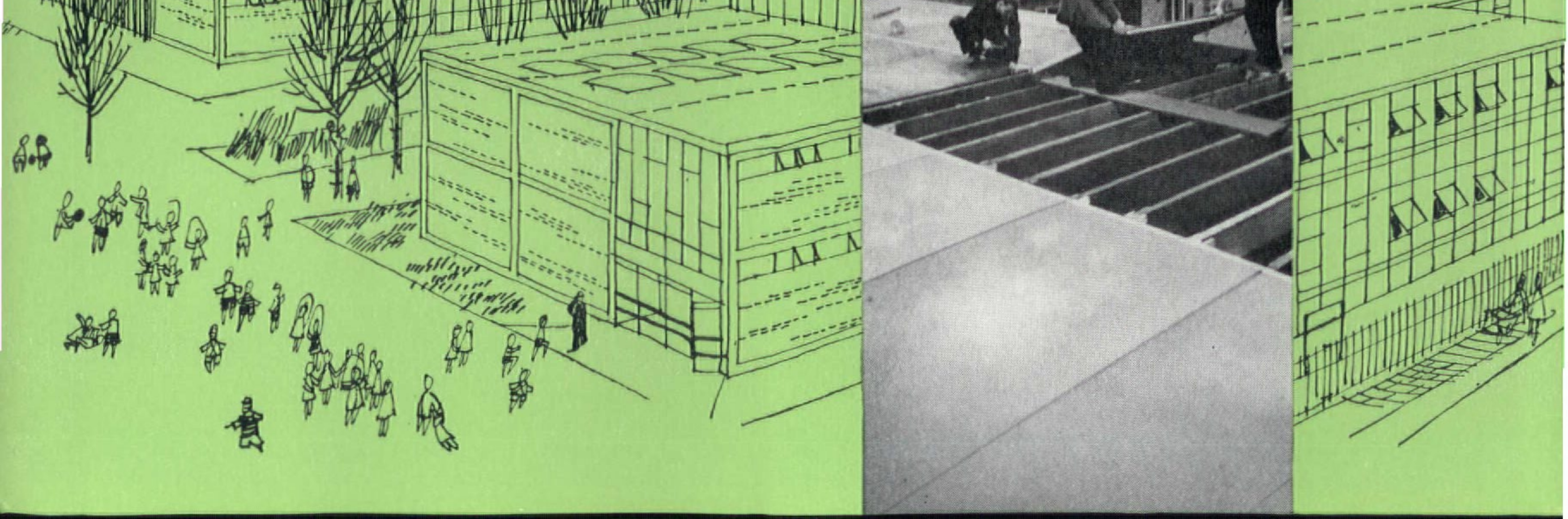
'Oldbury', Birmingham

continued on page 102

1

2

3



continued from page 101

1

'Vulkide' A chairs 1

A range of stacking chairs made from 'Vulkide' A, the acrylonitrile/butadiene/styrene sheet made by ICI (Hyde) Ltd., is manufactured by James Nuttall Ltd.

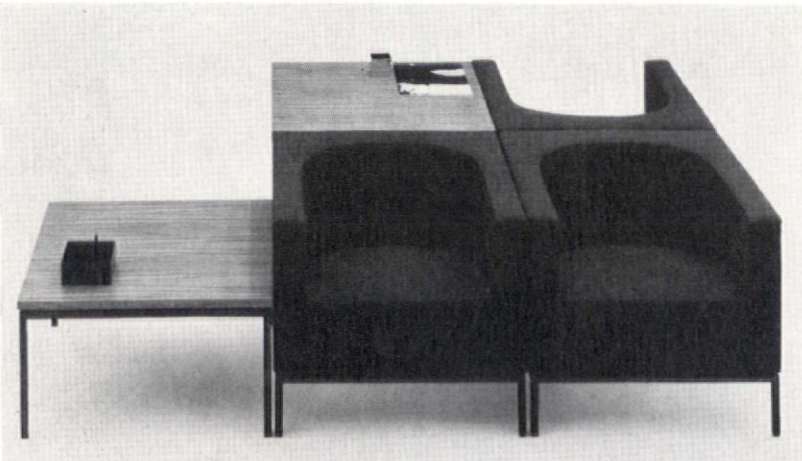
The chair backs and seats are vacuum-formed in one piece from 'Vulkide' A, by Orbex Ltd., and are supported by tubular metal frames. They can be stacked up to 20 at a time. The chairs are strong yet light (only 8lb), do not stain, and are easily washed with soap and water. They are available in a leather-grained effect, in a range of four non-fading colours (red, grey, pink and green), with coloured metal frames, and they cost in the region of £4 each.

Castleton, Rochdale

Unit seating group 2, 3

Martin Grierson, in collaboration with Michael Farr (Design Integration) Ltd., has designed a group of unit upholstered chairs and tables for Walter Knoll & Co., West Germany. The construction is a straightforward wooden frame with non-sag springing and latex cushioning. Tables and chairs are mounted on square tubular frames. The group was designed for contract work and, however they are ranged, interesting groups are formed.

Herrenberg, Württ, W. Germany



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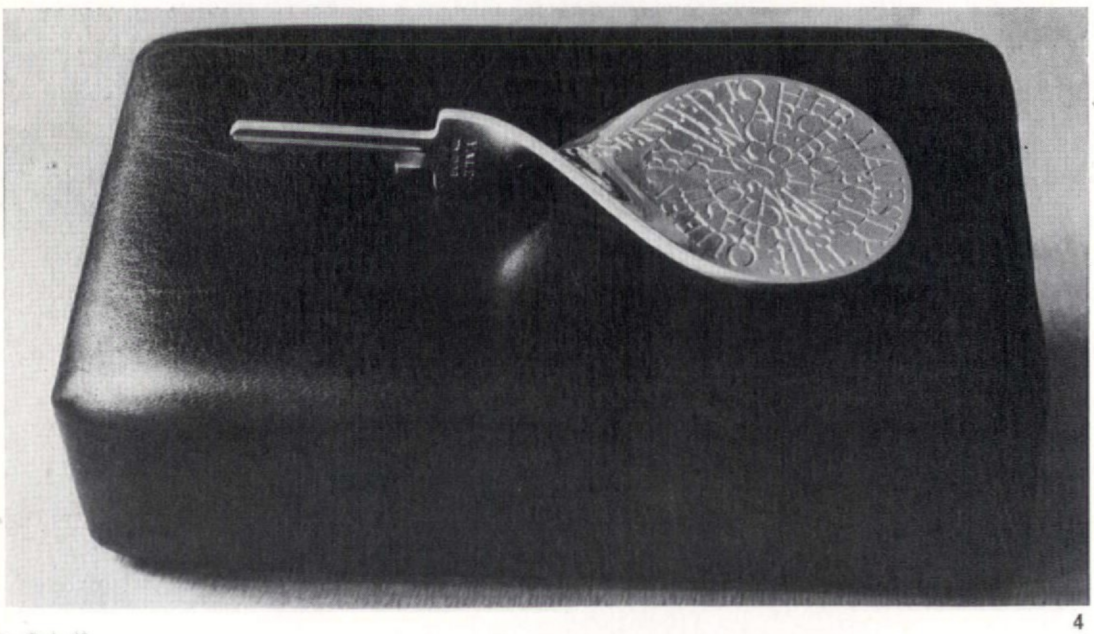

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Ceremonial key 4

A grand master key was presented to HM the Queen when she officially opened the library at the University of Sussex last November. The key was made by Yale & Towne, and can open hundreds of locks at the university. It was designed at the Tony Armstrong Boutique, London, and the silver-smithing was done by Carol Russell and Tony Laws, who also designed the leather box.

Yale & Towne, Willenhall, Staffs

Trade notes

Gontran Goulden

Trade and technical literature competitions

The RIBA and The Building Centre, joint sponsors of the series of competitions for Trade and Technical Literature, have decided after consultation with a number of competitors in last year's competition, that in future the competition will be held every two years instead of annually. The next competition will therefore be in 1966. Conditions will be available next autumn.

Reports on the Building Centre Forum 1963–64 series

Edited reports of six meetings of The Building Centre Forum held during the winter 1963–64 are available from the BC with an additional paper 'Building Plastics' by H. L. Froome-Lewis, ARIBA, and J. C. Ellis, ARICS, who were the BC Travelling Scholars of 1962. The seven papers are sold only in sets at 3*s*. 6*d*., postage included, from The BC, 26 Store Street, W.C.1, or from The Building Centres in Birmingham, Bristol, Dublin, Glasgow, Manchester and Nottingham.

The titles of the Forum papers are (1) Frost Precautions in the Design of Buildings; (2) Timber and Productivity in House Building; (3) The Future of Slate in Building; (4) The Future of Plaster and Plastering; (5) Plastics in Building: Can development work be co-ordinated?; and (6) Fixings for Heavy Cladding.

Progress in colour coordination

Carters Tiles Ltd. have recently made changes in and additions to their Dolphin range of wall tile colours. The Model Range of forty new colours has been selected from B.S. 2660 with the help of Mr H. L. Gloag, ARIBA, of the BRS, and is thus in line with the colour coordination recommendations of the RIBA. Five new mottled colours have been specially designed for the domestic market and the sixteen stock delivery colours together with others which have proved particularly popular have been retained, giving a total of eighty colours. The whole range has been accepted by the CoID for inclusion in Design Index. All tiles more than satisfy the requirement of B.S. 1281 and are made in 6in × 6in, 4in × 4in and 6in × 3in. All sizes have spacer lugs to control joint width. Two good leaflets are available: Carter 1 and 2, from Carter Tiles Ltd, Poole, Dorset.

Tiles for industry

Tiles for use on floors and walls in industry often present a problem and there is a constant search for the perfect product. Langley (London) Ltd. have made a special study of tiles for industrial use and have recently published a booklet on the subject in which a number of special tiles, mainly imported, are described with recommendations for use. Tiles suitable for all food processing factories, heavy industry, hospitals, power stations and breweries can be found here. The sizes, presumably based on metric measure, cover an even wider range than the tiles themselves.

Langley (London) Ltd., 163 Borough High Street, London S.E.1

A new sheet material for roofing and waterproofing

As long ago as 1948 Esso in America laid some trial canal liners made of Esso Butyl rubber sheeting. These liners were removed in 1963. Examination showed that sheet made to this specification would give a life of at least 25 years even under severe climatic conditions. Further intensive work has since been done on this product and the latest test data shows a theoretical life of well over a hundred years. The company however prefers to talk about a life of at least 25 years for the commercial product which is now freely available.

Butyl rubber sheeting is claimed to be unaffected by sunlight, ozone and oxygen, chemicals, soil acids and micro-organisms; physical damage due to rough handling, soil subsidence and root growth. It has high physical strength and flexibility and great temperature stability at both high and low temperatures and very low permeability. The material is very simple to apply and, as only one layer is required for roofing, the speed of application is high. It is claimed that it can be supplied and fixed at the same price as a good quality three-layer felt. At present the sheet is being made in this country by P. B. Cow (Industrials) Ltd.; Nairn-Williamson Ltd.; North British Rubber Co. Ltd. and Storey Brothers of Lancaster.

In addition to the standard product a fire-resisting sheeting is also being developed. Samples representing two methods of fire-proofing have been tested at the Fire Research Station, one was given a rating of External F AA and the other AB.

Butyl sheeting is also suitable for foundation waterproofing. Three booklets are available. Esso Butyl in Foundations, Esso Butyl in Roofing and Installation Recommendations for Esso Butyl.

Esso Petroleum Co. Ltd., Esso House, Victoria Street, London S.W.1

A new dampcourse

The Coal Products Division of the National Coal Board and The Ruberoid Company are combining to produce and market a new type of dampcourse. This is the first time that the Board and a private company have cooperated in this way. The new product is known as 'Hyload' and is made by the Board at Chesterfield. It will be marketed by the Ruberoid Company from Brimsdown, Middlesex. Hyload is made of pitch-polymer and inert fibres. While being suitable for dampcourses in all types of building it has the added advantage of great resistance to compression and shear. It will thus be of particular interest in engineering work. The material will be sold in appropriate widths for 11*s*. 3*d*. per square yard.

National Coal Board, Hobart House, London S.W.1

Garages by new process 2

A new range of garages made from pressed concrete parts is announced by Banbury Buildings Ltd. Pressed concrete is claimed to be stronger and to provide a better finish than vibrated concrete. The panels are manufactured automatically and are entirely untouched by hand, just like the best food products. Alternative types of door are available. The result is neat and tidy although for tall people the overall height is of 6ft 10in when using a flat roof, and a lift-up door gives headroom of only about six feet.

Banbury Buildings Ltd., Ironstone Works, Banbury, Oxon.

Painted aluminium sheet in 50 B.S. colours

The Imperial Aluminium Co. announce the installation of a new wide strip coating line at its Swansea works. The plant which is the most advanced of its type in Europe can handle strip 60in wide. It is claimed that the coloured sheet will withstand all the normal forming methods used with plain metal. The company does not state how the choice of colours from the B.S. range was made. Colour-sheet is available flat or in coil with a continuous coating on one or both sides or with a different colour in each side.

Imperial Aluminium Co. Ltd., PO Box 213, Witton, Birmingham 6

New jointing system for cladding panels

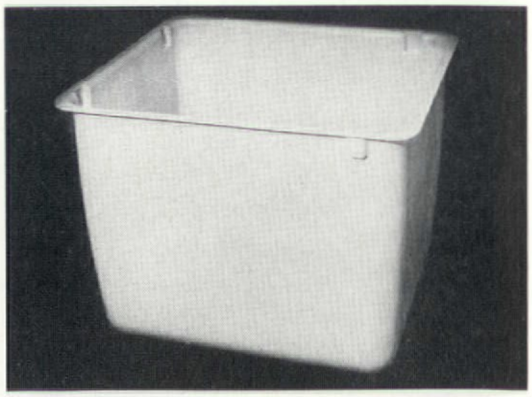
The patented EFAB system of sealing joints between concrete cladding panels uses high quality Neoprene. The Neoprene is manufactured in the form of tubes. The air is removed from the tubes which collapse and take the form of a flat tape. Having selected a tube of appropriate diameter the material is introduced into grooves provided in the cladding panels and the seal is broken, allowing air to enter. The tube tries to regain its original shape and thus presses against the faces of the groove and forms a seal. Cross-over EFAB tubes are used for both horizontal and vertical joints. The vertical grooves in the cladding units are slightly offset from the horizontal ones and thus allow the tapes to pass each other. The manufacturers claim that they have carried out extensive tests using production concrete panels and that the results have been completely successful.

Redfern's Rubber Works Ltd., Hyde, Cheshire

Plastic water storage cisterns 1

Osma Plastics Ltd. are now producing water storage cisterns of polyester/glassfibre in two sizes. No. C25 has a capacity of 25/15 gallons and a trade price of 65*s*. 6*d*., the larger No. C30 has a capacity of 30/20 gallons and costs 73*s*. 6*d*. These cisterns are rectangular on plan and are light and easily handled; they are moulded hot, a new process which ensures a smooth finish on both sides. Cisterns incorporate a moulded-in waterline. Matching polyester/glassfibre lids are available. Every Osma cistern is guaranteed for ten years.

Osma Plastics Ltd., Rigby Lane, Dawley Road, Hayes, Middlesex



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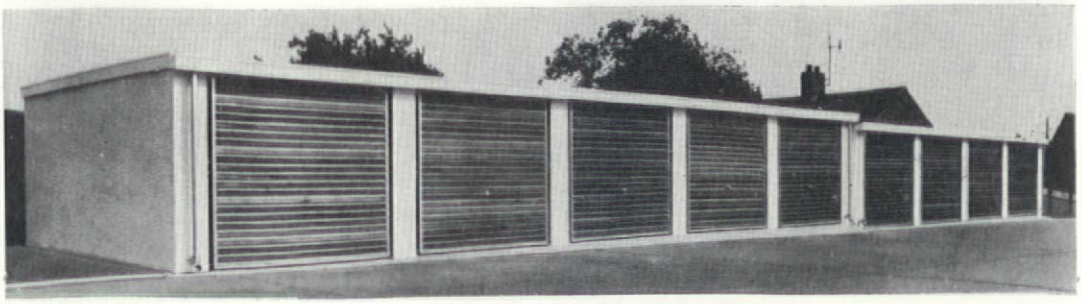

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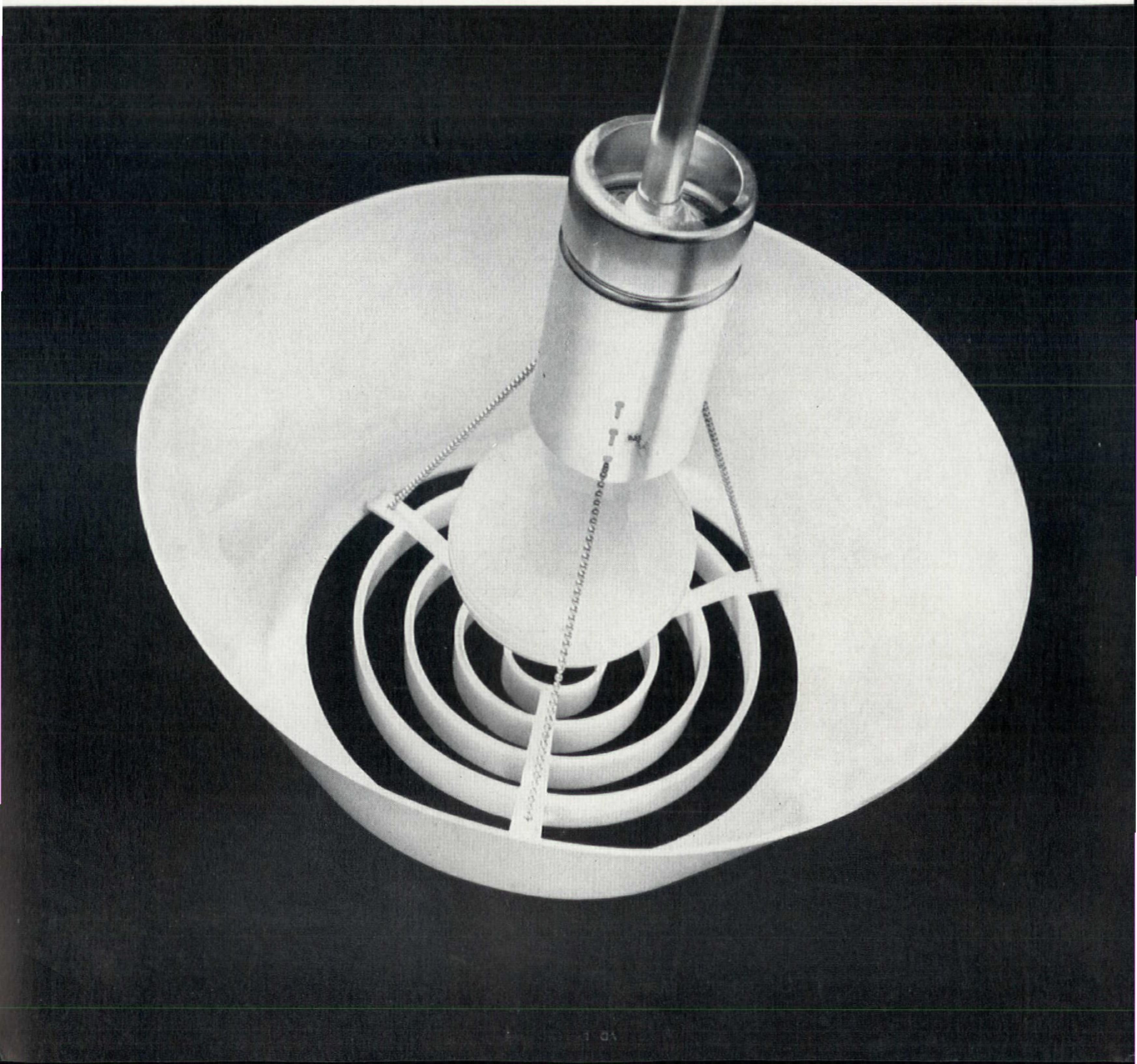

PROBLEM

How to decorate and protect these Multi-Storey Flats

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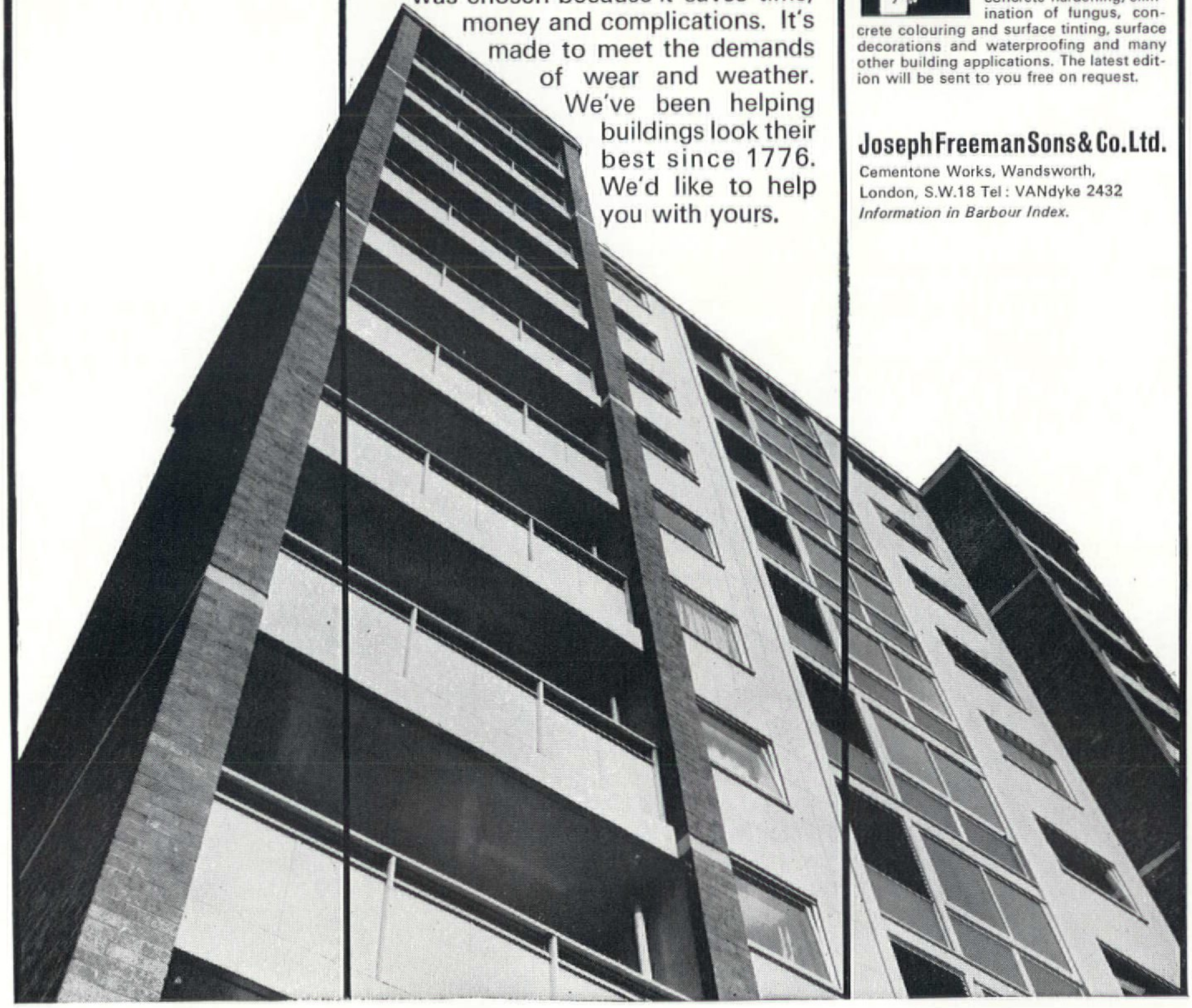
Cementone Number Seven was used for the balconies and staircases on these attractive flats at Huddersfield. The Borough Architect and Planning Officer is J. Blackburn, F.R.I.B.A., Dip. T.P., M.T.P.I. **Cementone Number Seven** was chosen because it saves time, money and complications. It's made to meet the demands of wear and weather. We've been helping buildings look their best since 1776. We'd like to help you with yours.



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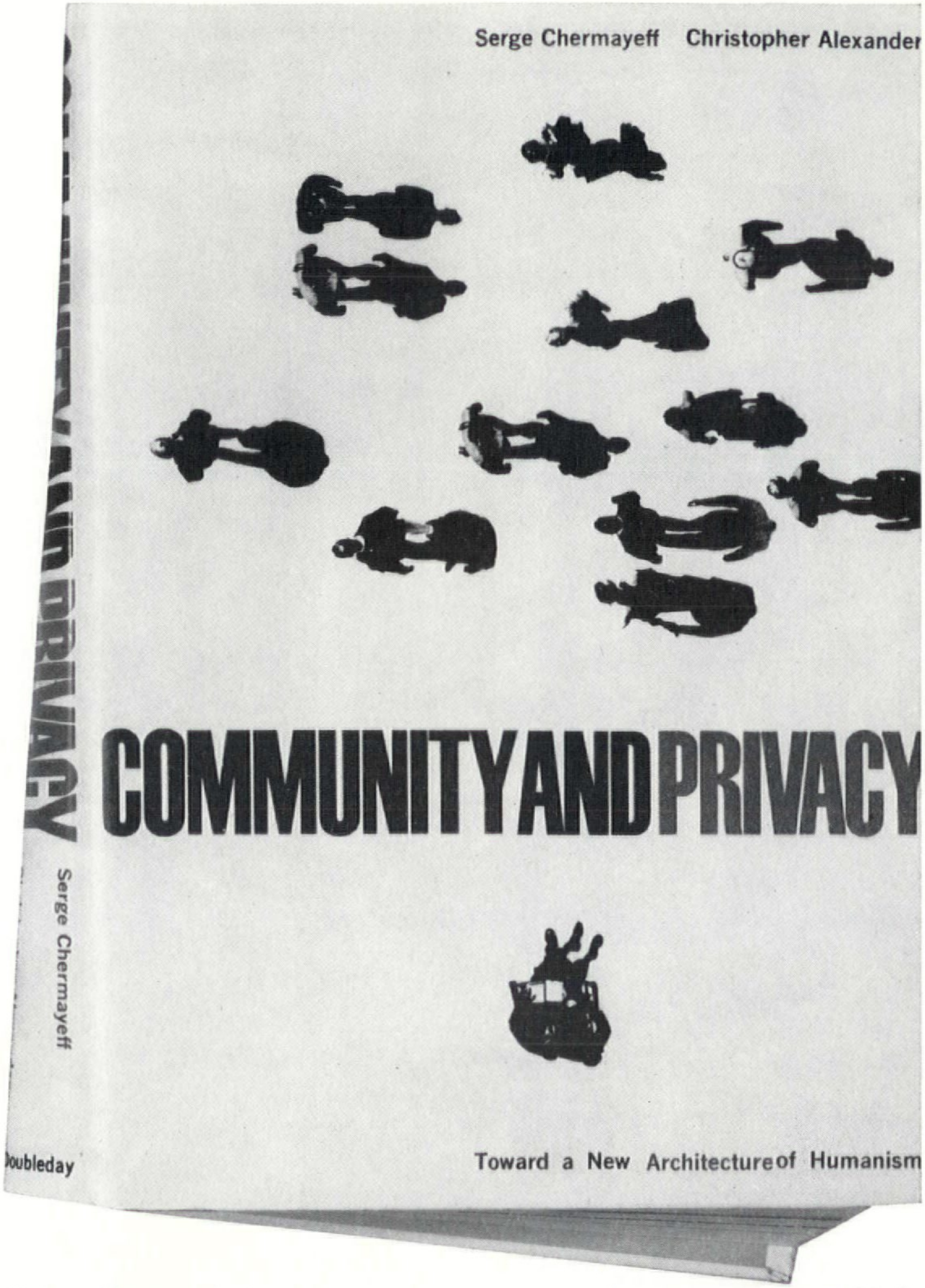
Joseph Freeman Sons & Co. Ltd.

Cementone Works, Wandsworth,
London, S.W.18 Tel: VANdyke 2432
Information in Barbour Index.



Modern architecture and city planning are inflammatory topics, yet few of their detractors or defenders recognize the full dimensions of the problem. Technology and urbanization are annihilating man's physical environment as we have known it. The countryside is vanishing; so are the sharply defined patterns of older cities. Phenomena that have become part and parcel of modern life—great numbers of people crowded together, loud noises, vast complexes of machinery, television, enormous dangerous trucks and cars—are destroying the sense of community and making privacy, intimacy and solitude increasingly hard to achieve. The job of the city planner and the designer is to create an entirely new environment in which man can once again find himself in his own dimensions.

It is to this job that the authors of this book address themselves. The book is not a plea for the old way of life, but an attempt to reconcile the human need for community and privacy that was satisfied by the old world with the new and different context of mass technology and high-density urbanization.

To this end, Chermayeff and Alexander define a kind of city house and an anatomy of city planning in which a series of clearly articulated separate domains provide for all degrees of community living and of privacy.

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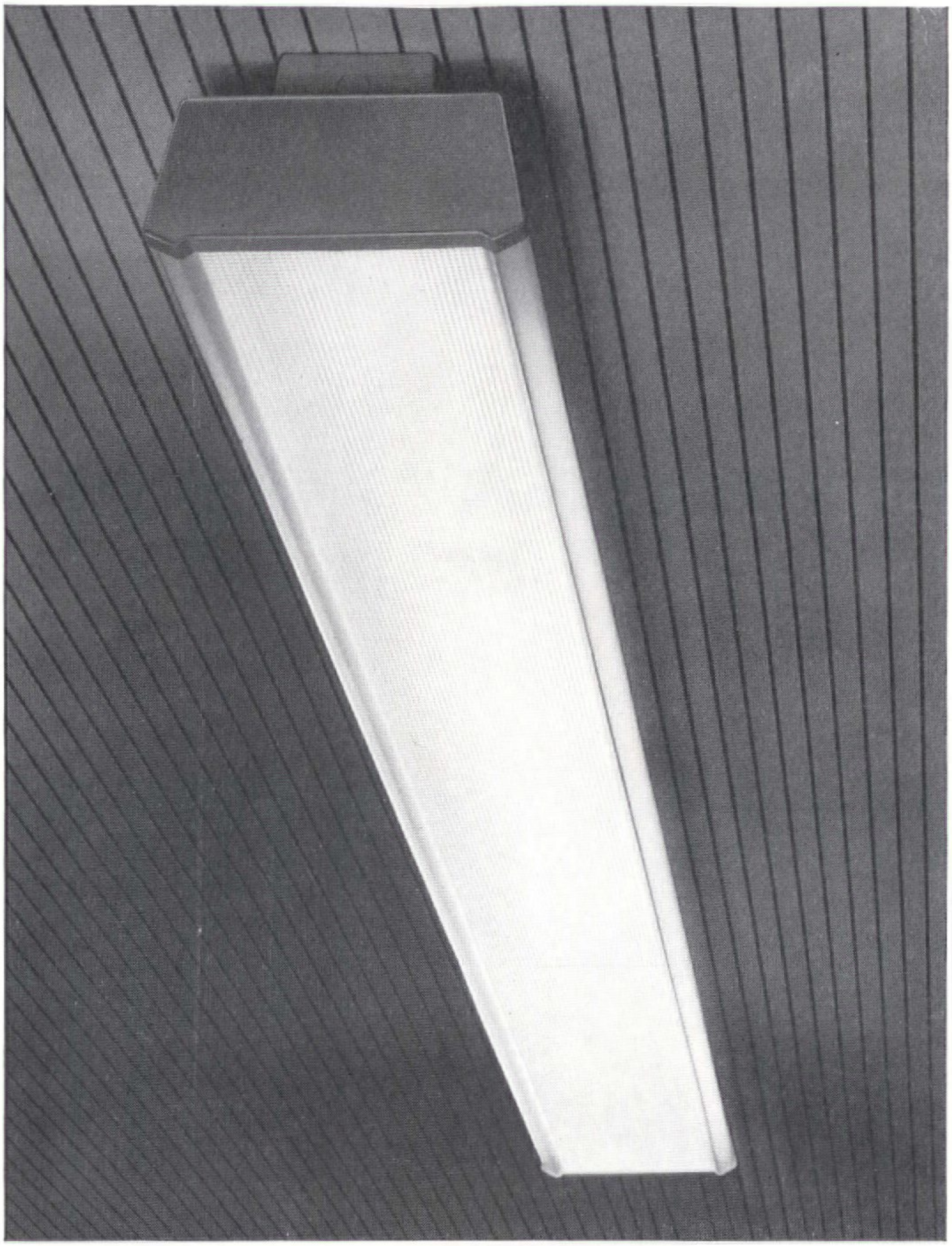

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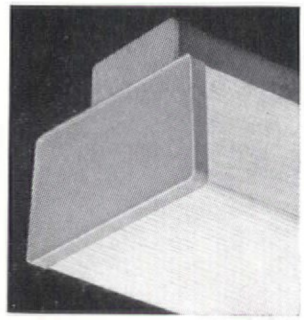

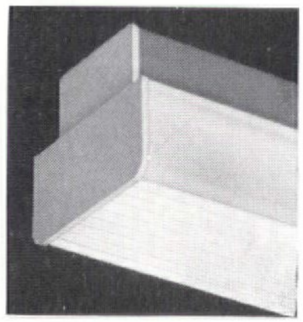

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8 OTHER ATTACHMENTS

In addition to the prismatic diffuser, the Atlantic 3 range features 8 other attachments that have been designed for use on single and twin-tube 4 ft., 5 ft. and 8 ft. fittings.

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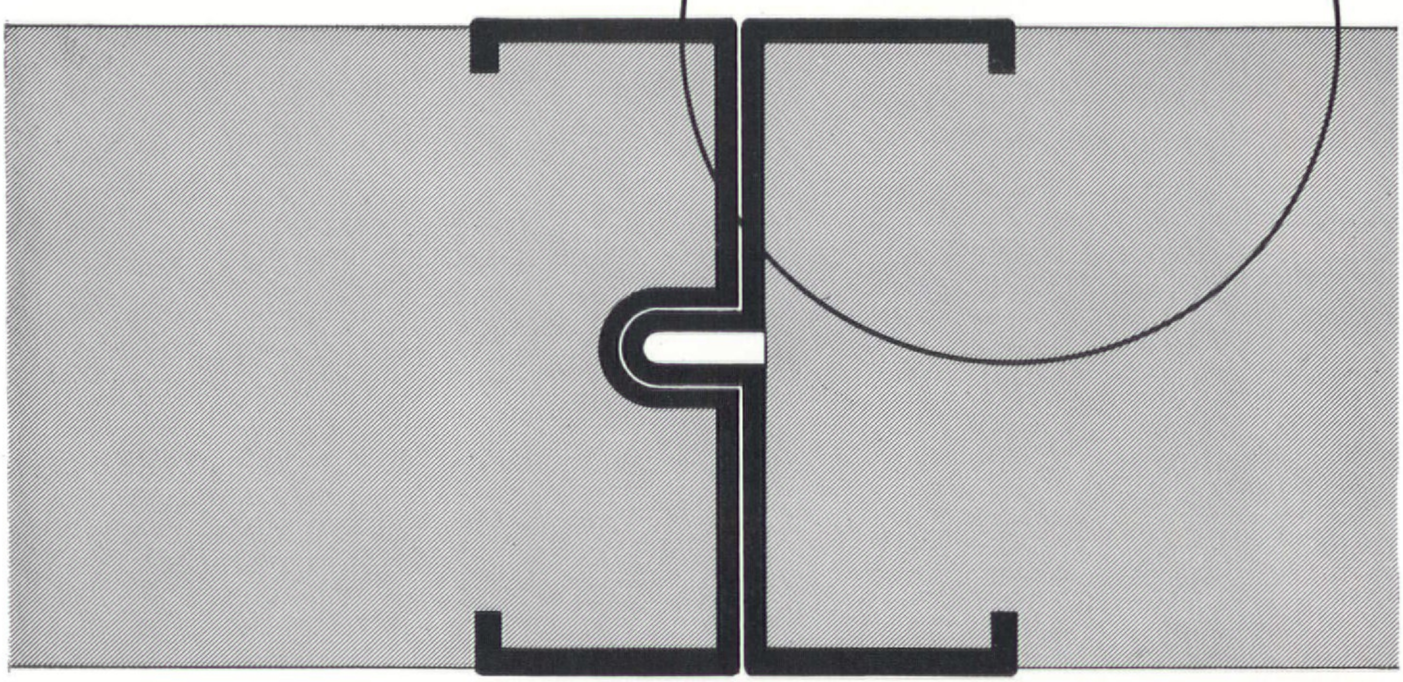

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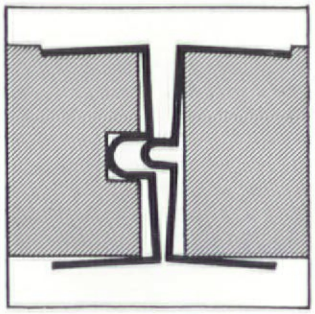

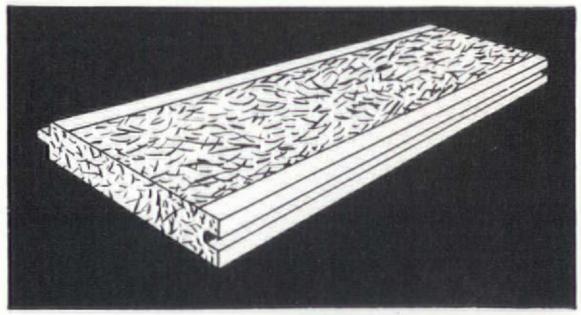

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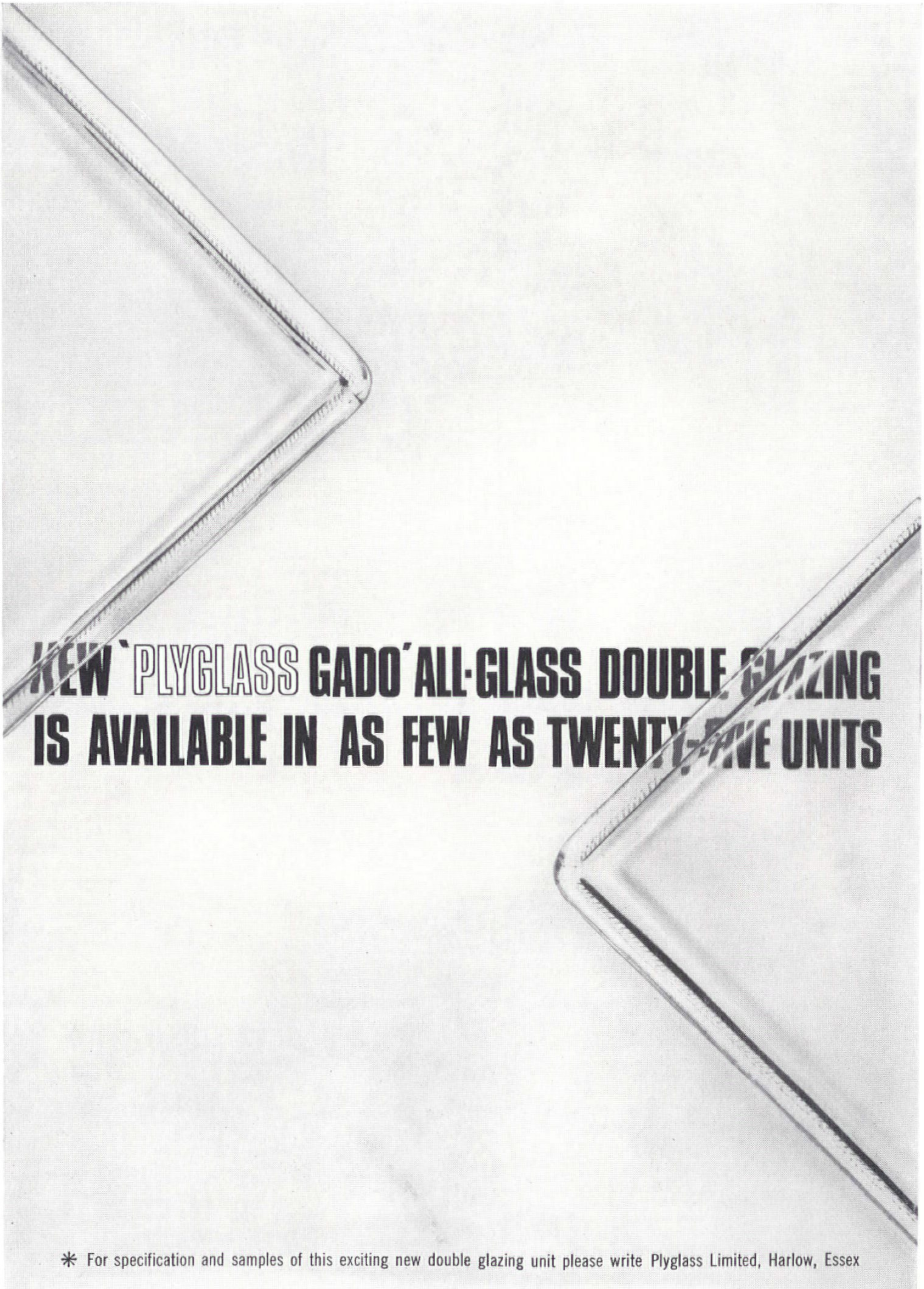
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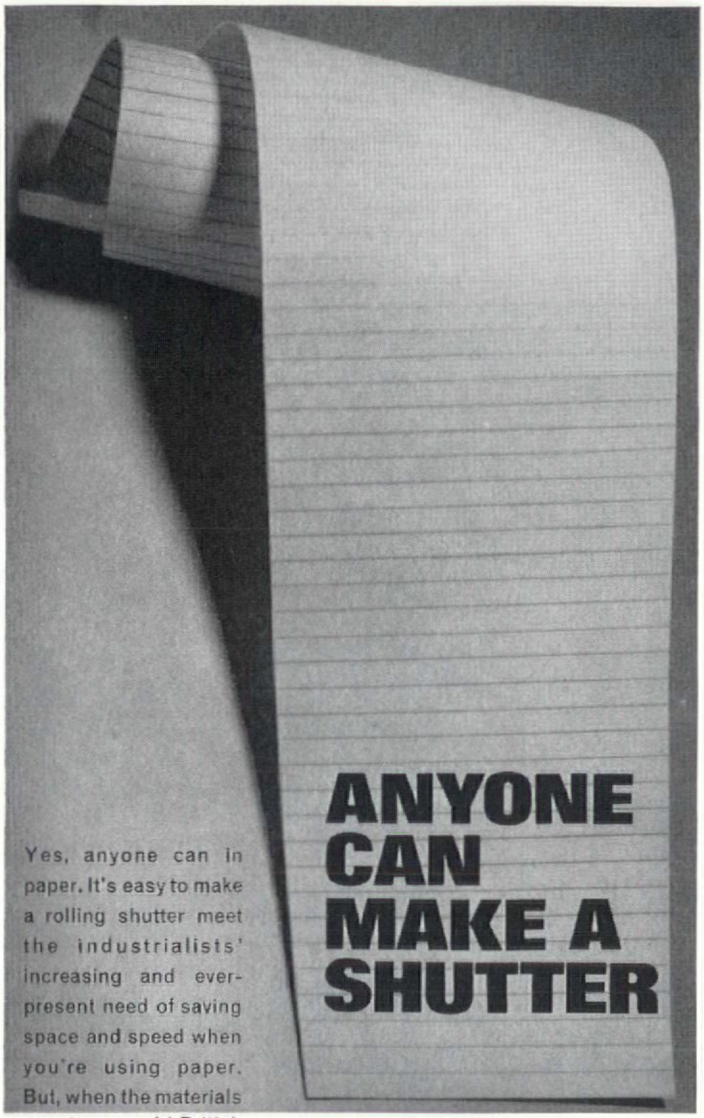

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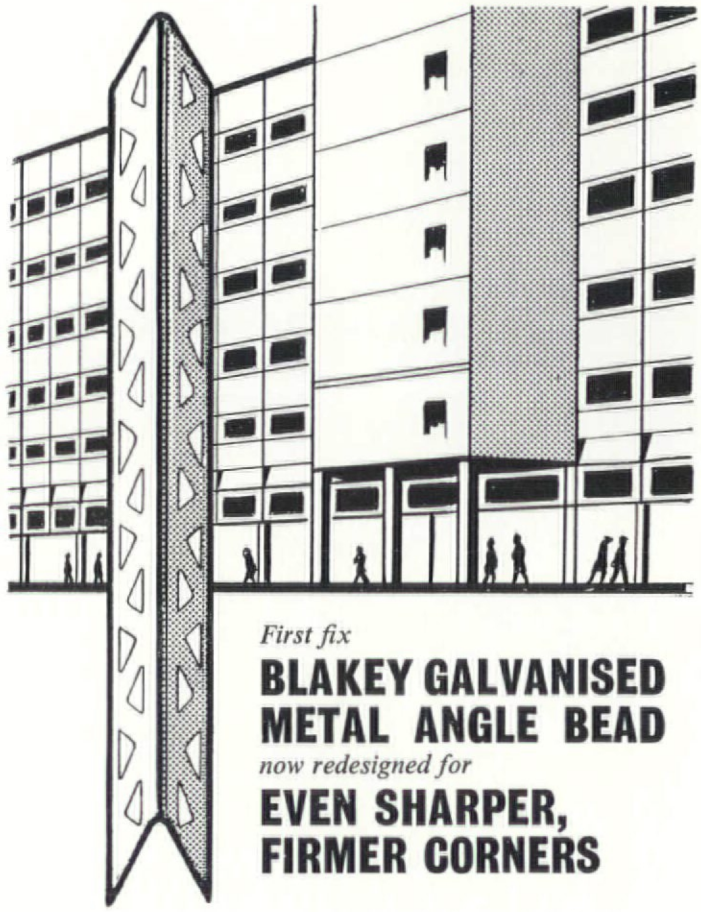

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Almost every house, office, hospital etc., has plaster covering its interior wall surface. At every corner, abutment or arris, in doorways and window-openings the plaster will require angle beading to strengthen the corner. The knowledgeable architect will choose for this job the new **Blakey** galvanised metal angle bead (Patent No. 797/887).

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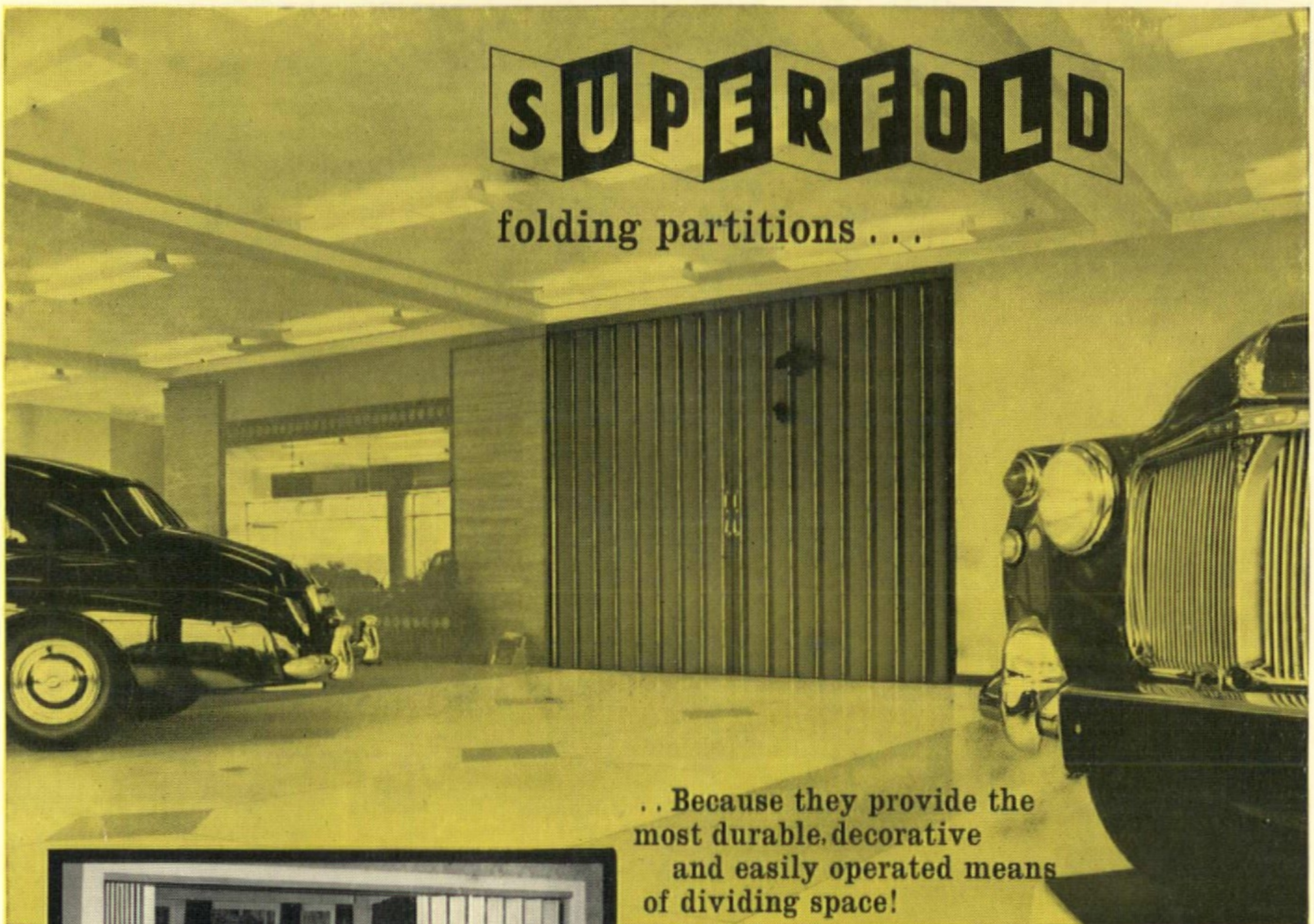
AD Page 85/Code 91

More and more architects are specifying



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