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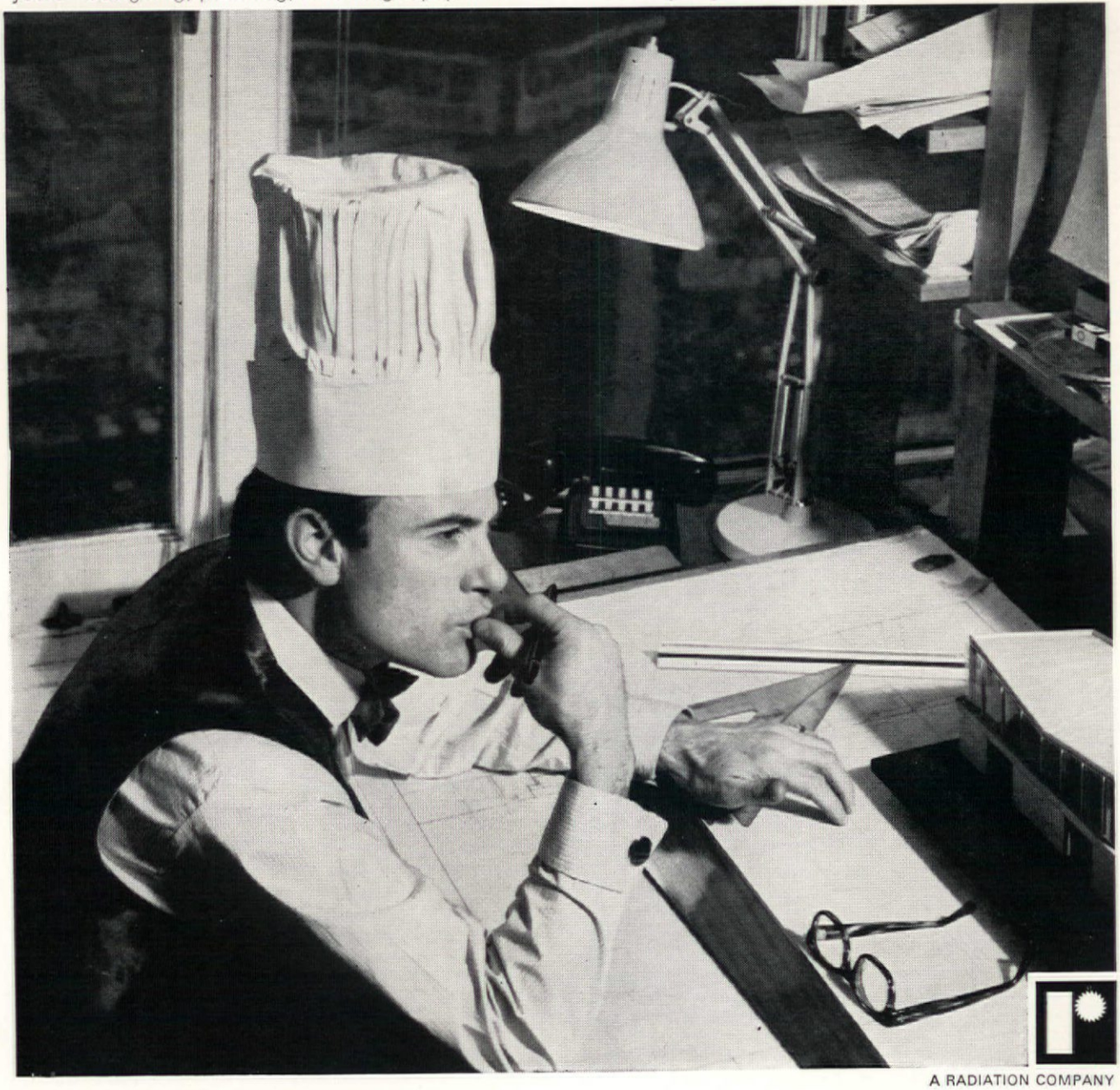

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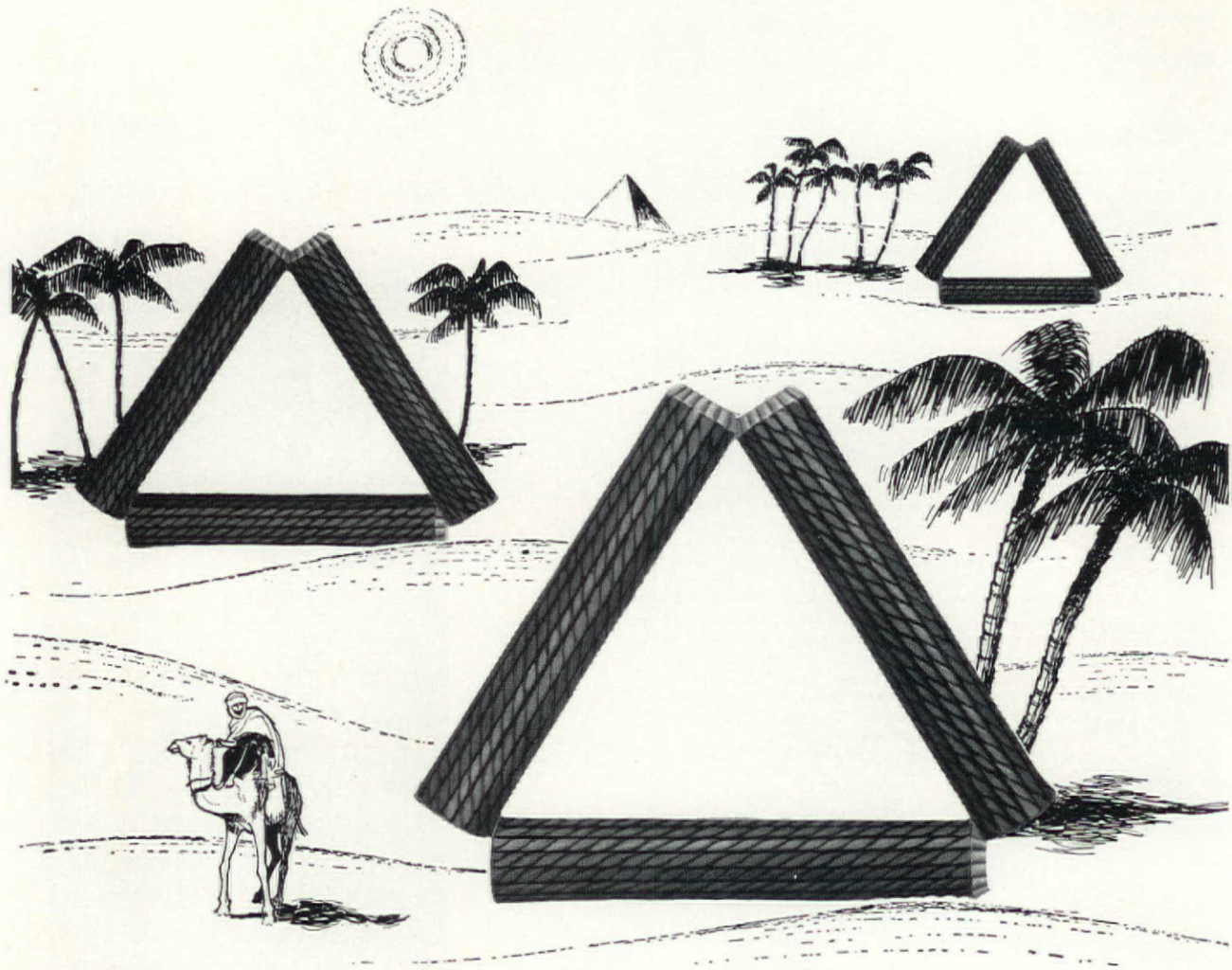

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Book notes

Town planning in London: *The eighteenth and nineteenth centuries*

By Donal J. Olsen
Yale University Press. 90s.

Dr Olsen has chosen a slightly misleading title for his fascinating study: this is rather a study of estate development and management as practised by London landlords, rather than 'town planning' as we understand that much abused phrase today. He shows how the aristocratic landlords of London such as the Bedfords and the Grosvenors, and the professional men who ran their large estates, were concerned with the more circumscribed town planning problem of how to create and maintain desirable middle-class neighbourhoods of soundly built houses, which would be taken rapidly by well-conducted tenants.

He uses his detailed research into the records of the Bedford Estate and the Foundling Hospital to show the influences that shaped Georgian and Victorian London: the personality and artistic prejudice of the landowner himself, the skill of the agent in producing an attractive and workable plan, the degree of care exercised by his surveyor in supervising the builder's activities, and last, but far from least, the scrupulousness and competence of that same builder. If the builder, like James Burton, built less well than the estate specified, his houses might degenerate into slums; if like Thomas Cubitt, his ideas were too grand, his developments would hang fire. And above all, was the great imponderable, the unmanageable, the trend of fashion, which in this case seduced desirable tenants away to the newly developed Belgravia and Bayswater.

It is a pity that he does not reveal more of the personalities involved, particularly that of Christopher Haedy, the dedicated Bedford auditor, whose annual reports contain fascinating analyses of contemporary social standards. It was his partnership with the cheeseparing seventh Duke which was largely responsible for restoring the fortunes of the encumbered Bedford estate, and more light on this would be revealing.

This is not only a book for the architectural historian, there is also much to interest the modern town planner. Possibly the most important conclusion is that planning, like politics, is the art of the possible, and people cannot be tempted or forced to live in uncongenial surroundings. It was the unfashionableness of Bloomsbury, not its lack of planning which led to its sad decline!

Hermione Hobhouse

Seaport: architecture and townscape in Liverpool

Quentin Hughes. Percy Lund Humphries. 50s.

The uniqueness of Liverpool's character has been caught admirably in this richly illustrated and well written and documented book. The city's pioneering spirit in the technical, commercial and social field permeates the pages. Quentin Hughes, with his photographers Graham Smith and David Wrightson, takes us into dockland, the downtown area, the shopping streets, St George's Plateau, the University and Cathedral precinct, the Everton slums and the parks; he concludes with a brisk chapter on Arrivals and Departures which ranges from a description of the Liverpool–Manchester passenger railway—the first in the country—to the projected elevated river motorway.

All the old favourites, like the Bluecoat Chambers, Hartley's Albert Docks, Ellis's Oriel Chambers and 16 Cook Street, Packman's St George's Church, Everton, The Albany and St George's Hall, make at least one appearance, together with a large supporting cast of less well known but equally interesting buildings, like the flambuoyant Art Nouveau pubs and the first prefab flats. The process of selecting what goes in and what must be left out must have been painful but there are some surprising omissions like Rodney Street, the city's best Georgian street and the Harley Street of Liverpool

Not surprisingly, the most extensive and also the best chapter is that on the River and the Docks. Here the simple functionalism of the monumental warehouses, the impressive scale of the river walls and the convincing details of paving, bollards and railings make the most direct appeal.

This is a timely book as Liverpool is about to embark on an extensive urban renewal programme which, it is true, will erase the Everton slums but conserve its great architectural heritage brought to life in this splendid urban character study.

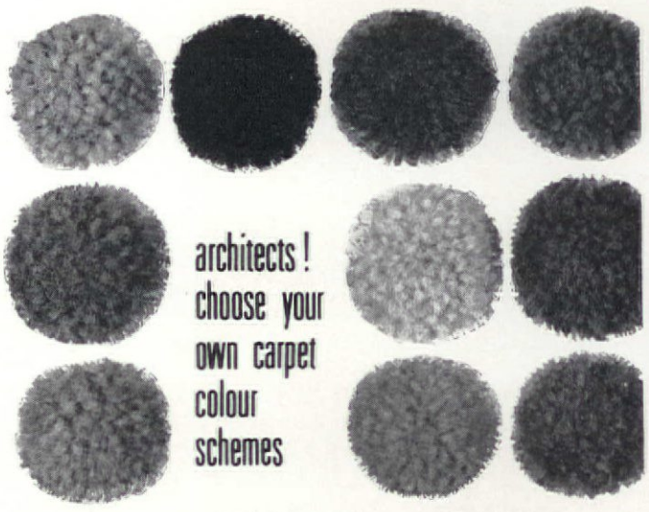
Walter Bor

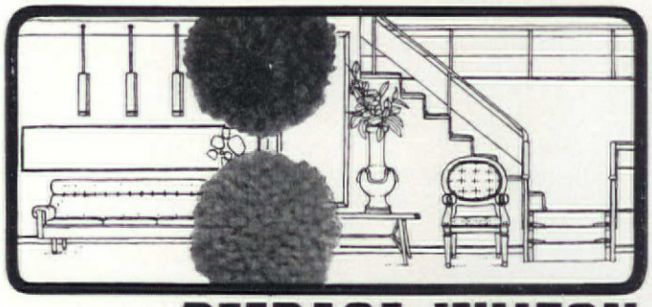
Essentials of structural design

Anthony Hoadley
John Wiley & Sons. 87s.

This book is essentially a designer's handbook and the author directs his attention particularly to the engineer or architect whose job it is to produce working designs and details for basic and straightforward framed structures such as make up the bulk of the output of the profession. It does not deal with more sophisticated and specialized structural problems nor does it attempt to give more than a basic outline of structural analysis. The major part of the work is given

continued on page AD7





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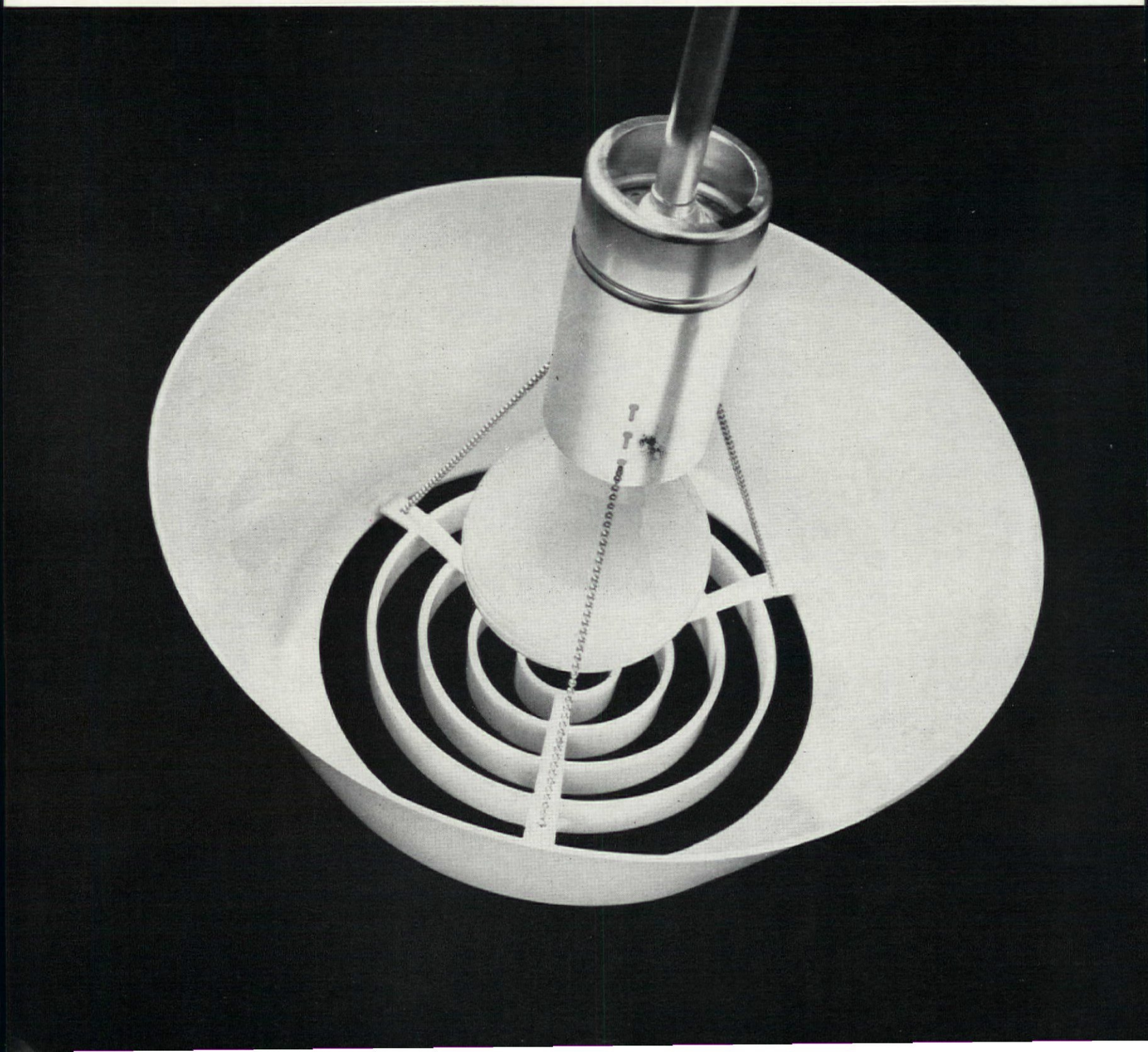

over to the design of individual members or components, and their connections.

The first chapter contains a résumé of structural analysis and is followed by chapters on deflection and loading. This section occupies only one fifth of the total contents of the book. The following two-fifths are devoted to structural steelwork, which is handled and presented particularly well and in considerable detail, although excluding the use of tubular work. The remainder of the book deals in equal proportions with reinforced concrete and structural timber. There is no section on prestressed or precast concrete.

By presenting twice as much space on structural steelwork as is given on concrete or timber, the author reflects the extent to which this material is given preference in building in the USA.

One would not particularly recommend the book for its section on concrete, principally because of its limited scope, but also as it is based on the ACI code, and omits any reference to prestressed or precast concrete. On the other hand its sections on structural steelwork and timber are well presented and contain much valuable information.

P. R. Paul

Building for industry

Vol. 1. Plans, structures and details
Vol. 2. International examples.
Walter Henn.
Iliffe Books Ltd. £11.

The encyclopaedia can provide vital background information on a specific subject but its scope is generally superficial and limited to the field covered by the introductory passages of the comprehensive specialist works. Professor Henn has to some extent overcome this defect by the compilation of an awesome mass of dimensional data, constructional details and structural systems. However, the subject is dealt with solely by example, appropriate enough for certain basic details but totally inadequate for those who seek to provide a solution based on a thorough understanding and critical evaluation of the problem. The value of the work would have been increased immensely giving fewer ready-made answers and stipulating certain cogent questions.

Volume 1 contains 3000 diagrams covering a wide range of information in metric dimensions, and an index and conversion table are two unpardonable omissions.

Volume 2 illustrates 140 typical industrial buildings, of varying standards of design, by 610 photographs, some splendid but many wasted by the lack of relevant plans.

Alexander Pike

Principles of hospital design

Hugh Gainsborough and John Gainsborough
Architectural Press. 45s.

A new publication dealing with the principles of hospital design is naturally of interest to both architects and medical planners.

The major part of this book, however, is devoted to a detailed consideration of ward planning and design. Many post-war ward plans are analysed, and the relative advantages of differing forms of ward design are compared. Most of the important factors that influence ward planning are thoroughly studied; and these include the basis of the organization and relative efficiency of the ward, the problems of cross infection, nursing observation and the implications of interim care and progressive patient care in the design of wards. From this analysis the authors draw their conclusions and put forward the type of ward plan that they consider to be most suitable.

The authors devote sections of the book to the design of paediatric and maternity services, operating theatres, diagnostic departments, out-patient areas and accident and emergency departments. The planning of each of these departments is analysed, though in less detail than that devoted to the planning of wards.

In addition to the sections of the book devoted to the design of individual areas and departments, the organization and planning of the hospital as a whole receives some consideration.

Hospital planners are becoming increasingly aware of the need to design new buildings with the future clearly in mind, and to allow for growth in the hospitals size and for changes in its organization. Though these fundamental issues are referred to in this book, the design techniques required to deal with these important problems are of such significance to the future of our hospitals, that one would have anticipated fuller consideration in a book dealing with the principles of hospital design.

This book should certainly be studied by hospital planners, but it is perhaps rather a disappointment to find important aspects of hospital design receiving such limited coverage.

Ivor Berresford

Kunst am Bau heute. Art and architecture today

Fritz R. Barran. Julius Hoffman. Stuttgart

Sculpture in, on or near buildings, cast concrete or brick reliefs and screens, murals, mosaics, decorated glass—all these and more, form the subject of this book, which is easy on the eye because it mainly consists of labelled photos, with short technical notes in several languages at the end.

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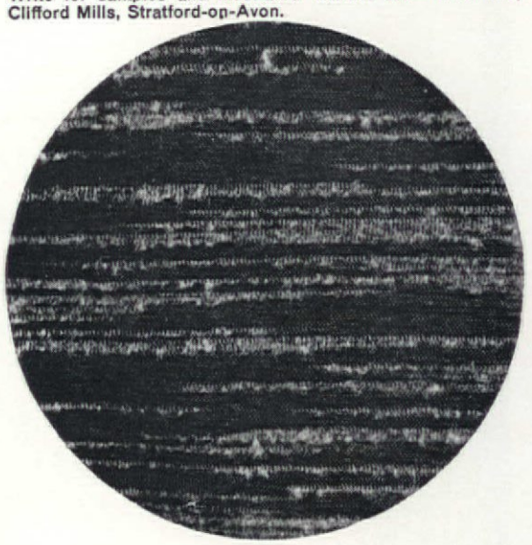

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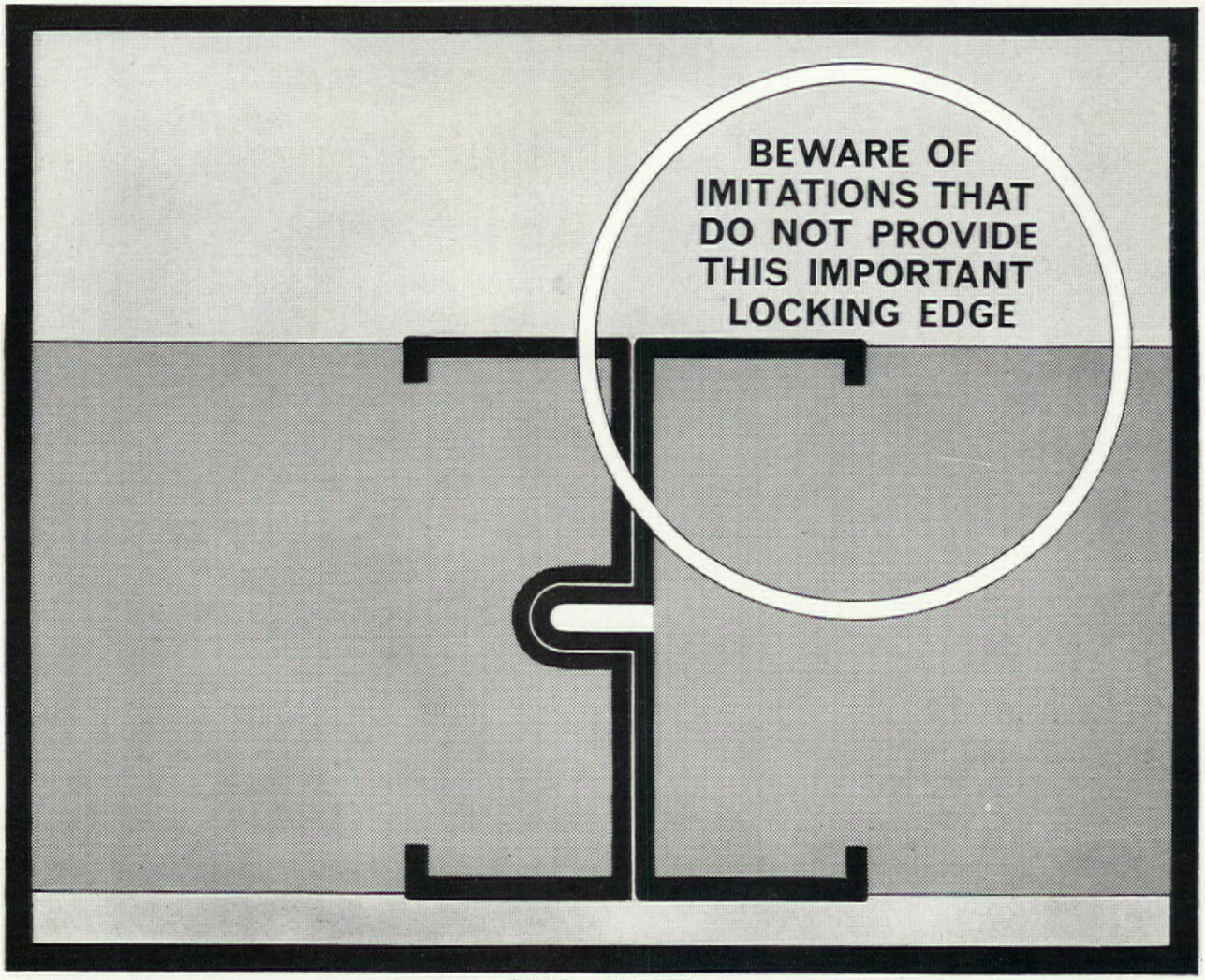

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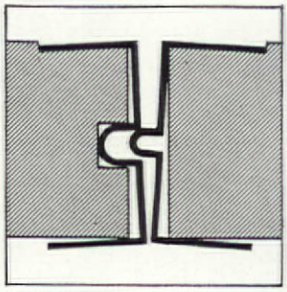

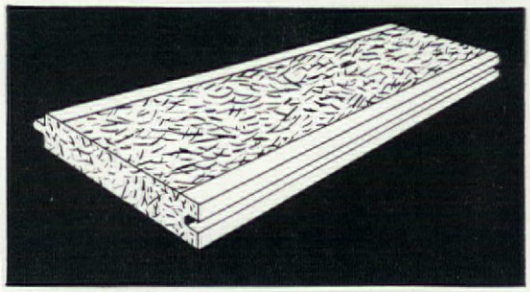

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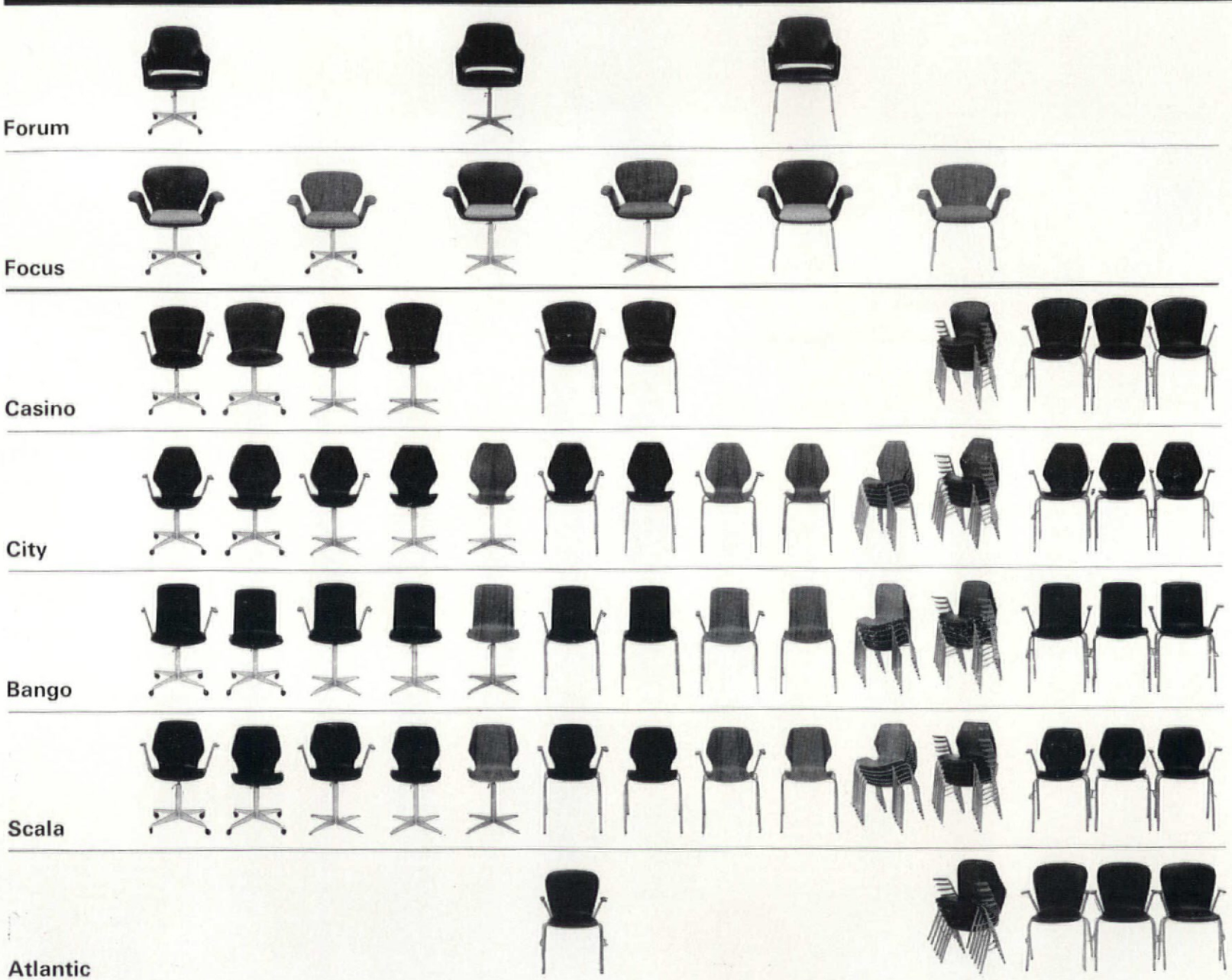

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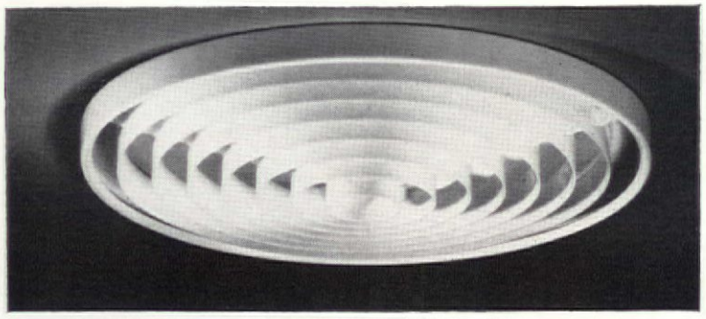

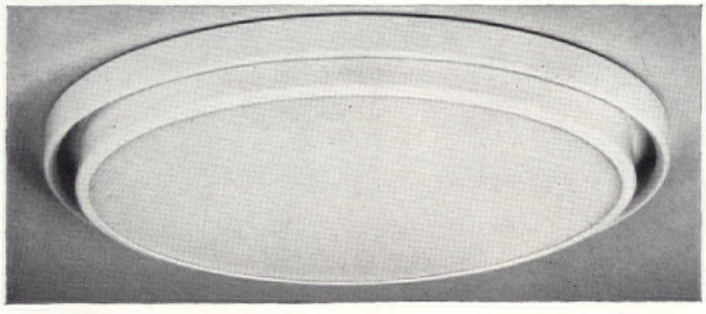

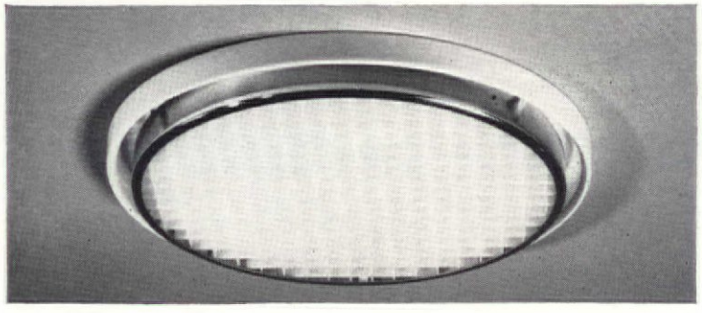

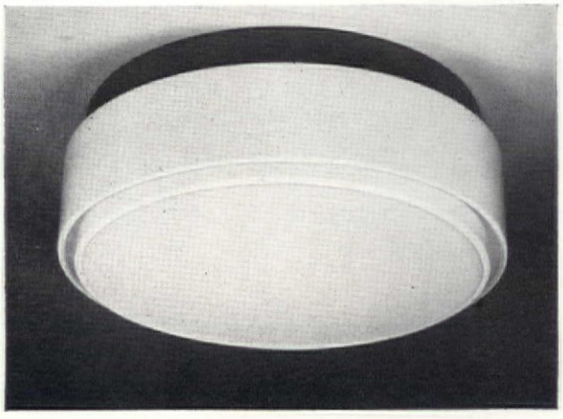

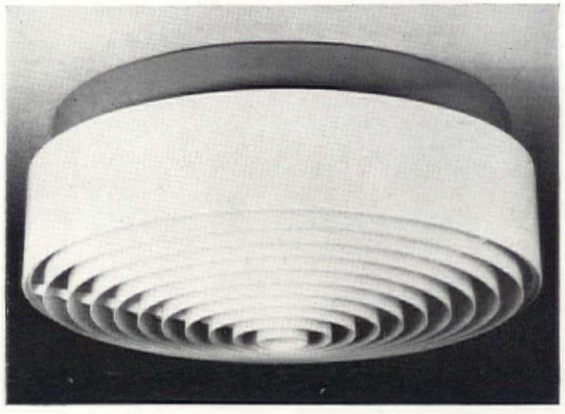

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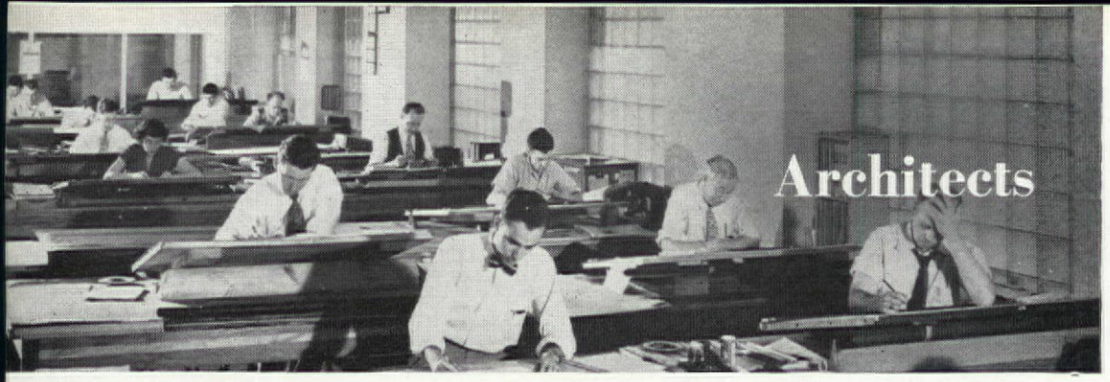

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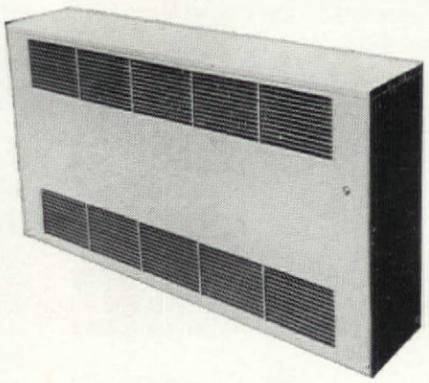

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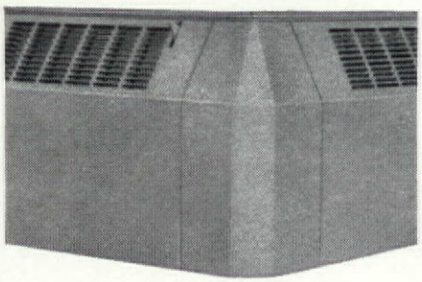

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As one of the largest and most progressive organizations in the fields of heating, cooling, ventilating and air-conditioning in the United Kingdom; spreading warmth and goodwill is a Biddle tradition. They have made their presence felt in the comfortable conditions prevailing in many of the world's largest and most famous structures. Coventry Cathedral, Shell Centre, South Bank, London Airport, Royal Festival Hall, Houses of Parliament, British Museum, Old Bailey Courts and the G.P.O. Tower telephone exchange are just a few of the buildings in the U.K. where Biddle installations are in operation. The wide experience and resources of the Biddle organization are combined with imagination. Research and Development Engineers are continuously engaged in projects designed to meet the needs of modern industrial and commercial building for the best heating and ventilating equipment. Your heating problems of tomorrow could be solved by a call to Biddle today.

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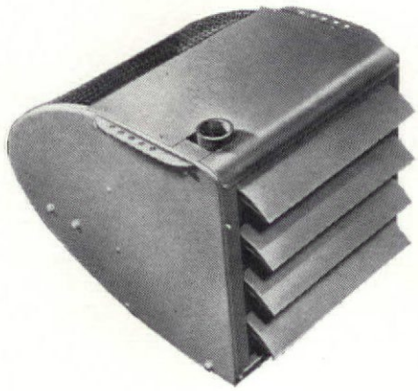
good reasons for specifying Biddle Heating Equipment (write in and you can have plenty more)

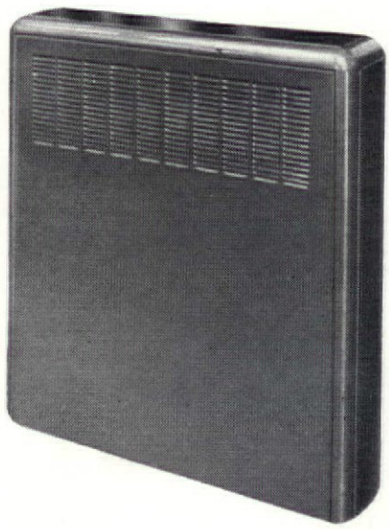
uniflow



The modern styling and recognized efficiency of Biddle Uniflow Unit Heaters has made them a popular choice for many new factories and industrial organizations. Uniflows are available as horizontal or downward discharge units for use with low, medium and high pressure hot water, low or high pressure steam. The horizontal unit is ideal for creating a flow of warm air along exposed walls, into narrow aisles and blanketing large doorways. The downward unit is particularly useful in projecting heat downward, regardless of obstacles which would impede the airflow from a horizontal unit.

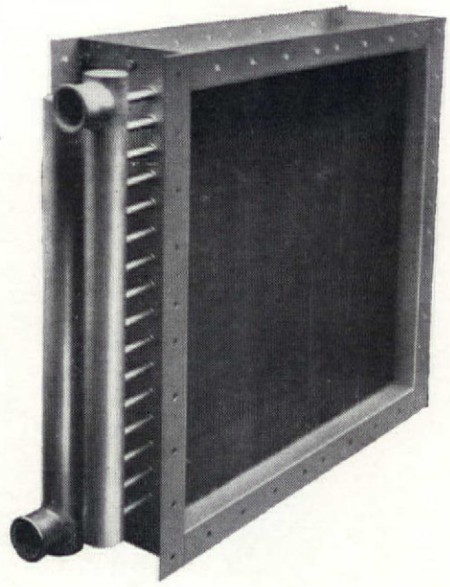
The Biddle Uniflow puts heat just where you want it.

vectair



Vectairs are the last word in convection heating. Available as floor, wall, recessed and semi-concealed units. These outstanding convectors have heating elements that are unique in construction: fins and tubes are mechanically bonded, metal to metal, ensuring the most permanent and efficient heat transfer made. Vectairs are available in a comprehensive range of sizes for hot-water or steam systems – conventional or small bore.

coils



Standardized Biddle Coils have been designed to meet all the requirements of modern air heating and cooling equipment. These coils are of welded construction and are tested to 400 p.s.i.g. air under water for a working pressure of 200 p.s.i.g. Over 60 fin and tube combinations are available in standard casings ranging from 12″ × 12″ × 1 row to 25 ft.² nominal face area by eight rows deep. Two or more coils may be mounted side by side, one above the other, or both methods combined.

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On cooling coils having plus fins, face velocities of np to 600 ft./min. are possible without moisture carry-over.

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Biddle Standardized Coils are available in four main types suitable for use with the normal heating and cooling mediums. Literature giving details of construction and dimensions is available from our offices or representatives.

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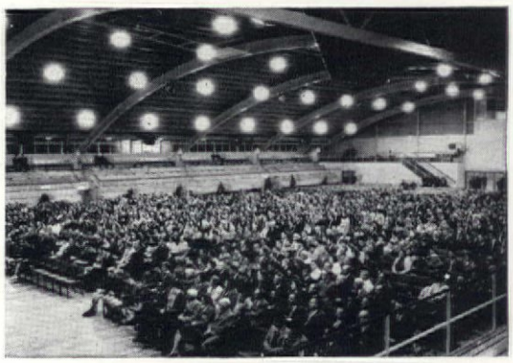

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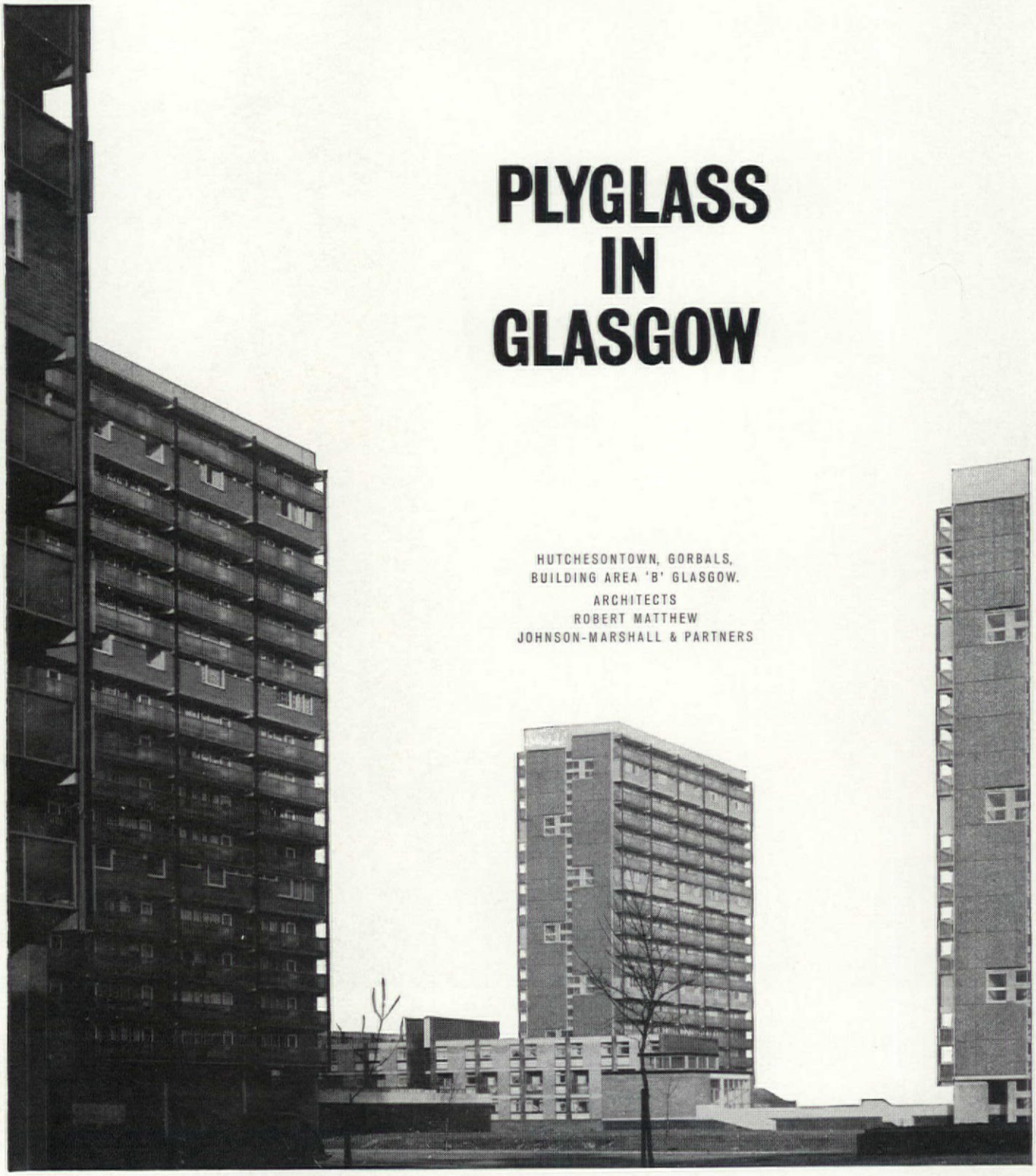

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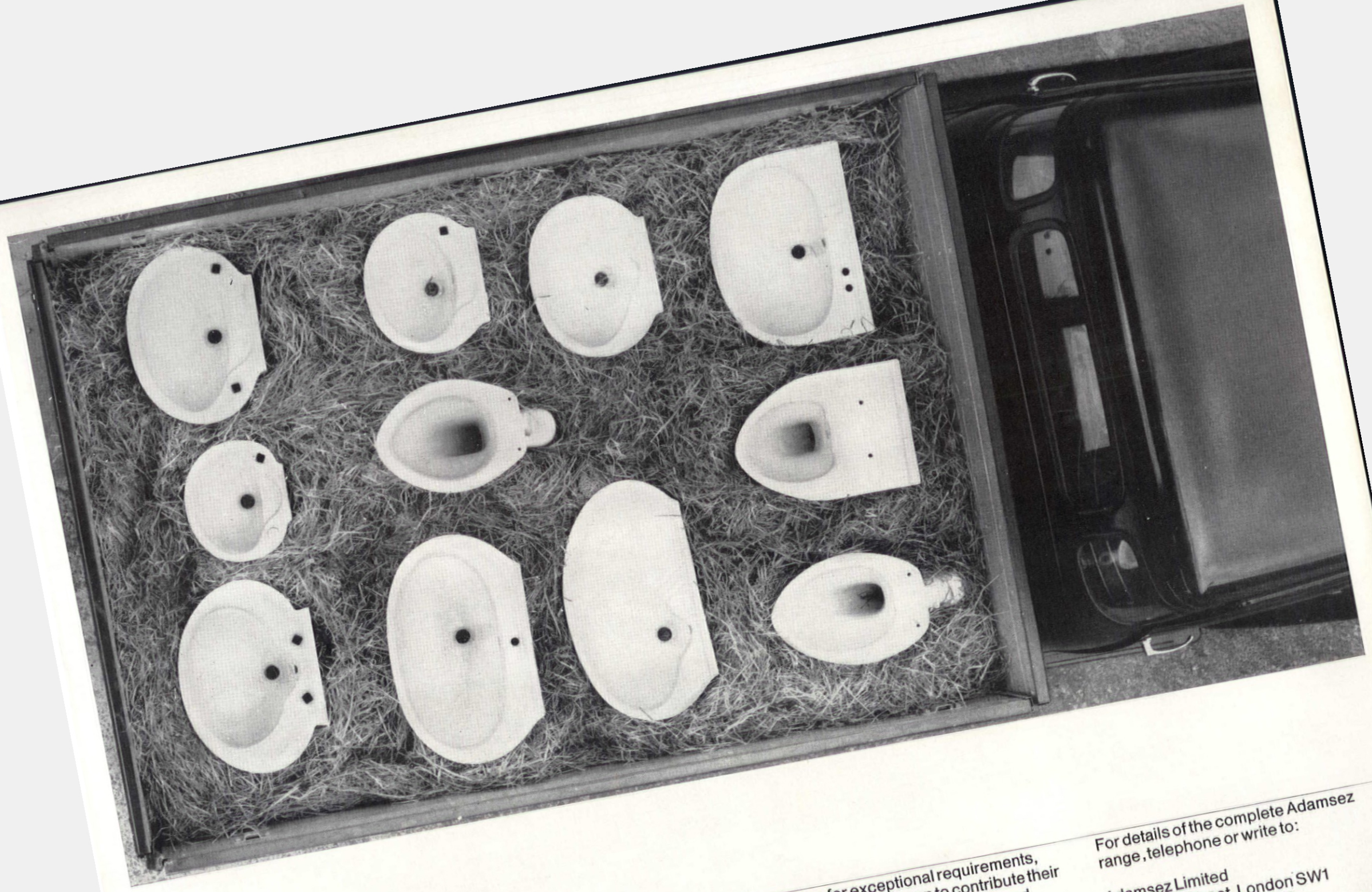



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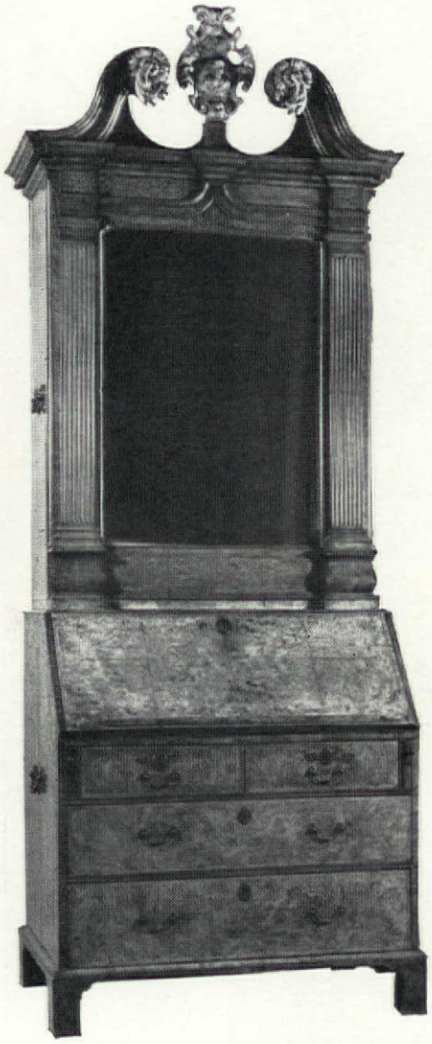
Bureau Cabinet, Walnut inlaid, Circa 1700
by Samuel Bennett. Victoria and Albert Museum.





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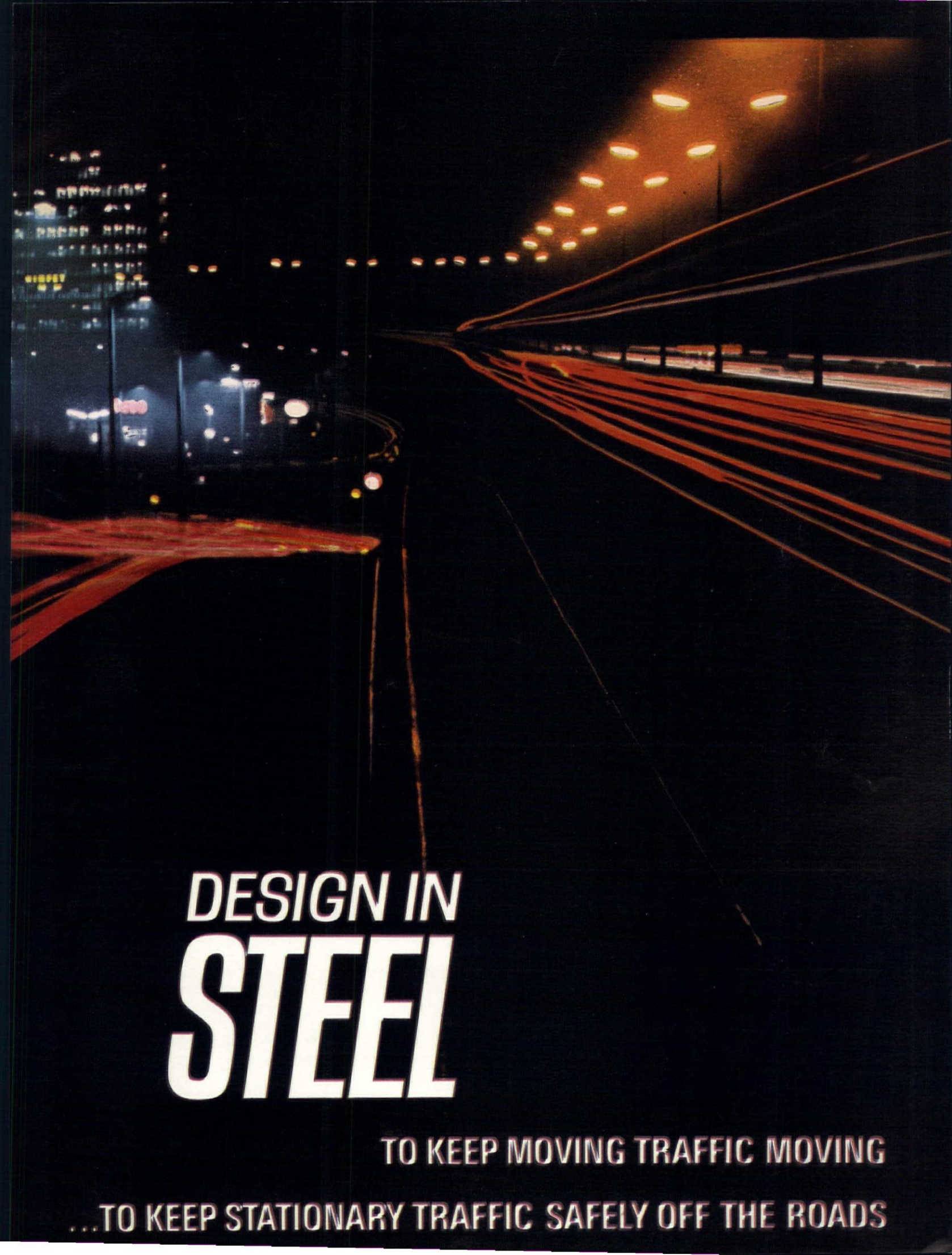

DESIGN IN
STEEL
TO KEEP MOVING TRAFFIC MOVING
...TO KEEP STATIONARY TRAFFIC SAFELY OFF THE ROADS

STEEL

SPEEDING TRAFFIC FLOW



Steel—for the road ahead The speed of steel construction is just one of its vital contributions to Britain's expanding road programme. Rapid progress is essential if traffic flow is to be maintained satisfactorily in view of the fast-growing volume of traffic. Even now steel is showing how this can be done—with economy and efficiency—in swiftly-erected bridges, flyovers, elevated highways, off-street car parks, multi-level interchanges and other road structures. Advanced design in steel, new developments and new techniques in its use, are together providing efficient solutions to modern-day traffic problems that Britain's economic progress demands.



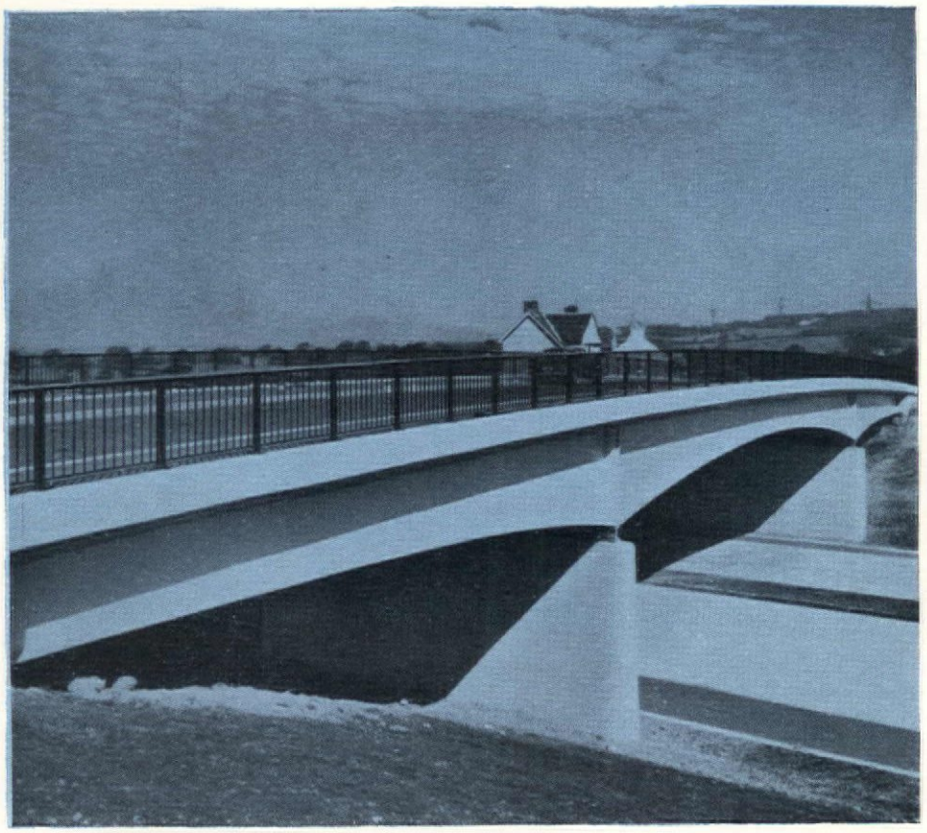
Steel elevated road Fylde Junction Higher Bridge at the 3-level Broughton M6—A6 traffic interchange. This attractively designed welded steel box girder viaduct, supported on steel piers, has a curved length of 1,300 ft. *The Structural Deck* (above) comprises a 14 ft. wide, 8 ft. deep, three-cell welded spine beam with 14 ft. long cantilevers on each side.

SOLVING THE PARKING PROBLEM



Quick solutions—in steel Many multi-storey steel car parks are easily dismantled and re-erected, and can thus meet temporary demands for central area parking on vacant sites during urban renewal schemes. 'Wheelright' 3-arch ramp-type car park, Birmingham, holds 400 cars on a site due for future redevelopment. This system is quick to erect and available in many forms.

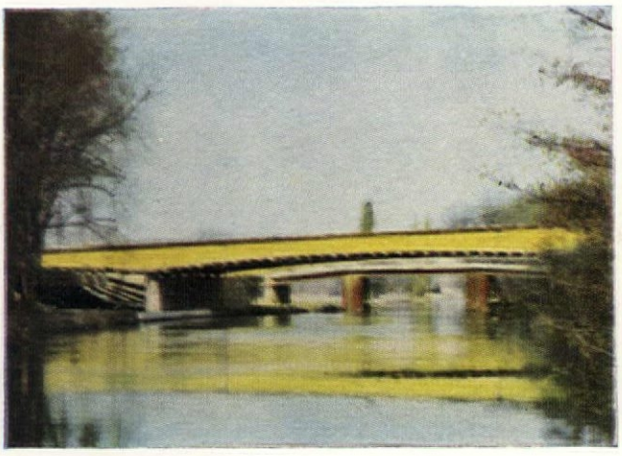
Urgently needed: More off-street parking, to give the motorist a clear road ahead. Choose your car park in steel—for the simplest, *speediest* solution to your parking problem. Park *up*, with the help of steel and vehicle capacity of an existing car park or new site can be quickly multiplied as many times over as planning demands. Standard steel units keep down costs in all types of multi-storey parking systems and fire-encasement of steelwork is often unnecessary. Open-deck one-level, split-level or sloping-ramp 'drive-in' parks employ high-strength lightweight steel frameworks with the cost-saving advantages of fast, dry, all-weather construction.







Attractive colour Special care in bridge design, and imaginative use of a wide variety of colour finishes — made possible with steel construction — combats monotony for travellers on the newly-completed M6 Lancashire motorway. Two of the many individually treated, coloured bridges: Top—Stacky Brow. Below—Southworth Hall.

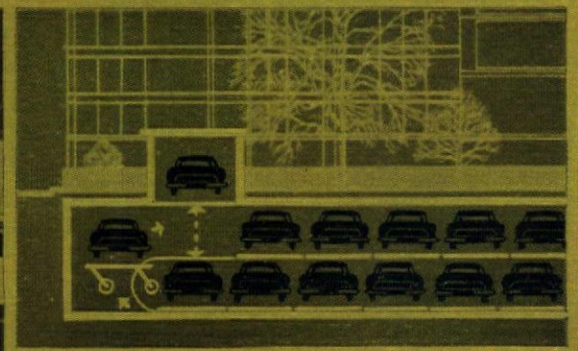


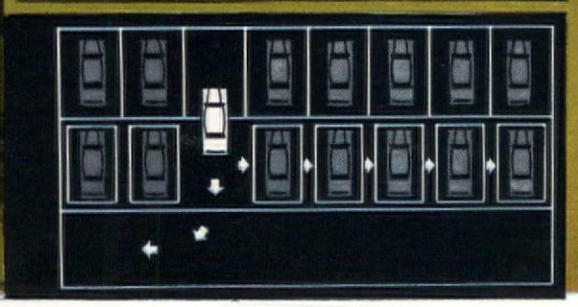


Stylish span Attractively designed steel plate-girder motorway bridge. Good clean design is now achieved employing modern welding techniques, resulting in smoothly contoured, aesthetically pleasing steel bridges and other structures. New protective systems also permit choice of durable finishes in colours to suit each bridge site.

Bridging the Isis Graceful new 3-span bridge on Oxford Southern By-Pass Extension. Steel superstructure of 10 continuously-welded girders, Universal beam diaphragm cross-girders, RHS cross-bracing at piers. Steelwork is protected by blast-cleaning, zinc spraying, zinc chromate paints, before site application of durable colour finish to suit the bridge's river setting.



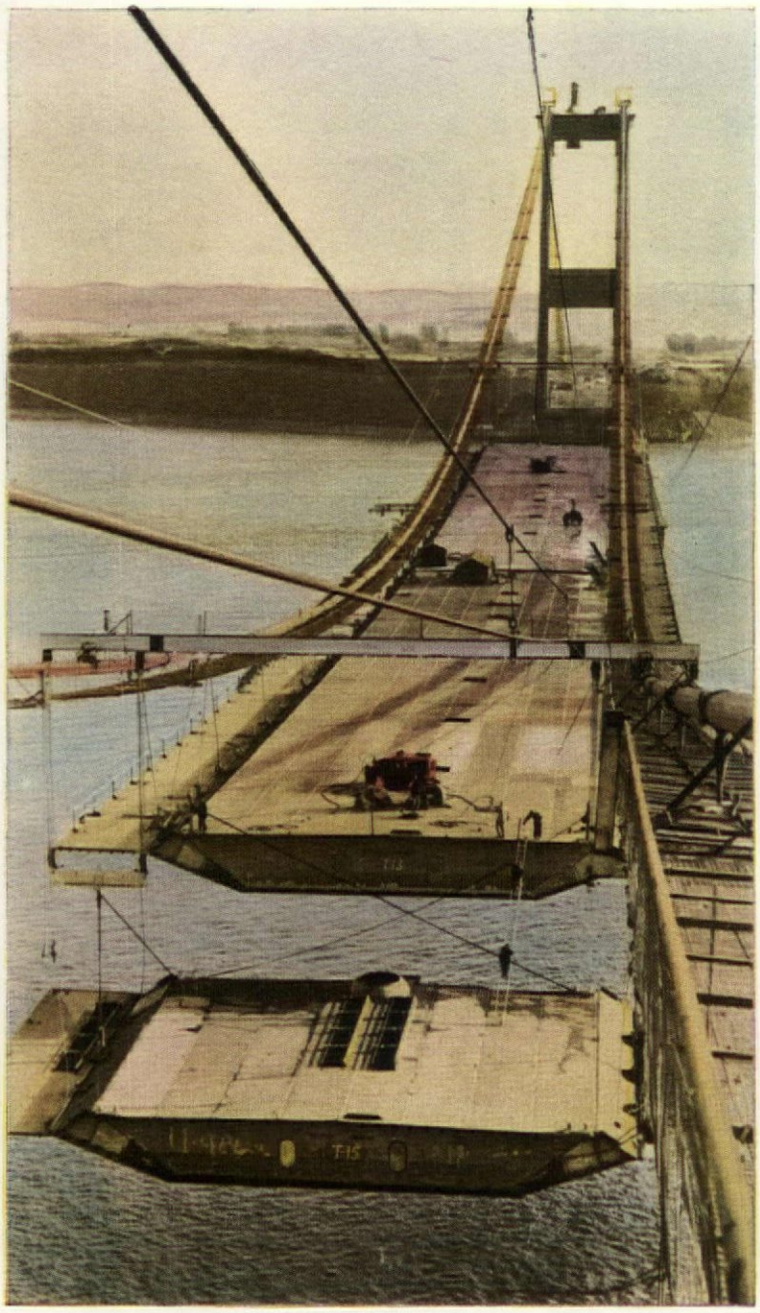


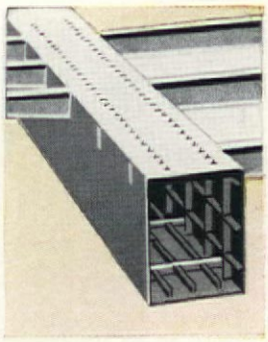


STEEL EQUIPS THE MECHANICAL CAR PARK

Fully automatic 'Au-Ro' pallet conveyor system stores vehicles in two rows on two levels. Front or side entry conveyor belt installations are available for up to 60 cars. Push-button operation gives quick release of any vehicle. The system greatly increases capacity of basement garages or underground car parks, and can be installed underground with a minimum of excavation work.

'Double-Ro' Parking System For space-saving two, three, or four-deep parking. Rail-mounted steel pallets hold vehicles in front rows and move sideways to give ready access to rear spaces. Less manoeuvring space is needed—no time is wasted in shunting cars. Easily installed in buildings or existing garages.

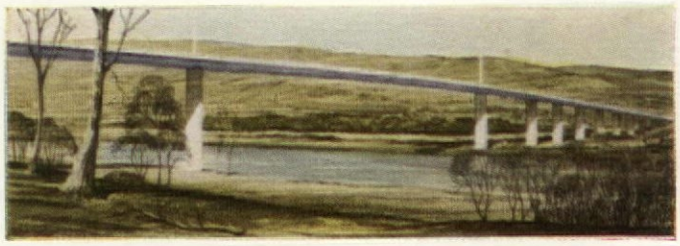




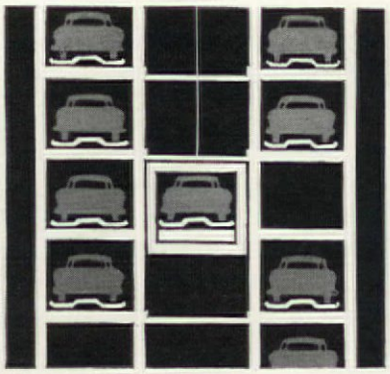
Severn Suspension Bridge A vital, and elegant, steel link in the M4, London—S. Wales motorway. Streamlined deck structure comprises 60 ft long continuously-welded box sections with cantilevered footways. The structure largely employs high tensile BS 968:1962 steel—in the slender 400 ft box section towers, shallow 10-ft-deep decking, and (INSET) welded box girders used for the Aust viaduct approach. Steelwork design refinements have cut costs, and reduced weight in the bridge structure by 20 per cent. Main suspension cables employed 18,000 miles of high tensile galvanised steel bridgewire.



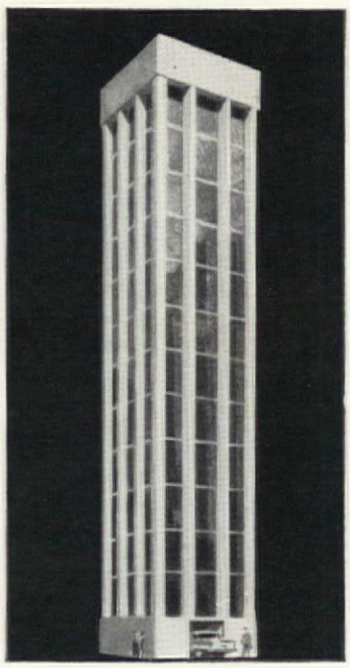
9½-hour flyover! Rapidly erected short-span motorway bridges and flyovers: Universal beams cut erection times and costs, minimise traffic dislocation. Steelwork for Newhouse flyover (A8, Glasgow-Edinburgh) was erected in only 9½ hours. Larger AUTO-FAB beams in a range from 42 inches and up to 78 inches deep now allow very high safe loads with similar economies.



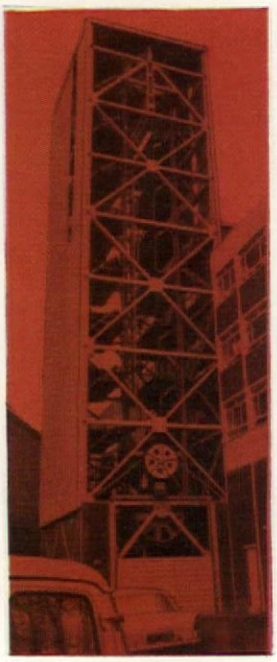
Sweeping elegance in steel Proposed design of new 1,000-ft-long Erskine bridge across the Clyde, has a welded steel superstructure of shallow depth and clean, aesthetically pleasing lines. Main spans consist of a single box girder with inclined webs. Cantilever brackets support outer footways and cycle tracks. Cables positioned between the carriageways support the deck and pass over twin 128-ft-high welded steel masts above main piers.



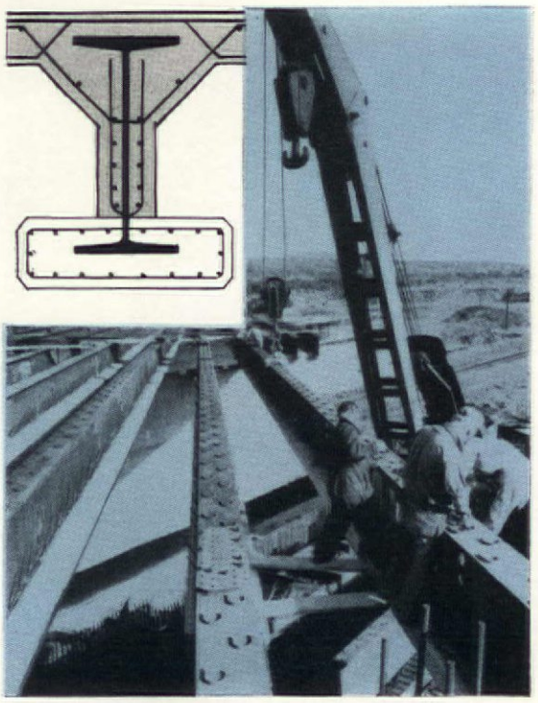
Vertical 'Keypark' Fully automatic steel-pallet/high-speed lift system meets high-density parking needs. Rust-proofed, pre-fabricated steel frame structure employs standard modular units. This system's ability to increase the car parking capacity of a small site, measuring only 24 ft x 22 ft, by up to 1,000 per cent, makes 'Keypark' especially practical where land values are high. Can also be installed integrally within buildings.



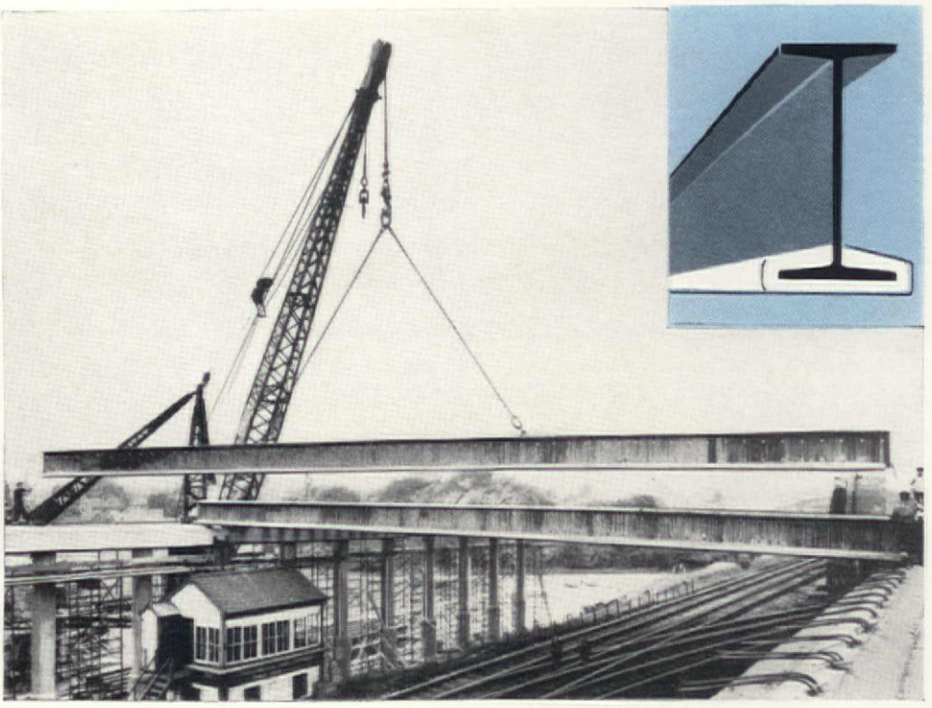
Mechanical parking systems in steel employing lifts or conveyors give high density horizontal or vertical vehicle storage. These can make maximum use of expensive or very limited land space, can be fitted into existing buildings or erected quickly on confined sites adjoining offices, flats, factories, and hospitals.



'Liftpark' mechanical system Standard unit paternoster system parks 20 or more vehicles on ground space normally required by two cars. Bolted steel structure is easily dismantled and re-sited. May be installed above or below ground with 'drive-in' at any level, or incorporated vertically or horizontally within buildings. System is available fully automated with personal key control or coin-collection.



'Preflex' beams provide one of the most economic methods of combining long spans with shallow depths or higher loadings. (INSET) Stiffened steel 'I' section with concrete-encased lower flange permits valuable economy and speed of construction in bridges, flyovers, multi-level junctions. (Scratchwood Bridge, M1 Extension.)

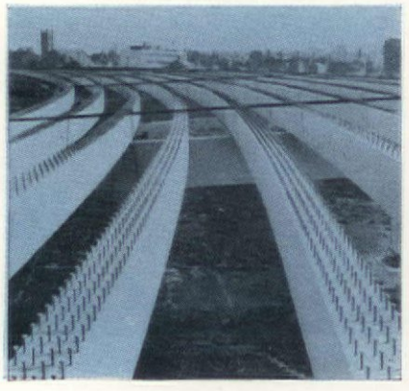


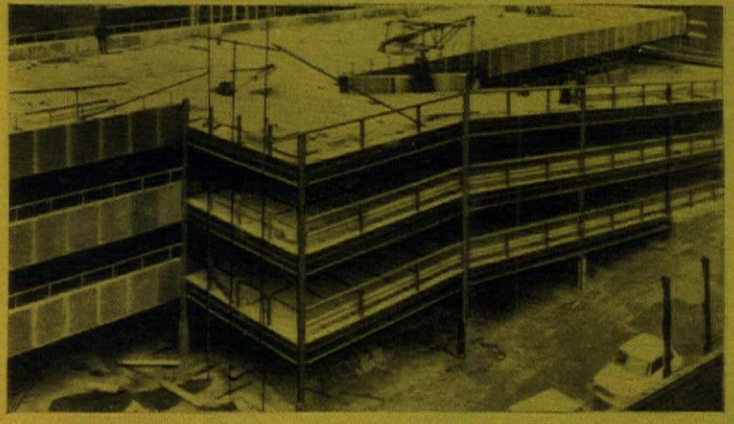
Novel use of 'filler' joists has cut costs, sped completion on many M1—M6 'Midland Links' motorway bridges. Site labour was reduced by about a third. Erection proceeds fast—no temporary shuttering or staging, little interference to traffic—using these (INSET) Universal high-yield steel beams with concrete-clad lower flanges.



Steel chosen for Hill Cross flyover A further elevated section of Coventry's Inner Ring Road is to take shape in steel. Steelwork is planned to proceed quickly on this 672 ft. long viaduct. As with the now completed Moat St. flyover, prefabricated welded box-section beams and stanchions will be transported to site with stud shear connectors welded on. Steel offered lowest cost, including maintenance.







Versatile Unit-frame System This 'TemPark' accommodates 152 cars on an urban site for Nottingham City Council and may be re-sited in future. Basic steel units (52 ft. 6 in. x 24 ft. 6 in.) can be used for permanent or temporary car parks of varying height, shape and capacity, at low capital cost.



'Multi-park' Steel-framed multi-storey system reduces construction costs by maximum use of standardised structural steel components in its multiple, modular parking grid units. Factory-built sections allow quick erection of one-level, split-level, or sloping-ramp car parks of any height or capacity.



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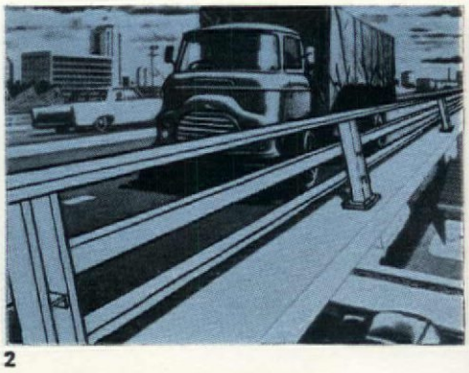

2



5

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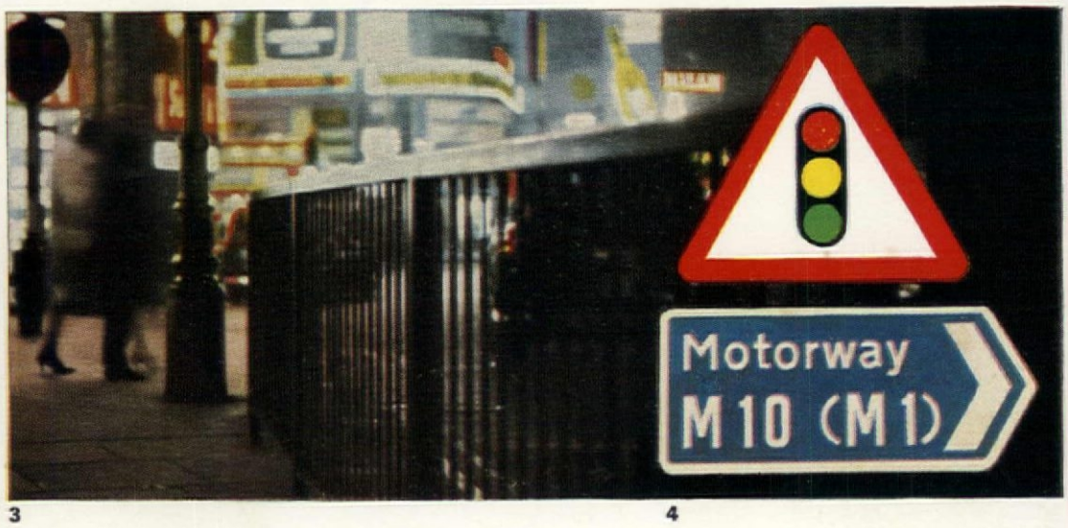

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CAR PARKING SYSTEMS. 'MULTI-PARK', 'KEYPARK', 'AU-RO' and 'DOUBLE-RO' Chamberlain Parking Systems Ltd, London SW1. 'TEMPARK' Braithwaite & Company Structural Ltd, R. M. Douglas Construction Ltd, Council of City and County of Nottingham; Engineer, F. M. Little, BSc Tech, MICE, MI Mun E. AMI Struct E. LIFTPARK The Butterley Company Ltd, London SW1. PEDESTRIAN FOOTBRIDGE Tubewrights Ltd, Liverpool.

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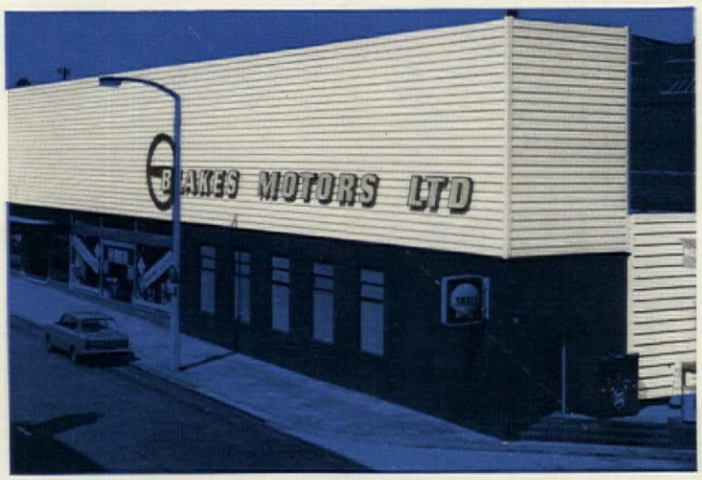

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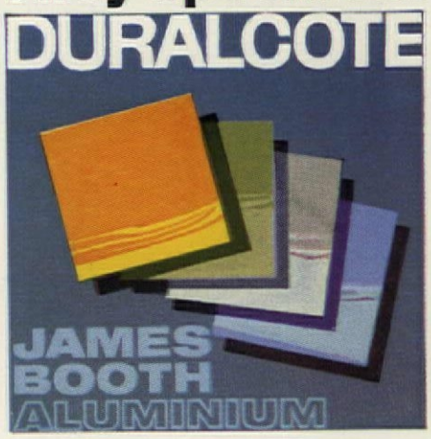

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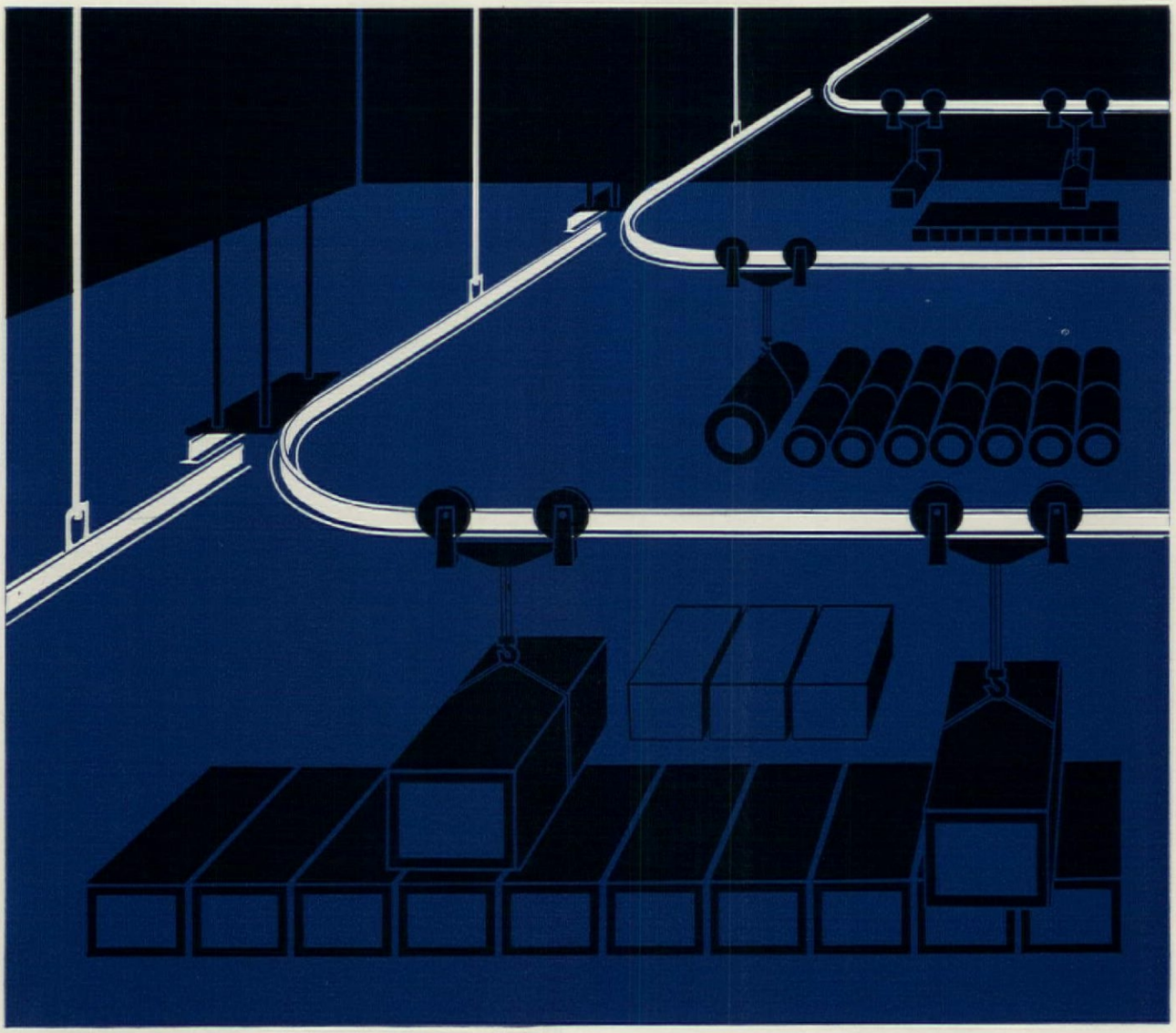

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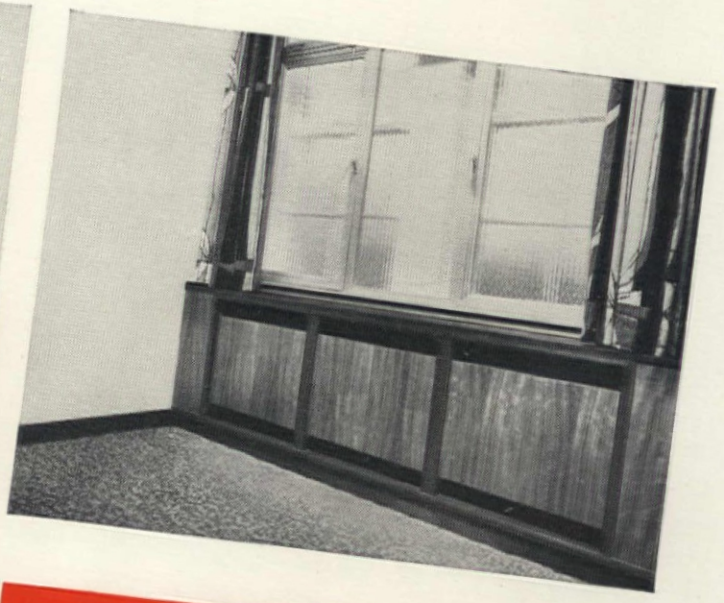
weyroc goes into the Bank





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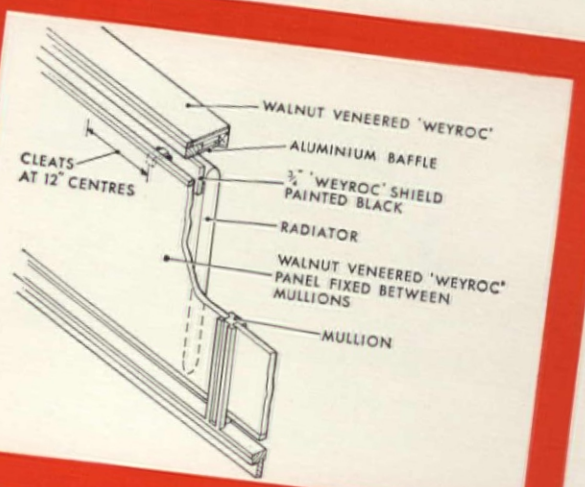

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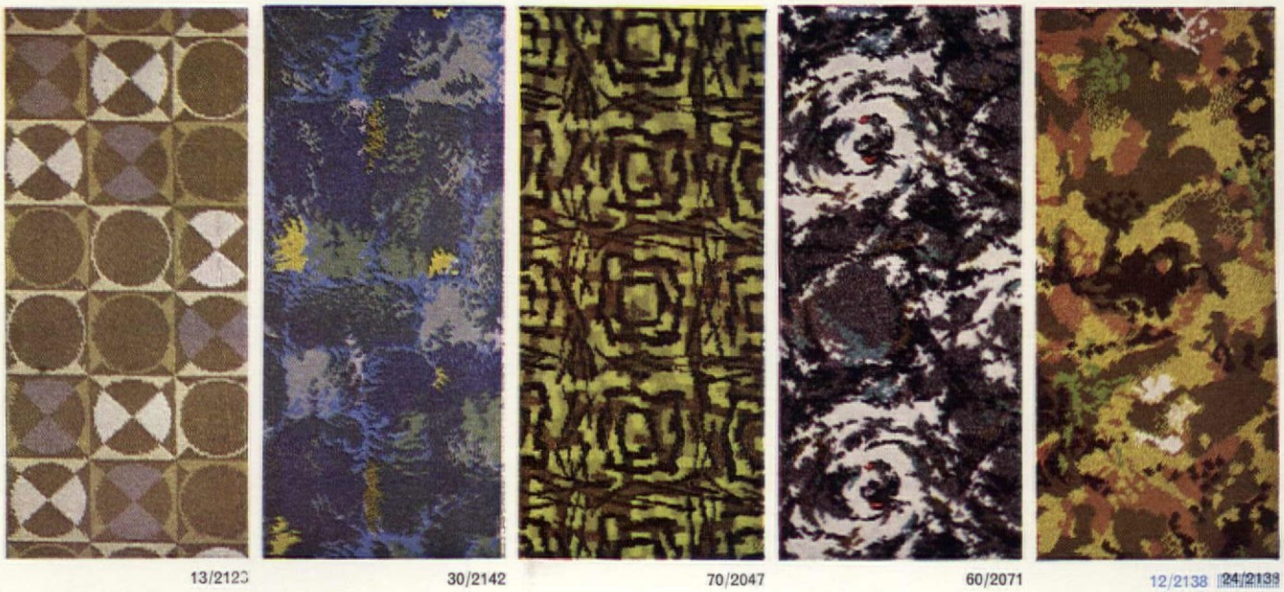

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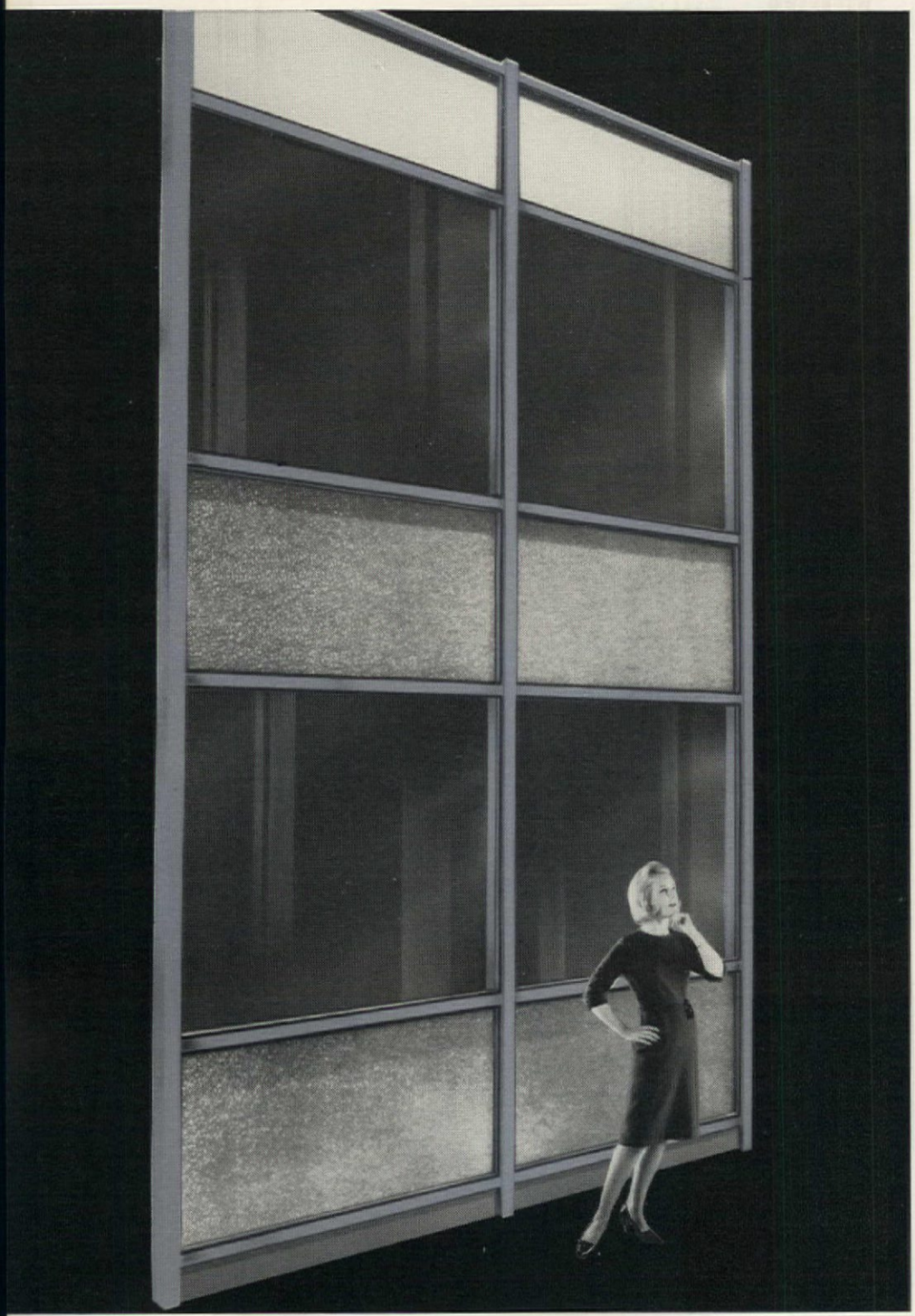

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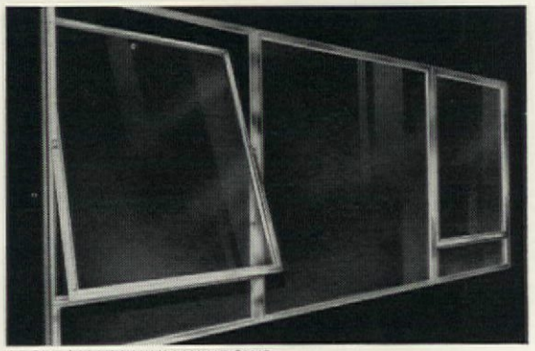

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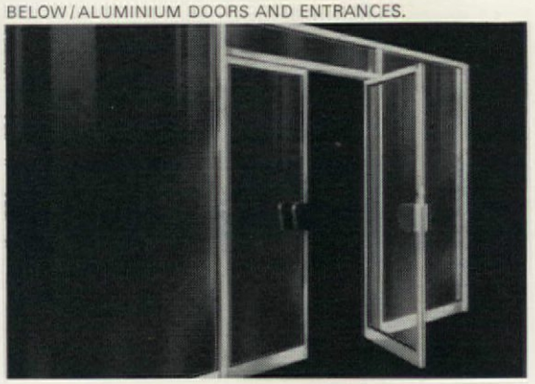

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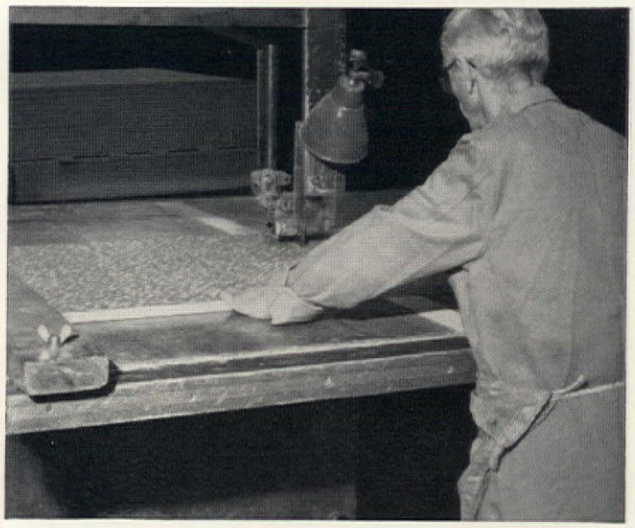

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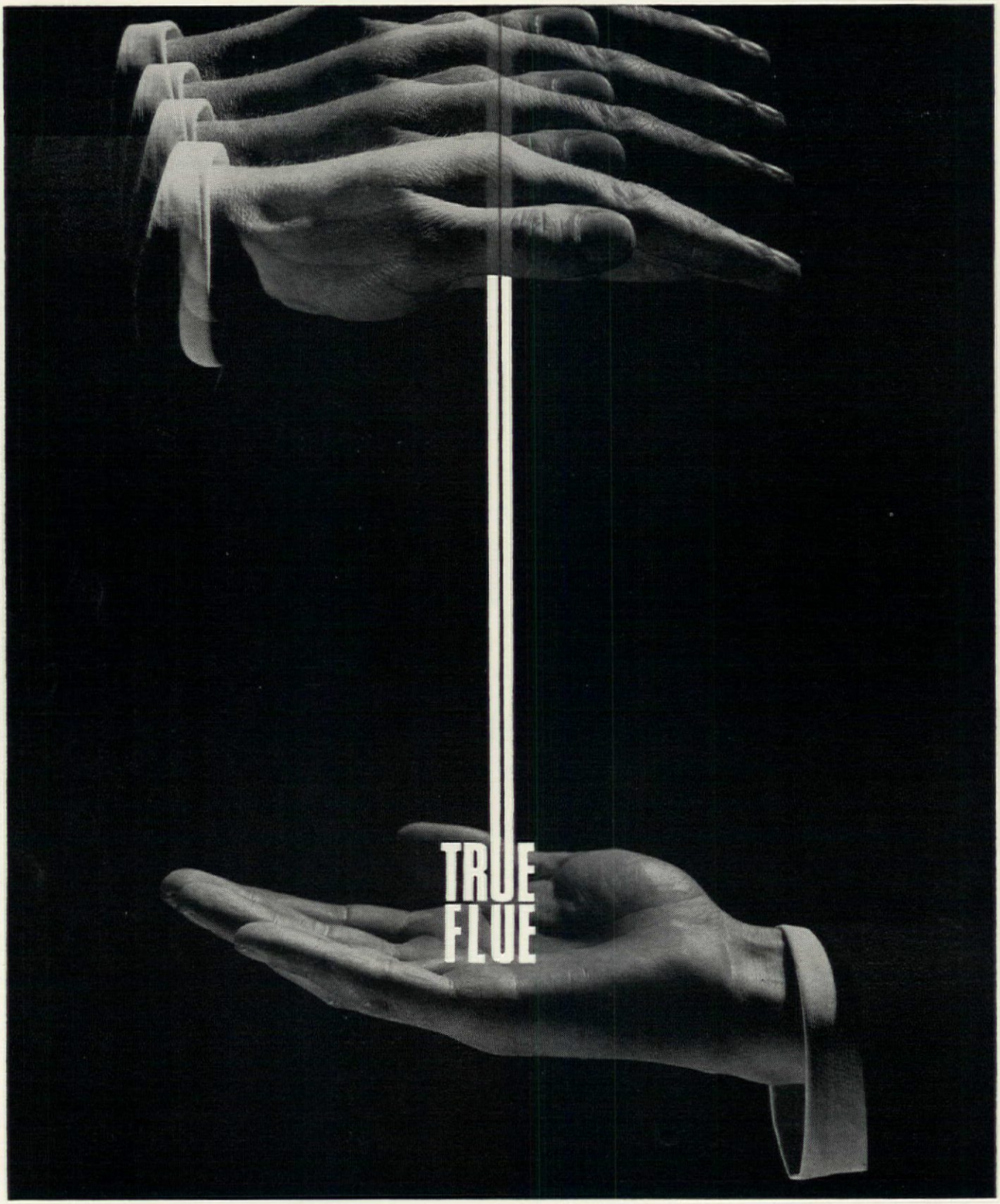

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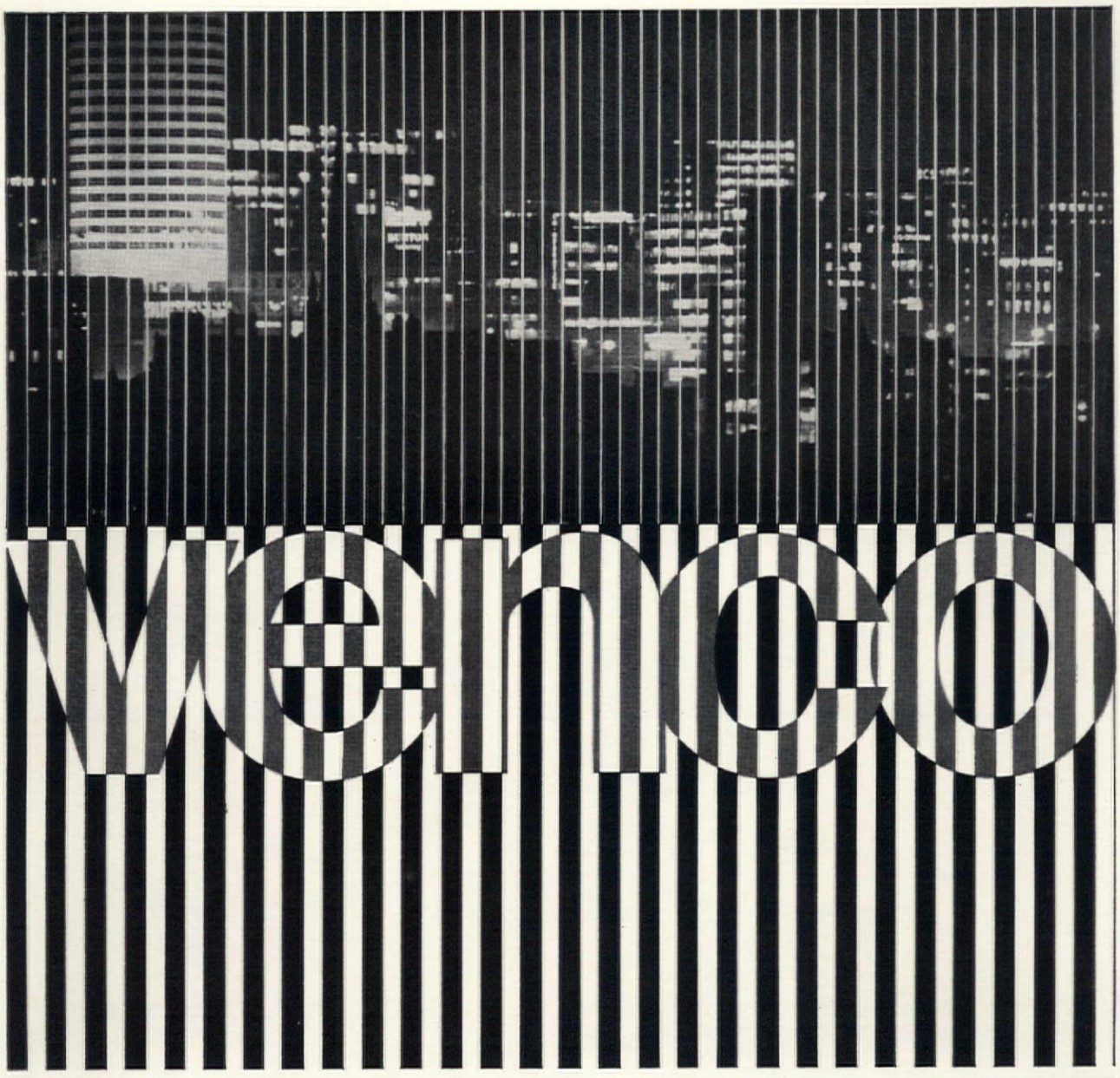

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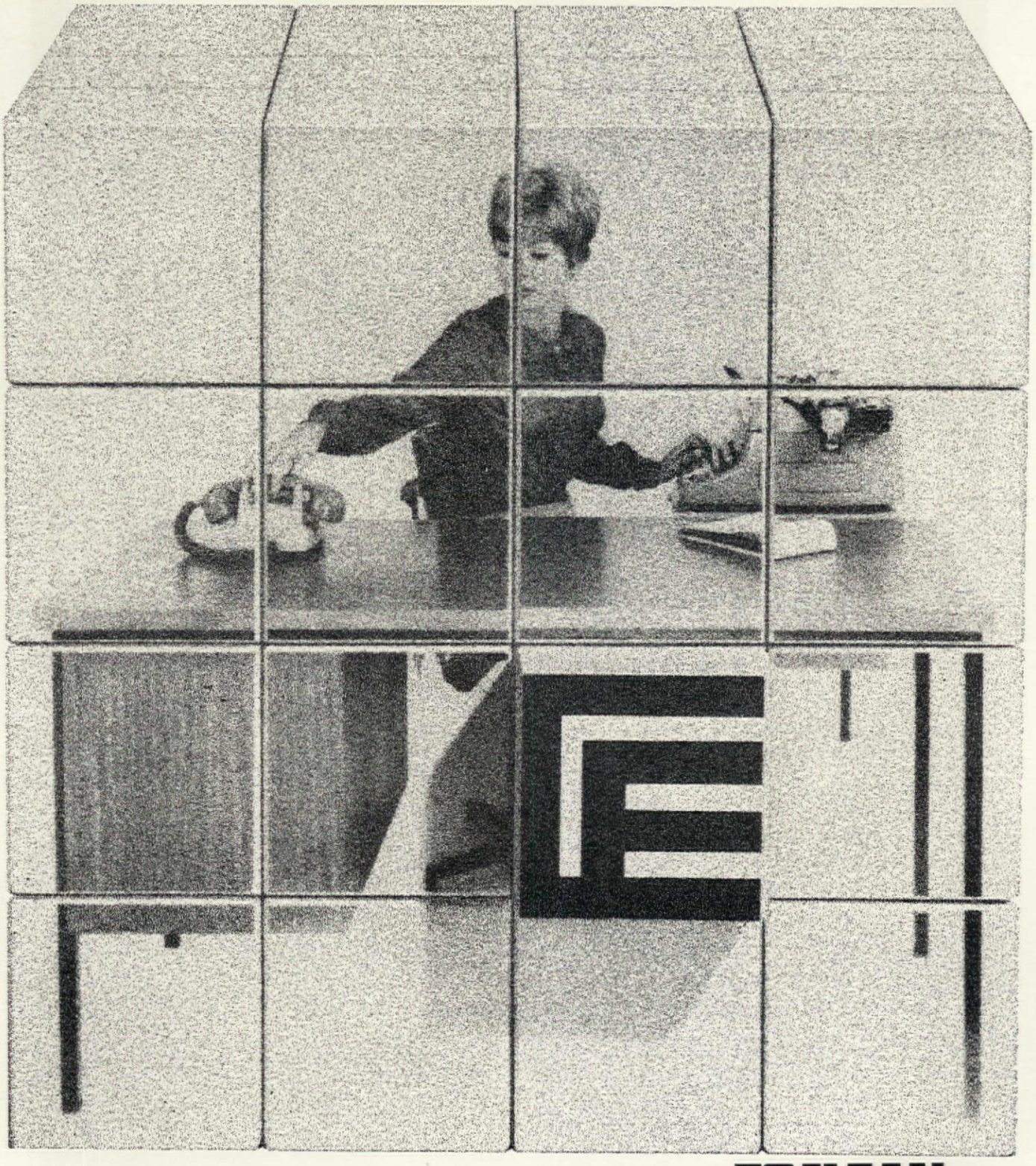

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Cosmorama

The month in Britain

The RIBA issued a pronouncement that aesthetic control of elevations by lay committees was not acceptable for buildings designed by architects. The Minister of Housing and Local Government is now expected to aim a directive to this effect at local authorities.

The RIBA recommended that in future 12in should be read as 30cm, 4in as 10cm and 1in as 2·5cm. They gave the London Architecture Bronze Medal to Denys Lasdun for the Royal College of Physicians and the RIBA Bronze Medal for Architecture to Arne Jacobsen for St Catherine's College, Oxford; and the President, Sir Donald Gibson, made off to Paris leading the RIBA delegation to the UIA 9th assembly and 8th Congress.

The first new municipal airport to be opened since the war commenced operations at Castle Donnington and planning permission was granted to extend the airport at Luton.

Leeds College of Art and School of Architecture announced new courses in landscape design, one of the most neglected disciplines in the design field.

The Bow Group, regenerated by the calm of opposition, published a thoughtful pamphlet called *New Life for Local Government*, proposing eight new regions for England and Wales to replace existing county councils. They claim (how right they are) 'the present system is in decline. The electorate is apathetic: the quality of councillors indifferent; and there is a good deal of inefficiency'.

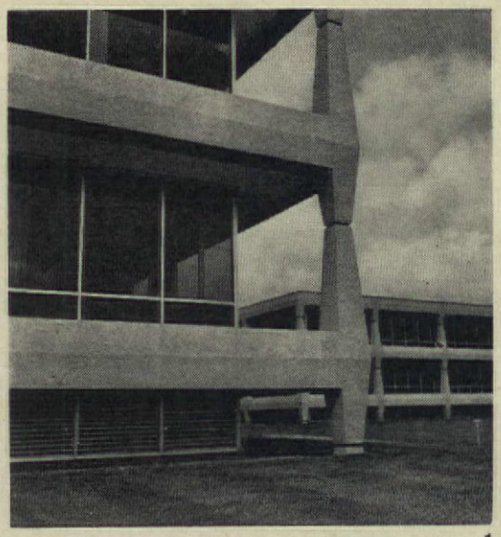
Professor Pier Luigi Nervi was consulted by the Provost of Portsmouth about the late Lord Mottistone's sketch design for Portsmouth Cathedral and agreed to cooperate with the Cathedral's architects Seely and Paget.

Jonathan Miller told the SIA that he was appalled by the low standard of intellectual effort in Britain, and Sir Hugh Casson told the Design and Industries Association that there is a 'leaden flaw of philistinism that unhappily runs from top to bottom of our society'. To prove them wrong, the Minister of Housing and Local Government, Richard Crossman, approved the appointment of Tom Hancock Associates to make a two-part study for the expansion of Peterborough; Hugh Wilson & Lewis Womersley to do the same for Northampton, and Shankland, Cox and Associates for Ipswich. He also succoured the seaside by calling for local authorities concerned to make an immediate assessment of those parts of the coastline that need further safeguarding from development. This burst of governmental constructivism continued when Sir Leslie Martin and Colin Buchanan presented their Whitehall report to the Minister of Public Buildings and Works, Charles Pannell, who in turn presented it to the House of Commons. The Victorian Society immediately went into the attack.

Michael Manser

New York charter flight

There are still one or two places left on the ICA's charter flight to New York, departing October 12th, returning three weeks later. Write to the Secretary, 17 Dover Street, London, W.1.



1

No variety 1

The sinister thrill of the authentic 'air-conditioned nightmare' can now be experienced in England; SOM, in association with Mathews Ryan and Simpson, have finished their research and administrative centre for H. J. Heinz at Hayes Park, Middlesex. Two buildings (linked by an underground tunnel) each with two full storeys above ground and a third half submerged by skilful landscaping, make up the centre. There is some wilful modelling on the columnar screens surrounding the buildings and some artistic planting in the pond in the internal court; for the rest the architecture is implacable and remote, disciplined to inhuman ends in the tradition of SOM and Saarinen. The detailing is impeccable. Vast air-conditioned office areas, divided and subdivided with mathematical precision and lit with warm, white fluorescent tubes provide the exemplar of the controlled environment that the compilers of the Pilkington Report recommend. Even those executives who are lucky enough to have desks near the windows will find little pleasure in their view of the parkland; the fixed glass walls have been tinted dark grey to reduce the glare (from the inside or the outside?). It was surely not for the fresh air or the picturesque charms of the country that the site was chosen. The result, at all events, is an anonymous self-contained work-space, safe from all external stimuli.

Photo Lehman

Environment: thinking outwards

Architects with, no doubt, the nodding approval of psychologists, have for some time been agreeing that there is a need during the design process for a much greater understanding and identification of the factors which help to create a total environment in a modern building. It is surprising how difficult it is to list buildings which appear to be a development of this 'thinking outwards'. This is probably due to the fact that a correct assessment of environmental problems requires a multi-disciplinary design team, whose restraints would be anathema to the architectural couturiers. It is timely therefore that an excellent report, costing 30s., has been published by the Pilkington Research Unit of the Department of Building Science, Liverpool University, which sets out to show that a multi-disciplinary approach gives a far more accurate picture of total environment 'in the round'. Though this work is specifically related to the design of office buildings, it could equally well be applied to other building types. All the individual elements which make up an office environment are considered in the report, not in isolation but in the context of a total experience.

Brian Henderson



2

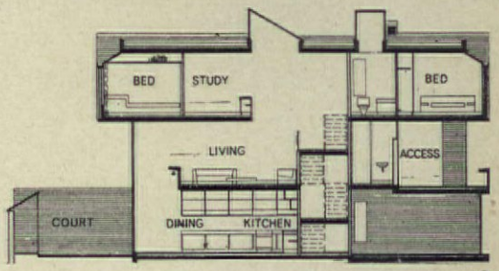
Poster awards 2

An exhibition of the winners of the Council of Industrial Design sponsored British Poster Awards was held in London last month.

This year 24 awards out of a possible maximum of 25 were made, indicating a general raising of the standard of poster design in this country. Although the judges felt that, for the first time, they were able to give one-third of the awards to product-advertising posters, it is interesting to note that the standard of design in that class fell short of the average for the exhibition as a whole. This is likely to continue until designers approach their task with as much professionalism as the grey flannel suited ad-men do theirs.

Broadclyst and Black Dog 3, 4

The National Trust competition for the development of Broadclyst has been won by First Avenue Construction Co. Ltd., architects H. Werner Rosenthal in association with Eldred Evans, Denis Gailey and David Shalev. The individual terrace houses are certainly exciting and deserving of the award, though the total building complex is surely too urban for those Exeter commutors who are hankering after the countryside. In addition, far from serving to unite the village of Broadclyst and the sporadic development at Black Dog to the south, the new housing forms a third independent element. The competition was, however, idiosyncratic in its conception of a fantasia of good economics and good design, and one must not be surprised by unusual results.



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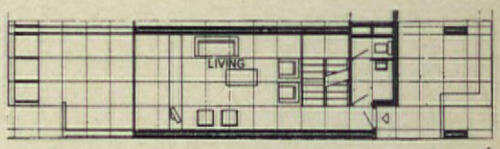

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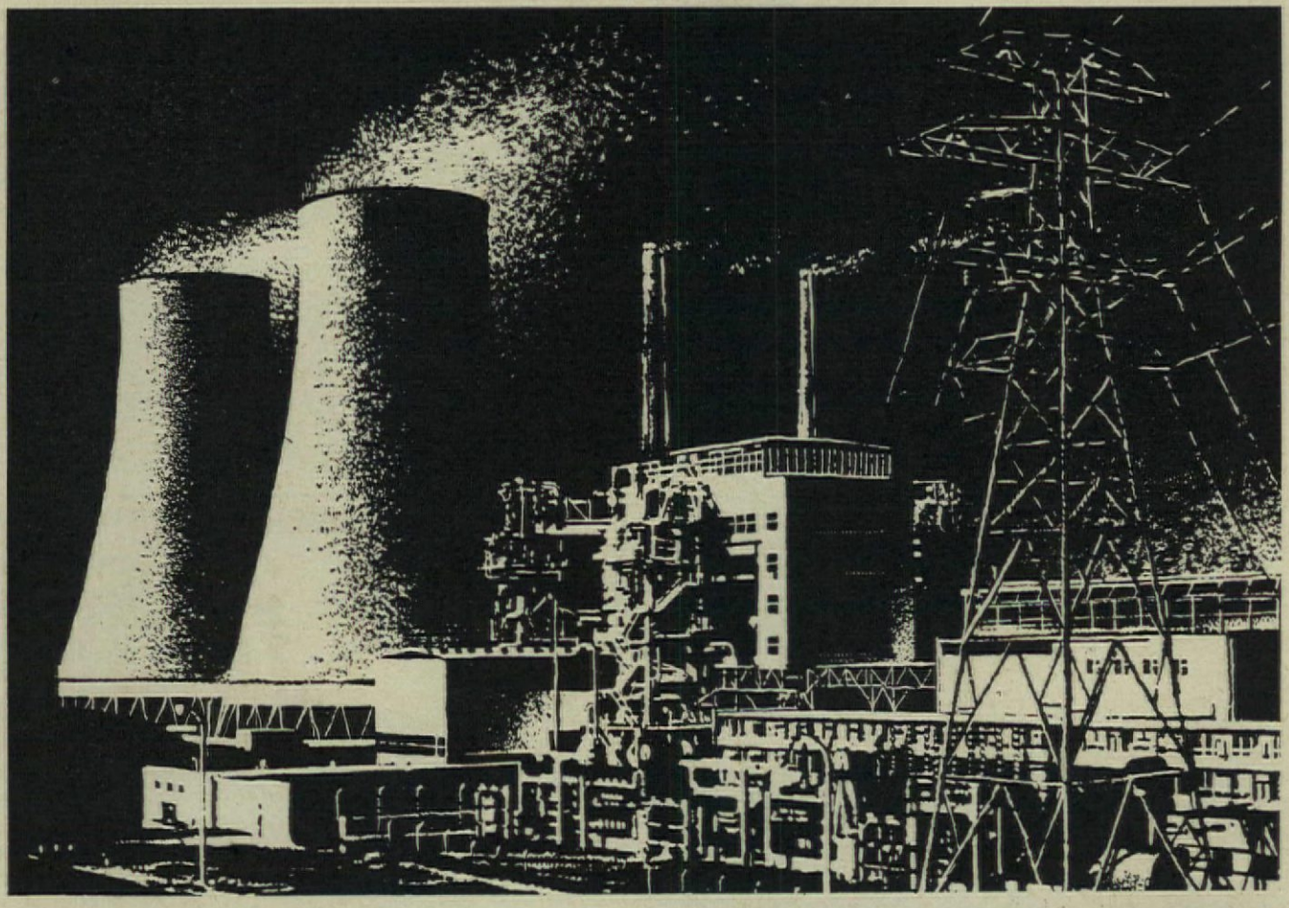
window controls for industrial buildings



BUILDINGS OF TODAY

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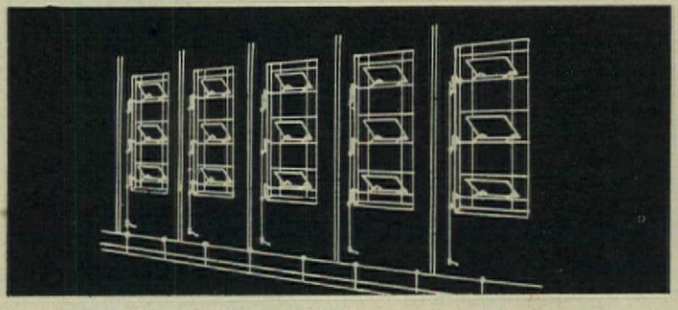

Illustration above is of the shaft and lever gear used at Calder Hall. This gear is neat and inconspicuous, and requires less maintenance than any other type.

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Preparing to build

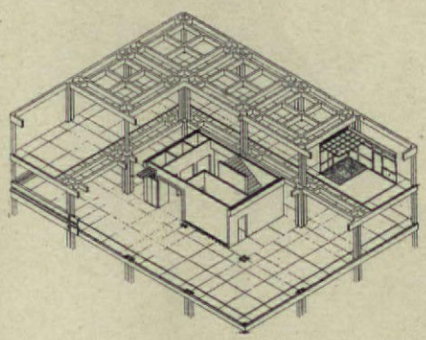
The MOPWB have issued two handbooks, *Preparing to Build* and *Selective Tendering for Local Authorities* (HMSO. 3s 6d and 2s).

On too many building projects the services of the architect are either used badly or not at all, and in *Preparing to Build* the Ministry aims to provide advice for building clients. Their shot is so wide of the mark that they may have scored a bull on the wrong target, and by adopting an equivocal ambivalence towards the question of design by architects or engineers may have leaned over backwards far enough to fall flat on their architectural face. It is regrettable that in a 5000-word booklet on this subject the word *architect* is employed only six times, the authors having managed to avoid its use on 56 other occasions by substituting *designer*, thereby blurring the distinction between architects and engineers and tending to create the impression that their services are interchangeable. However, the illusion is corrected by the humorous drawings of Frank Hoar, in which the architect is readily identified by his beard, bow-tie and under-arm tee square, shown cringing, coy or insane—so the intelligent client can see that the Ministry are not serious about the whole thing.

In *Selective Tendering for Local Authorities*, a subject which has rather less impact on our environment, the guidance is clearly presented in a useful document. *Alexander Pike*

Practice and management

The RIBA has published the third and last instalment of the *Handbook on Architectural Practice and Management*, covering communications, human relations, staff records and statistics, fees, work in progress, economic appraisal and estimating, programming, network analysis, and additions under general headings: together with appendices providing a glossary of terms, bibliography and index.



4

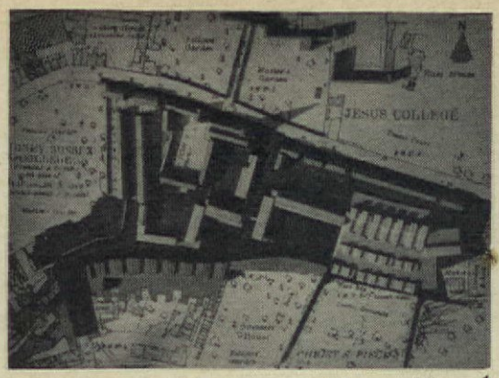
System for universities 4

At Marburg, Western Germany, a large and varied building programme has enabled a group of architects (H. Spieker, G. Bondzio) to develop a number of interesting ideas.

Foremost is the distinction between the load-bearing structure and the space enclosing elements. Each was the result of a separate competitive tender based on outline requirements only, details were then developed by negotiation.

The 3D site-cast skeleton permits alterations and extensions in all directions. Crisp detailed internal partitions are of zinc-coated steel sections with glass or enamelled asbestos panels. All the fixing is done by neoprene gaskets and sections which achieve a sound reduction of 40dbs. *Raymond Wilson*

International asbestos-cement review 38



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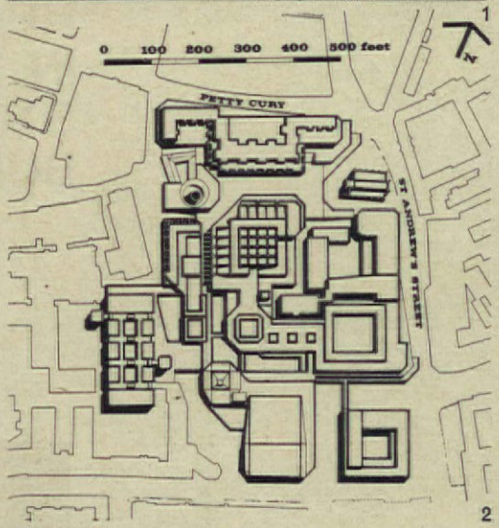
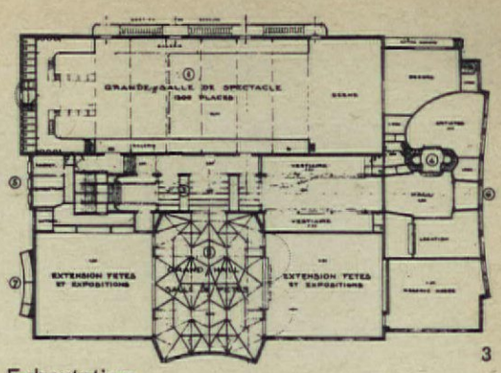


2

Cambridge development

Gordon Logie, the Cambridge City Architect, has revealed the latest of a series of proposals for the redevelopment of Lion Yard in the central area of Cambridge **2**. The new project, to be built in stages, includes shops, offices, flats, concert hall, art gallery and library, mounted on a pedestrian deck over two floors of car parking with a capacity of 750 cars. There will not be sufficient money available for extensive central road improvements and therefore access will be through existing streets. Alternative means of access to the Lion Yard from distant car parks will be necessary. The development will probably be carried out by the City. Logie insists that the project is a preliminary study only, to discover the financial feasibility of such a development, but it has been carried to sufficient detail to display conflicts in intentions. The Lion Yard will be the Civic Centre for a region extending beyond Huntingdon, Royston, Ely and Newmarket, and is to be planned in conjunction with related central areas to provide the best possible meeting ground for social, commercial and civic activities over a period extending more than 20 years ahead.

But there is no formal recognition of the problems of expansion into or linkage with surrounding areas, north into Petty Cury, the Market Square and the University, or east towards the new expanded centre in the New Square area. There is nothing to relate the development to that of the 5-acre site off Jesus Lane, plans for which have just been prepared by Ivor Smith of Morton, Lupton and Smith **1**. The adjoining buildings recently designed for Christ's by Denys Lasdun and for Sidney Sussex are similarly isolated and independent contributions to Cambridge architecture. Yet the desired patterns of association between the Lion Yard and the existing city surely demands a system which operationally and spatially links the whole and is capable of controlling the growth and change of surrounding area. *David Lea*



3

Exhortation

The protests and outbursts of righteous indignation that followed the report that Victor Horta's Maison du Peuple was to be torn down have had virtually no effect. The Société Centrale d'Architecture de Belgique and the Société Belge des Urbanistes et Architectes Modernes battled, but have clearly done less than was required, for demolition is now under way, with no more than pious plans **3**, prepared by Jean Delhaye, to re-erect the original café, the meeting hall and staircases at some future date. Other bits are to be scattered in museums throughout the country. The epoch-making façade swirling out over the precipitous street is to be lost for ever. Despairingly, one would welcome the ministrations of some Museum of Modern Art in the role of a Clough Williams-Ellis.

With more fortitude, SCAB has succeeded in having Horta's own diminutive, but highly complex and intriguing house, 25 rue Américaine, classified as an historic monument and has persuaded the local authorities to take it over as a museum.

As a token of good faith and will, they have issued a delectable brochure on Horta, available for 50 Fr. Belge from the Service de l'Instruction Publique, Hôtel de Ville, Place Maurice Van Meenen, Saint-Gilles, Brussels.

Architecture, No. 64, May–June 1965, *L'architettura* 116, June 1965.



5

Bloc house 5

André Bloc has now put up Habitat No. 3 in his garden (plaster Habitat No. 2 having disintegrated). More robust than its predecessors, the new cavernous shelter is of stock brick, with holes filled in with thick polyester. In his *exposé* of the scheme M. Bloc suggests that his walk-in sculptures are to be regarded as prototypes for buildings, and justifies them in rationalist terms. He chose brick in preference to steel or aluminium because it was cheaper; surely an odd criterion in a building that is a manifest example of conspicuous waste. Clearly, he was, still the sculptor, concerned rather to wield a single material into a homogeneous, mass—the brickwork, unfortunately, had to be reinforced with concealed concrete beams.

Domus, June 1965.

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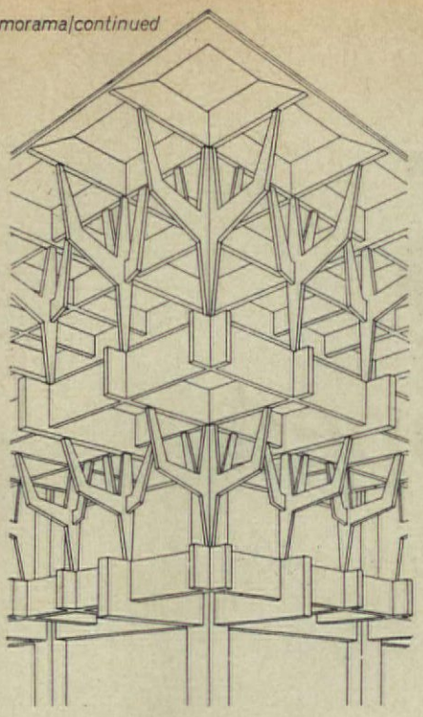


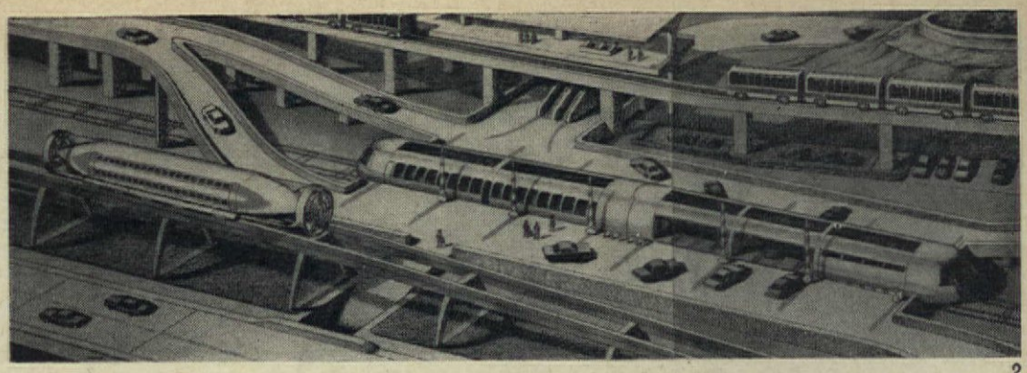
1

Musical pre-stressed concrete

Attempts by Toshihiko Kimura to find analogies between the various arts and crafts and the senses they mainly work on, have played a long and curious role in the history of Western speculations. Whereas ancient European and Oriental theory sought for analogies between sight and sound in their common basis in a supernatural harmony at once inaudible and invisible, modern total-art-work theories since Wagner and the Impressionists have rather sought for them in the phenomena of synesthesia, viz: what colours Sidney Smith's definition of ecstasy—eating caviare to the sound of brass trumpets, and so on, through the symbolists like Debussy, Mallarmé, to the abstract painters and politicians of our own day. It is not surprising that the polite Japanese, whose contribution to this body of speculations, by way of their colour prints, has been very great, should have taken back the theory where we left off and tried to improve on it. Of course, much of this is grossly unphilosophical, and consists of no more than taking seriously a linguistic convenience: we speak of loud and strident colours, sharp sounds, round flavours and so on. But any peg is good enough to hang a sheep-skin on, or is it a golden fleece? And if Toshihiko Kimura finds it helps him to see how much variety can be built into precast concrete work, by analogy with the tempi and the key, the modulations, the progressions and the changes of mood in Mozart or Modern Jazz, it seems a rather larger peg to hang such a very small fleece on.

In the case of the design for the museum at Mimasaka by the architect Kawashima **1**, and the engineer mentioned above, musical forms seem less to be a determining factor, than the attempt to find a precast concrete equivalent for the wooden brackets of Japanese moated castles. This entailed the most complicated structural analysis, and the help of a computer. What emerges rather suggests recent American schemes such as Boston Town Hall. In other words what we all of us now look for and find in our respective pasts owes so much more to us than to the past, that the results rather tend to resemble one another—a tendency towards feudal and fortress-like forms, to house contemporary goings-on which require no such fortress-like treatment. *T. G. Stevens*

Japan Architect, April 1965



2

High speed travel

By plane, the actual flying time between cities 200–500 miles apart is relatively short, the time involved in getting to and from the airport is often as long as that spent in the air.

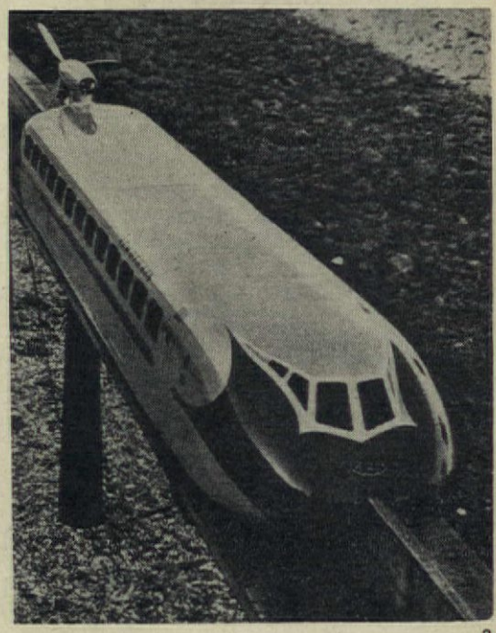
For shorter flights of say, 100 miles, efficient helicopter services are still a better proposition but only when a 'quiet' machine has been perfected that has sufficient capacity. Until then, high-speed railway systems are under consideration in Europe and the United States. In the US a research programme is under way for a high speed transport system linking Boston, New York and Washington. All the money spent on inter-city motorways, it has been found, has not kept up with the demand for more and more road space.

Several American firms, in anticipation, have published projects for various trains capable, they say, of speeds of 400 mph or more **2**. They travel in tubes or on air cushions over tracks and are generally driven by propeller. A French prototype **3** is also air-cushioned on a monorail and propeller-driven. It has now received official government support.

All these systems require special tracks due to the speeds involved, tracks elevated, at ground or underground as required. In Japan, where the 125 mph Tokaido express runs between Tokyo and Osaka, this speed is reached using conventional electric drive, but the tracks are mile-long, welded rails on a specially stabilized bed with no sharp curves. The track runs alongside the existing one.

The perfection of the track is vital at these speeds but much depends on the efficiency and location of the stations themselves and how well-connected they are to a suitably high-speed city transport system. The drop in speed on the Tokaido express from 125 mph down to 30 mph on entering the station to stop, interchange and carry on across the city at, say, 8 mph by bus or taxi, is just not good enough. Certainly to plug these new systems into nineteenth century terminal facilities would be unfortunate. *Brian Richards*

Paris Match, May 29, 1965, *Fortune*, April 1965



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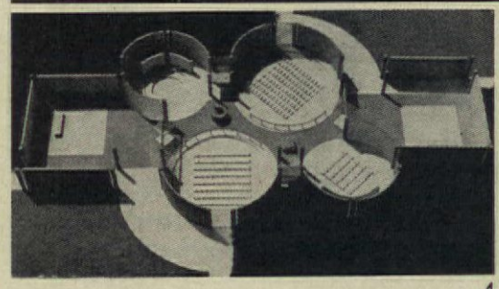

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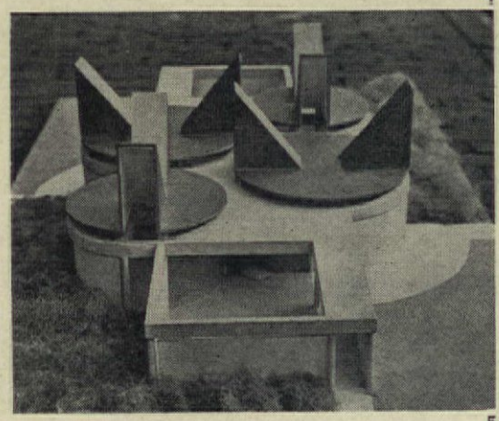

5

The wheels of heaven

The opening section of the May issue of *Domus* is taken up with a project by Aldo van Eyck for a chapel designed for the 'Church and World' movement **4, 5**.

He takes the old duality between pulpit and holy table in the Protestant Church and turns it to his advantage, making the spine of the complex a walk between groups of two circular chapels which open inward towards each other; they are roofed by circular flat concrete discs, separated from the walls by a thin band of glass; the beams which carry them provide a reticulated system, into which the tall 'dormer' windows are cut at various angles, so that the four discs appear to be rotating: it is these discs which van Eyck has called 'the wheels of heaven'. This kind of approach, some will object, is open to the worst 'prima donna' abuses. No doubt it is. Every approach is open to some abuse. But it is an approach which one hopes will lead to a methodical exploration of the formal possibilities of modern architecture as language, as a means of communication between the architect, the designer and the user of his buildings.

Domus, May 1965 Joseph Rykwert

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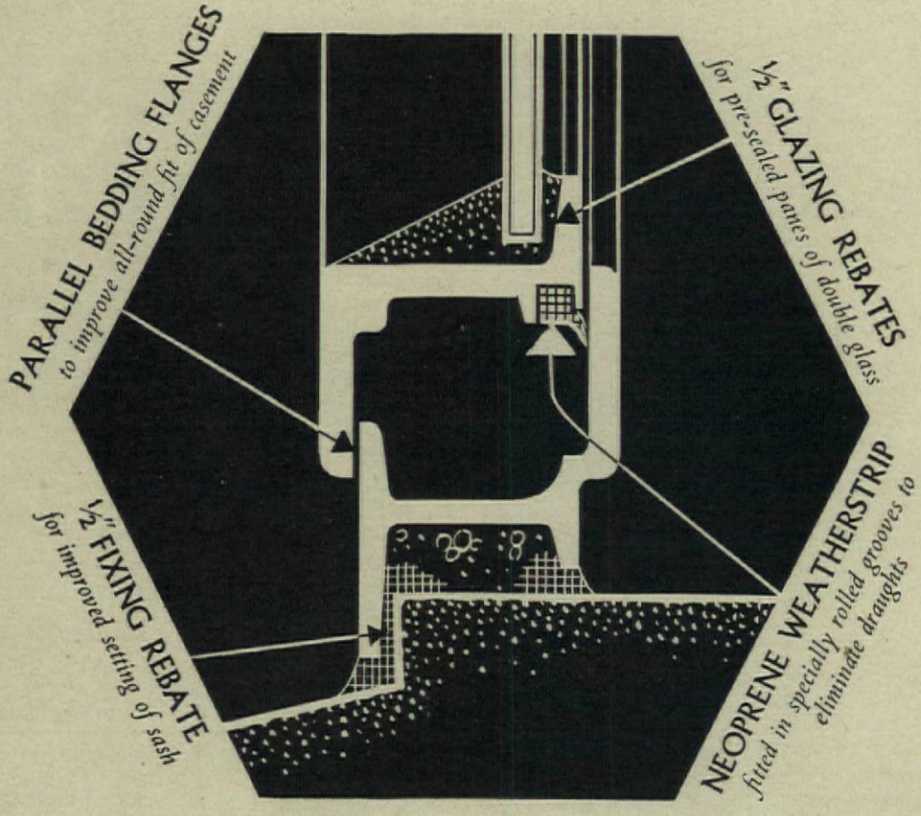

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1

Outsize UIA Congress

Though only eight congresses old, the UIA (International Union of Architects) has grown from its 1949 mere handful of founder delegates to a gathering in Paris last month of 2800 people from 59 countries and representing 160,000 architects. (Its importance can be gauged by the size of the 'construction' erected in the Place du Trocadero 1.)

Theme and resolutions

As per custom, the theme ('architectural education') and venue were announced at the previous congress in Havana. A questionnaire on the theme was then sent out by the French section (being the next organizers) to each member country, 30 of whom responded. Their replies were then sifted by the appointed congress group *rapporteurs*. (All this during the year preceding the Congress.)

The digest which they issued, and which was to be the basis of the Congress discussions, dealt with the subject of architectural education under the three titles of the Congress working groups: (a) general training; (b) technical training; and (c) plastic or imaginative training; further subdivided under the headings of the three working days of the groups: (1) general education; (2) architectural education; (3) post-graduate training.

At the end of the Congress it fell to the chairmen and *rapporteurs* of the groups to make sense out of all the points that had been elaborated by delegates speaking in their own language and recorded by stenotypers in a simultaneously-translated version which was often so literal as to be meaningless.

The officers and *rapporteurs* of a congress are real heroes, for they have worked voluntarily at increasing pressure for two years, and continue to do so throughout the Congress; while delegates are free to drift in and out of meetings, or partake of any of the far-too-many fringe activities arranged for their delectation. But when one reads the final resolutions, fruit of so much labour, it is clear that the importance of a Congress, even as unwieldy as the one in Paris, does not lie in the outcome of the official discussions so much as in the personal coming-togetherness. As Pierre Vago, General Secretary of the UIA, said: 'We have no possible hope of resolving anything. The important thing is the confrontation of ideas, from which each person can extract and use what he himself wants or needs.' Nevertheless, the 21 dead-pan resolutions coming from Paris do reflect the concern of the whole profession for the future.

Here is the gist of them:

(1) That public conscience should be aroused to the importance of architecture and planning, and the means found for the training of the people responsible.
(2) That from earliest childhood people should be made aware of the problems of architecture and planning.
(3) That teaching programmes should be designed to stimulate the natural creative needs of the young.
(4) That educationalists should be initiated by architects into the problems of architecture and planning.
(5) That UNESCO, helped by the UIA, should attempt to bring about the aforesaid points.
(6) That teenagers should be enlightened about the architectural profession.
(7) That entry into a school of architecture should be geared to a sufficiently high cultural and scientific level.
(8) That in order to ensure the necessary teacher-pupil personal relationship, the teaching staff of the schools of architecture should be sufficiently highly qualified and important.
(9) That teachers and architectural students should be able to collaborate with other disciplines.
(10) That functional, technical and plastic teaching should be carried on simultaneously, so that students will think of architecture as a whole.
(11) That the technical and scientific training of an architect should be the object of specific teaching.
(12) That architecture should be taught with constant regard to its integration in its socio-economic physical setting.
(13) That townplanning should be considered part of the complete education of an architect.
(14) That learning and self-improvement must always go hand in hand with an architect's career.
(15) That seminars or refresher courses should be organized for architects and teachers.
(16) That teams of architects, technicians and specialists in humanities and economics should be formed in order to make thorough studies in specific cases.
(17) That centres for architectural and townplanning research, theoretical and applied, should be formed under the aegis of architects.
(18) That countries in the course of development should be recommended to establish their own schools of architecture, and that technical administrators should influence the organization and running of these centres of learning, the choosing of teachers, the working out of typical study programmes, and the establishment of information centres suited to their particular needs.
(19) That the UIA should ensure permanent contact with the International Union of Architectural Students over all questions of mutual interest, especially work programmes, problems of exchange, courses and scholarships.
(20) That an international news and documentation bulletin should be encouraged for schools of architecture.
(21) That a permanent study group should be set up within the UIA to deal with the problems of architectural education.

Future Congresses

The 9th Congress will take place in 1967 in Prague, with the theme *L'homme dans son milieu*, 'Man in his environment'.

The 10th Congress is planned for 1969 in Buenos Aires.

Beyond the fringe

Almost unnoticed by most delegates—certainly ignored by the Beaux Arts organizers of the Congress—were the lively exhibitions put up in the Tuileries Gardens, behind the Orangerie, by students from various countries at the instigation of Buckminster Fuller, as part of the World Design Science Decade 1965–75, which he first proposed at the 1961 UIA Congress.

Bucky Fuller has been travelling the world during the past four years, telling architectural students in as many schools as possible about the way in which they could assume the design initiative. And he eventually persuaded the UIA Executive Council to let him address the student members of the 8th Congress and to organize an exhibition.

At the Southern Illinois University, where he is Research Professor, a World Resources Inventory* office was set up in 1963 with John McHale as Executive Director. Here, a great deal of research and coordinating work has already been done in Phase D and published in four volumes. Document I is an 'Inventory of world resources, human trends and needs'. Document II, 'The design initiative', outlines a 10-year plan of action. Document III, 'Comprehensive thinking' was specially prepared for the UIA Paris Congress and consists of extracts from Fuller's recent writings, which are supposed to be read in conjunction with Document II. And the fourth Document elaborates on the second. (We shall publish further details in a future issue of *AD*.)

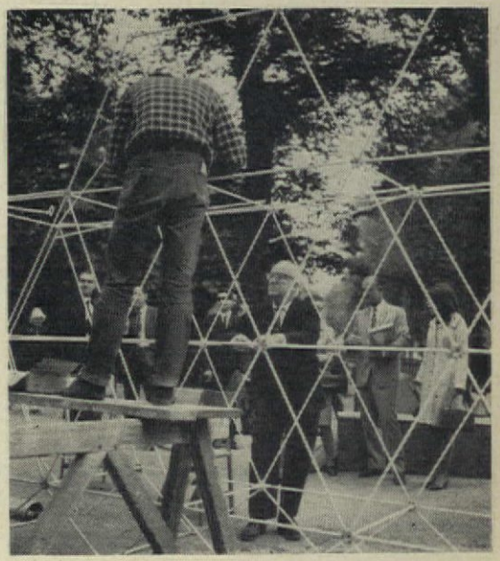
Bucky's directive to the schools who wished to contribute to the Paris exhibition was that they should confront the theme 'World literacy regarding world problems' (Phase One of the programme) in as broad a manner as possible, using charts, models, films, pictures, or any method they chose as long as it was a forceful and dramatic expression of the necessary overall design revolution. Also they should show in what ways 'man has design-augmented his performance-per-pound strategies'. It was suggested that, since school schedules are always crowded, students should invest their own time in preparing the material.

The net result of all this was not as striking as Fuller may have hoped. Nevertheless, it was impressive to see students from Colorado, Sydney, Nottingham, Watford, Reading, the AA, etc., keenly putting up plastic and bamboo structures or screens of photographs, explaining them to passers-by, handing out manifestoes in many languages, and only at the last minute remembering to chalk up their names. (We show 'Bucky' with a Colorado student in action 2.)

Buckminster Fuller had prepared two statements specially for the Congress: one was bound into Document III (see above); the other was a rather longer, very serious statement, as can be judged by its title, 'Utopia and oblivion'. Sad to relate, however, the Congress officially remained oblivious of both.

*Southern Illinois University, P.O. Box 909, 715A Univ. Ave., Carbondale, Illinois, USA.

2





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Terminal

Across the Atlantic in polythene sheet nylon string, and Cor-Ten struts? The answer perhaps for the British. The vision route to New York by BOAC's 'old time chances': or a mini aeroplane. We have all passed through a phase of with-it-ness at the aeronautical section of the Science Museum; it depends on how old we are whether we coincided with Paolozzi among the old dramatic display or in the new misguided, mis-shapen, demonstration that there is neither a Franco Albini nor a Carlo Scarpa in England. Even so, to see the old bat-wing back as rocket brakes—well it gives you a turn. How like them to get round to building on Hendon and Croydon only 15 years before there will be a screaming need for them again; for if BEA have any more trouble, it will be fly it yourself.

Simenon has it said to Maigret. 'He saved my son's life. He operated on him free of charge, and treated him for over two years.'

'Where is your son?'

'In the army. In Indo-China.'

Capra was killed there.

Year after year what is the point: for people who are neither Indian nor Chinese—not even on the fringe like Burmese. But like the Congolese—neither pygmies nor Africans, like Cypriots not Greek, certainly not British; like Trogs and Greasers the terrible in-betweens singing 'I'm just an in-between': obviously hating every minute.

War is such a waste, why do rational men not refuse to take part.

Strikes—ditto—ditto.

Certain jobs surely carry additional obligations if they are meshed in with the lives of many people.

For example, a newspaper strike has to be pretty lengthy before the fish trade becomes deprived. A bus strike becomes a British way of life with sentimental reminiscent attachments. But crash strikes in airports at holiday time so disturb the chosen courses of so many, throw the sequence of events, arbitrarily affect the order of days of innumerable innocents, affect countless pockets and livelihoods, that they create the new social offence of criminal egotism. Controversies pursued should not affect others beyond certain reasonable limits—this is basic good manners. When the undertaking is statutory—power, airways—strikes become criminal egotism.

Architects anyway should, knowing about strikes, have designed airports quite differently. The concourse is out—if it should ever have been in. I resent within half an hour of delay being reduced with fellow pigeons to conditions of wartime emergency. Within two hours I feel dishevelled, am reduced to picking newspapers out of bins to read, and to hoping this time the WVS will turn up with hot cha and a Cornish pasty.

With children, these European railway station standards are quite unacceptable. I say European, for the British in India had no such delusions about the requirements of each class of waiting room eighty years ago.

Within half an hour of a delay, parents with children should be shunted to nursery lounges. With three-quarters of an hour delay, remaining adults of the flight should be offered their delay lounge, with proper old-fashioned furniture and drinks and other necessities trundled in or opened up.

If BRS can open a transhipment depot at Southampton particularly for part and mixed loads to combat acute weekly period delays at the New Docks, then airports have no excuse in not rethinking their functional requirements.

For delays are not all union politicians' big business. I use business advisedly, for strikes have been resurrected since the war—when they were outlawed, and built up into what must be a very good business. Yet the workability of any system in society relies on the individual's conscience, the individual's and the society's well-being and prosperity being one and the same. We behave like the Vietnamese. Civil war without American arms. London Airport, directly or indirectly, gives a livelihood to something like 152,000 people. Docks, the motor industry, power, likewise all have pebble in pool effects—and, therefore, responsibility.

If you cannot rely on other people—at all—then it boils down to a turmoil of row your own boat, Icarus about, pedal your own electricity, start the kids growing mustard and cress and beans on blotting paper—for the great seize-up of the socialist-egotist society.

Which presents entirely different problems to us as architects and urbanists, makes an entire nonsense of any talk of industrialized anything.

I always confused the man of the flying trapeze with a chap in an early aeroplane. Rather than the trapeze I'd face a moon rocket with bat-wing brakes.

I was never much for socialism, as practised by socialists, but all for a rational, functional, orderly way of life and living, which is what modern architecture is about.

I. Chippendale

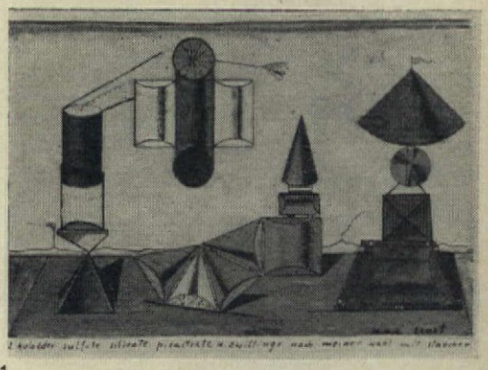
Max Ernst

Ernst has introduced the irrational into painting and sculpture—he has applied the notions which are normally related to poetry, to an illusionistic, phantasy world of his visual imagery. The sort of analytical approach which one might use in relation to constructivism, or even pop art, cannot be applied to the work of Max Ernst. One can imagine the context of his œuvre in terms of history, his use of various images, pictorial devices and techniques—but the meaning of his works and their interpretation is mostly a matter for personal conjecture.

Ernst's exhibition at the Hanover Gallery (until August 15th) contains a cross-section of his work from 1919 to 1965, and ranges from a gouache of imaginary scientific apparatus **1** to sculpture and paintings with the familiar themes of birds **2**, moonscapes and effervescent forests. Partly because Ernst's paintings and collages have been seen and written about more often, it is more relevant to consider his sculpture.

For Ernst, sculpture represents an activity very distinct from painting. He described the process as being the result of an embrace with two hands, like love. An art form which is simpler than any other and more primitive, that requires neither forcing nor guidance; nor even, the concentration and effort of painting.

Ernst's three-dimensional work has a considerable range. One of the earliest surviving examples, 'Fruit d'Une Longue Expérience', is a relief assemblage of 1919, in which he has made use of found objects. Apart from combinations of various formal elements and masks, most of his sculptures are small and relate to human/animal figures with smooth surfaces, in which stance even more than the features provides the vehicle of expression. They are so unlike what one thinks of as twentieth-century sculpture (possibly because they seem closer to primitive African or Eskimo art) that they appear more as three-dimensional configurations in which none of the materials are used in the way that one might expect. His approach is extremely varied. The two versions of 'Oedipe' 1934, small bronzes in the shape of a split bending column with two faces, alludes with consistent ambiguity to a celebrated myth, giving no clue whether the sculpture is the artist's interpretation of Oedipus, or whether the title was invented later. 'Etes-vous Niniche?' is made up of three found objects—two jokes of an ox and an engraved printing block with the word 'niniche' in capitals forming the base. 'Deux et Deux Font Un'—a box-shaped painted bronze, is based on the size of a bunch of asparagus, which bears some relationship to the small figure in front. All Ernst's works contain the spirit of irony and humour which the artist stressed when he commented: 'L'objet est toujours quelqu'un' and 'Le personnage n'est jamais qu'un objet'. *Jasia Reichardt*



1



2

1
2 Holoëder sulfate silicate picastrate zwillinge nach meiner wahl mit stabchen, 1919

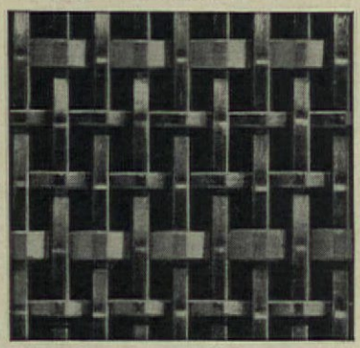
2
Ecole pour un équilibriste, 1958



Perforated Metal Pattern No. 2065.



Perforated Metal Pattern No. 954



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Dans ce numéro

Logements pour étudiants mariés, Harvard—Sert, Jackson, Gourley and Associates
Page 377

Les architectes avaient à faire face à des tâches qui offraient un défi et qui étaient en quelque sorte contradictoires: introduire le projet dans un voisinage à basse échelle et pouvoir en même temps répondre à la densité plus importante requise par l'Université; prévoir une succession d'espaces et de passages pour les piétons conduisant aux espaces réservés à la détente sur le bord de la rivière; prévoir des espaces extérieurs utilisés et pour leur plaisir par les locataires sans toutefois empiéter sur l'intimité de chaque appartement; ouvrir des espaces au voisinage tout en cachant les environs bien souvent délabrés; et enfin placer les unités élevées de manière à ne pas obscurcir le ciel tout en établissant leur rapport dans l'espace.

De la place centrale, qui mesure environ 170′ × 140′ le sentier conduit à une longue cour verdoyante parallèle à la rivière. La haie qui existe déjà et les bouquets d'arbres la rendent invisible et la protègent du bruit de la circulation venant de la Memorial Drive. Les immeubles à l'intérieur de cet espace n'ont que trois étages et sont placés en dégradé vers les tours. Des deux espaces qui restent, l'un près du terrain de jeux de la ville, sert d'accès aux voitures et de parking aux visiteurs; l'autre proche de la place centrale et de la cour ouest, par des sentiers, contient le terrain de jeux des enfants.

Une construction en dalles plates de petite envergure supportée par des colonnes de 12″ de largeur à différentes profondeurs a été choisie pour les grands et petits immeubles, étant donné que cela permettait, non seulement une simplification de la construction, l'installation facile de barres d'acier de renfort, de conduits, de renforts, de réglets, d'éléments encastrés prémoulés, mais cela simplifiait aussi le travail de finition. La hauteur de 7½′ du plancher au plafond a permi aux ouvriers de travailler sans échafaudage compliqué. Le dessous de la dalle structurale a servi de plafond. Les murs droits du périmètre ont été recouverts de lattes et laissés exposés. Les murs droits en béton intérieurs ont été peints et servent de cloison.

A l'intérieur du bâti structural standard le mur extérieur est composé de deux éléments de base: les panneaux en béton prémoulés et les bâtis des fenêtres. Tous deux partent du sol jusqu'au plafond entre les dalles structurales ce qui permet une hauteur constante tout en ayant des largeurs différentes. Les panneaux prémoulés sont composés de panneaux en béton de 2½″, de mousse de verre d'isolation et de bandes métalliques et de plâtre, le panneau n'ayant ainsi que 5½″ d'épaisseur tout en offrant une grande isolation et protection. Les escaliers en acier ont été pré-fabriqués. Toutes les cuisines ont été basées sur deux dispositions d'équipement de base et toutes les salles de bain ont été basées d'après une disposition standard. Des sections structurales en acier ont été utilisées pour les balcons. Des tapis servent à absorber les sons et à réduire le bruit venant des couloirs, pour lesquels ainsi que pour les cages d'escaliers on utilisa des briques pour réduire l'entretien.

Cité Universitaire, Boston—Sert, Jackson, Gourley and Associates
Page 383

Sur l'autre berge de la Charles River en face des logements pour étudiants mariés de Harvard, Sert, Jackson and Associates ont commencé une série de nouveaux immeubles pour l'Université de Boston.

L'emplacement est malaisé et peu commode, c'est un long morceau de terrain coupé qui s'égrène le long de la rivière, limité de chaque côté par des artères à circulation intense—une autoroute, Storrow Drive, entre le terrain et la rivière au nord, Commonwealth Avenue qui le coupe au sud en venant de la ville.

On prit donc la décision de construire des tours pour la cité, d'abord pour qu'il y ait vue sur la rivière, mais aussi pour ne pas obstruer la vue d'un bout à l'autre de la cité et enfin pour donner une impression d'espace. 'Ou c'était une cité verticale' expliqua Sert, 'ou le terrain tout entier était recouvert d'immeubles'. La première des tours est située près de l'immeuble ou se trouvait l'ancien syndicat des étudiants de Sert. On y trouve la Faculté de Droit et la Faculté d'Education. Au bas, à l'est on trouve la nouvelle bibliothèque Papas de Droit. Bientôt on commencera la construction, à l'ouest, entre la tour et le syndicat des étudiants, de la bibliothèque générale.

La beau et le populaire—Un essai sur McKim, Mead & White et la tradition américaine. P. Smithson
Page 394

La tradition architecturale la plus importante aux Etats Unis est celle qui prête tant d'attention aux détails en matériaux coûteux—granit, travertin, bronze, panneau de verre et dernièrement l'acier. On peut aisément affirmer que cette tradition a été commencée par McKim, Mead & White. La monographie de leur œuvre couvre les années 1879 à 1915, que l'on peut supposer être le summum de leur carrière, quoique l'on pense souvent que des immeubles tels que Selfridges, Bush House et le groupe Rootes à Piccadilly, qui représentent directement l'exportation McKim, Mead & White, étaient encore en cours de construction à la fin de 1920.

L'architecture actuelle de cette tradition c'est-à-dire celle de Skidmore, Owings and Merrill est la seule aux Etats Unis qui soit considérée par les architectes étrangers comme étant réellement américaine. Et comme pour les autos de Détroits, ils l'admirent sans la retenue qu'ils auraient exprimées en face d'une architecture semblable émanant de leur propre culture. Elle est admirée pour sa compétence technologique inégalée.

Bien entendu, ils se rendent parfaitement compte, que les modèles de planification de base sont ceux des anciens Beaux-Arts: banalité, exagération, pompe.

Mais l'expertise dont on se sert peut placer le produit dans la catégorie de la nouveauté—et voilà ce qui fascine, l'allusion à une 'autre architecture' en dehors des traditions européennes et japonaises.

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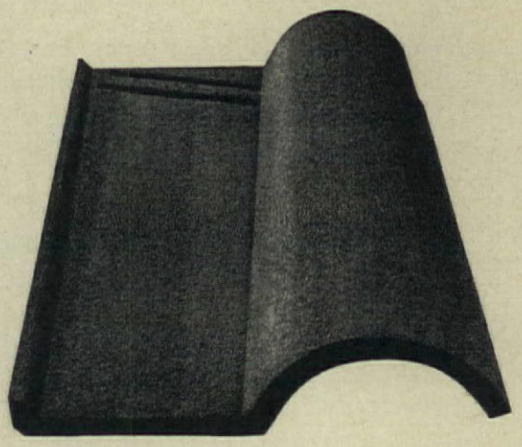

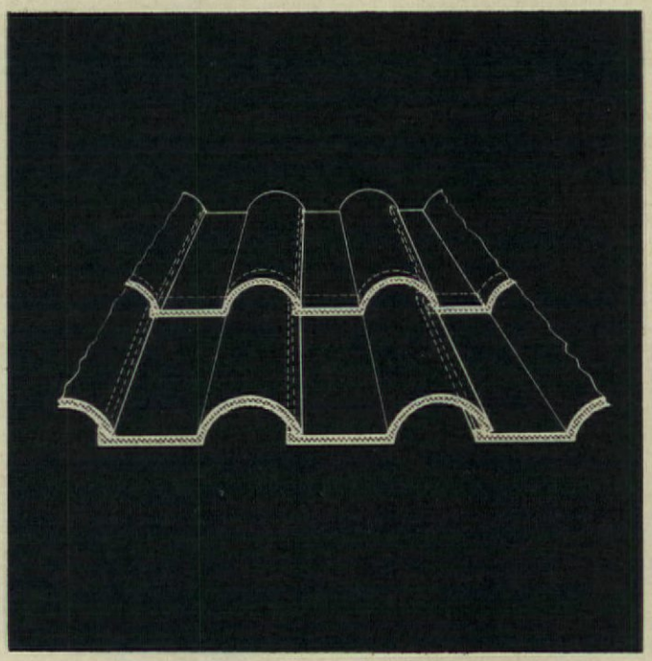

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In dieser Nummer

Wohnungen für verheiratete Studenten, Harvard—Sert, Jackson, Gourley und Mitarbeiter

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Die Architekten fanden sich anspruchsvollen und teilweise widerspruchsvollen Aufgaben gegenüber: das Projekt in die verhältnismäßig niedrige Baulinie der Nachbarschaft einzupassen, aber dabei gleichzeitig die von der Universität geforderte höhere Belegungsdichte zu ermöglichen; eine Reihe von Plätzen und Fußwegen zu schaffen, die zu den Erholungsplätzen am Flußufer führen; die Außenräume für Nutzung und Erholung der Anwohner so zu entwerfen, daß das Privatleben der einzelnen Wohnungen nicht gestört wird; den Raum zur Nachbarschaft hin zu öffnen, aber dabei Ausblicke auf die oft noch sehr zerstörte Umgebung zu vermeiden; und die Hochbaueinheiten so zu gruppieren, daß sie nicht zuviel vom Himmel verdecken, dabei aber die Verbindung untereinander im Raum beibehalten.

Vom Hauptplatz, der ungefähr 52 m zu 43 m mißt, führt der Hauptweg zu einem langen Gartenhof, der parallel zum Fluß liegt. Die vorhandenen Hecken und Baumgruppen schützen den Hof vor Einsicht und Lärm vom Verkehr auf dem Memorial Drive. Die Gebäude, die diesen Hof bilden, sind nur drei Stockwerke hoch, da sie gegen die Türme zurücktreten. Von den zwei anderen Plätzen dient der eine, nahe dem städtischen Sportplatz, als Zufahrt und Gästeparkplatz; der andere, mit dem Zentralplatz und dem Westhof durch Fußwege verbunden, umfaßt die Kinderspielplätze.

Flachplattenkonstruktion von kleiner Spanne, getragen von 30 cm breiten Säulen von verschiedenen Tiefen, wurde sowohl für hohe als auch für niedrige Gebäude gewählt, da sie vereinfachte Formung ermöglicht, leichte Anbringung von Stahlverstärkungen, Leitungen, Verbindungs—und Einsatzstücken erlaubt, und die weitere Ausgestaltung, wie Anstrich usw. erheblich vereinfacht. Die Raumhöhe von etwa 2,25 m erlaubt Innenarbeiten ohne lästige Gerüste. Die Unterseite der Bauplatten dient als Zimmerdecke. Schubwände auf der Außenseite wurden mit einem Leistenmuster versehen und unverkleidet gelassen. Innere Betonschubwände wurden angestrichen und dienten als fertige Trennwände.

Die Außenwand ist innerhalb des Standardbaurahmens aus zwei Grundelementen gebildet: den vorgefertigten Betonplatten und den Fensterrahmen. Beide reichen vom Boden bis zur Decke zwischen den Strukturträgern, wodurch gleichbleibende Höhe bei wechselnder Breite gegeben ist. Die vorgefertigten Platten bestehen aus einer 6,5 cm starken Betonplatte, Glasschaumisolierung, Metalleiste und Verputz, wobei die ganze Platte nur 14 cm dick wird, dabei aber vollen Schutz und volle Isolierung gewährt. Die Treppen aus Stahlpfannen wurden fertig geliefert. Alle Küchen beruhen auf zwei Grundeinrichtungen, alle Badezimmer sind in einer Standardausführung. Die Balkone sind aus Baustahl hergestellt. In den Korridoren sorgt Spannteppich für die Schalldämpfung und für den Lärmschutz, und sowohl in den Korridoren wie den Treppenhäusern wurde Ziegelwerk verwendet, um die Instandhaltung zu vereinfachen.

Universitäts-Campus, Boston—Sert, Jackson, Gourley und Mitarbeiter

Seite 383

Auf der anderen Seite des Charles River, gegenüber den Wohnungen für verheiratete Harvard-Studenten, haben Sert, Jackson und Mitarbeiter eine Gruppe von neuen Gebäuden für die Universität Boston begonnen. Es ist ein ungeschickter und unvorteilhafter Bauplatz, nämlich ein langer Landstreifen, der sich am Fluß entlangwindet, an beiden Seiten von Straßen mit starkem Verkehr begrenzt—Storrow Drive, eine Fernstraße, zwischen dem Platz und dem Fluß im Norden, und die Commonwealth Avenue als Trennung zur Stadt hin im Süden.

Es wurde daher schon bald entschieden, daß auf dem Campus Hochhäuser gebaut werden sollten, einmal um Ausblick auf den Fluß zu gewähren, ebenso aber auch um eine verbindende Ansicht von einem Ende des Bauplatzes zum anderen zu geben, und um das Gelände so weit wie möglich zu öffnen. Sert bemerkte dazu: 'Es mußte ein Campus mit vertikaler Hauptrichtung sein, oder das gesamte Gelände hätte zugebaut werden müssen.' Der erste der vier vorgesehenen Türme liegt nahe dem früher von Sert gebauten Gebäude der Studenten Union. Er enthält die juristische Fakultät und die Pädagogik. Am Sockel, gegen Osten hin, liegt die neue juristische Papas-Bibliothek. Eine allgemeine Bibliothek wird demnächst auf der Westseite, zwischen dem Turm und der Studenten Union begonnen.

Das Feine und das Volk—Ein Essay über McKim, Mead und White und die amerikanische Tradition. P. Smithson.

Seite 394

Die Stärkste Architecturtradition in den Vereinigten Staaten ist die der sorgfältigen Detailarbeit in kostbarem Material—Granit, Travertin, Bronze, Spiegelglas und jetzt auch in rostfreiem Stahl. Man kann ohne weiteres behaupten, daß diese Tradition von McKim, Mead und White begründet ist. Die Monographie über ihre Arbeiten umfaßt die Zeit von 1879 bis 1915, due als ihre Hauptwirkungszeit angesehen werden kann, obwohl man weiß, daß das, was man als 'McKim, Mead und White Export' ansieht, zum Beispiel Selfridges, Bush House und die Rootes Group Gebäude in Piccadilly, erst in den Endzwanzigern beendet wurde.

Die augenblickliche Architektur in dieser Tradition, die von Skidmore, Owings und Merrill, ist die einzige, die von ausländischen Architekten als wirklich amerikanisch angesehen wird. Und, genau wie mit Autos aus Detroit, bewundern sie diese Architektur ohne die Einschränkungen, die sie haben würden, wenn sie ein Produkt ihres eigenen Kulturkreises wäre. Grund zur Bewunderung ist die unvergleichliche technologische Richtigkeit.

Es ist ihnen dabei natürlich völlig klar, daß die zugrundeliegenden Modelle aus der späten Beaux-Arts-Zeit stammen: banal, übertrieben und formell. Aber das fachmännische Können, das dabei zutage tritt, hebt das Ergebnis in die Sphäre des Neuen—und das ist dabei das Faszinierende: die Ahnung einer 'anderen Architektur' außerhalb der Traditionen von Europa und Japan.

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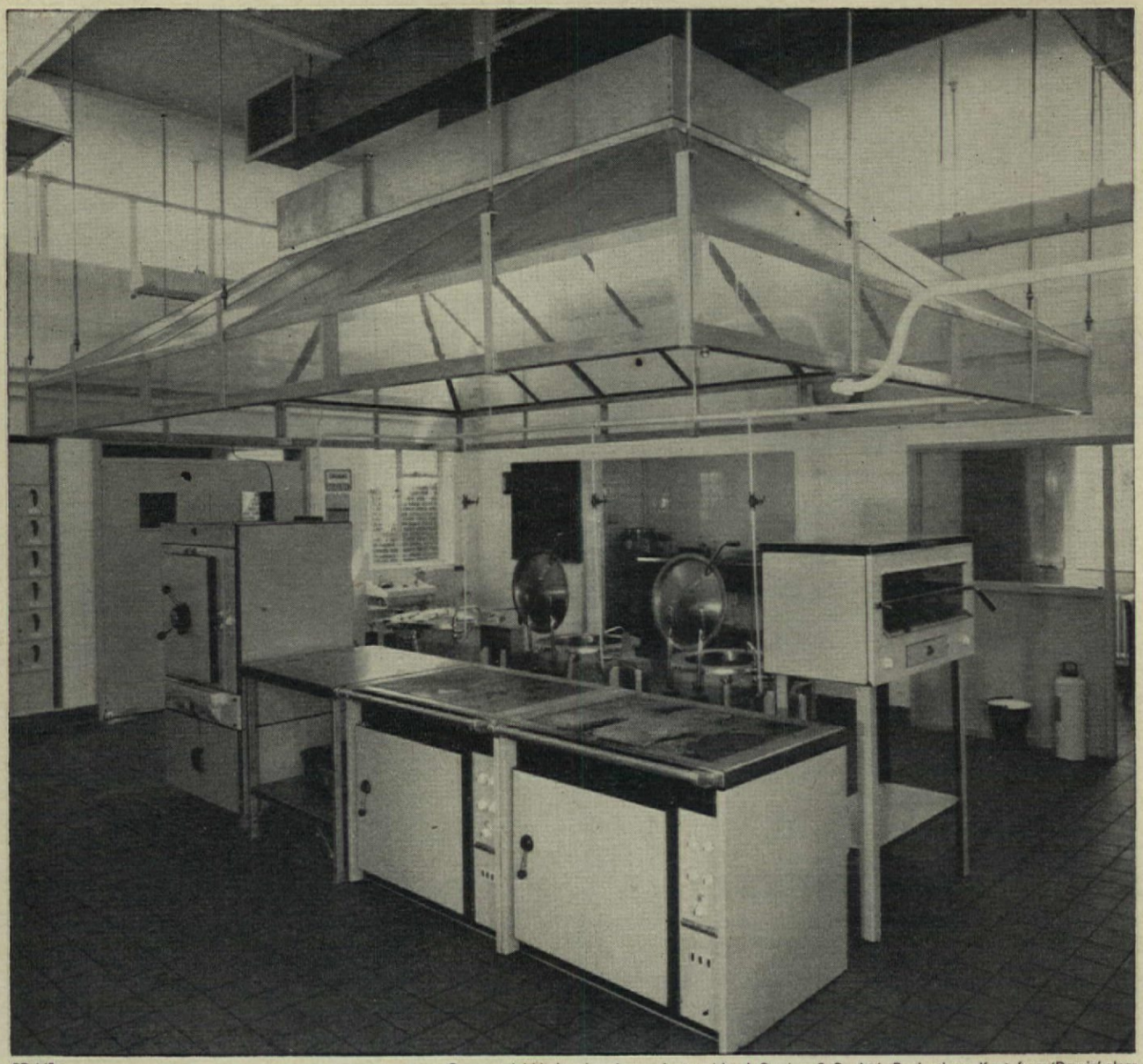

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The archeological hooligan

Eugène Viollet le Duc, as author and artist, military tactician, politician, architect and restorer of churches and chateaux (and also of Mont Blanc), has been commemorated in an exhibition at the Hôtel de Sully in Paris. Organized by the Monuments Historiques, its emphasis has inevitably been on his role as a great restorer; not that he has been consigned irresponsibly to greatness. His shortcomings are noted and even his most outrageous projects, such as that for re-aligning the west façade of Saint Denis and restoring the church to a state of unknown thirteenth century splendour are displayed. Though it would perhaps have been yet more honest to have shown the west façade that he did manage to build at Clermont Ferrand, having torn down the Romanesque front of the cathedral (not himself, of course, he got that muddle-headed dilettante, the Duc de Morny, to do the dirty work). The catalogue traces in painstaking detail his work as a restorer. Notes, letters, account books and yellowing drawings are pinned up or piled in glass cases, along with family portraits, more letters and sketches, medals and decorations. The profusion of evidence is suffocating. The exhibition is like nothing so much as one of those *Kunst und Wunderkammern* of the seventeenth and eighteenth century connoisseur in which everything is jumbled together in the hope that some new insight might be afforded. The catalogue is painstaking and scholarly. The total image of the man is, however, no clearer than it was in Paul Gout's amiable and respectful biography of 1914.

Most of Viollet le Duc's life was taken up with work of restoration and it would be wrong (indeed impossible) to ignore this aspect of his activity. But it is not as a restorer that he commands respect and attention today. He may have contributed to the formulation of the Art Nouveau style (his tentative formulations are shown in a fascinating interior view of Pierrefonds done in 1858), but his contribution was primarily that of a thinker. He not only thought more clearly about architecture than any of his contemporaries, but was able to set down his ideas with lucidity and vigour. The *Dictionnaire raisonné de l'architecture Française du XIe au XVe siècle* and the *Entretiens sur l'architecture* (misleadingly dated in the catalogue, for they came out in parts) have firmly conditioned architectural theory in the west for the last 100 years. Choisy was inspired and abetted by Viollet le Duc. Guadet, ironical though it may seem, was taught by Viollet le Duc and awarded the Prix de Rome on his recommendation. Gaudi, Perret, Frank Lloyd Wright, Le Corbusier, Mies van der Rohe, and even Kahn, have relied on his doctrines and have, indeed, added little to them. Whether or not we should continue to derive our support from Viollet le Duc is a question that the exhibition does not pose. Even the influence that he exerted on his contemporaries is neither questioned nor properly assessed. The founding of the Ecole Spéciale d'Architecture is virtually ignored; the magazine, *Gazette des architectes et du bâtiment*, that his son and later his star pupil Anatole de Baudot edited, is not considered important. Nor are de Baudot's highly original buildings investigated as expressions of the Viollet le Duc doctrine—even though most of the buildings are in Paris and the drawings scattered among the Viollet le Duc sketches in the Musée des monuments françaises. More honest than most recorders of Viollet le Duc, however, the organizers have set up a handful of drawings of Viollet le Duc's own uninspired and derivative buildings and a dim photograph of the Duc de Morny's ungainly tomb in the Père Lachaise. But no real effort has been made to explain or comprehend his architecture. Surely photographers should have been sent out to record the eighty-odd houses and monuments that he built in France, Switzerland, Corsica and Algiers? Is there no trace of that 'Wisigoth' cupboard he designed for Alexandre du Sommerand in his early youth? And though a stool from Pierrefonds and two chairs from his studio (unsuitably reupholstered for the occasion) are to be seen, could not the Poussielque-Rusand dining room suite have been exhibited or, at the very least, photographed so that one might form a clearer idea of Viollet le Duc's imaginings as an interior designer? If one is to have an exhibition of relics, then they must all be there. *R.M.*

Perret encore

There seems no need to provoke further discussion on the merits of Auguste Perret's architecture, though readers of Professor Peter Collins's new book, *Changing Ideals in Modern Architecture*,* will probably be goaded into rude comment by some of his assertions. Of 25 *bis* rue Franklin he writes, '. . . . though this building is "stylistically" acceptable to the art historians (presumably because it is covered with the Art Nouveau decoration of the era, and possesses spatial qualities shared with some of Victor Horta's houses in Brussels), it is, from the point of view of urban environmental harmony, deplorable, since it is completely alien to the other apartment buildings in the same street . . .', the suggestion being that Perret, if admired, is admired by the wrong people and for the wrong reasons. Perret is the prerogative of Professor Peter Collins. He is the single object of his veneration both in this book as in his earlier *Concrete: The Vision of a New Architecture*. And one understands after reading his detailed and spirited account of the vagaries of architectural ideals and standards in Europe during the last two hundred years, why he should want to impose a model of architecture that is consistent, capable of adaptation to many purposes and, most important perhaps, explicable in terms of the rational critique that stems from the writings of Jacques François Blondel and continues in those of Viollet le Duc and Choisy. He is anxious at all costs to create a norm. But it is not one that many architects are likely to accept in the form that he proposes. In final approbation he quotes from Perret, 'He who, without betraying the modern conditions of a programme, or the use of modern materials, produces a work which seems to have always existed, which, in a word, is banal, can rest satisfied.'

Whether or not one is prepared to accept Perret's thesis as the fulfilment of two hundred years of architectural wrangling, Professor Collins's book is bound to provoke thought and stir up ideas. He is not in the least bit sanguine or confident about contemporary architecture nor is he prepared to accept the lazy conviction that the best that can be done at the moment is to build a straightforward, anonymous type of architecture. Nothing short of a complete reassessment of our accepted ideas of architectural excellence will satisfy him and with great zeal and learning he has attempted to lay bare those ideals upon which modern architectural theory is based and to explain to us exactly why we think about architecture in the way that we do. His book is, on the whole, honest and fair—far more honest and fair than Sigfried Giedion's admittedly, more alluring, *Space, Time and Architecture*, which one hopes it will one day supersede—but it is maddening and uneven in quality. Professor Collins's energy has clearly flagged. His chapters on the Greek, the Roman and Renaissance Revivals are inadequate, that on Gothic Nationalism is a *pot-pourri* of interesting fact and speculation, but it is certainly not what it purports to be—there is no mention of Alexandre Lenoir, of Michelet or Guizot. The scholarship is at times faulty, at others failing. Nor are the arguments and conclusions always convincing. It is, of course, easier to write history as a compilation of facts than to make convincing deductions based upon them, particularly when the facts are themselves in the nature of ideas, but there is no excuse for unfounded assumptions and false statements. Professor Collins, moreover, has relied too much on secondary sources and he has not always appreciated the information that they have contained. Though most of his facts are part of French and English historical study, there seems no clear distinction between the great differences of thought and the interpretation of this thought in the two countries. The Gothic Revival was one thing in France, it was something totally different in England. The Ecclesiological movement cannot be described as if it were a European phenomenon, it has to be seen in different religious contexts. But more serious than this blurring of ideas to provide a composite and easily categorized series of Revivals and Analogies (the Gastronomic Analogy can be taken with a pinch of salt) is the tendency to interpret all ideas in terms of our own beliefs. It is unwise to write a history of architectural ideas without testing the meaning of these ideas against the actual buildings in which they were embodied. Not only are eighteenth- and nineteenth-century theories not often discussed in relation to the buildings in which they were made explicit, but, like Emil Kaufmann before him, Professor Collins does not appear to have visited many of the relevant buildings. The writings of the Abbé de Cordemoy and Abbé Laugier meant something very different in the eighteenth century from what they do to us. Expanded and irradiated by Viollet le Duc's brand of rationalism, their tenets took on a different significance in the nineteenth century, particularly when illustrated by analytical engravings of Gothic cathedrals; reinterpreted and set against pictures of liners and grain silos, they have to be understood in Le Corbusier's terms. Absolutely, ideas in architecture must be interpreted in relation to architecture itself, which is something that Professor Collins, for all his strict, puritanical sense of what is the right thing to do, seems not to have noticed. *R.M.*

*Published by Faber, 63s.

Sert's concept of living

Stanford Anderson

'A series of places conceived for the delight of a man on foot'

Two of the most recurrent words of the modern movement in architecture are *design* and *form*. These words, and certain attitudes attached to them, are incised in the minds of contemporary architects.

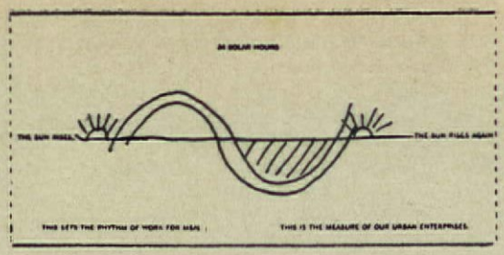
Design has come to imply more than simply a graphic stage in the production of some work. A major theoretical use of the word *design*—and a usage that accords with that of engineering and other related fields—connotes planning some object such as a motor or an airplane in such a way that all 'friction' (in a generalized sense) is avoided. The end product of the design process is a device that should engage in the events for which it is intended without making any unexpected demands upon persons involved in the event. Ideally, the device should disappear from one's consciousness. The objects that were chosen to exemplify this concept offered certain formal implications; for example, that the form should be closed, simple, geometrically definable, and possessed of uninterrupted lines. This has been an underlying and recurrent notion since the birth of modern industrial design and the maturity of the 'pioneers of modern design' in the first decade of this century.

That the actions of human beings are so unpredictable, and their psychic needs so complex, that the material and technical criteria of structure and construction are also complex and often contradictory, prevented the realization of a 'frictionless' architecture. For efficiency an image expressive of efficiency has been substituted.

In order to preserve the image of efficiency, form has come to dictate to use, sometimes quite ruthlessly. Especially in the United States, there has been a resistance to the acknowledgment of this situation. There has been little desire to consider whether some more complex formal construct, cognizable through careful perception rather than overtly imaged, might not accord better with needs and, in frankly acknowledging its effectiveness upon users, would purposefully seek to have a conducive effect. Few architects have actively exploited the intriguing dilemma posed by design and form. Rarely have the confounding dictates of human activity, material, and technique been accepted as the necessary and desirable coefficient of friction within the total work. They have rarely been considered as the generators of an environment that goes beyond an unrealizable self-effacing efficiency to become instead a positive creation encouraging a full life. It may be suggested that it is the adroitly conceived counterpoint of the functional-formal tension that is most satisfactory in the continuing event of an encounter with built environment.

The recent buildings by the firm of Sert, Jackson, and Gourley, and especially the Peabody Terrace married student housing for Harvard University, provide an interesting test for the last assertion. Before pursuing this suggestion, I would like, however, to present another related introduction to the work of Sert, Jackson, and Gourley.

Upon his return to France from the United States



in 1936, Le Corbusier felt the need to invent the sign reproduced above. He specifically commended this sign to the United States again in 1947 in the preface to the American edition of *When the Cathedrals Were White*. The simple but wonderfully evocative diagram is given more substance in that preface in which Corbusier diagnosed an American disease—*mobilitis*.

> 'Everything rolls here; . . . men are on wheels; they have wheels under their bottoms and thus they transgress the law of nature—of human nature, which is eminently alternating and not continuous: footsteps, the beating of heart and arteries, the closing of eyelids, the breathing of the lungs and the formulation of speech, etc. . . . For the philosophic spectator, the end of the road quickly appears: as things are, the cycle of the actions of life is not carried out, or not fully, or with pain and loss, in the irremissible period of time of each day. That is the judge, that is the touchstone: daily life.

Corbusier's question is how to live? The concern is with events and only then for the forms which will be conducive to these events.

Were it not for the Peabody married students' buildings at Harvard (opposite), the work of a firm keenly aware of Corbusier's example, the United States might still show no physical recognition of Corbusier's proposition.

In a single architectural commission, one cannot solve the desperate problems of Americans and their wheels, but in the married student housing for Harvard, Sert, Jackson, and Gourley have come near to solving the problem of transport as it is known to Americans. They have enabled the American to get his wheels out from under his bottom effortlessly and with a handsome directness, and thence to enter into a series of places rid of old streets and conceived for the delight of a man on foot. The continuous ramp parking garage which achieves this transition from the continuous wheel to the alternating footstep is sited such that its inclines complement the natural fall of the site toward the Charles River. Together, sloping site and ramp provide a pleasant and anticipatory approach to the alternating sequence of open spaces and apartment blocks.

Without experiencing or describing more than this, it is apparent that we have entered into an event that unfolds in time. For there is no ideal position from which to view this apartment complex or any part of it. One is not dealing with *the* moment, but rather with a duration which bears new themes, alternations, variations, and repeats within itself.

A view of the apartments can be analysed in terms of vertical and horizontal circulation, different sizes of apartments, different types of rooms—all of which demand, or at least suggest, different configurations of space and fenestration. Materials can be 'read' as support, enclosure, projection or attachment. The buildings are also shaped in response to the exterior spaces which they themselves create. Not that this describes a deterministic design process by which the building automatically emerges from its programme; much of the complex is freely developed and might have been otherwise. The genius of this housing group is that it encourages the tensions of formal construct and accommodating design to assert themselves within a developed syntax which gives the architect sufficient freedom to respect the parts—including persons—within an articulated event.

A recurrent criticism of the married student housing is that it is provided with balconies, yet not every apartment has a balcony. Similarly, the circulation areas deny to one floor the double exposure and through ventilation provided at the floors above and below. To the extent that balconies and such views and ventilation appear to be desirable features and have been claimed as such by the architects, it is to be regretted that they are not universal features of the apartments. Yet one should recognize that this argument turns on the principle of efficient design. The implication is that one must recognize the minimum needs of existence, or better yet the maximum amenity achievable at a given cost. One should discover *the* ideal orientation, *the* ideal dimension between blocks, etc. Then these qualities must be provided equally for everyone.

One must criticize the failure to provide highly desired physical accommodation. One should also criticize the occasional banal detail or failure of formal coherency which can be recognized in these building complexes; but it should be recognized that these physical inadequacies have been accepted or these formal risks have been run within the process of exploring a creative attitude which reckons on some of these 'frictions'.

A complex such as the married student housing is an enveloped necessity involving the privacy and individuality of the family, the community of working, shopping, studying and playing, the relation to neighbours and the neighbouring river and views. All this is extended in time—days and nights and seasons. Where there is an interaction of user and building, there is then also an interaction of the user's space and the building's mass. The balconies are as much an indeterminate indoor-outdoor space as they are physical construction. The volatile surfaces of the apartments, articulating and relieving but not obscuring the rugged shafts below, are completely appropriate to the 'no-thing' quality of these buildings. They are not things in the sense of readily identifiable and describable, discrete forms. They are also not things in the sense of agglomeration of objects which merely provide efficient material and physical satisfaction. The architects are not decreeing an *a priori* aesthetic law which will coerce all facts and events, but they are also not conceiving of the building and its residents anarchically. The complex is a framework which encourages that daily life and the cycle of the actions of life be carried out fully. Residents' experiences of the complex, even the buildings themselves, are eminently alternating. In the search for a conducive, rather than a merely permissive environment, the complex does cause friction, does make demands upon those who observe it or enter into it; but it does this on behalf of the person-event-form relationship rather than on behalf of the formal image. Neither design nor form is absent. Through a dialogue between contributive form and accommodating design, absolutist form is avoided while the forming sensibility still achieves a design which answers to more—and more complex—human needs than any design programme alone can manipulate.



1

Married student housing, Harvard

Sert, Jackson, Gourley and Associates

1
The student housing seen from across the river

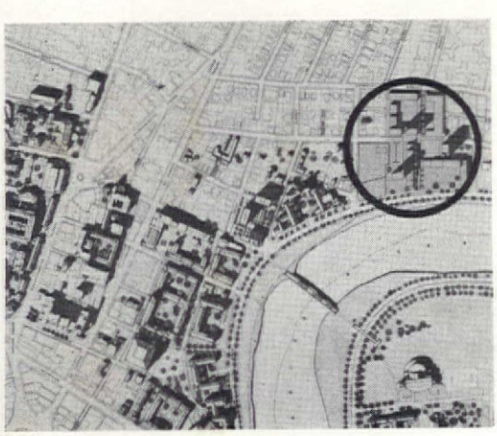
2
Location plan on the Cambridge bank of the Charles River

Prior to the award of the commission the Harvard Planning Office made several preliminary studies—studies of the neighbourhood and its characteristics, studies of existing married student housing, studies of rents, maintenance costs, building costs, zoning, and a study of a questionnaire sent to all married undergraduate and graduate students. From this a programme was prepared which set the approximate number and size of apartments, the ratio of apartment types (15 per cent single rooms, 40 per cent one bedroom, 40 per cent two bedroom, 5 per cent three bedroom) and the project costs and rents. The programme was deliberately kept flexible because the University desired a solution not only in terms of housing but also in terms of relationship to several existing neighbourhood factors.

The six-acre site is a ten-minute walk from Harvard Yard, separated from Dunster House, one of the undergraduate houses, by a city playground. It is bordered by Putnam Avenue on the east and Memorial Drive and the Charles River on the west. The site was cut by Sterling Street running east–west and Banks Street traversing it from north to south, which divided it into several separate city blocks. The neighbourhood is composed primarily of three-storey wooden dwellings and includes an elementary school and a public housing development immediately east of the site.

The architects faced challenging and in some ways contradictory tasks: to tie the project into the comparatively low scale of the neighbourhood, while at the same time providing for the much higher density required by the University; to open a sequence of spaces and pedestrian walks leading to the river front recreation area; to design the exterior spaces for use and enjoyment by the tenants without encroaching upon the privacy of the individual apartments; to open the spaces to the neighbourhood, while still shielding the views from the often dilapidated environment; and to place the high-rise units so as not to obscure the sky, while still establishing their relationship in space.

The first step was to eliminate all through vehicular traffic and consolidate the site. This was achieved by negotiating with the city for the closing of Sterling Street and portions of Banks Street. The former Sterling Street was paved in brick and shaded by two rows of maple trees; this became the spine of the project. On entering the site from Putnam Avenue the three-storey walk-up building is on the right and the wall of the continuous ramp garage (314 cars) on the left. The two buildings form a gate to the pedestrian mall.



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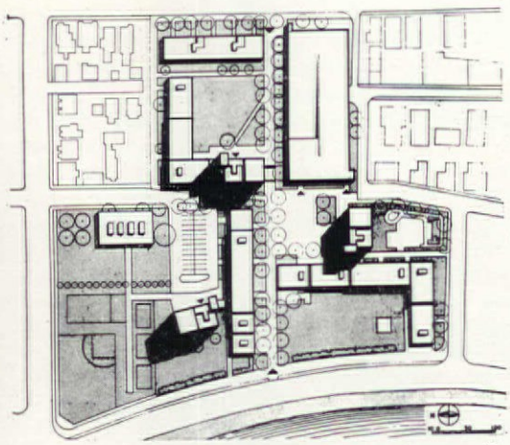

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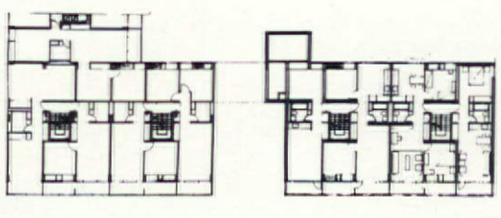

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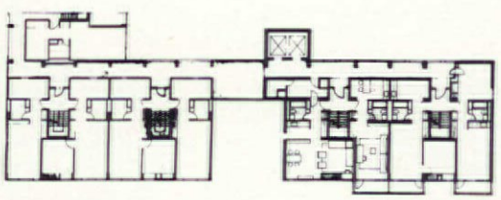

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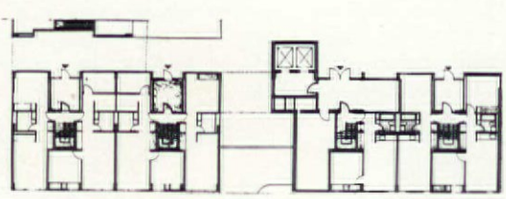

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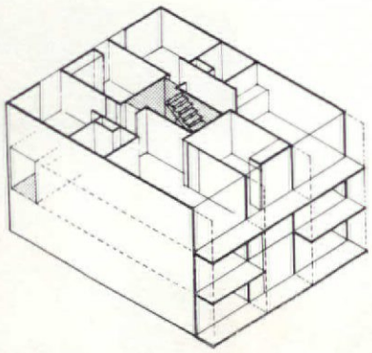
The gently sloping mall, bordered on the south by the long low line of the garage, opens to the first of the sequence of three spaces, a large (170ft×170ft) landscaped court, enclosed on the east and north by the balconied façades of the apartments. The balconies provide an outdoor extension to the living rooms and also serve as a second means of egress. At ground level white wooden fences form small private yards and tie the buildings to the court. It was the architects' policy to provide private outdoor space for family use wherever possible.

The buildings rise in steps from three to five to seven storeys. The seven-storey part of the building which forms the north-west angle of the court is tied at the fourth and sixth floors by glazed connecting bridges to the lift tower of the 22-storey towers. This arrangement provides a gradual transition from the three-storey buildings, which correspond to the height of the neighbouring wooden dwellings, to the markedly vertical volume of the 22-storey towers. The stepping down of buildings also provided an opportunity to create protected roof terraces open to the view and the sun. These are paved and landscaped. Every corridor on the fourth and



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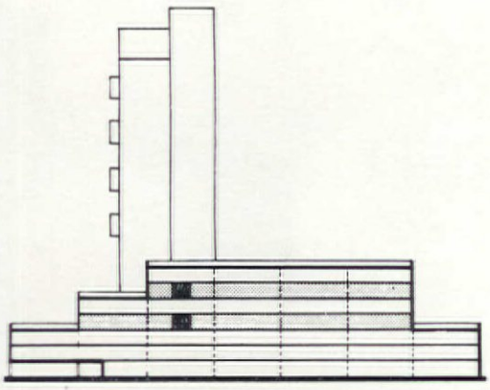

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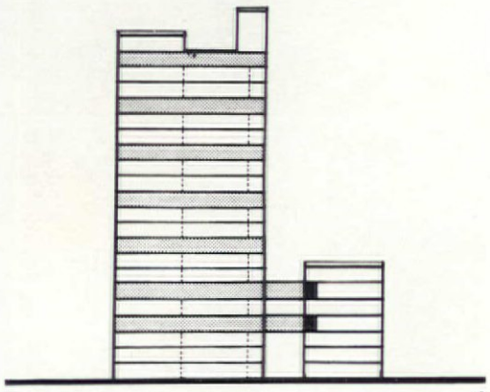

8

1
The housing development seen from the east

2
Site plan

3
Ground floor plan of the eastern tower block

4
Plan of corridor floors 2, 3, 5, 7; floors 10, 11, 13, 14, 16, 17, 19 and 20 of the tower are similar to the left-hand portion of the plan

5
Plan of the alternate floors, 4, 6; the tower floors 9, 12, 15 and 18 are similar to the left-hand portion of the plan

6
Diagram of the basic organizational unit for the whole scheme, three bays wide, three storeys high, with a stair in the centre. Repetition of these basic units simplified the framing, the formwork and the installation of steel, conduits and sleeves. While the short spans made it possible to use simple flat slabs for ceilings. The floor-to-ceiling height is 7ft 6in

7 & 8
Diagrams showing how both low and tower blocks are made up from this basic unit, with corridors running through both (shown shaded)

Photos: Phokion Karas.

sixth floors opens to one of the terraces. On the 21st floor terraces are also accessible from the small lounges adjoining the launderette.

All the buildings, including the towers, are designed as walk-ups for the three lower floors. The first two lift stops are at floors four and six and serve the corridor levels of the tower as well as the connected lower buildings. All buildings are composed around a standard unit, three structural bays wide and three floors high with a stair in the centre bay. The stair connects two lower and upper apartment units to the corridor level leading to the elevators. Only those stairs which are required as fire stairs extend to the ground floor.

From the first landscaped court, the pedestrian mall, flanked by the garage and the tower, two flights of steps go down to reach the central brick-paved plaza. This space, conceived as a community core, is surrounded by several facilities usually absent from rental developments. The University gave every encouragement to the architects in developing facilities for a community of students and their families.

The superintendent's office, the supermarket with its terrace, the large meeting room, seminar rooms and two nurseries with their fenced courts line the ground level of the plaza on two sides. The space is enclosed on three sides by lower buildings and is extended dramatically upward by the three surrounding towers.

From the central plaza, which measures approximately 170ft×140ft, the mall leads to a long landscaped court running parallel to the river. The existing hedge and tree clumps protect this court from the view and noise of the traffic on Memorial Drive. The buildings which form this space are only three storeys high near the road, but climb to five and seven storeys as they step back toward the towers. Of the two remaining spaces, the one close to the city playground serves as vehicular access and guest parking; the other, tied to the central plaza and western court by walks, contains the children's playgrounds.

All of the buildings are entered from the east and the north. The southern and western façades are allocated to the apartment living spaces as they overlook the courts and plaza and enjoy the best view. Since this view looks west toward the river, the architects faced the problem of guarding against the direct western sun without destroying the view. The balconies of the western façades, therefore, are provided with adjustable vertical louvres above the height of the handrail and protected by expanded metal panels below this level to permit downward views when the louvres are closed.

Studies of the site and building masses were carried out by the use of models at several scales which could be inserted into existing models of the surrounding area (prepared by the University Planning Office) to study the overall relationship with other university buildings and skyline. In their planning of the apartments, the architects made a conscious effort to obtain through views and through ventilation. All of the units, with the exception of the majority of single rooms on corridor floors, occupy the full width of the building. To emphasize this space between two cross-walls, the partitions separating the balconies are painted white to extend the white walls of the living room, and similarly, the underside of the balcony slabs are painted white to extend the white ceiling surface.

In the one bedroom unit, access to the bedroom is through a generous opening of about 3ft 8in and where possible, the opening is provided with a frameless folding door or curtain to emphasize the continuity of space. In the two-bedroom units the living room space extends freely into the kitchen/dining space with the kitchen screened from view by the volume of the bathroom, which projects into the space. The living room or even the kitchen/dining room may often serve as a means of access to the bedrooms, which is a departure from the usual internal corridor plus entrance vestibule serving all rooms.

Colour is used internally to augment the spatial concept. The total through-space is painted white and only those elements which protrude, such as the volume of the bathroom, are painted in strong simple colours. At either end of the space the window wall is treated similarly: the frames to the glass are painted white with only the ventilator in strong colour. Where a bedroom occupies the end of the space, as in the one-bedroom unit, the outside wall is composed of a storage and a window unit with a built-in desk, and the entire wall is covered by a curtain which screens either window, closet, or both. This treatment is consistent with the overall spatial concept.

The architects believe that this planning approach answers the needs of young family life, and there is ample evidence since occupancy to support their beliefs.

The costs, as reflected in the original bids and as borne out in minor extras during construction, were well within the original estimates and compared favourably with the costs of other similar housing projects in the area. The ease of construction enabled the contractor to turn over for occupancy 60 units in only 11 months and the entire 500 units within a tight 18-month schedule. The variety of exterior spaces, for use by both tenants and public have qualities not usually found in low cost housing.

Flat slab construction of short spans supported by 12in wide columns of varying depths was chosen for both high and low buildings since it permitted simplified formwork, allowed easy installation of reinforcing steel, conduit, sleeves, reglets, precast inserts, and also greatly simplified the work of the finishing trades. The $7\frac{1}{2}$ft floor-to-ceiling height allowed the workmen to proceed without complicated scaffolding. The underside of the structural slab served as the finished ceiling. Shear walls on the perimeter were marked with a batten pattern and left exposed. Interior concrete shear walls were painted and served as the finished partitions.

Within the standard structural frame, the exterior wall is composed of two basic elements: the precast concrete panels and the window frames. Both span from floor to ceiling between the structural slabs, which allows a constant height, but varying widths. The precast panels are composed of a $2\frac{1}{2}$in concrete panel, foam glass insulation, metal lath and plaster, making a panel only $5\frac{1}{2}$in thick, which gives full protection and insulation. Steel pan stairs were shop-fabricated. All kitchens were based on two basic assemblies of equipment and all the bathrooms on a standard arrangement. Structural steel sections were used for the balconies. Carpeting provided acoustical absorption and reduced impact noises in the corridors and brick was used both in corridors and stairwells to reduce maintenance.



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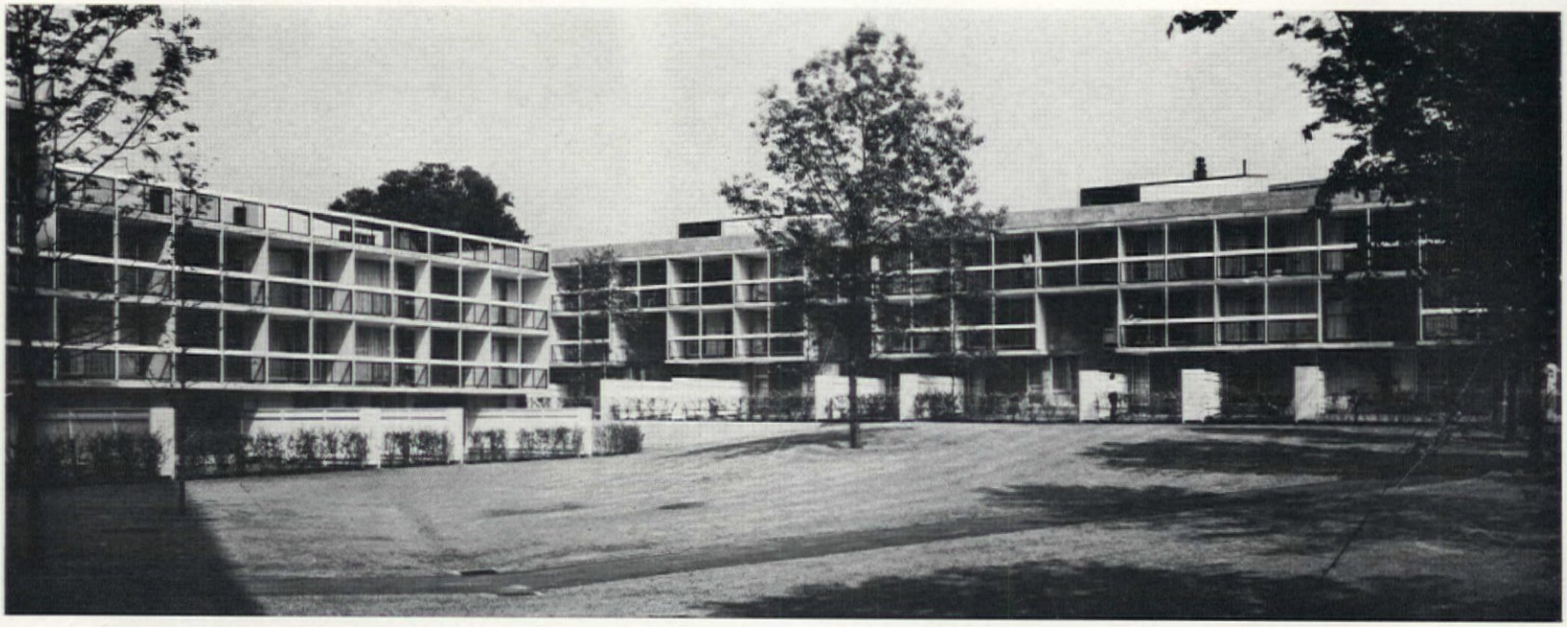

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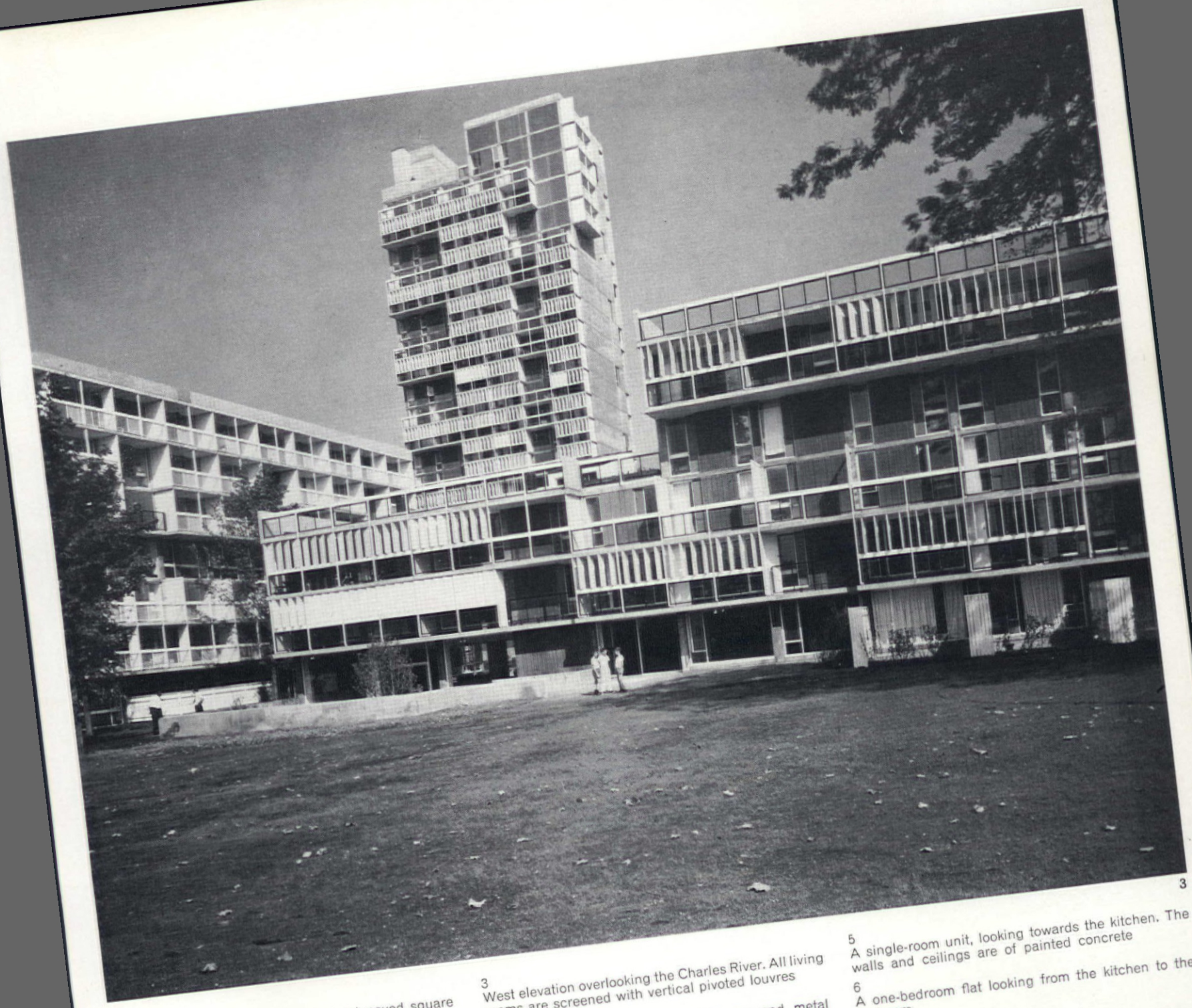

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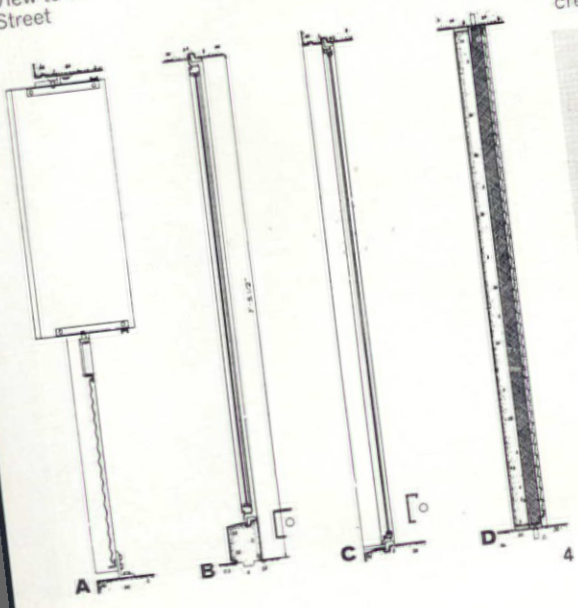
1
View from the south of the main brick-paved square around which the buildings are grouped

2
View to the east of an enclosed grass court off Sterling Street

3
West elevation overlooking the Charles River. All living rooms are screened with vertical pivoted louvres

4
Section through; **A** aluminium louvres and metal screen to balconies, **B** steel and glass doors opening on to the balconies, **C** a fixed glass window wall, **D** a precast wall panel, made up of 2½in thickness of concrete, a layer of foam glass and plaster on metal lath



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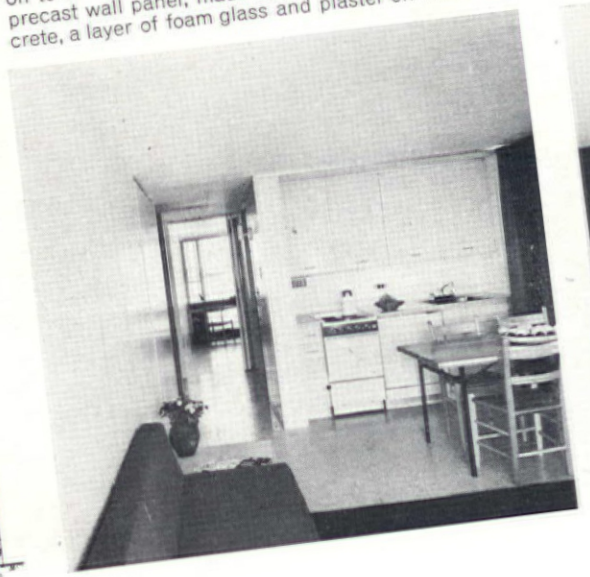

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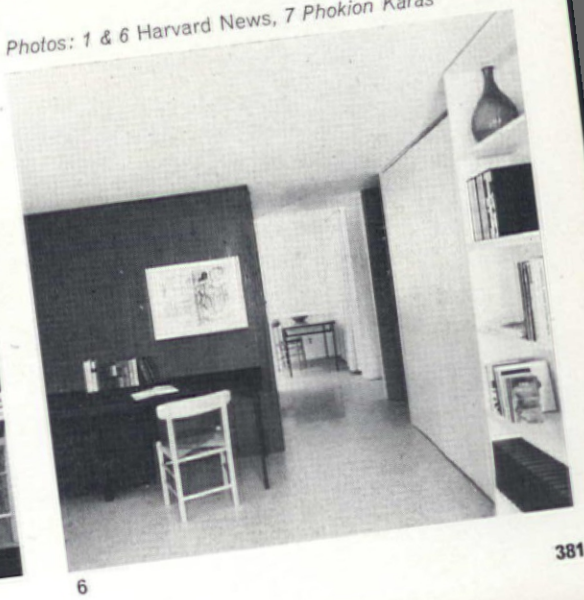
5
A single-room unit, looking towards the kitchen. The walls and ceilings are of painted concrete

6
A one-bedroom flat looking from the kitchen to the bedroom

Photos: 1 & 6 Harvard News, *7 Phokion Karas*



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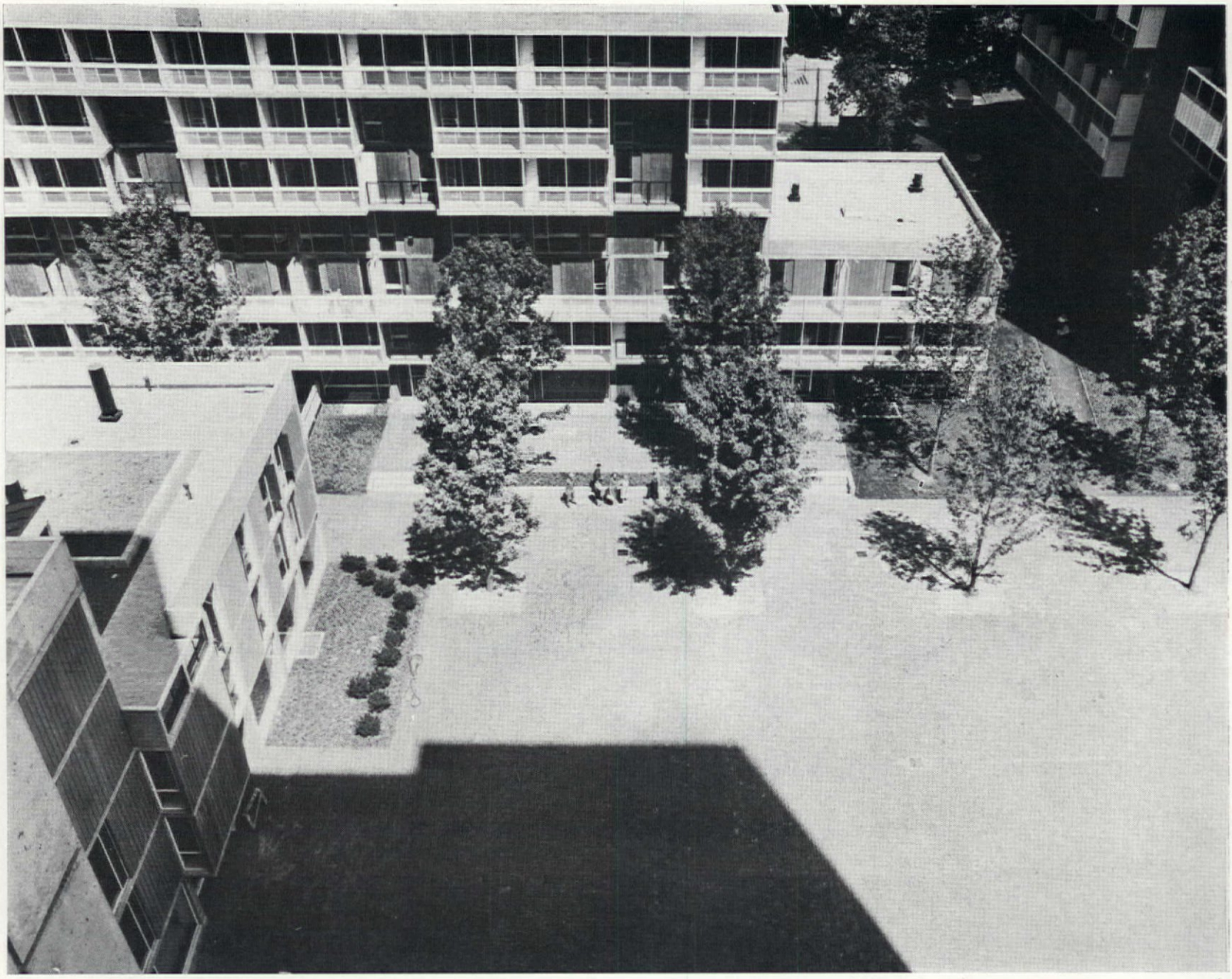


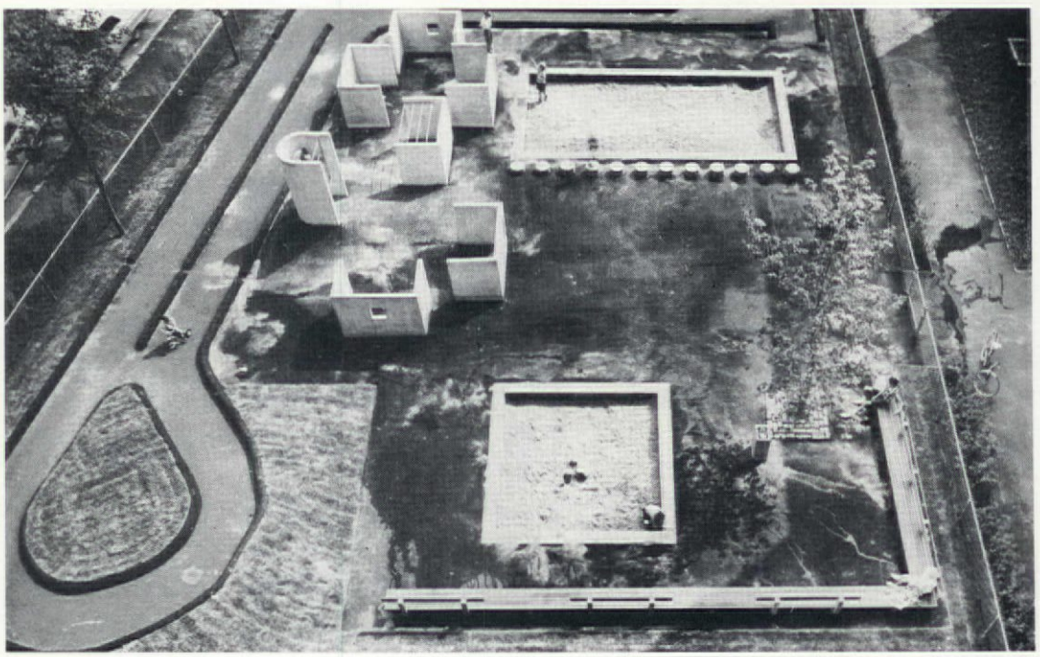
1

No air conditioning is provided, although provisions have been made for tenants to install their own water-cooled unit if desired. Heating system pipes (hot water in lower buildings and steam in the towers) rise at mid-span and are incorporated into bedroom cabinet work.

Sunlight is controlled by balcony projections and by sunbreakers where required. Ventilation is provided by metal ventilators that allow large glass areas to be fixed. Artificial illumination is generally incandescent except in corridors where fluorescent is used.

Seven and one-half inch concrete floor slabs provide acoustic isolation. Walls of double, staggered studs with batten insulation separate apartments.

A system of service tunnels connects all the buildings. A make-up air system balances the 'shaft' effect of the stairwells in the towers.

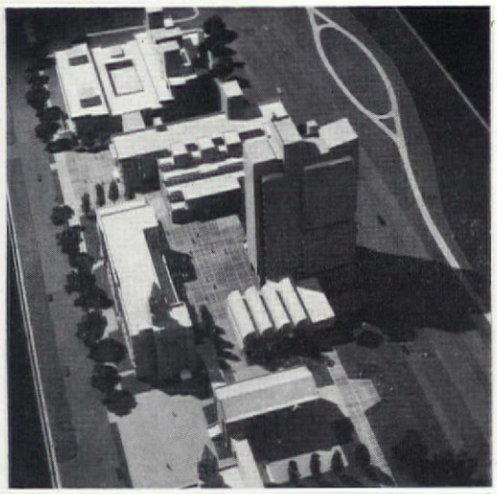


2

1
View from the southern tower block into the main brick-paved square

2
The children's play court on the south side of the site

Photos: Phokion Karas



1



2

University campus, Boston

Sert, Jackson, Gourley and Associates

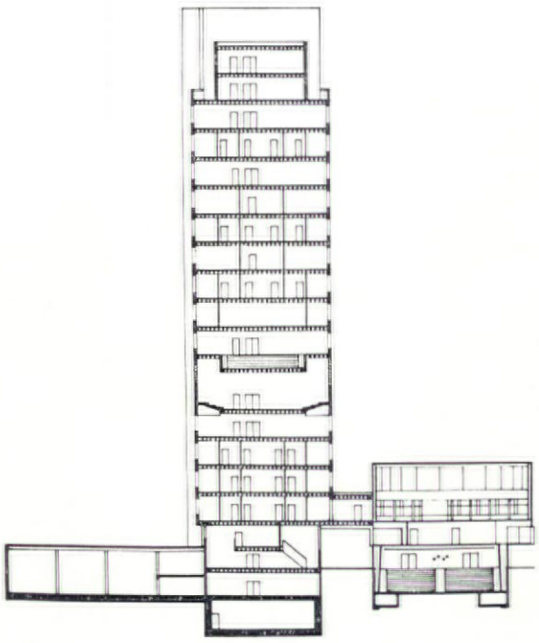
1
Model of the Boston University Campus
2
Aerial view of campus
3
West elevation of the tower block
Photos: 1 R. D. Harvey, 3 L. M. Bowen



3







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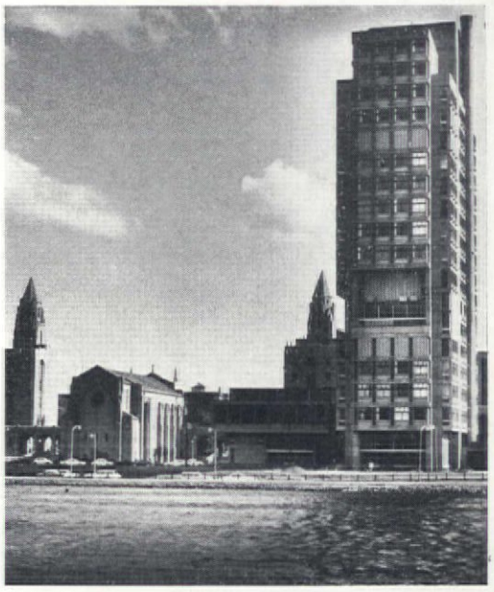

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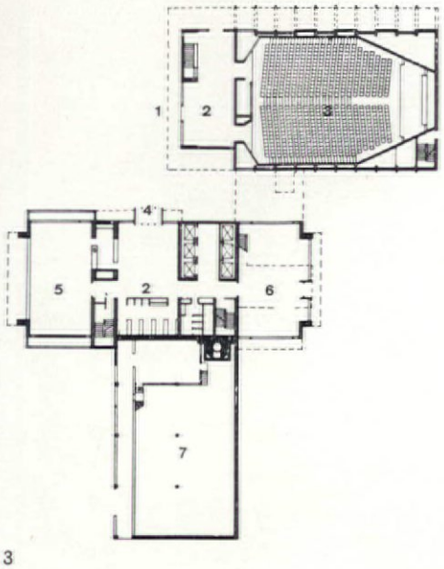

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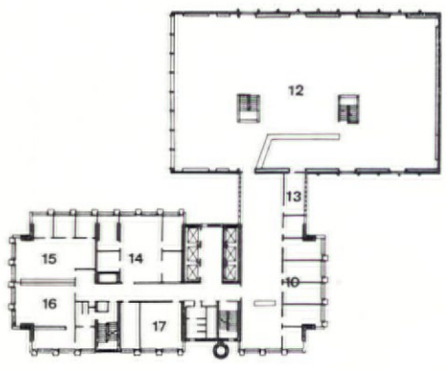

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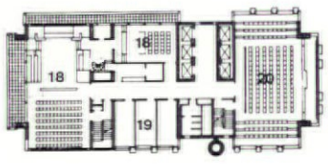

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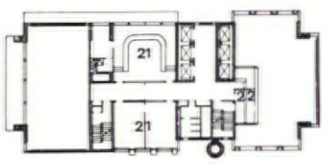

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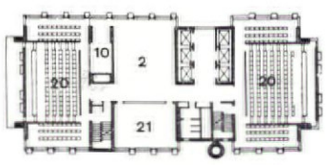


8

Opposite
The Boston University tower seen from across the Charles River by day, and by night

1
Section through tower and law library

2
The campus viewed from the north

3
Ground floor plan

4
First floor plan

5
Second floor plan

6
Sixth floor plan

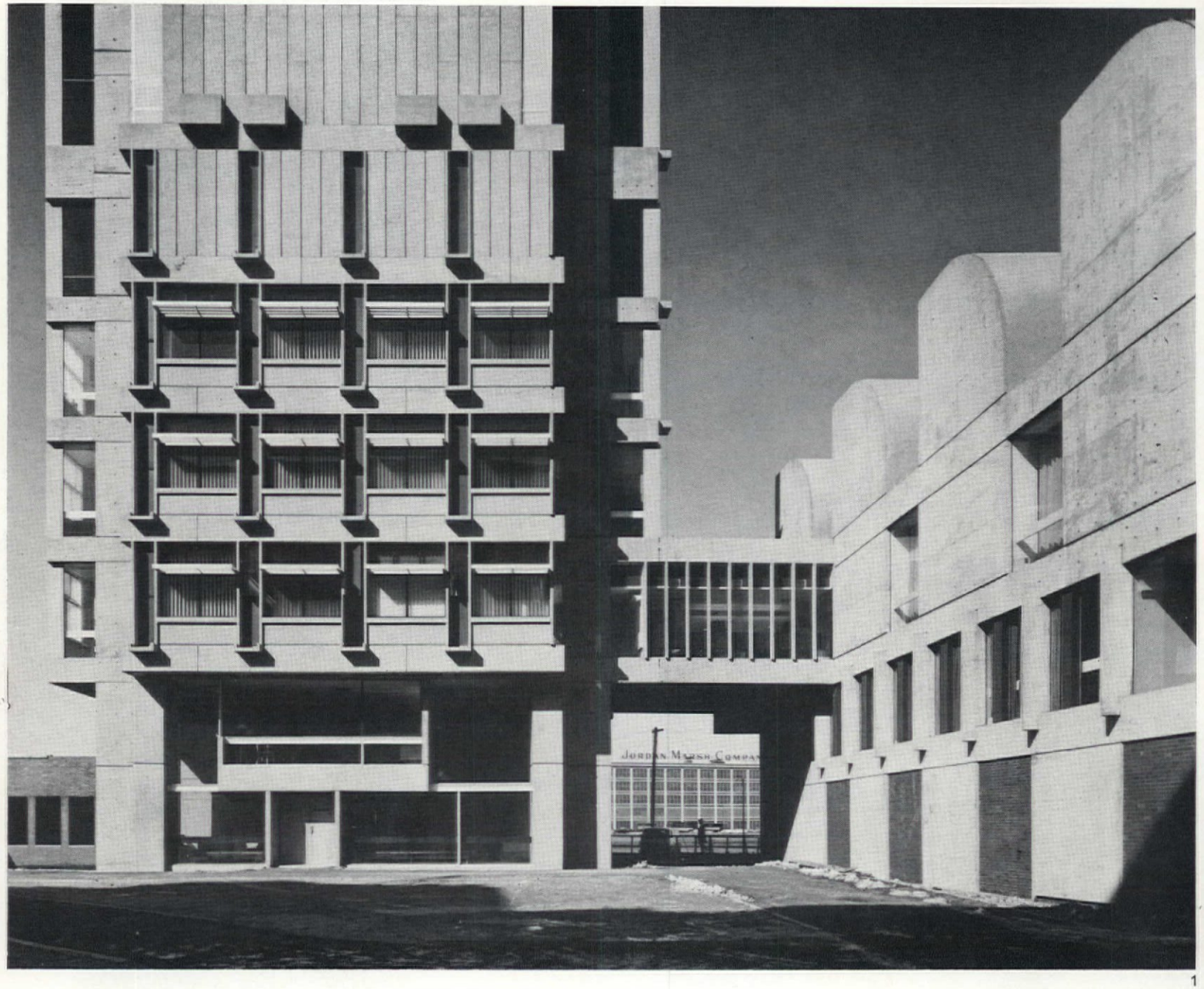
7
Seventh floor plan

8
Eighth floor plan

Key to plans

1 auditorium entrance	12 main reading room
2 lobby	13 librarian
3 auditorium	14 law studies
4 law school entrance	15 law review
5 barristers' hall	16 lounge
6 student lounge	17 tax lounge
7 heating plant	18 court room
8 tax library	19 research rooms
9 stock rooms	20 lecture room
10 offices	21 seminars
11 school entrance	22 balcony

Photos: J. W. Molitor, J. Heller



1

1
Base of the tower with the Papas law library on the right

2
View up the face of the tower showing precast panel and window details

Photos: 1 J. W. Molitor, 2 J. Heller

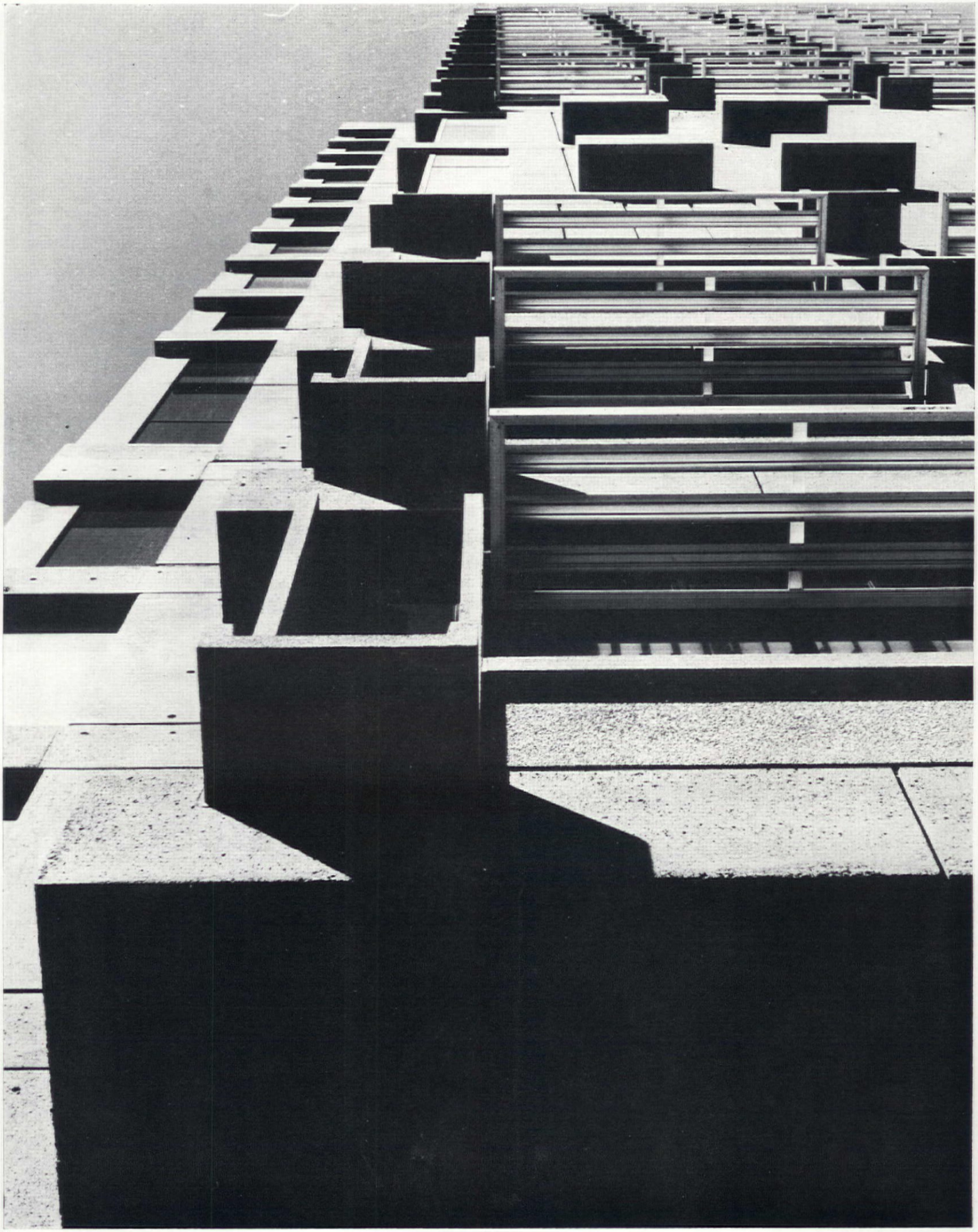
On the opposite bank of the Charles River from the Harvard married students' quarters, Sert, Jackson and Associates have started a series of new buildings for Boston University.

The site is an awkward and ungainly one, a long straggling sliver of land running along the river front, bounded on both sides by traffic-congested streets—an expressway, Storrow Drive, between it and the river on the north, Commonwealth Avenue cutting it off from the town on the south.

A decision was therefore taken early to use towers on the campus, in part to ensure views towards the river, but equally to provide visual links from one end of the site to the other and to open it up as much as possible. 'Either it had to be a vertical campus,' Sert explained, 'or the entire site would have been covered with buildings.'

The first of the four proposed towers is sited near Sert's earlier Student Union building. It contains the Law School and the School of Education. At its base to the east is the new Papas Law Library. A general library is to be started soon to the west, between the tower and the Student Union.

The Law School occupies the eight lower floors of the tower, the School of Education the upper part, with its splay-roofed library on the roof. The break between the schools is clearly expressed on the elevations, with a nipped-in waist reminiscent of Corbusian buildings. Indeed, the vertical expression of the lift and stair halls and many of the heavy concrete details, right through to the rounded north-lights on the Papas Library, have a Corbusian air which is considered, in America, as a forceful thrust against the purveyors of the ubiquitous metal and glass curtain-wall.



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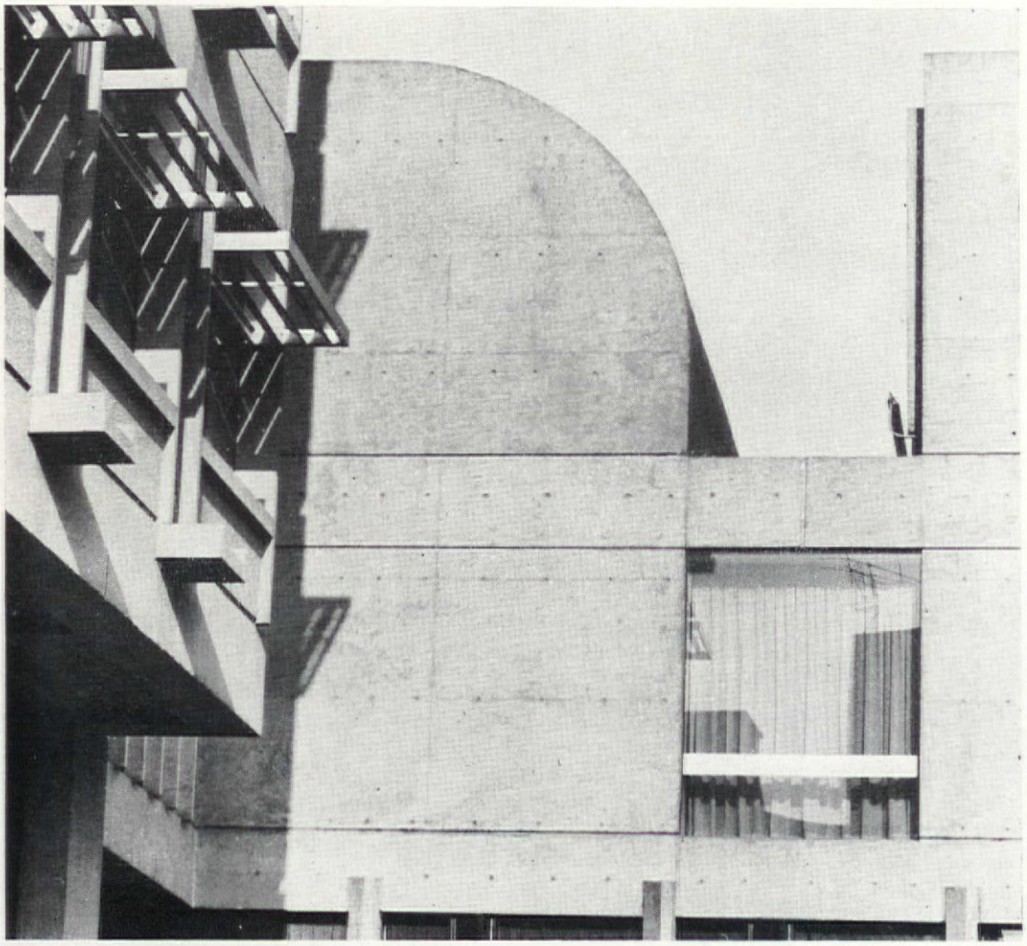

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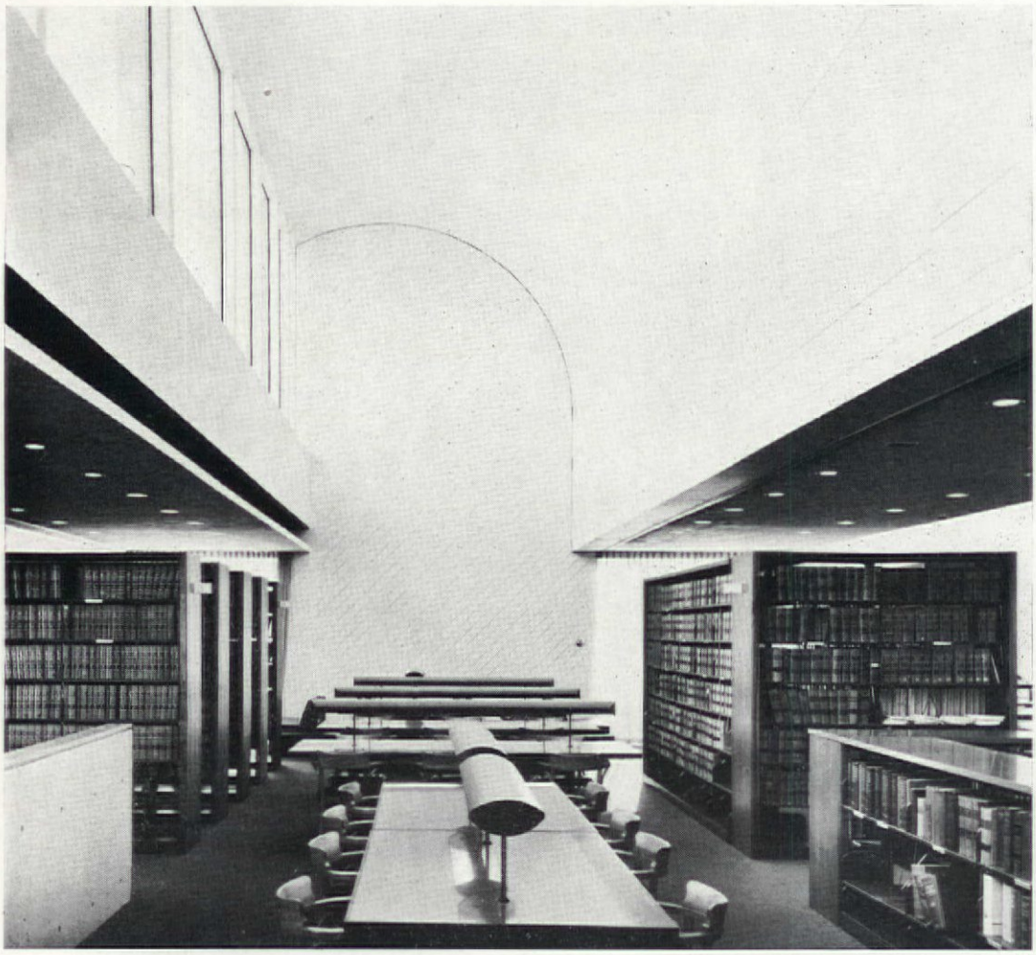


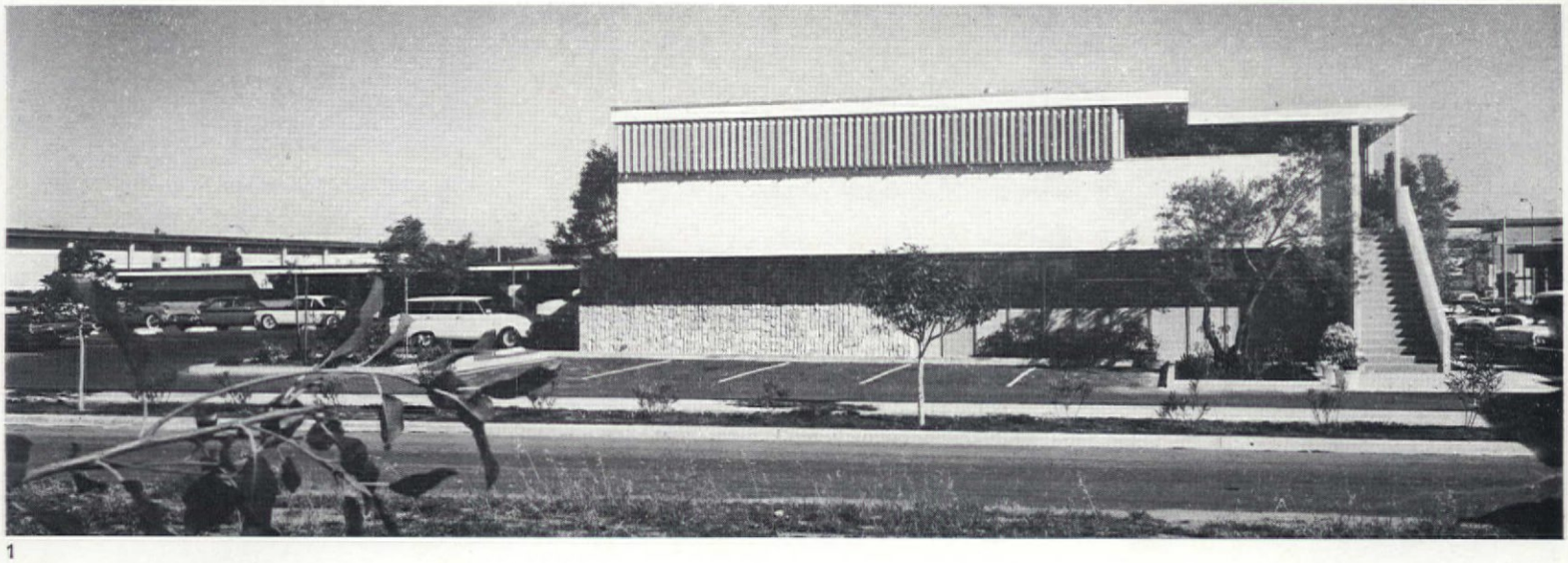
3

1
View of the junction between the tower and the law library

2
Window of one of the seminar rooms in the tower building

3
Interior of the law library

Photos: 1 J. Heller, 2 & 3 J. W. Molitor



1

Medical building California

Richard J. Neutra and Associates

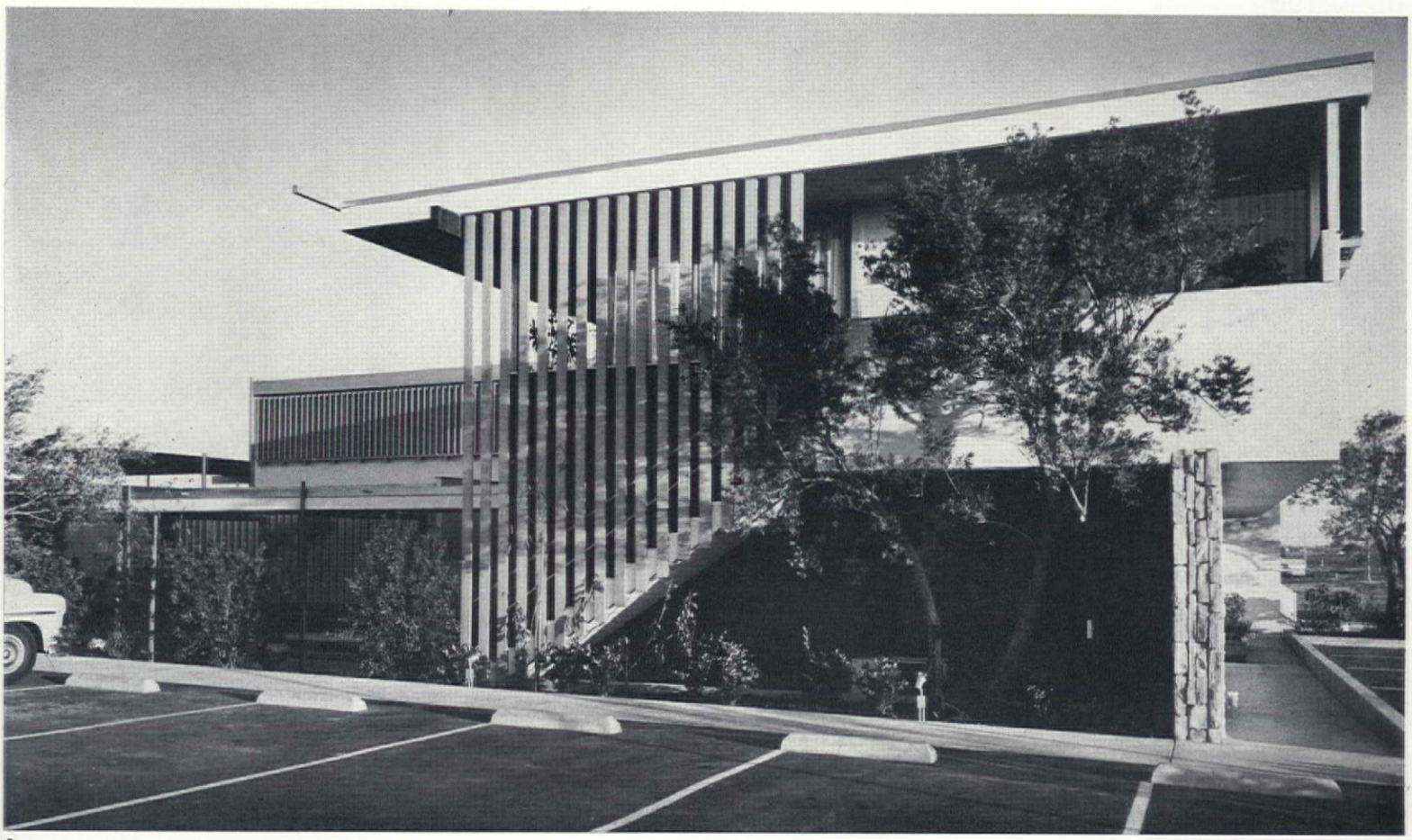
All photos: J. Shulman

1
An exterior view of the building, seen from the parking area

2
Staircase leading to second storey offices at the south-east corner of the building

The occupants of the suites in this medical building at Newport Beach are also the owners, who formed a corporation to have a building tailored to their individual needs. They selected their architect less for his international reputation than for his belief that the architecture should produce beneficial psychosomatic effects on the patients. Each doctor's suite is centred primarily, on the needs of the patients.
Each suite was first designed as an isolated entity to arrive at the most perfect internal arrangement. They were then fitted together into an overall composition and connected with covered walks. The result, as intended, gives a common patio for circulation which is broken up into interesting exterior spaces. Yet privacy prevails everywhere.

The axes of the site are 45° off north, which is difficult for sun protection as all four sides receive sun, with two sides receiving hot afternoon sun. Overhangs are not as effective as they would be on a true south-facing wall; indeed, they were found to be effective only on the south-east and south-west. In other places fixed or movable aluminium louvres were used to maintain maximum natural light while shielding from direct sun light.



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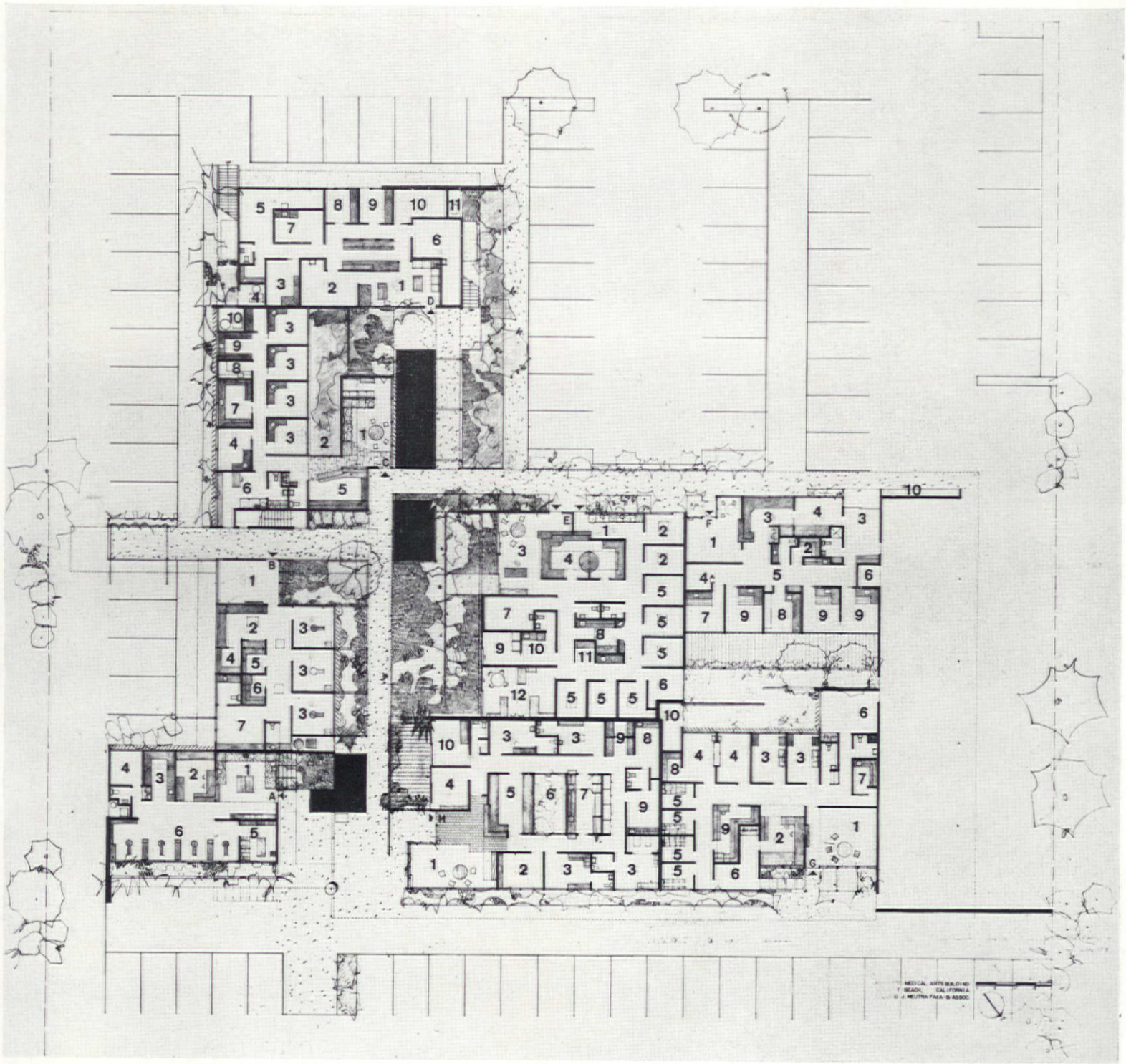

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1
View of the main internal courtyard and circulation area, with its reflecting pools and landscaping effects, looking north towards the main entrance

2
Ground floor plan

Suite A
1 waiting
2 office
3 laboratory
4 staff
5 consultation
6 operating room

Suite B
1 waiting
2 office
3 treatment
4 storage
5 audio
6 steril
7 doctor's office

Suite C
1 reception
2 patio
3 operatory
4 x-ray and hyg.
5 business
6 consultation
7 laboratory
8 dark-room
9 sterilizing
10 furnace
11 storage

Suite D
1 waiting
2 dispensing
3 consultation
4 furnace
5 refraction
6 secretary
7 surgery
8 treatment
9 laboratory
10 refraction mirror
11 heater room

Suite E
1 waiting
2 examination
3 waiting
4 office
5 examination
6 consultation
7 family examination
8 laboratory
9 lounge
10 allergy shots
11 head nurse
12 doctor's office

Suite F
1 waiting
2 dark-room
3 office
4 consultation
5 passage
6 furnace
7 hygiene
8 laboratory
9 operatory

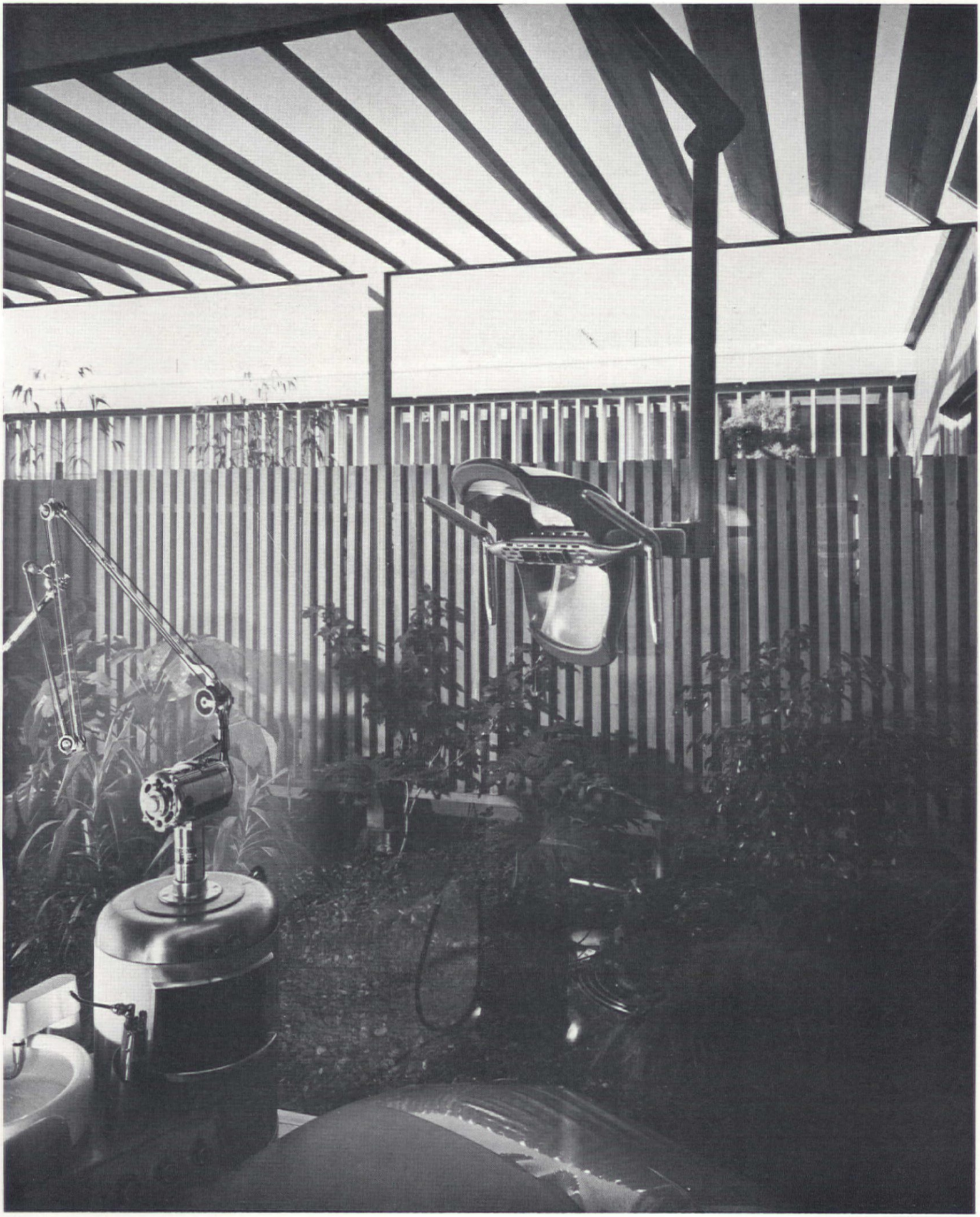
Suite G
1 reception
2 office
3 consultation
4 treatment
5 recovery
6 observation
7 dark-room
8 store
9 sterilizing
10 furnace

Suite H
1 waiting
2 consultation
3 examination
4 consultation
5 reception
6 atrium
7 laboratory
8 x-ray
9 dark-room
10 lounge

The dental suite A with chairs for four patients



View from the dental suite B into one of the patios





The fine and the folk

An essay on McKim, Mead and White and the American tradition

Peter Smithson

The strongest architectural tradition in the United States is the tradition of careful detailing in expensive materials—granite, travertine, bronze, plate glass and lately in stainless steel.

This tradition can safely be said to have been founded by McKim, Mead, and White. The monograph on their work* covers the period 1879–1915, and this may be assumed to be their high period, although one's own feeling is, that what one always assumed to be export McKim, Mead, and White, such buildings as Selfridges, Bush House and the Rootes Group building in Piccadilly, were still being finished in the late 1920s.

The present-day architecture of this tradition, that of Skidmore, Owings and Merrill, is the only architecture in the United States that foreign architects regard as really American. And, as with Detroit cars, they admire it without the restraints that would operate against the admiration of such architecture were it a product of their own culture. It is admired for its unmatched technological competence.

They are, of course, perfectly aware that its underlying planning models are those of the late Beaux Arts: banal, overblown, official **6**.

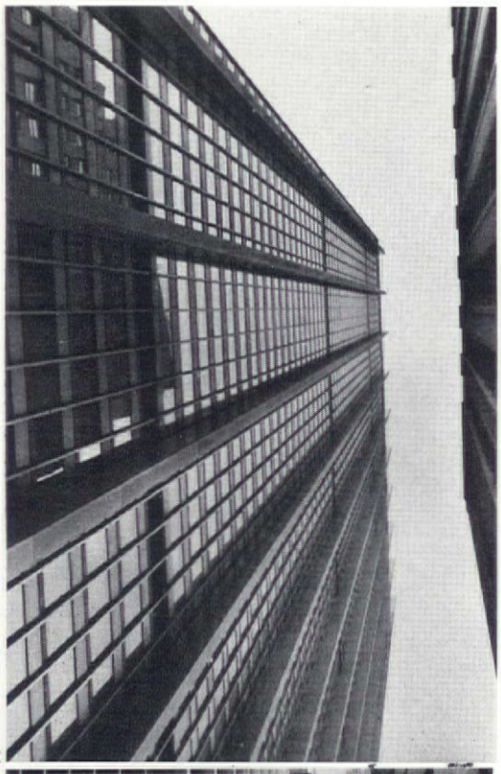
But the expertise that has been brought to bear can lift the product into the category of the new —and this is what fascinates, the hint of 'another architecture' outside the traditions of Europe and Japan.

This, of course, one has been able to see only recently and is apparent in very few buildings, and only a breath of it can be felt in the works of the founders of the tradition—McKim, Mead, and White.

But there is no doubt that Skidmore, Owings, and Merrill's Union Carbide **5** and Chase Manhattan Bank buildings **1, 2, 3 & 4** in New York are so well made and of such expensive materials that one cannot imagine who could have made them. They arouse the strongest cargo-cult feelings in foreigners, and are truly hints of *une architecture autre.* Yet the same architects' Connecticut General Building is a load of nothing (in some way one senses really life-diminishing for its occupants); and the same tradition's Lincoln Centre a load of near-wicked nothing (actually kind of morally corrosive).†

*Paul Wenzel, Maurice Krakow *A monograph on the work of McKim, Mead and White,* 1879–1915. Architectural Book Publishing Co. N.Y. (There seems to be no biography of this firm. This would make a good subject for a European's Ph.D. Thesis.)

†One can be definite in one's judgments of this latter sort of building for the architectural language fumbled after is a known one, the cribs obvious, the intentions too familiar.



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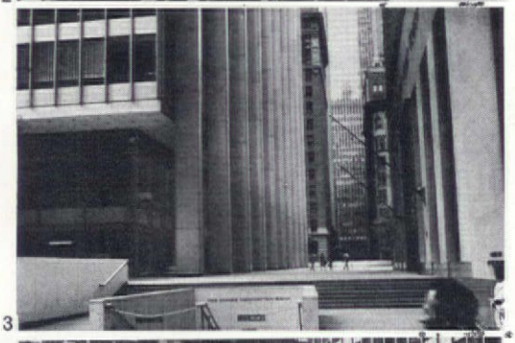

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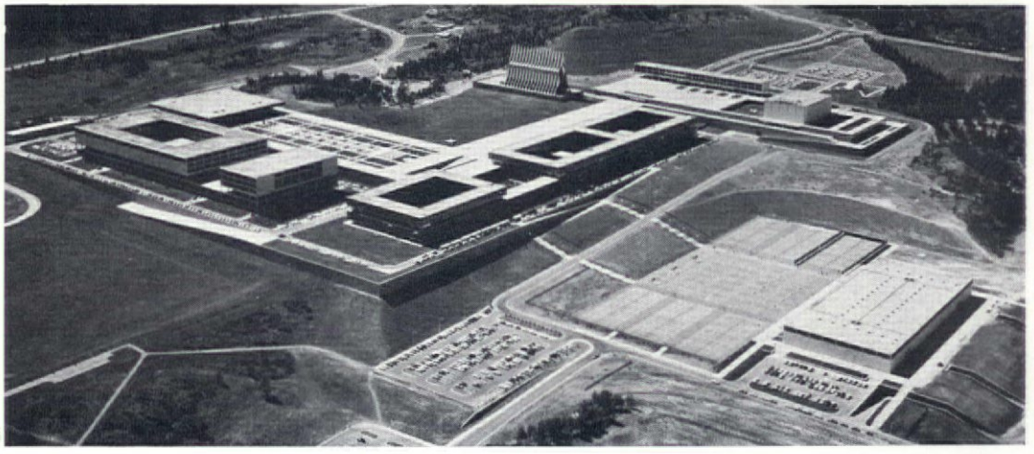

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1
Chase Manhattan Bank, New York, Marilyn Monroe and US Army jeep

2 & 3
Chase Manhattan Bank, New York—1957–61

4
Chase Manhattan Bank with the Federal Reserve Building by McKim, Mead and White in the background

5
Union Carbide Corporation, New York—1957–60

6
Air Force Academy, by Skidmore, Owings and Merrill, Colorado Springs—1956–62

Montage by Geoff Reeve from photos by Eric Locker and Richard Avedon and American Information Services; 2, 3 & 4, P. Smithson; 5, Moss Photo Service; 6, Stewart's Inc.



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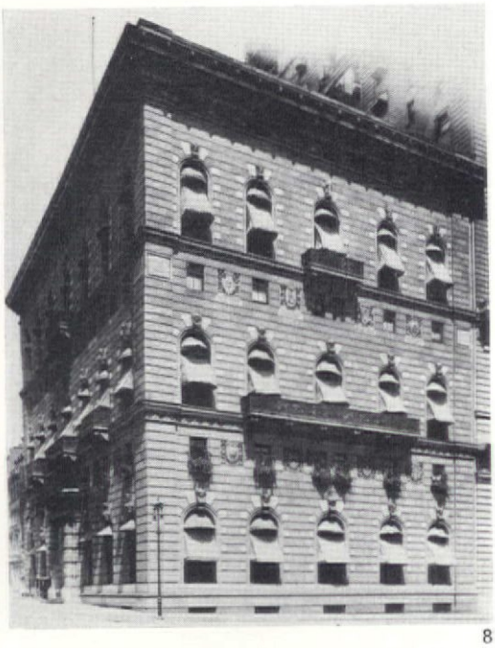

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10

The breath of 'another architecture' in the founding firm of the tradition can still be experienced outside the University Club (corner of 54th and 5th Avenue) **8**, and can be seen in the plates of the Madison Square Presbyterian Church **7** in the monograph on their work.

These exteriors are detailed in a way outside of a foreigner's experience of the possible.

In no real Renaissance building was so much trouble taken. That sort of perfection only appeared in buildings as rare as the Parthenon or the Ise Shrine, and they were not so machine-absolute then, as they are, or appear to be, now.

No bollard for us so well made as at the Washington Arch **9**.

The square-section lengths of granite that lie so simple, so expensive, so eloquent, between the pavement and the building at the new Museum of Modern Art are impossible for us, for we are outside that special tradition of concentration on detail which Americans enjoy.

And the lavatories are what we envy most of all. Those luxe vitreous enamelled partitions, the thick-glazed pans, and the flush brush-finished stainless steel towel dispensers. All from catalogues. What a culture that can produce such pleasures for every man! And they really are potentially for most men, as Detroit has shown.

There seems to be a straight line from the frame house to the Pepsi building **10** which comes to Americans without special thought.

Those American architects who are thoughtful about the making of spaces, H. H. Richardson or Louis Kahn, make *our* sort of architecture—and Mies van der Rohe has never left Germany in his head. Mies of course, in his material aspect, has grown out of a parallel tradition to that of McKim, Mead, and White—even his earliest work is made with materials of the finest quality detailed with great care—the marble, travertine, plate glass, and chromed steel of the Barcelona Pavilion; the vast veneered-wood doors and careful brickwork of the Krefeld Houses.

But even with the example of Mies, Skidmore-Owings, and Merrill could not have bridged the gap from McKim, Mead, and White to their present cargo-cult style without Richard Neutra, for Neutra was the first to make the precise glamorous. His houses, as photographed, are so polished, so perfect, as to seem impossible to achieve. As if their builders all wore white gloves and Tabi in the Japanese manner and their owners never had an unguarded moment. They have a kind of de-materialized glamour, almost that of soap-advertisements, that is specially, even uniquely, American.

This American cargo-cult architecture of technology is un-exportable. It is a much lesser thing that is exportable.

What SOM did with the Lever House was of the utmost banality. Without good proportions, meaningless in the town-pattern (routine Emery Roth perversely enough makes more sense), its language illiterate. But it is precisely for these reasons it has become a universal model.

It is not frightening, makes no demands. It hasn't 'made Mies acceptable'—for Mies still has secrets and these frighten. Lever House has no secrets, there is nothing in it which can't be copied by an average team of average architects with a fair amount of money and a fairly developed industry.

A 'Lever House' can give the illusion to a foreign city of having a genuine technological culture. The glamour without the century of one half's effort needed to produce one.*

Soon those same foreign cities that have 'Lever Houses' will have copies of the black anodized aluminium/grey glass people's '900' office towers of New York two years ago, and later be freckled with brown anodized aluminium (or cor-ten)/brown glass poor man's Seagrams that are currently going up there. (We in England have a rash of black ones this year, and brown ones due to arrive in '68–'69.)

For these too are glamorous—desirable often in defiance of climate and situation. Their presence in our cities is intended to be read as a gauge of our nearness to the fountain of technological culture—they are aspects of the cultural reversal.†

But we will build no copies of the Chase Manhattan Bank. It will never be a model, for it is built with unimaginable wealth and resources. Like the Pyramids. And almost equally remote, for it too has its secret. The secret of being quite sure what to do. A secret that has been held in turn by Egypt, by Greece, by Rome, by Spain, by France, by England. By the Dutch, by the Rajputs, and so on—this is the history of the world.

It would seem that it is the identifying characteristic of a technological culture that its key objects—those things in which the discipline of their evolution is most clear and most assured—should appear as a by-product of concentration, not on old-world notions like 'the discipline', but on perfection of process and of detail. This would certainly seem to be so in that the strongest hints of the emergence of 'another architecture' are in multi-storey buildings with a great deal of repetition, where what Americans know most about in their bones—mass-production, process control, etc.—becomes 'the control', rather than any notions of composition, or art.‡

We have had much slighter hints in Europe with the early Hertfordshire schools and from the *école Prouvé*—but their acheivements are so incomplete as to be far from assuring us that we have indeed a technological culture.

American architects almost have it made: if they could only stop worrying about architecture.

*The acceptance of the 'automatic mill' came in the 1790s. See Roger Burlingame's *Machines that built America*. Signet Key Books, 1955.

†Whereas in 1891 McKim, Mead, and White built a cricket club in Germantown, Philadelphia, Pa., and called their elevators 'lifts' on plan (see Houses for Jas J. Goodwin, New York City 1898), we now build 'A.B.C. Bowlings', and are beginning to call our lifts 'elevators'.

‡H. Russell-Hitchcock's introduction to the SOM book seems for him to be quite extraordinarily lacking in insight and objectivity. Its comparison of the achievement of the 'integration of the arts' between SOM on the one hand and Mies van der Rohe and Le Corbusier on the other, is either an impertinence, or else a kind of comic misunderstanding of what art is all about.

7
Madison Square Presbyterian Church—1906
8
University Club, New York—1900
9
Washington Arch, New York—1892
10
Pepsi- Cola Company, 1958–59

An architectural journey

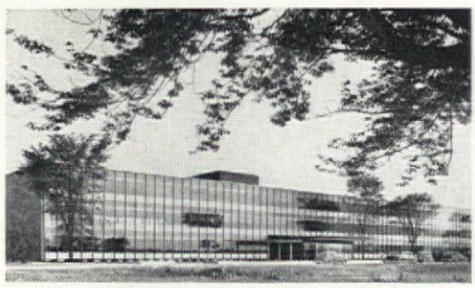
Notes on a tour of the United States

Michel Ragon*

After two months study in the United States, where I met both Mies van der Rohe and Philip Johnson, visited the large offices of Harrison and Skidmore, saw the new buildings of New York and Chicago and talked to American architects, engineers, teachers and critics, I came to the surprising conclusion that American architecture is in a state of absolute regression. Having given up research for increased production, it has succumbed to a baroque that is not the structural baroque that we have so often acclaimed, but a purely decorative variety.

Mies van der Rohe's purity, Gropius' functionalism have stimulated a reaction. It appeared on the grand scale with Eero Saarinen **1**, who, having cut the umbilical cord that joined him to Mies van der Rohe, produced an admirable architecture–sculpture, like the Yale hockey stadium or the TWA air terminal in New York **2**. Had he not died in 1961 he would have been the last of the grand old men of American architecture. But what would have become of his work if he had not died so young? Several of his later buildings tended towards prettiness and decorative compromise. The girls' dormitories at Philadelphia University **3** are an exception and an aberration. From outside they appear an impregnable fortress (to reassure parents?), but internally there are an array of delicate shutters that suggest an operetta décor.

When one calls Saarinen the last of the grand old men one naturally means the last after Gropius and Mies van der Rohe. These two octogenarians are in fact highly active. Working anonymously with a group of young architects since 1949 in the Architect's Collaborative,



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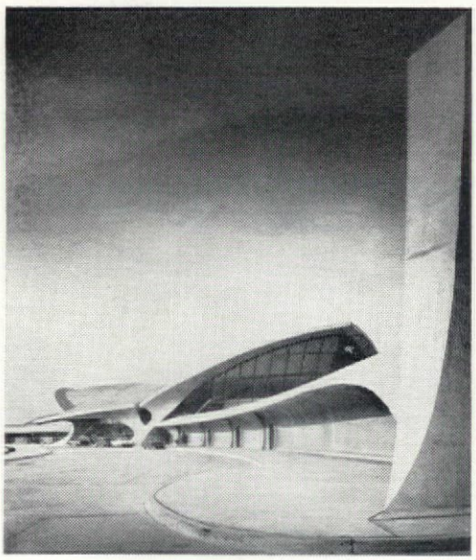

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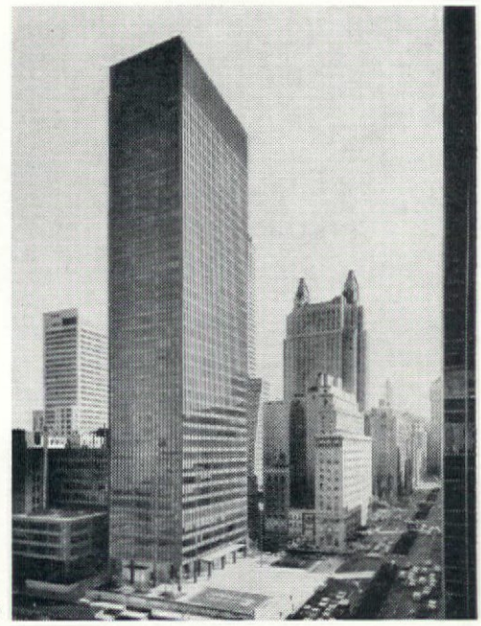
Gropius is the author of one of the most spectacular of recent skyscrapers in New York, the Pan-am building **4**, which blocks the view down Park Avenue. But this building, like Gropius' other American works, is not of a kind with the German work of the Bauhaus father. Contrary to Mies van der Rohe, his inspiration has been exhausted by America. Mies van der Rohe's recent buildings, on the other hand (whether it be the Charles centre in Baltimore, the Baccardi Rum building in Mexico **5** or the Berlin museum) have lost nothing in vigour nor in perfection. The genius of Mies has inspired a whole generation of architects who work more or less in his manner. Where it is at its best American architecture is marked with the style of Mies van der Rohe, as French architecture is marked by that of Le Corbusier. But in both cases, followers interpret principles with varying degrees of thoroughness or lay themselves open to other influences. The two largest American offices,

*One of three articles from *Bauen & Wohnen* 1965



6

Skidmore, Owings and Merrill (with a staff of 750 architects) and Harrison and Abramovitz (with 200) have adopted Mies' manner to good effect, others have retained only a superficial aspect of it, and New York, in particular, is being stuffed with an array of boxes of steel and glass, of varying sizes, one on top of another. When one compares them with the Seagram building **6**, one of the finest buildings not only of New York, but of the twentieth century, one is appalled. Contrary to what one might think, it is not the large Skidmore office that builds most, but a small office that provides skyscrapers by the yard, applying the same plan indiscriminately to any building.

It is not surprising that the stereotyped box of glass and steel has prompted a reaction. The most obvious has been the rehabilitation of reinforced concrete. Le Corbusier, the apostle of reinforced concrete who had built nothing in the United States, finally received his first commission there: the Carpenter building at Harvard University. I visited it after having seen a great deal of American architecture and my immediate response was, 'At last, some fresh architecture!'

In this reaction from steel to concrete, from a lightweight to a heavyweight architecture, three new stars appeared: Louis Kahn, Rudolph and Bertrand Goldberg.

Louis Kahn is not a young architect, rather a sexagenarian. But fame came late to him when he built the Medical Research Laboratories at Pennsylvania University **7** in 1956. This marked a turning point in American architecture, with its



7

massive and solid forms as opposed to the dematerialization of architecture by Mies van der Rohe's disciples. Its strong forms, its towers, were the starting point for a robust, full-bodied, Germanic architecture, medieval in inspiration, which was nothing less than a new expressionist fashion. Louis Kahn does not hide his admiration for the towers of San Giminiano and Carcassonne, for Graeco-Roman and Renaissance buildings. If he avoids the pastiche—though he comes close to it at times—it is through his innate sense of form. Saarinen, as we have seen, fell for the fortress style in his girls' dormitories at Philadelphia. Philip Johnson, once an exemplary disciple of Mies, has, like Saarinen, strayed into the fortress style, so opposed to that of his famous glass house. It is enough to compare this with the tower he is building at Yale (the Science building **8**) to see that he has reverted to the 'medieval' skyscraper style that flourished in the United States before 1930.

Regarded by some as a prophet, greatly admired by others, and especially by Le Ricolais, a teacher with him at Philadelphia, Louis Kahn is indeed important. His works are among the few that have a presence, a poetic will. But despite this (and I saw a retrospective exhibition of his work at Philadelphia) this admiration seems exaggerated.

Paul Rudolf, ex Yale professor, has, like Louis Kahn, been able to put up an out of the ordinary building, thanks to the confidence his university has placed in him. His School of Art and Architecture **9** has much in common with Kahn's laboratories. The same liking for full and heavy forms, towers and unexpected plays of volumes. The interesting point about the building is that not wishing to accept the conventions of Functionalism it is not functional at all. And what is disturbing in a school, an art school in particular, is the treatment of the concrete, with all surfaces shuttered to leave vertical ridges that are finally hammered and broken into rough edges. The resulting effect is clearly intended to give the concrete an appearance of rough stone, of rock. It is not a frank expression of concrete. Yet it is impressive. Also at Yale is Rudolph's parking garage **10**, which is simpler, more massive, and more surprising, almost animal in its quality.

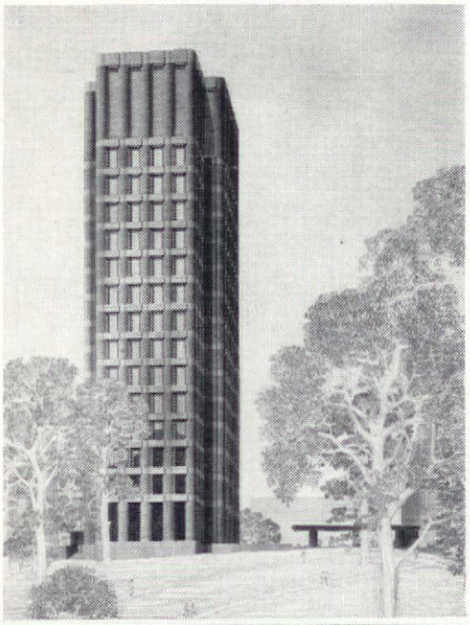
In Chicago, Mies van der Rohe's domain, Bertrand Goldberg has built the highest concrete structures in the world **11**, 660ft high, that seem to defy the boxes of steel and glass. These strange towers, which are a combination of shell and column, are remarkable both for their unusual form and their position. Marina City is not only an exceptional architectural feat, but equally a town-planning *tour de force*. On the edge of a stretch of water, it has a yacht basin at the bottom and a spiral car park for 900 cars at the base of the towers. Tenants can thus park their cars in their building and get from the garage to their flats by the lifts in the central column. The wedge-shaped flats are planned around this column, each with a private balcony. Marina City includes, in addition to the two living and parking towers, a shopping and office centre, a theatre, a swimming pool, skating rink, bowling alley and gymnasium, four restaurants and a service station.

To the three stars one must add a septuagenarian outsider: Frederick Kiesler. 1964 was a Kiesler year, because his most important work, the building for the Dead Sea Scrolls in Jerusalem, was completed; the Guggenheim museum held an exhibition of his sculpture; and Simon and Schuster published his *Diary of an Architect*. Just as pop art and Lolita shot Balthus into the painting firmament in America, Kiesler came into the architectural limelight with the baroque style for which he had been a precursor for 20 years. Just as he is a precursor of *Villes spatiales*. Saarinen's TWA building illustrates Kiesler's ideas in a spectacular way. But Kiesler, who has dedicated most of his life to research has no illusions. He said to me: 'There are three types of architects, first, those who work out ideas far ahead for the second lot, who adapt them. Then come the third, who are the reactionaries.'

What disillusioned me most in my tour of America was the fact that I did meet so many adaptors and reactionaries, but no forerunners. One looks in vain in America for any counterparts to men such as Yona Friedman or Paul Maymont. Le Ricolais lives in Philadelphia quite isolated and misunderstood. The same applies for Soleri at Texas University. The only 'seekers' I met were Snelson, a one-time pupil of Buckminster-Fuller, earning his living as a television cameraman, he researches into light structures; the industrial designer George Nelson, who has developed an extendible house made with materials usually used only in the aircraft industry, and Dietz, a specialist in plastic at MIT. Dietz's plastic 'House of the Future' **12**, set up in Disneyland, has survived 15 million visitors and an earthquake.

To the credit of the United States, one must record the fact that an experimenter can always find a job as a teacher in a university, where he can further his research. But teaching and research seem to hold out little attraction for the young, who prefer to work in large offices, where they become anonymous specialists, but very well paid.

If I have written of the new stars in American architecture, if I have noted several researchers, it must not be assumed that these are the popular architects. Popularity has been attained by two architects, in particular, whose work fills the magazines and newspapers and who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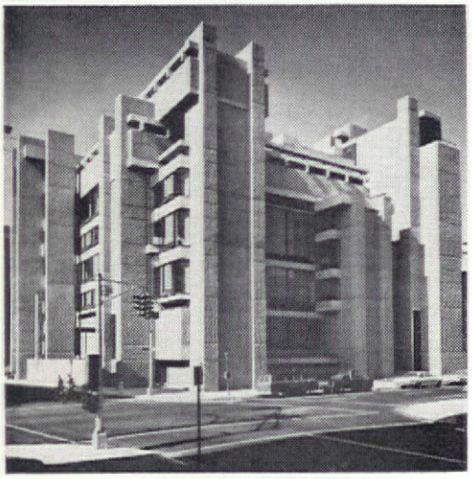
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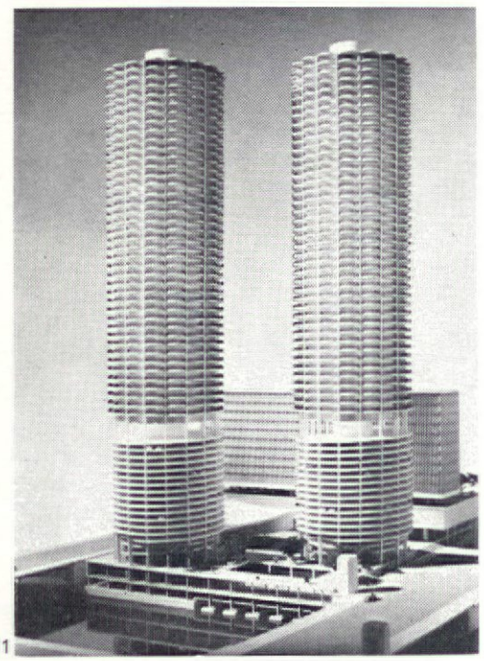
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12

13



have received official recognition: Ed Stone and Minoru Yamasaki.

Stone, who designed the American pavilion at the Brussels Fair, has proliferated his talent throughout the world in a series of embassies of a decorative, baroque style **13**, that recalls the pastiche architecture that flourished in America 30 years ago. He, moreover, has been chosen to design the Kennedy Cultural Centre in Washington that will include an opera, a theatre and a concert hall. (Cultural centres are very much in fashion in America, where about 60 are being built at present.) The era of embellishments and tail-pieces, which is going out for car design, is emerging in architecture with Stone and his emulators.

Thus New Yorkers have seen a new museum going up on the fringe of Central Park, built by Stone at the cost of seven million dollars in a neo-Venetian style, with colonnades, marble, etc. This museum, called the Gallery of Modern

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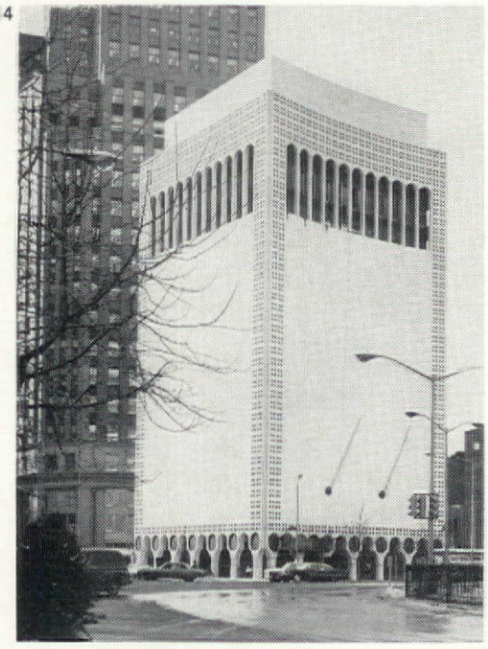
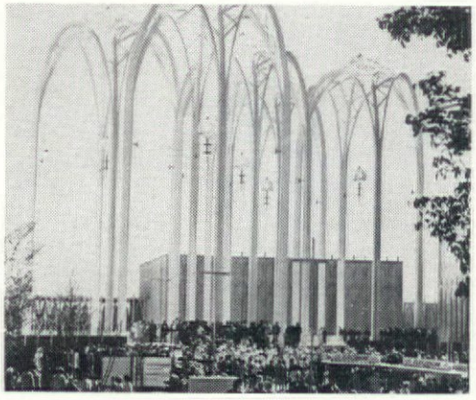


Art **14**, in contradistinction to the Museum of Modern Art, has been designed for Huntington-Hartford to house his collection of 70 paintings and 20 sculptures. These range from works by Gustave Moreau and Puvis de Chavannes to Salvador Dali, including both Sargent and the pre-Raphaelites, the basis of anti-abstract collection intended to counteract the influence of that of the Museum of Modern Art. It is difficult to imagine the latter being countered by the Huntington-Hartford Museum with its figurative collection of a dreary mediocrity. The contents, however, are worthy of the container.

To complete the picture one should add that the steel doors are painted to resemble wood, that the decorative ceiling of the conference room is meant to 'represent' 150 people, and that an organ in the entrance hall is intended to provide an air of *chic*.

Minoru Yamasaki, born in the State of Washington, where Japanese are numerous, did much work for the international exhibition at Seattle **15** that brought him fame. The press continues to cite his name in connection with two large



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skyscrapers to be built in Lower Manhattan. In 1958 he won the first prize of the Association of Architects for the diamond-spiked MacGregor Conference Building in Detroit. The building is indeed, precise, like a jewel. Everything is precious, with marble in profusion—there is nothing to jar the eye which is always the case with Stone—suggesting that Yamasaki can achieve something in a small building in which his virtuosity can be tuned. The MacGregor building **16** is a perfect baroque jewel and thus a success. One can discern a certain Indian influence, which transforms it into a sort of twentieth-century Brighton Pavilion. But in his large buildings, and Yamasaki is building bigger and bigger, he simply applies décor to the functional parts. His gas company headquarters in Detroit **17**, with its pendentives and crenellations, is another example of the 'medieval' fashion in America. But with the elegant Yamasaki this becomes a Tiffany style.



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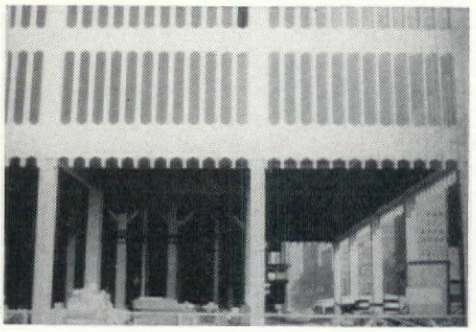
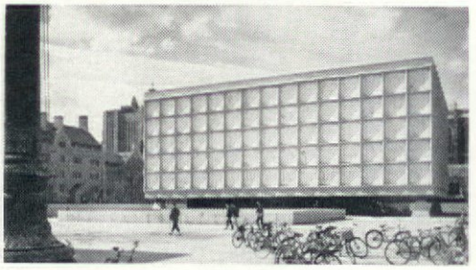


17

Functional architecture is important, he considers, but it has expressed what it had to express. What we require, he claims, is beauty and serenity. And one has little enough serenity in the United States.

Philip Johnson, as I have noted, has changed from Miesian dematerialization to the fortress style. But he is not the only one to make this *volte-face*. Gordon Bunshaft, designer of the Lever Building, built the Yale rare book library **18** as a sculptural lump. And one learns with



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amazement that this granite and marble box hides a building of steel. It is a throwback to the observations of the Grand Palais in Paris, where the stone façade screens a building of iron.

One woman has spoken up violently against this air of lax resignation in American architectural thought. She is a woman Professor of Architecture at the Pratt Institute, with long experience of modern architecture, for she is the widow of Moholy-Nagy. Her television attacks on Yamasaki have at least altered the preceived view that he represents the *avant garde* in architecture.

'I have tried,' she said to me, 'to prevent Americans from being crushed by their system. They are utterly unhistorical because they are immigrants. When they discover history, they go mad. Since Louis Kahn saw Les Audelys and San Giminiano he can do nothing else. Americans swallow anything they get their hands on to, but they can't digest it. In Europe architecture is a vocation, in America it is a job, like any other. Which will explain to you why you can find us disinterested researchers. The period of the architect artist is past. He is nothing more than a manipulator of money. It is suicide. After the first generation of great artists, Wright, Gropius, Mies van der Rohe, there has been no second in America. There will not be a third.'

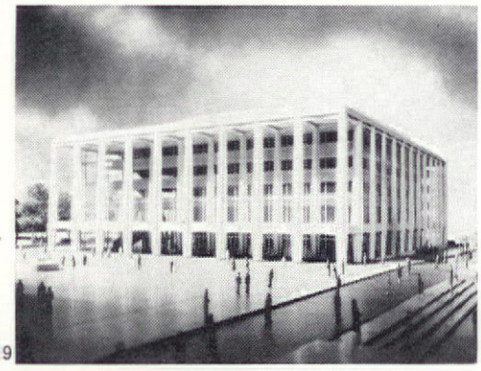
An ugly verdict to which José-Luis Sert, who has always represented the Corbusian trend in American architecture, responded with some indulgence. 'Architecture,' he said, 'is paralysed by a formula that is too rigid. The reaction has been a need for freedom. Liberty and libertinism are close. We must accept that structures are not always interesting and that it is not always a crime to hide them. The architectural vocabulary is richer today than it was fifteen years ago.' Richer, yes. But is it more beautiful? Is it grander? Does the architectural expressionism that has succeeded architectural purism and cubism represent progress? It seems not. One may note that the expressionist change in architecture is parallel to neo-expressionism in painting, thus it is part of a need, a general trend. Reyner Banham has even written a piece on pop-architecture. It all hangs together. But the latest fashion is not necessarily *avant-garde*. Or rather the *avant-garde* is not necessarily progressive. It seems, indeed, that the painting and architectural *avant-garde* in America is reactionary.

Modern architecture (and not modernistic) has always been the exception in the United States, like everywhere else. The masterpieces of modern architecture have been so often illustrated that one tends to think of America covered in buildings by Wright and Mies van der Rohe. The reality is otherwise. The Rayburn building in Washington, recently finished, is a neo-Greek affair with columns supported on balconies. They have always built, and they still build, with all the archaisms of Europe. If, unlike France, America destroyed its vestiges of the past too lightly (the past in America being represented by Colonial architecture, which is often imbued with considerable charm), they are busy restoring it with a vengeance. In Philadelphia the modernistic Lafayette Building, near the historical House of Independence, is being torn down to be replaced by Colonial style houses. Is a new Viollet-le-Duc arising in the United States?

From Regency Greek Revival to Stone's Academic Modern, and then to the Trocadero Style, equally popular, and appearing, surprisingly in the Lincoln Centre, New York.

The Lincoln Centre has been long discussed. This architectural group, an opera house, two theatres, a concert hall, etc., has been proclaimed as the exemplar of the new architectural baroque. But the mountain has given birth to a mouse. The Lincoln Centre is nothing more than a joke if one compares it to the Seagram Building, and a relapse if one thinks of the Rockefeller Centre. It fits in well with the current spirit of mannerism, historical allusion, prettiness and concealment, and is, not altogether surprisingly, near the Huntingdon-Hartford Museum, off Broadway, in 65th Street. It has replaced a vast slum area, and this redevelopment has enabled the architects to keep all cars off the site—one of the only ones in Manhattan where cars are kept to the perimeter or in tunnels.

The Philharmonic Hall **19**, by Max Abramovitz, was opened in 1962. The promoters themselves describe it as 'something of a Greek temple'. It seats an audience of 2656. There are three balconies. Acoustic reflectors, termed 'clouds', can be raised or lowered from the ceiling according to the wishes of the conductor. At the same time these 'clouds' are used for lighting. The décor is thus a functional décor. The whole of the lower level is a restaurant.



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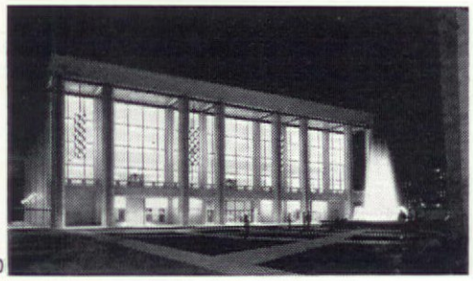

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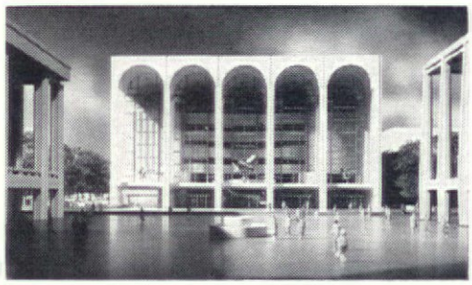
The New York State Theatre **20**, by Philip Johnson, was the second building in the group to be completed. It is a theatre in the Italian style, covered with Italian travertine. The audience of 2720 are entertained with ballet, operettas and musicals. Entirely traditional in conception, the theatre even has an upper gallery 'for students'. It would be difficult to push the imitative theme further. There is also a banqueting hall for conference dinners—'to replace the Waldorf'. The hall is decorated with two large statues of women of Carrara marble in the style of Despian.

Three other buildings are virtually complete; the Vivian Beaumont Theatre, the Library and museum of Performing Arts and the Metropolitan Opera House **21**. A fourth, the Juilliard Building **22**, must await the expropriation of a school on the site.



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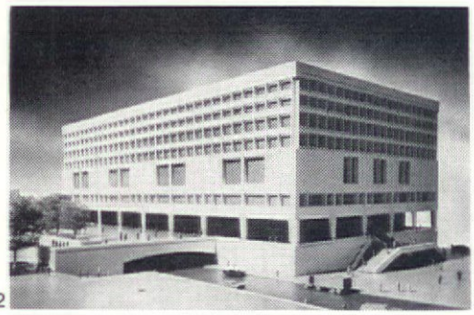

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The Vivian Beaumont Theatre was designed by Saarinen just before his death. It is thus a posthumous work, supervised by Jo Mielziner. Though it is, in fact, no more than a part of the library and museum by Skidmore, Owings and Merrill. The theatre is adaptable, being changed from a theatre in the round to the traditional Italian style theatre at the push of a button.

The Opera, which will be opened in 1966, will seat 3800, and will replace the old Metropolitan Opera, which will be destroyed to make way for an office block. It will be entered off the central plaza. Boxes will be maintained as is customary. But the sets will be gigantic and the stage revolving so that whole sets can be mounted and dismantled backstage. Wallace K. Harrison is the architect.

The Juilliard Building, for chamber music, will be separated from the rest by a road, but a bridge will link it to the plaza. The plans are by Pietro Belluschi, Catalane and Wastermann.

There is in addition a shell for open-air concerts, a fountain 30ft high, and a pool with large groups by Henry Moore. When it is complete the Lincoln Centre will accommodate 11,000 people, who will have direct access from the subway and parking garages.

It is lamentable that so large a cultural centre has been conceived in so retrogressive a spirit, the more so when the architects are considered to be among the most modern in the United States. But if it relates to Palais de Chaillot in Paris, in spirit, it exceeds it in technical perfection. This is impeccable. It is noteworthy that in America most buildings, even the most dreary and reactionary, are finished with a care and technical perfection that is not to be found in Europe. American buildings are made with the same efficiency as cars. But unfortunately there is a tendency to ape the striking effects of car design and add unnecessary details that are both artistic and ugly. It is also to the credit of the Lincoln Centre that artists in great numbers have taken part (not, of course, in the organization, as there is no more a synthesis of the arts in America than in Europe, but with the decoration). Thus Philip Johnson, who is a noted collector, has adorned his theatre with works by Lipchitz, Somaini, Henry Moore and a group of pop-artists, of whom he is a great admirer. As for the Philharmonic, it has a gilded Lippold and statues by Rodin, Bourdelle and Seymour Lipton.

The failure of the Lincoln Centre is due in part to the large committees who organized it and could reach agreement only by compromise. These committees were made up of business men and amateurs, Rockefeller at their head. The total cost is 160 million dollars, 120 million coming from private sources. The donors, of course, had their say on the committees. Some idea of the number of active donors may be gauged from the fact that everyone giving more than a 1000 dollars towards the Philharmonic has his name inscribed on a seat—which is not to say that the seat is thus reserved. But those who have given 100,000 dollars have access to the screened boxes, where they can listen and scan the audience without being seen.

What is the future of American architecture? Expressionism and mock medievalism on the one hand, attenuated forms and decoration on the other, with Miesian conformity in between—the outlook is not promising. The reversion to reinforced concrete in a country used to building in steel is unexpected, representing a late acceptance of Le Corbusier. Knowles, who is known for his design for the Boston Town Hall

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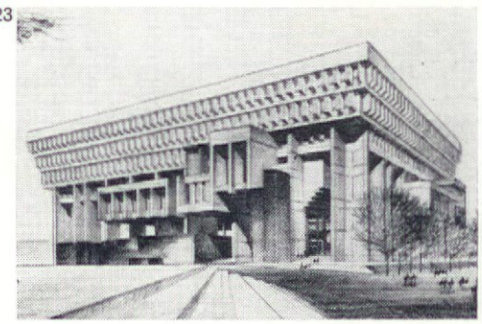
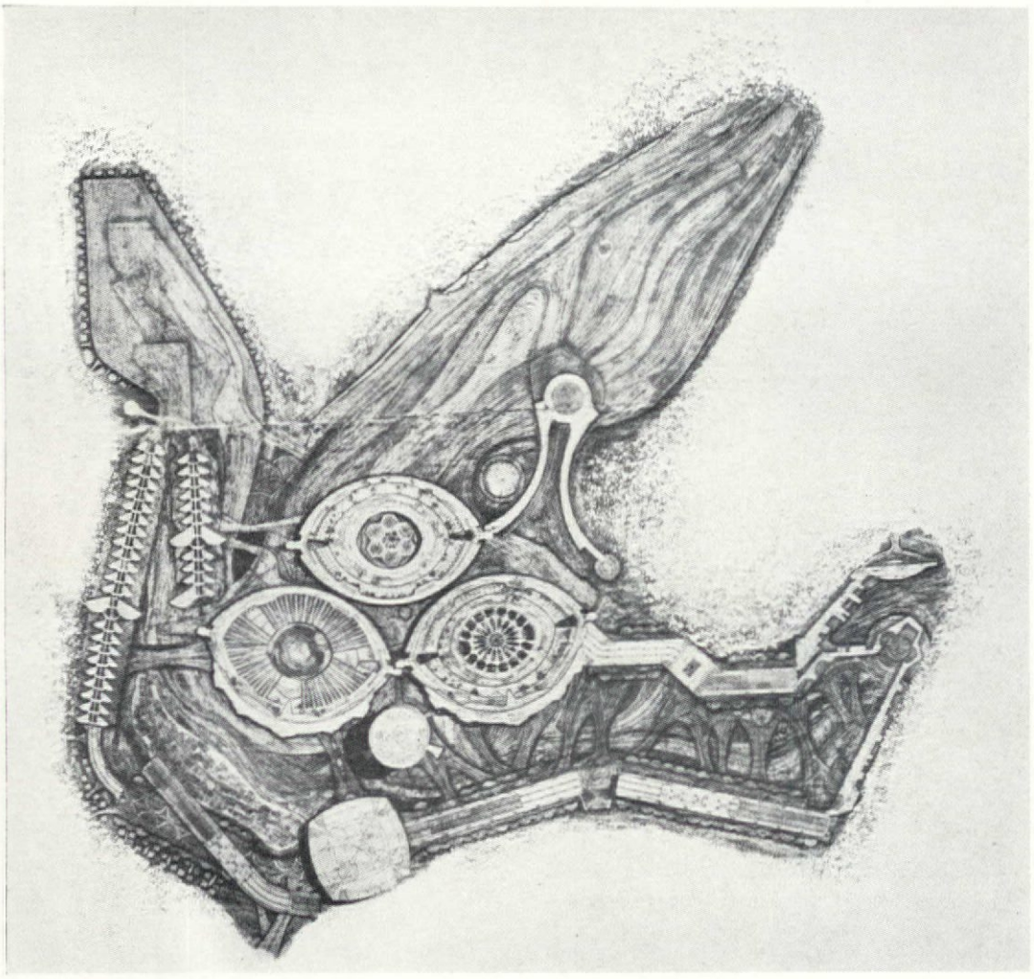


23, has learned much from La Tourette. Since then there has been an epidemic of La Tourette's in the United States, applied to any type of building. Just as the success of Goldberg's Marina City has engendered a crop of circular buildings.

American architecture has taken a dangerous turn. In an effort to rid itself of the overpowering influence of the pioneers, it has reverted to a series of hackneyed styles which one would have hoped would be scorned in a country which has been in the vanguard of architecture for 20 years and more.



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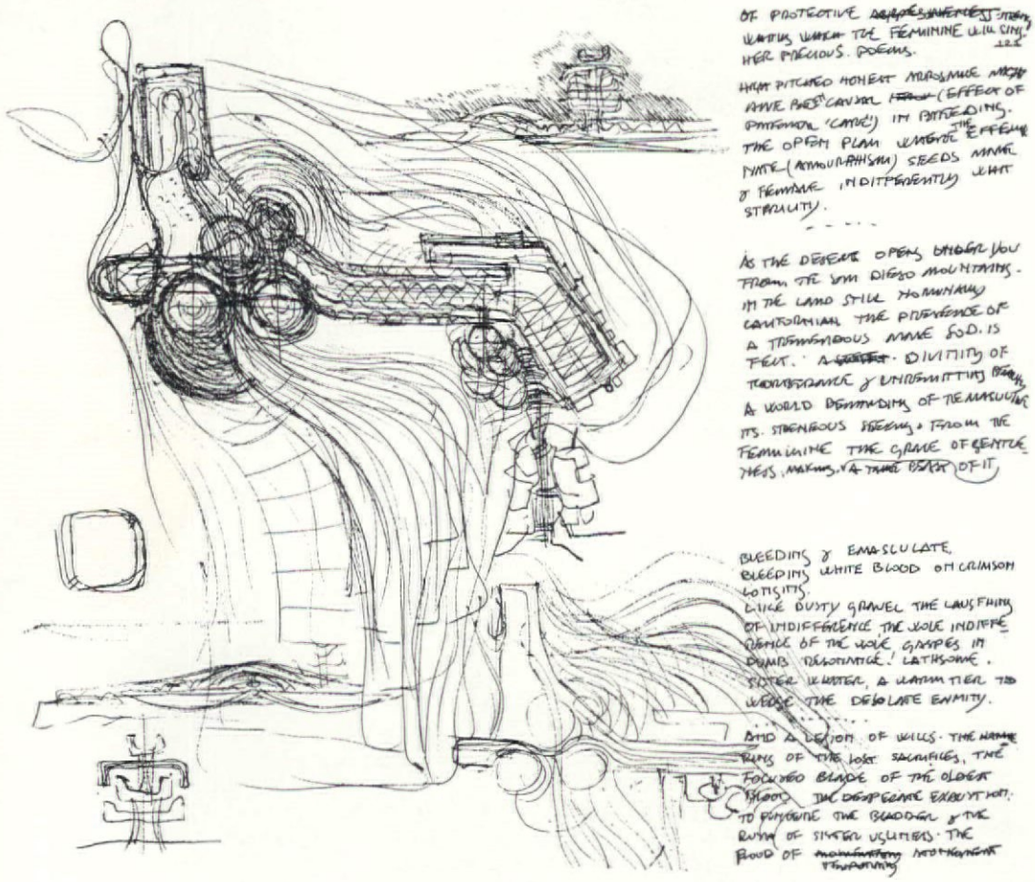

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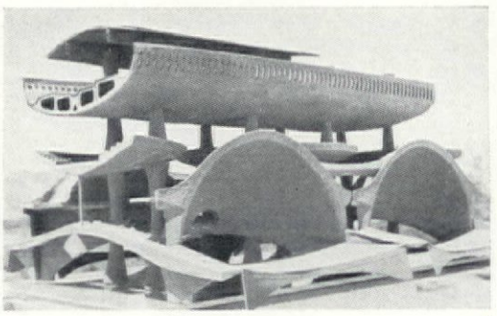

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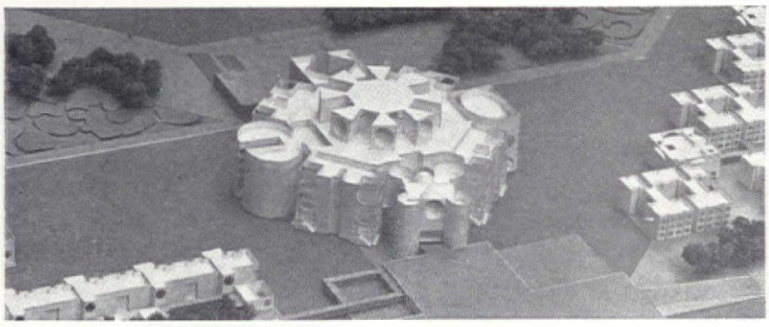
The Groves of Academe

Nerve, ability and finesse have guided those students of the University of North Carolina—headed by Keller Smith Jr. and Reyhan Tansal—who conceived the idea of publishing a series of small books tracing in detail the design process of a number of world famous architects, from their initial conception of a building to its final completion.* Not just the one evocative doodle on an envelope back or a twist off a blotter, but a whole array of sketches, notes and variations showing how a building by architects of the stature of Le Corbusier or Louis Kahn is developed and takes on its final form. This broad intention has unhappily (and no doubt unwillingly) not been pursued fully in each of the five books issued so far, though Le Corbusier in particular, has been cooperative and has helped to produce the most engaging and also the most outrageous of the items published.

Absolutely he enjoyed himself—even if it did disturb one morning's work. 'Voila Mr Keller Smith', he writes in his final flourish, 'Vouz m'avez donnez les ordres'. (Commentez ces dessins.) J'ai consacré le temps nécessaire; ma matinée de travail a été durement perturbée.' But he has managed to give a vivid and most revealing commentary for his design process of the ill-fated church at Firminy, the date of conception of which apparently goes back to June 1929, though it was not commissioned until 1960 and has not yet been built and is indeed unlikely to be unless some intransigent member of the Diocesan Building Service is willing to give his consent. Le Corbusier at his most unabashed and immodest parades himself the great creator, the maker of images, careless of all the humdrum business of mere building. His performance is staggering and commands attention, though if this is, indeed, his method of designing he is likely to swank himself right out of architecture into sculpture and poetry.

In comparison with the Le Corbusier publication, Alvar Aalto's account of the design (and construction) of the church of Vouksenniska, Imatra, seems disarmingly tame, but it is by no means insipid. Nor is Louis Kahn's development of the capital at Dacca in East Pakistan; indeed one recognizes some of the authentic prima donna quality in the improvizations and sketches with which Kahn has liberally provided the editors. Kahn's introductory notes are no less formidable than Le Corbusier's commentary. And not to be outdone in poetic intention Paolo Soleri has provided a sheaf of sketches and café-table commentary for a publication on his Consanti Foundation design, done at the same time as his better known Mesa city. The fifth book in the series is a collection of the writings and buildings of Hamilton Harris.

*Student publications of the School of Design, North Carolina State of the University of North Carolina, Raleigh, N.C. Vol 14, nos 1–5. Alex Tiranti, London.



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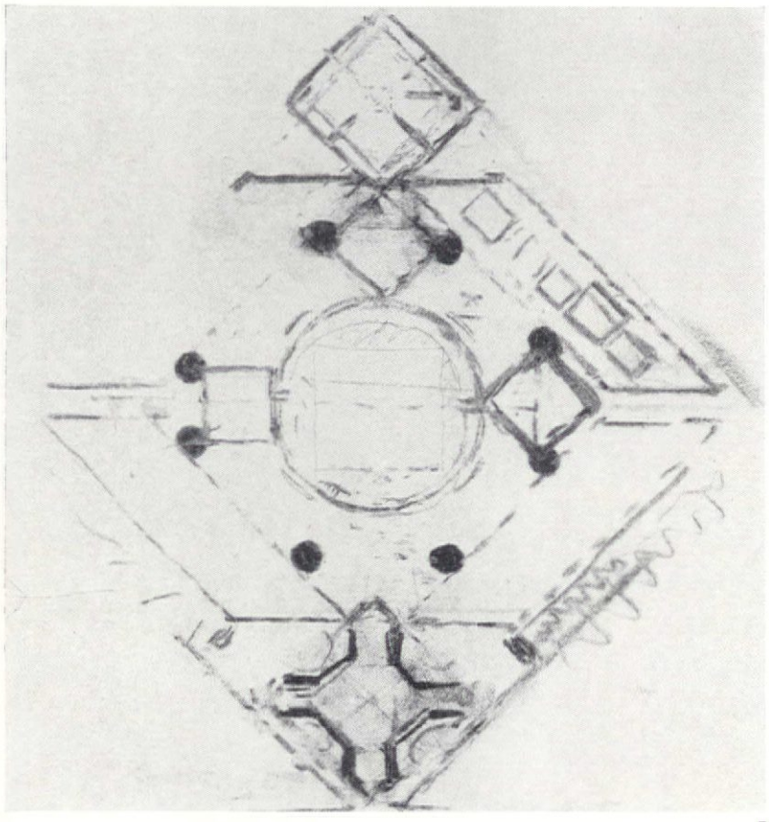

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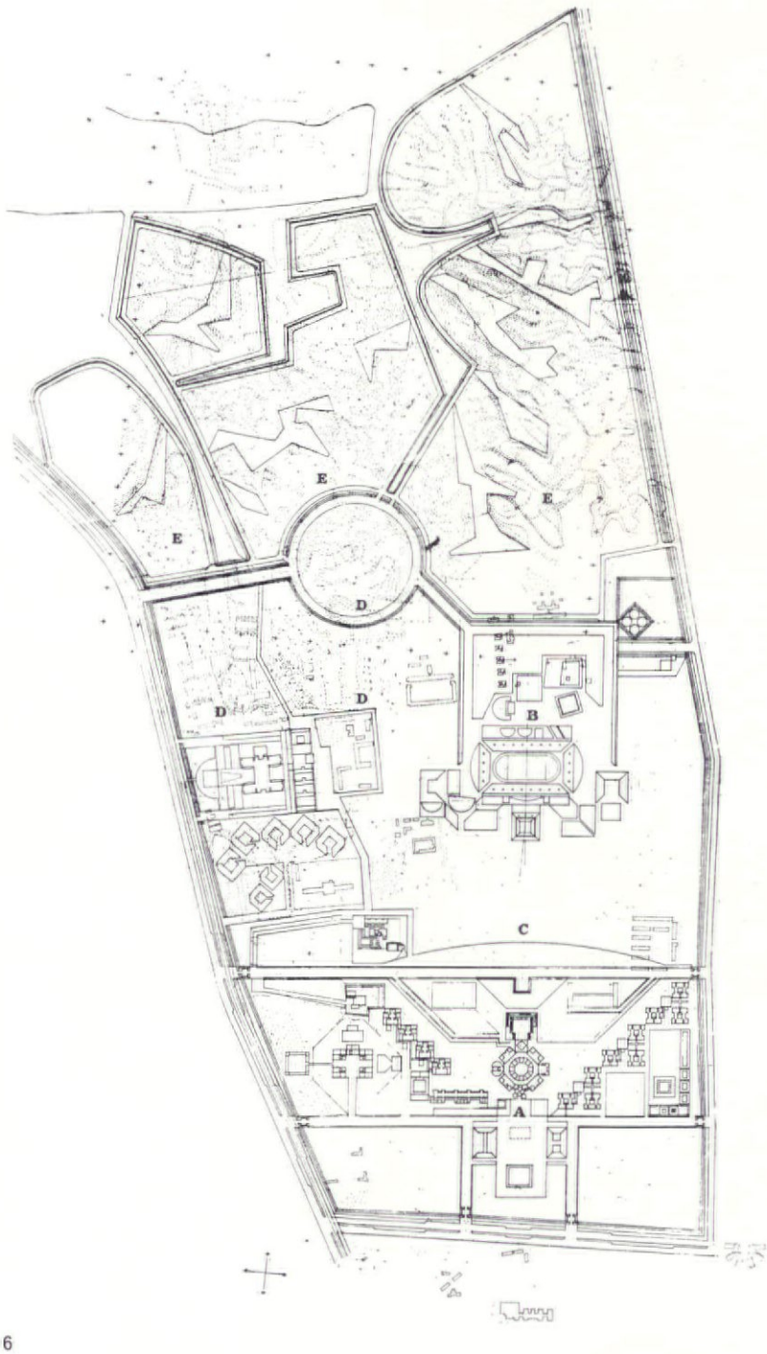
1, 2 & 3
Sketches and model of Paolo Soleri's design for the Consanti Foundation, Arizona
4, 5 & 7
Model and sketches of Louis Kahn's proposed Assembly building in the second capital of Pakistan at Dacca

6
Kahn's developed site plan of the proposed capital, dated August 1964
A Citadel of the Assembly
B Citadel of the Institutions
C Public park
D Institutional estates
E Residential estates



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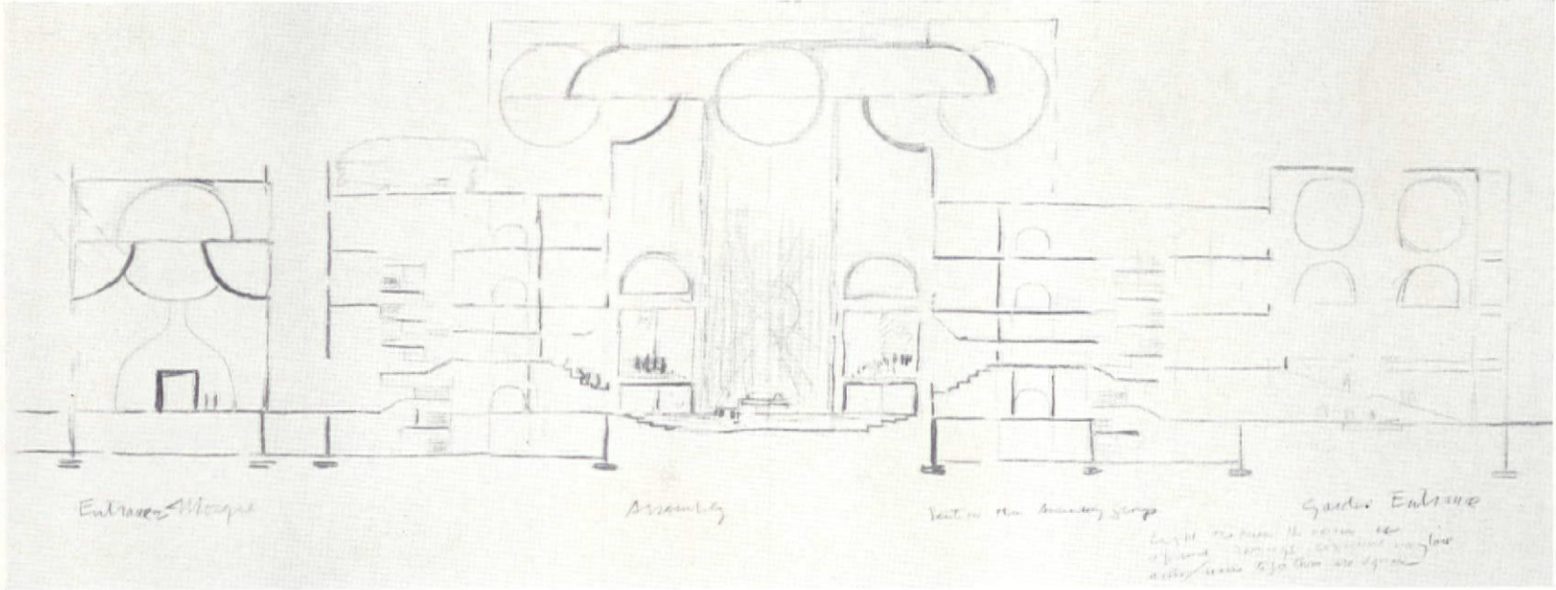

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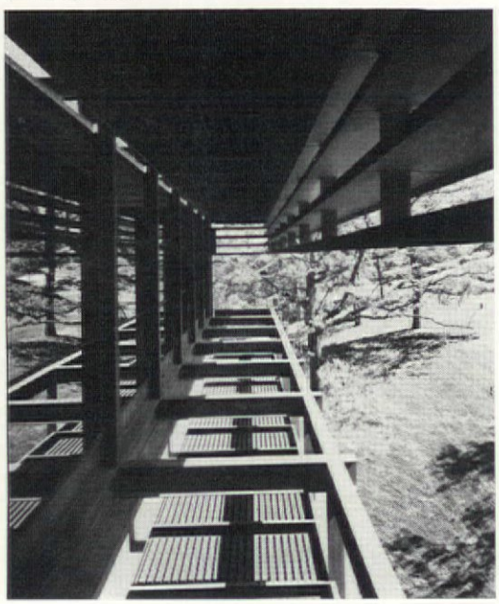
Deere and Co., USA

Eero Saarinen and Associates

The new Deere and Co. administrative centre, commissioned in 1956, is one of the last buildings designed by Saarinen before his death in 1961. The firm, one of the nation's oldest major manufacturers, is the leading producer of farm machinery and also produces tractors and equipment for earthmoving, construction, logging, landscaping, and materials handling.
In the new buildings, located approximately seven miles south-east of Moline, Saarinen first introduced the use of exposed, unpainted, high-tensile corrosion-resistant (Cor-Ten) steel in building. This steel, developed in 1933 by the United States Steel Corporation to provide an extra strong, rust resistant steel at low cost for the railroads, does not require paint or other protection as a tight, dense coating which protects against further oxidization is formed during weathering. Since employed by Saarinen, the steel has been chosen for the new Chicago Civic Centre.



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1
Detail of the hanging louvres on the administration building

2–5
Ground, first, second and third floor plans
1 store
2 advertising
3 photography
4 data processing
5 kitchen
6 waiting area
7 executive dining room
8 private dining room
9 telephone equipment
10 telephone operators
11 duplicating
12 office stores
13 photostats
14 mail sorting
15 receiving depot
16 store
17 waste bins
18 pump rooms
19 employees' dining room
20 servery
21 visitors' dining room
22 terrace
23 executive offices
24 secretaries
25 board room

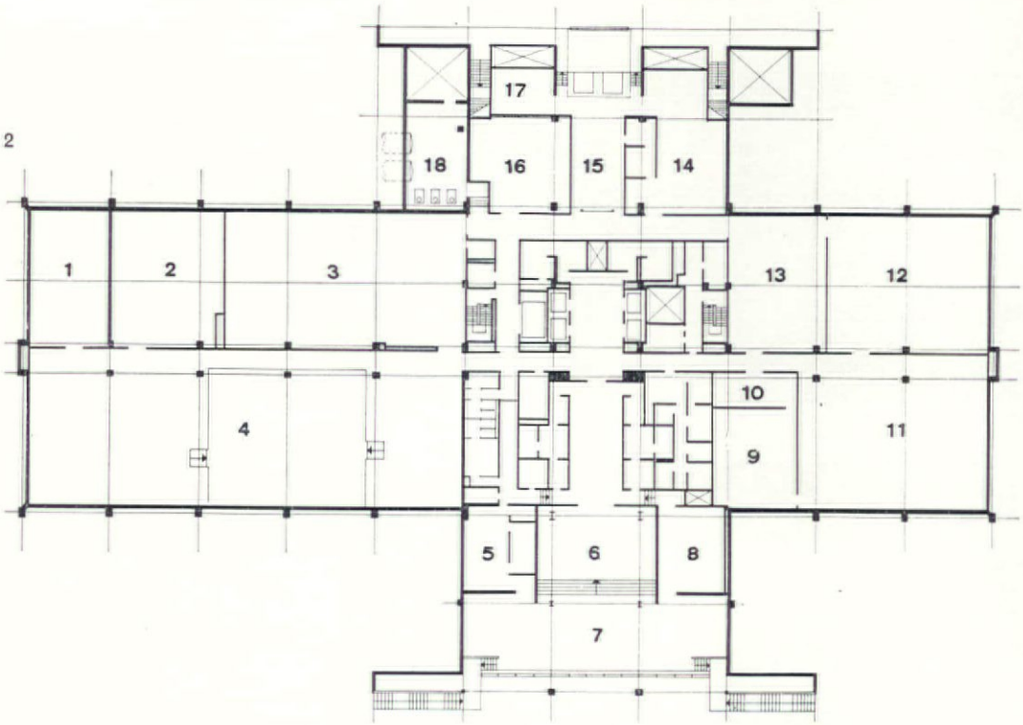
Photos Ezra Stoller. Plans courtesy Baumeister

6
General view of the administration block from the south

7
Site plan
1 administration building
2 bridge
3 exhibition and display
4 auditorium
5 exhibition yard
6 proposed addition
7 parking
8 lake

8
The east end of the administration block seen from the roadway flanking the exhibition and display building

2



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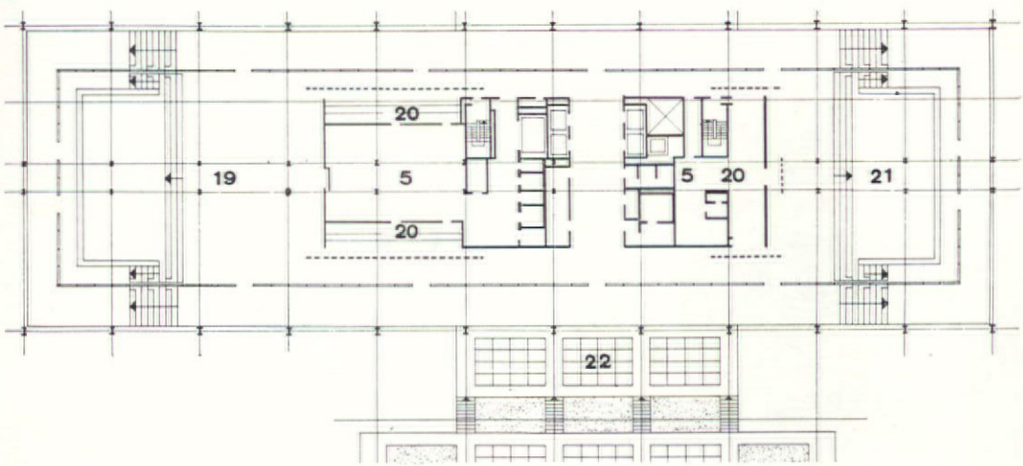

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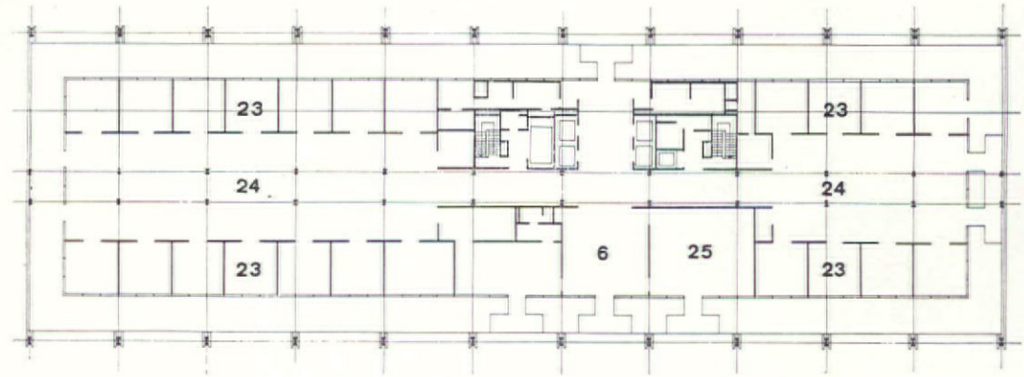

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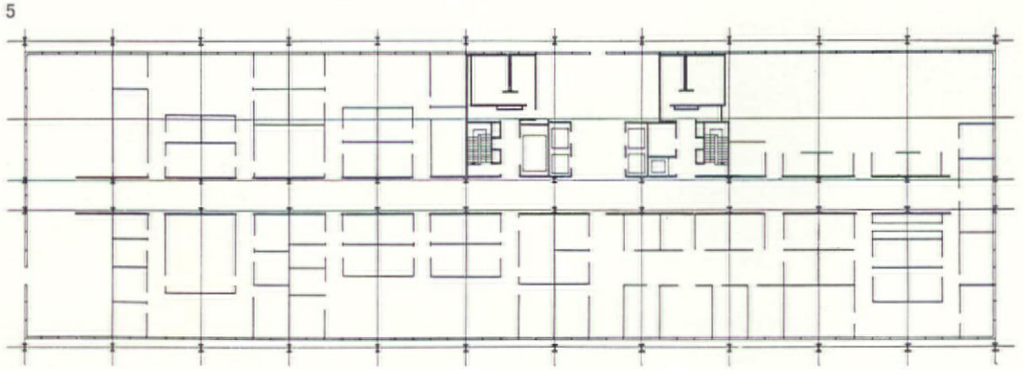

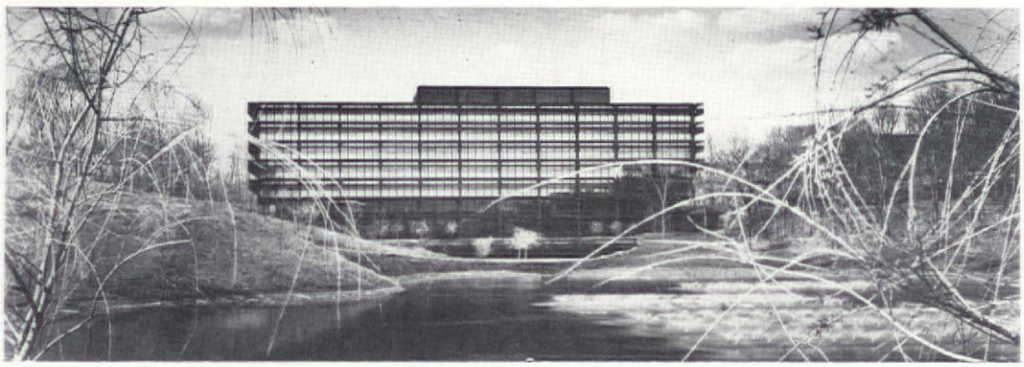

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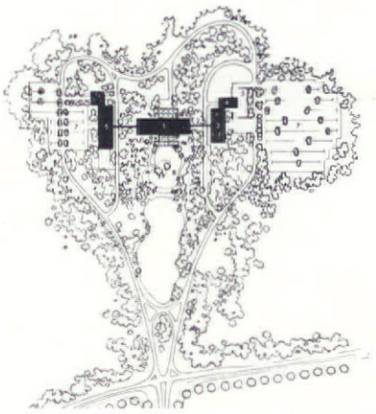

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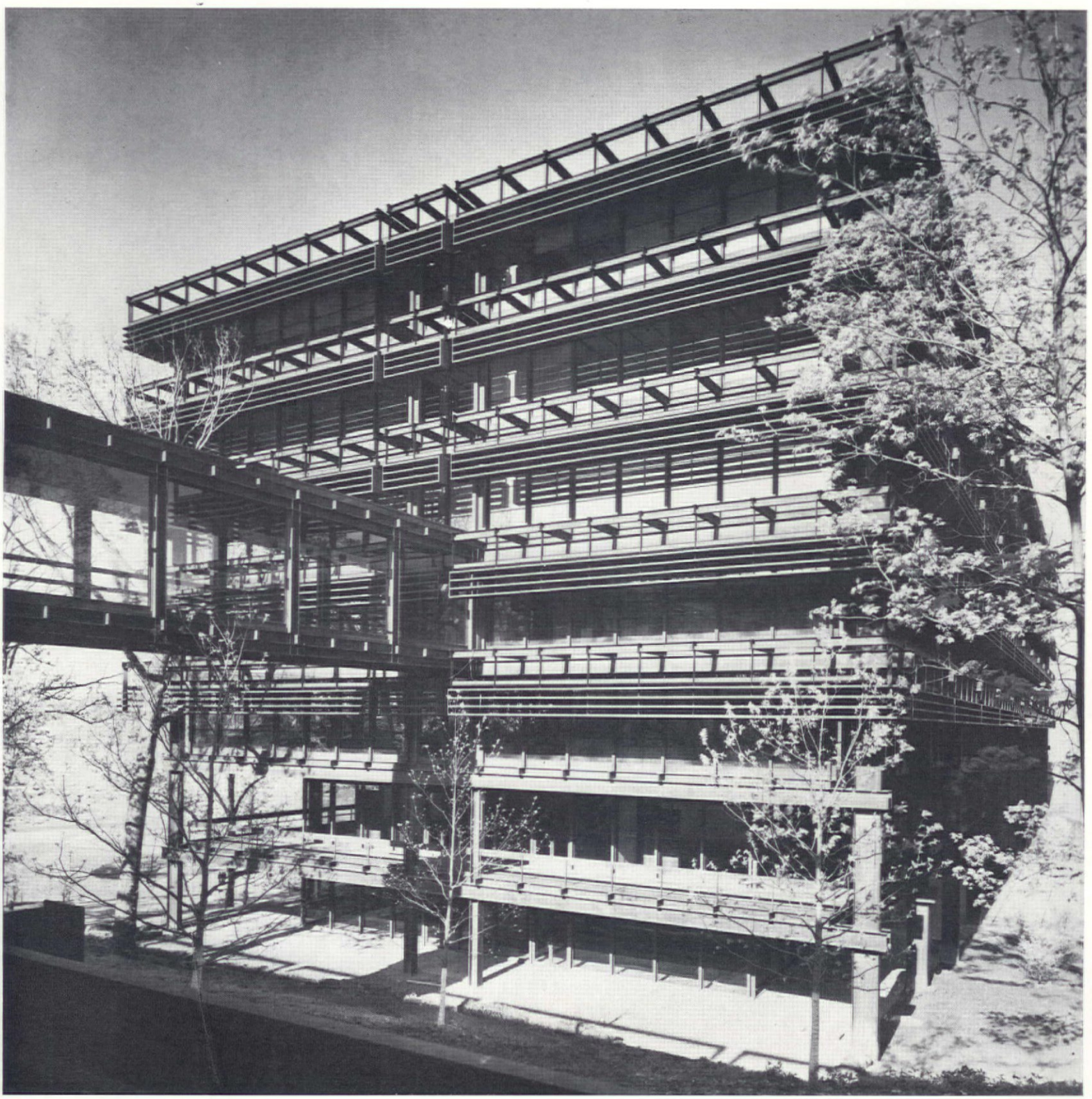

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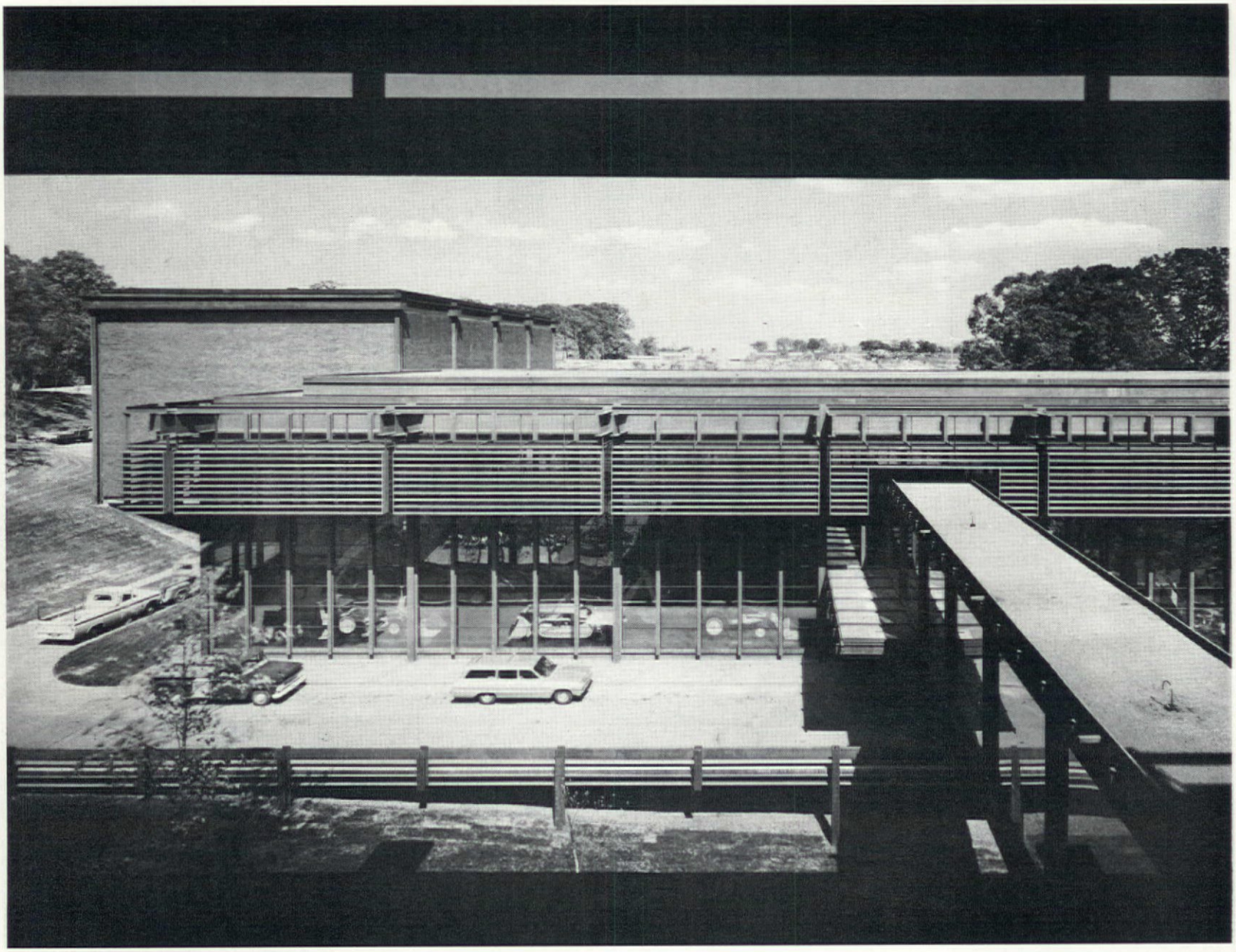

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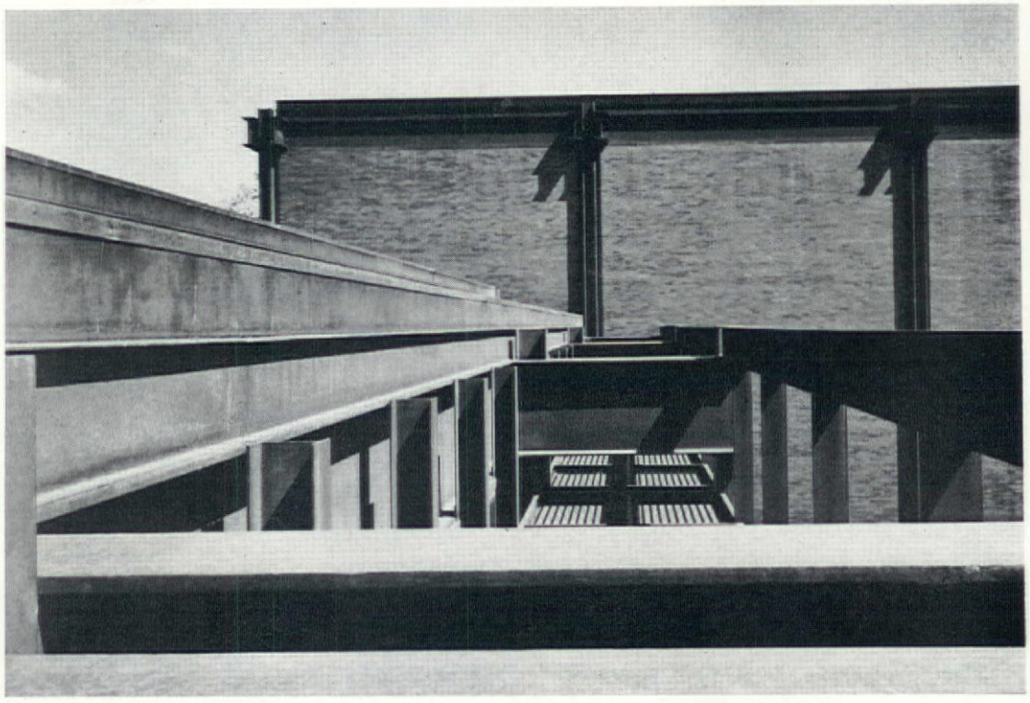


2

1
The exhibition and auditorium buildings seen from the administration block

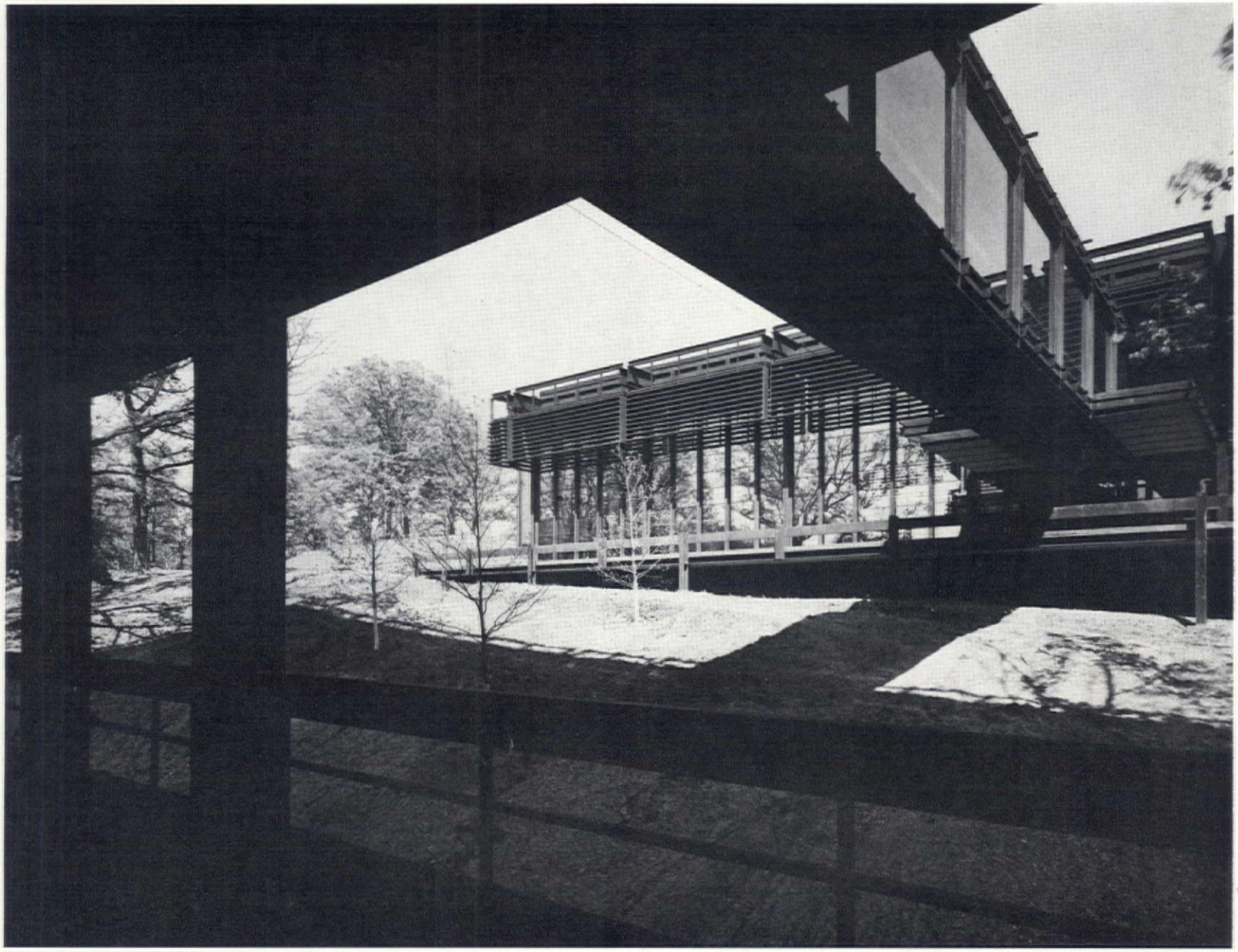
2
The south wall of the auditorium building viewed from the roof of the administration block

3
The exhibition building and bridge linking it to the administrative offices

4
Detail of the steel framing and brickwork panels of the auditorium building

5
Diagram showing the assembly of the louvres, windows and ceilings of the administration building

Drawing courtesy Architectural Forum



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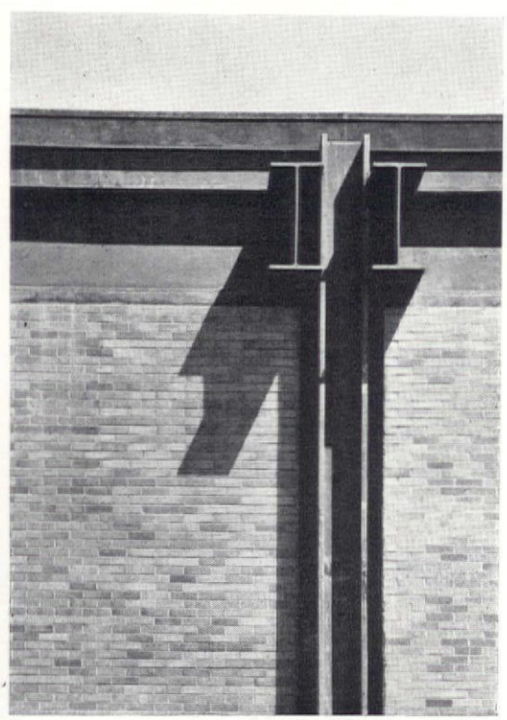

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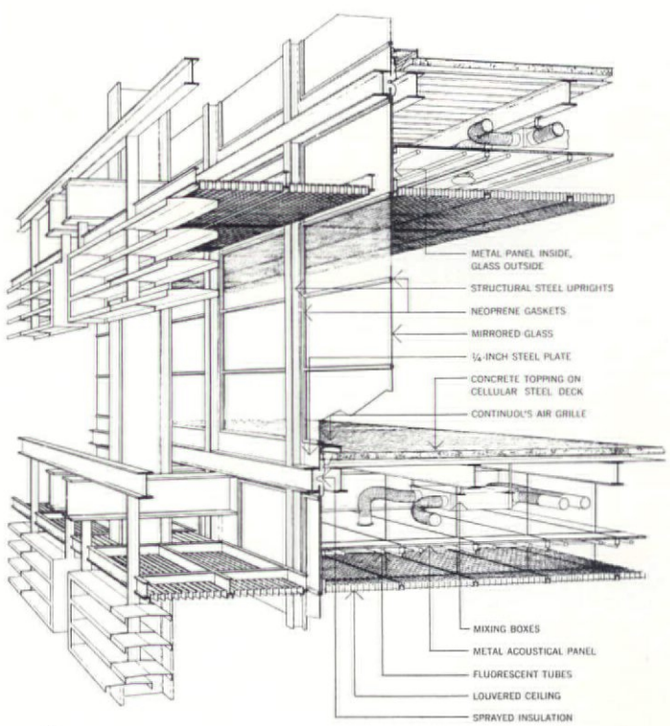
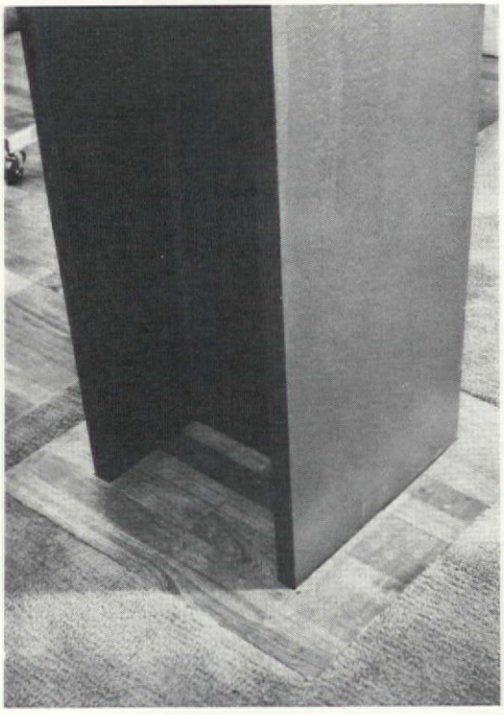

METAL PANEL INSIDE, GLASS OUTSIDE
STRUCTURAL STEEL UPRIGHTS
NEOPRENE GASKETS
MIRRORED GLASS
¼-INCH STEEL PLATE
CONCRETE TOPPING ON CELLULAR STEEL DECK
CONTINUOUS AIR GRILLE
MIXING BOXES
METAL ACOUSTICAL PANEL
FLUORESCENT TUBES
LOUVERED CEILING
SPRAYED INSULATION

5



1



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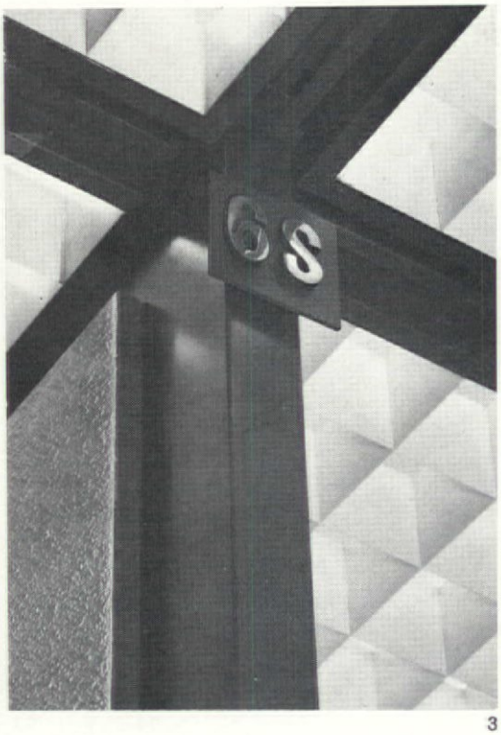


3

1
Open office area on the fifth floor

2
Detail of steel column internally

3
Detail showing the junction between partitions and ceiling panels. The sign refers to the aisle number in the open office layout

4
View through executive offices to open secretarial offices



4

The main building of the new administrative centre, nestled among giant oak trees, rises seven stories from a ravine located between two low ridges. In front of the building are two lakes covering four acres.

On the hill to the east are a parking lot for 718 cars and two buildings—an auditorium and a display building for the company's products. A steel-and-glass bridge, some 50 feet above the ravine, runs between the display building and the main building at the fourth floor level and serving as the entrance.

The main building is 297,000ft² in area, the auditorium nearly 23,000ft², and the display building 30,000ft².

Enhancing the appearance is a grillwork of louvres, designed not to obstruct the view from within, yet to shield the building from the sun and make window shades unnecessary except for a few days in December when the sun is at its lowest point.

The glass in the buildings is a special laminated glass with bronze-coloured metal sealed between two layers of glass; it reflects a considerable proportion of outside light without its transparency being affected. The glass inhibits all glare and serves also to reduce the air-conditioning load.

The lakes in front of the building are not entirely ornamental; they are used to cool water for the air-conditioning system, making it unnecessary to have towers. Water from the air-conditioning system is piped to the lake, and is then pumped back out of the lake to be re-used.

To provide as many employees as possible with an outside view, most general working areas ring the outer walls with private offices on the inside. The building is arranged on a 3 × 6ft modular pattern with movable steel partitions which provide flexibility as requirements for office space alter.

The five upper floors of the main block house general office departments. The second floor, which along with the first floor is recessed slightly, is the executive floor. The first floor contains the cafeteria.

There are two lower levels also, where data processing and service departments such as telephone and duplicating are located, as well as the boilers, electrical equipment and other utilities. On the ground floor, overlooking the smaller lake at eye-level, there is an executive dining room for about 70 people. There is also a conference dining room for 20 persons.

The building is equipped with touch-tone telephones which are equipped with push-buttons instead of dials.

The building is operated from an electronic control panel located in the basement of the building. Building engineers maintain a 24-hour a day watch over the building from this control centre, from which they turn all lights on and off, control heating and ventilation and watch for fires.

Individual temperature control is provided in all working areas. Located in the main building, the display building and the auditorium are 727 'constant volume mixing boxes'. These mixing boxes are outlets for the cool and hot air circulated through the cooling and heating ducts. The mixing boxes are controlled by 516 thermostats located in all private offices and in general working areas. By adjusting the temperature settings on the thermostats, employees can control the mix of hot and cold air for their individual areas.

Cool air is provided by a central air conditioning system with a capacity of 1600 tons. Heat is provided by two gas-fired high temperature hot-water boilers, each with a capacity of 25 million BthU per hour.

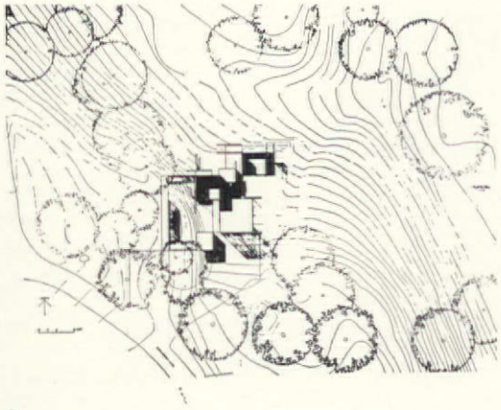
The fans which circulate the air through the building have a capacity of one million cubic feet per minute.



1



2



3

1
Exterior view from the north-west

2
Exterior view from the east

3
Site plan

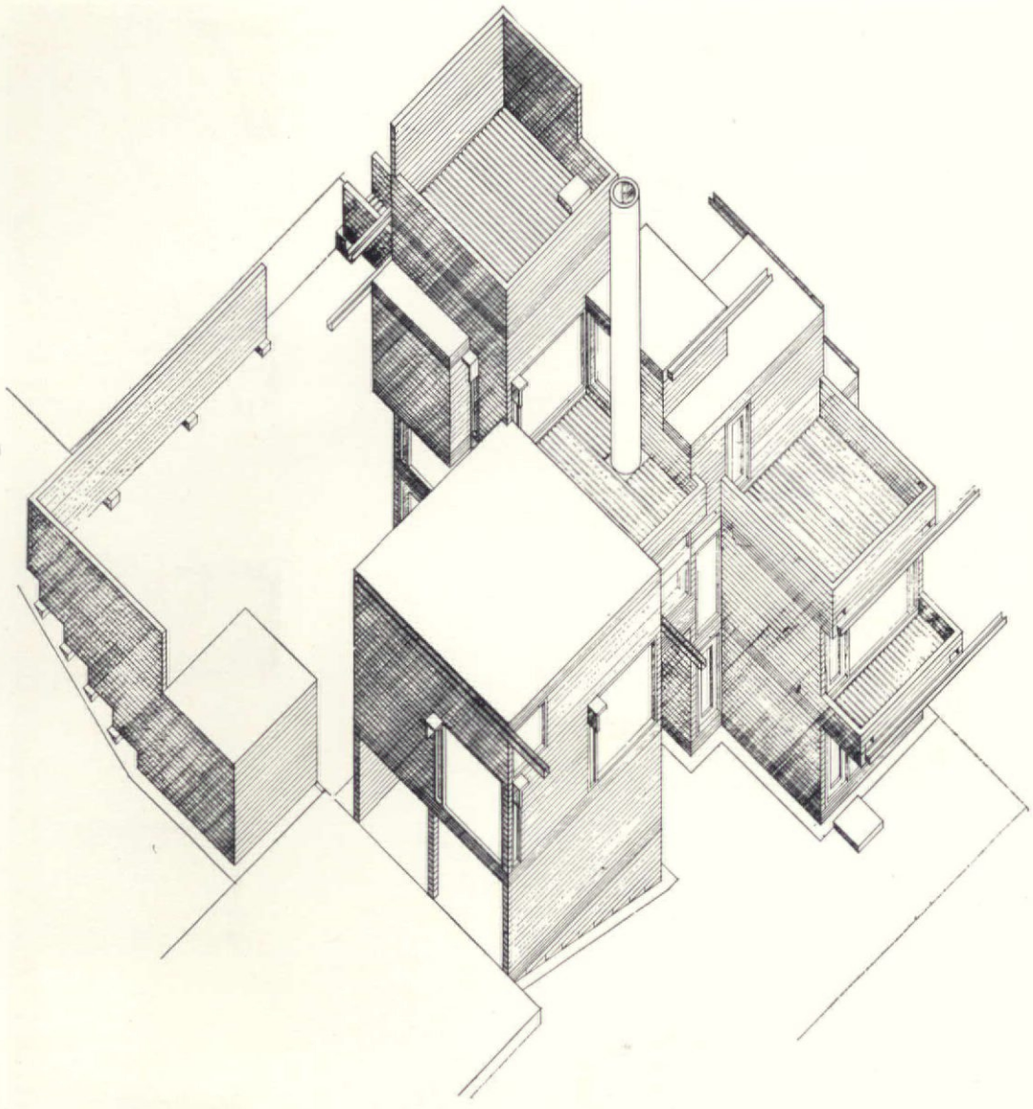
Doctor's house, Conn. US

John Fowler

The house was designed for a doctor, his wife and their two sons. The specific brief was to provide complete separation of the boys' activities from those of the parents; a common meeting area, to be the dining room, a large open area for use in entertaining; and enjoyment of the view to the east from all main rooms.

The site off Huckleberry Lane, Weston, consists of 2½ acres of well wooded, sloping land, leading to the east branch of the Saugatuck River. Houses adjoin the site on its north, south and west flanks. The predominant view is to the east, towards the river.

The house on the north flank, designed by Neutra, is the closest of the adjoining properties, it is however screened from the house by a thick growth of trees and a pronounced rise in the ground. The remaining properties are ordinary in the worst possible sense of that word.



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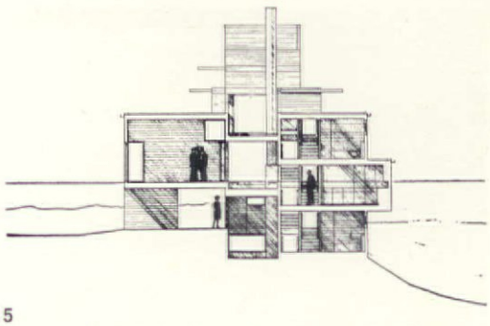

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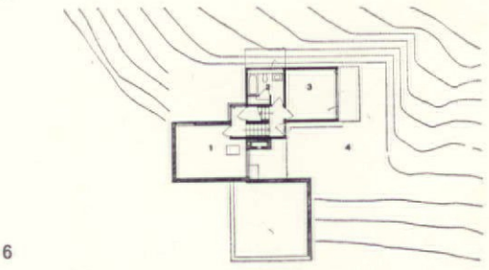

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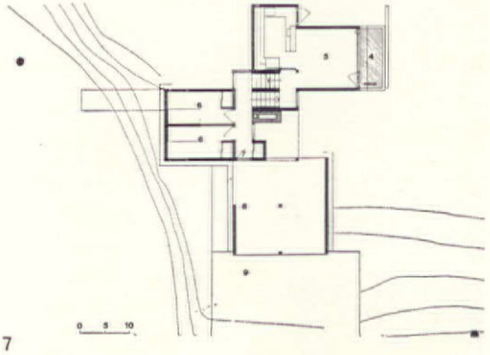

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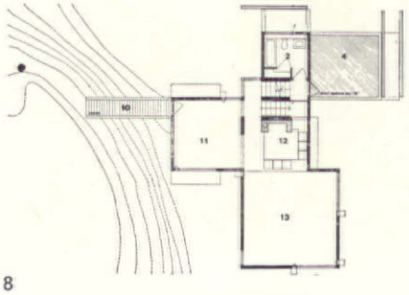

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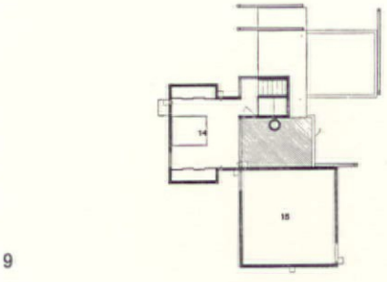

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It was determined to place the house at the head of the site in the lee of an abrupt change of level, taking care to interrupt the flow of the land as little as possible by constructing the accommodation in a tower. The building thus became a distinct object on the site, responding to it rather than becoming part of it.

The stair forms the core of the organization, and the rooms are distributed about it at half landing intervals.

The elements are expressed as directly as possible in relation to this organization. The kitchen, demanding more space and a particular view, juts out beyond the line of the bathrooms above and below it, and the closets to the master bedroom and hallway protrude to permit a simple internal volume. No attempt is made to obscure any of the elements.

At the lower levels are the children's bedrooms, their bathroom and playroom. When the children outgrow their rooms, the playroom will serve as a second bedroom, their present rooms will be converted into one room, as a third bedroom. Above this, the next set of levels accommodates the dining room and kitchen, with, half a level above, the living room. This is divided into two spaces distributed about the fireplace, itself a low sunken area. A larger volume is located on the one side, whilst adjoining and divisible from these areas is a low studio which accommodates a library and also serves as an entrance hall. It can be closed off by means of a set of sliding doors, to become a study or a guest room.

There is a bathroom on the half level above the living room for the convenience of guests and half a level above this is the master bedroom.

The house is essentially of very simple timber frame construction. The characteristic of wood frame is such that it offers great flexibility in the provision of openings, while walls and floor function as bracing membranes, with great interdependency, rendering any absolute recognition of one against the other difficult and irrelevant. Attempts were made to describe this monolithic quality which are particularly apparent in the fenestration of the living room and stair tower, the whole being tightly controlled by the discipline of the clapboarding. Further definition of this characteristic resulted in cedar clapboarding being used both internally and externally. No steel, save for a single Lally column in the centre of the garage, was used.

4
Axonometric view, in which appears the chimney stack originally proposed by the architect, but ultimately modified by the client, who wished to lay random rubble for himself.

5
Section through main living room, stair, bathrooms and kitchen area

6–9
Ground, first, second and third floor plans

1 workshop
2 bathroom
3 playroom
4 terrace
5 dining room
6 bedroom
7 entrance
8 carport
9 driveway
10 bridge
11 studio
12 fireplace
13 living room
14 master bedroom
15 upper living room

Photos David Hirsch



1

Openings are filled with fixed plate glass. Ventilation is provided by adjoining wooden vents. Where the location of glass and ventilation requirements conflict, heavy wood casements are used. Opening elements are shielded by either overhangs or plywood hoods.

Materials and finishes throughout are in their natural condition. Wood is treated with preservative, but ceilings are finished in a white sand-finished paint. The floor is waxed oak strip.

Heating is by means of forced hot water, and is arranged on five circuits. Fin tube elements are recessed in the floor wherever possible.

Lighting is by recessed fixtures. Lights are also recessed in exterior soffits, so that the interior can be lit by these lights without any interior light being used. Surrounding trees are floodlit from sources on the structure, further defining the building as an independent object.

The total cost was $52,000 excluding the cost of land but including landscaping and driveway.

The total area amounts to approximately 2000ft², calculating within walls and basement and carport as half area. This amount to $19.40 per foot², rating carport and basement as half area.

Furniture: Stendig, Inc.
Rugs: Kebabian, New Haven
Sculpture: John Matt.



2

1
The living room with the sunken fireplace area on the left

2
View from the living room towards the studio
Photos David Hirsch

In search of a new approach to city planning in Britain

Walter Bor

There is an acute shortage of planning staff and a dearth of up-to-date research on basic issues

Transport, housing, industry, and leisure MUST be planned regionally

The present development plans are the strongest brakes on new ideas in city planning and should be replaced by much publicized draft urban structure proposals which the public can debate

New complex computer techniques are being developed for comprehensive land use and transportation surveys

Public transport will play the major part in getting people to and from work. Yet, at present the Ministry of Transport is entitled to make grants for road works only and local authorities have no powers to run their own rail systems

The preparation of an interim plan[1] for Liverpool has brought my team of planners and myself up against a host of problems and opportunities which must be typical for major cities in this country and may therefore be worth discussing.

The planning team

Many cities in this country still have an inadequate committee structure and departmental establishment to accord planning the vital role it must play in the reshaping of their cities. Those who have realized this fact in recent years have had to adjust their committee structure accordingly and recruit new staff in large numbers to plan effectively. This was done in Liverpool soon after the creation of a new city planning department, but I regret to say only by depleting other towns and cities of their planning staff. There is a tremendous shortage of skilled and experienced planners at the present moment at a time when many cities have not yet set up appropriate planning organizations. When they do, the shortage will be even more acute.

Research and policy

Because of the relentless pressure to solve day-to-day problems quickly it is extremely difficult for a planning authority to detach adequate staff to concentrate on research and policy thinking. Yet, unless this is done, planning will remain what it is in many cities—the day-to-day adjudication between conflicting interests rather than a positive and creative effort to reshape the city. But even when, as in the case of Liverpool, a separate division within the planning department is set up, responsible for research and policy, it is found that there is a dearth of up-to-date research on basic issues such as planning standards, leisure, accessibility, shopping provisions, to name but a few. This lack of up-to-date data in planning has been recognized by the Minister of Housing and Local Government when he set up, at the beginning of this year, a Research Advisory Group to advise him how best to overcome the difficulty by commissioning a series of research projects with universities. Meanwhile planning authorities must fend for themselves and where necessary embark on their own research projects. In Liverpool, for example, we found it necessary to enquire in some depth into retail trends and open space provisions[2] and the conclusions have been incorporated in the *planning policy statement*.

Apart from the need to advance enquiries in certain fields of urban planning, there is a substantial job to be done in collecting and analysing relevant facts and figures on population growth and structure, economic factors, employment and traffic. This data, however, would be of a limited use only if it were collected only for the area contained within an inevitably arbitrary and restricted boundary of the local planning authority. In the case of Liverpool, we had to obtain data for the whole of the Merseyside city region. We found, for instance, that the demand for new housing within the next 20 years in this region was such that it amounted to building another city of the size of Liverpool. During the same period some 20,000 new jobs will have to be created for the growing population, only half of which would be generated locally, and half of it will therefore have to be provided by bringing new employment into that region. These and many other basic data and conclusions highlight the undisputable fact that planning for a city does not make sense unless it is carried out as part of a planning process embracing the region of which the city is an integral part.

Planning for the city region

In spite of the truism that one cannot plan for a major city without also planning for its region, the present administration of planning does not recognize this fact. There are, for instance, on Merseyside, four County Boroughs, each of which is an independent planning authority within its own boundaries. Two County Councils and various Ministries are trying to adjudicate between conflicting interests within the region. Clearly, a Merseyside Planning Authority is urgently needed to be responsible for overall strategic planning. It is true that recently a North West Regional Council and Board have been set up, but their responsibility is for the whole of the NW Region and, in any case, they have neither executive nor financial responsibilities and are, therefore, only advisory.

There are at least four major planning aspects which must be planned regionally, i.e. transport, housing overspill, industrial location and leisure. All these are, of course, closely interconnected, and we have indicated a possible expansion pattern within the city region **1** whereby new communities and industries would be grafted on to the main existing and proposed rail and road communications, with open countryside between these 'fingers' of development firmly preserved for agriculture and leisure. However, these are just tentative ideas and it would require a powerful overall authority to prepare and execute a strategic plan for the development of Merseyside.



1

Need for a new type of plan

In my view, one of the strongest brakes on new ideas in city planning has been the present development plan and its rigid interpretation. Any town plan which in these times of an ever growing rate of change attempts to predict in detail the use of every property in a town over the next 20 years, is doomed to failure. Because in these development plans a definite land use decision must be made related to each property, planning authorities have been over-cautious in suggesting any changes and many existing development plans, including the Liverpool one, have degenerated into glorified user maps largely confirming the existing pattern. The apparently accurate information is very often misleading, as events tend to overtake long term detailed zoning proposals. The host of amendments which flood the Ministry as official applications for departures, often submitted even before the development plans have been approved, are proof enough that this method is obsolete. Colin Buchanan has discredited the development plans in terms of traffic and environmental planning. The Minister's Planning Advisory Group, which was set up in May 1964, has analysed this problem and recommended a new dual system of urban plans consisting of a broad urban structure map, illustrating only major planning principles, accompanied by detailed written statement, and of large-scale detailed action area plans (related to district plans for the surrounding areas showing main traffic and land use proposals). Only the urban structure proposals would be submitted to the Minister for approval, while the action area and district plans would be local plans to be tested as and when action is to be taken during the next ten years or so. Since

[1] *Liverpool interim planning policy statement* Liverpool city planning department, March, 1965.

[2] *Retail trends and their planning implications Report no.* 10. Liverpool city planning Department, April, 1964. *Open Space Report no.* 15, Liverpool city planning department, August, 1964.


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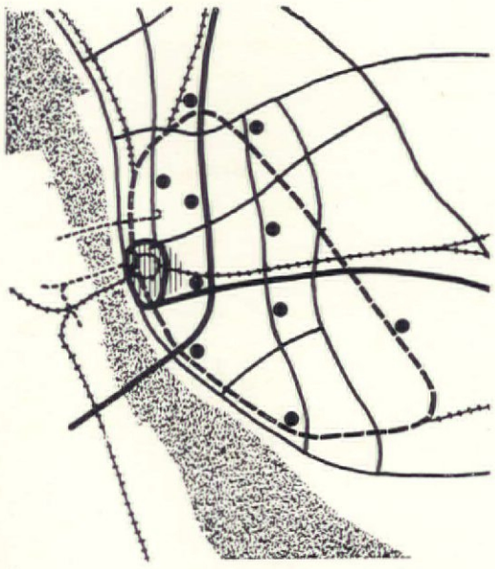

4

Key to map on opposite page

- city centre
- district centre
- residential
- high density
- civic uses
- industry and commerce
- docks
- rail—rapid passenger services
- rail—other services
- main station
- 1965–1985 / post 1985 } primary motorway
- 1965–1985 / post 1985 } primary limited access arterial
- secondary road

I was a member of the Planning Advisory Group while my department was producing a new plan for Liverpool, many ideas emerging from the PAG were incorporated in the preparation of the future city structure **2** and priority area **3** maps for the city.

Any new plan for a city should not be a cut-and-dried blueprint but a draft in form of a discussion document. Public participation in planning has not been forthcoming in the past because the public felt left out of it, and generally people only stumbled on to a major planning scheme when it was too late. This state of affairs must be changed if urban planning is to be understood and supported by the planned. One way of getting people more interested is to present them with a planning hypothesis and invite their comments. This we are trying to do by publishing our draft plan, encouraging public discussion in the local press and at meetings, and by staging a public exhibition in the Walker Art Gallery, which attempts to explain in popular form the plan for the city as a whole and for the city centre in particular. I believe we are moving away from the period when laboriously detailed development plans for whole cities were prepared every 10 years or so. Instead, broad urban structure plans will be produced which may be revised more easily and more frequently while a continuous production of detailed action area plans for city centres and other renewal and rehabilitation areas will guide imminent development in much greater detail than has been the case hitherto. Thus we would meet more effectively the need to plan for continuous change.

Transportation

Just as the form of future city plans may be radically different from the present development plans, the content, indeed the whole approach to urban planning, is undergoing significant changes. The greater insight into the indivisible relationship between traffic generating uses and transportation, and the clearer realization of the all-pervading importance of continuous changes in our technology and the economic and social patterns, are having a profound influence on our concept of city life and how to reshape it. New complex computer techniques are being developed for comprehensive land use/transportation surveys in which sophisticated projection methods assume greater importance than the simple data collection. We in Liverpool have initiated such a survey, the area of which has now been extended to embrace the whole city region. In the meanwhile, a preliminary transport system for Liverpool is suggested, based on a limited survey carried out since 1962 which, however, provides sufficient basic data to draw up this hypothesis. The existing road network converges onto the city centre, and the Mersey Tunnel must be radically modified to meet the requirements by superimposing a system of urban motorways consisting of:

1 An elevated inner motorway routing traffic round the centre and along the docks, also acting as distributor to terminal car parks adjoining it.

2 A second Mersey road tunnel to the north of this motorway and connected to it.

3 A N–S primary providing an urgently needed N–S route connecting with Preston in the north and with the Wirral in the south by means of a possible third river crossing in the south.

4 A spur from the M6 national motorway from the east and connecting tangentially with the inner motorway—its primary objective being good accessibility from the docks to the M6.

5 Three additional northern and one southern radial to motorway standard.

This suggested road system results in a grid which will distribute road traffic as evenly as possible throughout the city and which is closely related to existing and future traffic generating uses. This road system is primarily designed to cater for essential goods traffic and services; when fully developed it will not cater for more than 20 per cent peak hour private car traffic and is likely to cater for a good deal less, depending on the number of car parks which can and should be built, at any point in time. (The maximum provision of car parks in and around the central area is for about 30,000 cars, with a price mechanism operating in favour of the short-term shopper with a possible five-times turnover of one space per day.)

Thus, public transport will continue to play the major part in getting people to and from work. We analysed two systems, one with an emphasis on buses and the other on rails. The next ten years will be critical. Since, even with the best will and twice as much money spent on urban roads as compared with now, only a limited amount of new road works could be built within that period, the solution must be found in transport independent of roads. Liverpool, and indeed the whole of Merseyside, has still a very well developed rail system—if under-used and therefore threatened with closure—which could be revitalized relatively easily and cheaply. We therefore suggest that the proposal to link the four railway stations in the centre by means of an underground loop connecting with the existing Mersey rail tunnel be realized forthwith and that an outer loop within the city be completed at one point and the whole line revitalized by electrification, the provision of new stations with ample car parks. The whole of this inner and outer loop work can be completed within ten years at the cost of less than £10 million and would provide the city with a first-class rapid transport system. This proposal has now been followed up in some detail with a feasibility study which shows that the line would be self-supporting at the cost of twopence a mile, provided a 75 per cent grant were forthcoming from the Ministry of Transport. And here we come up against the interesting, but depressing fact that, as the grant structure stands at present, the Ministry of Transport is entitled to make grants for road works only and that a local authority has no powers to run its own rail system. The best solution to these difficulties on Merseyside would be if this proposed railway system, together with other integrated lines throughout the city region, could be run by a unified Merseyside transport authority, and that in any case the law should be amended to empower the Ministry of Transport to give grants for railways. (Both these suggestions may require a new Act of Parliament.)

Internal decentralization

This idea of a revitalized rail system was accepted by the Liverpool Council on 7th April—and can now become the backbone for future intensification of traffic generating uses such as additional industrial concentrations, new district centres and high density housing development. All these courses are being pursued, the most significant of which is the proposal for a new district centre at Belle Vale in the south-east outskirts of the city with a new railway station, ample parking provisions and major shopping,

social and entertainment facilities as well as local industry.
This proposed new district centre and nine other such centres **4** which envisage the development and expansion of existing thriving shopping centres into small town centres with a catchment area of approximately 50,000 population each, are an integral part of a concerted policy of internal decentralization. In addition, these district centres would provide a new local focal point with its own identity, and would help to decongest the city centre to provide more effectively central area functions and specialized shops. Assisted by a new grid of primary roads and a revitalized railway system, a policy of a more even distribution of such traffic generating uses as markets, major industries, high density housing and district centres throughout the city could be achieved over a period of time.
But not only traffic generating uses must be decentralized but also the provision of open spaces. With increasing mobility it will no longer be necessary to provide most of the open space provisions within the urban fabric. We calculate that 3 acres/1000 population of open space of various types and sizes should be provided within the city and another 3 acres/1000 of open space in the green belt on the periphery of the city in form of several parks of about 200 acres and one of 600 acres. Thus the green belt could be maintained in a modified form of green wedges with usable recreational open spaces and agricultural land.

7
Model of Anglican Cathedral precinct action area



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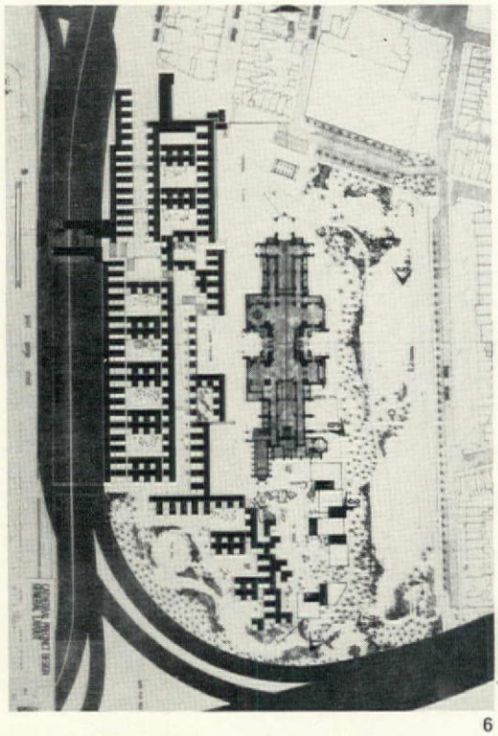

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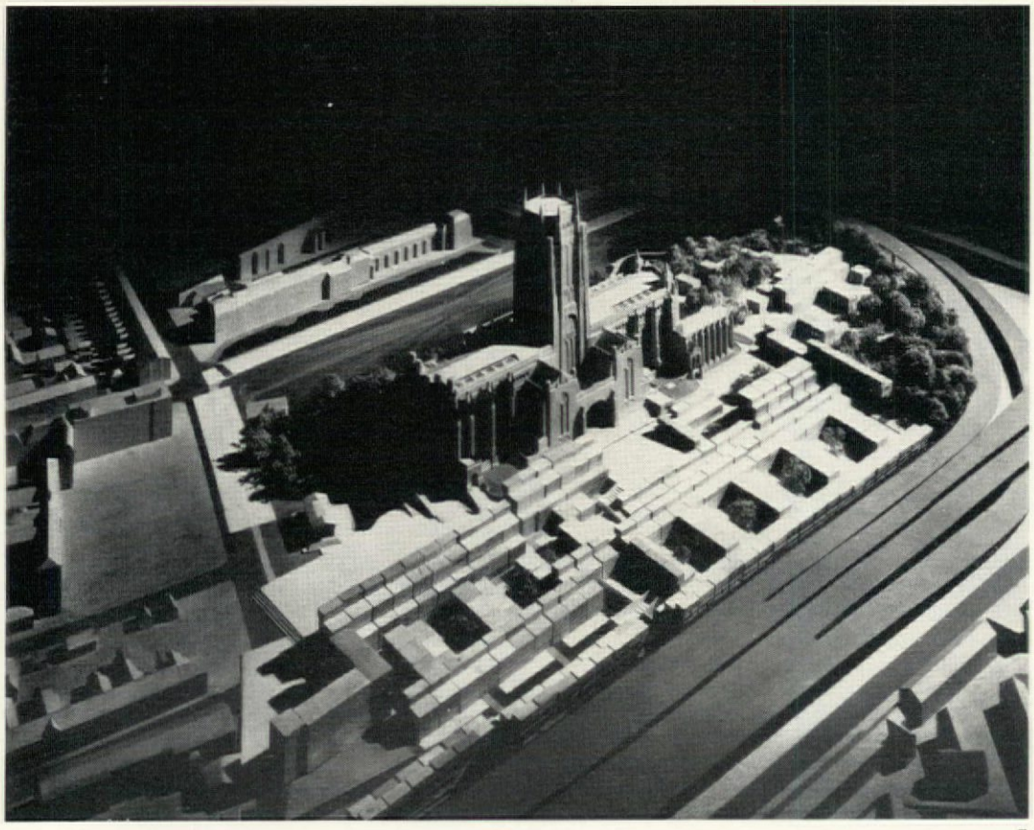

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Action areas and environmental design

We have two major inter-related planning aims in Liverpool which I believe would apply to most major cities; to design a balanced transport plan with different forms of transport complementary to each other, providing maximum accessibility with the least detrimental effect on environment; and to create within the transport network a series of environmental areas for living, working, education, shopping and entertainment, in which considerations of good environment would take precedence over vehicular traffic. Detailed three-dimensional planning will be undertaken in an order of priority within those areas where rehabilitation or redevelopment is likely to take place within the next ten years or so. These action areas may comprise new road works with associated redevelopment in depth, new housing or existing housing areas to be rehabilitated, new or reorganized existing industrial areas, parts of the central area, district centres, university or hospital precincts, new parks or indeed a combination of any of these. However, since the jump from a broad small-scale urban structure map to a large-scale detailed action area plan to a scale of 1:1250 or 1: 500 is too abrupt, an intermediate type of plan is essential for large areas, possibly bounded by primary roads, in form of district plans to a 1: 2500 scale which would show the main traffic pattern (both vehicular and pedestrian) and the disposition of the main uses. Within such district plans individual action areas will be defined and developed to a three-dimensional detail **5** & **6**.
District plans, like the associated action area plans, will be prepared in a strict order of priority, but eventually the whole city would be covered by district plans, whereas at all times only some parts of the city (although perhaps the whole of the central area) will be designed as action areas. Thus the scarce resources of urban designers would be concentrated on the most urgent and important parts of the city, while for the purposes of development control, district plans for most areas and action area plans for some areas will give detailed guidance.
The success of urban planning lies in the quality of urban environment which will be created within the framework of the plan. In a city like Liverpool, where so much of the city is at present outworn and broken down, it is particularly important to raise dramatically the quality of environment and to concentrate design staff on these visual aspects. Apart from studies to be produced for individual action areas, a series of reports have been produced, or are in course of preparation, which will attempt to define various aspects of a visual policy for the city. These reports includes a high buildings policy, the preservation of historic buildings, a policy for the control of advertisements and a landscape policy for the city. The fundamental aim of these special reports and the detailed action area studies is to ensure a sensitive integration of the old and new, and a high standard of environmental design in the redevelopment of the city.



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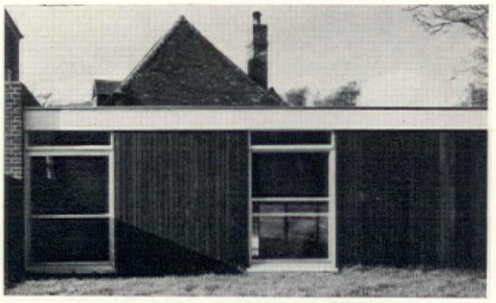

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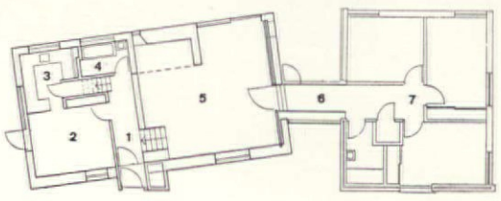
Cottage conversion

A traditional flint-built Sussex farm labourer's cottage at Alfriston, and attached 'brewhouse' containing a large brick fireplace, copper and baking oven, was converted to form a holiday house by Gordon & Ursula Bowyer in association with Iain Langlands.

Three small bedrooms were made on the first floor and an L-shaped kitchen and dining space out of the living and kitchen areas. A new entrance porch leading onto a 'balcony' inside, the space below housing ducts for the electric warm air heating and storage. Another three bedrooms and bathroom were added onto the far end of the living room.

The external finishes are: flint retained where existing; new brickwork in local Sussex bricks to match existing; and timbering finished with Oladi Solignum. Internally, walls are plastered and painted white, woodwork is mainly natural and lightly varnished. New ceilings are boarded with the exception of that of the living-room which is plaster on expanded metal.



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1
The living room with entrance balcony and dining room at the back

2
View from living room along the link into new annexe

3
The 'brewhouse' showing new entrance porch

4
Annexe elevation

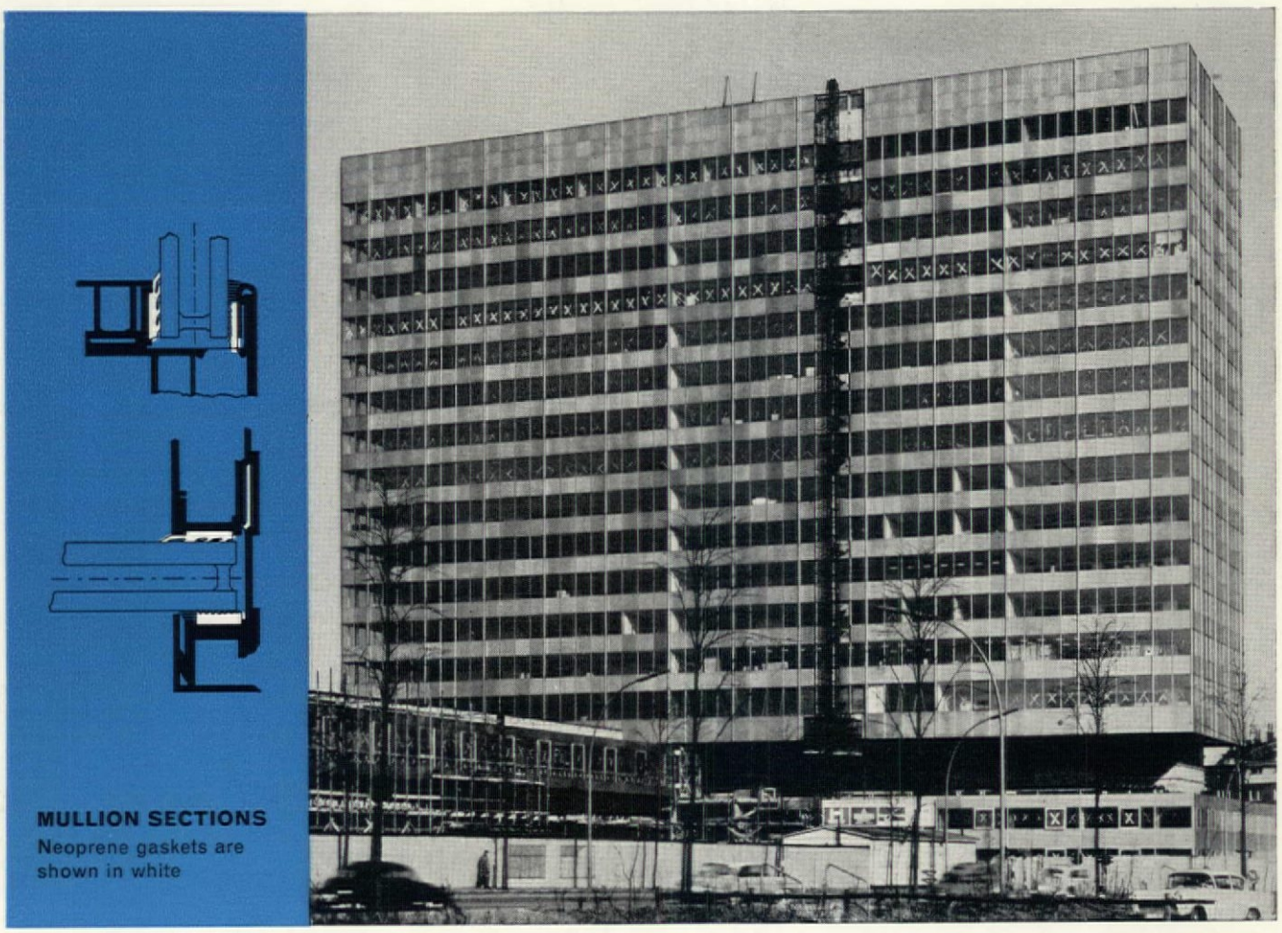
5
View into living room from 'link' (see 2)

6
Ground floor plan

1 entrance
2 dining
3 kitchen
4 bathroom
5 living
6 link
7 annexe

Permanently weatherproofed—with Neoprene

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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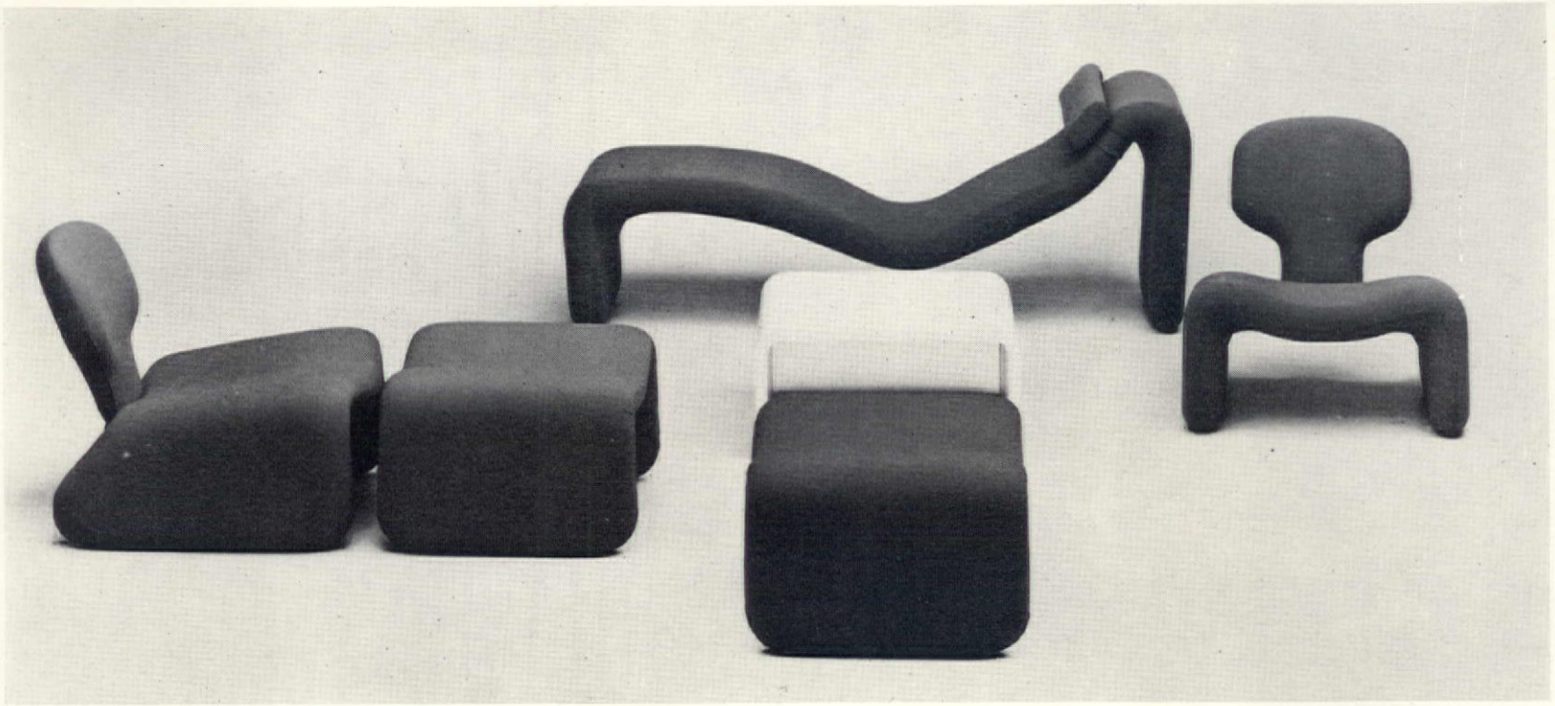

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Design

Olivier Mourgue

It was Olivier Mourgue, a young and inventive French furniture designer, who stole the show at the Paris furniture fair earlier this year with his two ranges, 'Domino' **1, 2** and 'Whist' **3, 4**, which are made by Airborne (Rue Grenelle, Paris).

'Domino' is a series of bulbous lounge seating of foam rubber on a strong but supple steel frame, with zipped-on bright-coloured jersey-cloth covers. They all have chromed steel gliders.

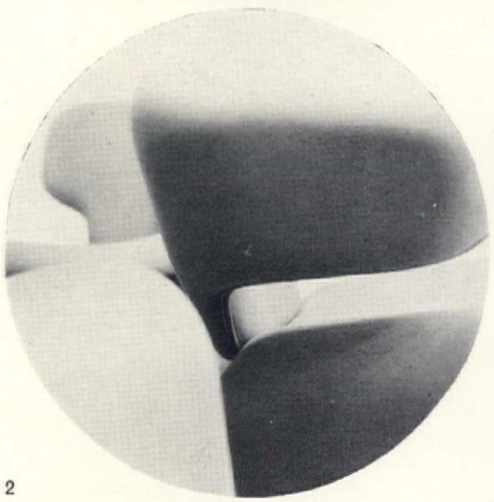
The 'Whist' range seats have a chromed steel frame, with rubber strap suspension on which rests the leather-covered padding forming the seat and back.

Export prices quoted in Paris are as follows: 'Domino': pouf 202F, double pouf 261F, chair 276F (with arms, 354F), double chair 387F (with arms 491F), chaise-longue 549F.

'Whist': pouf 432F, chair 618F, chaise-longue 965F, back-to-back chair 1235F.

Mourgue has also been experimenting with a chair of shaped chromed-steel rods **5, 6, 7**. (See *Mobilia* 116.)

All the seats will probably be imported into Britain by Harrison Gibson of Ilford, Essex.



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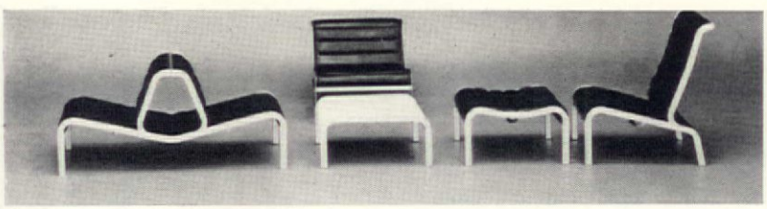

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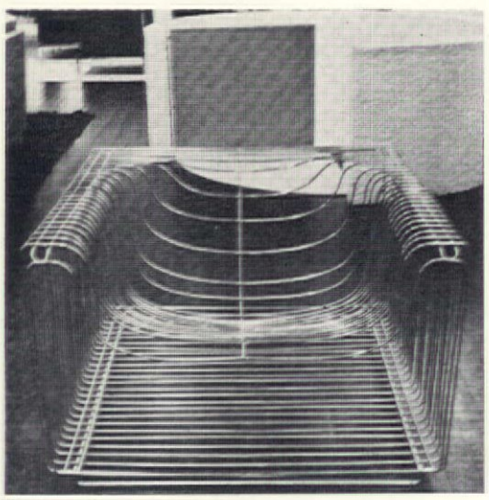

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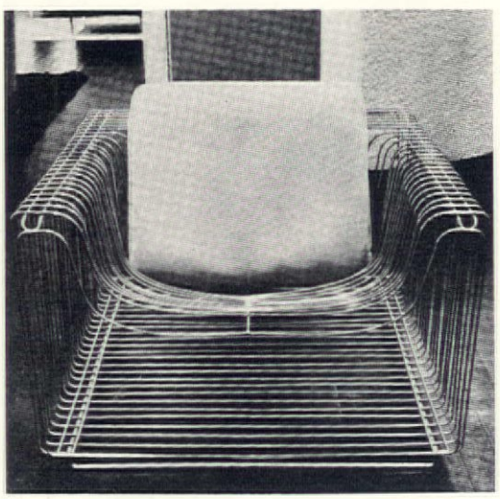

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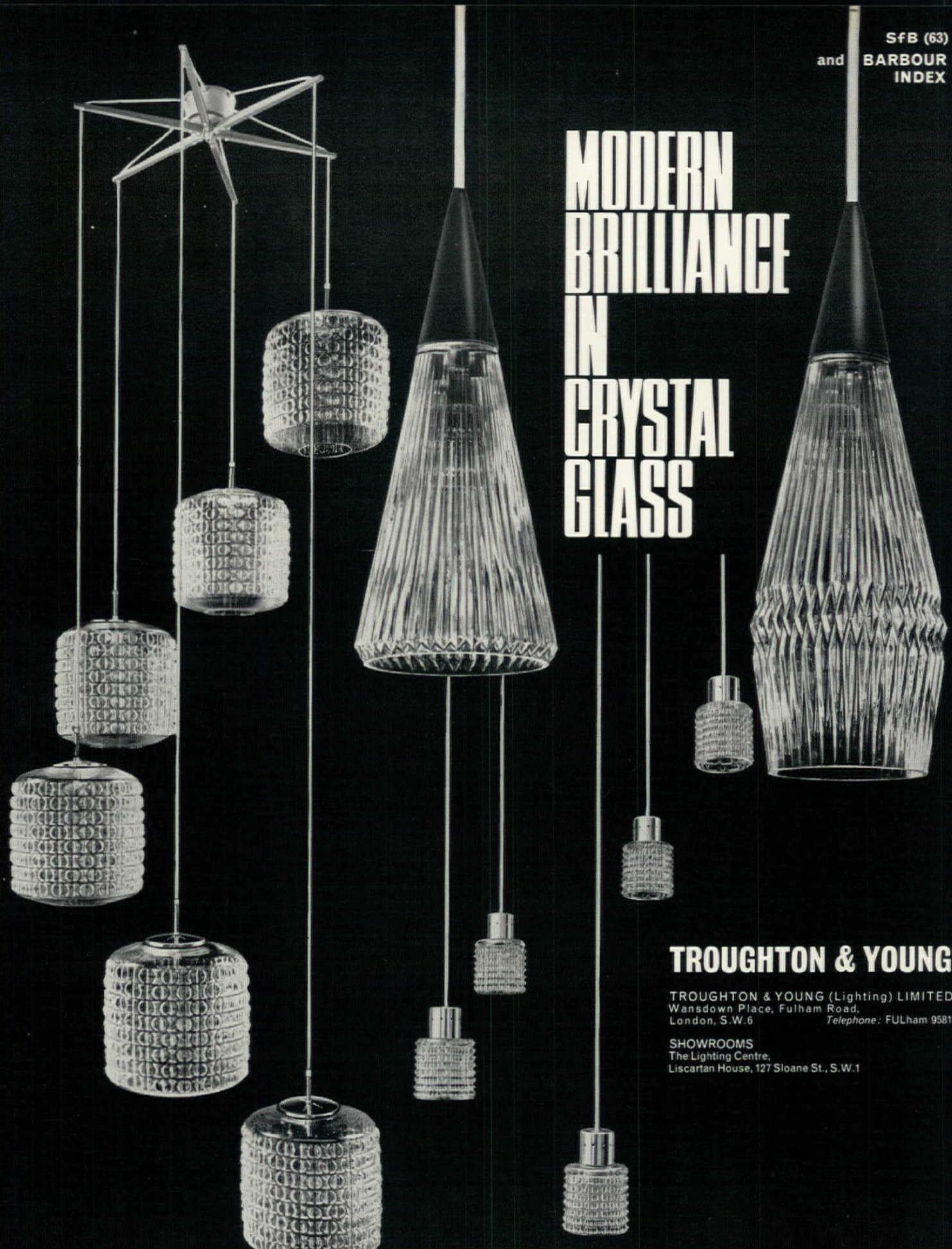
SfB (63)
and BARBOUR INDEX



MODERN BRILLIANCE IN CRYSTAL GLASS

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Aeropreen awards

Though Aeropreen Ltd are a company manufacturing polyether flexible foams, the annual furniture competition which they sponsor has a reputation for objectivity and freedom from commercial presures. Nevertheless, the judges when making their selection this year (from more than 100 drawings submitted) of six designs to be made up in full scale prototypes, sought those which were evolved through consideration of the properties of polyether foams and the best way to exploit them.

The first prize went to an easy chair by A. E. Hollis **1, 2** (tutor at High Wycombe College of Technology and Art), whose basic idea was the use of a formed ply shell from a simple developed ply shape, rose veneered on the back, with Aeropreen-interior upholstery and steel underframe.

Second prize went to C. R. Simpson (RCA student) for an ingenious general-purpose hospital bed **3–6** planned according to the published draft specification of the RCA research team led by Bruce Archer. The jurors found the mattress base not sufficiently rigid and the hydraulic mechanism as specified probably too expensive and complex. Bruce Archer, commenting, said: 'I must at once say that this is not a complete solution of the problems posed in the draft specification. But it is fairly close to a solution and a jolly sight closer than we had any right to expect!

'We have come to the conclusion that a good hospital bed should be capable of height adjustment, enabling nurses and doctors to attend to patients raised to a convenient level of 36 inches from the floor. It is equally important that beds may be lowered to 18 inches from the floor to enable patients to get in and out of them easily. There are many patients, particularly among the aged, who are totally bed-ridden because they cannot get out of their beds to go to the lavatory. What we have to remember is that the ward bed is the nurse's work-bench, and that the patient is her work-piece. If the work is to be done to the satisfaction of all concerned, the work-bench should be fit for the job.'

The third prize went to an easy chair by Paul Conti **7** (who is currently a partner in Design & Contract Associates, and is consultant for the Lazarus 'Uniflex' furniture). With plenty of experience of luxury-chair design (Uniflex 'International' chair and Gomme's swivel-rocker, both best sellers), his structurally enterprising entry was formed of various shaped members of rose-veneered moulded ply assembled in an unusual manner, and upholstered with several densities of Aeropreen foam, handled in a way equating with down filling, and covered with buckskin. The headrest is adjustable.

B. E. Wilson (student at High Wycombe) won the Directors' Prize with an armless hostel chair **8**, potentially economic to produce, made from three preformed veneered plywood shapes, the seat and back supports being upholstered integrally with the cover material and attached to the main frame by a sleeved construction.

The special merit prize was won by T. Widdowson (consultant) for an inexpensive hostel bed, convertible to a settee by a simple bolt device.



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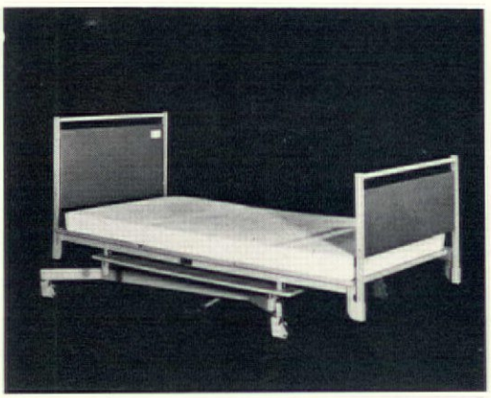

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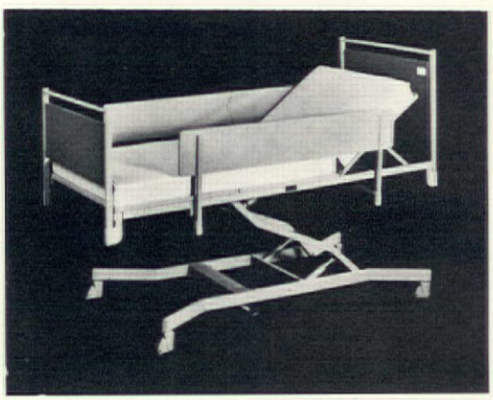

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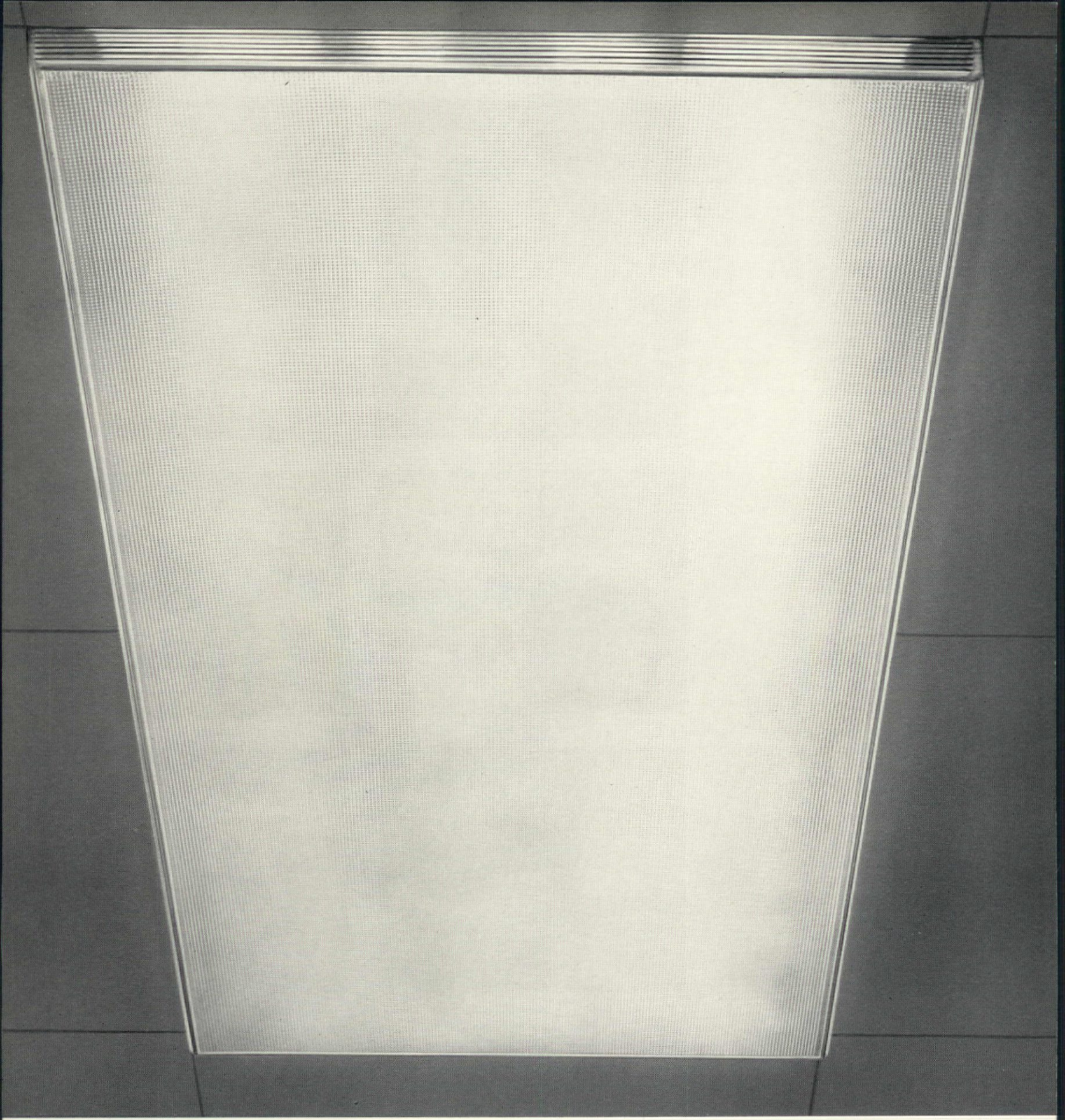


New trimless troffer extends lighted area to full width of module

Designed also
for continuous lighting
and rectangular patterns

This new modular recessed fluorescent fitting, the Atlas Trimless Troffer, has been developed to spread light over the full module width and give other significant advantages. No metal trim breaks the line.

Rectangular patterns and continuous lines can be created without interruption. Diffusers butt squarely against each other.

Based on a 2 ft. wide module, the troffers and attachments are available in 2 ft., 4 ft., 6 ft. and 8 ft. sizes. In addition to a plain opal dish, a new prismatic diffuser has been developed of crisp design and giving excellent brightness control.

atlas

Full details from: Atlas Lighting Limited.
A subsidiary company of British Lighting Industries Limited. Thorn House, Upper Saint Martin's Lane, London, W.C.2.

Trade notes

Alexander Pike

To obtain additional information about any of the items described below, circle their code numbers (C1, C2 . . . etc.) on the Readers' Service Card inserted elsewhere in this magazine.

C1 Air humidifier 2

Felvic Marketing & Sales Co. Ltd., 70 Carolina Road, Thornton Heath, Surrey.

Designed to overcome the problems associated with central heating without air conditioning. Rate of water atomization 1lb per hour. Consumption 45 watts. Price 12 guineas.

C2 Miniature fluorescent fittings 4

A.E.I. Lamp & Lighting Co. Ltd., Melton Road, Leicester. Atlas Lighting Ltd., Thorn House, Upper St Martin's Lane, London, W.C.2.

Suitable for display cabinets, mirrors, desks, etc., 12in 8-watt and 21in 13-watt fittings are $1\frac{1}{2}$in wide and $2\frac{13}{16}$in deep. Opal plastic diffusers are available and accessories for the Atlas range include a raffia baffle. Prices £2 10*s* and £2 17*s*, diffusers 9*s* 6*d* and 11*s* 3*d*, baffles 11*s* 10*d* and 13*s* 8*d*.

C3 Stainless steel sinks

Carron Stainless Products Ltd., Carron, Falkirk, Scotland.

Fully sound-deadened 20 gauge 18/8 stainless steel with multi-fluted draining boards. Drips on front and sides to prevent water spillage down face of cabinets. Prices from £12 11*s* 6*d*, 36in × 18in, to £35 0*s*, 84in × 21in.

C4 Illuminated ceiling system

Lumitron Ltd., 33 Alfred Place, London, W.C.1.

Extruded aluminium tracking supporting corrugated or moulded plastic diffusers or clear polystyrene prismatic lens panels.

C5 Aluminium roof edging

Permanite Ltd., 455 Old Ford Road, London, E.3.

Permatrim has recently been modified to improve the appearance and is now available in three new sections.

C6 Electrical central heating

Denham & Morley Ltd., Denmore House, 173 Cleveland Street, London, W.1.

The Beha system claims to provide full central heating on a selective time basis with running costs no greater than gas or oil systems at lower installation costs. Two independent circuits controlled by a central programmer with thermostatic control applied for each circuit or each room.

C7 Cantilever w.c. partitions

Venesta Manufacturing Ltd., West Street, Erith, Kent.

Melamine-faced steel framed partitions 5ft 8in high are fully cantilevered from a load-bearing back wall at any desired height. The floor beneath is entirely unobstructed.

C8 Rubber floor tiles

Hatcham Rubber Co. Ltd., Princes Way, Waddon, Croydon.

Triangular tiles with a non-slip surface of bevelled studs. In natural rubber, neoprene, ethylene, propylene or butyl, dependent on the particular type of resistance required.

C9 Aluminium suspended ceiling

Hunter Douglas Ltd., 33 Sloane Street, London, S.W.1.

The Luxaclair false ceiling. Stove enamelled aluminium panels 4in deep, clipped at 4in centres to aluminium carriers. Suitable for concealment of overhead installations and for diffusing light entering from above.

C10 Sashless double glazed windows 3

H. C. Janes Ltd., Barton, Bedfordshire.

Horizontally or vertically sliding, manufactured in Californian Redwood. Available in 36 standard sizes, factory or site glazed.

C11 Wall lanterns 1

Falks Ltd., 91 Farringdon Road, London, E.C.1.

The Guardian has a stove enamelled aluminium body in a choice of two colours and a moulded Perspex visor. Size $8\frac{1}{2}$in × $4\frac{3}{4}$in × 5in deep. Price £3 8*s*.

C12 Ceiling heating panels

Atkinson Electrical Engineering Co. Ltd., Penryn, Cornwall.

The Riviera Invisible Heating System has thermostatically controlled low temperature heating elements held in prefabricated units of plaster laths backed by a fire-resisting insulant. Consumption 14 watts per ft².

C13 Thermostatically controlled bidet 5

Eastwoods Froy Ltd., Redland House, 42 Kingsway, London, W.C.2.

The Caribbean bidet has a Temperfix valve to maintain constant temperature and reduce the danger of scalding. A control knob adjusts the flow of water and height of spray. In white or six colours. Prices: white £38 16*s*, colours £41 15*s*.

C14 Gas-fired boilers

Thomas Potterton Ltd., 20/30 Buckhold Road, Wandsworth, London, S.W.18.

Five new Diplomat range-rated gas-fired boilers have output from 30,000 to 80,000 B.Th.U. Prices range from £51 to £85.

C15 Weatherproof coating

C.T. (London) Ltd., 27 Ashley Place, London, S.W.1.

Polystrat is a combination of plastics and synthetic resins claimed to provide a continuous skin expanding and contracting with the surface over which it has been applied.

C16 Airhouses 6

Gordon Low Plastics Ltd., Horsham, Sussex.

To enable assembly work on transformers to be carried out in simulated factory conditions, free from weather contamination, AEI Transformer Division are using an airhouse formed from 1000yd² of polyester reinforced PVC sheet. Funnels let into the roof allow cranes working outside the structure to place large components within, pressure being maintained by a double seal at the tips.

C17 Decorative printing process

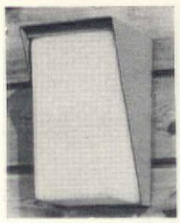
Virgilio Rognoni ed C. Societa, Via Legnone 54, Milan.

By applying a light-sensitive glue to the surface, durable multi-coloured prints of any size can be photographically reproduced on plastics, metals, glass, paper, ceramic tiles, textiles, etc.

C18 Metal coated plastic

Farbenfabriken Bayer, Leverkusen-Bayerwerk, Germany.

Novodur PM-2C enables plastics to be coated with copper, nickel or chromium to provide a light, corrosion-resistant material for cars, furniture, radios and electrical appliances.



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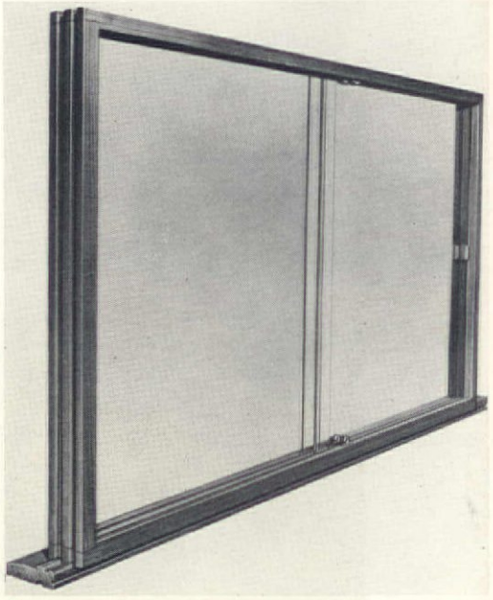

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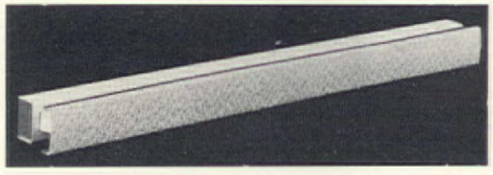

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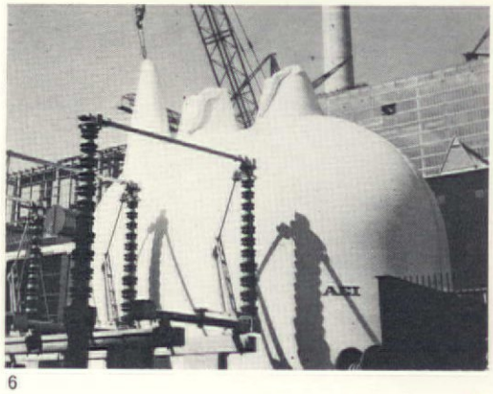

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← Code 47



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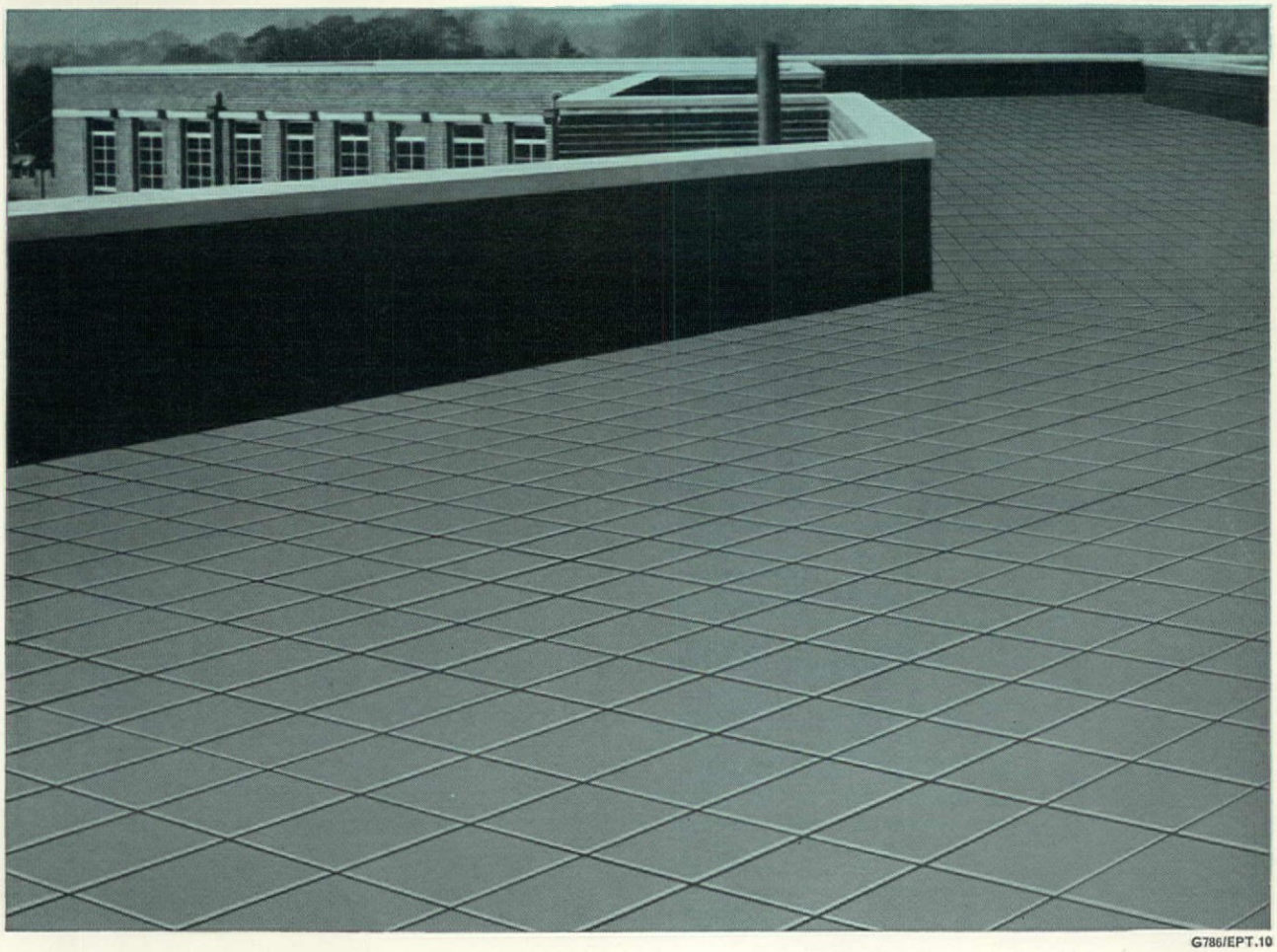
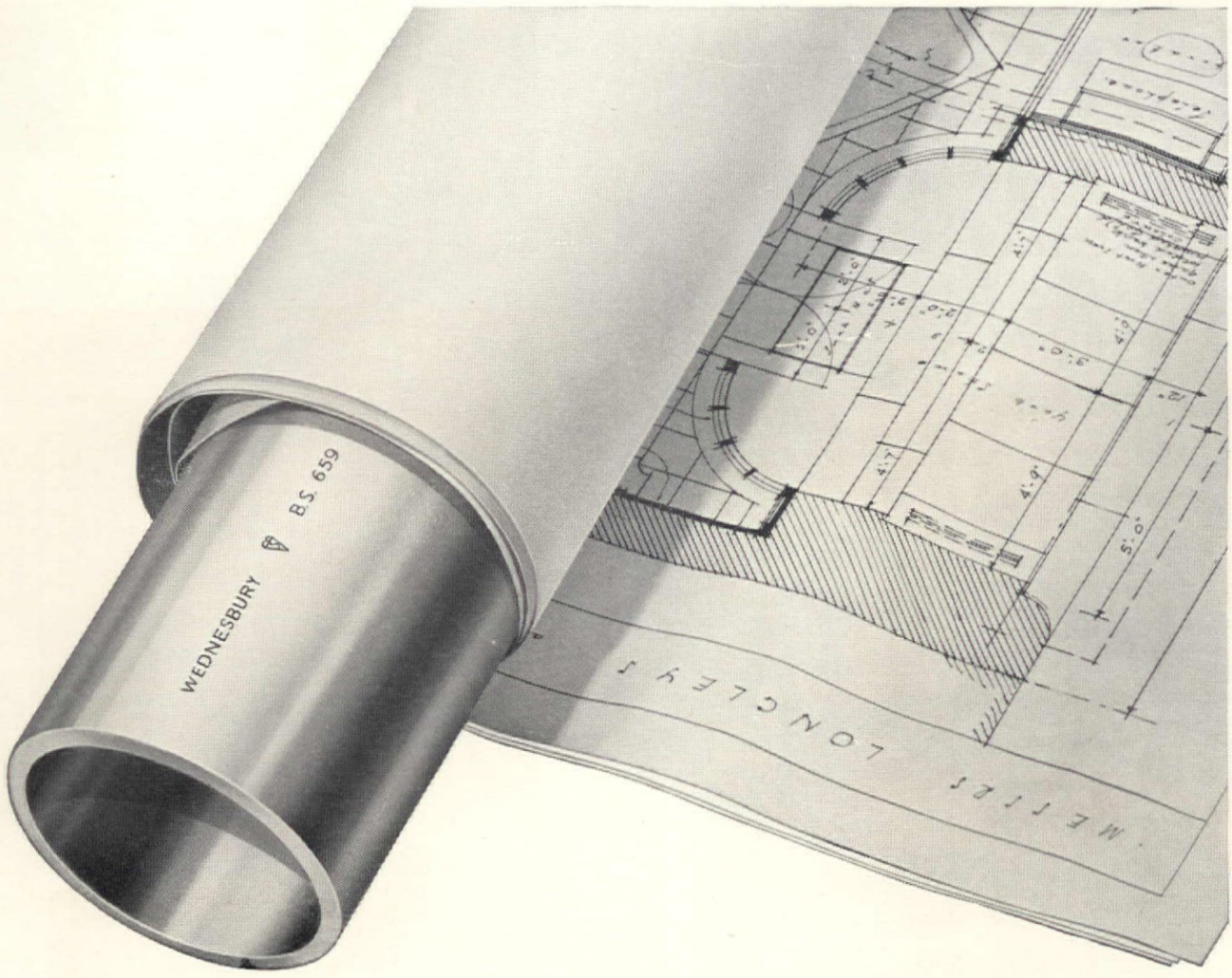


"EVERITE" Promenade Tiles on the roof of the Maternity Unit, General Hospital, Southampton

G786/EPT.10



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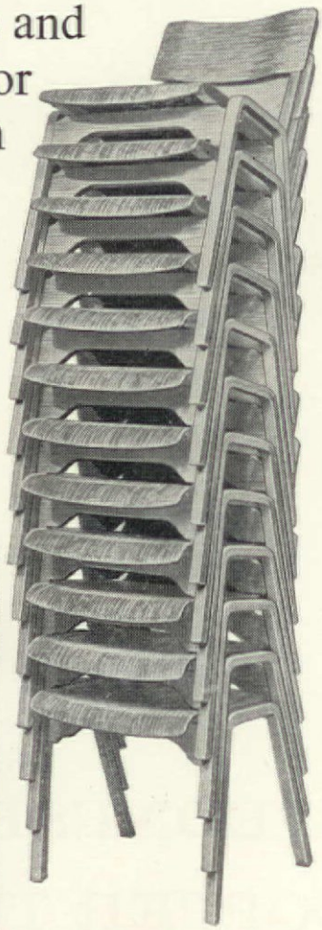

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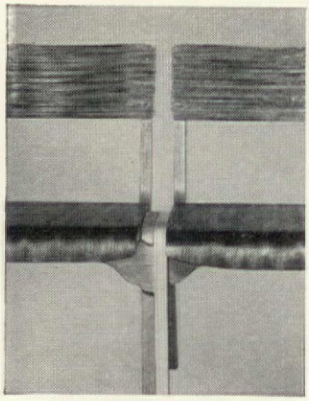

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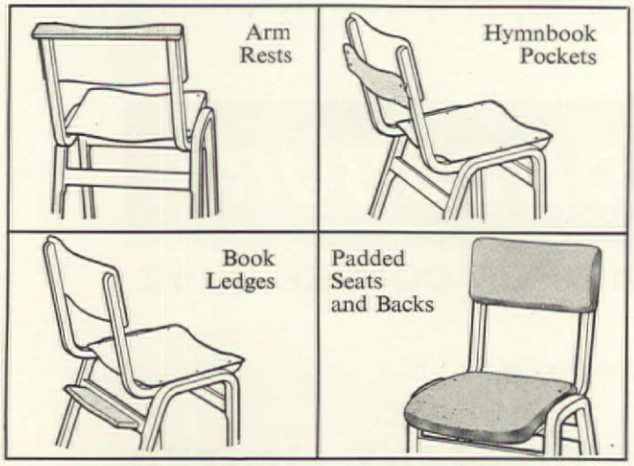

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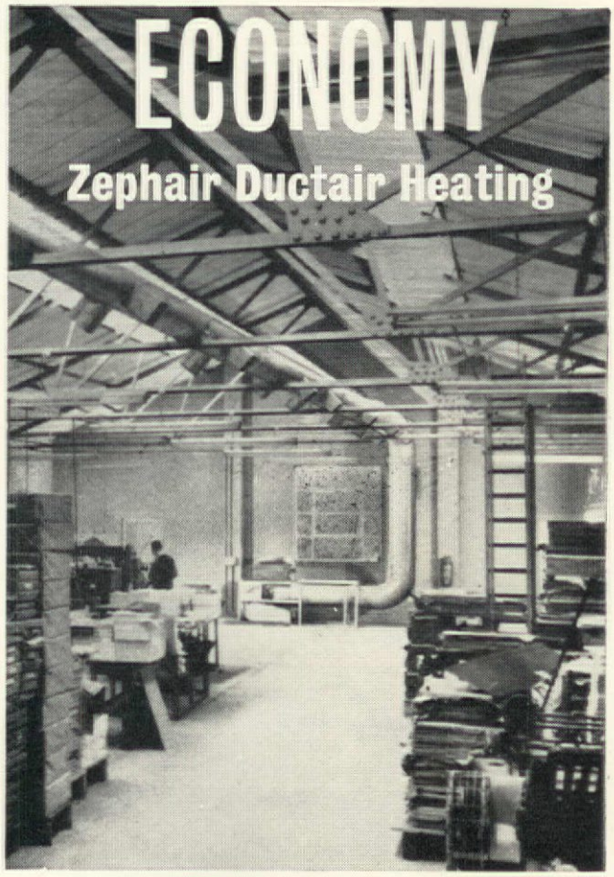

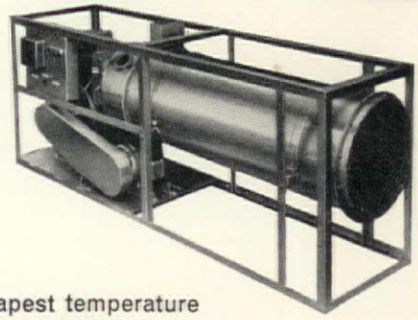

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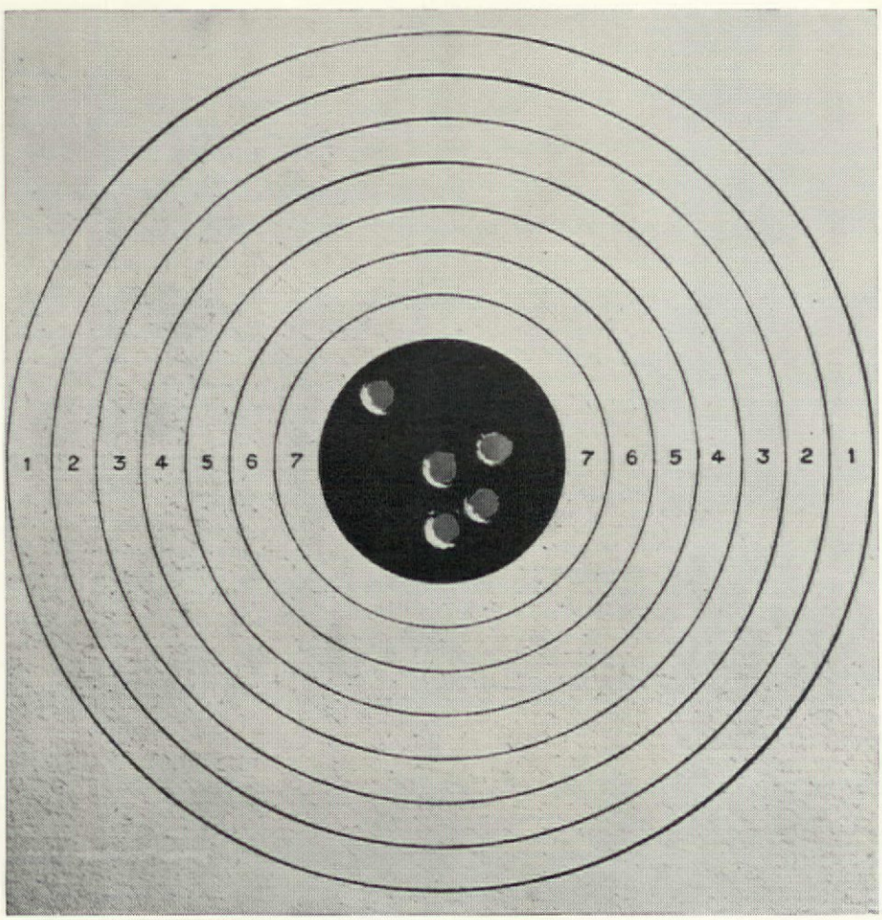

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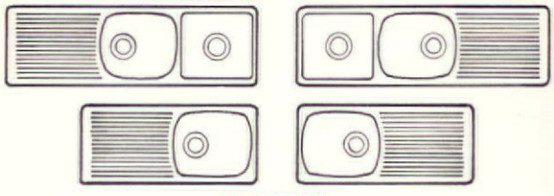

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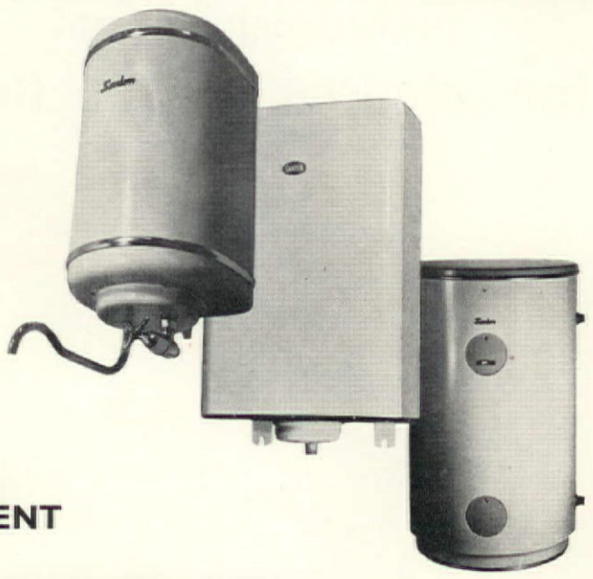

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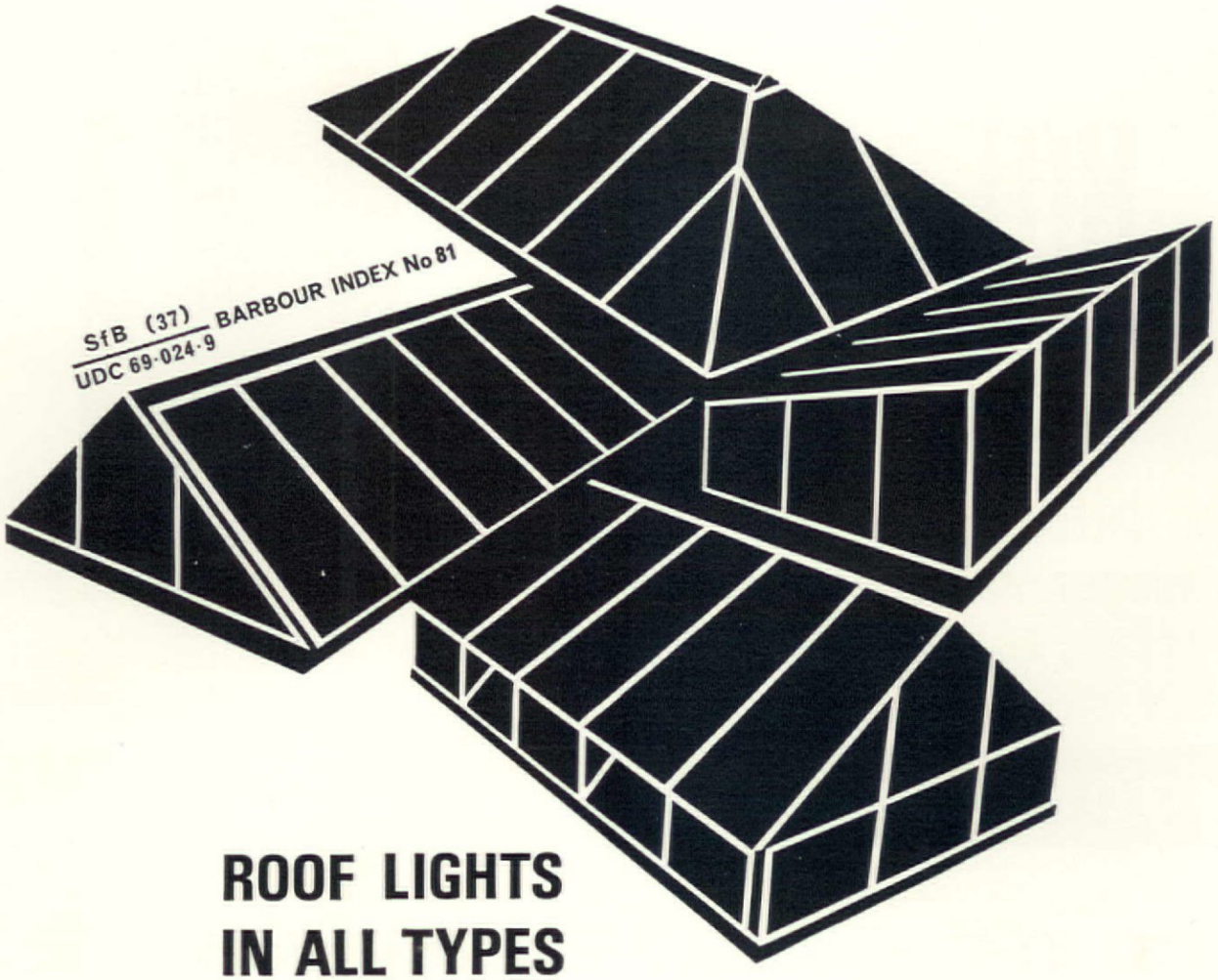

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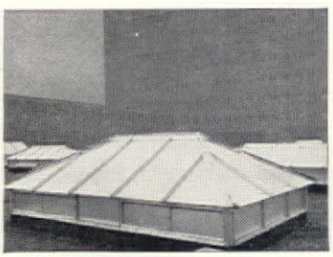



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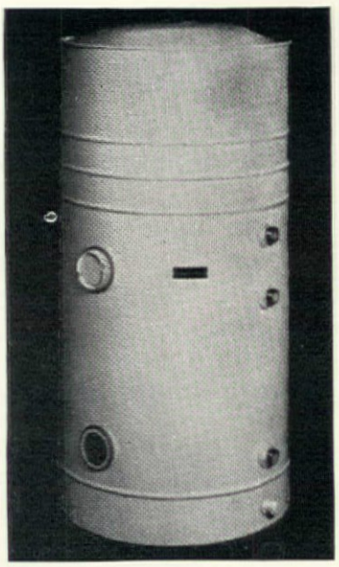

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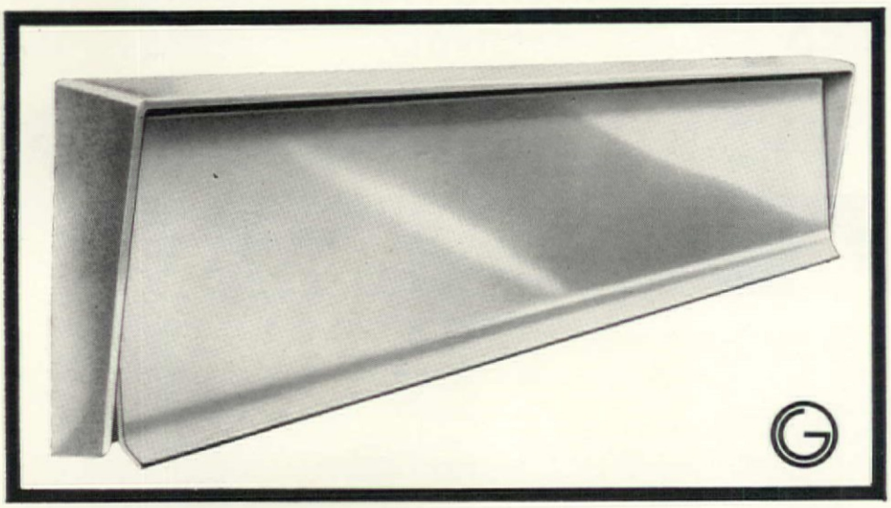

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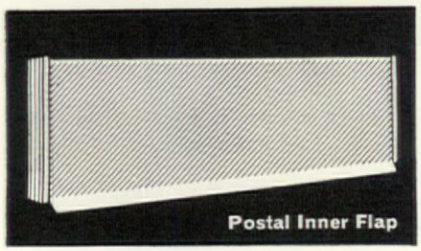

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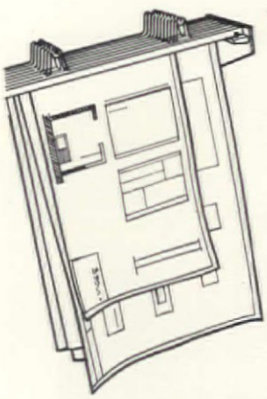

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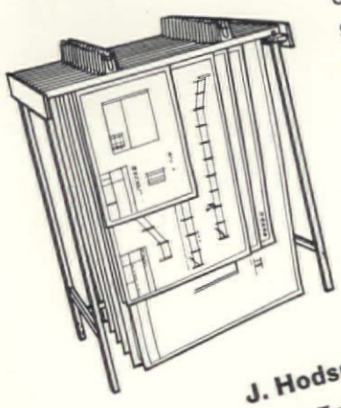

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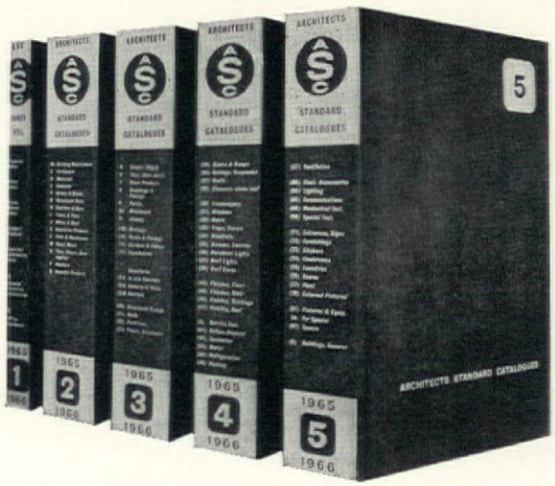

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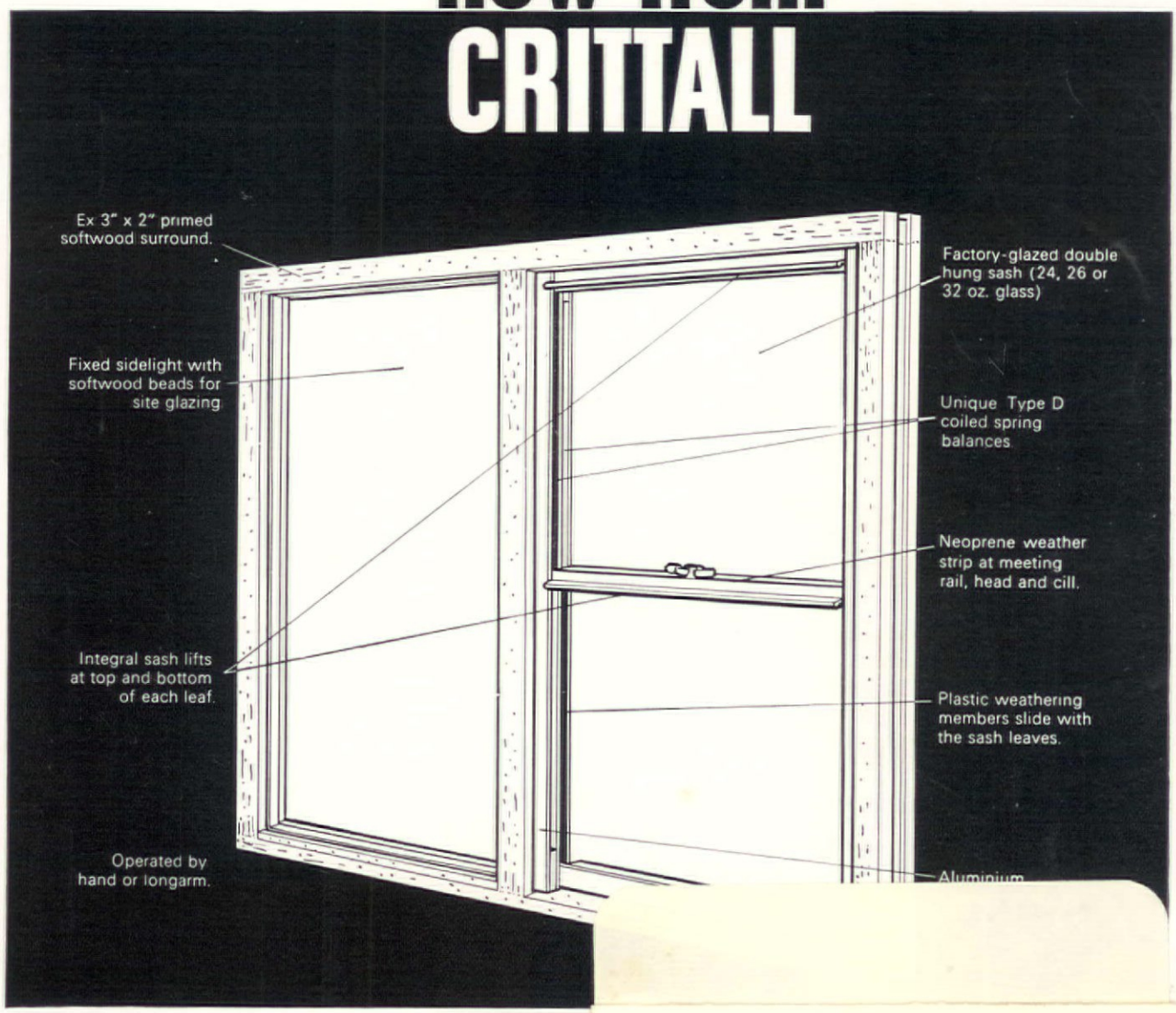

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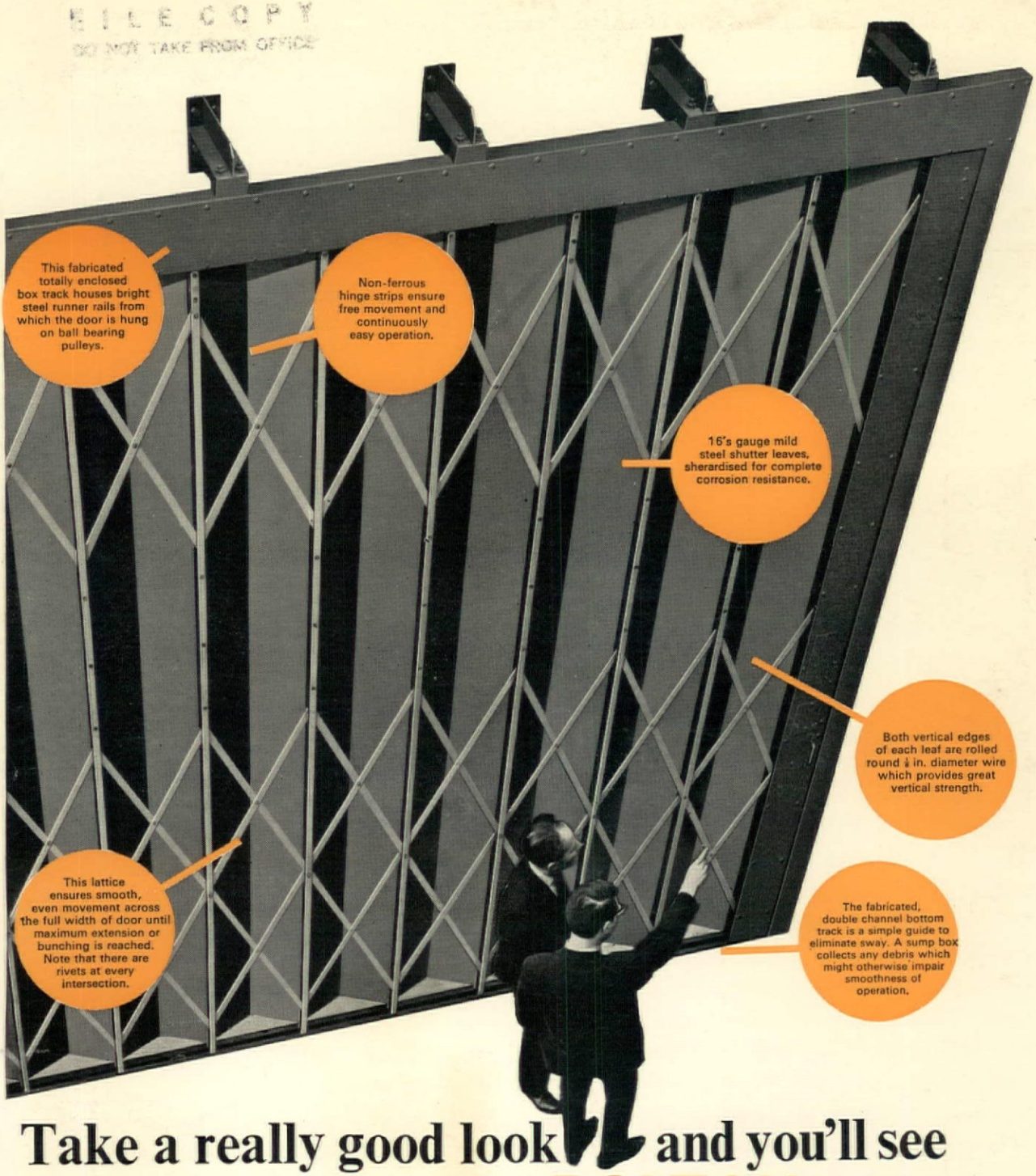

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