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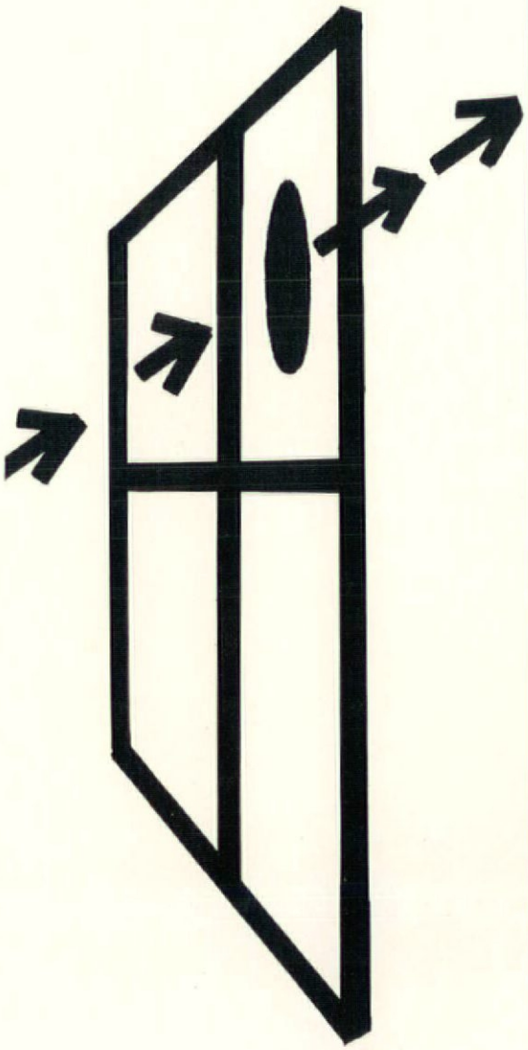

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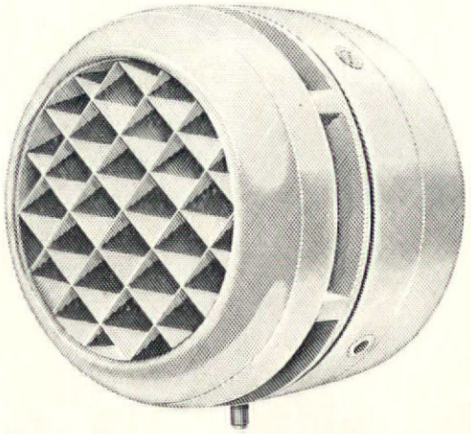

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November 1965

11

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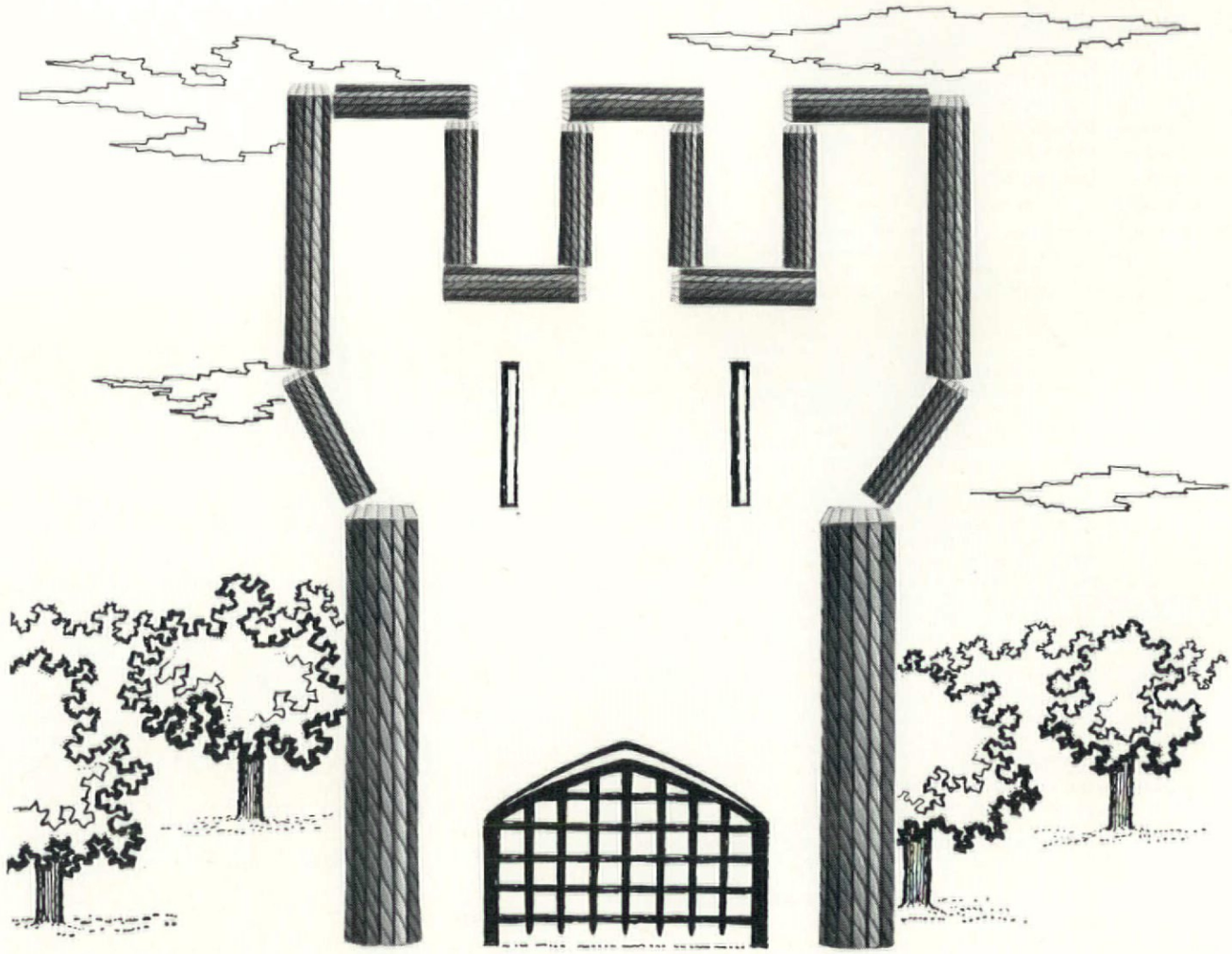

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Books

Architectural scale

Heath Licklider. Architectural Press. 30s.

Architectural scale is obviously a matter of concern to Professor Licklider and his book, while making only general proposals, sets out to encourage the architect to involve himself with the relationship between drawings, buildings, and the experience those buildings may afford the observer.

He rejects the use of a uniform module based on the human figure as inherently restrictive, and regards proportional systems simply as a means of furnishing systems of shapes that link part to part and part to whole in an orderly way.

In short, his book does not relate scale to obsolete theories of beauty or harmony, but to the provision of a relationship between architecture and human beings so as to provide an emotionally satisfying observer-centred environment.

Spread as it is over 200-odd somewhat superfluously illustrated pages, Professor Licklider's argument is rather diffuse, and could quite possibly be condensed into a supplement of Do's, Don'ts and Definitions which would, of course, make the book redundant. *S. B.*

Habitation 3

J. H. van den Broek. Elsevier Publishing Company. 160s.

UIA report on housing in Finland, Greece, Hungary, Yugoslavia, Turkey, USA and USSR. Text in English and French.

Town-planning in the Netherlands since 1900

R. Blijstra. P. N. van Kampen and zoon.

Illustrated study in English.

British townscapes

Ewart Johns. Edward Arnold. 45s.

Illustrated study of architectural influences on the geography of towns.

Garden cities of tomorrow

F. J. Osborn. Faber. 7s. 6d.

Ilustrated planning study.

Wohnen in Neuen Seidlungen

Karl Kramer.

Text in German. Planning in Germany.

Urbanistica

Corrado Beguinot. Fausto Fiorentino.

Text in Italian. Planning study.

Design sources and resources

Loise Ballinger and Thomas Vroman. Studio Vista. 35s.

Collection of photographs from nature, architecture and the fine arts intended as 'a source of inspiration' to designers.

The radience of Chartres

James Rosser Johnson. Phaidon. 12s. 6d.

Studies in the early stained glass of the cathedral.

Werkstoffe und Verarbeitung im Innenausbau

Otto Steinhöffel. Julius Hoffman. 75 DM.

Text in German. Photos and detail drawings of contemporary interior design in Germany.

Practical mosaics

Hans Unger. Studio Vista. 35s.

Practical and artistic problems of mosaic making. Illustrated.

Discrimination and popular culture

Denys Thompson. Pelican. 4s.

Examination of the effect of mass media on present-day standards.

Colour and harmony

Paul Renner. Studio Vista. 35s.

Illustrated study of the theory and practice of colour.

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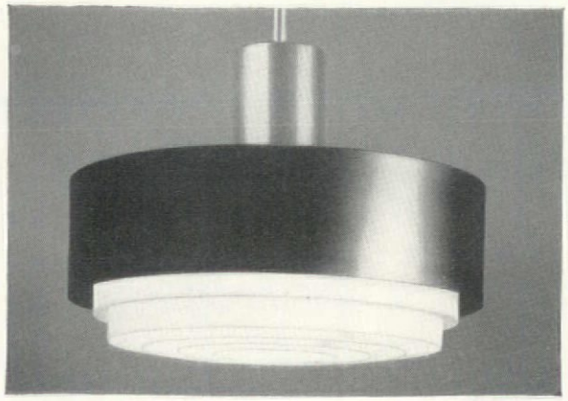

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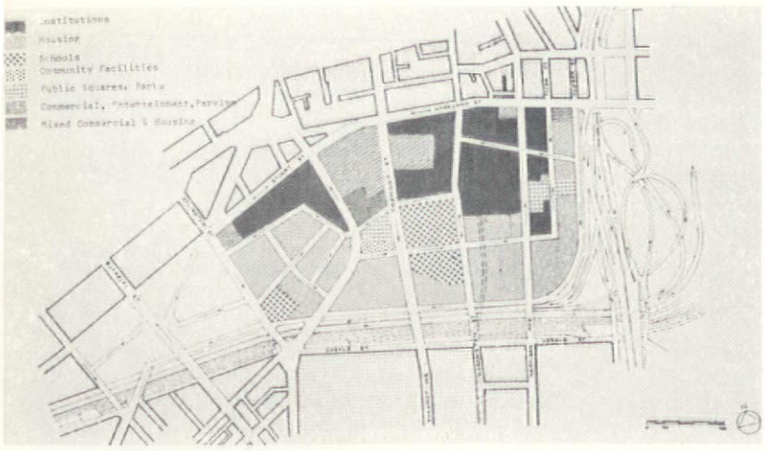

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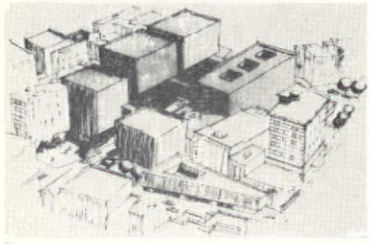

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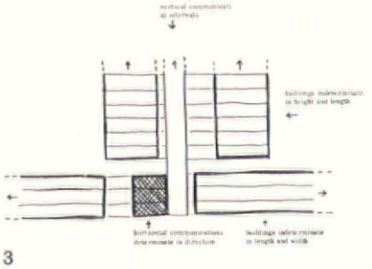

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Tufts New England medical centre

A preliminary study

Herman H. Field is the director of a multi-disciplinary planning team which for the last four years has been studying the redevelopment of a complex of hospitals and post-graduate research institutes in the middle of Boston. This report describes the objectives and methods of analysing the present situation; an urban development plan for rehabilitating not only the old sites but the surrounding areas as well, and in it are suggested three alternative plans for the Tufts–New England Medical Centre, to be achieved during the next twenty years. In this report and in two papers 'The application of comprehensive planning to the Urban Teaching Medical Centre' and 'Organising the planning process', Herman Field states a philosophy of hospital planning and in particular how to plan for the future as well as the immediate state of a developing institution.

The situation of the medical centre in Boston is similar to that which may be found in London and other cities in this country where old medical institutions are in the centres of cities for historical reasons and now find themselves trapped. The Boston Medical Centre hospitals and institutes occupy small irregular lots and are surrounded by a quietly collapsing urban area. As Field describes it: 'an accelerated decline and shrinkage of commercial life has taken place until the area has begun to show all the characteristics of extreme blight; a continual falling off of its remaining residential population, high fragmentation of land uses, a spread of every kind of marginal operation dominated by parking lots, partly empty structures, bars, drifter establishments and obsolete areas.' However, these sites are at a city communication hub. They are flanked by an urban freeway intersection and there are two major subway lines with stations on the site; further, in Boston the effectiveness of public transit as an alternative to commuting by car has become realized, and steps have been taken to increase the city's network of surface rapid-transit systems.

In Britain in similar situations little is being done. The cost of urban land prevents its acquisition in any quantity for National Health Service or University Grants Committee purposes; urban rapid-transit systems are non-existent and there are no urban freeways at the centres of cities. Medical and university institutes on sites which are too small and bounded by traffic-choked streets are unable even to expand to the size required by their present work, let alone look forward to satisfaction of their future needs. In the absence of a massive urban renewal effort it is probable that for our institutions the only way that they will get enough room will be to leave their historic sites completely.

But there exists in the United States 'section 112' of a Housing Act of 1961. Under this section Federal monies are made available for urban redevelopment, where this is in the interests of the community at large. Expenditure by an institution on development which is compatible with an urban renewal plan approved by a city council is matched, two dollars for one, by a federal capital grant. This money is made available to the city's renewal programme; thus every dollar of institutional expenditure brings two dollars' worth of city improvement. As Herman Field remarks, 'this Federal legislation puts the institute into a new position of strength which it formerly lacked. It provides a constructive alternative of mutuality of interest to the traditional town and gown impasse.' And so, although there was an early temptation, on finding that their location

▷ AD9

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was boxed in in a blighted area in downtown Boston, to get out of the city and into the green fields outside, they decided to stay and to attempt to make over their part of the city. It meant devising a campaign to get both institution and city into a series of actions that would make a renewal project a certainty. This has been the course over the past three years and as a result the Tufts–New England Medical Centre and the city are collaborators in an active Federal Urban renewal project for the area.

The study proceeded carefully with every step documented and a rationale of action held to continuously. Chapter headings of the study are indicative of thoroughness: 'Transportation proposals', for example. The transport situation in the city is analysed meticulously and includes problems of parking, resiting the subway stations and for tying-in to the urban freeway network. Another chapter is headed 'Summary of Personnel Inventory'. It was discovered, as is often the case in complex institutions, that nobody knew precisely what work was going on and it was impossible to say accurately how many people and in what disciplines they were employed. Techniques were devised for getting this information.

Assessments were made of the volume of building which would be required for the new institutions and assumptions made about the growth rate of various departments. The basis for the assessment of future needs is an analysis of community needs and requirements, a definition of the objects of the new centre, analysis of present operations and sensible and relevant material of national and regional trends.

A detailed proposal was made as part of the urban renewal plan for the future land use budget **1**. This was drawn up, not only to make the best use of the area in the immediate future, but also to provide a land bank for future extensions of the combined medical institutes—the provision of this land bank is an essential one and alone makes it possible to consider developments such as this in the centres of cities.

The planning team under Field is itself multi-disciplinary. Team members are: a social anthropologist, an architect, a planner and a hospital administrator, and this cadre of decision-makers has active consulting links throughout the hospital at every level of staff.

Field, in his paper on planning methods describes one of the techniques of staff interview devised in connection with the study of the Children's Hospital project —the famous 'Floating Hospital'. Instead of putting set questions 'terms were gradually collected which seemed to crop up in connection with the study of children in hospital. These were organized in a wall display. Our interview with the doctor or nurse, or whoever it was, started by us pulling out the card relating to his or her service or speciality. We would then successively match it with the other cards on the wall, asking the person being interviewed to stop us if he saw any relationship or significance.' The responses were recorded and, continues Field, 'this associative technique opened up unexpected and unexplored areas bringing out aspects that never would have come up otherwise'. These interviews produced not only a wealth of information but a 'clustering of concerns' of direct relevance to the search for the key linkages in the hospital system.

Several of these techniques are described and one is struck again and again by Field's brilliant empiricism and real human understanding in the design of techniques for revealing hospital relationships which will avoid intrusion of pre-digested thinking, as would be the case with even diagrammatic plans, for example.

The question of phasing the construction of the future accommodation is correctly seen as bound up with the problem of planning for growth and change. Field notes the irrelevance of discussion of 'ideal' shapes for hospitals, where 'ideal' cannot exist. He considers the shape of hospital buildings only in relation to the interlocked problems of internal communications and external constraints. Perhaps rather too quickly he dismisses a wholly indeterminate architectural reply to the indeterminate problem set, putting value on a wholistic intent to be achieved by 'successive approximation'.

His methodical approach to the problem is of course an immensely valuable discipline but there are grave dangers in his belief that by use of extremely accurate analytical methods it is possible to home-in on a final solution which is wholistic in the sense that the design of the flight deck in a modern aircraft is wholistic. To be sure, a flight deck is a total design but its very completeness makes it useful only as long as its whole context is intact. Buildings are not really like aircraft and they combat obsolescence in different ways. One of the ways they can combat it is by avoiding wholeness; in fact they continue through their lives to grow and change with their changing context by the same process of 'successive approximation' used in reaching their starting point.

Assessments of the space required for the future buildings and the work to be done in them are admitted to be 'broad'; so they should be, and there is no need to be ashamed of the fact. But this *uncertain* future must be central to the architectural concept. Three proposals are sketched, each allowing for phased development through the sites to 1985, taking in their stride a major city artery, Washington Street, which is of symbolic as well as literal value.

The first bridges it with a communication link and develops parallel buildings along each side, bridging from time to time as necessary. The second develops first one side and then bridges it and develops on the other, in high-rise compact blocks. The third alternative starts by bridging Washington Street straight away with a core building, and develops continuous building through the sites at low density and with greater horizontality.

The three alternatives hover uncertainly between the gift of primacy to the buildings or to the communications. Certainly the illustrations, are desperately tentative and look terribly like hospital buildings **2**, but the plans confirm the uncertainty. It could be that the impossibility of achieving a wholistic solution in the face of an indeterminate problem is demonstrated here. The development is time-based and the life of the institutions functions about intricate but changeable internal communication patterns. The pattern for the future must be based on a communication system which will make possible the greatest number of alternatives in the future; which will secure freest communications over the largest area and impose only those directions for development which are inevitable.

The buildings—shape, bulk, content even —and quite *separate* from the communication network, can only be broadly assessed as are their requirements at this moment; but the solution for the communication system must be stated more precisely because this will determine the workability of the whole solution **3**. This point should not be submerged, as it almost is in this most intelligent report; it should dominate.

John Weeks

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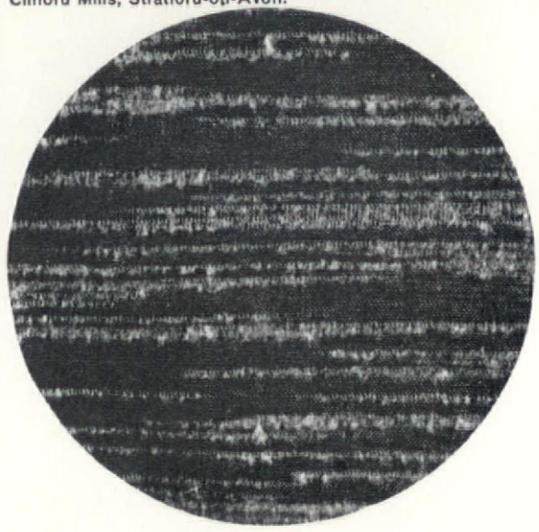

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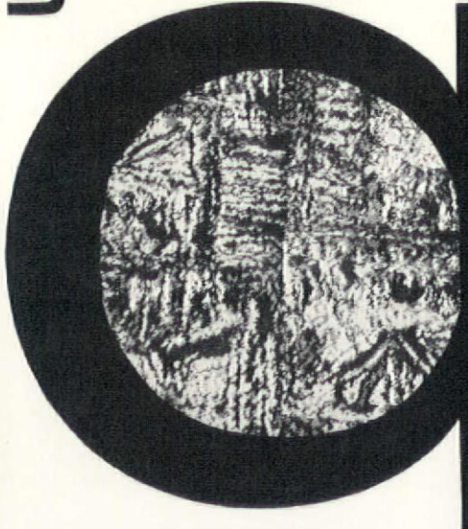

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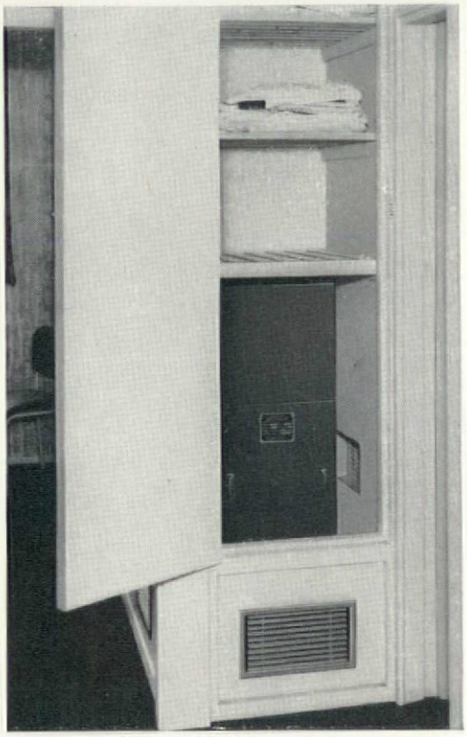
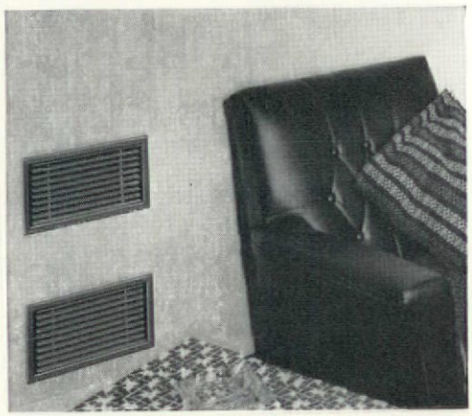


Halcyon F60 in purpose-made compartment in hall



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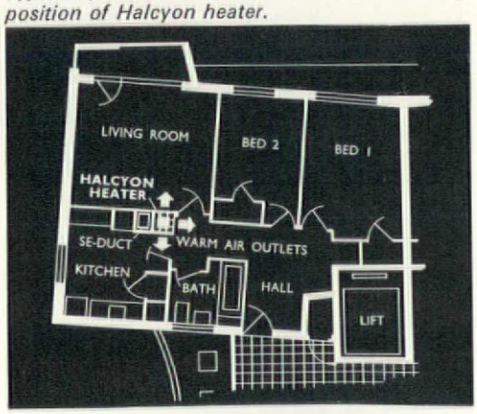

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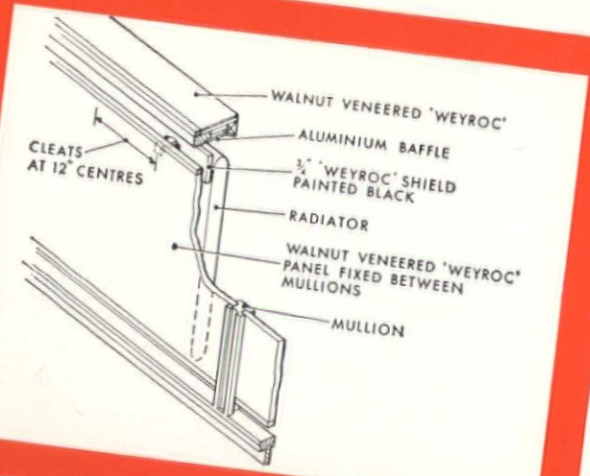

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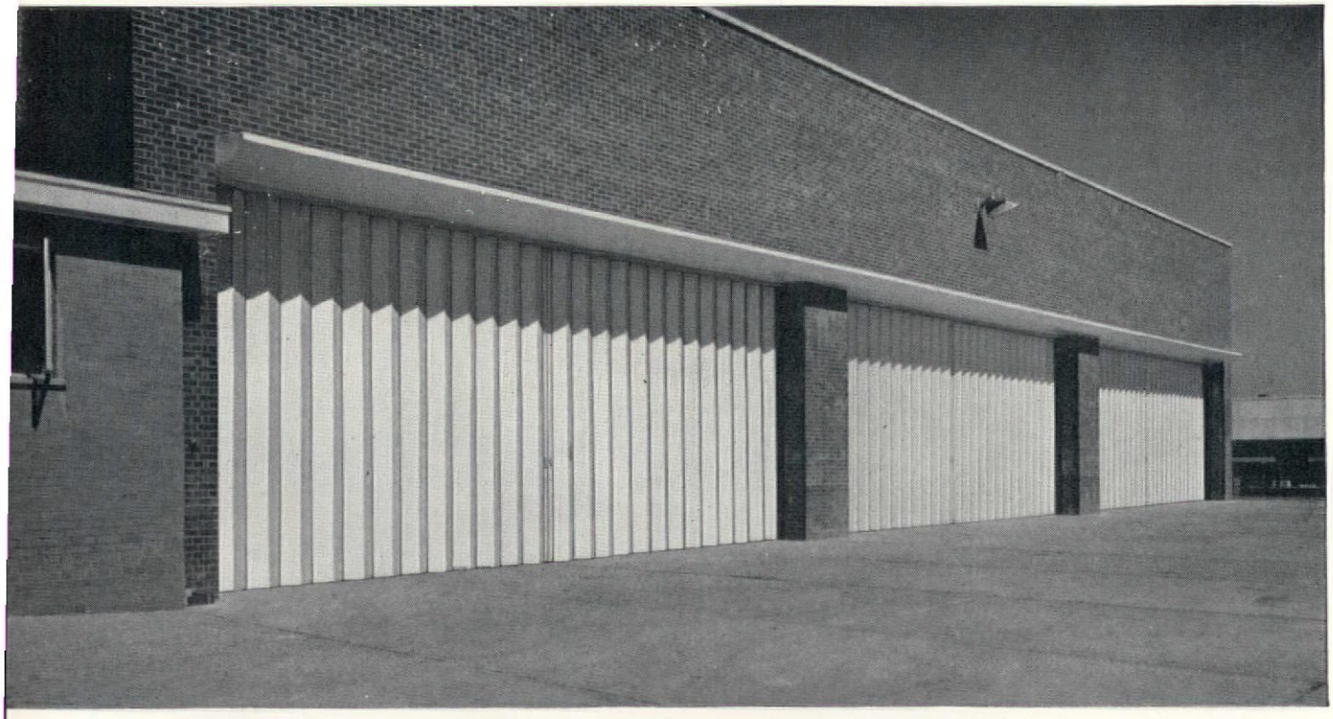
VERSATILITY . . . is such that Bolton Shutter Doors are used with great success in situations as different as fire stations and passenger lifts. They can be arranged to clear runway beams on loading bays, sloping floors, trolley bus wires and railway tracks. They can be operated by hand or power, controlled by push button, floor pad, photo-cell or radio. They can be perforated for ventilation in tropical climates, or fully glazed for extra illumination in factories.

THIS IS NOT A CHEAP DOOR . . . but in terms of performance and service it is, without question, the best value you can buy in shutter doors. The minimum is a manually operated door, built by craftsmen to a standard stock size from tested materials. The maximum is probably a special size (anything up to 45 ft. high x 200 ft. wide) in a situation with special problems. It may be cellulosed, fitted with stainless steel hinge strips and will most likely be radio controlled. Whatever we supply it will give long years of uninterrupted service.

Write today for full information, quoting ref. AD 596.



BOLTON GATE CO LTD

BOLTON, LANCS

THE BIGGEST NAME IN DOORS

Branches in London, Birmingham, Glasgow and throughout the country

BG.596

ROULETTE BRINGS OUT THE BEST IN PEOPLE...

. . . Roulette is a **SOCIABLE** chair, ideally suited to the informal conferences now widely accepted throughout business and industry — an **EFFICIENT** chair, with a satin smooth swivel action for ease of entry and exit — an **INFORMAL** chair, curvacious, but dignified and crisply in keeping with today's vitality — a **LIGHT** chair, to keep pace with everyone's demands for flexibility — a **COMFORTABLE** chair, with curves and angles cunningly contrived to give a comfort far in excess of expectation — a **COMPETITIVE** chair, at £32 10 0 retail it is hard headed value for money. Roulette is a **MUST SEE** chair, ring IVAnhoe 0763 and we will do our best to show you one.

STEVENS ROULETTE CHAIR

R S STEVENS LIMITED
FOWLER ROAD
HAINAULT
ILFORD
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TELEPHONE: IVANHOE 0763 & 0813

SHELL moulded in tough, light, reinforced rigid polystyrene upholstered with super quality foams and covered in expanded vinyl fabric. Separate seat cushion with zip. SWIVEL BASE of polished cast aluminium with nylon bearings for smooth trouble-free action. Tough plastic glides.

The bricks: Ibstock silver grey handmade
The building: Public Library at Hull

Architect: The City Architect, Kingston upon Hull.

Contractors: J. Mather & Son, Leeds Road, Hull.

Bricks supplied through: Henry Williamson & Co. Ltd.

See the permanent exhibition of the Ibstock group's machine and handmade bricks at the Ibstock showrooms, 29 Crawford Street, London, W1

IBSTOCK who produce Ibstock, Himley and Aldridge facing bricks

THE IBSTOCK BRICK & TILE CO. LTD., Ibstock near Leicester Ibstock 531
London Offices, 29 Crawford Street, London, W1 AMBassador 2782

Subsidiaries: Himley Brick Co. Ltd., Kingswinford, Brierley Hill, Staffordshire Kingswinford 3118
Aldridge Brick, Tile & Coal Co. Ltd., Aldridge, Walsall, Staffordshire Aldridge 52211

"TURNALL" Asbestos-Cement "SPAN

Span 15ft from eaves to ridge without end lap

The introduction of "TURNALL" Asbestos-Cement "SPANTILES" constitutes a new and important development in all-purpose roofing. The advantages are obvious and immediate. In normal house construction, for example, "TURNALL" "SPANTILES" can be fixed on purlins up to 6 ft 6 in. centres. Rafters and battens are unnecessary. As 15 ft² of roofing is laid in one operation, erection times are considerably reduced and overall costs automatically cut. "TURNALL" "SPANTILES" are also suitable for pitches as low as 5°.

Standard Lengths: 8 ft to 12 ft in 12 in. increments.
12 ft to 15 ft in 6 in. increments.

Standard width: 19 in. Net cover width: 12 in. Nom. thickness: $\frac{5}{16}$ in.

Accessories: A complete range is available.

Finish: Thrutone Blue.

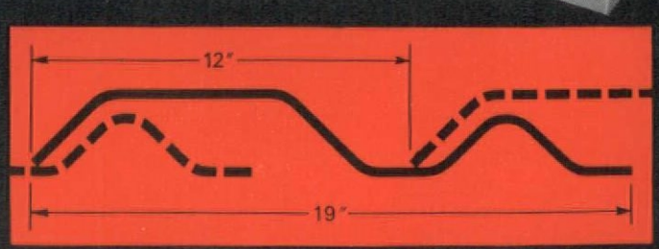
For detailed technical information send for T.A.C. Publication B.122.

See the "TURNALL" "SPANTILES" on T.A.C. Stand No. 183, Avenue 'C', Grand Hall, at the International Building Exhibition Olympia, November 17 to December 1.

TURNERS ASBESTOS CEMENT CO. LTD.
Trafford Park, Manchester 17, Tel: TRAfford Park 2181, Telex: 66 639
Regional Sales Offices: London, Belfast, Birmingham, Bristol, Cardiff, Glasgow, Nottingham and York.

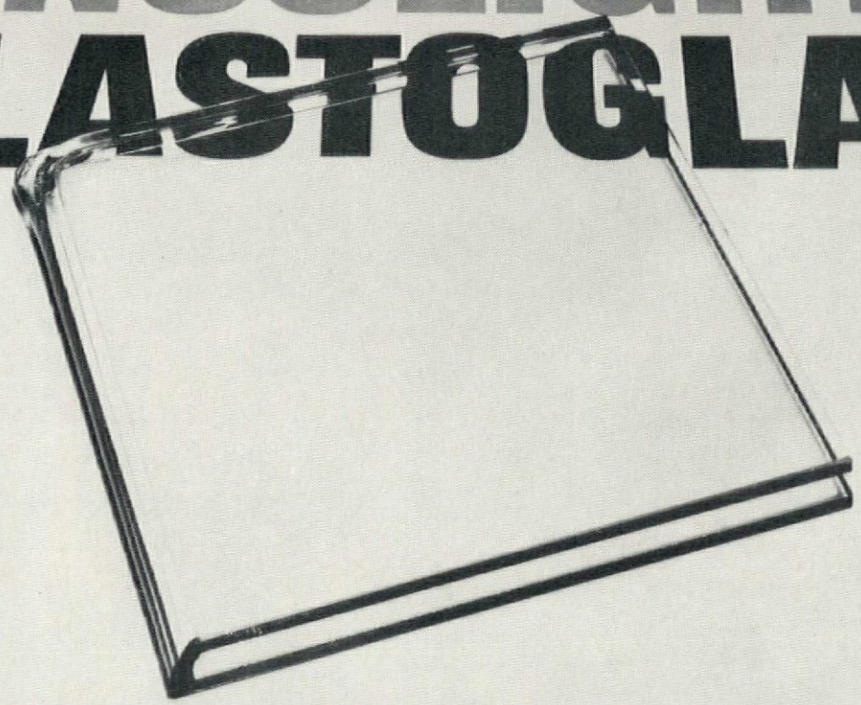
A TURNER & NEWALL COMPANY

TILES"

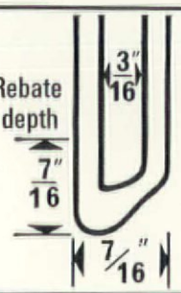


The only all-glass Double Glazing units available in over 130 sizes from stock

PILKINGTONS' "INSULIGHT" GLASTOGLAS



Over 130 sizes now being delivered. This is the all-glass sealed unit which has made double glazing installations as easy as fitting any standard building component: Pilkingtons' "Insulight" Glastoglas unit which is available ex-stock in a wide range of sizes covering the more usual frames and including the new Module 4. The range is being added to constantly.



THE "INSULIGHT" GLASTOGLAS UNIT

Construction: Two panes of clear sheet glass are spaced at 3/16 in. and the edges are fused together to give permanent seal.
Sizes: A wide range of stock sizes within the limits 10 in. × 16 in. to 32 in. × 38 in. and 18 in. × 39 in. to 50 in. × 70 in. There is *no minimum quantity* for orders to stock sizes. Units to customers own sizes (within the above limits) can be supplied subject to minimum orders of 200 units.
Overall unit thickness: 7/16 ± 1/32 in. **Weight per sq. ft. of unit:** 3 lb approx.
Nominal U value: 0.62 Btu (single glass = 1.0 Btu) **Minimum rebate requirements:** 7/16 in. deep × 3/4 in. wide.
For full details of the "Insulight" Glastoglas unit and up-to-date list of stock sizes currently available please contact your nearest Pilkington office or depot. Ask too, for details of the "Insulight" Mk VI metal-edge unit. This is purpose-made and can be supplied in larger sizes; and in many types of glass including Float, with its outstanding clarity and brilliance.

PILKINGTONS' "INSULIGHT" DOUBLE GLAZING

Supplies are available through the glass trade. "Insulight" is a registered trade mark, in many countries of the world, of Pilkington Brothers Limited, St. Helens, Lancashire (Telephone St. Helens 28882). London Office & Showrooms: Selwyn House, Cleveland Row, St. James's, SW1. (Telephone WHItehall 5672).

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support makes light work of shelving problems

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ADDRESS _____

PD147

These Cordar double-skinned Skydomes, sold in Great Britain by Cordar Ltd., Dean Street, Newcastle-upon-Tyne, 1, made from 'Darvic' ICI vinyl wire laminate are installed on the roof of the Central Park Swimming Pool, Plymouth. Architect: H. J. W. Stirling, ARIBA, City Architect, Plymouth. Contractors: Richard Costain (Construction) Ltd., Plymouth.

'Darvic' ICI vinyl clear wire laminate for domelights

Domelights made from 'Darvic' ICI clear wire laminate, which will not shatter, have obtained the highest classification in External Fire Exposure Tests carried out under British Standard 476 Part 3 (1958). In addition they give good light transmission and require no maintenance. Please write for IS Note No. 1122 on the properties and applications of 'Darvic' clear wire laminate.

ICI
'DARVIC'

'Darvic' is a registered trade mark of IMPERIAL CHEMICAL INDUSTRIES LIMITED · LONDON SW1

SPLENDOOR by MODERNFOLD. Here is an ideal way to meet modern problems of space division. Manufactured in 4¼″ panels of extruded ·056 aluminium. Tough vinyl locked into the metal is used to hinge all panels which are finished in elegant looking Anodised silver, gold or bronze. Single dividers can be made to a maximum width of 60′ 0″ x 15′ 0″ high. Splendoor space dividers are made to measure and require no floor track. Completely flexible they can be recess stacked — made to meet each other, or curved and supplied with or without a matching cornice. Without a doubt we suggest you investigate this brilliant member of the *Modernfold* range.

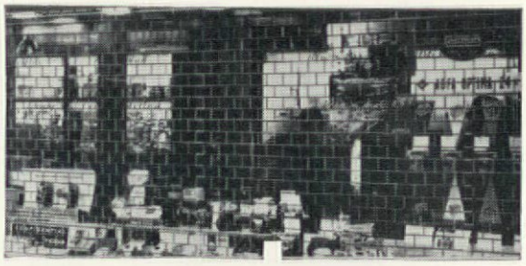
modernfold

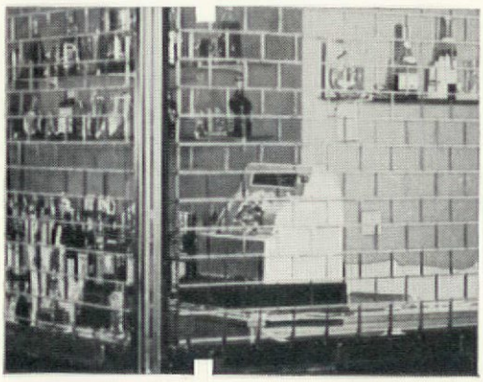
WRITE FOR FULL DETAILS TO:- **HOME FITTINGS** (Gt. Britain) **LIMITED**

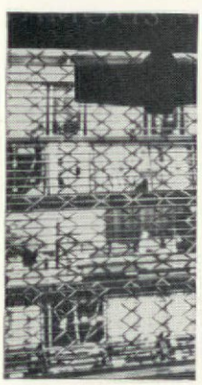
ONE OF THE BROCKHOUSE COMPANIES

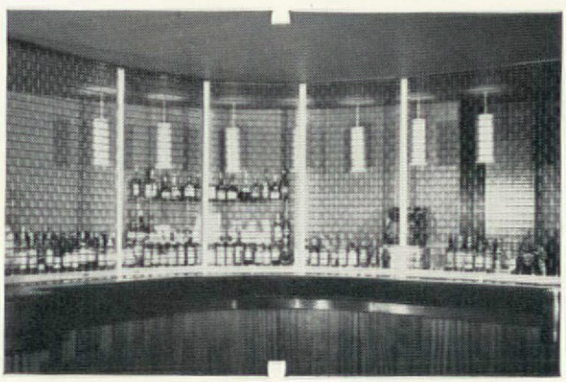
DEPT. AD24 BRIDGE WORKS, WODEN ROAD SOUTH, WEDNESBURY, STAFFS. TEL: WEDNESBURY 0761

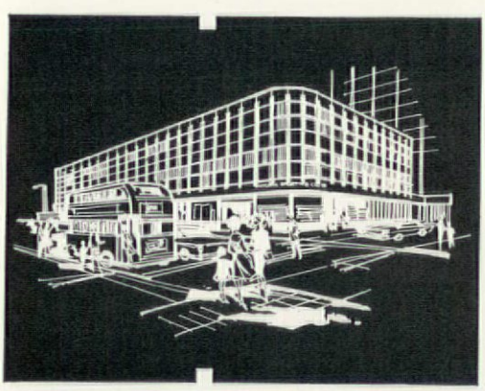
ALSO MANUFACTURERS OF THE BROCKHOUSE MONO-CONTROL AND SUN-AIRE VENETIAN BLINDS











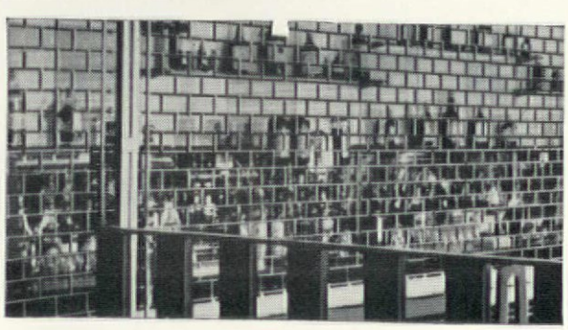
More and more managements are learning the advantages of Grilles for the safe protection of valuable stock. Display appeal, too, is unimpaired. Amongst some of our latest installations are those at the Victoria Sporting Club in London, the Winter Gardens in Bournemouth and the Crystal Palace National Recreation Centre.

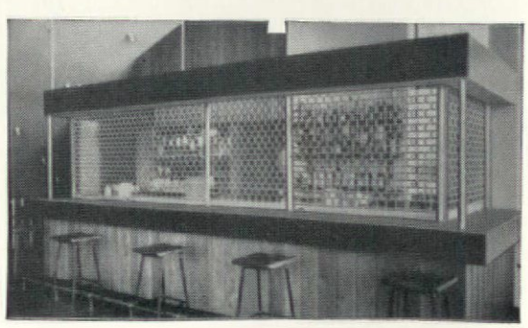
Rely-a-Bell Burglar & Fire Alarm Co. Limited

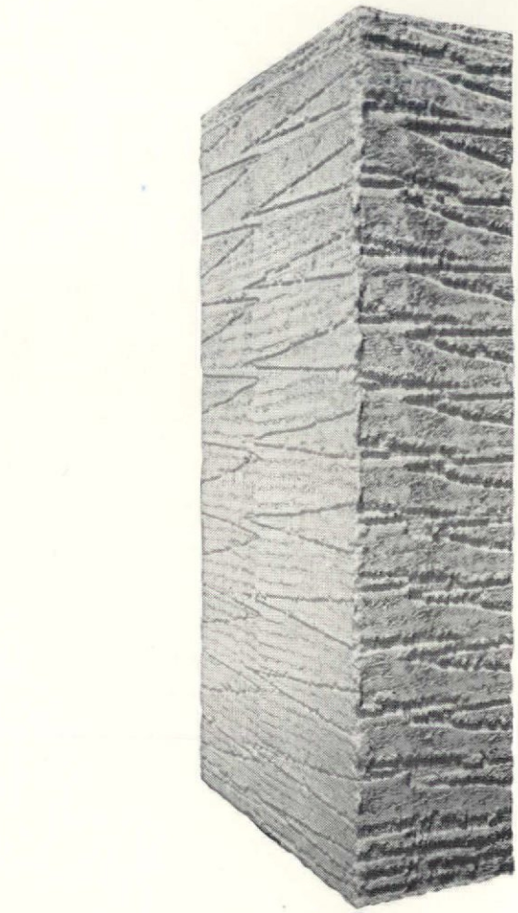
The Security Centre, 54 Wilson Street, London, E.C.2. Tel: BIS 4321

Branches at Manchester, Glasgow, Birmingham, Southend-on-Sea

R/B







oh so light — Thermalite

and now for my next trick: Observe with your own two eyes that after projecting the Thermalite block into the air I execute two pirouettes, three double somersaults, a jack-knife, and a triple entrechat before catching it again. Of course, my work owes much to the lightness of Thermalite — without this quality I could only get through a fraction of my programme between ascent and descent — if you see what I mean. I believe chaps who build houses and things value this lightness too. They build with Thermalite and finish much quicker — or something. Rather a novel use for jugglers' props — don't you think?

Thermalite blocks are manufactured by Thermalite Ytong Ltd — the largest makers of aerated concrete blocks in the U.K. For full details of all our products simply attach your letterheading to this advertisement and post to:—

Thermalite Ytong Limited, Hams Hall, Lea Marston, Sutton Coldfield, Warwickshire. Telephone: Coleshill 2081. A LAING COMPANY

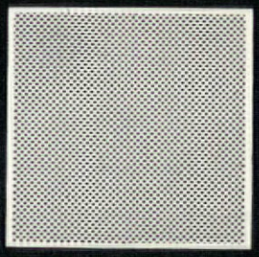
THERMALITE lightweight, loadbearing, insulating building and partition blocks.

New, fire resistant "TURNALL" Asbestos

SECRET FIX CEILING PANELS

Easily and speedily applied

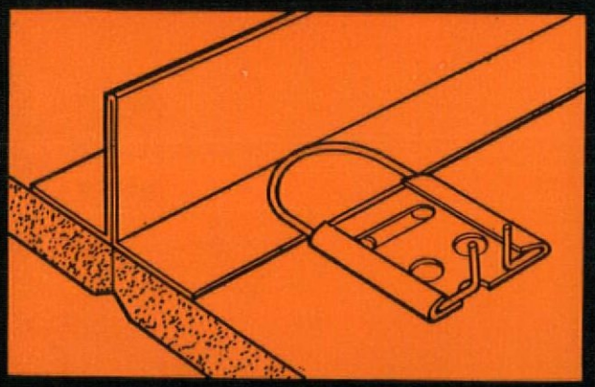
Plain



Perforated

Striated

These panels represent a major advance in suspended ceiling development. There are no visible signs of fixing when the panels are installed which adds considerably to the aesthetic appeal of the ceiling. The simple design of this unique fixing method offers substantial economies in time and labour.
"TURNALL" SECRET FIX CEILING PANELS are supplied complete with 4 clips already in position for immediate fixing on to standard 18 gauge metal tees.
Three patterns are available, Perforated, Striated and Plain.
Sizes: 2 ft x 2 ft x $\frac{3}{8}$ in. and $\frac{1}{2}$ in.



In cases where a fillet is not required "TURNALL" SECRET FIX CEILING PANELS are available with flat-type fixing clips.

Data Sheet B.C.S. 62 gives comprehensive details, send for a copy today.

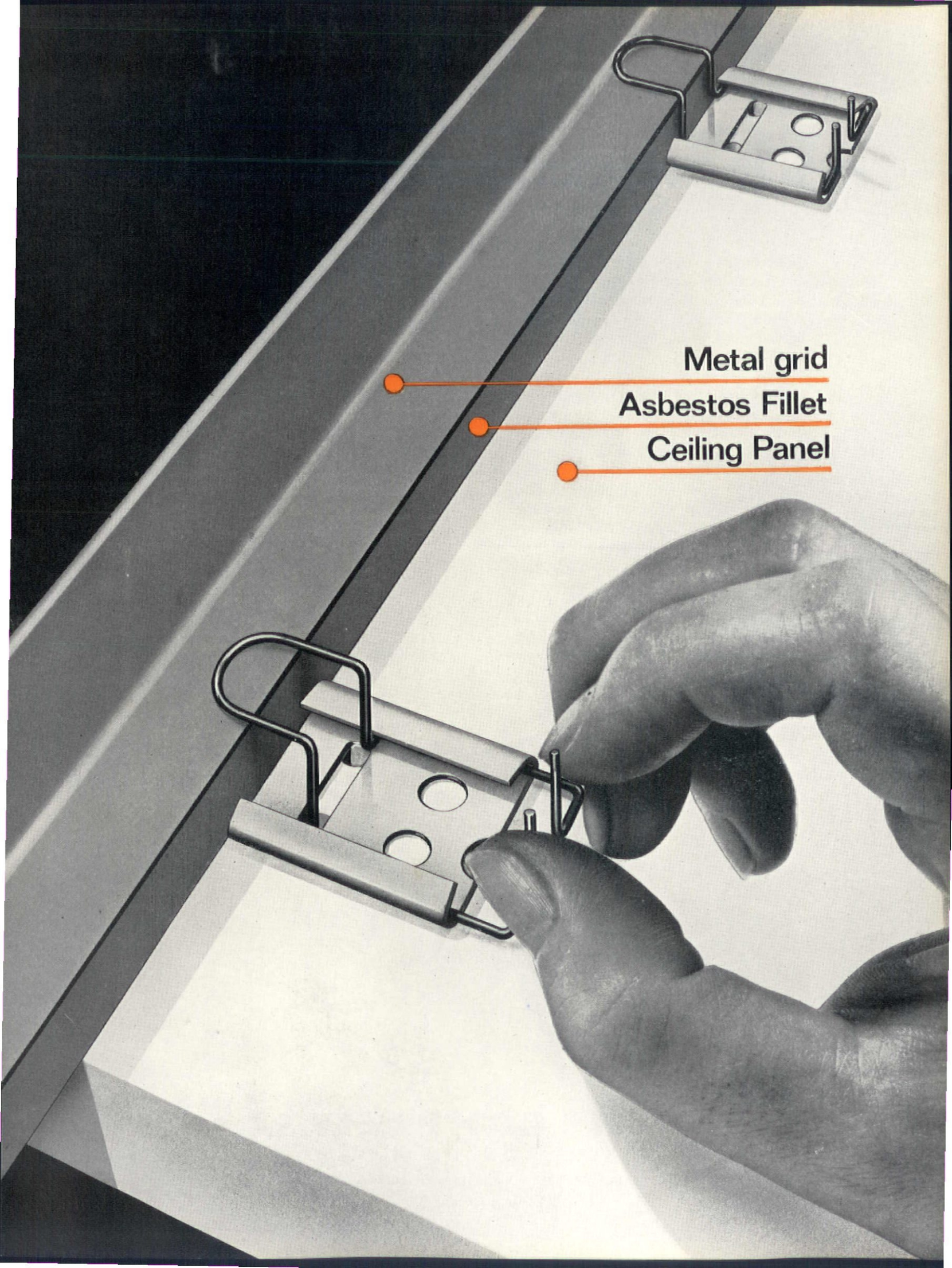
See the "TURNALL" SECRET FIX CEILING PANELS on T.A.C. Stand No. 183, Avenue 'C', Grand Hall, at the International Building Exhibition Olympia, November 17 to December 1.

TAC

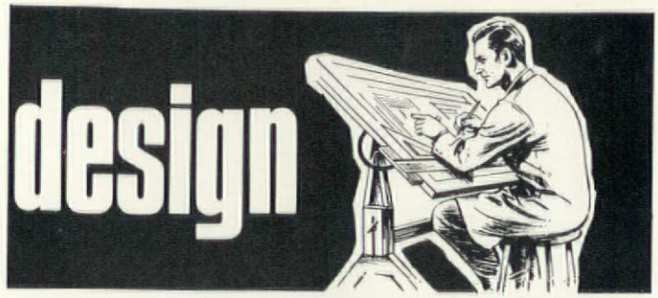
TURNERS ASBESTOS CEMENT CO. LTD.
Trafford Park, Manchester 17, Tel: TRAfford Park 2181, Telex: 66 639
Regional Sales Offices:
London, Belfast, Birmingham, Bristol, Cardiff, Glasgow Nottingham and York.

T&N A TURNER & NEWALL COMPANY

F10


Metal grid
Asbestos Fillet
Ceiling Panel

fire protection by design



Every building starts on the drawing board and it is at this stage that plans for fire protection are usually introduced.

We manufacture the world's most comprehensive range of fire extinguishers to meet every known fire risk.

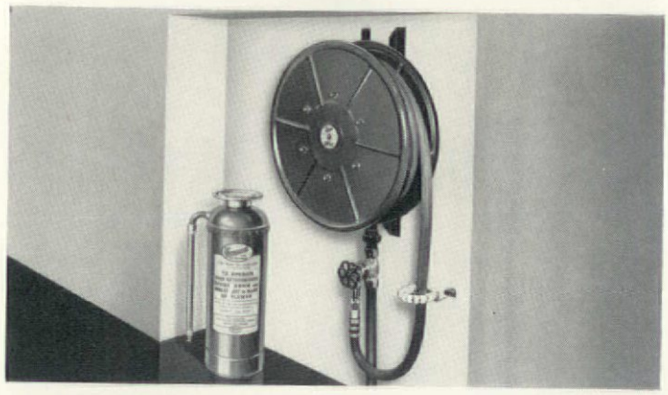
Modern buildings, domestic, commercial and industrial, tend to grow upwards rather than outwards, therefore planned fire protection with close co-operation between the manufacturer of fire equipment and the architect becomes more necessary than ever.

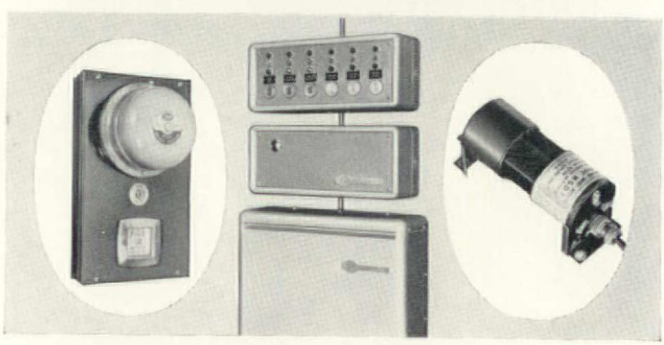
"PYRENE" Fire Extinguishing and Fire Detecting Equipment is already protecting many of Britain's newest and tallest buildings. A few examples of this vast range of equipment are illustrated on the right and include new types of fire extinguishers, hose reels, a CO_2 built-in installation, a Pakalarm fire warning unit, the "PYRENE" Fire Detecting System and a miniature smoke detecting unit.

We would like to help you with your fire problems, however large or small. Will you please write to Dept. A.D. 11.

BY APPOINTMENT TO H.M. THE QUEEN
SUPPLIERS OF FIRE EXTINGUISHERS

Pyrene TRADE MARK





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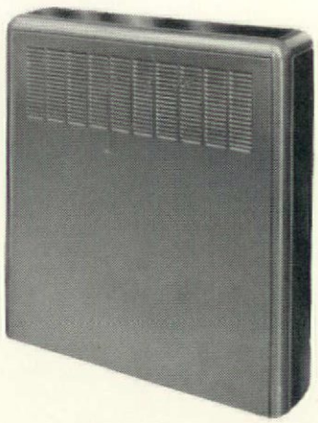
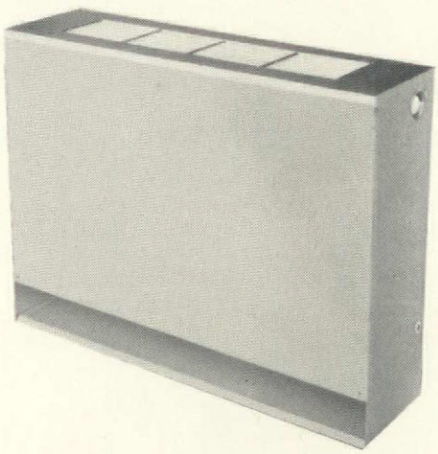
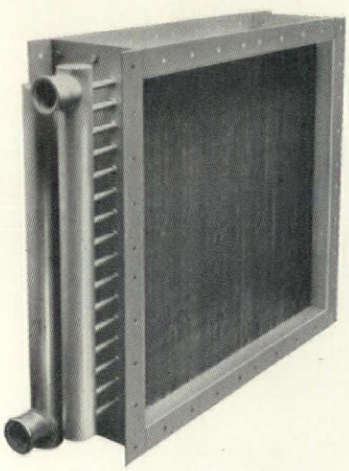


coolflo



coils



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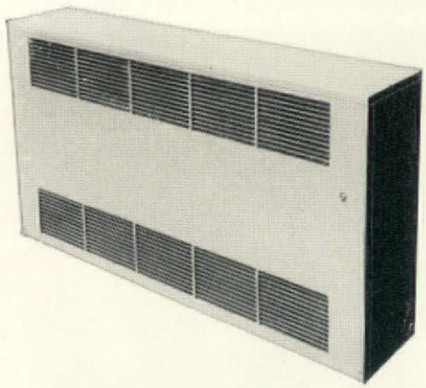
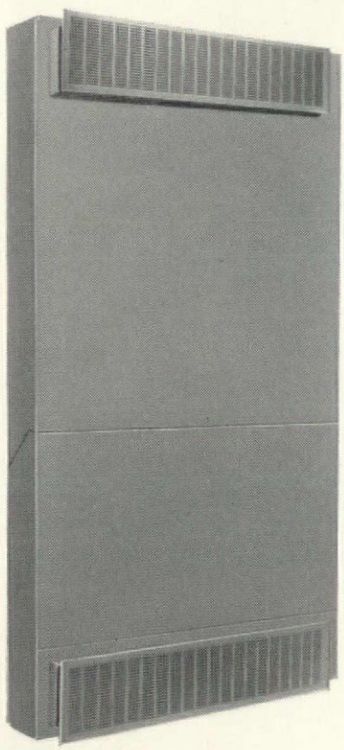
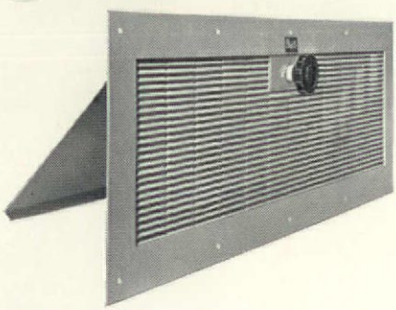
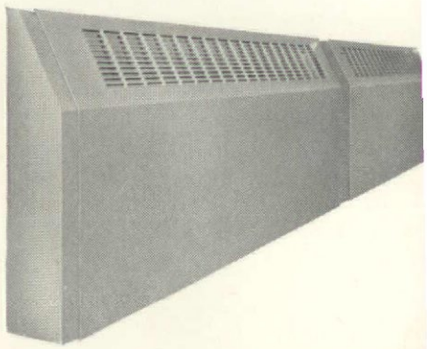


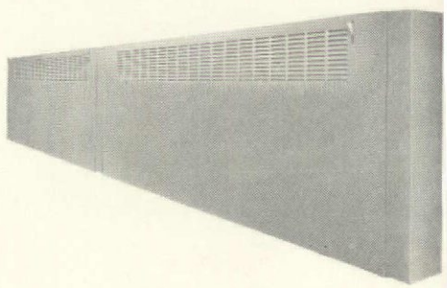


grilles

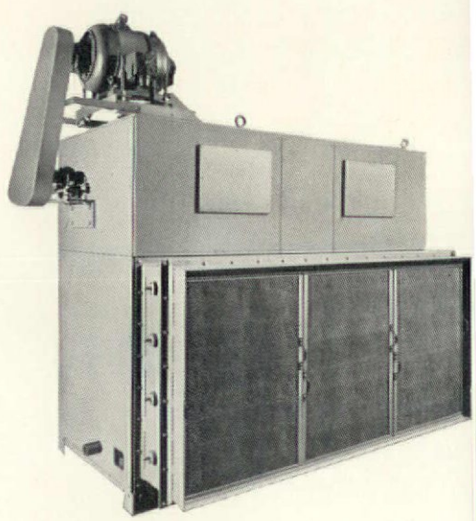


warmline





space air conditioning unit



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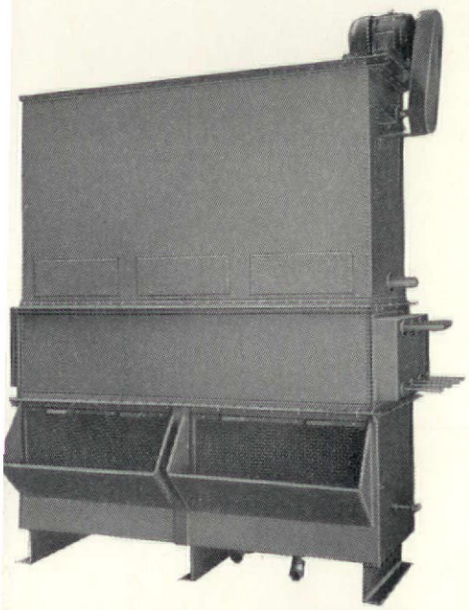
Sales Offices: **Tuttle Hill, Nuneaton, Warwickshire Nuneaton 4191-4 Crompton House, 2 New Yo**

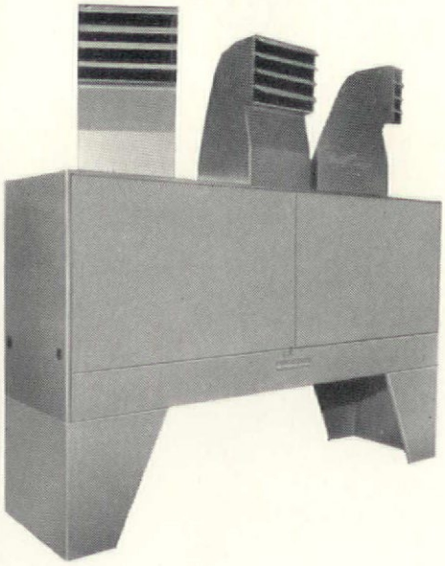
range of heating and air conditioning equipment

Units for every type of building and application. Products of the most modern and progressive research and development.

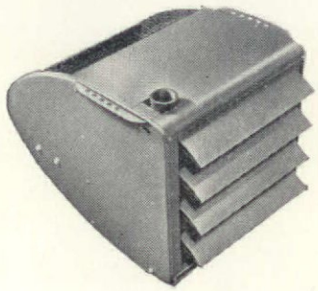
evaporative condensers

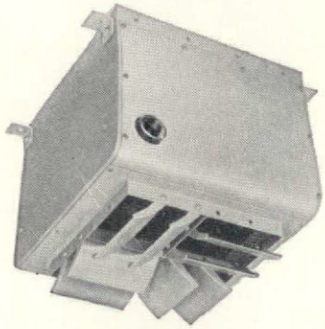


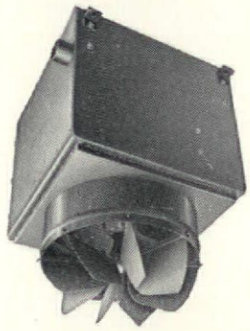
torridaire



uniflow

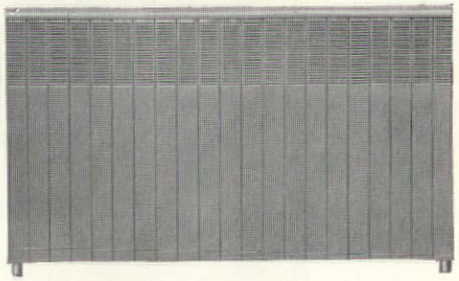




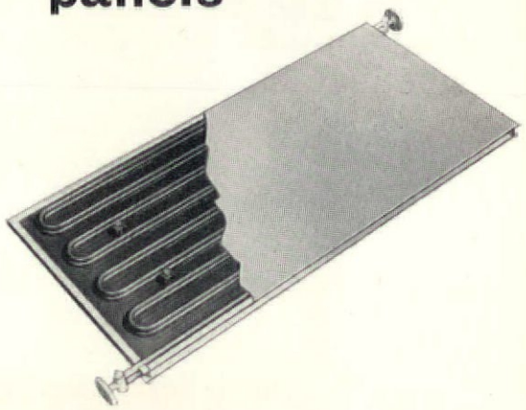


dehumidifier

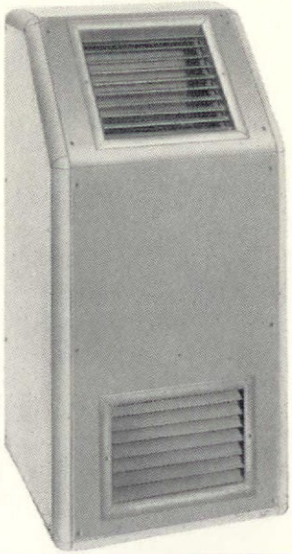
conrad



radiant heating panels



universal heater



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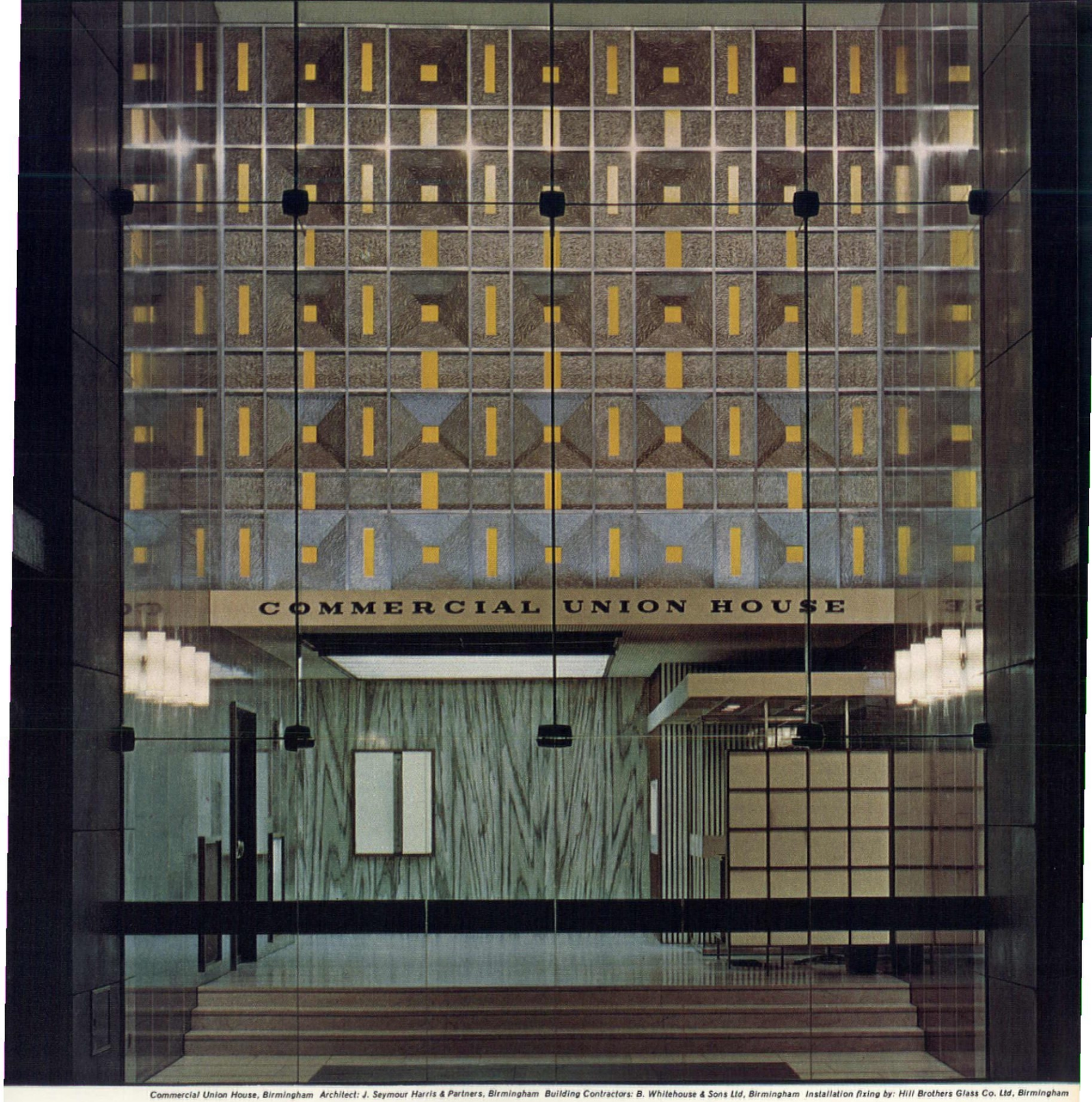

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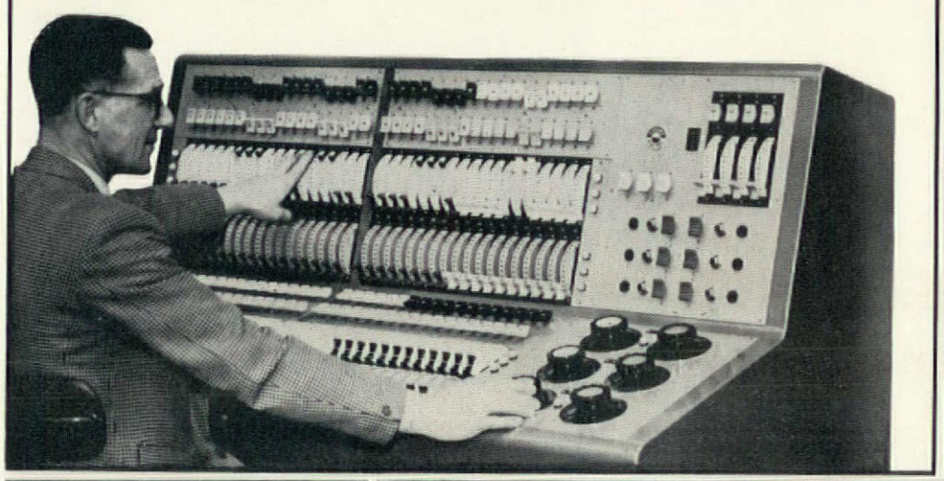

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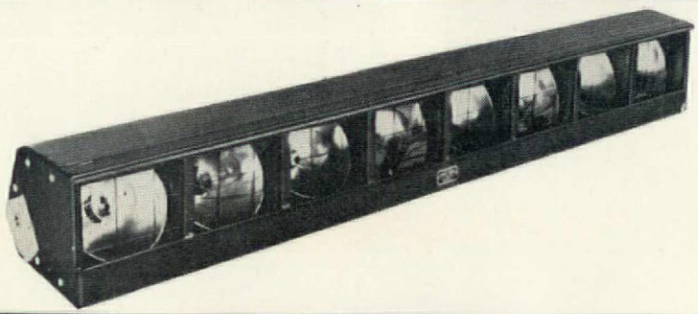

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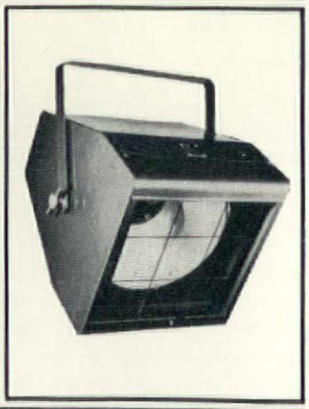

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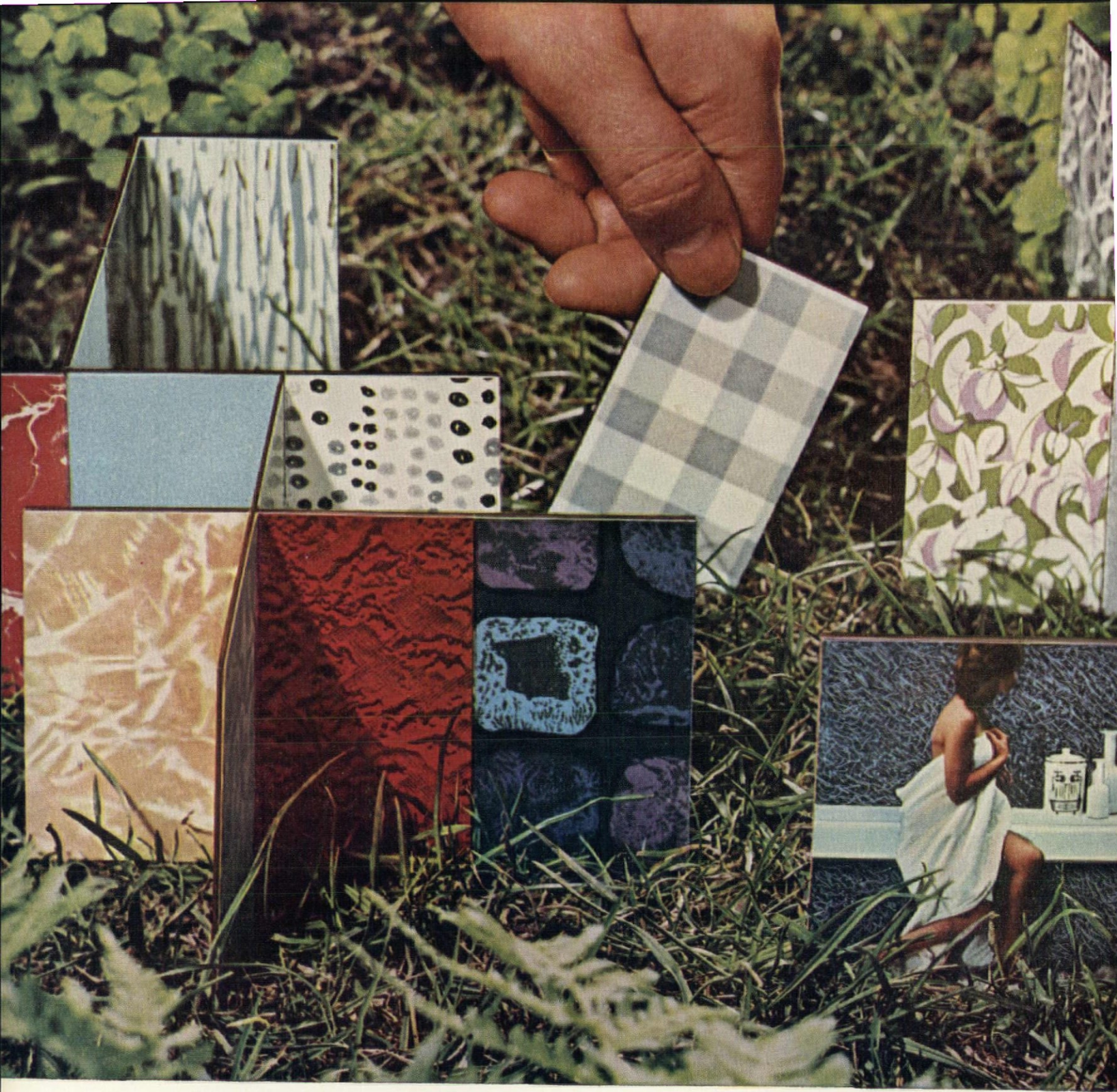

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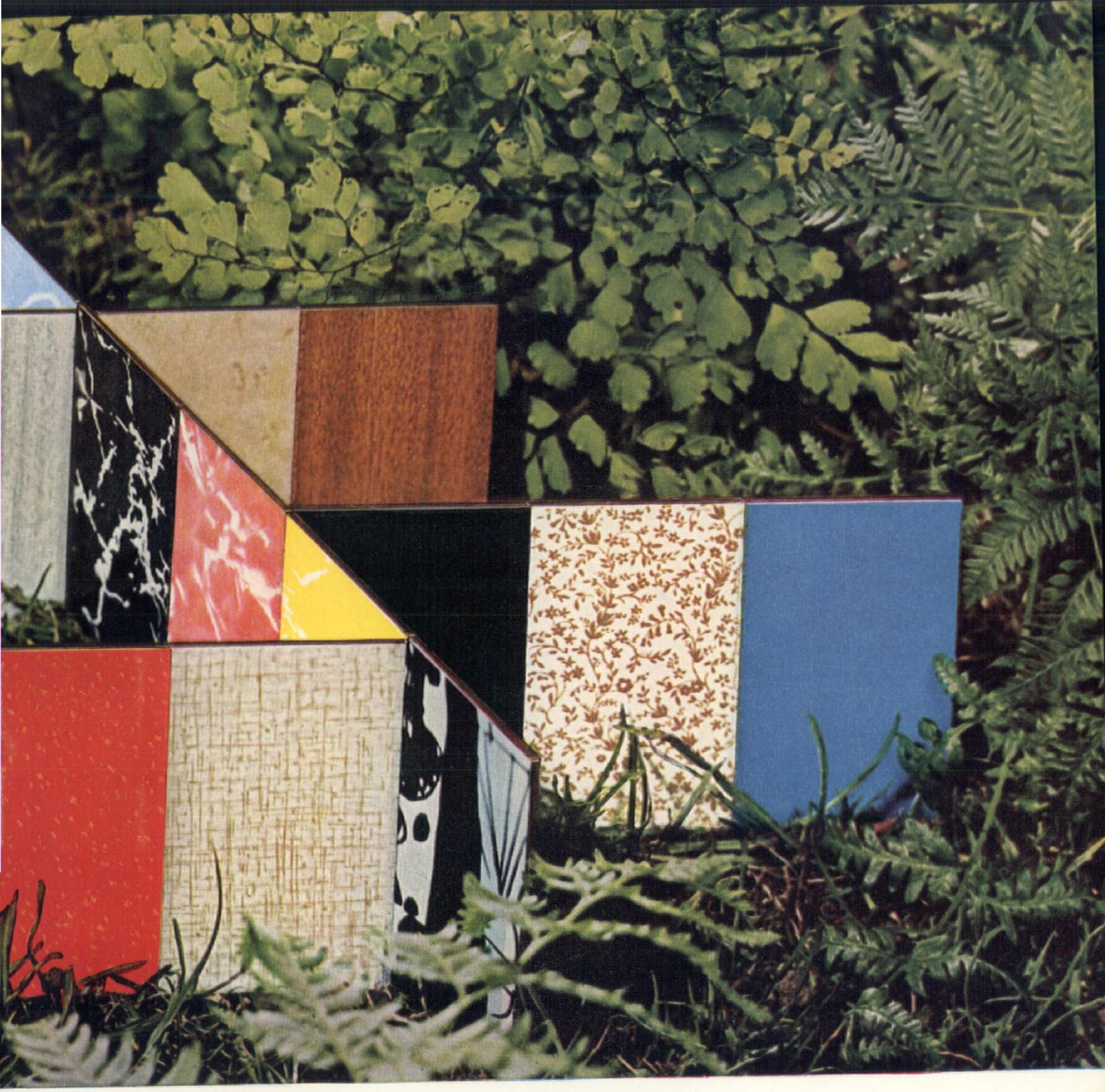

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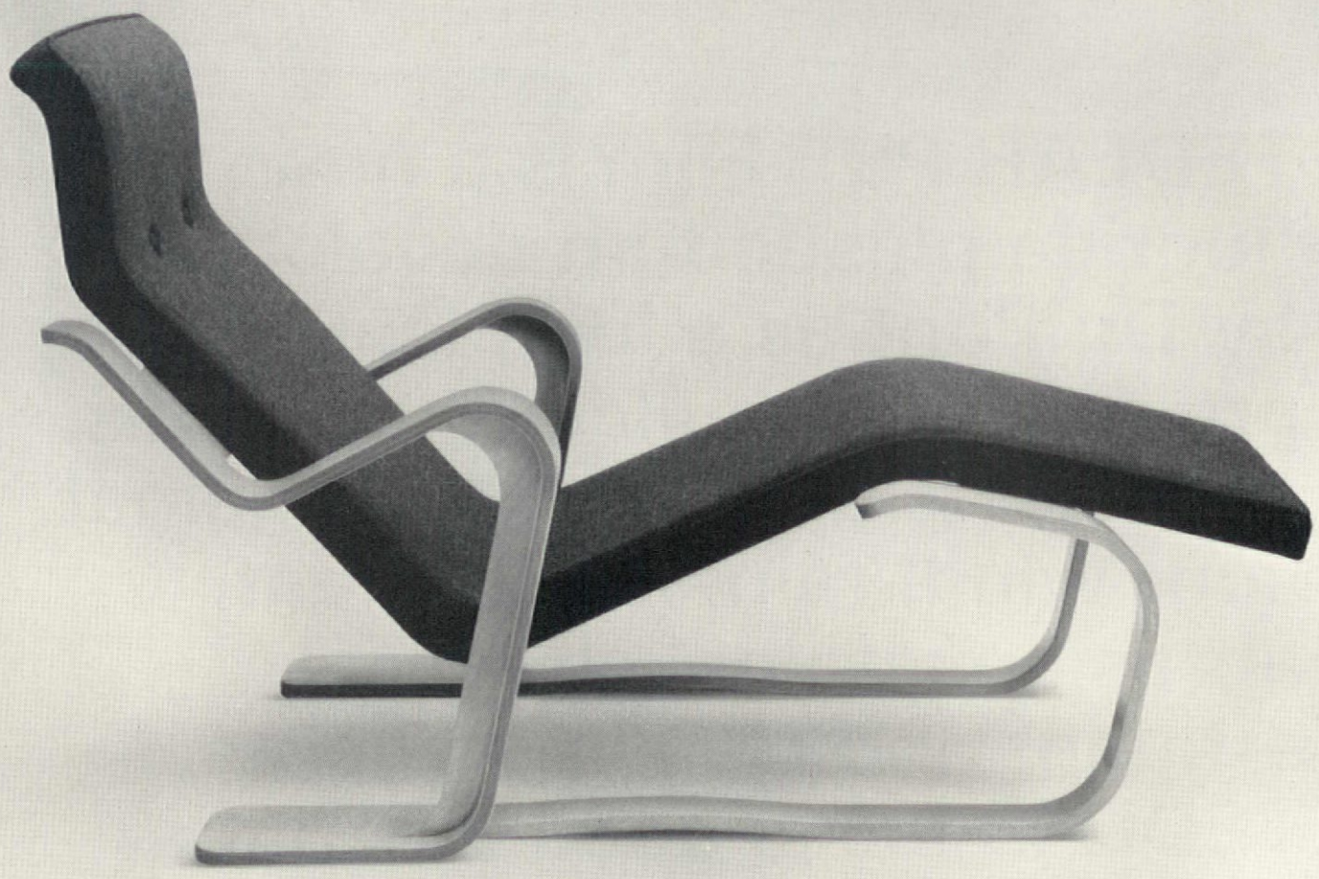

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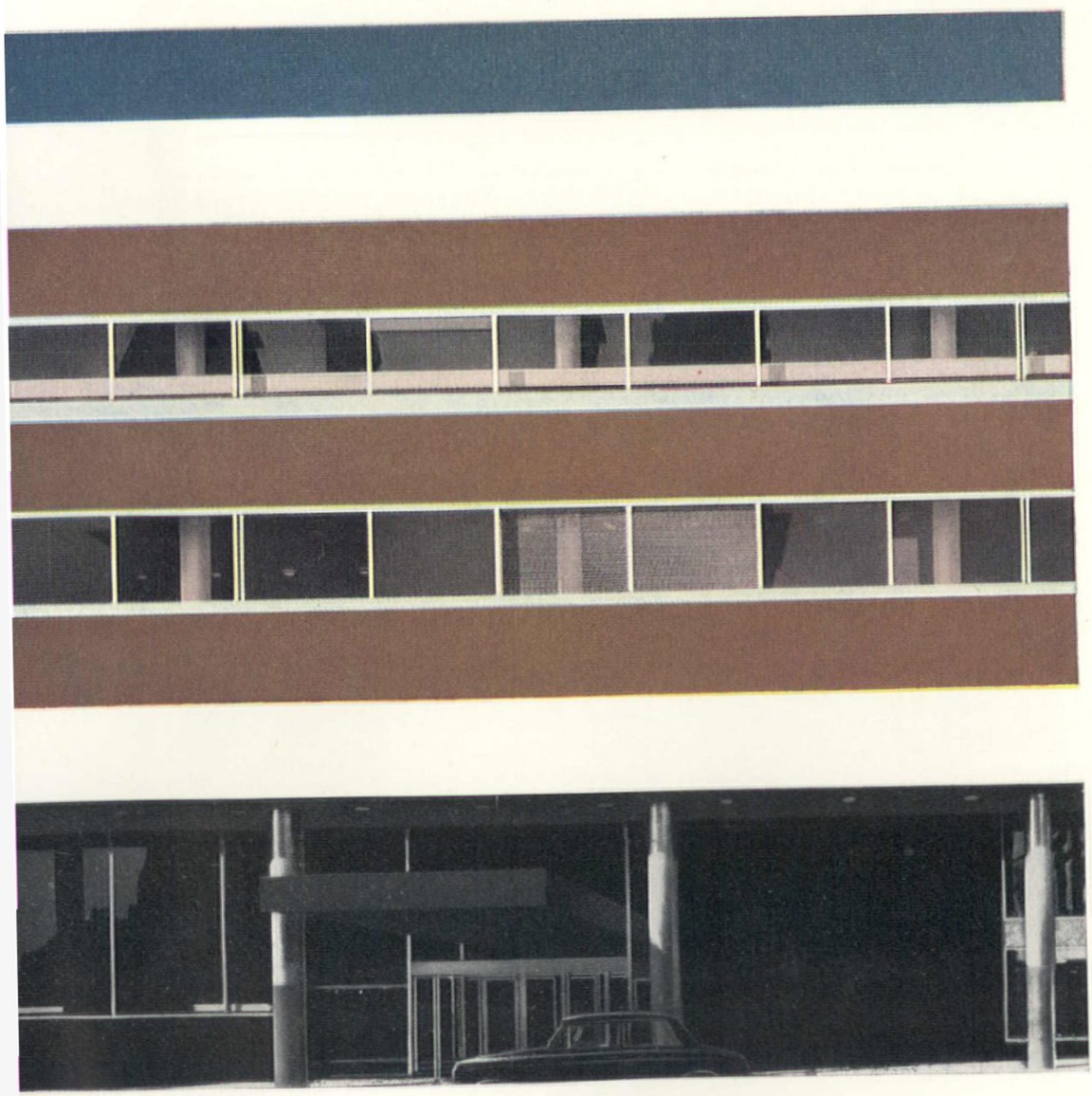

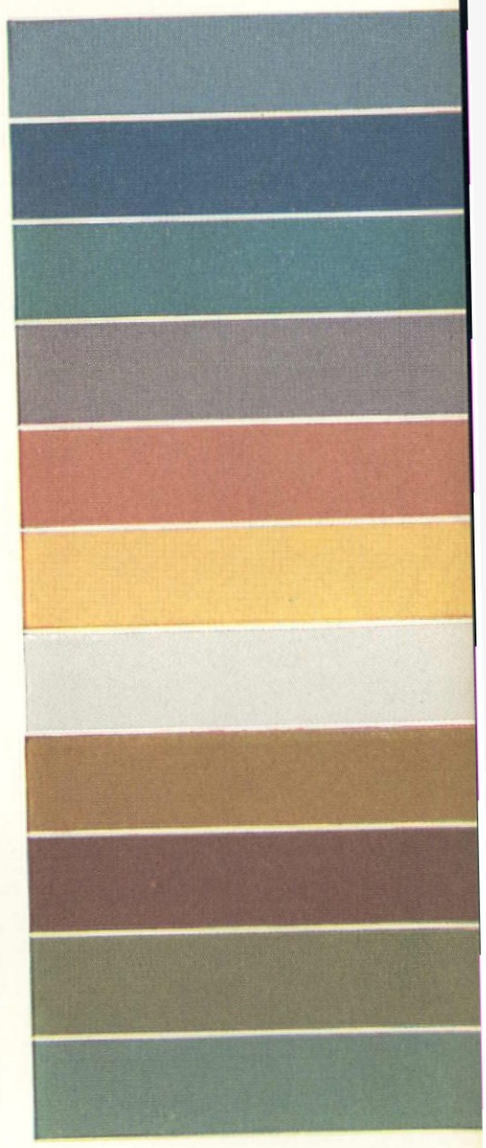

See the "TURNALL" "COLOURBEST" Sheets on T.A.C. Stand No. 183, Avenue 'C', Grand Hall, at the International Building Exhibition Olympia, November 17 to December 1.

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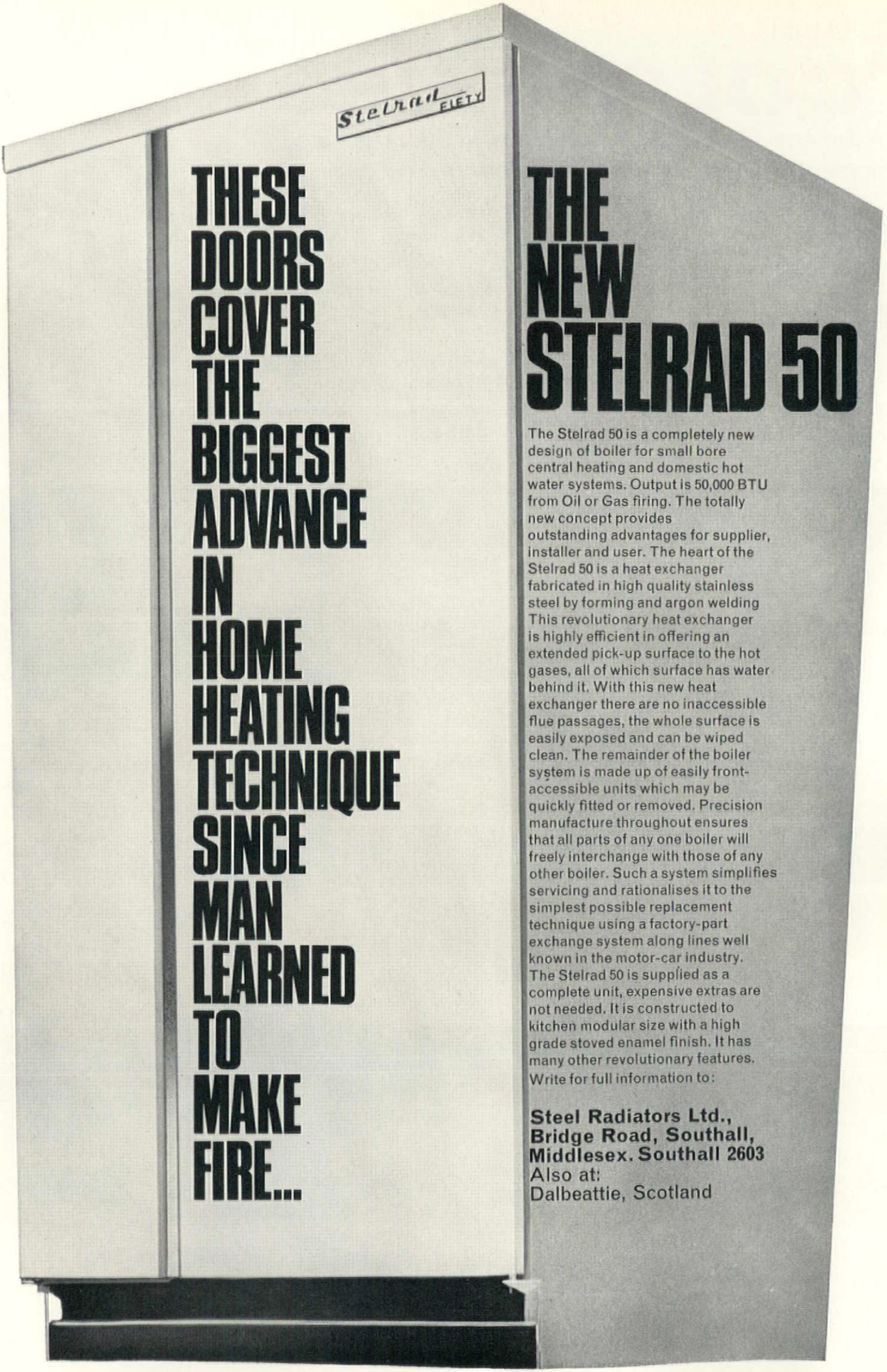
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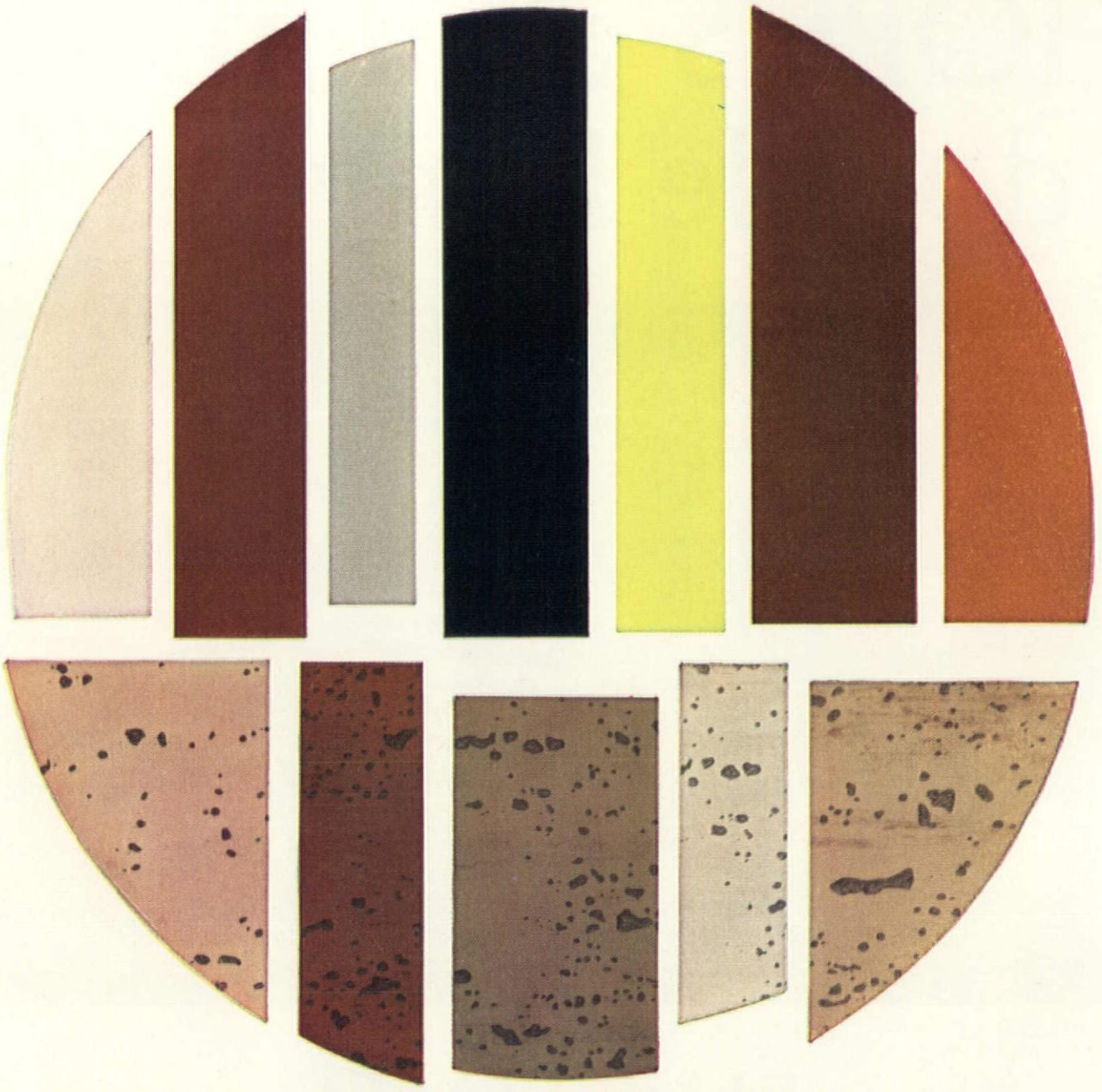

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The month in Britain

Michael Manser

'George's Crystal Ball' was the way one tabloid greeted the publication of the Government's National Plan for the future prosperity of England. Despite what George saw, the British Road Federation looked into their ball and discovered with a news release of rage that it contained substantial government cuts in the road building programme. They pointed out that the National Plan provided for an annual increase in road expenditure of 9·7 per cent, but even the present programme, which has been cut, will not keep up with the increase of traffic.

The RIBA looked to its own forecasting arrangements and sent out a questionnaire on the effects of the building restrictions. Only half the members bothered to reply, but from these it was discovered that £546,000,000 of work in hand in architects' offices was postponed because of the Chancellor's restrictions.

From the Ministry of Housing and Local Government came news of an inquiry into objections to Stanstead as London's third airport (what about the Thames estuary?) and a national housing plan in which government and building societies collaborate to regulate the flow of private houses. Less confidently the Minister of Public Building and Works faced a deputation from the brick industries to explain why after rising to his exhortation for 8400 million bricks in 1965 they were now left with the bricks while he is exhorting Local Authorities to system building. The GLC formed a planning Consortium for the comprehensive redevelopment of Covent Garden on the Barbican scale and also a draft plan for 60,000 extra homes at Woolwich Arsenal and Erith.

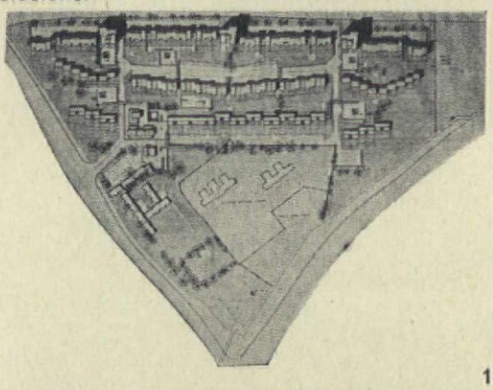
The RIBA invited Lord Bridge, Lord Conesford, Evelyn Derrington, Paul Reilly, Rudolf Wittkower, Sir Gerald Barry and Sir Gordon Russel to be honorary fellows and gave Bronze Medals for the Nottingham Theatre by Peter Moro, a house in Cornwall by Giles Blomfield and the Reid Library in Perth, Australia by Cameron Chisholm and Associates. They announced details of an International competition for the central area of Varna in Bulgaria under UIA supervision and made a statement of concern at the procedure followed by some local authorities in obtaining professional advice on town planning and redevelopment. They point out the unsatisfactory aspects of authorities allowing developers to pay fees to the authority's consultant for preparing an overall development scheme and comment that society sometimes tries to get planning done on the cheap. It is, they insist, contrary to the ARCUK code if an architect makes the first approach to an authority on behalf of a developer and they emphasized the point by taking disciplinary action against Shingler and Risdon for offering architectural services to Dunstable Borough Council for free. In a happier vein Lord Esher made his presidential inaugural speech at the RIBA.

The Cement and Concrete Association has published a list of part-time and full-time lecture courses on various aspects of concrete design and construction at colleges throughout the country. The list is available free from the Association, 52 Grosvenor Gardens, London, S.W.1.

Portsdown housing

The Portsmouth housing competition has been won by Richard E. Theakston and John Duell with a double bank of buildings interspersed with point blocks (up to 17 stories high) running along either side of an access road on the northern boundary of the site. The basic arrangement seems straightforward enough, but the modelling lacks vigour and the disruption of scale occasioned by the point blocks is questionable.

Other competitors, Owen Luder and Partners **2**, in particular, adopted the same *parti* without losing control of the scale of the wall of buildings. Their blocks jump up and down, between eight and twelve stories. A yet more humane approach was suggested by Michael Brawne, who attempted a 'ground-scraper' scheme; a series of two-storey court houses rising with the contours to spring across an east–west access road and fuse into a six-storey wall of flats on the north boundary. The design presented a firmly unified mass in contrast to the clutter down at the south boundary of the site. Altogether it seemed that very few competitors had studied the surroundings before reaching their conclusions.



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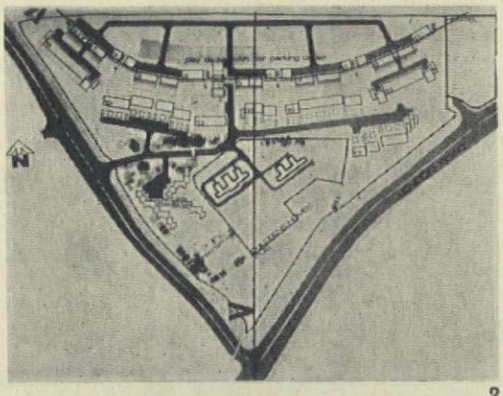

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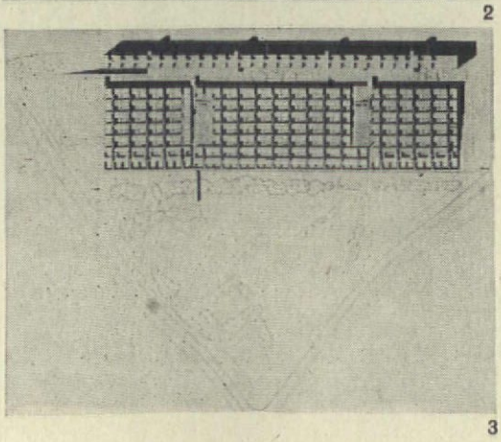
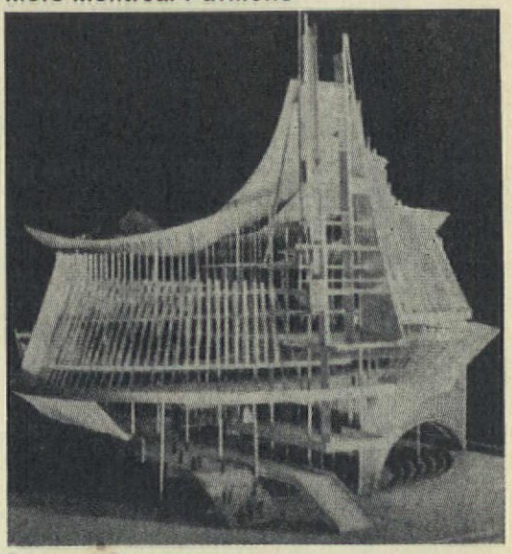


3

Off with his head

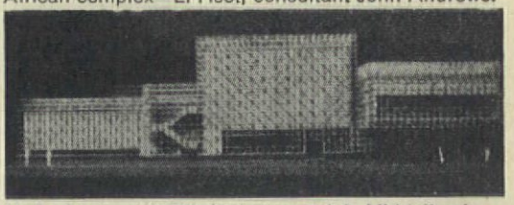
Llewelyn-Davies, Weeks and Partners have presented their report for the resolution of the Tate's space problem. They propose to demolish the river front and portico and build a new wing in its place. Lord Llewelyn-Davies has already demonstrated his scant regard for the buildings of the past in an infamous judgement on Kent's house in Berkeley Square. The Tate is not a distinguished building and it can perhaps be considered as expendable. If it is really considered unfeasible to extend and complete the building at the rear as originally intended (on an open site) it would be more straightforward to propose a scheme for the ultimate replacement of the whole of the present building than to dismember it piecemeal in this ghoulish fashion.

More Montreal Pavilions

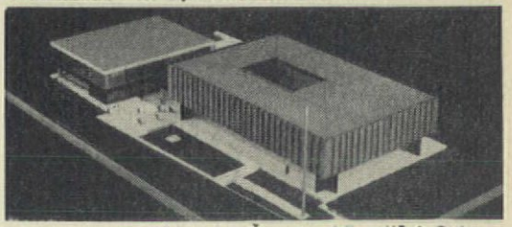


France—J. Faugeron.

African complex—E. Fiset, consultant John Andrews.



Netherlands—W. Eijkelenboom and A. Middelhock.



Czechoslovakia—Miroslav Řepa and František Cubr.

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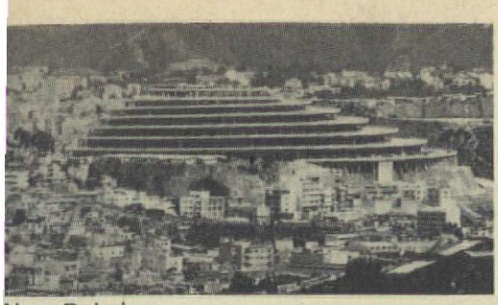
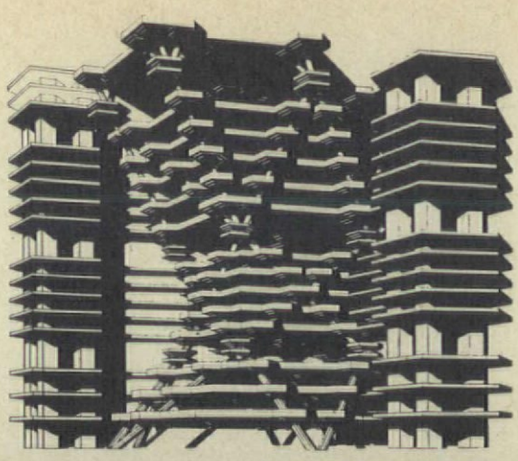
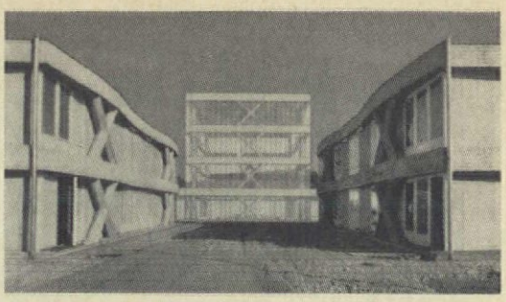


New Babylon

The giant shopping centre that Jorge Romero Gutiérrez designed for Caracas in 1956 is not yet complete, and is not likely to be completed unless another $10 million can be found. It stands a vast, grim memorial to irresponsible enterprise and over-ambition. *Fortune*, June 1965

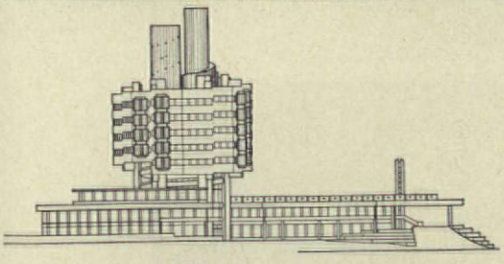


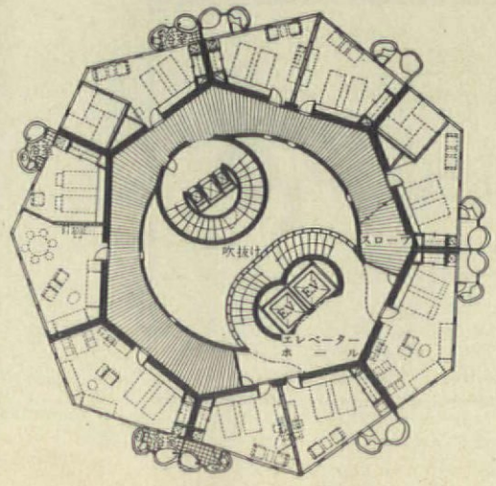


Austrian stock-pot

Architects nowadays seem to demand the most widely diverse stimuli—and they are clearly not thrown by them. The current number of *Bauen + Wohnen*—on Austrian architecture—ranges from such prim but subtly twisted samples of symmetrical classicism as the church centre at Steyr-Ennsleiten (above), by the Arbeitsgruppe 4, to the lurching office towers with helicopter landing stages above by Wilhelm Holzbauer (left). Also illustrated are two prickly, purposefully shocking projects by Hans Hollein—an Accessible Theatre 1963/4 and the famous Aircraft Carrier City 1962, poised majestically in wheatfields.

Bauen + Wohnen 9, 1965

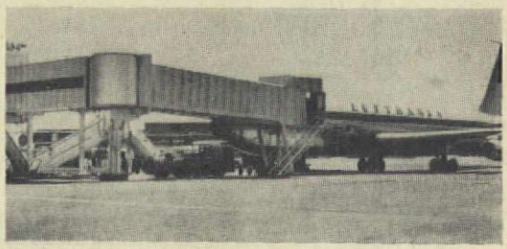




Le dégagement

Kiyonari Kikutaki's Hotel Tokoen, near Izumo, is complete. Another overlooking the Pacific has now been planned and published. Both buildings, in their own way, pose the problem of expression in a multi-purpose building or, by extension, a group of such buildings or a city itself. Should architectural discipline continue to demand that the individual functions of a building be so clearly expressed? Should, at its simplest, a staircase be shown off? Or—in this particular instance—should the bedrooms be deliberately differentiated not only from the stairtower but from the dining and reception rooms below? In the Tokoen hotel this disassociation is taken to the extent of separating the very structure of the parts. The theory of such clear-cut expression has been with us since in 1706, the Abbé de Cordemoy adumbrated his thesis of an economical and honest architecture in which the mechanics of the building were, so to speak, laid bare, right down to the minutest detail (*le dégagement* he called this quality). But whether, while being explicit, we should continue to interpret this theory as the complete dislocation of buildings is debatable. The flaring roof and the nostalgic reminiscence to the timber structure of the old Izumo shrine apart, the Hotel Tokoen strikes a romantic, if agreeably, wrong-headed note.

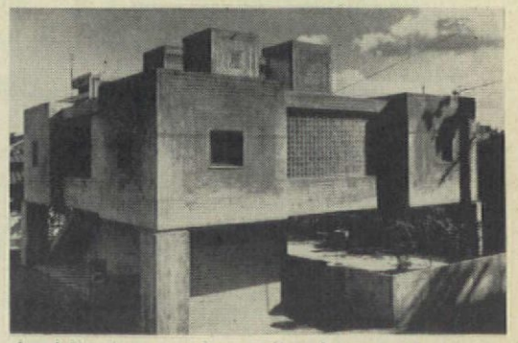
Japan Architect, July 1965, *Kenchiku Bunka*, April 1965



Articulated architecture

The concept of architecture as static and immutable has been steadily eroded by the aircraft industry. Lufthansa, following the pattern of several American airlines, has now installed swivelling, hinged, high-level embarkation channels for its passengers at Los Angeles. The result is, perhaps, not-quite-architecture, but if our concept of architecture is not broad enough to take in such experiments in articulation, then the hard road to functionalism has been abandoned for traditional aesthetics.

Bauwelt 36, 1965



Architecture as formalized geometry

Arata Isozaki's recently published house for M. shows that in Japan architecture can be reduced to formalized geometry on a metaphysical whim. An explanation is given in an accompanying article 'Metaphysics of Illusion', but no account is given for the oddly conventional—and unsymmetrical—plan that is housed in the geometrical box. *Kenchiku Bunka* 3, 1965

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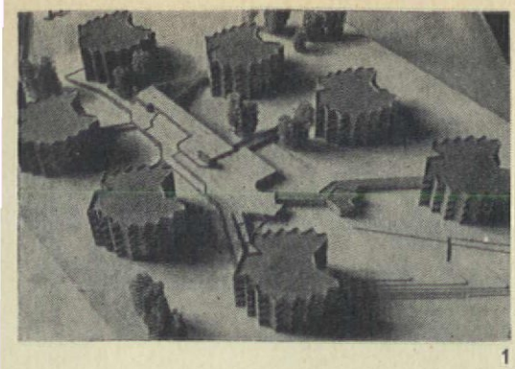

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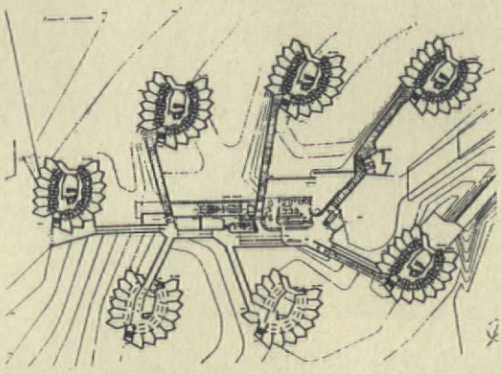


2

Student haven in Aarhus 1, 2

The proposed student hostel and community centre at Aarhus, designed in 1963 by Paul Niepoort and Salling-Mortensen, is, despite the apparent flamboyance of its plan, a sensible and decent gesture in the provision of privacy (in the form of individual rooms with showers and w.c.s) for 340 students, while at the same time sustaining all gregarious spirit. Fourteen individual rooms are grouped around a common room on each floor of the six, widely spaced residential buildings, which are in turn scattered around but linked to a community and entertainments centre that includes such comforts as a swimming bath and rooms for guests.

Werk, September 1965

3

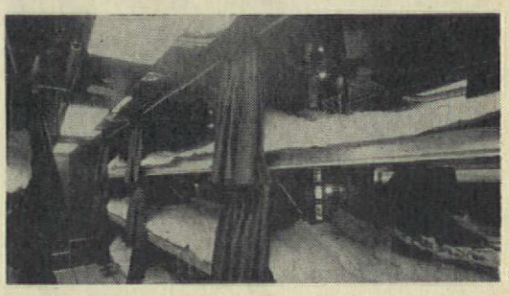
Mobile building

Ron Herron's Moving Cities (illustrated on p. 572), while intended as an image of a more mobile society rather than a practical possibility, should not reduce architectural die-hards to gibbering rage. Most of them have probably succumbed to the charms of Lavengro. Already 250,000 people in this country live in mobile homes and caravans, many more use them for holidays. The concept and the feasibility of mobile architecture is well established. And space capsules have prompted a radical reassessment of the standards and amenities necessary for survival and hence living.

Up to now there has been a lack of venture in the size of mobile buildings, but already two tourist hotels are in operation. The first **3, 4** owned by Georg Holtl plies between Munich and Bombay, the second, **5, 6** built by the West Belgium Coach Company, takes in the Holy Land.

Aficionados of this genre will enjoy the illustrated survey, from steamships and railway trains to astronauts' cabins in *Bauwelt* 37, 1965.

4



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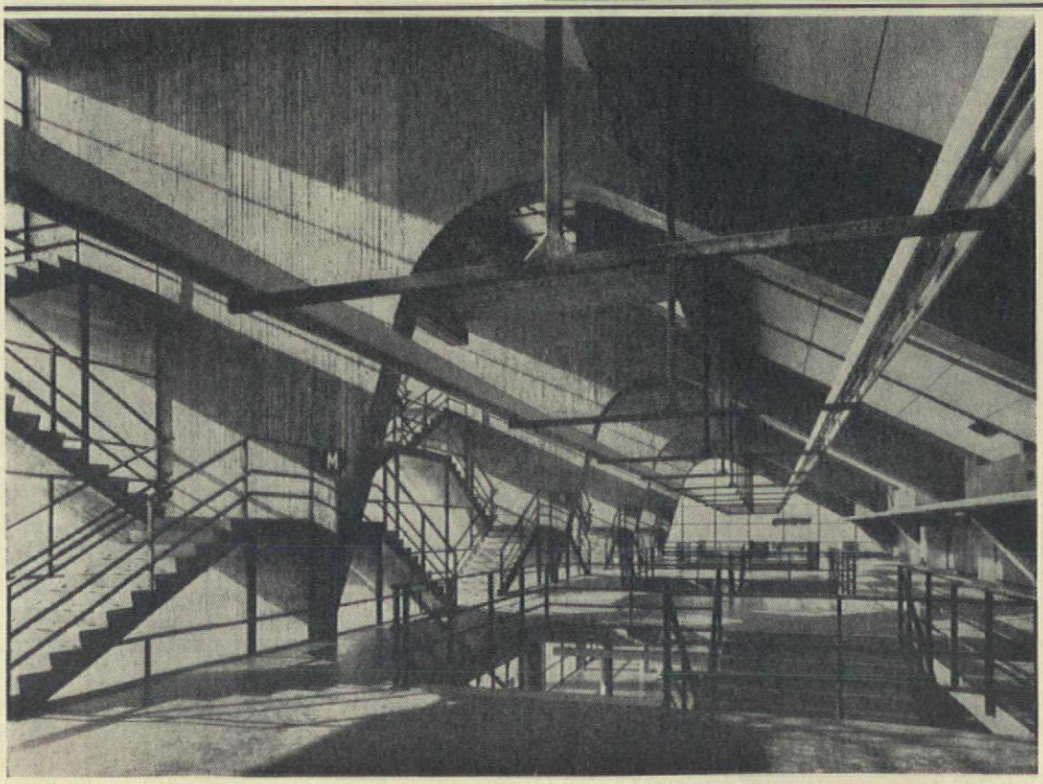

Engineering scale

Architects of the twentieth century have been notoriously inept in relating those secondary, small-scale spaces in which people are on the move or are operating as individuals to those vast spaces in which they are quite simply part of a crowd and as such require a structure of fitting scale and magnitude. The great theatres and concert halls, the arenas and stadia that modern engineers have devised appear, invariably, to be cluttered up around their bases with the array of tunnel-like corridors and rooms that are essential to their proper functioning but are in no way properly related to the conception of the whole—and least of all to the scale. Most stadia, while dramatic and daring as examples of engineering, are belittled by this muddle of structures underneath. In Bremen though, the reverse seems to be true. The access galleries to the new grandstand, by Roland Rainer, Max Saüme and Günther Hafemann, are infused with all the grandeur and interest normally associated with the whole. The main stadium, while dramatic enough as a structure, is a building of little real power. Absolutely it lacks the Piranesian—or rather Constructivist—drama of the galleries.

Bauwelt 19, 1965

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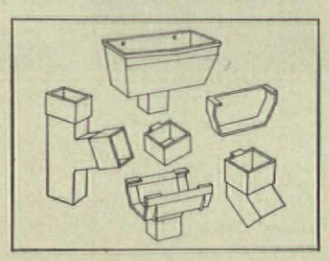

Limpet

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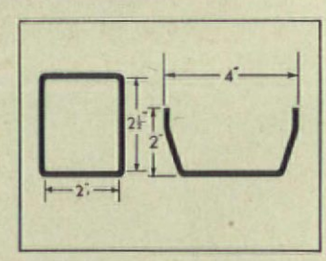

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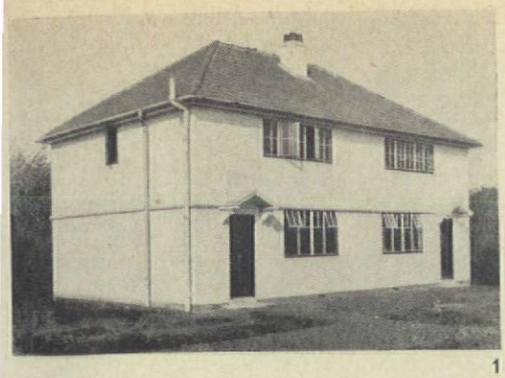

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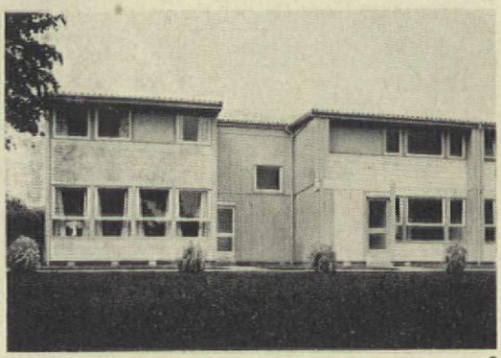


2

Where were weir

Raymond Wilson

In 1925, two years after *Vers Une Architecture* was published—'We must create the mass-production spirit'—the same year that Breuer released his sketches for a *Kleinmetalhaus*, G. & J. Weir Ltd launched on the first full-scale production-run of houses built with steel frames and steel-plate panels **1**. Constructed in the Clydebank shipyards, 1500 were erected. They were conventionally styled with pitched slate roofs, Greek-style porticos, and a chipped granite finish; but remember that the post-war building boom had already given prefabrication a bad name, enamelling and plastics had not yet arrived, and acceptability was important. Production was finally brought to a halt because the building trades unions, that had been bypassed, put pressure on the Local Authorities.

Nevertheless their influence on house production was tremendous. Quantity had become an architectural design factor.

Today, 40 years later, the Weir Housing Corporation, the successors, have introduced the rudiments of what may well be the first commercial 'open' system of industrialized building **2**.

Designed by a team, with a sample range of plan-types prepared by their own architectural staff, the system is now based on a timber frame with 4M coloured aluminium cladding panels (brick veneer available for the Luddites), stressed skin floors, and lightweight concrete party-walls.

The organization offers a service ranging from the 'all-in package', the supply of houses from the standard range, the supply of 'open' components for other plans or other systems, to the production of specials, where justified by the run.

It would be easy to hammer the appearance, the choice of range, or the technical specification, but the majority of other systems are far worse. Here is the first opportunity for designers in Scotland and the North to avail themselves of the benefits of industrialization without bowing to all the limitations. Architects please note.

Photo: 2 Studio Swain

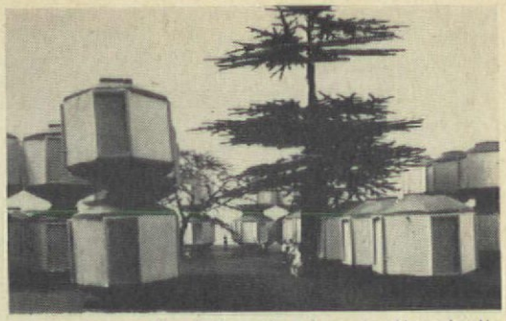
Pavilion housing project

Arthur Quarmby

We cannot transport a complete house: in order to achieve the necessary degree of factory fabrication we must concentrate upon less than the complete house. The simple solution is the room unit.

The room unit which is the basis of this project would be totally fabricated in the factory, down to floor and wall finishes, all furniture and perhaps even kitchen utensils in the drawers. The room unit door would be locked in the factory and would not be re-opened until the purchaser/tenant moved in.

The form of the units is dictated by the necessity for total flexibility of layout in three dimensions. Each unit must be capable of connecting to another unit on four sides, above and below (the only party-wall though, is the doorway, 3ft 6in × 7ft 6in which is sealed with a fireproof panel). All room units are fitted with a standardized insert floor around the central floor/roof connector. The hollow chamber between the floor and the outer shell is intended to be oil-filled with inset electric elements for storage heating

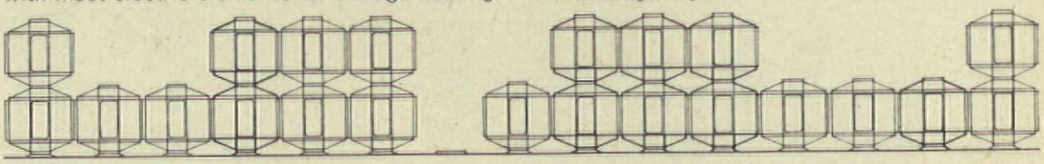


(the main shell of the structure is 1in plastic sandwich panel construction with an insulating core: the floor is single-skin with ribs beneath). The long sleeve of the concrete base fits into the floor/roof connector space, and is capped with single-skin g.r.p. to give a level floor.

Eleven conversion inserts are envisaged. (Compare this with the nine versions of the basic Ford Cortina.)

The site plan at the bottom of the page shows alternative densities of 130 and 175 p.p.a. maximum.

Photo Montgomery



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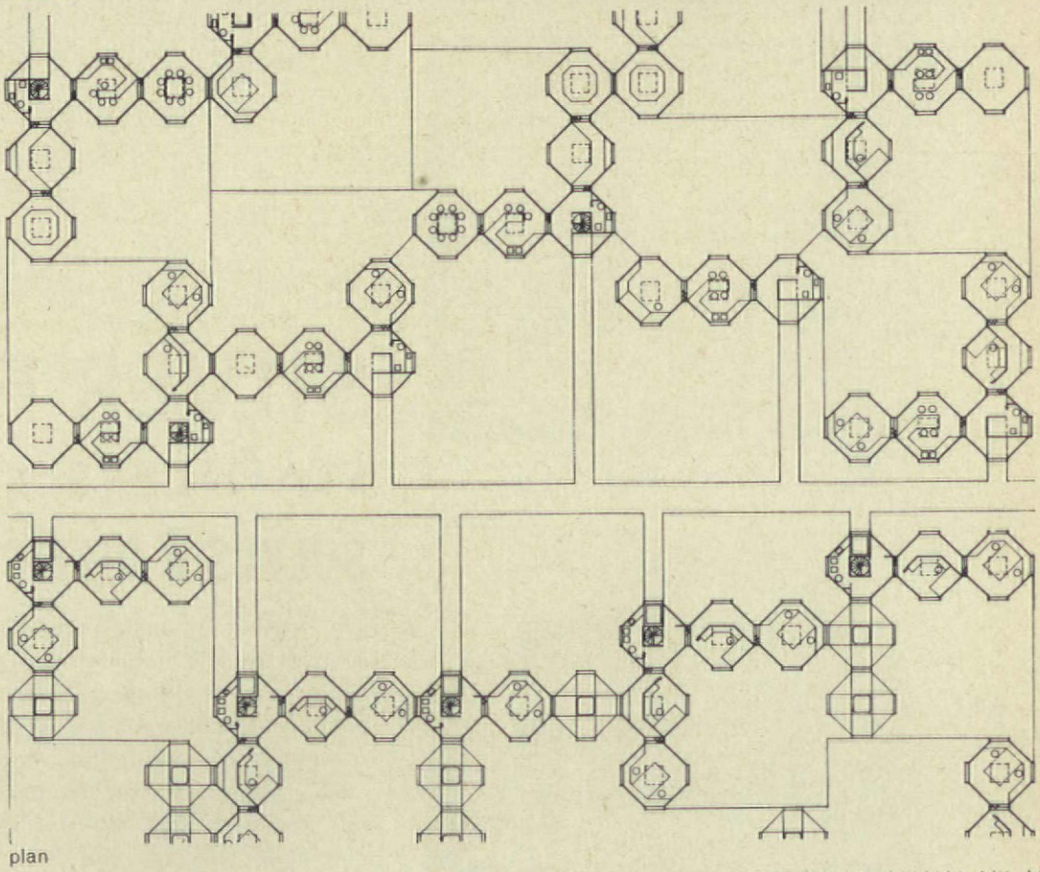

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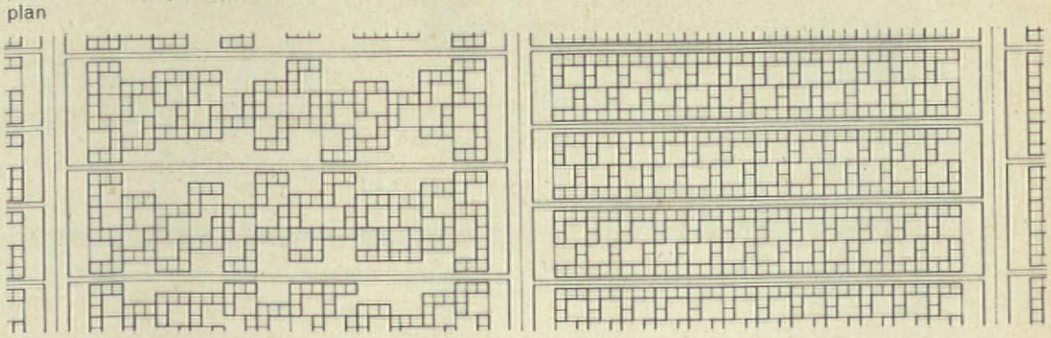

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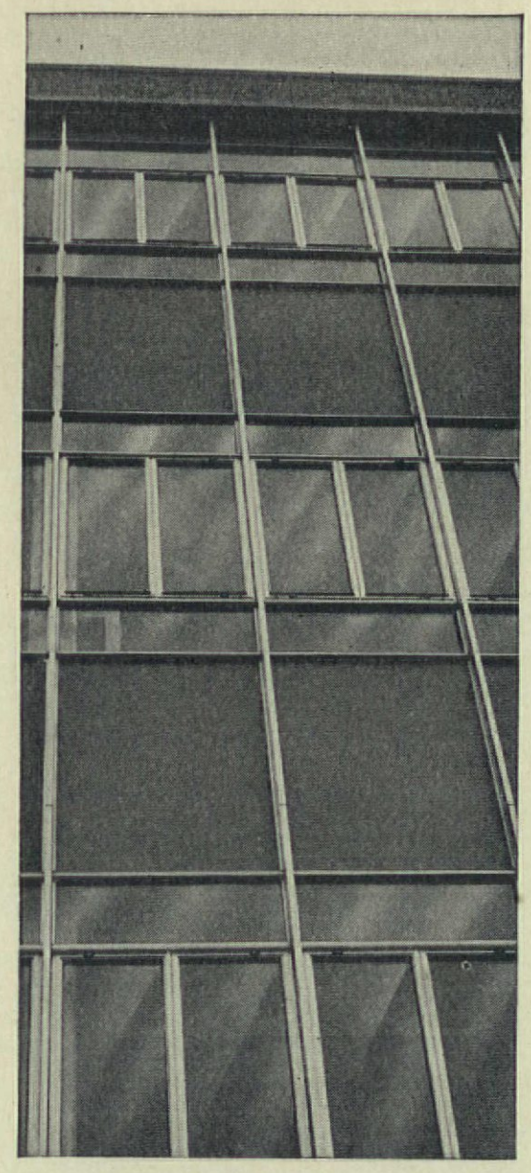

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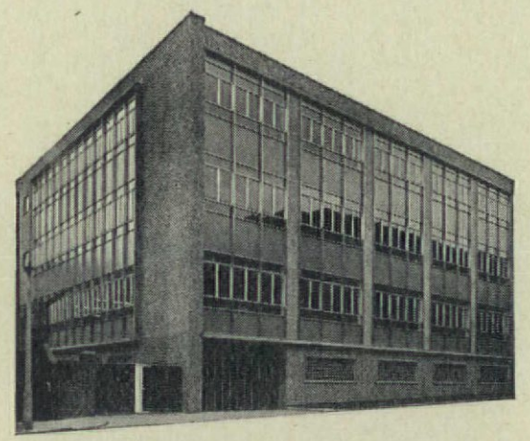

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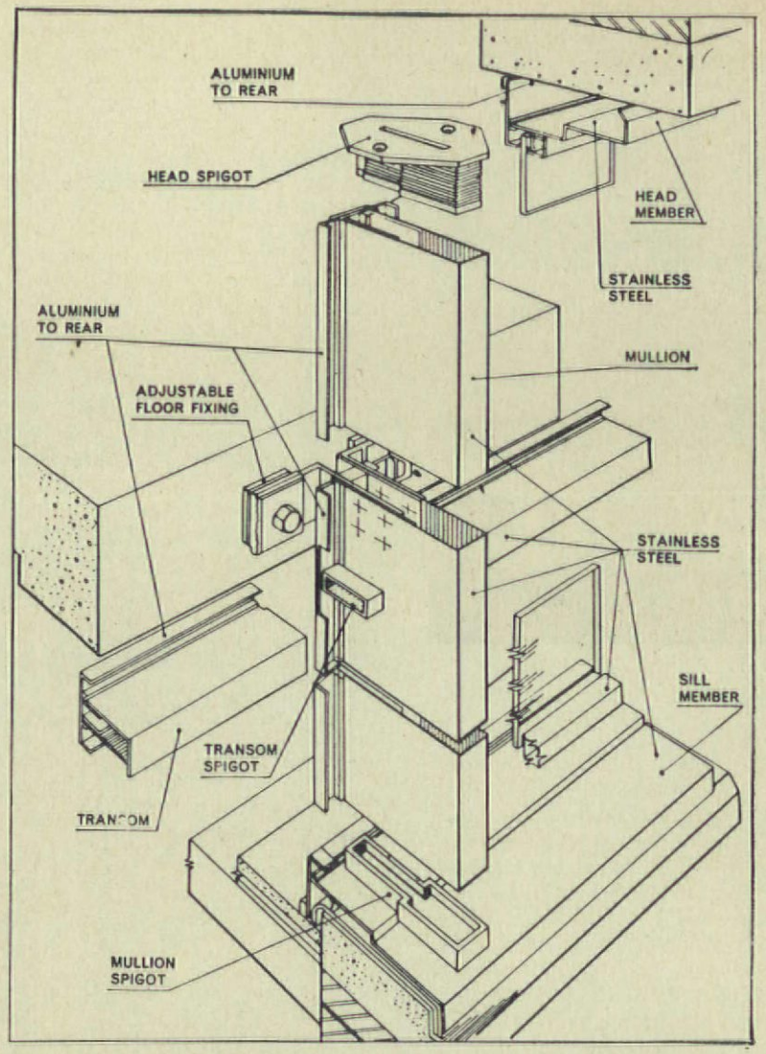

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Building a myth on a Graham Foundation

I. Chippendale

Catching up on Eliot with aid from the Vultures of the Communications Industry: Eliot was just before my time, and one was treading such a thin line in those days to avoid falling by the English literary wayside that I eschewed all knowledge of that ilk, from Quartets Cantos.

So I came fresh to Eliot's observations on our way of life 'and flinging empty bottles' and our problems.

'Can you keep the city that the Lord keeps not with you?
A thousand policemen directing the traffic
Cannot tell you why you come or where you go.'

Thats just it. It's answers that are difficult.

Meanwhile my literature stopped with Joyce as he seemed part of the mood of Europe I needed to know about—Dadaists, Ubu Roi, the Steins, the Bauhaus. Whatever happened to Baby Bauhaus? I refer to the Breuer of a boy, the teddybear of the Western World. He seemed about to make a pass at a different sort of relation of building to car—and then never did, and with a last whiff of timber frame over carport among the stones went the way of all Gropius's pupils and collaborates. And time has moved on terribly since the late 40s—the 'clean American boys' who depressed Sert looked like a lot of battered actors when I at last saw them. You have to keep with it or you are a has been and the RIBA will give you a medal to prove it.

But if Eliot wrote the 'Rock' to publish in '35, is it not about time people got with it and admitted at least of the necessity for some answers, for cities of men even if higher things are not solvable.

A new champion may be about to enter the lists for Banham's form of with-it-ness is ahead-of-it-ness. We can see this in his New Statesman run in to the Economist. Speaking for those who try to drive, ride or walk through London—just before an aside bash at the youth hostelers' Lionel Brett-Nairn. Banham is about to get mobile.

I don't mean he is about to learn to drive—he is about as shortsighted as Theo Crosby (the Mister Magoo of the design world)—I mean he is moving into the motion business—and I don't mean marry Elizabeth Taylor either. As soon as he has wrapped up all he can say about man, machine and motion, the machine aesthetic, theory and design in the machine age he will be on to motorways: as the critic Buchanan must have been hoping would never raise his beard.

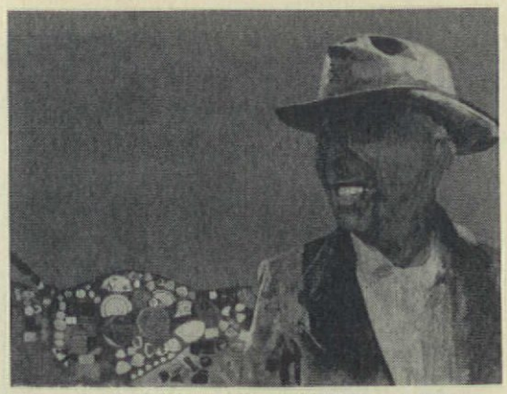
There has always been this strata in Banham: Badges stating Monorail Pioneer and souped up Scalectrix being at least 40 per cent of the game, 20 per cent being science fiction, 10 per cent immediate saleable story. This leaves 30 per cent base material for future use.

I suspect that what is already forming as the roll *after* whatever form is given the Graham Foundation work on services (machines) in buildings may have in part been suggested while working on the Brutalism book for Joedicke; for he will have automatically re-read all the Smithson papers (nearly all were in *AD*, please note, dear readers), and about half of these actually talk about how to get to the buildings without making the buildings not worth getting to.

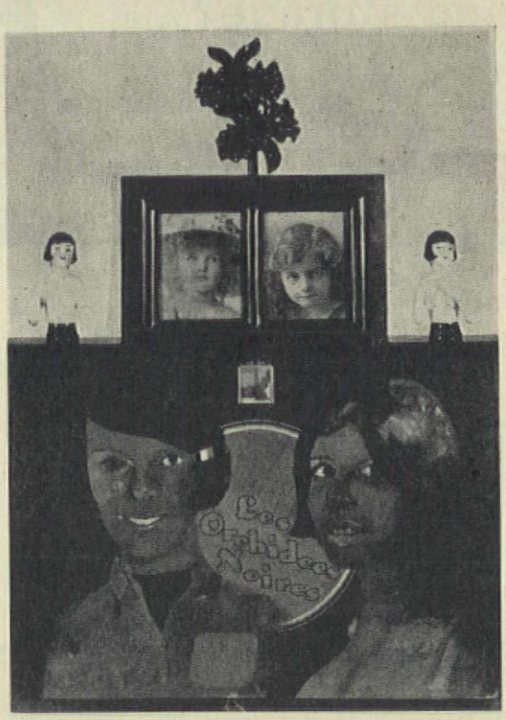
It would seem we have another work demon like Pevsner on our hands, with as many facets of the machine to explore as there are counties in England or penguins in Harmondsworth.

Some thoughts on Peter Blake

Jasia Reichardt



'Simon Rodia',* 12in × 14in, cryla on board, 1965.



'Les Orchidées Noires', 16in×12in, cryla, collage on hardboard, 1965.
Photos Brompton Studio, by courtesy of Robert Fraser Gallery.

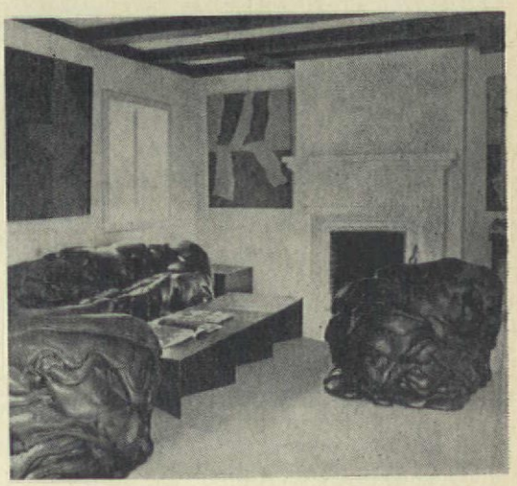
* Simon Rodia, known also as Sam of Watts, the Italian immigrant to the USA who spent more than 33 years in the construction of those extraordinary lattice work towers at Los Angeles, died on July 16th last, at the age of 90, at Martinez, California, where he had been for more than 10 years, indifferent to the fate and fame of his fantasia, silent and uncommunicative as to their significance. 'If your mother dies and you loved her very much,' he said, 'you don't talk about her.'

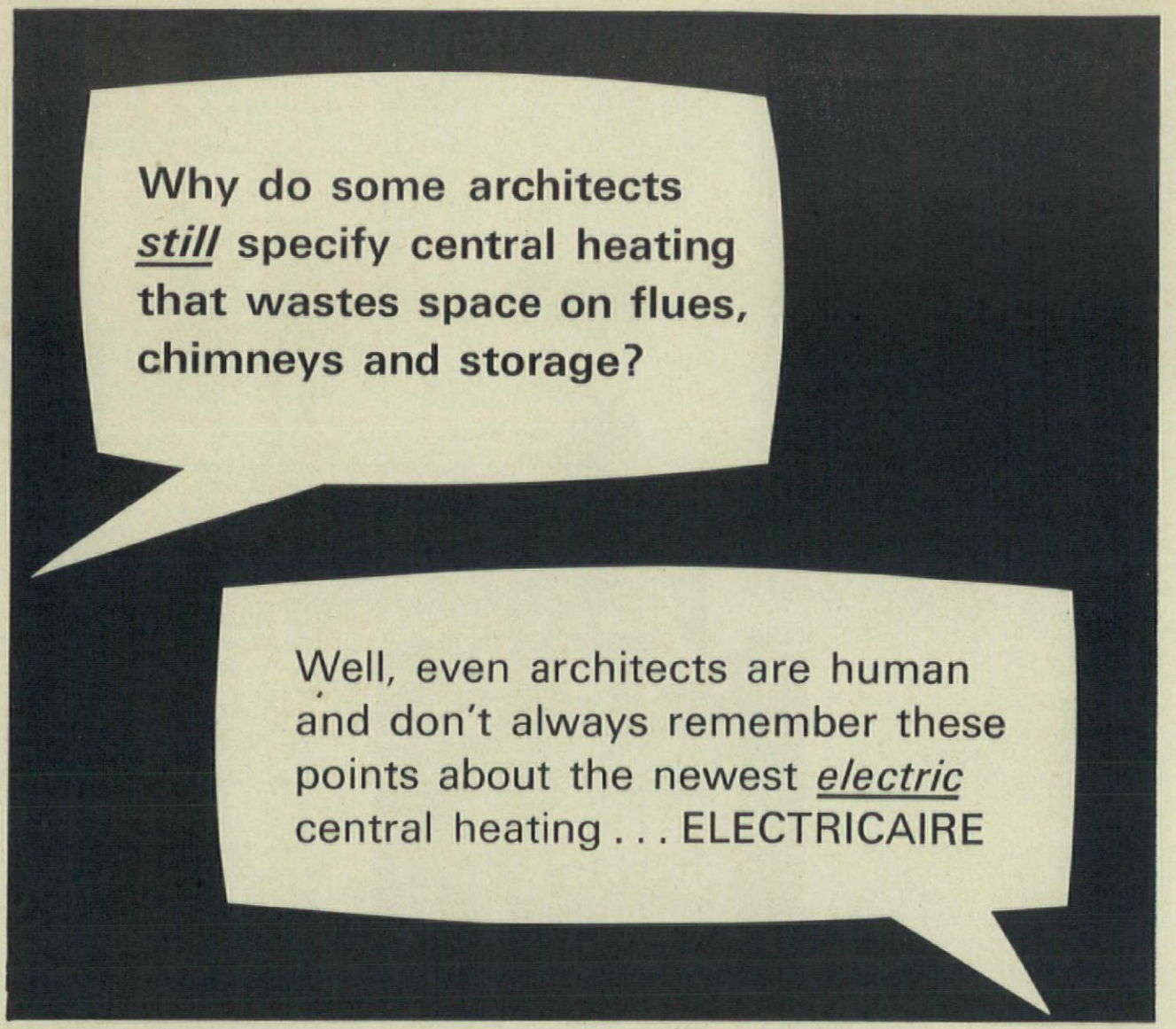
It is in connection with Peter Blake that one can consider wherein precisely lies the difference between academic art and an art form which utilizes conventional techniques and subject matter without having distinctive academic flavour. So far Blake's work has been far too personal thematically for it to be classifiable with mainstream art or any group manifestation, or the academic genre. When in 1962 he was referred to as the father of pop art, he neither refuted nor accepted that title, though it was clear that his own pursuits were neither influenced nor distilled from the whole paraphernalia of subject matter and techniques that pop seemed to imply. Superb draughtsman and artist of highly individual approach, Blake was able to tackle themes such as real and imaginary portraits, constructions, objects, collages with figures, *trompe l'œil*, music hall, the world of horror movies, wrestling and popular culture, as if these were images of his own invention. This treatment which transformed a known figure such as that of Jean Harlow into a Jean Harlow as seen through his own eyes has been the crucial factor which dissociates Blake from both academism and pop art.

What does his particular transformation of subject matter basically consist of? Mostly it is the elements that Blake wishes to stress in each case—the relation of the main theme to detail, to time, and to his other paintings of the same type. Everyone sees and imagines the same subject matter differently and he is particularly aware of this. Blake's portraits have the sort of feeling as if they were painted in hommage or in appreciation of the sitter. It is clear that whatever he paints he does so from a very positive view point and embellishes those characteristics and aspects which appeal to him most, however irrelevant they might appear from an objective view point of the main theme. A good example of his approach is the painting/construction 'Les Orchidées Noires'—an imaginary iconographic exposition of two lady wrestlers from Paris, where in the small photographs in the centre they are seen as children, in the statuettes on either side the Orchidées are about 21, and in the main section they are in their late twenties and at the peak of their career. The stages through which they have reached the point at which the picture was painted are quite obviously significant. One can feel that Blake is extremely fond of the two characters he has created with their own past and the orchid emblem of their pursuits. What perhaps is most revealing about this work, as well as the whole exhibition at Robert Fraser Gallery, is Blake's exposition of the crucial theme through detail, side references, and an unabated enthusiasm for his chosen subject.

Blops of glup

Aagaard Andersen's 'Chesterfield Suite', made by spraying polyester from a garden hose and painting it black, is less the result of reconsidering how best we may sit in comfort than a snook to be cocked at both the technologists who want new techniques and new materials for all new furniture designs and the traditionalists of contemporary architecture who have cornered the furniture market in Scandinavia. When they were first shown at the forestry museum at Gävle, Sweden, these chairs not surprisingly provoked some angry and ugly comment. They are a self-indulgent fantasy, clearly intended to stimulate disgust, sick-laughter and pity for the poor furniture designer. And it is probably not by chance that they evoke that old, black image of Dali and Bunuel spraying their dead donkeys with glue. *Mobilia*, August–September 1965





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Dans ce numéro

Logement à Malte.

Austin-Smith, Salmon, Lord Partnership

page 536

En 1959 le Secrétaire d'Etat à la Guerre établi le Comité Weeks pour examiner comment un vaste programme de logements pour l'armée pouvait être réalisé pour le mieux et le plus économiquement possible. Par suite de ses conclusions le Directorat des Traveaux du Ministère de la Guerre fut établi sous le double commandement d'un administrateur, William Geraghty et d'un architecte, Donald Gibson. Leur organisation chercha vigoureusement des moyens pour donner à cet usager immense, anonyme et souvent mécontent, qu'est l'armée, des immeubles qui répondraient vraiment à ses besoins, tout en contribuant une conception nouvelle.
Bien des méthodes d'organisation qui permirent ceci font maintenant partie des règles d'administration de l'architecture. On demanda à notre association de concevoir 59 logements pour officiers mariés à Malte en fin 1959, nous étions des conseillers 'externes' au DOW et fort heureusement nous pûmes expérimenter bien de ces méthodes d'organisation nous-mêmes. Nous avons reçu des instructions détaillées des architectes et des administrateurs du Ministère de la Guerre—par conséquent nous avions une compréhension parfaite du principe fondamental et du besoin de ces logements. La responsabilité pour pousser ce projet fut placée sur l'équipe externe de conception comprenant, architecte, arpenteur et ingénieurs. On mis l'accent sur la nécessité de discuter 'les besoins des usagers' avec les officiers de tous les grades ayant alors leur quartier à Malte.
Notre manière d'aborder le problème eut pour base une enquête, une hypothèse, une vérification et un cycle de contrôle. Nous avons tout d'abord examiné, avec l'arpenteur, tous les aspects imaginables de vie et de construction à Malte. Nous attendions et nous avons trouvé un nouveau milieu, de nouveaux matériaux, des frais inconnus et un usager assez exceptionnel. Ceci fut suivi par une esquisse qui vérifia les idées fondamentales et nous avons obtenu une notion probable du coût. Puis une autre visite doublée d'un questionnaire que remplirent 31 officiers vivant sur l'île, dont les résultats influencèrent profondement la forme de ces logements. Nous avons découvert que pour un officier normal ce logement représente un 'chez-soi du pays' dans lequel lui et sa famille vivent pendant au plus trois ans. Alors qu'il a peu de temps pour s'occuper de faire un 'chez-soi' et de faire le jardin, on intimité est pour lui très importante, pour compenser la nature communautaire de sa vie et de son travail dans l'armée. La communauté dans laquelle il vit pourrait être décrite comme étant 'innée' parce qu'il est un anglais à l'étranger et, au contraire de la vie ordinaire, son voisin et lui appartiennent à la même 'compagnie'. Donc pour lui permettre de préserver son identité il préfère, instinctivement, une villa séparée avec grand jardin (bien que négligé). Sur un tel emplacement, toutefois, une telle dispersion n'était ni économiquement désirable ni faisable.

Geoffrey Salmon.

Deux Maisons, Cambridge.

Colin St. John Wilson

page 546

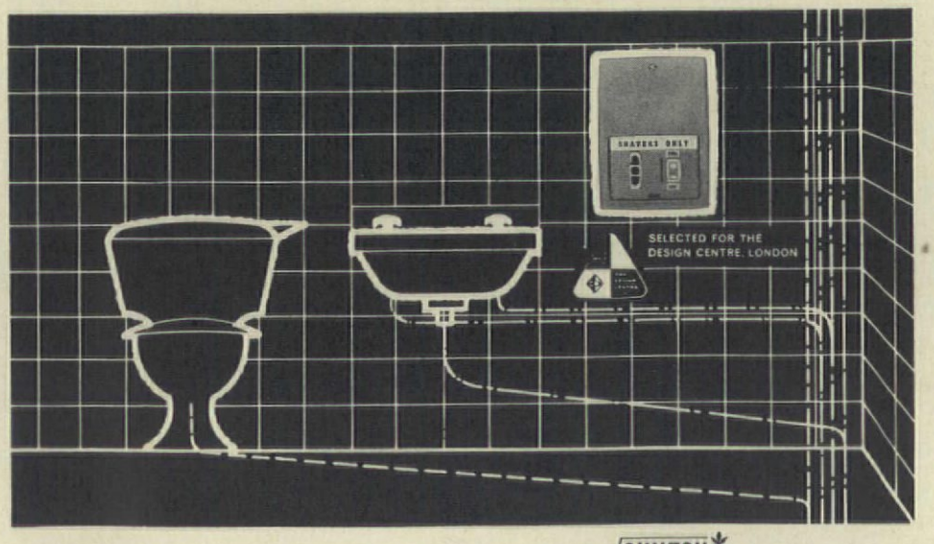
A l'heure actuelle le point le plus crucial et le plus discuté est la maison; les diverses solutions apportées ne se différencient pas tant par leur contenu technique, opérationnel que par leurs intentions symboliques. La différence entre la maison de Farnsworth et le pavillon d'Aalto à Muuratsalo n'est pas une différence de 'fonction' ni (à moins que vous ne partagiez le déterminisme historique des Miesiens) un système technique, mais dans chaque cas, une intense incorporation résolue d'une 'manière de vivre', l'incorporation précise de certaines valeurs.
Il vaut mieux reconnaître la brêche qui doit être franchie (quelque soit notre frayeur en face des dangers) plutôt que de prétendre soit qu'elle n'existe pas ou qu'elle se soudera d'elle-même ou qu'elle pourrait être l'excuse pour une plaisanterie privée. Ainsi, à notre époque construire une maison est être obligé (sans aucun espoir d'évasion) à faire une profession de foi évidente.

Archigram

page 559

Archigram I fut un déchaînement contre la stérilité de l'architecture qui nous entourait à Londres durant l'hiver 1960–61. Le travail d'étudiants durant les années 1950 était tout ce que l'on pouvait voir: le défunt Edward Reynolds virtuose de la formation libre à l'école AA, l'explosion Bowelliste à la Regent Street Polytechnic. L'essence était verbale aussi bien que formelle: REJETEZ rideaux, 'Conception', histoire, papier graphique. DIGEREZ—ACCEPTEZ—SANCTIONNEZ—homogénéité, planificateurs, Monk, extensibilité. L'immeuble de Michael Webb pour un fabricant de meubles était l'un des immeubles Boyanistes (Bowellistes) les plus développés, il attira bien des commentaires de la part des connaisseurs quant à ses antécédents dans les années 'vingt, quatre vingt dix, etc. . . . L'instinct de cet immeuble fut en réalité fondé sur la publication des idées offertes par l'exemple et l'enseignement des Smithsons, Stirling et Gowan, Howell et Killick—qui peuvent tous être retrouvés chez les architectes que émergèrent récemment et qui contribuèrent à l'Archigram.

Designers remember details



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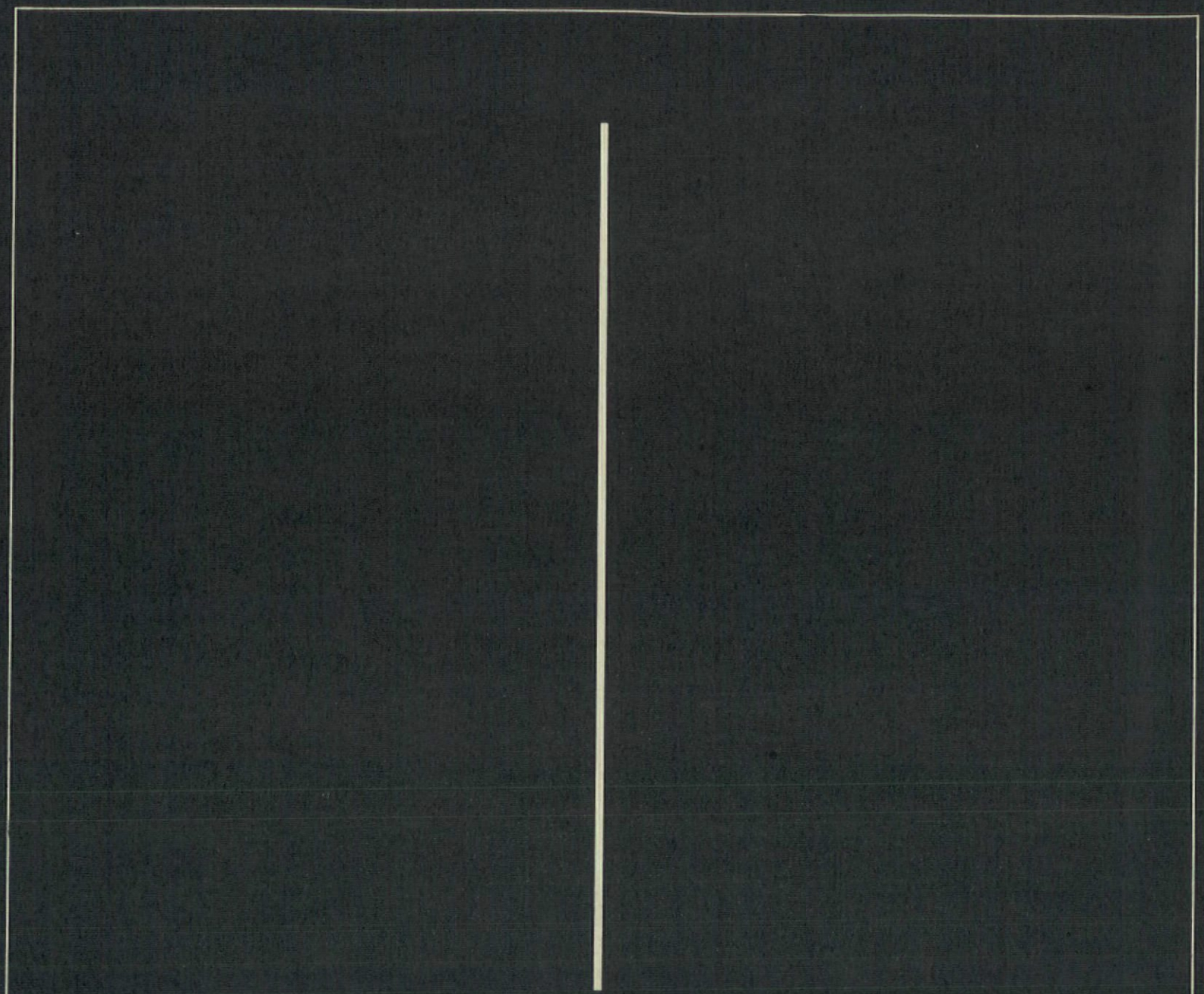

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SISALKRAFT

En este numéro

Viviendas en Malta.

Austin-Smith, Salmon, Lord Partnership

página 536

En 1959, el Ministro de Guerra, organizó el Comité Weeks para investigar los medios por los cuales el vasto programa habitacional del ejército podría obtener un mejor resultado con costos reducidos. Como conclusión a sus estudios, la Direccion de Obras del Ministerio de Guerra fué organizado bajo el comando en conjunto de un administrador, William Geraghty, y de un arquitecto, Donald Gibson. En su organización buscaron vigorosamente los medios por los cuales, el utilizador, vasto, anónimo y algunas veces descontento que es el ejército, pudiera ser provisto con edificios que genuinamente sirvieran a sus necesidades y que en el proceso de así hacerlo se contribuyera a la compilación de datos para el diseño.
Muchos de los métodos de organización por los cuales esto fué logrado han llegado a ser libros de texto de la admistración arquitectónica. Nuestra sociedad fué comisionada a fines de 1959 para diseñar 59 viviendas para oficiales casados, como consultores contratados por la Dirección de Obras y afortunadamente pudimos experimentar muchos de estos métodos de organización directamente. Fuimos provistos de detalladas instrucciones por ambos del Ministerio de Guerra; los administradores y los arquitectos—de aquí entonces tuvimos una comprensión completa de las bases fundamentales y de las necesidades de acomodación. La responsabilidad de completar el sumario fué claramente entregada al equipo "externo" de arquitectos, medidores e ingenieros. Un gran énfasis fué puesto en la necesidad de discutir las "necesidades del utilizador" con oficiales del ejército de todos los rangos que estaban estacionados en Malta. Nuestro estudio fué en base a un ciclo de investigación, hipótesis, experiencia y comprobación. Primero tomamos, juntos con el medidor una mirada muy detallada a todos los aspectos concebibles de la vida y de la construcción en Malta. Esperábamos y encontramos, un ambiente nuevo, nuevos materiales, costos desconocidos y un utilizador "más bien excepcional. Esto fué seguido por un "esquisse" que experimentaba con ideas básicas y obtenía nociones de un costo probable. Luego otra visita combinada con un cuestionario presentado a 31 oficiales viviendo en la isla, el resultado del cual influenció poderosamente el plano de las viviendas. Encontramos que para el oficial término medio en servicio, su acomodación representa un "hogar del hogar" en el cual él y su familia vive normalmente por un máximo de tres años. Mientras que tiene poco tiempo para los agrados de construír el hogar y el jardín, él le da gran importancia a la privacidad para compensar el aspecto comunal de su vida y trabajo del ejército. La comunidad en la cual vive podría ser descrita como auténtica, tanto porque él es un inglés que vive en el extranjero como porque, distinto al vecino corriente, él pertenece a la misma "firma" que el vecino. Para poder conservar su identidad individual, él instintivamente prefiere la villa aislada con un gran (aunque descuidado) jardín. En tal lugar, sin embargo, una dispersión no era económicamente deseable o prácticamente realizable.

Geoffrey Salmon.

Dos Casas. Cambridge.

Colin St. John Wilson

página 546

Entre los tipos de edificios de hoy día, la casa es la que propone mas crucialmente una discusión cuyas varias soluciones son diferenciadas no tanto por su contenido operacional o técnico como por sus intenciones simbólicas. La diferencia entre la casa Farnsworth y la casa de verano de Aalto en Muuratsalo no es una diferencia de "función" ni de sistemas técnicos (si uno no participa del determinismo histórico de los Miesianos), pero sí en ambos casos una claramente determinada materialización de un "estilo de vida", la incorporación precisa de un conjunto de valores.
Es talvez conveniente reconocer esta brecha que debe ser saltada (no importa cúan aterrados podamos estar de los peligros) y no pretender ya sea que no existe o que la brecha se cerrará sola o que pueda ser ocasión para una burla personal. Y así, el hacer una casa hoy día es el estar apremiado (sin esperanza de evasión) a hacer una manifiesta declaración de fé.

Colin St. John Wilson.

Archigram

página 559

Archigram fué una explosión contra la esterilidad de la arquitectura que lo rodeaba a uno en el Londres del invierno de 1960–61. Los trabajos de los estudiantes realizados durante la mitad del decenio de 1950–60 era todo lo que se podía señalar: el virtuosismo formador libre de Edward Reynolds en la Architectural Association, la explosión Bowellista en al Politécnico de Regent Street. El espíritu fué tanto verbal como formal: Rechazad—muros-cortina, "diseño", historia, papel de gráficos. DIGIERA—ACEPTE—APRUEBE—homogeneidad, transportadores, Monk, obsolescencia. El edificio de los Fabricantes de Moblaje de Michael Webb fué el más desarrollado de los edificios Bowellistas y fué capaz de atraer muchos comentarios de los expertos acerca de sus orígenes en los "años veinte" y los "años noventa", etc. El impulso de este edificio fue encontrado en la liberación de ideas ofrecidas por el ejemplo y enseñanza de los Smithsons, Stirling y Gowan, Howell y Killick—todos los cuales pueden ser seguidos a través de los arquitectos recientemente aparecidos que han contribuído a Archigram.

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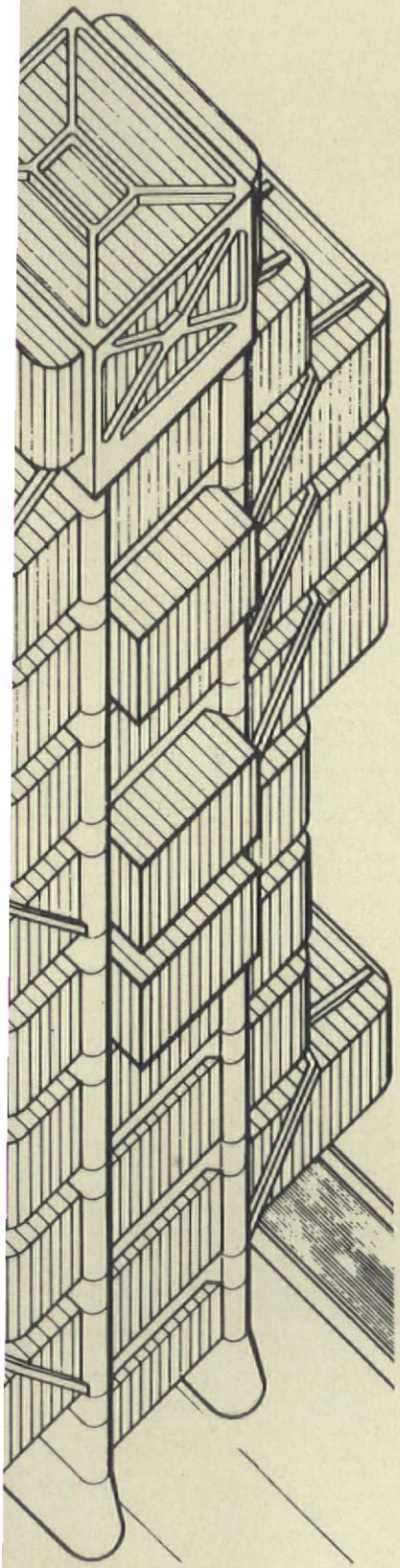

Plug-In office tower, 1964, Peter Cook

BASA are holding a 'Plug-In City' symposium at the Building Exhibition, Olympia, on November 20, 10–6pm. Fee 10/–

Musing on the potentialities of US technology in a special issue of the *Architectural Review* entitled 'Man Made America', Gerhard Kallman observed 'the question of whether—with emerging new realities of the anonymous, of endlessly linked chains, of fugal and progressional rhythms—all centirsitic concepts, be they geometric or irregular, will give way to new concepts, is now becoming a very burning one. . . .'

That was December 1950, and subsequent history shows that the question burned nobody in the US—a generation genially misled by Philip Johnson all turned to old-world centristic concepts to solve their problems of architectural composition, and thus produced the current flourishing revival of that monumentalism that the 1930s had hopefully proclaimed dead. Among that generation is numbered, of course, Mr Kallman whose part in the design for the new Boston City Hall shows that questions of anti-centricity barely even singed him personally. The very few surviving examples of anonymous, endlessly linked, non-centristic architecture that the US produced in that period of the early fifties—the long façades at Eero Saarinen's GM technical centre, for instance—are now among the most disregarded and despised architecture that post-war USA has produced.

The idea of endlessness

But if the question failed to burn in the US, it fired a number of imaginations on the other side of the Atlantic, and this paragraph of Kallman's is part of the pedigree of the concept of an 'indeterminate architecture'. Under various names this intellectual concept has been circulating in Britain for 15 years now (and is therefore probably due to be taken up shortly as an exciting novelty in the US).

One of the reasons why the concept took hold in Britain was that a number of disparate trends were already pulling in that direction: among them, a simple desire to be cautiously non-committal among the uncertainties of post-war reconstruction. Thus, the famous Hertfordshire prefabricated schools were not only conceived in terms of a seemingly unlimited repetition of standard glazed wall-units, but of a theoretically unlimited repetition of identical classroom units along a corridor as well. Contemporary anti-formal (not to say anti-architectural) concepts such as 'the neutral technological frame' which were current among British architectural students at the time were also understood to be endlessly repetitive, buildings that could be cut to length as required, and be neither better nor worse aesthetically for being 10 units long or 1000—because the aesthetic point was the fact of visual repetition anyway.

Six months after Kallman's article, many of these vague notions and floating concepts were brought together and given a massive intellectual stiffening in a paper read at the Architectural Association, London, by Richard Llewelyn Davies (now both a Professor and a Lord) who has long been the *eminence grise* of the scientific and systematic approach to both architectural design and constructional methods. Under the title 'Endless Architecture' he presented not only his own views but that of a group of persons, including Sir Leslie Martin (under whom he had worked on prefabricated railway stations) and John Weeks, who will appear later in the narrative as Llewelyn Davies's partner in architectural practice. The topic that these three had been turning over among themselves, with a wealth of erudition that included a Mondriaan painting which appeared during the lecture (courtesy of Sir Leslie) was the aesthetic interpretation of the architecture of Mies van der Rohe at the IIT campus, Chicago.

Taking as his text the Alumni Memorial Hall, Llewelyn Davies said: 'The elevations all consist of similar units repeated a number of times. . . . No single element is treated as self-contained, nor is it isolated from the rest by special treatment. The whole, again, is left unbounded.

'There are no stop-ends, nor any dominating feature limiting the extension of any particular plane, or concentrating interest at any point in the plane. I think that a wall is conceived by van der Rohe as an aportion cut from a plane, extending infinitely into space, and that this quality, which could be called endlessness, is at the bottom of this approach to design.

'The detail at the corner of the building . . . bears out this point. . . . This corner goes unnoticed when we look at the building as a whole. It is the very opposite of the emphasized rusticated corner of the Renaissance, it is almost refined into non-existence. By stepping it back behind the wall faces, by breaking the angle up into numerous angles and planes, the corner has been dissolved away. Thus, and this is the real reason for doing it, the continuity of both walls is preserved. Neither is allowed to pass beyond the other so as to stop its imaginary infinite prolongation.'

It was Llewelyn Davies' misfortune to launch these ideas on an audience that was becoming increasingly sophisticated in matters historical, and within three or four years such arguments no longer convinced—a generation of younger architects, post-war trained, had grown up who knew too much about the Neo-Classical tradition to see Mies' façades at IIT as anything but closed classical compositions, and their black steel corners as more visually positive end-stops than any rusticated Renaissance corner. An older generation rejected these arguments on different grounds—like many of the Left in Europe at that time they rejected everything to do with America and/or technology as 'Inhuman'. And yet the idea did not fall entirely flat. You can't go on rejecting technology for ever, and because Mies' welded steel architecture has always been regarded as the acme of technological building in Britain, the concept of an endless architecture kept on cropping up whenever advanced building technologies were being discussed, because these are normally visualized by Europeans (including Britons) as being primarily concerned with the mass production of structural elements, and mass production is equally normally visualized, not as a Detroit range of interchangeable options (e.g. Chevrolet with a choice of 17 bodies and five different engines) but as the relentless repetition of an invariable product. At least this was, and is, the way of seeing the situation in architectural circles, and an endlessly repeated aesthetic seemed entirely appropriate to it.

The result could look like, for instance, Emile Aillaud's seemingly endless, non-centristic, indeterminate snake-plan blocks of flats at Pantin or Bobigny, outside Paris; or the equally indeterminate and extensible architecture envisaged by the Smithsons and others in their entries for housing competitions in the early 1950s, and finally realized in the famous Park-Hill housing at Sheffield, by Jack Lynn and Ivor Smith, where the loops and bifurcations of the enormous apartment block produced a non-centristic plan that looks on paper like some crazy, rough-carpentered man-made chromosome. What was at stake in all these projects, concepts and the rare completed buildings, was an architecture whose form was not defined by the accepted rules of architecture—symmetry, unity, coherence, balance and all those.

Somewhere in the background another concept had floated into the argument unnoticed—the informal or even a-formal order of the composition of action paintings. This idea was, I suspect, sneaked into the argument by Philip Johnson in 1951 when, in a talk about something quite different at the Royal Institute of British Architects, he interpolated a description of how to live with a Jackson Pollock painting, where any one bit of the picture is as good and as important as any other. Curiously enough, the term 'Action Architecture' was coined, somewhat later, by guess who, Gerhard Kallman—but he did not really mean by this anything more than that the architecture of the Brutalist period had raggedy surfaces and eschewed high finish. But what was germinating in the back of the mind of British architecture was a kind of building design which was not only endless, indeterminate and a-formal, but in which every bit was as good as another and could be replaced by any other. This, in a sense, is true of a building made of bricks—any brick is as good as any other brick, and interchangeable. But what the British were beginning to have in mind was a rather larger brick—large enough to live in. The breakthrough toward an endless architecture of indeterminate form was to come by way of very precisely determined units of habitation, clipped together.

A cell with services

Alison and Peter Smithson, innovators of so many things in the British architecture of the fifties, produced late in 1955 (for exhibition the subsequent year) a design for a plastic House of the Future. It was a seasonable commission—Ionel Schein produced one at the same period for the Exposition des Arts Menagers in Paris, and Monsanto's plastic house which later found a home at Disneyland is of the same vintage. The Smithson version, however, was more sophisticated than the others in a number of ways. Conceived in terms of a mass-produced product of the 1980s, it attempted to face the practicalities of mass-marketing by exhibiting something like an architectural version of Detroit styling, and an approximation to Detroit production engineering in that it consisted of a number of large, non-repeating components; i.e. like the fenders or hood of a car they occurred only once in each assembled product (unlike the components of the endless designs discussed above) and the attainment of an economically long production run would have depended on the production of a great number of house units. Now, although each house was to be a self-contained unit in itself, stuffed with futurist household gadgetry, the project did involve an alternative form of endlessness or indeterminacy. All the rooms were to be lit from a central oval patio in the middle of the house, and the only hole in the external walls was for the door on one of the long sides. With three blank walls, the houses could be pushed together into endless rows, two deep,

* *This article is reprinted by kind permission of Peter Seitz, the editor of* Design Quarterly, *in which it first appeared.*

back to back, and this town-planning proposition was part of the design from the start. In this the Smithson House of the Future differed from other standard of living machines like Fuller's Dymaxion House, or Schein's Maison Plastique, which were virtually impossible to assemble into larger wholes, but—like them—it was a fully serviced dwelling unit, complete and self-sufficient. In this, it differed again from the repeating units of the Llewelyn Davies concept of endless architecture. Where he had identified repeating structural units that could be added up into a usable volume, the Smithsons were offering usable volumes that could be added up into something more complex. The concept was less intellectually pellucid, but more emotionally appealing—it is difficult to identify oneself with a pair of vertical mullions, an underwindow air-conditioner and an area of tinted glass, but easy to identify with a room you can stand up and walk about in.

The Smithsons, in their free-ranging way, went off now on a different architectural tack, but Ionel Schein, with his partner Jaques Coulon, probed further into the possibilities of the repetitive cell in the remaining years of the fifties, producing a series of projects for habitable units that came to look more and more like industrial designer's products, and less and less like architecture (see foreground fig. 8 page 556). Their mobile book-exhibition project contained provision for joining the cells together in such a way that you could walk through; the mobile motel unit took the aesthetic further and added to it so high a degree of servicing that it became almost an independent living-capsule, capable of being popped off into orbit. Mobile and transportable, both units had made the psychological and aesthetic break necessary to free themselves from architecture's time-honoured roots in the ground —Europe, irresolutely and too late, had re-invented the American mobile home, but then immediately went on to offer one possibility further. A young Belgian architect, Jaques Baudon interrupted his military service long enough to submit for a competition in 1959, a house-design that added an essential further concept —the connector between the units. Apart from the living room, which was of totally indeterminate form and construction according to the whim of the inhabitants, each other function—sleeping, bathroom, kitchen—was housed in a separate capsule reached from a corridor-tube made up of standard branching sections; but adding more sections you could provide clip-on points for more functional capsules, and create a house of any size.

The clip-on concept

It was at about this point in time that I first remember using the phrase 'clip-on' in connection with architecture. It must have been in circulation for at least a year before I used it in print in the *Architectural Review* in February 1960 and its meaning was to some extent fixed by conversational usage before then. The sort of ideas that belonged to the concept at that time I can now best reconstruct from some notes for an unpublished article on the Clip-on Philosophy which were written down in 1961. The epitome of the clip-on concept at that time was the outboard motor, whose consequences for the theory of design intrigued many of us at that time, in the following terms: given an Evinrude or a Johnson Seahorse, you can convert practically any floating object into a navigable vessel. A small concentrating package of machinery converts an undifferentiated structure into something having function and purpose. But, equally, the undifferentiated object might be a paper cup full of raw black coffee, and the clip-on could be the packets of sugar and cream and the stirring stick which convert to the particular cup of coffee that suits your taste.

The architectural equivalent of this, at face value, would be one of Bucky Fuller's 'Mechanical Wings', the trailer full of mechanical goodies that converts any old shack or hole in the ground into a habitable dwelling. Or, to go back to the Baudon project, the tent, dome or plastic bubble that serves as a living room is the undifferentiated structure, and all the specialized capsules on their connecting corridor constitute the clip-on. The Smithson House, or the Schein/Coulon motel unit are more in the nature of a clip-together architecture, but as soon as they begin to be clipped together they raise a problem which neatly turns the clip-on concept inside out. When more than 'two or three are gathered together' (in the words of the Anglican liturgy) a second factor appears as a necessary corollary of their aggregation. Services, communication and other manifestations of interdependency will have to be consciously designed at the same time as the units themselves—the result of not doing so can be seen in the overhead jungle of wires and marginal slummery of so many American trailer camps. If the units are simply spread on the ground, then the circulation of men and vehicles among them will become a determinant of the layout—as with the corridors of Baudon's house, or even the way the Smithson houses stack with their doors outwards, thus fixing the spines of communication along the sides of the super-blocks into which they aggregate. If the units are stacked vertically, then some form of external structure will be needed to take up their cumulative weight; and if any substantial number are to be serviced with water, air, gas, piped music or you-name-it, then those services are going to thicken up into some pretty impressive ducts and trunking in places. So you reverse the proposition. The generalized structure becomes the source of power, service and support, and the specialized clip-ons become the habitable units. The outboard analogy has to be replaced by something more like the connection of domestic appliances to the house's electrical supply (see page 559)—which is why the *Archigram* group use the term 'Plug-In' instead of clip-on for their urban projects. But too much should not be made of this distinction between extreme forms of the two concepts: technically they are often intimately confused in a single project, and the aesthetic tradition overruns niceties of mechanical discrimination. The aesthetic is still the Clip-on Aesthetic. But multiplied by a wild, swinging, pop-art vision that is a long way from the intellectual austerities of the speculations of Kallman or Llewelyn Davies.

So, while the architecture of the establishment rusticates in the picturesque prefabrication techniques of the tile-hung schools of the CLASP system (Consortium of Local Authorities Special Programme), while British Railways prepared to drop into place the first of their plastic switchgear huts (serviced cells if ever there were) and Llewelyn Davies and Weeks began to square up to the design of their endless and indeterminate hospital at Northwick Park (where even the repetition of the structural units goes on an indeterminate pattern) . . . while, in short, possibilities of the fifties were being translated into the practicalities of the sixties, younger architects yet were about to set up a new set of projected possibilities, in which a conscious element of play upon the life-enhancing potentials of the most advanced urban technologies becomes a major animating force.

A machine to live it up in

And I mean 'play'. The Fun Place project —announced as the First Giant Space Mobile in the World—is a mechanized shrine to *Homo Ludens*, conceived in the first instance by Joan Littlewood, that astounding blend of social conscience and strolling player who put before the world for the first time such theatrical knockouts as *The Quare Fellow, Oh What a Lovely War*, and like that. Her fanatical belief in spontaneity and audience participation led her to conceive of a place, a zone, of total probability, in which the possibility of participating in practically everything could be caused to exist, from political rallies to Greco-Roman wrestling, table tennis to choral song, dervish dancing, model drag-racing or just goofing and falling about, where even the simple business of walking about or finding where to go next would be rewarding or stimulating.

This could doubtless have been achieved by means of a large number of single-purpose buildings in a park of rest and culture, but by the time Joan and her team of 'younger creative nuts' (she calls them) finished with the idea they had a giant erector toy, compact enough to fit on a tight urban lot, but big with the potential of manufacturing spaces for all purposes. It is not, however, a large building which can be variously subdivided; it is simply a kit of parts and a space-grid of supports and services which can pick up, assemble and animate the parts to suit whatever purpose comes along, and then put everything back in the box in the morning. The space-grid consists of vertical towers full of works, from toilets to electronics, carrying a system of gantry cranes on their heads to manoeuvre the parts into position, and with their feet resting in heavy servicing plant (including sewage disposal—since the FP is a piece of 10-year-expendable urban equipment, a degree of detachment from permanent mains services is to everybody's advantage).

Day by day this giant neo-futurist machine will stir and re-shuffle its movable parts—walls and floors, ramps and walks, steerable moving staircases, seating and roofing, stages and movie screens, lighting and sound-systems—sometimes bursting at the seams with multiple activities, sometimes with only a small part walled in, but with the public poking about the exposed walks and stairs, pressing buttons to make things happen themselves. This, when it happens (and it is on the cards that it will, somewhere, soon) will be indeterminacy raised to a new power: no permanent monumental interior space or heroic silhouette against the sky will survive for posterity to remember the designers by—Cedric Price (architect), Frank Newby (structural engineer) and Gordon Pask (systems consultant). If it is going to be a monument to anything, it will be to architecture's silent partners, the invisible and long-suffering mechanical servitors who keep most buildings going, but never get thanks or acknowledgement for it. For the only permanently visible elements of the FP will be the 'life-support' structure on which the transient architecture will be parasite. You can do this for a single giant 'Anti-building' (the FP is sufficiently worked out in detail for construction to start more or less tomorrow) but could you do it for a whole city?

Plug-insville

Archigram can't tell you for certain whether Plug-in City can be made to work, but it can tell you what it might look like. *Archigram* has developed over the past four years from a student protest broadsheet to something between an architectural space comic and a magazine of protest. Rather suddenly, in 1964 it became an architectural magazine of international standing—issue number 4, which was all space comic with a pop-up zoom-city in its centre spread, was taken up and quoted all over the world from *Architectural Forum* to *l'Architecture d'Aujourd'hui*, and Peter Cook, the editor, has had requests for number 5 from even further afield than that. The strength of *Archigram's* appeal stems from many things, including youthful enthusiasm in a field (city planning) which is increasingly the preserve of middle-aged caution. But chiefly it offers an image-starved world a new vision of the city of the future, a city of components on racks, components in stacks, components plugged into networks and grids, a city of components being swung into place by cranes. They make no bones about being in the image business—like the rest of us they urgently need to know what the city of the future is going to *look* like, because one of the most frustrating things to the arty old Adam in most of us is that the wonders of technology have a habit of going invisible on us. It is no use cyberneticists and O and R men telling us that a computerized city might look like anything or nothing: most of us want it to look like *something*, we don't want form to follow function into oblivion. So, *Archigram's* visions of Zoom City, Computor City, Off-the-Peg City, Completely Expendable City and Plug-in City, may evoke yawns of impatience from the expert servants of the silent servitors mentioned above, but practically everyone concerned with architecture as constructed form (including plastics engineers) over-responds to the plug-in vision. They may reject it or accept it, but *Archigram's* kit of interchangeable living cells and support structures seems to be the first effective image of the architecture of technology since Bucky Fuller's Geodesic domes first captivated the world 15 years ago. The difference from Fuller hardly needs to be rubbed in, except to hope that the opposite mistake will not be made. Fuller offered (offers) a manner of thinking radically about the control of the environment, but the architectural profession ran off with the pretty bubble that housed the environment and soon got bored with playing with it. A lot of po-faced technicians are going to pooh-pooh Plug-in City's technological improbabilities and brush it off as a Kookie teenage Pop-art frivol, and in the process the formal lessons of the Plug-in City might be missed.

Put as tersely as possible, those lessons say this: a plug-in city must look like a plug-in city. If people are to enjoy manipulating this kind of adaptable mechanical environment (and if they don't enjoy it, we have gained nothing over previous environments) then they will have to be able to recognize its parts and functions, so that they can understand what it is doing to them, and they can understand what they are doing to it. And many of the future environments of man on this crowded little planet are probably going to have to be quite as highly mechanized as *Archigram's* Plug-in metropolis.

But *Archigram's* larky approach is also, probably, a sign of growing self-confidence and maturity. We started on this particular clip-on history with Llewelyn Davies offering a careful and respectful critique of the work of an acknowledged master, work which no-one in Britain at that time could hope to equal. We finish with *Archigram* acknowledging the activities of other city-image specialists, but normally printing their designs smaller than its own. We started with Kallman making cautious propositions about what technology might do to aesthetics; we finish with aesthetics offering to give technology its marching orders, while magazines and pundits around the world wait for the word from London. No-one—least of all the modest types who produce the magazine—wants to exaggerate the importance of *Archigram*, but its growing international reputation, backed by the threat of a real live Fun Palace (pilot scheme due later this year) suggests that the English contribution to the architecture of indeterminacy has now reached the point where its progress is worth recording.

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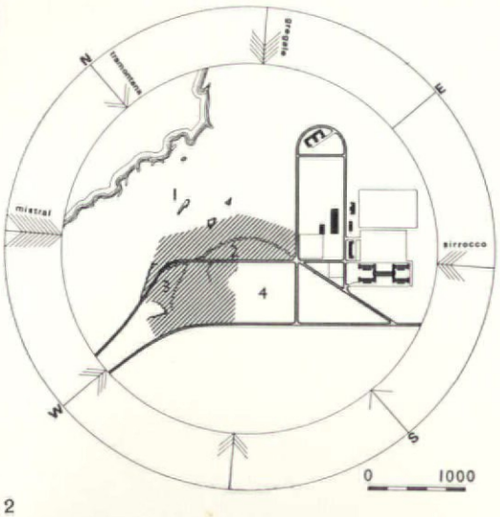

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1 & 3
Views of the officers quarters from the north

2
Diagram illustrating the nature and characteristics of the site
1 Area of deep gullies and outcrops of weathered Globigerina limestone, not easily accessible.
2 Sub-strata of hard Coralline limestone: some rugged outcrops, but mainly steady slope with little soil. Aspect good and disused roads provide ready access making the area suitable for building.
3 Terraces topped with arable land, mainly clear of outcrops. View excellent, site open to in-shore winds, providing for maximum air movement. Tracks allow easy access.
4 Level area, rising slightly to the south; arable top-soil, Coralline limestone sub-strata. Suitable for building, but difficult to ensure privacy. Appropriate for playgrounds. *Photos: 1 & 3 Henk Snoek*

Malta revisited

Army officers' quarters

Austin-Smith, Salmon, Lord Partnership

In 1959 the Secretary of State for War set up the Weeks Committee to investigate means whereby the large programme for Army accommodation could achieve better value for money. As a result of its findings the War Office Directorate of Works was set up under the twin command of an administrator, William Geraghty, and an architect, Donald Gibson. Their organization vigorously sought ways in which that vast, anonymous and sometimes disgruntled user, the army, could be given buildings which genuinely served their needs and, in the process, sensibly contribute to design data. ▷ 538

3

1

1
View of the housing from the west

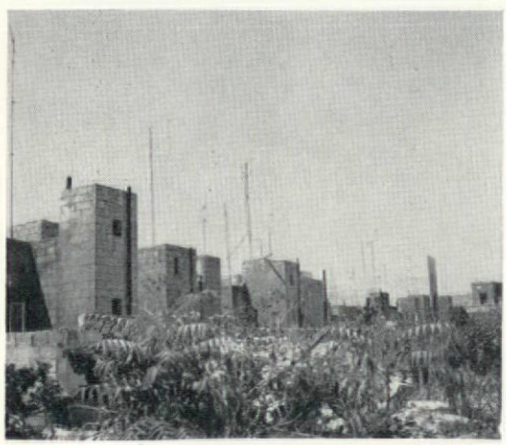
2
Typical Maltese housing

3
Site plan

1 House type SS4
2 " " 2S4
3 " " 2S5
4 " " 3S5
5 heating plant
6 transformer house
7 St Patrick's barracks, existing

4
View from the east

Photos: 1 Henk Snoek; 2 & 4 G. Salmon



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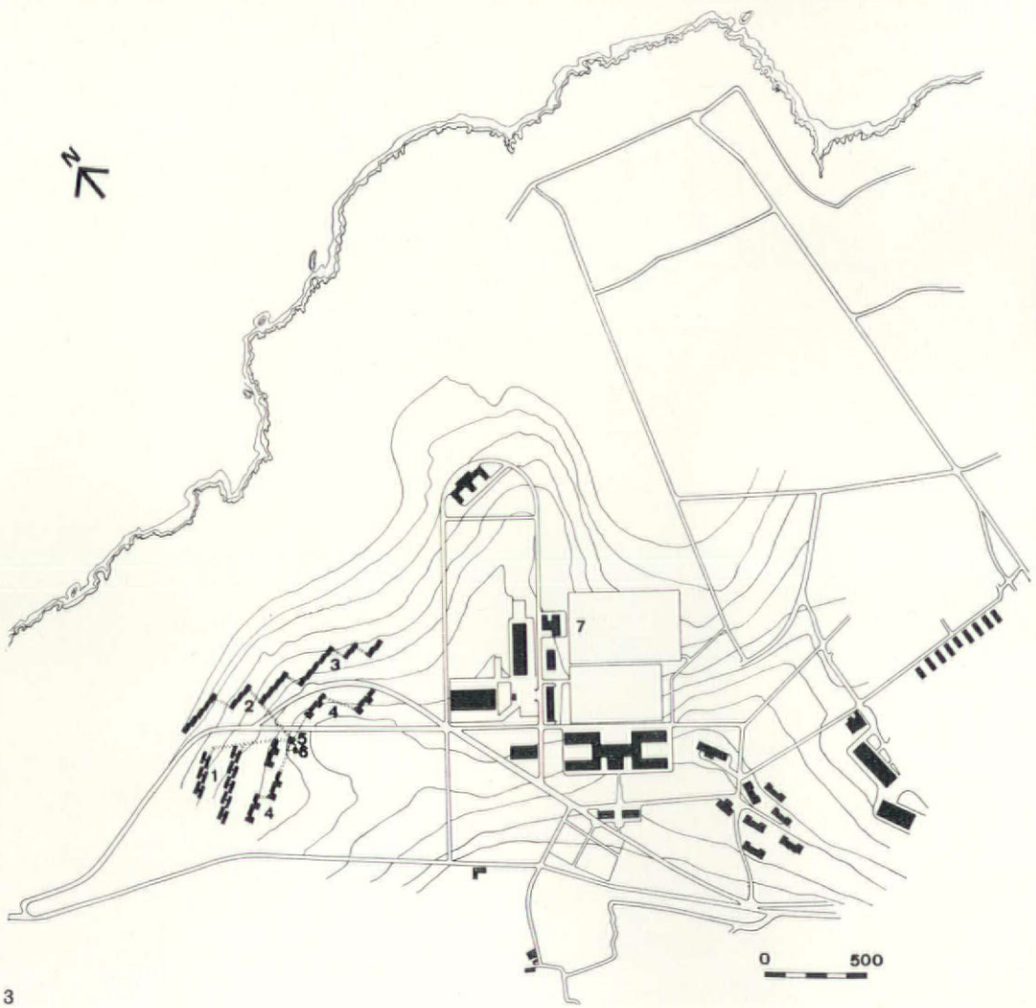

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Many of the organizational methods whereby this was achieved have become textbook examples of architectural management. Our partnership was commissioned to design 59 married officer quarters in Malta in late 1959 as 'external' consultants to DOW and fortunately experienced many of these organizational methods at first hand. We were given detailed briefings by both War Office administrators and architects—consequently we had a complete understanding of the fundamental basis and need for the accommodation. Responsibility for extending the brief* was placed firmly on the 'external' design team of architect, quantity surveyor and engineers. Great emphasis was placed on the need to discuss 'user requirements' with army officers of all ranks.

*The following extract from a briefing letter to the architects typifies the approach:
'The "Q" Brief and Barrack Synopsis Scales (Appendix 2) have been drawn up in the tradition of UK practice, modified in certain specific ways to suit a tradition of sub-tropic building. Little account has been taken of the particular climate, the particular site and the particular requirements of officers and their families in Malta.
'You are therefore asked to regard the requirements as stated as a statement of standards and secondly as a statement of detailed needs which you will follow so far as it allows you to provide the best value for money, making the best use of the site and other resources in the light of the local conditions which you will ascertain. As soon as you conclude that the detailed requirements in any respect are likely to prejudice good value for money, you will refer back to WA 2 with your alternative proposals. Arrangements will be made by WA 2 for you to meet military personnel to obtain user reactions and technical advice.
'Cost information in Malta is scarce and unreliable and cost planning methods will be of only limited value in controlling the total cost of this project. Cost planning will, however, ensure a controlled distribution of expenditure and you will therefore collaborate with the quantity surveyor and produce a "Cost Plan".'

Our approach was on the basis of an investigation, hypothesis, testing and check-back cycle. First we took a very detailed look jointly with the quantity surveyor at every conceivable aspect of living and building in Malta. We expected, and found, a new environment **2**, new materials, unknown costs and a rather exceptional kind of user. This was followed by an 'esquisse' which tested basic ideas and obtained a notion of probable cost. Then a further visit combined with a questionnaire to 31 officers living on the island, the results of which strongly influenced the plan form of the quarters. We found that to the average serving officer his quarter represents a 'home from home' in which he and his family live usually for a maximum of three years. While he has little time for the finer points of home-and-garden-making he places the greatest importance on privacy, to compensate for the communal nature of his Army life and work. The community in which he lives could be described as 'in-bred' both because he is an Englishman abroad and because, unlike the average householder, he belongs to the same 'firm' as the man next door. In order to preserve his own individual identity he instinctively prefers the detached villa with a large (albeit untended) garden. On such a site, however, such dispersal was neither economically desirable nor practically feasible.

The final designs were presented to DOW in early 1960, and, following acceptance in principle, presented to the potential users two weeks later. Thus the users (or at any rate, their predecessors) were consulted throughout the design process and knew exactly what they were going to get. Work began in May 1961 and the scheme was completed in late 1963. The quarters have now been 'lived in' for almost two years. While we as architects learnt a good deal from the design approach it seemed to us of vital importance to complete the cycle by returning to Malta and finding out the failures and successes of the scheme. We therefore revisited the site in July 1965, and with permission of the Ministry of Defence interviewed several families living in the quarters to obtain their views. In addition we made purely personal observations which although they inevitably suffer from being subjective, were of great value.

The comments invited were limited to matters affecting three main aspects of the scheme, viz: the environment generally; the amenities provided; and the detailed planning of the quarters. Analysis of these comments was broken down as follows:

Environment and site planning
(i) The density of the dwellings and their relationship one to another.
(ii) The degree of privacy attained and the degree of overlooking in the quarters.
(iii) The site and its landscaping.
(iv) The motor traffic within the site and its effects.
(v) What sense of community exists within the site.

Detailed planning of the quarters
(i) Linkage of dining, living rooms and hall.
(ii) Link with the garden.
(iii) Privacy of internal and external space.
(iv) Layout of bedrooms.
(v) Layout of the kitchen.
(vi) Storage space.
(vii) Sitting out space.

Site amenities
(i) The adequacy of washing and drying facilities.
(ii) The playground space.

▷ 539

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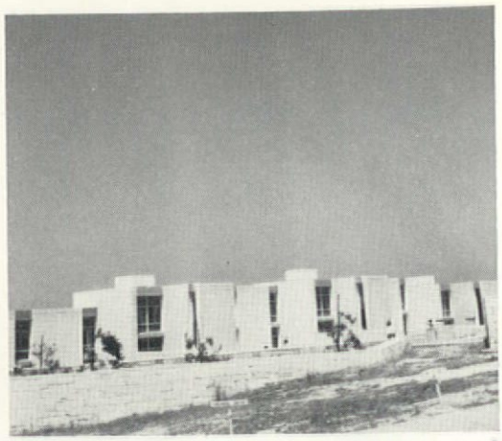

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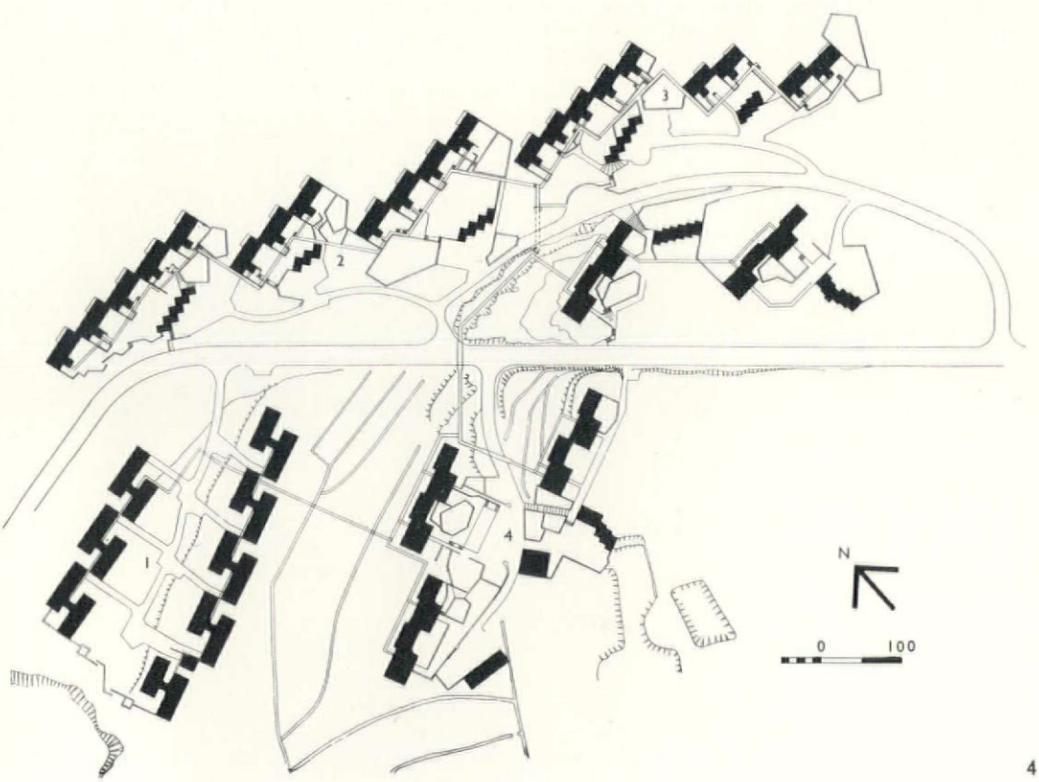
(iii) The proximity of garages to dwellings.
(iv) The provision of parking space.
(v) Pedestrian movement around the site.
(vi) The scope for personal gardening.

The degree of climatic control attained

Seven occupants of different types of dwellings were formally interviewed. The results were sufficiently consistent on fundamental points to enable general appraisal of the scheme to be made. Photographs were taken to record some of the comments visually and some of these are reproduced. The following appraisal is based partly upon the comments made by the occupants and partly upon our own observations.

The environment and site planning generally: one occupant said that he thought living on this site 'was a bit like living on the moon'. This is partly a fair description! Imagine a rocky hillside sloping 1 in 8 to the Mediterranean with barely any soil upon it. Sharp sea spray corroded boulders and old quarries make walking difficult and crazy rusted tumbleweeds of World War II barbed wire still lurk near the shore. The potential idyll of living on a Mediterranean hillside—very apparent to the designer at the outset—had clearly passed this occupant by. Nevertheless, the hillside had and still has a great beauty and peace; asphodel and cacti grow between the rocks, and thyme and other aromatic plants smell wonderfully under warm sun and almost the year through. The intention was to maintain these idyllic qualities; by grouping the housing as closely as possible forming a comprehensible self-contained community, a cohesive group tied to the rocky hillside yet offering its temporary officer tenants the privacy and seclusion which he demanded in his answers to our first questionnaire.



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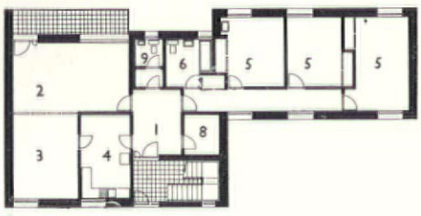

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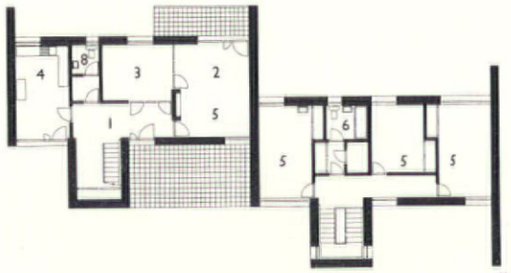

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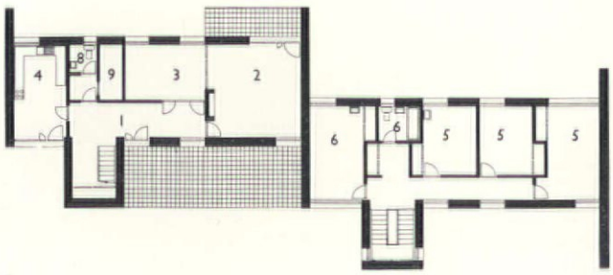

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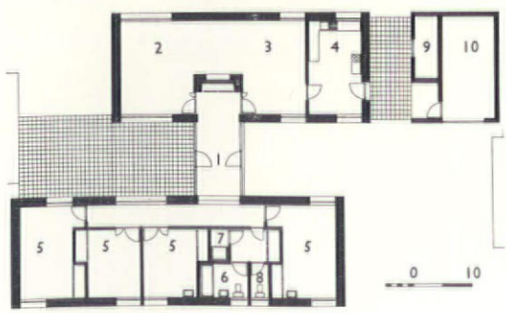

9

Key to plans

1 hall or lobby
2 living
3 dining
4 kitchen
5 bedroom
6 bathroom
7 shower
8 w.c.
9 store
10 garage

Two types of quarters—one of 1650ft² (type IV), and the other of 1450ft² (type V)—were distributed in single-storey and two-storey houses and three-storey flats across that part of the site already served by two disused roads. They were placed along the contours and sited according to the facility of foundations and access. Although the site formation is entirely of rock, it varies greatly in quality and consistency so that foundation excavation was a major cost factor. The three-storey flats **1, 6** are southernmost and furthest from the sea; the two-storey houses in a series of blocks forming a wide arc directly overlooking the sea **2, 7, 8.** The single-storey 'bungalows' are to the west on a gentler sloping site **3, 5, 9.** This mix of dwelling types gives interest both within and outside the site. It gives a greater sense of cohesion between the separate elements—especially when viewed from afar—than is actually the case. It may even be responsible for the fact that inhabitants of the dwellings at widely separated parts of the site, each privately believe that his is the better planned or the more favoured in its siting. ▷ 541

1
Three-storey houses from the north
2
Two-storey house clusters
3
Single-storey houses
4
Layout of house types 1 SS4. 2 2S4. 3 2S5. 4 3S5
5
Three-storey houses beyond single-storey ones
6
Plan 3S5 (three-storey blocks)
7
Plan 2S5 (two-storey blocks)
8
Plan 2S4 (two-storey blocks)
9
Plan SS4 (single-storey)
Photos: 1, 2 & 3 G. Salmon; 4 Henk Snoek

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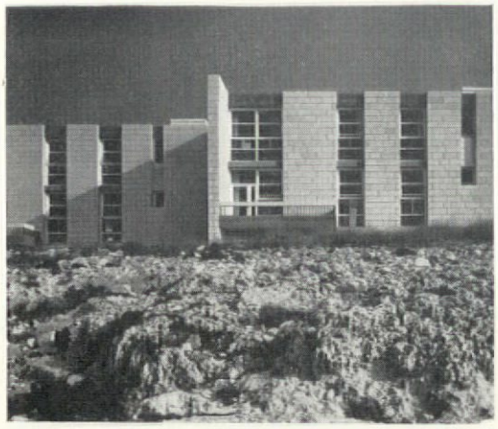

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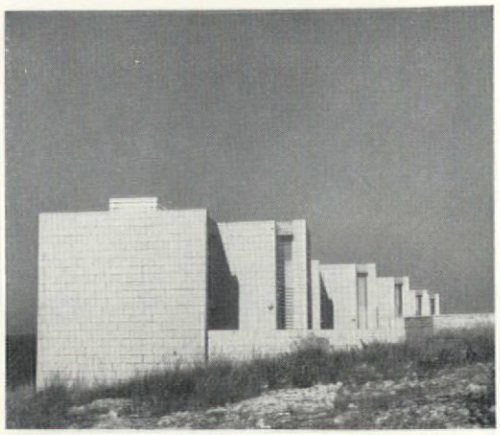

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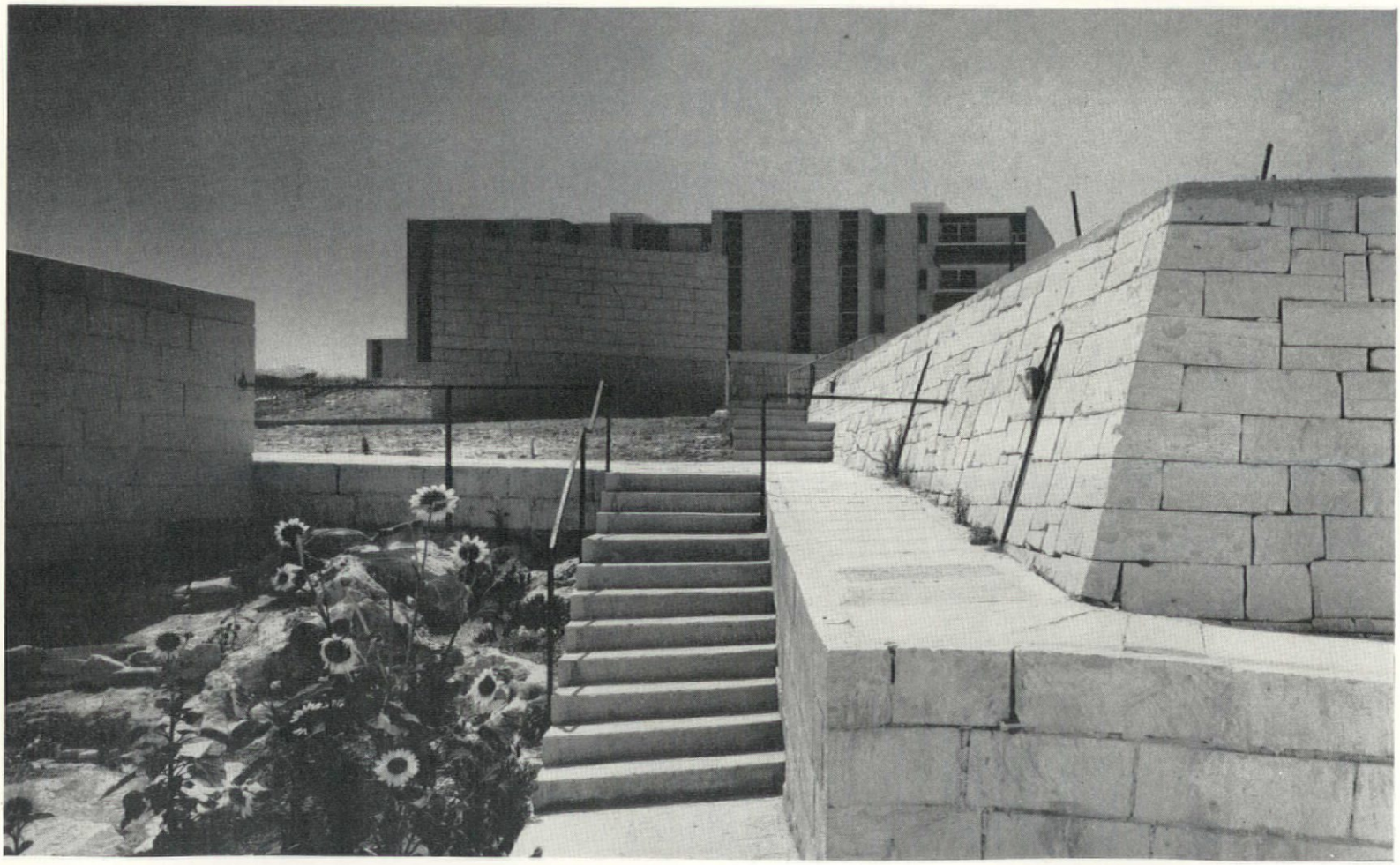
Each adjoining house in a terrace was stepped back from its neighbour to emphasize their separation and to afford mutual shading. The occupants of the two-storey houses in these terraces understand and are satisfied with this arrangement. On the seaward face they are completely unaware of houses on either side **1, 2.** From the landward side **3** only the problem of airborne sound occasionally worries them. But this was also an expected problem. On an isolated rock-strewn site with little vegetation and far from the background 'hum' of regular traffic, sound travels far. This would also occur between widely separated detached houses in the same circumstances. Strangely enough the occupants do not associate sound problems with living in a terrace and one wife thought that it was an advantage 'to be able to shriek out for one's next door neighbour if one's husband was away'. Indeed, none were exceptionally prejudiced against terrace houses as such, and the arrangement in Malta appears to have overcome many of the normal objections to living 'cheek by jowl'.

A sloping site such as this inevitably creates problems of overlooking from roadways or paths into houses or their gardens which exist at lower levels. In UK this can be solved either by light timber fencing, by rapid growing shrubs and trees or by screen walls. On the Malta site it was decided to make garages the main screening element between roadways and houses **4**, and generally this has proved successful. Regrettably it was necessary in some locations to place the garages at right angles to the houses, to facilitate road access down particularly steep slopes. The absence of garage screening in some places is a nuisance which has not been easily overcome **8**, as the light split cane screens over which it was hoped that bougainvillea and other exotic climbers would romp, have been blown down by the winter gales.

Similarly there were the usual problems of overlooking from one group of dwellings to the next on such a sloping site. In Malta a compromise had to be reached between giving the higher level dwellings the superb view of the coast line to the north-west and at the same time shielding dwellings below from overlooking **5.** After careful sight line exercises, stone rubble walls or earth retaining bastions were strategically placed. In the event occupants agreed that overlooking between groups has been mainly eliminated and the principal failure remains between the end houses of the two-storey terraces.

To reduce the total length of the two-storey houses across the site, each terrace 'overlaps' the next by about 30 feet, with the ends separated by about 60 feet and at differing levels,



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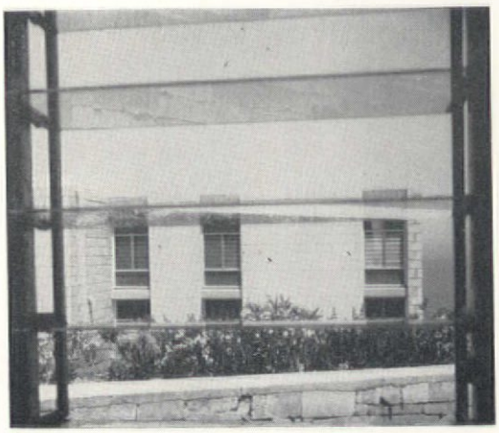

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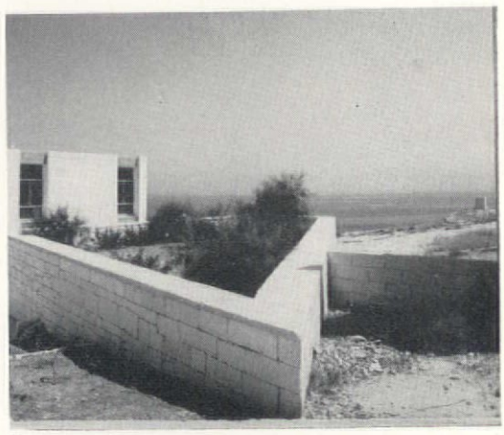

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varying as much as 30 feet. But this strategy is a failure because of the 'sense' of overlooking which takes place between the upper and lower houses **6.** The occupant of one 'lower' house was not worried; he could take any necessary precautions. His 'upper neighbour', however, was acutely embarrassed in case, when looking out to sea, he was mistakenly assumed to be looking into the lower house! Their overlooking problem had been anticipated and will be lessened when the trees mature in the large earth-filled 'bastions' which we have provided between the terraces **7.** Two occupants of end houses in 'lower' terraces thought that there were advantages in their location because it was away from the rest. Others wanted more stone rubble screen walls, and it was difficult to explain that the cost of them (and ironically their foundations) was the limiting factor. Strategic planting was also attempted, but only a relatively small sum was spent on this, much to the occupants' annoyance. There is not the depth of soil or natural irrigation for shrubs to grow quickly, and in order to plant a tree or shrub a hole must be hacked out of the rock about 5 feet in diameter and say 5 feet deep: cost of hole about £10, cost of plant about £1, plus constant watering. About 100 trees and shrubs were originally planted, but many were destroyed by gales or sun. However, the local MoPBW now has a planting programme well in hand.

Concerning motor traffic, luckily the army decided to close one end of the existing roadway which threaded through the site, which means that there is no fast through traffic as originally anticipated, and the pedestrian bridge/tunnel shown on the original site plan crossing the main road was considered unnecessary. Everyone agreed that motor traffic was barely a hazard. ▷ 543

1, 2 & 3
Three- and two-storey housing blocks seen from the east, north and west, to show how the stepping of the individual units cuts them off from one another while allowing for continuous massing

4
View from an entrance court showing bastions and garages acting as screens

5
View to the north showing how the view to the coast is retained for both the upper and lower level houses

6
Overlooking; a problem that is not entirely resolved

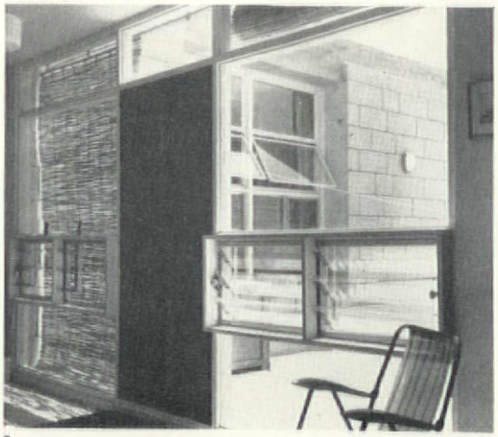
7
Trees starting to mature to provide a sense of enclosure in the large earth filled bastions

8
An unresolved relationship between garages and houses

Photos: 1, 2, 4, 5 & 7 Henk Snoek; 3, 6 & 8 G. Salmon

8

1



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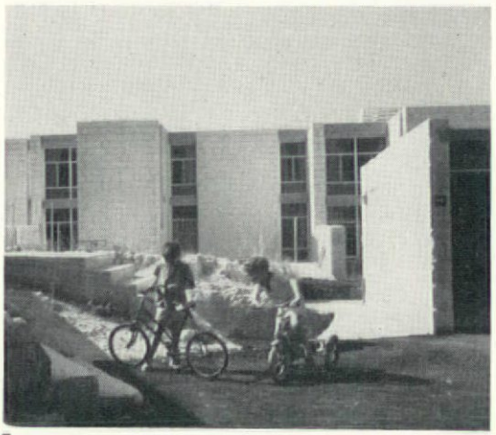

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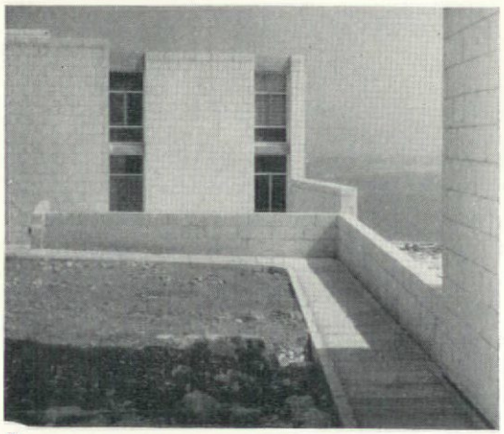

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◁ 542

What slight sense of community exists does so principally because the men work together, 'all part of the same firm', and because, somehow, the site imposes a sense of an isolated English colony. There are not the numbers to encourage community activities within the site. The original letters of the Blocks A to M on the architects' site plan have been used by the Army as the initials of a series of English castles 'Arundel' to 'Monmouth'. Some officers have put up name plates at their front entrances. The community seems to be as neat, self-contained and detached as a middle-class English suburb, even to some small brown, parched, 6 foot square lawns sown on 3in-deep soil-covered rock in 'back gardens' facing the Mediterranean.

When the detailed planning of the quarters was discussed this year, several of the occupants said that they wished they could take the houses back to the UK with them. Though critical of details, they enjoyed the flexibility of the ground floor with dining and living rooms and hall linked by sliding full height doors. In fact this derived directly from the answers of the officers five years ago to our questionnaire on the frequency and method of entertainment. It was interesting to find that this frequency had not changed appreciably. Their desire for air circulation during the hot summer months (May to September) kept the ground floor opened up during that time, though in winter when northerly gales brought cold draughts, the doors were closed. Some of the two-storey and the single-storey occupants thought their large halls were wasteful of space. Others agreed that it gave an agreeable impression of airiness and space upon entering, and made a useful play space for very young children. All this we had originally intended.

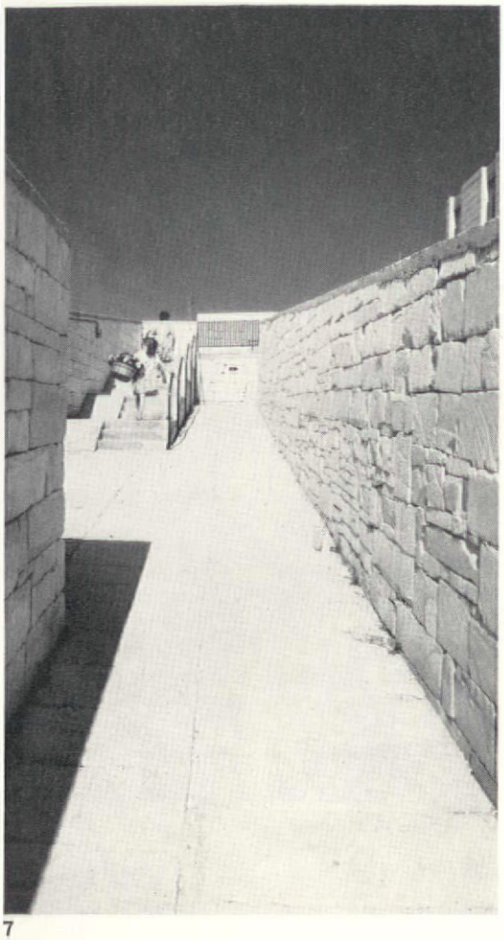
There were no criticisms of the link with the courtyards on the south face of the two-storey houses. But there was strong criticism of the fully enclosed ground floor balcony on the seaward side, which was galling to us. We had designed steps down from the balconies in spite of the desire for security expressed in the questionnaire. But they were eliminated during construction because of the worry over security expressed by high-ranking users, plus the hazardous nature of the site between the houses and the sea. Now we discovered that several occupants had unscrewed the balustrade rail and used ladders or home-made steps to get down to the ground! **1** The single-storey occupants were delighted with their twin enclosed courtyards, but some of the two-storey occupants suggested a pergola on the south side to give shade when sitting out. Other single-storey occupants had used split-cane blinds over their east- and west-facing windows in the absence of a pergola **2**. (This too was ironic, since pergolas had been included in the design but had been omitted on the grounds of excess maintenance.) Some preferred to sunbathe; a few had manufactured shade by umbrellas or home-made pergolas **3**.

The principle of cross ventilation, which had given the houses wide frontages and consequently bedrooms of conservative width, was understood. However, everyone thought the bedrooms too narrow with only 2ft 6in between the bottom of the bed and the wall. The flat dwellers were all convinced that their quarters were the largest in the whole area in spite of the fact that they were of the smaller (1450ft²) type, and this we attributed to the long views possible between living room and bedroom wing interspersed by a large hall space. But they complained that they had nowhere to sit out except their north-facing balconies which did not permit sun-bathing. Communal areas for sun-bathing had not been consistently provided, and this was a valid criticism.

Storage is a problem in all housing, but particularly for the army, with all their trunks and packing cases for moving families to the next posting. All quarters had been provided with store rooms, but some officers with batman service used these for cleaning, and asked why no windows had been put in them. Garages were also used as storage space, and there were complaints that no electric light had been installed in them so that they could be used as workshops, etc.

The layout of the kitchen did not provoke as much criticism as might have been expected. It was inconvenient for using as a family breakfast room because its limited width and door positions were too restrictive. The 'breakfast bar' idea suggested in the questionnaire was still not popular. And the fundamental mistake of omitting a hatch link between kitchen and dining room, on the assumption that servants would serve from a trolley, was politely pointed out.

The chief comment on washing and drying facilities centred round the fact that, because the original split cane screening had often blown down, washing lines were too exposed in some places **4**. New timber slatted screens were being erected but require vegetation over them to overcome their sun-bleached rawness.



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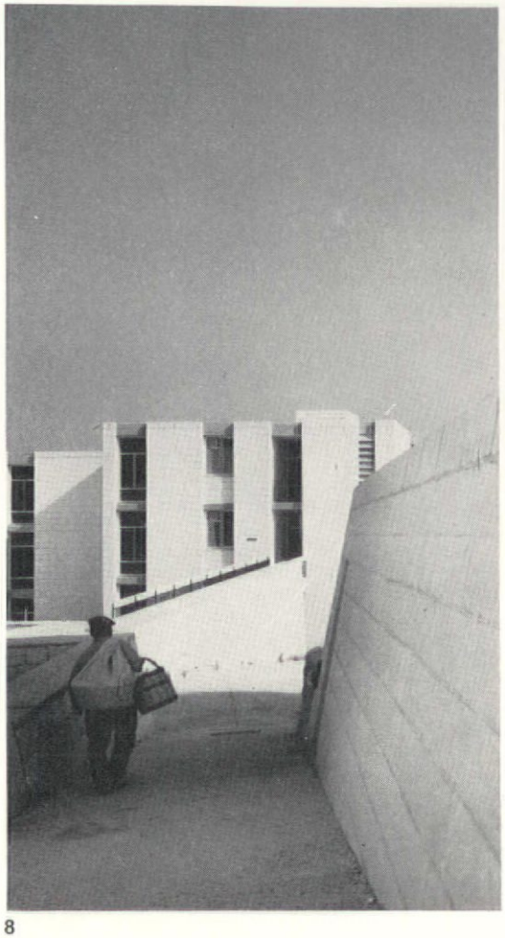

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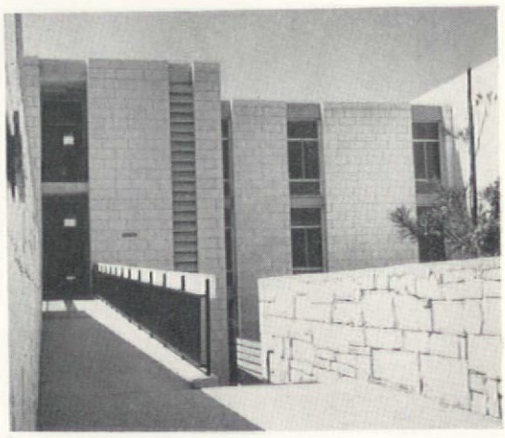

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10

Parents of young children up to 6 thought that the courtyards of the houses offered adequate safe play space close to the eye of the mother. Children from 6 to 10, more adventurous, would rather play games and ride bicycles in the garage area **5** than make their way to the playground behind the flats. Although this sounded dangerous, in fact the limited number of the garages per block and the fact that they were all at the end of culs-de-sac made the practice acceptable to the mothers. While considering this problem it occurred to us that were cattle grids placed at the entrances to all garage areas, traffic would be forced to slow down, and the inevitable bicycle riding and roller skating would be that much safer. Parents thought that if traffic were as erratic and dense as in UK the 7–12s would need local playgrounds, but ignored the obvious fact that then parents would be much more strict as to where children played. In any case parents preferred their children to play near at hand within the 'safe' part of the site rather than 'out on the rocks'. The exigencies of sites of this nature undoubtedly demand a higher expenditure on protected play spaces, but the insulation of the area from fast traffic has enabled the present compromise to continue as acceptable.

Everyone was enthusiastic about the proximity of garages to homes. This is a fully motorized middle-class community with no local shops and an infrequent bus service. The women rely almost entirely on their cars and in the summer heat or winter gales the decision to provide garages at 100 per cent ratio to dwellings was a wise one. The storage, cleaning and workshop problems of most houses in any case makes the garage seem an essential adjunct for every type of dwelling even though the family may not necessarily possess a car. And the corollary of a motorized community, often forgotten, is reasonable space for guest cars and tradesmen. In Malta this was generously provided and is appreciated.

The site is not a large one and until rock surfaces were soil-covered, pedestrians simply took the shortest distance between two points. The route of the general services duct **6** joining all blocks was intended as a pedestrian way when it is exposed, and particularly as principal entrance route to the front courts of each house. The worst hazard to pedestrians is the abrupt change of levels which occurs particularly in the lower areas of the site. Many flights of steps and some ramps overcome this problem **7, 8** but the site planning of these was a nightmare. It was originally intended to form large common platforms for each block above ground level, so placed as to eliminate steps and require only slight ramps. This idea was discarded on economic grounds, and the ramps only exist to ease the route to first floor level in flats **9, 10.** They are immensely successful, but the general impression now is of a half measure. Certainly the question of pedestrian movement on many housing sites deserves at least as much attention as that currently given to vehicle movement.

During the three-year term of duty the average officer does not customarily become very enthusiastic about gardening, especially when water is difficult to obtain and soil is sparse. It is surprising therefore that the small courtyards/patios which all the houses possess are in many cases being carefully tended and will become charming traditional small Mediterranean gar-

▷ 545

1
Home made steps from the balconies

2
Split-cane blinds installed by occupants

3
Canvas awnings provided by occupants

4
Laundry considered to be too much exposed

5
Children playing with apparent safety in the garage courts

6
Pathways made up from covered service ducts

7 & 8
Flights of steps and ramps providing access from one level to another and, equally, intimate enclosed spaces between the open roadways

9 & 10
Ramps designed to provide ease of access to first floor flats in the three-storey blocks

Photos: 1–6, 9 & 10 G. Salmon; 7 & 8 Henk Snoek

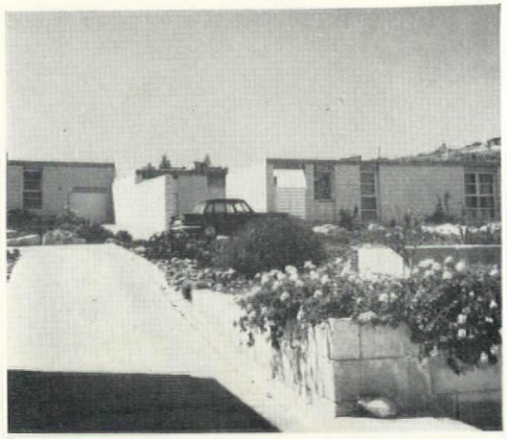
1

◁ 544

dens **2.** Many appreciate the local flora enough to use mesembrianthemum as ground cover instead of grass and cacti instead of roses **1.** The blasting of foundations destroyed much of the local lichen and rock plants nearby and created a dust nuisance which perhaps spurred the inhabitants to landscape. The easier it is to see the gardens from the road the better they seem to be. Those garden areas at the rear of some of the flats are often neglected. After hot summer sun has turned the soil into dust bowls, the appearance is dismal. Eighteen 30ft deep by 15ft diameter walls—bell-shaped in section—were hewn out of the rock substrata throughout the site and take all roof water, which is then used for irrigation.

The varying climate of Malta and the exposed position of the site made climatic control extremely important. A central boiler house provides partial district heating between November and April when temperatures descend to the 40s—an amenity greatly appreciated by the occupants. Layout and construction is, however, primarily oriented towards the relief of heat and humidity during the summer months. The plans permit virtually complete cross ventilation, the masonry walls are built with a cavity which is not customary in Malta, and an air gap beneath stone slabs gives summer roof insulation. The window design was chosen with care: low-level glass louvre blades induce air across the rooms at body level during the summer **3, 4** on the south side all glass is heat-absorbing and on the north side high level projecting windows were added to increase ventilation from sea breezes. The results of this design are superb in the summer—'the coolest non-air conditioned houses in Malta', said one occupant—but were initially disastrous in winter. The fierce northerly winter gales pushed through the louvre blades and caused draught and rain to penetrate. The louvre manufacturer protested that this was his first failure and was unable to suggest a remedy. In fact the solution has been to insert an internal lightweight sash during the winter to give double glazing. The air gap between louvres and glass is sufficiently stable to eliminate the troubles. Nevertheless the experience has made at least one architect vow never to use louvre windows again—at any rate until a suitably draughtproof louvre can be produced at reasonable cost.

These are general impressions, but their effect reinforces the idea that architects can learn a good deal by returning to the 'scene of the crime', and observing whether or where they made the fatal blunder. However rational he may try to be during the design process, an architect is inevitably involved with the idea rather than with the reality. Over a distance of time, however, he can become sufficiently detached to consider if his design approach was right—did he ask the right questions? Did he draw the correct conclusions?—after which he may be nearer to answering truthfully the terrible last question—did he succeed in interpreting those conclusions correctly as seen in the building itself? *Geoffrey Salmon*



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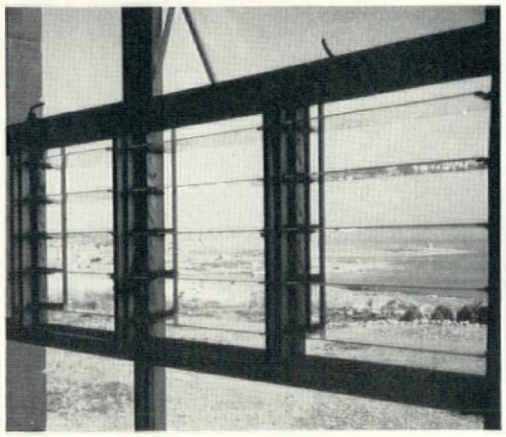

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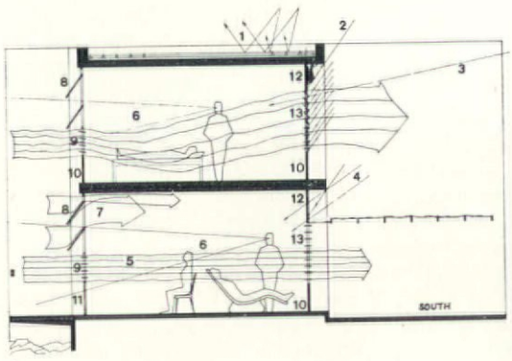


4

1
Cacti and succulents serving as ground covering around the new houses

2
Carefully tended gardens of a more familiar type

3
Low level glass louvres were, unsuccessfully, used in all the houses

4
Diagram of the ventilation and heat reducing system
Key
1 sun high in summer, roof to reflect solar heat
2 September solstice, lowest desirable elevation of the sun
3 optimum sight line from next house
4 December solstice some sunlight desirable
5 main breezeway
6 open view to north
7 secondary breeze
8 glazed projected windows
9 glazed adjustable louvres
10 solid sill
11 glazed sill
12 actinic glass
13 actinic adjustable louvres

Photos: 1 Henk Snoek; 2 & 3 G. Salmon

Two houses, Cambridge

Colin St John Wilson

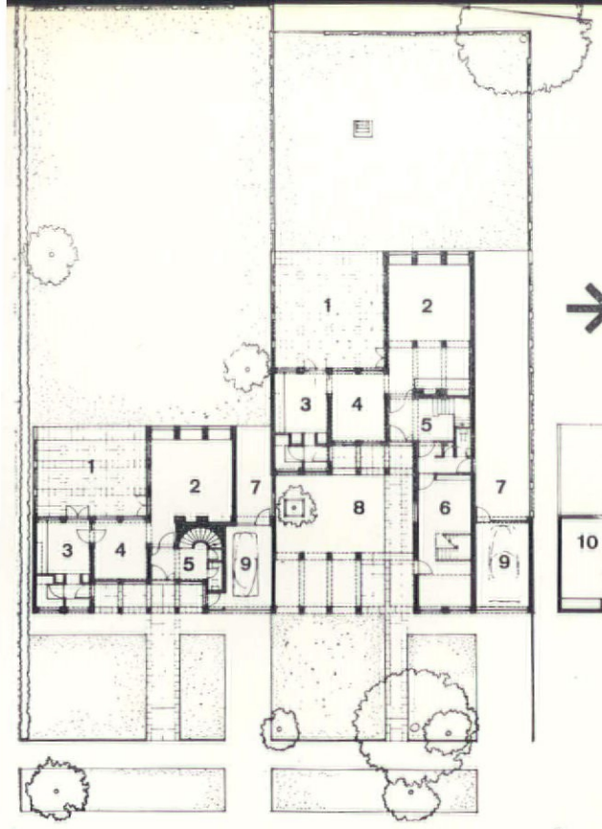
Engineers: Felix Samuely and Partners

Quantity surveyor: Davis, Belfield and Everest

Most crucially among building-types today the house poses a task whose varied solutions are differentiated not so much by their technical or operational content as by their symbolic intentions. The difference between the Farnsworth house and Aalto's summer-house at Muuratsalo is not a difference of 'function' nor (unless you share the Miesians' historical determinism) of technical system, but of the acutely determined embodiment in each case of a 'way-of-life', the precise incorporation of a set of values.

It seems better to acknowledge this gap that must be jumped (however appalled we may be at the dangers) than to pretend either that it does not exist or that it will 'bridge itself' or that it could be the pretext for a private joke. And so to make a house today is to be compelled (with no hope of evasion) to make a manifest declaration of faith. It would be so much easier merely to write of the more innocent intentions of such

▷ 548



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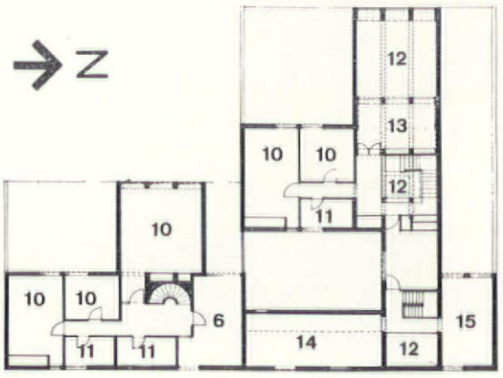

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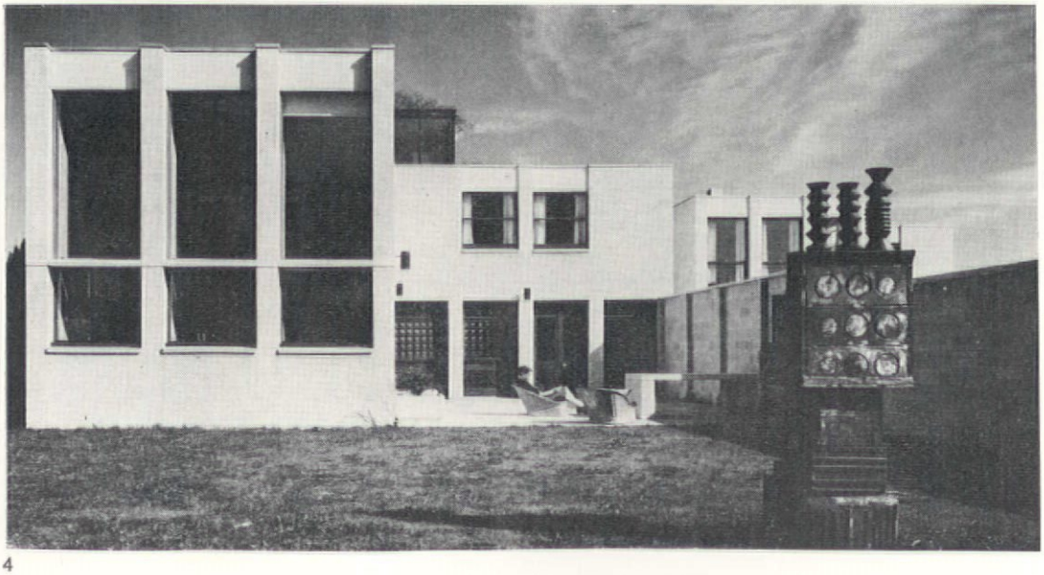

4

1 & 2
Ground and first floor plans
The house on the left was built for Dr Squire, that on the right is the architect's own

1 patio	9 garage
2 living room	10 bedroom
3 kitchen	11 bathroom
4 dining	12 void
5 hall	13 library
6 study	14 studio
7 yard	15 workshop
8 gravelled court	

3
Street elevation of Dr Squire's and C. St John Wilson's houses

4
The Wilson house from the garden court. The sculpture on the right is by Paolozzi

Photos: Henk Snoek

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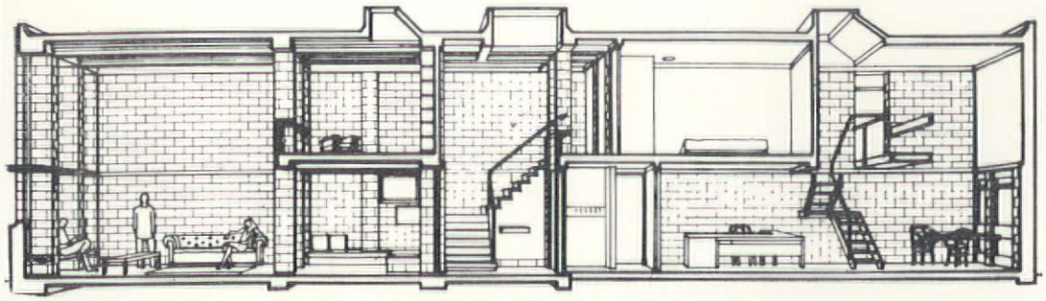


2

1
The gallery wall of the living room

2
Diagrammatic section through the living room, stair-hall and study of the Wilson house

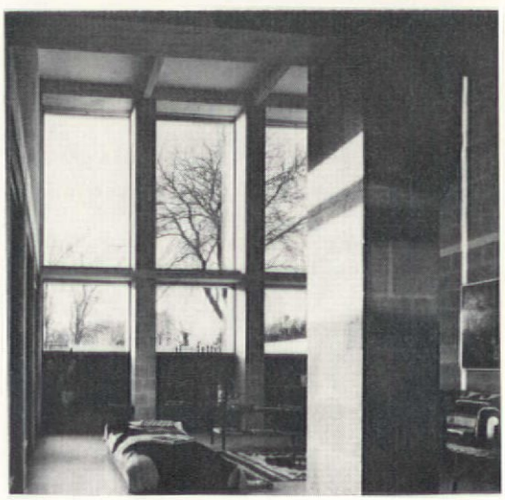
3
The living room seen from the library gallery

4
The west wall of the living room from under the gallery

5
View from the dining room doorway under the living room gallery

Photos: 1, Henk Snoek; 3, Lynn Fishman; 4, Brecht-Einzig; 5, J. Donat

3



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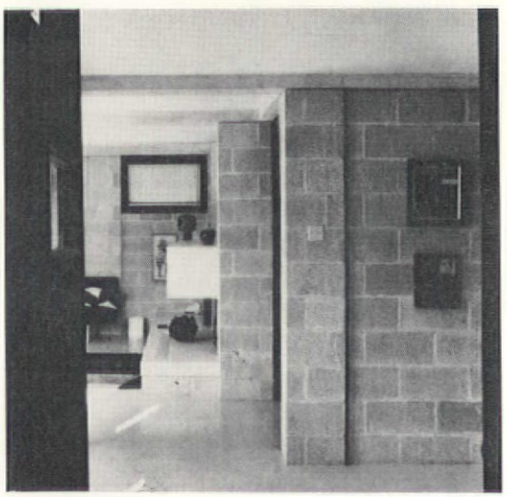


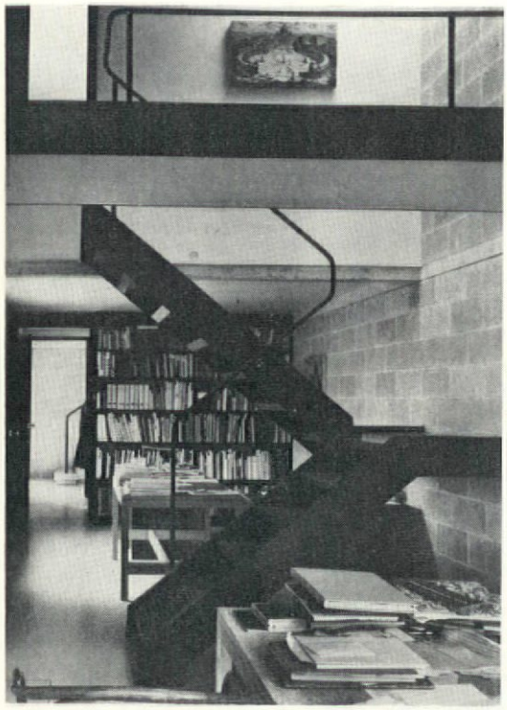
5

◁ 546

work—the working-out of a modular system, the implication of a terrace-form in recognition of the street and the complementary assertion of privacy in the orientation and walling of court-yards; but one is compelled to say more, and in this case the least I can get away with is to say that it now seems more necessary than ever to recover the notion of a house as the embodiment of calm, of fixity. We do better to reserve to our car compulsive images of the dynamic, and we turn for reparation to a quietism that holds a more potent charge of wholeness and self-sufficiency. And so one makes, as best one can, forms that answer to that need, making emphatic the measured enclosure of walls.

The site, on the western edge of town amongst houses of medium size 30–50 years old, is formed by the division of an orchard into plots 50ft wide by 150ft deep.

▷ 549



1

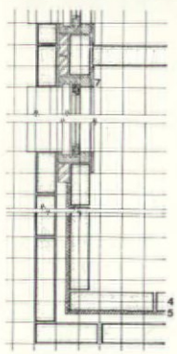
2

◁ 548

Requirements: A house for a University lecturer; the same plus studio for the architect.

Maximum privacy was the aim, achieved in relation to the road by the use of glass-blocks and translucent glass and, in the relation of house to house, by orienting the living rooms around walled patios (facing south and west) and by the enclosure of the gardens by walls.

The building system is modular. The whole building is set out on a modular planning grid by a regular bay space of 4ft 4in located on an irregular tartan of 1ft 0in in the east–west grain and 1ft 4in in the north–south grain. Certain products such as tiles and glass-blocks are not made to mesh in with 4in module. The 10in cavity walls being 'stationed' in a 12in space permitted the rooms still to be on the 4in module. Both houses are constructed from a standard 8in × 16in concrete block made with crushed Abergele limestone and waterproof white cement with white aggregate concrete beams exposed. The interior walls are also of fair-faced blockwork except in bedrooms and bathroom which are plastered. All timber is stained with dark brown preservative. Floors are white rubber tile; heating is by off-peak electric underfloor panels; windows are double glazed.



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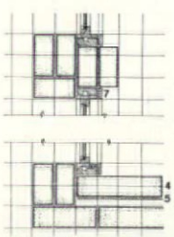

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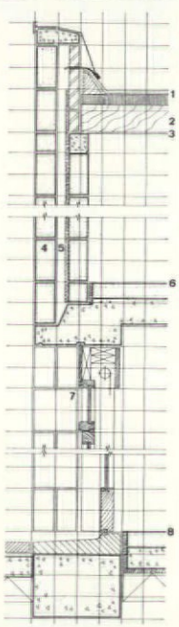


5

1
Staircase in the study leading to the studio

2
Art students on the main stair

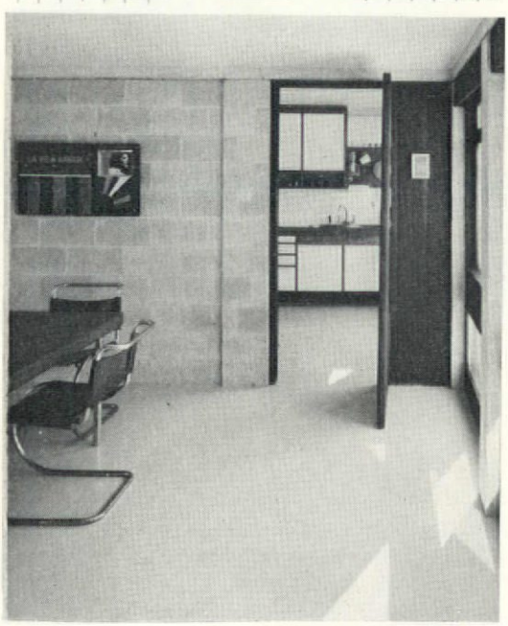
3 & 4
Plan of first and ground floor windows

5
Typical section through an external wall
1 asphalt on woodwool slabs
2 softwood joists
3 aluminium backed plasterboard
4 3⅝″ fairfaced concrete blocks
5 ¾″ polystyrene
6 white vinyl tiles
7 windows of makore stained with solignum
8 white rubber tiles

6
View from the dining room towards the kitchen

7
Kitchen fitting

Photos: 1 & 7, J. Donat; 2, Evan Duff; 6, Henk Snoek



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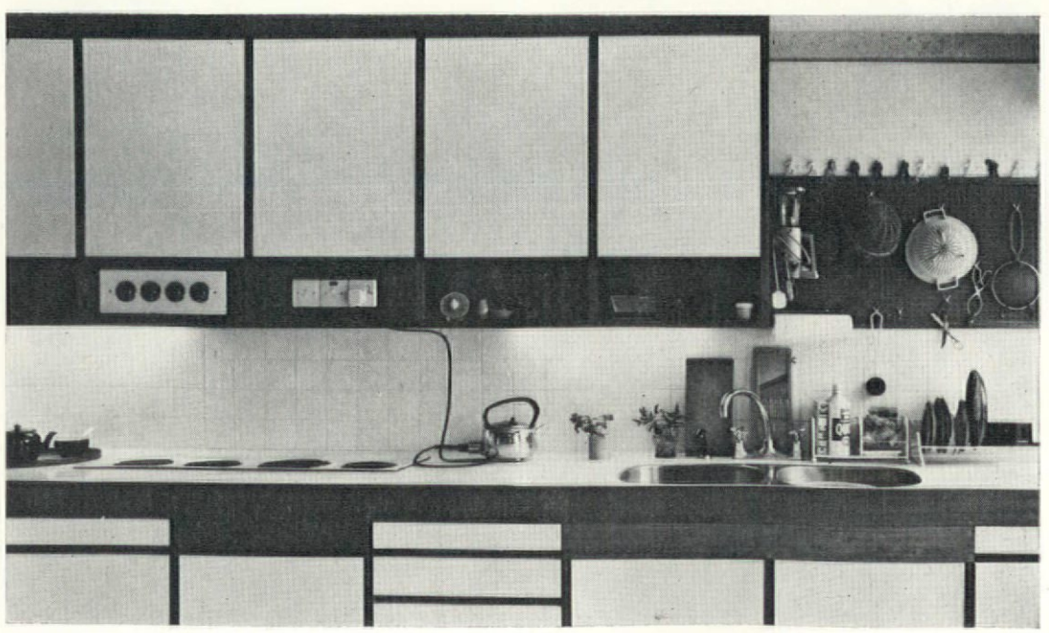

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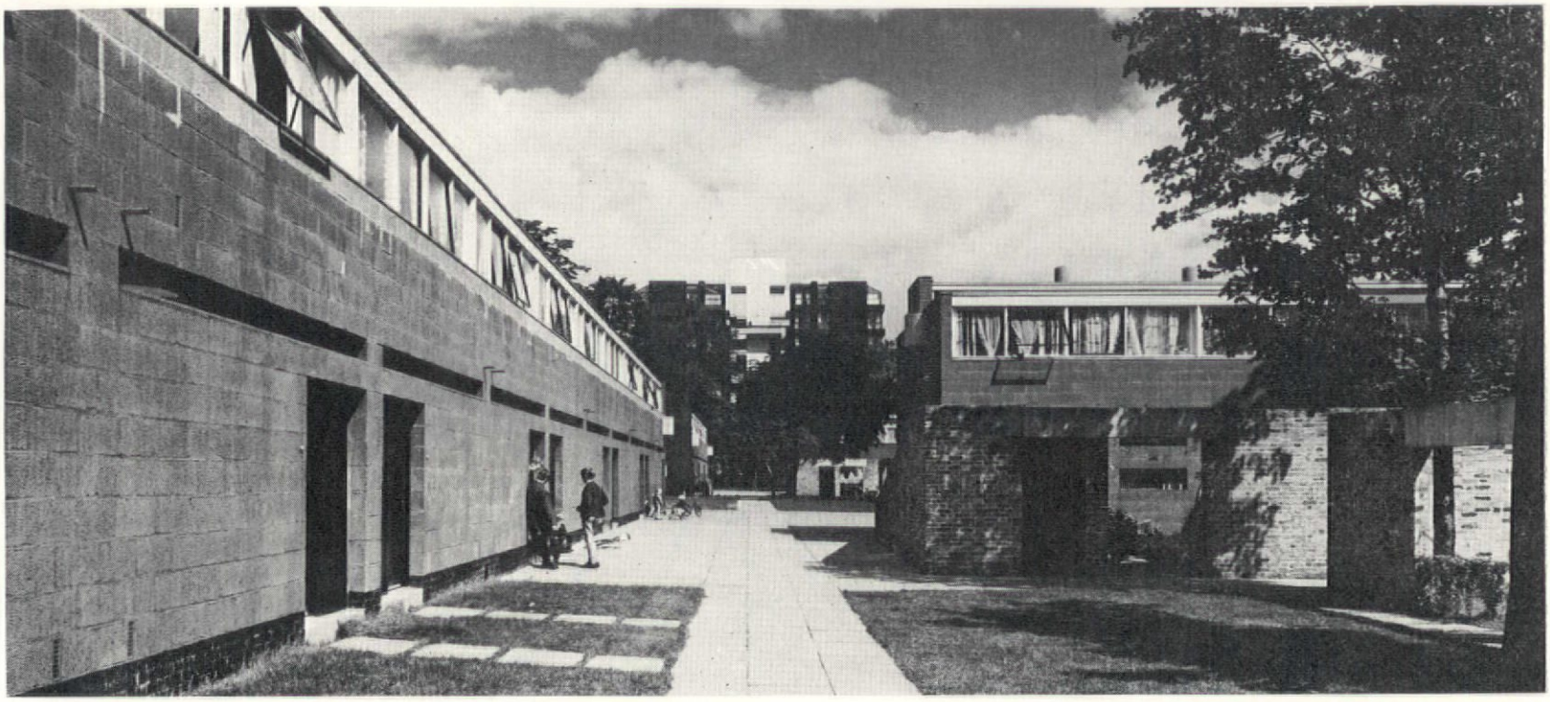

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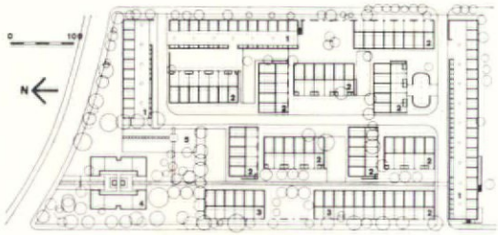


2

1
View south down pedestrian way

2
Site Plan
1 mews flats
2 four-bedroom houses
3 five-bedroom houses
4 tower block
5 pool

3
Central courtyard from the south

Photos: S. Lambert

Vanbrugh Park, Greenwich

Chamberlin, Powell & Bon

Architectural assistants: B. Frost, M. Thomas

Structural engineers: Taylor, Whalley and Spyra

Quantity surveyors: Davis, Belfield and Everest

The site is on the south side of Blackheath to the east of Greenwich Park with an area of 5·7 acres nett (just under 7 acres for density purposes). It is level, with a gravel subsoil. A hundred or two yards north of the site the land starts to fall quite steeply to the Thames valley. The density is 90 persons to the acre.

The general proportion of units of different sizes was provided by the client, Greenwich Borough Council. The architects were, however, asked to prepare two alternative sketch schemes, one with houses and flats and one with flats only. The Council finally decided to pursue a solution of mixed houses and flats.

The majority of flats are concentrated in one eight-storey block (and one low-level floor of stores) at the north of the site to exploit the view to the north and to be unassertive when viewed from the heath which is surrounded by low and medium height buildings. The remaining flats are in the form of mews with a single storey of flats over garages. Because of access to garages, these are on the perimeter and the mews terrace facing the heath has garages on the inner side only, giving a continuous outer wall of old bricks and continuing the form of the old wall to Greenwich Park.

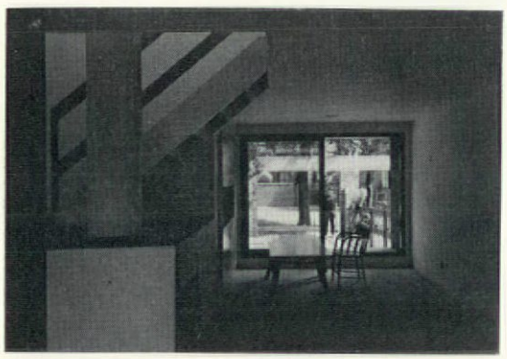
There is an access road down the centre of the scheme and a separate system of pathways, the principal one passing through the tall block to the heath via a bridge over a sunken section of the estate road. There being no through traffic, the road is as much a pedestrian way as the paths.

There are three type plans with two variations. In the tall block there is a two-room type and a variant formed by adding a second bedroom at

▷ 553

3

1



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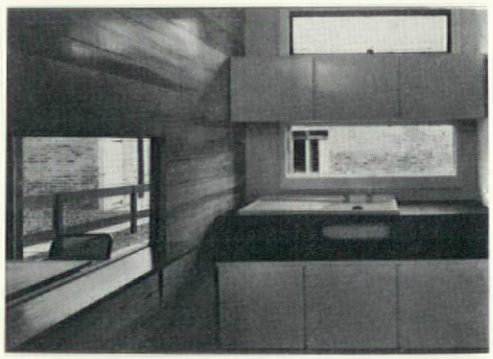

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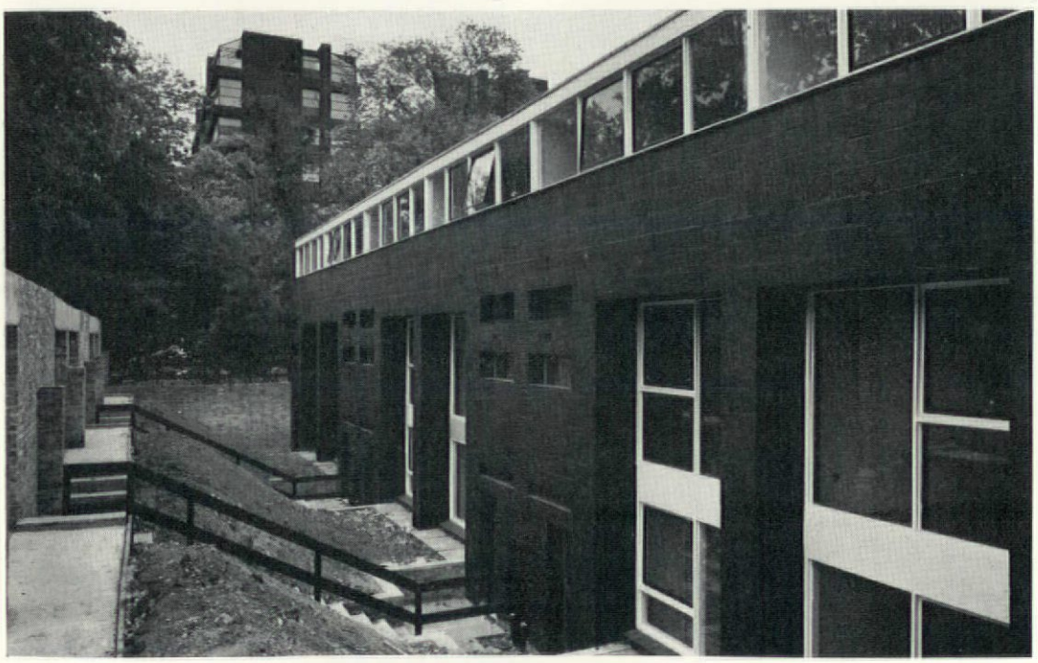

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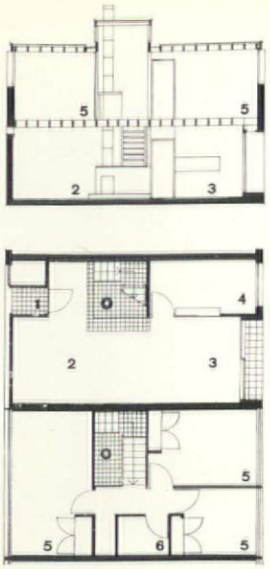

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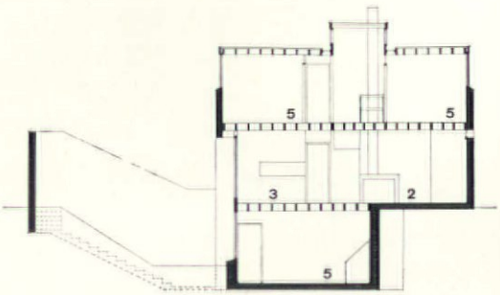

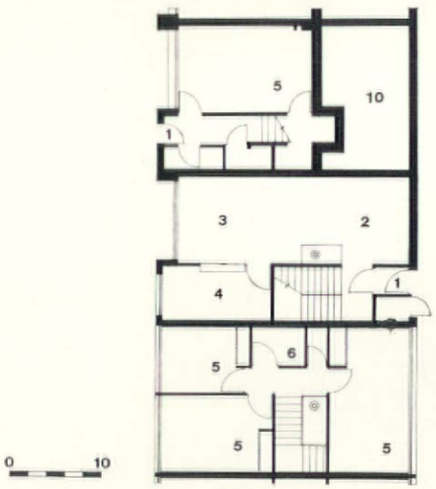

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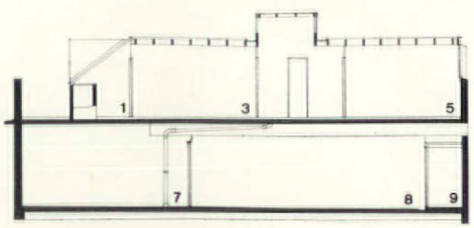

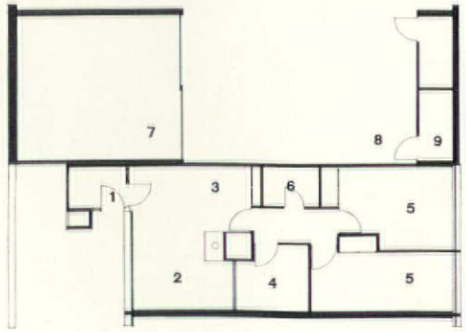

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8

1
Four-bedroom houses with the pool in the foreground

2
Living room in four-bedroom house

3
Standard kitchen

4
Five-bedroom houses

5
Plan and cross-section of four-bedroom house type

6
Plan and cross-section of five-bedroom house type

7
Plan and cross-section of mews flats

8
Mews flat access gallery with the tall block in the background

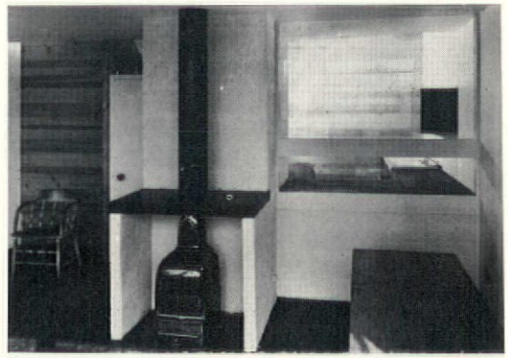
9
Mews flat: living room and kitchen hatch

10
Mews flats, access gallery with garages below

Photos: 1, 8 & 10, S. Lambert; 2, 3, 4 & 9, J. Maltby

Key to plans

1 entrance	6 bathroom
2 living room	7 garage
3 dining room	8 covered road
4 kitchen	9 store
5 bedroom	10 unexcavated



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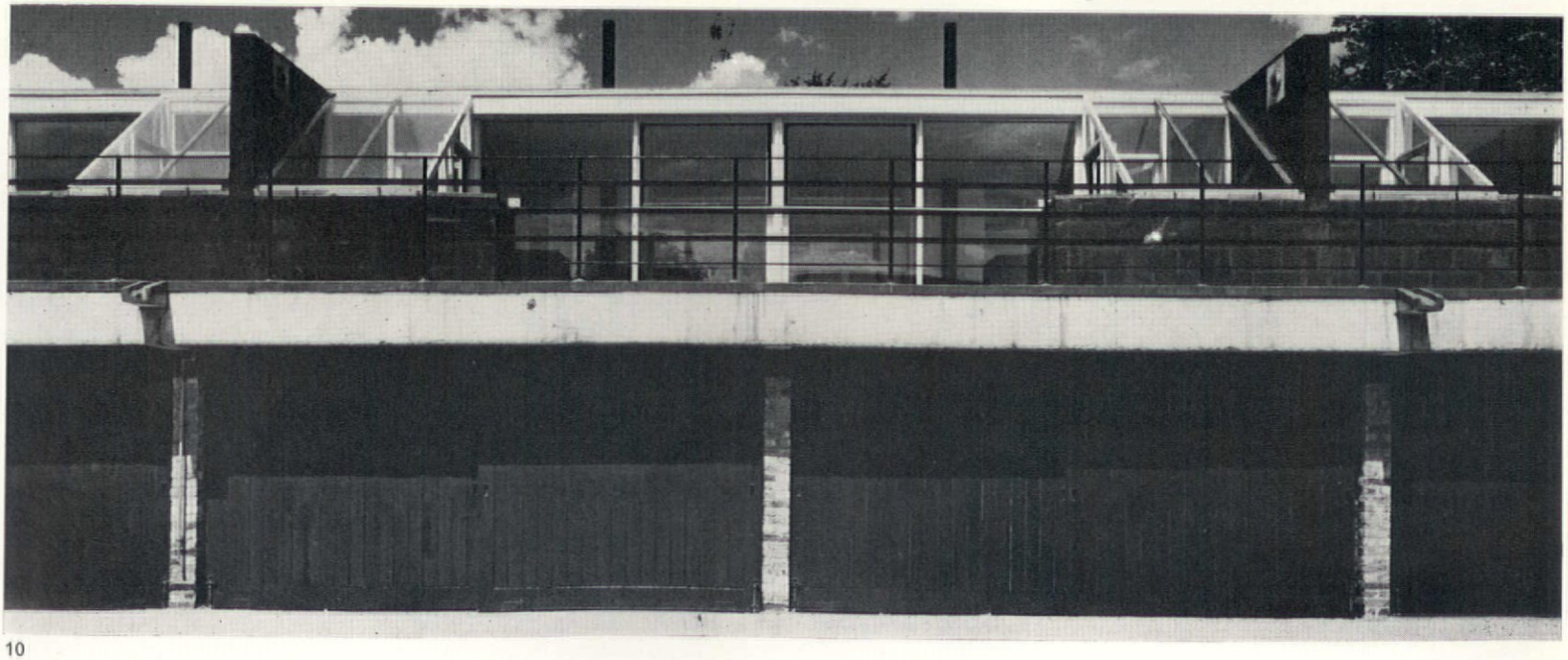


10

1

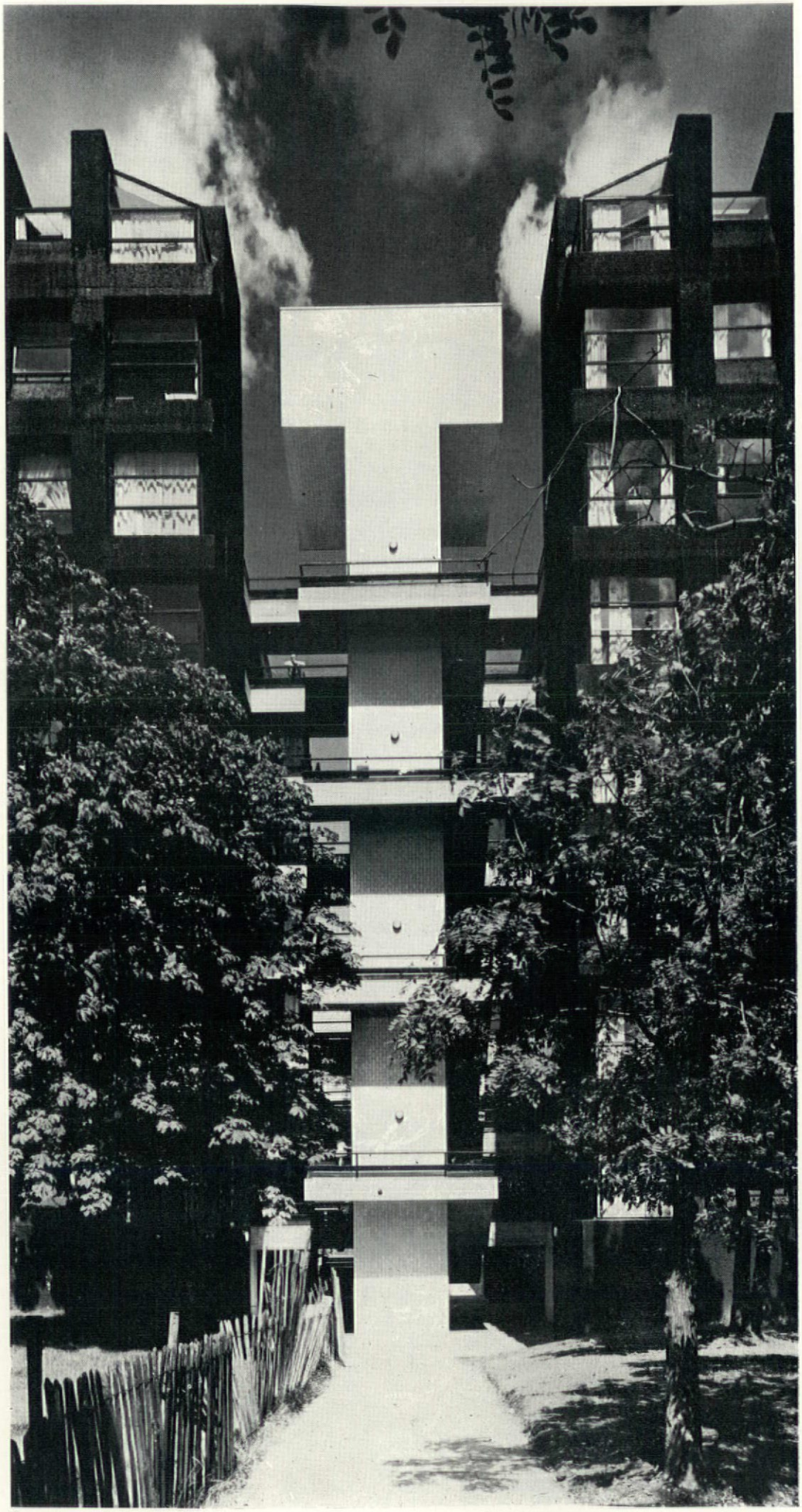
◁ 550

the end of the block. The mews flat type with three rooms is consistent, while the four-room houses have a variant where a fourth bedroom is added—at a lower level—exploiting dips in the site on the lines of the old basements.

The plans in the tall block are conventional, but the mews flats have an outlook from the living room over the access way. For a degree of privacy a glazed porch projects forming a terrace recess. The house plans centre around the stove, which is encased with blockwork forming a large mass for the retention and diffusion of heat at a low surface temperature in the manner of continental stoves. The stove block which forms the landing of the stair provides heat by convection to the bedrooms.

The external walls of both the mews flats and houses are of cavity construction, both leaves being of concrete blocks containing their own additional cavities. This gives a good degree of insulation, but is not in conformity with the London Building Acts, which leaves the matter largely to the discretion of the District Surveyor, who proposed several possible treatments, including rendering and tile hanging. A thick elastic paint-like finish was finally accepted and this has unfortunately faded, the original neutral brown fading to pink. It was the architect's original intention to apply a thin permeable decoration to cover damage to blocks, which can quite easily be chipped or scored. Having seen the blockwork undecorated, it became clear that this would have given the best appearance had it been allowed.

The tall block is of reinforced concrete, pick hammered and with the normal Thames valley ballast aggregate. To mask the inevitable rust stains from displaced wire stirrups and from pyrites in the aggregate, it was the architect's intention to stain the concrete with a thin watery stain that would soak right in and give the appearance of a naturally very dark concrete of a brownish colour. Creosote was at first considered. The stain ultimately selected did soak in, but it dried, forming a seal so that any overlapping of coats produced dark irregular bands. It is hoped that in time this will weather.



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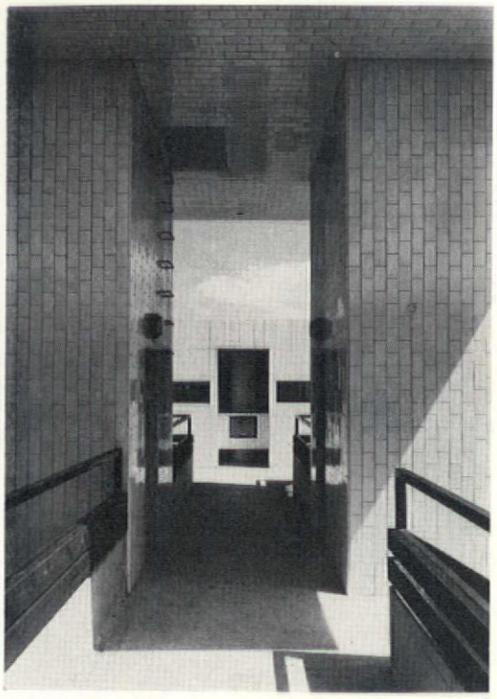

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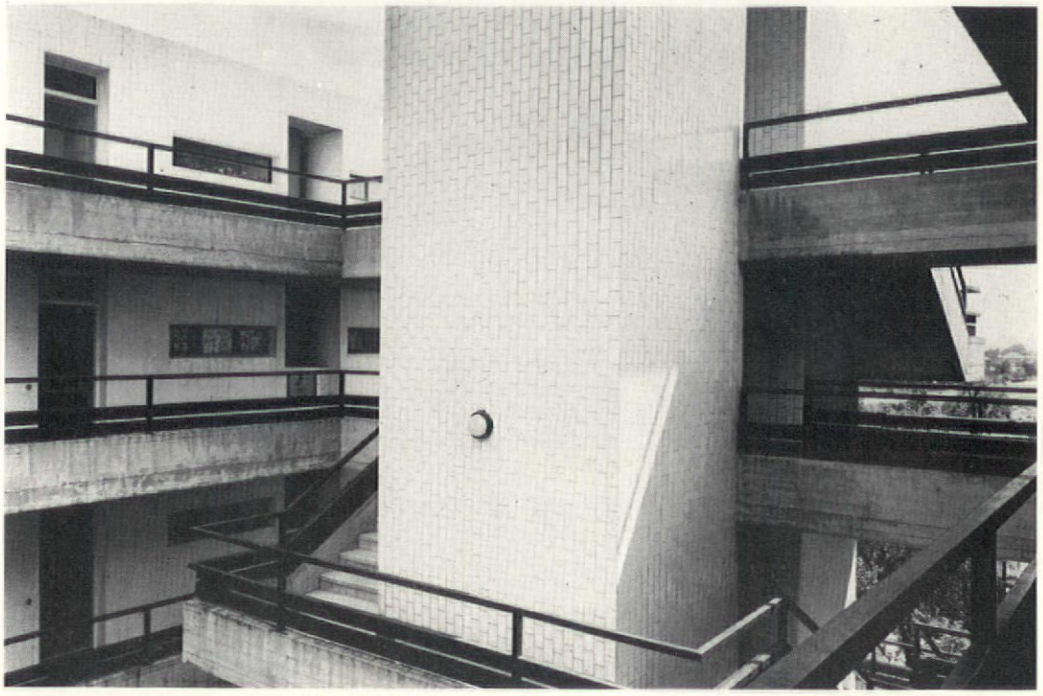

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1
Tall block from the east

2
Stair and lift shaft of tall block

3
Bridge on the top floor in the tall block, showing the two lift shafts and the soffit of the water tanks above

4
Stair and access gallery of the tall block

5
Top floor living room in the tall block

6
Living room and kitchen hatch

7
Typical floor plan—to the same scale as plans on p. 551
1 living/dining
2 kitchen
3 bedroom
4 bathroom

Photos: 1–4, S. Lambert; 5 & 6, J. Maltby

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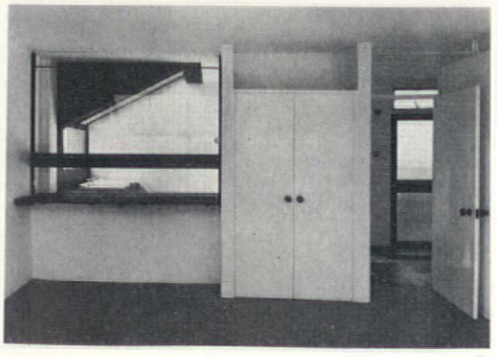

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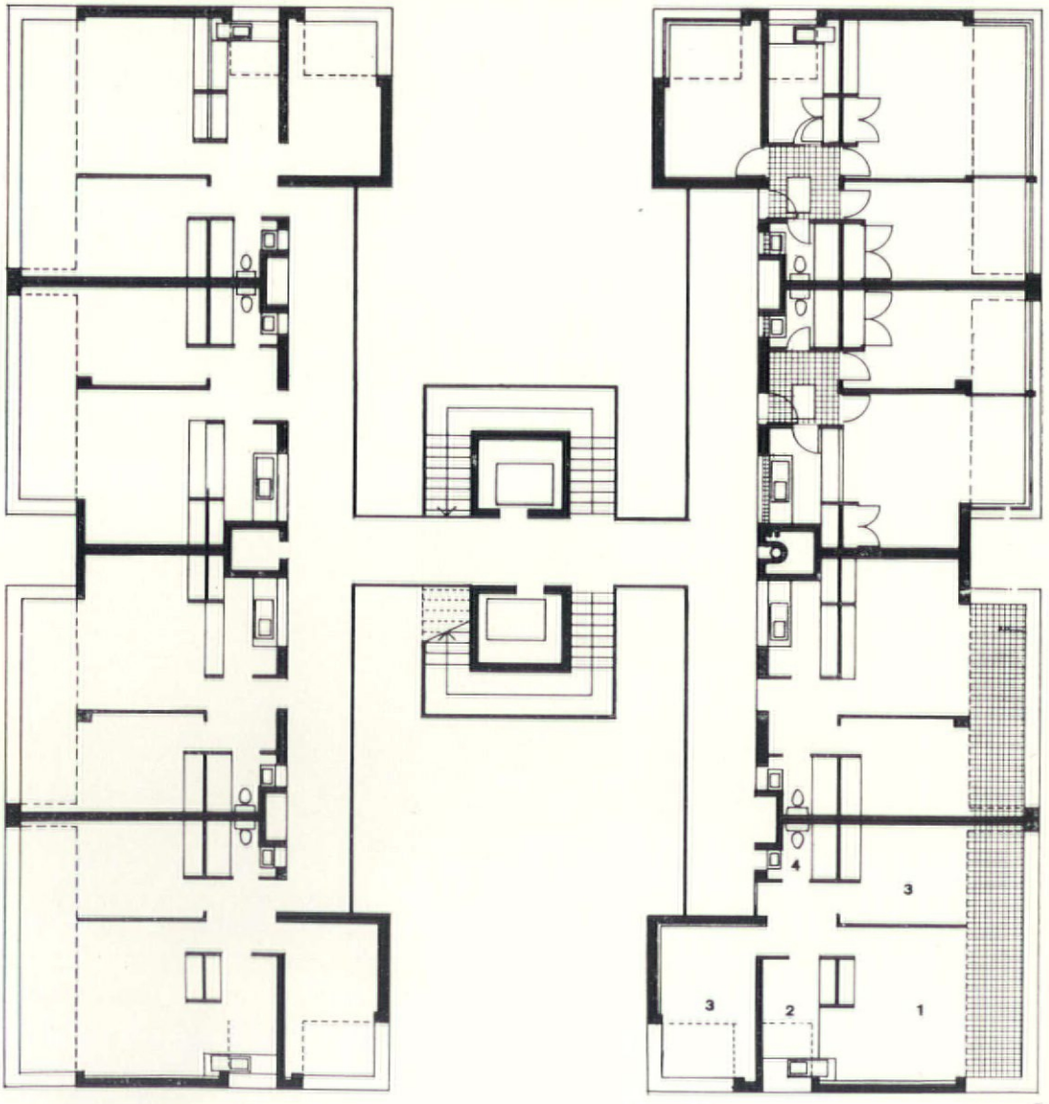

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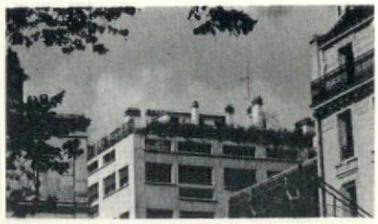


1

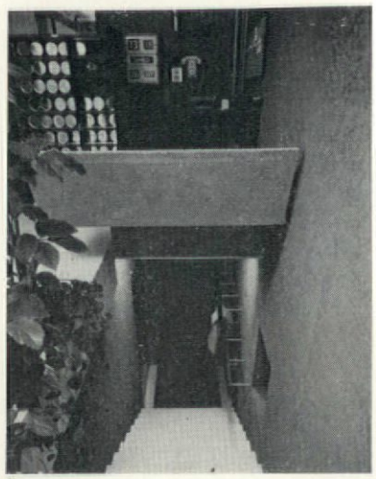
Penthouse flat and office, Paris

Ionel Schein

Claude Demoulain
Jan Rol
Jeanine Abraham

All Photographs Thomas Cugini

Position: the top floor of a recently completed building in Paris.
Programme: the conversion of an existing volume into free and organic spaces for living and work.
Description: Separation, flow, interpenetration of spaces, acts and daily movements that relate to the constructed elements.
Analysis: Totality and unity are restored to the scale of the human body in movement, alone, carrying out rites in relation to the furniture, the walls, the floor and the ceiling, in harmony with the transparencies and the opaque surfaces; in accord with materials and forms—following a rule free from fads, expressing a complete faith in architectural magic. The light of night and day is handled like a material. A language of materials, rough, polished, and tufted—a symbol of interpretation and agreement. The forms, enveloping, welcoming, repelling, directing—in contrast to functional formalism.



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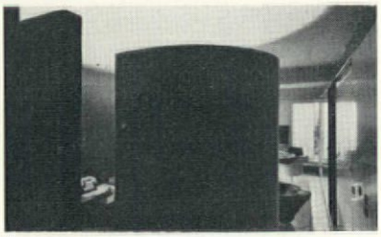

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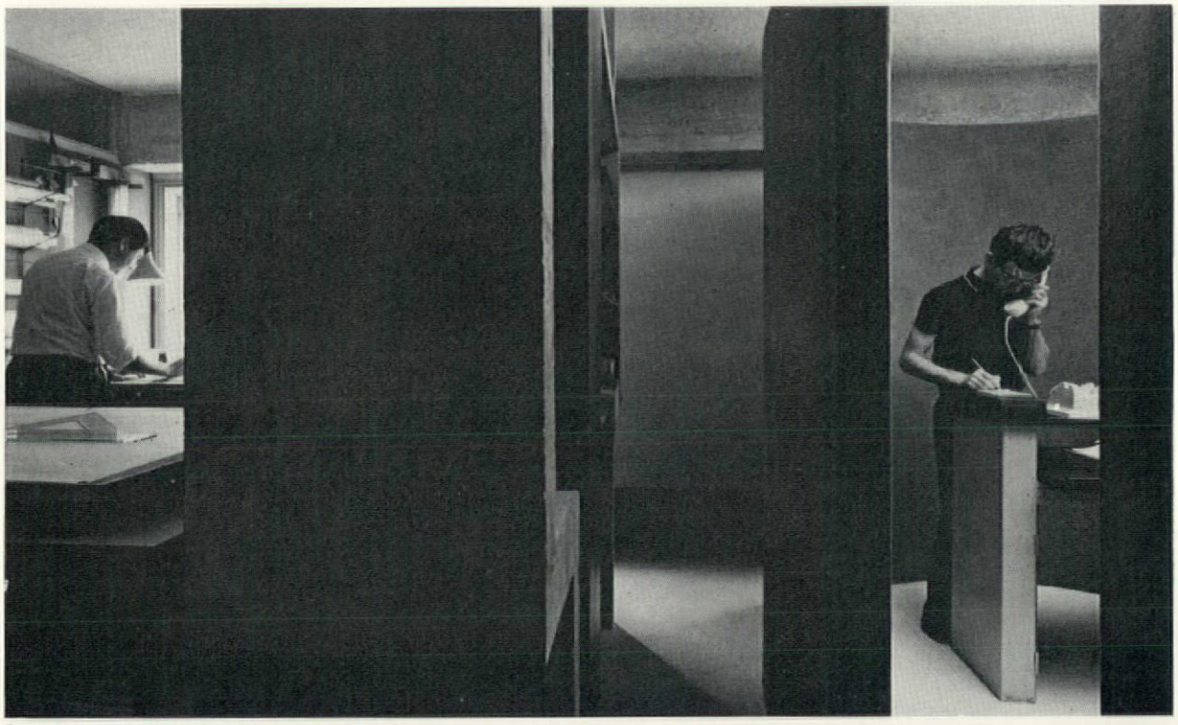

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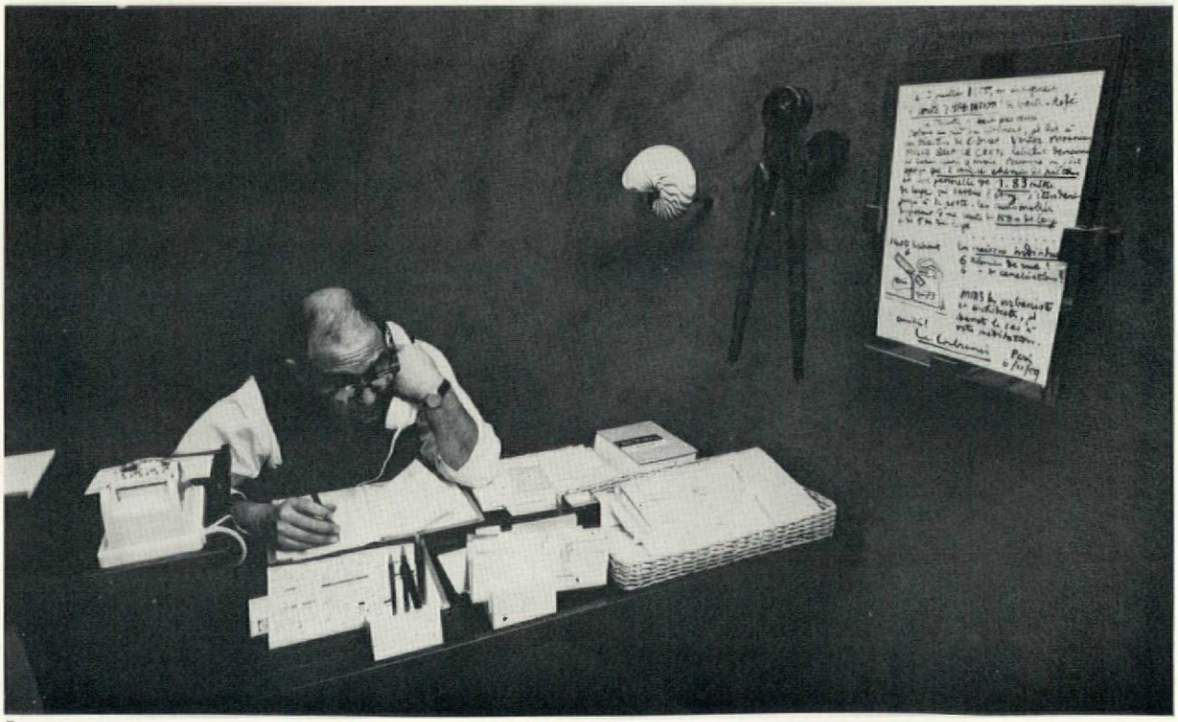
Situation: dernier étage d'un recent immeuble Parisien.
Objet: conversion d'un volume existant en espaces libres et organiques conjuguant habitat et travail.
Description: separation, fluidité, interpenetration des lieux, d'actes et gestes quotidiens dont la demarche s'allie aux éléments construits.
Analyse: La totalité et l'unité sont ramenées à l'échelle des corps se deplaçant, s'isolant, officiant des rites en communion avec les objets et les parois, avec le sol et le plafond; en harmonie avec les transparences et les opacités, en accord avec les matières et les formes—suivant une rigueur libre de tout snobisme, experimant une foi totale dans la magie architecturale. Lumière du jour et de nuit traveillée comme un materiau. Langage des matières brutes, lisses, raiches, touffues—symbole d'interpretation et de concordance. Les formes, enveloppantes, accueillantes, repoussantes, dirigeantes—fuient le formalisme fontionnel!



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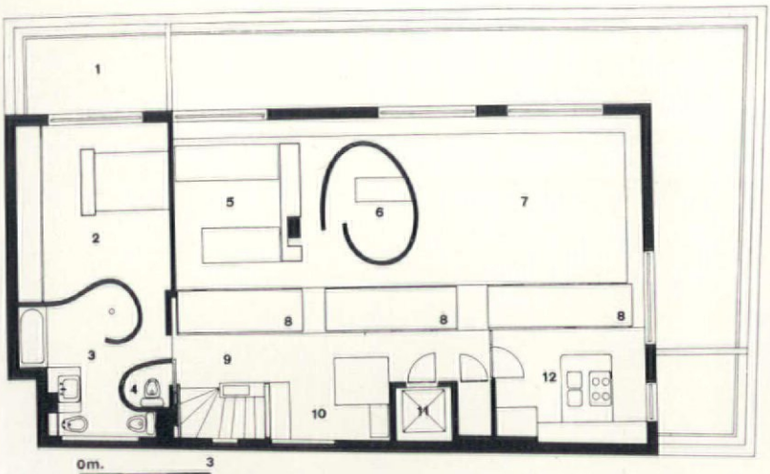

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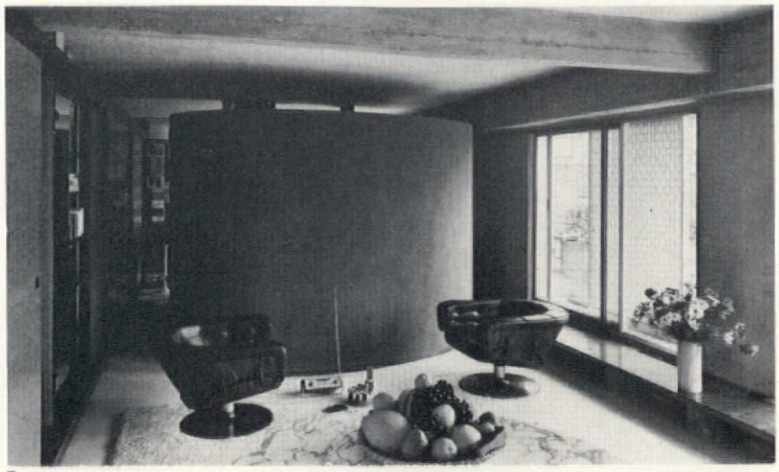

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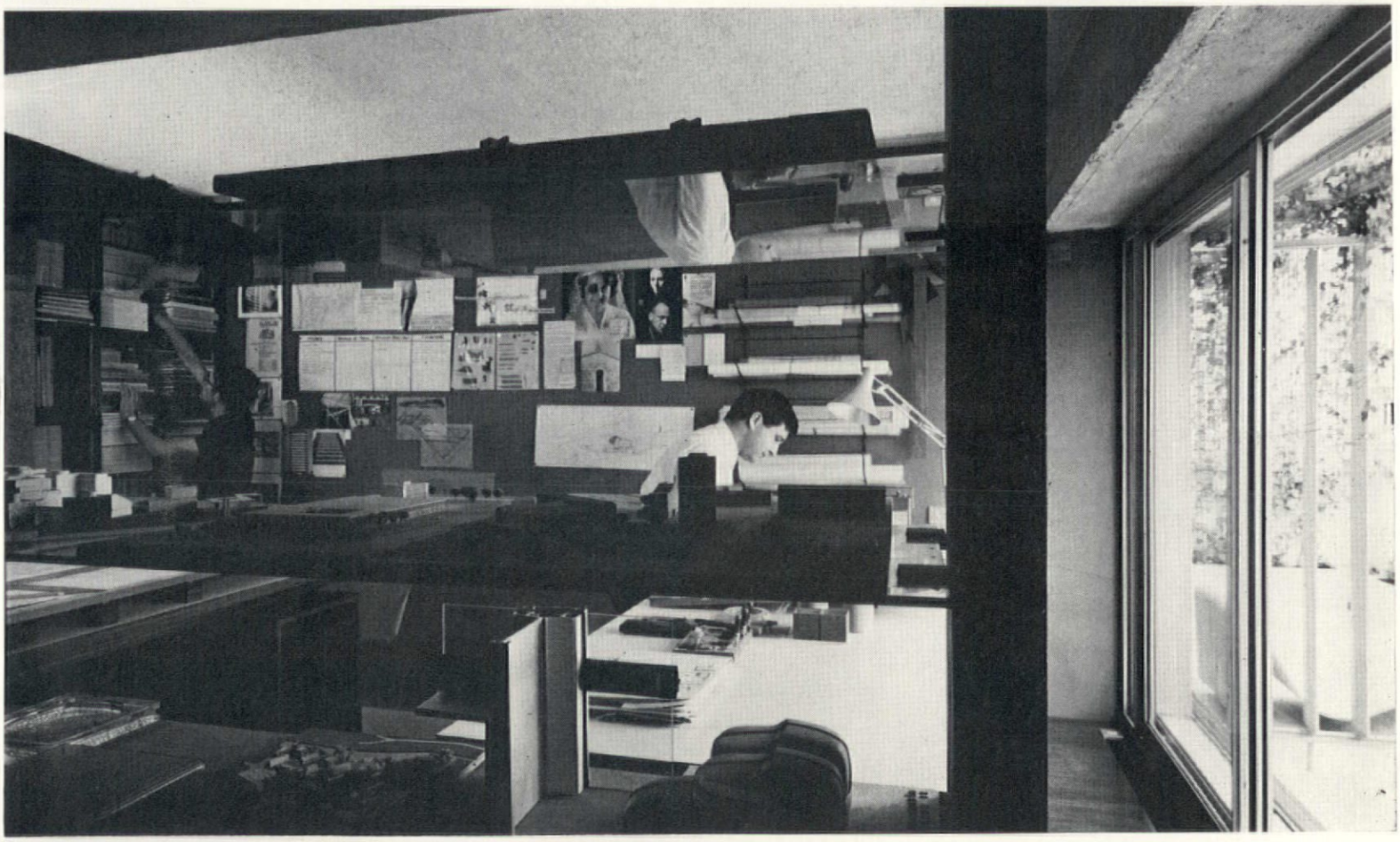

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9

1
View of the penthouse flat on a recently completed building

2
The secretary's office and reception desk seen from the landing of the entrance stair. The walls of this area are of painted hessian, the floors and stairs are of white mosaic

3
The curved partition around Ionel Schein's office

4
The entrance to the workspace—on the left is the studio, on the right is M. Schein's office

5
Ionel Schein in his office. The walls are faced with carpeting, the floor is mosaic

6
Plan of the converted flat. The lift, the water and service points were all fixed and thus constituted limiting factors

7
Ionel Schein's carpet covered office serving as a partition between the living room and the studio. The ceiling is sprayed with asbestos cement, the floors are of white mosaic throughout. The low shelf seen on the right runs around the whole of the living room, forming a base to the storage cabinets and sliding partitions on the left of the picture

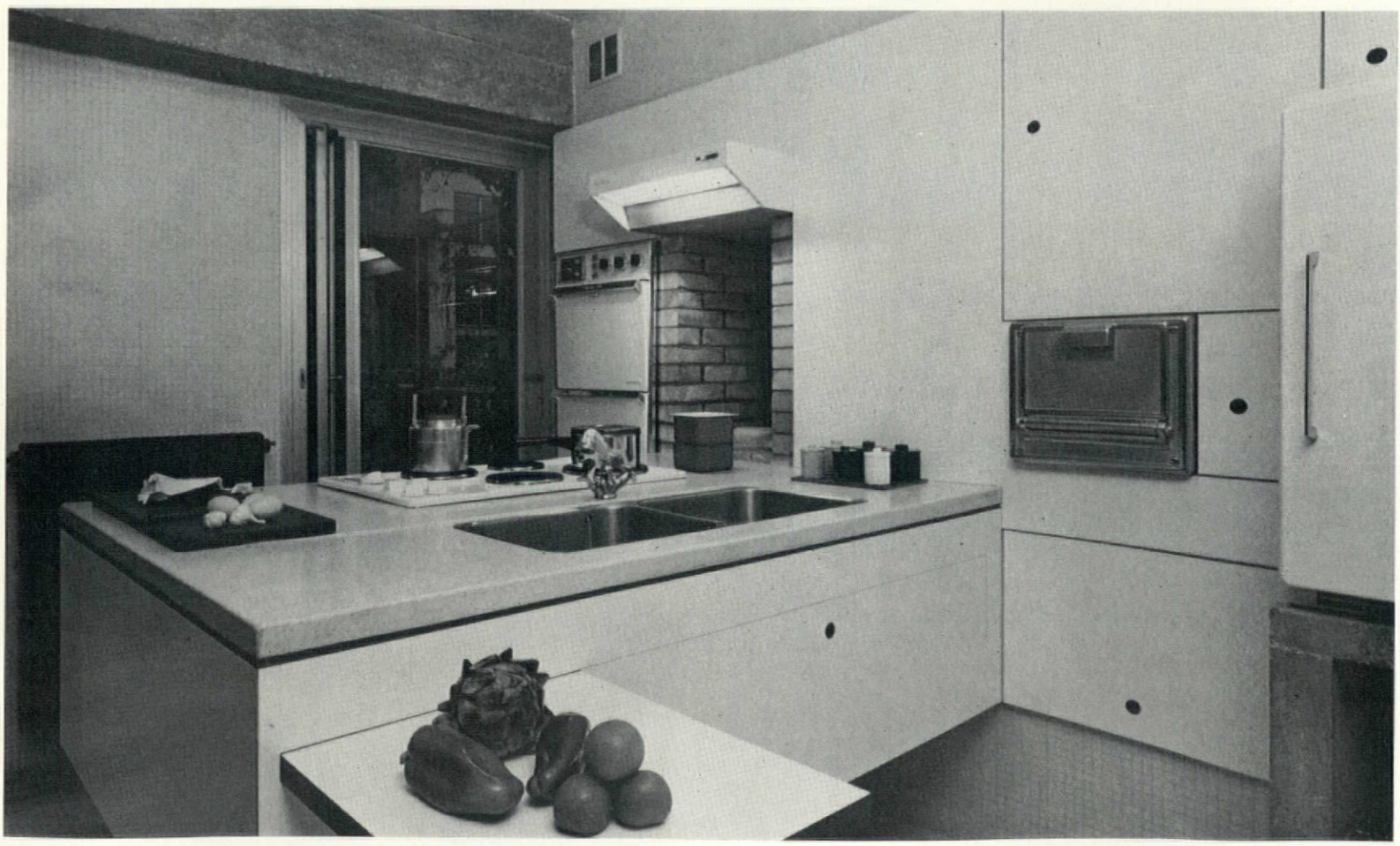
8
The cork lined studio seen through the shelves of the storage wall

9
The studio seen from the terrace doorway

Key to plan

1 terrace	7 living room
2 bedroom	8 storage space
3 bathroom	9 hall
4 w.c.	10 secretary
5 studio	11 lift
6 office	12 kitchen

1



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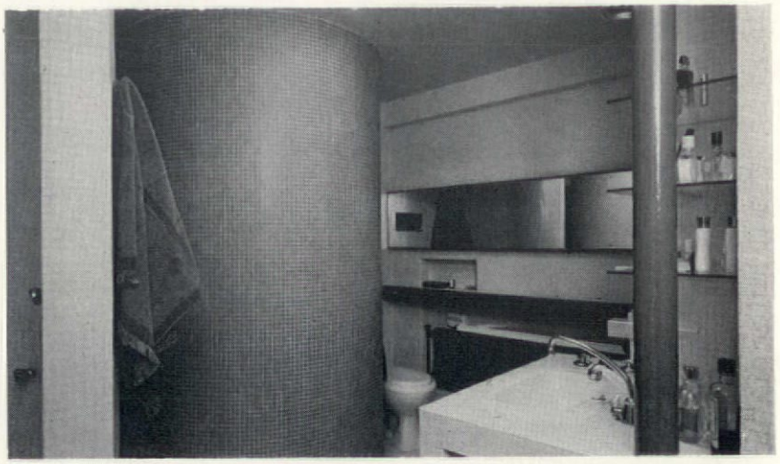

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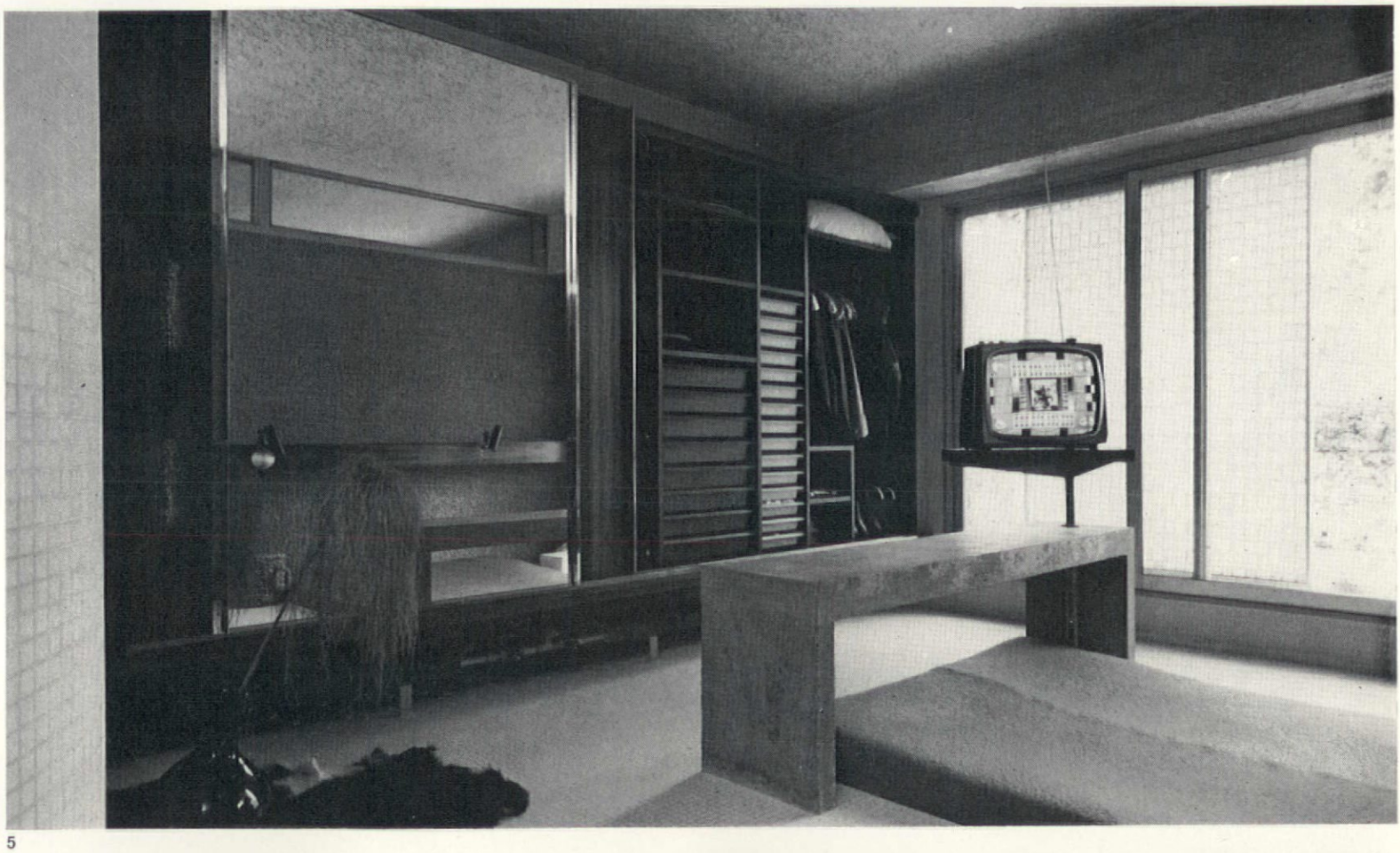

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1
A view from the living room towards the main storage wall with its sliding partitions of white formica and mirror, and the kitchen beyond

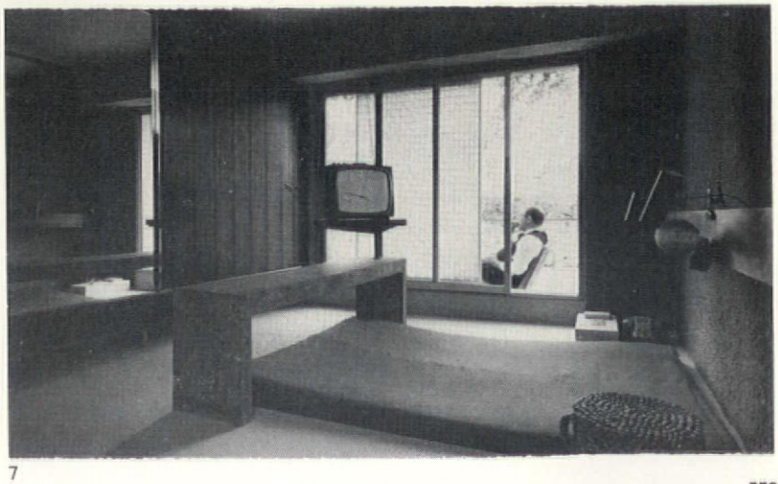
2
The kitchen, finished in white formica and mosaic. The grill is lined with reconstituted Burgundy stone

3 & 4
The bathroom

5
The bedroom, looking towards the storage wall with its timber and mirror sliding doors. The ceiling is of sprayed asbestos cement, the floor of white mosaic. The sliding doors to the terrace are screened with translucent polyester blinds

6
The bedroom terrace

7
The bedroom with the cupboards closed



7

ARCHI GRAM

Archigram group, London

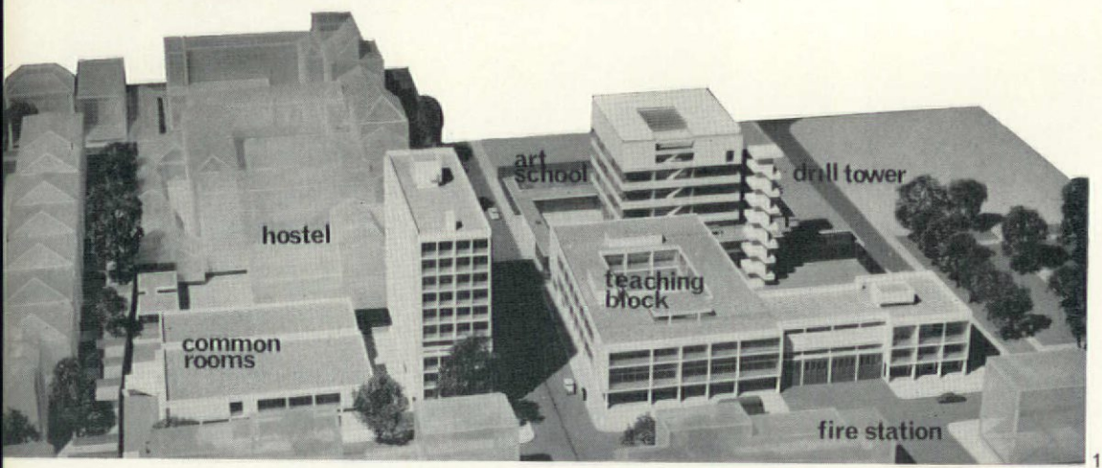
A chronological survey

The Archigram Group has not been formally constituted. Six young architects working in an office found interests and antipathies in common. At times they developed their ideas and projects independently, at others they collaborated closely, in particular, on the production of *Archigram*, a mettlesome broadsheet that has stirred the interest of architects throughout the world. Now they are regarded as a close-knit group and accept the situation as such, but are nonetheless liable to quirks and eccentricities that are no part of their credo.

Warren Chalk (b. London 1927, studied Manchester College of Art) joined the LCC Schools Division in 1954, where he met Ron Herron (b. London 1930, studied Regent Street Polytechnic). In 1960 they persuaded Dennis Crompton (b. Blackpool 1935, studied Manchester University School of Architecture)—who had been recommended to them by a friend—to leave Frederick Gibberd's office for the Special Works division of the LCC, to which they had by then been transferred. All three were to work together on the design for the new concert hall and art gallery adjoining the Royal Festival Hall, now under construction.

Peter Cook (b. Southend-on-Sea 1936, studied Bournemouth College of Art, Architectural Association) worked first for James Cubitt and partners where, in 1959, he met David Greene (b. Nottingham 1937, studied Nottingham School of Architecture). Michael Webb (b. Henley-on-Thames 1937, studied Regent Street Polytechnic) met Cook in 1959, who introduced him to Greene. Together they were stimulated to issue the first number of *Archigram* in 1961. Cook was the editor. And it was he who approached Chalk and Herron in the same year to act as contributors.

All were dramatically united in the following year, as members of the design team formed by Theo Crosby for the redevelopment of Euston Station by Taylor Woodrow Construction Co. Ltd. There they worked together and fostered their interests. They were recognized first as a group in 1963, when, on Theo Crosby's recommendation, they were invited to organize the Living City exhibition for the ICA. Thereafter they collaborated on the production of *Archigram* and the general dissemination of their ideas, lecturing at the AA, at Cambridge, Bristol and other architectural schools. With the contraction of the Euston project the group was slowly dispersed. Greene and Webb teach now in the USA, Chalk, Crompton and Cook all teach at the AA, though Crompton works also on the IBIS programme. Chalk and Herron are partners in an architectural practice.



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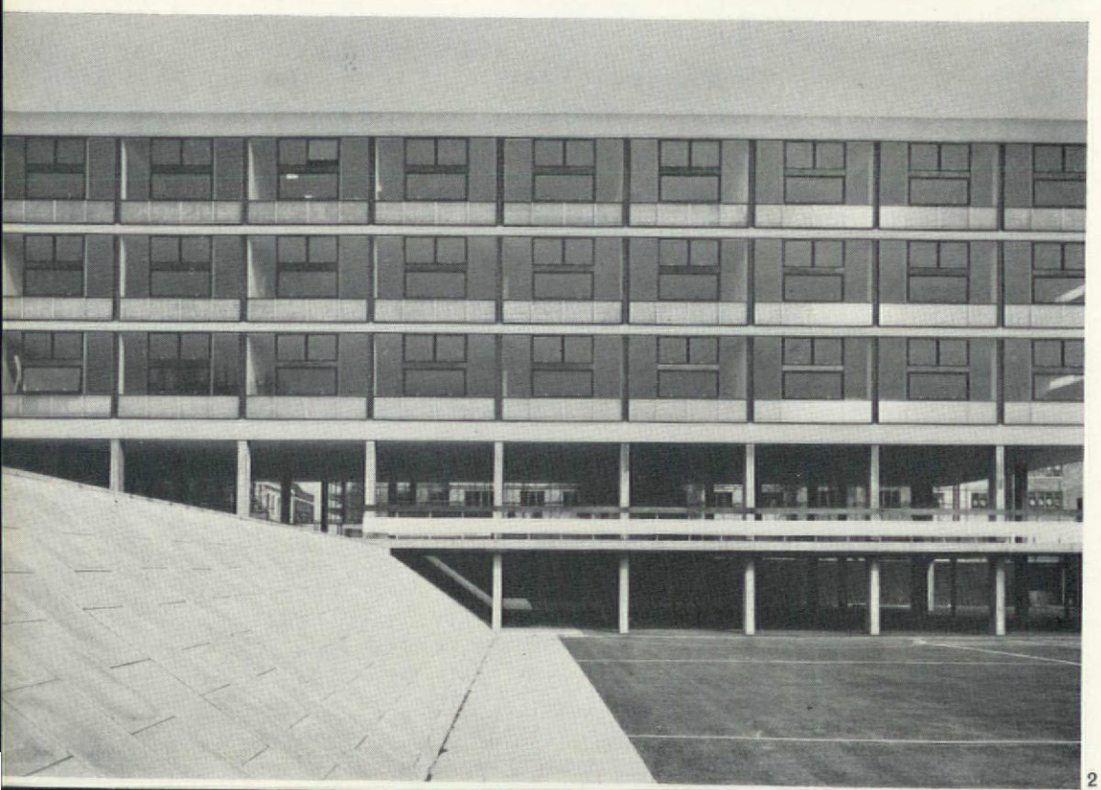
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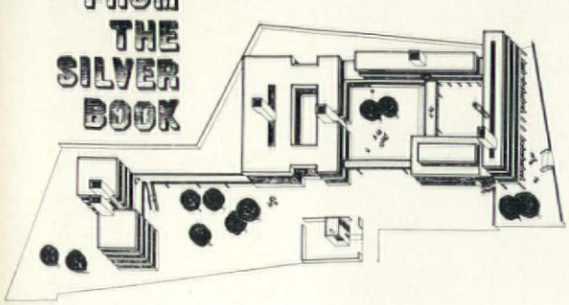
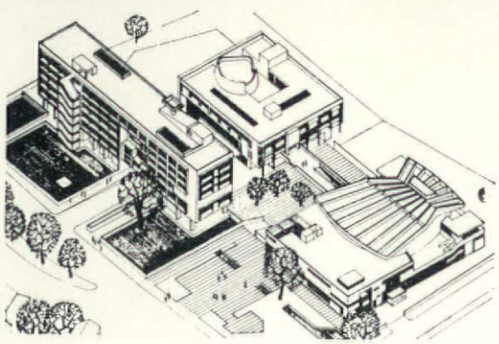
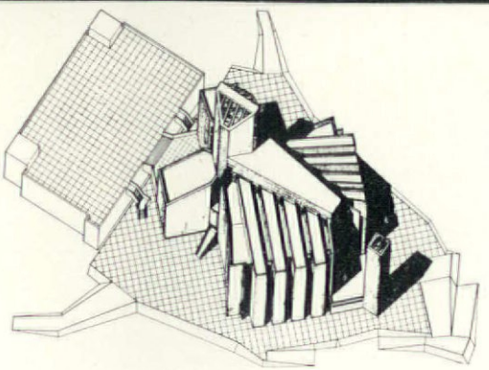
EXTRACTS FROM THE SILVER BOOK





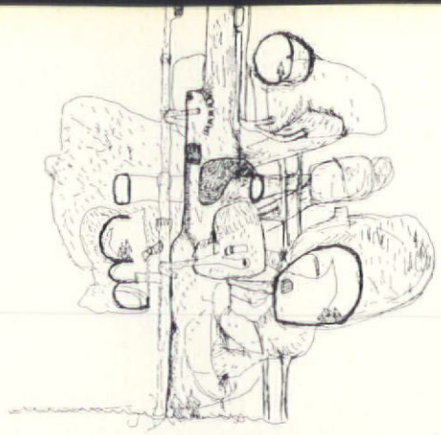


Archigram 1 was an outburst against the sterility of architecture surrounding one in London in the winter of 1960–61. Student work of the mid-fifties was all that could be pointed to: the late Edward Reynolds' virtuoso free-forming at the AA, the Bowellist explosion at the Regent Street Polytechnic. The spirit was verbal as well as formal.

REJECT—curtains, 'design', history, graph-paper.

DIG—ACCEPT—homogeneity, travelators, Monk, expendability.

Michael Webb's Furniture Manufacturer's building was the most developed of the Bowellist buildings and was able to draw much comment from the pundits as to its antecedents in the twenties, nineties, etc. The instinct of this building was in reality founded on the release of ideas offered by the example and teaching of the Smithsons, Stirling and Gowan, Howell and Killick—all of whom can be traced through to the recently emerged architects who contributed to *Archigram*.



3 4

1
Model of the Chelsea College of Advanced Education 1958, Chalk, at the LCC, chief architect Hubert Bennett
2
Prospect secondary school 1959, Herron at the LCC, chief architect Hubert Benett
3 & 4
Seaside entertainments building 1961, Greene
5
Elevations of a projected Furniture Manufacturers Association building, High Wycombe 1959, Webb (*Architects Journal*, March 15, 1959)
Bottom, l.h.p. Paisley technical college competition entry 1956, Chalk, Herron and Seligmann/Enfield civic centre competition entry 1958, Chalk, Herron and Seligmann/Liverpool cathedral competition entry 1959, Crompton and A. Waterhouse.
Bottom r.h.p. *Archigram 1*, broadsheet 1961/Piccadilly Circus competition entry 1961, Cook and Gordon Saintsbury/Mosque 1958, Greene
Photo: 2 Sam Lambert

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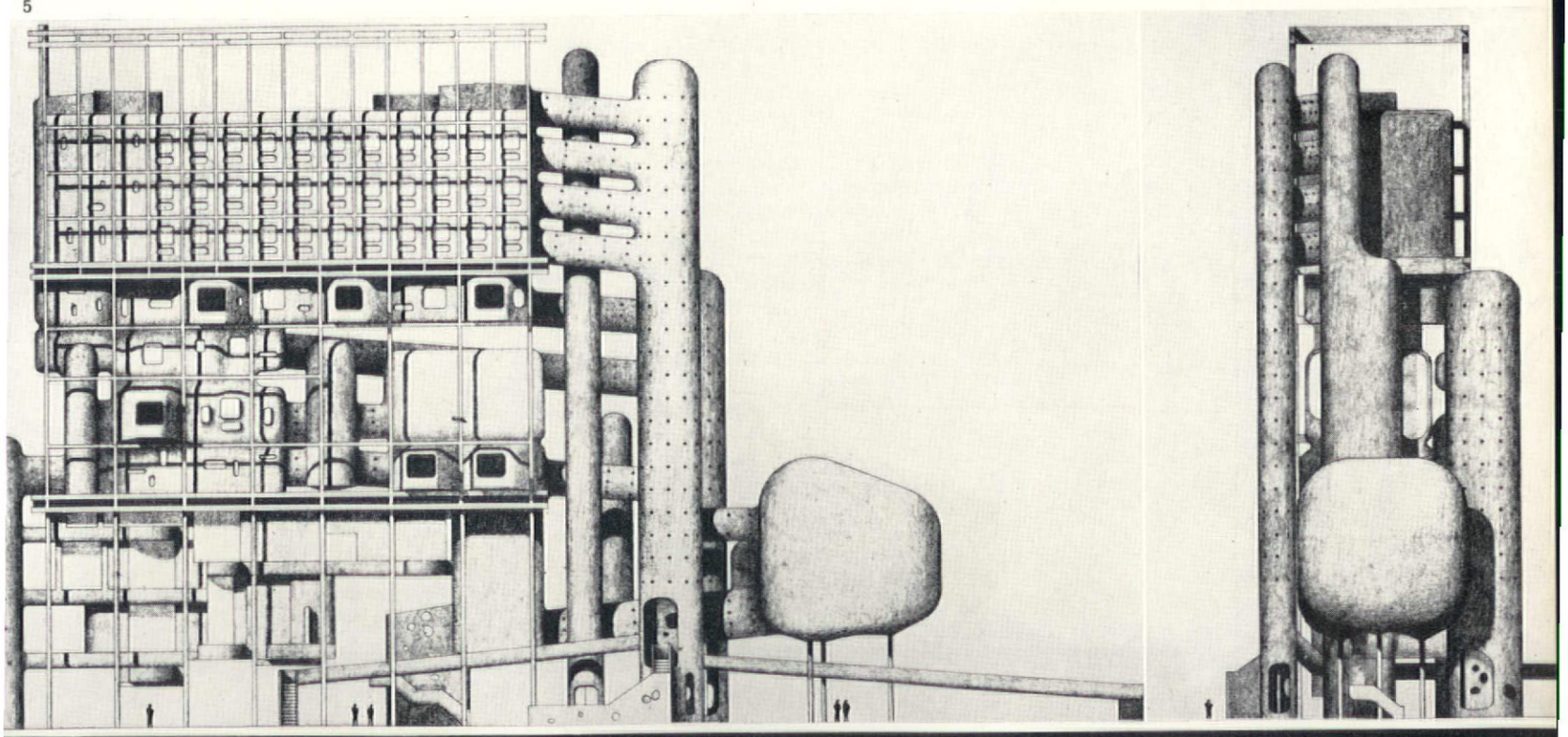

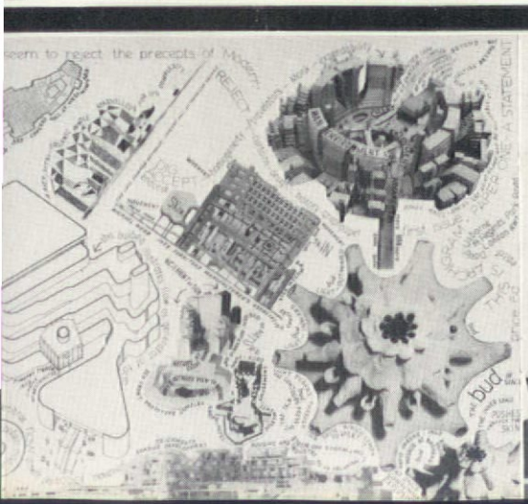

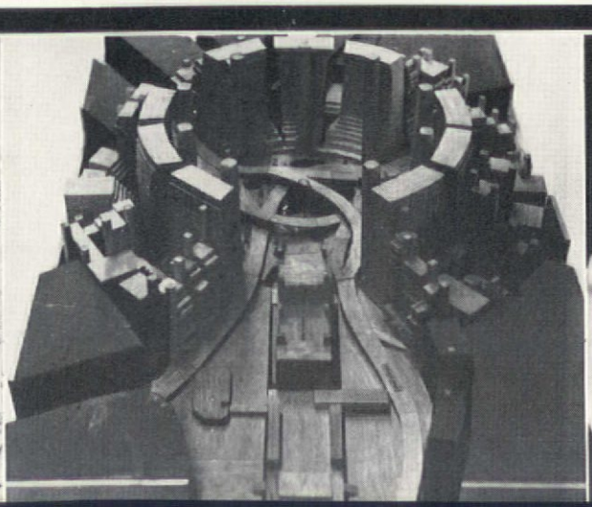

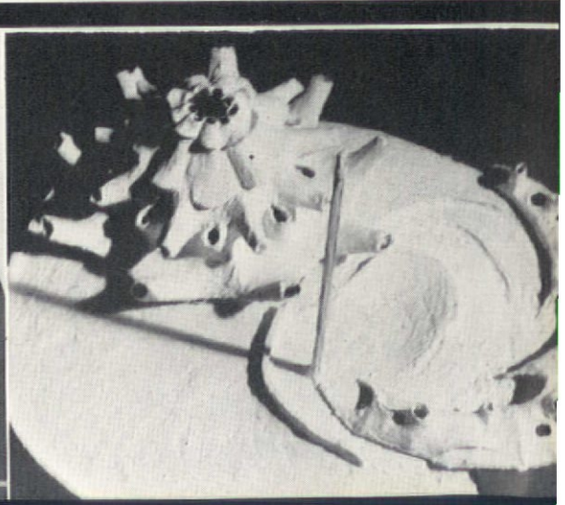

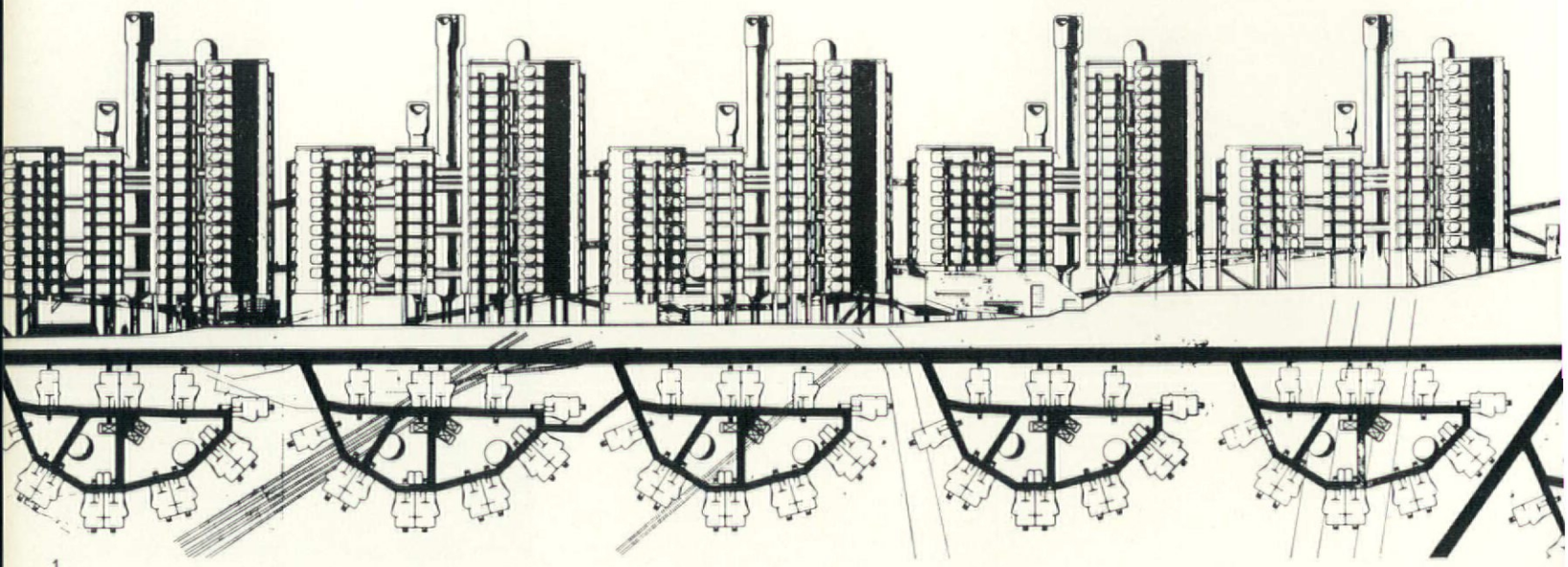

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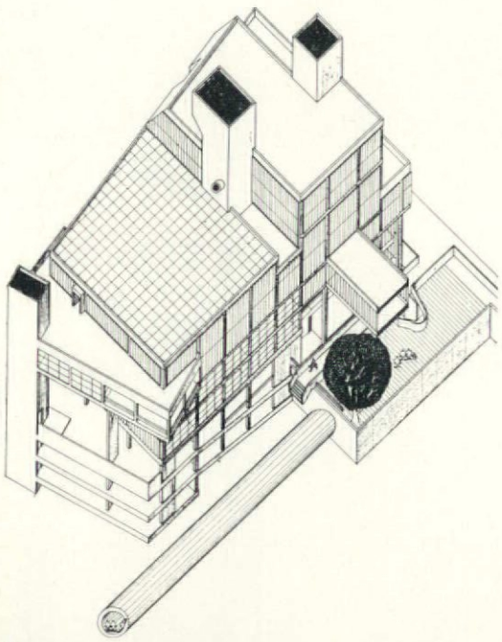


2

Archigram 2 marks the contact between the two groups—Herron, Chalk, Crompton of the LCC; Greene, Cook, Webb, unbeknown; thinking along very similar lines. Expendable architecture and the relevance of the gestural tradition of comics and space hardware are already in the discussion . . . '*common involvement with Dan Dare's psychology—with that of Superman, Lunar architecture and shredded wheat, and in physical terms, with that of the radiator grille and launching pad . . . the situation could not be the same without these occurrences. Form, space, enclosure and complete involvement with our packaged environment is ceasing to be selfconscious. Modern architecture is coming to include all these things. If we are involved in all this, the public image of 'modern architecture' seems terribly irrelevant . . . Archigram 2.*

'*Our concern is to liberate building from preconceived formal disciplines and art ideologies*'. . . . Warren Chalk.

The method of connection—by stringing buildings along raised decks, the creation of streets within—the method of production: a transition from wet methods with the potential of freedom to recourse to processes new to architecture such as car production.

1
Pressed metal student housing 1961, Cook

2
National Gallery competition design 1958, Chalk Herron and Alan Forrest

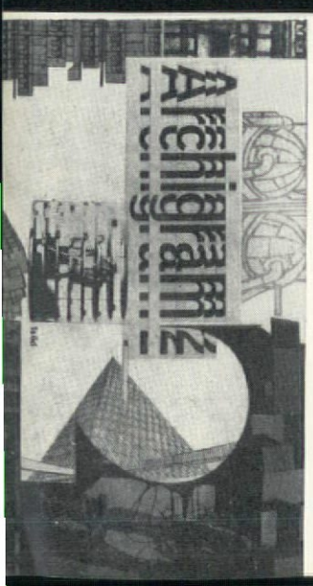
3, 4 & 7
View of the model of the South Bank redevelopment

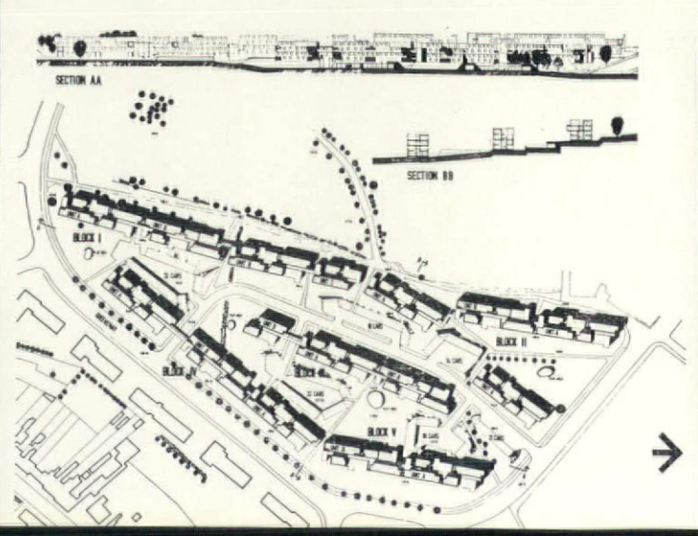
5 & 6
North elevation and plan of the South Bank redevelopment, new concert hall and art gallery adjoining the Royal Festival Hall 1961, Chalk, Herron and Crompton at the LCC. Group leader Norman Engleback, chief architect, Hubert Bennett

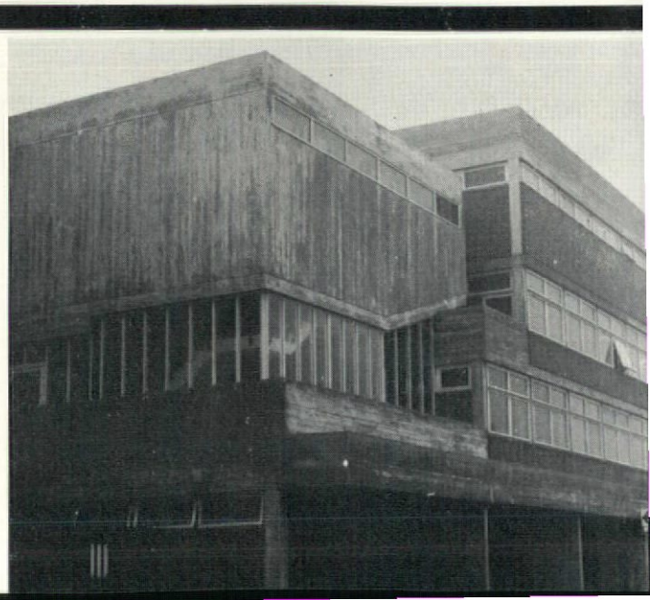
8
Progress view

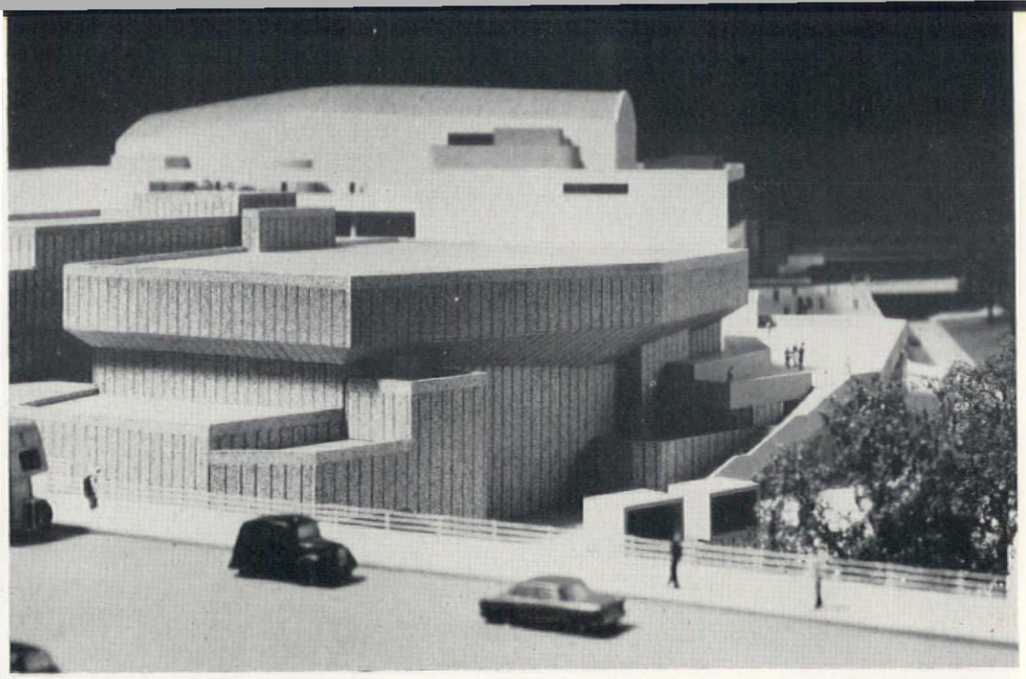
Bottom l.h.p.
Archigram 2 cover 1962, designed by Peter Taylor/ elevation, section and plan of Highlands housing competition for Halesowen, Birmingham 1960, Chalk, Herron and Andrew Radwan, second prize/extension to the Woolwich Polytechnic 1959, Herron at the LCC, chief architect Hubert Bennett

Bottom r.h.p.
Elevation and plans of Lillington Street, Westminster, housing competition entry 1961, Chalk, Herron and Crompton









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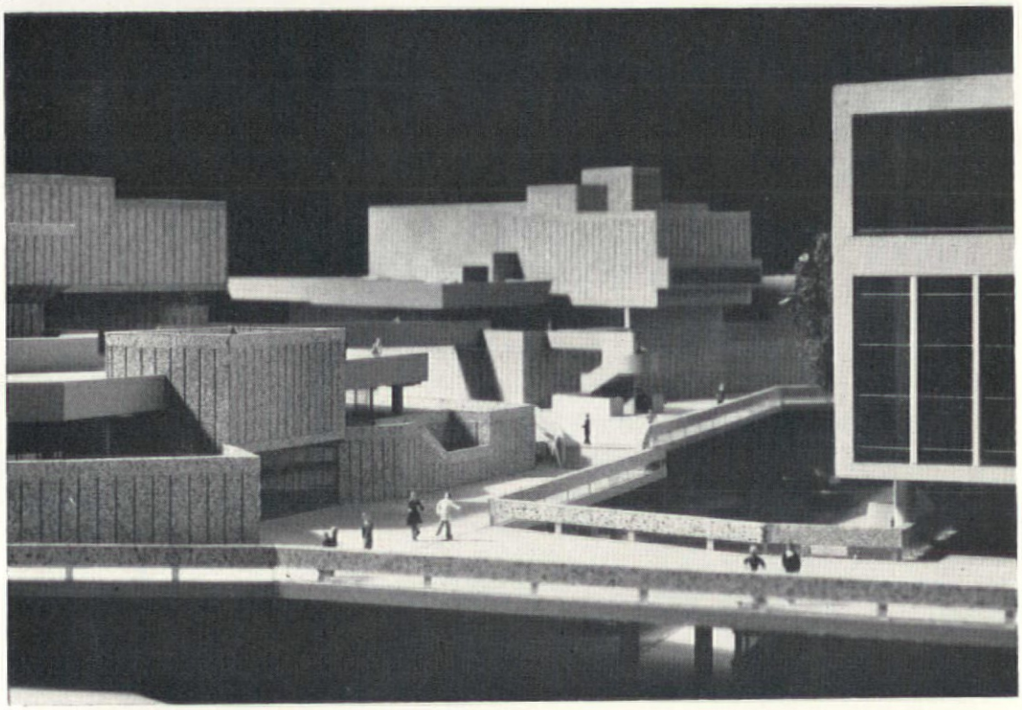

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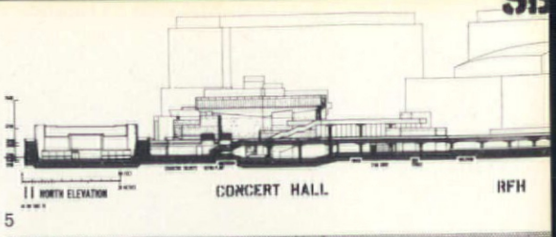
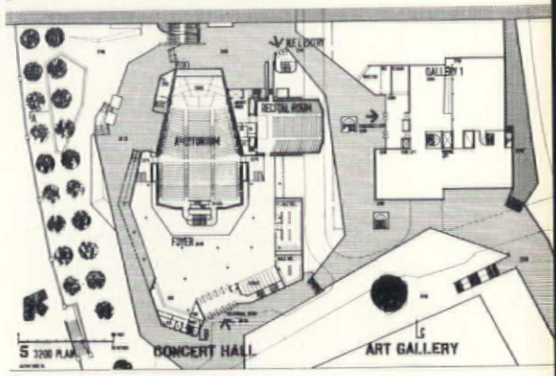
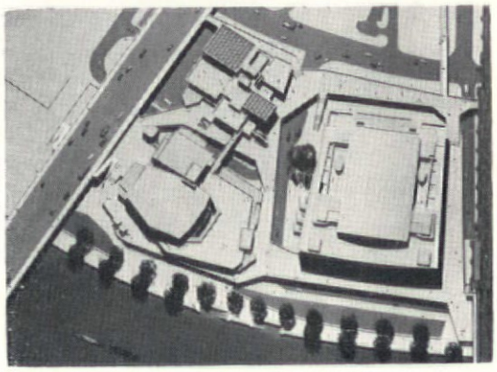

NORTH ELEVATION
CONCERT HALL
RFH

5


AUDITORIUM
FOYER
GALLERY 1
CONCERT HALL
ART GALLERY

6



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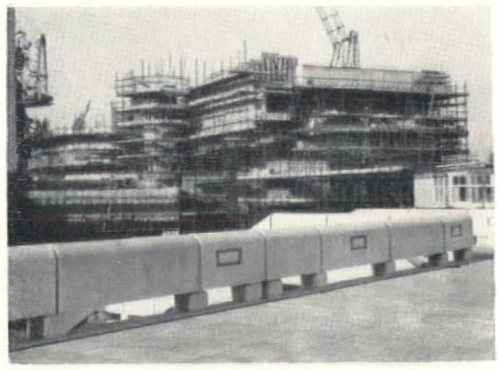

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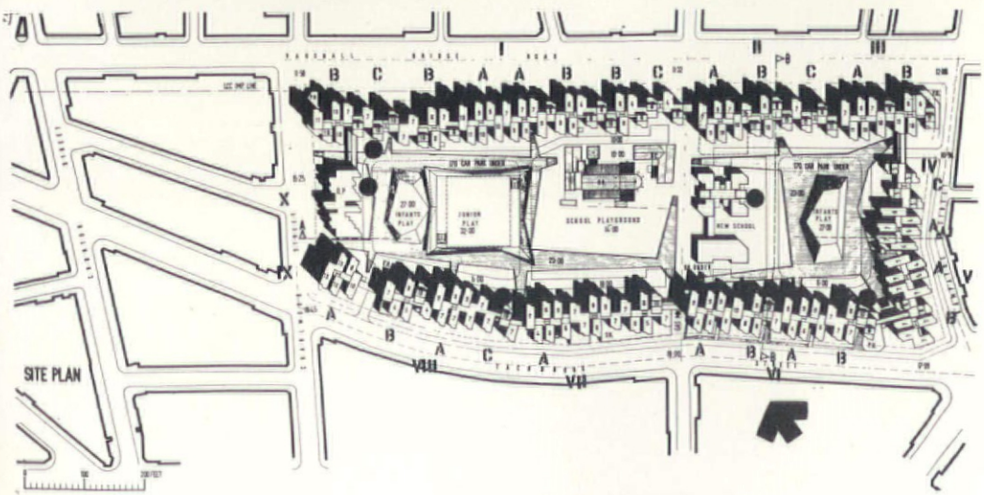
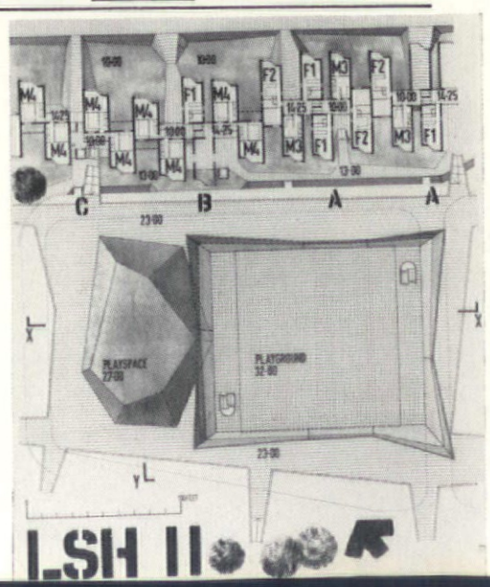
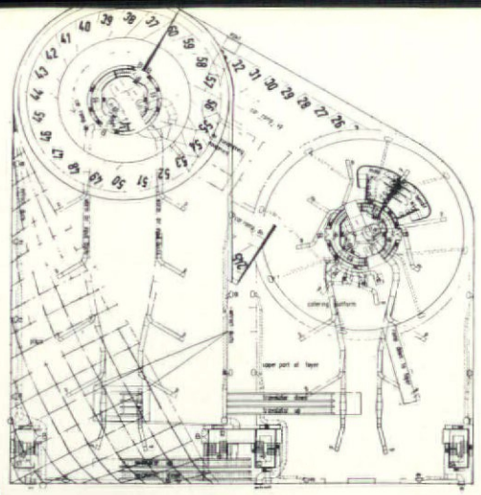

SITE PLAN


PLAYSPACE
PLAYGROUND
LSH II



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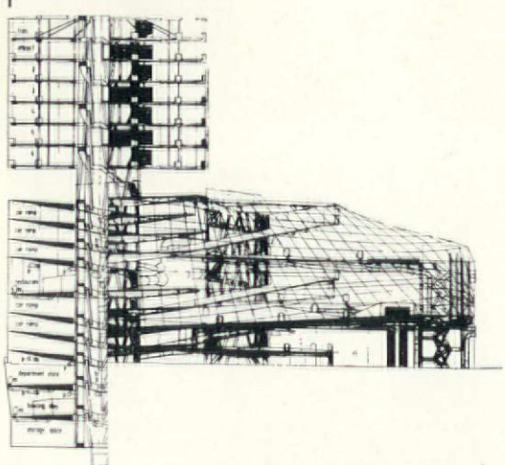

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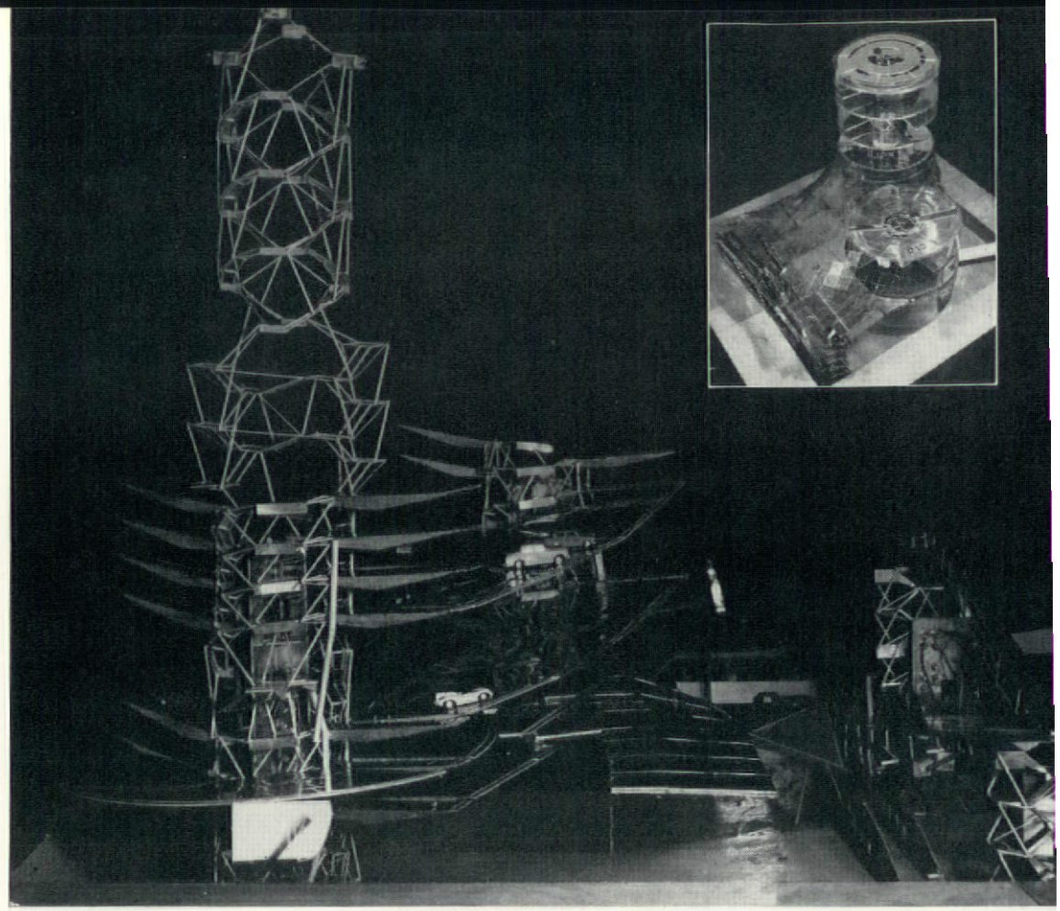
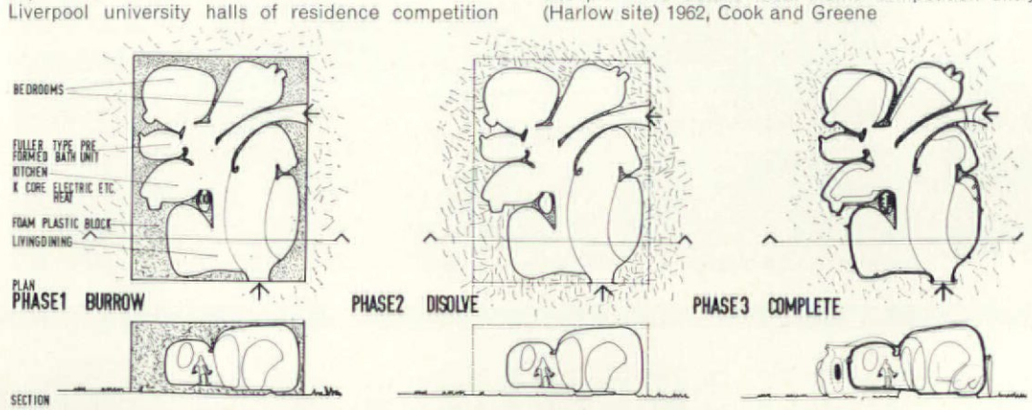


3

1, 2 & 3
Sin Centre for Leicester Sq., 1961, Webb (*AD* 11, 1963)
4
Plastic spray house 1961, Greene
5 & 6
Lincoln civic centre competition 1961, Chalk, Herron and Crompton. Commended
7, 8 & 9
Lincoln civic centre competititon 1961, Cook, Greene
10, 11 & 12
Liverpool university halls of residence competition 1962, Chalk, Herron and Radwan
Bottom l.h.p.
Berkshire county offices, Reading, competition design 1962, Cook and Greene/*Archigram 3* cover 1963, by Peter Taylor/model and section of Nottingham shoping centre 1962, Cook and Greene
Bottom r.h.p.
Gas council house competition 1961, Cook, first prize/site plan and details Ideal Home competition entry (Harlow site) 1962, Cook and Greene

The period 1961–63 covers an accelerating involvement in the technique and expression of expendability, suspension, conditioned environment, free enclosure and the search for these by way of any technology that might be handy. The Sin Centre is not only an original and high sophisticated structural gesture—it underlines its use of services and air conditioning ducts as desired visual objects—it deliberately throws the normal concept of the geodesic skin. The car park is part of the 'theatre' of crowds and movement. The plan forms are circular where they come under the influence of the car ramp system and rectangular where they come under the influence of the pedestrian system . . . '*during the design stage I noticed the similarity of the plan organization with that of a machine or of the circulatory skeletal system in the human body.*' *Archigram 2.*
The Nottingham shops project marks the beginning of the 'plug-in' series in that expendability (the theme of *Archigram 3*) and crane-and-tube service are built into the design.



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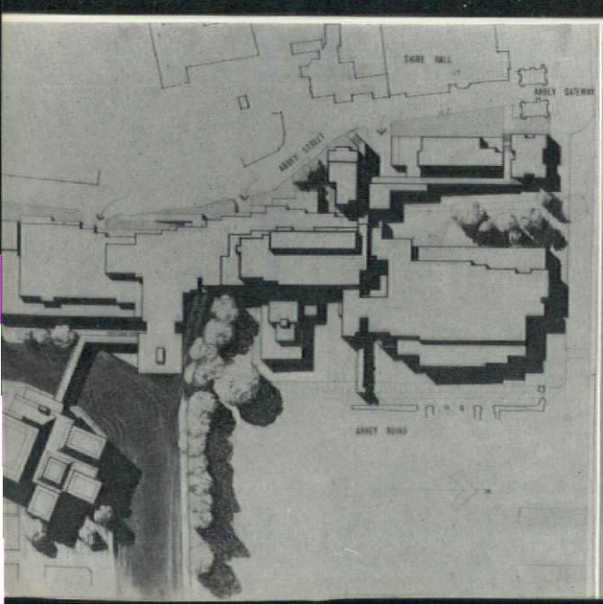

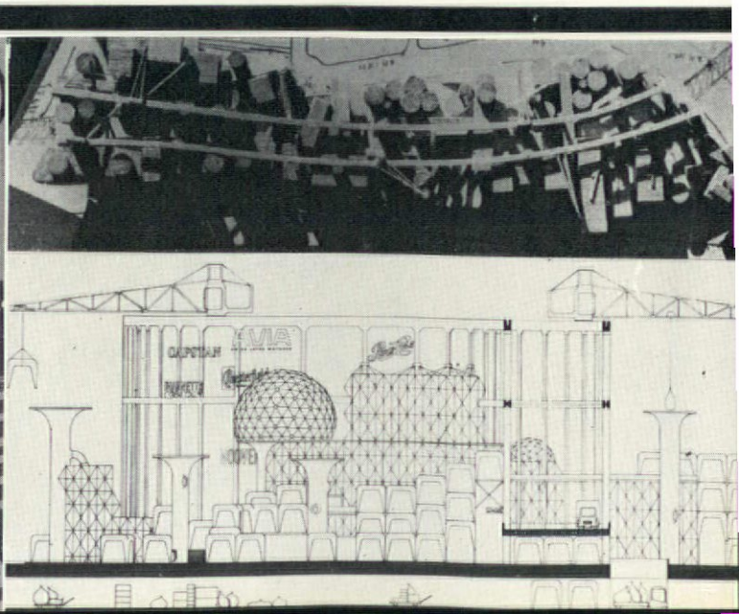

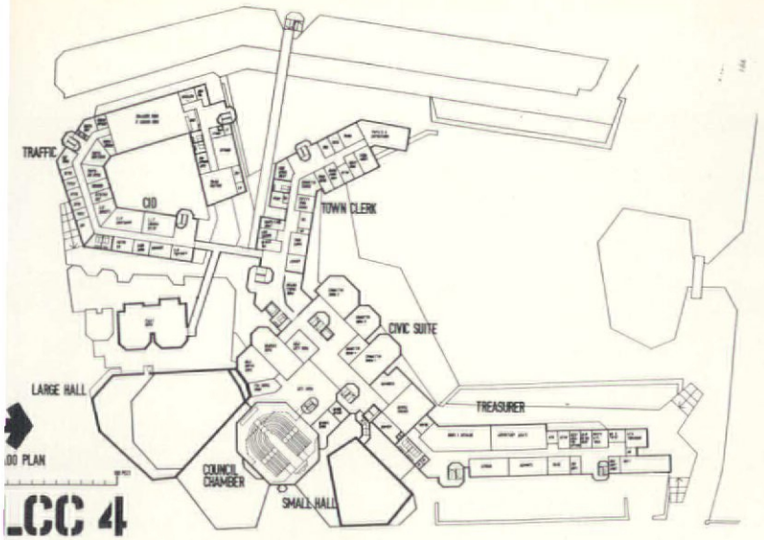

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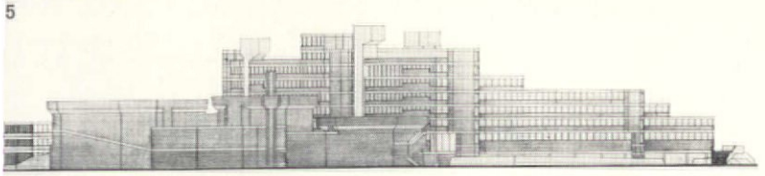

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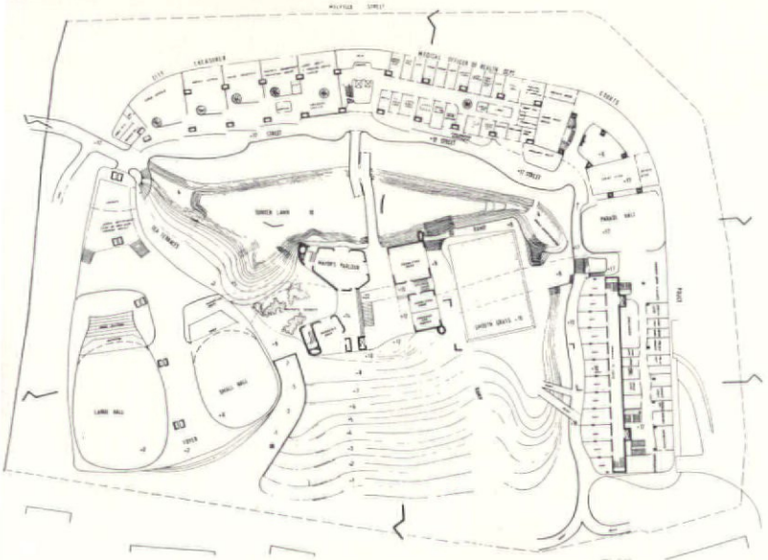

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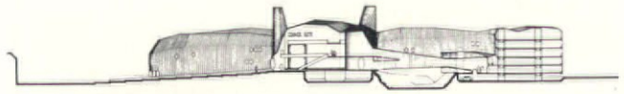

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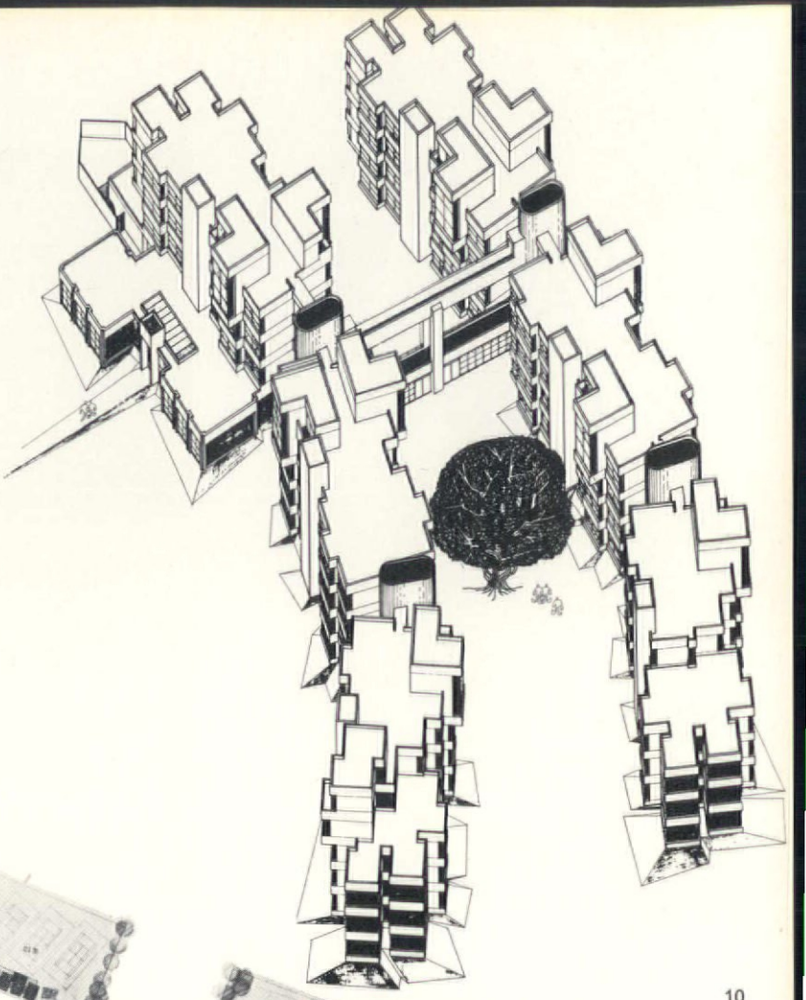

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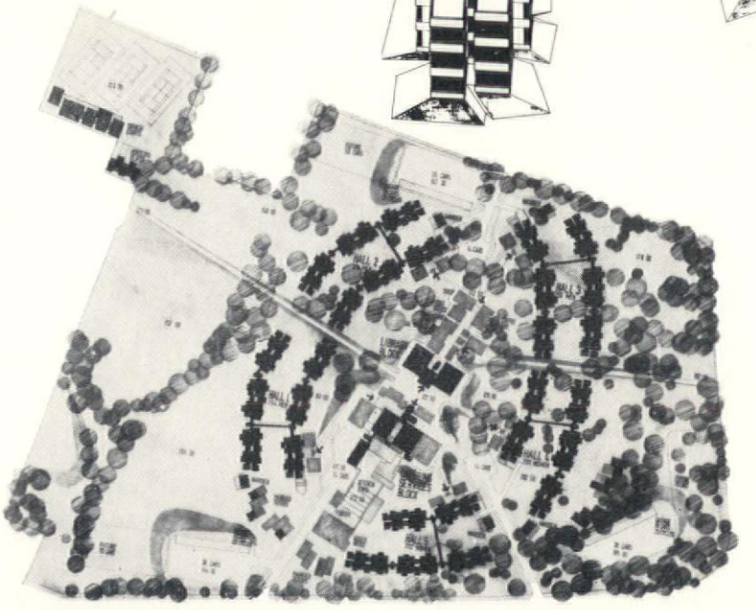

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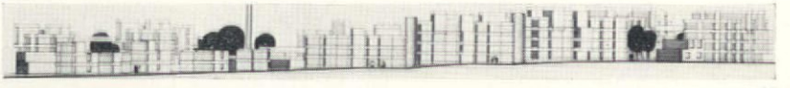

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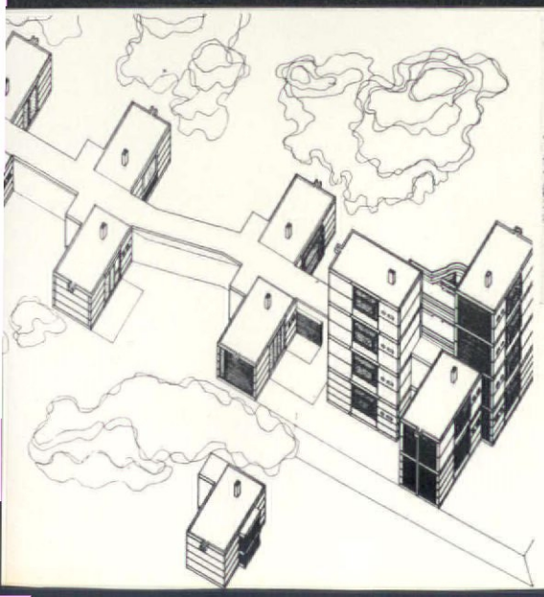

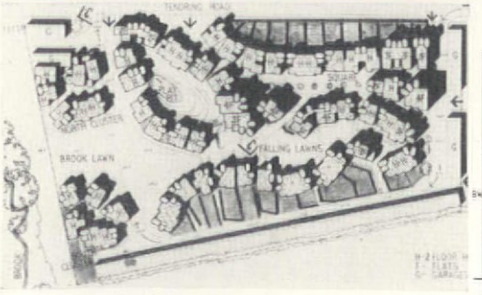

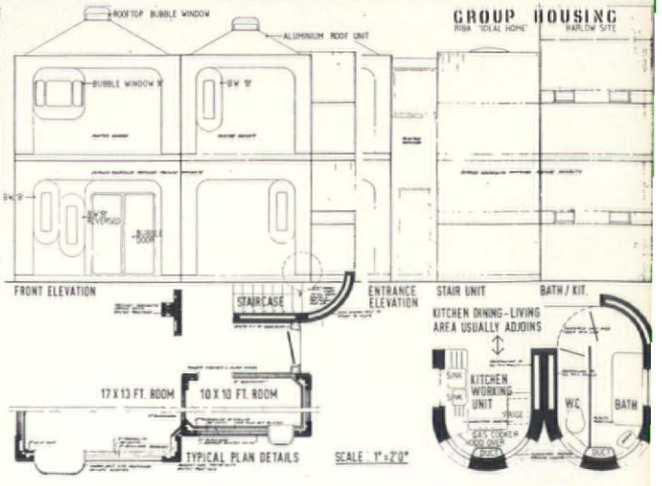

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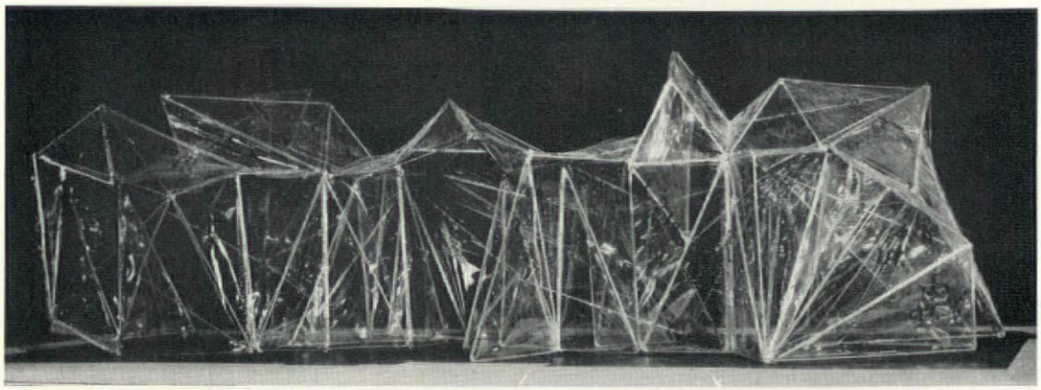
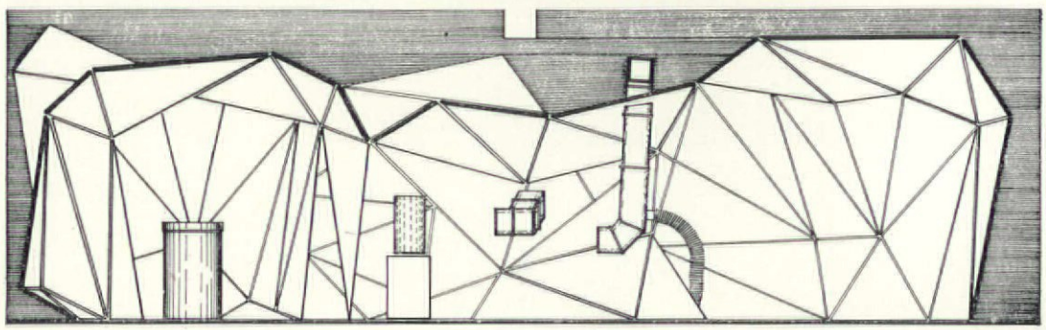


2

Living City exhibition (ICA June–August 1963) served the group as an opportunity to draw a baseline of ideas and conditions, and an opportunity to test the connections that existed between each other's work. Several of the earlier projects illustrated had been pointing towards the inevitable time when a total, or near-total urban statement would have to be made. Deliberately, this was not one of the Exhibition's terms of reference, but various loose ends were being exploded—or brought together.



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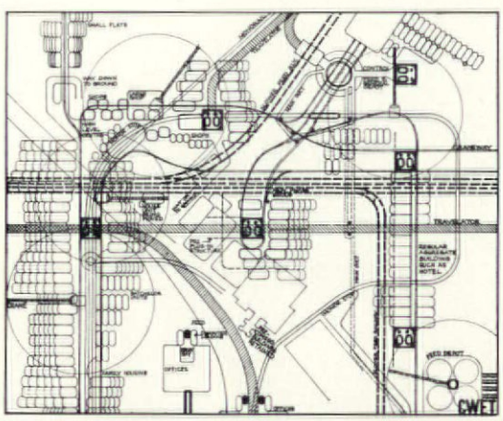

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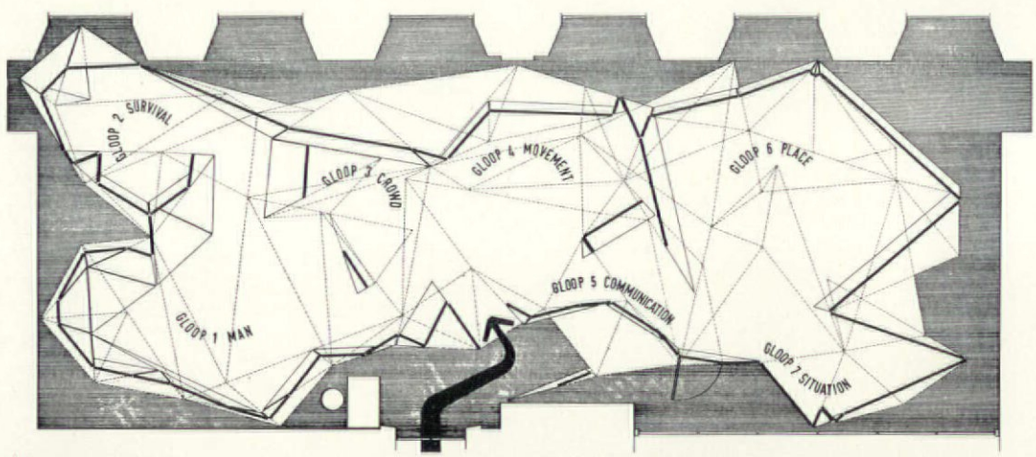

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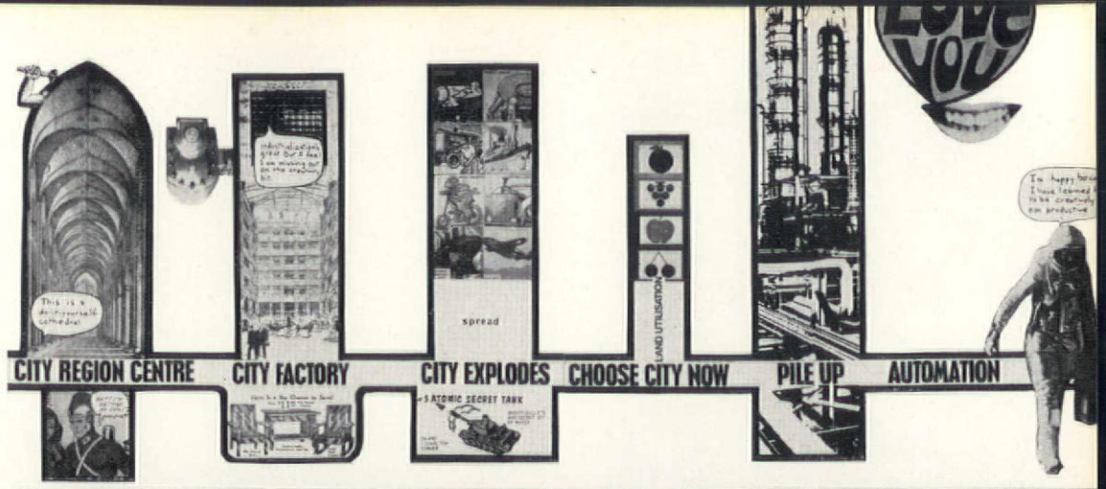
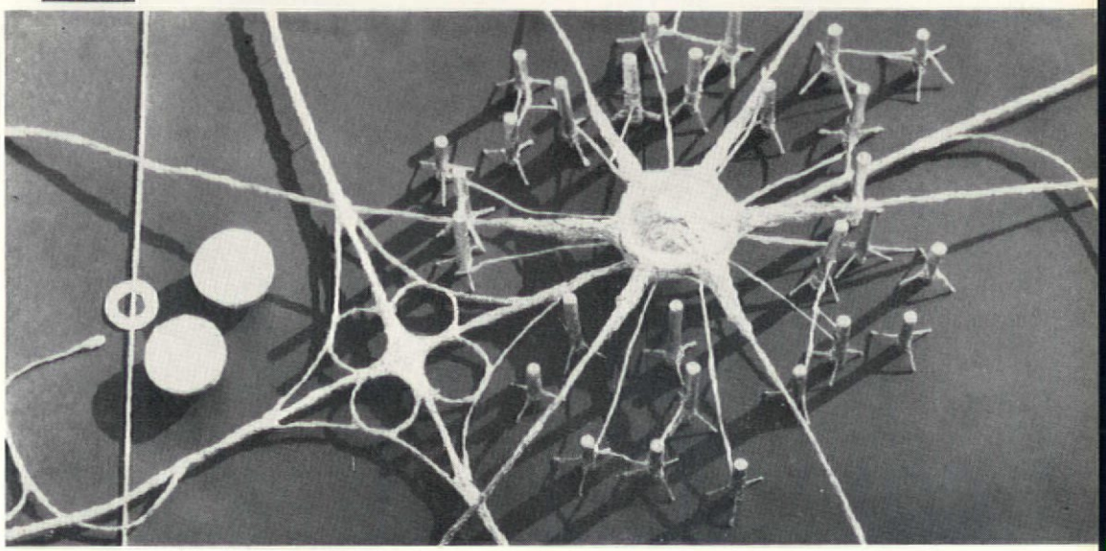


7

1
Living City symbol, 1963, Peter Taylor
2–4
Working model, section and plan of Living City exhibition set up in the ICA, June–August 1963
5
Come-Go city, 1963, Cook
6
Crowd wheel, 1963, Ben Fether
7
Page by Ben Fether from article in *Living Acts*, no. 2, 1963, devoted to Living City
8 & 9
City interchange 1963, Chalk and Herron
10
Space city, *Adventure Comics*
Bottom l.h.p.
Views of the Living City exhibition
Bottom r.h.p.
City Synthesizer 1963, Crompton



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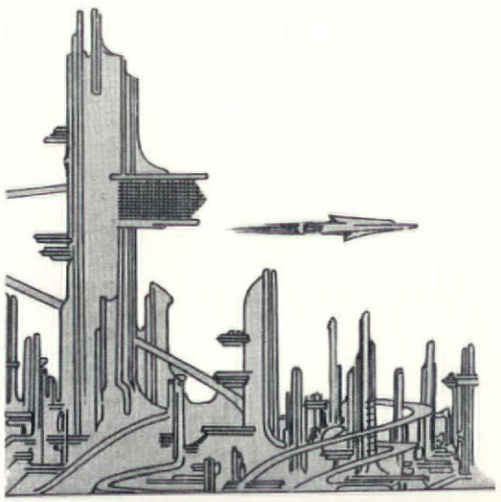

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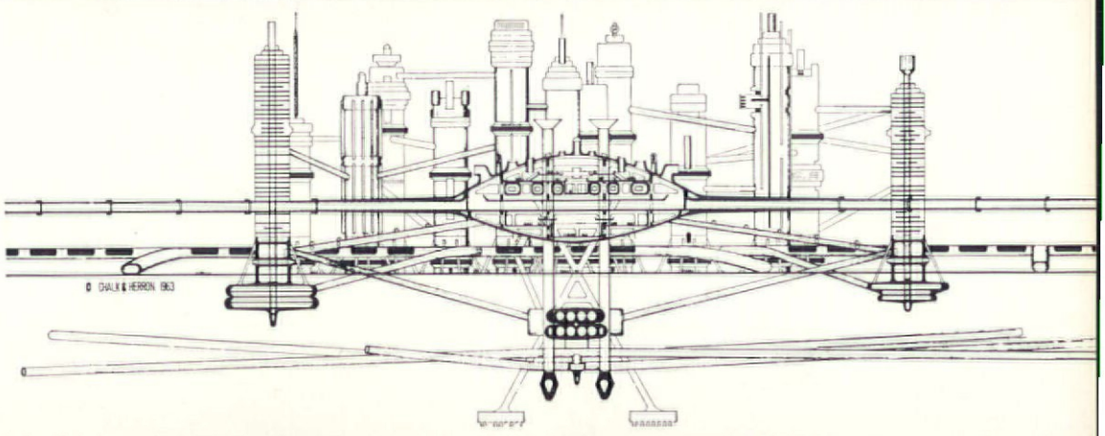

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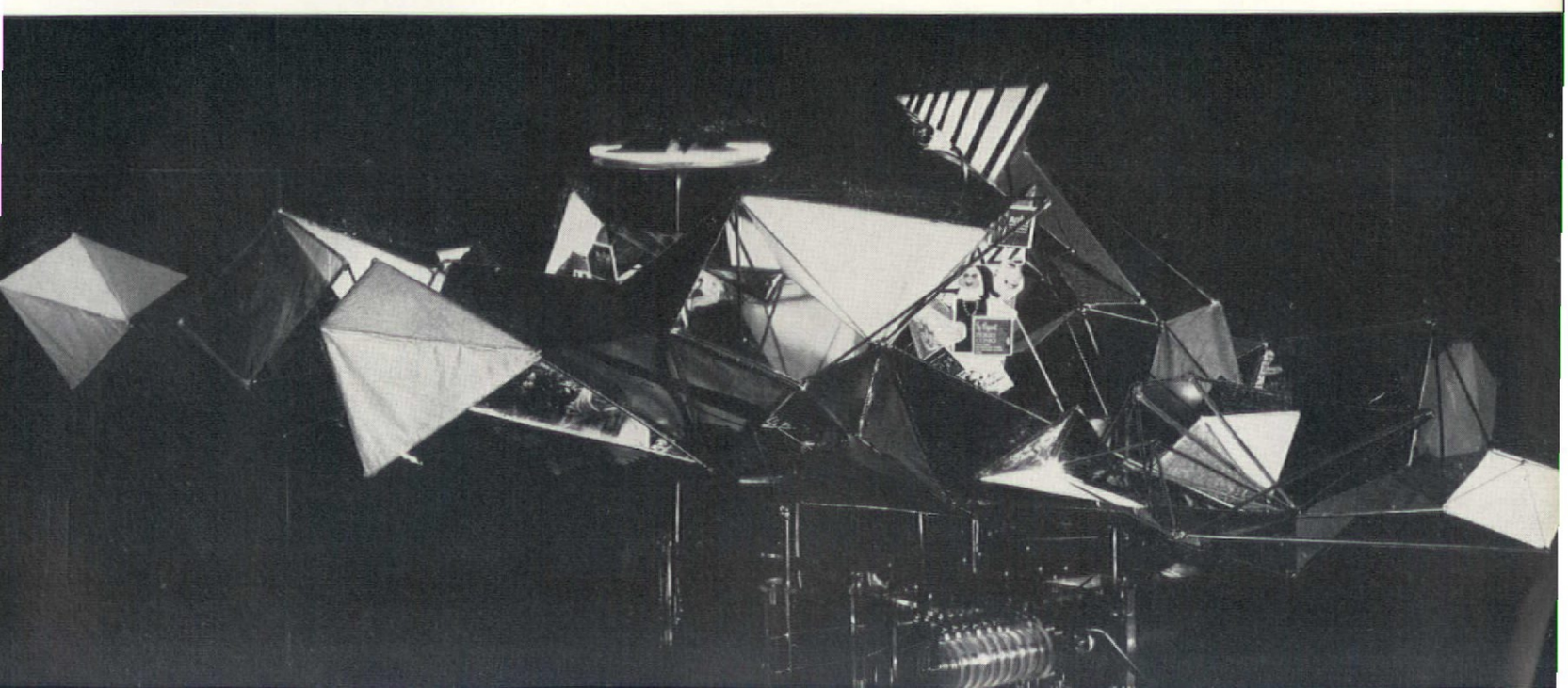

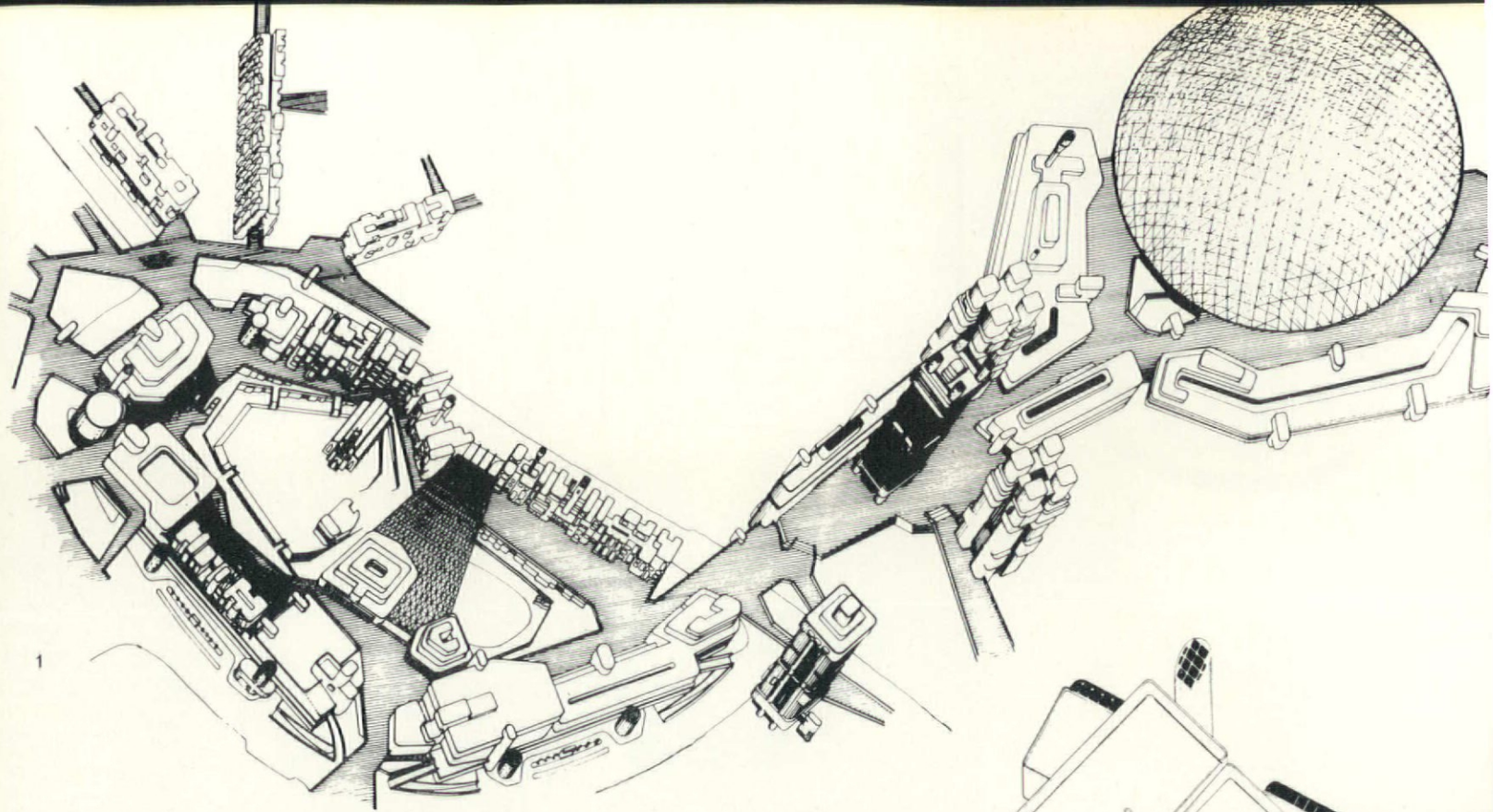

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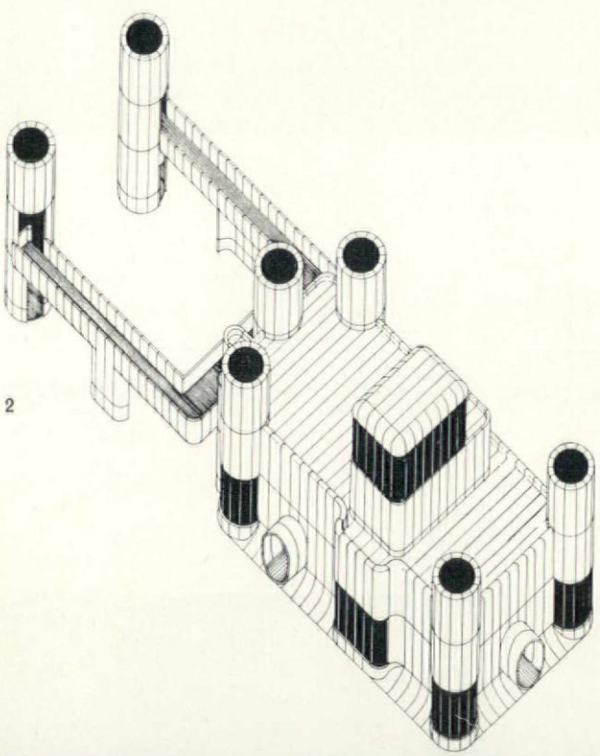

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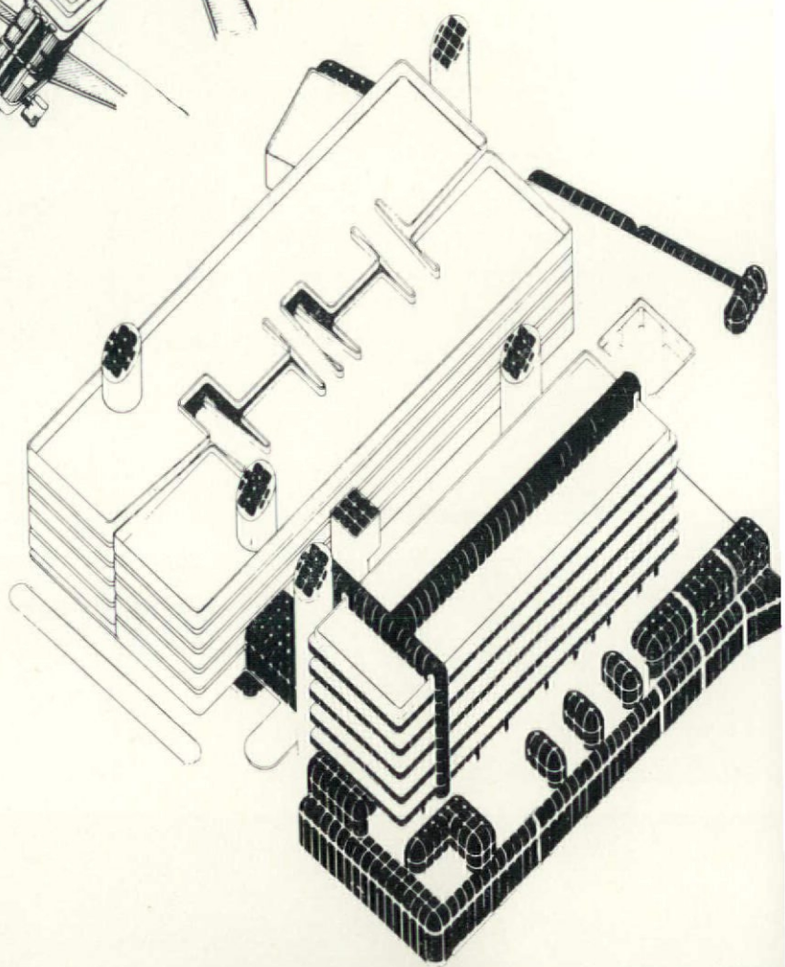

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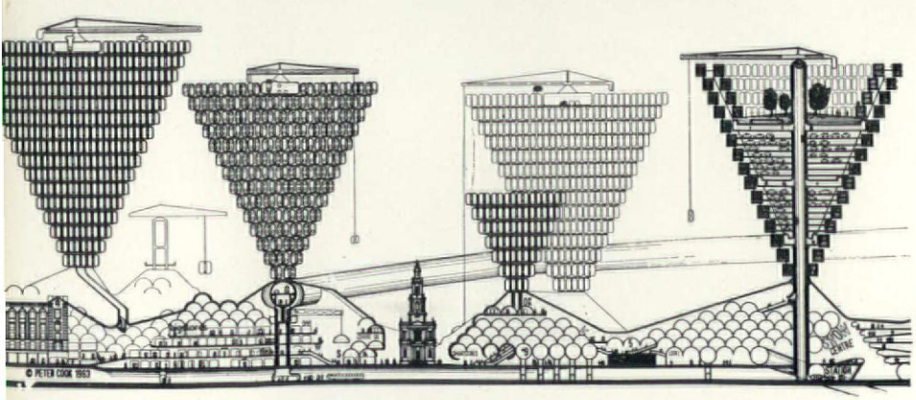
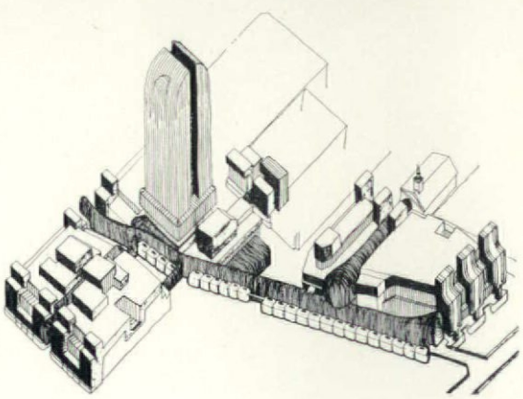
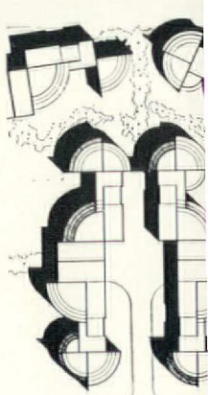
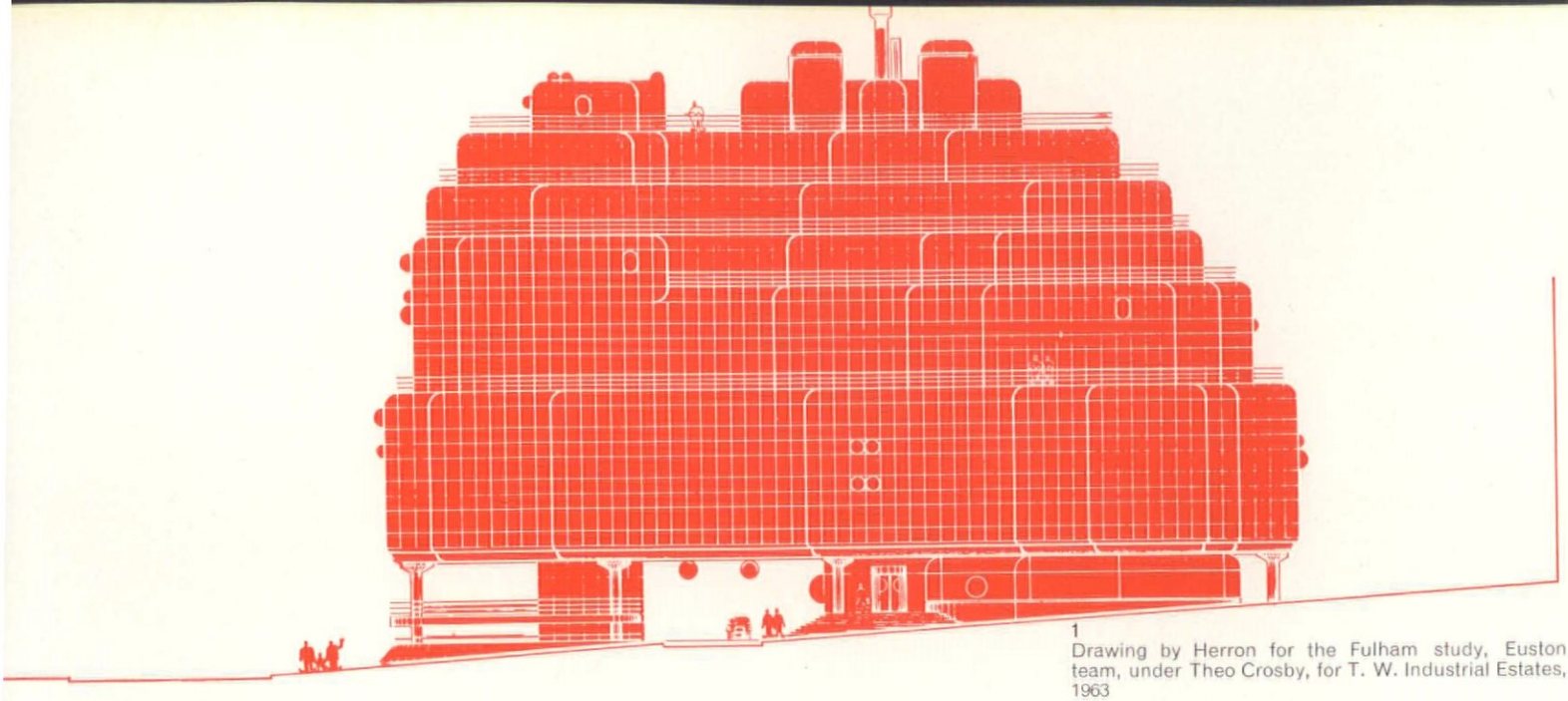








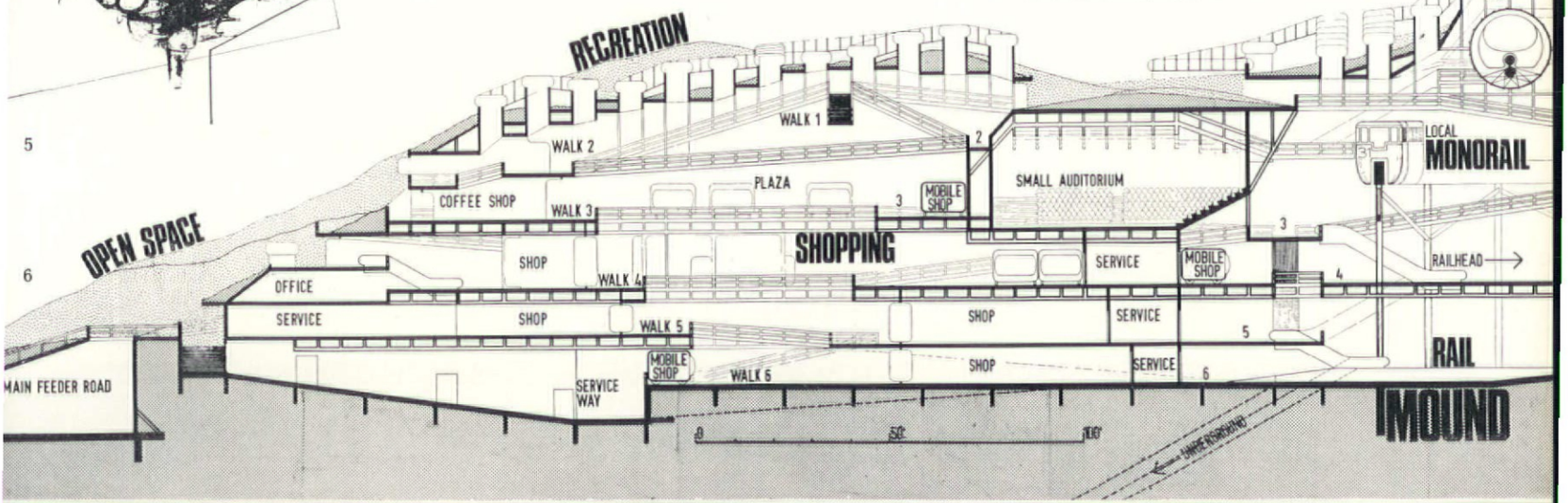
1
Drawing by Herron for the Fulham study, Euston team, under Theo Crosby, for T. W. Industrial Estates, 1963
2
Ibsac pavilion for T. W. Construction Co., 1964, Herron
3
Hotel, shops and car park for Kingston-upon-Hull, 1964, Chalk, Cook for T. W. Industrial Estates
4
City office block, 1964, Herron
5
Space house, 1964, Greene
6
Mound—a city terminal redevelopment, 1964, Cook
Bottom l.h.p.
Strand redevelopment, 1963, Cook/Oxford Street redevelopment, 1963, Cook, for T. W. Construction Co., chief architect Theo Crosby/Ideal Home housing competition 1963, Cook
Bottom r.h.p.
Moorfields development, Liverpool, 1963, Chalk/*Archigram* 4, cover, 1964, Chalk/Plug-in office tower, 1964, Cook

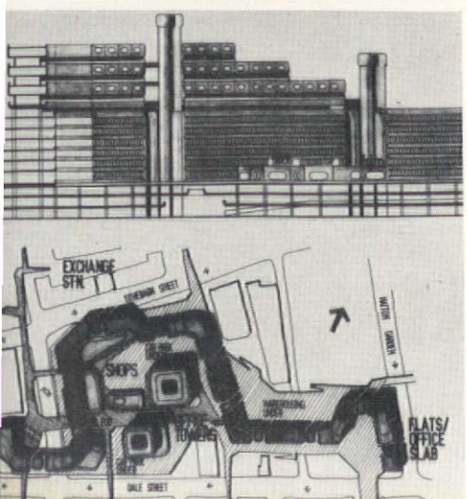
The closeness felt to the instinctive spirit of the space-comic and to science fiction had been expressed since 1961. At the back of our minds had been the idea of the architecture-comic. Largely through Warren Chalk's sympathy, know-how and collection of space comic material it happened at last in 1964. In the process we discovered an uncanny similarity in the work of the German expressionist idealists of the 1910–1920 period, whose work we cross-referenced with the comics, real SF hardware, and our own work. Our various experiments elsewhere continued. Cook 1965.

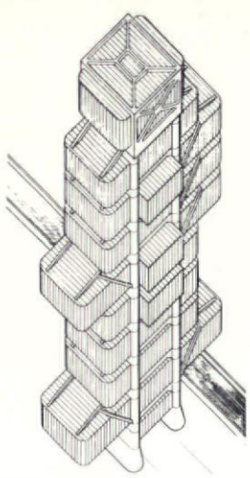
4

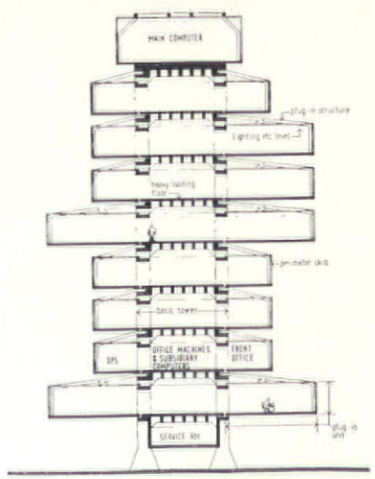
5

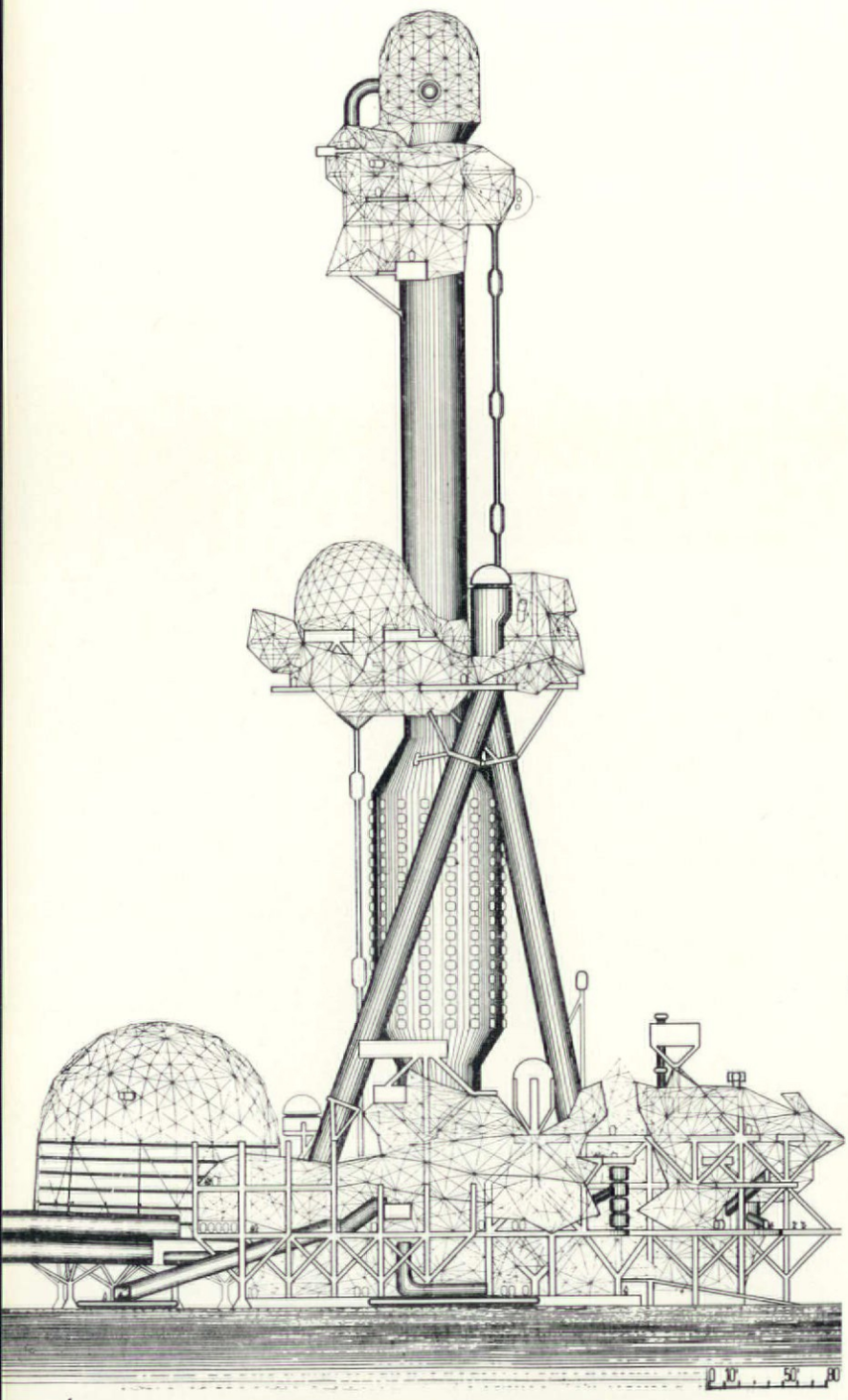
6



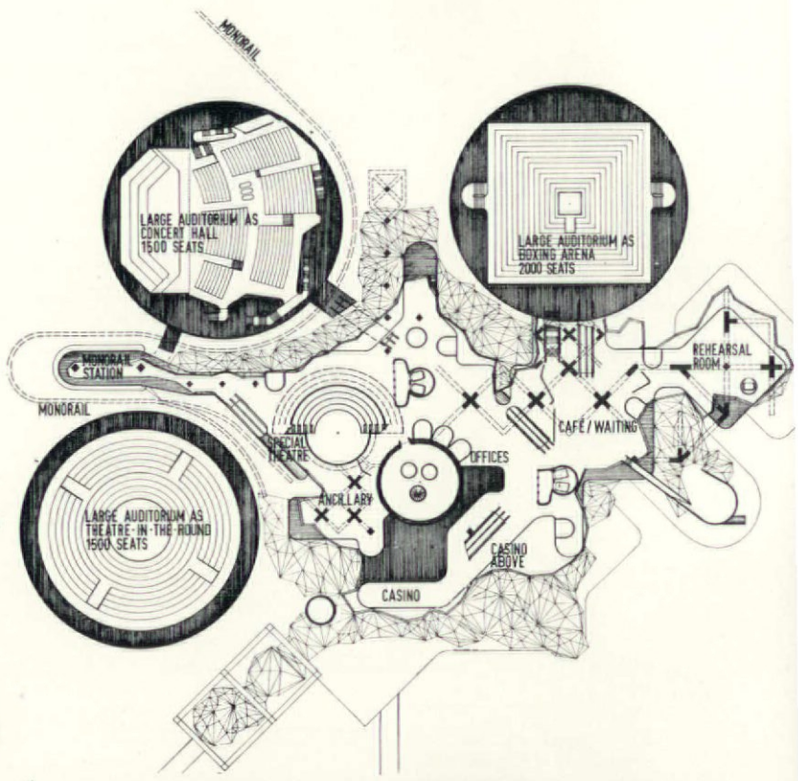




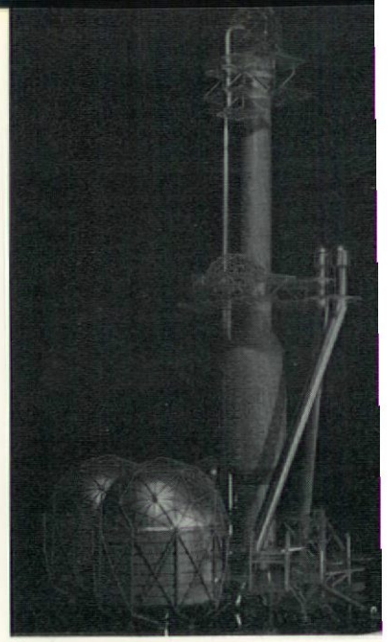




1


MONORAIL
LARGE AUDITORIUM AS CONCERT HALL 1500 SEATS
LARGE AUDITORIUM AS BOXING ARENA 2000 SEATS
MONORAIL STATION
MONORAIL
REHEARSAL ROOM
CAFE / WAITING
SPECIAL THEATRE
OFFICES
ANCILLARY
LARGE AUDITORIUM AS THEATRE-IN-THE ROUND 1500 SEATS
CASINO ABOVE
CASINO

2



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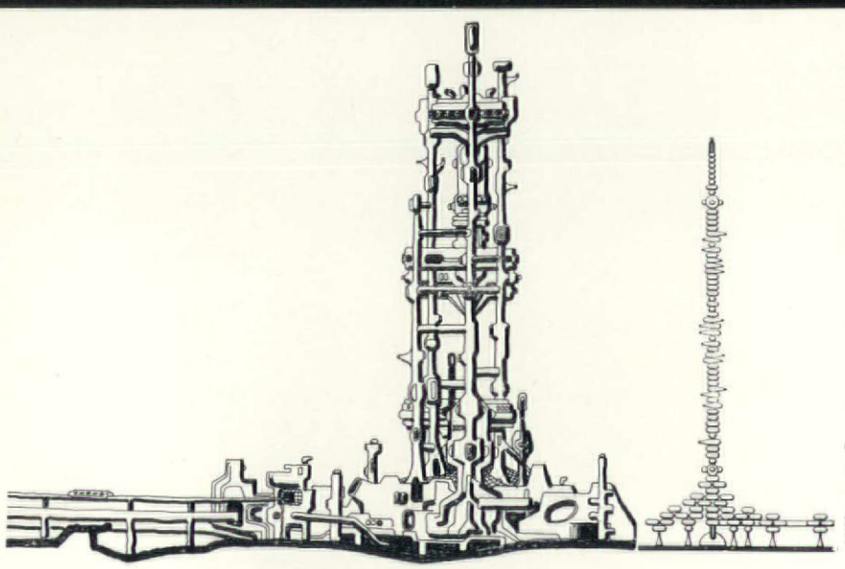
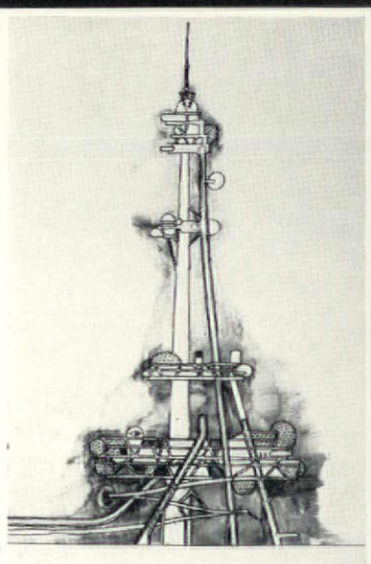
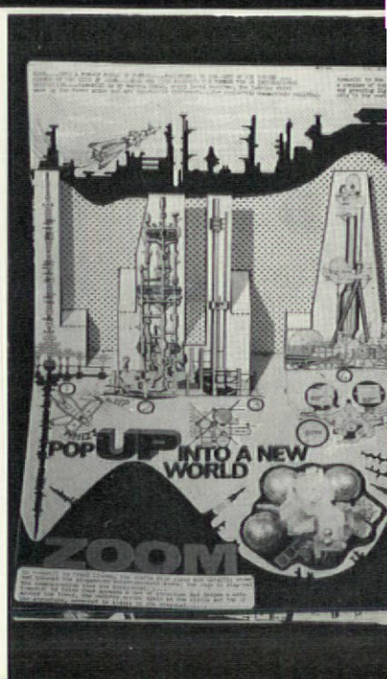
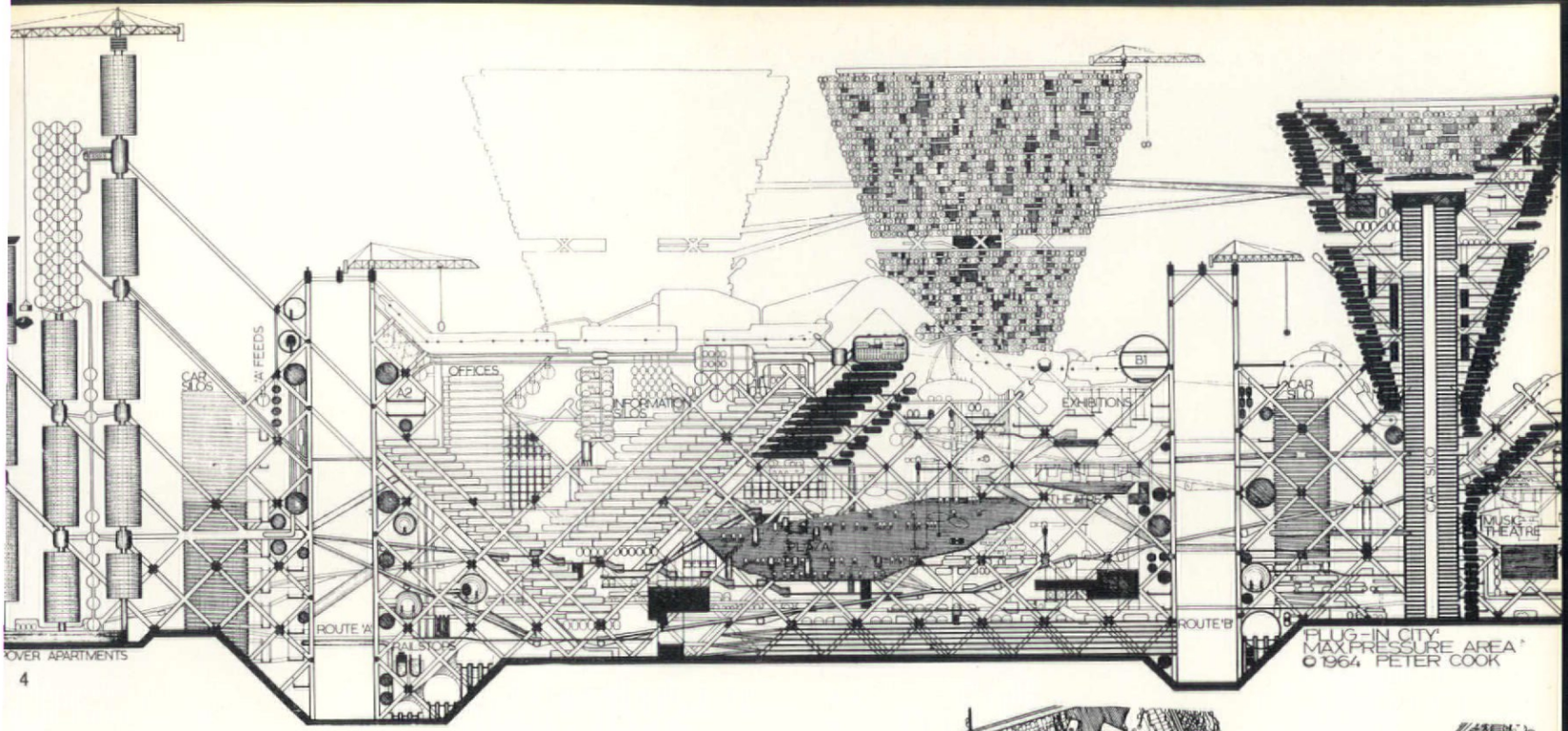




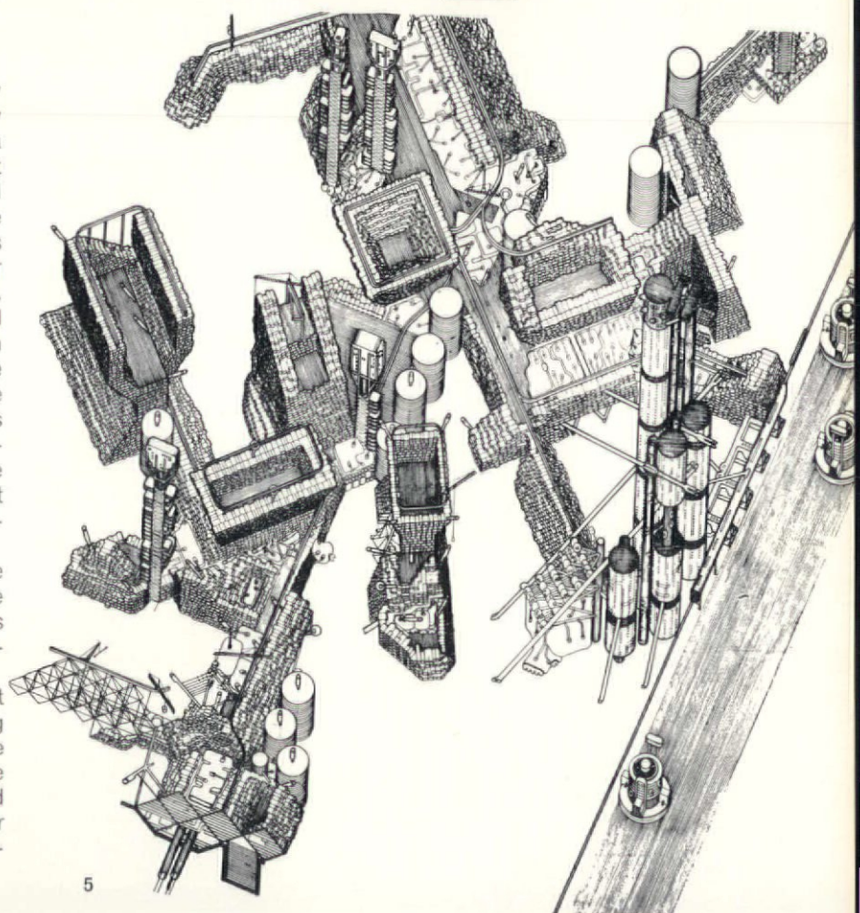

POP UP INTO A NEW WORLD
ZOOM



4

The Plug-in City is set up on any type of terrain, whether already built upon or not, by erecting a large-scale network-structure that contains access ways and essential services. Into this network units are placed that cater for all the needs of the city. They are planned for obsolescence (as is the structure). The units are serviced and changed by means of a crane-railway which is established at intervals above the top of the main frame-work. There are occasional smaller craneways at lower levels within, using telescopic cranes. The interior of the network contains components that provide for increased leisure activities.

The transport and sustenance elements, monorails, roads, the system of feeder-tubes for goods and services, etc., are all expendable. The whole city is expendable. The city is one building. Initially it will run tangentially to existing cities, but will eventually replace them. After about 40 years the structure itself will be outdated and will (by means of the craneways, or whatever replaces them) have replaced itself.

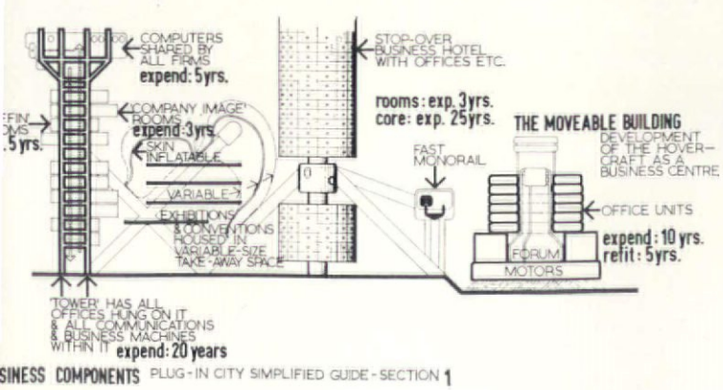


5

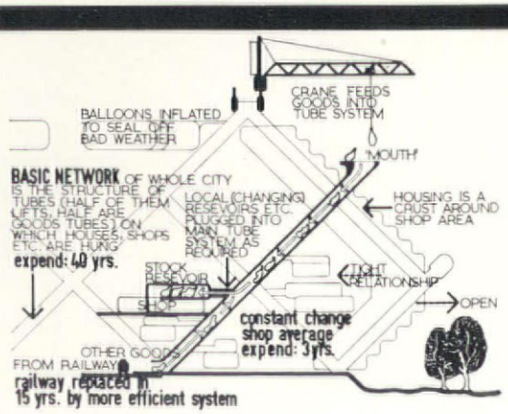
1, 2 & 3
Elevation, plan and model of an exhibition tower, incorporating a hotel, car parks and entertainment centres, intended for Montreal, 1964, Cook, prepared for Taylor Woodrow Construction Co., chief architect Theo Crosby

4
Section through maximum pressure area, Plug-in city, 1964, Cook

5
Axonometric of local district, medium pressure area, Plug-in city, 1964, Cook
Bottom l.h.p.
Preliminary sketches for the Montreal tower design, 1964, Herron, Chalk and Cook/Pop-up page from *Archigram* 4, 1964, illustrating the tower designs
Bottom r.h.p.
Explanatory cartoons of the Plug-in city, 1964, Cook/map showing United Kingdom pressure zones with a Plug-in city overlaid, 1964, Crompton



SINESS COMPONENTS PLUG-IN CITY SIMPLIFIED GUIDE-SECTION 1



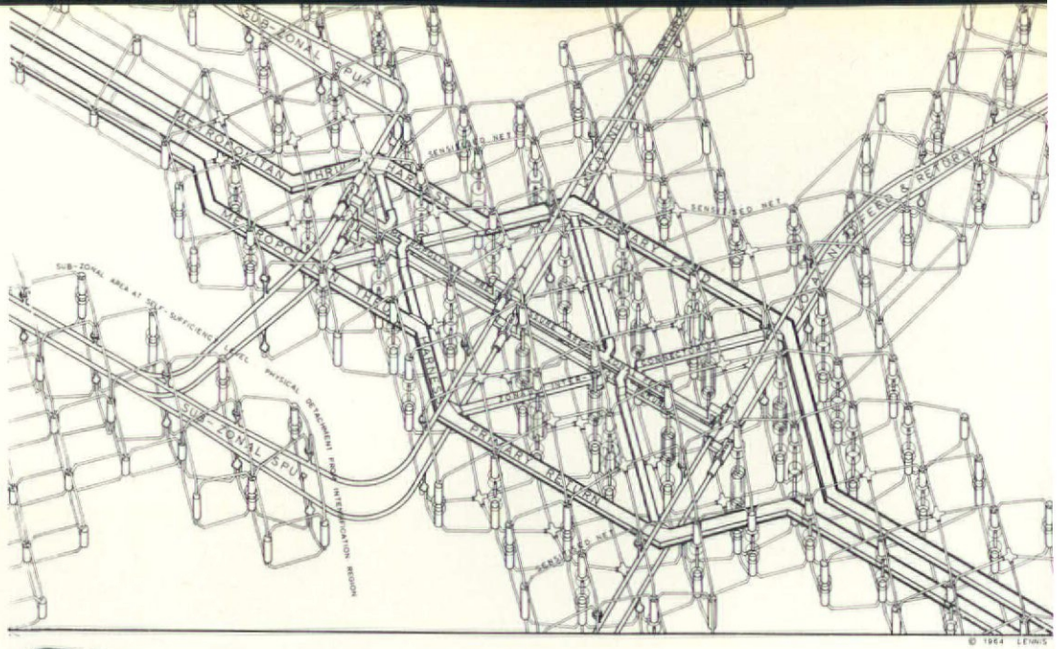
SUSTENANCE COMPONENTS PLUG-IN CITY SIMPLIFIED GUIDE-SECTION 2

UK – ACTIVITY PRESSURE ZONES

1
Computer city, 1964, Crompton
2–6
Circular tower made up of plug-in living units, 1964, Chalk. The units can be changed whenever a new, improved one comes out. But since appliances are bound to develop at a faster rate there is a clip-on appliance wall which can be yet more readily replaced. Kitchens and bathrooms are in pop-out capsules adjacent to the wide service doors of the unit
7–9
Model, elevation and explanation diagram of Plug-in university node, 1965, Cook
10, 11 & 12
Cities Moving—elevation, plan and section of units of a mobile city intended to congregate at any point of the earth, grouping and ungrouping, changing all existing concepts of static societies, 1964, Herron

Bottom l.h.p.
Underwater city, 1964, Chalk/Europa city, 1963, Cook (prototype for the plug-in city)/*Archigram* 5 cover, 1964, designed by Rae and Ben Fether/page from *Archigram* 5, 1964, Chalk

Bottom r.h.p.
Moving cities at New York, 1964, Herron



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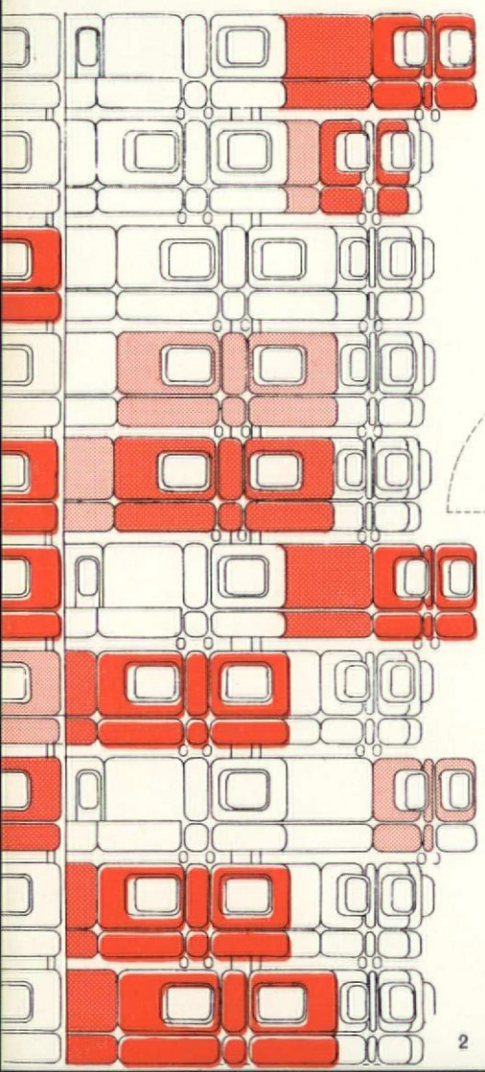
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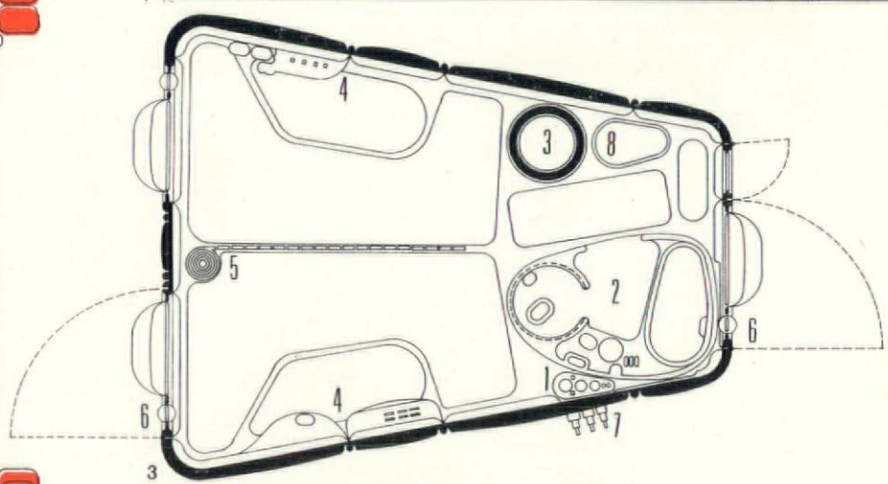

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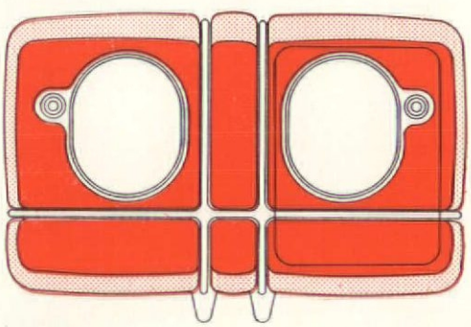
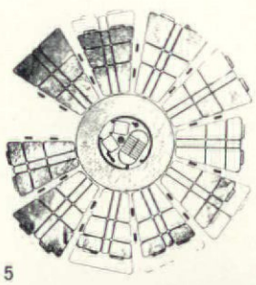

4

Key to plan
1 service duct
2 kitchen or bathroom
3 pneumatic lift
4 clip-on appliance wall
5 spring-loaded divider
6 wide service door
7 services connection
8 storage unit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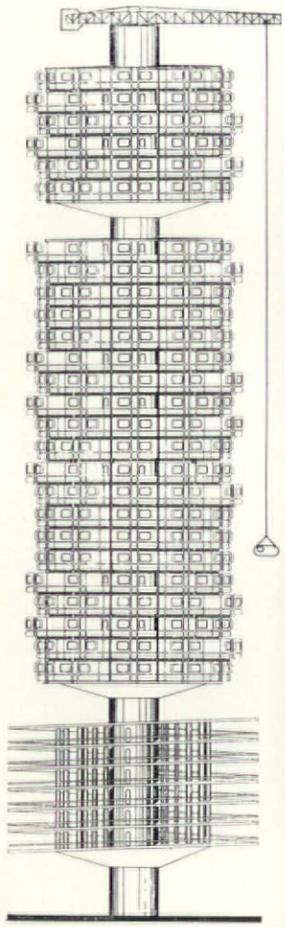
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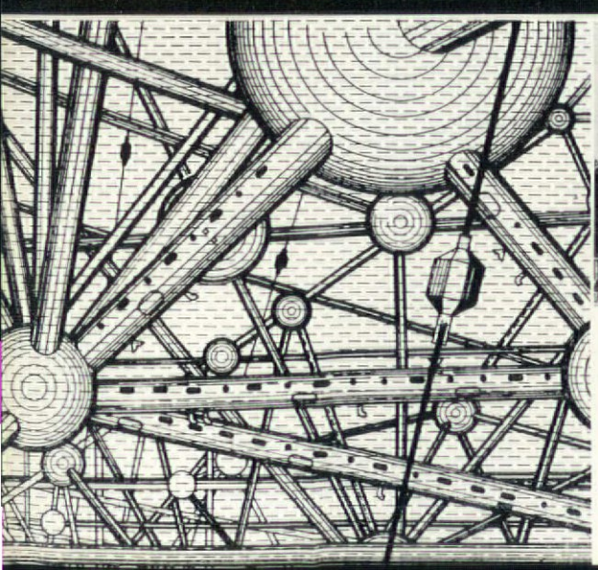
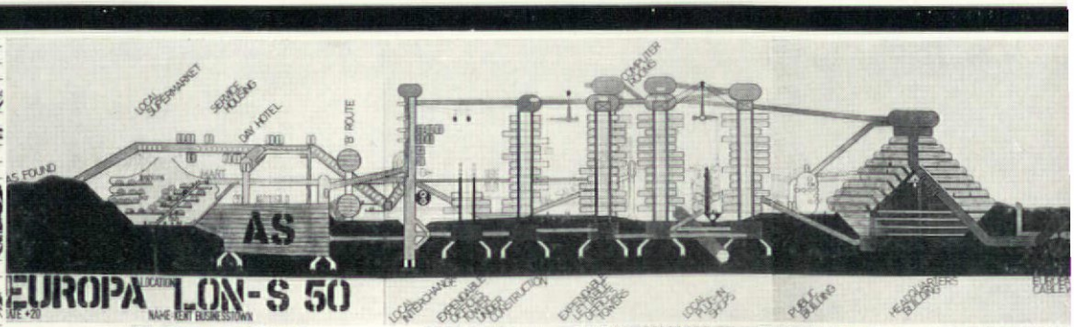
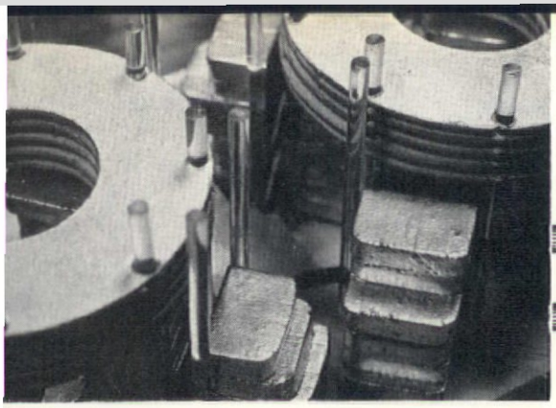
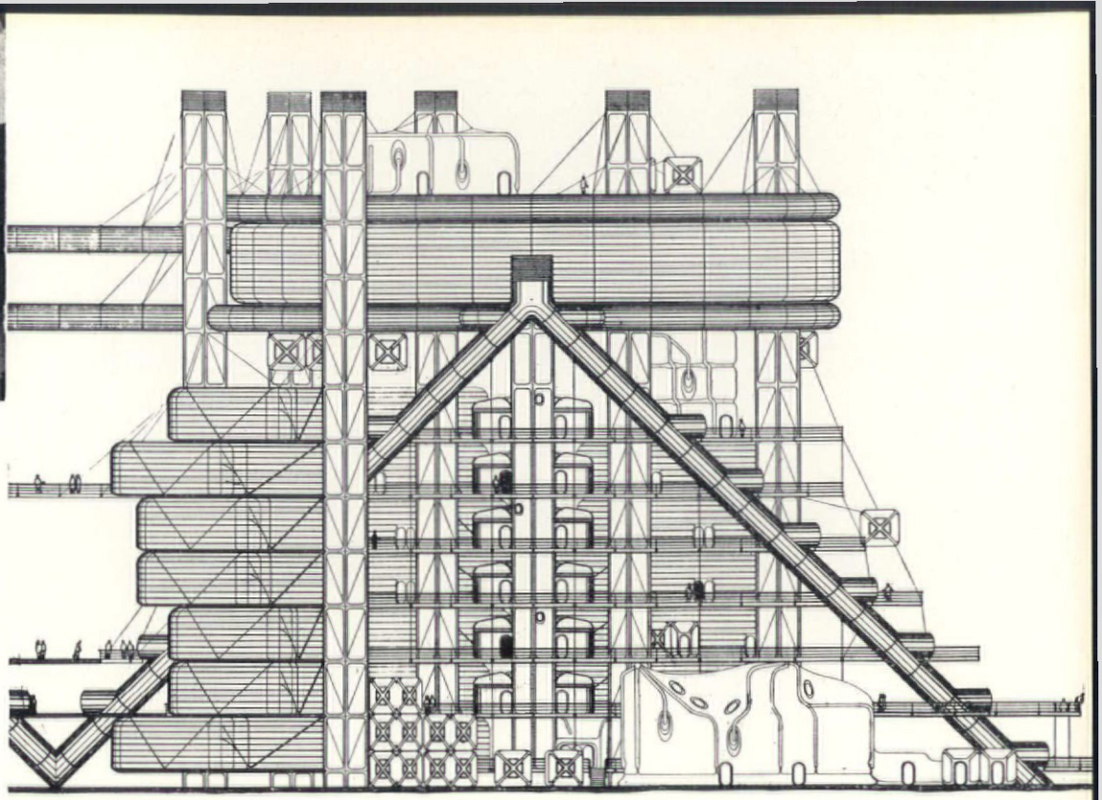






The University Node was a study of a particularized section of the Plug-in City, and since the requirements and the working parts can be designed for in some detail, it demonstrated many of the abilities of an expendable building organization to adapt to specific and yet changing conditions. The basic diagonal access ways which are structural also, interlock with a vertical system of information tubes going up to the 'silo' or library. The horizontal movement around this part of the city and the diagonalized local movement come together at the node. Though the way of teaching, the enclosures, and forms of the building change, the node remains. Here social units congregate (as shown, they are in the form of rentable metal boxes or inflatable shelters).



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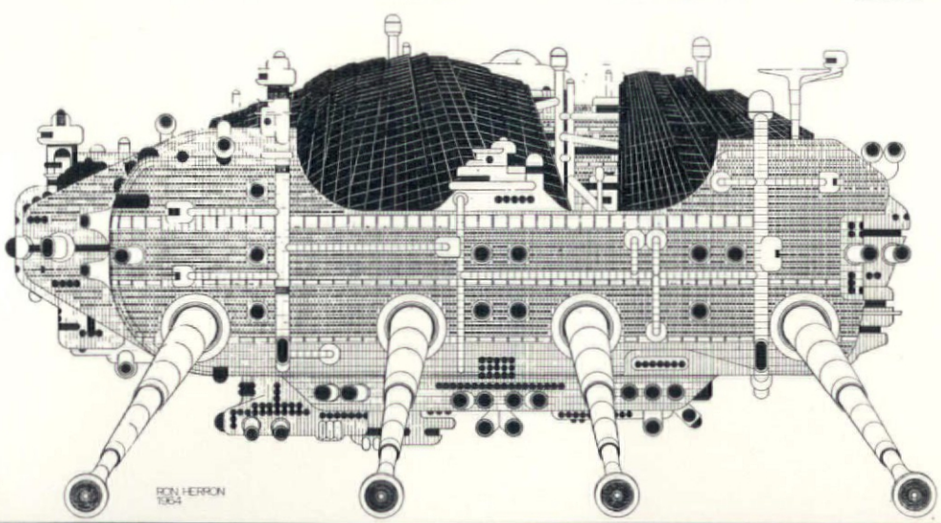

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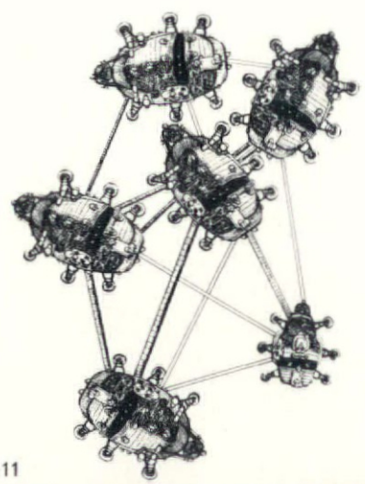

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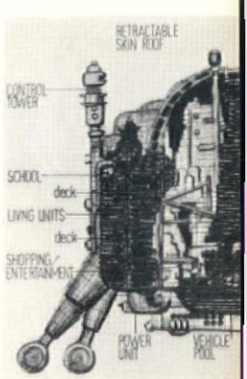

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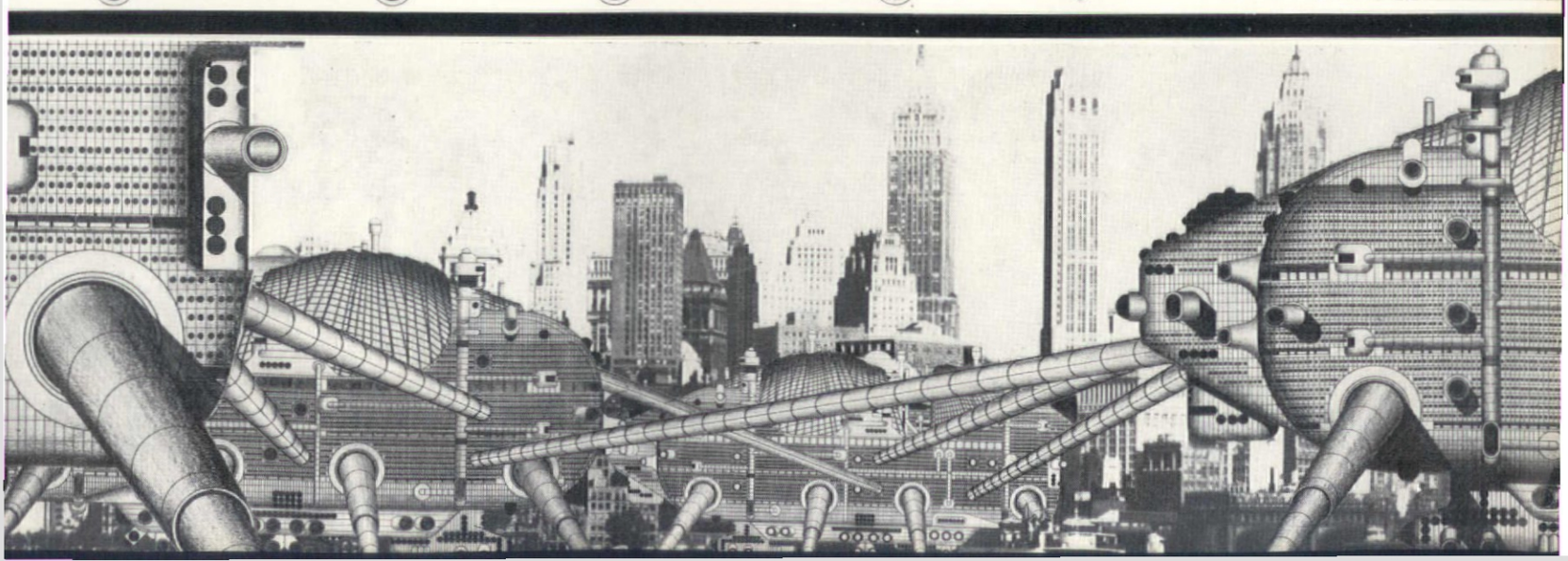
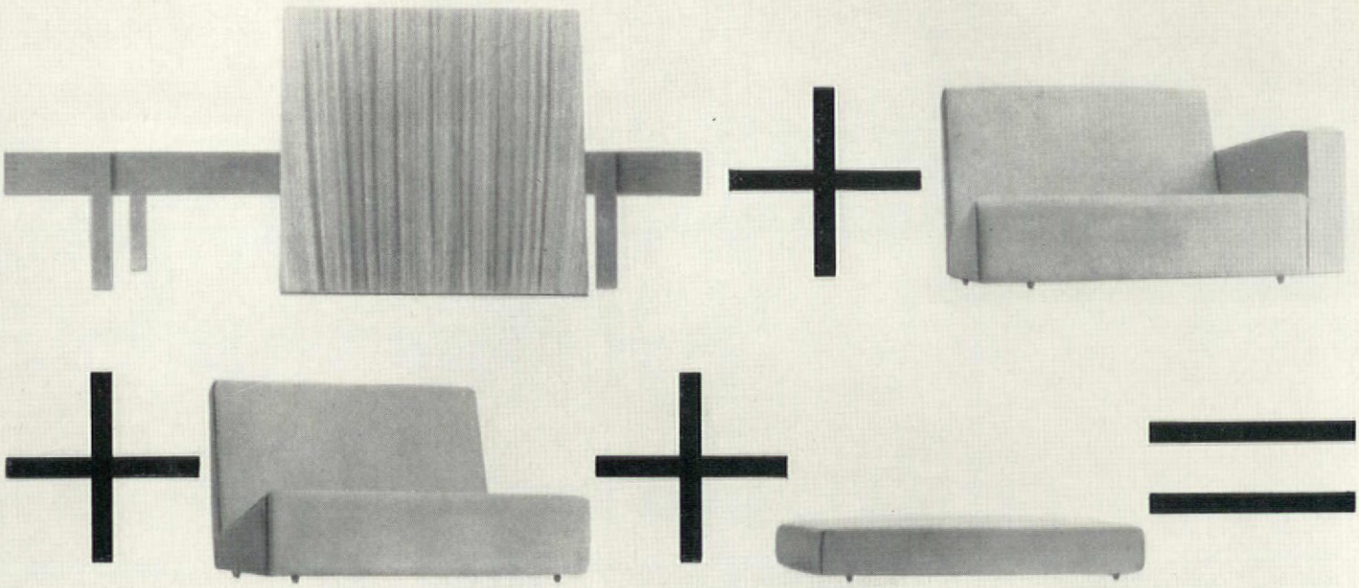




Sum furniture!

The Plus Group from Hille—simple, beautifully designed and endlessly adaptable unit furniture. The various components can be assembled by anyone without the use of tools and, of course, they can be rearranged or added to just as easily.

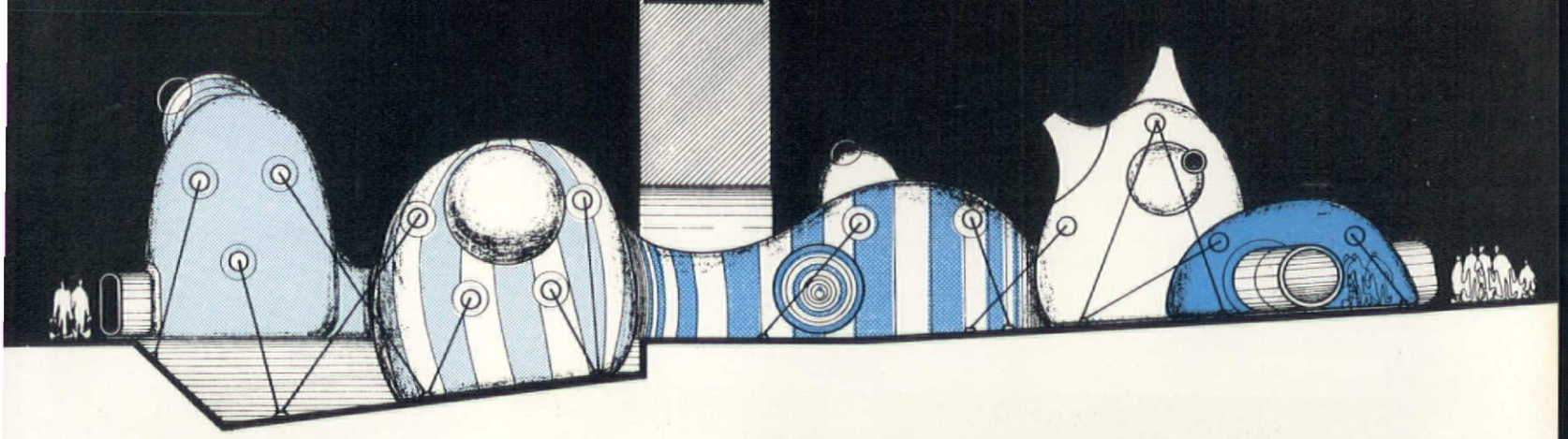
The sturdiness and neat proportions of this group have proved it most suitable for university common rooms, reception areas and other extensive seating situations.

An extremely straightforward system, it consists of timber frames, high and low backed seating units (with or without arms), a table-top and seat cushion.

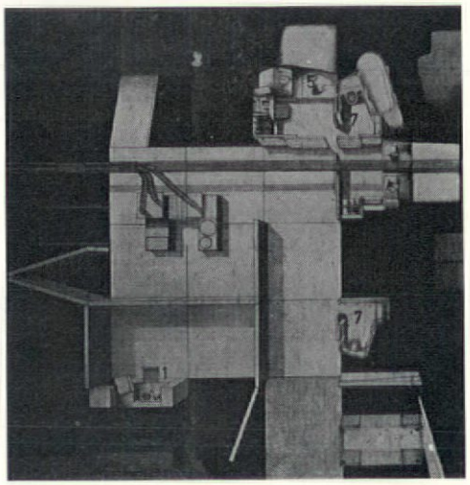
The frames, in two, three or four seat lengths are of African Walnut or Pine and the table-tops are veneered to match. The sprung seat and cushion units can be covered in any of the extensive range of Hille fabrics. In addition two related armchairs and low tables are available,

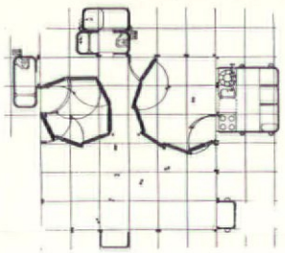
The grouping shown is, of course, only an indication of the possibilities. The amount and arrangement are up to you, and the Plus Group furnishes you with the freedom to change both. We invite you to see the Plus Group at our showrooms:— **London:** 41 Albemarle Street, London W1. Tel. Hyde Park 9576-9. **Birmingham:** 24 Albert Street, Birmingham 4. Tel. Midland 7378. **Edinburgh:** 25a South West Thistle Street Lane, Edinburgh 2. Tel. Caledonian 6234. **Manchester:** Sackville Street, Manchester. Tel. Central 6929. **Watford:** St. Albans Road, Watford. Tel. Watford 42241

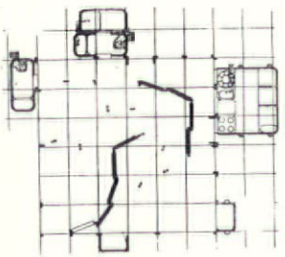
hille



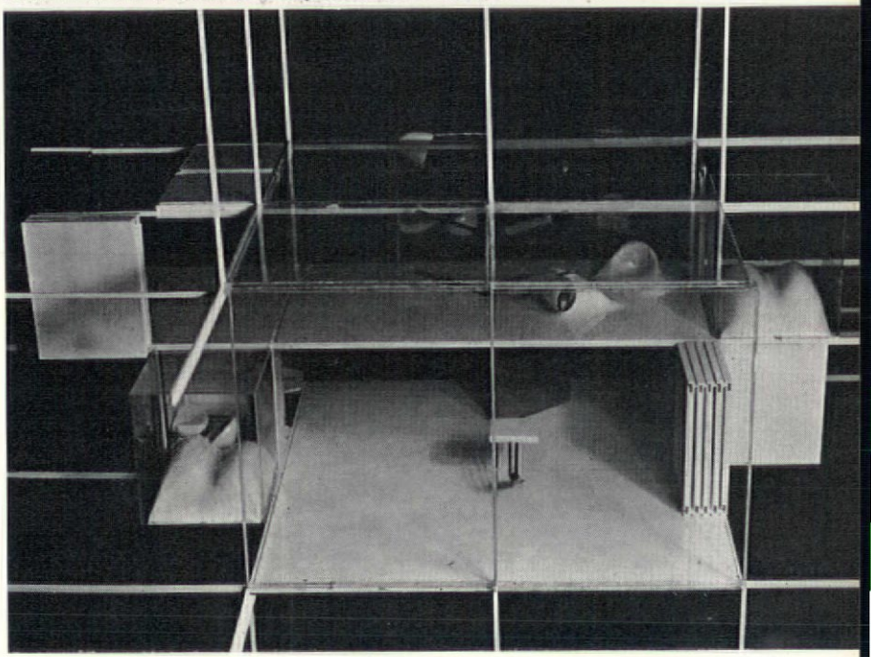
The Webb house is automatically constructed, serviced and dismantled. Its opaque and transparent plastic panels fold, reform and adapt themselves to all conditions of climate and social change. Appliance and service units are clipped on to the main spaces and are expendable. The whole is a study in movement.



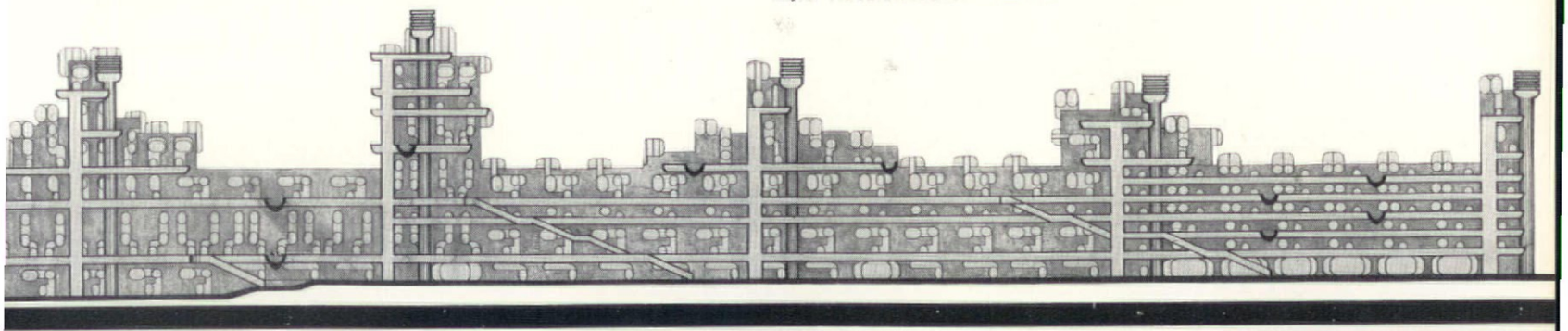


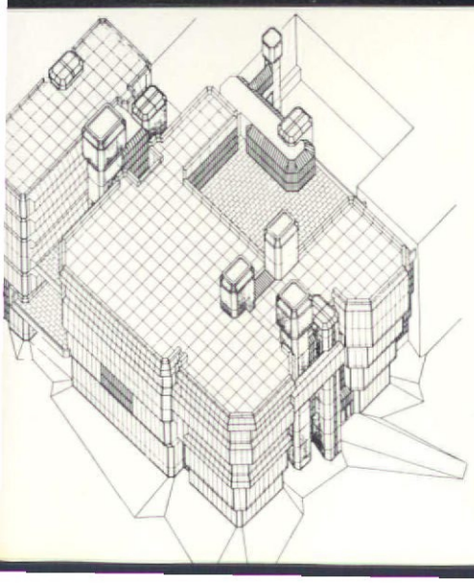


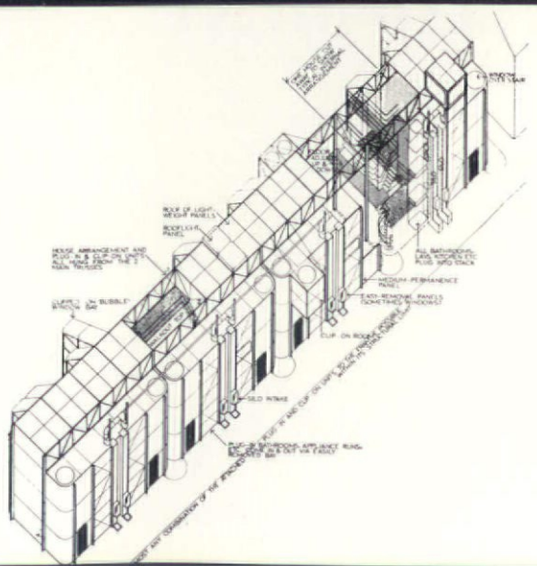
Above: An exhibition pavilion of air houses, Cardiff, 1965, Herron
Below: Plans and model of a fully automated house, 1964-65, Webb



Below: Kensington High Street redevelopment, 1964, Chalk, Crompton and Cook, for Taylor Woodrow Industrial Estates







Ulster museum competition entry 1964, Herron and Brian Harvey, second prize/Plug-'n Clip housing, first version 1965, Cook/a view of the 'Exploration du Futur' exhibition at Arc-et-Senans, 1965, arranged by Claude Parent and Patrice Goutet/*Archigram* 6 cover, 1965, designed by Geoffrey Reeve

LEA VALLEY KITCHENS FOR SALFORD RE-DEVELOPMENT

Fresh concepts in convenience and beauty for Salford's re-development plan include the superb Lea Valley Continental 21″ Contract Kitchens.

Phases 2 and 3B of the scheme to be completed in April 1966 comprise flats, maisonettes and houses for the aged — a total of 99 dwellings — all to be equipped with this modern kitchen furniture.

Designed and manufactured by Lea Valley Joinery Ltd. — the units are of seasoned timber finished with exclusive MELAMITE, a durable satin smooth melamine surface. Here is the perfect kitchen equipment, produced for building developments where economy is of major consideration.

Architects and builders are invited to make use of our specialised services — layout suggestions and quotations supplied on request. Write now for colour brochure and further information.

LEA VALLEY JOINERY LTD

62 BILLET ROAD, LONDON E.17 Larkswood 1937 & 1944.

Lea Valley Continental 21″ Contract Kitchen Units to be installed in Bury New Road Re-development, Salford City.

Engineer: G. Alexander McWilliam, B.Sc., M.I.C.E., F.R.I.C.S., M.I.Mun.E.

Architects: Cruickshank & Seward.

Quantity Surveyors: Frank Hyams & Partners.

General Contractors: Shepherd Taylor Ltd.

Product analysis

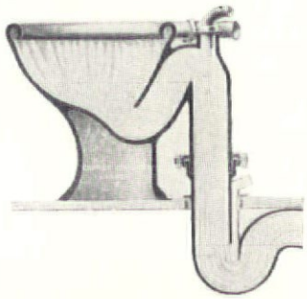
Architectural Design's consultants are unanimous in thinking that could one achieve an architecture in which standard industrially produced equipment and fittings were completely integrated into its organizational and form disciplines, the result would be a 'normalized' architecture entirely appropriate to our present situation.

Industrially produced equipment and fittings are not usually subjected to any kind of scrutiny as to their capacity to perform anonymously and quietly, or as to their form-compatability within their own range, or with other ranges of equipment likely to be used in the same room and in the same building. Neither are buildings usually subjected to a 'use of equipment and fittings' scrutiny. How have their designers dealt with the problem of equipment compatability, with the language of light-fittings and grilles (do these speak about light and air?) ; is there apparent in our buildings any sign of a discipline of services and equipment which could be discussed as Renaissance architects could discuss the discipline of room-sequences and proportions?

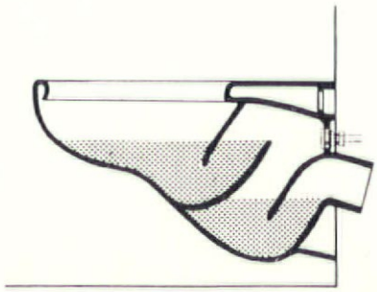
For us, the ideal architecture is one in which an ordinary mass-market fashionably dressed person who has arrived in an ordinary bus is perfectly at ease.

In the belief that manufacturers of standard equipment would welcome viewpoints based on this philosophy and that readers will appreciate statements on the stage reached by any particular product towards the realization of these aims, we intend to publish each month a critical analysis of a range of standard items. Criticism will be severe, but not destructive, having as its aim the creation of a heightened discrimination amongst architects and the stimulation of enterprise and inventiveness on the part of manufacturers. To this end, and to avoid meaningless criticism of bad faults which may appear in isolated examples of a particular product but which are not representative of the design of the product in general, only those items considered to be the best of their kind will be selected as subjects for criticism. The first article in the series, *Water Closets,* appears below, and will be followed by *Bidets and Basins* (January) and *Baths* (February).

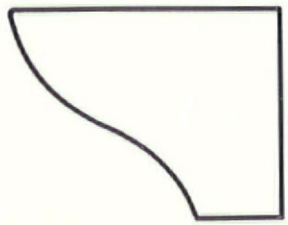
Progress since 1900



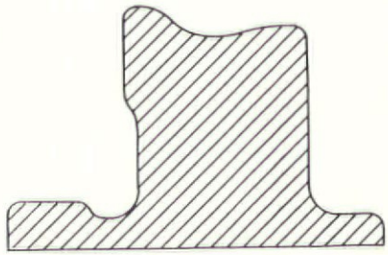
Jennings' syphonic closet 1900



Armitage Muresta



Lotus Bonne Femme 1965



Stonebridge Special 1965

Water closets

Alexander Pike

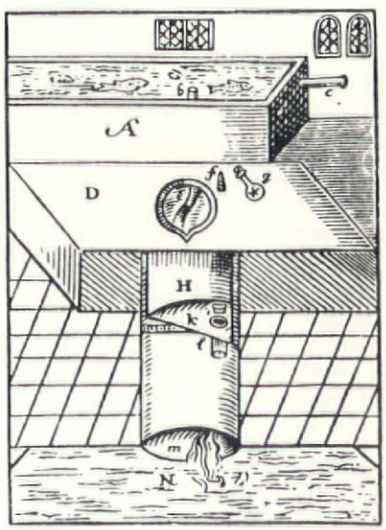
Advances in attitudes towards industrial design and training for its future practitioners have led us to anticipate a degree of inventiveness or stimulus to invention during the design process. Given wide scope in the brief, the good designer will ask himself whether the product he has been instructed to design is to fulfil a primary function or is merely required to combat certain deficiencies in other products. Do we really need vacuum cleaners—or should we be concentrating on designing for the exclusion of dust, or using ultrasonic precipitators? Do we have to design opening windows because failure to provide an economical ventilation system precludes its consideration as a separate function? In many instances questions such as these involve the overlap of interests into areas beyond the manufacturer's scope, and the extension of a brief to this extent may be tantamount to commercial suicide or in direct opposition to company policy.

However, in some cases advancement of thought on the subject may have been inhibited by the compliant acceptance of an established product or principle on the part of both the manufacturer and the consumer, creating a barrier to future development. A suitable nomination for inclusion in this category is the time-honoured figure of fun, the Water Closet. A subject with latent possibilities for mirth or offence, it has attracted a wide variety of formal and informal names throughout its history and has been with us for so long in its present form that it has acquired its own mystique of regulations and priesthood of inspectors. To question its 20th century validity as a contribution towards the disposal of human excrement seems almost heretical, yet progress in its development, slow compared with the coeval scientific and technical achievements in the 17th to 19th centuries, has been almost at a standstill for the past fifty years. In a century that has seen universal electricity, produced radio, television and atomic power, put the world on wheels and the planets within our reach, it is paradoxical that the fundamental problem of the disposal of our personal waste matter should receive such little attention and an unchanging principle be so widely accepted.

Initial development

The precept is medieval. A type of water closet, flushed from a cistern, was built in London by Thomas Brightfield in 1449, and Leonardo's proposals for Amboise Castle included water closets with flushing channels and ventilating shafts. The first illustrations of a water closet appear in Sir John Harington's *Metamorphosis of Ajax* in 1596, which contained full instructions for the construction of a valve closet that may possibly have functioned as efficiently as many of those in use at the end of the 19th century. The prototype was constructed at Kelston and no records of its adoption or further development appear to exist before 1718, when one was noted by Aubrey in Sir Francis Carew's house in Beddington, followed in 1738 by Blondel's

▷ 575



Harington's water closet, 1596

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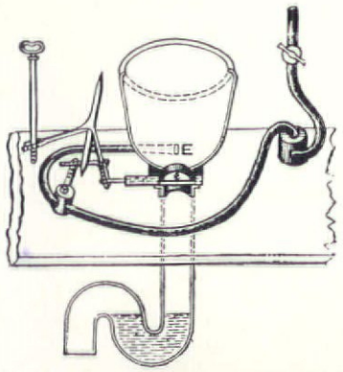
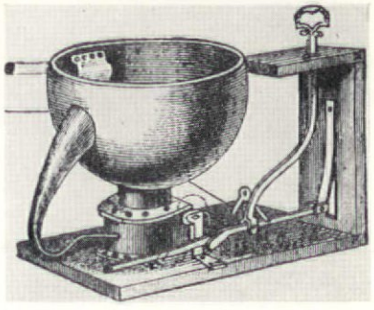
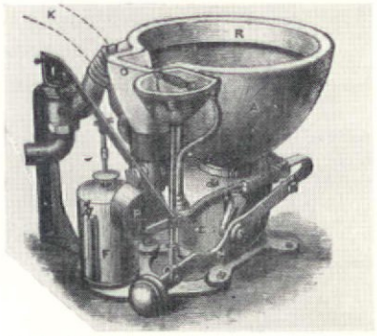


Alexander Cummings' valve closet, 1775



Joseph Bramah's valve closet, 1778



Hellyer's improved valve closet, 1870

reference to the use of valve closets in France. After this their development was steady, even if surprisingly slow. The first patent for a valve closet was issued in 1775 to Alexander Cummings, whose sliding valve was improved by Bramah's patent in 1778. This held pride of place for nearly a century, weakly contested by the Long and Short Hoppers. In 1870 Hellyer's Improved Valve and Mann's Syphonic closets were introduced, followed by the Washout in 1885. The modern Washdown closet was invented in 1889 and apart from slightly improved flushing efficiency and the elimination of tendencies to blockage, no basic advances have been made since that date.

Materials

British Standard 1213 for WC Pans permits the use of caneware, earthenware, fireclay, heavy earthenware, stoneware and vitreous china. With very few exceptions most WC pans produced today are of either fireclay or vitreous china.

Vitreous China is fired at a high temperature immediately before becoming soft, the consequent risk of distortion making it difficult to form sharp edges and large units. The texture of the finished product is homogeneal throughout and the surface is not subject to crazing. The material is more brittle than fireclay and is liable to breakage under impact.

Fireclay is fired at a lower temperature and has little or no tendency to distort from its original shape. It is heavier and more expensive than vitreous china, and after firing has a highly porous inner core surrounded by glaze. In spite of its tendency to craze, some hospital Boards prefer to use fireclay because the softer 'biscuit' core is more capable of resisting severe impact and a damaged bowl can be used until a replacement is installed.

Criteria for design

Some assessment of the capability of the product in general to be incorporated within the organizational structure of an integrated architecture may be made by applying a set of standard design criteria:

Aesthetics. Most manufacturers have exercised a rigorous application of the dictum that *form follows function* and have thus derived the basic shapes for their equipment—producing for some syphonic closets surprisingly appropriate intestinal forms. Zealous drives to create new models in a competitive market have led to the concentration of attention on meaningless styling, overlooking fundamental weaknesses and ignoring the hard fact that junctions with floor and wall surfaces create visual and cleaning problems demanding solution by the design of the fitting.

Economics. For such an essential item the elemental cost is low and the comparatively marginal price differences should not militate against the choice of the better product—although some manufacturers claim that this is the case. Economics can understandably become a decisive design factor when competitive tenders are called for against an inadequate specification, a practice—too frequent—which must share a large proportion of the blame for poor designs.

Ergonomics. Research is not manifest, and the standard height and shape of WC seat has become so firmly accepted that any alternatives have been resisted (with a few notable exceptions) by the indifference of manufacturers, and the empirical solution has become codified by acceptance as a British Standard. A body of medical opinion considers that the standard fitting is too high, and that seats introducing a posture similar to that adopted for the use of the Eastern 'footprints' pattern would be more suitable, yet the fixed seating position appears to be accepted as a necessary evil and no attempts have been made to market an adjustable fitting. Another eastern practice which is not accepted —or perhaps even known—in this country is the strict observance of the use of opposite hands for incompatible operations. Consequently, more often than not, the same hand, will manipulate highly porous paper, operate a flushing mechanism, handle a bolt knob and open a door before reaching a lavatory basin (which may then be by-passed). Yet in spite of the warnings of typhoid epidemics it is still current practice to position flushing handles on the right of the cistern, and although foot operated flushing mechanisms are available they are considered primarily as an anti-vandal device.

Function. Within the limits generally circumscribed most WCs fulfil their primary aim in that they move waste matter from one place to another leaving a minimum of residue. Nevertheless, splashing from the apparatus or the user can result in an unhygienic situation which most models do not resolve. In all but a very few versions, including the corbel types, ledges are created at the top of the trap which cleaners can reach only by adopting a position with their head very close to the seat, a posture which few will choose to adopt frequently and which will reflect itself in the standard of cleaning experienced.

Marketing. Together with production, this is essentially the problem of the manufacturers, who will obviously have considerable experience on which to base this factor of design. The purchaser may assume that as this is an essential item of equipment with a guaranteed market the problem is unlikely to be sufficiently serious to qualify as a design criterion. The subject is a delicate one, in which conservatism rules, and new innovations may evoke customer resistance, but there should be little difficulty in overcoming this if a design is created which has obvious advantages over other models.

Mechanical performance. The two flushing systems currently employed, simple and syphonic, have undergone little change since their inception, and noise is still a problem requiring a solution at source rather than by insulated construction. Many water authorities are still reluctant to permit the use of flushing valves, which offer scope for saving space and providing much cleaner installations although, where permitted, most of the marketed versions do not exploit fully these opportunities.

Motivation. The requirements are so essential that motivation is obvious, but it is surprising that the method has never been seriously questioned as part of the design brief.

Structural performance. Normal usage and resistance to damage are never accepted as factors influencing the choice of materials. When assessed against these criteria the traditional materials are not entirely appropriate for the purpose.

Production. The shapes and materials employed exert a considerable influence on production, and the problems created may force a high rank on this criterion. These may however, be self-imposed by an inflexible adherence to the use of standard materials, and the demand for the product obviously exists in sufficiently high quantities to make production subservient to other criteria for those firms not totally committed to the use of a particular material.

Manufacturers' approach to design

In an attempt to discover the present basis for the design of the WC and to draw conclusions on future development, seven leading manufacturers were requested to provide information on their design processes, assessments of market requirements and results of any investigations into alternative methods.

One firm claimed that the criteria of *aesthetics, ergonomics, function, mechanical performance, motivation, British Standards, tradition, marketing* and *production* were all taken into account during the design brief, and with the exception of the last two items, all given an equal level of priority. It is surprising that the designer facing such a task can produce any result at all—and even more surprising to note that the designs emerging from this sophisticated procedure bear a relatively close resemblance to the results of the empirical processes employed fifty years ago. This firm employed their own design department whose work might, as in so many parallel situations, be subjected to over-riding pressures from upper levels.

Most companies took the view that *function, mechanical performance, production* and *aesthetics* were the critical factors influencing their design, placed in varying order of importance.

Only one firm employed outside consultants for the complete design, all other firms relying on their own design staffs, occasionally complemented by advice on specific points from consultants. Only three firms felt it necessary to give the names of designers.

Market research consultants were not employed by any firms, assessments generally being made within their own organizations based on reports from and discussion with their sales staff and representatives. Industrial design procedures employed in many manufacturing industries are based on seeking solutions, from first principles, to the basic problems involved. None of the seven firms questioned could claim to have investigated any alternative method for the disposal of excrement other than the water closet, nor indeed did they appear to be aware of the work carried out on such methods elsewhere. Their attitude appeared to be that whilst sewers existed, no alternative form was necessary, thus creating a vicious cycle: whilst sewers exist, WCs will be employed; whilst WCs are used, sewers are necessary.

Criticism

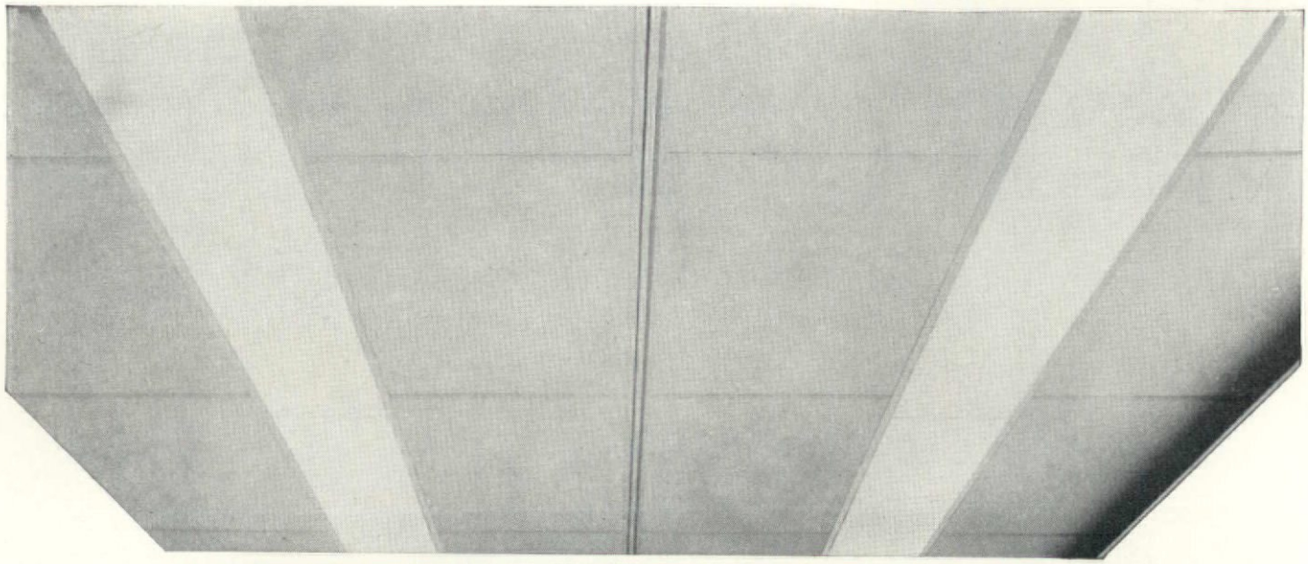
When assessing a product which has remained unaltered, in essentials, for over 70 years, severe criticism is justified, and should be communicated to the manufacturers either explicitly through their normal channels of assessment or implicitly by discriminating against those displaying little or no effort to improve their products.

The principle and basic functional shape have been established for such a long period that we should now be able to expect a high standard of performance and refinement in detailing. Current catalogues reveal that whilst most manufacturers have succeeded in eliminating the dirt-collecting ledges and raised patterns characterizing the design of closets at the turn of the century, this has merely stripped the surface clear of decoration, retaining most of the original undesirable features.

In an item of equipment where the strictest standards of hygiene are essential it is deplorable that manufacturers should devote such little attention to the

▷ 577

←Code 52



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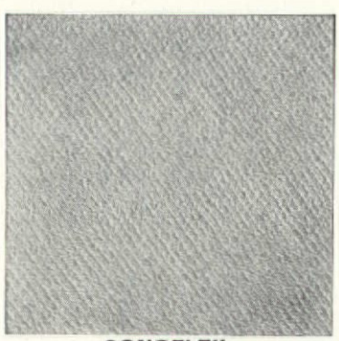

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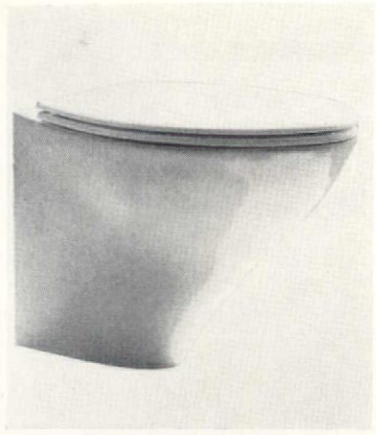
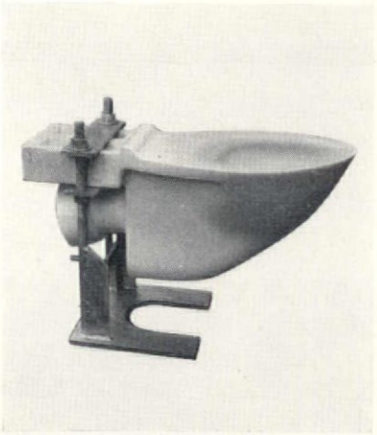
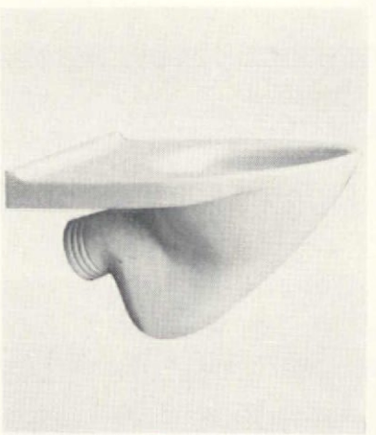


Adamsez, Meridian One, A409
Rimless fireclay



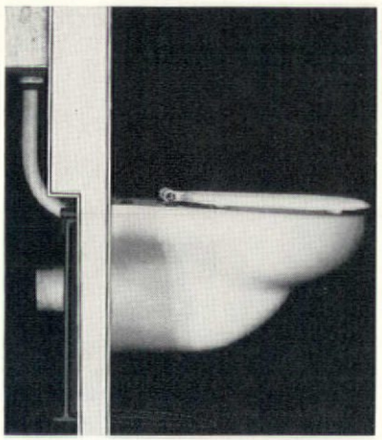
Adamsez, Lotus Corbel, C411
Fireclay



Adamsez, Lotus Bracket, C424
Fireclay

Shanks, Prison, 56/29
Fireclay

Goslett, New Soho, C2009
Semi-rimless fireclay



Goslett, Swanlyne Hospital, CL2001/H
Vitreous china

Goslett, Syphonic close-coupled,
CL2001/5 Vitreous china

Ideal-Standard, Sanwall
Vitreous china

Twyford's Unitas-Silent, syphonic, 2774
Vitreous china

Twyfords w.c. basin, 2595
Vitreous china

Armitage Unisyla, syphonic, V200
Vitreous china

Armitage Muresta, syphonic, V1224
Vitreous china

Shanks Cavendish, syphonic, 62/79
Vitreous china

Shanks Nisa, 64/12
Vitreous china

Doulton's New Victor, V3000
Vitreous china

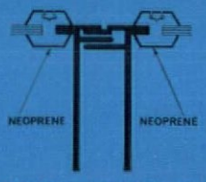
Doulton's V3080
Vitreous china

Architects agree—

not only in Europe

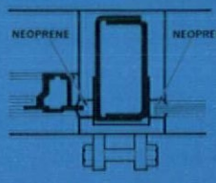
GPO RADIO TOWER, LONDON
Architects: Chief Architect's Division
Ministry of Public Building & Works
(photo by courtesy of HM Postmaster General)

. . . but in America



FIRST NATIONAL CITY BANK, HOUSTON
Architects: Skidmore, Owings & Merrill

. . . and in Asia!



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Architects: Carlos D. Arguelles Associates

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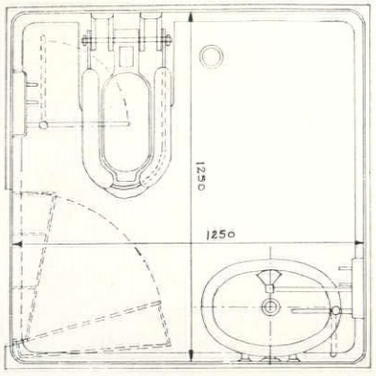
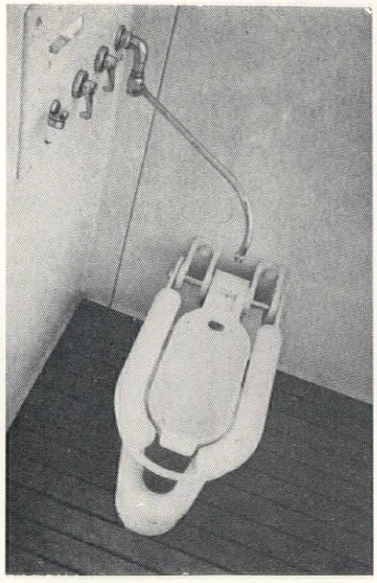
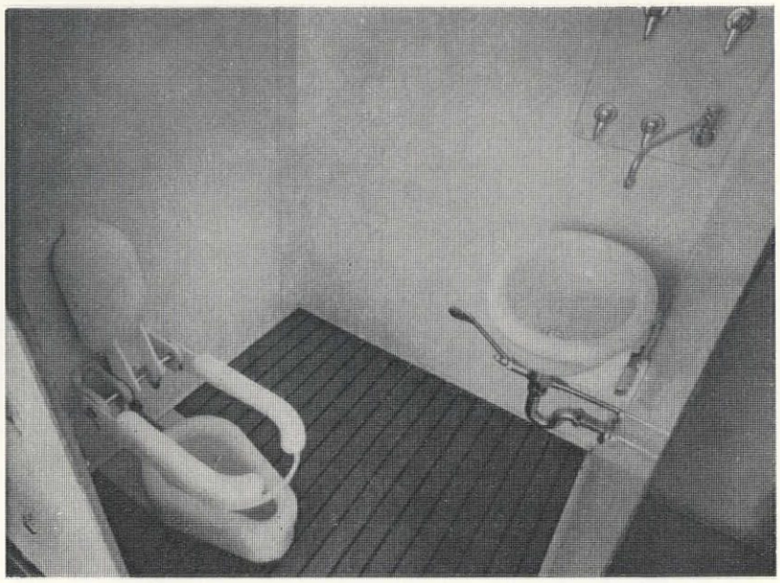






Above and right, part of a 'sanitary cabin', 49in square, designed by Le Corbusier with Pierre Jeanneret and Charlotte Perriand for the Etablissement Delafon in 1936. The combined w.c./bidet offers a choice of seating height and a swivelling nozzle serves as a water supply to the bidet and as a flushing unit
Industrial Design 6, June 1961
Aujourd'hui, March 1961

◁ 575

subject. Most designs have areas which are difficult, if not impossible, to clean: the top of the trap, and its junction with the bowl, have always been awkward areas, and the current tendency to increase the width of the rear of the fitting in close-coupled units aggravates the condition; with corbel units the situation is far worse—having raised the fitting to enable the floor to be cleaned, far more important areas are made almost inaccessible; all but a few designs still incorporate holes for base fixing screws which create pockets to defy the most ardent cleaner; holes for hinge bolts cannot be cleaned without removing the seat, and even then only with considerable difficulty. This condition, in the most vulnerable position for urine splashing, is forced on manufacturers by British Standards 1254 and 2089 for Plastics and Wooden WC Seats which, if suitably modified might encourage enterprising designers to evolve alternative methods of fixing.

The separate seat was obviously necessary in the unheated compartments in Victorian homes, and it is regrettable now that it is easily possible to devise a means of heating the rim of the fitting, thus dispensing with the seat altogether, that we should discover that man's defective motor co-ordination requires its retention as a splash-coverer. Without exeption, the design of every WC on the market today fails to acknowledge the fact that it is a permanent item of equipment requiring to be fully integrated with the surfaces with which it is in contact. Coved skirtings for bathrooms and WC compartments are now fairly common practice, yet the area of the floor where cleanliness is most essential, at the base of the fitting, is the most difficult to clean. No manufacturer has yet made provision for carrying a cove up to the base of a pedestal closet, or produced a design capable of being let into the floor to achieve the same result. The fitting of most low-level cisterns leaves more than ample provision at the rear for dirt, cobwebs and dead flies, and only one firm appears to have realized that these are now most frequently fitted to a tiled wall and should be designed accordingly.

Although rimless bowls are available, most patterns have a flushing rim, and whilst we hope and suppose that these are self-cleansing, we have no means of establishing that this is so.

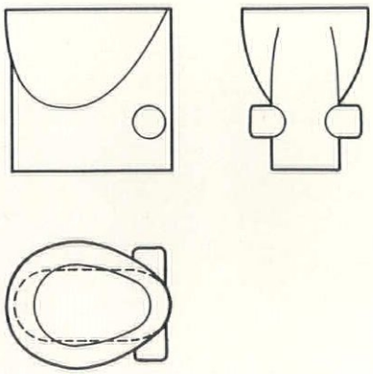
Disposal at source

For absolute criticism comments need not be confined to the water closet as the initial receptacle, but should be extended to cover the extensive supporting system it requires for its operation. When one considers the ramifications of the acceptance of the WC, with its attendant paraphernalia of supply pipes, sewers and treatment plants, the logic of the entire system becomes extremely obscure. Starting inside the building, the rigid spines of pipework demand a grouping of fittings that frequently conflicts with the requirements of the user and produces totally inflexible planning situations. Continuing into the ground they become an unseen (and often uncharted) horror of drains and sewers growing larger, deeper and more complex as they wend their way to create an unsalubrious locality at their disposal point. En route a rigid format is created with built-in and incontestable arguments against diversion and with a profound influence on street layout and city planning for generations to come. If some freak disaster could wash away our streets and the supporting soil for a depth of 30ft we would be even more amazed at the ridiculous array of pipework left behind.

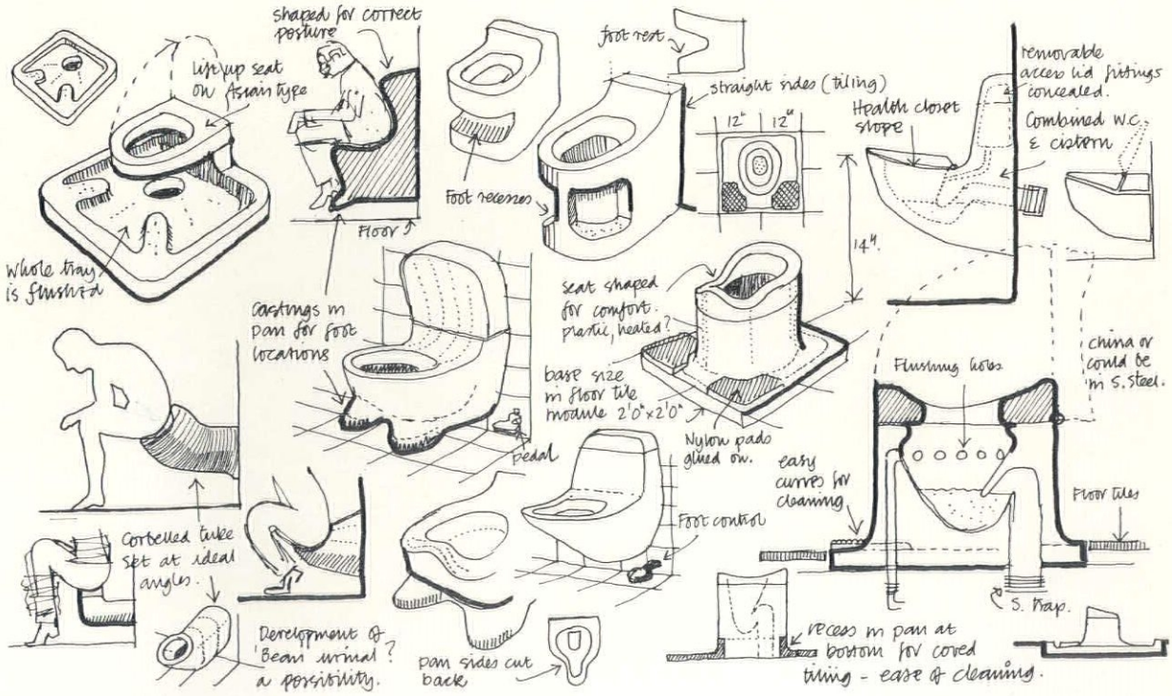
Buckminster Fuller's vision of the autonomous building, independent of the ground on which it sits, may not be an essential feature of future planning, but it would relieve us of more problems than it presents and would certainly eliminate the justification for the many dreary housing layouts based on short drainage runs and remove the severe restrictions frequently imposed on large scale developments. Furthermore, an increased demand for greater quantities of water coupled with the difficulty experienced in finding new sources makes the principle of using two gallons of clean water to despatch four ounces of excrement not merely wasteful, but foolhardy.

In 1874 W. Eassie was able to say 'Nothing can be more satisfactory than a good water closet apparatus, properly connected with a well-ventilated sewer.' Must we say the same today?

▷ 578



Above, w.c. with foot supports for 'natural' posture designed by Le Corbusier for the Pozzi Company, Milan



Right, sketches by Peter Stonebridge suggesting new and not entirely impractical ideas for the improvement of w.c.s

hushed flush!

That's the "Lincoln" closet, with its double trap siphonic bowl, in action.
Designed by "Ideal-Standard". Specifically for the smaller bathroom. Hygienic: in non-porous vitreous china. Reliable: every bowl is test flushed before it leaves the factory. Wash down bowl if preferred. Close-coupled cistern. Choice of Corallin, Pearl Grey, Ming Green, Regency Blue, Ivoire de Medici, Primrose, Turquoise, Sky Blue or White.

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New approaches

Faint rays of hope gleam in a dull picture of slow development as a few enlightened individuals struggle against a stream of apathy. In Switzerland Hans Maurer has developed the Clos-o-Mat, primarily for use by severely disabled persons but with obvious advantages for general acceptance. The device comprises a water closet combined with an electrically operated warm water bidet and warm air dryer. After using the closet, pressure on a foot control in the base of the pedestal forces a nozzle from the rear of the unit into the appropriate position for the douche; it then sprays water at body temperature for about 15 seconds, the temperature decreasing gradually and finally becoming cold. The douche continues as long as the foot button is kept depressed. When the foot button is released, the douche stops, the douche nozzle retracts and warm air flows from a duct at the rear of the pan for $2\frac{1}{2}$ to 3 minutes, or until the user rises. A manual control enables the closet to be used in a conventional manner.

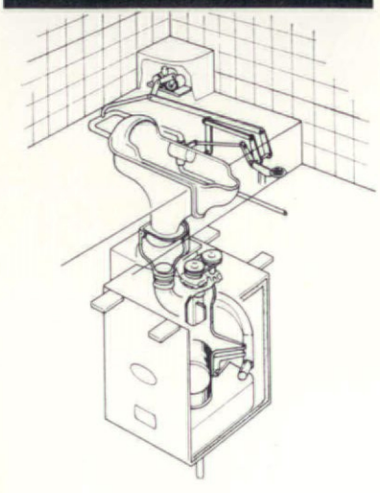
Accustomed as we are to the use of a Victorian apparatus the procedure may sound somewhat terrifying, but the hygienic advantages are overwhelming and its wider acceptance can be predicted. The units have been imported into this country in small quantities—10 or 20 at a time—and cost approximately £230, but an increase in demand could show a considerable reduction on this figure. Visually the design is conventional, and the potentialities of housing the mechanism may not, perhaps, have been fully exploited, but a commendable idea has been originated which is worthy of our interest.

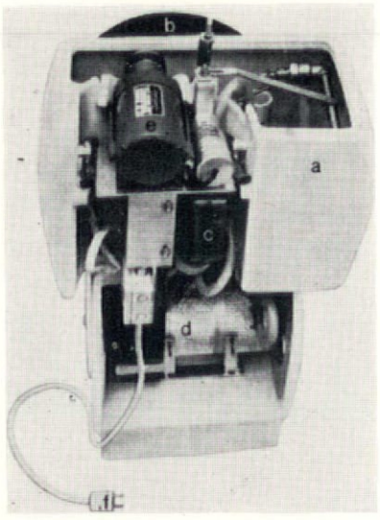
A device which deserves more attention than it has received is the Sewerless WC invented in the USA by Carl Boester. This is based on a process of waste incineration employing the low temperature combustion of instantaneous oxidization. The apparatus consists of a closed circuit containing a pump which continuously circulates water from a storage cylinder into the WC bowl. The jet of water drives a rotor which grinds the waste matter into fine particles, and washes it away through the outlet leading to the storage cylinder. The rotor is designed to revolve at 800 r.p.m., inducing an excessive amount of air into the water in the mixing chamber, entraining sufficient oxygen to disintegrate and oxidize the excrement immediately. Of the small quantity of ash remaining, some settles to the bottom of the cylinder, the remainder being retained in suspension in the recirculating water. The methane, carbon dioxide and carbon monoxide gases produced in the process are vented through the top of the cylinder and the settling ash, accumulating at the rate of $\frac{1}{2}$ to $\frac{3}{4}$lb per person per year can be drained off at ten year intervals. The system relies on continuous flushing, loss by evaporation being made up by the water content of urine. Invented in 1952, the device does not appear to have been developed since then. The destruction of toilet paper is possibly a greater problem, and suggests a combination of the Boester and Maurer mechanisms.

A process recently developed in Tokyo by Masakuni Kanai is claimed to provide an economical method of purifying sewage and industrial waste liquids, and may prove to be a considerable contribution towards the evolution of the independent WC. Two treated aluminium electrodes are immersed in the liquid and a low electric current applied. The positive is encased in an envelope of chalk and barium salt, and the negative coated with a mixture of potassium iodide and sodium fluoride. The organic and inorganic contents are precipitated, leaving the water pure and potable.

These processes may not yet be practical commercial propositions, but they should provoke the more advanced thinkers amongst our WC manufacturers into investigations of a similar nature. If not, perhaps enterprising firms engaged in other spheres might seek to satisfy the future need, if not demand, for a self-contained disposal system.

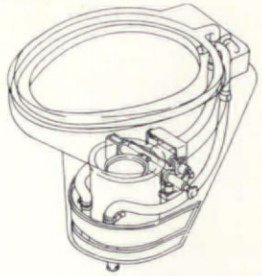
Below and right, the outside and motor of the Clos-o-Mat, in extensive use on the Continent for the past seven years and now available in this country



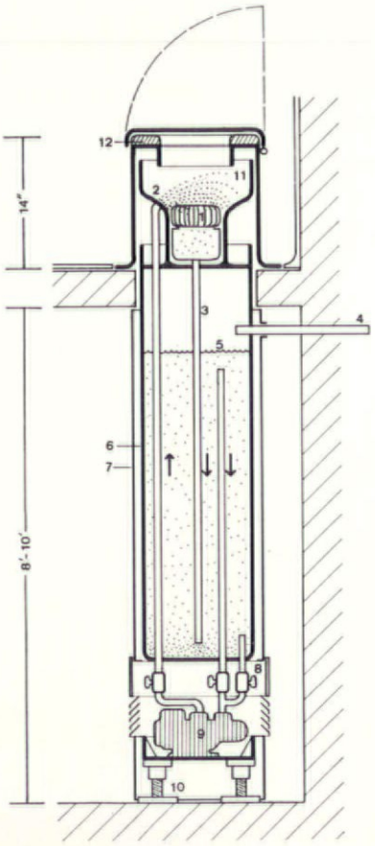


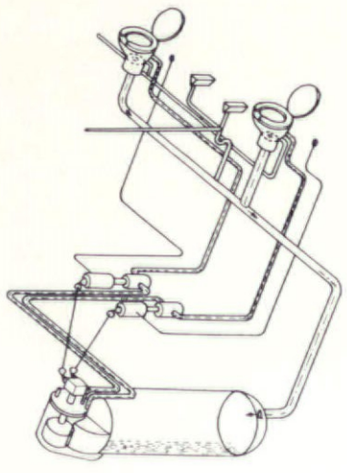
Right, an installation incorporating the Boester Sewerless system

1 rotor
2 inlet from pump
3 outlet to cylinder
4 vent pipe
5 water level
6 steel or plastic tank
7 metal casing
8 drain cock
9 electric pump
10 adjustable feet
11 stainless steel bowl
12 heated plastic seat



Left, the Tokaido train unit. The solids are broken down by an impeller and fed through a centrifuge from which the liquid is discharged outside the train
Above and right, aircraft unit for DC 8, 707 and Caravelle. Push-button control for flushing spray, filters and pump. Solid particles are retained in the tank, liquid is mixed with disinfectants and recirculated





Some makers of water closets

*Adamsez Ltd., 75 Victoria Street, London, S.W.1

*Armitage Ware Ltd., 10 Northumberland House, 303–306 High Holborn, London, W.C.1

John Bolding & Sons, Grosvenor Works, Davies Street, London, W.1

*Clos-o-Mat (Gt. Britain) Ltd., 2 Brooklands Road, Sale, Cheshire

*Doulton Sanitary Potteries Ltd., Doulton House, Albert Embankment, Lambeth, London, S.E.1

*Alfred Goslett & Co. Ltd., 127–131 Charing Cross Road, London, W.C.2

Heathcote Ceramics Ltd., Calvin Street, Longton, Stoke-on-Trent

J. & R. Howie Ltd., Hurlford Works, P.O. Box No. 13, Kilmarnock, Scotland

George Howson & Sons Ltd., P.O. Box No. 6, Eastwood Sanitary Works, Hanley, Stoke-on-Trent

Ideal-Standard Ltd., Ideal House, Gt. Marlborough Street, London, W.1

C. W. Outram & Co. Ltd., Woodville, Derbyshire.

*Shanks & Co. Ltd., Paramount House, 75 Uxbridge Road, Ealing, London, W.5

Shaw, Knight & Co. Ltd., Bishop Auckland, Co. Durham

Shaw's Glazed Brick Company Ltd., Whitebirk Works, Waterside, Darwen, Lancs.

John Slater (Stoke) Ltd., Berry Hill, Stoke-on-Trent

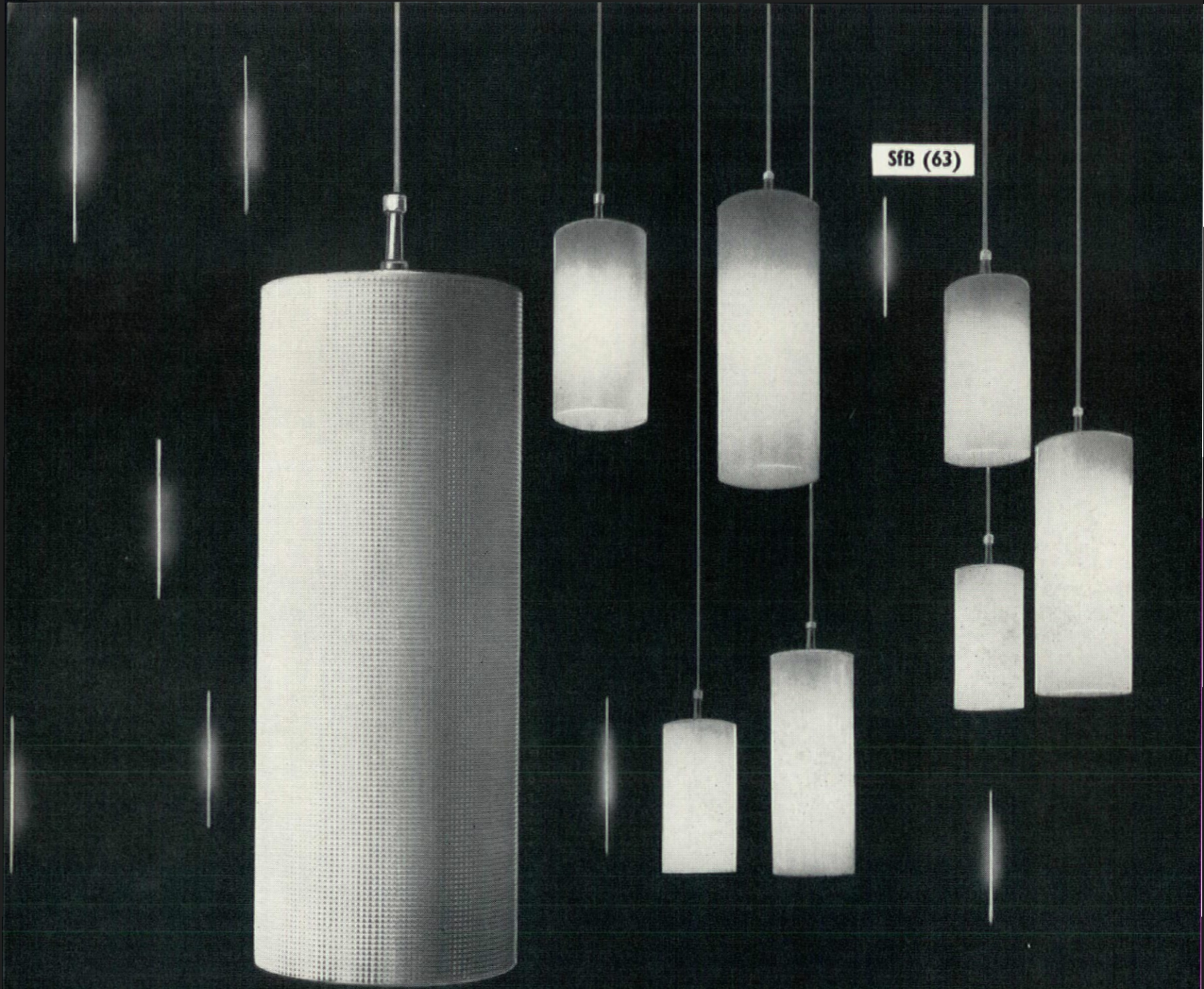
Standard Range & Foundry Co. Ltd., P.O. Box No. 106, Watford, Herts.

John Steventon & Sons Ltd., Middlewich, Cheshire

*Twyfords Ltd., Africa House, Kingsway, London, W.C.2

Valson Enamelled Sanitary Fireclay Co. Ltd., Westhead Road, Croston, Nr. Peston, Lancs.

*The co-operation of these firms in providing background information is gratefully acknowledged.



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Trade notes

Alexander Pike

To obtain additional information about any of the items described below, circle their code numbers (F1, F2 . . . etc.) on the Readers' Service Card inserted elsewhere in this magazine.

F1 West African hardwoods

United Africa Company (Timber) Ltd., Shelley House, 3 Noble Street, London, E.C.2

A guide to 19 of the more generally available West African hardwoods lists, in an easily comparable form, their physical properties and recommended uses.

F2 Self-adhesive finger plates

Industrial Devices Ltd., 313 West End Lane, London, N.W.6

Anodized aluminium finger plates with a self-adhesive gummed back are now available. Backing paper covers the adhesive and a plastic sheet protects the face, to be peeled off after fixing. Size 12in × 3in.

F3 Gas fired warm air heater

Lennox Heating Company Ltd., Croydon Airport, Croydon, Surrey

The Lennette GRI-28 heater has an output of 28,000 B.T.U. per hour and an air delivery of 260–340 cfm. Openings are provided to a plenum chamber in the front and sides of the unit. Size 43¼in high × 15in wide × 22½in deep.

F4 Water repellent

Silexine Paints Ltd., Abbey Road, Barking, Essex

Silexol is a new water repellent with fungicidal properties claimed to have exceptionally long lasting qualities. Transparent and invisible, the coverage on masonry is 20 to 30yd² per gallon. Retail price 32*s* per gall.

F5 Oil-fired domestic heating

Shell-Mex and B.P. Ltd., Shell-Mex House, Strand, London, W.C.2

A comprehensive 70-page book for architects and builders deals with a variety of heating systems and covers aspects of design both in the building stage and in the commissioning of heating contractors. Free.

F6 Pedestal wash basin 1

Doulton Sanitary Potteries Ltd., Doulton House, Albert Embankment, London, S.E.1

The Lynton basin in vitreous china is available in white and a range of colours, and in two sizes, 25in × 19in and 27in × 22in.

F7 Spot lamp 5

Plus Lighting Ltd., 2 Patshull Road, London, N.W.5

A spot light rotatable through 360° and tilting through 60° forms the basis for several new fittings. On an independent base, as illustrated, the price is 52*s* 6*d* in brass or 60*s* 9*d* in copper or chrome. Twin spots attached to a 24in high square steel tube form a table lamp priced at £10 9*s* 6*d*, and a similar arrangement to form a 4ft 10in high floor standard costs £12 9*s* 9*d*.

F8 Concrete screen walls

The Wettern Group of Companies, Wettern House, Dingwall Road, Croydon, Surrey

The four basic shapes of Monoscreen units can be used in a wide variety of combinations. Sizes: 12in × 6in × 4, 6, or 8in thick. In fine grain white concrete or charcoal grey open texture.

F9 Magnetic catches

Bower Trading Co., 41 Whitehall, London, S.W1

French magnetic catches for lateral, mortice and angular fitting with pulling powers from 6 to 13lb.

F10 Light fittings

Lumitron Ltd., 33–34 Alfred Place, London, W.C.1

For use with 32 or 40w circular fluorescent tubes, opal plastic diffusers are dust-sealed against a stove enamelled aluminium backplate. Prices £7 5*s* 10*d* and £8 5*s* 6*d*.

F11 Split level garage 3, 4

P. R. Raven & Co. Ltd., 15 Victoria Drive, London, S.W.19

The novel Duplex system employs a simple electrically controlled hydraulic mechanism to pivot a ramp to an upper level, enabling two cars to be garaged in an area only slightly larger than that normally required for one.

F12 Portable drafting set

Westwood Stationery Ltd., 13–15 Wenlock Road, London, N.1

The Tecnostyl set consists of a translucent Perspex surface which can be back lit and a parallelogram type drafting machine with protractor head rotatable through 135° with automatic setting at 15° intervals. Price £12 18*s*.

F13 Central heating control 2

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

The Prefect control operates the hot water system independently of the central heating, controls the hot water supply at a lower temperature than the water in the radiator circuit, and offers a choice of 12 different programmes. Claimed to save up to £10 a year on fuel bills, it is priced at £31 10*s*.

F14 Built-in wardrobe

The Elemental Component Co. Ltd., 23a Motcomb Street, London, S.W.1

Incorporating a unique and foolproof sliding door arrangement, the Moduless system claims to combine flexibility in size and appearance with the economy of mass production. Available in a wide variety of door facing materials. Total cost approx. 7*s* 0*d* per ft² of frontage.

F15 Plumbing fittings

Econa Ltd., Highlands Road, Shirley, Solihull, Warwickshire

Handbooks 1, 2, 3 and 4, dealing with food waste disposal, traps, prefabricated ranges and waste pipe fittings, give illustrations, prices, sizes and ordering information for each item. Excellent!

F16 Automatically controlled window

Fabricating Engineers Ltd., Lombard Road, Merton, London, S.W.14

The BRS have developed a double window which closes automatically to keep out external noise, and a prototype has been installed at Harlington Secondary Modern School, close to London Airport. The noise source is detected by a roof-mounted microphone which operates an acoustic switch directing electric switches and hydraulic control valves. By this means double windows with 8in airspace are closed by hydraulic rams when the noise signal rises above a predetermined level, and opened when the noise source is removed. The completion of tests at Harlington will provide data on which production models could be based.

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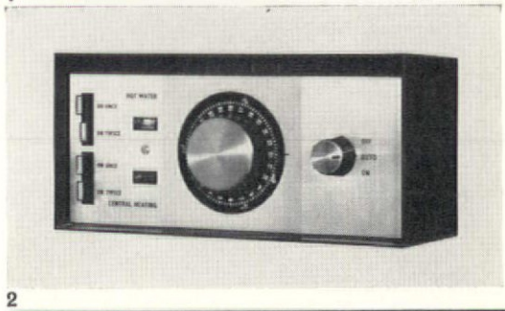

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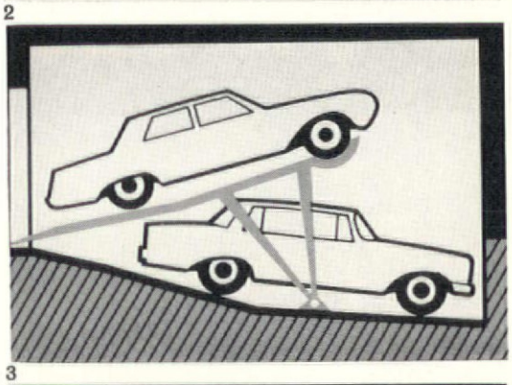

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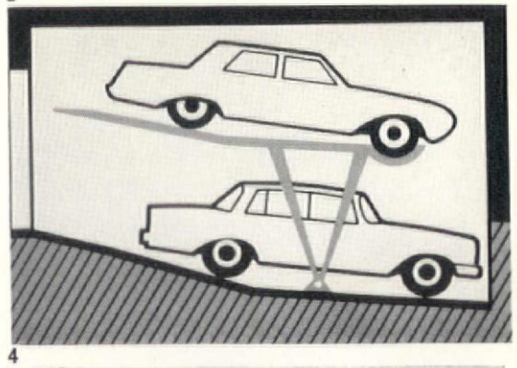

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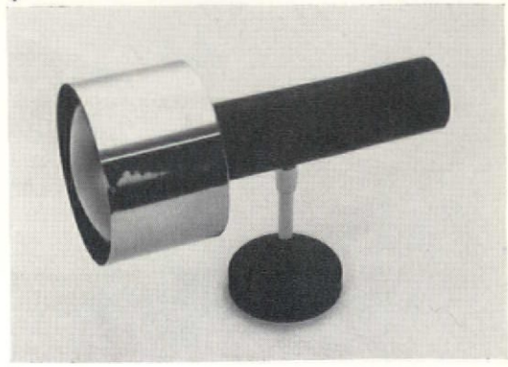

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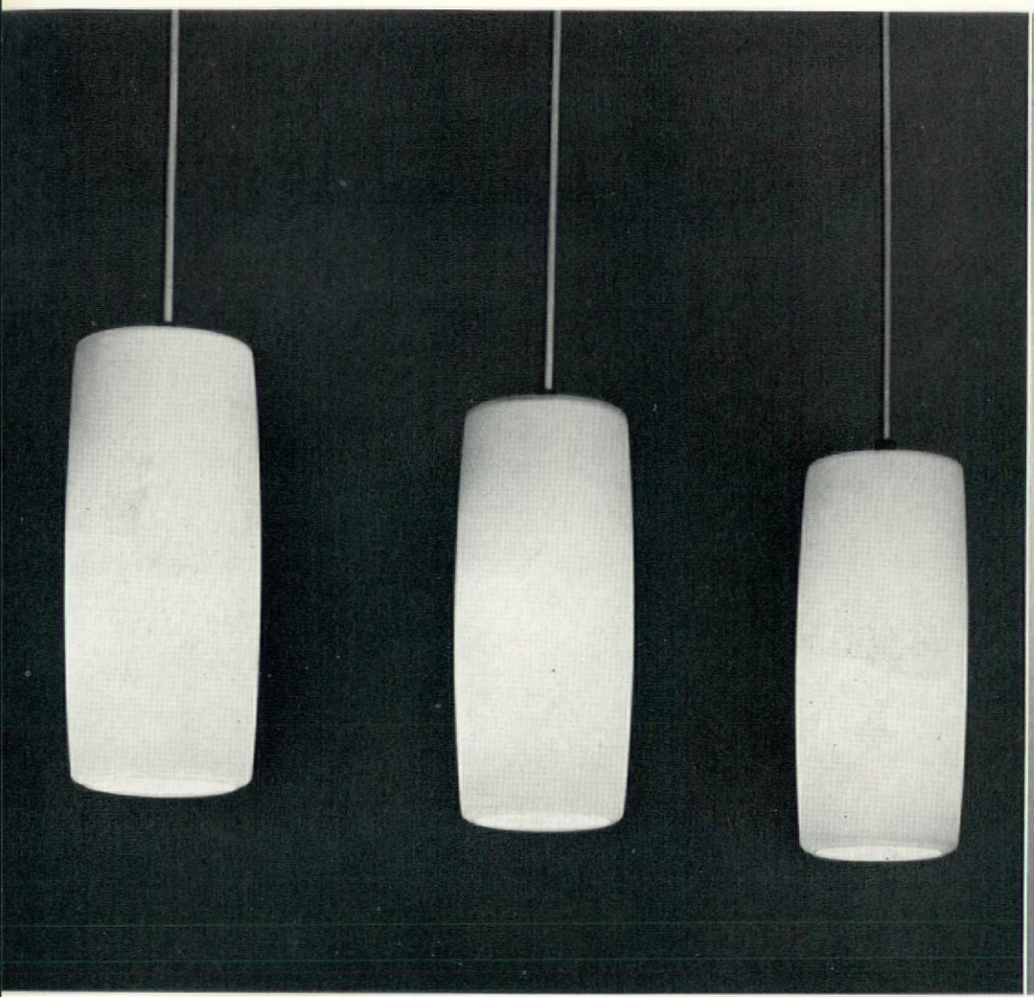
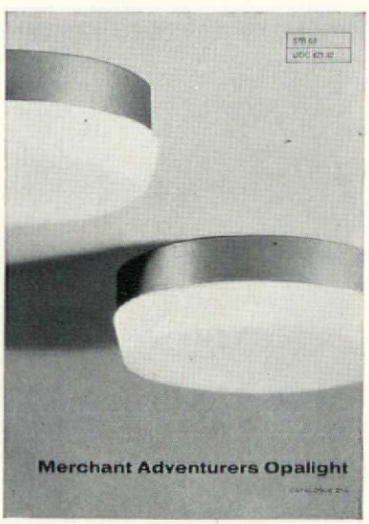


Versatile 1620 series single and multilight units from Opalight catalogue 21A



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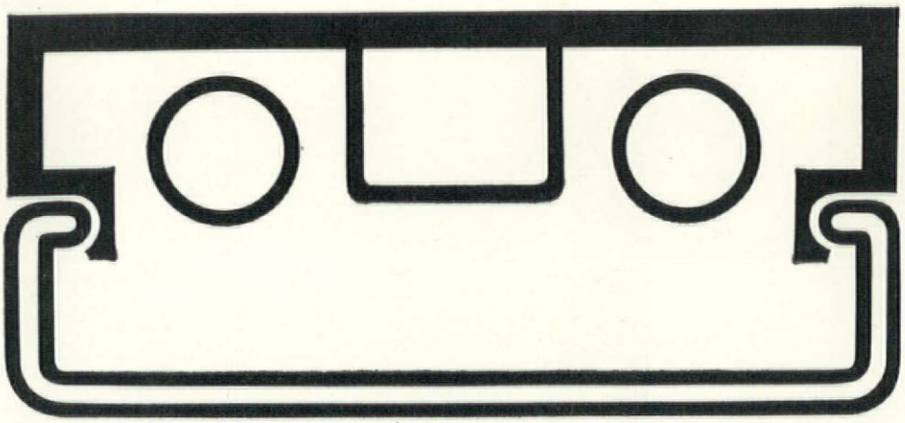

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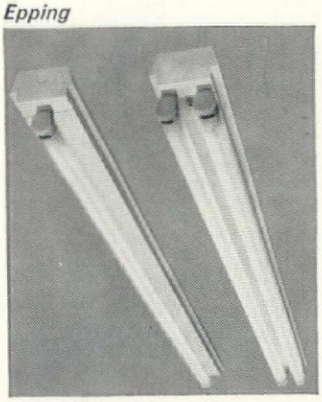

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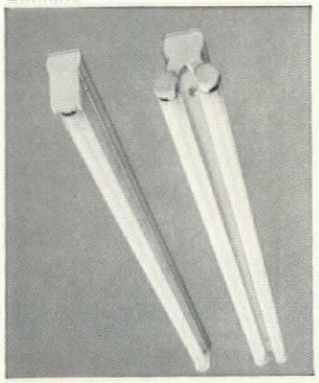

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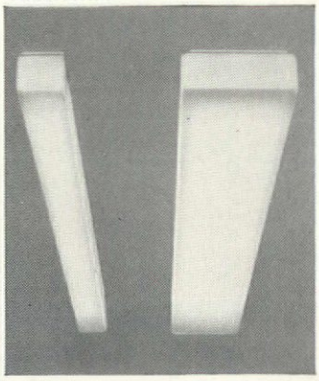

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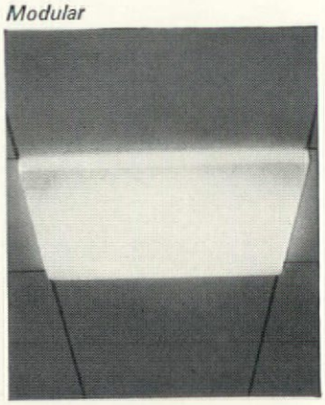

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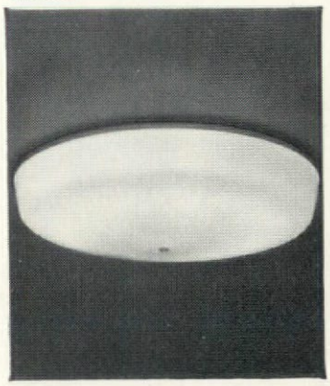

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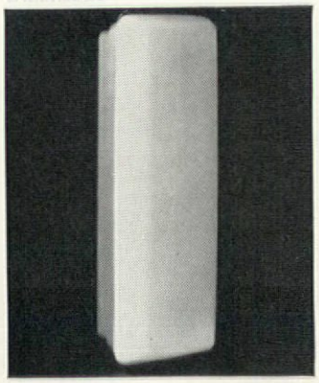

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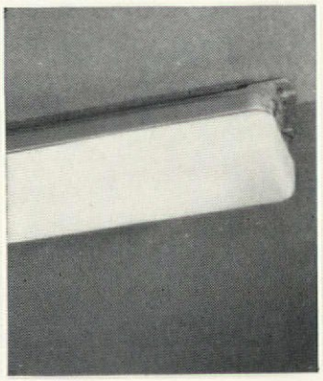
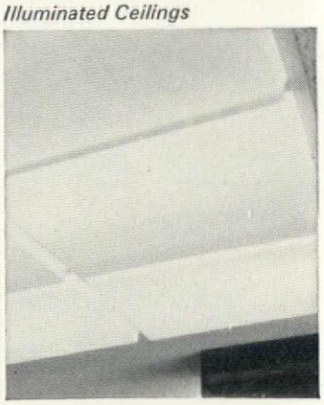


Illuminated Ceilings



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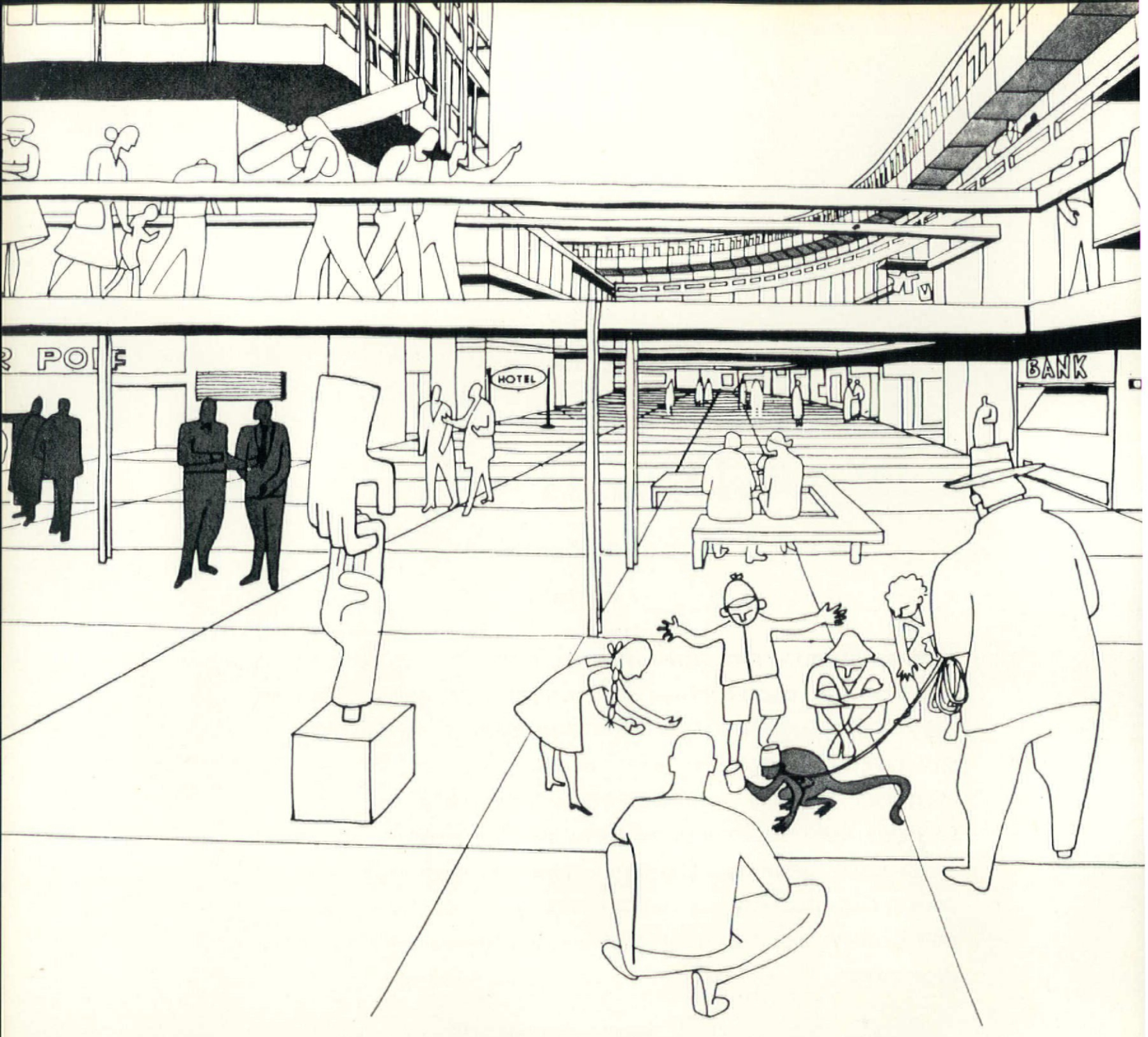

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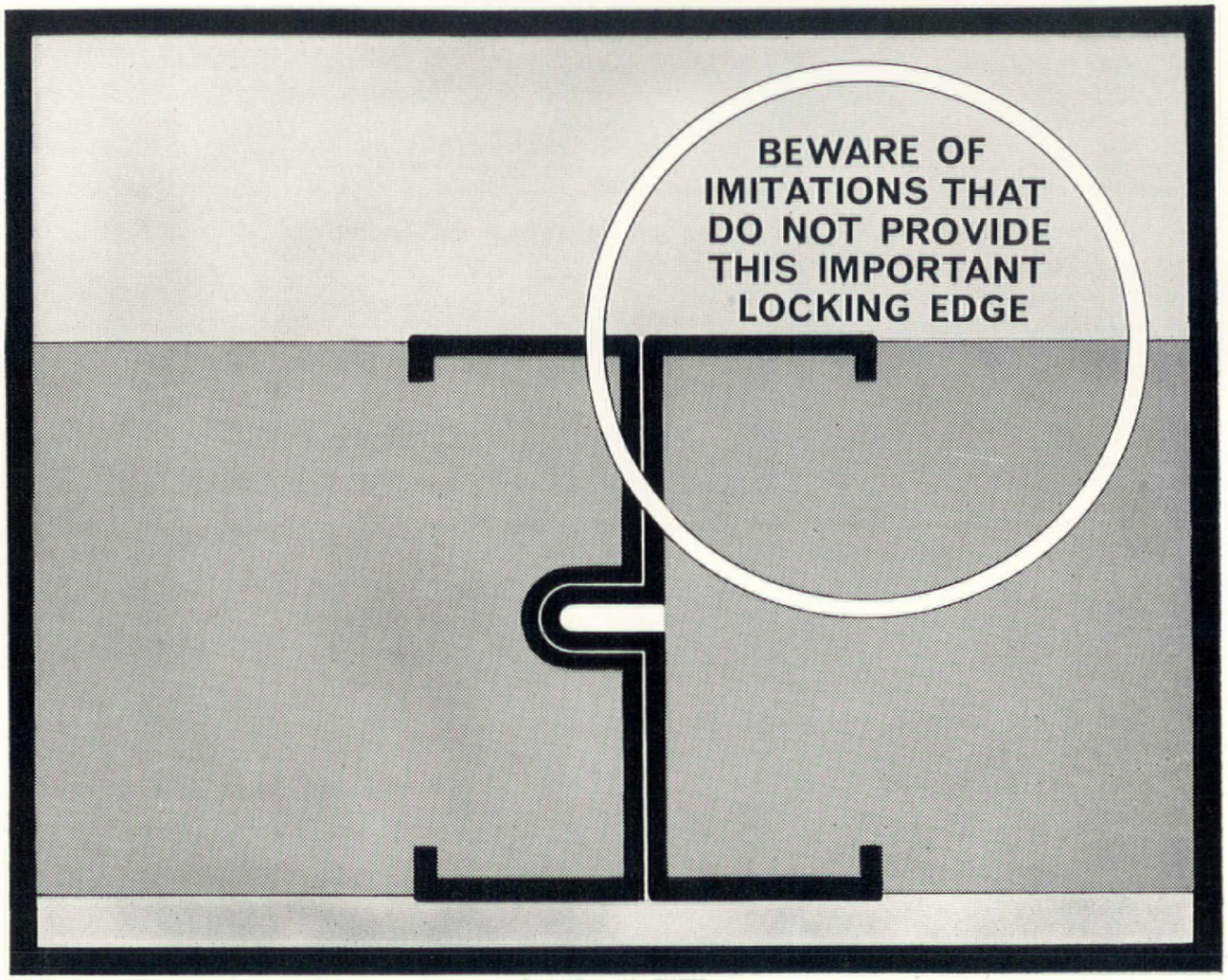

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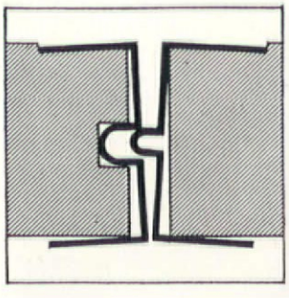

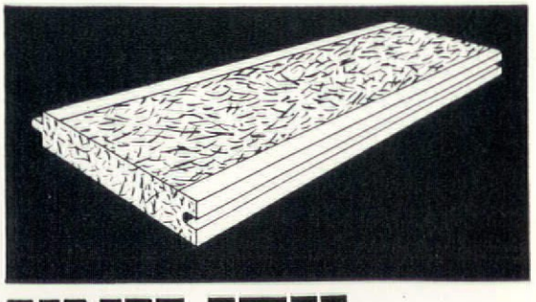

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Cave man style Locking up for the night must have been quite a performance in Stone Age days. And just think of the finger-trapping opportunities in trying to get a windproof seal with a sharp edged rock.

Norman style The Normans, being such frightfully efficient chaps, had things much better organised and invented the drawbridge, which is said to have given rise to the Old English saying: "Pull up the drawbridge, Jacques, je suis sur board."

Gothic style The reason for the Gothic arch is simple:
'Tis merely to accommodate the whimple.

Baroque style The Baroque style of ornamentation was, of course, nothing but a carefully calculated disguise, so that afterwards you could never remember which door you had been smuggled through — or indeed whether it was not a door at all but a secret bookcase fronting directly on to the lower reaches of the Grand Canal.

Scottish croft style A dour door, but foursquare as its owner and his wee foursquare doggie.

Leaderflush 1965 style Much has been written about the unquestionable merits of the Leaderflush door of 1965 but modesty (to say nothing of lack of space) forbids us to reveal the full inside story here. But a letter or 'phone call will bring you a copy of our booklet. Tells you everything.

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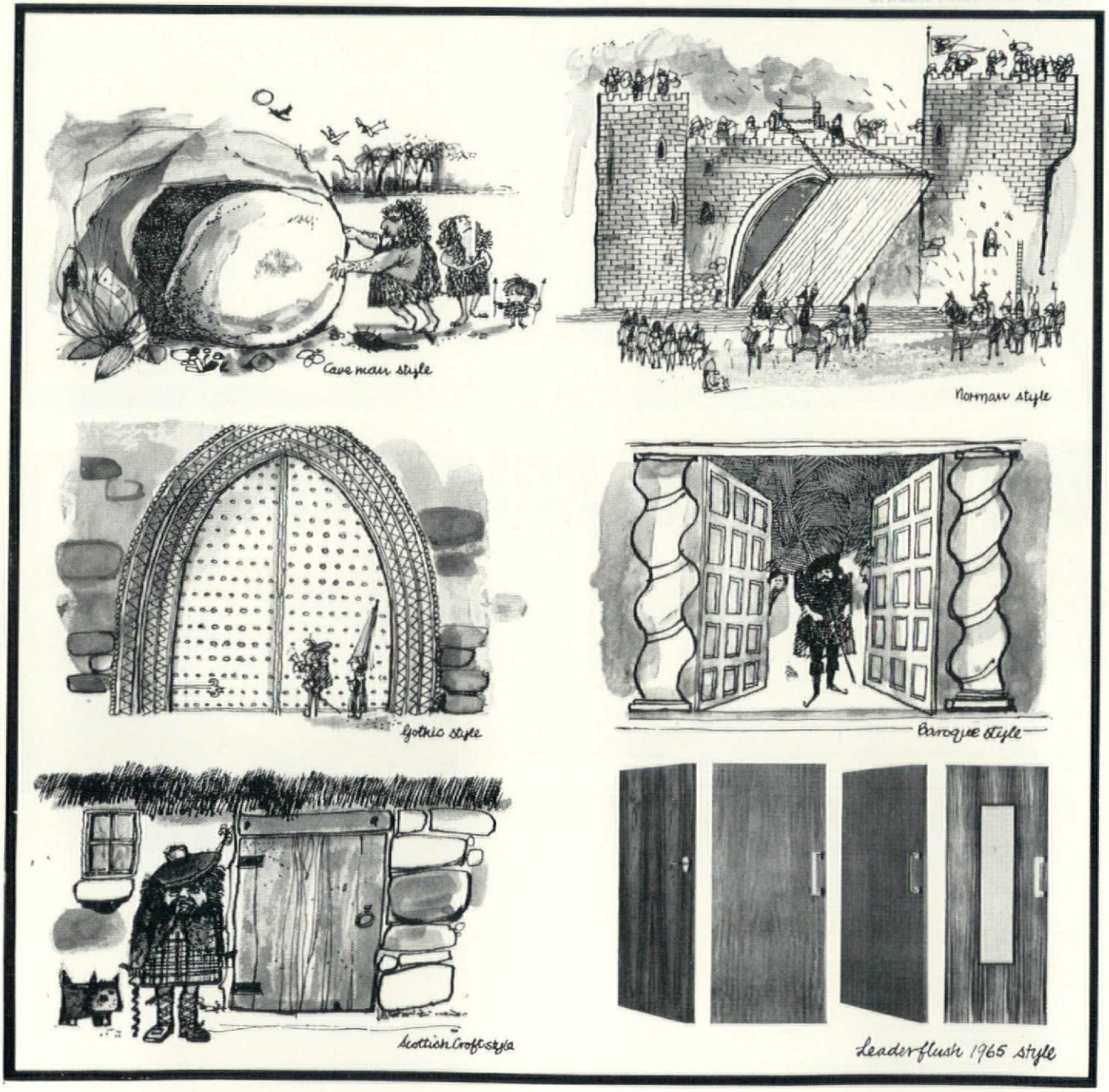

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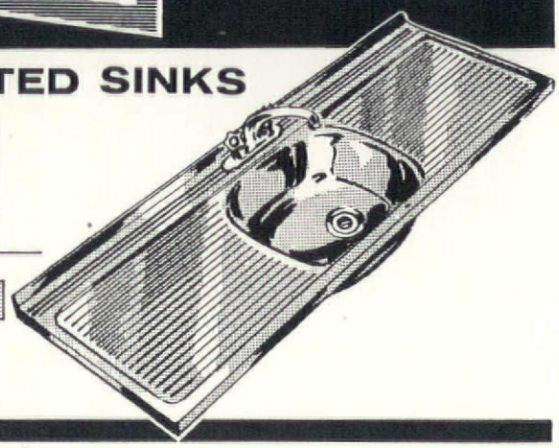

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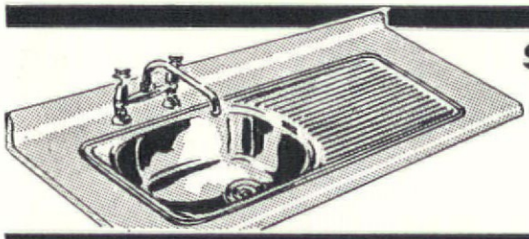

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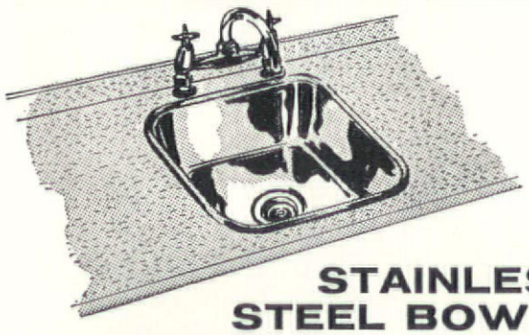

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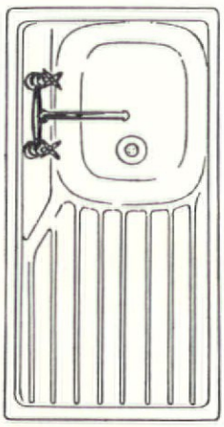

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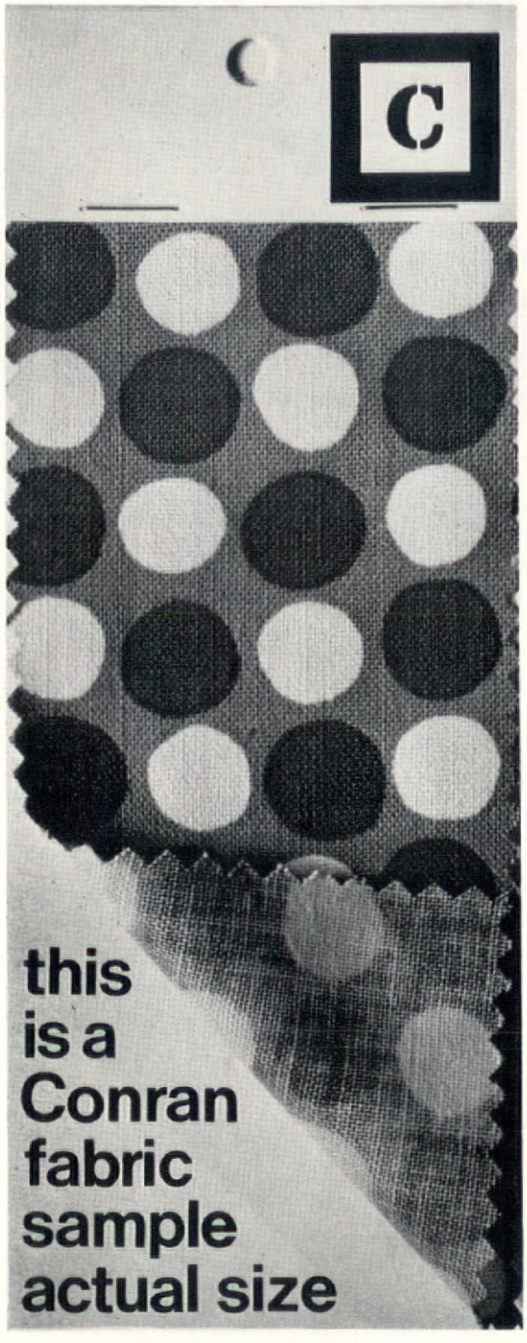

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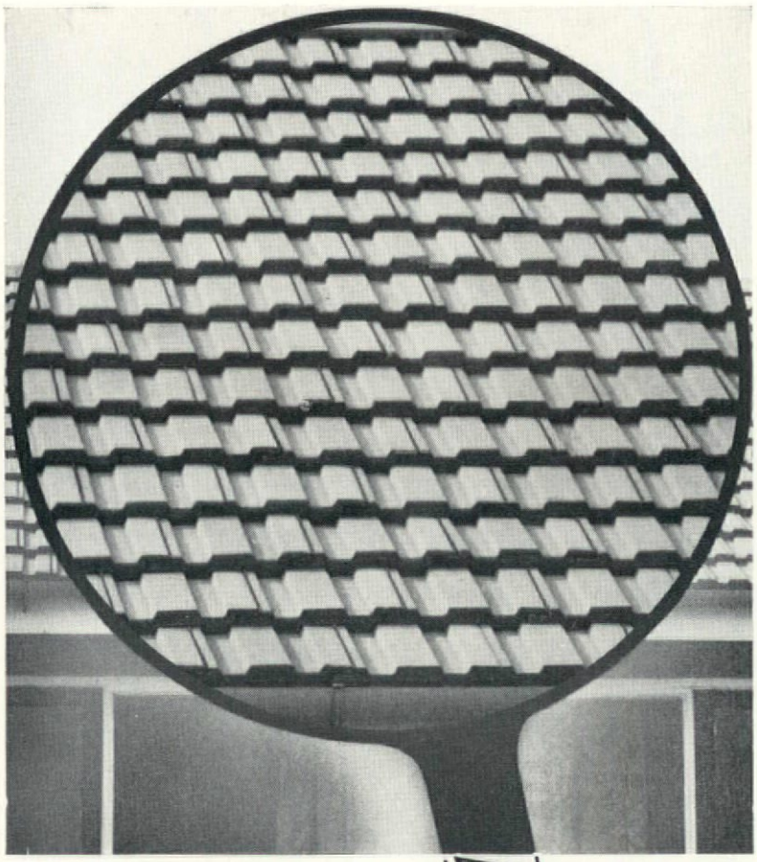

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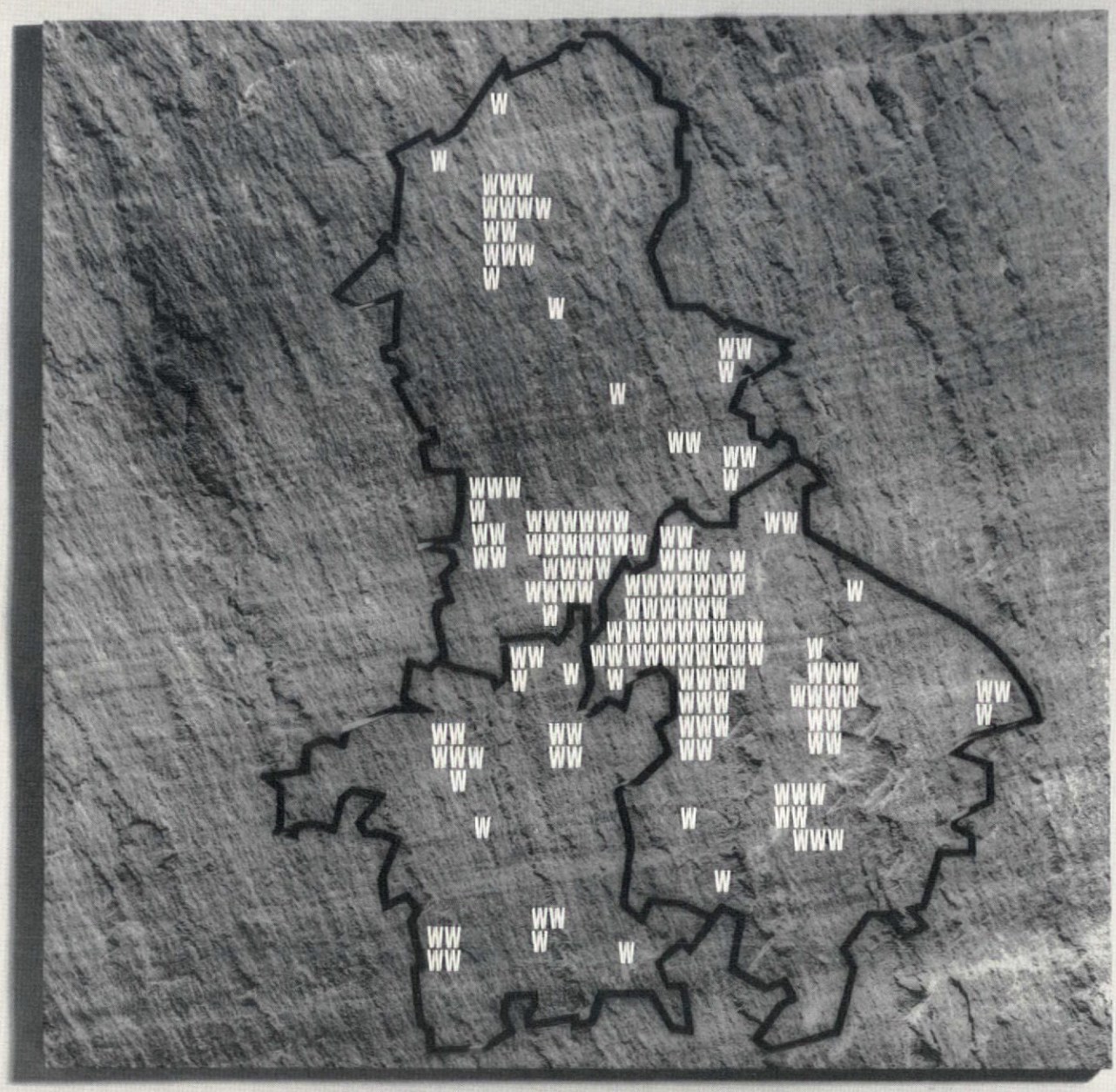

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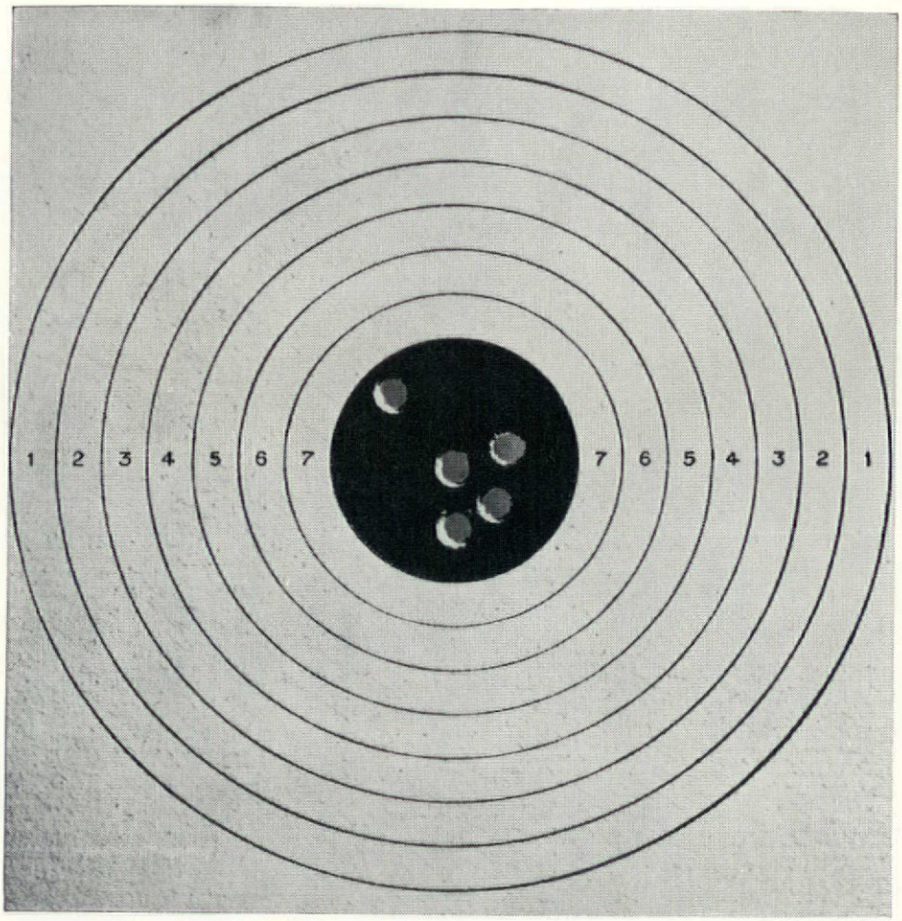

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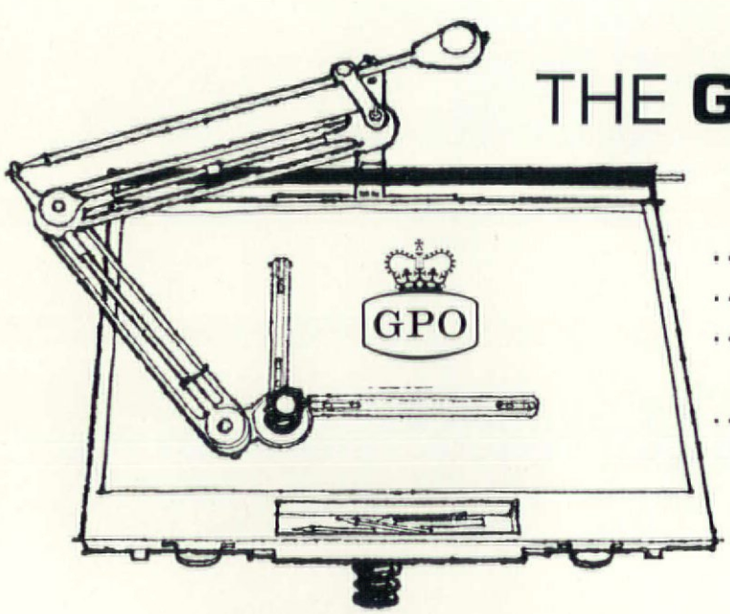

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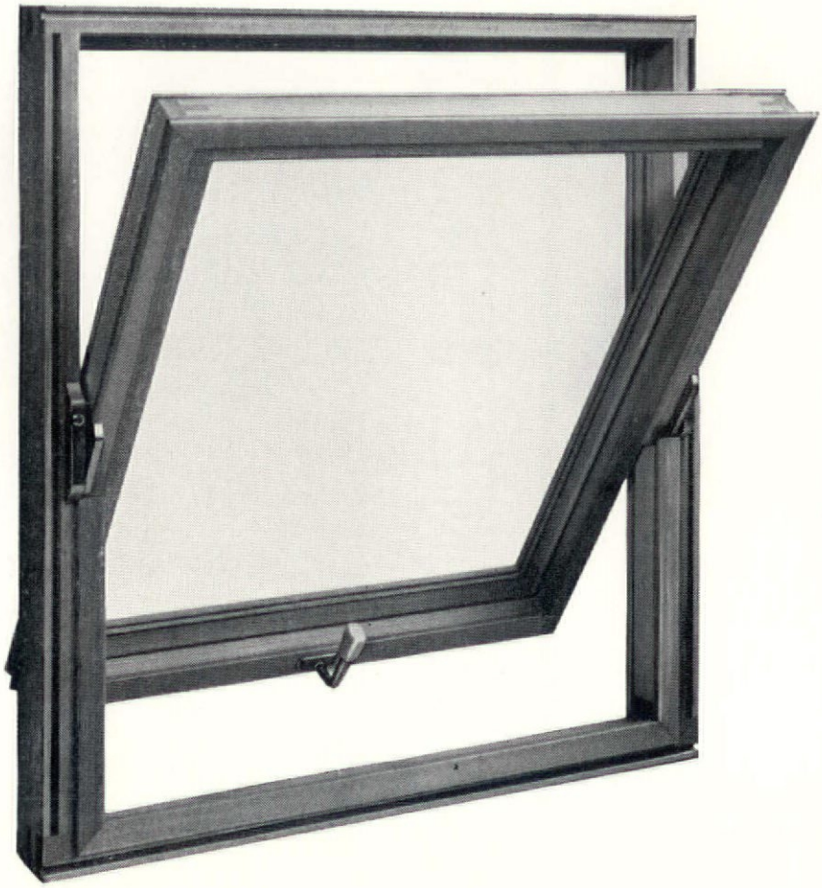
with the patent Balanced Pivot Hinge



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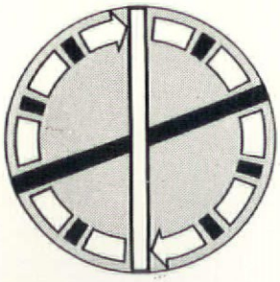

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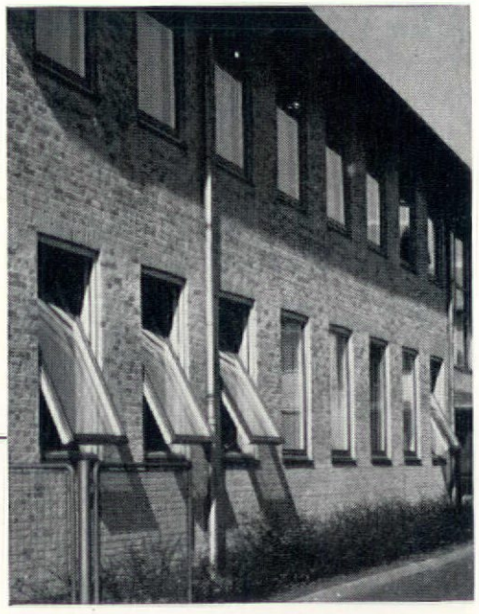

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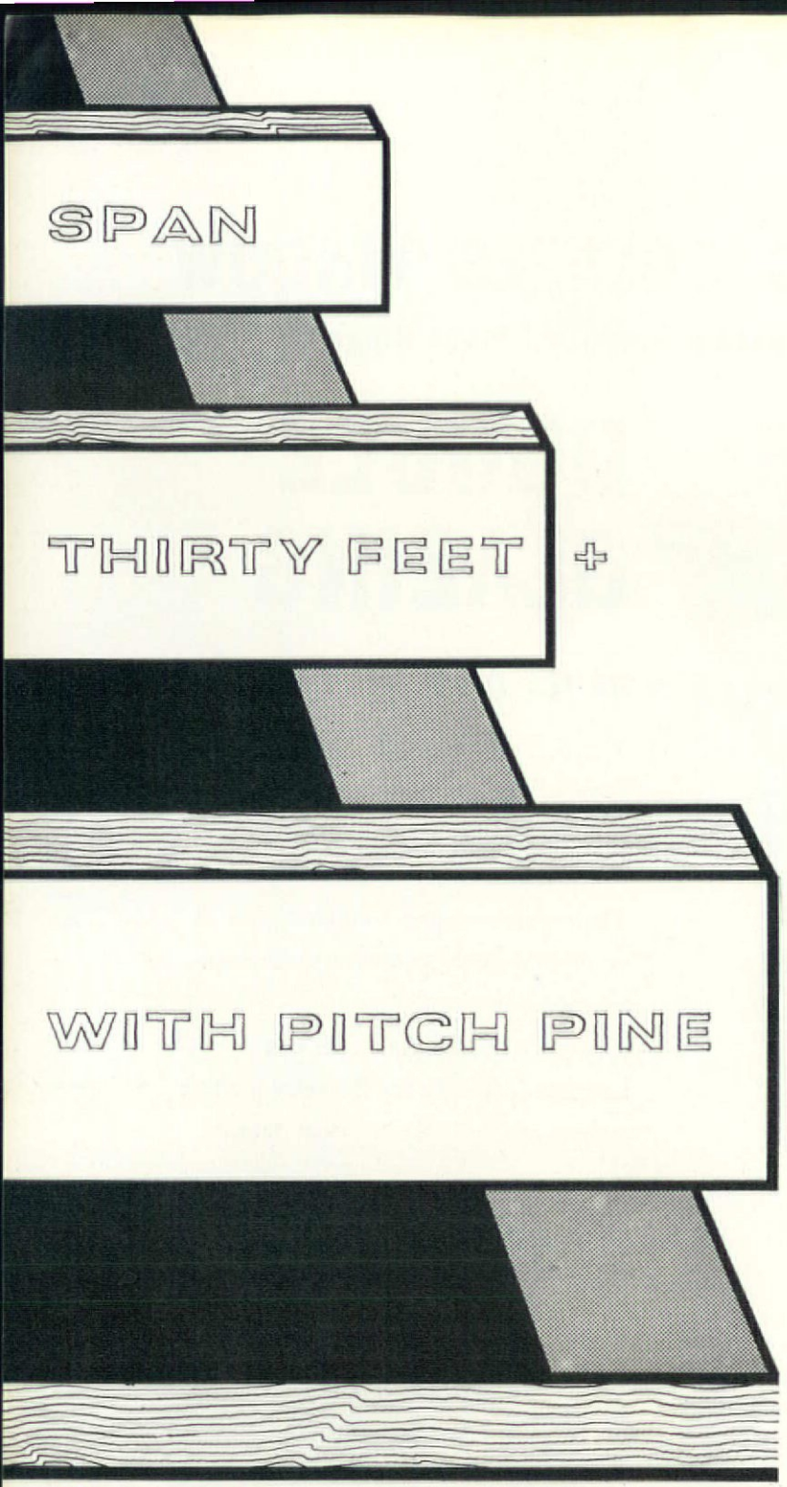

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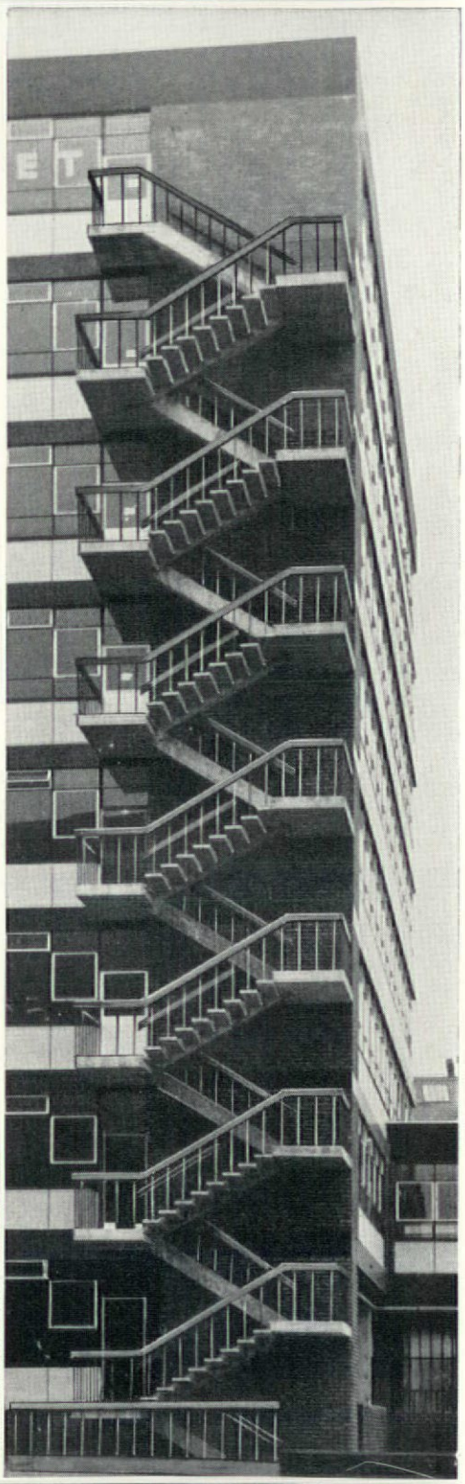

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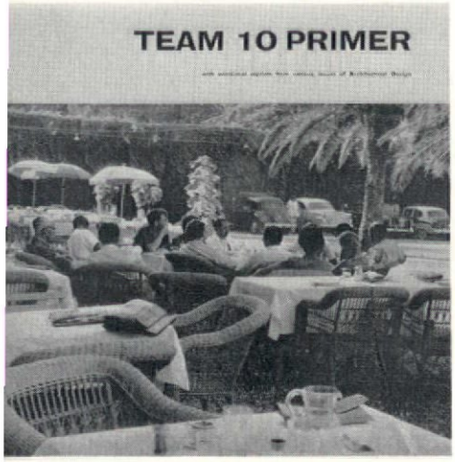
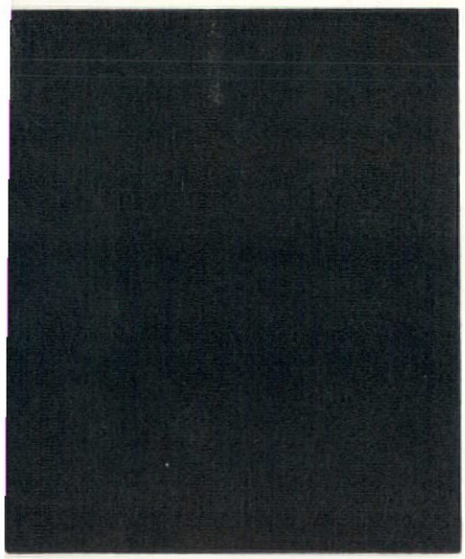


The Aim of Team 10

Aim of Team 10 has been described as follows:
Team 10 is a group of architects who have sought each other out because each has found the help of the others necessary to the development and understanding of their own individual work. But it is more than that.
They came together in the first place, certainly because of mutual realization of the inadequacies of the processes of architectural thought which they had inherited from the modern movement as a whole, but more important, each sensed that the other had already found some way towards a new beginning.
This new beginning, and the long build-up that has followed, had been concerned with inducing, as it were, into the bloodstream of the architect an understanding and feeling for the patterns, the aspirations, the artefacts, the tools, the modes of transportation and communications of present-day society, so that he can as a natural thing build towards that society's realization-of-itself.
In this sense Team 10 is Utopian, but Utopian about the present. Thus their aim is not to theorize but to build, for only through construction can a Utopia of the present be realized.
For them 'to build' has a special meaning in that the architect's responsibility towards the individual or groups he builds for, and towards the cohesion and convenience of the collective structure to which they belong, is taken as being an absolute responsibility. No abstract Master Plan stands between him and what he has to do, only the 'human facts' and the logistics of the situation.
To accept such responsibility where none is trying to direct others to perform acts which his control techniques cannot encompass, requires the invention of a working-together-technique where each pays attention to the other and to the whole insofar as he is able.
Team 10 is of the opinion that only in such a way may meaningful groupings of buildings come into being, where each building is a live thing and a natural extension of the others. Together they will make places where a man can realize what he wishes to be.
Team 10 would like to develop their thought processes and language of building to a point where a collective demonstration (perhaps a little self-conscious) could be made at a scale which would be really effective in terms of the modes of life and the structure of a community.
It must be said that this point is still some way off.



The object of this Primer is to put into one document those articles, essays and diagrams which TEAM 10 regard as being central to their individual positions.

In a way it is a history of how the ideas of the people involved have grown or changed as a result of contact with the others, and it is hoped that the publication of these root ideas, in their original often naïve form, will enable them to continue life.

The first part of the document —the role of the architect—is concerned with the attitudes which the subsequent project material speaks about in another way. The project material has been roughly grouped into three sections—'Urban infra-structure', 'Grouping of dwellings', and 'Doorstep'. Each of these sections tends to be dominated by one person or group—he or they, whoever developed the root idea—and the complementary or commentary material by others is printed alongside making a kind of counterpoint. The following material is also included.

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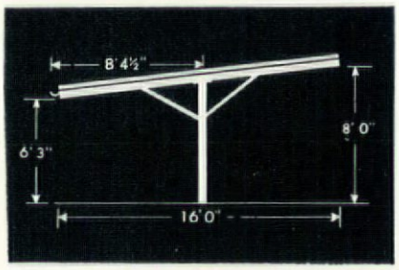

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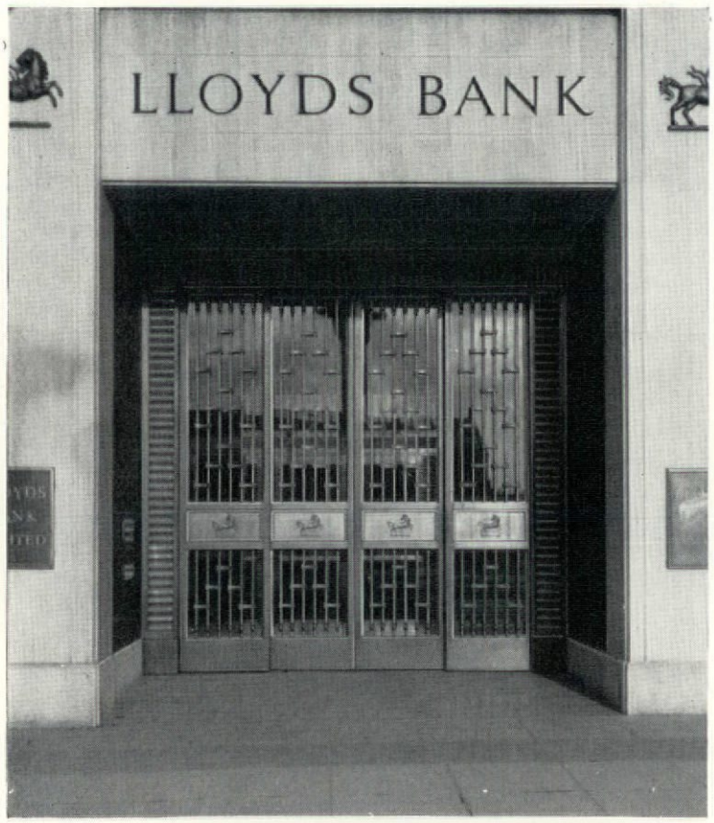

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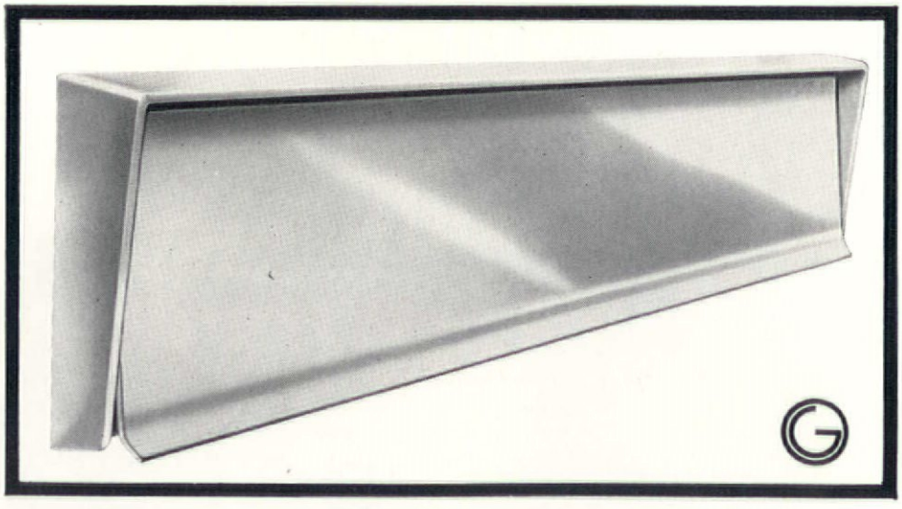

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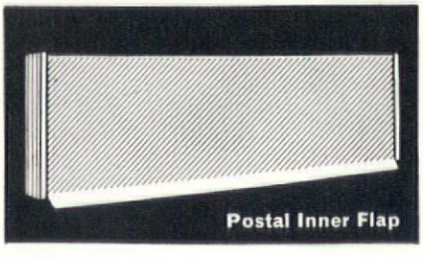

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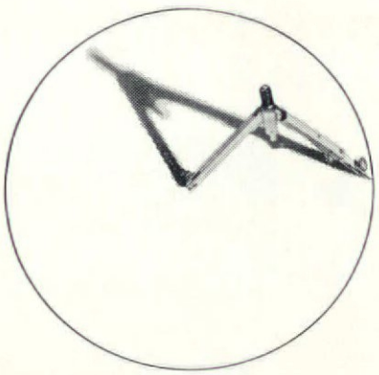

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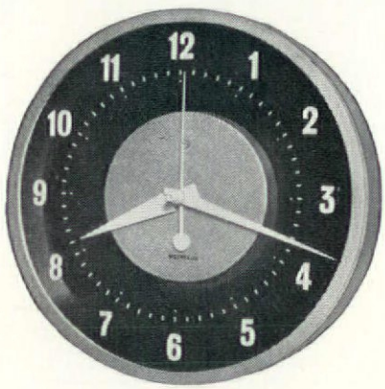

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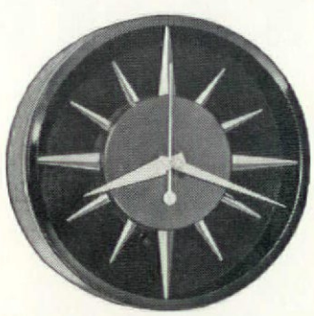

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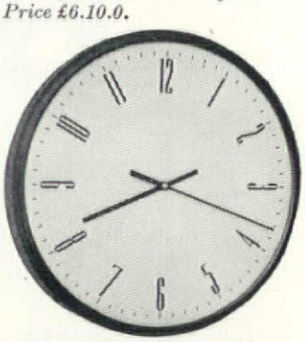

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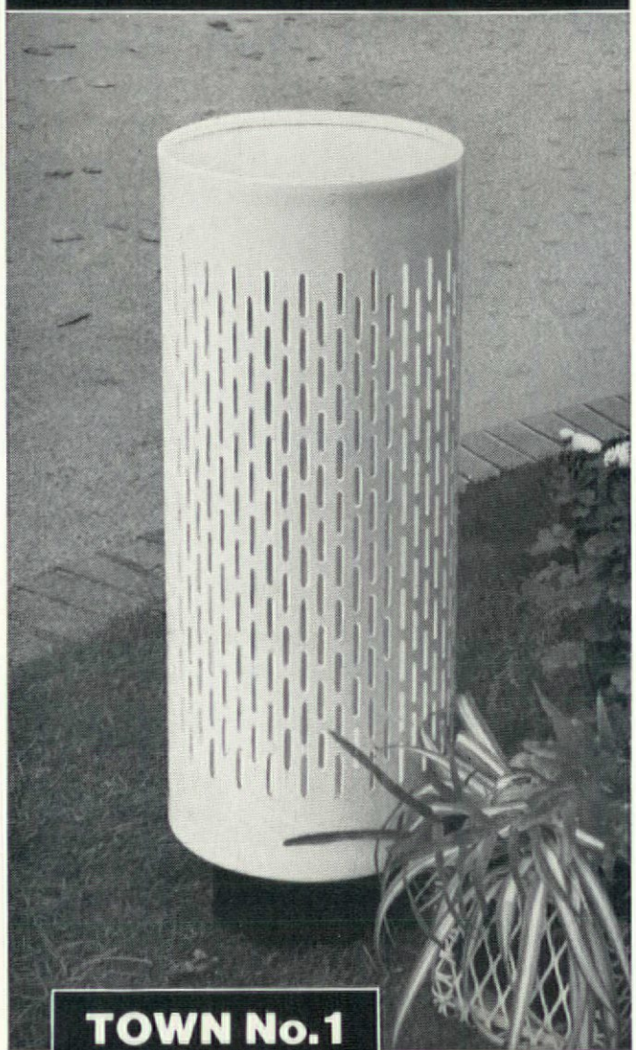

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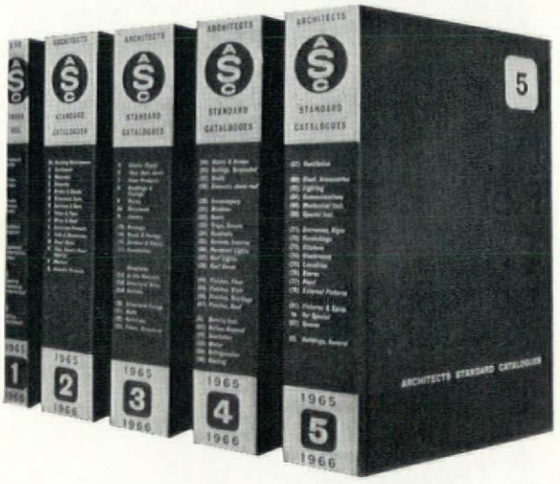

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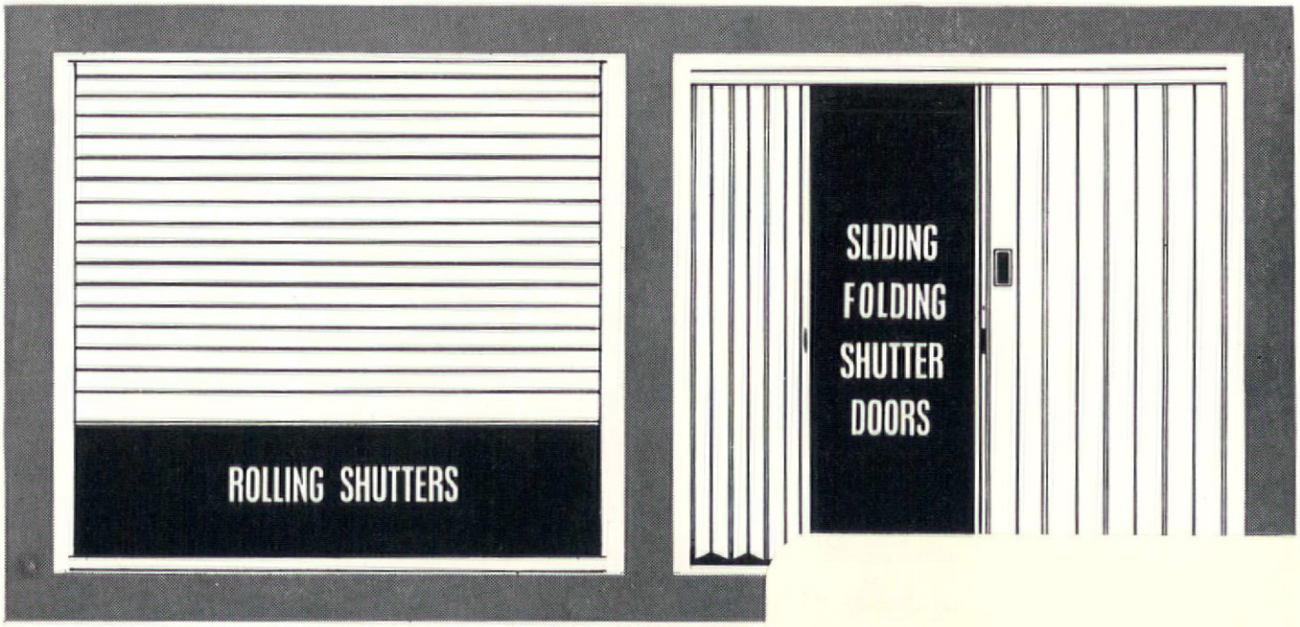

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