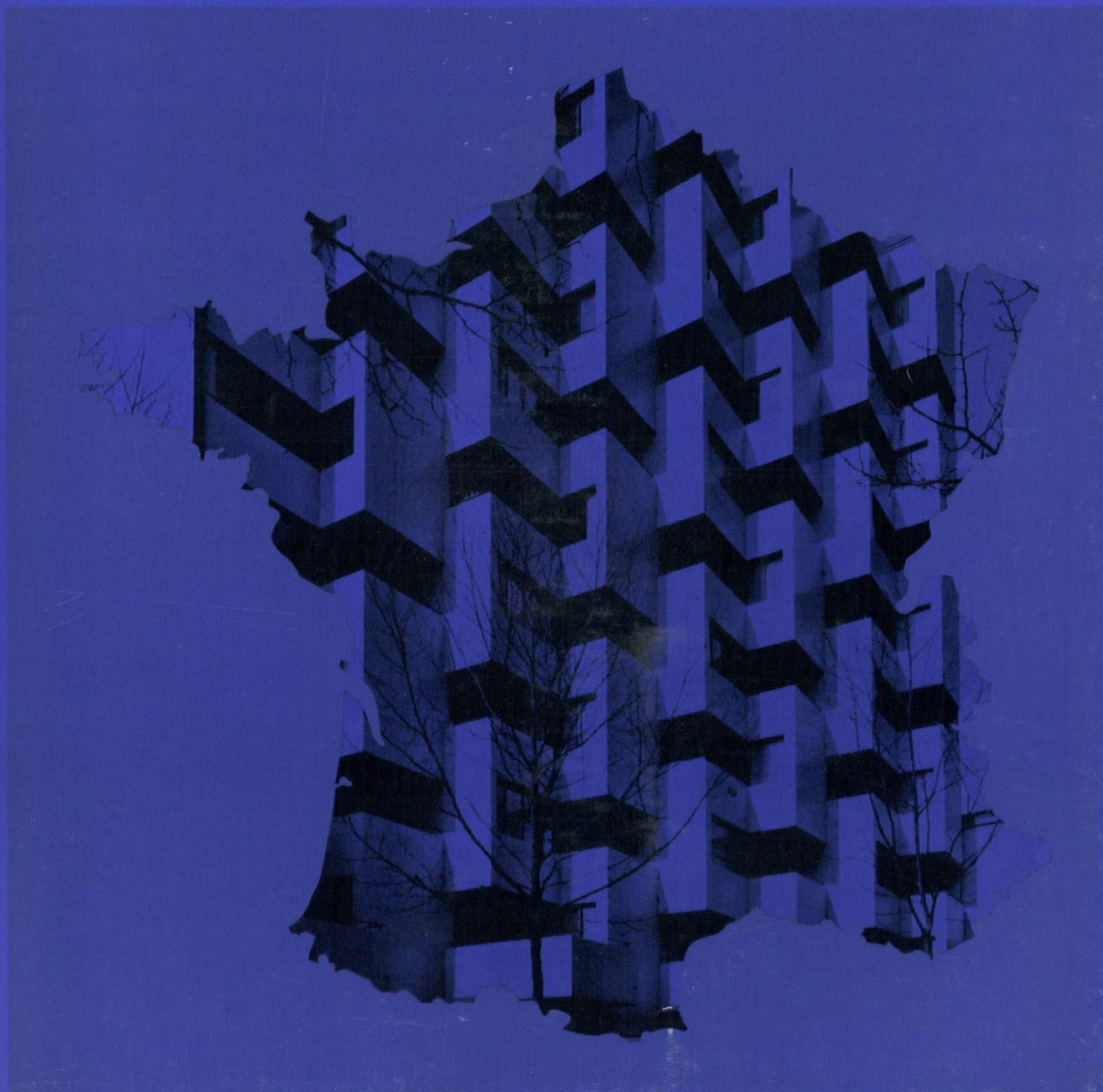


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Book notes

The idea of a town

Joseph Rykwert. *St. George's Gallery*. 7s. 6d.

This essay stands to influence our concept of the 'town' in two distinct ways. Firstly by modifying our knowledge of the principles upon which the ancients founded towns and secondly by causing us, at least, to question both the spirit and the manner in which we tend to establish towns today. To found a town in ancient times required not only practical advice of a Hippocraten order relating the site, and its climatological factors, to the essentials of health and defence, but also good auspices at the town's foundation and thus the services of divination and augury. It was cosmo-magical affair as indeed it still is today for certain primitive peoples.

Joseph Rykwert commences his study by a re-examination of the Romulus and Remus legend which suggests that Remus may have forfeited his life, for a defilement of the sacred boundaries of Rome during its inauguration; for Remus died, apparently, as retribution for leaping over a ditch which Romulus was cutting to mark the perimeter of the town. Starting with this legend, Rykwert proceeds to gather and sift a large amount of archaeological mythological and literary material, relating to the foundation of towns, from both Etruscan and Roman sources, as well as from wider origins lying well outside the Mediterranean basin.

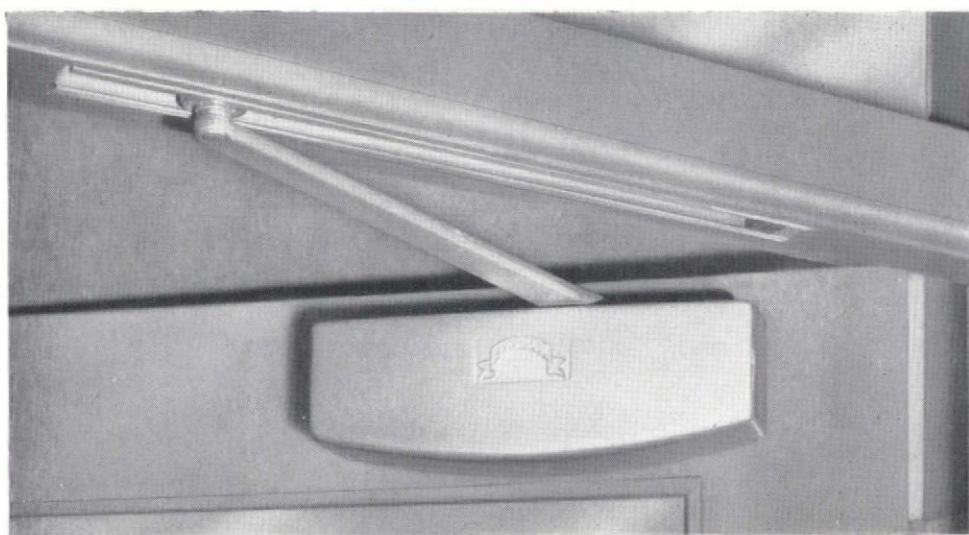
In spite of the innate diffuseness of the subject, the author argues his thesis both methodically and modestly, founding a good deal of his reasoning upon a psycho-analytical base. His debt to Jung and Kerenyi in particular, for a psycho-analytical approach to interpreting otherwise obscure material, is evident and is acknowledged in the appendix.

The author carefully retraces and discreetly interprets for the reader's benefit, the essentials of town foundation and divination rites, as they are described in ancient texts. The ancient's rites of town foundation in the Mediterranean, seem to have always involved, the services of an augur, who established by processes of incantation and delineation on the ground, the auspicious site of the town on some spot adjacent to the proposed town centre. The site of the inauguration was known to the Romans as the *templum* and this was commonly conceived as a circle analogous to the *templum* of the sky and in Roman ritual it was divided into four quarters by vertical and horizontal lines known respectively as the *cardines* and the *decumani*. This aspect of Roman augury may explain the continued use of the word 'quarter' today, to designate a particular area of a town.

All ancient and primitive town augury, from Assyria to India, seems to approximate to this primitive model—of the town being founded at, or upon the intersection of ordained cosmological coordinates or configurations. As Rykwert writes in the last paragraph of his essay, 'It is difficult to imagine a situation when the formal order of the universe could be reduced to a diagram of two intersecting coordinates on a plane (yet) . . . the Roman who walked along the *cardo* knew that his walk was the axis around which the sun turned. . . .' Rykwert concludes that although we have lost this innocent certainty, we are still obliged to look for such certainty in founding new human environments. Yet in spite of this, one remains in doubt how such primal forms and needs can help us today in our struggles to deal with the crucial and overwhelming problems of an age of mass, population explosion and rapid technological change.

K.S.

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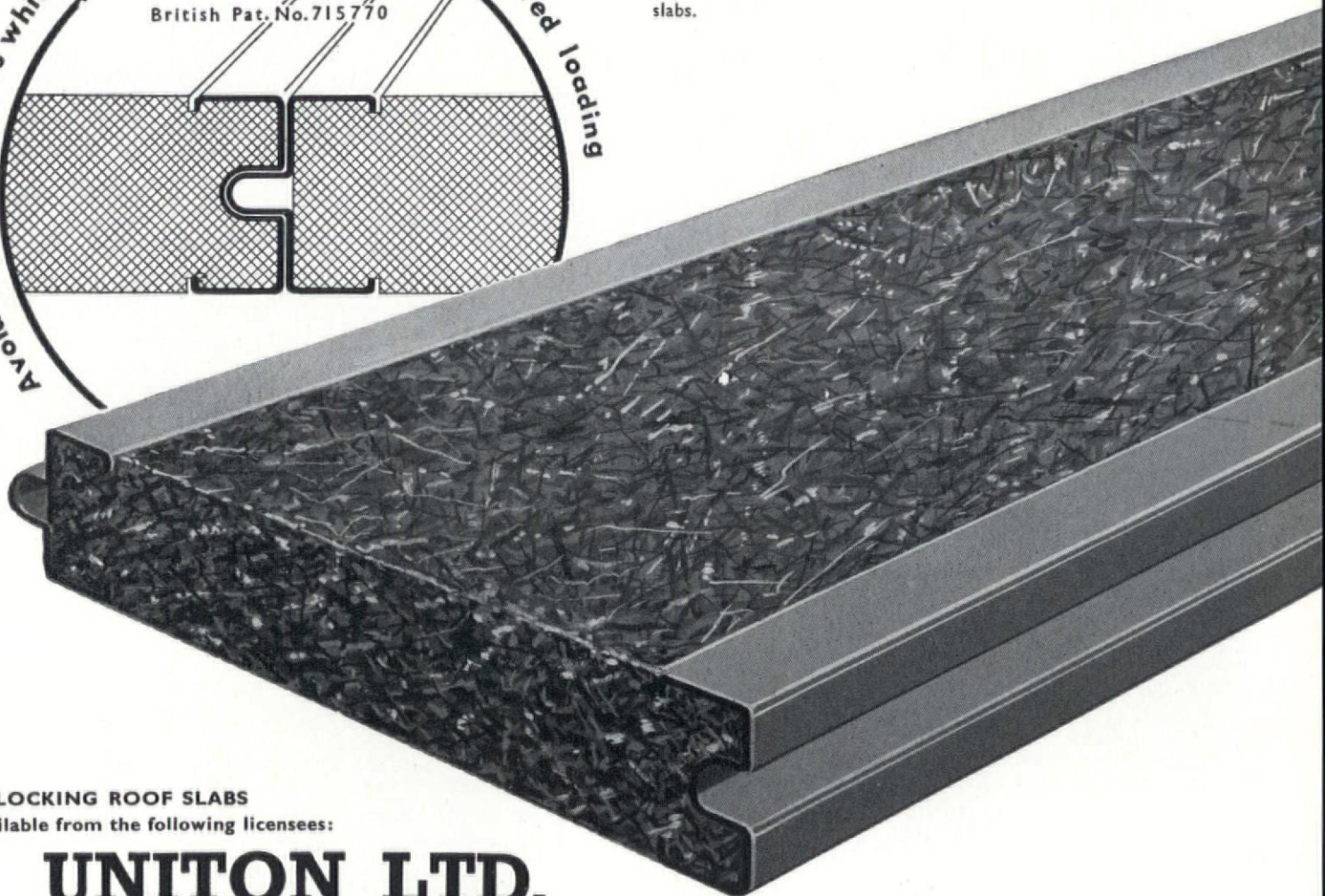
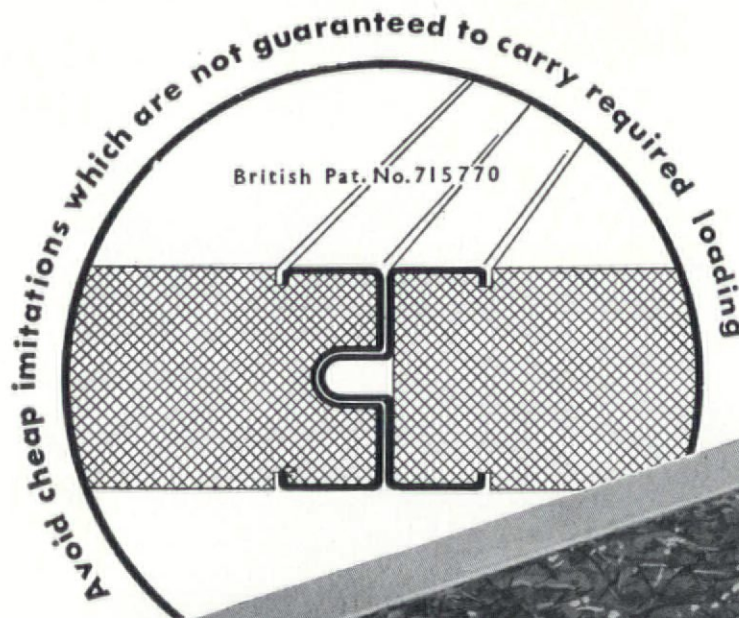
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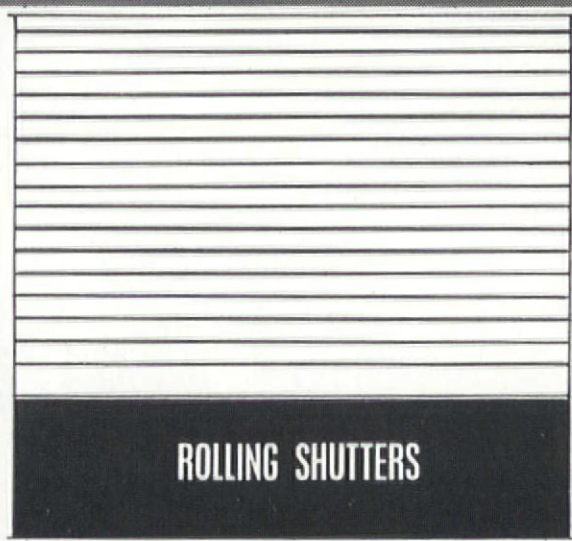
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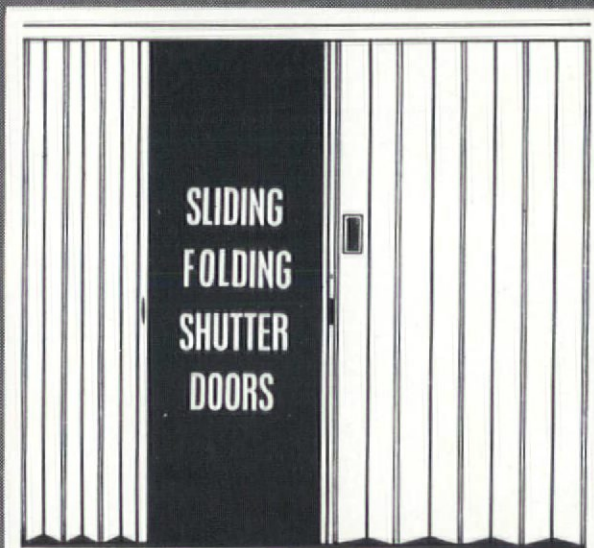
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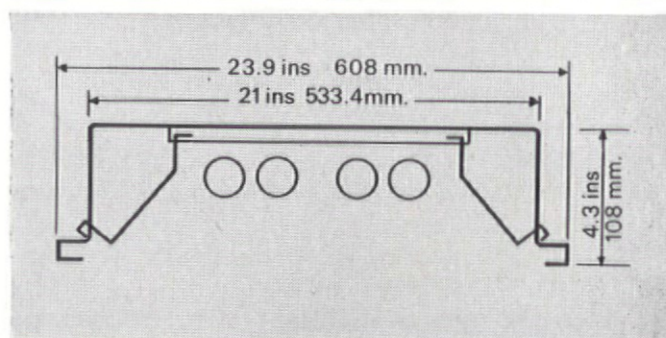
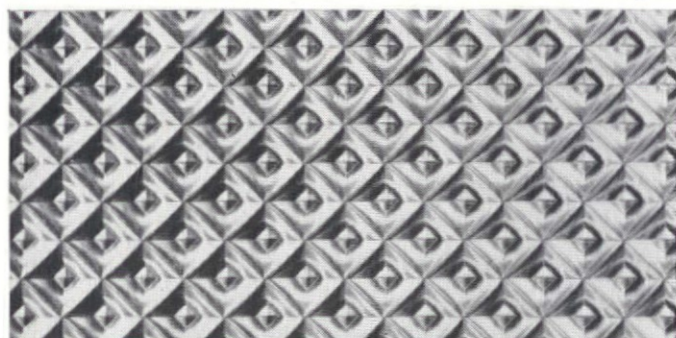
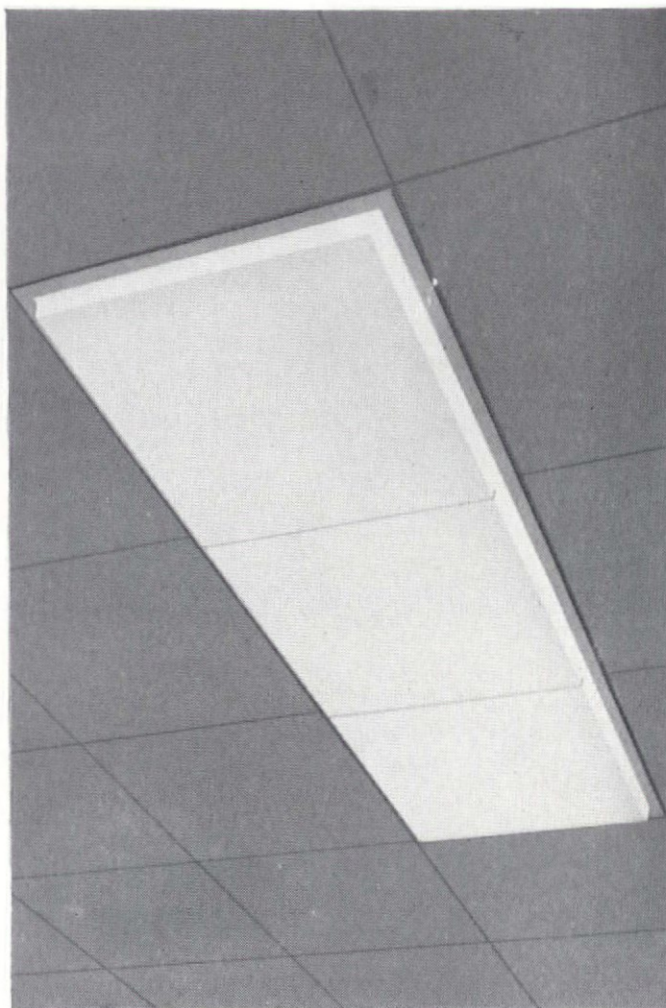
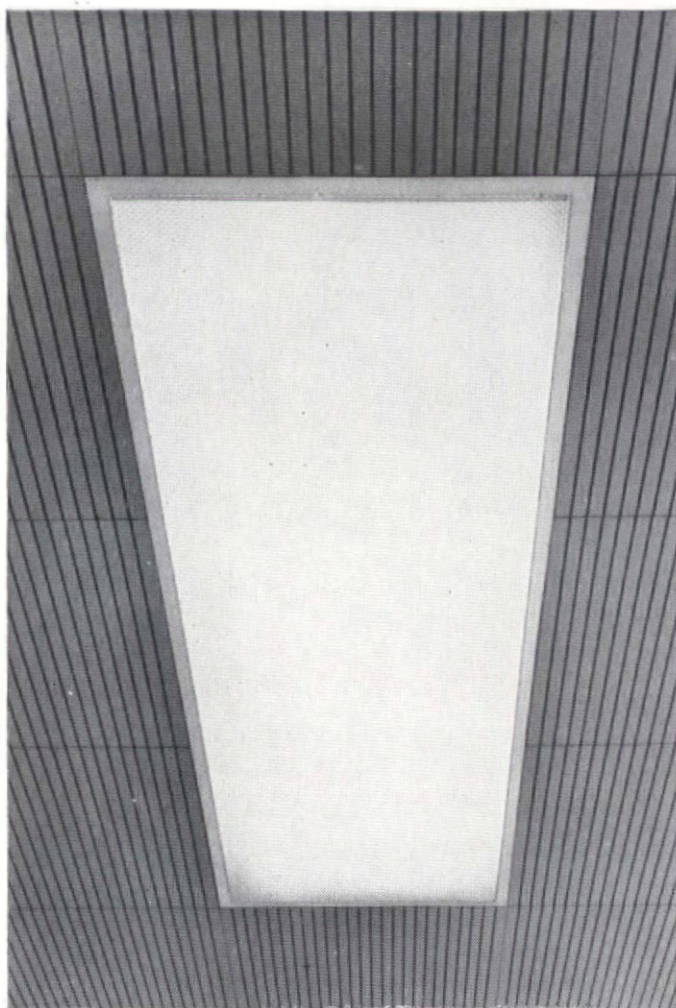
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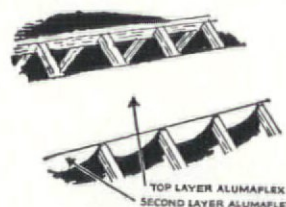
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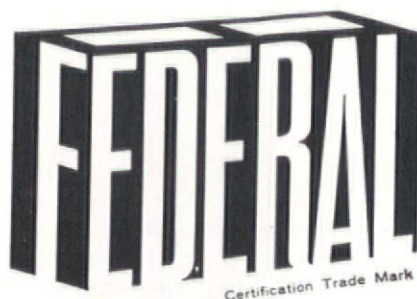
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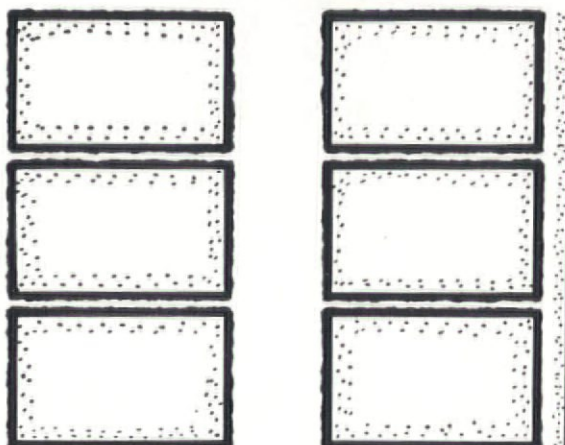


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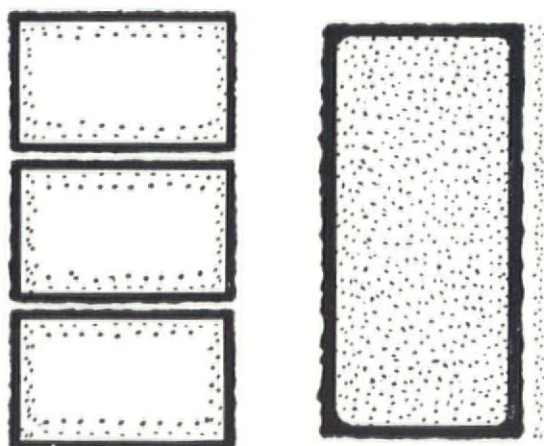


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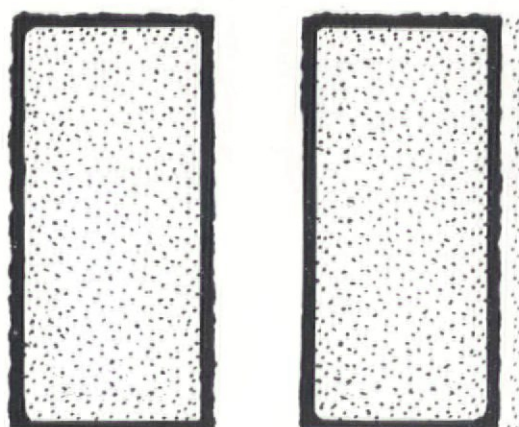
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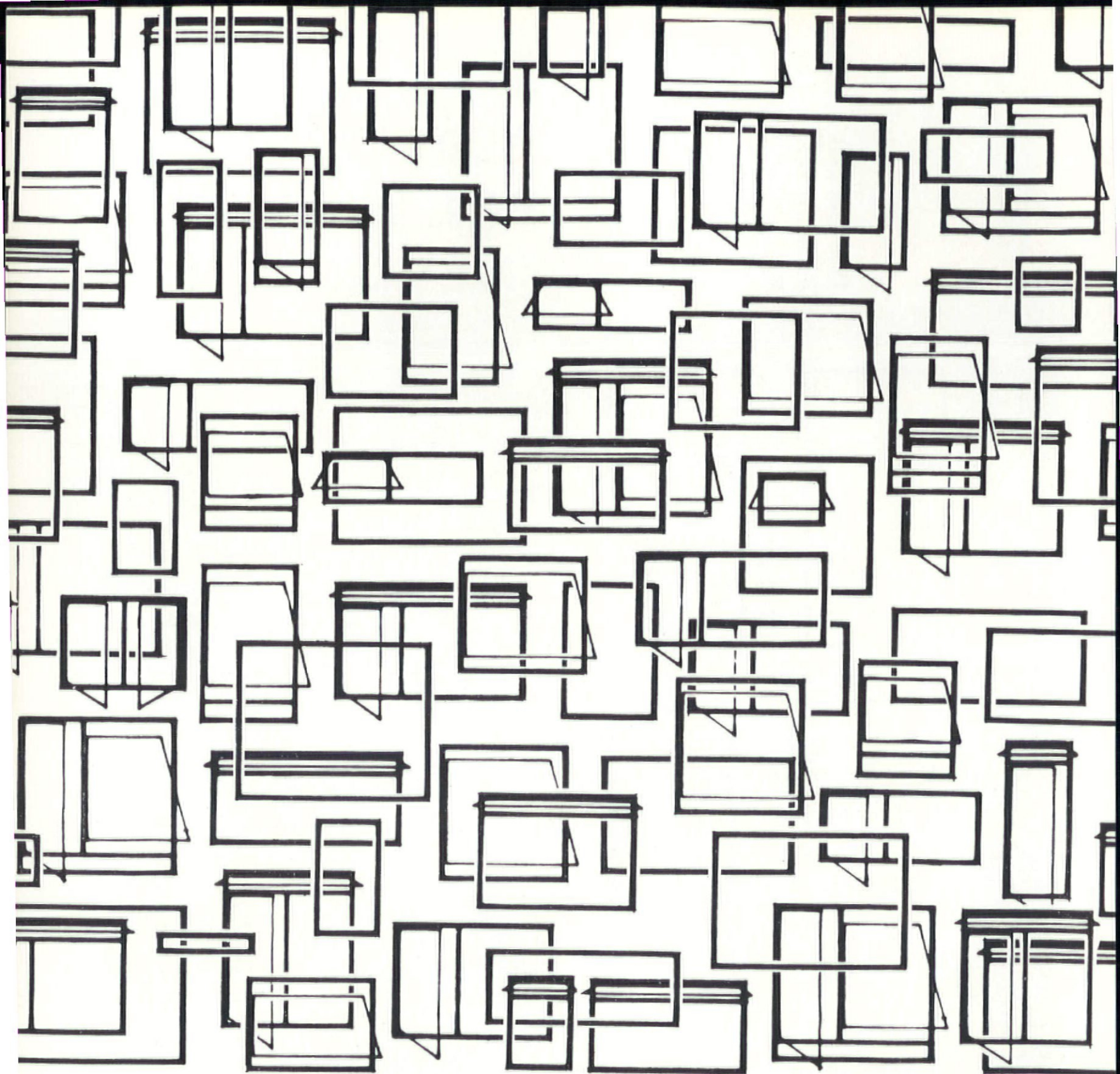
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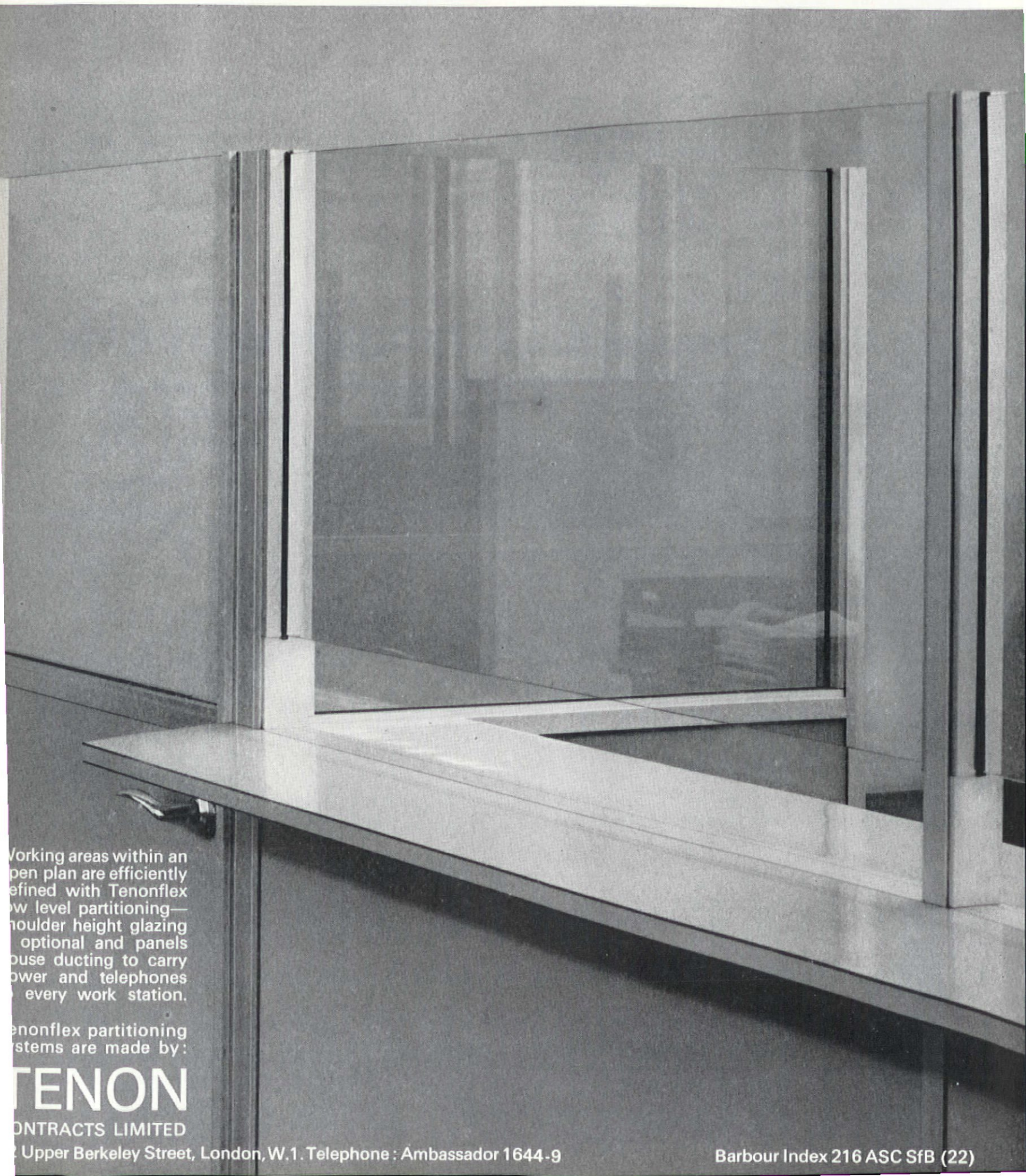
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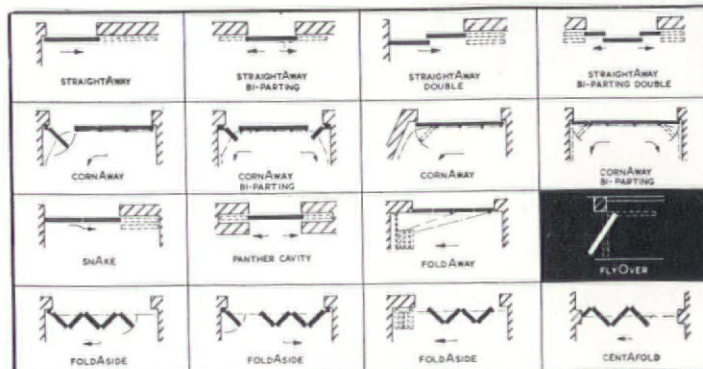
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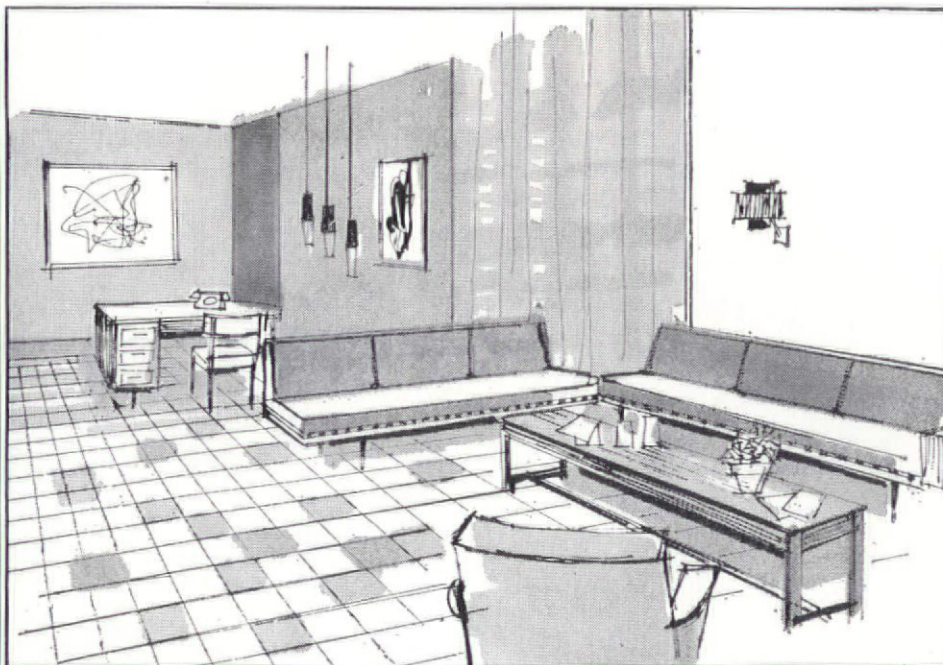
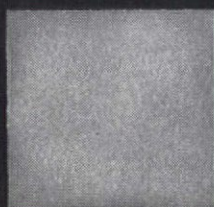
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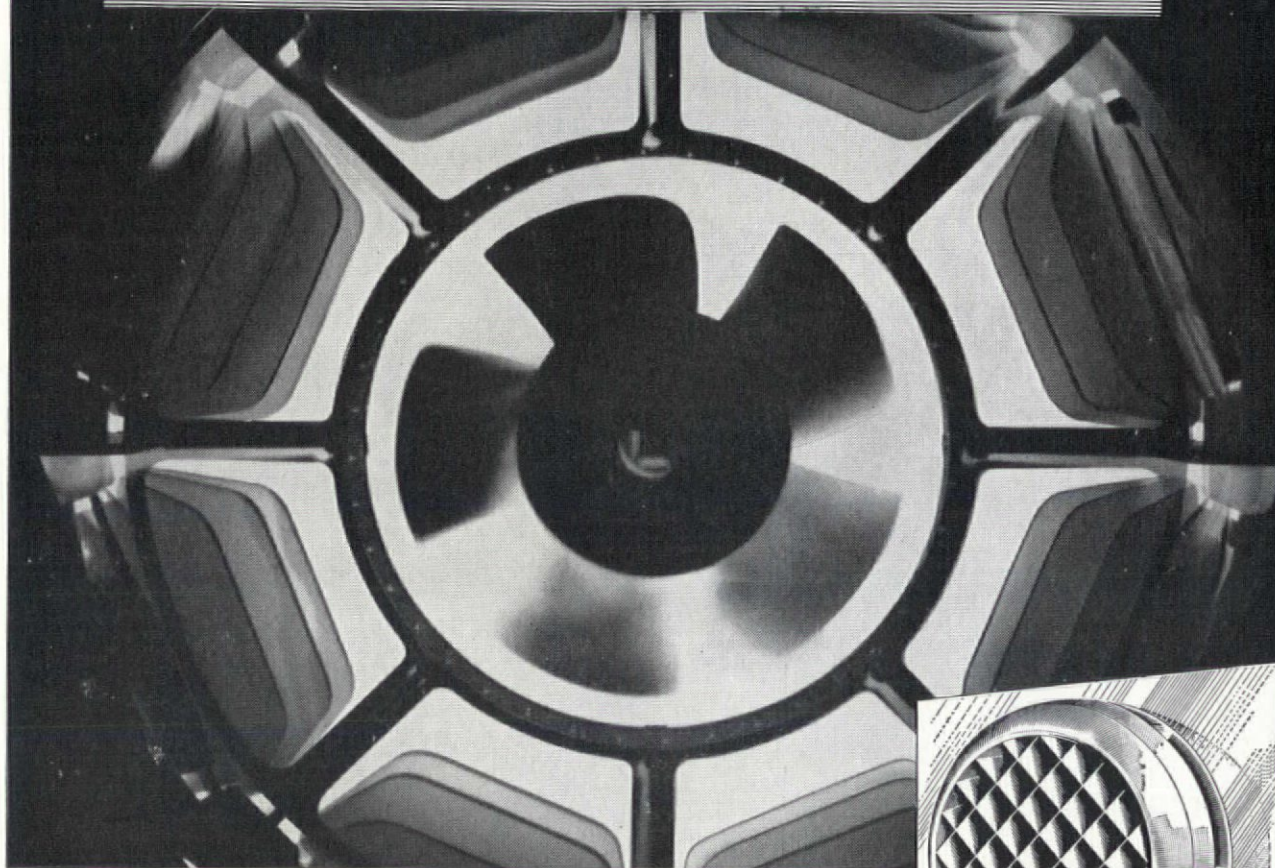
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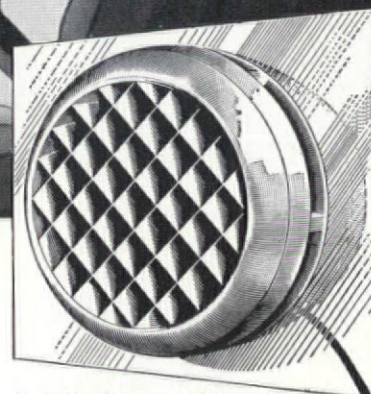
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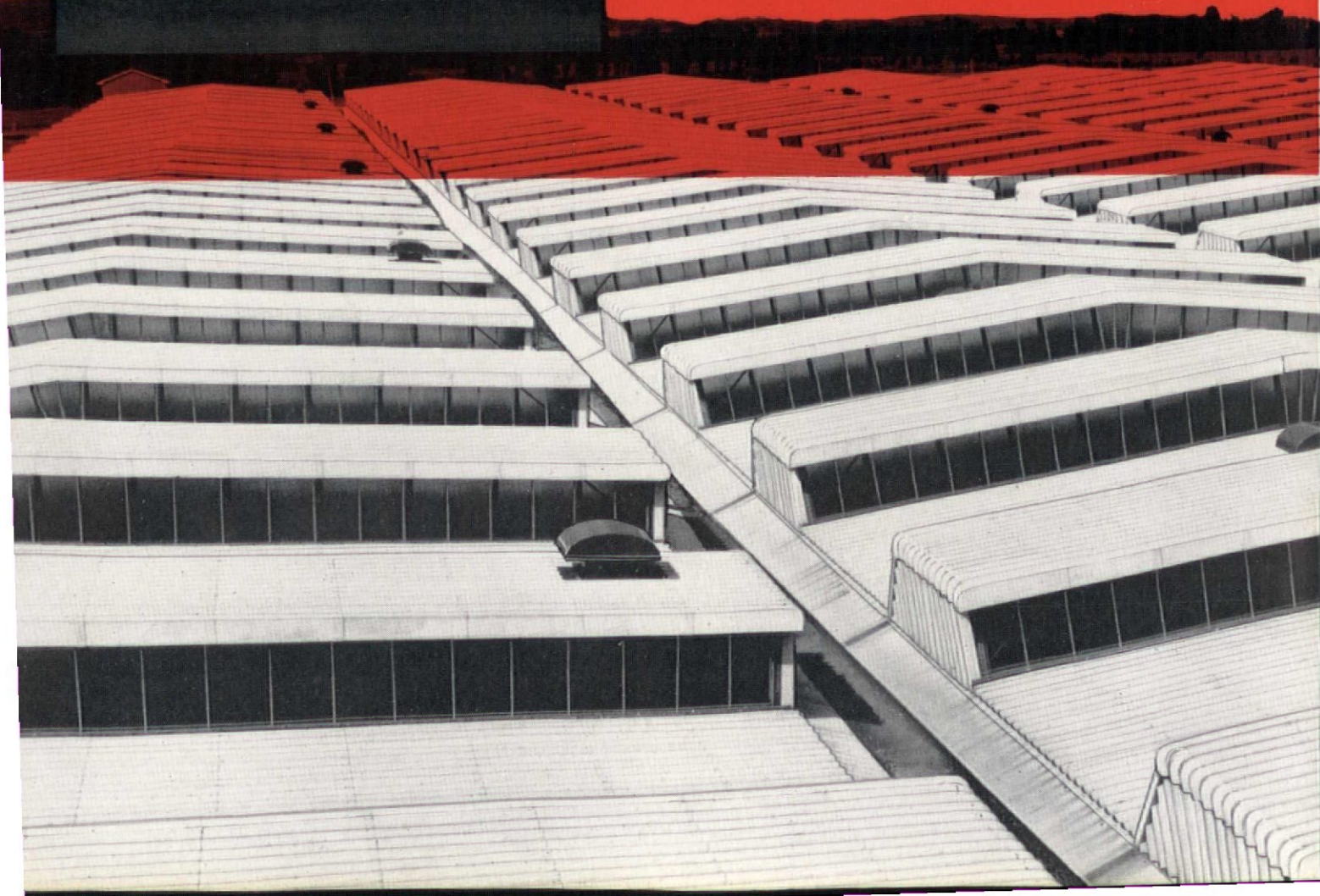
Fort Asbestos Cement Sheets were designed specifically for the re-roofing of an existing building at the Fort Dunlop Factory of the Dunlop Rubber Company Limited. The Company's Architect's Department was looking for a lightweight asbestos cement sheet suitable for laying on existing purlins which were set at 4' 9" centres. UAM designed a sheet which met these requirements and which could be used with purlins set at up to 5' 6" centres (6' 6" for Sandwich Construction). The sheet which evolved became known as 'FORT', because of its association with Fort Dunlop, and the name has been retained since that time. The properties of 'Fort' quickly became appreciated and it is now widely specified for industrial buildings of all types. The Braunstone project described here has a roof of unusual design, covering an area of more than half a million square feet. This roof design is an example of what can be achieved when the Architect approaches the manufacturer as early as possible during the design stage. Some of the design problems which were overcome are shown under the heading "Design with Fort in Mind":

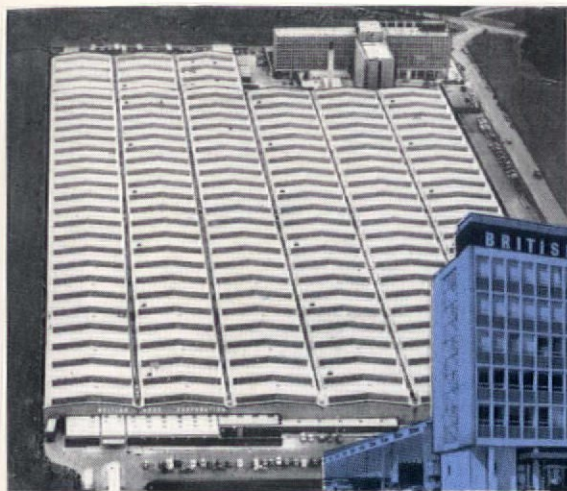
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PURLINS CAN BE SPACED AT 5' 6" CENTRES

**COMPLETE SYSTEM OF SANDWICH CONSTRUCTION
ALLOWING PURLINS TO BE SET AT 6' 6" CENTRES**





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Covering some 14 acres the warehouse is probably the largest of its type in the world. The main structure consists of steel with an asbestos cement covered roof. The floor which was required to take a heavy superimposed load is made of reinforced concrete with a granolithic concrete finish cast monolithically. The project was roofed in at an early stage and consequently concreting was able to continue despite rain and frost.

Architects:
Lewis Solomon, Kaye & Partners,
London, E.C.1.

THE CONSTRUCTIONAL ENGINEER

The Braunstone project was remarkable for two reasons; firstly for its sheer size, 600,000 sq. ft. (approx. 14 acres), and because it incorporated the patented Conder Monitor roof design, the monitors being formed across the 6° roof pitch by cranking the purlins to the shape of the monitor. Here was the opportunity for outstanding co-operation between UAM and Conder designers to produce a first-class roofing project at an amazingly low cost. The pricing for this scheme and its ultimate result completely proved how rewarding could be this close co-operation between Structural Engineer, Architect and Cladding Designer.

The Conder Engineering Co. Ltd.,
Winchester, Hants.

THE ROOFING CONTRACTOR

A Fort roof means fewer problems for us. Fort nests neatly and the complete roof and insulation (Sandwich Construction) can be laid in one operation from the outside. At Braunstone, Fort enabled us to lay a good looking, highly efficient roof in record time.

L. Whittaker & Co. (London) Ltd.
London, W.5.

THE MAIN CONTRACTOR

Various problems threatened our schedule on the Braunstone project. Not least of these was the worst winter for 122 years. We had a very strict deadline and, if the Fort roof had not gone up in record time, we would have been unable to complete on schedule.

Token Construction Co. Ltd.,
London, W.1.

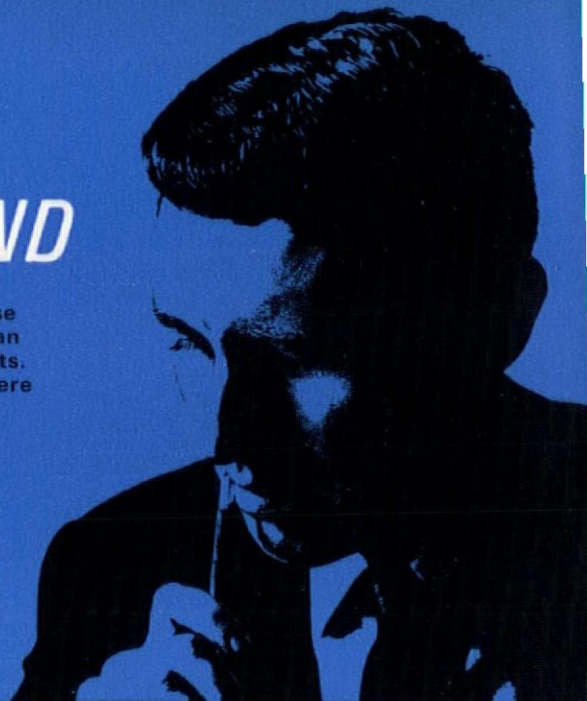


DESIGN WITH *fort* IN MIND

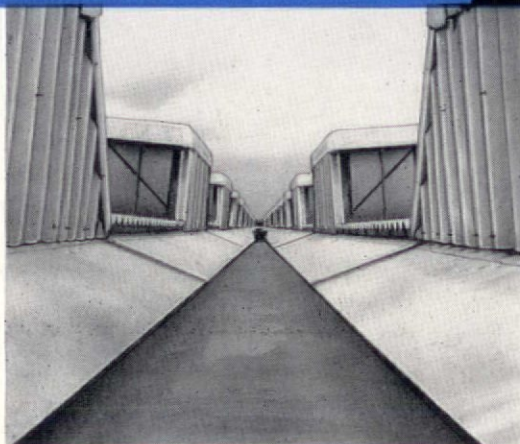
It is possible to obtain considerable benefits in efficiency and economy by the use of Fort Sheets in a wide range of industrial applications. These benefits can be obtained, in most cases, by the use of standard sheets and fitments. However, there are a number of projects—Braunstone is an example—where the design of 'specials', such as a flashing piece, easily overcame what had appeared to be a difficult design problem. Architects are invited to discuss problems of this nature with our Technical Service Department.

The use of Universal Sandwich Construction means that purlins can be spaced at 6' 6" centres. Economies in building frames are always possible when lightweight asbestos cement sheets are used, but, with Fort, costs can be even further reduced.

Fort Sheets are specifically designed to span increased purlin spaces and, as a result, the cost as laid is remarkably low.



This photograph clearly illustrates the flashing detail against an abutment wall. Note the close nesting of the corrugation and the bold profile of the Fort Sheets.



Special attention was given to the flashing of the vertical sheeting on the monitors so that adequate protection was provided against driving snow and rain. The neatly contoured capping pieces are clearly illustrated in this view along one of the massive valley gutters.



A close-up of one of the monitor units which provide adequate, even light to the extensive floor area.

THE FORT SHEET

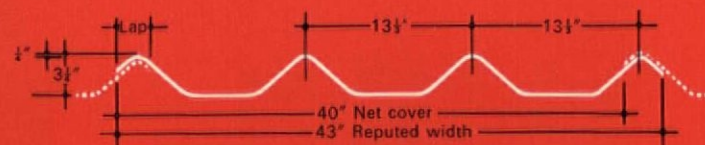
for Roof Covering and Wall Cladding.

Lengths: 3' 0" to 10' 0" in 6" increments.

Weight and area: Weight per sq. yd. as laid for roofing, including fixing accessories, 27.50 lb. Sq. yds. per ton 92.40.

Covering capacity: Cover of 10' 0" sheet is 9' 6" x 3' 4".

Purlins: Up to 5' 6" centres.



THE FORT SHEET SANDWICH CONSTRUCTION

with General Purpose Underlining.

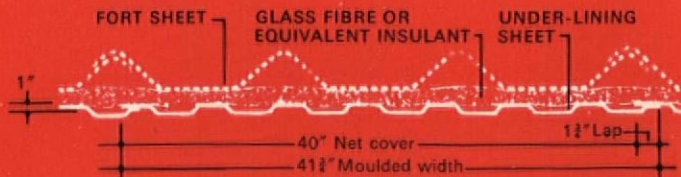
Lengths: 2' 9" to 9' 9" in 6" increments.

Weight and area: 597 lb. approximately per square, complete with interleaving and including fixing accessories. 53.78 lb. per sq. yard.

Covering capacity: As external sheets.

Thermal insulation: $U = 0.20$ with 1 in. glass fibre or equivalent insulant, allowing for partial compression at end laps.

Purlins: Up to 6' 6" centres.



The UAM Technical Service Department exists to help the Building Industry in its present and future needs. It may be approached through the Head Offices at Watford, through the Group's Area Offices or through any of the Group's Representatives. Please make use of this service which is available to help you.

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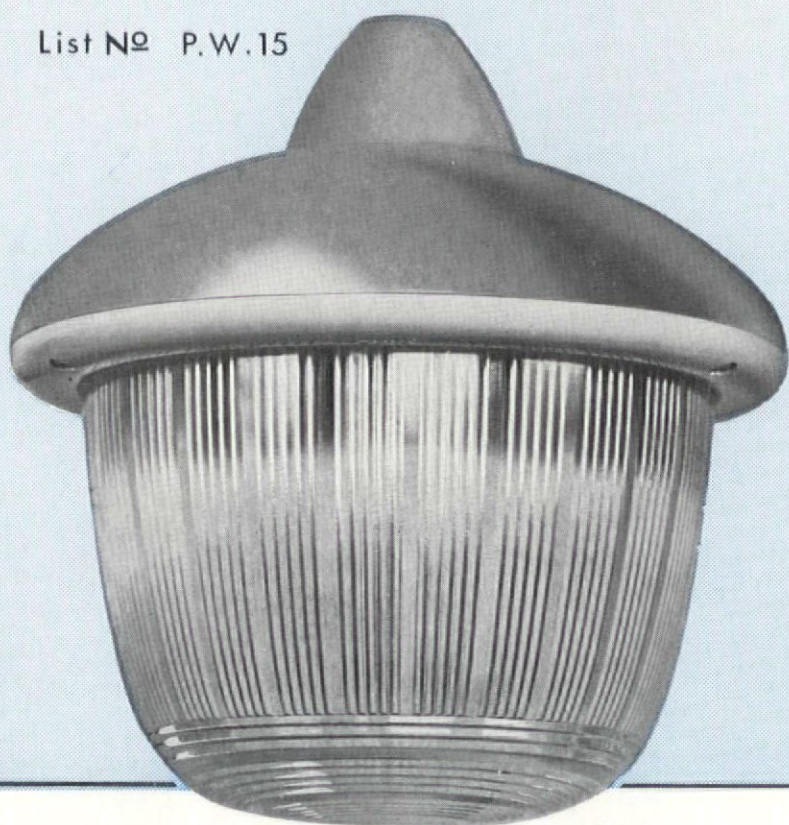


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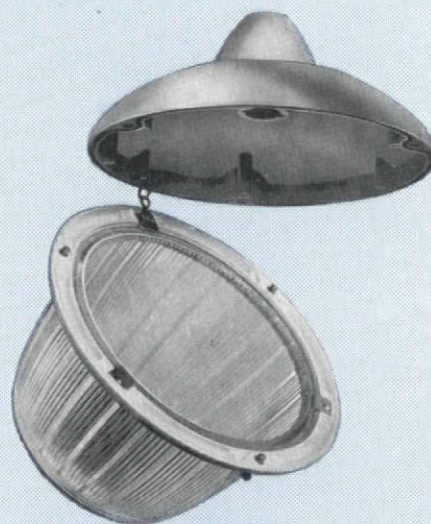
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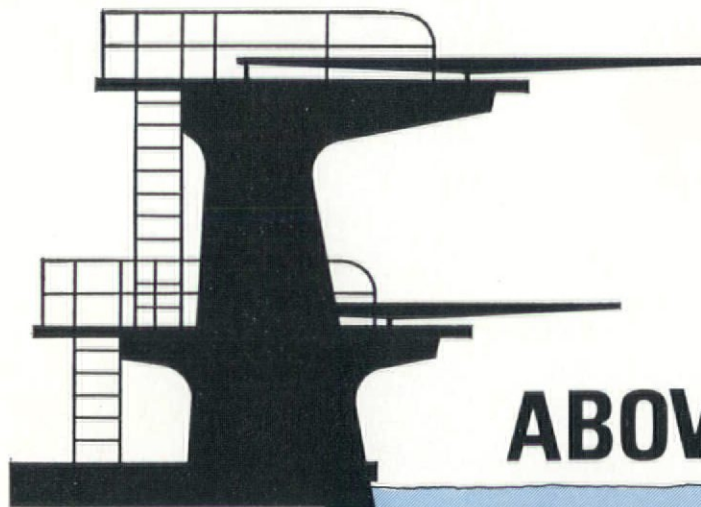
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An interesting point is that different weathering was used in each case. One of the advantages of specifying Stramit is that almost any form of weathering can be applied *without* screeding, a big saving in both time and materials. For the full story of how Stramit helps speed up construction and reduces costs, ask for Technical Brochure STC. 1004 (see Barbour Index File 225, Gorco Bureau Section 20/14)

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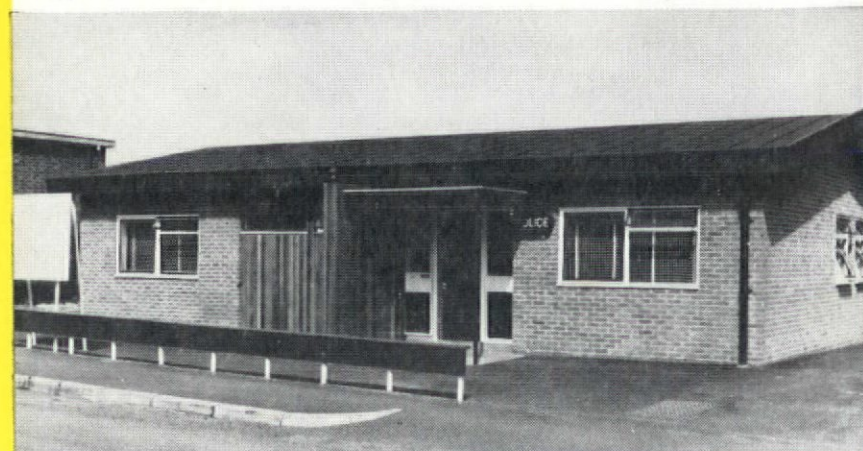
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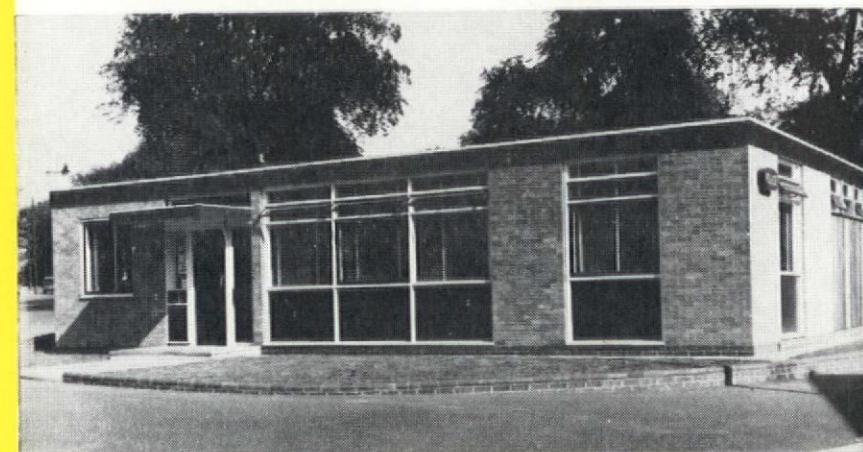
One of the TOMO Group of Companies



CLIFTON ROAD POLICE STATION, NOTTINGHAM. Roof construction is joists at 2ft. centres to carry the Stramit structural roof-decking. The weathering is copper, fixed in the traditional manner.



RANSOM ROAD POLICE STATION, NOTTINGHAM. The 10°-pitch roof construction has purlins at 2ft. centres with Stramit structural roof-decking weathered with built-up felt.



BATH STREET POLICE STATION, NOTTINGHAM. This flat roof has joists at 2ft. centres to carry Stramit structural roof-decking weathered with Nuralite.

STRAMIT

INSULATED ROOF-DECKING

Introduction by Vladimir Bodiansky to his lecture on Le Corbusier's 'Unité d'habitation' at Marseilles, March 30th, 1949
(See pages 20 to 28)

Young people, architects and engineers have come to ATBAT from all points of the globe, from Peru to Canada and Colombia to China. They work enthusiastically at a difficult, thankless and humble task. It is of them I think and to whom I dedicate my sincere regards.

Our responsibility is great.

All over the world we have innumerable friends, who eagerly watch our efforts.

All over the world we have innumerable enemies who no less eagerly watch our efforts.

If we succeed, it will still only be considered a drop in the ocean in relation to the immense resources at man's disposal; an experiment, a contribution to modern architecture, perhaps a significant step.

If we fail, it will be interpreted as a failure of modern architecture. We have not sought this, but we make allowances for such a situation and fully appreciate the extent of our responsibility.

Right now our task is to make this beautiful dream* come true; to prove that it can be built by methods that are reasonable both technically and financially. Our experiment cannot succeed except under these conditions.

I will tell you now how we are going to construct this building, and I hope that those of you who are looking for a revelation of hitherto unpublished structural secrets will be disappointed. I have often noticed such disappointment on visitors' faces on the Marseilles site, and I have often heard people say, 'it is so simple, anyone could do it!'

However, all our efforts, all our studies constantly modified and revised, aim essentially to produce a result which everyone can produce; for good architecture must be able to build itself, quite simply, without acrobatics.

*The *Unité d'habitation*



Designing in Glass

(Right)
One of two Suspended
Glass Assemblies at
opposite ends of the
department store of
A. Goldberg & Sons, Ltd.,
Edinburgh.
Constructed
in 'Armourplate' Glass by
Clark-Eaton for City Glass
Co. Ltd., Glasgow

Architects:
J. & F. Johnston

(Below)
Messrs.
Sparshatts Showroom,
Southampton
Suspended Glass Assembly
in 'Blackfriars'
Toughened Plate Glass

Architects:
Sutcliffe, Brandt &
Partners

Shopfitters:
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Ltd.



Modern fixing techniques developed by Clark-Eaton have greatly widened the scope for glass as a major element in building design.

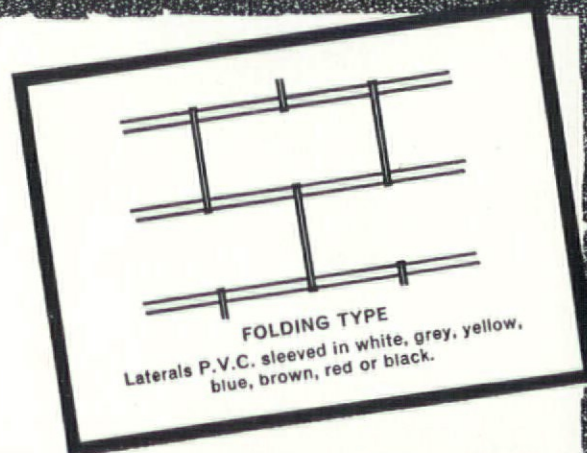
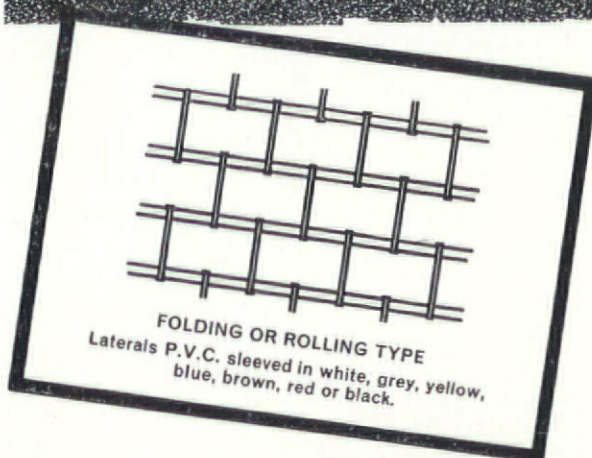
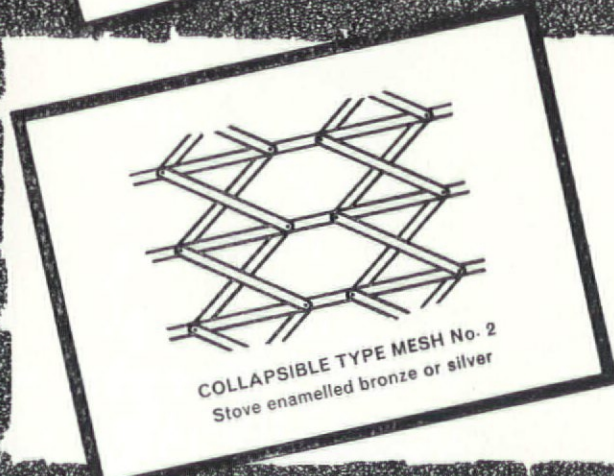
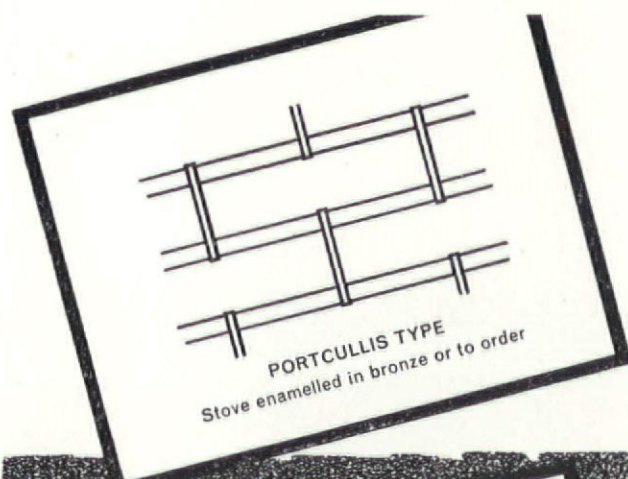
Suspended Toughened Glass Assemblies

in 'Armourplate' or 'Blackfriars' Toughened Plate Glass can provide the main feature of an elevation or even form a complete facade. Toughened glass entrance doors can be incorporated if required. Clark-Eaton, the experienced Specialist Fixers, provide a complete service in the unusual or spectacular use of glass. Technical representatives are available. Please ask for literature AD3.

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appear old-fashioned**



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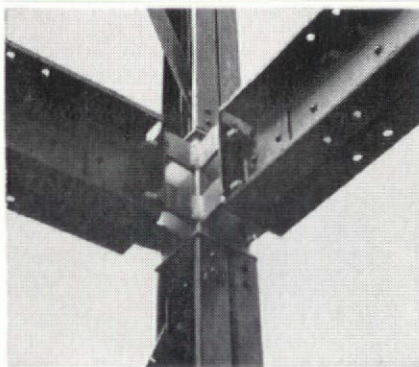
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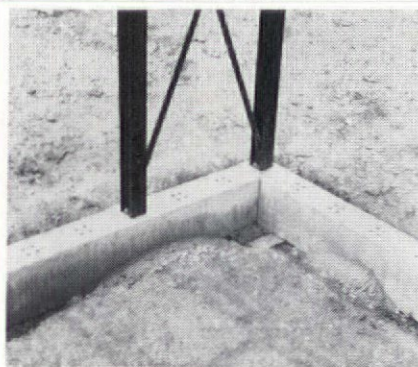
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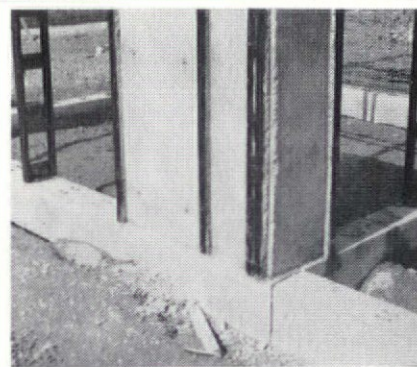
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Intersection of main stanchions and main beams showing use of 2-way connector unit.



Precast concrete ground beams and braced panel of steelwork.



Demonstration corner section of concrete party wall as used on interlocking 'L' shaped plans.



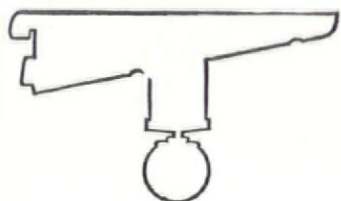
for further details write

3M Trusteel Trusteel Corporation (Universal) Ltd, Gate House, The High, Harlow, Essex.

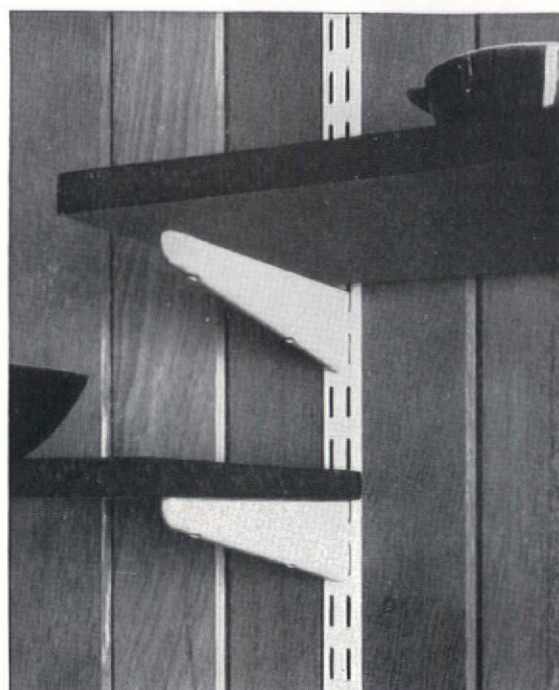
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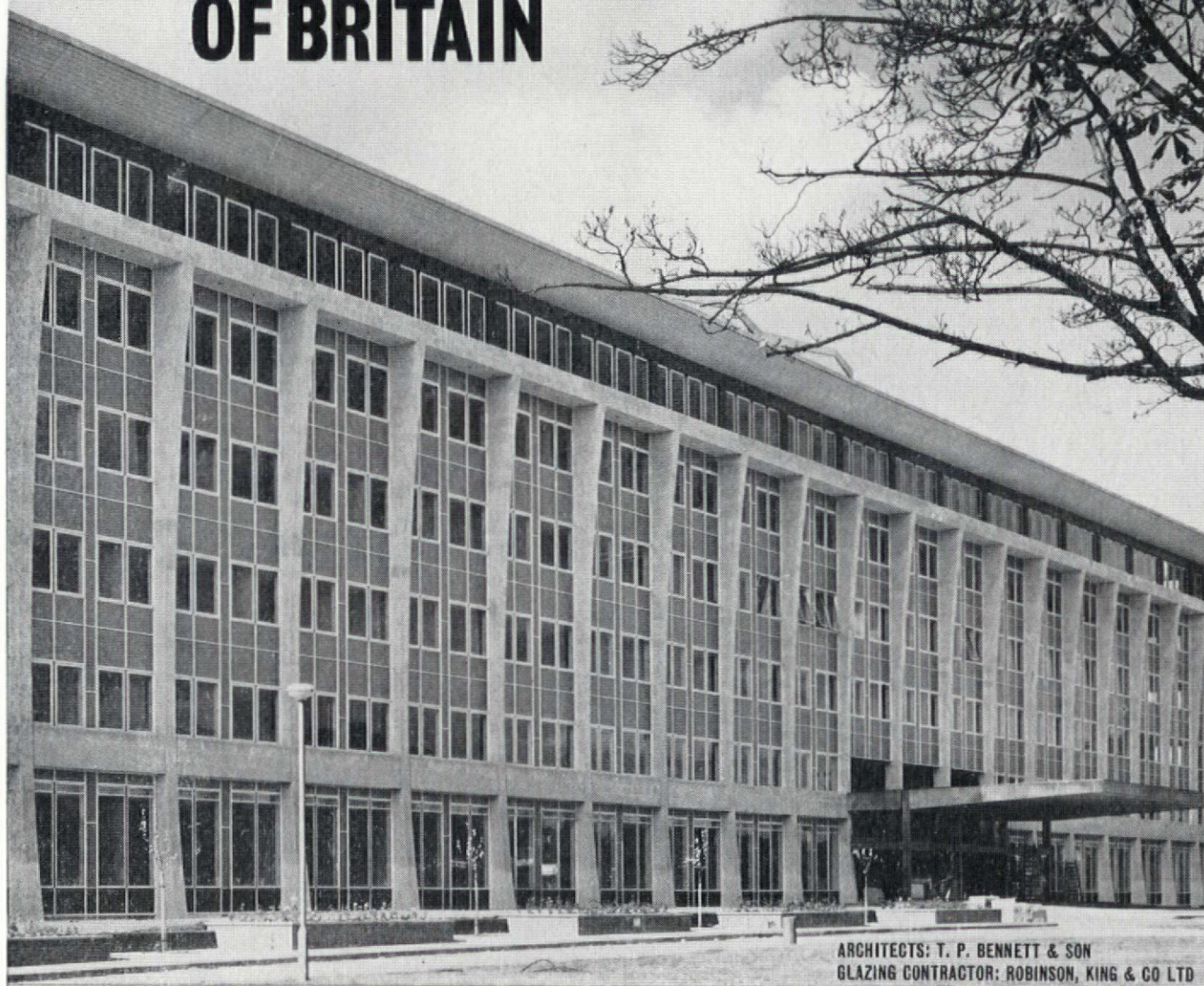
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Lecture room seating with Seminar chairs and tables in the Bartlett School of Architecture.

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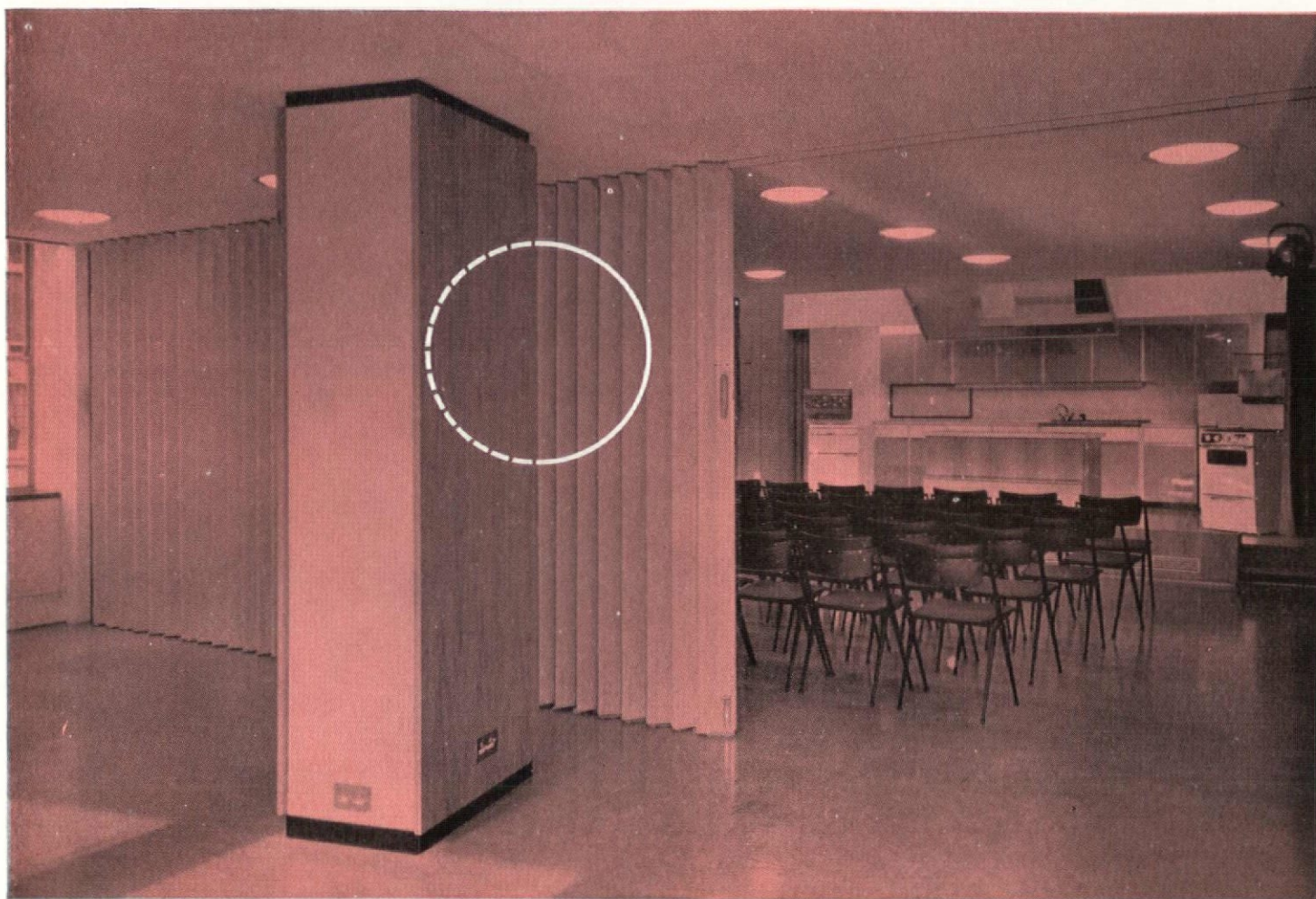
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At the Food Information Centre, 5-7 John Prince's St., London, W.1 where the Modernfold Soundmaster, illustrated above, was tailor-made to meet their very specific requirements, i.e. a single, fully floating Room Divider for recess stacking with two built-in film projector ports which, when not in use, would not affect its sound resistant properties.

This was achieved by using a Modernfold Soundmaster and inserting in the centre two steel plates with two apertures, each covered by a hinged steel flap, fastened with a simple catch. All these steel plates were covered in matching Vinyl leather cloth.

This is another example of the many ingenious applications of the Modernfold range of doors.

Do not forget that all the Dividers in the Modernfold range are designed to suit individual requirements, are draught proof and flame proofed to British Standards and are available in a variety of attractive covers.

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CEILINGS



"And up . . . and down . . . two, three, four . . . Listen to the music . . . three, four." Belles on their toes want no clangour in their ears. And the first steps should lead to Cullum who sell and fix most leading brands of acoustic tiles. Cullum are feet on the ground experts on acoustic ceilings. Have been for over 30 years. Ask us to trip over and see you.

The latest rehearsal room installation at the London Opera Centre.

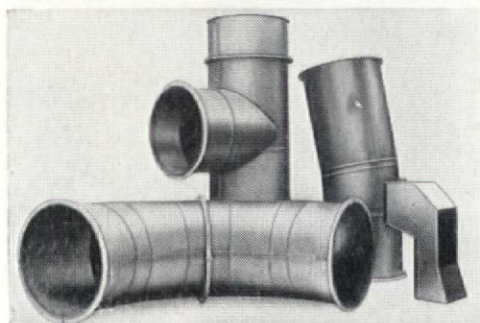
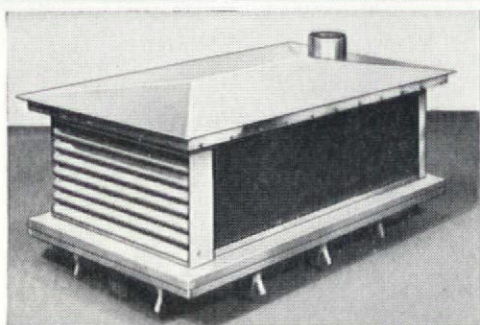
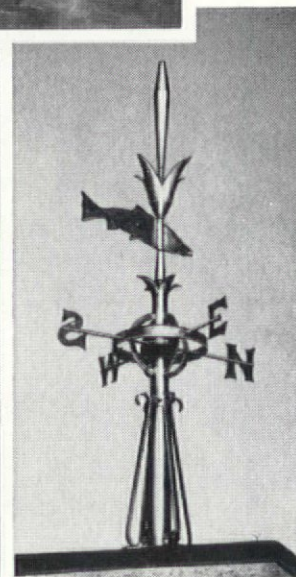
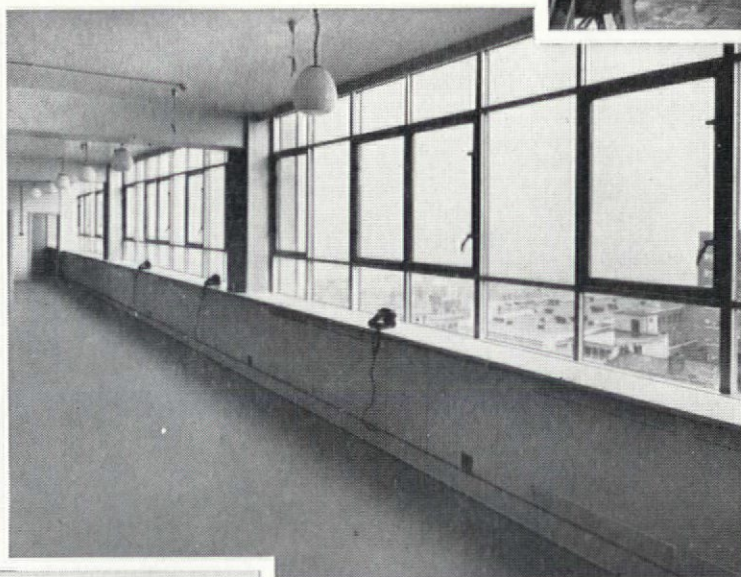
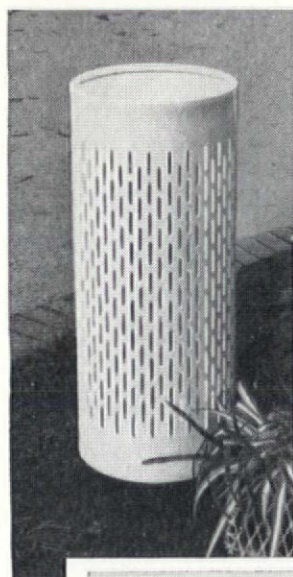
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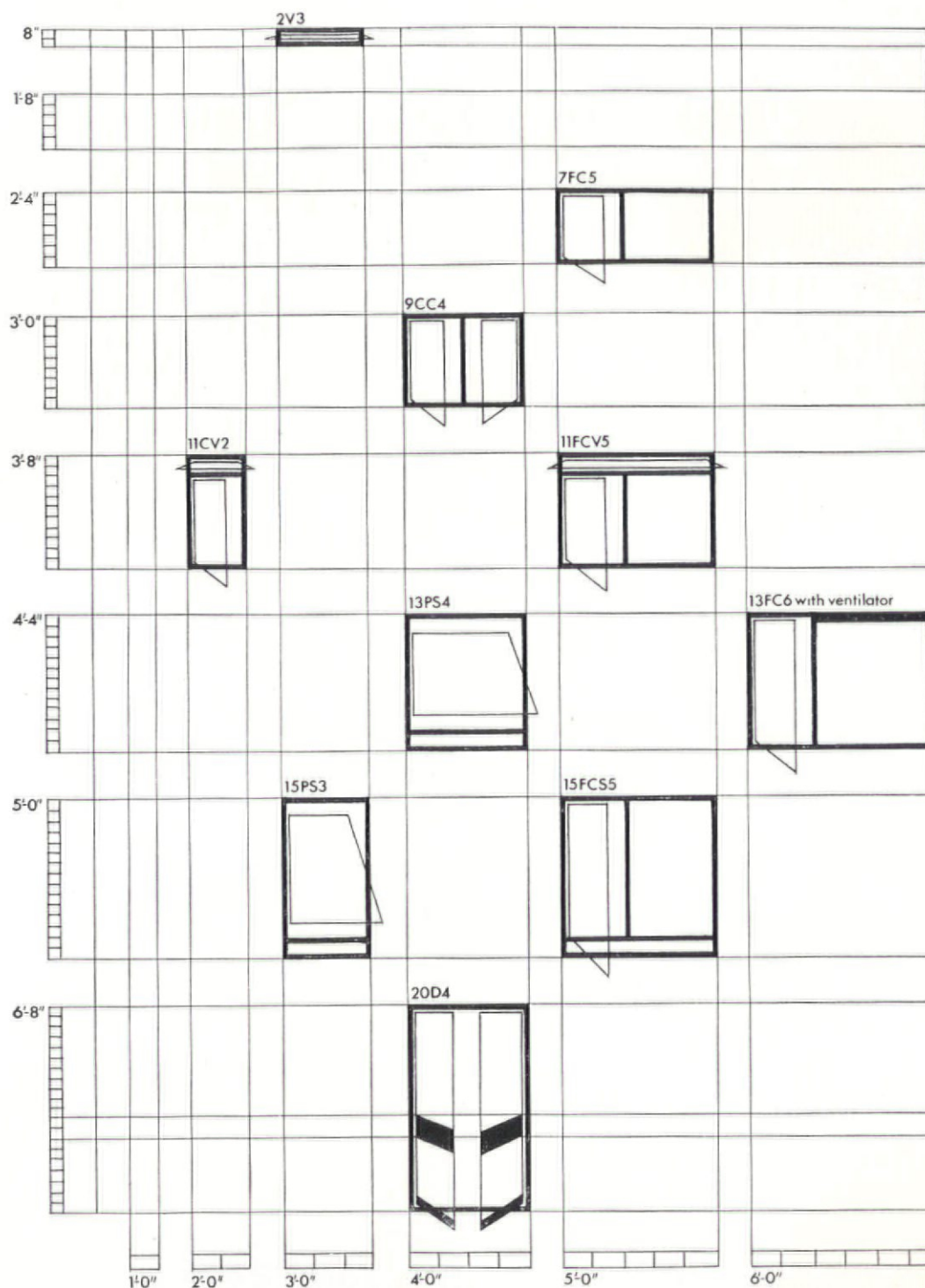
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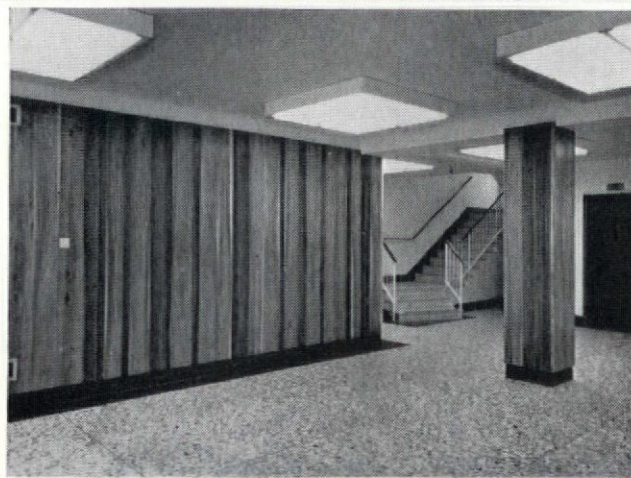
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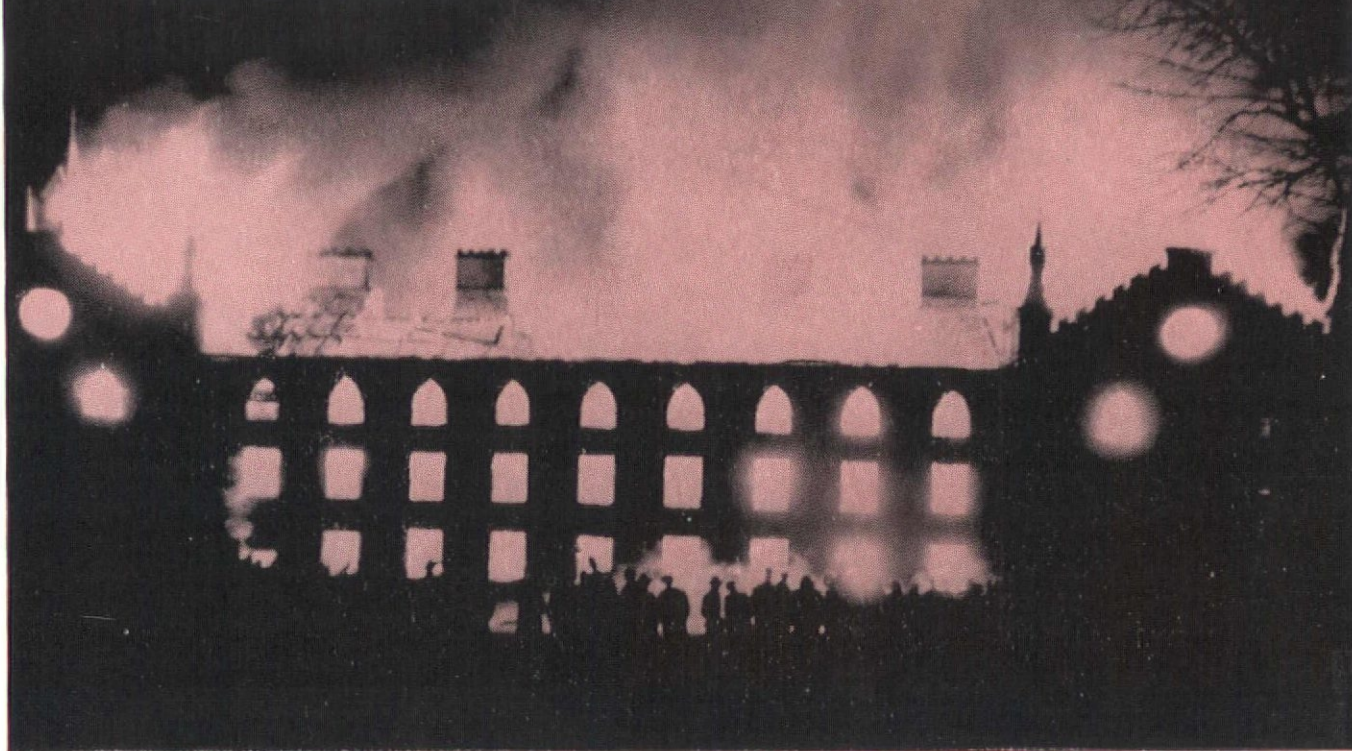
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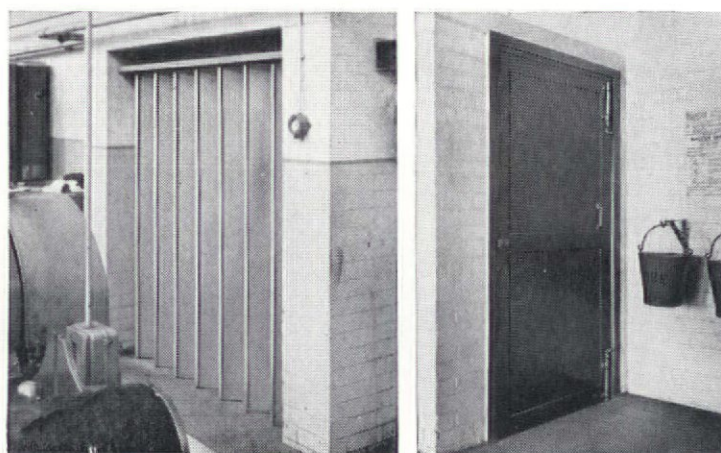
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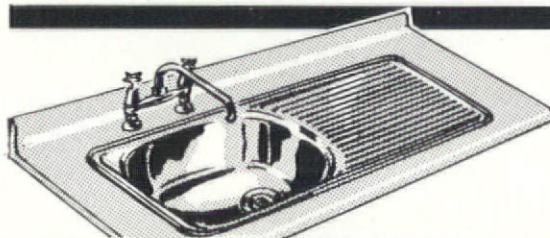
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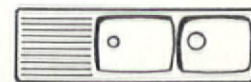
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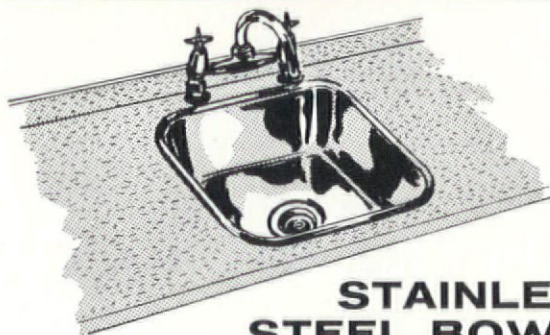
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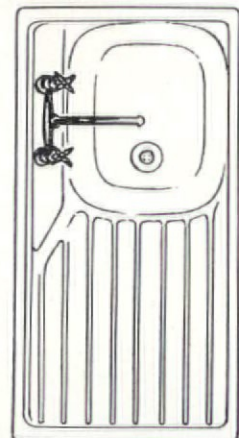
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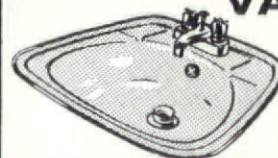
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- (2) That submission of the project gives *Architectural Design* first publication rights in the architectural field of both the project and the completed building in the case of **award winners.** (Allowance is made for those projects which have already been published before February 1965.)
- (3) That you agree to the exhibiting of your project at exhibitions to do with these awards and any subsequent National publicity which will result from these awards
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UK news

Terence Bendixson

New university

At last we are to have a new university that does not start off among the broad acres of an eighteenth century gentleman's mansion. The new University of Surrey, evolving from Battersea's emigrant College of Advanced Technology, will be in Guildford. Grenfell Baines of Building Design Partnership, envisages it as a 'hill town' skirting and framing Sir Edward Maufe's cathedral **1**. The master plan **2** shows three bands of buildings—residential, social and academic—slung across the north side of the cathedral mound. The first and southernmost band is made up of clusters of small towers accommodating groups of 12 students that are combined into houses of 50 and into neighbourhoods of 500. Next comes a band containing libraries, lecture theatres, dining rooms, coffee bars and the union. Below this are the academic buildings which are designed to defeat obsolescence. In section they are stepped to give narrow office spaces on the top floors, medium spaces for classrooms and labs on the middle floors and large spaces at the bottom for workshops. There is a similarity here to the section of James Stirling's Cambridge library. In plan the academic buildings are designed as L's, U's, and O's. Where they occur as L's and U's there is space for them to expand to O's and then to spawn new units.

Service roads will run under the university where there will be staff parking. Students' parking for 3000 will be at the bottom of the hill. To provide for the needs of about 2000 students by 1969 (expanding thereafter to 5000) prefabrication will be used—probably different systems for the different building types.

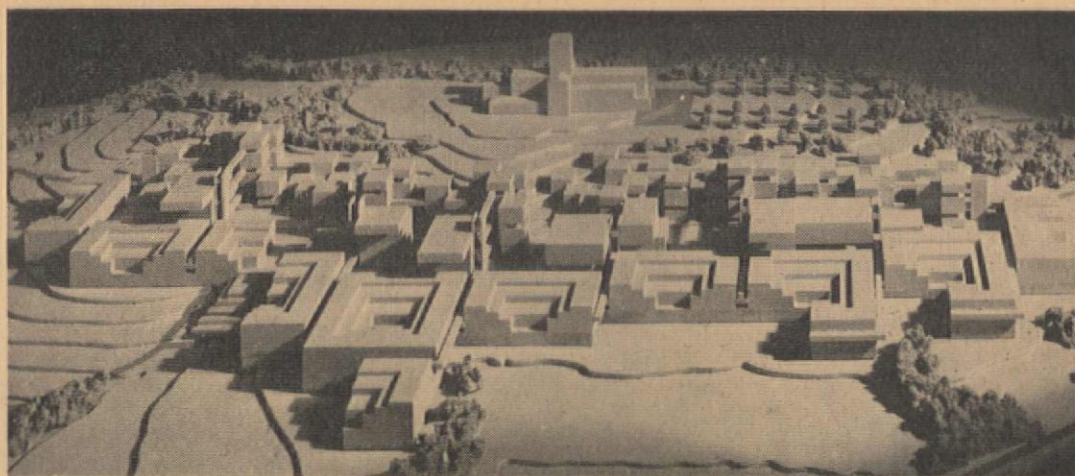
Memo
AD Project Award entries are due in on
January 29th

Study-bedrooms

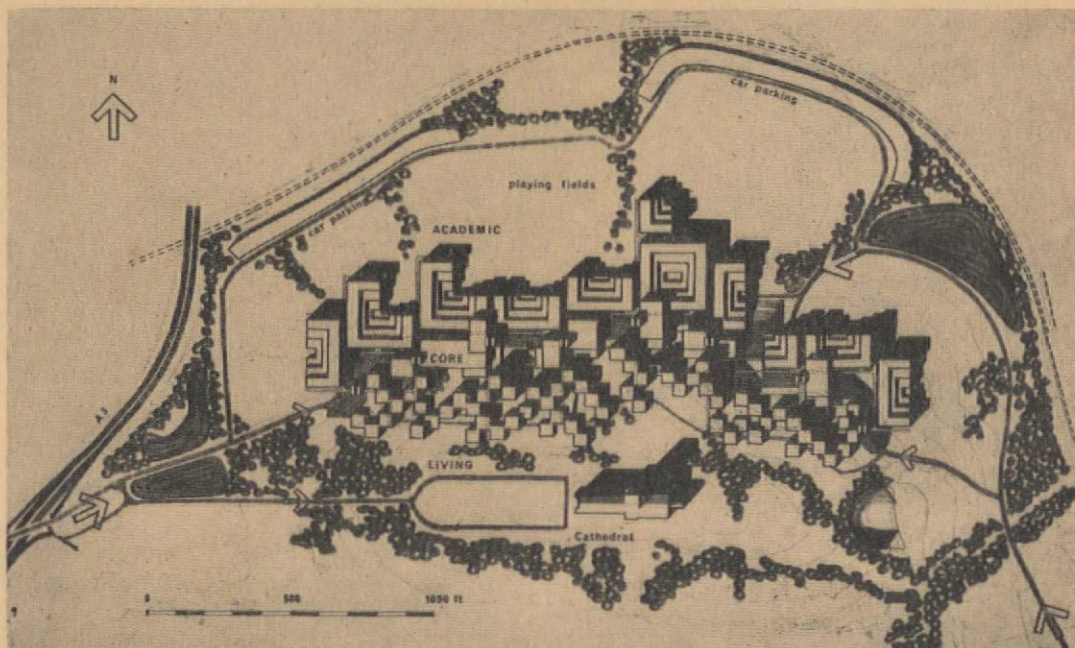
A much smaller academic project using precast concrete structural members is the study-bedroom tower in Leonard Manasseh's Furzedown Teachers' Training College for the LCC at Streatham **3**. Originally intended to be 18 floors high, but lopped to 11 to avoid a public enquiry, it has heavily profiled white load-bearing façade panels. Behind them on each floor are 16 study-bedrooms. Other parts of the college are not quite finished.

Banks and The Economist group

Banks have not been the brightest chapter in recent architecture but with Martins hotting up the pace the big five are slowly galvanizing themselves. A chunky four-cashier branch for Barclays **5** is related to a large building for BEA with which it shares a tree-studded pedestrian



1



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3



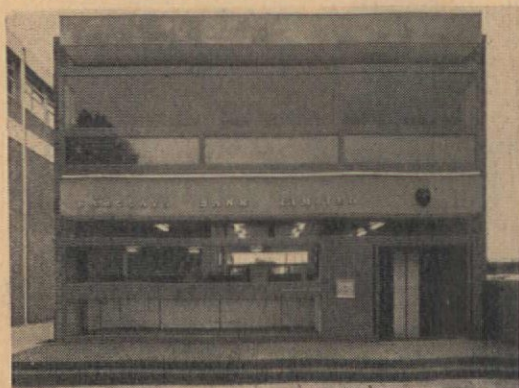
4

courtyard, and brings quite a mark of distinction to a sleazy bit of South Ruislip. Murray, Ward and Partners were the architects for both buildings. Alison and Peter Smithson's escalator branch for Martins in St James's Street, London, on the other hand, is set in superb urban surroundings but still manages to add something to them. The entrance hall at the foot of the moving stairs is a bit bleak but the space above on the piano nobile is really noble. The cluster

of towers in which the bank occurs—the Economist group **4**—will be described fully in our February issue.

Linearity

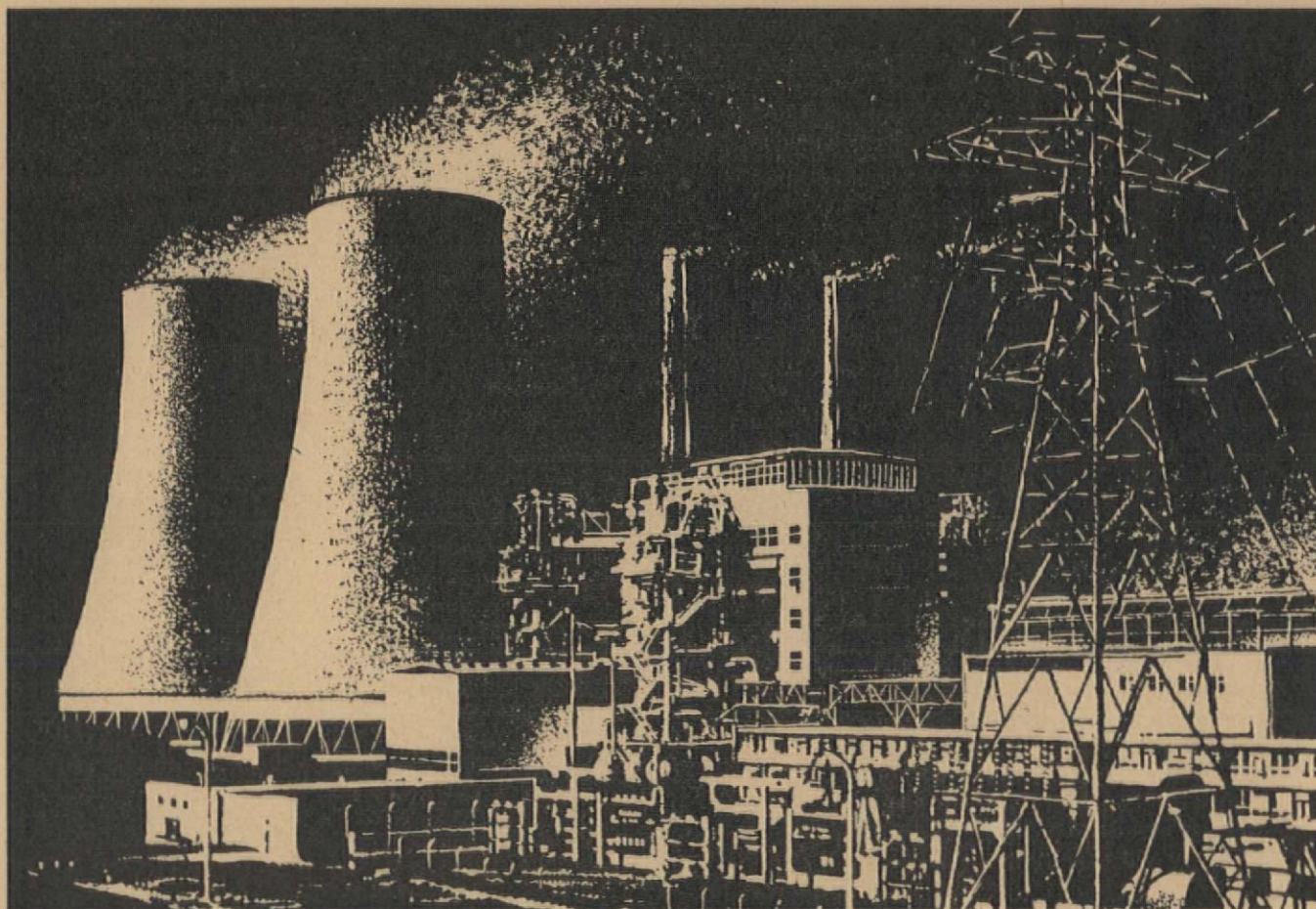
Starting with Sir Donald Gibson's presidential address at the RIBA, monorails and linear cities seemed to be continuously in the news. Sir Donald said his department (the Ministry of Public Building and Works) had studied the



5

1

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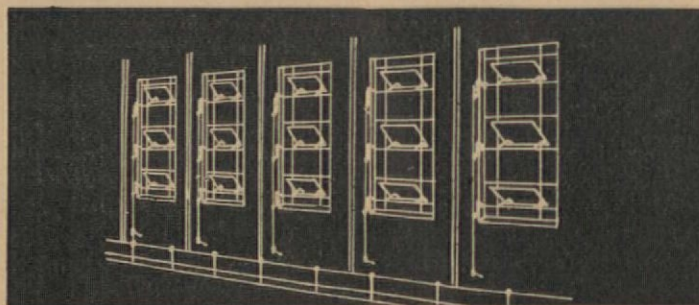


Illustration above is of the shaft and lever gear used at Calder Hall. This gear is neat and inconspicuous, and requires less maintenance than any other type.

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feasibility of using the monorail beam in Fred Pooley's North Buckinghamshire circuit linear town to carry water for district heating from an adjacent power station. He urged the Government to think big and build experimental new cities to test such ideas. He also suggested a national headquarters building to provide a forum for the whole building industry.

A few weeks later, also at the RIBA, Max Lock took a swipe at the county-based planning system saying that the counties were too small to plan regionally and too remote to be sensitive locally. At the Town and Country Planning Association's annual conference Derek Senior said that counties could only be made to function by giving them boundaries related to current demographic and economic realities. Under a broad umbrella of regional planning he proposed counties based on the spheres of influence of existing and future conurbations. Inside them would be reorganized urban and rural districts.

Railways

As the electrification of the Euston Manchester line goes on, a string of massive new electronic signal boxes is being built to control the running. The latest of these is at Rugby 9 and has elementarist sunbreakers. These coincide with corner windows. Elsewhere obscured glass has been used to cut down light on the signalling consoles. The gantry for the overhead power lines on the other hand seems to be in the best British add-to tradition. The signal box was designed by the Midland Region architect, R. L. Moorcroft.

South Bank

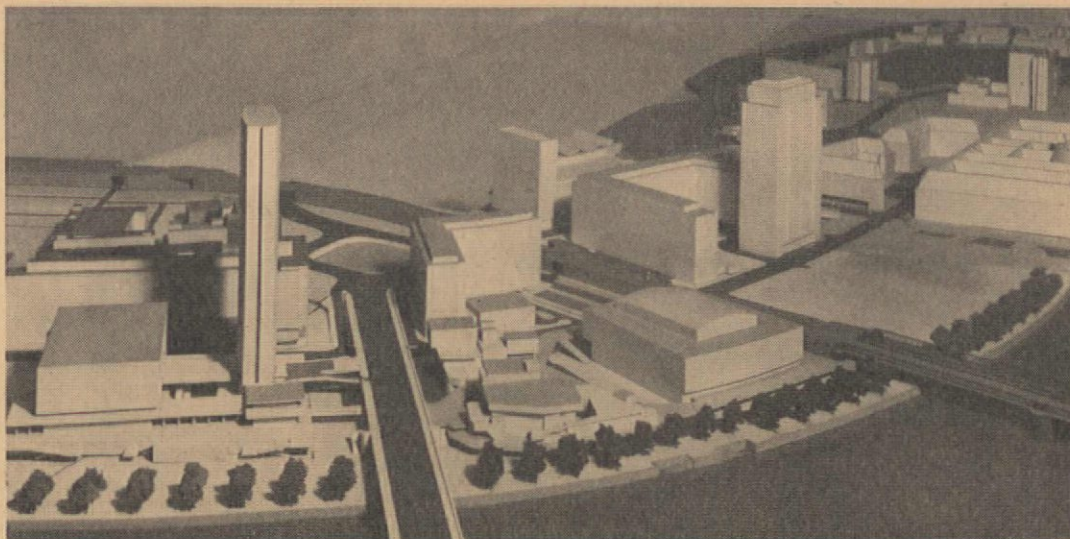
After years of behind-the-scenes negotiation, the LCC has at last settled on a developer for a hotel and conference centre east of Waterloo Bridge on the South Bank. The proposal 6, designed by Leslie Gooday and Associates, has yet to be given outline planning permission but the LCC is said to have approved it in principle. St Martin's School of Art is included on the site and will occupy the top part of the squat block. The hotel, a tapered slab 439 feet high and holding over 600 rooms, will look pencil thin when seen from Somerset House 7. From Westminster Bridge on the other hand it will be seen as a slab 8.

Carparking

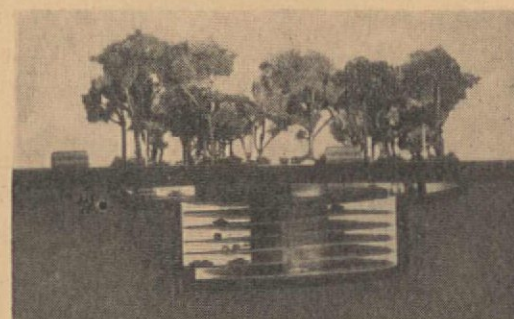
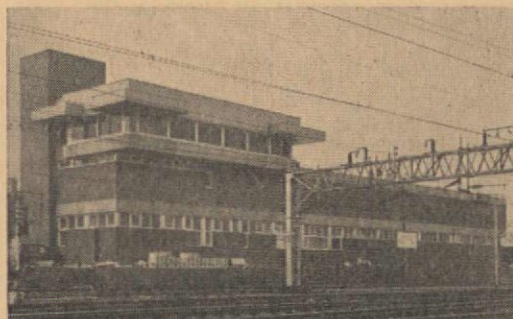
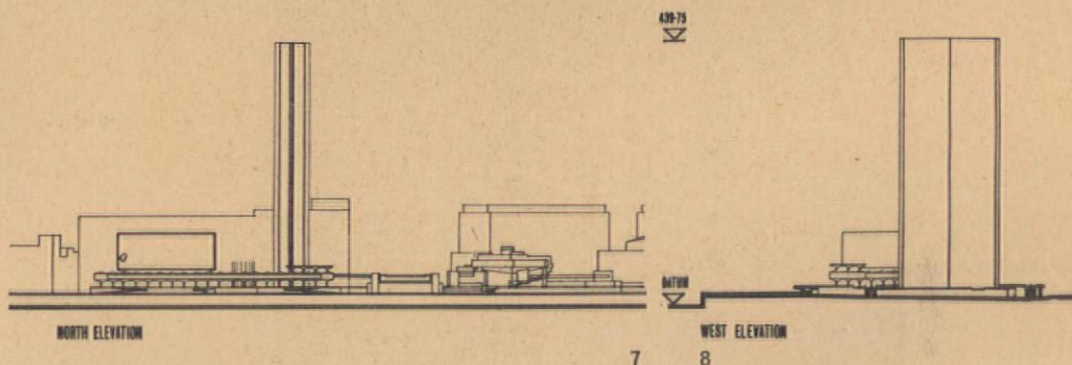
Holborn Borough Council intends to build a helical underground garage for 450 cars in Bloomsbury Square 10, just around the corner from the AD office. The LCC has agreed to the plan because only three healthy forest trees will have to be felled. The garage seems likely to set a new standard of unobtrusiveness for this sort of location because all the ventilating equipment will be hidden in the ramp wall or stair wells. It will also enable parking around the edges of the square to be ended. The garage's perimeter will be built by the ICOS system using the earth as shuttering. The designer is S. A. G. Cook, Holborn Borough Architect, in conjunction with Helical Parks Limited.

Swimming and reading

Hampstead's new library and swimming baths, designed by Sir Basil Spence, Bonnington and Collins, were opened in November. The group of finely landscaped buildings is successful outside where the rectangular swimming hall with its horizontal slats contrasts with the oval and vertically slatted library. Inside, particularly in the large swimming pool hall, the almost flat planes of the walls and roof give an uneventful feeling to so huge a space.



6



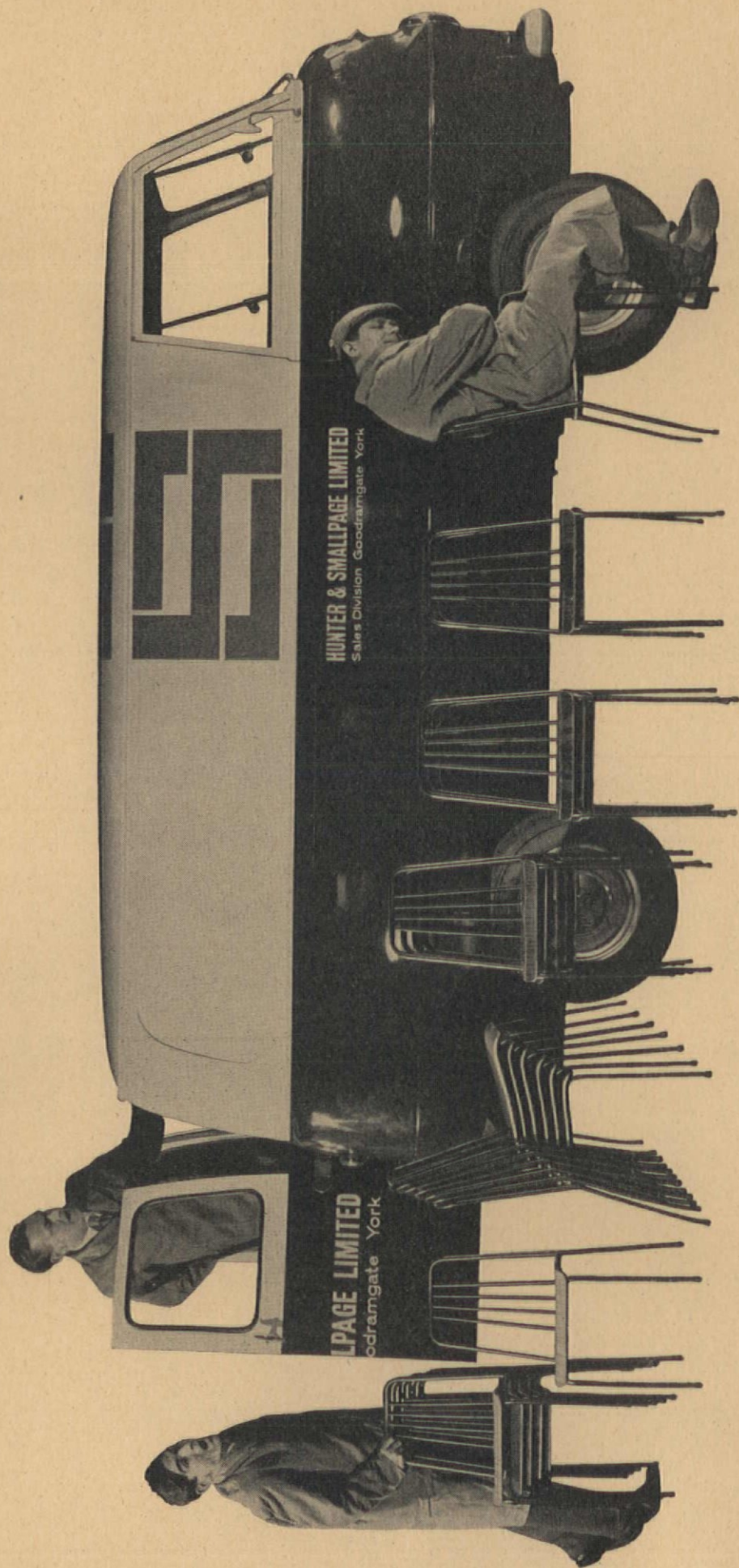
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11

2



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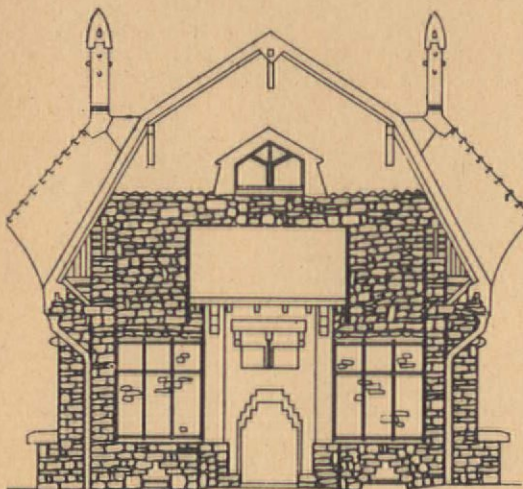


World news

France

'A century of architecture' 1

This title given to the April-May 1964 edition of *L'Architecture d'Aujourd'hui* means of course this century. Amongst such a large illustrated catalogue of well-known material, certain less familiar works are bound to appear, including the hitherto unseen houses of Le Corbusier built in the Jura at La Chaux-de-Fonds before 1912—during the period of his first association with Hoffman and Perret. Our illustration shows the Villa Stotzer, of 1908.



1

Spain

André Bloc house 2

André Bloc has, at last, realized one of his 'dream houses' at Carboneras, Almería, in the south of Spain. This is Bloc's second holiday house, a direct development of his environmental sculpture built in the garden of his house at Meudon. Certainly, this is a different approach to the problem of the holiday house than the helicopter illustrated on page 5.

Arquitectura 71, November 1964



2

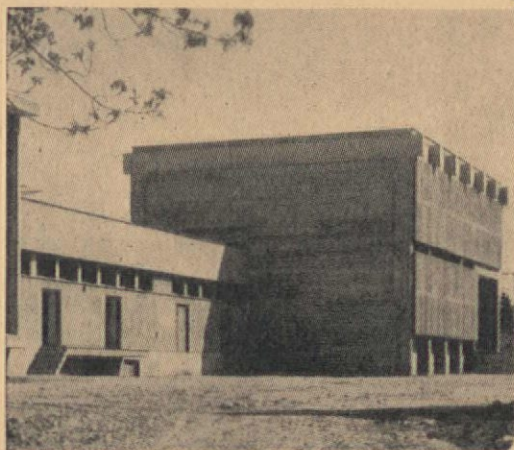
Italy

The work of Epaminonda 4

The architects of Britain, still for the most part culturally centred upon or in London, cannot help but sometimes envy the old legacy of 'city states' still extant in Europe. Today's 'city state' appears to have inherited a natural tendency towards civic pride and culture for in Germany, Switzerland and Italy these 'states' continue to throw up out of their own localized culture their 'princes' of architecture. Ungers in Cologne, Gisel in Zurich, Valle in Udine and now Ceccarelli Epaminonda in Ravenna. Epaminonda is a latter day rationalist who appears to have been quietly building away in concrete during the last few years in the narrow streets of Ravenna. Until now his work has remained virtually unknown.



3



5

Italy

Edilizia Moderna 3

The brilliant editing of *EM* by the Vittorio Gregotti team continues unabated. If this magazine folds at its next issue everything that it has done to date under Gregotti will become collectors items. This issue is devoted to a presentation of three recent international exhibitions; the 13th Milan Triennale, the World Fair in New York, and the Lausanne Swiss National Exhibition; indeed a 'Risposta a Harry Lime' as Umberto Eco has entitled his article on the Swiss exhibition. This presentation of three exhibitions is preceded by an historical survey of world exhibitions since the Industrial Exhibition held on the Champ des Mars in 1798; including a reproduction of a Ledoux exhibition design for that date. The spirit of the times of these exhibitions is best appreciated from their advertising posters; our illustration 3 shows the Chicago Expo poster of 1933.

Edilizia Moderna, n. 84

Germany

Lichtenberg estate 5

The inclusion of these farm buildings outside Munich by the architect Franz Kiessling, in an issue of *Bauen + Wohnen* devoted to 'brutalism' has given Jürgen Joedicke the opportunity to make something of a comparative study of 'brutalism' as an international phenomena. The other examples illustrated in detail are Caius College, Cambridge, the Art and Architecture building at Yale, and Kenzo Tange's Nichinan



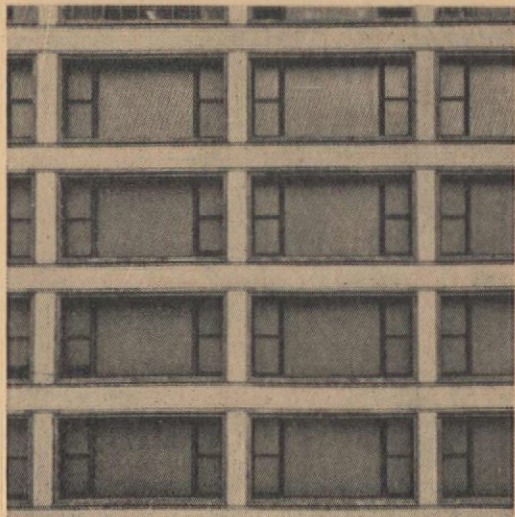
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Cultural Centre. Joedicke's article demands to be read along with Banham's 1955 essay in *Architectural Review*, for anyone who considers that the 'brutalist' phenomena is worth serious consideration. Something of Joedicke's main argument can be inferred from the following quotation, 'The tendency toward separation, toward viewing each functional element as an autonomous form element, leads to a formal emphasis on secondary functional elements. This can be significant, yet it can also lead to rank exhibitionism.'

Bauen + Wohnen, November 1964

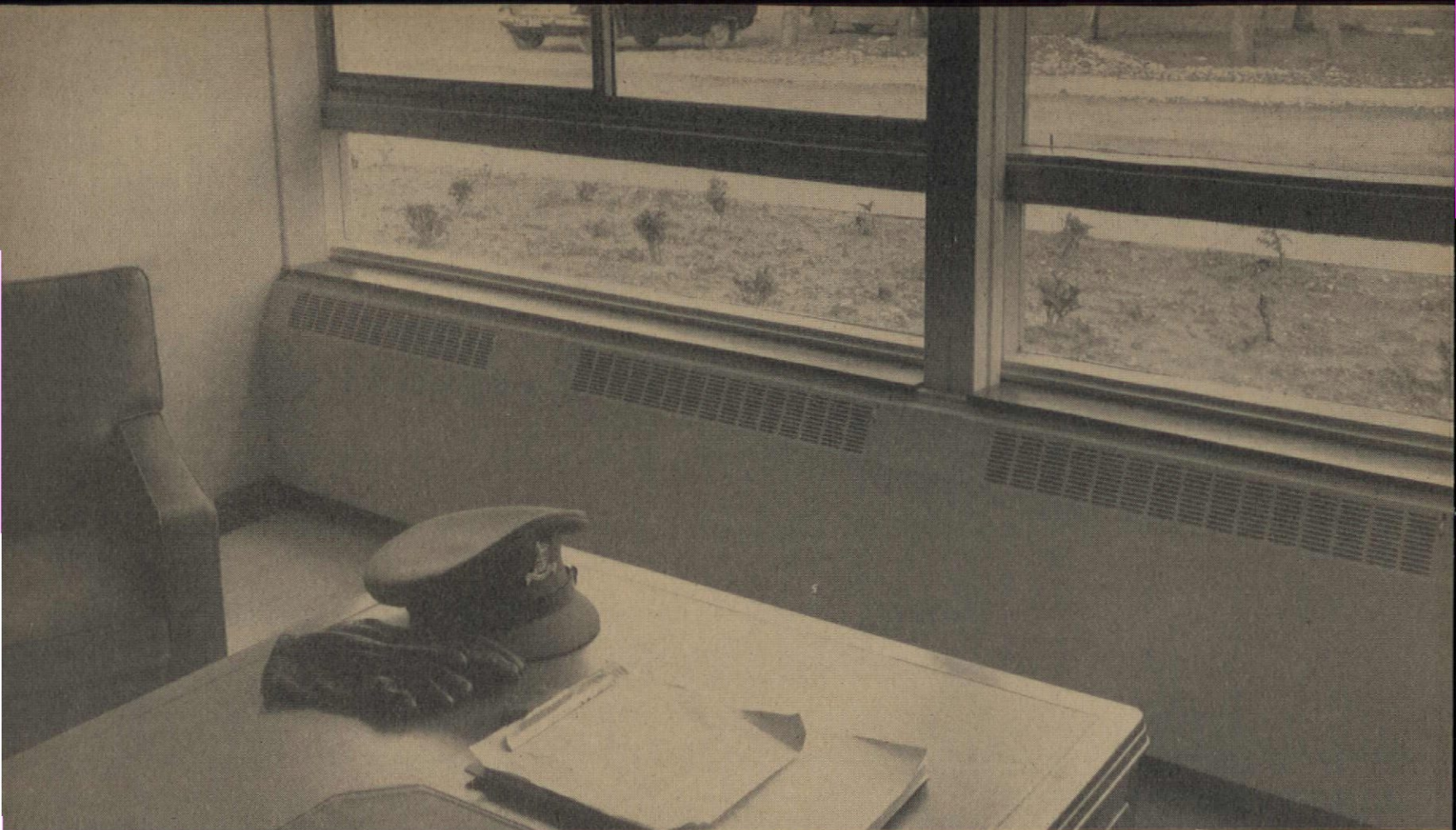
Switzerland

A collaboration between Lucius Burckhardt and Werner Blaser has resulted in vitalizing the magazine for yet another issue. (See *AD News*, December 1964.) The November 1964 issue of *Werk* is largely devoted to an essay by the two men entitled 'Objective Architecture'. Over the years, architectural speculation returns again and again to the towering achievement of Louis Sullivan. Now scoring 65 years of age the Carson, Pirie and Scott building 6 remains virtually timeless; a skeletal structure anticipating Mies and our present growing concern with the creation of an 'objective' architecture. *Werk*, November 1964



6

3



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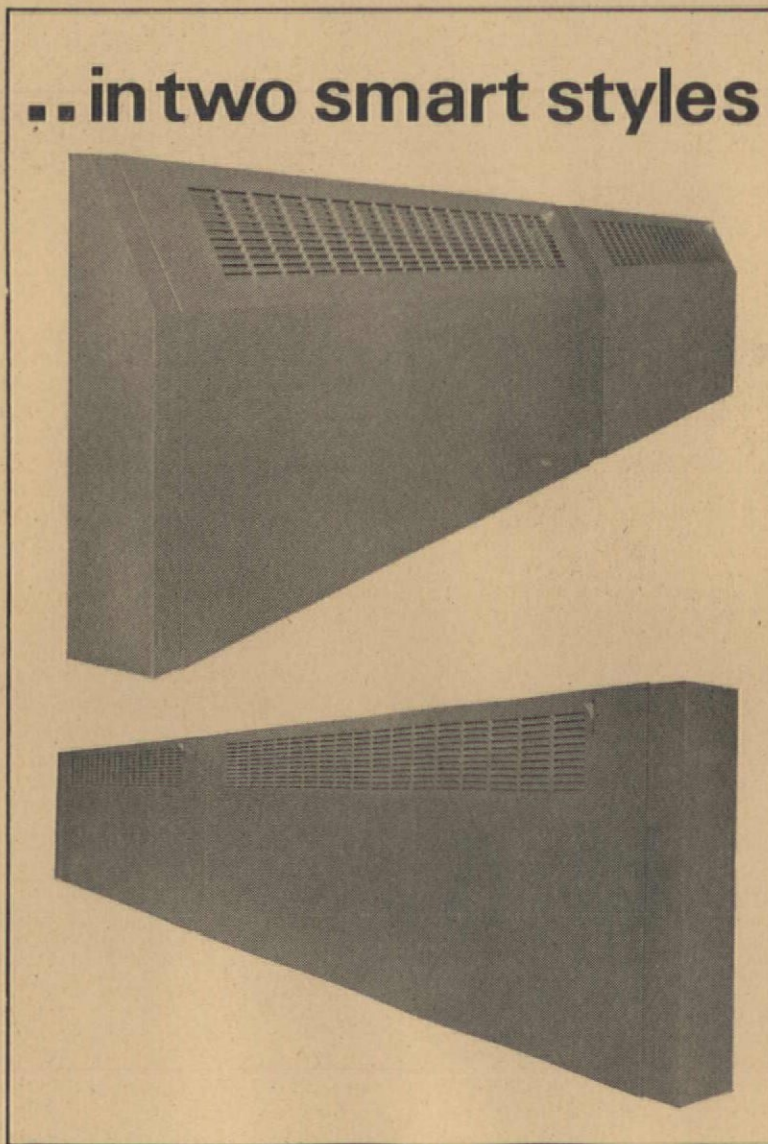
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India

School of Architecture, Ahmedabad

This school, now under the joint directorship of Balkrishna Doshi and Bernard Kohn has just published its first bulletin recording its curriculum and educational activities. Its present curriculum plan is deliberately organized into three teaching streams, that deal with pure and applied science, then with the special technologies of architecture and planning and finally with the more general aspects of folk sociology and the humanities. All the students of every 'year', pass each year through these streams in turn, passing them at progressively more advanced stages. The total course leading to a BA in architecture lasts five-and-a-half-years, one-half year being spent in architectural practice prior to the final year.

Hong Kong

The staggering statistics of Hong Kong are that its density of population in the urban area is equivalent to accommodating the entire population of the world within a circle of 75 miles radius; an actual load in Hong Kong of 3 million people on 15 square miles of land. The Hong Kong government has a project to rehouse over 1 million by 1970 and a grand total of 2.2 million by 1974.

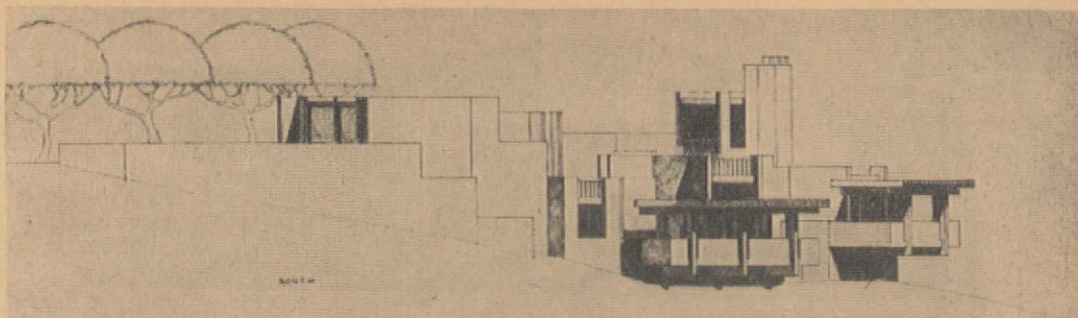
USA

Architectural Forum

The phoenix has risen. Back from a newsprint grave comes *Architectural Forum*, this time to be published again in April 1965 under the sponsorship of the American Planning and Civic Association. It will remain virtually under the direction of the previous editorial. Peter Blake will reign now as editor, with Donald Canty as managing editor—while Paul Grotz remains in his old position of art editor. It seems that the only basic change resulting from the new sponsorship will perhaps be a bias in editorial matters towards town planning and urban redevelopment.

House on Mt. Olympus, L.A. 1

For Mr Russ Vincent, Mount Olympus, situated in the centre of Los Angeles, is a God-given but hitherto undevelopable tract of mountainous land, which now, fortunately for Mr Vincent, is about to be given to men or rather sold off to them in custom-built lots. Russ Vincent is a 'Moses' that first saw the light on the mount and its potential with only 58 cents in his pocket. The subsequent use of a large quantity of earth-moving equipment has brought to Mr Vincent the opportunity to share his primitive dream with the rest of mankind—and share we will, at least some of us will, to the tune of \$500,000 per house. Nothing has been too good for Mount Olympus, certainly not Mr Vincent's \$50,000 international competition for the first house to grace its bulldozed slopes. The lucky winner (if ever there was one), is Mr Douglas P. Hanner, an American who at the moment of winning was still living and learning in Rome. Now is the time of homecoming for both Mr Vincent and Mr Hanner. There is no doubt that Mr Vincent is a man of great foresight and Mr Hanner is a man of some talent—but the sad fact remains that within a few years that which was a virgin mountain in the centre of Los Angeles, will quickly become a cemetery of 700 architecturally theatrical houses—where with free enterprise, the great 'American Dream' will live out its myth in an individualized borax miasma of box hedges and high balls, dying 700 times a day as an expression of human community, while the lights of Los Angeles twinkle away 1600 feet below it.



Japan

Olympic roads 2

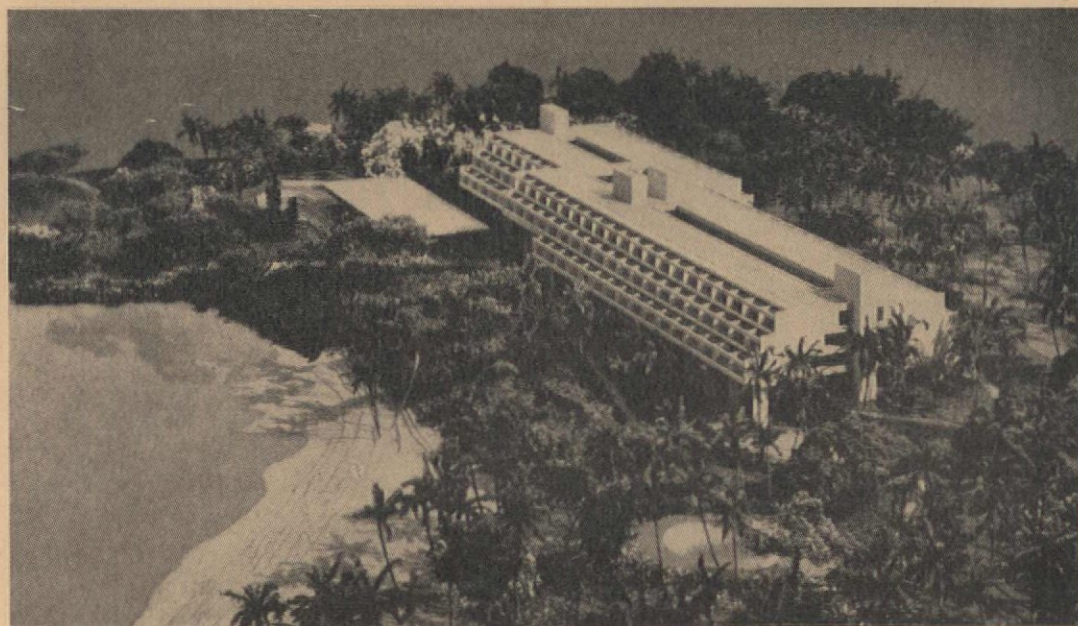
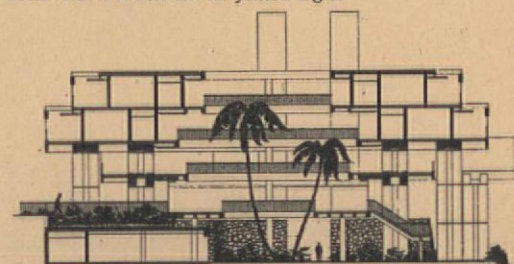
Our photograph shows but one example of the complicated traffic network which has been built up in Tokyo to cater for the now past Olympic peak load and the ever pressing transport need of the rapidly expanding city. This is the network in the Akasaka-Mitsuke area. Here the No. 4 super highway runs above the No. 4 radial road, while the metropolitan road runs again below that. The super highway was built to link Haneda Airport to the Olympic Village.

Hawaii

Mauna Ken Beach Hotel 3, 4

For once a good solution to the problem of the luxury tropical beach hotel. This time by SOM. This solution is neither a diffuse scattered plan nor the closed double-sided corridor solution so often proffered as an answer to the large hotel

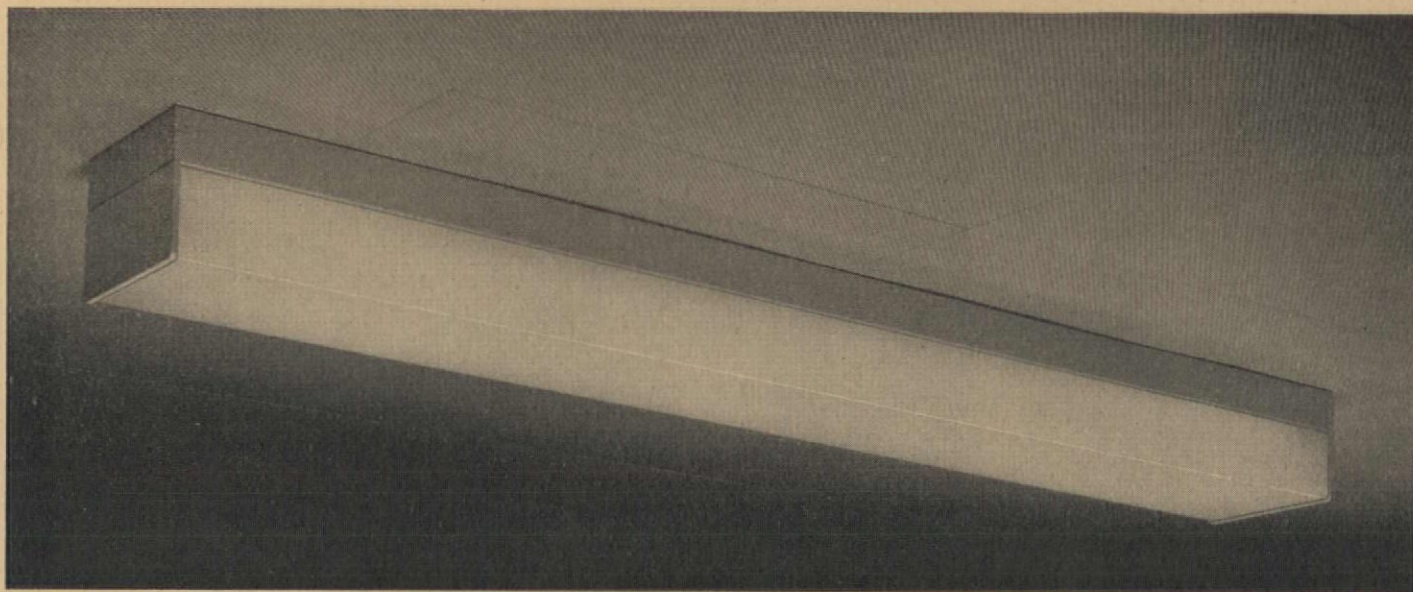
problem in such a climate. The double-sided corridor is here expanded to become a staggered double side access gallery section which is wider at the base than at the top, thus allowing all guests to gain access to their rooms under cover but in the open air 4. This is probably the best hotel that SOM have turned out since their Istanbul Hilton of 10 years ago.



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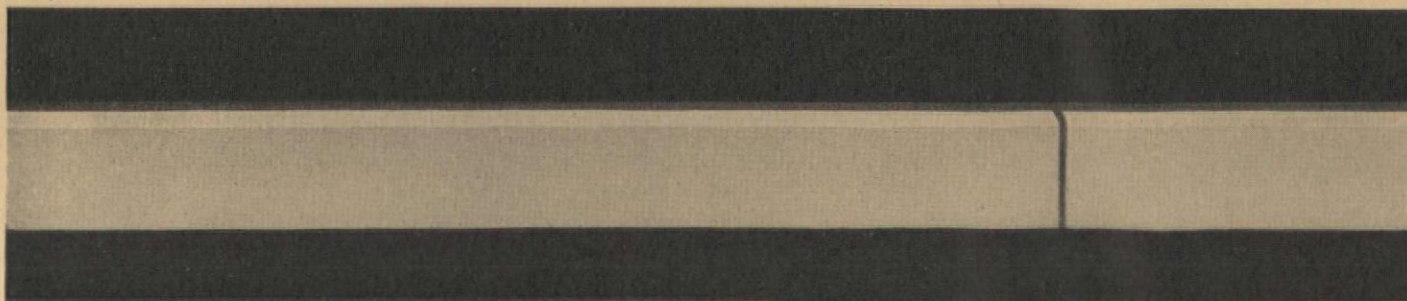
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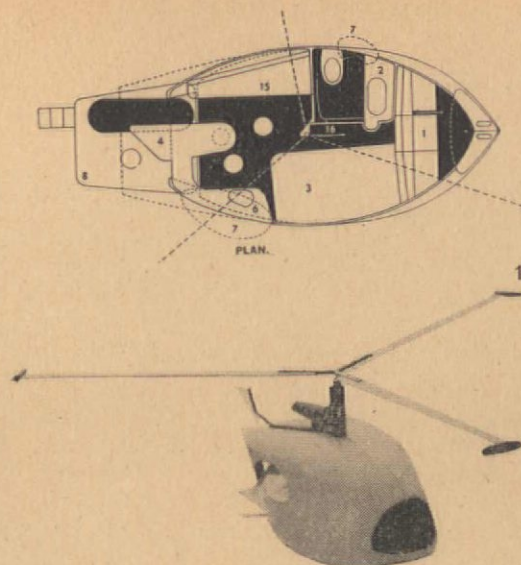
Design

A flying holiday house

The flying house was at the Salon des Arts Ménagers in Paris in March 1964. Conceived by Guy Rottier and Charles Barberis in the spirit of caravans and prefabricated bungalows, this helicopter is designed to carry two adults and two children.

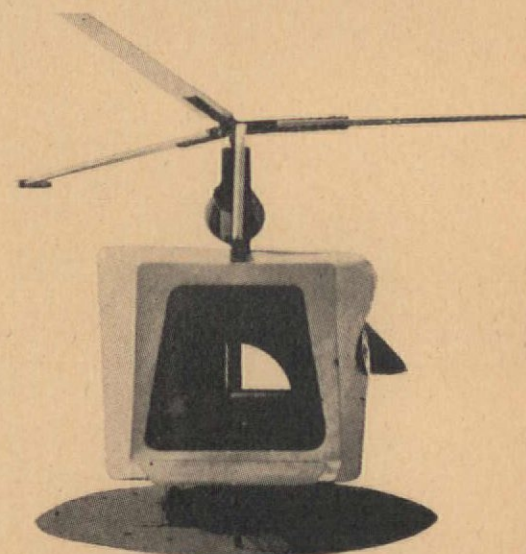
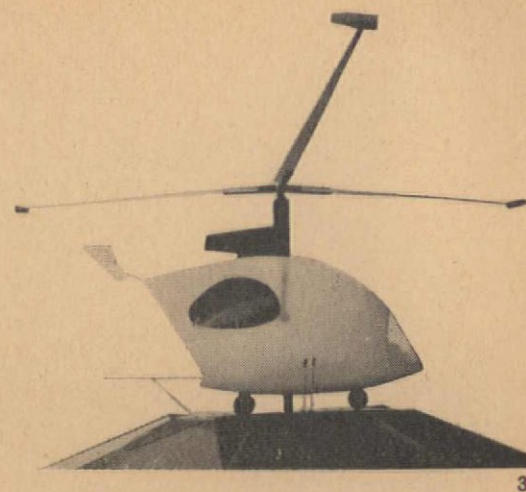
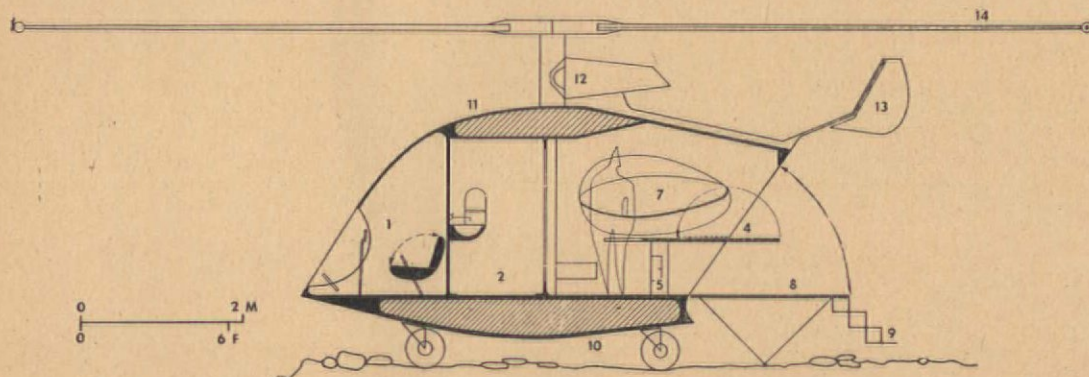
The helicopter comprises the pilot's cabin, a living room and a washroom/W.C. Measuring approximately 13ft 6in x 8ft, the machine is of a plastic construction and is powered by a gas turbine. The petrol tank, sited beneath the cockpit floor, has a capacity sufficient for a range of between 30 and 60 miles. A landing area of approximately 30 feet square is required.

Aujourd'hui No. 47



Key to plan (above) and section (below)

- | | |
|------------------------------------|-----------------------|
| 1 pilot's cabin | 9 folding steps |
| 2 toilet | 10 fuel tank, baggage |
| 3 parents' bed | 11 motor, water tank |
| 4 folding table | 12 turbine |
| 5 crockery (table leg) | 13 rudder |
| 6 cooking/sink | 14 rotor blades |
| 7 window | 15 children's bunks |
| 8 bottom hung door forming terrace | 16 storage |



Art

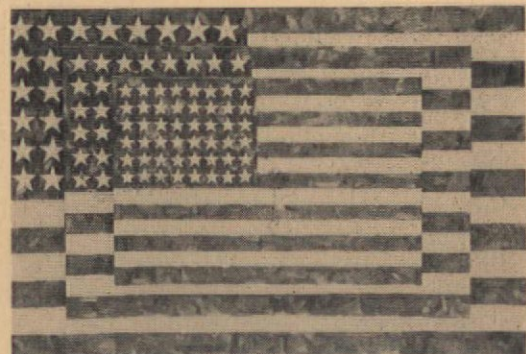
Is it a flag!

With Jasper Johns (34-year-old American) whose paintings are of objects so common that they are almost insignificant, one can examine the relationship of the artist and the viewer to subject matter. Johns has painted flags, numbers, targets; as parts of his assemblages he has used rulers, cutlery, cans and letters; he has also made aluminium casts of torches, bulbs, toothbrushes, beer cans and paint brushes. He does not make comments about these utilitarian and everyday things—his American flag is neither a reflection on his country nor some expression of patriotism; his numbers have neither a symbolic nor a mathematical connotation. With Johns the accepted way of looking at a painting which carries something recognizable breaks down completely. It is irrelevant in this instance that the viewer recognizes a bucket or a flag in the painting, because the painting is not about either of these items. The fact that the artist had chosen something from his environment which the viewer recognizes as part of his environment too, does not in itself constitute a bond of understanding between them. On the contrary when Johns paints a flag **6**, he, in fact, means something else. It is a far cry from the Pop Art approach where the essential nature of the subject matter and the painting are entirely fused. Jasper Johns wrote once: 'Sometimes I

see it and then paint it. Other times I paint it, and then see it. Both are impure situations, and I prefer neither.'

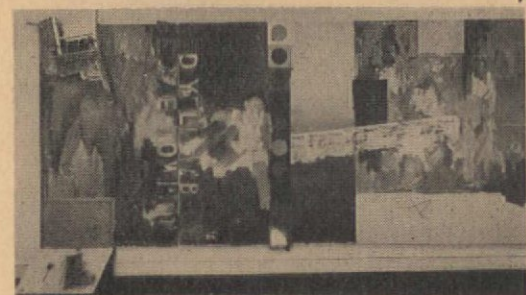
His work is often based on contradictions, like painting the words *red blue yellow* in a picture containing only varying shades of grey **7**. His cast of beer cans, carefully painted with all realistic details, is close enough to the original to confuse anyone seeing it fleetingly. On examination, however, one finds that one of the two seemingly identical beer cans is a fraction smaller. This fact is crucial in the understanding of the procedure Johns employs in the metamorphosis of an object into something else. The actual change of scale in itself does not make a beer can into a work of art—but the idea of adjustment between reality and painting or sculpture, used in this instance with great restraint, is an art process typical of John's work of the past seven years. If the adjustment were greater it might have been easier to accept, and the act of transformation might have been considered the prime motive of the artist's work. In the case of Johns (Whitechapel Art Gallery, December) the measure of change and personal interpretation of displacement in the use and relationship of common things is a radical contribution to contemporary art.

Jasia Reichardt



6
Three flags, 1958, 31in x 45½in x 5in

7
According to what, 1964, 191½in x 88in

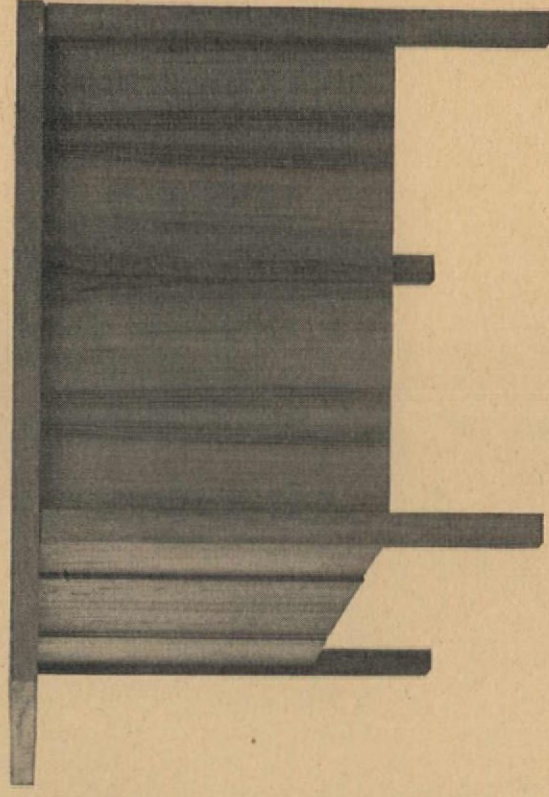
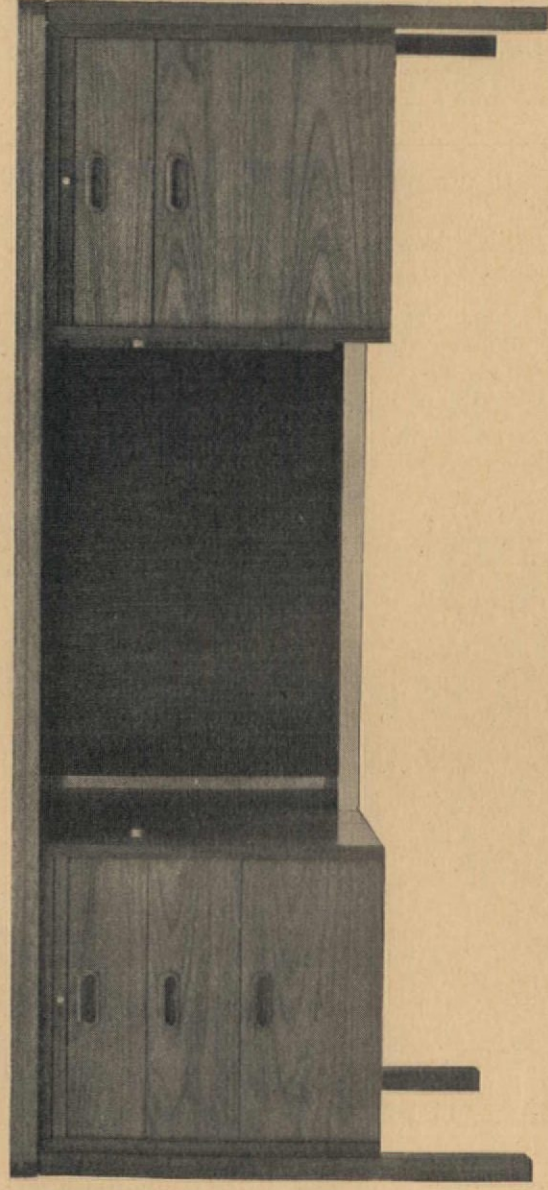




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In dieser Nummer

Der Werdegang von ATBAT und sein Einfluss auf die Französische Architektur

Seite 20-24

Es ist heute allgemein anerkannt, dass der im wesentlichen vereinte Einfluss Le Corbusiers und ATBATs weitgehend die Entwicklung und gegenwärtige Einstellung vieler junger Architektenbüros, welche sich in den letzten 10 Jahren in Frankreich aufgetan haben, bestimmt hat.

Dieser historische, von Marion Tournon-Branly verfasste Überblick beschäftigt sich mit der Entwicklung ATBATs seit 1947, und zwar unter der Leitung von Bodiansky und Lefebvre. ATBAT, d.h. 'Atelier des Bâisseurs' wurde 1947 von einer in enger Zusammenarbeit mit Le Corbusiers 'Unité d'habitation' in Marseilles wirkenden Gruppe gegründet; diese Gruppe umfasste ausser Le Corbusier, Bodiansky, Wogensky auch Marcel Py und Lefebvre als Verwalter. Im darauffolgenden Jahr vergrösserte sich die Gruppe und teilte sich spontan in verschiedene Unterabteilungen und Architektenbüros. Le Corbusier, Wogensky und Py gingen 1949 von ATBAT weg, und Candilis, der bis dahin in Marseilles gearbeitet hatte, trat an ihre Stelle und arbeitete zusammen mit Bodiansky und Lefebvre. Noch im selben Jahr richtete Candilis eine Zweigabteilung in Marokko, 'ATBAT Afrique' ein, unter Mitwirkung von Woods und Piot. In der Zeit von 1949 bis 1954 führte diese Gruppe unzählige Bauprojekte aus, darunter ihre berühmten Entwürfe und Durchführungen für ihre 'Behausung der Grössstzahl'. ATBAT Afrique ging 1953 nach Algerien und führte dort weitere Arbeiten aus, unter der Beteiligung von Berry, Daure, Pons, Gomis und Tournier. Während dieser Zeit beauftragte Paul-Emil Victor ATBAT mit dem Entwurf der Stationen für die französischen Polarexpeditionen; diese Projekte für Adeliaand und Grönland wurden von Chatzidakis, Josic, Varlet und Marc bearbeitet.

Candilis, Josic, Woods und Piot bildeten 1954 eine unabhängige Gruppe, die inzwischen sehr bekannt geworden ist. Einige ihrer neueren Arbeiten sind auf Seite 34-40 dieser Ausgabe besprochen. Die bis zur Gegenwart führenden folgenden 10 Jahre waren Jahre fruchtbarer Forschung zur Stadtentwicklung vonseiten ATBATs, weiterhin wurden

während dieser Zeit Projekte für Bagneux, Annassers, Dame Blanche und Akkra in Ghana bearbeitet.

Das Werk von Vladimir Bodiansky

Seite 25-28

Bodianskys Leben und Laufbahn sind mit ATBAT seit 1947 fast unlösbar verknüpft. Vorher aber hat Vladimir Bodiansky viele Rollen gespielt. 1914 arbeitete er als junger, russischer Ingenieur an der Bokhara-Kabul Eisenbahn, 1919-1929 war er Offizier in der französischen Fremdenlegion, wo er einer Flotten-Fluggruppe angehörte. 1922 ging er in den belgischen Kongo, um wiederum an einer Eisenbahn zu arbeiten. 1923 trat er den Renault Autowerken bei, 1925 wurde er Geschäftsführer der Villiers Flugzeugwerke und zuletzt, von 1927 bis 1931 leitete er die ihm gehörenden Bodiansky Flugzeugwerke.

Zu Beginn der dreissiger Jahre kehrte er der Flugzeugkonstruktion den Rücken und wurde Bauingenieur. Es begann die langjährige Zusammenarbeit mit Beaudoin und Lods, in welcher die berühmten Fertighäuser in Drancy und das 'Maison du Peuple' in Clichy entstanden. 1937 war Bodiansky Ingenieur beim Bauen der 'Quarry Hill' Wohnungen in Leeds, England. Bevor er sich fast ganz und gar ATBAT verschrieb, unternahm Bodiansky jedoch noch eine wichtige individuelle Arbeit, und zwar im Zusammenhang mit dem 'Maison Suspendue' und dem 'Palais de la Découverte', die er mit Paul Nelson schuf. Dies waren Projekte der Jahre 1948 und 49. 1953 übergab Bodiansky dem Cercle d'Etudes Architecturales sein Behausungs-Manifest ('charter for housing'). 1961-62 und 63 beauftragten ihn die Vereinigten Nationen mit vier Missionen nach Cambodia, wo er als baulicher Berater wirkte. Während er in dieser Eigenschaft arbeitete, wurde das süd-östliche Stadium der Olympischen Spiele in Phnom-Penk fertiggestellt (Seite 28).

Architektenbüro Wogensky

Seite 29-34

Wogensky verliess ATBAT zu Beginn der fünfziger Jahre und baute zuerst einmal sein eigenes Haus in St. Remy-les-Chevreuses (Seite 29-30). Seitdem hat er seine eigene Arbeit fortentwickelt unter Zuhilfenahme einer sehr genauen Planungstechnik. Hier muss sein berühmtes experimentelles Theater, das er zusammen mit Jacques Polieri baute, genannt werden. Wogenskys interessantestes Werk, welches

er bis zum heutigen Tage geschaffen hat, ist wahrscheinlich seine Studie für das Fertighaus 'Mex' für den 'Salon d'Arts Ménagers', Paris 1961.

Architektenbüro Candilis, Josic und Woods

Seite 35-40

Candilis und Woods lernten sich kennen, als sie von 1946-48 für Le Corbusier arbeiteten. Seite 1946 haben die Beiden eine Riesenanzahl von Arbeiten ausgeführt, z.B. ihre bekannte Wohnbau-Anlage für Toulouse-le-Mirail, ihre berühmten Projekte für Bochum, Frankfurt und Berlin. Wir zeigen Ihnen auf Seite 35 bis 40 ihre Wohnbau-Anlagen, wie sie in La Viste, Marseilles und Aix-en-Provence in Wirklichkeit umgesetzt wurden, ebenso sehen Sie ihr Projekt für das Ski-Zentrum in Belleville.

Obiges Projekt umfasst vier Schlaf- und Verwaltungszentren, die durch das ganze Tal auf Terrassen angeordnet, und die miteinander und mit dem Beginn der Eisenbahn durch Einschienenbahn verbunden sind.

Unser Überblick über das Werk dieses Architektenbüros endet mit ihrer kleinen französischen Volksschule, die kürzlich in Genf in der Schweiz gebaut wurde.

Architektenbüro Montrouge

Seite 42

Dieses Atelier wurde von den Architekten Jean Renaudie, Pierre Riboulet, Gerard Thrunauer und Jean-Louis Veret gegründet. Ihre Arbeitsweise hat ihren Ursprung im Werk Le Corbusiers—dies macht sich besonders im Messagier Wohnsitz bemerkbar, wie auch in ihrem fast fertigen Feriendorf in Cap Camarat—letzthin sind sie jedoch in ihrer Arbeit viel unabhängiger geworden.

Architektenbüro Anger und Puccinelli

Seite 46-51

Diese Architektengruppe hat ihren Ausgangspunkt im Werk von ATBAT Afrique und dem Schweizer André Studer genommen.

Die Architekten haben versucht, den Fassaden ihrer Pariser Wohnhäuser einen belebten, plastischen Ausdruck zu verleihen; diese Entwicklung hat ihren Höhepunkt in den 28-stöckigen Türmen erreicht, welche sie für das Ile Verte Grundstück in Grenoble geplant haben.

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Architectural education in France

Philippe Molle

President of the Association of students and former students of the Ecole Nationale Supérieure des Beaux-Arts; general secretary of the International Union of Architectural Students.

The Editor of *Architectural Design* has invited me to explain the position of French architectural students *vis-à-vis* the reform which the Government is trying to impose upon them.

The present situation

In France, the title of Architect is protected, that is to say that only those entered on the Architectural Register have the right to use this title. To be entered on the Register they must, except in very rare cases have gained a diploma from one of the French architectural schools recognized by the State.

There are three of these schools:

L'Ecole Spéciale d'Architecture (ESA)

L'Ecole Nationale des Ingénieurs de Strasbourg (ENIS)

L'Ecole Nationale Supérieure des Beaux-Arts (ENSBA)

(1) The Ecole Spéciale d'Architecture trains architects in four or five years and has 450 students.

The students must have their baccalauréats in order to sit for the entrance examination, preparation for which takes one to two years. Once they are accepted, the students disperse to studios where, under the guidance of a Director, they study for the various projects and examinations which occur in the three years before they obtain their diploma.

The ESA is a private school and the students are fee-paying. The Diploma carries the title 'Architecte DESA'

(2) The Ecole Nationale des Ingénieurs de Strasbourg is, like ESA, a private school where the students are fee-paying. The architectural section has 70 students.

The course, which lays much more emphasis upon technique than composition, is very academic in character and lasts only three years. The Diploma carries the title 'Architecte DENIS'

(3) The Ecole Nationale Supérieure des Beaux-Arts has 3500 students and gives the title 'Architecte DPLG'

I shall deal at much greater length with the methods of this school because it has the largest number of students; its organization of courses is more complex; the courses are much longer; I am a student at this school and therefore know it better than the others.

The Ecole Nationale Supérieure des Beaux-Arts

ENSBA has four faculties: architecture, painting, sculpture and engraving. Thus the architecture students are in contact with the other plastic arts and this would be excellent if these contacts were genuine and organized. Unfortunately they are not extensive and only one examination a year is open to mixed groups. I am now going to try to explain, as fully as possible, the manner in which the architecture courses are organized at the ENSBA.

Administrative organization

Each student at ENSBA has to enter a studio of his choice. Each studio is supervised by a director, who sometimes has the help of several assistants.

Every studio prepares its students for the projects and examinations which take place at the school, but their working methods and outlook vary according to the director and the students. The number of students in each studio varies between 30 and 350: the majority have about a hundred.

The studios each have 'prefects', a group of students chosen each year to supervise the studio.

The studios fall into three main categories:

(a) *Intramural studios*. There are 10 of these. Their directors are appointed and paid by the administration.

(b) *Extramural studios*. These are outside the School and at present there are 13 of them. The students themselves elect and, if necessary, dismiss their director. This director is unpaid. This is an excellent method which allows development in teaching methods by choosing young directors.

(c) *Provincial studios*. There are 15 of these in 13 towns. Their directors are paid by the municipal authorities. The students study in their own towns, but send their projects to Paris where they are judged with those presented by the Parisian students. The entrance and diploma examinations also take place in Paris.

Organization of the actual studies

The students at all levels prepare for their projects and examinations in their own studios. They also carry out research work under the guidance of their director and staff, but the lectures and examinations take place at the School.

Courses are divided, not by years, but by classes, of which there are three. The student goes on to the next class only when he has been found satisfactory in all the examinations of the former class.

Preparatory class

To be able to enter this class the student must have passed two baccalauréats or an examination in 'General Culture' which, in principle, is equivalent to two baccalauréats. Students in the Preparatory Class prepare for the entrance examination.

A student can stand for examination six times and there are two sessions a year, about 25 per cent of the candidates are accepted each year (but this figure varies). A student is very seldom accepted the first year. On an average, those accepted have done two and a half years preparation.

The entrance examination consists of:

(a) a rough architectural plan drawn up at home in 12 hours. This plan is judged by a National Jury which marks from 7 to 20. All marks below seven are eliminatory (coefficient 20).

Criticism

The plans which the student must make at home, and also in their studios, are completely out of date.

The materials to be used are always simple and that is good. But the student who dares draw anything but Roman or classical architecture is bound to fail! Therefore the candidate tries to apply the well-known examples to the subject he is set. If he can get a hundred good examples off by heart, he is sure to obtain a good mark. On the other hand, he is not asked to analyse a

subject or to be able to arrange space according to human proportions. This is the most difficult examination to pass in the whole school.

(b) A drawing made in eight hours from one of the models on the syllabus: a moscophore, a horse's head, an Egyptian vase, a Corinthian capital, a Koré, the discobolus, the discophore, etc.

This drawing is in pencil or charcoal. It is judged by a National Jury and any mark below seven is eliminatory (coefficient 10).

Criticism

The Jury often tries to discover 'character' in these drawings and it sometimes happens that it places more importance on this 'character' than on the actual proportions of the model. Candidates are judged more as painters than prospective architects.

This examination has remained completely unchanged for a hundred years.

(c) Mathematics (coefficient 16) consisting of a written examination (two 4-hour papers at home) and an oral.

The examination is divided into two subjects: general mathematics (geometry, algebra, trigonometry) at a fairly low standard; and descriptive geometry, of a higher standard than that of general mathematics.

Any mark below seven is eliminatory. The examination is judged by only one teacher.

Criticism

Not about the examination itself, but about the preparation. There are some 1500 students in the Preparatory class. One teacher gives two lectures a week. The students there have to work on their own and, in my opinion, this is very bad.

(d) An oral in architecture (coefficient 10) before two examiners. The students have to answer fairly general questions (e.g. on bays, framework, walls, etc.) and show their knowledge of antiquity and construction. They also have to present a file of studies: rough plans, sketches, drawings, surveys, models, photos, etc.

Criticism

No knowledge of contemporary architecture is required. Preparation for this examination has to be made individually, since there are no lectures on it.

Taking the examination as a whole, I shall make one criticism: it would be far better for the candidates to be judged by several tests (not only one) in each subject, and for these tests to be spread over the year. This would successfully dispose of examination risks and would have the advantage that only those students who really deserved it, would be allowed to go on to the Second Class, that is to say, only those students in whom could be found the essential qualities of a potential architect.

Second Class

Students can register for the Second Class when they have passed the entrance examination. The course of the Second Class is divided into two main categories: architectural studies in the true sense of the word and so-called scientific studies.

Analytical studies of construction elements

These are comparative studies of existing elements or buildings. This test is now breaking away from its former completely outdated form, for, up till this year, students had to present an attractive paper, well laid out and well designed, which was entirely futile.

There are five analytical studies each year and a student must pass in three before he is

allowed to draw up projects.

Simple architectural projects

These projects are drawn up in the studio under the supervision of the Director and staff, in accordance with a sketch made at home in 12 hours from a simple subject. They are judged by a Jury composed of seven staff and two architects who are not professors.

There are six projects a year. A student must pass in two of these projects before being allowed to draw up more complex projects.

Complex architectural projects

The same system as above, but with more difficult subjects. A student must pass in two.

Rough sketches

This test is done at home in 12 hours, following a fairly simple subject. It is in fact a rapidly executed plan. There are five a year. A student must pass in two.

Scientific values

Simultaneously with the preparation of their projects, the students must prepare for and pass a number of examinations in: general mathematics; descriptive; statics; construction materials and elements; physics and chemistry.

Construction

Once they have passed these examinations, they are allowed to enter for the construction examination, which is a very advanced project, entailing study of structure and details of actual construction. There is also an oral on general architectural knowledge.

Other subjects

Examinations in perspective; history of architecture; and the '3 arts' which consist of two drawings and one model.

Finally there is an examination in legislation and one in professional organization which can be passed either in the Second or First Class. Students take from two to five years to obtain all the necessary Second-Class passes.

First Class

The studies in the First Class consist of:

Simple projects which are drawn up in accordance with the same methods as those of the Second Class. The student has to pass in three.

More complex projects: three in all.

Rough Sketches: four in all. However, three of these sketches can be replaced by complex projects.

Construction: a specially carefully studied project with an oral examination during which the candidate can defend his project.

History of architecture examination.

A drawing.

An examination in monumental art, which consists of planning a sculpture and integrating it with architecture.

The First Class course lasts from two to ten years. Students who have proved satisfactory in all the examinations can enter for their diploma.

Diploma

The diploma consists of a project drawn up from a subject chosen by the candidate from a curriculum which he himself has composed. The project includes all the plans, sections, façades, details necessary for carrying it out, and an estimate.

The candidate presents his own project to a Jury composed of staff, outside architects and technicians.

Criticism

The system could be excellent, but it proves deplorable because:

(1) The grants allocated by the Government to architectural teaching should be a hundred times larger: lack of teachers, buildings, materials, scholarships, etc.

(2) Students are obliged to work in architects' offices to earn their living. They cannot give enough time to their studies.

(3) The decisions made concerning the projects are often disgraceful. The Jury awards marks for fine pictures without considering volumes, materials, or even function.

Decisions are a real Honours List, with the Directors on the Jury trying to get as many passes as possible for their own students.

(4) Teaching lags behind architectural practice. No attention is yet paid to: mock-ups, visits to building sites, modern materials, town planning, field work, practical work, and contacts with other professions (doctors, sociologists, economists, engineers, technicians, the plastic arts, etc.).

(5) Students have no share in organizing the teaching which they receive, as they should.

We do in fact consider that the framework is good, but everything in it should be improved, or even completely altered.

Reform

Realizing that it was absolutely essential to 'do something' the French Government has decided to carry out some reform in architecture teaching. Unfortunately a draft decree was issued in February 1962 by a minister (Michel Debré) who knew nothing about architecture or teaching it. Since February 1962 several committees have tried to implement the decree but so far without success; the mistakes in the draft decree have aroused general hostility (teachers, architects and students).

We do not know yet what will become of this reform, since the Government seems hesitant to upset the greater majority of the people concerned. But one thing is certain: we want reform, but not that which the Government wanted to force upon us, and we are ready to do anything to defend the following principles:

(1) An architect's training must be complete, continuous, progressive and open to all.
(2) An architect's training is an assisted personal instruction which can be obtained in schools of architecture and in architects' offices.
(3) Instruction in architecture must be open to everyone who has the necessary ability, irrespective of social position.

(4) Introduction to architecture is carried out in a studio where the Director acts as a guide.

(5) Each student must be able to choose his own teaching methods, i.e. his school or his studio, and to change them when he sees fit.

(6) Contact between juniors and seniors is essential.

(7) Weeding-out must be done at the beginning of the course when the abilities required have to be sought out.

(8) Progress in architectural instruction must be related to academic work (human construction, technical construction, plastic construction), maturity of mind, growth of sensibility, human contacts, and development of the creative imagination.

(9) There must be no specialization during the actual course.

(10) There must be no grading in academic criteria.

(11) The material and intellectual conditions of each school must correspond to the needs of the students.

(12) The students must have some say in the organization of the teaching they receive.

FRANCE

Guest editors

Marion Tournon-Branly & Bernard de la Tour d'Auvergne



Message from Max Querrien

Directeur Général de l'Architecture en France

If you land at Le Havre you already know that France consists of more than just Versailles and Rheims Cathedral. You feel that, quite recently, since the last war, something has happened to which you cannot remain indifferent. France is not dead, not a recumbent figure cut in stone. She lives; here and there she assumes a new face.

We are grateful to *Architectural Design* for inviting our friends in the United Kingdom to interest themselves in our achievements of the past twenty years, in an architectural creation which does not always comfort us, but which does not impress us enough either, and which other eyes may perhaps help us to discover more objectively.

For France is concerned about her architecture.

The restoration of historic buildings to their original colour, the excavation of the moats of the Louvre, the rediscovery of Ledoux's salt works, are not prompted by a fit of nostalgia. The renewed intensity and authenticity given to certain messages from the past is the necessary counterpart to a new creative urge.

We are certainly not going to boast of being at the end of an 'epoch', or of being able to offer the materialization of one of those visions that have strewn the history of our architectural thought: Ledoux's 'ideal town', Tony Garnier's 'industrial city', Perret's 'absolute' dream, Le Corbusier's 'ville radieuse'.

Le Corbusier, though he has built much abroad, has surprisingly few works in France. One has to seek out his 'Unité d'habitation' of Marseilles and Nantes-Rezé, his monastery of La Tourette near Lyons (much appreciated by its Dominican occupants) and his chapel of Ronchamp (an astonishing piece of concrete sculpture). At the moment he is designing a vast cultural group which will be erected to the west of Paris, beyond la Défense. It must be mentioned that this block will include a school of architecture; thus this architect with an anything-but-academic past is going to take a brilliant revenge. (One could equally say that it is the school taking its own.)

There is today a new attitude to architecture. From the confusion engendered by the nineteenth century, with its eclecticism, its aberrations and its frequent inability to choose between truth to structure and its camouflage behind window-dressing (for example, the façade of the Grand Palais), there has arisen a fondness for periods marked by spontaneity, impulse and invention. Redundancy is condemned, imitation is despised. Honesty of response to a clearly defined programme, authenticity in the recourse to the possibilities of science and engineering, are considered the relatively objective criteria of architectural

creation. The circular tower, the flying buttress or the slender arch thus constitute reasonably sure values. It is largely on the basis of this line of thought that a review has been undertaken of a certain number of modern or contemporary buildings with a view to their preservation as historic monuments.

Of course, nothing is simple. In order to have architecture, there must be truth and there must be grace.

Those who have seen the Maison de la Radio, the CNIT, the UNESCO headquarters, the basilica of Lourdes, the housing at Bagnols-sur-Cèze, the Tancarville bridge, the power-station of Carling, or the Donzère-Mondragon dam, will perhaps wonder whether the general architecture of our dwellings, our schools and our current town-planning is equal to these individual achievements. Certainly our wisest approach to some of our realizations would be to try to understand their causes and then to alter the causes.

After the war, by force of circumstance, reconstruction was undertaken rather hastily within a framework of legislation based on the restoration of patrimonies, and individual compensation for war damage. It was an unfavourable situation, therefore, to any new departure in architecture; and, moreover, land was difficult to free for redevelopment (always a serious obstacle with us). Tony Garnier, dreaming of his 'industrial city' at the beginning of the century, wrote: 'We have taken for granted that society disposes freely of the land and that it is the business of society to look after the provision of water, bread, meat, milk, medicines, by reason of the multiple efforts these products require!' We are very far from what used to be called in ancient France *le domaine éminent*, and even if the recent technique of 'zones for priority planning' represents a positive contribution, the obstacle of property speculation has not been overcome. The socio-economic structure of France results from a geography that is too balanced and from a history that is too broken up; the individualistic reactions that this structure produces, is the resulting 'climate' for architectural creation, and this must not be forgotten.

Hampered in our urban renewal by our 'small-lot' conception of the land, we have been restricted in our architectural expression by beliefs in which the prestige of Versailles probably plays its part. I do not wholeheartedly subscribe to the pessimism of a French architect who wrote: 'A long period of more than four centuries seems to have accustomed the French to identifying the changes in architecture with superficial variations in fashion. Greco-Latin classicism has become synonymous with

architecture to such an extent that anything unrelated to it is refused the right to be called architecture.* There is certainly some truth in this. But, after all, if Stalin could believe that proletarian architecture should take its inspiration from elements of Greco-Latin antiquity, one must not be too astonished that the French bourgeoisie (and others) should for long have seen the ideal dwelling as a replica, at first modest, then ridiculous, of the salons of *le roi soleil* (Louis XIV), or that architectural tradition should find difficulty in freeing itself from too exclusive an allegiance to prescribed architecture.

And yet, on the plane of intention, and on the drawing-board, a break is in sight. From Sarcelles I to Sarcelles V the difference promises to be considerable. Unified patterns on a large scale are being sought. The restoration of old neighbourhoods, and awareness of the structural innovations necessary in the vicinity of historical monuments, help to give due importance to organic architecture and town-planning.

This may cause surprise, just when France seems to be on the verge of industrialization of building; but industrialization is as yet neither welcomed nor controlled in France. The whole problem is to know whether its direction will conform to the essential truth that architecture is the organization of space around a man who finds himself constantly subject to decisions deriving from the very victories that he wins over nature. If tomorrow a series of elements carefully designed with the collaboration of architects, were submitted to the contractor, this could provide the impact that would warrant that in twenty years' time *Architectural Design* would devote another special number to the architecture of our country. Forced to free ourselves from all imitation, whether of the past or the present, we would have experienced, if all went well, a new creative force in the rhythm of the twentieth century. Let us not forget that, structurally, Gothic architecture was invented between the eleventh and the thirteenth centuries and that the contribution of the flamboyant style was virtually limited to the plane of decoration.

It is because the concrete conditions of architectural creation are in the process of undergoing profound change that France has undertaken to refashion her teaching of architecture and to define the intervention of 'men of art' in terms of the realities of today and, if possible, tomorrow.

The freedom of this general survey is therefore backed by optimism.

A stylized, handwritten signature in dark ink.

*Jean Fayeton, in the special number of *L'Architecture d'Aujourd'hui* entitled 'One hundred years of architecture'

Architecture in France 1944–1964

Ionel Schein

If in the Resistance and within 'Free France' the renewal of the social and economic structure was deliberately prepared and carefully studied in order that victory should not be only a military one, such preparations did not embrace town-planning and architecture. Yet the bitter experience of the post-World War I period could have been used in conceiving reconstruction and improving on anonymous and mediocre architecture.

So once more one becomes aware of the helplessness of the isolated originator; once more one realizes the omnipotence of politics, the citizen's lack of training in the absorption of new facts which concern him directly and immediately.

In theory, France in 1944 could have become (and at the time she had all the means to do so) the most favourably placed country to undertake the total renovation of her living-environment.

The nationalization of utilities and transport should also have been extended to the important branch of building. In 1944, many men of great ability could say and state precisely, with plans, how France, a victorious but destroyed nation, should be built. The divorce of political gambits from daily realities, postponed for some twenty years the understanding of problems stated and solved by, to take one instance, ASCORAL. At the beginning of the post-World War II period, and it is clearly apparent now, there was a total lack of political action to provide for planning, nationalization and building on the scale of the requirements, not only for homes but also for traffic, work and culture.

While a social policy of high birth rate was being put into force, nothing was done to create a living-environment, essential to a new and renewed population whose vitality was unmistakably progressing. However, some teams were able to build or to plan a new environment; in Saarbrücken, Le Havre, Sotteville-les-Rouen, Maubeuge, La Rochelle and Saint Dié. But all architects were emerging from an inactive period, and for most of them the villa of 'Madame de . . .' had for a long time been only a dream!

On the other hand, for over twenty years the pervasive influence of functionalism has been making itself felt, making its incursions into town planning and architecture; resulting in the zoning and segregation of the citizen's activities in the course of twenty-four hours.

Towns became no longer towns, dwellings no longer had the organic character of the kind of dwellings with which many people were

familiar; a stratification of content appeared, succeeded by that of the container. Thus an extraordinary inversion of values was achieved: from the miniaturization of the functionalistic universe (detached-houses of the years 1925 to 1935) to the functional gigantism of large developments in creating of which most architects adhered, not without indifference, to the oversimplified formulations of the Athens Charter. Thus confusion was born and with it uncertainty.

But at the same time a healthy reaction set in and an awareness occurred: architectural and official town-planning records do not as yet fully reflect this action.

Towards the years 1956–1958, succeeding the arduous building development of the Marseilles Unité, a kind of clandestine architecture was created by the work of the young and not so young, all of whom had become aware of the deep inter-connection between town planning and architecture on the one hand and political, social and economic factors on the other. Consequently the idea of a building industry took shape, a genuine improvement on oversimplified prefabrication.

France, a country of capitalist economy, is now in her fifth social and economic expansion plan. Regional planning, in which, implicitly, town planning and architecture have their place, thus conditions to a large extent the development of the other branches of activity. A new awareness develops in the approach of the designers of living environment.

The training of these designers is not quite up to the standard required from them for their task within the nation. Here also, however, a kind of clandestine approach begins to take place; numerous contacts are made between the persons in charge of all branches of activity. Auto-culture, the creation of town-planning and architectural cooperatives and workshops, etc. Thus is born a real and healthy building industry. In spite of experiments with aluminium, plastics, wood and steel, it is still largely concrete which produces the most advanced expressions. It may be deplored that no official institution for research in this field exists as in other fields, such as in the petroleum, textiles, rubber industries, etc. But some private enterprises are seeking to achieve worthwhile results.

The notion of the 'greatest number' was introduced into planning. The initiative came from the architects, as did also the awareness. Thus the aesthetic trend, although it has still numerous followers, no longer dominates architectural production. The introduction into building of the ideas of consumption and production

indicates the new trend.

Now production (as a whole) can only be ensured by an industry—consumption, relationship—and thus only by the efficient training of the consumer (hence education) and by a necessary but fair distribution of consumer-ware.

The urban landscape with its personality, its new rhythms and its new cycles is being reinvented. France accepts, the French people begin to demand a renovation not only of car-bodies but also of their living environment, they are no longer satisfied with the functionalistic simplification of their urban existence.

A new doctrine of regional planning is taking shape which embodies the evolution of the country and of its activities. Towns and country tend more and more towards a mutual integration; but weaknesses still exist in the planning of transport, in the location of cultural centres and leisure facilities, and in the location of places of work in relation to the places of residence and other activities.

From 1944 to 1964, town-planning and architecture present an irregular but logical contour. From the end of the war onwards until around 1958, the essential character resides in the literal transcription of functionalism on a small and also on a large scale. Thus, on her territory which is sparsely and unevenly populated France allows for the most part an architecture of 'social-assistance' to be built; the essential aim being millions of reasonable lodgings, which are however designed without genius and without personality.

Since 1960, more precisely, parallel to the young architects' growing concern and 'clandestinity', a change of attitude has occurred also in political circles, where the combination of town-planning and the conduct of the country's affairs is being attempted.

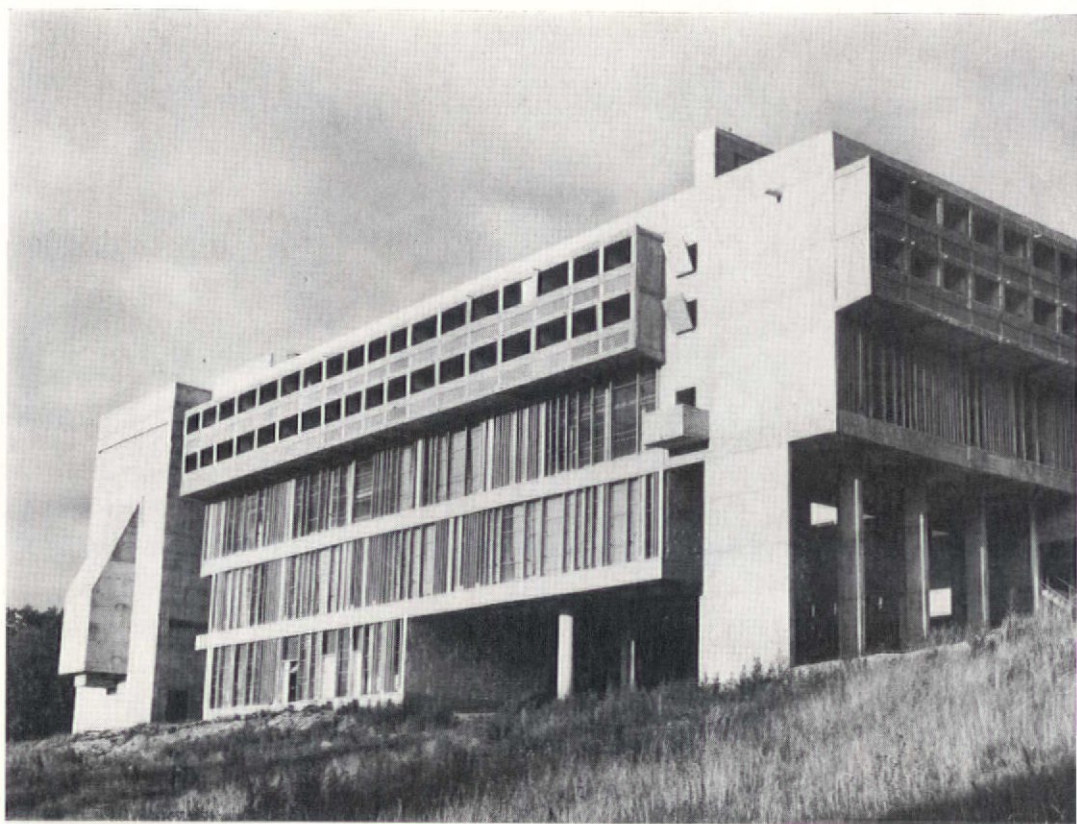
Like every people with a long and prodigious history, the people of France have not yet acquired the ability to understand and to assimilate the changes which its living-environment requires.

Twenty years of struggles, trials and attempts have not been enough to prepare favourable ground for these changes. The younger generations assimilate better and much quicker the necessity of a new formulation of their living-environment.

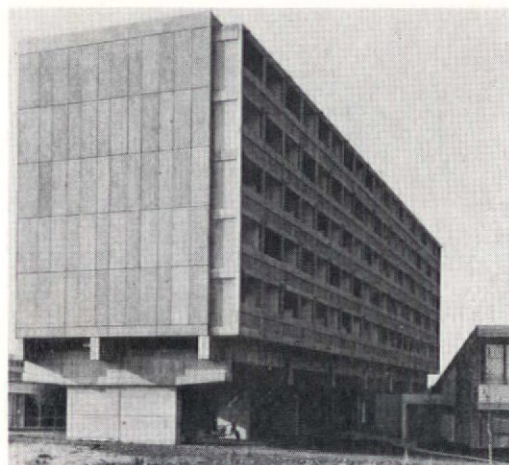
France is now 21 years old. Her town-planning and her architecture will be young, with all the failings, but also with the enthusiasm and will-power of youth. They will give a new face to the country and perhaps also to Europe.

continued from previous page

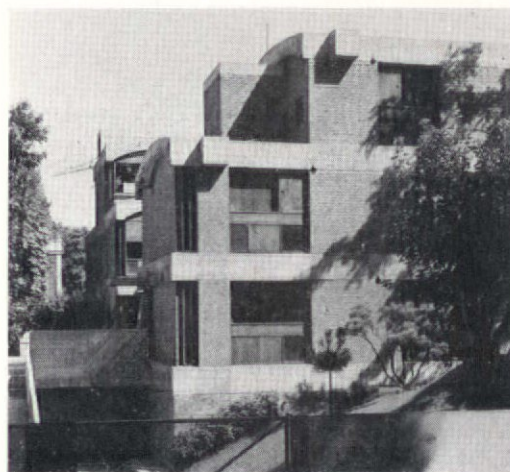
- 67 **Factory, Plaisir**
Grandval
- 68 **Nuclear power station, Chinon**
Dufau
- 69 **Cérabati ceramic factory, Châteauroux**
Andrault, Parat
- 70 **Youth centre (Copainville), Troyes**
Marot
- 71 **Church at Fontaine-les-Grès, near Troyes**
Marot
- 72 **Theatre, Caen**
Bourbonnais, Carpentier
- 73 **Church near Caen University**
Bernard
- 74 **Unité d'habitation, Briey-en-Forêt**
Le Corbusier
- 75 **Holiday home, Le Guidel (6km north of Lorient)**
Gomis
- 76 **Housing, Angers**
Schein
- 77 **IBM research centre, La Gaude, near Nice**
Breuer, Gatje, R. & M. Laugier
- 78 **Church, Audincourt**
Windows by Leger
- 79 **Holiday home, Chamrousse, near Grenoble**
Pradel



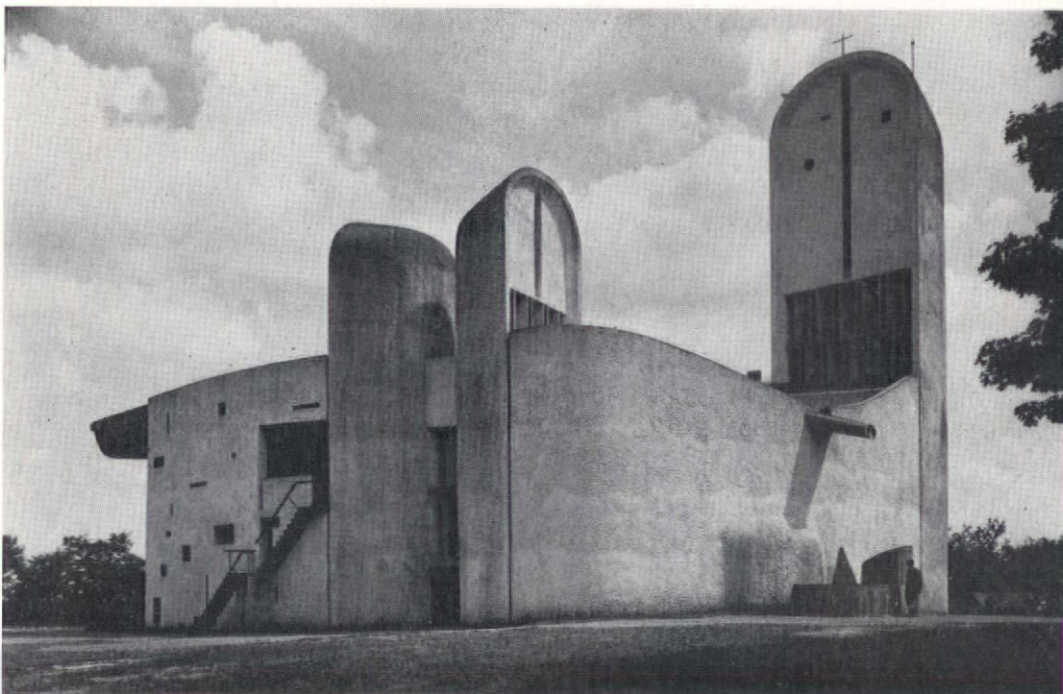
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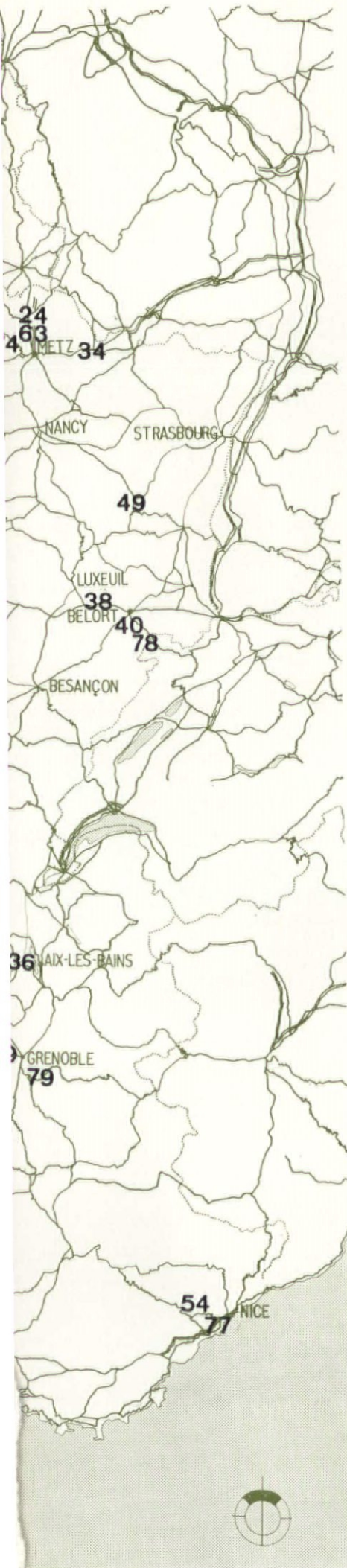
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4

Map of France indicating post-war modern architecture

Buildings or building groups which are in or near Paris are indexed with a bold numeral and are not indicated on the map. All the listed numerals correspond also to the numerals shown in parentheses in the captions overleaf and on pages 18 and 19.



- 1 House, St Brévin l'Océan
Wogenscky
- 2 Church near Verdun
The Rev. Father Reyssignier
- 3 Thompson factory, Bagneux-les-Blagis
1, rue des Mathurins
Coulon, Douillet, Schneider
- 4 Printing works, Massy-Palaiseau
176, Route de Paris
Leclaire
- 5 Housing, La Viste, Marseilles
Candilis, Josic, Woods
- 6 Housing, Louviciennes
Rue du Général Leclerc
Herbé, Le Couteur
- 7 Schlumberger factory, Clamart
Ave. de la Libération
Legrand
- 8 CNIT building, Puteaux
Rond-Point de la Défense
Camelot, de Mailly, Zehrfuss, Esquillan
- 9 Cité des Courtilières nursery, Pantin
Aillaud
- 10 Cité des Courtilières housing, Pantin
Aillaud, Camus
- 11 Cité des Courtilières kindergarten, Pantin
Aillaud, Camus
- 12 Commercial centre, Sceaux
Ave Jean-Perrin
Andraut, Parat
- 13 Radio building, Paris 16
Ave du Président Kennedy
Bernard
- 14 Housing, Meudon-Bellevue
93, Route des Gardes
Sive, Prouvé
- 15 Housing, Les Buffets, Fontenay-aux-Roses
Rue du Maréchal-Foch
Lagneau, Weill, Dimitrievic, Perrotet
- 16 Maisons Jaoul, Neuilly-sur-Seine
81 Rue de Longchamp
Le Corbusier
- 17 Offices, Paris 17
85 rue Jouffroy
Albert, Sarf
- 18 Housing, Bobigny
Ave. Edouard-Vaillant
Aillaud, Vedrès
- 19 Kindergarten, Sceaux
Rue de Bagneux
Herbé, Le Couteur
- 20 Flats, Square Mozart, Paris 16
Mirabaud, Prouvé
- 21 Brazilian Pavilion, Cité Universitaire, Paris
Le Corbusier, Lucio Costa
- 22 Mourenx new town
Coulon, Bouillet, Maneval
- 23 Firminy new town
Sive, Roux, Delfante, King
- 24 Solac steelworks, Thionville
Leclaire
- 25 Heating plant, Massey-Palaiseau
Leclaire
- 26 Housing, Pont-sur-Sambre, near Maubeuge
Willerval
- 27 Cooling tower, Pont-sur-Sambre, near Maubeuge
Willerval
- 28 Le Havre
Perret
- 29 Atomic centre, Marcoule
Badani, Roux Dorlut
- 30 School, Bagneux-les-Blagis
Rue Branly
Gomis, Guerry
- 31 Housing, Les Grandes Terres, Marly-le-Roi
Route de St Germain
Lods, Honegger, Beufe
- 32 School, Villeneuve-la-Garenne
Rue du Fond-de-la-Noue
Herbé, Le Couteur
- 33 Unité d'habitation, Marseilles
Le Corbusier
- 34 Housing, Forbach
Aillaud
- 35 Housing, Créteil
Rue Viet
Bossard
- 36 House and studio, Aix-les-Bains
Chaneac
- 37 Covered market, Royan
Sebillotte, Sarger
- 38 Chapel, Notre-Dame du Haut, Ronchamp
Le Corbusier
- 39 Bagnols-sur-Cèze
Candilis, Josic, Woods
- 40 House of the painter Messagier, Montbéliard
Verret, Riboulet, Renaudy, Turnauher
- 41 Housing, Aubervilliers
Lopez
- 41B Renault factory complex, Flins
Zehrfuss, Nervi
- 42 UNESCO building, Paris
Place Fontenoy
Breuer, Zehrfuss, Nervi
- 43 Bridge on Route Nationale 7, Orly
Freysinet
- 44 Air France offices, Orly
Route Nationale 7
Aubert, Sarf
- 45 Orly airport
Route Nationale 7
Vicariot
- 46 Offices, Paris 15
Rue Viala
Lopez, Reby
- 47 Flats, Paris
33, rue Croulebarbe
Albert, Boileau, Labourdette
- 48 Central heating plant, Bagneux-Les-Blagis
Gillet, Gomis, Bodiansky
- 49 Factory, Saint Dié
Le Corbusier
- 50 Tancarville bridge
- 51 Commercial high school campus, Jouy-en-Josas
Coulon
- 52 Hospital, Marseilles
Forestier
- 53 Museum, Le Havre
Lagneau, Weill, Dimitrievic
- 54 Museum, Vence
Sert
- 55 Underground basilica, Lourdes
Vago, Le Donné
- 56 Cultural centre, St Etienne
Wogenscky
- 57 Monastery La Tourette, Eveux-sur-Arbresle
Le Corbusier
- 58 Church, Royan
Gillet, Sarger
- 59 Church, Taizé, near Cluny
- 60 Administration centre, Neufchâtel-en-Bray
Auzelle
- 61 Technical college, Rennes
Arretche
- 62 Housing, Nîmes
Candilis, Josic, Woods
- 63 Cormontaigne bachelor housing, Thionville
Dubuisson
- 64 Housing, Bourges
Andraut, Parat
- 65 Youth centre, Firminy
Le Corbusier
- 66 Vehicle workshop, Ris-Orangis
Granet



Architecture in France, 1944–1964

On the following pages we show photos of some of the buildings indicated on the maps on previous page. The numerals in brackets corresponds to the reference numbers in the map index.

- 1 Couvent de la Tourette, Evieux-sur-Arbresle / Le Corbusier (57)
- 2 Brazilian Pavilion, Cité Universitaire, Paris / Le Corbusier, Lucio Costa (21)
- 3 Maisons Jaoul, Neuilly / Le Corbusier (16)
- 4 Notre-Dame du Haut, Ronchamp / Le Corbusier (38)
- 5 Housing at Bagnols-sur-Cèze / Candilis, Josic, Woods (39)
- 6 Messagier residence, Montbéliard / Verret, Riboulet, Renaudy, Turnhauser (40)
- 7 Housing, La Viste, Marseille / Candilis, Josic, Woods (5)
- 8 Holiday house, St. Brévin l'Océan / André Wogenscky (1)
- 9 Housing, Les Grandes Terres, at Marly / Lods, Honegger, Beufe (31)
- 10 New town at Moux / Coulon, Bouillet, Maneval (22)
- 11 New town at Firminy / Sive, Roux, Delfante, King (23)
- 13 Housing les Buffets, Fontenay-aux-Roses / Lagneau, Weill, Perotet, Dimitrievic (15)
- 14 Housing at Louveciennes / Herbé, Lecouteur (6)
- 15 Radio building, Paris / Bernard (13)
- 16 Thompson factory, Bagneux / Coulon (3)
- 17 School, Villeneuve-la-Garenne / Herbé, Lecouteur (32)
- 18 Printing works, Massy / Leclair (4)
- 19 Air France offices, Orly / Aubert, Sarf (44)
- 20 Flats, rue Croulebarbe, Paris / Albert, Boileau, Labourdette (47)

Photos:
Thomas Cugoni 2, 3, 14, 17, 19, 20. Monica Lehmann 1. Ministère Construction 4, 5, 11, 15. Pierre Joly, Véra Cardot 6, 8. H. Frechou 7. R. Durandaud 9. Thomas 13. Henrot 16. Richard Blin 18.



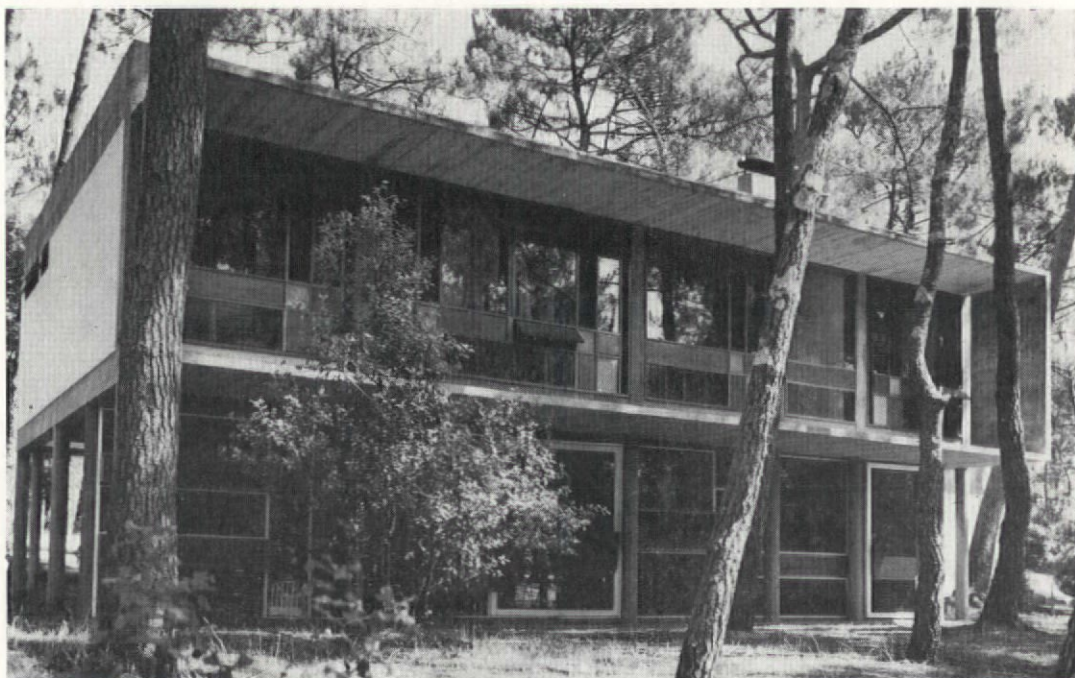
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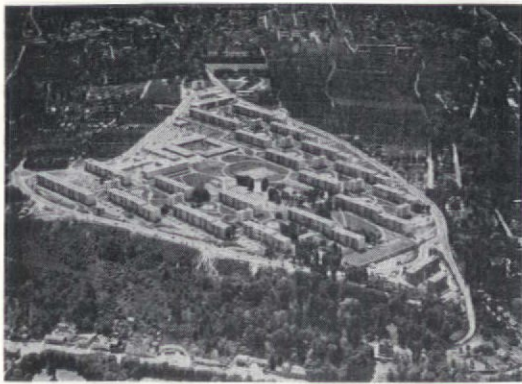
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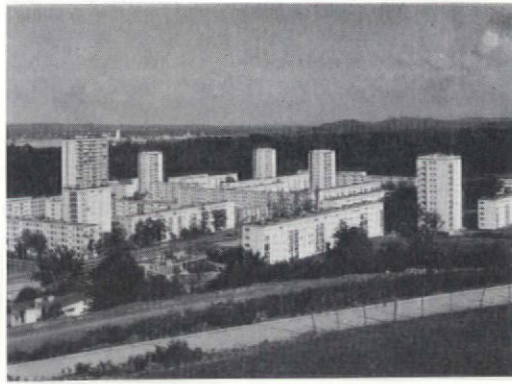
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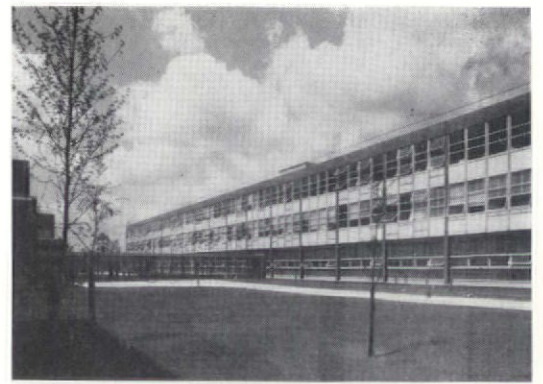
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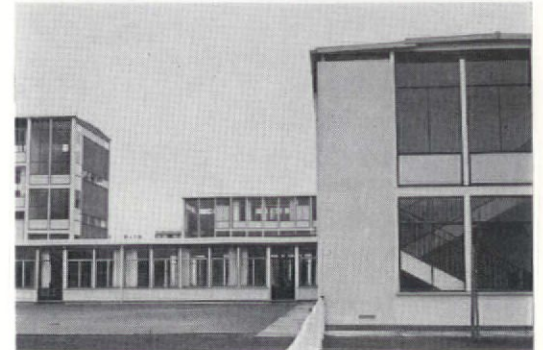
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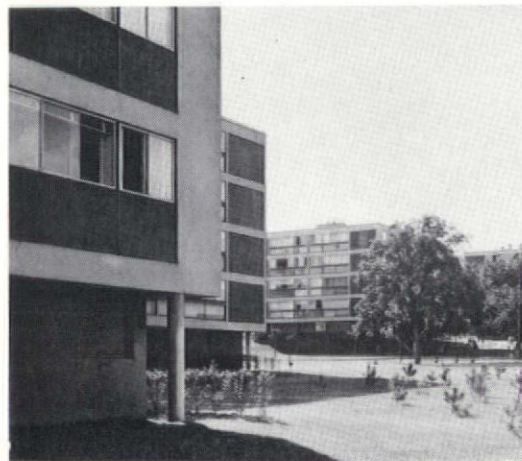
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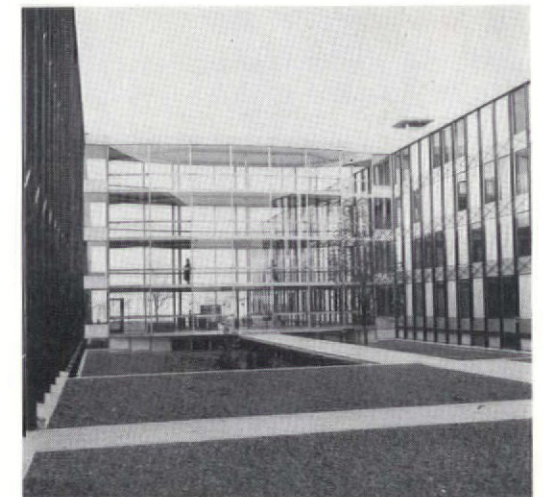
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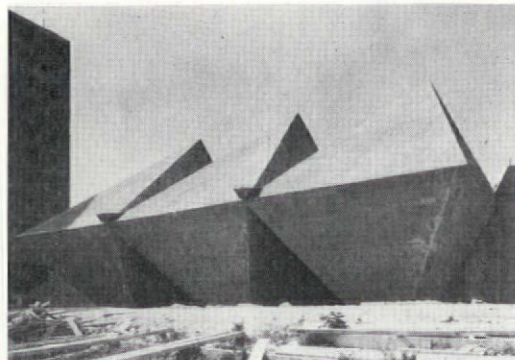
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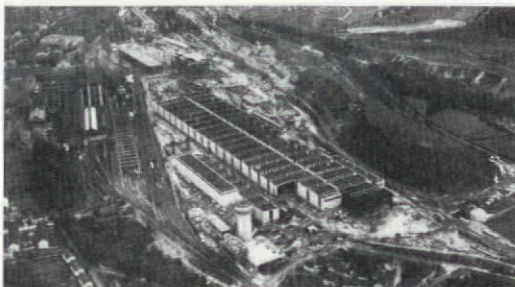
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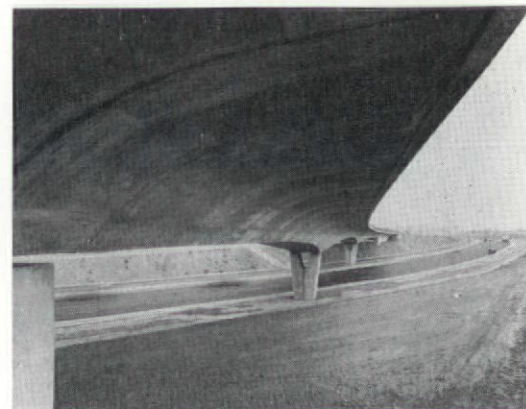
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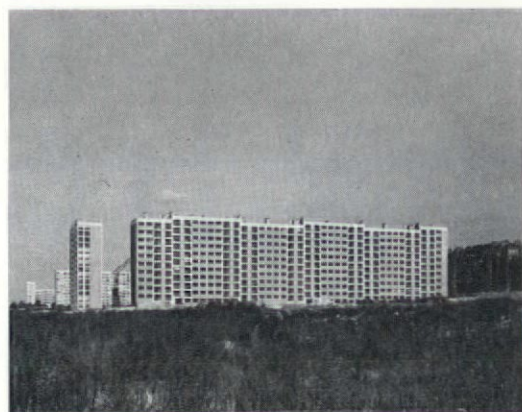
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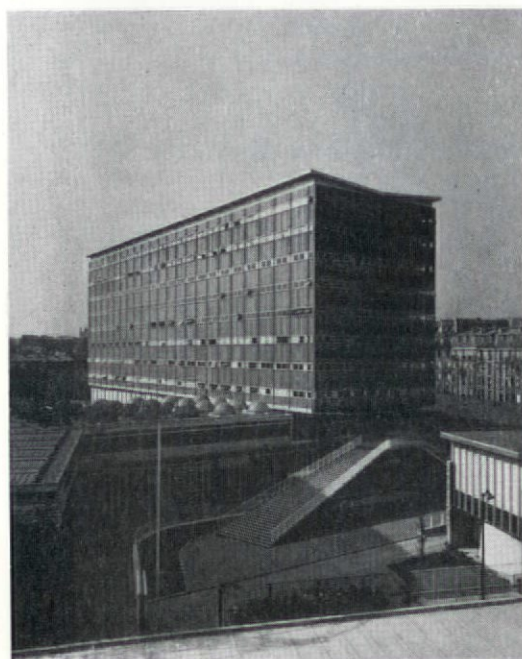
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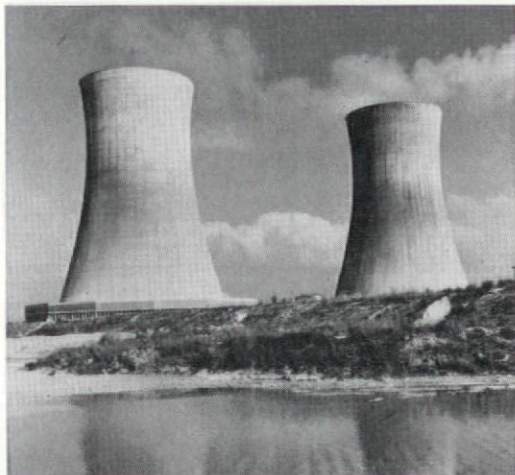
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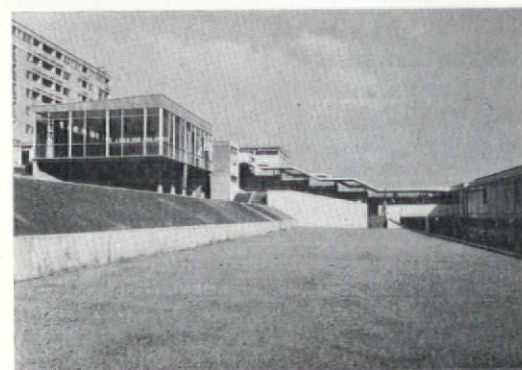
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14

Architecture in France, 1944–1964

1 Flats, rue Jouffroy, Paris/Albert, Sarf (17)

2 Heating plant, Bagneux-les-Blagis / Gomis, Gillet, Bodiansky (48)

3 Atomic centre, Marcoule / Badani, Roux Dorlut (29)

4 Solac steel works, Thionville / Leclair (24)

5 Bridge over the Route Nationale 7 at Orly / Aubert, Sarf (43)

6 Housing at Aubervilliers / Lopez (41)

7 Housing, Créteil / Bossard (35)

8 House and studio at Aix-les-Bains (36)

9 Offices, rue Viala, Paris / Lopez (46)

10 Cooling towers near Maubeuge / Willerval (27)

11 Covered market, Royan / Sebillotte, Sarger (37)

12 School, Bagneux-les-Blagis / Gomis, Guerry (30)

13 CNIT building, Puteaux / De Mailly, Camelot, Zehrfuss (8)

14 House, Route des Gardes, Meudon / Sive, Prouvé (14)

15 Housing, Bobigny / Aillaud (18)

16 Les Courtillières nursery, Pantin / Aillaud (9)

18 Housing, Forbach / Aillaud (34)

19 Les Courtillières housing, Pantin / Aillaud, Camus (10)

20 UNESCO building, Paris / Breuer, Zehrfuss, Nervi (42)

21 Orly airport / Vicariot (45)

Photos:
Margo Friters-Drucker 1. Thomas Cugini 2, 5, 6, 14, 15, 18. Pierre Joly, Véra Cardot 7, 12. Ministère Construction 9, 10, 20. Compagnie Aérienne Française 4. Dupont 11. Robert Durandaud 13. MRL 23.



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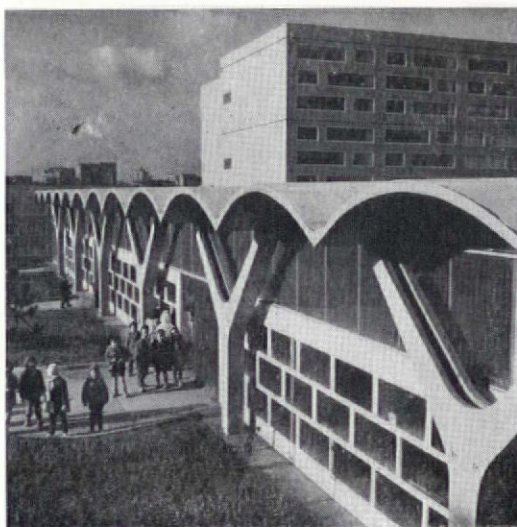
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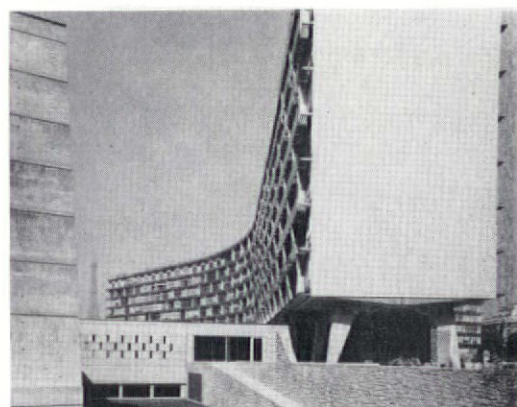
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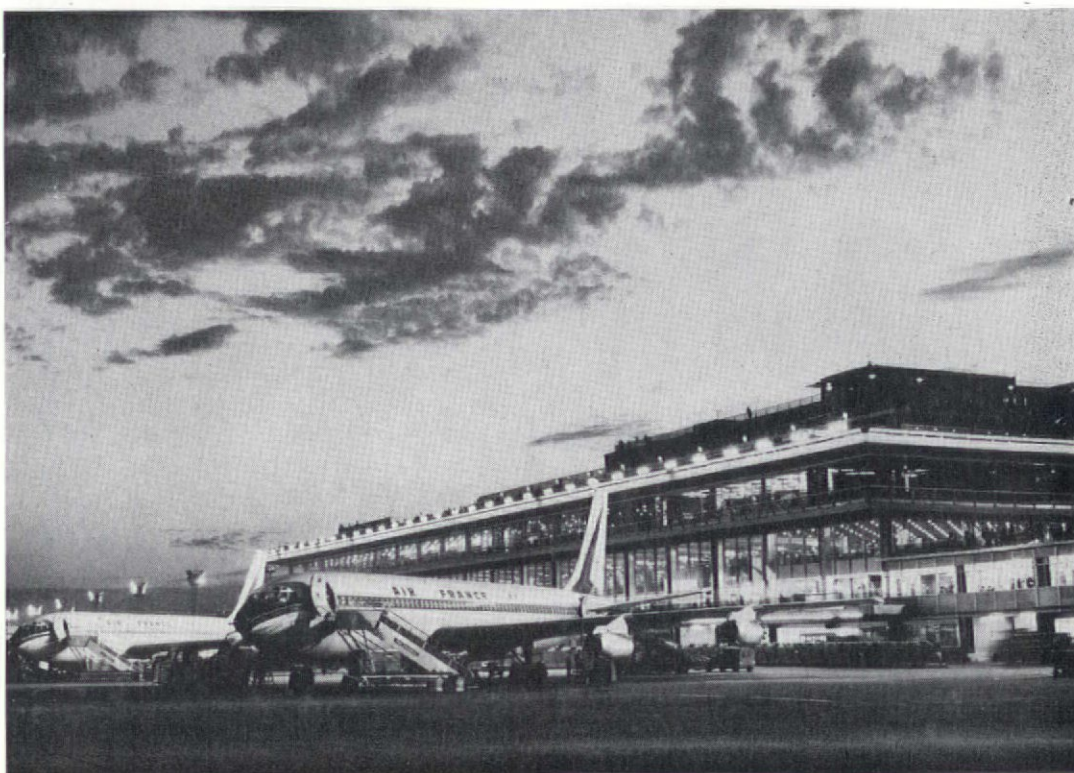
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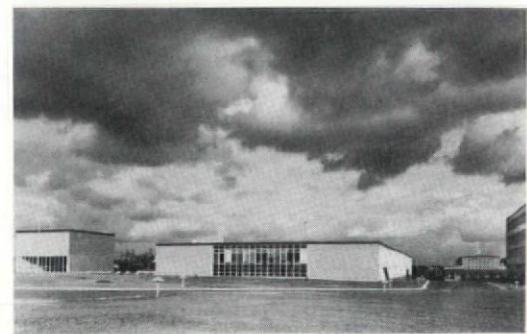
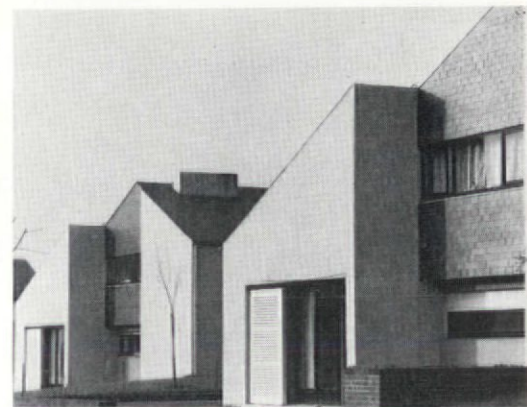
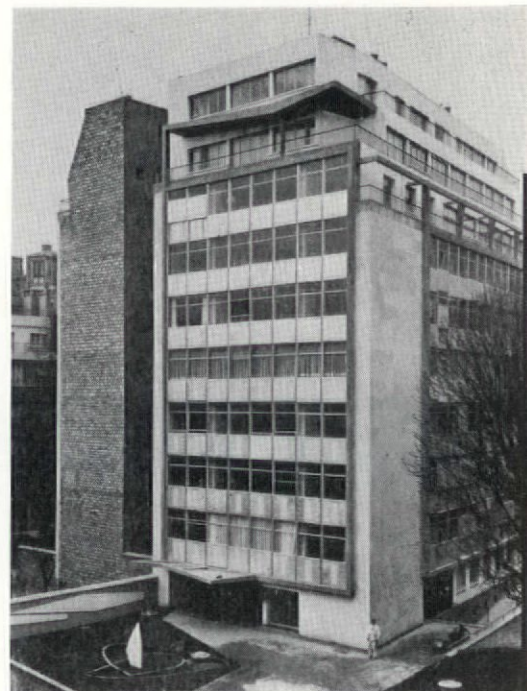
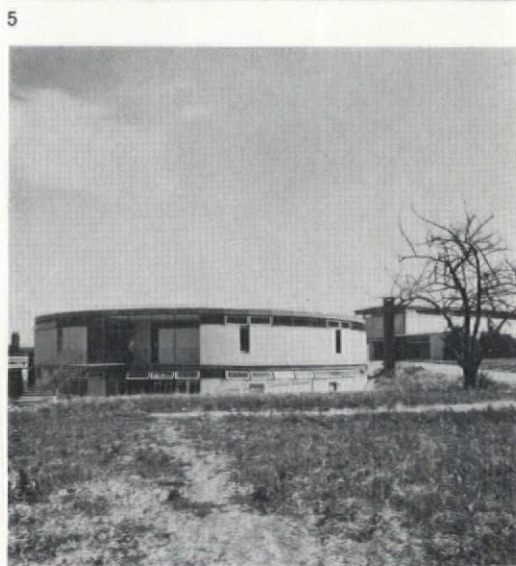
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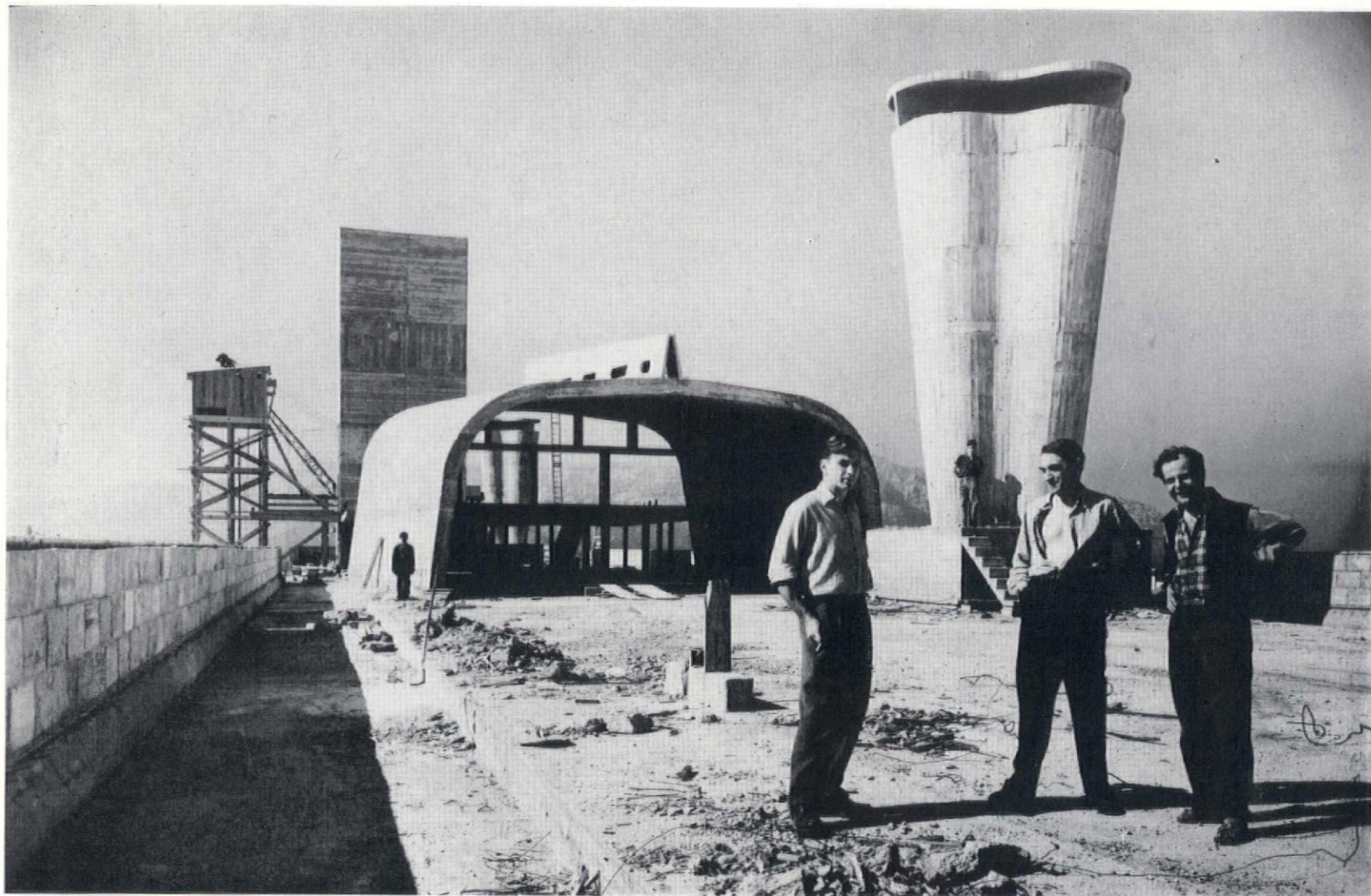


21

Architecture in France 1944–1964

- 1 Church by the Rev. Père Reyssignier near Verdun (2)
 - 2 Flats on Square Mozart, Paris / Mirabaud, Prouvé (20)
 - 3 Shopping centre, Sceaux / Andrault et Parat (12)
 - 4 Houses, Pont-sur-Sambre near Maubeuge / Willerval (26)
 - 5 Heating plant at Massy / Leclaire (25)
 - 6 Schlumberger factory, Petit Clamart / Legrand, Rabinel (7)
 - 7 Kindergarten, Sceaux / Herbé, Lecouteur (19)
 - 8 Renault factory complex, Flins / Zehrfuss, Nervi (41B)
- Photos:
 Pierre Joly, Véra Cardot 1. Claude Ferrand 2. Ministère
 Construction 3. Gilles Ehrmann 4. Etienne Weill 5, 6.
 Thomas Cugini 7.





1

It is now generally accepted that the essentially combined influence of Le Corbusier and ATBAT has determined, to a great degree, the approach of many of the young architectural ateliers established in France over the past 10 years.

It is hoped that the following survey will demonstrate the extent of this influence and at the same time reveal the process through which differing 'schools' of architectural thought evolve, each 'school' developing a different approach from that of contemporary or preceding 'schools', while simultaneously maintaining a recognizable 'chain' of thought that appears to stem from the same one source, that being the immediate post-second world war activity of both Le Corbusier and Bodiansky and the establishment of ATBAT.

History of ATBAT and its influence on French Architecture

Marion Tournon Branly

2



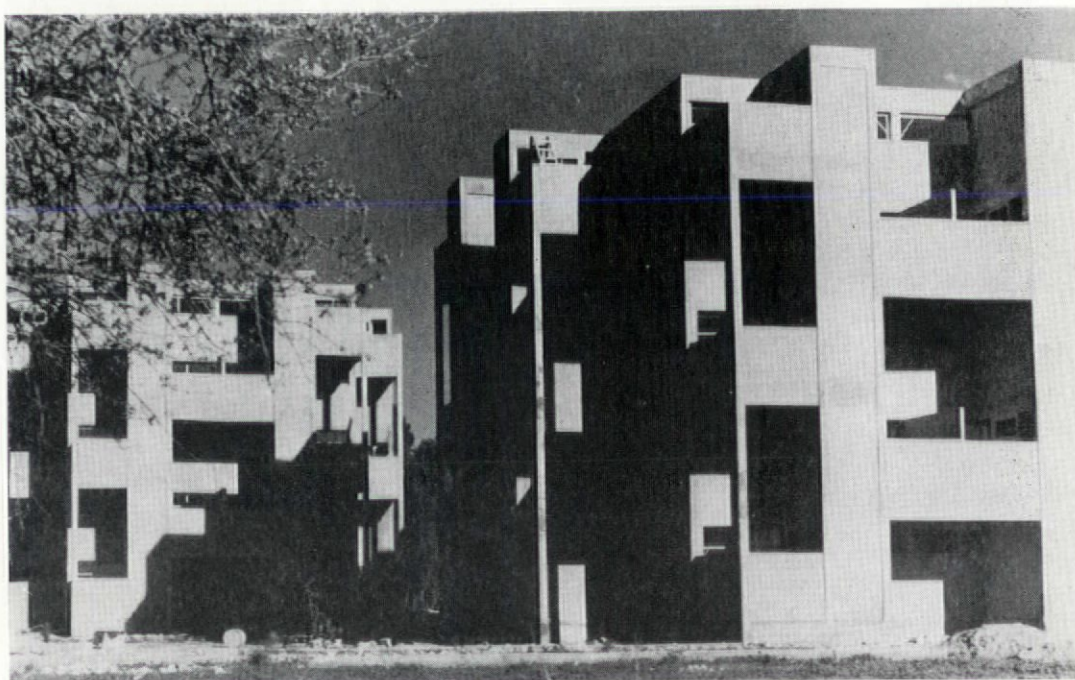
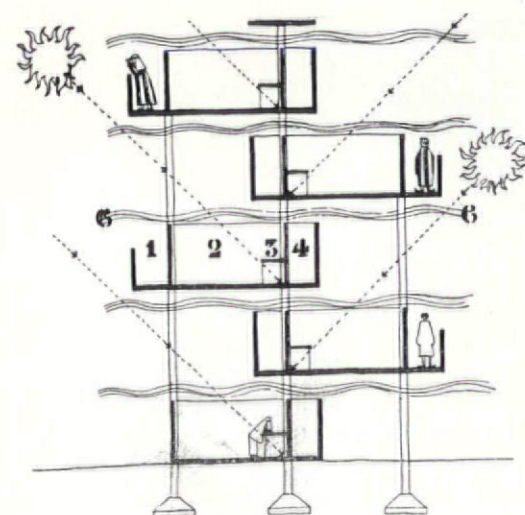
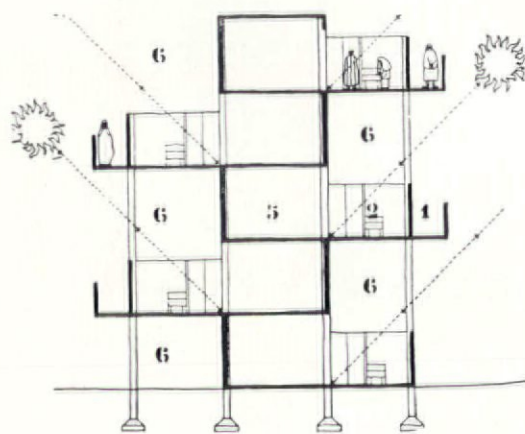
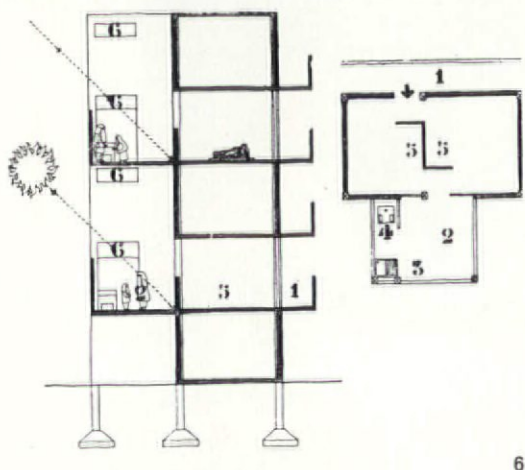
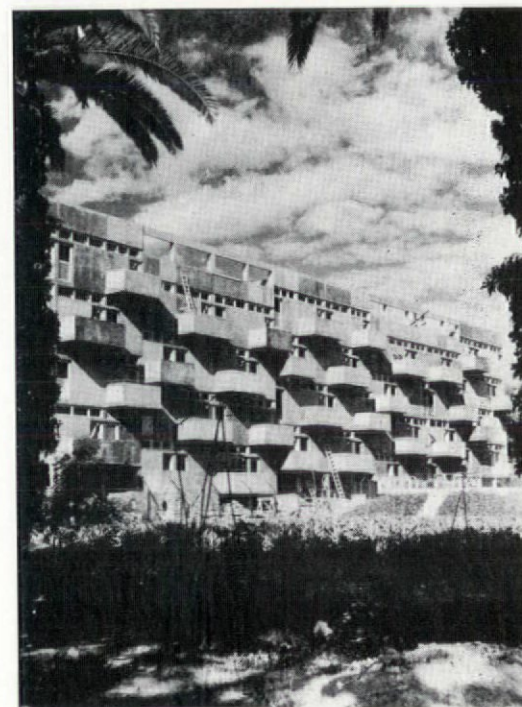
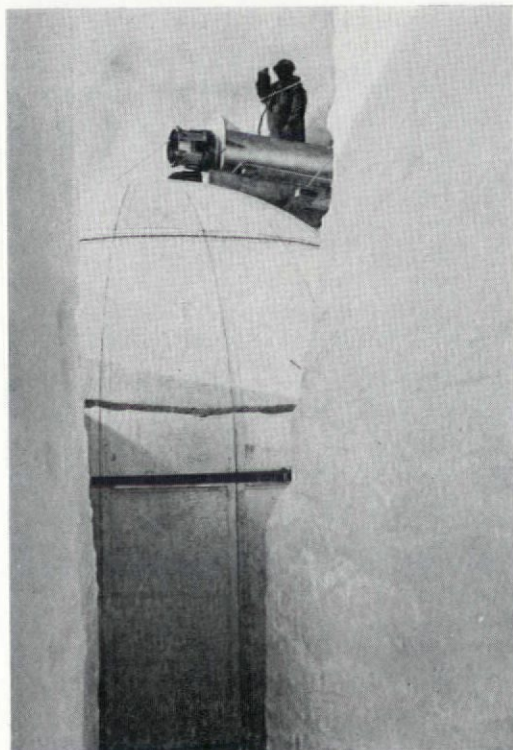
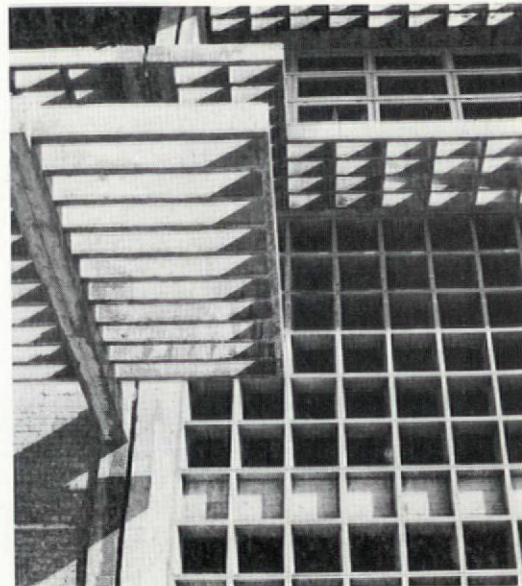
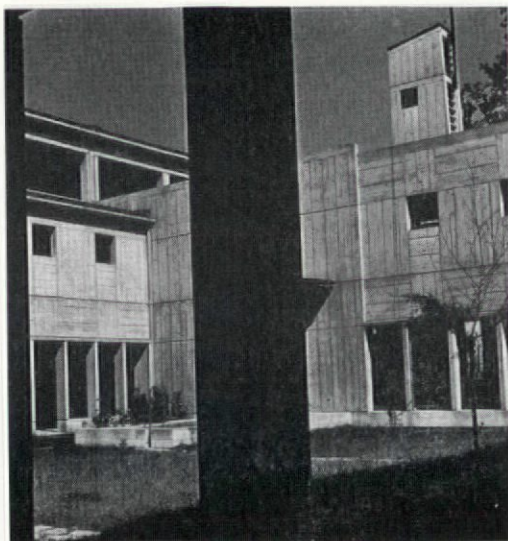
ATBAT, *Atelier de Bâtitseurs*, was set up in 1947. Le Corbusier, Bodiansky, Wogenscky and Marcel Py, with Lefebvre as administrator, established ATBAT when working in close collaboration for the *Unité d'habitation* in Marseilles.

The fundamental idea was to set up a research centre which should be a meeting-place for architects and technicians working along similar lines. It is quite extraordinary to realize that this experiment should have lasted 18 years. Developing in many directions and undergoing considerable changes, this atelier has up to now had an intense life, taking part in projects and achievements that have often been *avant-garde* and have always been interesting. It has been the high morale of Bodiansky that has kept a difficult experiment in being.

1
ATBAT members (*l. to r.*) Shadrack Woods, Vladimir Bodiansky and Georges Candilis in 1949 on the roof of Le Corbusier's 'Unité d'habitation' at Marseilles, while the building was still under construction

2
The Adelia Land research and observation centre for scientists and explorers, was designed by ATBAT in 1953 for the French P-E. Victor polar expedition (See *AD* Jan. 1955, page 9)

- 1 Clarté-Dieu monastery. Architects the brothers Arsène-Henry with ATBAT, 1949
Photo: Lucien Hervé
- 2 Agadir town hall, Morocco. Architects Lods, Bodiansky, and brothers Arsène-Henry with ATBAT, 1950-52
- 3 The P-E. Victor polar expedition central station in Greenland under construction. Designed by ATBAT and the expedition's technical services, 1959-60
Photo: Jacques Masson
- 4 Cité Ronsard, Oran, Algeria. Housing 'for the greatest number' by ATBAT-Afrique, 1953-59
- 5 Housing 'for the greatest number' in Algeria type town 'Woods'. By ATBAT-Afrique, 1953-58
- 6, 7, 8 Sections through three types of collective housing in Morocco by ATBAT-Afrique
- 9 Master plan for Accra, Ghana, by V. Bodiansky and Varlet (of ATBAT) and Dalidet, Devillard and Gaubert, 1954
- 10 Model of dormitory town Bagneux 2, by Gillet, Gomis and Bodiansky (ATBAT), 1957
- 11 Model of 'Dame Blanche' housing by ATBAT, 1959-63



continued from page 20

Actually, ATBAT was the first centre of interdisciplinary studies, architectural and technical, in France, Le Corbusier and Wogenscky being, by rules imposed by the administration, associated by a contract with engineers.

To make such an experiment successful, it is necessary above all to believe in it profoundly. For a research centre is often financially embarrassed since it is a question of experiments, these often taking the form of collaboration on projects not followed up to completion. It is not a question of producing, but first and foremost of creating. It is thanks to financial aid at the beginning and during the 18 years of Jacques Lefebvre's activity that it was possible to establish ATBAT and to get through the difficult moments.

If one considers the history of ATBAT, it almost becomes necessary to draw up a genealogical tree, starting from the root which would be composed of Le Corbusier, Bodiansky, Wogenscky, Lefebvre, and Py.

The trunk would divide into branches which would themselves ramify in different directions, depending on personality, the trunk being represented by Bodiansky and Lefebvre, who for 18 years held the balance.

Coming generations, hungry for research, experience and creation, may consider the life of ATBAT as an experiment that has succeeded, with 'team spirit' as the unfailing, guiding force. How many young foreign architects and engineers have come to know the building in the Rue Saint-Augustin and will remember the lively, sometimes tumultuous, but always fruitful evenings!

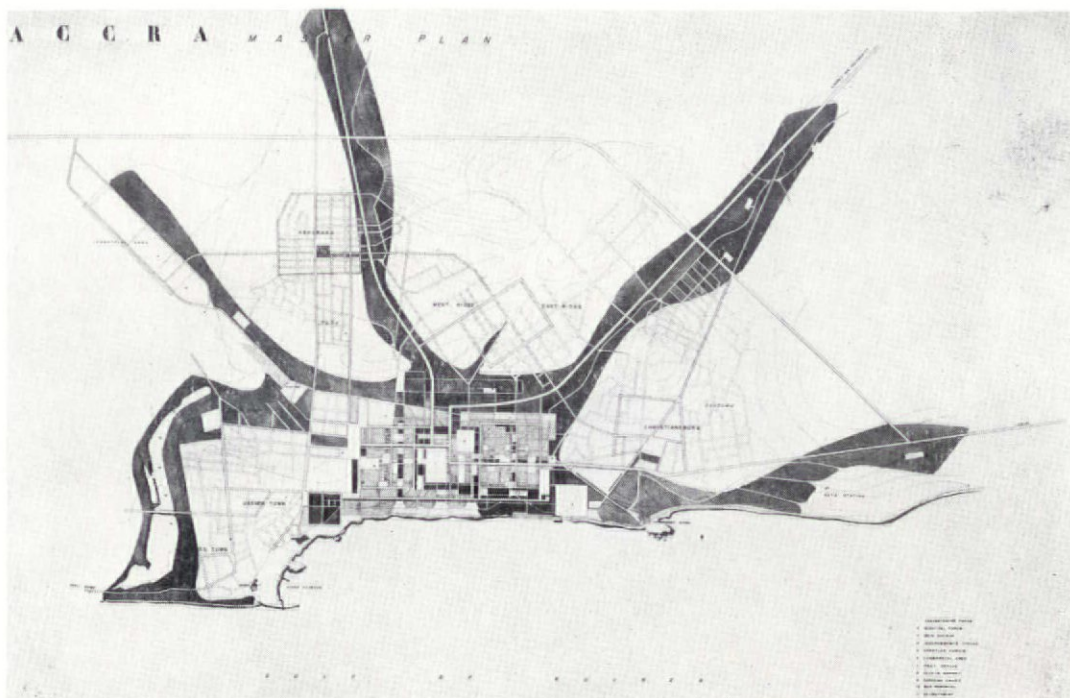
Le Corbusier, Wogenscky and Marcel Py remained in ATBAT until 1949. Then Candilis, who had already worked in the atelier at Marseilles, continued ATBAT with Bodiansky and Lefebvre.

In 1949 a branch, ATBAT-Afrique, was set up in Morocco. This was directed by Candilis, Woods and Piot, under the spiritual guidance of Bodiansky. ATBAT-Afrique was first established in Tangiers, then later in Casablanca.

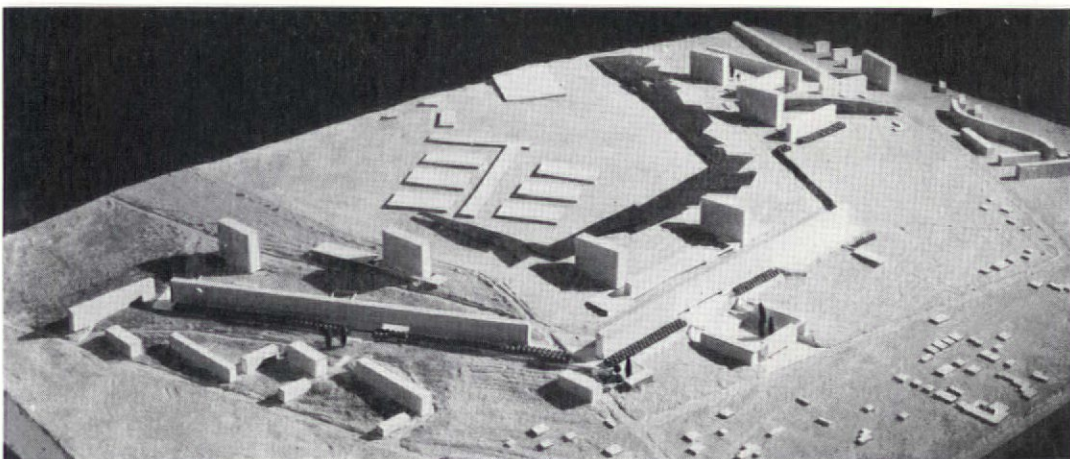
In the period from 1949 to 1954 this team was to carry out innumerable building projects, administrative and commercial, as well as schools with G. Jaubert and Chenineau, and the hospital of Port-Lyautey. They began with the first designs and realizations for 'Housing of the greatest number' in the shanty-town of the central arena of Casablanca. The Mohammedan dwelling 'For the greatest number' being one of the essential problems of the place; very fine research was carried out by ATBAT-Afrique, taking into account the Mohammedan way of life and providing in a remarkable way the necessities of life, of function and of beauty.

Already in September 1951, Bodiansky's proposal for the foundation of a large training-centre in Morocco dedicated to the subject of 'Housing for the greatest number' was adopted by the BROC, the Building Research Organizing Committee, now the CIB, International Council for Building Research Studies and Documentation, to which, when it was formed, Bodiansky and Nervi were elected as unattached members, with several other personalities. Bodiansky was appointed by the Technical Commission of the United Nations as *rapporteur général* of the proposed training centre. The political events of 1953-54 prevented the realization of this project.

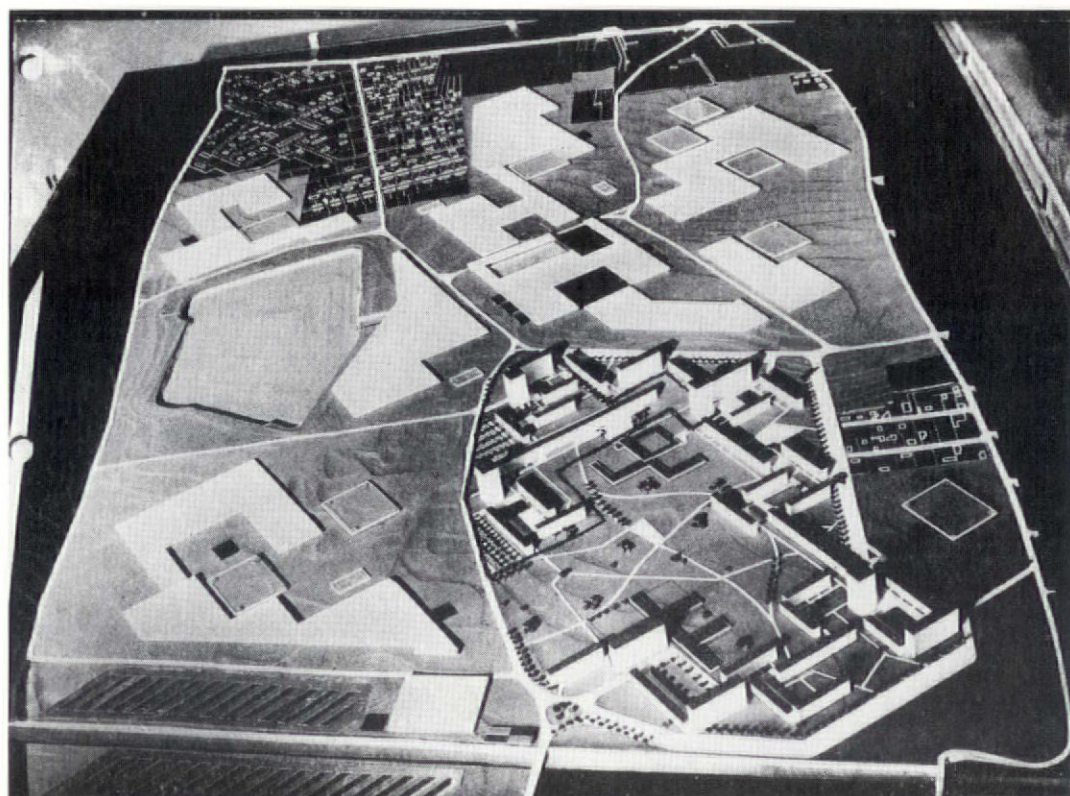
In his own name, but working on behalf of



9



10



11

ATBAT, Bodiansky collaborated with Lods and Arsène-Henry, entering the Agadir Town Hall competition, receiving first prize and going on to complete his project. The engineering was carried out by ATBAT-Afrique. Entirely prefabricated, this completed project was one of the few buildings that survived the terrible earthquake.

In respect of attendance, the atelier was at this time already considerable, with 15 students and 5 foreigners, making altogether a total of 25 people working with enthusiasm.

After the events of 1953, ATBAT-Afrique removed its activities to Algeria where, from 1954 to 1960, it carried out alone, or in collaboration with Berry, Daure, Maury, Pons, Gomis and Tournier, architects, several thousands of Mohammedan and European dwellings on more than 30 sites. Bodiansky, travelling between Paris and Africa, looked after both ateliers.

During the period it was engaged on designs in France and Algeria, ATBAT, in close collaboration with the engineers of the French Polar Expeditions, were commissioned by Paul-Emile Victor to design polar stations in Adelia Land in Greenland, and also the high altitude station on the top of the Aconcagua in the Andes.

Several collaborators of ATBAT, in particular, Chatzidakis and Josic, worked on the first project of the Port Martin station in Adelia Land, while Varlet, Marc and others worked on the designs for Greenland and the Aconcagua.

Intended initially for 12 scientists and explorers, the Adelia Land station has become a very important research and observation centre with laboratories for 65 scientists and explorers. The central station of Greenland, built four years ago for six explorers, was prefabricated in plastic and was completely assembled under the snow, less than 24 hours after parachuting.

The design of the Aconcagua station, like that of the Adelia Land station, is still being constantly modified and enlarged. It is going on at the moment and has been for several years, under the supervision of Bodiansky, and Marc. Bodiansky, with his scientific and encyclopaedic knowledge, is passionately interested in these designs and their execution, and has been able to inspire the same interest and enthusiasm in his co-workers of ATBAT.

One must mention perhaps the numerous excursions into doctrine of the ATBAT team. For instance, the intervention of the team in the CIAM Congress; or the 'Charte de l'Habitat', published by *L'Architecture d'Aujourd'hui*; and with the International Building Council in 1953, producing the 'Morocco' grid with the Lods, Arsène-Henry and Christina Gandziarek team, the 'Marly-Grandes-Terres' grid and others.

In 1954, Candilis, Woods, Josic and Piot, following the normal evolution of maturity of mind and experience, formed an independent team. On pages 35 to 42 we examine their brilliant development. Numerous other collaborators of Bodiansky, before or after, have fore-stalled or followed the example of the Candilis team and ATBAT.

The next 10 years, from 1954 to today, was a period of important research, with many designs and completed projects in the fields of town-planning, architecture and engineering; Bagneux City with Gillet and Gomis; the large block of the Annassers, near Algiers with Hanning, Bossu and Gomis; the Dame-

Blanche inspired by J. de Chalendar in collaboration with several other architects and engineers; 'Bellevue-Ouest' and Sidi-Bel-Abbes with the ARTECA team (Pingusson and Bodiansky co-directors), ATBAT and the collaboration of Colle, Sala, Okun, Sage, Fautrelle and Auvergniot. Also, after a special mission with Charles Abrams and Otto Koenigsberger, the outline master plan of Accra, the administrative capital of Ghana, with Dalidet, Devillard, Gaubert and Varlet, under the spiritual guidance of Bodiansky. Then there is also the Cité des Carrières in Algiers with Berry and Daure. These are only some of the numerous other projects and designs which were achieved during the period.

Similarly, in collaboration with Ecochard, Edde and Dr Ferrand, ATBAT intervened as the Centre of Engineering Studies in the construction of the Hospital of the Sacred Heart at Beirut. It was likewise on the recommendations of Bodiansky, of ATBAT, that Ecochard won the competition for the Museum of Kuwait, which he is carrying out at the moment.

Again, with the team Kalt, Pouradier-Duteil and Vignal, ATBAT used its influence as adviser and design centre in the design of 122 primary schools and of the French Embassy in the Republic of Nigeria; in addition to 225 centres of rural education and 12 hospitals; and of blocks of housing for the administration of rural education in the Haute Volta Republic; and of the girls' college at Abidjan. With the Lods team, finally, at Conakry (Guinea): hospital, lycée, covered market and flats.

It is far from our intention to draw up an ATBAT reference list, but only to draw attention to the most striking and important examples of its research and work among many others.

In 1954, on the occasion of the Congress of the International Centre of Regional Planning in London, Bodiansky and his friends formed the 'International Group of Consulting Engineers' ('Interconsult'), bringing together the most important centres of architecture and engineering of five countries (Germany, Austria, Belgium, France and the Netherlands), having at their disposal more than 1400 architects, engineers and technicians. It is the first and the only 'engineering international'.

The sudden death of Jacques Lefebvre put a full-stop to ATBAT's existence in its special form. But this long experiment so full of promise continues with an ever-widening perspective through Bodiansky, his friends, his pupils and former collaborators.

We have tried to illustrate the life and spirit of ATBAT with photos of the most striking completed projects of the past 18 years. The ones by Bodiansky, before, during and after ATBAT, cover a long period of 50 years, from 1914 to the present. Those of the team Candilis, Woods, Josic and Piot and those of Wogenscky are primarily works of the last 10 years.

We know that very many other former co-workers and students of ATBAT are continuing the task. In the pages that follow we should like to show the development of this atelier and the transformations it has undergone in the course of its activity.

We shall also see the development of those who have formed their teams in order to follow their own path and, finally, we shall see what influence ATBAT has been able to have in the development of their personalities.

ATBAT/Associates & members

List, in alphabetical order of the architects, engineers and town-planners, founders and principal collaborators of ATBAT from its foundation to the present

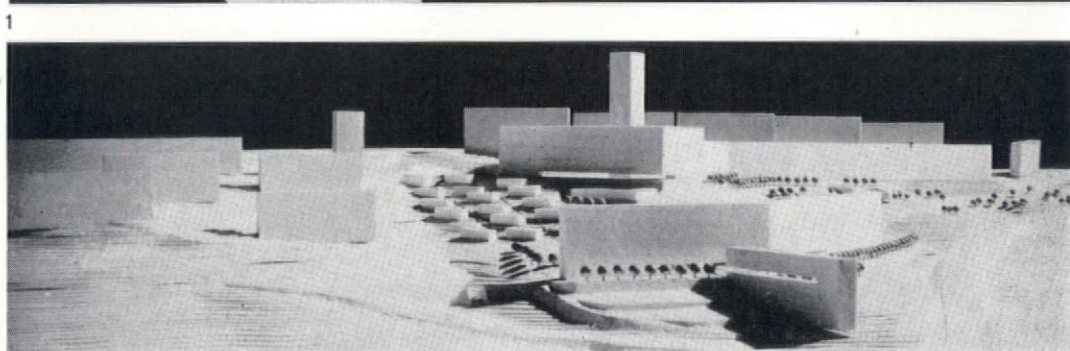
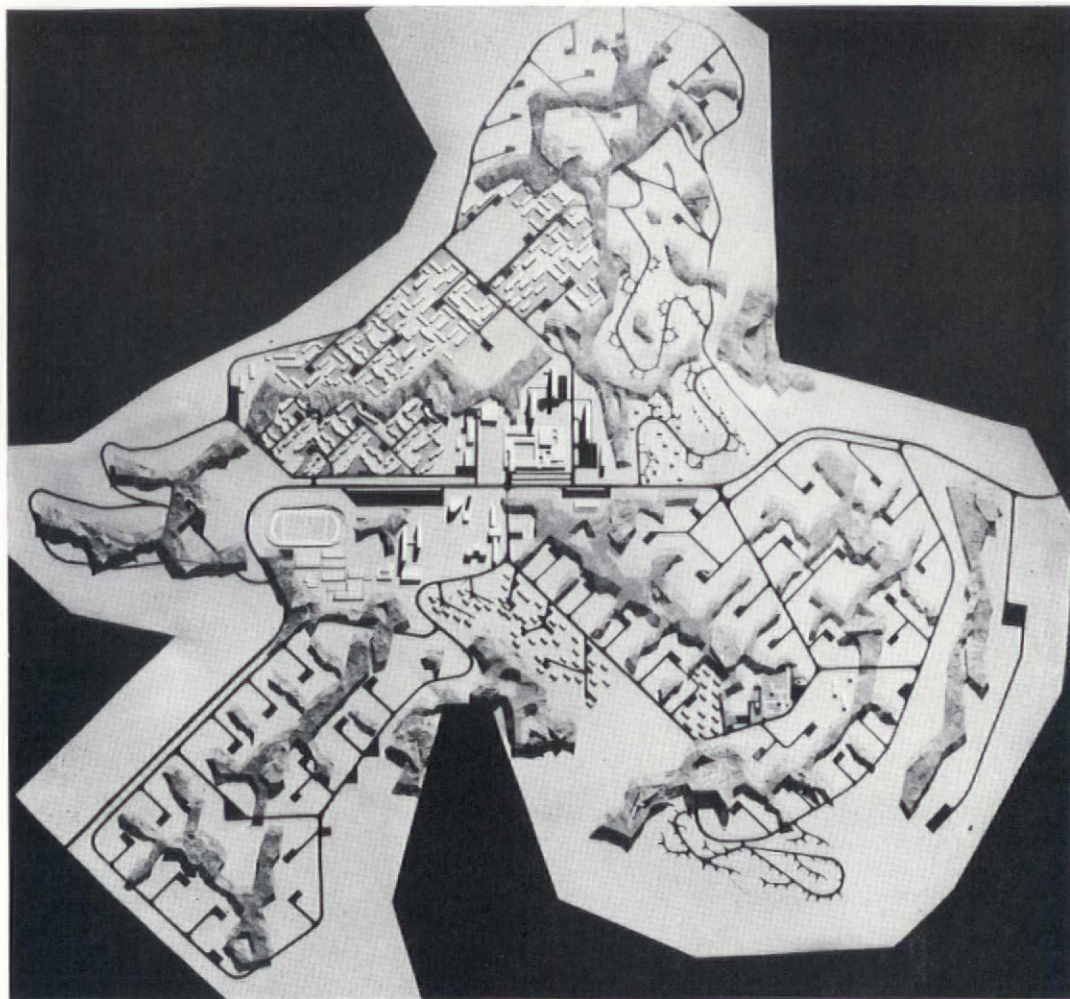
Mme Edith Aujame (*née* Schreiber)
Mme Pirkko Chatzidakis (*née* Hervela)
Princesse Magda Kadjar (*née* Guevrenova)
Mme Dorita Lavagno (*née* Labadie)
Mme Roux-Dorlut (*née* Gandziarek)
Mme Jeanine Seailles (*née* Cadiergue)
Baronne Bride Sparre (*née* Kennedy)
Mme Yvone Wise (*née* Czeiler)
Mme Josiane Couvradjo
Mlle Maria Fenyo
Mlle Irka Kaczorowska
Mlle Blanche Lemco
Mlle Myriam Schwartz
M. Nadir Alfonso
M. Roger Aujame
M. Roger Baudel
M. Gyoji Banchoya
M. Paul Berret
M. Vladimir Bodiansky
M. Georges Candilis
M. Panis Carellas
M. Nicolas Charzidakis
M. Henri Chollet
M. Stanislas Crabovski
M. Raymond Creneaux
M. Denis Delprat
M. Nino-Fridolin Egger
M. Alfred Folmer
M. Fernand Gardien
M. Juan Gunther
M. Alexis Josic
M. Gerald Hanning
M. Rundard Hauser
M. Michel Karkhanin
M. Ahmed Keyvan
M. Georges Kondracki
M. Olek Kujawski
M. Le Corbusier
M. Jacques-Louis Lefebvre
M. Marcel Lasson
M. Christian Levasseur
M. André Maisonnier
M. Olivier Marc
M. Jacques Masson
M. Jean-Claude Mazet
M. Raymond Nicolas
M. Henri Piot
M. Aristomenis Provelegios
M. Marcel Py
M. Olivier Ranson
M. Morton Rader
M. Brian Richards
M. Pierre Rosenberg
M. Bernard Reboul
M. Guy Rottier
M. André Roux
M. Chan Saipak
M. Richard Sjöström
M. Augustino Serralla
M. Joseph Zalewski
M. Jan Trapman
M. Roland Varlet
M. Pierre Vaugelade
M. Vasco Viera da Costa
M. André Wogenscky
M. Shadrach Woods
M. Jean Xenakis

Note: For 18 years a great number of apprentice-architects, exhibitors and students from more than 20 countries of Europe, Africa, Asia, North America and South America have also taken part in the studies and researches of ATBAT.

1
Masterplan for the FRIA town Sabende, Fr. Guinea, by
architect Michel Ecochard and V. Bodiansky (ATBAT)
Photo: Jean Biaugeaud

2
Bellevue-Ouest dormitory town, Constantine, Algeria.
An ARTECA project by architects Pingusson and
Bodiansky and ATBAT. 1960

3
Staff flats for the industrial firm FRIA in Sabende, Fr.
Guinea, by architects Lagneau and Weill with V.
Bodiansky (ATBAT) 1959-60
Photo: Jan Coussi (SETAP)





1

The work of Vladimir Bodiansky

Marion Tournon Branly

As captain of the ship, Vladimir Bodiansky has held the rudder in spite of the upheavals that have sometimes endangered the life of ATBAT. For eighteen years he alone has kept alive the initial impulse that has made this research atelier a kind of turntable for the young architects and technicians who have come to it.

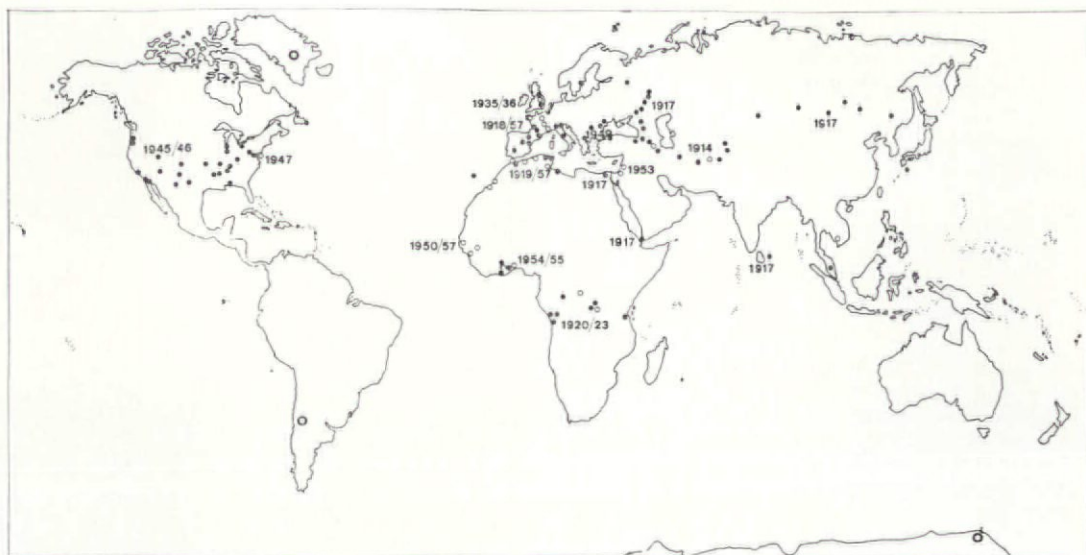
One has only to recall in a few lines the vital career of Bodiansky to understand that his deepest desire has always been to seek out, to use and to develop ideas that might lead to a development of forms linked to pure technique. He has always believed that team-work was necessary; that is why all the experiments of his life have been made in collaboration with architects, engineers and administrators.

In June 1914, as a young engineer in the Highways Department, he left for the Russian protectorate of Bokhara to take part in the construction of the strategic Bokhara-Kabul railway in Afghanistan. At the declaration of the First World War he became a cavalry officer and then a pilot-aviator in the Russian army. He ended the war as an officer of the Foreign Legion in the French army, attached to the ground and naval aviation forces. Released in 1920, he obtained in 1921 the Diploma of the Aviation Staff College.

He next went to the Belgian Congo as Chief Section Engineer of the Great Lakes Railways and worked out the master plan for the town of Albertville. Returning to France in 1923, he was attached, successively, to the research centre of Renault cars, where he played a part in designing the first French motor railway engines; then to the Caudron aeroplane company; and, finally, in 1925 he became the managing director of F. Villiers Aeroplanes, a post which he held until 1927. From 1927 to 1931 he directed 'Bodiansky Aeroplanes'. During this last period he designed and built several aeroplanes and hydroplanes, notably the Villiers aircraft-carrier hydroplane which brought to France three world records, some night fighter planes, a hydroplane for submarines, some seaplanes and finally the 'Type 10' Bodiansky aeroplane, the first French aeroplane with a slotted wing—and also several other craft.

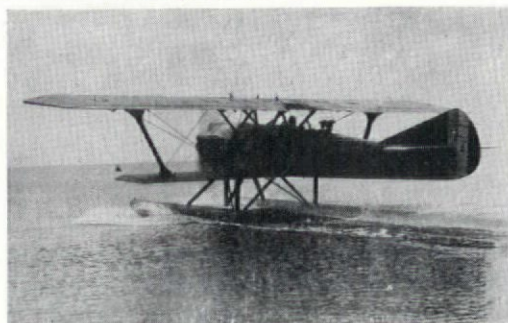
Between 1931 and the war of 1939 his main activity was in collaboration with the architects E. Beaudouin and Marcel Lods. A series of projects and achievements saw the light during this period:

In 1932 Drancy, in collaboration with E. Mopin, engineer; one of the first entirely prefabricated schemes. It was of great importance at that time, for it contained 1200 dwellings in one 'ensemble'.

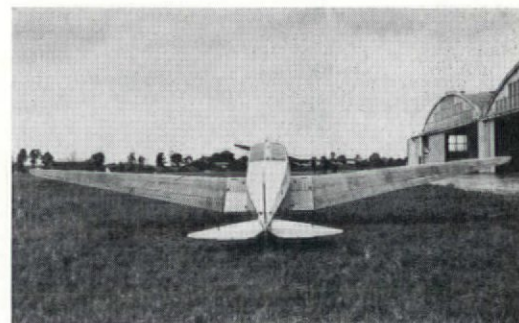


- Travels of V. Bodiansky
- Professional work of Bodiansky
- French Polar Expedition sites

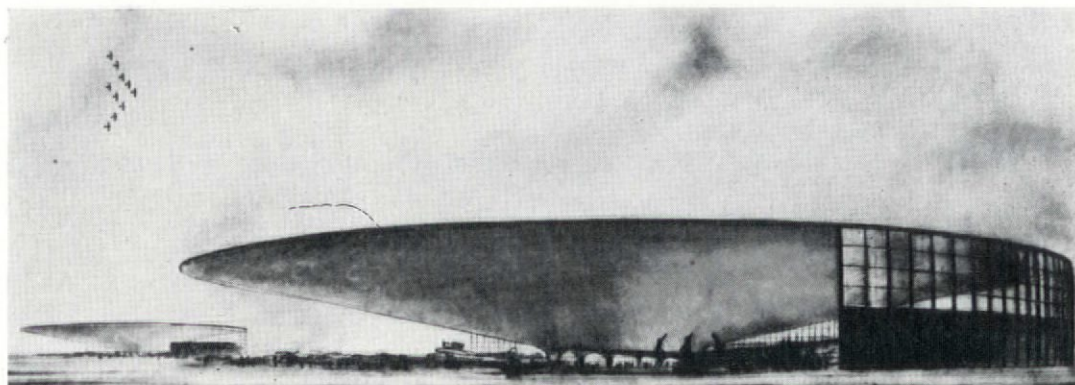
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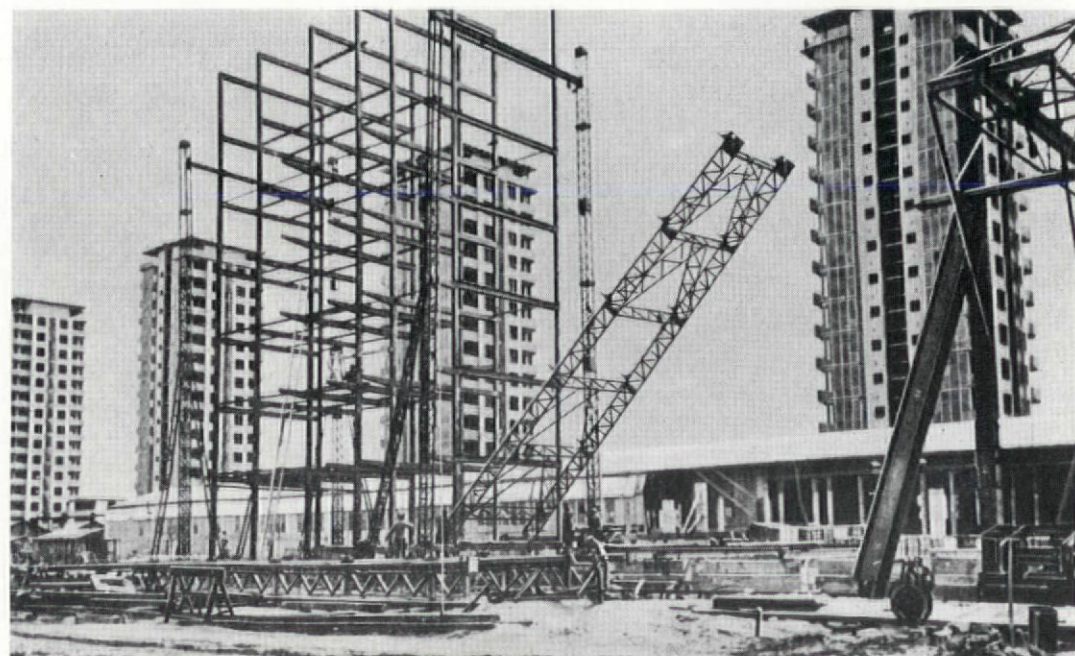
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6

In 1934, the OTUA competition; a large circular Exhibition Palace in Paris covered in simulated canvas, having a 420m diameter and roofing 13 hectares without intermediate supports.

In 1935; the building of the Clichy market (the *maison du peuple*) which still exists. This work was carried out in collaboration with Prouvé and Schwarz-Haumont as builders. The simple, essential lines of the architecture are married to the ingenuity of the engineering.

In 1937 Bodiansky was in Leeds (England), where from engineer he became managing director of Mopin & Co. Ltd. He designed and supervised with R. A. H. Livett the 950 prefabricated dwellings of the Quarry Hill housing estate in Leeds. He also designed at this time a competition entry for suspended highways with Azivessy and Nitzshke. In its form and its function this *avant-garde* project was in advance of our time. This period of activity before the war influenced the next generation very profoundly. In the years to follow, putting production aside, Bodiansky devoted his time to designing an aeroplane laboratory for testing three-wheel landing gear, and to very advanced projects of scientific research including an equatorial telescope 1.50m in diameter, without cupola.

1
Vladimir Bodiansky at work in his atelier

2
World map, showing the French arctic stations and the professional activities and travels of Bodiansky

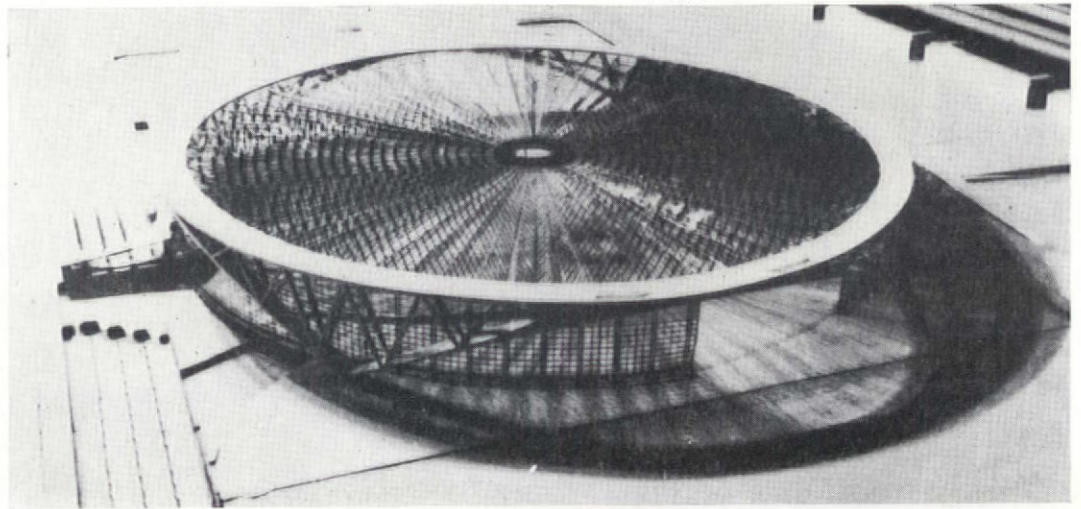
3 & 4
Seaplane Villiers IV 1926 and Bodiansky Type 2 1929, both designed and built by Bodiansky

5
1935/36 Circular aircraft hangar by Lods and Bodiansky

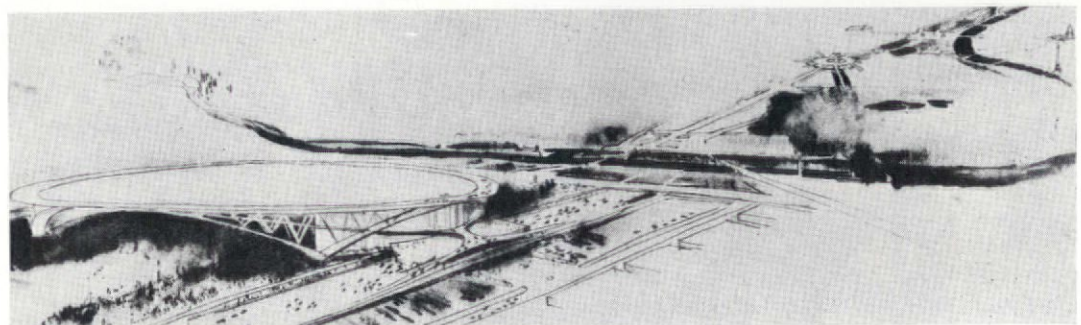
6
1932/33 Housing Drancy, by Beaudouin, Lods, Mopin and Bodiansky

7 & 8
1934 OTUA Exhibition building at Rond-Point de la Défense à Paris by Beaudouin, Lods, Bodiansky

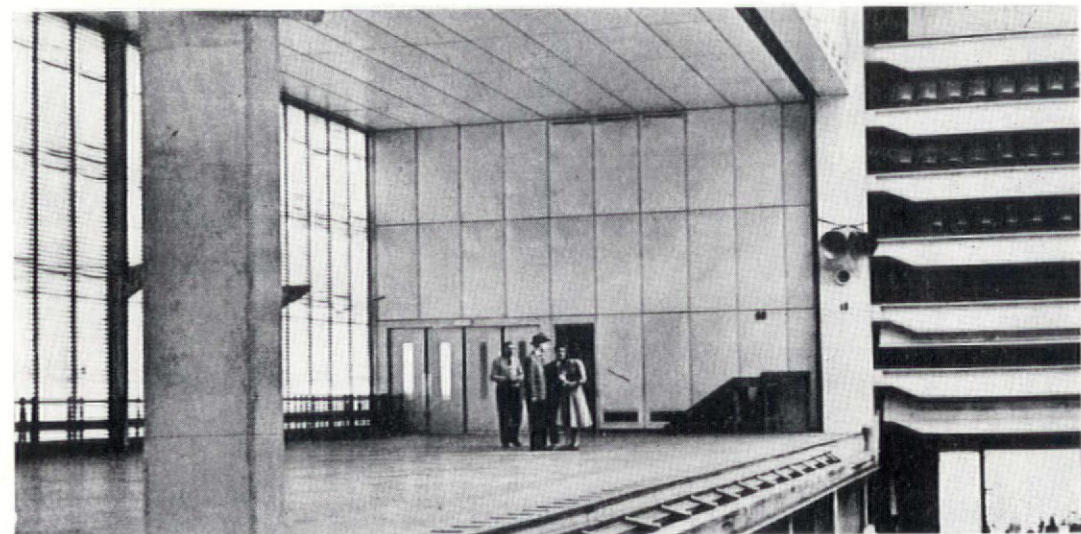
9, 10 & 11
Maison du Peuple, Clichy, Paris by Beaudouin, Lods, Prouvé and Bodiansky



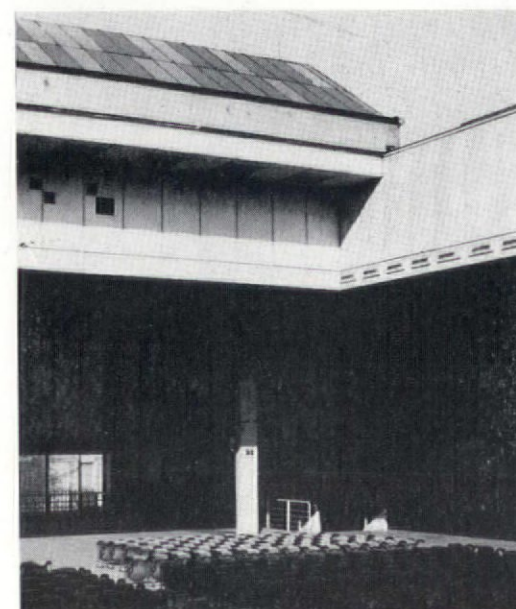
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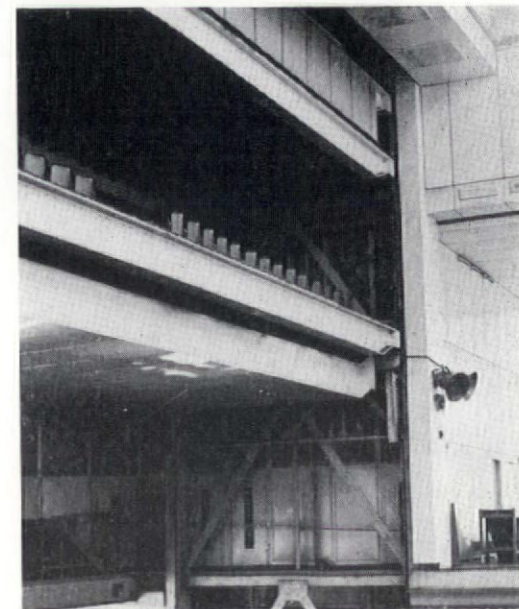
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11

Extract from 'Charte de l'Habitat' — 1953–1958

Published in L'ARCHITECTURE d'AUJOURD'HUI
CONSEIL INTERNATIONAL DU BATIMENT
ASSOCIATION INTERNATIONALE DE L'ECONOMIE COLLECTIVE et adoptée par le
CERCLE D'ETUDES ARCHITECTURALES

FORMS AND TECHNIQUES

Every human work has three aspects:
Functional — Aesthetic — Rational.

They cannot conflict if creative thought is simultaneous.

Man creates useful forms which he materializes by means of Technique.

There is a hierarchy:

THOUGHT—EMOTION—TECHNIQUE

The boldness of ignorance imitates and creates arbitrary forms.

FORMALISM TAKES THE PLACE OF ART

Then follows slavery to experience which is nothing but a morbid perception of difficulties.
Forms are imposed by Technique.

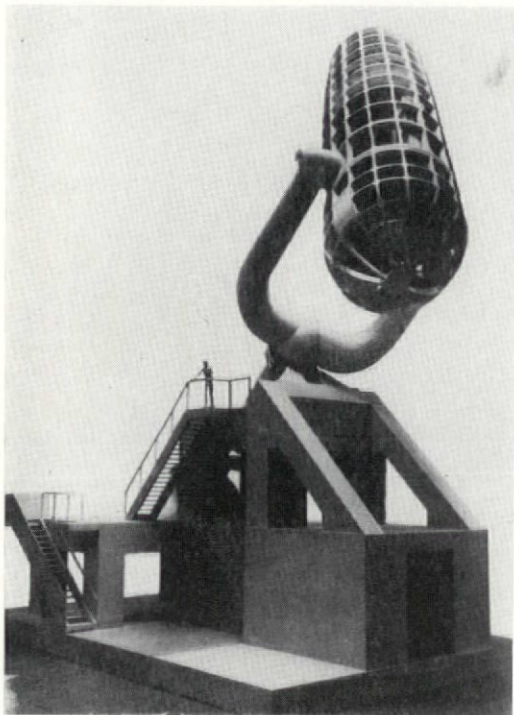
ART GIVES WAY TO CRAFT

And finally, for a chosen few or homogeneous teams blending "Art and Knowledge", comes "Mastery".

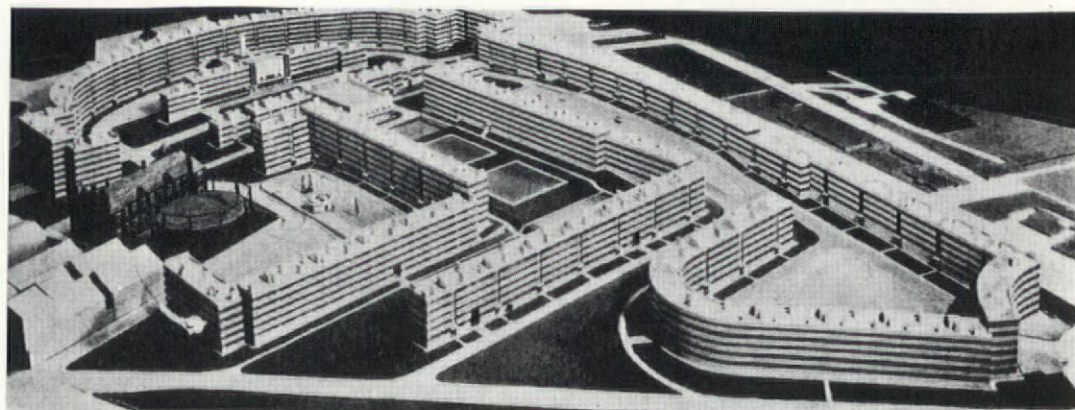
Technique is dominated, it becomes a tool.

THIS IS ARCHITECTURE

V. Bodiansky



1



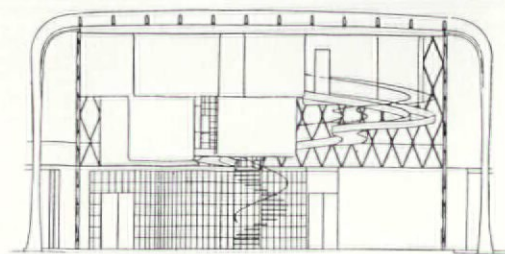
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1 1941-42 Project for a 150cm equatorial telescope for the observatory of Pie-du-Midi-de-Bigorre.

2 1936-37 Quarry Hill flats, Leeds. Prefabricated construction by Bodiansky of Mopin Ltd, with R. A. H. Livett

3 Project for the 'Maison Suspendu' by Paul Nelson and Vladimir Bodiansky

4 Project for the 'Palais de la Découverte', Paris by Paul Nelson, Oscar Nitzschke, Frantz Jourdain and Bodiansky



3

Immediately after the war Le Corbusier formed the first French town-planning and housing mission to the United States. He invited Bodiansky to take part, with Ecochard, Sive, Emery and Hanning. For seven months this mission travelled across most of the States by car.

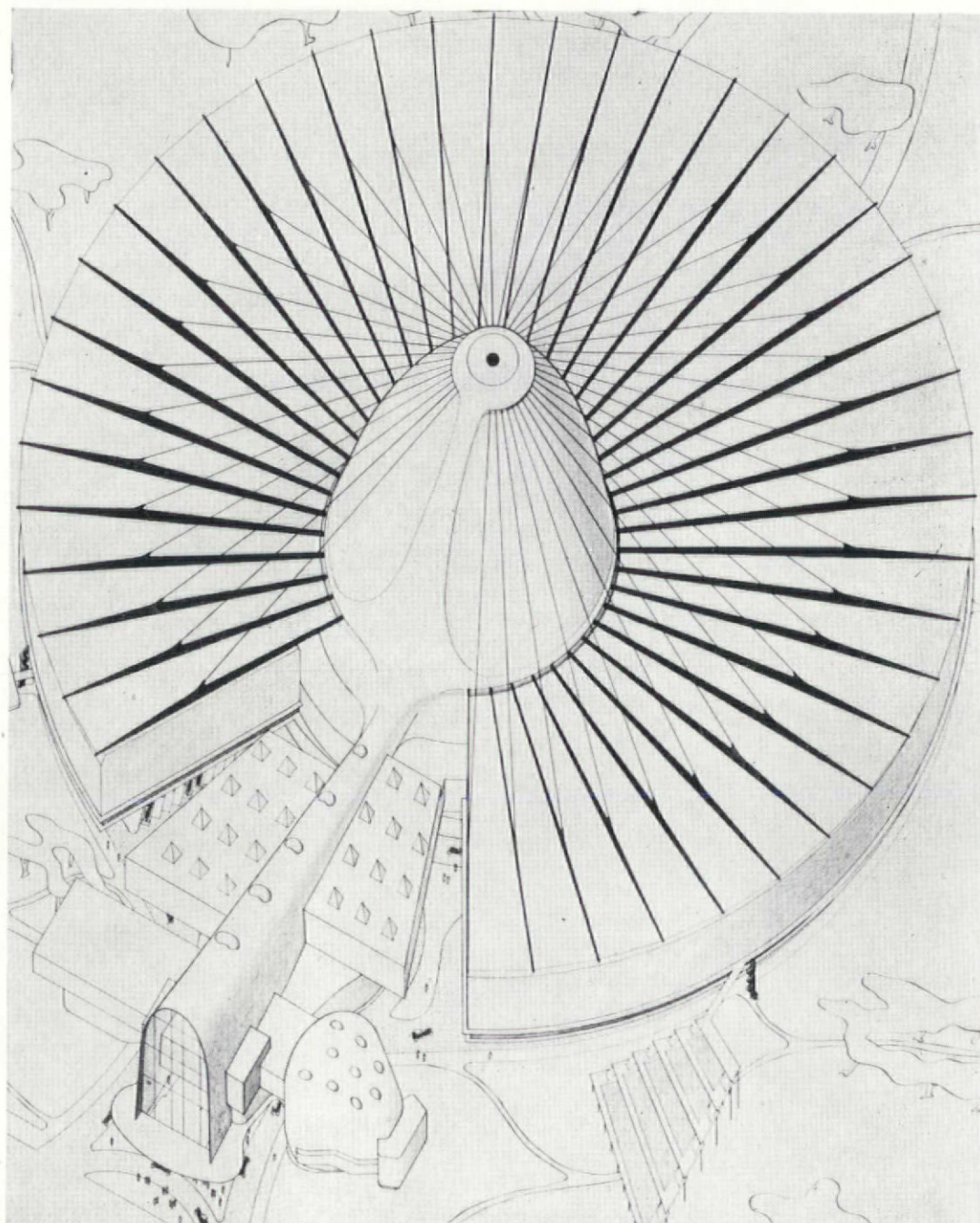
Shortly afterwards, Le Corbusier initiated the Marseilles project for the Unité d'Habitation and, at the end of 1946, ATBAT was formed. This project was to be the first big project for the atelier. From that moment Bodiansky, aided by Lefebvre on the administrative and financial side, has not ceased to be the soul of this atelier. If he is consulted independently in some matter, he never fails, in one way or another, to involve ATBAT.

We shall consider his career, in connection with the atelier as one involved in a sequence of parallel events of great importance. Thus we find him working on the Unité d'Habitation at Marseilles, while he is at the same time technical adviser on the hospital of Saint-Lô. This block was built by Paul Nelson, a great specialist in this problem, in collaboration with Sebillote, Gilbert and Mercier, with the medical assistance of Dr Bridgman.

Again with Paul Nelson, Bodiansky took part in the experimental projects for the 'maison suspendu' and the 'Musée de la Découverte' in 1948-49. In 1946-47 he was the adviser to the Monnet Plan. Then he was invited to take part in working out the project for the United Nations building in New York. He was one of the technical consultants within a team of fifteen architects and engineers, supported by an American technical office. The whole project was directed by Harrison, the French architect being Le Corbusier.

The Le Corbusier Marseilles Unité having been completed by the end of 1951, ATBAT continued its activities in France and in Africa. These were the years spent in Morocco and Algeria, full of promise; all too soon to be stifled by the Arab problem.

Bodiansky, still with ATBAT, was also technical consultant for the first project of Marly-Grandes-Terres, with Lods, Arsène-Henry and Honneger.



4

From 1949 to 1955 he was passionately interested in theoretical research. The reports to the Housing Committee and especially *La Charte de l'Habitat*, begun in 1953 and subsequently published by the Cercle d'Etudes Architecturales, was to be one of his great preoccupations.

It was after the formation of the team Candilis, Woods, Josic that he served with numerous missions of the Technical Committee of the United Nations and gave the whole of his energy to the design and carrying out of the French polar stations in Adelia Land in Greenland, and for the French high altitude stations in the Andes.

We cannot sufficiently stress Bodiansky's very strict and personal views on prefabrication, on how much they are appreciated when he communicates them to the students of the Camelot-Bodiansky atelier, for both are elected by the students as co-patrons of the atelier.

The years 1959 to 1961 were those of great achievement, sometimes in competitions. First Bagneux, with the team Bodiansky, Gillet and Gomis; then Annassers, with Hanning, Bossu and Gomis; and then Dame-Blanche, a vast project for which, initially, J. de Chalendar was responsible. There were also many now completed projects in Guinea with Ecochart, Kalt, Pouradier-Duteil, Vignal, Lagneau, Weill, Bodiansky serving as technical consultant for the town of Sabende, part of the Pechiney industrial combine of FRIA.

In the years 1961-62-63 Bodiansky was entrusted with four missions to Cambodia as Expert of the Technical Committee of the United Nations. Dealing with numerous designs and completions relating to the development of this country, in a record time of eighteen months, under the direction of Vann Molyvan, DPLG, architect and Minister of Public Works, and in collaboration with French and Cambodian architects and technicians, Mean Kimly, engineer, Um Samouth, Duchemin and Morin, architects, and G. Hanning, town-planner, he carried out, among others, the South-Asia Olympic Games complex at Phnom-Penh.

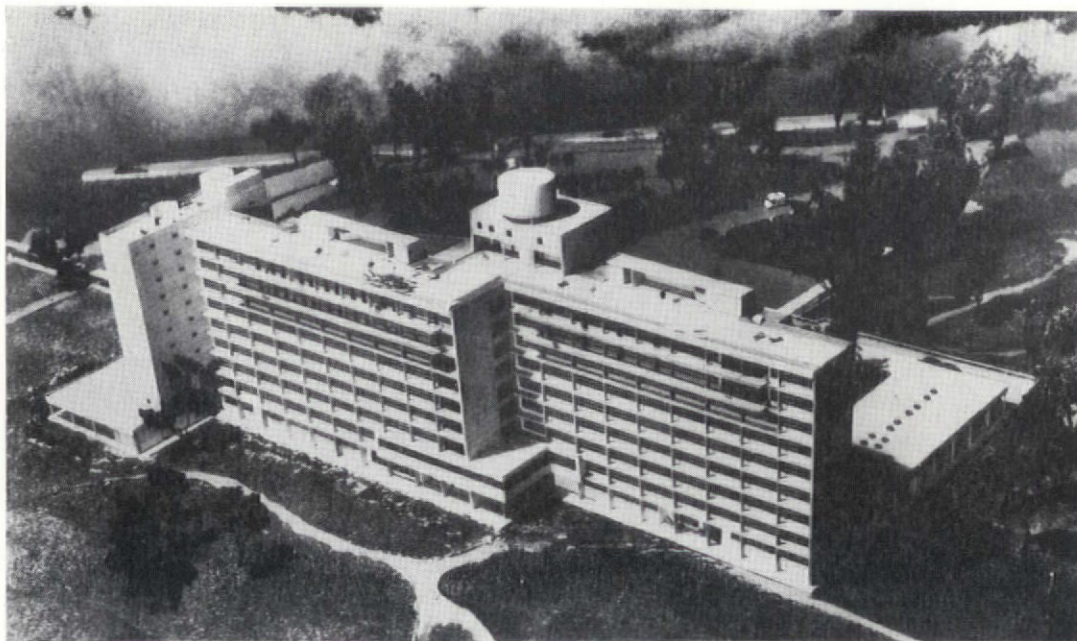
He is co-rapporteur of the work group 'Urban Development and City-Planning' of the Housing Committee of the UN in Geneva; corresponding member of the French Society of Town-planners, member of the International Building Council (CIB). He received the gold medal for architecture from the Society for Encouragement to Art and Industry in 1959.

May it satisfy those who are convinced of the urgency of teamwork in our times, to reflect on the extraordinarily fascinating life of Bodiansky, consulted on many occasions when it has been a question of *avant-garde* projects or realizations. His mere presence has brought the light and the faith of a scientist, sensitive to architecture as a creative source which must conform to the demands of engineering.

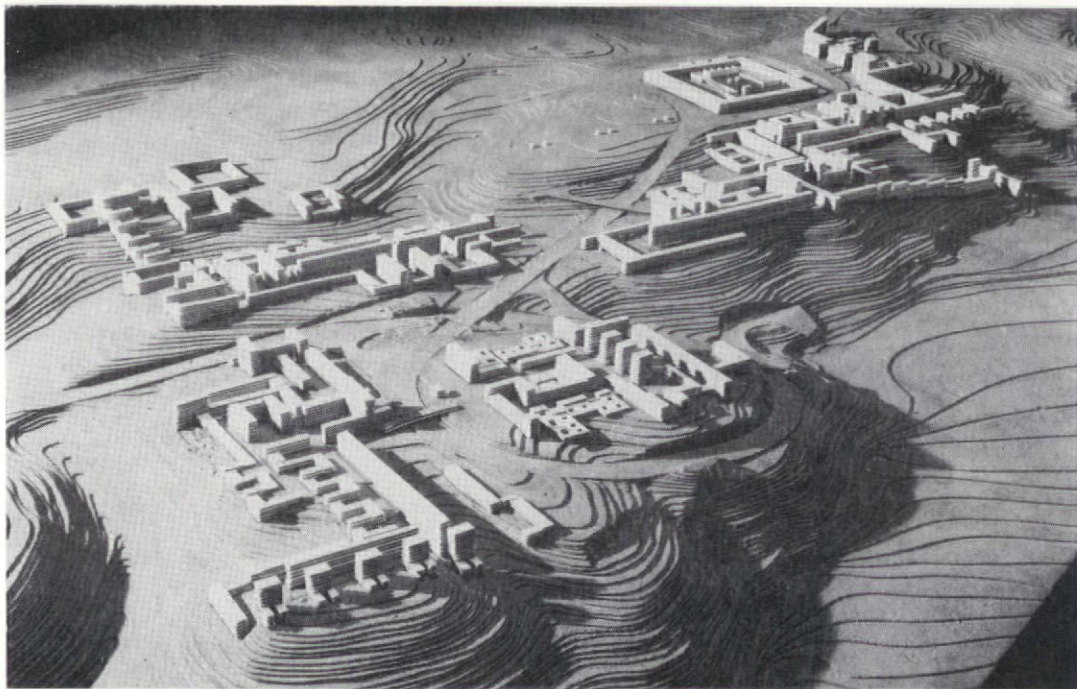
6
1946-48 Franco-American Memorial hospital at St Lô
Paul Nelson, architect, in collaboration with Sebillote, Gilbert and Mercier. Bodiansky acted as technical consultant

7
1959 Project for Annassers, Algeria, by Bodiansky, Gomis and Bossu, in collaboration with Dulloz and Hanning of the Bureau du Plan d'Alger

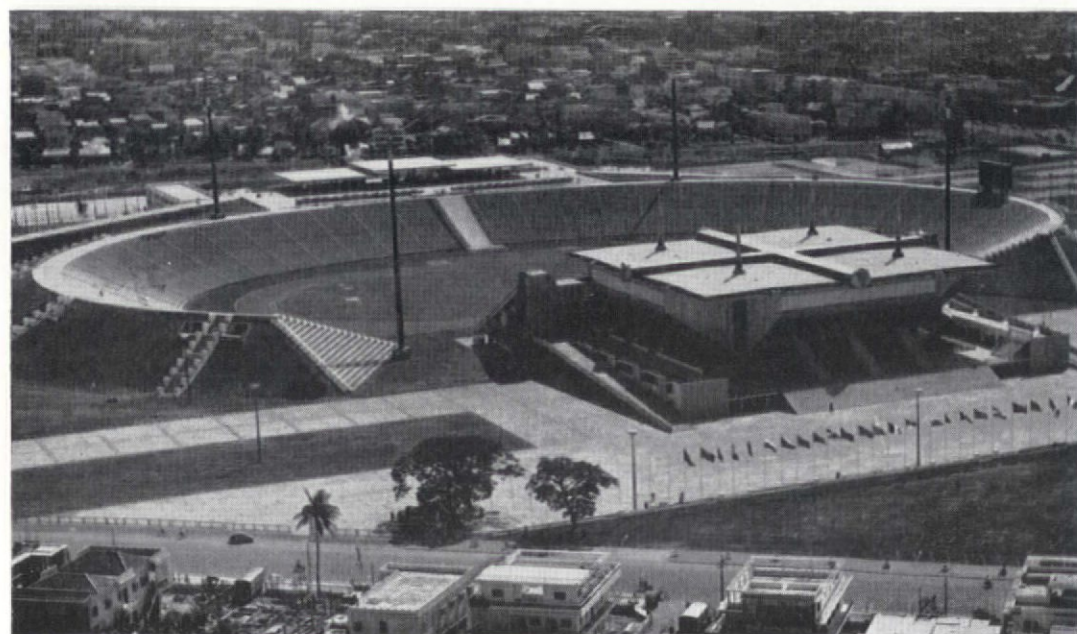
8
1963-64 Stadium for the 3rd SEAP games at Phnom-Penh, Cambodia by Vladimir Bodiansky



6



7



8

Atelier André Wogenscky

André Wogenscky has worked both as a member of ATBAT and in collaboration with Le Corbusier. His own work is a straight development from the thinking of Le Corbusier. In the following essay he outlines his present views on the social implications of architecture.

Thoughts on an active architecture

Each year I become more and more profoundly convinced that architecture is 'active'—by which I mean that it works on men.

Today one understands quite well that it does not consist simply in solving the technical problems of construction and in 'decorating' this construction to make it 'beautiful'. One perceives that it is much more than that. Taken in its widest sense, which embraces town-planning no less than industrial design, it is an actual organization of our physical milieu and of what belongs to it. Our physical milieu grows less and less natural, more and more artificial, and progressively more 'constructed' and, for this reason precisely, more and more organized; 'organization' being taken in its widest sense to mean the 'creation of organized bodies'.

Yet what still too often escapes our attention is that this organization does not stop simply at introducing order into the material of our milieu, but that it 'activates' both the material and the milieu—'influencing' these by the mere fact that they are organized.

In organizing our milieu, architecture renders it active, at first affecting our health by the conditions with which it surrounds our organic life.

It also influences all our activities, even our simplest individual movements, which are facilitated or hampered, or even prevented by its presence. The proportions and the dimensions of this milieu are facilitated or inhibited; the milieu itself made more economical, and ultimately more efficient by town and regional planning. This already suggests the powerful and complex potential effect of architecture upon society.

Yet this effect appears still more profound and penetrating once one realizes that architecture also acts on our thoughts. This idea should be developed at a greater length than is possible here. In reality, it is seen as a result of the effect of the physical milieu on our psychological behaviour patterns.

I am absolutely convinced that architecture exerts multiple effects on our psychological life and on our spiritual behaviour patterns, from our individual thoughts (even from early childhood) right up to the collective thought and the social behaviour patterns that play so important a part in our contemporary life.

It is in this sense that the architecture of social centres has a great role to play, and the architect therefore has in designing these centres very great responsibility.

When he is designing a social-centre project, the architect must not rest content to organize it only from a functional point of view, giving to it forms and dimensions that are merely appropriate to the activities destined to take place in it. He must also be concerned (and this is not always easy) with the multiple effect that his architecture will exert on the thoughts of those who use his centre.

The social centre is going to 'envelope' groups and this 'envelope' will not only be a shelter for bodies, it will be a 'form', surrounding and containing minds and speaking a language to them, playing a 'music' to them which these minds will take in. It is a continual exchange between the architecture and the minds. And, according to the forms, dimensions, proportions, rhythms, materials, colours, harmonies, and cadences created in space—all these individual and collective thoughts are going to absorb a thousand influences, a thousand forces, a thousand energies. That profound impression that we feel, that warmth which invades the body and the heart and which we exteriorize with these simple little words 'it is beautiful', is nothing but the syncretic result, the sum, the total of all these influences absorbed, a kind of resultant, a synthesis of all the others, which does us good, which is positive, and which proceeds in the same direction as our aspirations and our hopes, which adds a little strength, a little energy to our inner life, to our need to grow, to our inner tension, to our continual effort to broaden our faculty of thought.

So, through its architecture, the social centre will itself be a living being, and like all living beings, it will have a face, a physiognomy. It will be a presence in the city. One will meet it with pleasure when passing by it. Perhaps one will say 'Hallo' to it. It will reply to us: because it will not only be there to welcome and enfold those who enter. It will also be there to say, even to those who are only passing by, that it exists, that it is present and that it is generous. Through its architecture it will have the value of a collective representation, of a symbol. It will say that the city is not merely utilitarian, but that it is also made for thought, for the mind. It will say that the heart of the city is no longer simply 'business' or the 'administration' or the buildings that these functions occupy, but that it is also the place of meeting, of relationships, a cross-roads set at the very centre of the community; that tomorrow the cultural centre will be the true heart of the city and that its architecture will be its radiant face.

Today the process of the formation and development of towns has stopped. And yet the introduction of mechanical speeds and, above all, the evolution of our needs, tendencies and aspirations, call for a profound modification in the structure, the form and the material organization of our towns.

This modification is possible. Today it is possible to reconcile the dense built-up area with a return to Nature, to the provision of green spaces, and sun, for all the inhabitants. It is possible to reconcile family privacy with a collective organization. It is possible to solve the problems of circulation and parking. It is possible to reconcile industrial decentralization with the close link that must exist between factories and towns.

Town-planning and architecture are not inert and passive. By virtue of the organization that the architect and the town-planner can give to them they are active. They have an effect on men—too often baneful—which can be salutary. This effect is complicated; one must know it, one must analyse it. It has aspects that are too little known, too rarely recognized. It is possible that this effect is profound and contributes largely to a recognition of our individual and social life. This point of view can lead to an efficient town-planning and architecture. It also leads to a new philosophy of architecture and of the architect's profession.

House St-Remy-les-Chevreuse

This is the dwelling of the architect and his wife, the sculptress Marta Pan. The house comprises a living room with kitchen, a sculpture studio, a study-cum-library, a parents' room, with dressing room and bathroom, two small rooms for children or friends, and a garden roof terrace.

Apart from the children's rooms which, on account of their function, are separated and isolated, the house is not made up of separate rooms, but of a large interior space open to the south. There are two voids running through the two storeys to produce two high spaces—one in the living room the other in the studio.

The more intimate spaces, the rear of the studio, the dining room, etc., have low ceiling heights (2.26m).

The whole house is thus organized so that each function in the house has its correct place, but the spaces interpenetrate and the eye passes from one to another and discovers an incessant play of perspectives and proportion.

Sliding panels can be slotted into grooves in the floor and the ceiling to split up the room. As the occupants have no domestics, the kitchen is organized on the basis of the work process and the movements involved in cooking, etc.

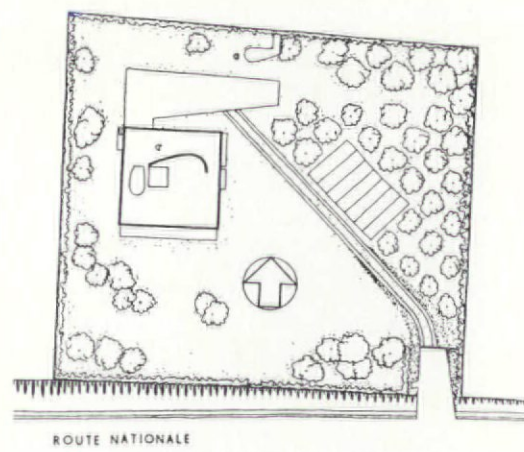
The bedroom is very small. The bed is situated close to three small windows designed with a view to light and ventilation. A large cupboard separates the room from a space which serves as a dressing room, off which the bathroom opens.

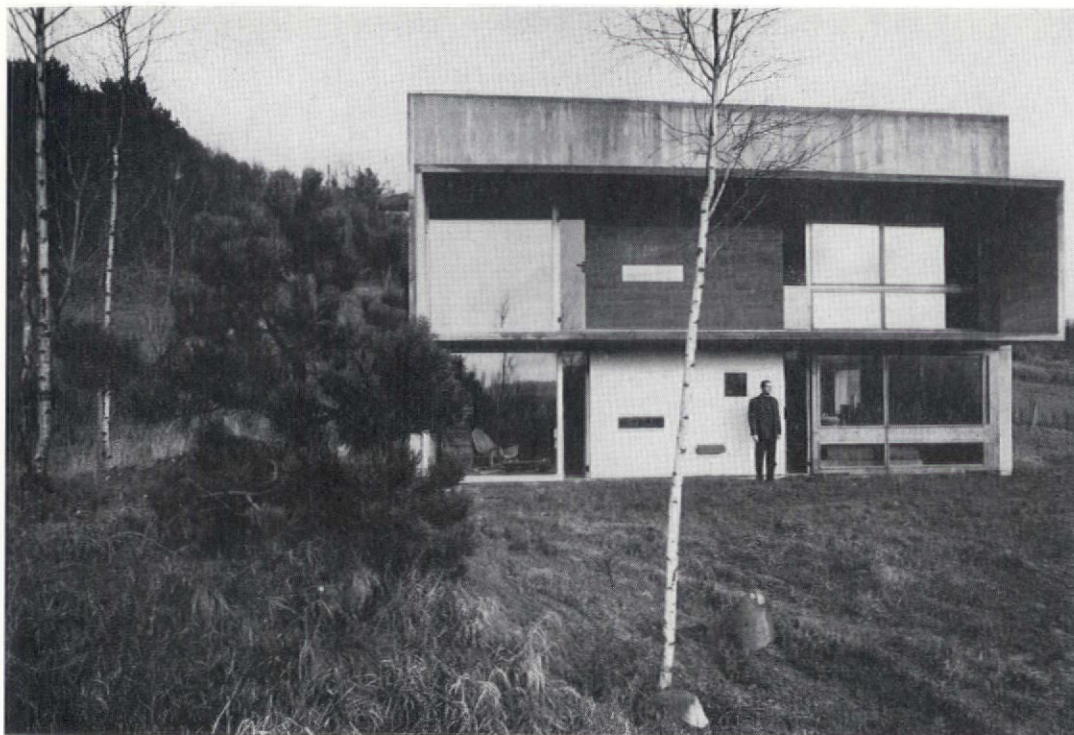
Both internally and externally, the aim was to achieve an architectural dynamic through the combined play of forms, dimensions, proportions and rhythms, emphasized by the contrasting materials and colours.

Externally limestone flags, rough concrete, either plain or painted, was used in conjunction with glass and natural wood.

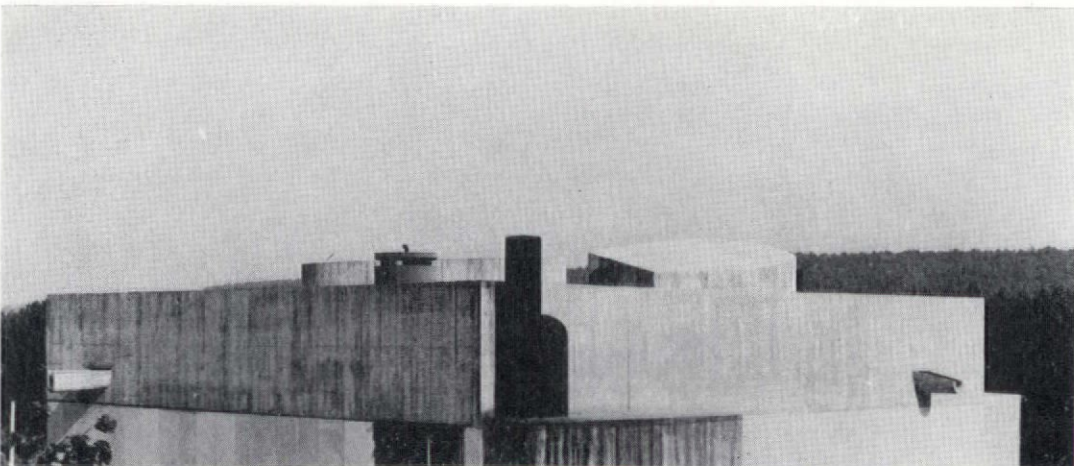
Internally extensive use was made of rough concrete, either plain or painted, and again glass and wood.

- 1 Site plan
- 2 General view of Wogenscky house
- 3 Interior of studio
- 4 Roofscape of the house
- 5 Interior of living room

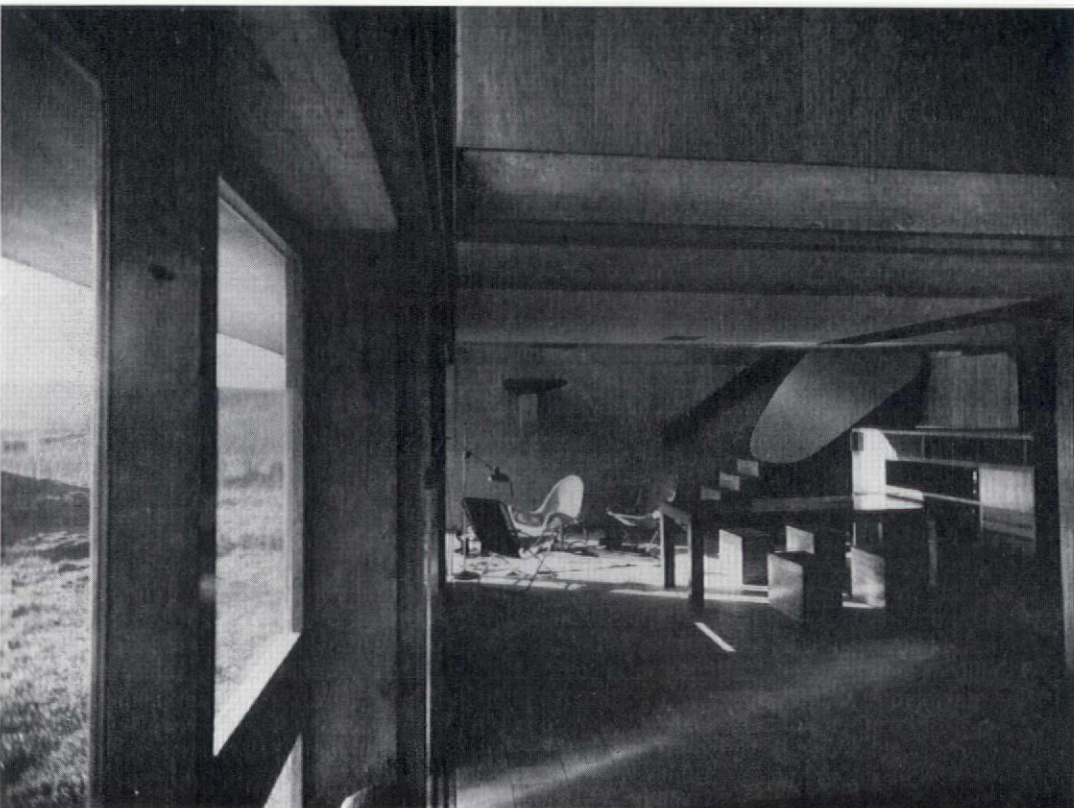




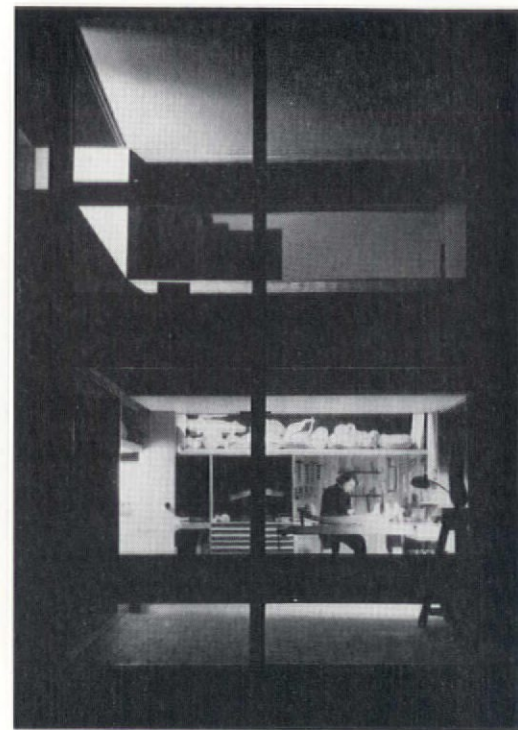
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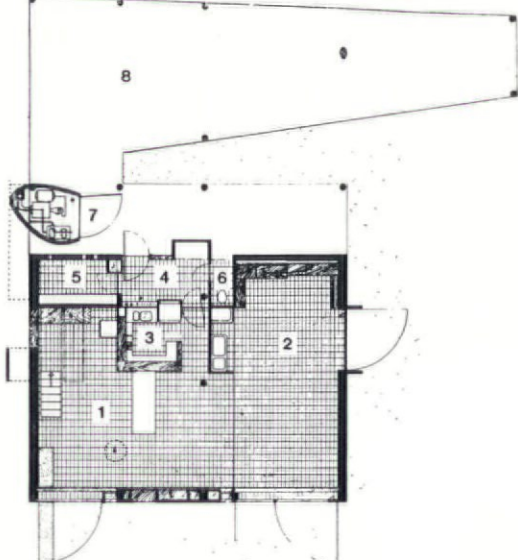
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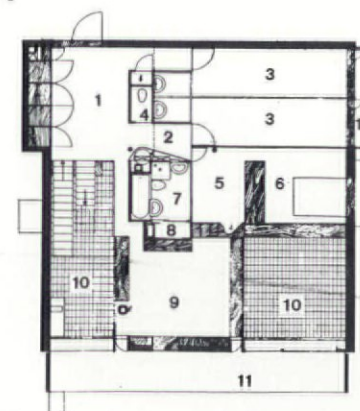
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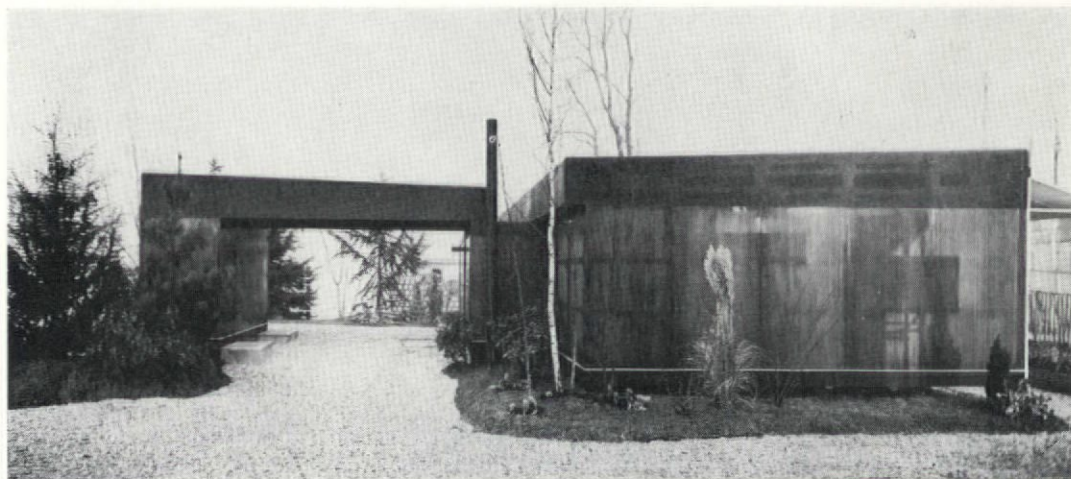
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Ground floor plan of the house

- | | |
|-----------|-----------------|
| 1 living | 5 dressing room |
| 2 studio | 6 w.c. |
| 3 kitchen | 7 storage |
| 4 entry | 8 car port |

First floor plan

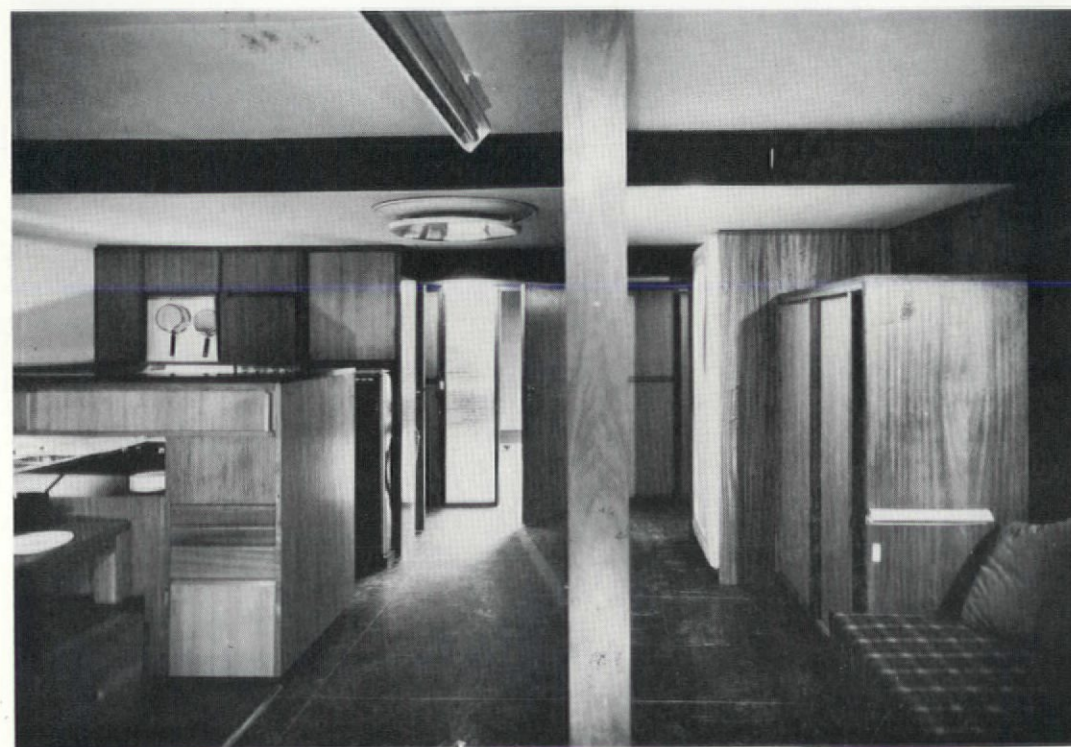
- | | |
|-----------------|-----------------|
| 1 landing | 7 bathroom |
| 2 entry | 8 cupboard |
| 3 small bedroom | 9 study/library |
| 4 w.c. | 10 void |
| 5 dressing | 11 balconies |
| 6 main bedroom | |



1



2



3

The 'Mex' house, 1961

'Family life goes through continuous change during the life of a family, beginning from the first few months before marriage and going on until the closing of death... this evolution, starting with the initial core—the single man's lodging or that of the newly married couple—has two phases:

(1) The enlarging of the dwelling up to the moment when the man, having four wives (the maximum figure) and none of his children yet being married, will occupy a degree of development in living space which will not go any further.

(2) As the sons get married and the wives die (or go away after the divorce), a diminution occurs that can go as far as reducing the dwelling to a single room... etc.'

Were it not for a few evident allusions to polygamy and tribal sociology, this text, extracted from a thesis on ethnology¹, could be applied, word for word, to the conceptions that have inspired André Wogenscky and his team in designing their Mex extensible house.

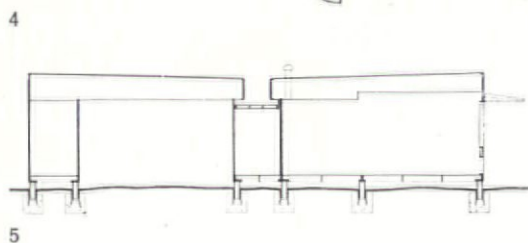
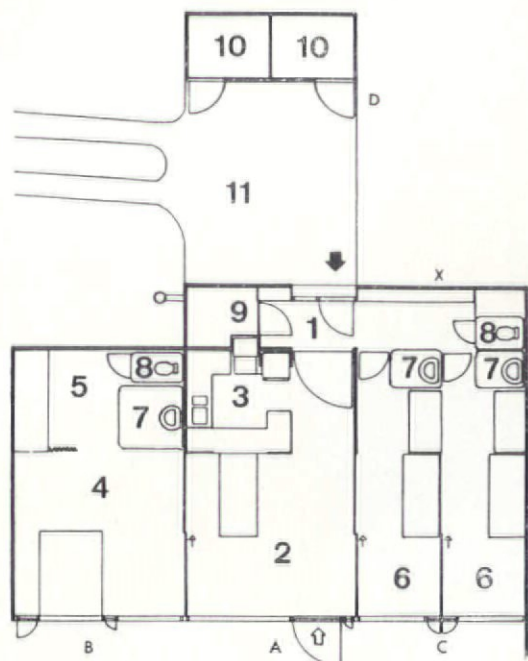
Based upon simple elements, André Wogenscky has conceived a type of housing indefinitely extensible, composed (as presented to the 'Arts Ménagers' Salon 1961) of three standard cells: The A Cell or living room, including a kitchen unit directly linked to the living space through a double system of sliding cupboards, that gives access to the dishes. The position and size of the kitchen unit calculated according to human measurements permits the person engaged in cooking not to be isolated from the rest of the apartment.

The B Cell, or the parents' room, is separated from the living room by a sliding partition and is itself divided in two by a curtain. It contains a private corner with a toilet unit and a big and deep wardrobe. The bedroom itself has a large window with vertical slates for better air conditioning. Once the sliding partition is pulled, the bedroom extends the living space.

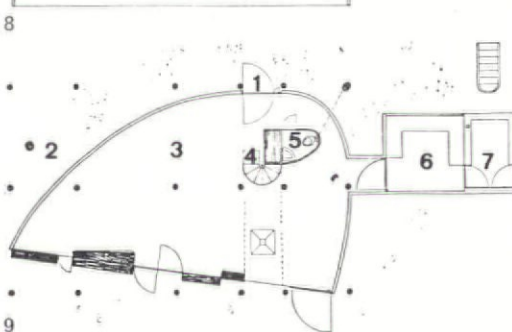
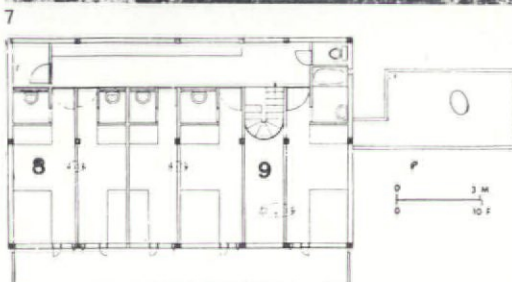
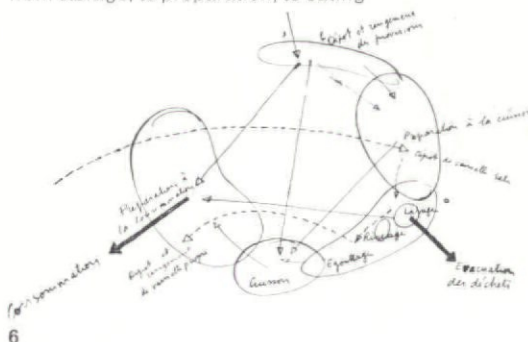
The C Cell provides two small bedrooms, side by side lengthwise, permitting each member of the family to enjoy a certain isolation: positions of beds, wardrobes, shower and studying desks have been considered. Wherever the moving partition that separates the two rooms is opened, the children will have a corner to play and thus are able to be separated from the living room and have a certain independence.

With the X elements that form the way of access to rooms and the D element, the penthouse-garage standing on a double cellar, the Mex extensible house can be adapted to all the needs of the family: from a kitchenette for a single person composed of one or two elements, to the motel using all the C and B elements. Furthermore the contractor insists upon the fact that he does not propose a prefabricated house of a given type but many prefabricated removable cells of which the final mounting disposition is the buyer's choice. André Wogenscky has made up for the inconveniences of serial fabrication by making only the parts prefabricated, not the whole. He thus avoids the monotonous generalization of a single kind of habitation, and allows for particular needs and tastes as well as for geographical and topographical necessities.

¹Jean-Paul Lebeuf: *Habitation of the Fall*. (Hachette ed.)



- 1 Drive-in entry and car port to the Mex house; storage units are situated on the left-hand side
- 2 View of the house on the living room side
- 3 View of the kitchen and entry from the living room
- 4 Plan of the Mex house
- 5 1 entry
- 6 2 living room
- 7 3 kitchen
- 8 4 main bedroom
- 9 5 dressing room
- 10 6 small bedrooms
- 11 7 toilet/wardrobe
- 12 8 w.c.
- 13 9 heating
- 14 10 storage
- 15 11 car port
- 16 5 Cross section through house, car port and storage
- 17 6 Diagram of circulation of food, during the process from storage, to preparation, to eating



- 7 A general view from the south of the house at St Brévin L'Océan
- 8 & 9 Upper and ground floor plans respectively
- 1 entrance
- 2 curved screen wall
- 3 living space
- 4 staircase
- 5 w.c.
- 6 kitchen
- 7 utility
- 8 main bedroom
- 9 void

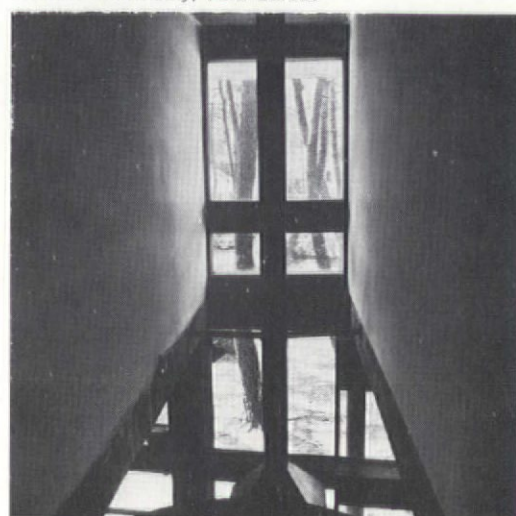
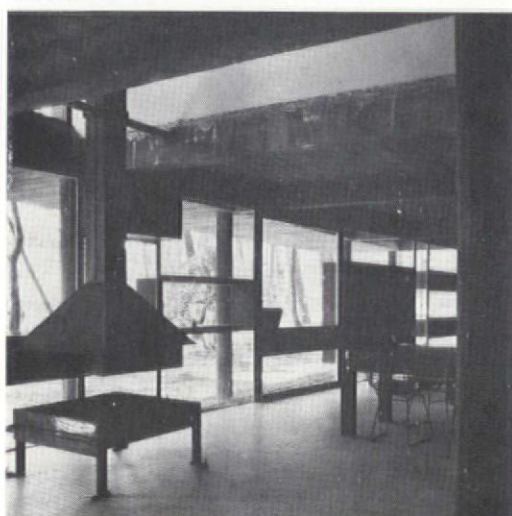
House at St Brévin L'Océan

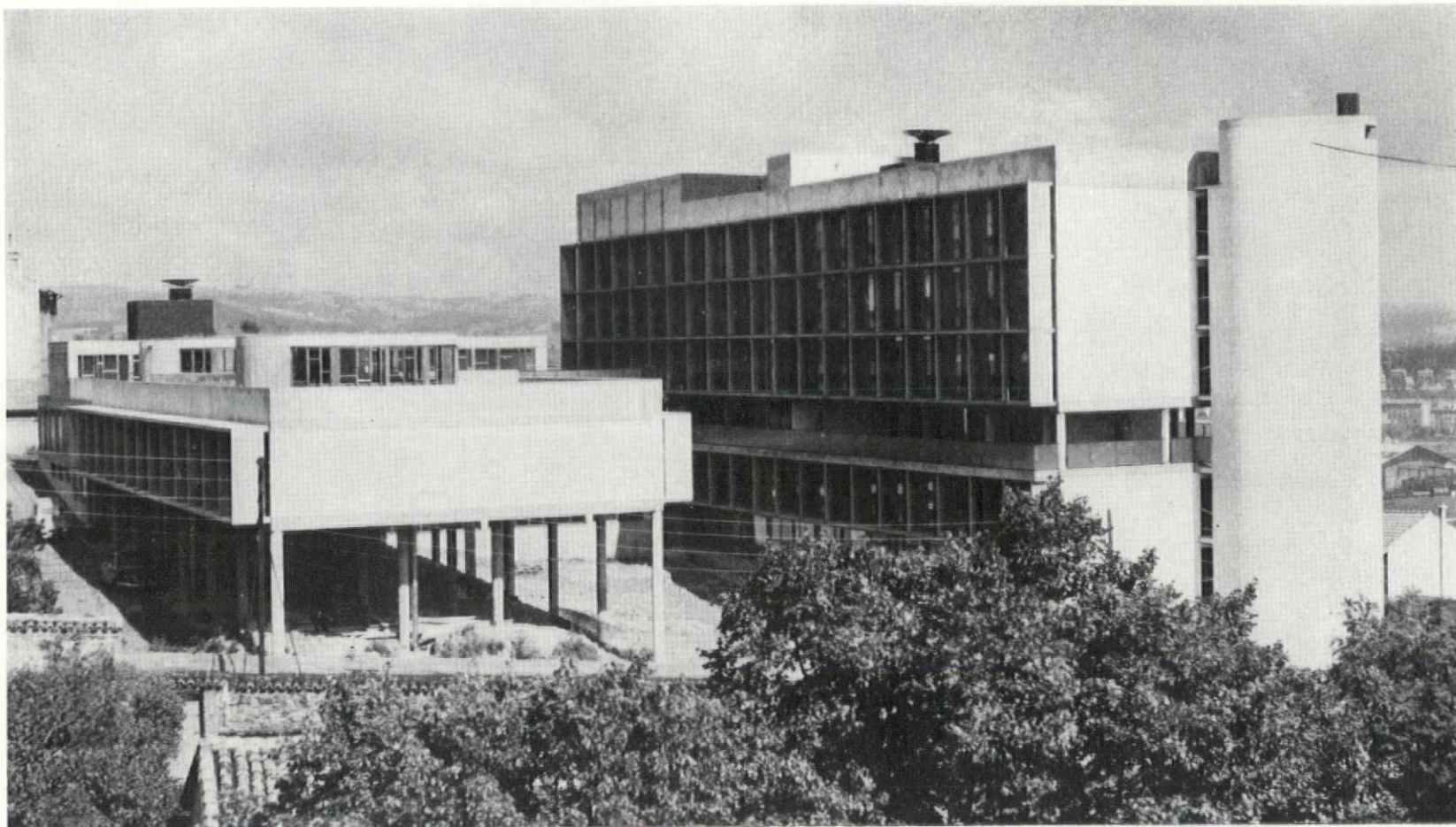
This holiday house is situated not far from a beautiful beach on the Atlantic ocean on a large site planted with pines. It demonstrates clearly Wogensky's concept of free internal volumes set within a simple general form. A large living room of 60m² is situated at ground floor level under the piloti. This room is bounded by a curved wall on its northern side—remaining fully open on the south! This room is inscribed within the piloti of the block determined by the plan of the bedroom floor over. The living room is linked spatially to the bedroom corridor via a double height void within which the circular stair is placed.

The parents' bedroom is separated from the children's bedroom by the staircase void. The house is constructed out of reinforced concrete.

- 10 A general view of the interior of the living room
- 11 A view of the void—looking down into the living room from the bedroom level

Photos: Pierre Joly, Véra Cardot





Hostel, St Etienne

It was difficult to meet the requirements of the programme on this narrow sloping site and still avoid creating a 'barrack'-like structure. The programme required the separation of three groups of dwellings, for the young, the middle aged and the older worker all to be accommodated in single rooms. The solution provides a separate wing for each group, the wing of the youngest on one side, the wing of the middle aged and of the oldest group on the other. The wing of the oldest (three storeys) is placed over the wing of the middle age group (two storeys) separated from each other by an open storey. The remaining wing, one storey on columns, is situated exactly in the same horizontal plane as this 'open floor' and therefore has no counterpart at its level. Thus from the windows of their dormitories the youngest see a very beautiful landscape 'through' the split wing opposite. Closing the plan into the form of a 'U', is a low connecting wing which contains all the communal services.

A very simple architectural concept was used in communal areas, in particular, the meeting rooms and the rest rooms, etc. They are set in a large open floor, and are simply surrounded by curved walls, without doors, the entrances being designed as overlaps to avoid through-view and noise. This immediately creates very plastic forms which envelope certain chosen spaces. The effect of these forms on the occupants is intended to be conducive to rest, relaxation and leisure.

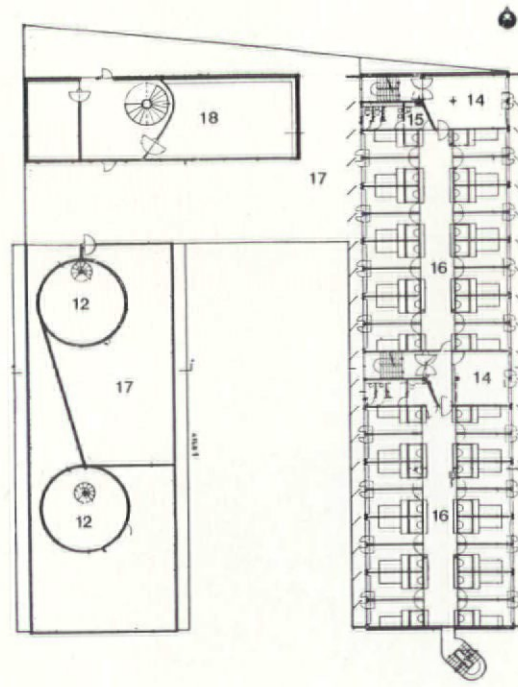
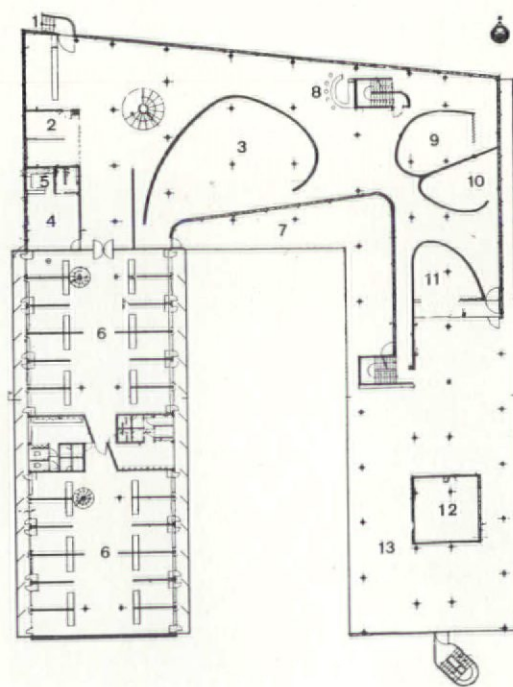
The small individual rooms were very carefully studied in respect of forms and proportion, and of internal organization. Very gay, even violent, polychromy has been used in the interior of the public space, employing such combinations as yellow, green, red and grey.

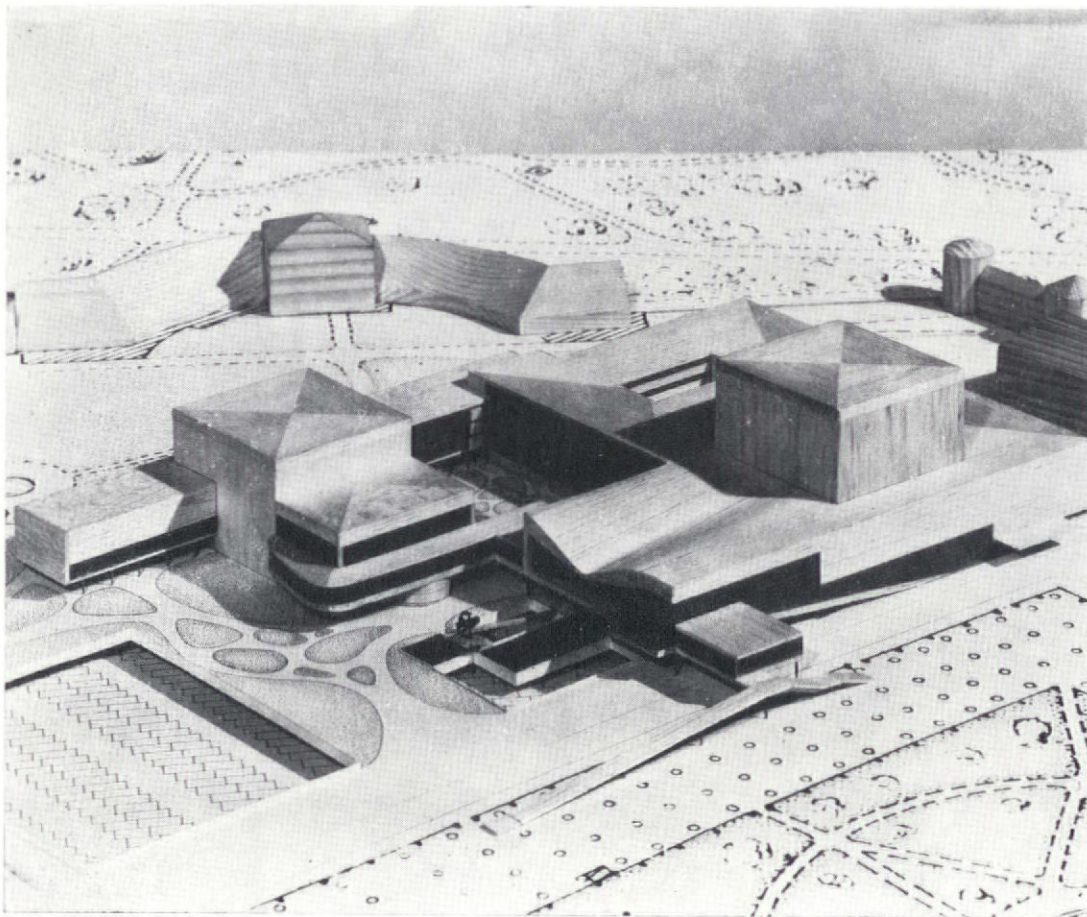
1 View of the whole complex from the south-west

2 & 3

Plans at the level of the open storey and grassed roof terrace level respectively

- 1 reception and entrance
- 2 office
- 3 assembly hall
- 4 studio
- 5 kitchen
- 6 12 bedroom/group
- 7 terrace
- 8 bar
- 9 television
- 10 records (music)
- 11 music
- 12 reading room
- 13 open floor
- 14 common room
- 15 kitchen
- 16 16 bedroom/group
- 17 grass terrace
- 18 library





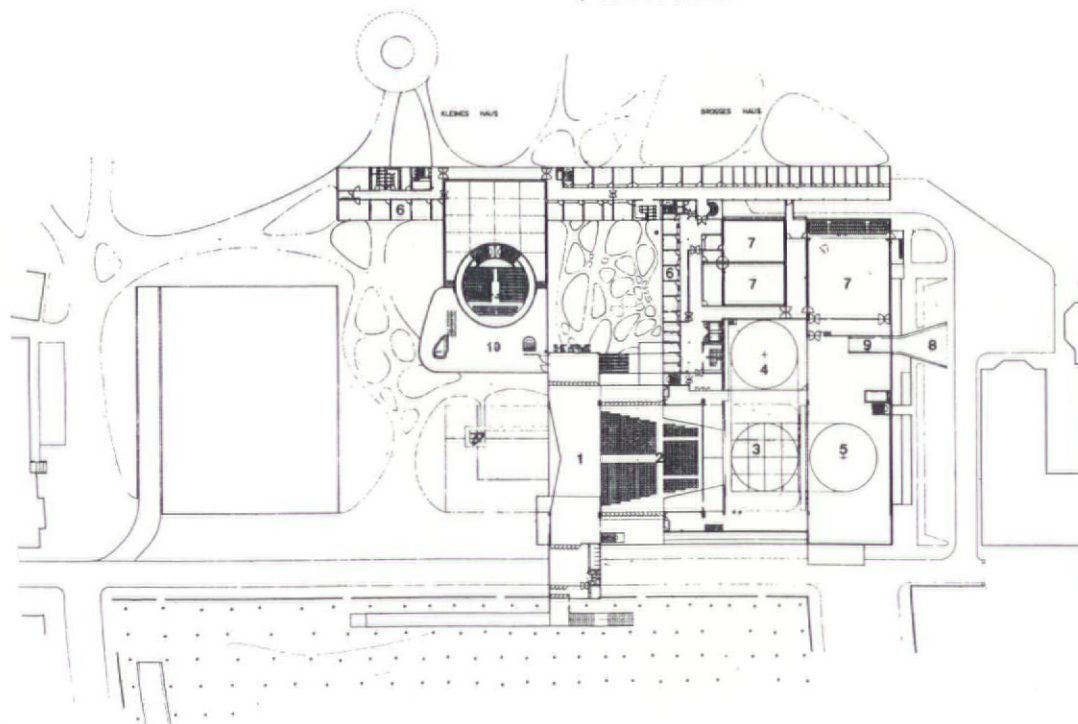
1
Model of the Karlsruhe scheme. The small theatre is on the left, the big theatre on the right

2
Ground floor plan, Karlsruhe scheme

- 1 foyer
- 2 auditorium
- 3 stage
- 4 side stage
- 5 rear stage
- 6 offices
- 7 rehearsal room
- 8 lorry entrance
- 9 unloading ramp
- 10 small revolving auditorium

3
Plan and section of the Wogenscky/Polieri experimental theatre

- A fixed stage
- B rotating ring forestage
- C rotating seating (1000 places)
- D slips
- E artificial lake
- F theatre entrance
- G mechanical staircase
- H entry hall to restaurant
- I understage
- J public foyer
- K bar
- L tunnel access and travelator to and from the theatre
- M control and projection cabin
- N entry to restaurant
- O external lighting groove
- P escape unit
- Q service tunnel



State theatre, Karlsruhe

Although this competition entry was not for France, it is included here as part of the work of the Wogenscky atelier. The following concepts determined the solution.

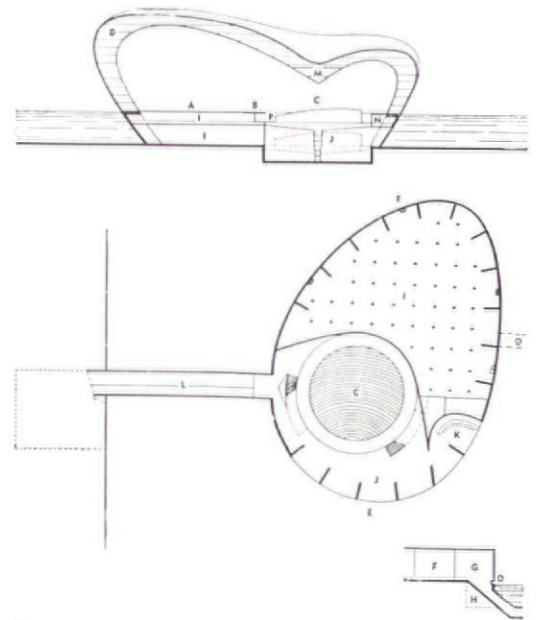
(1) The siting of the building is so arranged that it links the Jardin Botanique to the Schlossplatz.

(2) Parking for 300 vehicles is provided on a reduced ground level, thus giving an unobstructed view of the Jardin Botanique to pedestrians, on the Schlossplatz.

(3) The project provides different approaches to the auditoria for different users (i.e. motorists, pedestrians, etc.).

(4) An attempt has been made to achieve unity between both the auditoria and the stages (the creation of a single space), and also the auditoria and the foyer. The 'Grand Theatre' is united to the foyer by virtue of a continuous ceiling. In the 'Petit Théâtre' the auditorium is carried on a turn-table which is turned as an entity into the foyer during the intervals. This idea of spatial unity is developed further in the foyers, which are glazed and look on to a common garden court which may be used for an outside spectacle in the intervals.

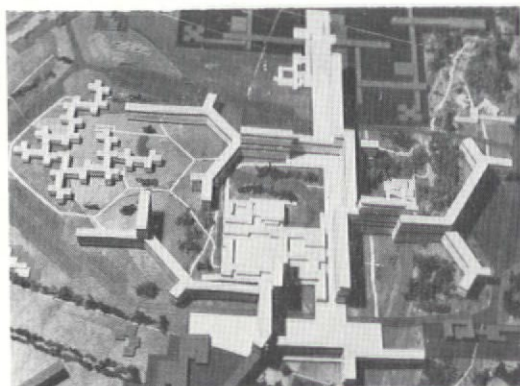
(5) Flexible mobile stages, sometimes of varying width are used in both theatres. The absence of dress circles and the arrangement of seats gives excellent visibility to all parts of the stage. The design gives possibilities of wrapping the 'action' around the audience, and also of the introduction of relative movement into any given production.



3

Experimental theatre

This design for an experimental theatre was produced as the result of a collaboration between Jacques Polieri and André Wogenscky. The theatre consists of an irregular concrete shell, egg-shaped in plan, situated in the centre of an artificial lake. The audience enter the theatre via a tunnel under the lake to a submerged foyer. A rotating auditorium platform rises on a hydraulic jack from this foyer to the theatre shell above. Once this rotating circular platform has entered the shell, the audience is presented with multiple and changing views with 'stages' of varying depths. The director or controller above may subject the audience to a variety of experiences static or dynamic, in which either the ring forestage or the audience or both may rotate in respect of each other.



Stage I, Toulouse-le-Mirail

Atelier Candilis, Josic and Woods

Candilis and Woods met while both were working for Le Corbusier (Candilis from 1946, Woods in 1948). They were together in Marseilles for the building of the Unité d'habitation. When the Unité was completed in 1951, they left for Casablanca, with Bodiansky who was then opening the Moroccan office of ATBAT-Afrique (Atelier de Bâtitseurs). In 1953 Josic joined ATBAT in Paris. In 1954 Candilis returned to Paris, still with ATBAT. In 1955 the new team was formed, along with Paul Dony, Henri Piot and Guy Brunache, to take part in a national architectural competition for low-cost housing types. As a result of that competition the office in rue St Ferdinand was opened with commissions to build about 2500 dwellings in the Paris region and in the south of France.

In 1956, the Atomic Energy Commission let contracts for housing in the Marcoule area. A proposal by the team of Candilis, Josic and Woods with a contractor, La Construction Moderne Française, to build 360 dwellings at Bagnols-sur-Cèze was accepted. The Ministry of Construction then commissioned the architects to plan an extension of the city of Bagnols-sur-Cèze. About 2200 dwellings were built within the area planned in 1956.

The principal activity of the association has been in the field of subsidized housing. This has been studied in different geographical, social and climatic situations. Three main categories have been examined. Western European—principally France and Germany. Hot dry countries—Morocco, Algeria, Iran, Tchad. Tropical—French West Africa.

Since housing doesn't exist in isolation, the architects were engaged at an early stage in urbanism. The first examples were Bagnols-sur-Cèze in 1956, workers' quarters in Abadan in 1956, the Quartier Balata in Martinique in 1956. As the European consciousness of the problems of housing large numbers of people has been awakened, ever greater projects have been sponsored by the various government agencies concerned with these problems. The team of Candilis, Josic and Woods has taken part in several large-scale competitions (Caen, Hérouville, Hambourg Steilshoop and Toulouse-le-Mirail in 1961, Bilbao-Asua Valley in 1962), as well as being commissioned directly to work on others (Fort Lamy in 1962). In addition to the problems of habitat, recent projects have included mass leisure installations; Vallée des Belleville ski resort in 1962, development of the Languedoc coast, Club Méditerranée and Universities Bochum in 1962, and Berlin Free University in 1963.

Candilis and Josic teach in an atelier at the Beaux-Arts; Woods serves occasionally as a visiting critic in American schools.

Among the projects which the partners consider important in their own development are the following: Housing in Morocco and Algeria, 1952-54; Operation Million competition, 1955 (development of prototypes which combine in many ways); Bagnols-sur-Cèze, 1956-59 (architecture and town planning); and the Caen, Hambourg, Toulouse and Bilbao competitions, Fort Lamy 1961-62 (search for systems).

The search for a systems approach to the problems of architecture and town planning is being continued in such projects as the Frankfurt Centre proposal and the Berlin Free University building.

Chronology/Candilis, Woods, Josic

1946

Candilis with Le Corbusier

1948

Woods with Le Corbusier

1949

Candilis and Woods in Marseilles
'House of the Fool'
chalets at Megève, St Gervais
'Eternit' pavilion
CIAM Bergamo Folder

1951

Candilis, Bodiansky, Piot in Tangiers and Casablanca, the beginning of ATBAT-Afrique.
Woods in Tangiers, Candilis in Casablanca; first survey of the Mohammedan Dwelling; with Aroutcheff and Jean the competition for the City of the Young in Casablanca (1st prize).

1952

Closing of the centre in Tangiers; Candilis and Woods in Casablanca.
Dwellings survey—Mohammedan, European Israelian; Greek Church in Meknes; Competition University City in Rabat.
With Aroutcheff and Jean, construction of the City of the Young; College in Khouribga.
Organization of the CIAM 'Gamma' Group.

1953

Construction of Central Services blocks of flats.
Folder 'Dwellings Charter' for the CIAM Congress of Aix-en-Provence. Submission Moroccan Dwelling in Aix; survey of the semi-duplex and funnel blocks.
Plan of a district of 3000 dwellings in Safi.
Study for individual dwelling (ATBAT—M.R.U.).
Josic at the ATBAT in Paris.
Plan of the Chateau Gaillard (Charentonneau).
Type dwellings for Boumendil in Casablanca.

1955

Return of Candilis to Paris. The organization of the independent team with Piot, Brunache and Dony.
Return of Woods to Paris. The establishment of the Rue St Ferdinand Centre. The formation of the Team 10.
Competition for Operation 'Million' launched by the government (1st prize).
1955 to 1957:—2500 dwellings Villeneuve St Georges, Corbeil, Gagny, Rambouillet, Mantes La Jolie, Mantes La Ville, Sarcelles, Rueil Malmaison, Dourdan, St Ouen L'Aumône, Ile St Denis, Ivry, Persan, St Denis.
Construction of 270 dwellings in Blanc-Mesnil Emmaus and 100 in Argenteuil (HLM).
Survey and construction of the municipal market of Bois Colombe.
Competition of type tropical school.
First dwelling quarter at Bagnols-sur-Cèze (The Citadel).
Survey of dwellings in Iran.

1956

Survey dwellings in Nicaragua.
Plan of blocks of flats for Bagnols-sur-Cèze 2500 dwellings.
Survey of dwellings in Panama.
Construction of 80 dwellings Chateaufort Malabry (HLM); of 100 dwellings La Garenne Colombe; of 480 dwellings Petit Seminaire; of 50 dwellings La Ciotat Marseilles (Operation 'Million'); of 160 dwellings in Gennvilliers.

In collaboration with Herbé and Le Couteur; competition for 2200 dwellings in Deuil-La-Barre (1st prize).

1957

Construction of 735 dwellings in Bobigny (HLM).
Survey type gymnasiums.
Survey of the Balata Quarter, Martinique.
Construction of 1100 dwellings in Lyon (LOGECO); of 64 dwellings in Plessis-Trevise (LOGECO).

1958

In collaboration with Olmeta; Competition for 1000 dwellings in Marseilles (1st prize).
Competition for 800 dwellings Balata Quarter Martinique.
Construction of dwellings in Bagnols-sur-Cèze; of the Tour L'Eveque in Nîmes; of 75 dwellings in Pau.
Competition for a hotel in Athens.
Survey for Hotel Para, Guadeloupe.
Study of a Simca garage in Marseilles.
Survey of La Viste dwellings in Marseilles (Competition 2nd stage).

1959

Construction of a school in Martinique.
Survey of a block of flats in Aulney-sous-Bois.
Survey on dwellings through Ministry.
Survey Radiology Centre, Rothschild Foundation.
Construction of a gymnasium in Cachan; of the Rue Mathurin Regnier block of flats (200 dwellings).
Competition for type schools in the Overseas Departments.
Competition for Gymnastic Halls for the Ministry of National Education (1st prize).
Competition for Semi-Urban Dwelling in Algeria.

1960

1st Grand Prix of Town Planning—awarded for the Bagnols-sur-Cèze flats.
Dwellings survey Parisian Region—Gretz.
Town Hall competition in Marseilles.
Survey of a block of 3500 dwellings in Jouy-en-Josas.
Construction of a tower in Ivry-sur-Seine.
Primary school in Geneva.
Crafts centre in Sèvres.
Survey for the Caesarea Israel.
Dwellings survey in village.
Construction of 80 dwellings Rue Volontaires.
Survey 120 dwellings Thiais (LOGECO).
Study for tropical dwellings on Reunion.

1961

Construction of 80 dwellings in Manosque; of 230 dwellings in Clos D'Orville, Nîmes; of dwellings in Aix-en-Provence; of a cultural centre in Bagnols.
Competition for a satellite town in Hamburg (4th prize).
Competition Zup Toulouse-le-Mirail (100,000 inhabitants; 1st prize).
Survey tourist dwellings.
Construction of 133 gipsy dwellings in Avignon.
Competition in respect of sports facilities in schools through the Ministry of National Education.
Problem of the town of Barcelona.
Construction of La Maison Alfort; of a convent in Poitiers.
Survey of planning of Fort-Lamy.
Competition Belleville Valley; ski resort.

1962

University of Bochum competition—Germany (1st purchase).
Construction of a block of flats in Neuilly; of dwellings in Beziers.
Dwellings competition in Bilbao.
Tahiti—individual houses, rest centre.
Dwellings survey Ris Orangis.
Competition for 6000 dwellings—Zup Herou ville (4th prize) (Caen).
Competition type primary school.

1963

Competition Frankfurt—Römerberg.
Competition Free University Berlin (1st prize).
Sèvres survey; Ville D'Arly.
Construction of dwellings in Roquebrune.
Survey of a district of 4000 dwellings in Ales.
Construction of a Club Méditerranée Hotel Tahiti.
Operation 'PILOT' Toulouse, 2220 dwellings.
Survey of a tourist centre Languedoc Roussillon.
Construction of dwellings Marseilles Marignane; of dwellings Argelès-sur-Mer; of 300 dwellings in Bagnols.

1964

Survey of 1000 dwellings in Le Havre.
Tourist survey Antilles.
Project of a tourist block in San Juan de Porto Rico.
Construction of 400 dwellings in Orange (LOGECO).



1

1 View from the north-west

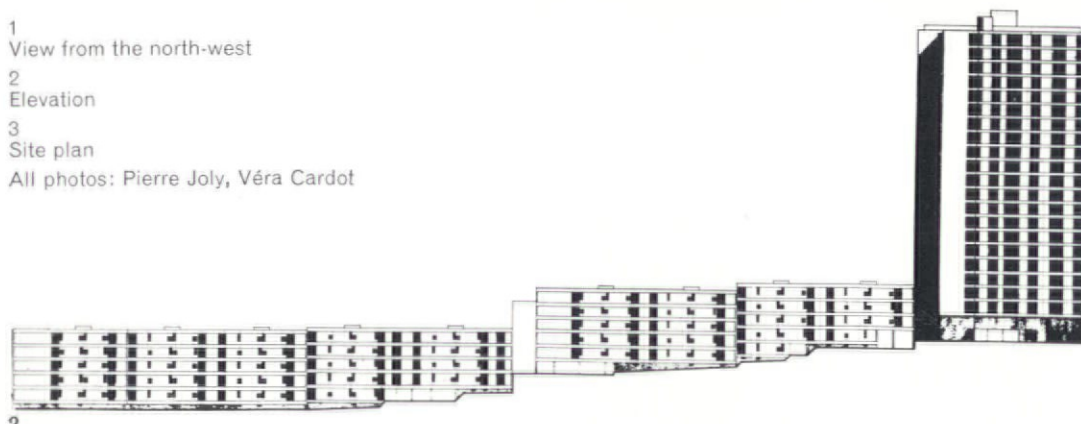
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Elevation

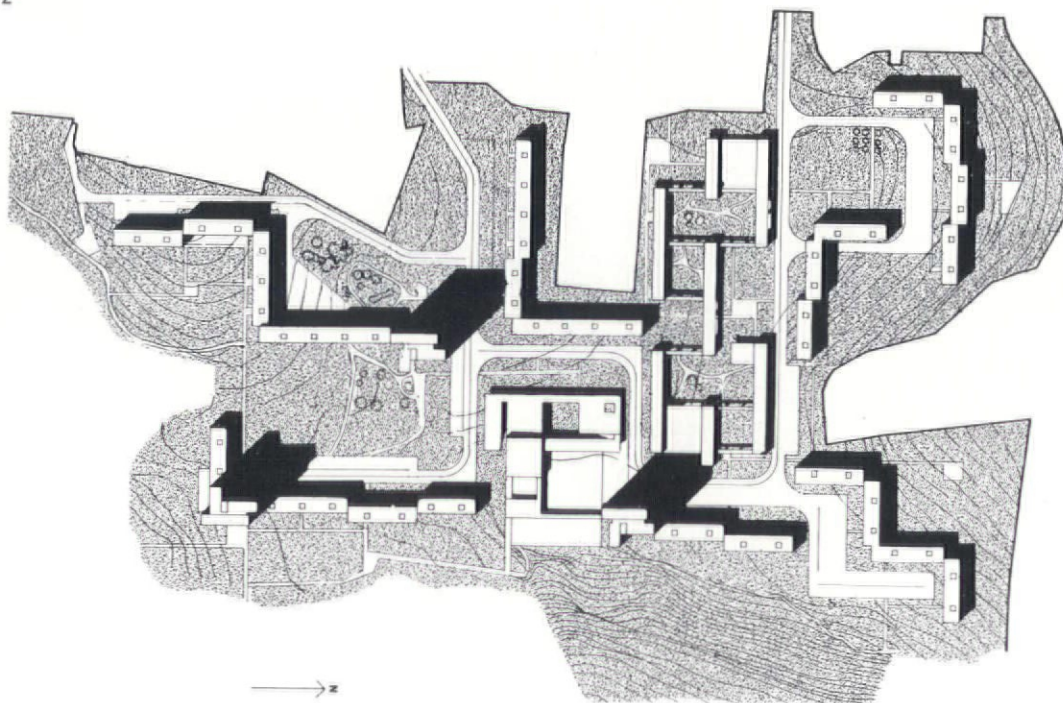
3

Site plan

All photos: Pierre Joly, Véra Cardot



2



3

Housing La Viste, Marseilles

In 1959 a competition for the construction of 4000 dwellings on three separate sites in Marseilles was organized by a limited Marseilles company. This competition in two stages, was held for the design of HLM dwellings, that is to say, practically the cheapest category that was being built at that time.

In the first stage, the Candilis and Olmeta team, with La Construction Moderne Française as contractors, were commissioned on the three sites. Their overall plan was adopted for La Viste.

The site is between the old Aix road (Route Nationale 8) and the Nord motorway in the Saint-Antoine quarter. It rises about twenty metres above the motorway and commands a panoramic view over Marseilles and the port of La Joliette. Seen from the motorway as one leaves Marseilles, the site appears as a rocky plateau on which are a few small houses and a little green.

One of the governing ideas of the plan was to give full importance to the side 'facing the motorway'. By surrounding the edge of the plateau with low buildings (5-storey) and by underlining the topographical relief with three towers (18- and 22-storey), the architects made a coherent group which achieved a synthesis between programme and landscape.

In general, the perimeter of low buildings follows the limits of the site suitable for building, enclosing spaces that vary in character according to their use and their topography. The tower blocks link up this composition and give it identity. Inside the perimeter are spaces protected from the *mistral*, spaces extending the dwelling; outside, is the panoramic view to the horizon. Most of the apartments gain from these two aspects of the whole.



Great care was taken to preserve fine trees, as far as possible.

At present the scheme is still three hundred dwellings short on the northern side of the site. In addition, primary and infant schools still have to be built. The flats with four or more rooms are in the low buildings, the small one-, or two- or three-roomed dwellings being in the towers. All the flats, except the one- and two-room ones, have two frontages.

The main concern of the architects has been to give the maximum space within the price framework. To this end, both structure and services are simplified, thus effecting savings which are used to increase floor space. The free spaces in the plan are connected up by kitchen, bathroom and access spaces. This provides for a systematic organization of the building and facilitates the process of construction.

The low buildings are constructed in load-bearing concrete blocks and r.c. floor slabs. The towers are of r.c. frame with breeze-block infilling. All exterior surfaces are rendered and painted.

The living rooms and apartments are equipped with sliding shutters. These shutters are painted the same colour as the external walls, so that the openings disappear and reappear, the constantly changing façade thus expresses the way of life inside the buildings.



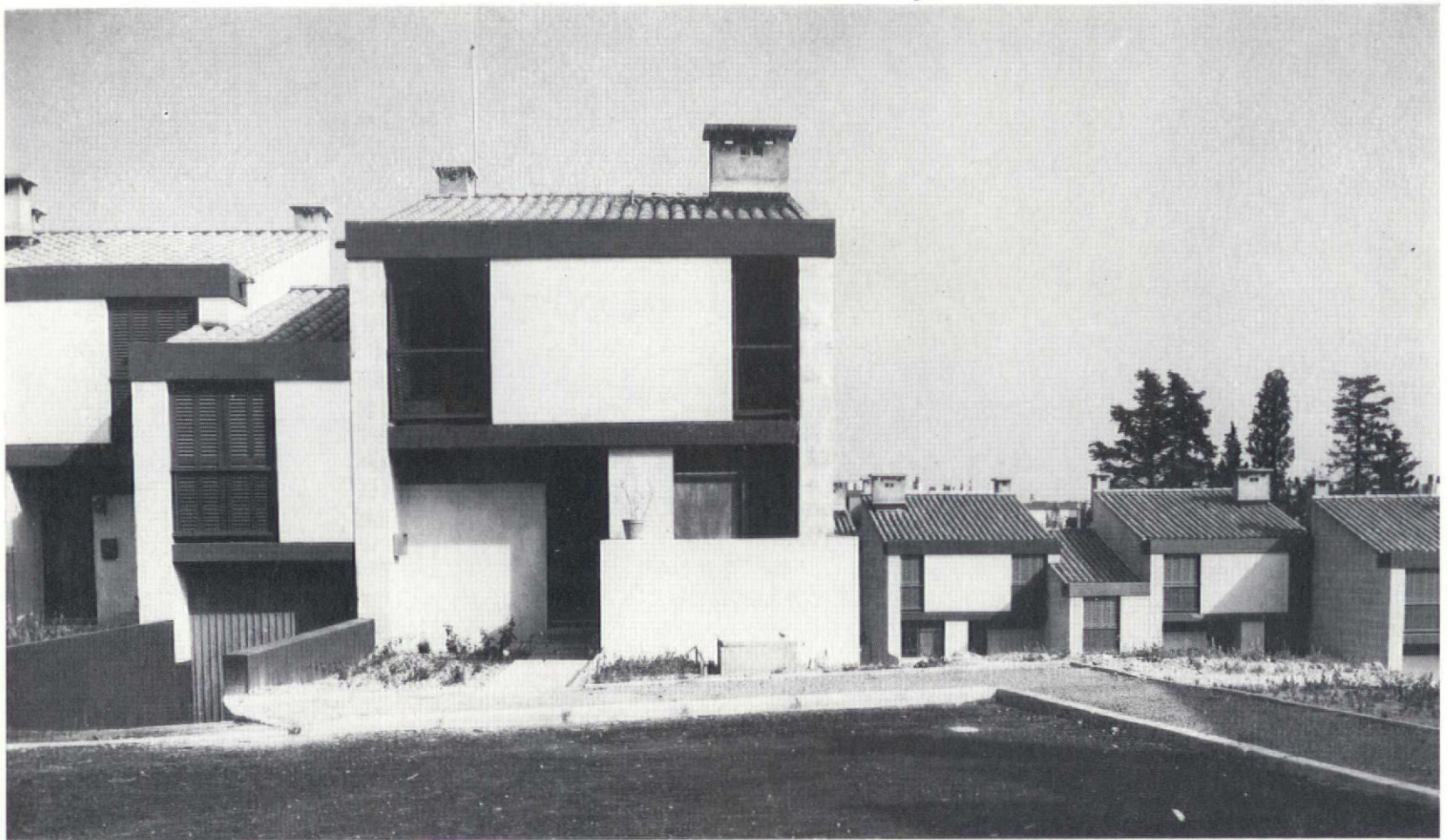
1 View from the south-east

2 View from the north

3 Low building seen from the north-east

4 Typical floor plan of high building

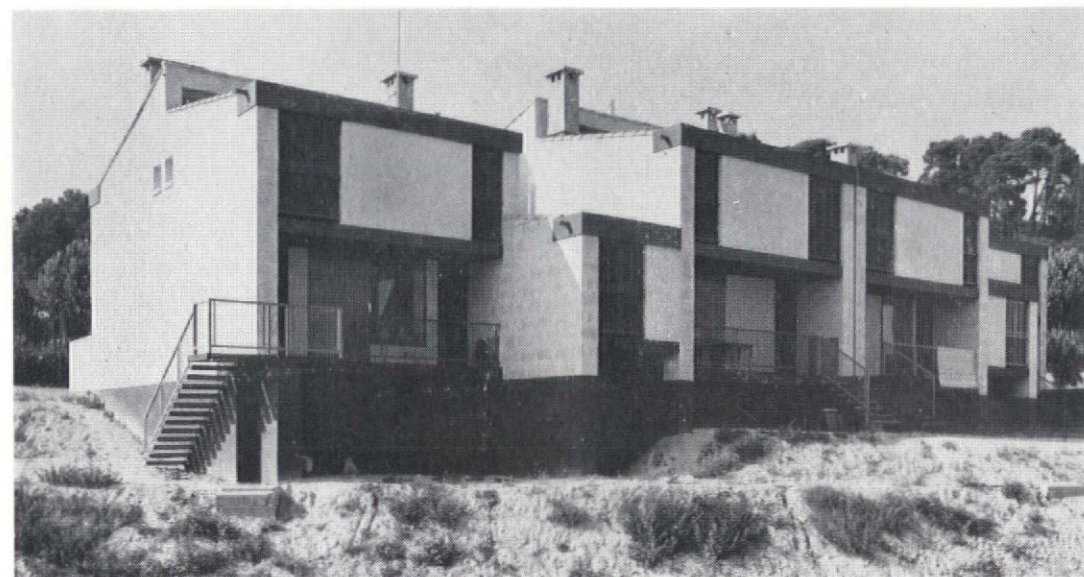
- 1 entrance
- 2 living room
- 3 bedroom
- 4 kitchen
- 5 bathroom
- 6 w.c.
- 7 cloakroom
- 8 fire escape



1



2



3

Housing Aix-en-Provence

These 32 houses, ranging in size from four to seven rooms, were designed in 1961 for the French Atomic Energy Commission as part of an estate for the engineers employed at the Cadarache plant.

They are grouped in four parallel terraces on a gentle slope overlooking the Route de Vauvenargues.

The accommodation provided is simple; these dwellings conform to the government norms for subsidized housing in the medium-price range.

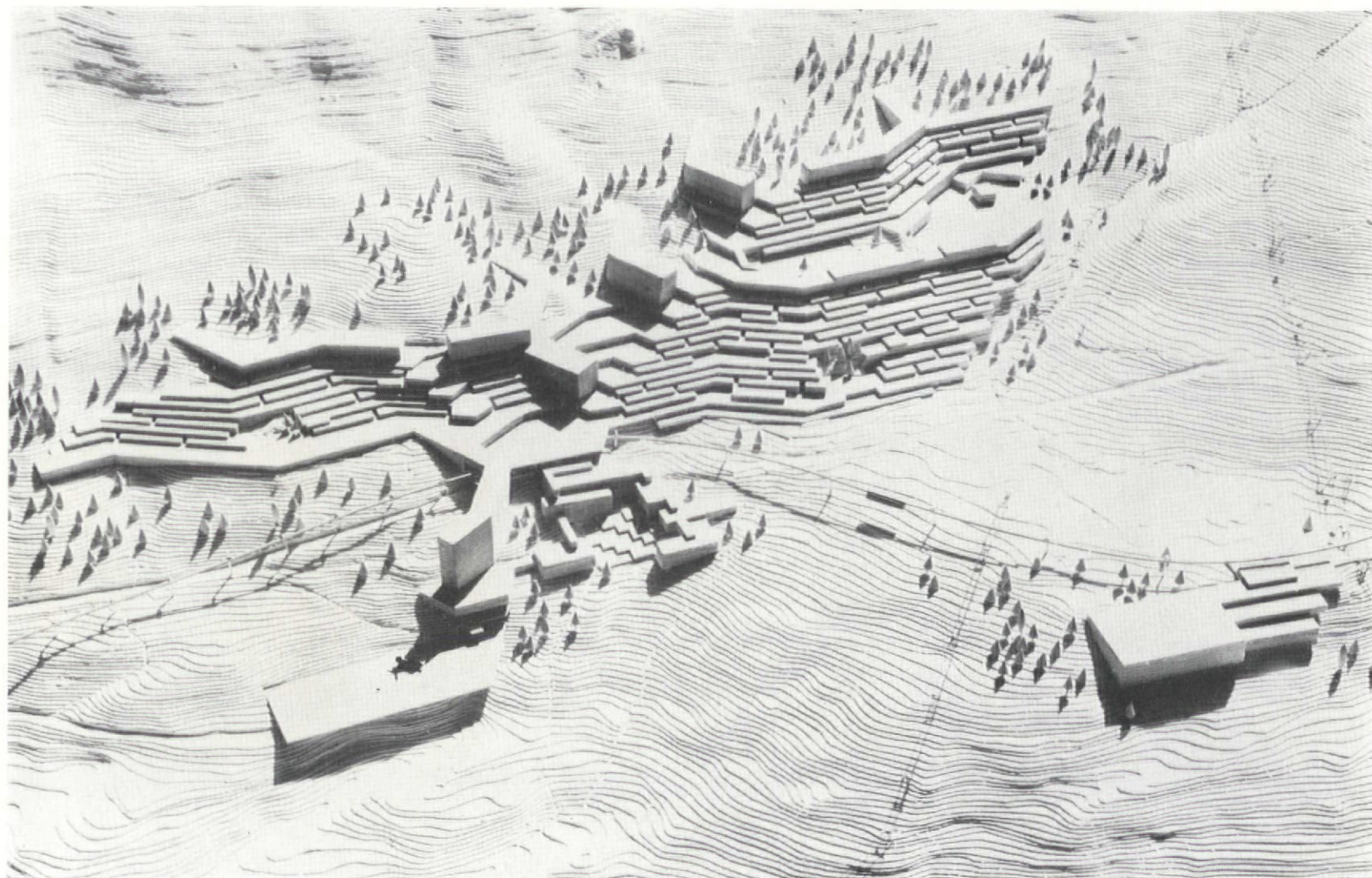
In compliance with local aesthetic controls, the external walls are cut stone and the roofs are red 'Roman' tile (laid on reinforced concrete slabs). The pitch of the roofs is broken to admit light and air to the central area of the house. The roof gutters are of reinforced concrete.

The major living areas face south and the fall in the site provides long views from all living rooms which give on to large terraces and private gardens. The access is from the kitchen side of the house. A walled service yard is provided outside the kitchens. All living and bedroom windows are provided with shutters for light and sun control.

1
Terrace houses for Atomic Energy Commission at Aix-en-Provence

2
Part of site plan showing the disposition of houses

3
A unit of four houses at Aix-en-Provence
Photos: Pierre Joly, Véra Cardot



1

Belleville ski resort

Candilis, Josic, Woods
with Prouvé, Perriand and Susuki

This project to convert the Belleville Valley into a ski resort for 25,000 people was the subject of an international competition. Access to the site is through a narrow valley which is subject to avalanches—the only approach being at present in very bad condition. In the height of the season garage space for some 7000 cars will be required.

The architects decided to eliminate the problem of snow clearance by providing a monorail access from the main railway station at Montiers. This monorail serves the whole length of the site including four dwelling areas, an administrative and a social centre. From each monorail stop and combination of mechanical and static inclined access systems take the arriving skiers to their quarters; including ramps, a series of escalators and a complex of lifts. Another series of vertical hoists (i.e. goods lifts) facilitates the distribution of luggage, etc.

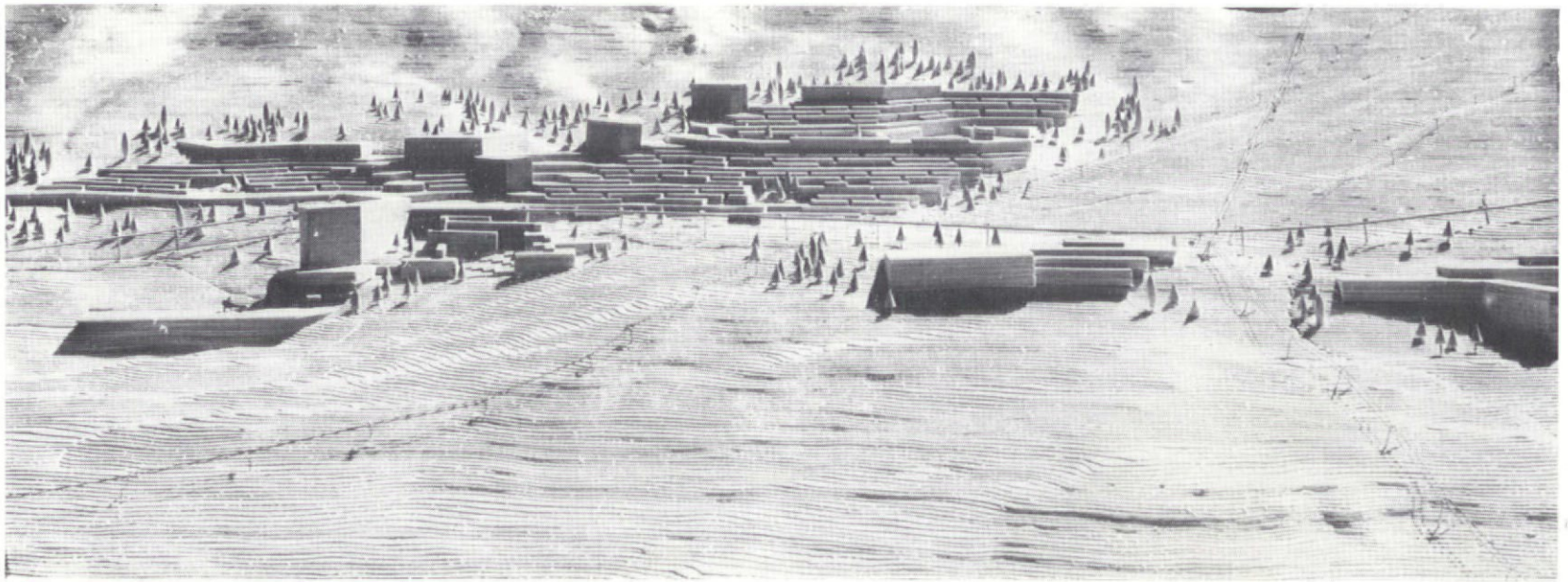
Sleeping accommodation and some of the hotels are grouped in structures of 6–8 stories. The flats and other hotels are arranged in steps on the slope as continuous one-storey units. The main means of access to the two types of building is by a sloping mechanized roadway (i.e. escalators or moving slopes). On the different landing stages are to be found commercial, cultural and social activities.

1
Model of the first section of the ski resort. A monorail runs through the centre of the section; a heliport is situated adjacent to the central station and administrative centre

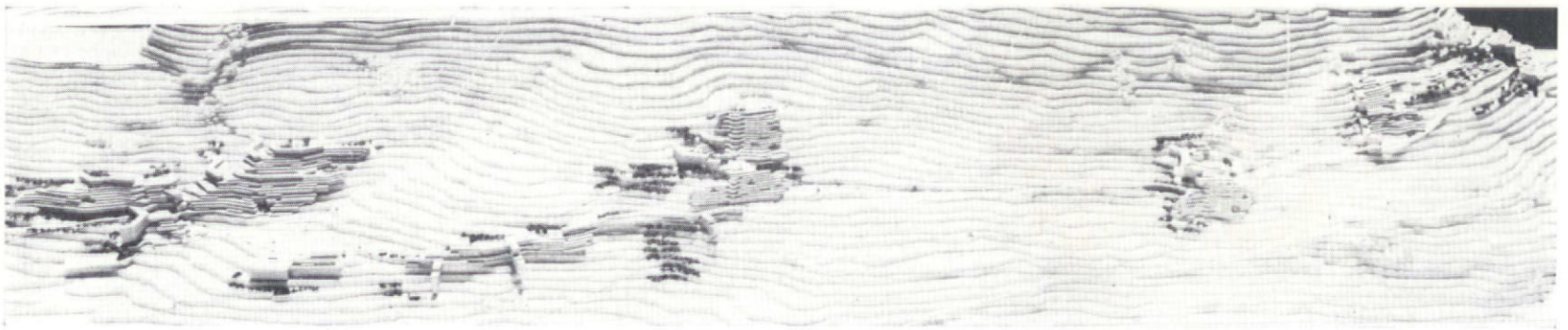
2
Plan of the first section of the ski resort



2



3



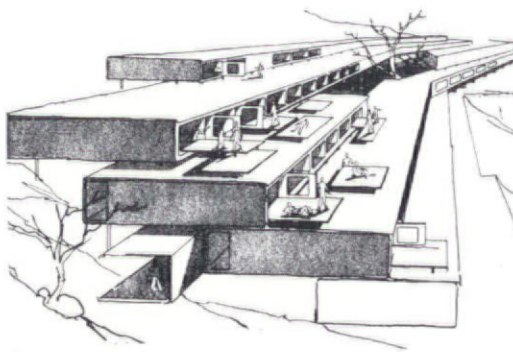
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3
Elevational view of the first section of the scheme

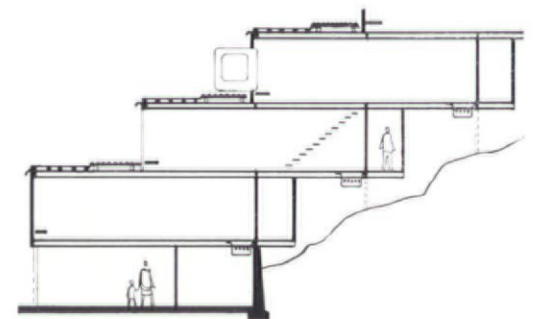
4
A view of the total valley resort project

5 & 6
Perspective section and sketch of proposed chalet terracing

7
Plan of the entire valley project. There are four proposed centres in the length of the valley. The first centre provides 7930 beds, the second 6900 beds, the third 2600 beds and the fourth 4800 beds. The thin lines indicate ski lifts, the line with crosses the monorail



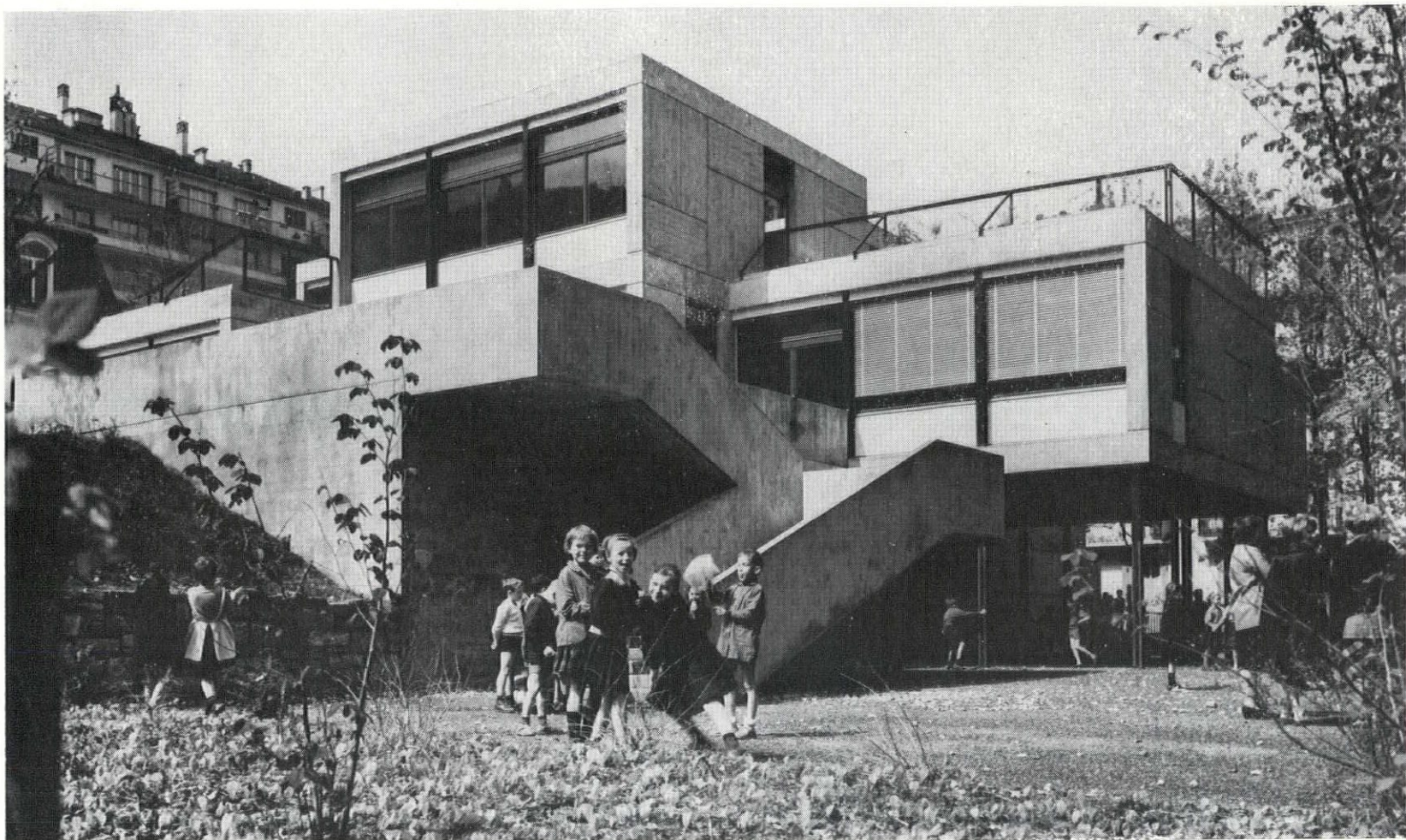
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6



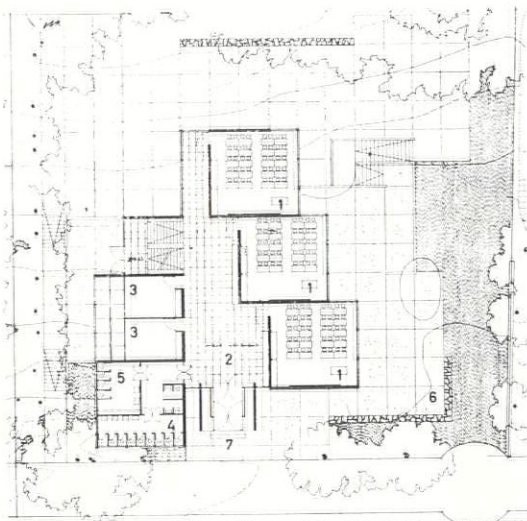
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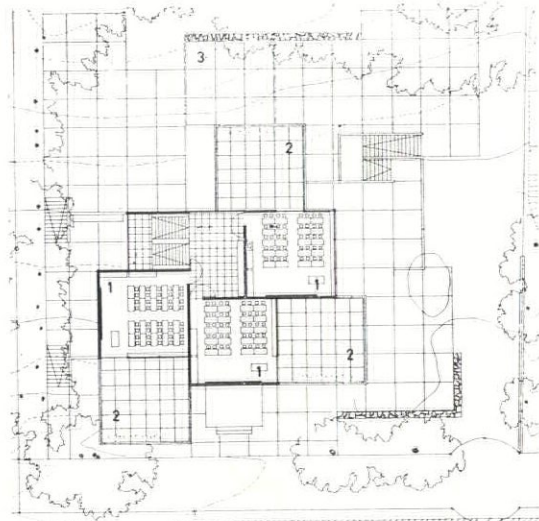
1

French primary school, Geneva

The school is built on a wooded slope in Chemin des Roches in the centre of Geneva. The Association Francaise de Geneve were responsible for its realization and in addition to its six primary classrooms, it also contains a number of rooms for the use of members of the Association. The architects exploited the incline of the site to emphasize the difference between the school and the association's quarters, by placing the recreation ground below the principal entrance. From an architectural point of view, the volumes are clearly defined and each classroom extends into a terrace which can be used for open-air teaching. The alternation of glazed and solid faces stresses the difference in materials: aluminium and glass on the one hand, and exposed concrete on the other. Beriger was the collaborating architect.



2



3

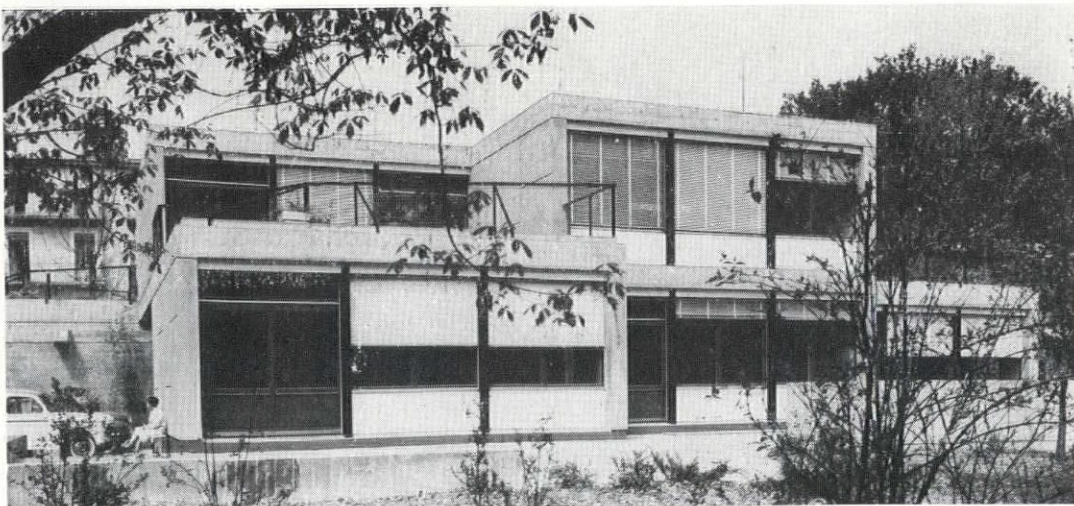
1
View from north-east

2
Ground floor plan
1 classroom
2 hall/cloaks
3 staff
4 girls' w.c.
5 boys' w.c.
6 open air classroom
7 entrance

3
Upper floor plan
1 classroom
2 open air classroom
3 extension

4
View from south-east

Photos: Pierre Joly, Véra Cardot



4

Atelier Montrouge

The Studio of Architecture was founded in 1958 by four architects, Jean Renaudie, Pierre Riboulet, Gerard Thurnauer, Jean-Louis Veret.

This studio of architecture, wishing to break with the guild tradition of the architect's profession, is organized in such a way as to group the various disciplines and activities relating to building at every stage of the work. A constant and experienced liaison is maintained between the studio proper and a certain number of specialists: town-planners for regional and group plans, topography, landscape and plantation, engineers for structure and building, heating and ventilation, plumbing and electricity, industrial designers for decoration, furniture, objects, painters and sculptors.

Each architect is responsible for one work. A second architect is also familiar with the work so as to be able to take over at any time.

Messagier residence, Lougres, Montbeliard

The house is for a painter, his potter wife, and three children, and is an extension to an old mill. The new building consists of two separate volumes, one for the living and bedrooms, the other for the pottery, both on 2½ levels. The structure is reinforced concrete, with the upper floors in oak frame and plastic-finished plywood/polystyrene sandwich panel infill. The roof consists of two prefabricated pine hyperbolic paraboloids, ply finished, with two layers of polystyrene and fibreglass insulation.

EDF building, Paris

This building on the south-west perimeter of Paris, houses the electronics department of Electricité de France, which, besides the usual installations and administrative offices, includes four electronic computers and a large part of the accompanying filing and archives.

The total floor area is about 5000m², distributed on nine floors. The framework and floors are in reinforced concrete. The façades are metal; walls or partitions between ceilings and floors are panelled in pre-oxidized pure copper.

The roof terrace serves as rest-room for the staff.

The whole building is air conditioned and various air-conditioning points are installed for the computers and for the offices.

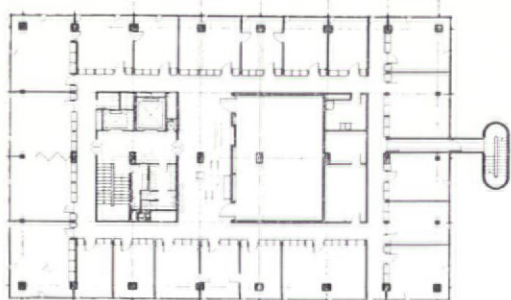
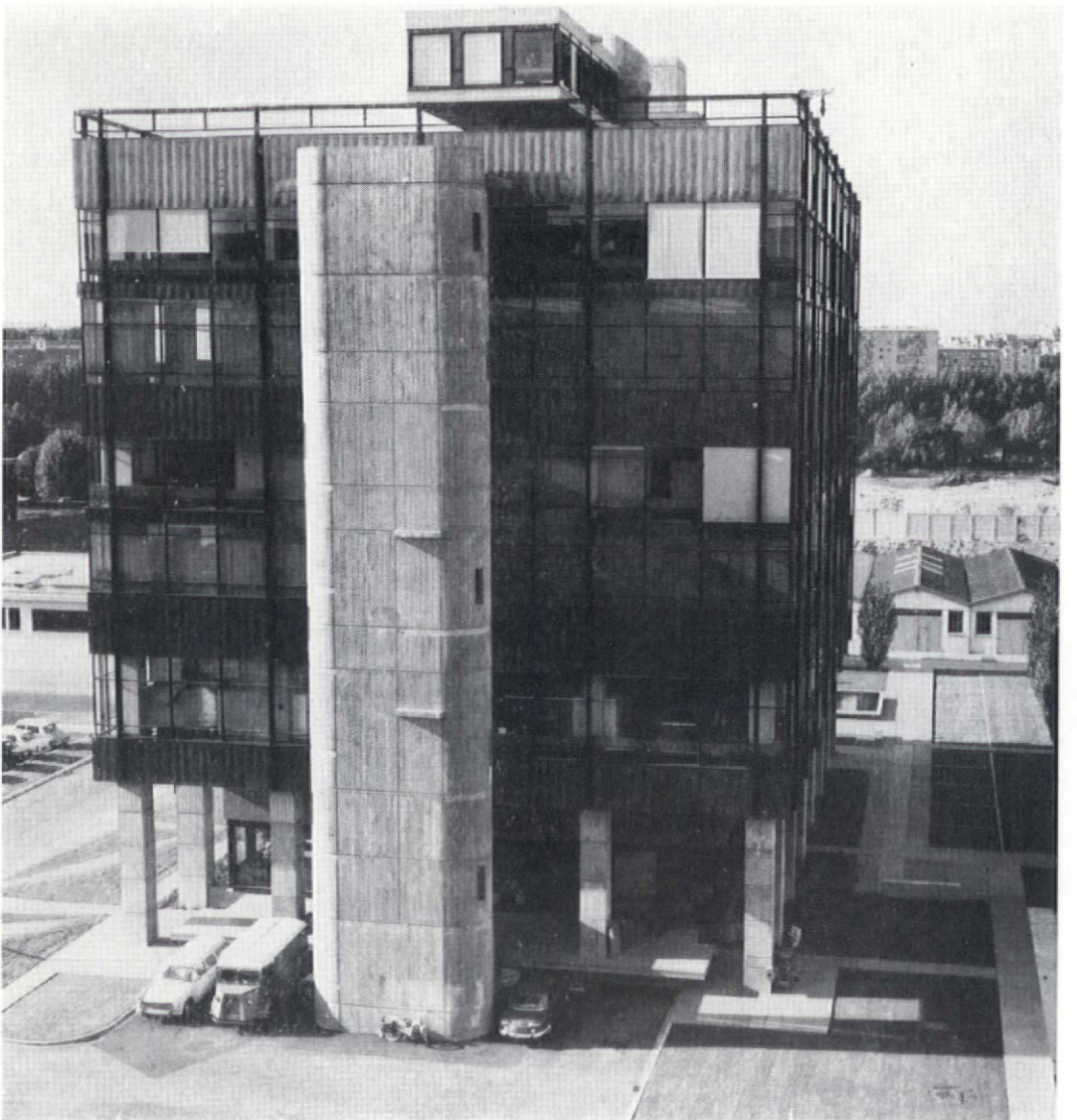
The work was begun in September 1962. The service came into operation in January 1964.

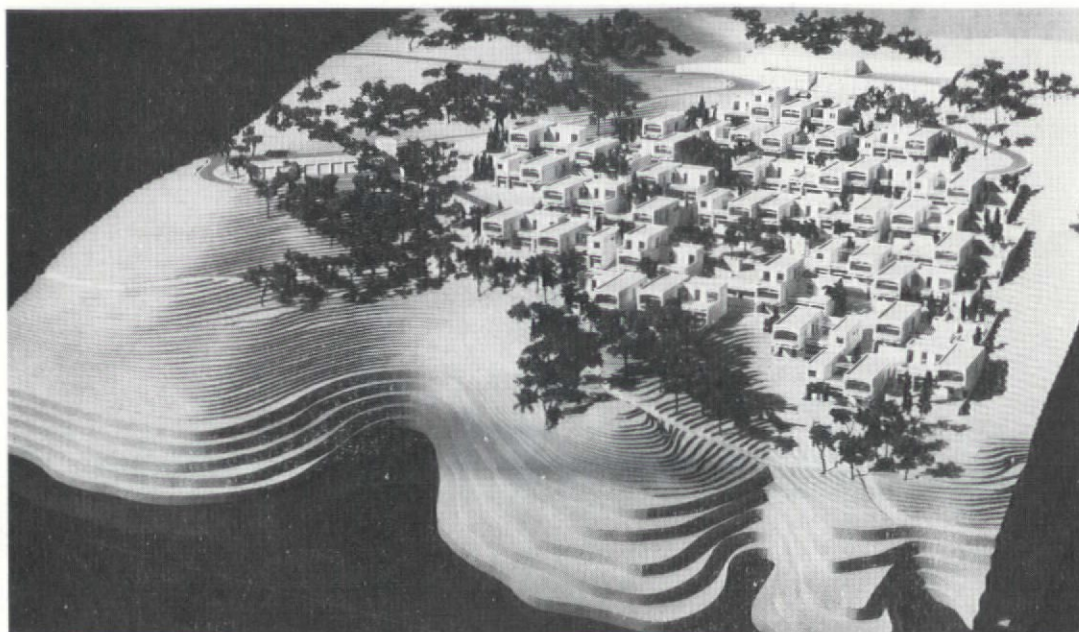
1
The Messagier house

2
The EDF building with the external reinforced concrete fire escape at one end

3
Fifth floor plan of EDF building

Photos: Pierre Joly, Véra Cardot, 1

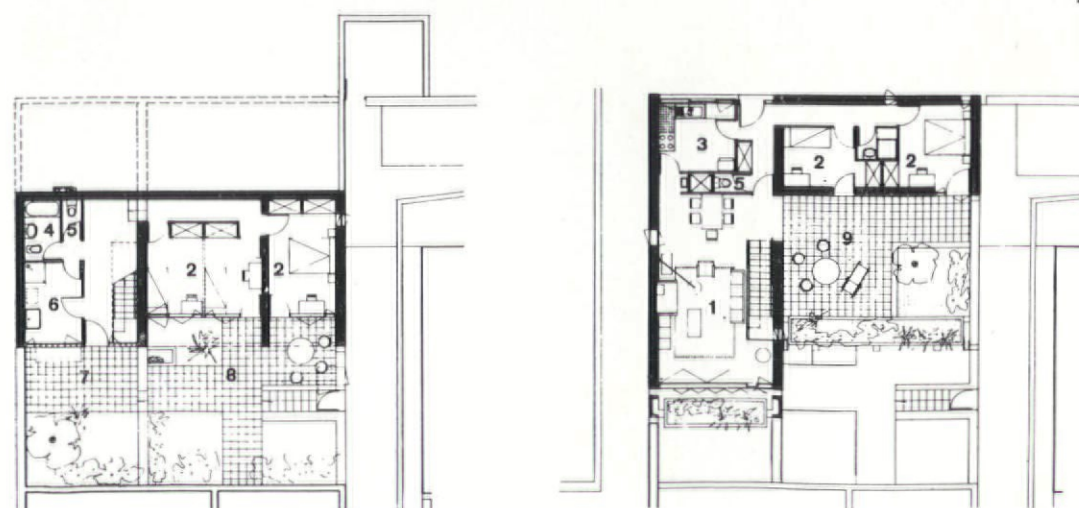




1



2



3

Holiday villages on the Côte d'Azur

The Côte d'Azur, and more especially the coast of the Var department, is graced by a certain number of exceptional sites which have not yet been reached by the wave of holiday building. This is partly explained by the isolation of these regions in relation to the main traffic routes, road or rail.

In view of these natural possibilities there is an ever-growing pressure from a public avid for holidays in the sun on the shores of the Mediterranean.

So now, as for the years to come, a serious problem arises in respect of the rational use of the Var coast, where each geographical site, by reason of its particular features, should become the context for an original solution. Solutions should obey the following general principles:

(1) To develop the site and enhance it. In respecting the general structure of the site, the grouping of the dwellings will have to complete it with their architectural forms and establish a harmonious *ensemble*.

(2) To concentrate the dwellings and their collective facilities so as, with a compact density, to balance the pressure of mass and produce a unified whole.

(3) To preserve vast areas definitely classed as areas *non aedificandi* so as to maintain the harmony or rhythm of the landscape and preserve nature.

(4) To produce convenient car and parking connections.

The architects tried in the projects Camarat and Gigaro, to demonstrate these principles and to find a solution in terms of the features of each of the sites, taken by itself and in relation to a general arrangement of the site on a larger scale. At Camarat, on a site of 100 hectares, 200 houses have been grouped in five villages of 35 to 50 houses, situated either in the valleys or in clearings within the wooded areas.

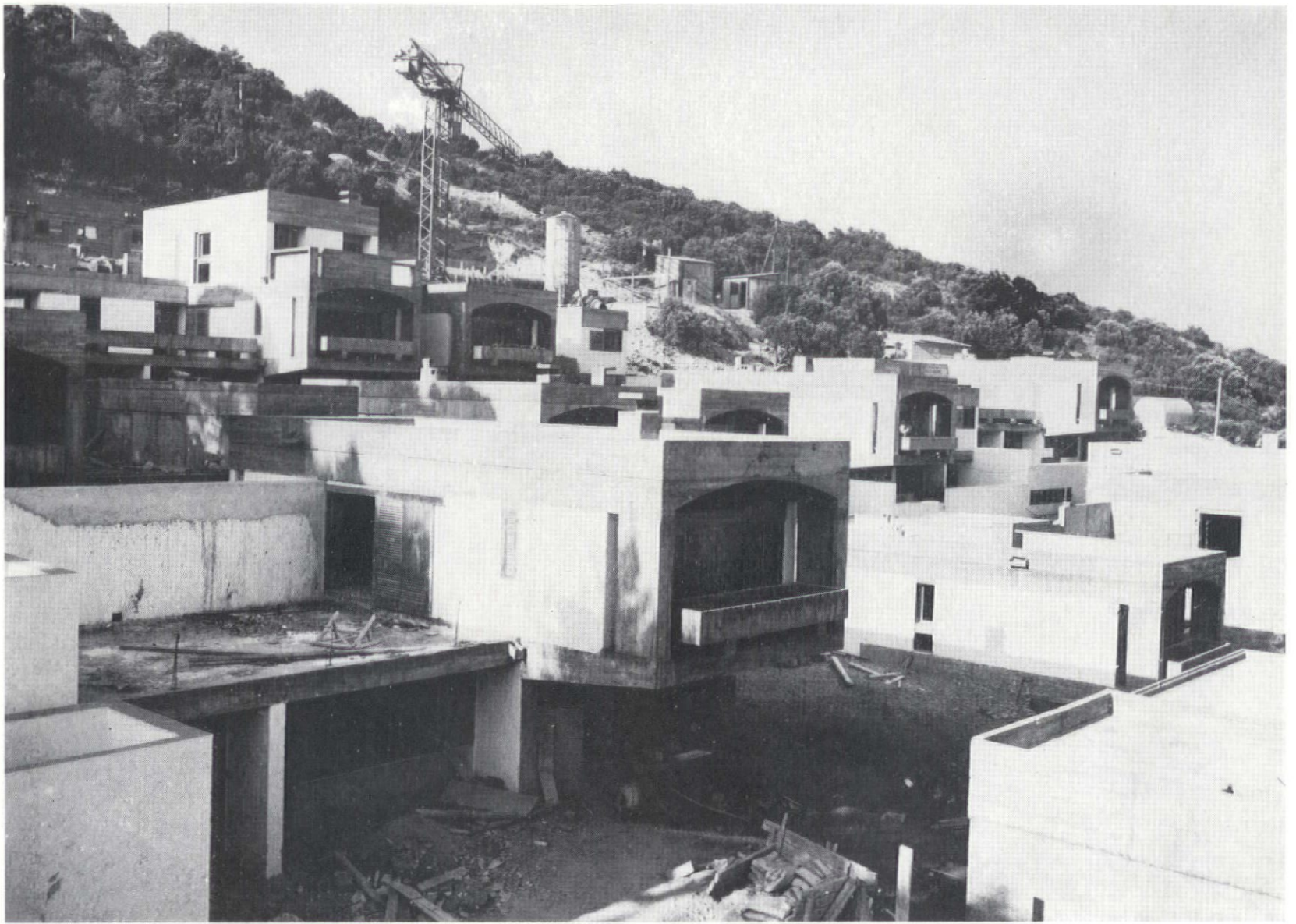
At Gigaro, the site, an area of 47 hectares, is in the middle of a great open space which opens to the south and on to a beach; 200 houses have been grouped on the brow of a hill with a largely unrestricted view.

In both cases the housing programmes are completed by collective elements, shops, hotels, clubs, gaming rooms, etc., and seaside facilities. At Camarat these facilities are grouped around the club and swimming-pool near the entrance to the estate.

In both projects the houses, designed in terms of their holiday uses, fit into each other, enabling a large number of spatial combinations and volumes complemented by surroundings of little streets and small squares reserved for pedestrians, but to which vehicles may occasionally have access. In both cases a resolutely contemporary architecture essentially clads the silhouette of the *ensemble* of each grouping.

- 1 Model of one of the five villages at Camarat
- 2 Map showing the disposition of the five villages of Chateau Volterra on Cap Camarat
- 3 Ground and upper floor plans of dwelling

1 living room	6 laundry
2 bedroom	7 porch
3 kitchen	8 patio
4 bathroom	9 terrace
5 w.c.	



4



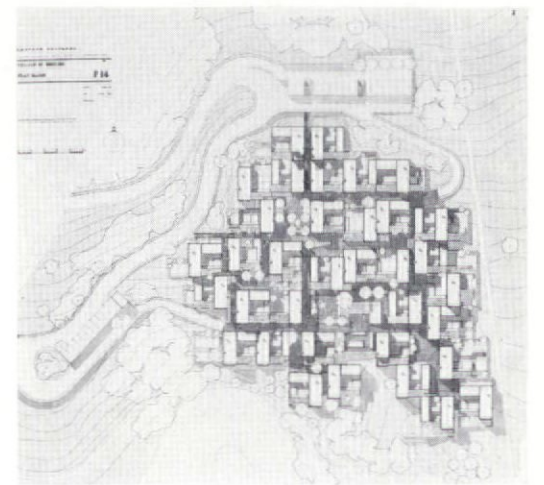
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4
A detail of the village of Merlier under construction on
Cap Camarat

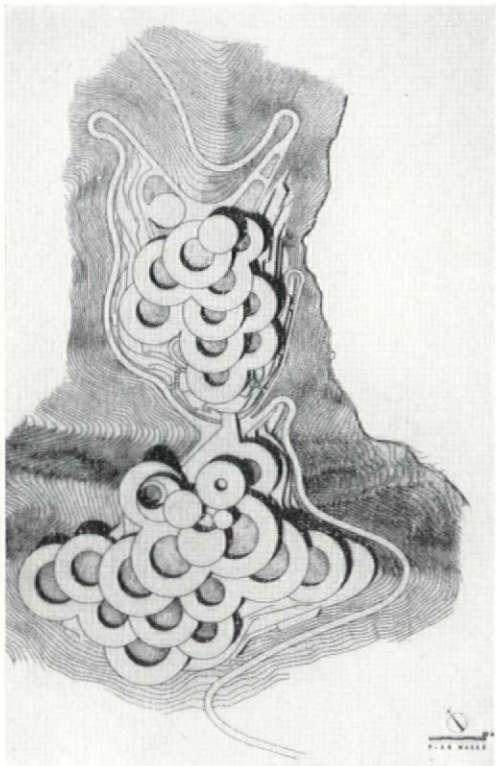
5
Typical interior of dwelling at Camarat

6
Plan of the village of Merlier

Photos: Pierre Joly, Véra Cardot



6



1



2

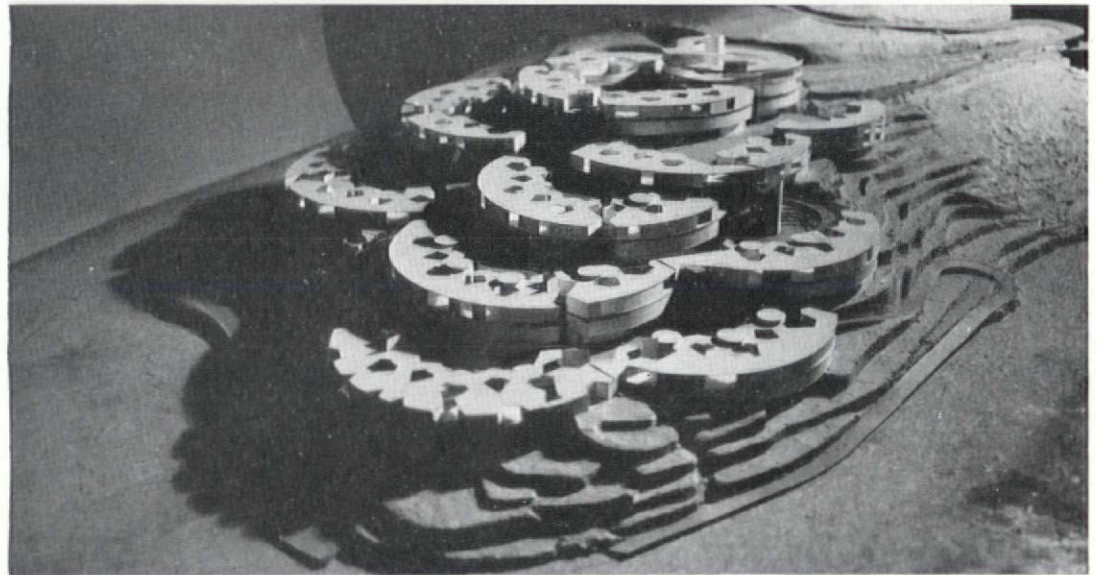
1 Site plan showing the grouping of 200 houses at Gigaro

2 Model of Gigaro showing access routes

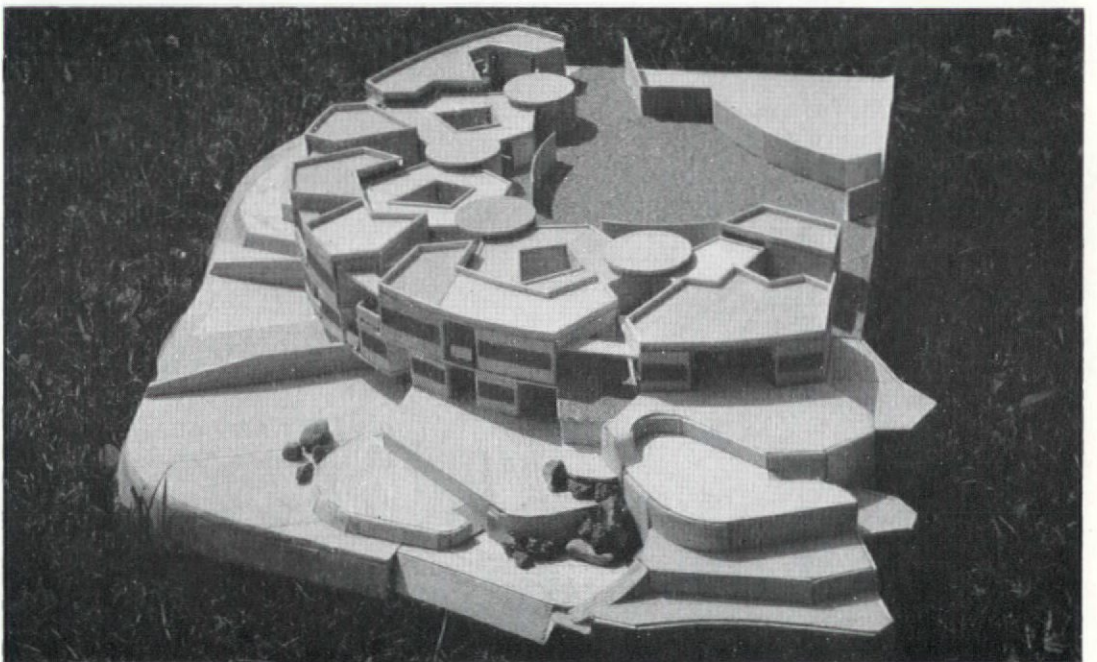
3 Model of the top section of the village showing the grouping of approximately 70 houses

4 Plan of a seven house unit
 1, 3, 4 & 5 three-room houses
 2 & 7 four-room houses
 6 five-room house
 8 parking area
 9 private gardens

5 Model of a seven house unit



3



4



5



Atelier Anger and Puccinelli

Robert H. Anger first started to practise in 1952 having obtained his diploma from the Ecole des Beaux Arts in 1951. The early activity of the atelier was small scale and specialized; most of the commissions being for decoration or industrial design.

Puccinelli joined the atelier in 1958 and subsequently the practice expanded. The atelier now consists of 60 associates/assistant architects. The architects usually work as teams of five, one team on each undertaking.

When the office started to develop, it seemed to the architects that the very expression of architecture, as a continued development in the direction of an increasingly arid renunciation, was leading to an impasse, to a point where the creative possibilities of the architect would be sacrificed.

In their façades, therefore, the architects have tried to introduce a new expression and to rediscover the charm and warmth that can result from the animation of space. The architects are of the belief that the skin of a construction, in its decisive function of screen between interior and exterior, deserves a more differentiated form than that of a thin flat film. In general Anger and Puccinelli have striven always to do justice to the main purpose of their profession; that being to create a pleasant and appropriate setting, whatever the function of the constructed mass.

The buildings that follow are arranged in chronological sequence in order to show the various solutions that architects have devised for the problem of urban renewal during different stages in a line of research that has been single-mindedly adhered to since the beginning.



1
Rear courtyard of a block of flats at Victor Hugo/Belles Feuilles, Paris

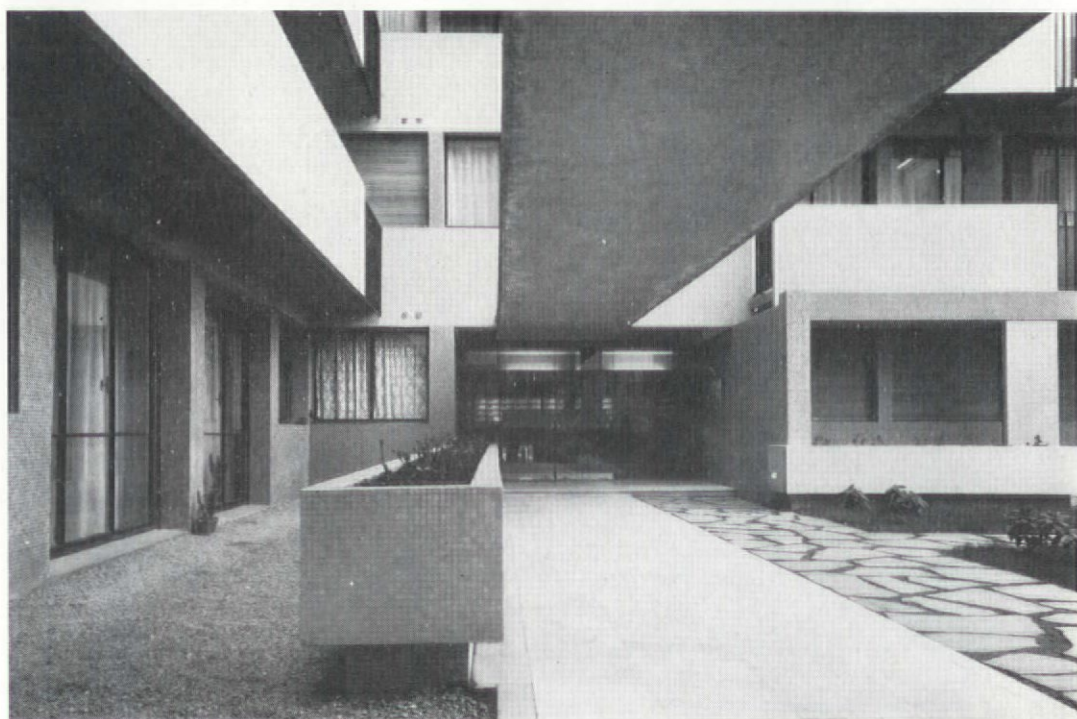
2
Flats 'Les Pinards' at Limay, Seine et Oise
Photos: Studio Martin

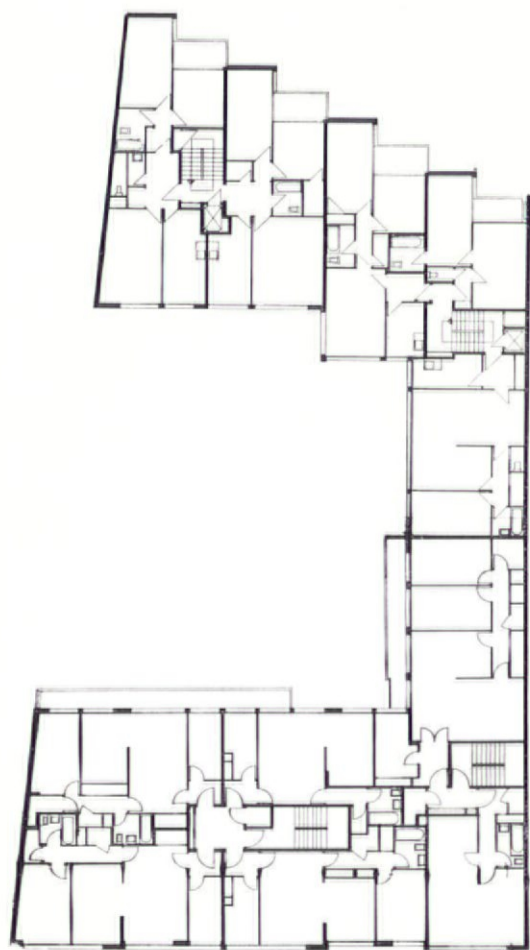
Paris flats, 283 Rue des Pyrénées

The site was restricted by two non-parallel streets on either boundary. The architects wished to preserve the orthogonality of the rooms in the distribution of the flats and thus constructed a faceted elevation set on to the street. This faceted façade permits a double orientation, south and east, and at the same time, comprises an interesting plastic relief which is accentuated by the staggering of balconies which are modified according to the perspective and sunlight.

All the façades, interior and exterior, are of glass mosaic. The entrance hall crosses the ground floor of the building on the Rue des Pyrénées and receives light from the inner courtyard. This courtyard provides access to the building on Rue du Retrait and is crossed by a covered passage. The whole building is served by one entrance. A fountain is situated at the approach to the entrance hall and the approach of white marble runs into a composition of green glass mosaic and pebbles.

- 1 & 2
External views of the block in 283 Rue des Pyrénées
3 & 4
Two views of the internal courtyard 283 Rue des Pyrénées
5
Typical floor plan of 283 Rue des Pyrénées Paris 20e
Photos: Studio Martin





5



4

Flats at Paris & Perreux

These flats at Vanves, Paris and at Perreux are further examples of residential development designed by Anger and Puccinelli.

6
Flats at Victor Hugo/Pasteur at Vanves, Near Paris 15e

7
Flats Mederic at Perreux

Photos: Studio Martin



6



7

Information sheet

Building



The development plan for the University College of Swansea, due for completion in 1970, will provide accommodation and tuition facilities for 3,000 students. D & C, main contractors for most of the buildings so far completed, are involved in construction works totalling £4½ million to date, including: College House—the cultural and social centre; 2 10-storey Halls of Residence; Natural Sciences building; Applied Sciences buildings; Library and Arts buildings; and two miles of roads, drainage works, paths and playing fields, alterations to the Abbey, earthworks, preliminary landscaping and botanical gardens.

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2



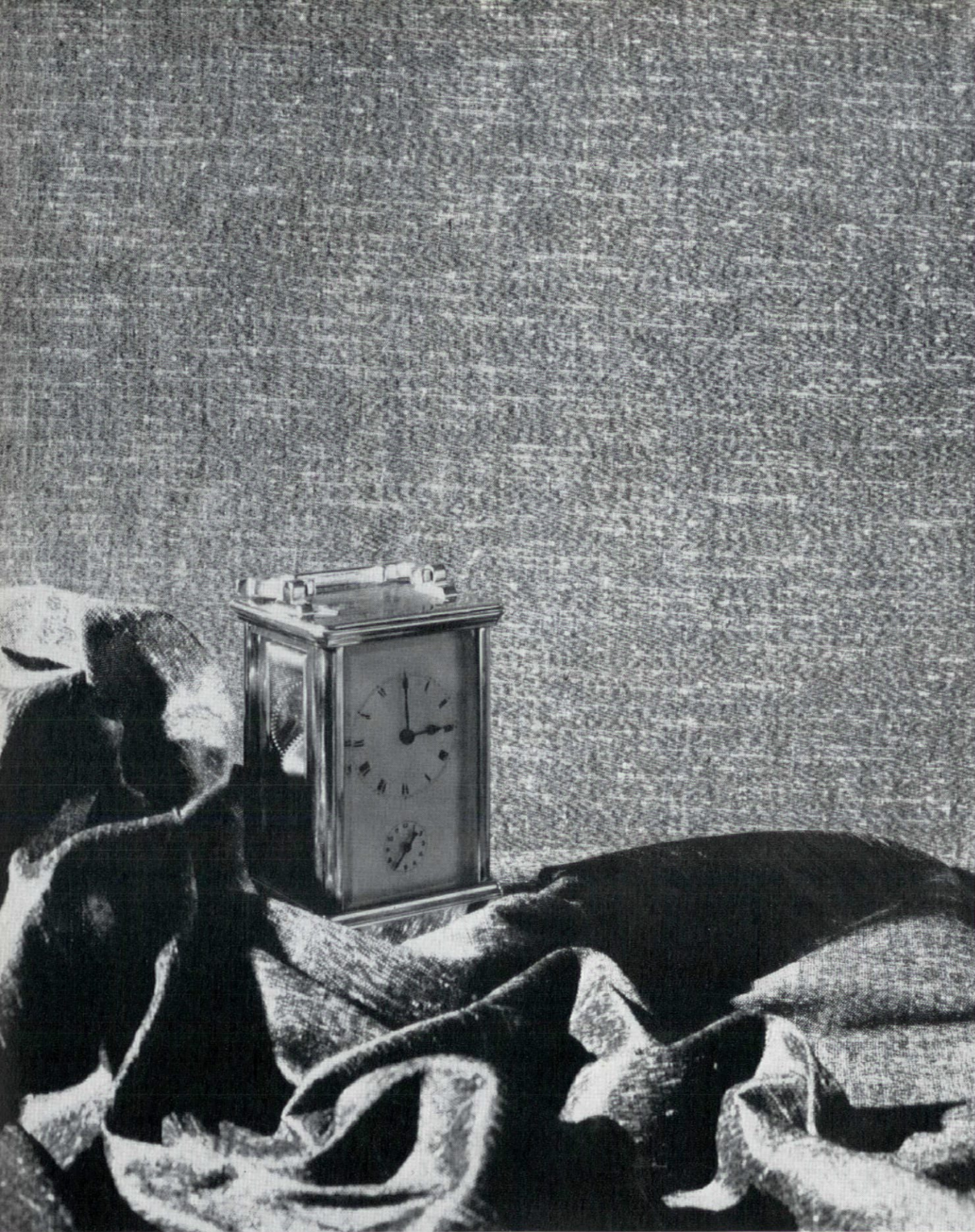
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1
Flats at 209 Rue des Pyrénées, Paris

2
Flats at 28/30 Rue de la Colonie and 67 Rue Barrault, Paris 13e

3
Flats at Rue de Lourmel Paris, 15e

Photos: Studio Martin



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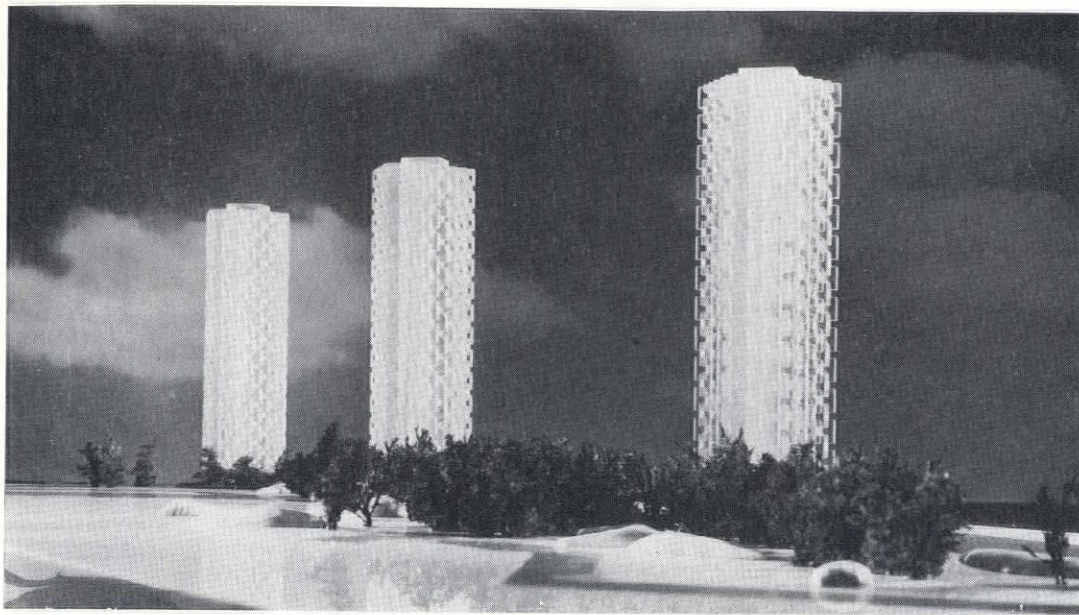


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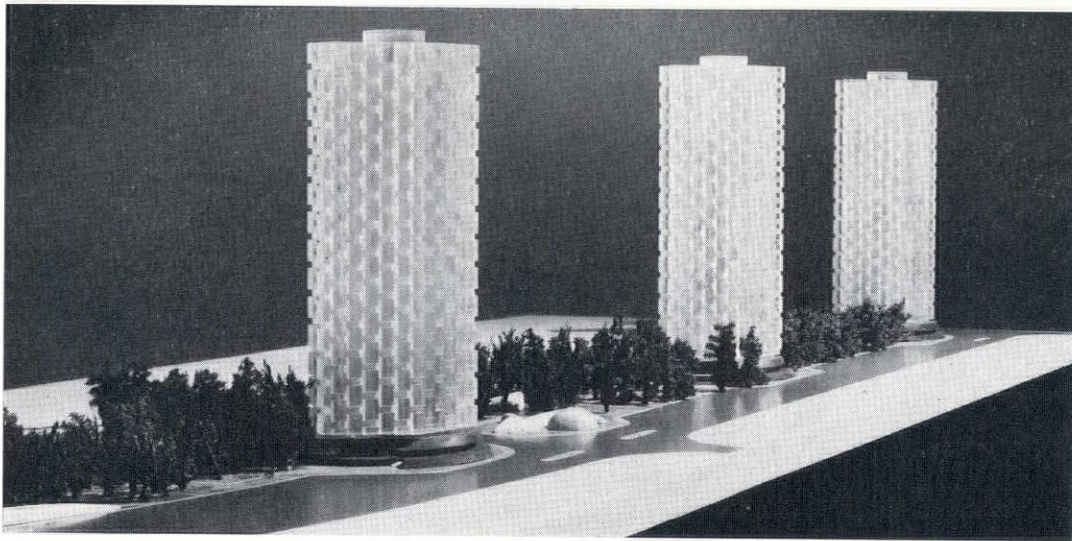
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Flats, 'Ile Verte,' Grenoble

Situated in the centre of Grenoble on a site called 'Ile Verte', these three towers of 28 floors each, now in construction, will on completion be the highest blocks of flats in Europe.

The principle of three identical towers, dictated by the master plan in order to preserve as much as possible the magnificent trees existing on the site. This condition led to a plan of a certain severity. As a result the architects adopted a form which allowed a changeable aspect of the volumes to be seen from each angle. These changes in aspect provide a sense of richness which is increased by the texture of the façade, and the pattern of the balconies. Each flat contains a balcony which acts as an intermediary space between the intimacy of each interior and the spaciousness of the exterior environment.

The plan for each tower is extremely simple. The longest diagonal of the lozenge contains a vent which opens at each level on to a central core where the vertical services, serving the apartments, are situated.

The ground floor of the tower has been designed so as to give the impression of a solid base which harmoniously unites the 30-metre building with the ground. Half a level lower than that of the entrances a general water plan has been designed and is crossed by large marble bridges leading to the central hall.

The façade is entirely out of glass mosaic; this costly material is set off by the reflections from the fountains. The framework is of reinforced concrete. The heating is by means of a hot-air circulatory system.

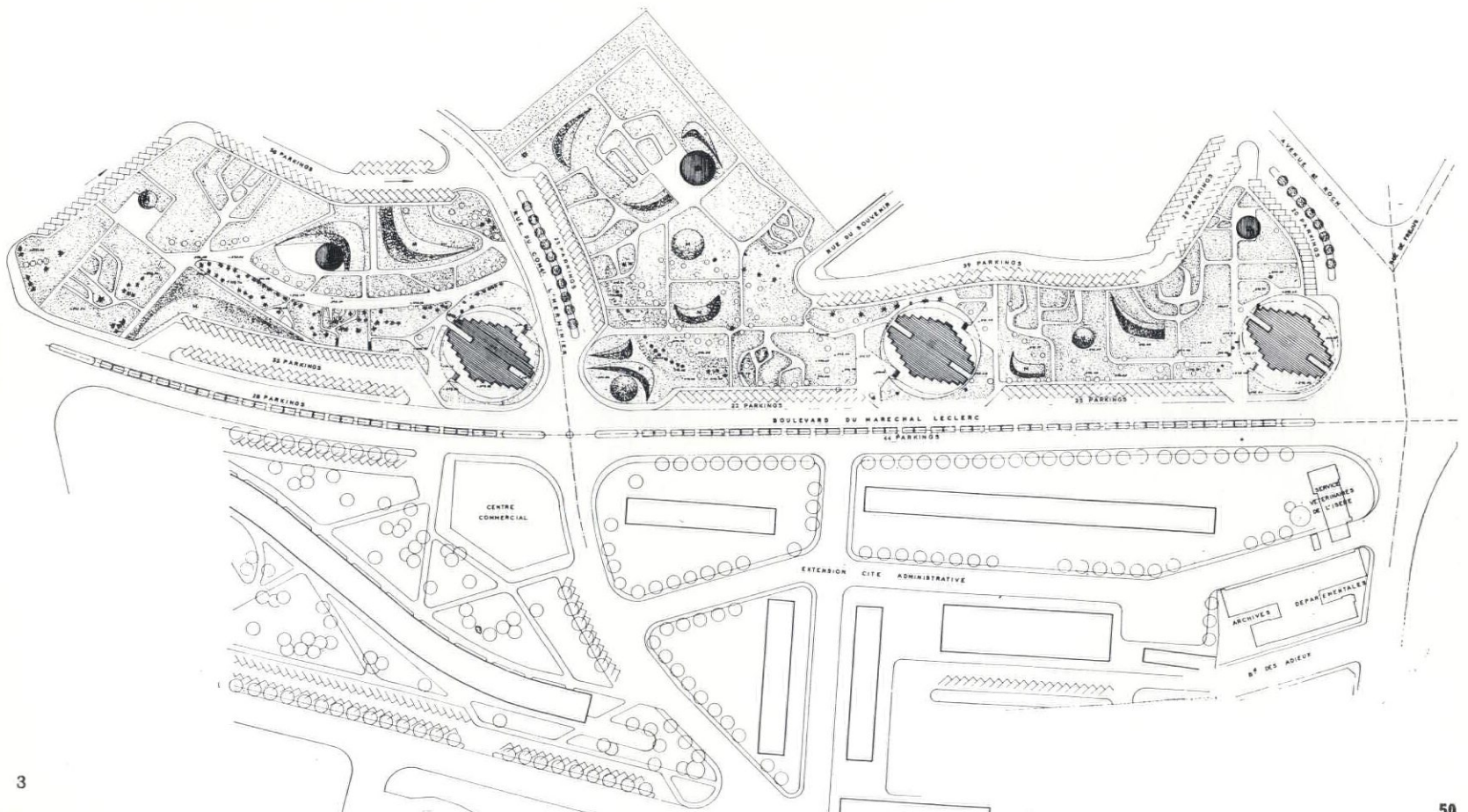
1 & 2

Two views of the model of 'Ile Verte' development

3

Site plan of the 'Ile Verte' development

Photos: Studio Martin



3

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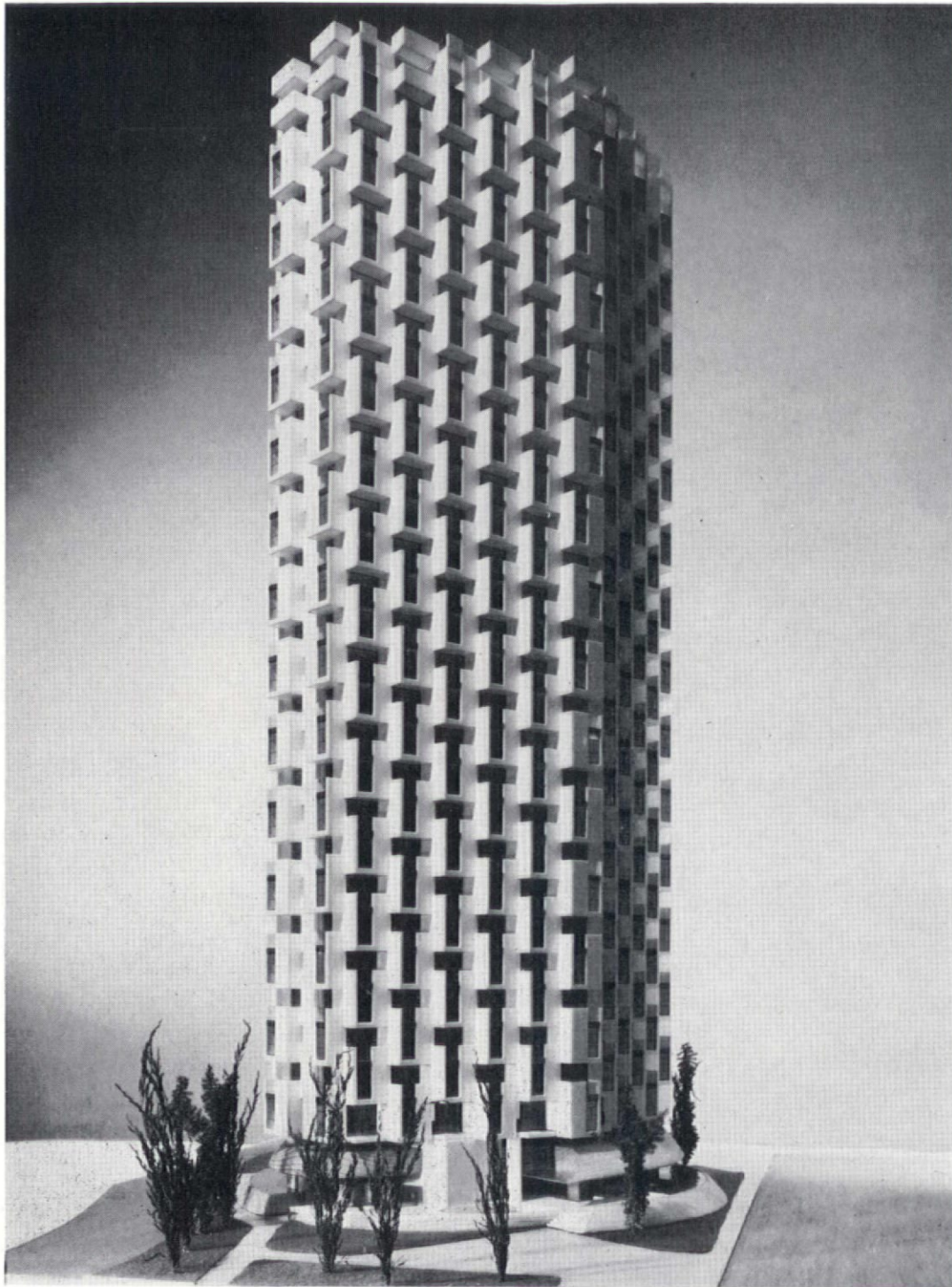
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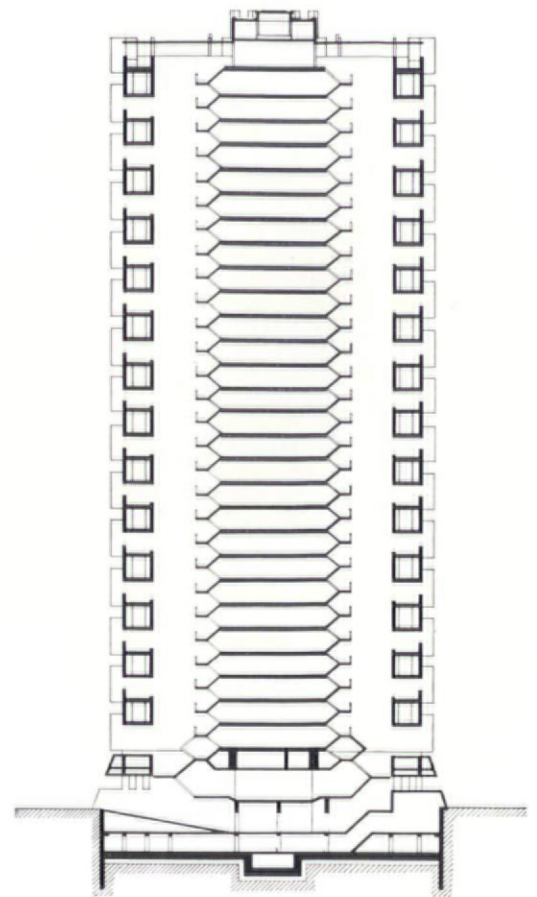
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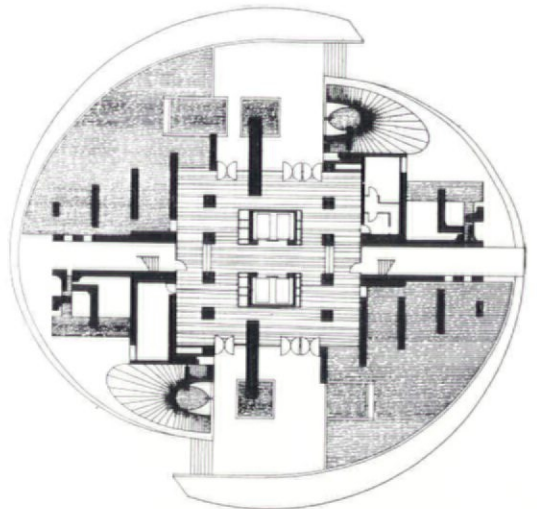
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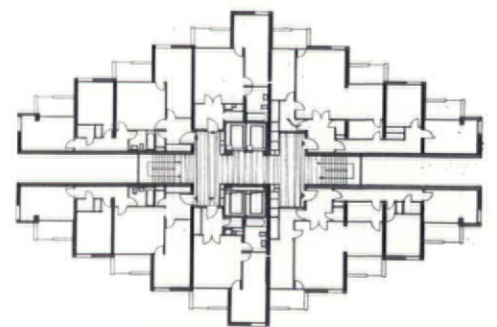
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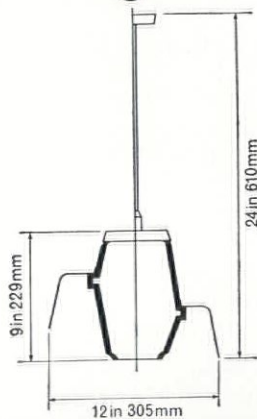
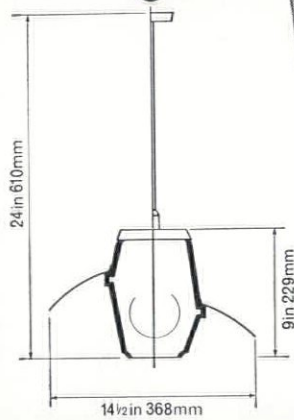
5

- 1
Cross section through the 'Ile Verte' tower
- 2 & 3
Two views of a model of the 'Ile Verte' tower
- 4
The ground plan of the 'Ile Verte' tower. The supporting blades of the tower rest on water
- 5
Typical floor plan of the 'Ile Verte' tower
- Photos: Studio Martin

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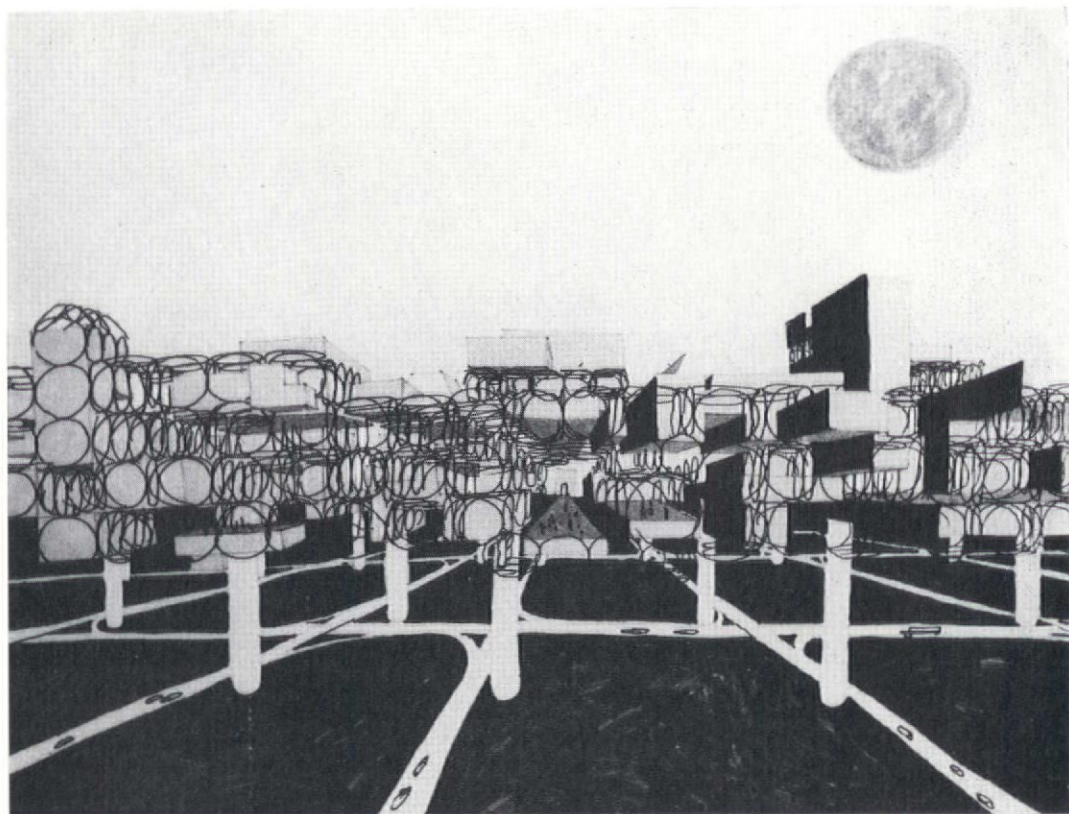
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A trend in architecture: analysis and prognosis

Yona Friedman

1. The final objective of architecture and town planning in the past was the creation of forms (artistic). These forms (artistic) were integrated into *collectively agreed patterns*; social-organization for instance; organization of the family, organization of productivity, and organization of trade. The architect (in fact a craftsman) chose a certain form (artistic) corresponding to one of the patterns, but the choice of the patterns as a whole were not under his control.

2. Nowadays, through changes, as much technical as social, the historically established patterns (social organization) have completely lost their efficiency. On the other hand, other patterns which have always been in existence but in a latent state, are gaining in importance.

3. The architect who ignores the totality of the patterns is unable to exercise a choice with regard to patterns (social-organizations). He is used to choosing forms (artistic) and he continues, by habit, to choose such forms. He does not see that a new artistic-form, whatever it may be, cannot solve the problems created by the need for new patterns, and that the innovations of forms he suggests are only, owing to these facts, a wasted effort.

4. In brief, one may say that *it is impossible to create a new architecture based on intuition*. One will have to seek an objective basis. This objective basis will be made up from all the possible patterns *humanly conceivable in our times on the subject of organization*.

5. To create a new objective architecture, the architect must, before anything else, solve the relations implied by the patterns, e.g. the relation between social organization and transport systems, etc. It is only after this study that the architect may seek the form (artistic) which is convenient and apply it to the established patterns.

6. It is clear that (in the past as nowadays) the choice of patterns and the choice of forms

cannot be made by the same category of individuals. Formerly, the patterns were made collectively and the forms were chosen by qualified individuals (architects). Today the reverse is the case.

7. It is necessary to establish a general system organizing every complex of facts according to a single formula. Such a system is axiomatic for comprehensible systems.*

8. Social organization, represented according to such a system, becomes comprehensible as a 3-element structure: firstly as spatial organization, secondly as organization of the 'group', and thirdly as organization of the distribution of the means of living.

9. The 'organization of the group' element is not completely known at present. We can only establish a list of the possible combinations of these three elements, without being in a position to foresee the transformations which may actually take place.

10. We may also establish a 'neutral and continuous' field where the transformations of the systems formed out of the three elements (fields) may take place. We can increase the 'neutrality and continuity' of this field by technical means.

11. Without any specific forecast we may find the superior limits of each possible combination (the lower limit may be considered as the equivalent of the *status quo*).

12. In general, the superior limit is 'neutrality and continuity' established over *the whole of the terrestrial globe*. Hence climatization, increase of utilizable surface, increase of 'connectivity'; i.e. the continuity of distribution networks.

13. These points are of general interest to us. But for the purpose of choosing the appropriate technical systems we must consider 'feasibility', that is the means which are at present at our disposal, within reasonable time-limits with reference to the transformations mentioned under 9.

The illustration shows a recent Friedman drawing of a spatial town. The town is carried in a space frame infrastructure which is composed out of circular rings. These rings are jointed at those points where the forces are running parallel to each other. The resultant spaces easily accommodate rectilinear forms. This infrastructure is similar to that used for the bridge town structure discussed on page 53

* See AD Aug. '64 page 371

continued on page 53



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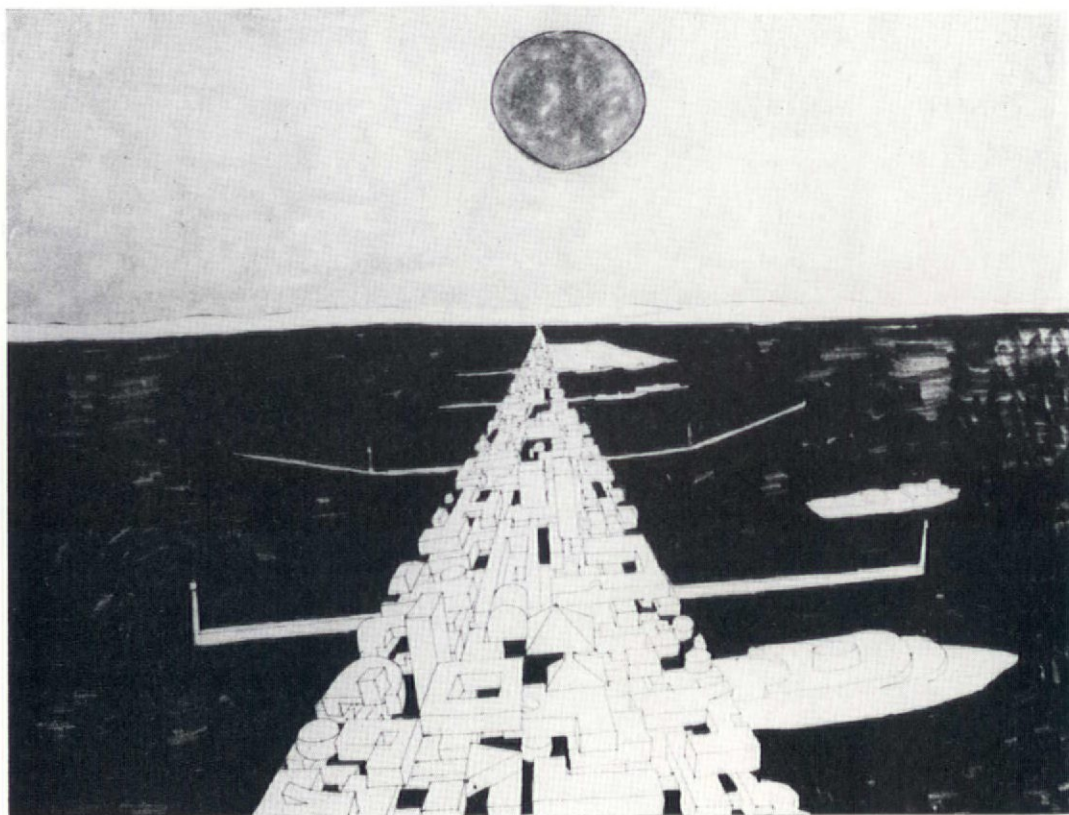


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S.49



continued from page 52

14. The actual possible techniques for the creation of the conditions as mentioned under 12 and 13 are:

- (a) the spatial infrastructure, the utilization of which is undetermined beforehand;
- (b) the possible extension of this infrastructure over the surface of the ocean;
- (c) the construction of intercontinental bridge-towns. These three technical proposals represent the 'superior limit' as mentioned under 11.

A proposal concerning bridge-towns

Looking at the map of the world (polar projection) two facts appear very clearly:

- (1) The four large continents, Europe, Asia, Africa, America, are only separated by 50 to 150km wide straits;
- (2) The overland networks (railways and highways) which cover these four large continents, could be made continuous (except in Africa). As a matter of fact, the total maximum distance separating the various networks, including the straits, does not exceed 2400km.

For a direct through transport on wheels to be possible, for instance from Japan to the United States of America via Russia, or from India to South America via Russia and North America, all that is missing is:

- (1) The building of eight bridge-towns linking the straits to the continents (see above illustration);
- (2) The building of the required railways and highways.

The building of the eight bridge-towns, the total length of which would be about 400km (a distance slightly greater than Paris to Brussels),

and the laying of 2000km of roads and railways (roughly twice the distance from Paris to Nice), does not appear to be a major problem for world industry. The necessary quantity of steel is less than that used at present for sea transport on the Atlantic Ocean alone (ships), and the efficiency of such a solution of direct communication would be tremendous owing to the speedy conveyance of goods and the elimination of trans-shipment.

The most important of the eight suggested bridge-towns is the one across the Behring Straits (150km), and this is the easiest to build as there is no maritime traffic through the Straits; it would therefore be possible to build it as a pontoon bridge.

The bridge-towns of Hokaido and Hakodate (Japan) would not together exceed 80km. The bridge-towns of Gibraltar and of the English Channel would be roughly of the same length (32 and 50km).

From a utilitarian point of view these bridges would be most important, because they would link the great industrial centres to the great consumer markets of the whole world. The two others (Malacca and Sunda) would be less important, although more than 100 million inhabitants depend on this extension.

As far as the structure and the general conception of these bridge-towns is concerned, the solution under consideration is similar to that previously proposed for the Channel bridge (see *AD*, April 1963). The structure would contain the stores, the technical departments and the housing of the personnel; these constructions would be carried out according to the model of the spatial infrastructures studied among others in connection with Spatial-Paris and the English Channel, etc. (see *AD*, November 1963). The infrastructure may be laid or suspended on pylons or floated on very close floats (engineering of military pontoon bridges).

In brief, these bridge-towns could yield (at the cost of little effort) results of fundamental importance for the world.



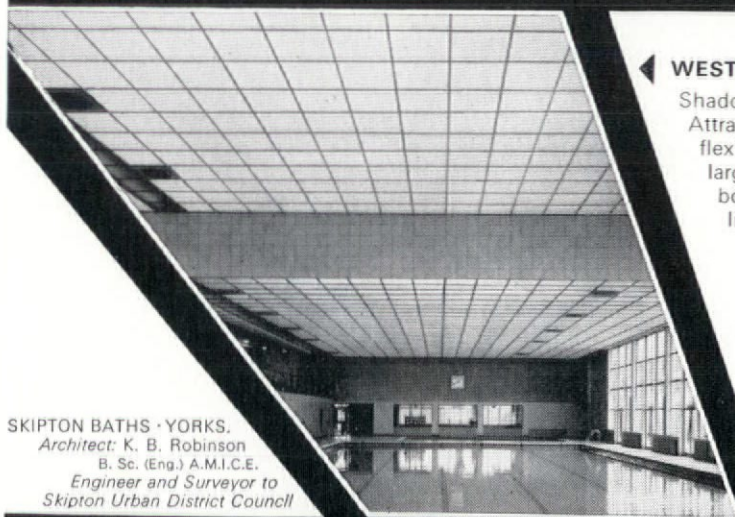
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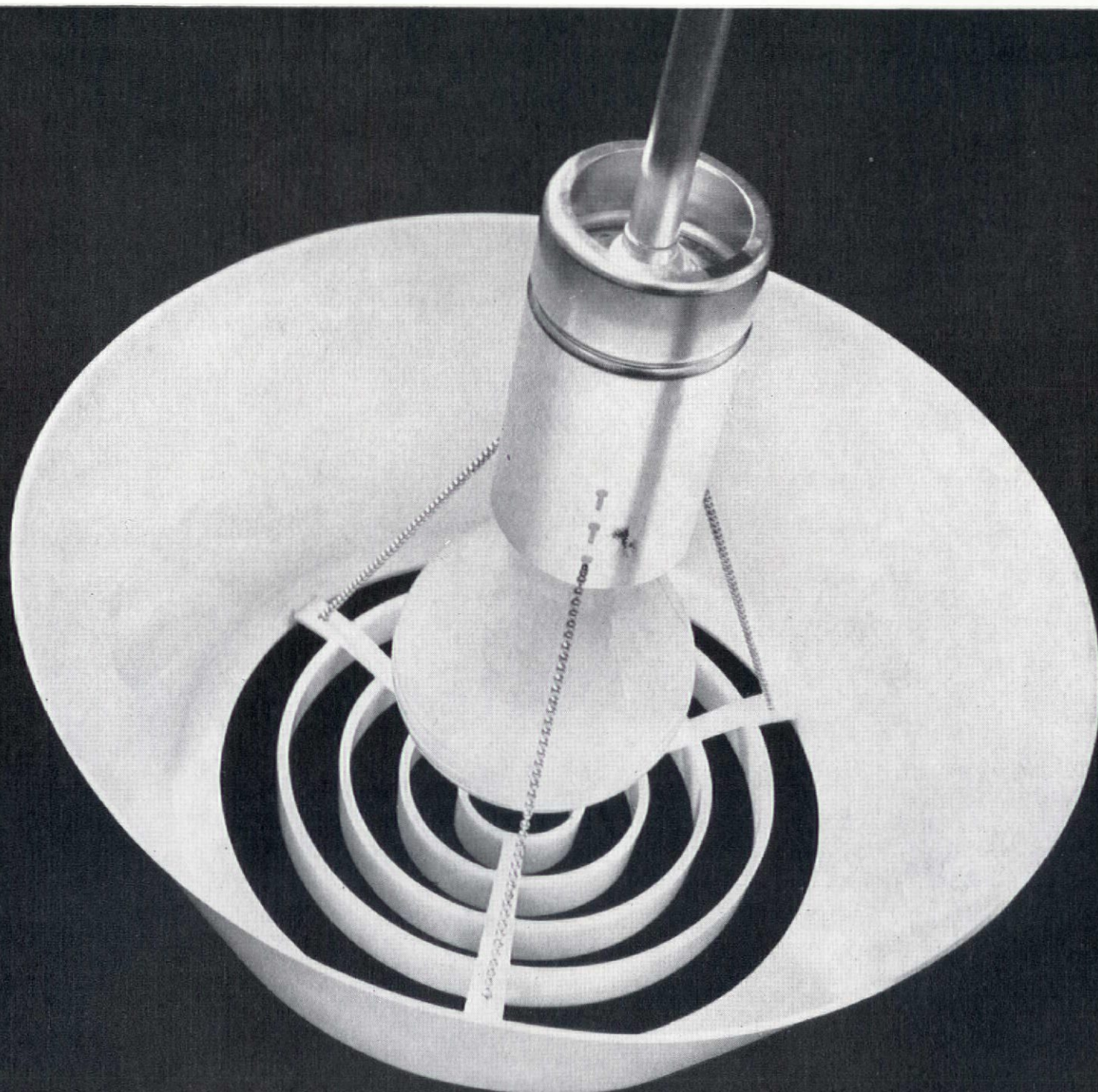
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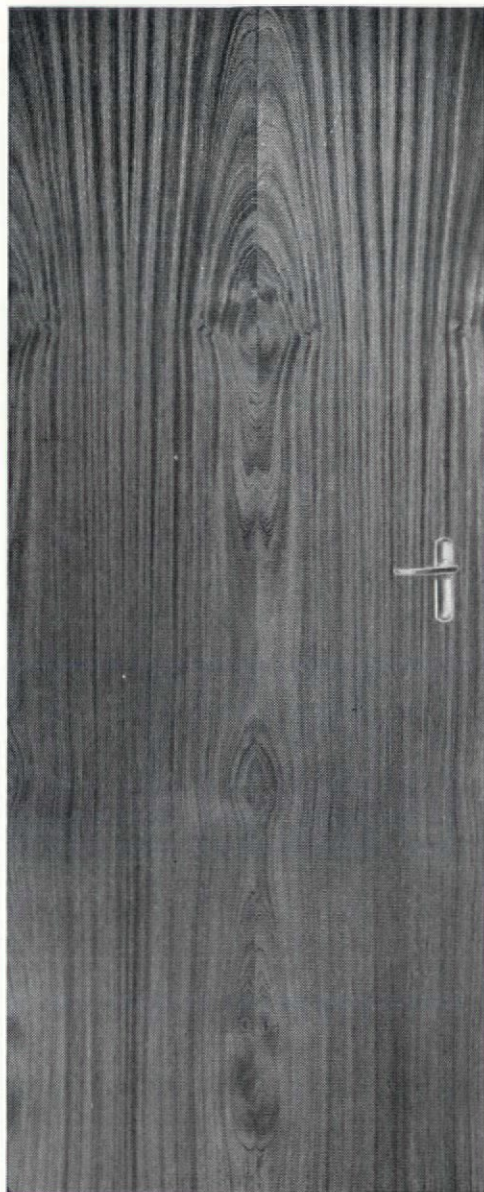
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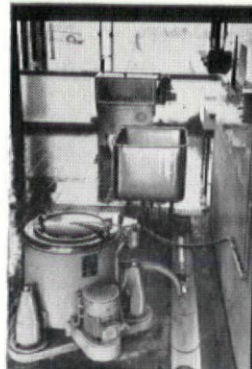
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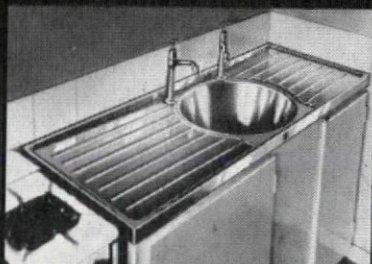
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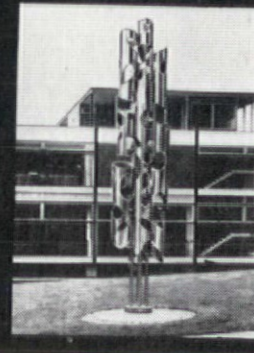
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Architects — Ronald Ward & Partners.



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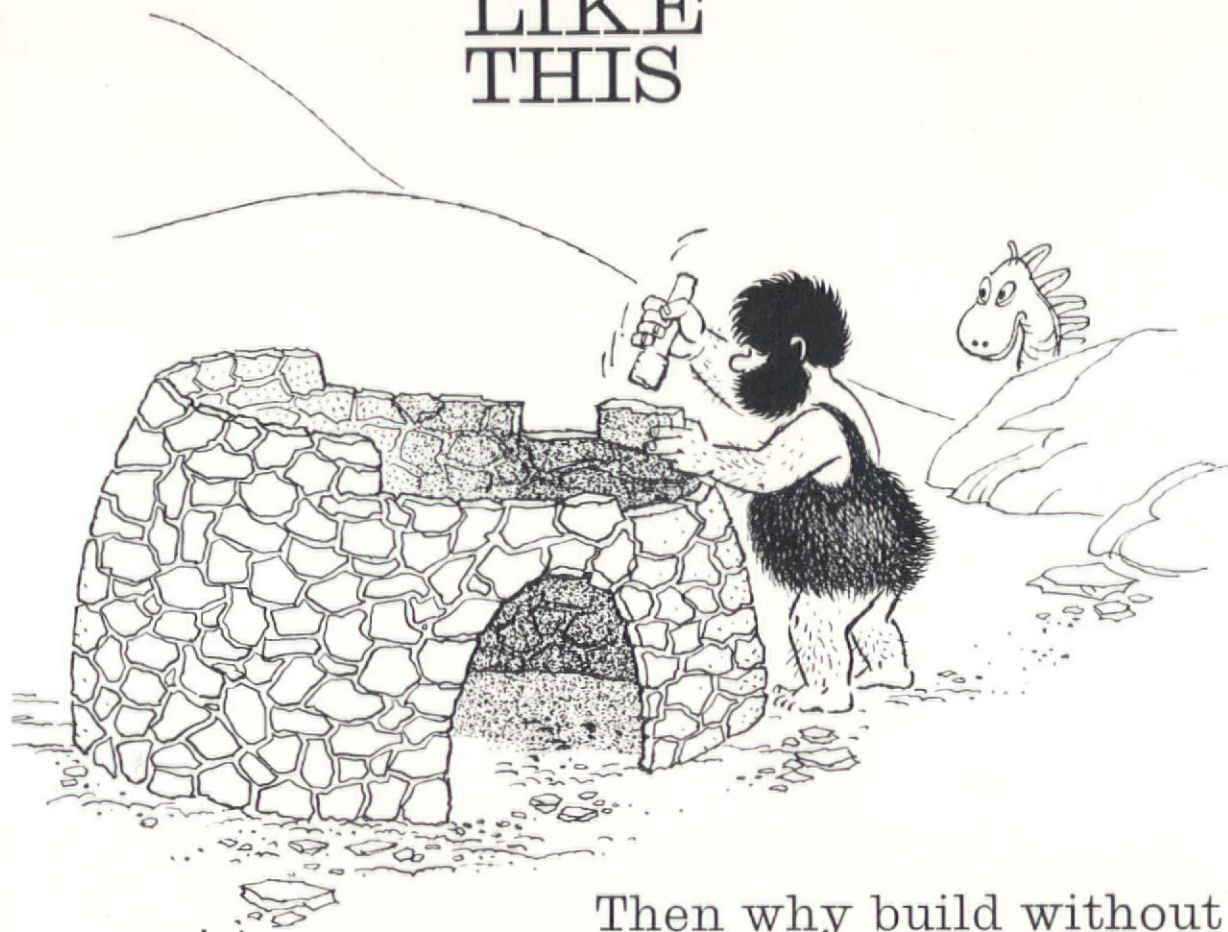
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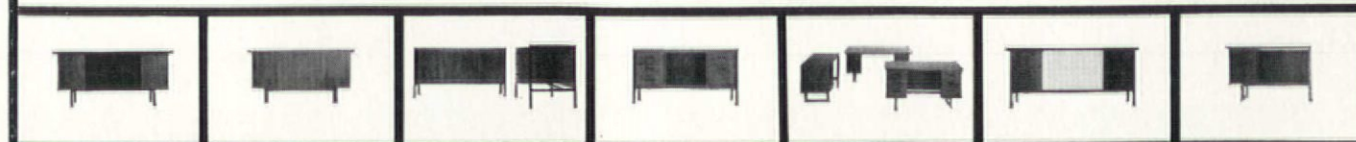
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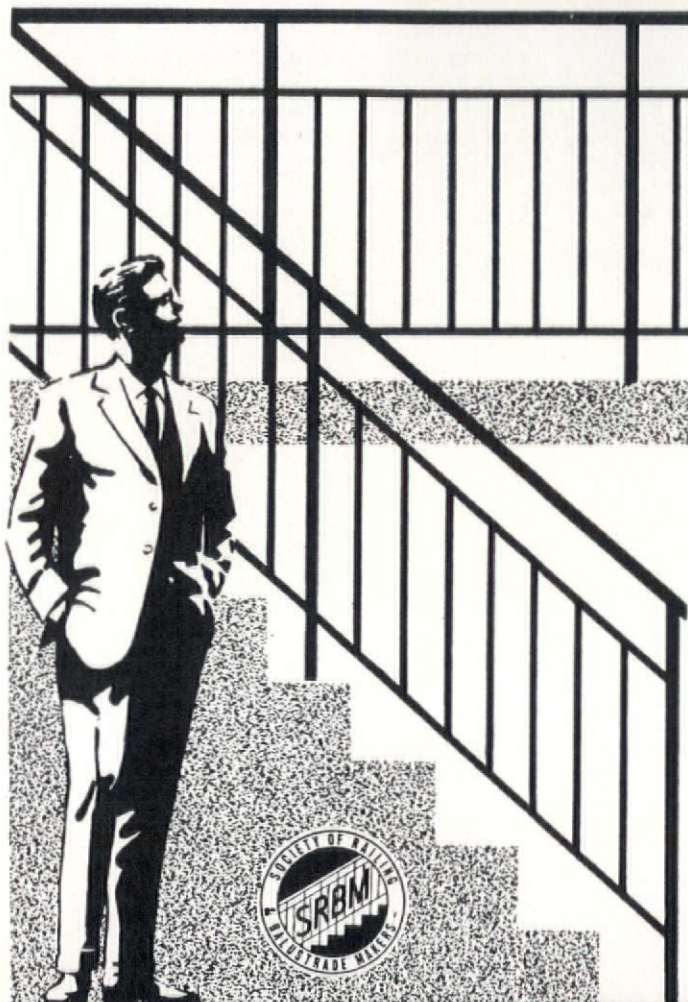
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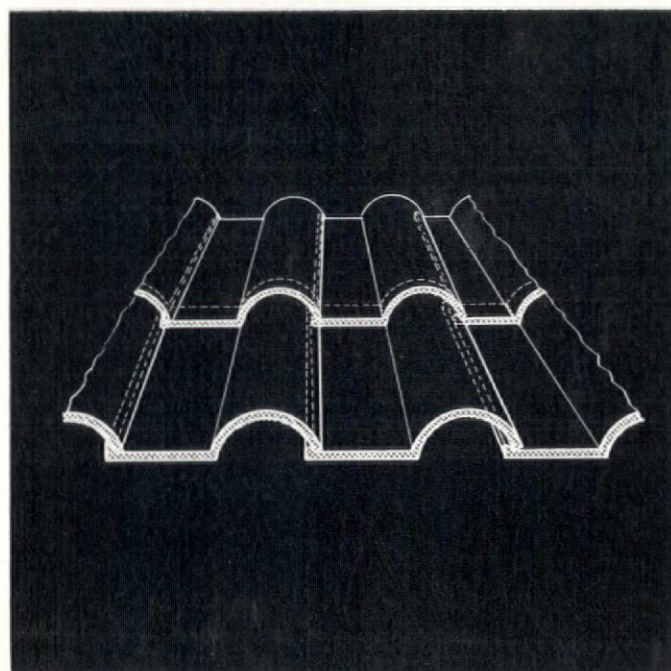
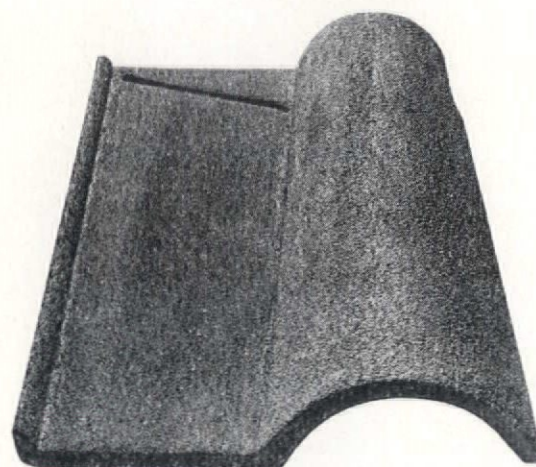
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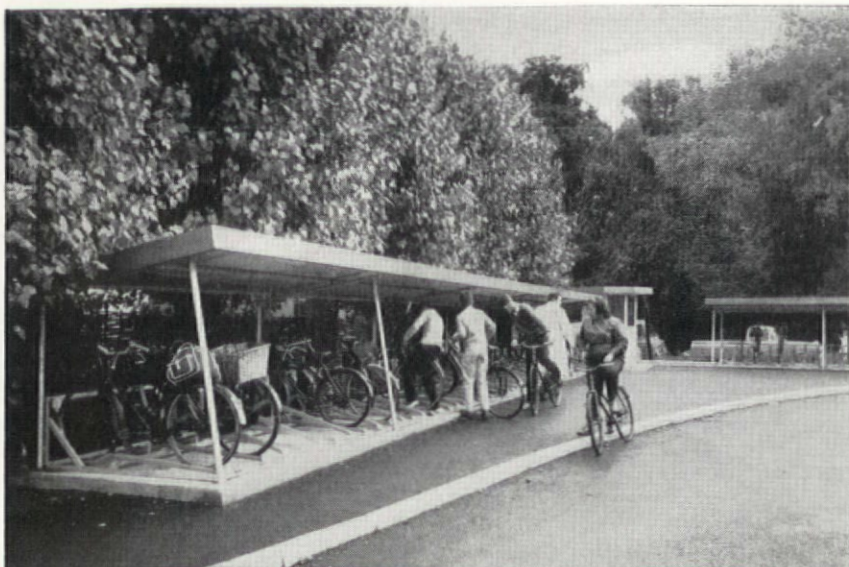
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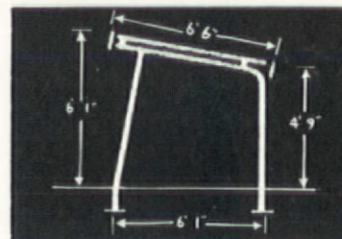
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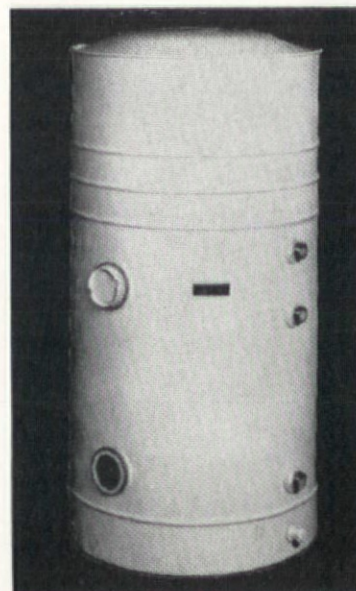
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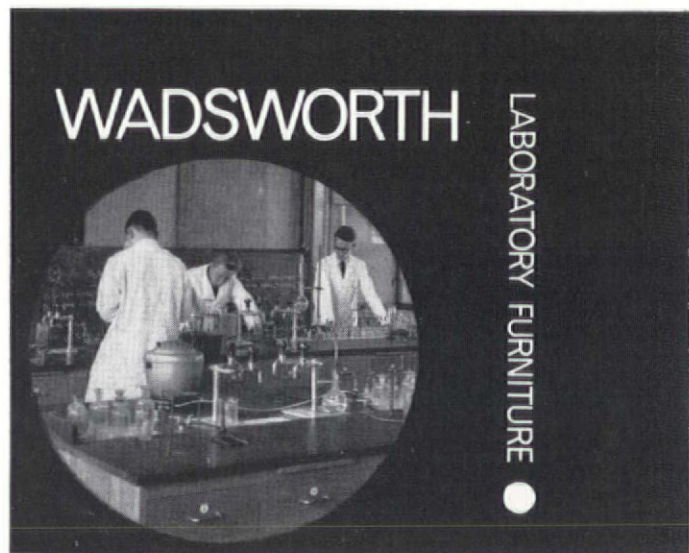
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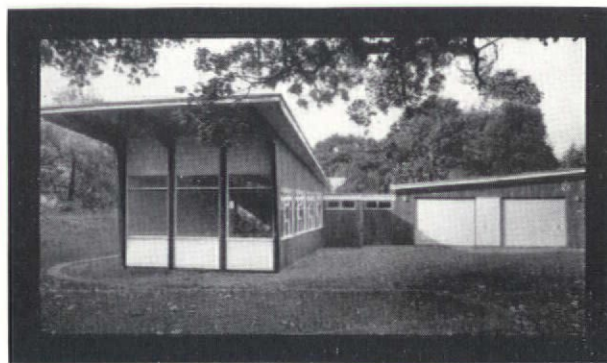
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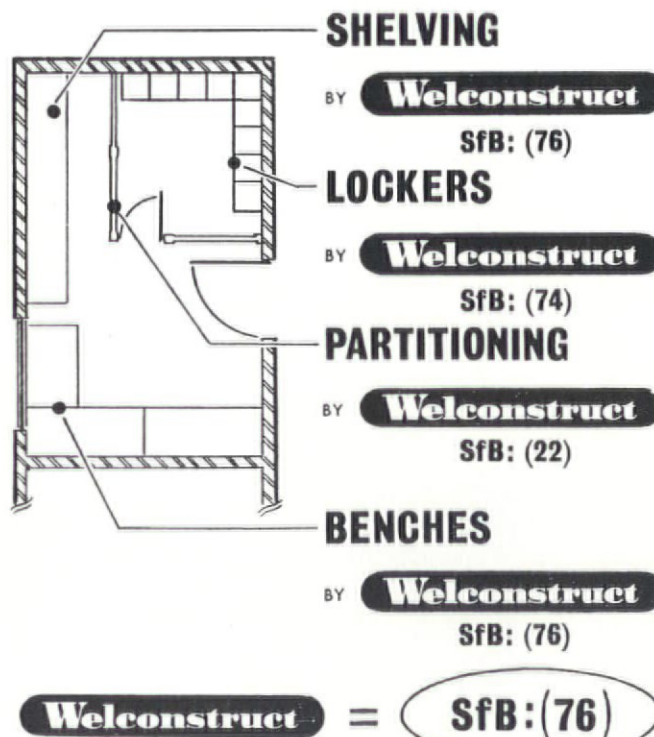
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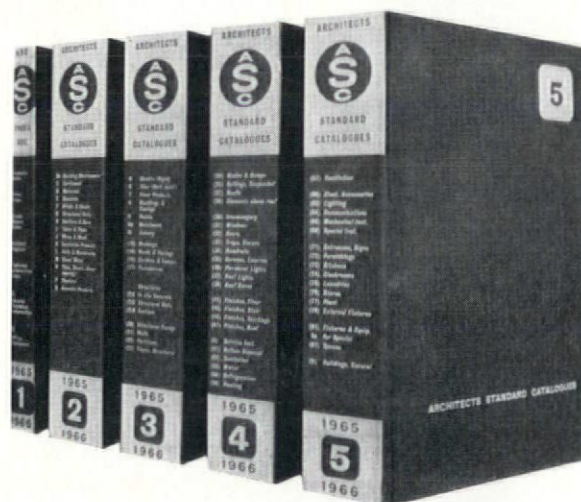
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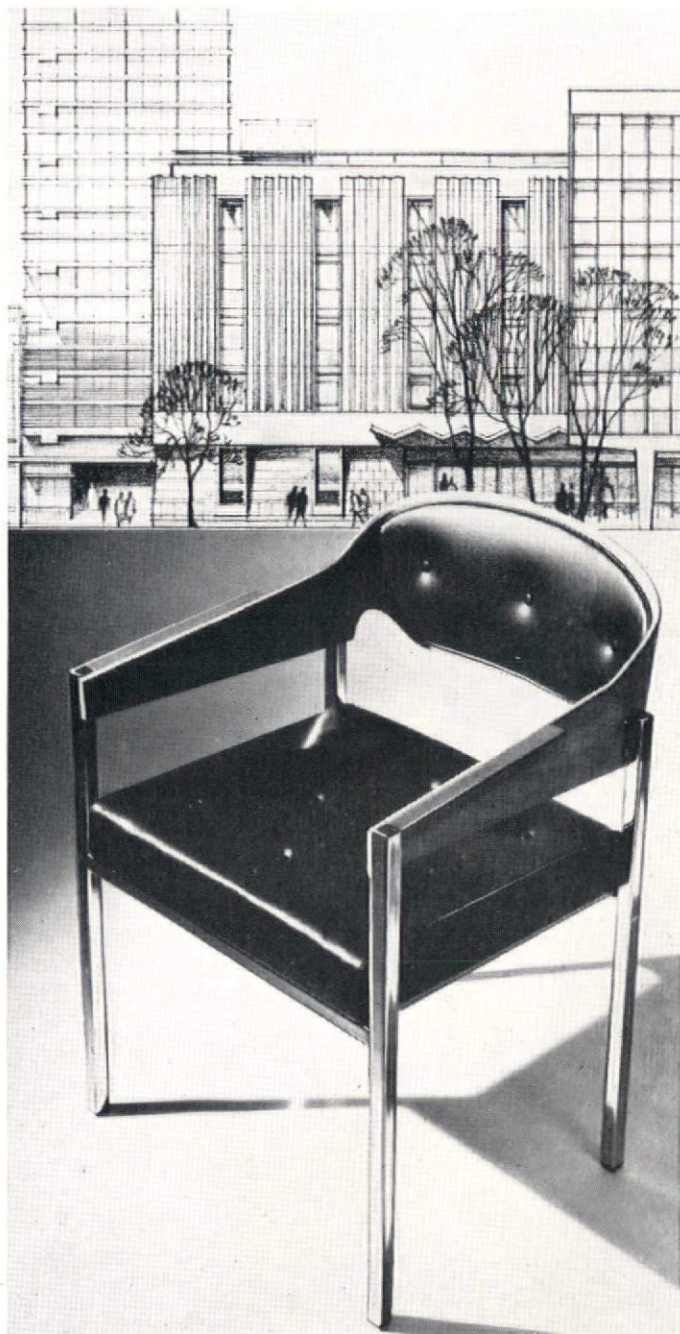
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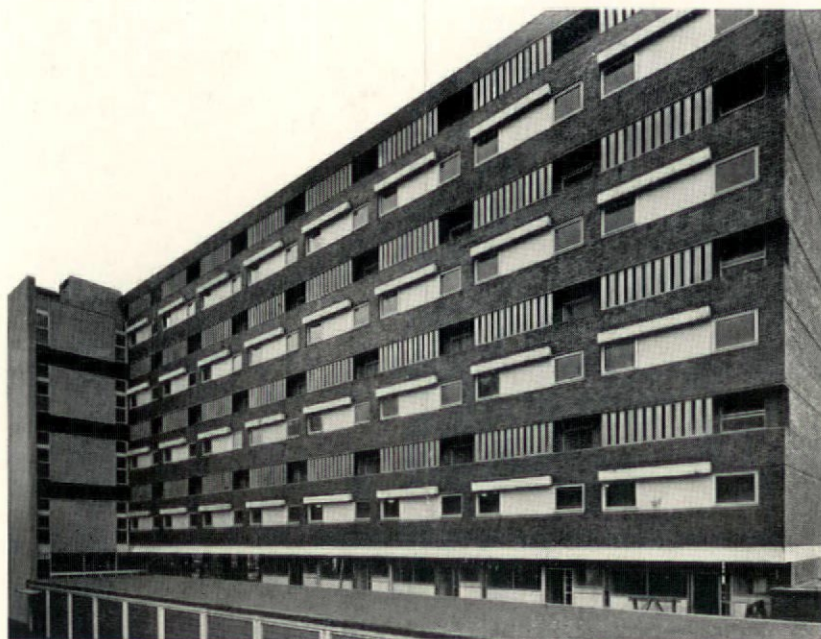
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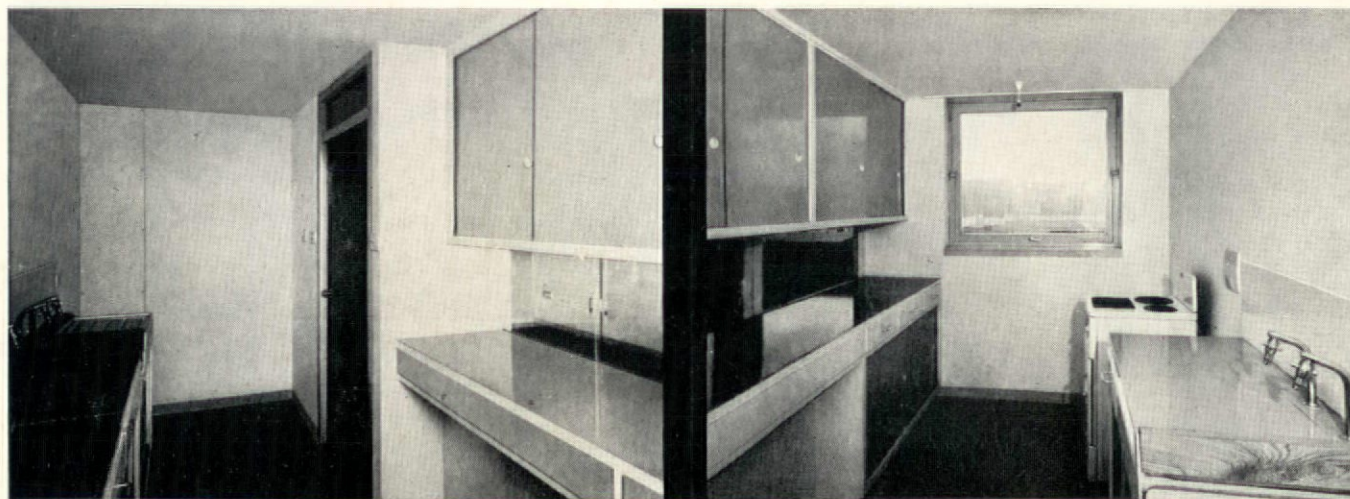
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