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From private to public: Le Corbusier and the House-Palace, 1926-1928.

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From Private to Public: Le Corbusier & the House-Palace, 1926 -1928

CYNTHIA ANN POOLE

A thesis submitted according to the requirements
of the University of Westminster
for the degree of Doctor of Philosophy

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TABLE OF CONTENTS

Abstract
Introduction

i

Part I • *THESE*

Theoretical and Poetical Ideas in Le Corbusier's *Une Maison*:

Introduction:

- The structure of the book 1
- The origins of the Book - the 1927 lecture 3

The thesis: sequence of ideas & their development from previous writings

- The cover image 4
- Architecturethe true Architecture 6
- Higher Needs - Ratios 7
- Ordering ... Nature 11
- Organisms 14
- The House is a clear organism: the type-house 20
- Potential for Architecture: Resources 22
- A Palace is made of the House -Transformation 28
- The Précisions Version 33
- The Précisions Version 41

In Defense of Architecture

- Le Corbusier & the Constructivist Critique 44
- The Teige Polemic 51
- In Defence of Architecture 54

Part II • *EXPLICATIONS*

Le Corbusier'S 1927 project for the Palace of Nations

- Le Corbusier presents his project: *Une Maison* part II 73
 - The Drawings Set 73
 - The Organisation and Emphases of Part II 74
 - Early Sketches 86
 - Project Development & Facade Studies 89
 - The Palace of Nations and the Villa Stein at Garches 94
 - The Roof Garden 102
 - Parterres and a Continuity of Pattern Making 106
 - The Tambour 107
 - Internal Circulation 109
 - The Overlooked hall 110
 - External Circulation 114
 - Rowe's Phenomenal Planes 116
 - The Symmetrical Variant: Rearranging the parts 117
-

Part III: *APPENDICE:*

A brief history of the Competition c.1925-1927

Chronology of the Competition	127
Section 1	•The Formation of the League of Nations 129
	•The Structure of the League 131
	•An Architectural Competition 134
	•Who were the Jurors? 135
	•The jury defines the problem 139
	•Writing the Programme 141
	•The Competition Programme and Rules 142
Section 2	•A beaux-Arts Precursor 150
	•The competition period 156
	•The entries arrive 159
	•377 entries - the state of Architecture in 1927 159
	-Planning strategies of entrants 160
	-British Entries: the Beaux-Arts seen from afar 161
	-Visions of a Palace: a multitude of Styles 163
	-Notable entries 167
Section 3	•Judging the Competition - 175
	-The Jury Report 180
	-The Jury's Choices - 27 winning Designs 181
	-Public Reactions - the English Press 185
Section 4	•Who will build the Palace of Nations? 192
	•Le Corbusier campaigns for his project 197
	'The decision of the Committee of Five 198
	The first <i>Requête</i> 199

CONCLUSION	207
------------	-----

Selected Bibliography	210
-----------------------	-----

ADDENDA

PART I

- English Translation of *Une Maison - Un Palais:*
A House - A Palace: in Search of an Architectural Unity

PART II

- The Competition drawings & Assembly Hall plans [fr. Computer model]
- Still images from the Computer Model
- About the Computer Reconstruction • Problems of the Reconstruction
 - technical information
- CD-Rom of Computer-generated animations of the Reconstruction.

PART III

- Documents
 - The Competition Brief [extract]
 - Letter from Horta to Secretary General
 - Secretary General to Horta
 - The Jury Report
 - Initial Committee of Five Report
 - Final Committee of Five Report
 - Secretariat to Le Corbusier
-

Abstract

Thesis for the degree of Doctor of Philosophy
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February 1997.

From Private to Public: Le Corbusier & the House-Palace, 1926 -1928

My submission consists of a written thesis and two other pieces of work: a French-to-English translation of Le Corbusier's 1928 book about the 1927 competition for the Palace of Nations, *Une Maison - Un Palais*, and a computer model from which still images and computer animations of his unbuilt entry have been generated. These last are available on video and on [Mac Format] CD-ROM. The project is organised as follows: the tripartite structure of my study follows that of *Une Maison - Un Palais*, around which my investigations are centred: *Une Maison* consists of a '*Thèse*', or exposition of ideas, followed by '*Explications*' - a presentation of the Le Corbusier/Pierre Jeanneret entry, and then by an '*Appendice*' - a collection of documents detailing the outcome of the competition and Le Corbusier's campaign for his project.

The *Thèse* in *Une Maison* indicates Le Corbusier's architectural thinking in 1928, with particular reference to this project, the House-Palace of the title, and I have explored the ideas in the *Thèse*, their derivation from earlier books, and their development here.

The second part of my thesis is devoted to an analysis of Le Corbusier's project with the aid of the computer reconstruction, whereby the two main internal spaces - the Assembly Hall, and the Grand Entrance Hall which precedes it - are explored, as well as the entire ensemble on its lakeside site.

As an addendum, I have examined the circumstances of this project: the League of Nations, its 1926 competition, the judgement and its aftermath. A number of documents, from which the history of the competition can be reconstructed, have been unearthed, and some of them are included here: the competition brief, the jury's report, and the Committee of Five report which eventually awarded the commission jointly to four [Academic] architects.

A Note on the Illustrations

The illustrations for each section are numbered as follows:

Part I:	figure 1 - figure 22 inclusive
Part II:	figure 1 - figure 69 inclusive
Part III:	figure 1 - figure 36 inclusive

Where illustrations have been added at a late stage, or have been split up into parts for clarity, the figures have been designated [eg.] 'figure 22A', 'figure 22B' etc. Uncredited figures have either been drawn by me, or are taken from the *Oeuvre Complète*, or from drawings held by the *Fondation Le Corbusier*, and recorded in the *Garland Archive*.

From Private to Public: Le Corbusier & the House-Palace, 1926-1928

Introduction

This study examines Le Corbusier's 1927 project for a Palace of Nations and the 1928 book *Une Maison - Un Palais*, in which he presented the project. As my English translation of this text forms the basis of the study, I have followed Le Corbusier's tripartite organisation of his book. *Une Maison - Un Palais* consists of a *Thèse* or 'thesis', *Explications*, and an 'Appendice'. The *Thèse* section of the book is an exposition of Le Corbusier's architectural thought at that time, with particular reference to this project, the House-Palace of the title. I have examined the ideas in the *Thèse*, and, as far as possible, traced their origins. My translation of *Une Maison - Un Palais* accompanies this section. There follows an examination of Le Corbusier's house-palace, analysed with the aid of a computer reconstruction. Video footage, still images and QTVR panoramas generated from the computer model are presented alongside the written discussion. My investigation of the historical circumstances of this project - the League of Nations, its 1926 competition, Le Corbusier's competitors, the judgement and its aftermath - is included as an addendum. I have collected, among other documents, the competition brief, the jury's report, and the official album of premiated designs, some of which are included as annexes. where?

The various geometric and theoretical rule systems which Le Corbusier used to generate his houses of the 1920's are well known and much studied: my initial intention was to discover how Le Corbusier applied these rules to a much larger, *public* building; that is, one in which numbers of people will gather and participate in some group activity of mutual interest: a parliament, a law court, a theatre, etc. The most important spaces in such building will invariably be a large hall or auditorium, usually approached in a ceremonial fashion, and those public areas which preface it: particular cultural and societal structures will be represented here. The grand, public space usually requires adjacent administrative accommodation - offices: either located within the same envelope as the primary chambers, or requiring an auxiliary building adjacent to the first, as is the case with Le Corbusier's Palace of Nations. Questions such as the adequacy of

Le Corbusier's 'Purist' rule structure for this kind of building: would it be meaningful given the increased scale? Might it express a symbolic programme? - are addressed in the second part of this study along with analyses of many other aspects of the project: research indicates a multitude of Corbusian concerns here.

In Le Corbusier's history of architecture as related in *Une Maison*, the basic building types are 'the house, the temple and the palace'¹: the very first public building is the temple, the 'votive enclosure of primitive peoples'. He juxtaposes the image of the temple with a contemporary example of a primitive hut, artfully chosen: the form of the hut is mirrored by that of the tent-temple of the Israelites². The metamorphosis - of hut into temple or palace - is the matter of his text, and one of my concerns is to examine the extents and success of the corresponding transformation of Purist house into Purist palace in the case of the Palace of Nations project. His Palace consists of two buildings, Assembly Hall and Secretariat; while the Secretariat clearly takes the form of a *redents*³ block floating above the landscape, a configuration designated as mass housing in previous projects, the Assembly building with its special function and correspondingly special form, is not so obviously derived from the Purist house despite the application of common architectural strategies.

The Palace of Nations design is the first project for a public building in Le Corbusier's oeuvre⁴. It was designed when his mastery of the Purist house had reached its peak: in the same year, the *équipe* Le Corbusier built two houses for the Weissenhofseidlung in Stuttgart, completed the Villa Stein at Garches, and had begun the design of the Villa Savoye at Poissy. The facades of the Villa Stein were designed at exactly the same time as those for the Palace of Nations⁵. Before 1926, there is no indication that Le Corbusier had considered the problem of the modern public building, either as a building type or as a likely focus in an urban plan. After the League of Nations competition, both these considerations are evident in his work. But the importance of this project is not just as a developmental marker in his oeuvre; it is immensely significant for the Modern Movement as a whole. The competition for the Palace of Nations provided architects with perhaps the most important architectural programme in Europe in the first half of the Twentieth Century. And this was the first time a Modern project, that of Le Corbusier, had ever been seriously considered for a major public building.

It is difficult - perhaps impossible, probably undesirable - to extract the building from its context of European war-weariness, idealism, and political

expediency. It is hedged about with the innate contradictions of the League of Nations, that instrument of Peace and Unity in a still divided and hostile Europe. Against a background of declining nineteenth century empires and institutions - the victorious 'establishment' of Le Corbusier's text - the avant-garde movements of the early years of our century spring up on all sides, their extraordinary vigour and diversity at least partly fuelled by a horror of the recent past, and the 'war to end all wars'. The League of Nations competition ended in débâcle when the judges were unable to agree on a winner. There was widespread anger and much press criticism.

Le Corbusier mounted a campaign to get his project built, and his tactics included petitions, open letters to the 'elite of the world'⁶, the book *Une Maison - Un Palais*, and several legal representations, including an accusation of plagiarism. These activities were given coverage by sympathetic journals and newspapers and although the campaign failed, the matter focused attention, not only on Le Corbusier, but also on the Modern Movement. The opportunity to build such a programme was not granted to Le Corbusier until the 1950's, but the experience was not wasted: the projects for Chandigarh, built 25 years later are resonant with the architectural ideas and strategies developed in the 1927 competition.

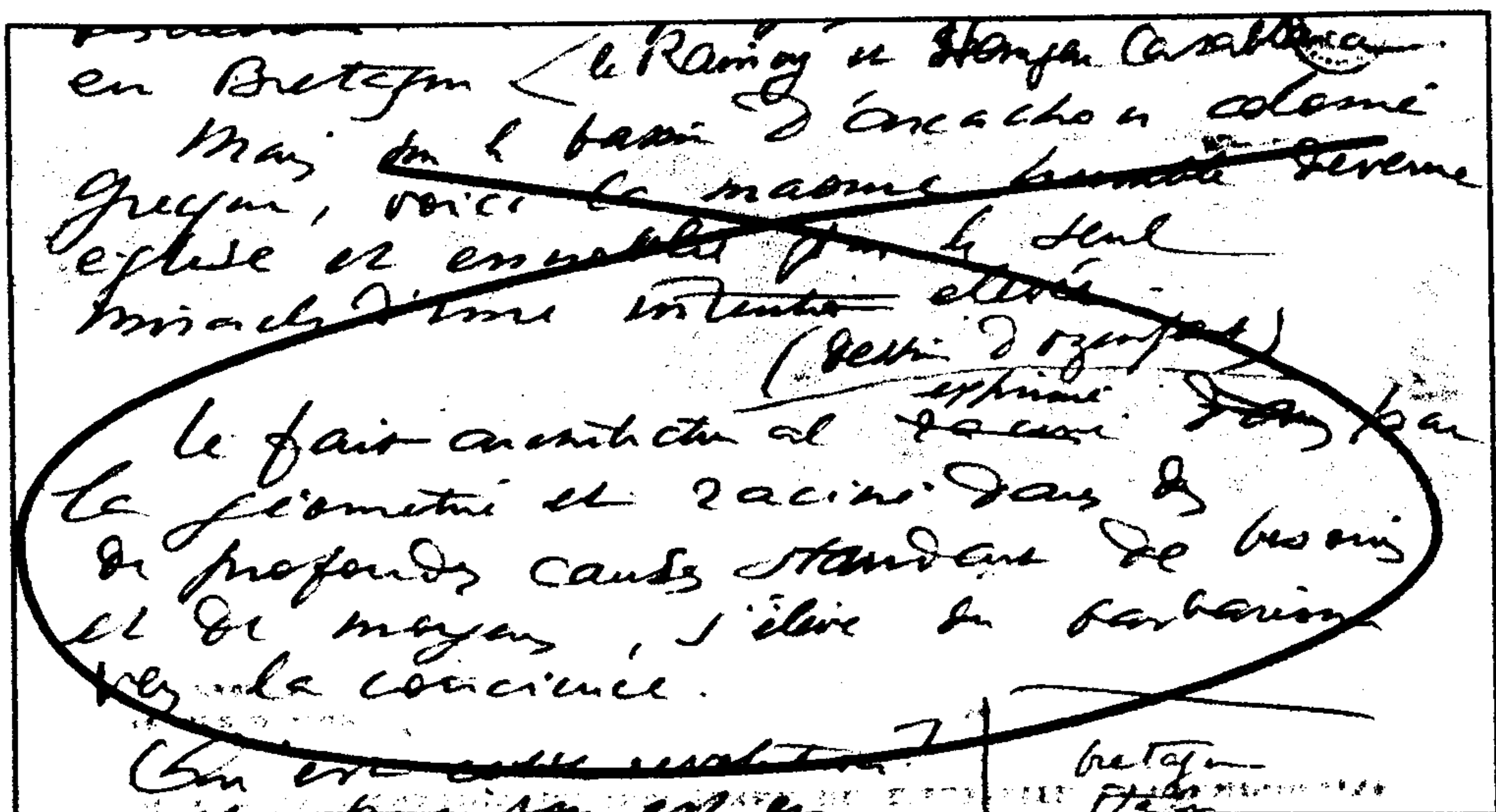
Notes to Introduction

1. See *Une Maison*, p2.
2. See *Une Maison - Un Palais*, p40. The temple sketched here is the fabric tent and enclosure of the ancient Israelites; see *Vers une Architecture*, 'Regulating Lines' for the original illustration [from Choisy].
3. The coinage '*redents*' to describe those raised slab blocks allocated to mass housing which zig-zag across many Corbusian urban plans dates from the early 1930's, but they first appeared in the 1922 *Ville Contemporaine* project, although here and in the 1925 *Plan Voisin* they are configured so that the arms of the 'zig-zags' are directionally weighted, and thus serve to emphasise the major circulation routes, rather than, as in later plans, acting as a counterpoint to them. I have used the term '*redents*' throughout my text for convenience.
4. Public and *ceremonial*: there are of course early projects such as the abbatoir projects at Challuy [1917] & at Garchizy [1918] and the factory for Frugès in Bordeaux [1925-1926].
[Note the striking, axial formality of the Challuy abbatoir with its overhead conveyors, and the similarities between the site of the abbatoir and that of the Palace of Nations: as Le Corbusier said, *un architecte a exploité ses réserves*. See Part II, fig.65B and concluding remarks to this thesis].
5. See Tim Benton, *The Villas of Le Corbusier*, p174-175 for axonometrics of designs for the Villa Stein facades dated to November and December 1926.
6. See appendices in *Une Maison*.

Une Maison - Un Palais: In Search of an Architectural Unity

PART I

THEORETICAL AND POETICAL IDEAS
in Le Corbusier's *Une Maison*: The Thèse



from B3(4) V, 504-541; Conferences a Zurich - notes for the first 'Une Maison' lecture

But in the Greek colony of the Arcachon Basin, here we see a humble rustic cottage turned into a church and ennobled by the sheer miracle of a lofty intention. (drawing by Ozenfant)
the architectural fact expressed by geometry rooted in profound standard causes involving needs and means rises from barbarism towards consciousness.

Une Maison - Un Palais is a 228 page book¹, which is at once an extension of Le Corbusier's campaign for his *Palais des Nations* project, and an exposition of his architectural ideas as extended from the private house, to the public building [and ultimately, to the city]. As it has never been available in English, I have translated it, and my translation is included here as an appendix. The structure of the book is tripartite:

Thèse - Explications - Appendice.

In the *Thèse* he sets out his conception of architecture, as developed through the 1920's, in a highly condensed form. The *Explications* section is a presentation of the Palais des Nations project as exemplar of these ideas, and the book ends with the *Appendice*, the history of his post-competition campaign for his project; from the May 1927 announcement of the results up to the submission of his first *Requête* in February 1928, and the Secretariat's reluctant and dismissive response to this document some months later.

Une Maison - Un Palais is Le Corbusier's last book of the 1920's, and all his concerns of those years are gathered together and displayed here: by the time of the next book, *Précisions sur un état présent de l'architecture et de l'urbanisme*², his interest had shifted along with his activities. But *Une Maison* is not just a coda to the three *L'Esprit Nouveau* books³, it is a bridge between *L'Esprit Nouveau* and the books and journals of the 1930's, between the Purist houses of the 1920's and the larger buildings of the following decade; between the relatively anonymous geometries of the *Ville Contemporaine* and the much more site-specific and curvaceous structures of the Algiers projects. The project for the *Palais des Nations* led Le Corbusier not only from *Maison* to *Palais* but also to a much more developed consideration of the place of the public building in the urban plan.

The Book and the 1927 Lecture

The character of the 1927 lecture from which the *Thèse* and *Explications* sections of the book were derived, a pencil draft of which is preserved in the Fondation Le Corbusier⁴, is retained in the book, both in the direct and often passionate tone in which the audience is addressed, and in the lavish use of photographs and drawings: the original slide presentation converted to picture-pages. This derivation is made explicit in the very first, scene-setting paragraph of the book:

The reader should imagine himself to be in a conference hall- the *Auditorium Maximum* of the Ecole polytechnique Federale of Zurich, or the *Salle de la Residencia* in Madrid. It is night; on the screen the images stream past; they appear precisely when required; the lecturer develops his thesis, which is linked to the images. In Zurich, he improvised from succinct notes. After this book was requested, in Madrid, he read. It is a difficult task, trying to hold an audience spellbound when reading a manuscript; good lectures are improvised. In Barcelona, sometimes improvising anew, the lecturer felt strongly that synchronising images and speech emphasised the appropriateness of terms and the precision of the idea.

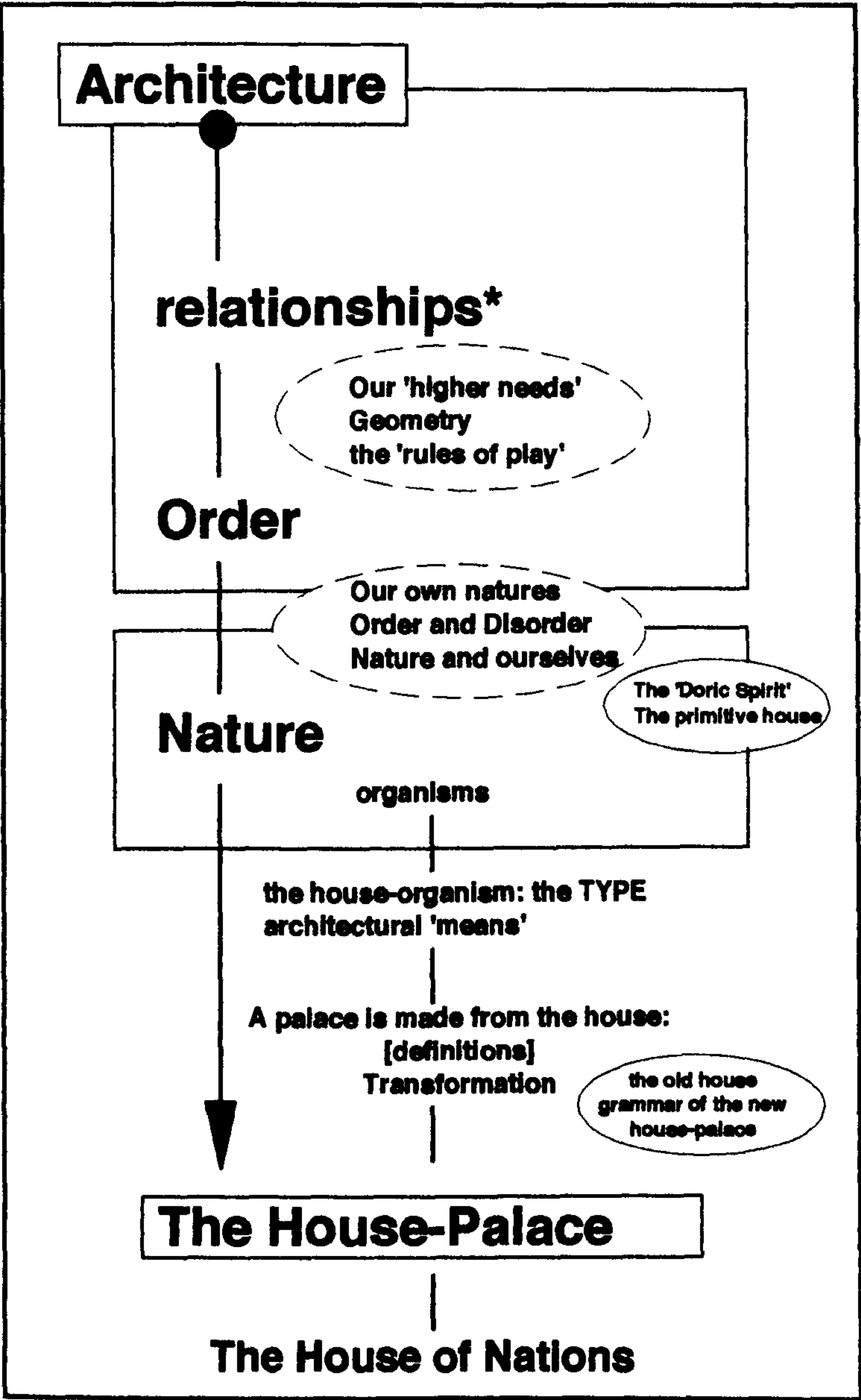
Because of the layout of this book, the reader will find himself in the position of the audience for whom this lecture was devised.

From documents in the Fondation Le Corbusier it is clear that Le Corbusier was inundated with requests for lectures at that time, and he turned down many of them. The first *Une Maison - Un Palais* lecture was one of three requested by the Student Lectures Committee of the Universities of Zurich, Bern, Basel and Freiburg⁵, and given in Zurich on 9th November, 1927 to 'Lesezirkel Hottingen'⁶. The other two lectures which accompanied it were "*Architecture et Mobilier*", given in Bern, and "*L'Esprit Nouveau en Architecture*", given in Basel. In early 1928, Karl Moser asked Le Corbusier to give a series of lectures at the E.T.H. in Zurich in the summer term, and '*Une Maison - Un Palais*' was again included in Le Corbusier's list of suggested topics. The *Une Maison* lecture was later given in Madrid on 11th May, 1928 [paired with '*Urbanisme*', given on 9th May], and in Barcelona on 16th May [paired with '*Architecture et Mobilier*', given on 15th]⁷. The linking of lecture topics does not appear to be significant: Le Corbusier's lectures derived from his books and his recent architectural projects; he simply lectured about his current concerns. From the handwritten lecture notes, it is clear that the published text of the *Thèse* closely follows the lecture text, and that the *Explications* section was mostly improvised for the lecture, and vastly expanded for the book. The document collection which forms the *Appendice*, exists only in the book.

The *Thèse*: Theoretical and Poetic ideas in *Une Maison*

The architectural argument presented in the *Une Maison* lecture and the *Thèse* of the 1928 book of the same name is, as we shall see here, mainly a reiteration - albeit a highly condensed one - of the ideas Le Corbusier developed in the 1920s, and publicised in the pages of *L'Esprit Nouveau* and the books collected from it. I intend to devote the bulk of this chapter to a discussion of the origins of the ideas in the *thèse* in those previous books and their development in *Une Maison*. A version of the *Une Maison* lecture was included in Le Corbusier's South American lecture tour in 1929 [published as '*Precisions*' in 1930] and this abbreviated version contains indications that by then Le Corbusier's ideas about the house and the palace had taken their place in the larger context of town planning.

The *Thèse* is not structured by subheadings or chapter divisions. Some punctuation of the ideas is achieved by the layout - blank spaces provide pauses - and by the typography - a triangular design of asterisks is used to indicate changes of theme. Although Le Corbusier's writing style is very rhetorical, with emphatic repetitions, it is possible to extract from the text a sequence of ideas as follows:



* French: 'Rapports'

The Cover Image

The focus of the book, the grounding of the palace in the primitive house-type, is immediately obvious from the title and from the organisation of the *Une Maison* cover, and this conjunction is new in Le Corbusier's published work; but the argument within is a development arising from previous ideas.

On the cover of *Une Maison - Un Palais*, two images are juxtaposed.

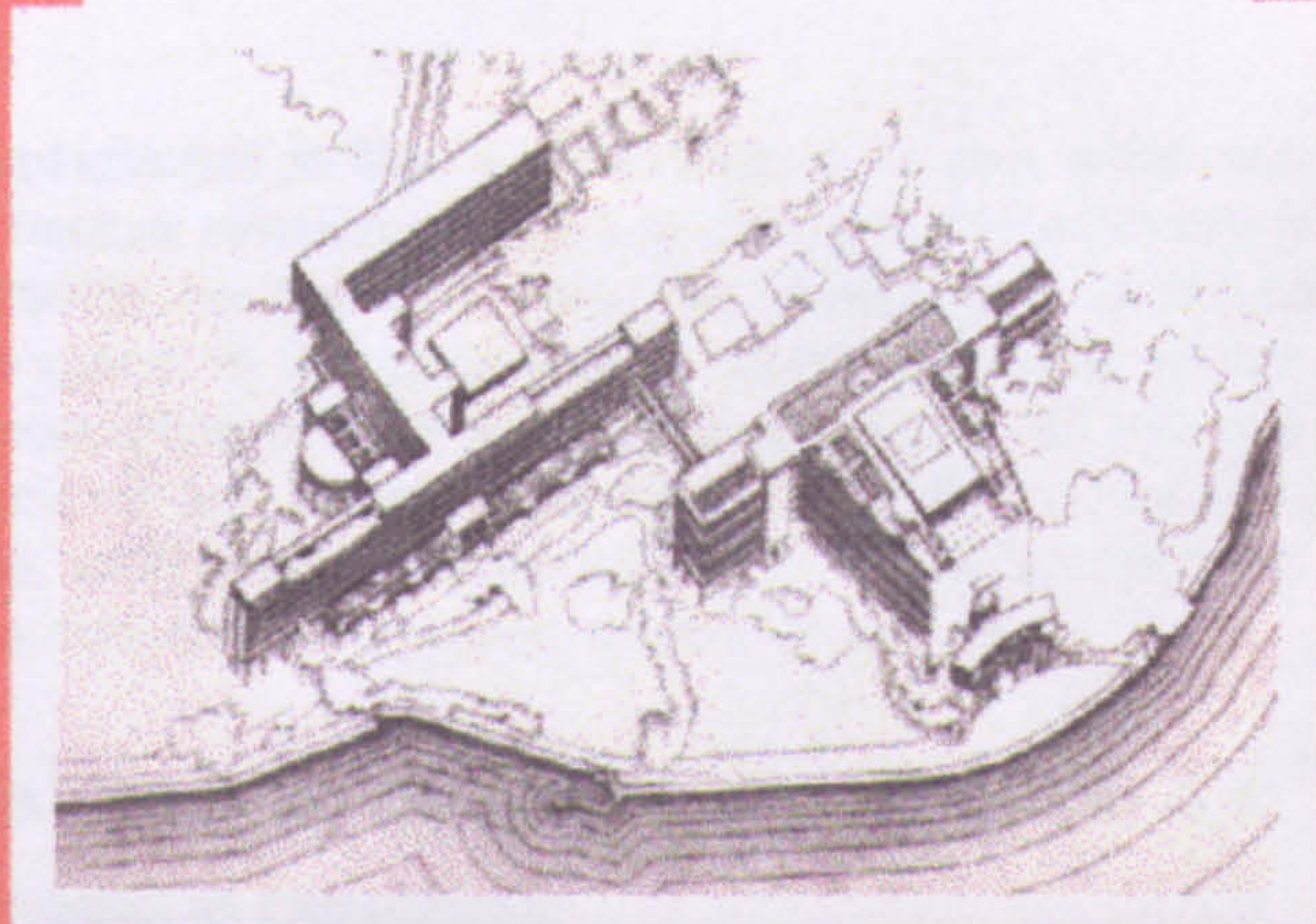
[fig.1] A rustic house among sand dunes, sheltered by parasol pines, is presented in opposition to Le Corbusier's own palace of Nations in its stately park on the shores of Lac Lemman. The sketch of the fisherman's shack among the sand dunes and pines of the Arcachon shore is as crude as the shack itself; the machine-age palace below is finely delineated in a reproduction of one of the competition drawings. The bold, black title is placed between them and shares the shaped, white ground on which they are arranged. Placed thus, the title makes explicit Corbusier's intention to link the two, so disparate in scale, status, location and in their respective places in history⁸. Both buildings are treated at length in the text; a lyrical description of the fisherman's rustic house occupies two pages of the *Thèse*⁹, and part II of the book is entirely devoted to an exposition of the Palace of Nations project. But the relationship between these two buildings posited by Le Corbusier is not immediately revealed: he sets out his argument dialectically, beginning with his view of Architecture. The subtitle of the book, *In Search of an Architectural Unity*¹⁰ hints at the direction his thoughts will take.

COLLECTION DE "L'ESPRIT NOUVEAU"

LE CORBUSIER



UNE MAISON - UN PALAIS



EDITIONS CONNIVENCES

Cover of 'Une Maison - Un Palais'

Architecture

The book begins with a visionary definition of architecture:

Architecture is an inevitable event springing up in a single instant of creation where the spirit, preoccupied with ensuring the solidity of the work, with satisfying requirements for comfort, finds itself elevated by a more lofty intention than simply that of serving, and it extends to the expression of those lyrical forces which impel us and give us pleasure.¹¹

A version of this definition may be traced back to *Vers Une Architecture* [1923], where it was expressed as follows:

You employ stone, wood and concrete, and with these materials you build houses and palaces. That is construction. Ingenuity is at work.

But suddenly you touch my heart, you do me good, I am happy and I say: "This is beautiful." That is Architecture. Art enters in.

.....by the use of raw materials and *starting from* conditions more or less utilitarian, you have established certain relationships which have aroused my emotions. This is Architecture.¹²

Those words were echoed two years later in *L'Art Decoratif d'aujourd'hui*, with a slightly different emphasis:

When the inexplicable intervenes in Man's work, that is to say, when our spirit is projected far from the narrow relation of cause and effect and a feeling of happiness lifts us and carries our thoughts from the brute object to the cosmic phenomenon in time, in space, in the intangible, in all that is visible of the roots spread out around us, nourishing us with the sap of the world - at this point the inexplicable is the miracle of art, the moment when an object, a raw creation, shaped before our eyes, with a form similar for us all, is like a radium, a potential of the mind, a concentrated power, a work of art.¹³

Similarly, in *Urbanisme*, in the same year, we find this declaration in a discussion of the city and its basis in calculation:

...it is only architecture which can give all the things which go *beyond* calculation¹⁴

Where the 1923, *Vers une Architecture* piece was a lyrical and extended, even intimate, discussion, by 1925, the tone had changed and the idea had become fixed - it is stated rather than discussed - but Le Corbusier still expanded on the idea at

considerable length. By contrast the 1928 *Une Maison* version was concise and axiomatic.

The Corbusian presentation of the idea that architecture/art arises spontaneously from the conjunction of utility and geometry, as a conjunction of paired opposites, is characteristic: this tendency is nowhere more clearly displayed than in the packaging of this book; in the title, *Une Maison - Un Palais*, and in the juxtaposed images that bracket it. This invariable, dualist vision has been investigated by Paul Turner in his 1977 thesis, *The Education of Le Corbusier*¹⁵, where Le Corbusier's binary perception of the world is traced, in the first instance, to his family background. The Jeanneret family were strongly Calvinist; in addition, they believed that they were descended from the Cathars, the Manichaeian heretics of Albi, whose religious stance embodied perhaps the most extreme ideological dualism ever recorded. Those Albigensians saw life entirely in terms of a struggle between good and evil, between matter and spirit, body and soul, light and darkness. For a time, Catharism represented a serious threat to the Papacy, and Cathars were persecuted and massacred. Survivors are believed to have fled to northern Italy and Switzerland¹⁶. According to Turner, Le Corbusier was fascinated with this sect all his life, and collected a number of books on the subject. But the dualist view of architecture he formulated may have more immediate origins in his architectural education. He had two teachers of significance: Charles L'Eplattenier, and Auguste Perret, and their views could not have been more different. Turner asserts that Le Corbusier ultimately absorbed both views, and that the power of his architecture derives from the tension between the two:

One view, which could be called *rationalist*, is concerned first and foremost with objective, worldly matters - structure, technology, function, other human needs - and is suggested by Le Corbusier's famous definition of a house as a "machine for living." The other conception (implied by another of Le Corbusier's definitions, "*Architecture, pure création de l'esprit*") could in a general way be called *romantic*; it sees architecture principally as a spiritual or personal activity - whether as the creation of abstract forms, or in a Platonic or idealistic sense, as the embodiment of perfect spiritual ideas that the architect has intuited or discovered. Much of the tension and power in Le Corbusier's architecture derives from the dynamic relationship between these two conceptions, the romantic or idealistic and the rationalist.¹⁷

Turner recorded Le Corbusier's years-long struggle to reconcile these opposing views¹⁸ - the recurring presentation of images of conflicting opposites in his

writing would seem to reflect this experience. But his dualism was not limited to the expression of an internal struggle between rationalism and romanticism; it became a habitual method of thought: for example, he took up an oppositional stance with respect to established architectural styles, confronting them directly. This becomes clear, as Alan Colquhoun has pointed out, if one considers that each of the 'Five Points of a New Architecture'

... takes its departure from an existing practice and proceeds to reverse it.

Colquhoun argued that this is not as obvious as it sounds, that the presence of both components of the oppositional pair are required for the Corbusian construct to be comprehensible, as he put it

It might be argued that any innovation is bound to contradict previous practice and that therefore it is redundant to include within the concept of innovation that practice which has been replaced. But the fact that each new set of rules in the "Five Points" takes as its basis the traditional articulation of building elements seems to indicate that, in the case of Le Corbusier, the original practice and the new prescription constitute a paradigmatic of metaphoric set, and that the new can only be fully understood with reference to the old, in absentia.¹⁹

The old is not rejected out of hand: an alternative is proffered which, culturally speaking, incorporates that which it replaces. This oppositional basis makes possible the transformational moves which characterise Le Corbusier's work and thought, the semantically rich metamorphosis of one architectural type into another with which *Une Maison* is concerned, and to which we will return later.

Having defined his concept of architecture at the beginning of *Une Maison*, Le Corbusier locates it in the context of the 1920s, firstly with respect to the Beaux-Arts school, and then, in passing, with respect to the purely functionalist reaction of other Modernists to Beaux Arts production. The architecture of the Beaux Arts is denounced as loathsome, because it is based on motifs borrowed from the antique without structural or cultural justification, an anachronistic and dishonest usage in the new machine age:

architecture collapses at the moment when the lofty intention is no more than a style, a trick of the inspired diagram, an uncontrolled form, a lyrical representation without further contact with the true spirit which once gave birth to it. And here is the most vile state of the human spirit: the lie, pretension, bombast.

The *moment of architecture* IS NO MORE in the dying, stinking output, the carrion of the *Academies*, blind curators of pre-machine epochs²⁰

A true architecture, Le Corbusier declares, is of its time:

Architecture is the result of the spirit of an age: it goes on ahead following the law which controls the world.²¹

And then he touches on the growing functionalist reaction to academic architecture, and finds it wanting:

And this usual conception of architecture: to disturb it is not permitted at this moment by the young, by those who come and who, in open war with the Academy, wrestle over that which is called "architecture". Nauseated by the lies of Schools, driven by a fierce desire for purity, here they deny that which at the bottom of their hearts is their only and special passion. ²²

He concludes his remarks on architecture with a return to the attack on Academism: the academic school is likened to a leaking corpse

...an *effusion*, then, not a matter of the mediocre spirit, or of satisfying material needs.

And on the one hand is that bewitching stock of mummy-effusions, of corpse-effusions, of wax-doll effusions.

And on the other, an immense propriety: we check this emotion which stirs us; a discipline: let us occupy ourselves with the reasonable problem; a fear: let us distrust the fairy-spirit which would drag us to the bottom of the waters of the lake.

This passage recalls parts of the chapter in *L'Art Decorative d'Aujourd'Hui* entitled 'A Hurricane':

[...] Industry blew upon the world, and there was a hurricane. If the vital axes of social organisation became misaligned, imagine the microcosm of confusion in the heart of the individual: the hurricane overturned on us without restraint the miraculous fruits of the first industrial age; these came in the form of a cornucopia carved with gadroons and acanthus leaves, in the manner of the craftsmen of the *KINGS* - baubles catalogued by archaeologists born precisely in this disjointed era.²³

THE INDUSTRIALIST SAID [...] decoration will save me; let us cover everything with decoration. Let us hide the junk beneath decoration; decoration hides flaws, blemishes, all defects.²⁴

The view that antique ornament is inappropriate in modern production - an

immoral, even hideous effluxion - is the same in each case, although the focus has shifted between books, from the decorated machine-made object to academic architecture.

Higher Needs - *Relationships*

From his definition of architecture, Le Corbusier moves to the house and its purpose: he declares that construction according to an underlying geometrical principle will effect a transformation from shelter to architecture:

A house, a palace...

Truly, products of the same activity, a single product.

A house exists to *serve*...what? Shelter, cold, heat, etc.? Is it not also for the satisfaction of the higher needs which exist in each of us? [...]

What mechanism will trigger pleasure over and above the mundane?

Harmony.

So this word appears to be vague!

Yet the phenomenon is simple: to combine exact quantities in precise relationships²⁵.

Relationships. Measure enough so that everything is there and so that the single capacity for perception of relationships characterises the spiritual values of men. We are surrounded by relationships: nature, human constructions, events, multiple ratios, innumerable. All of a sudden, everyone knows when to stop dead, and, pointing out a relationship, to exclaim: "Look!" A poet!

For the mechanism of relationships to be effective, the proportions that they administer will be perceptible, legible.

And this, then, is the place of geometry.

Geometry, which in the midst of the apparently confused spectacle of nature, has established marvellous signs, of clarity, of expression, of spiritual structure, signs which are characteristic.

Geometry: human language.

Geometry: normal production of our mind and *inevitable* because, participating in a universal rhythm, we recognise that this rhythm is geometric: there are *characteristic* figures. Geometry, geometry! [...]²⁶

The basis of architecture, then, is geometric. The contention that our dwellings should not merely shelter us, but also satisfy our 'higher needs' - our craving for beauty - is a compressed restatement of *The Engineer's Aesthetic and Architecture*, in *Vers une Architecture*, where it is framed as follows:

ARCHITECTURE is a thing of art, a phenomenon of the emotions, lying outside questions of construction and beyond them. The purpose of construction is TO MAKE THINGS HOLD TOGETHER; of architecture TO MOVE US. [...] When certain harmonies have been attained, the work captures us. Architecture is a matter of "harmonies," it is "a pure creation of the spirit."²⁷

The premise of the geometrical basis of visual harmony appeared previously in *Vers une Architecture* in the chapter called 'Regulating Lines'. Having already treated the matter at length, that detailed 'proof' was not reproduced in *Une Maison*, but this and some of the other theoretical issues of *Vers une Architecture*, and of the other two L'Esprit Nouveau books, are recalled in *Une Maison* by oblique references to those texts, and by the reproduction of significant illustrations from them. For example, a hand-drawn version of the Temple of the Israelites drawing from *Vers une Architecture* [p67] appears on page 41 of *Une Maison*. By 1928 Le Corbusier was obviously confident of the spread of his ideas, and knew that the reader of *Une Maison* would be familiar with his previous polemic, hence this compression of ideas already in the public domain.

In *Vers une Architecture*, Le Corbusier moves from regulating lines to the fundamental solids of Purist theory:

Architecture is the masterly, correct and magnificent play of masses brought together in light [...] cubes, cones, spheres, cylinders or pyramids are the great primary forms which light reveals to advantage [...] ²⁸

[Three reminders to architects]

The light plays on pure forms, and repays them with interest. Simple masses develop immense surfaces which display themselves with a characteristic variety according as it is a question of cupolas, vaulting cylinders, rectangular prisms or pyramids. [...]

Absence of verbosity, good arrangement, a single idea, daring and unity in construction, the use of elementary shapes. A sane morality. ²⁹ [The Lesson of Rome]

In *Une Maison*, these well-known statements are invoked at the very end of the *Thèse* with this remark about the joys of architecture:

These joys are in the skilful, correct and magnificent play of forms in light. ³⁰

The later *Vers une Architecture* chapter, 'Architecture, Pure creation of the Mind' celebrating the Parthenon as supreme exemplar of geometric comprehension, is referred to only in passing in *Une Maison*: the drawing of three stone dies at Delphi [p15] is followed by a small reproduction of the same drawing of the distant acropolis that may be found in *Vers une Architecture* [p206] accompanied by the following statement [Fig. 2]:

It is therefore on geometry that temples and palaces are to be raised: in

geometry the proofs of the will are to be found: power. Priests and tyrants, demonstrating their strength, established architecture on geometry.

Geometry: a clear spirit and the infinite mystery of combinations.³¹

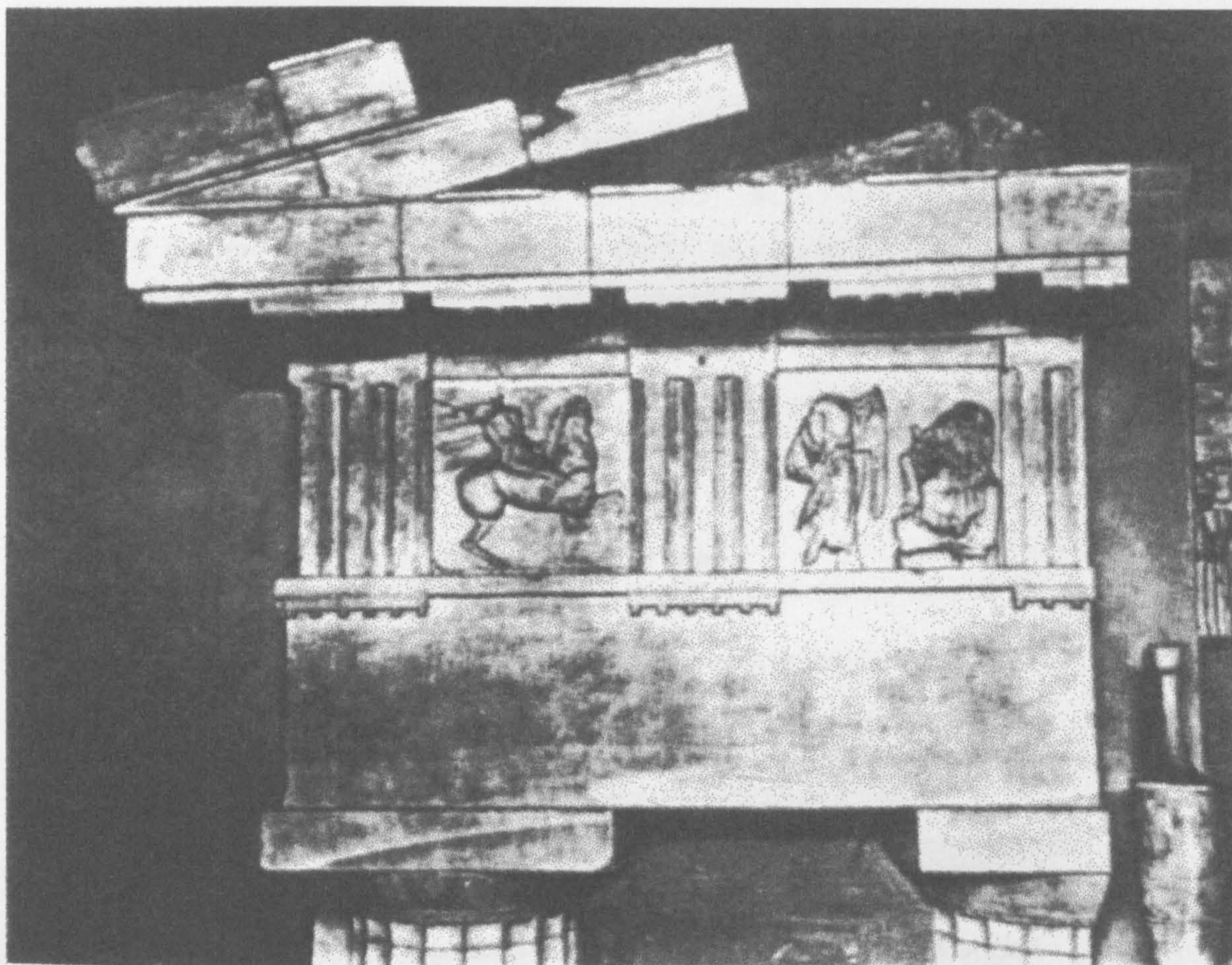
Another illustration of the Parthenon from *Vers une Architecture* may be found in *Une Maison* a few pages later³², accompanied by a couple of sentences that recall the entire chapter from the previous book [fig. 3]. Geometry, then, is the means of achieving harmony and spiritual satisfaction. Geometry, said Le Corbusier, "is our language", thus implying both historical familiarity and a high degree of development: a complex and subtle language. By inference, the need of the spirit for pleasure extends to a requirement that the underlying geometry of the created object be recoverable:

the rules of play should be clearly perceptible³³

It is in our nature, that is, it is natural for us to seek understanding and the necessity for geometry applies to the most mundane objects, to everything that we touch, because we are subject to their constraints. The need for geometry, for new geometrical rules, is even more urgent today because [suddenly] we have a new society, far removed from the old. The view that the changes in society and means - the first world war, and the new technology - require orderly new forms, and a rethinking of the objects we use, our buildings, and our cities - runs all through the three previous books. In *Une Maison*, Le Corbusier incorporates the argument for the new city as follows:

[...] the cities disintegrate and in forcibly swallowing the innumerable organs of the modern life, hasten their deaths; the struggle between their cramped frames and the torrent of new life which is precipitated there, is hopeless. A new frame is necessary for our initiatives [...]³⁴

and his own, geometrically regular and orthogonal, proposals for the form of the new city are re-presented: drawings of the *Plan Voisin* and the *Contemporary City*,³⁵ previously published in *Urbanisme* are included here. Le Corbusier does not mention Camillo Sitte by name, and it is not the purpose of this thesis to discuss the nature of the picturesque movement in architecture and town planning and Le Corbusier's response to it; however, there are several condemnations of the arbitrary curves of the picturesque - the 'pack-donkey's way', treated at length in *Urbanisme* - in the *Une Maison* text³⁶.



'Une Maison - Un Palais' p31

Ordering...Nature

From the assertion of underlying mathematical laws that transform shelter to architecture, Le Corbusier moves to our proper role in the matter; he maintains that it is natural - *fundamental* - for us to *order* : to create our buildings, cities etc., according to these laws; we have the necessary authority *and* it is our duty to do so:

And behold that which is fundamental in our nature:

to order;

to ordain.

to *order*, to arrange, to dispose, to put in order.

"*God has ordered everything in the universe*", the dictionary informs us, in majestic terms.

To ordain, and act emanating from a supreme authority.

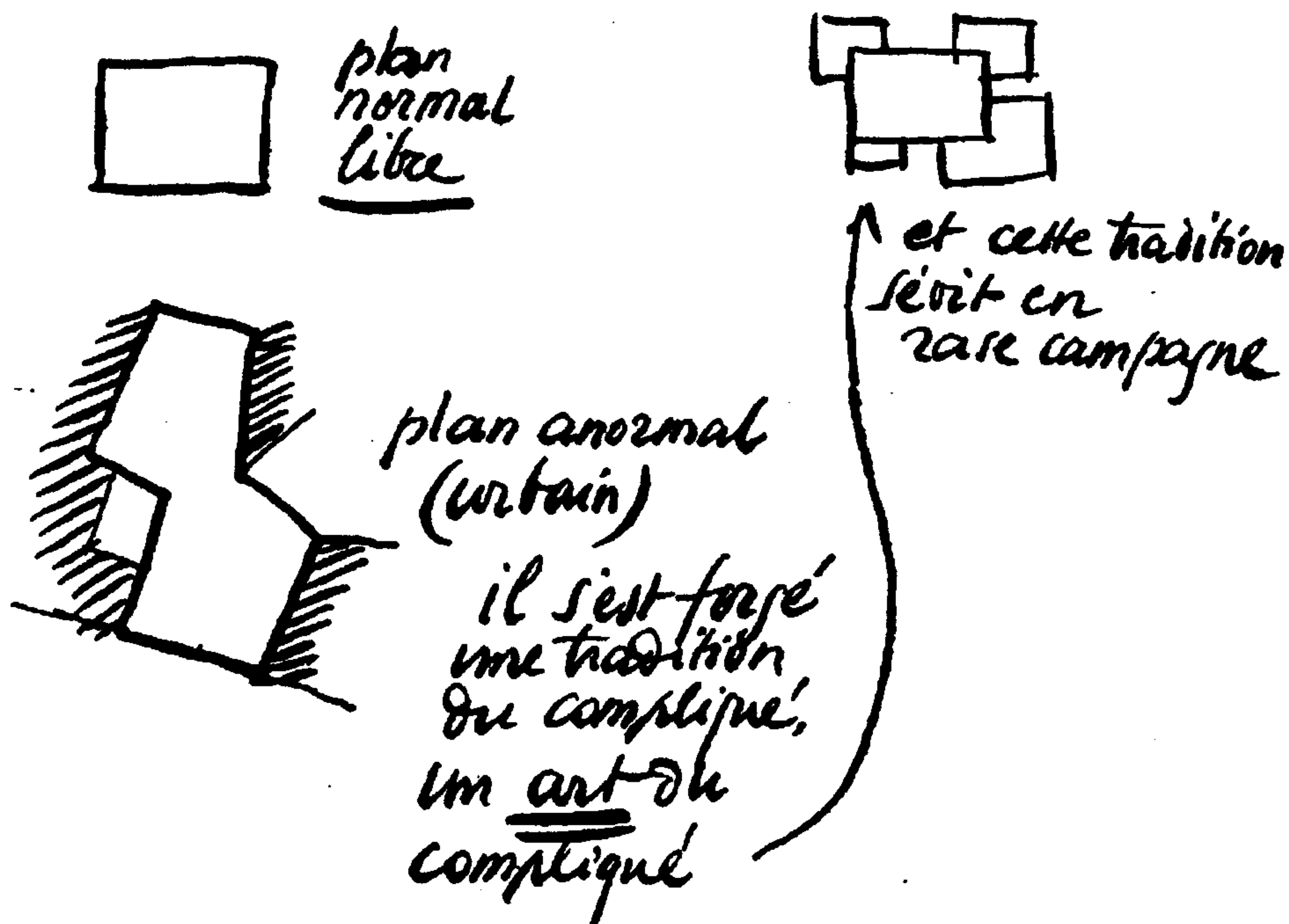
From our authority comes the *normal*.

From our carelessness surges the abnormal, the pervasive and destructive abnormal; where will declines, it takes root and ravages.³⁷

Following this discussion of order and disorder the first simultaneous mention in the text of house-and-palace may be found. The argument which precedes this mention is an ingenious one, a mythology of the origins of bad architecture, and worth examining. For Le Corbusier, it is axiomatic that the ideal house has a regular geometric form. But in the crowded conditions of the haphazardly developing city, the house, squeezed by its neighbours, has become irregular [*Fr.anormal*] in plan. We have become so used to this irregularity that it has become acceptable, the norm, even. In the spaciousness of the countryside, this twisted view prevails, and we build houses of irregular plan. And as a result, the house has lost those qualities which might have made it into a palace:

...this third image, [of the irregular country house] representing the *agreed disorder*, shows us *why the house has ceased to be a palace*.³⁸

The sequence from regular to irregular is illustrated with great clarity in the accompanying diagram [fig.4]. At this point in the *Thèse*, neither 'house' nor 'palace' is defined. Le Corbusier chooses rather to extend his train of thought on order and disorder to the persistent disorder of cities, traceable to the retention of their haphazard medieval centres in modern times, then contrasts this disorder of



'Une Maison - Un Palais' p31
The Irregular House

cities with examples of 'order' in other times and places. The 'lucid' Chinese country house is followed by the 'ruthless' vigour of the Coliseum, and by Indian temples which, according to Le Corbusier,

express the conditions of all architecture... order, hierarchy. Force, suppleness, and subtlety. Nuance.³⁹

The argument for order derives directly from the chapter of the same name in *Urbanisme*⁴⁰, and some passages are almost identical. Compare the opening passage in *Une Maison*,

And behold that which is fundamental in our nature:
to order;
to ordain.

with the following sentence from *Urbanisme*:

Man by reason of his very nature, practises order; that his actions and his thoughts are dictated by the straight line and the right angle, that the straight line is instinctive in him and that his mind apprehends it as a lofty objective.⁴¹

A few pages later in *Urbanisme* we find

[...]Order is indispensable to him, otherwise his actions would be without coherence and could lead nowhere. And to it he brings the aid of his idea of perfection. The more this order is an exact one, the more happy he is, the more secure he feels. In his mind he sets up the framework of constructions based on the order which is imposed upon him by his body, and so he creates. All the works that man has achieved are an "ordering."⁴²

The mythologized history of the irregular house is not found in detail in that book, but the fashion for the picturesque in architecture and townplanning is similarly condemned:

Man [...] has built his houses and his towns. Human order, a geometrical thing, reigns in them, and has always done so; it is the mark of great civilizations, and has left dazzling landmarks to be our pride and for our perpetual admonition.

Your passion for twisted streets and twisted roofs shows your weakness and your limitation. [...] ⁴³

Le Corbusier's remark about the disorder of cities in *Une Maison*,

ordered according to the confusion of the first crowd⁴⁴

echoes his condemnation of Paris in *Urbanisme*:

Paris is a dangerous magma of human beings gathered from every quarter by conquest, growth and immigration; she is the eternal gipsy encampment from all the world's great roads [...]⁴⁵

In each case, he proclaims new intentions of order:

These days we regulate the city, we wish to govern, to ensure respect for order, we order.[*Une Maison*]⁴⁶

[Paris] digs and hacks through her undergrowth, and out of these evils she is tending towards an ordered system of straight lines and right angles
[*Urbanisme*]⁴⁷

Historical examples of 'ordering' illustrated in *Urbanisme* are the native hut, the Egyptian house, ancient Babylon, Peking; analogous examples in *Une Maison* are the Chinese house, the Coliseum, and the temple of Rameswaram [fig. 5]. The illustration of the Coliseum on this page is a drawing of the print in *Urbanisme* which heads the chapter on 'Permanence'⁴⁸.

From the discussion of order in *Une Maison*, Le Corbusier moves to examine our relationship with nature. An image of struggle is laid before us:

We are born in the bosom of Nature.

Antagonistic, hostile to our initiatives, most justly indifferent, totally absorbed in her proper events which are but gales, tempests, burning desert, night and day, summer and winter, she implacably destroys our work, each hour, each day, each minute; she unmakes. There is no resting place.

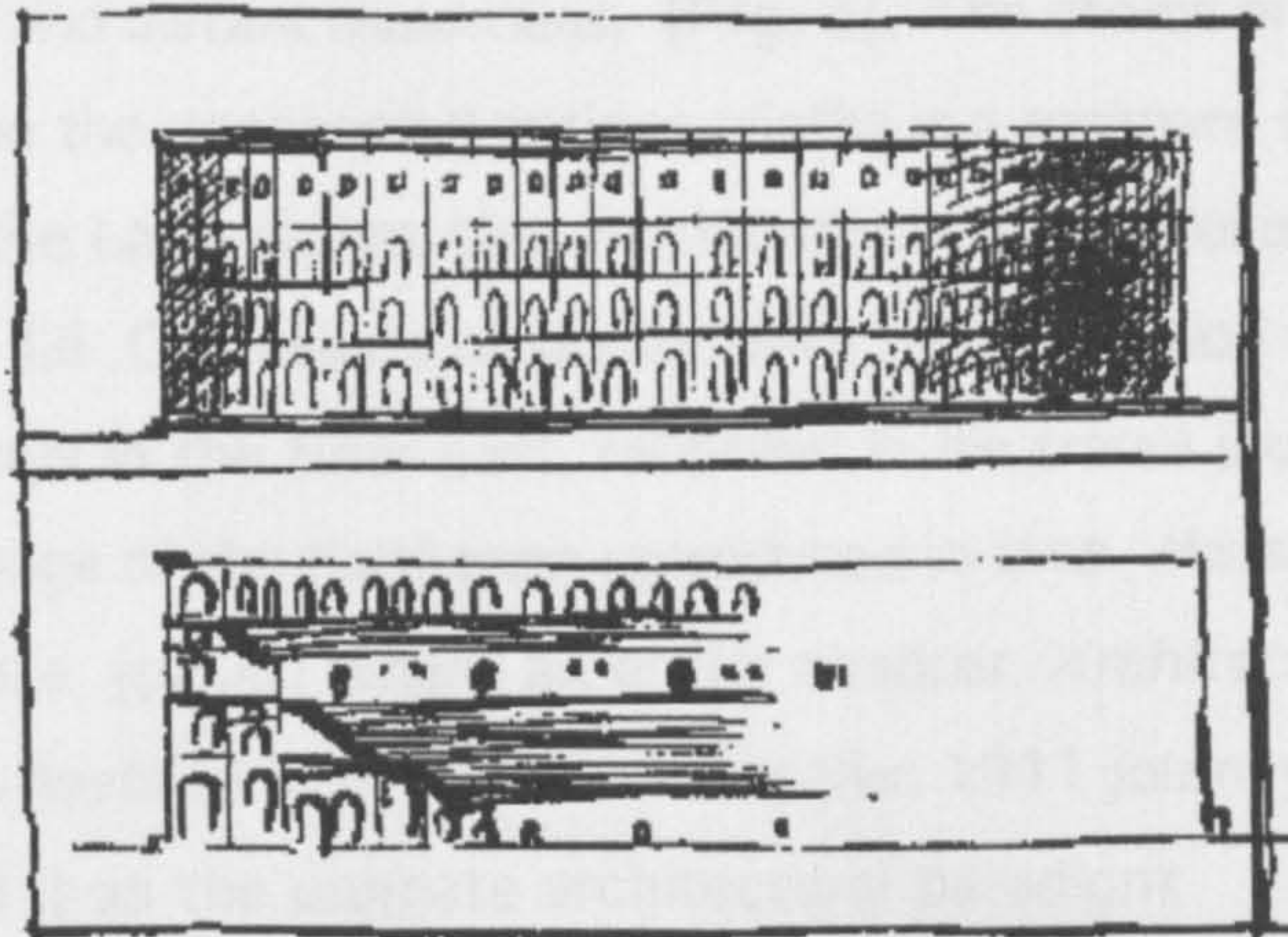
and simultaneously an image of reconciliation and identification:

Nevertheless we are sons of the earth and we have called her earth-mother.

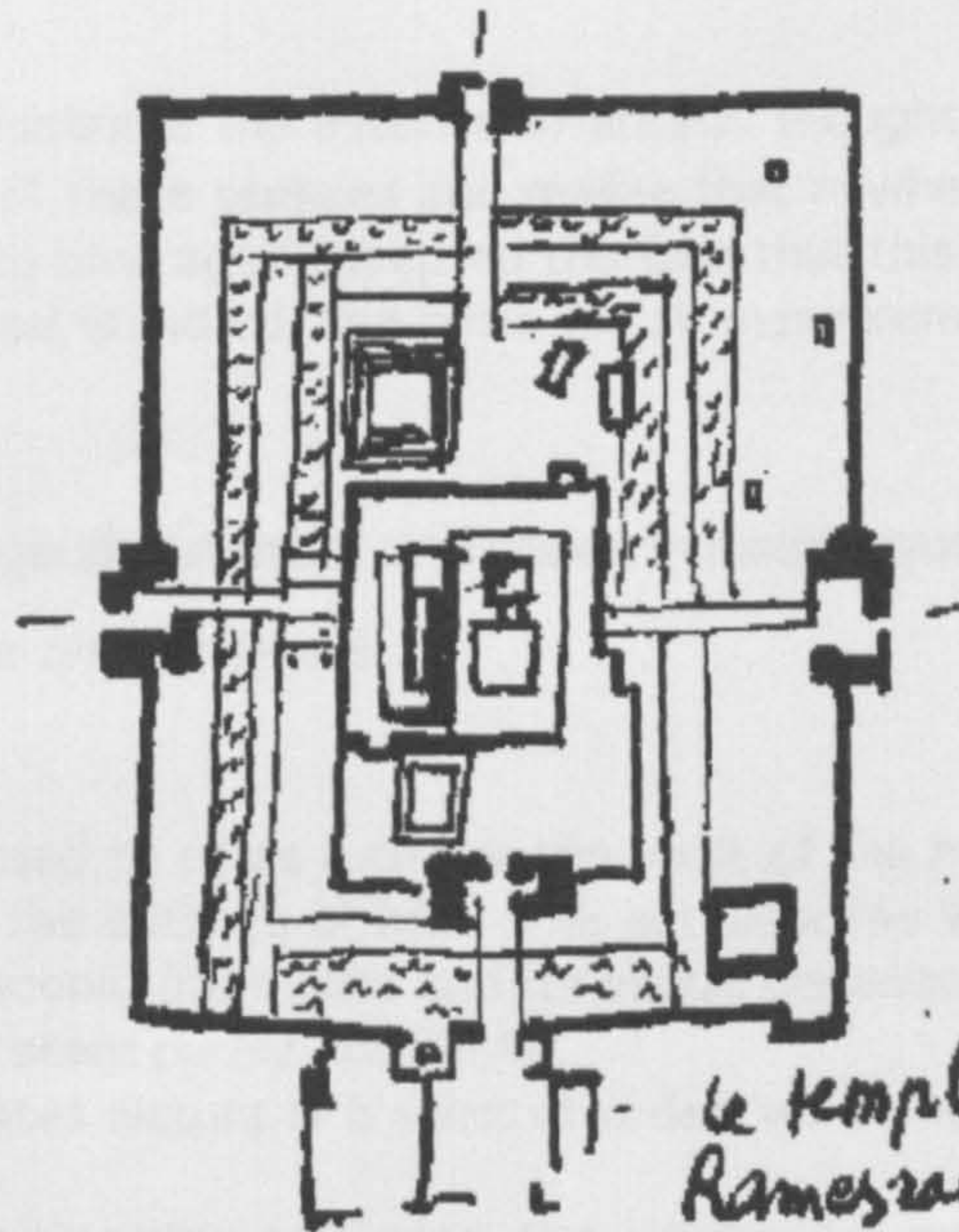
And we love her, with our flesh which comes from her and with our spirit which lives only in her, limited to overwhelming instances, and without possible end, examining the mechanism for mastering her, searching for reasons to prop up our dignity and to try and put our minds at rest in conceiving the principle.⁴⁹
In Nature he finds both chaos *and* geometric order. The chaos is only apparent, a disordered surface; beneath it is an unshakeable order:



Les résidences
d'été aux environs
de Pékin.



Le Colisée.



Le temple de
Rameswaram.
— Plusieurs
enceintes, des
allées, des
portiques, les
étangs sacrés.

'Une Maison - Un Palais' p11
Historical examples of 'Ordering'

Having considered her apparent chaos and the dead end of all her causes, yet we have found order and sense, and, wishing to live, we have accepted her order [...]

Geometry, the single language we know how to speak, we have taken from nature because all is not chaos, except on the surface; within, all is order, an implacable order. 50

Our notions of order and our geometric language derive from this underlying *natural* law and our creative force is like that of nature. The illustrations that follow represent the most sublime conjunctions of man and nature. Untouched Nature - Delphi - is followed by two images of human intervention - three 'dies' dominating 'the chasms and valleys at Delphi', and the Parthenon, 'proof of the will'⁵¹ set in its context of sea and distant mountains. [Fig. 2]. The choice of the term 'dies' [Fr. *dés*] to describe the unoccupied antique plinths is a resonant one: 'die' and 'dé' both derive from the Latin *datum*, that mathematical and philosophical premise from which we begin. Le Corbusier's obsession with the Parthenon dates back at least to his 1911 travels in the Near East, recorded in his travel journal, the *Voyage d'Orient*. The image of the Parthenon reproduced in *Une Maison*, and in *Vers une Architecture*, [p206] where an entire chapter, *Architecture, pure creation of the Mind*, was devoted to it, was drawn on that 1911 journey, where Le Corbusier presented it as the ultimate architectural paradigm:

I don't know why this hill harbours the essence of artistic thought. I can appreciate the perfection of these temples and realize that nowhere else are they so extraordinary; and a long time ago I accepted the fact that this place should be like a repository of a sacred standard, the basis for all measurement in art. [Voyage d'Orient, p216]

The *Une Maison* passage about order and chaos in nature quoted above is a version of the following piece in *Urbanisme*:

Nature presents itself to us as a chaos; the vault of the heavens, the shapes of lakes and seas, the outlines of hills. The actual scene which lies before our eyes, with its kaleidoscopic fragments and its vague distances, is a confusion. [...]the aspects of Nature seem purely accidental.

But the spirit which animates Nature is a spirit of order; we come to *know* it [Urbanisme, p24-25]

From chaotic Nature Le Corbusier extracts Order: the Horizontal and the Vertical, and hence the right angle; again the passage in *Urbanisme* is echoed in *Une Maison*:

The horizon gives us the horizontal, the line of the transcendental plane of

immobility. The vertical in conjunction with the horizontal gives us two right angles. There is only one vertical, one horizontal; there are two constants. The right angle is as it were the sum of the forces which keep the world in equilibrium. [*Urbanisme*, p27]

the eye [...] is caught by those things which have an aspect. All at once, we are seized, measuring, appreciating: a geometric phenomenon develops itself under our gaze: upright rocks like menhirs, the indubitable horizon of the sea, meander of beaches. And by the magic of relationships we are transported to the land of visions
[*Une Maison*, p22]

In *Une Maison*, Le Corbusier moves from the Parthenon, that temple raised on geometry, to the Island of Tiberius:

But here already are the symptoms of decadence; pomposity bloats the crystal, the intense relationships collapse. The measure is no more.⁵²

Then he gives a modern example of the same failure, an American urban vision using historic means decoratively, without understanding the underlying order of the classical tradition⁵³. Returning to Europe, he asserts the need to return to those underlying rules in modern times:

A new anxiety plagues us, we of the old Europe. The machine, with thundering rhythm, has thrown us violently into perhaps the most intense geometric event ever to have been lived through [...]

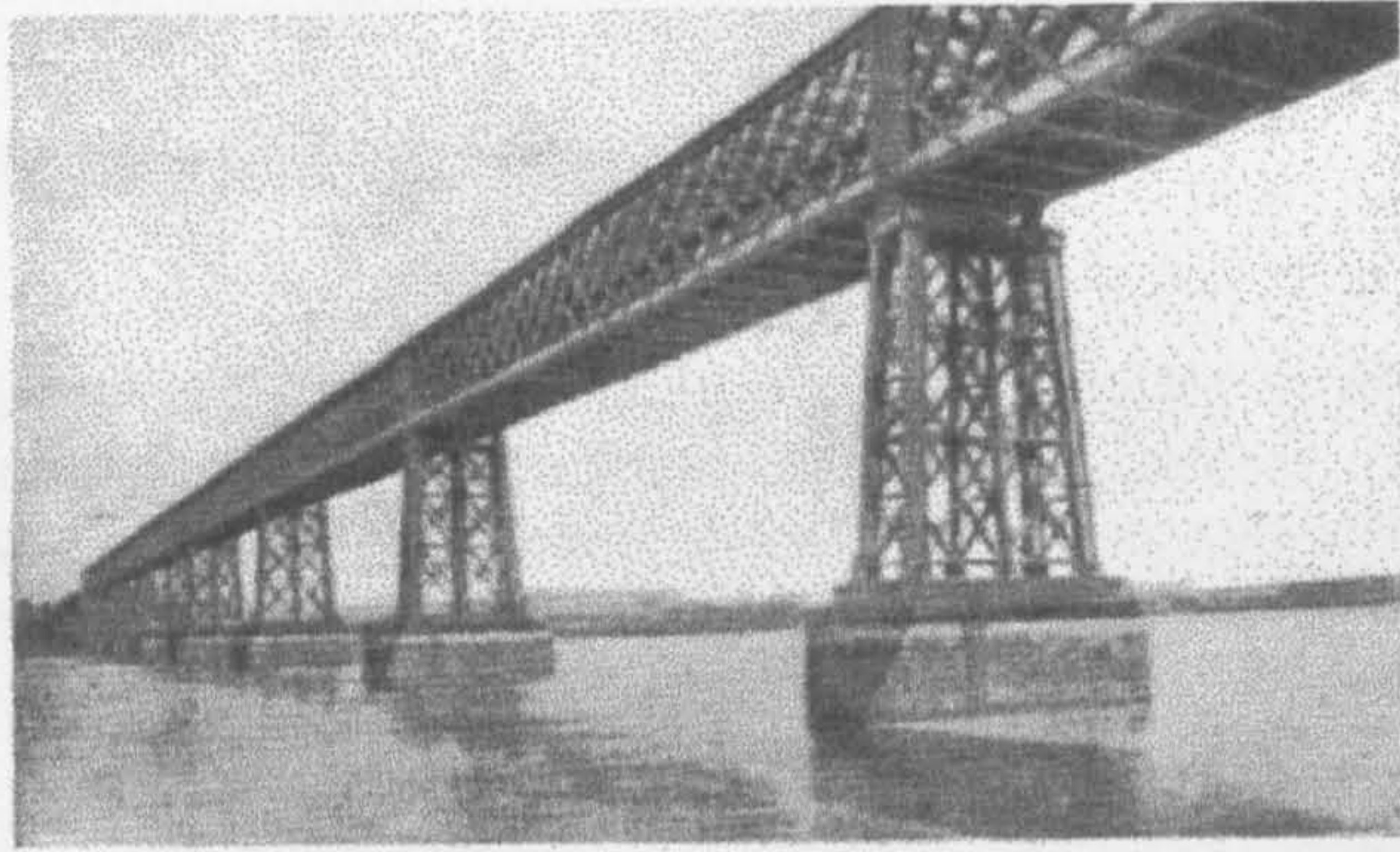
A great emotion has seized us, a purity, a rigour, a precision inconceivable until yesterday, sharply controls our schemes [...]

When, after the war, the new generation understood the event of the machine, a prescience of tomorrow illuminated their hearts: the way appeared, leading us to a conclusion⁵⁴

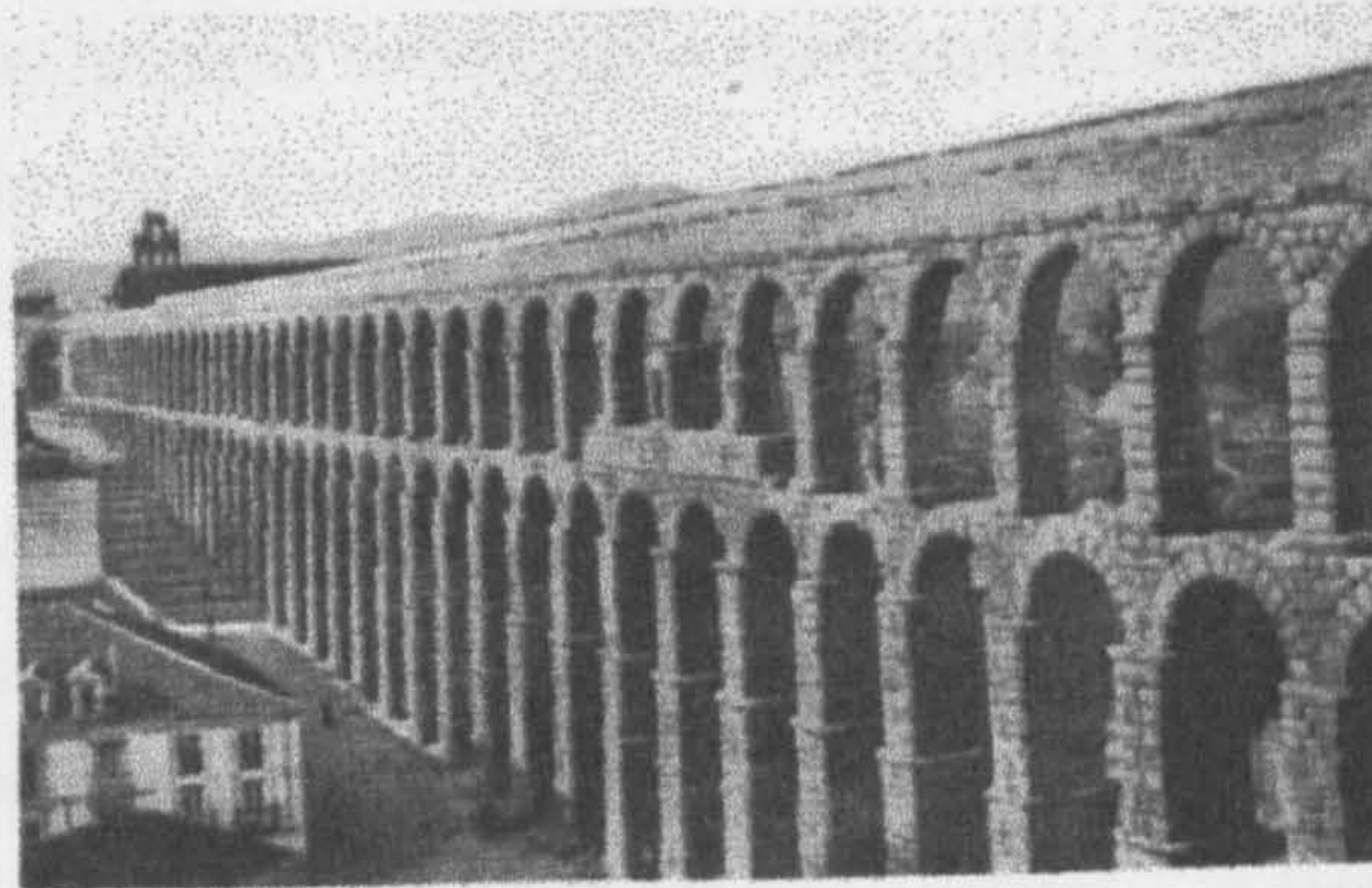
And examples of some of the more massive feats of engineering of today are contrasted with the productions of Rome [Fig. 6]. Will our works endure, he asks? Will they be recognised? - Yes, if we build on 'relationships':

And we have in us a diapason which is a table of harmony. It vibrates to the true work. Unanimity is reached in the case of these works and they are recognised.
55

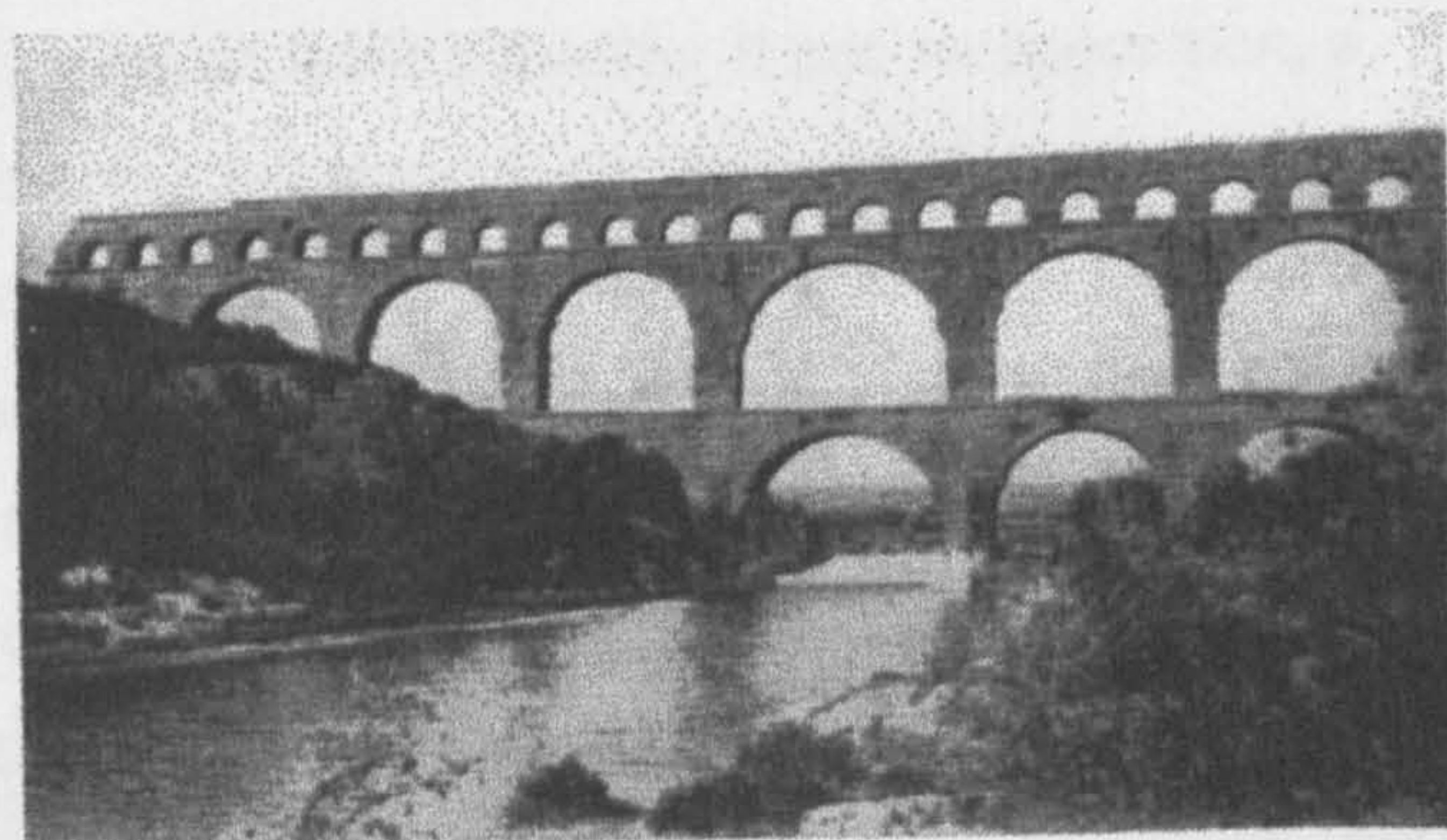
We recognise an harmonious work when we see it, because such geometric understanding is simultaneously our need and our nature: we can look beyond the surface chaos of Nature to the order beneath, and we can, if we begin with the



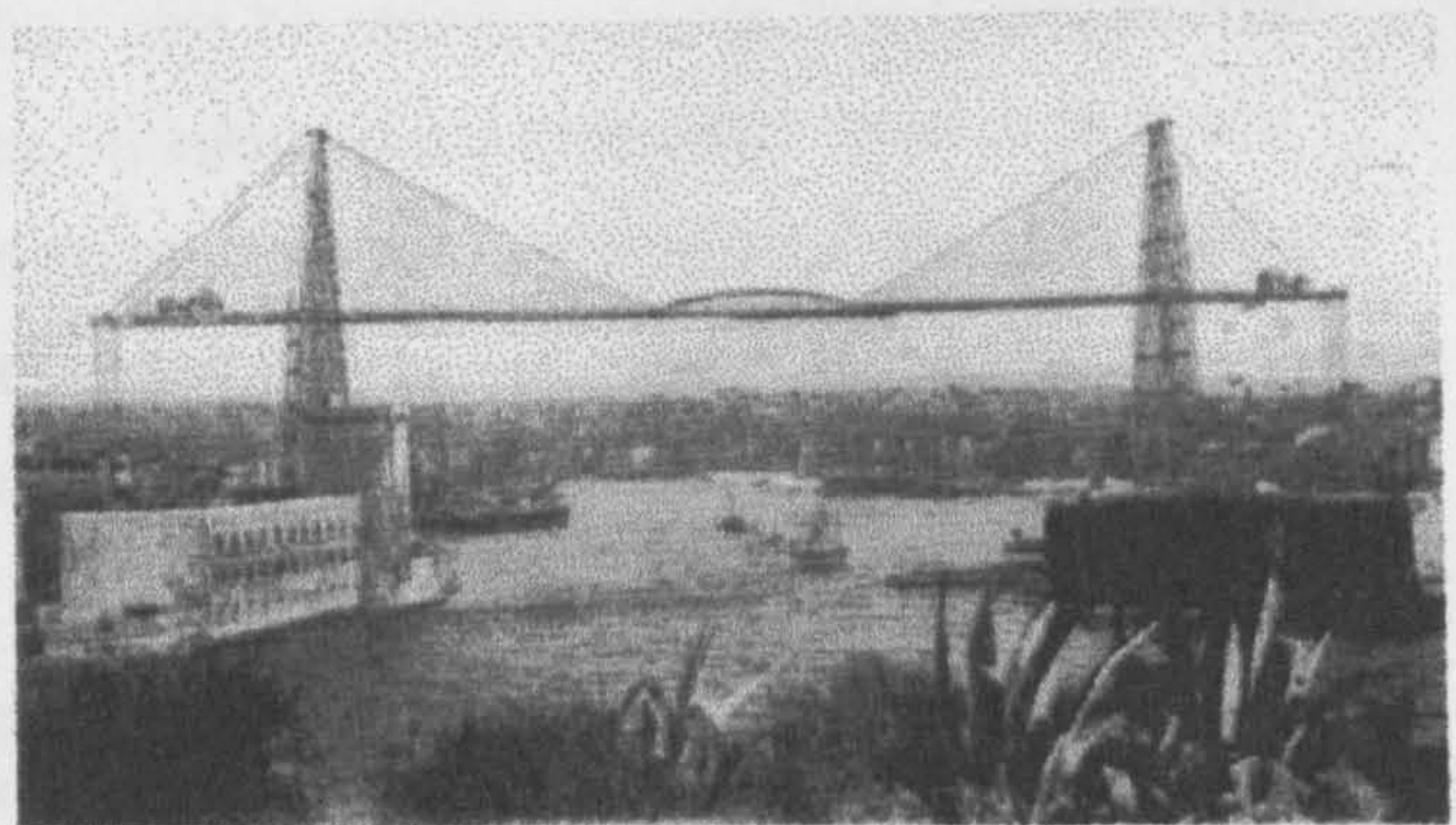
Viaduc de Cussac (Gironde).



Ségovie (romain).



Aqueduc du Gard.



Le transbordeur
de Marseille.

'Une Maison - Un Palais' p21
The 'Productions of Rome' and Modern Engineering

square, join with nature in a 'dazzling synthesis':

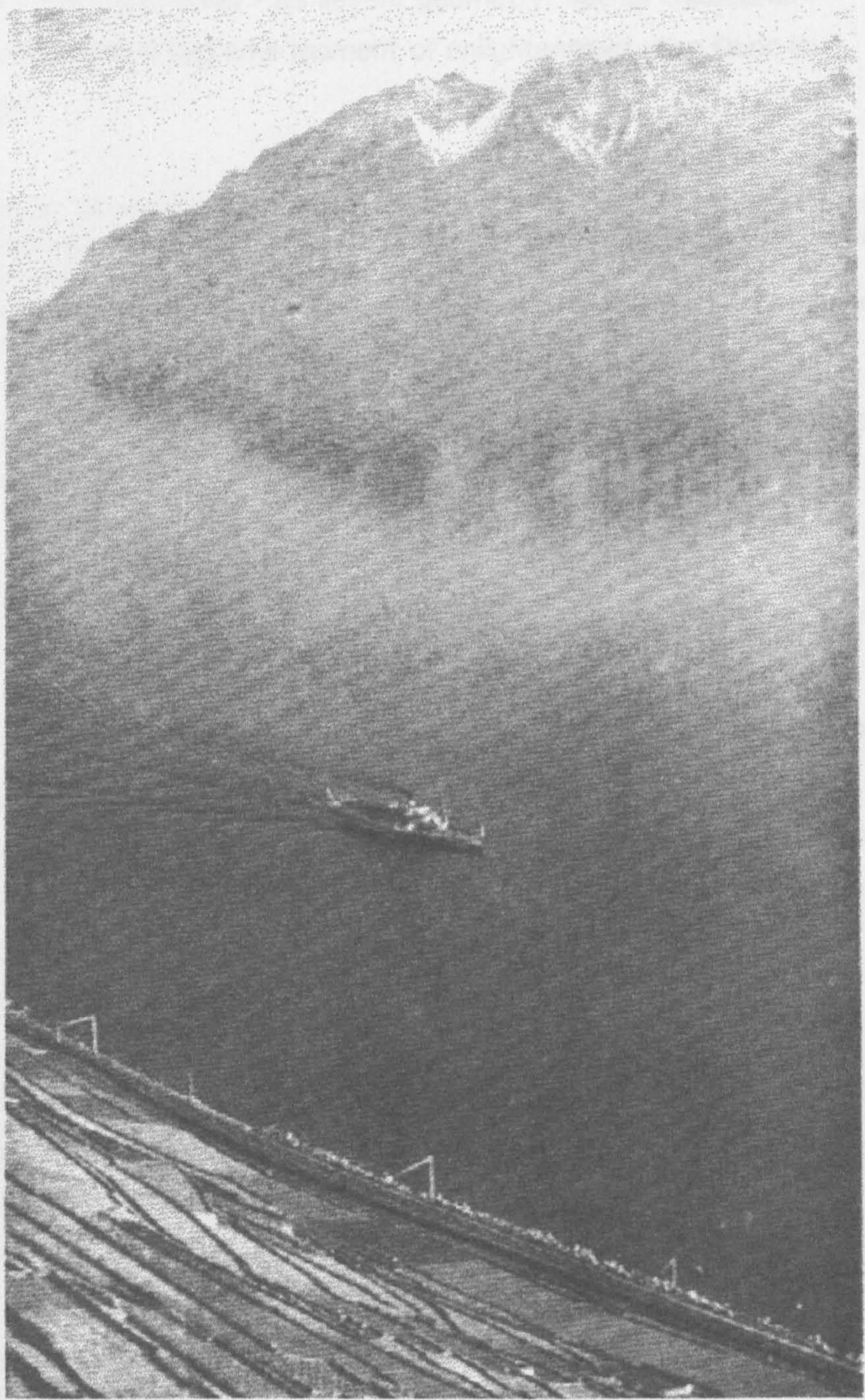
then in happy moments along the road, dazzling syntheses appear, satisfying our hearts and our spirits. In a stirring concert the explicit *natural* fact and the *human* fact, precise in explicit functions, sing the same law together. Joining in his work the forces and resistances of Nature, man has put his own creation in perfect harmony with her.⁵⁶

So man and Nature simultaneously oppose and complement each other, are different and alike. The idea of the 'sublime synthesis' is illustrated in a photograph of a steamship on lake Geneva with distant mountains.[Fig. 7]. The same poetry of machines so characteristic of his first published book - ocean liners, aeroplanes, automobiles flicker through its pages⁵⁷ - is a powerful survival in this his fourth.

The linked dichotomies - order/disorder, man/nature, are typical of the previously discussed dualist system of thought employed by Le Corbusier, and typical also in that the components are not merely twin aspects of a binary system, but opposite forces, struggling violently against one another. In *Une Maison - Un Palais*, the very title containing at least a duality, if not an opposition, a string of such paired concepts is threaded through the text: a vision of *spirit* versus *function* is followed by a comparison of *Academic* and *Modern* approaches to architecture; this particular disagreement then being represented metaphorically as [rotting] *flesh* versus *spirit*. These pairings are followed by the aforementioned *order/disorder*, *Man/Nature* constructs and then the central house/palace set. The Man-and-Nature duality is built as an alternating sequence of declarations: we struggle against Nature *but* Nature is our mother; there is chaos in Nature *but* also order; we must master Nature, *but* also be reconciled with her: together man and Nature produce sublime syntheses. In addition Le Corbusier asserts that our search for such 'ineffable' moments is to be seen in the 'history of progress' and the 'history of culture': the notion of the search for harmony is also built of two opposing components, themselves binary:

The history of progress is a question of equipment, and the history of culture, a question of spiritual architecture (architecture, putting in order, creating order) are both made in the passionate search for this harmony.⁵⁸

His view of both histories is that they are not straight traces of improvement but that men oscillate continuously between confusion and enlightenment. According to Le Corbusier, the Gothic Cathedral came into being in one of those 'painful' times of



'Une Maison - Un Palais' p27
Steamship on Lac Lemman - a 'sublime synthesis'

confusion, whereas the Doric order - its severe geometry, not its traditional elaboration - resulted from a supreme moment of enlightenment. The Doric is *lawful*, or 'natural':

this drawing by Vitruvius evokes the Parthenon, a name which is today a rallying cry, and from which an equally potent light bursts forth; signifying that which is lawful, that which is full and potent, that which is pure and whole.

Made dynamic, severe, rigorous, exact by geometry, naked like Diogenes, but like him skilful, eloquent, subtle!

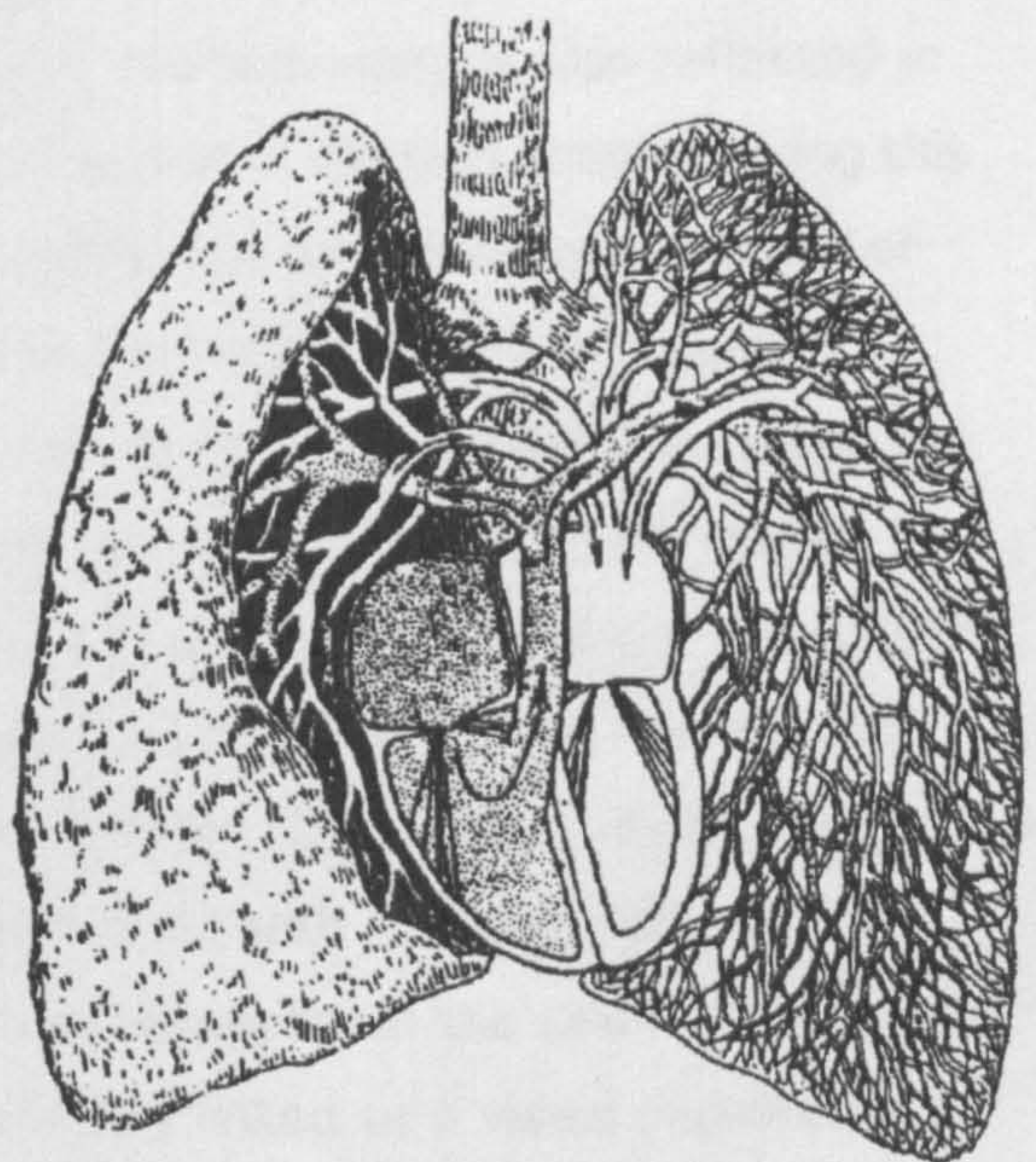
The 'Doric' spirit, applied to the materials we use, lays bare their characteristics; therefore they become eloquent:

In hard steel the pure edge is the *perceptible* thing. The artist forms it skilfully, subtly, to make perceptible this geometry, naked like Diogenes, which will become *eloquent*. The thing will be *perceptible*.⁵⁹

These Corbusian histories of culture were constructed for *L'Esprit Nouveau*, and published in *Urbanisme*, as the chapter *Sensibility comes into Play*. In 1928, this chapter was condensed into a couple of pages in *Une Maison*. A photograph of Rouen, similar to the one in *Urbanisme*⁶⁰, accompanies it here, while the picture of the cupola of the pantheon at Rome in *Urbanisme*, which represented the classical achievements of antiquity, is replaced by a reproduction of part of the entablature of the Parthenon. The identical illustration was used in *Vers une Architecture* in the chapter, *Architecture, Pure Creation of the Mind*⁶¹. In *Une Maison*, a plate from Goujon's *Vitruvius* illustrates the coming of the Renaissance and a return to the orthogonal means of the antique in Le Corbusier's twin histories. In *Urbanisme*, the equivalent example of cultural development is provided by the activities of Louis XIV, builder of the Place Vendôme and of Versailles⁶². Le Corbusier's conclusion is that when we have learned the lesson of the Doric - when we understand the rules - the things we make will become 'eloquent'.

Organisms

From the many-layered conjunctions of man and nature, utility and poetry, and of the spirit and form of materials previously constructed, Le Corbusier leads



Une Maison - Un Palais p33: The Organism
"Et tout dans l'univers fonctionnant, nous apparait 'organique'"

us to a consideration of the *organism*.

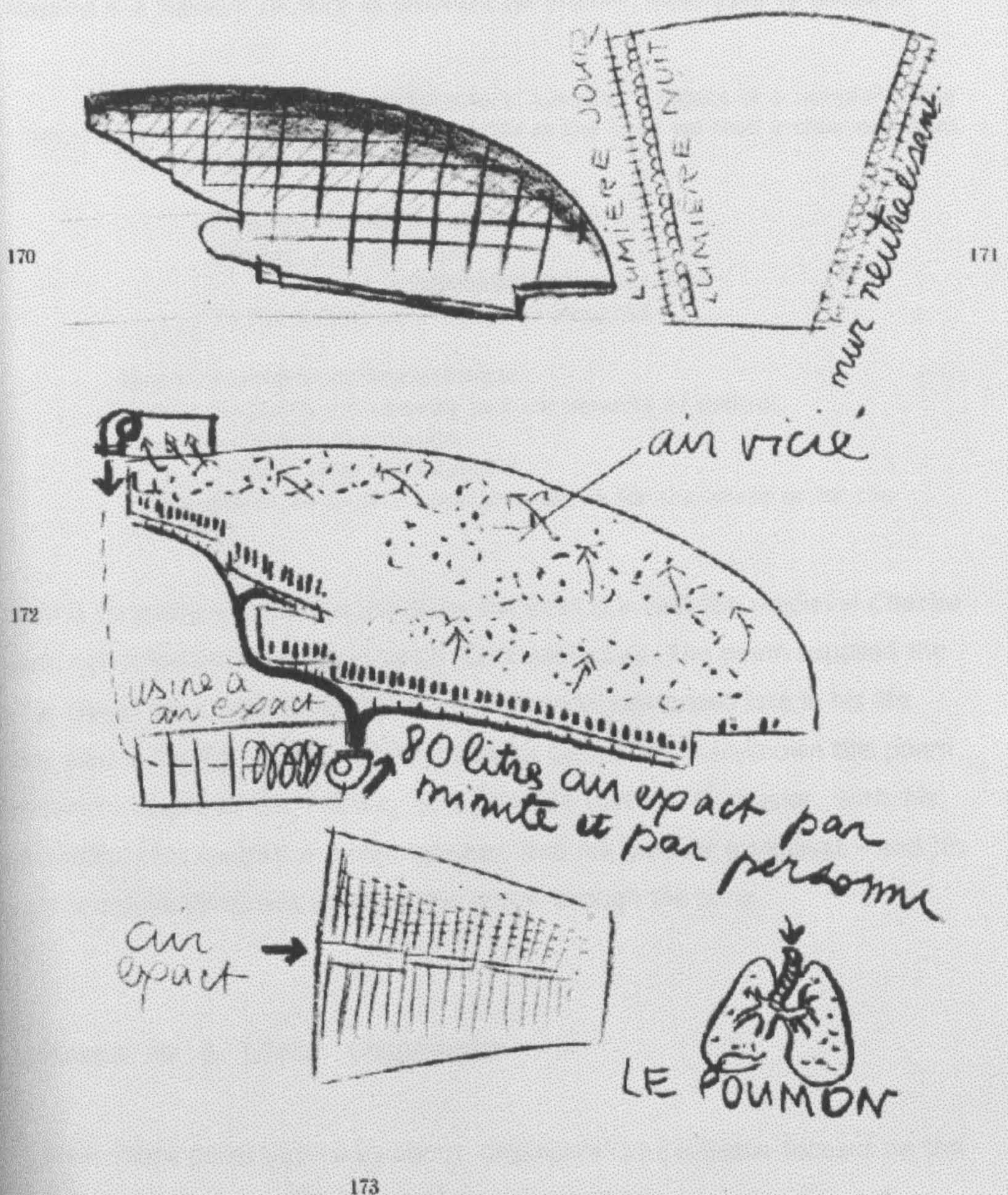
This conjunction of utilitarian functions, small or large, and emotive potential either small or large - fusion of two different intentions - is expressed in a rule of co-ordination shown in things; we call them *organisms*. And everything in the functioning universe seems to be *organic*. By this term we mean to signify that which lives or that which is viable, and applying it to the human work, we attach to it a sense of reverence.⁶³

He contrasts the organisms of nature and those of man; presenting first an image of the human heart and lungs, then photographs of a racing car, a bi-plane, and an airship. The conspicuous movement of the machine-organisms in these pictures is equivalent to the sequence of arrows showing the flow of blood through the heart in the first image; motion indicates life.[Fig. 8] The drawing of heart and lungs is carefully chosen: a very clear example of a natural machine, a pump, which is also loaded with emotional connotations: heart and breath, spirit, blood and life. His interest in circulatory systems, especially in townplanning, is also reflected in this choice. The word 'circulation' does not appear in the text accompanying this image, but one of its French meanings is 'traffic': the movement of blood and of vehicles must be linked at some level in the mind of a native French speaker. Although he wrote about street plans in *Vers une Architecture*, and about the problems of modern traffic in *Urbanisme*, this analogy had not been made previously, and the heart and lungs image is new in his writing of the twenties⁶⁴. But the usage does recall the medical diagrams of the skeleton and nervous and circulatory systems used at the head of the chapter 'Type-needs, Type furniture' in *L'Art Decorative d'Aujourd'Hui* which deals with a related subject⁶⁵. A pencil drawing of the heart-and-lungs image reappears in the *Une Maison* chapter of *Précisions* in 1930, but there it is directly linked to a visual explanation of the air circulation system for Le Corbusier's League of Nations assembly hall. [Fig. 9]

In *Une Maison*, Le Corbusier notes of the car, bi-plane and airship that some 'organisms' have more resonance than others:

Between a thousand or a hundred thousand, these organisms snare our sensibilities because they are revealed in much greater *purity* than the others; they are perceptible, explicit; they are reassuring. ⁶⁶ [my italics]

As we shall see, 'purity', with its undertones of religious feeling, is an aspect of the



171 lumière jour/daylight // lumière nuit/artificial light // mur neutralisant/neutralizing wall // **172** air vicié/used air // usine à air exact/air conditioning plant // 80 litres air exact par minute et par personne/80 liters of treated air per minute per person // **173** air exact/treated air // le poumon/the lung

Precisions p167:

The heart and lungs image;
the hall depicted as a lung

type-object/organism; as with machines, so with architecture, and the example in *Une Maison* is a modern factory at Sainrapt en Brice⁶⁷, described as follows:

Here we have entered architecture: a house, a palace or a temple? I say this: we have entered architecture because at the base we read a clear organism. The poet of the Renaissance sang:

Time has loosed his cloak
Of wind, cold and rain
And it is bedecked with embroideries
Of the smiling sun, clear and beautiful.

Beautiful crowns *smiling* and *clear*.
Smiling suggests the security and the serenity of control.
The mastery is in the clarity.
Smiling clear and beautiful.

This is almost an architectural programme for the house or for the palace.⁶⁸

The poem is *Le temps a laissé son manteau*, the poet is in fact the medieval *Charles d'Orléans*, not a Renaissance figure as Le Corbusier says. The poem supplied the words for one of Debussy's *Trois Chansons de France*, composed late in his life [Debussy died in 1918]. I have not been able to gauge how well-known this poem was in French culture in the 1920's. It is possible that Le Corbusier, with his musical family - his mother a music teacher, and his brother a violinist - and his avant-garde connections, was aware of the poem through the song.

The House is a Clear Organism

After those general remarks about 'organisms' Le Corbusier focuses on the organisms of architecture. The house of man, he asserts,

is a *pure* organism, so pure that it has always taken on the character of a *type*, and this *type*, from hovel to palace, is unique in the course of an epoch, based on the same profound causes, rational or sentimental.⁶⁹ [my italics]

This is the first use of the word 'type' in this book, and here it is used to denote what Anthony Vidler called 'an elementary principle'⁷⁰. The form of the house, Le Corbusier implies, will change with changing times, the informing principles will not. We are treated to a brief history of the house, the enduring

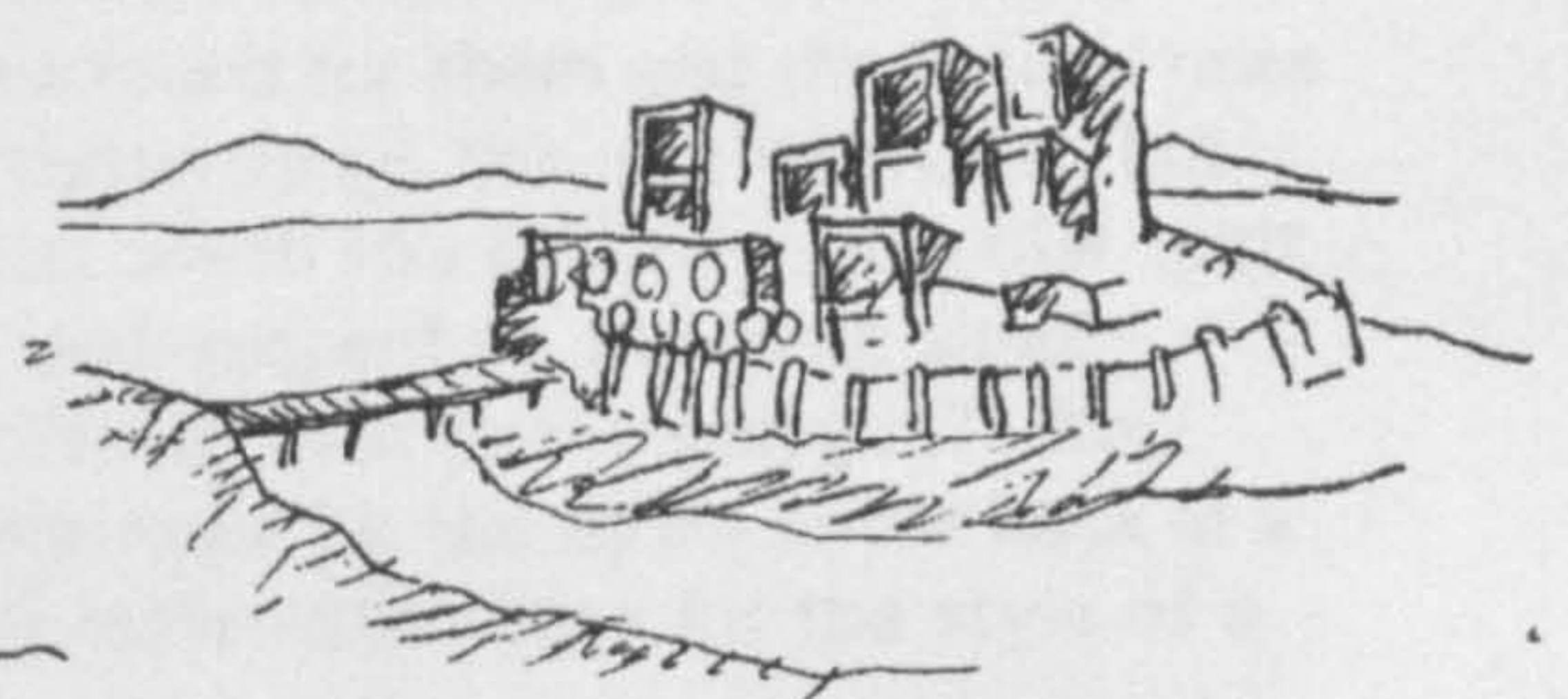
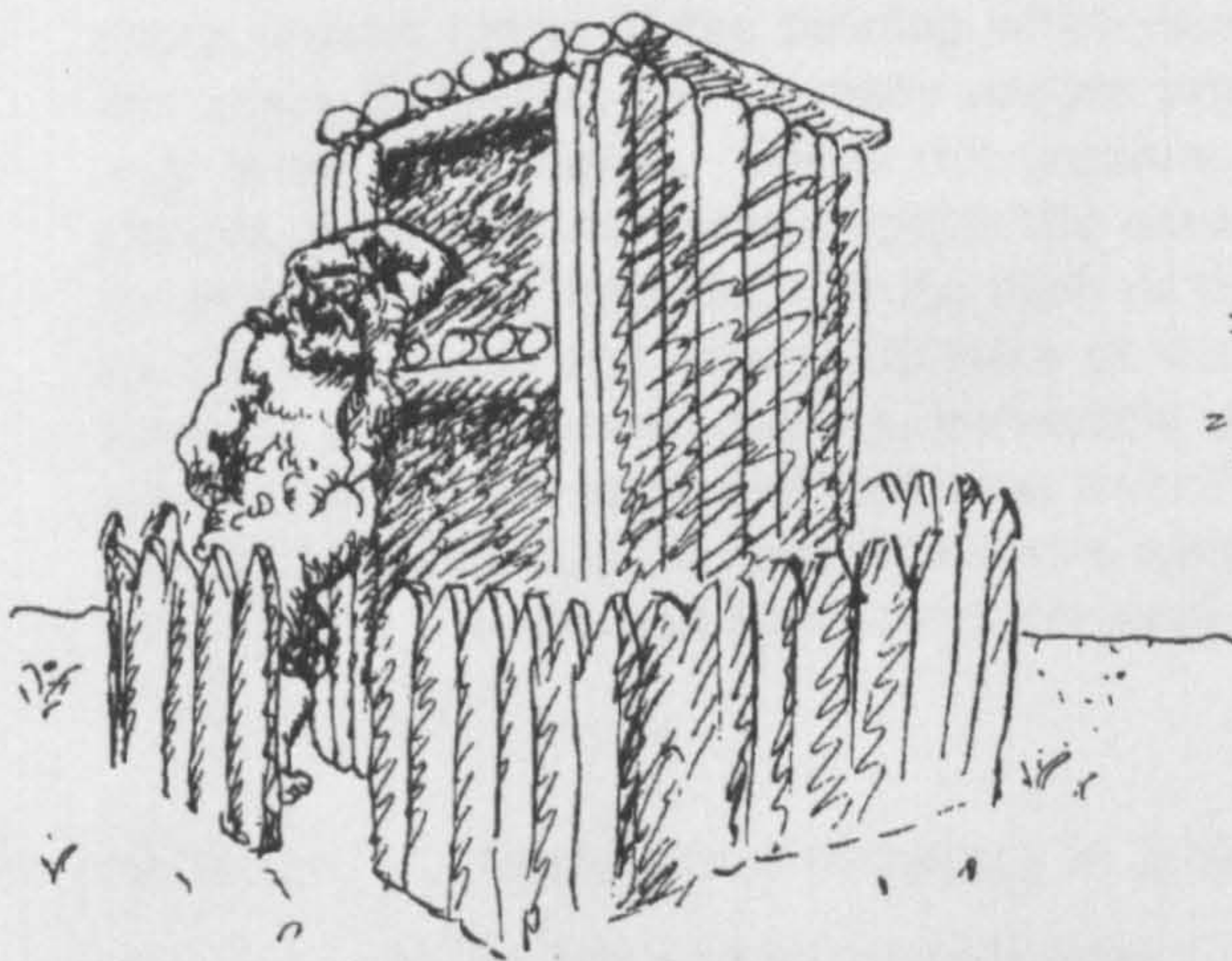
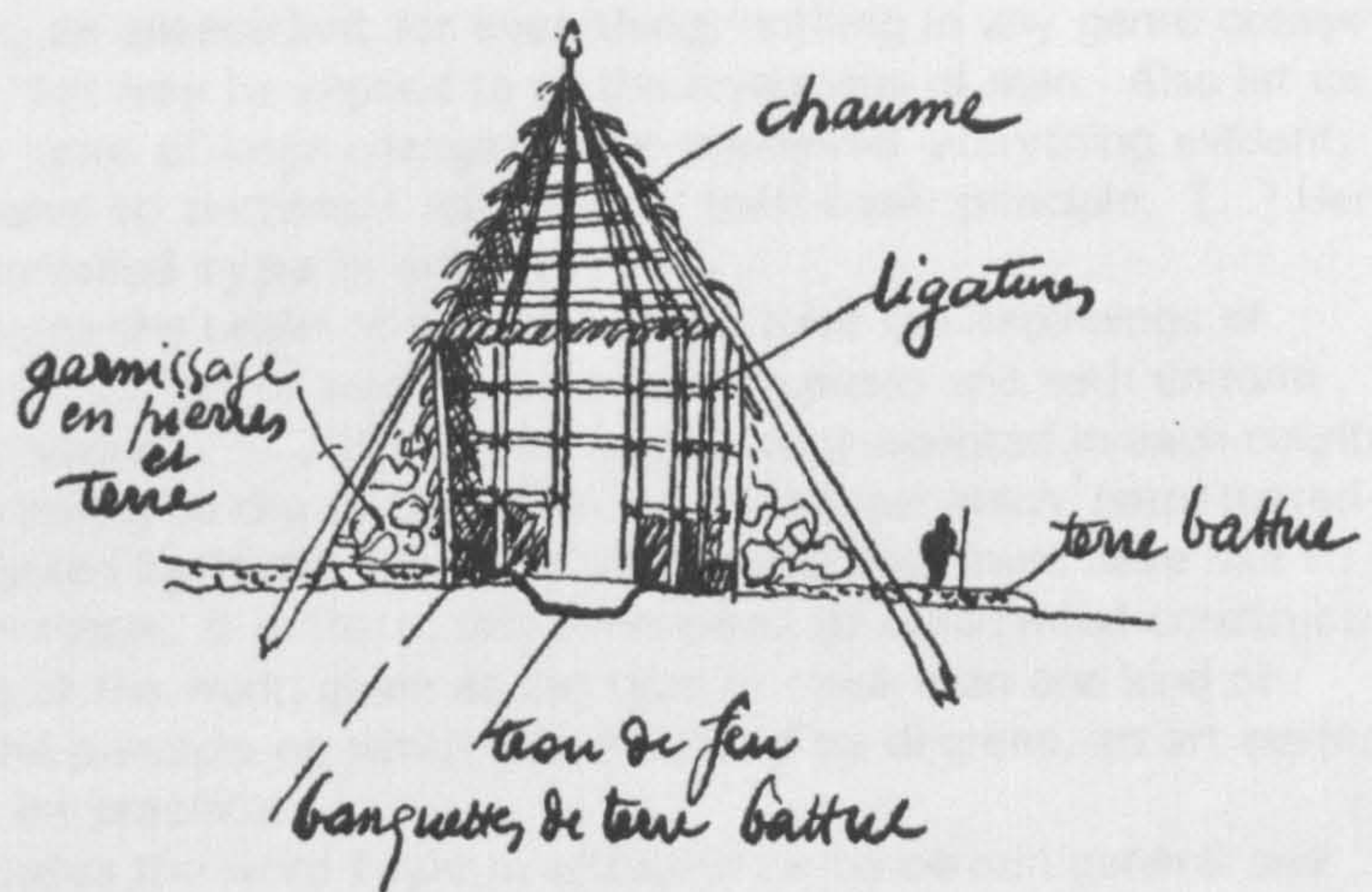
characteristics of which, even in the most primitive hut, are functional exactitude, economy, and geometrical ordering. And here the eighteenth century idea of typological origins is introduced:

Will this hut not one day become the Pantheon of Rome, house of gods?

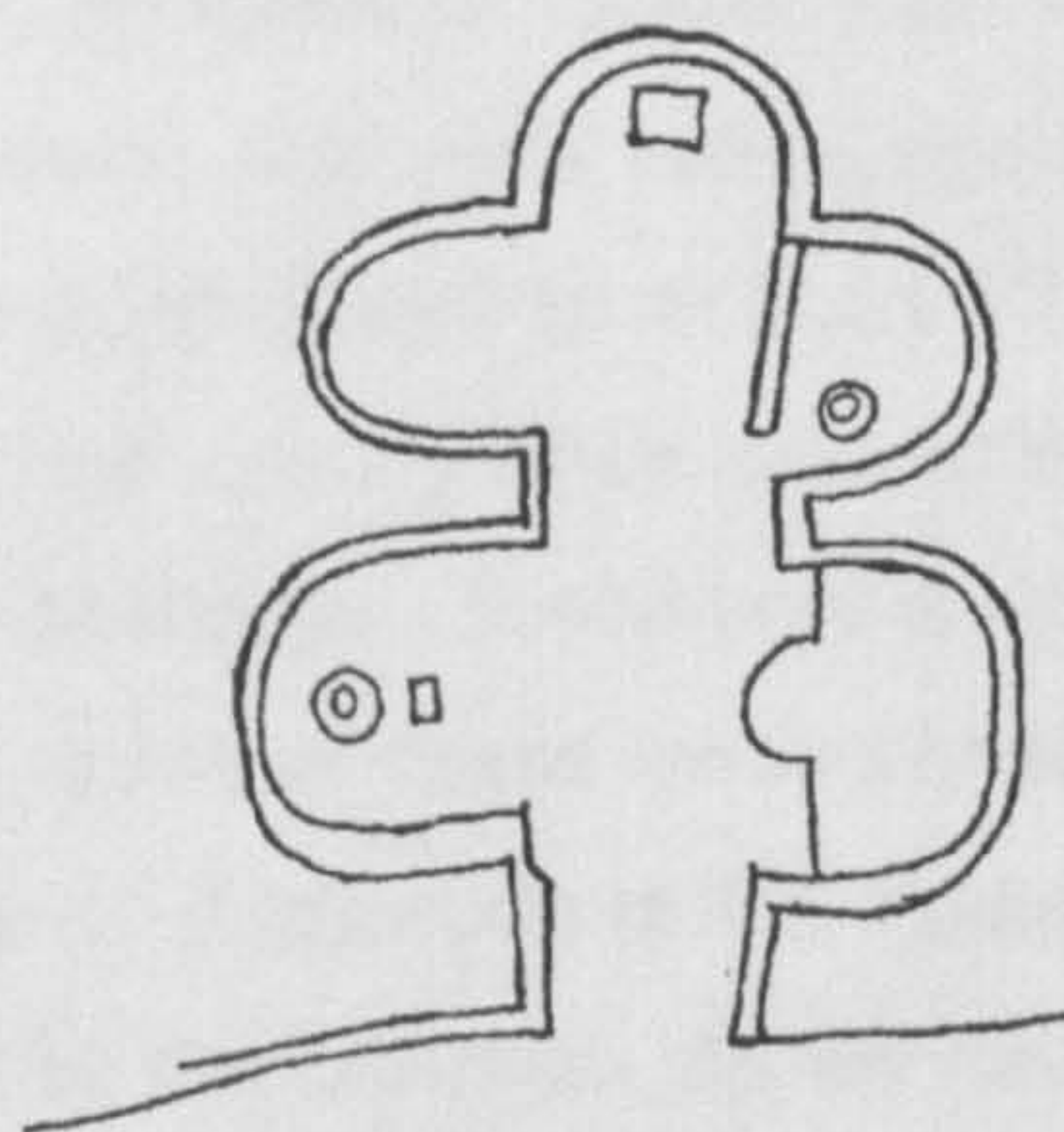
The hut, as in Quatremère de Quincy's writings, is the origin of *all* building types, not just its grander domestic successor. Choosing his examples carefully, Le Corbusier presents a square palisade and an Irish Crannog as 'proof' that the orthogonal is natural to man. He argues that ancient religious structures such as Stonehenge indicate an innate architectural ability, an urge to order, even in primitive man. These religious and public structures, he asserts, are *already* significant architecture, with disturbing emotional content [Fig. 10]. We know that when Le Corbusier went to Paris in 1908, he spent long hours educating himself in the library of the Beaux Arts⁷¹, and it seems likely, although there is no recorded evidence, that he encountered Quatremère de Quincy's *Dictionnaire Historique d'Architecture*⁷² because his own writings on *type* are at times so close to the text of the *Dictionnaire*. According to Quatremère,

The word *type* presents less the image of a thing to copy or to imitate completely, more the idea of an element which must serve as the standard for the model. Thus one will not say at all - or as infrequently as possible - one would be wrong to say it, that a statue, that the composition of a painting finished and delivered has served as the *type* for the copy that one has made; but that a fragment, a sketch, the thought of a master, description more or less vague, had given birth [...] to a work, one will say that the *type* has been furnished by such and such an idea, by such and such a motif, such and such an intention. The model, understood in the practical execution of art, is an object that one must repeat as it is; the *type* is, on the contrary, an object to which each person may conceive of works which may not bear any resemblance to each other. Everything is exact and fixed in the model; everything is more or less vague in the *type*.⁷³

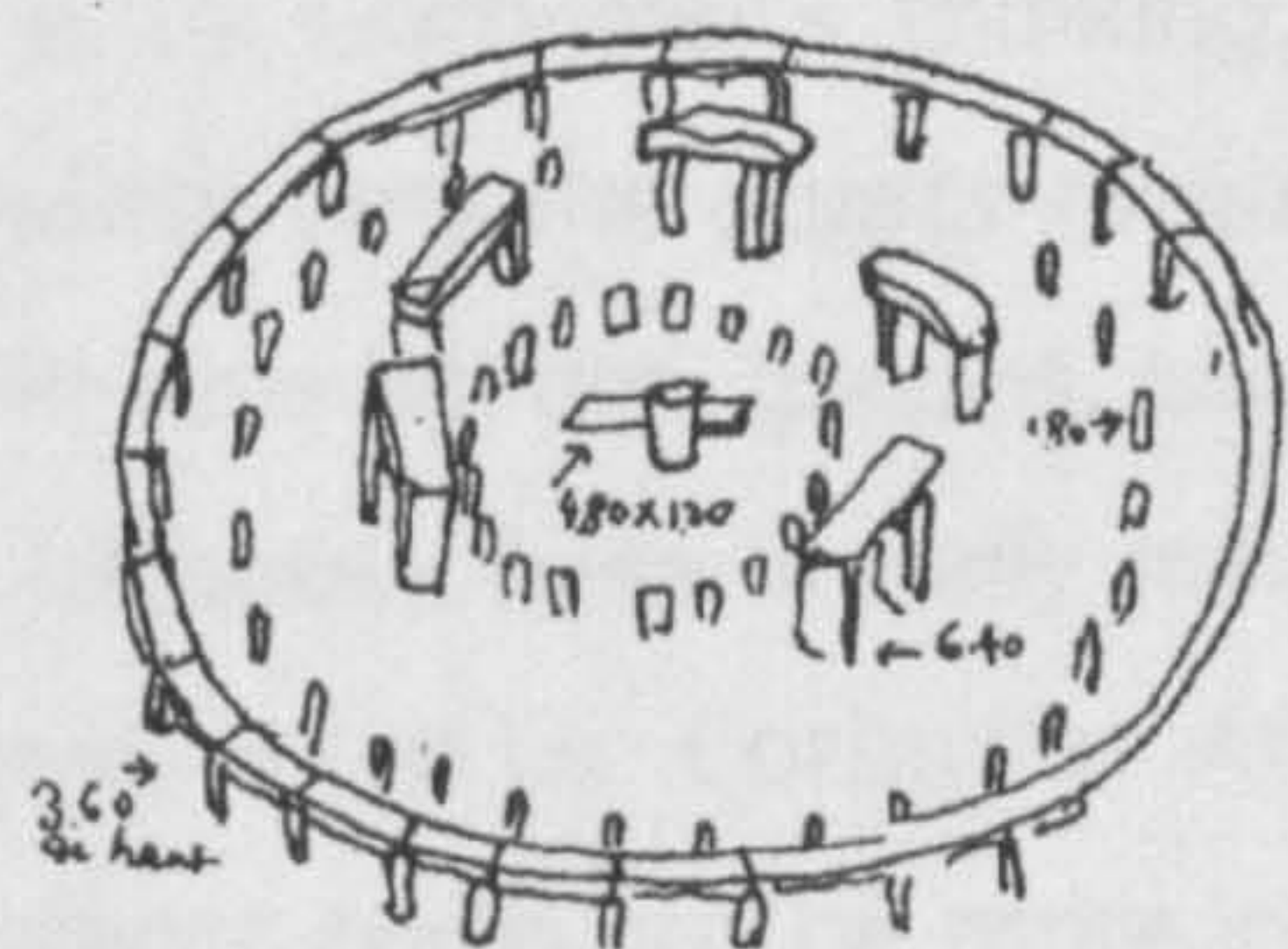
On *type* and architecture, Quatremère has this to say:



Huttes des Crannoyses
d'Irlande
(Musée Mondial)



le gigantesco de l'île Gozzo
phénico-cypriote
à l'âge du bronze
en blocs considérables



Stonehenge
Salisbury
d'origine

Une Maison - Un Palais p39:
Voici la maison primitive

[...]In all countries, the regular art of building is born from a pre-existent seed. there is necessarily an antecedent for everything; nothing in any genre comes from nothing; and that may be applied to all the inventions of men. Also let us see that all things, in spite of later changes, have preserved everything evident, everything responsive to sentiment and reason, their basic principle. [...] Here is that which must be called *type* in architecture...

...when one returns to the origin of societies which have the beginnings of civilisation, one sees the art of building born out of causes and with uniform enough means everywhere. [...] the use of wood... once adopted in each country, became there, according to the construction needs, a type which, perpetuated through use, perfected by taste, proven in immemorial use, must have had to pass into endeavours in stone. It is there, this antecedent of ours [wood construction] in numerous items of the work, given as the type of more than one kind of architecture, as the principle on which was modelled by degrees, an art perfected in its rules and in its practice.

[...] Again, one applies the word *type* in architecture to certain general and characteristic forms of the building which receives them. [...] For the rest, one can again, if desired, permit many usages proper to certain mechanical arts which may serve as examples. One is not unaware that furniture, utensils, chairs, clothes, have their necessary type in the uses found for them and the natural uses for which they are intended. Truly, each of these things has, not its model, but its *type* in needs and nature. In spite of that which the bizarrely industrial spirit seeks to invent in these objects, perversely with respect to the most simple instinct: who does not prefer in a vase the circular form to the polygon? Who does not believe that the form of a man's spine must be the *type* of the back of a chair? That the rounded form is not the only reasonable *type* for the style of a head?

When one recalls Le Corbusier's chapters in *L'Art Decoratif d'Aujourd'Hui* concerning the type-object and its orthopaedic nature his arguments appear strikingly similar to those of Quatremère in the last paragraph quoted above⁷⁴. By 1928, the notion of *type* was firmly established in Le Corbusier's thinking, and Von Moos has traced it back to at least 1920, by which time the *objets-types* of Purist painting had already been assembled⁷⁵. The wine bottles, glasses, plates and pipes of those paintings - fundamental domestic objects - were literally measured once identified; some of these measurements survive in the Le Corbusier Archives: the importance of proportion in the Purist type-object could not be more clearly indicated than by this survival. As we have seen, the same conjunction of utility and poetry was emphasized eight years later in *Une Maison*. Between 1920 and 1928, the related ideas of *type*, and of the primitive hut and its transformation emerge in several places and in several aspects in Le Corbusier's writings. In the *L'Esprit Nouveau* books which precede *Une Maison*, the word 'type' often alternates with 'standard'. In *Une Maison*, the two words appear as direct alternatives:

The architectural fact expressed by geometry, rooted in profound standard [type] causes, needs and means, is elevated from the unconscious towards awareness.⁷⁶

Paul Turner⁷⁷ has documented the different ways in which Le Corbusier used the term 'standards' in the early 1920's. Sometimes he used it to describe forms which arise purely as solutions to engineering problems, but he also used it to refer to the concrete examples of *formal* types such as the Parthenon⁷⁸, where the forms of the components from which that type-object/building is constructed have been achieved through cultural refinements rather than by functional necessity [compare this with Quatremère's history of the transference of the forms of wood structures to the stone ones that followed them]. When Le Corbusier referred to mass-production and standardisation, he did not always mean, says Turner

the factory production of identical, interchangeable parts, but ...simply represented a general notion of order and uniformity⁷⁹.

For Le Corbusier, the achievement of a 'standard' results not only in functional efficiency, but also in the creation of 'order, harmony and perfection'⁸⁰: with an implication that the *standard/type* stands crystalline - 'the sparkling crystal of mastery'⁸¹ - against a background of disorder: the *standard* counteracts chaos; thus the notion of *order* and its obverse face, *disorder*, are incorporated in Le Corbusier's concept of *type*.

In *Vers Une Architecture*, the *objets-types* of Purism are replaced by the *objets-types* of modern life:

Our modern life, when we are active and about [...] has created its own objects: its suit, its fountain pen, its eversharp pencil, its typewriter, its telephone, its admirable office furniture, its plate glass and its "Innovation" trunks, the safety razor and the briar pipe, the bowler hat and the limousine, the steamship and the airplane⁸²

He was to return to these objects two years later in *L'Art Decoratif d'Aujourd'Hui*, where the image of a briar pipe that he used as an end piece to the former book reappears as one of the chapter heading images⁸³. Here in the chapter on 'type-needs', mainly illustrated with pictures of Roneo office furniture, we find the following:

To search for the human scale, for human function, is to define human needs.

They are not very numerous; they are very similar for all mankind [...]

These needs are type, that is to say they are the same for all of us; *we all need means of supplementing our natural capabilities*, since nature is indifferent, inhuman [extra-human], and inclement; we are born naked and with insufficient armour. Thus the cupped hands of Narcissus led us to invent the bottle; the barrel of Diogenes, already a notable improvement on our natural protective organs [our skin and scalp], gave us the primordial cell of the house; filing cabinets and copy-letters make good the inadequacies of our memory; wardrobes and sideboards are the containers in which we put away the auxiliary limbs that guarantee us against cold or heat, hunger or thirst, etc.⁸⁴

Here is another Corbusian historical fable, this time of the origins of domestic objects. In *Une Maison*, there is a similar history, this time of the origins of ancient architecture, from the primitive hut to the temple. Other passages in *L'Art Decoratif d'Aujourd'Hui* recall the house-tool idea from *Vers une Architecture*:

...we have the right to insist upon the type quality of our needs, since our concern is with the mechanical system which surrounds us, which is no more than an extension of our limbs; its elements in fact, *artificial limbs*. Decorative art becomes orthopaedic...[p72]

Decorative art is an inexact and wordy phrase by which we denote the totality of *human-limb* objects. These respond with some precision to certain clearly established needs. They are extensions of our limbs and are adapted to human functions that are type-functions. Type-needs, type-functions, therefore type-objects and type-furniture. [p77-79]

This is condensed in *Une Maison*:

Extension of our limbs, [the work] descends to the utilitarian; it domesticates itself: a shoe, an armchair.⁸⁵

Where *Vers une Architecture* devotes a chapter each to the liner, the airplane and the car, *Une Maison* has a single page of images of modern machines of motion - the car, the airplane, the airship. In *Vers une Architecture*, all these modern machines are examined - and exalted - for their type-qualities. The great liner is 'a lesson for architects'; the airplane is a demonstration of a 'well-stated problem'; and the history of the car - and its analogue, the Parthenon - shows how the type object achieves perfection. In the chapter on liners, Le Corbusier rails against the persistence of the traditional house in modern times:

Architecture is stifled by custom. [...]

On the valuable ground of our great cities, you can still see masses of masonry rising as foundations for a building, although simple concrete piles would be equally effective. The roofs, these wretched roofs, still persist, an inexcusable paradox. The basements are still damp and cluttered up.....⁸⁶

and in a later chapter '*Mass Production Houses*'⁸⁷ presents his own solutions - roof gardens and pilotis - to the problems identified above. Roof gardens and pilotis are two of his 'five points of a new architecture'⁸⁸ codified as such in the late 1920's, and a pointer to the origin of a third, the *fenêtre en longueur*, is to be found in the *Liners* chapter in a picture caption beneath a photograph of a saloon in the *Acquitania* which says

For architects: a wall all windows, a saloon full of light. What a contrast with the windows in our houses making holes in the walls and forming a patch of shade on either side..⁸⁹

In *Une Maison*, as in *Vers une Architecture*, Le Corbusier presents his own houses as examples of modern solutions to the problem of the house. In *Vers une Architecture*, we see his earliest Modern work; in *Une Maison*, in the photographic portfolio of work presented at the end of the *Thèse*, he displays some of his most accomplished 'Purist' houses: Maison Cook, the two houses in Stuttgart, and the paradigmatic villa at Garches⁹⁰, all completed in 1927.

From the *Airplanes* chapter in *Vers une Architecture*, we learn that the airplane shows us that a problem well stated finds its solution. To wish to fly like a bird is to state the problem badly, and Ader's "Bat" never left the ground. To invent a flying machine having in mind nothing alien to pure mechanics, that is to say, to search for a means of suspension in the air and a means of propulsion, was to put the problem properly: in less than ten years, the whole world could fly.

This is followed by a six page elaboration of the problem of the house which concludes 'a house is made for living in'. In *Une Maison*, Le Corbusier describes instead the constitution of a primitive hut - the fisherman's shack at Arcachon - but first he proceeds to discuss another aspect of type, the idea of origins and the long refinement of the primitive hut⁹¹; he traces a history of *ordering* from this datum:

Here is man in the darkest, the most fearsome times: Nature stalks him.

His house is erected straight and rectilinear. Each component of his structure has an architectural force. One day, very much later [...] he will conceive a symphonic counterpoint; the brutal fact is spiritualising, the hovel will become the materialisation of lofty intentions and the temple of the deity will be placed on the Acropolis....

...to make architecture is to put in order; in this way architecture transmits down the millennia the order of thought.⁹²

The matter of the *Vers une Architecture* chapter on the automobile is similar in that it deals with the establishment of 'standards', that is, the refinement, both functional and mathematical, of the type object over time, and its consequent perfection. Here we find the much published visual comparison of the motor car and the Parthenon [Fig. 11], and the text that accompanies it:

Let us display, then, the Parthenon and the motor-car so that it may be clear that it is a question of two products of selection in different fields, one of which has reached its climax and the other is evolving. That ennobles the automobile. And what then? Well, then it remains to use the motor-car as a challenge to our houses and our great buildings. It is here that we come to a dead stop. "Rien ne va plus." Here we have no Parthenons.⁹³

If there are no modern Parthenons, yet there will be, and in *Vers une Architecture*, Le Corbusier leads the way with his 'mass-production houses' a few chapters on, where he declares

[A house] will become a tool as the motor-car is becoming a tool. [...] it will be beautiful too, with the vitality that the artist's sensibility can give to its *strict and pure organism* ⁹⁴. [my emphasis]

- a point of view which recurs in *Une Maison*, as we have seen:

The house of man, through the ages and in every climate is a *pure organism*, so pure that it has always taken on the character of a *type* [...]

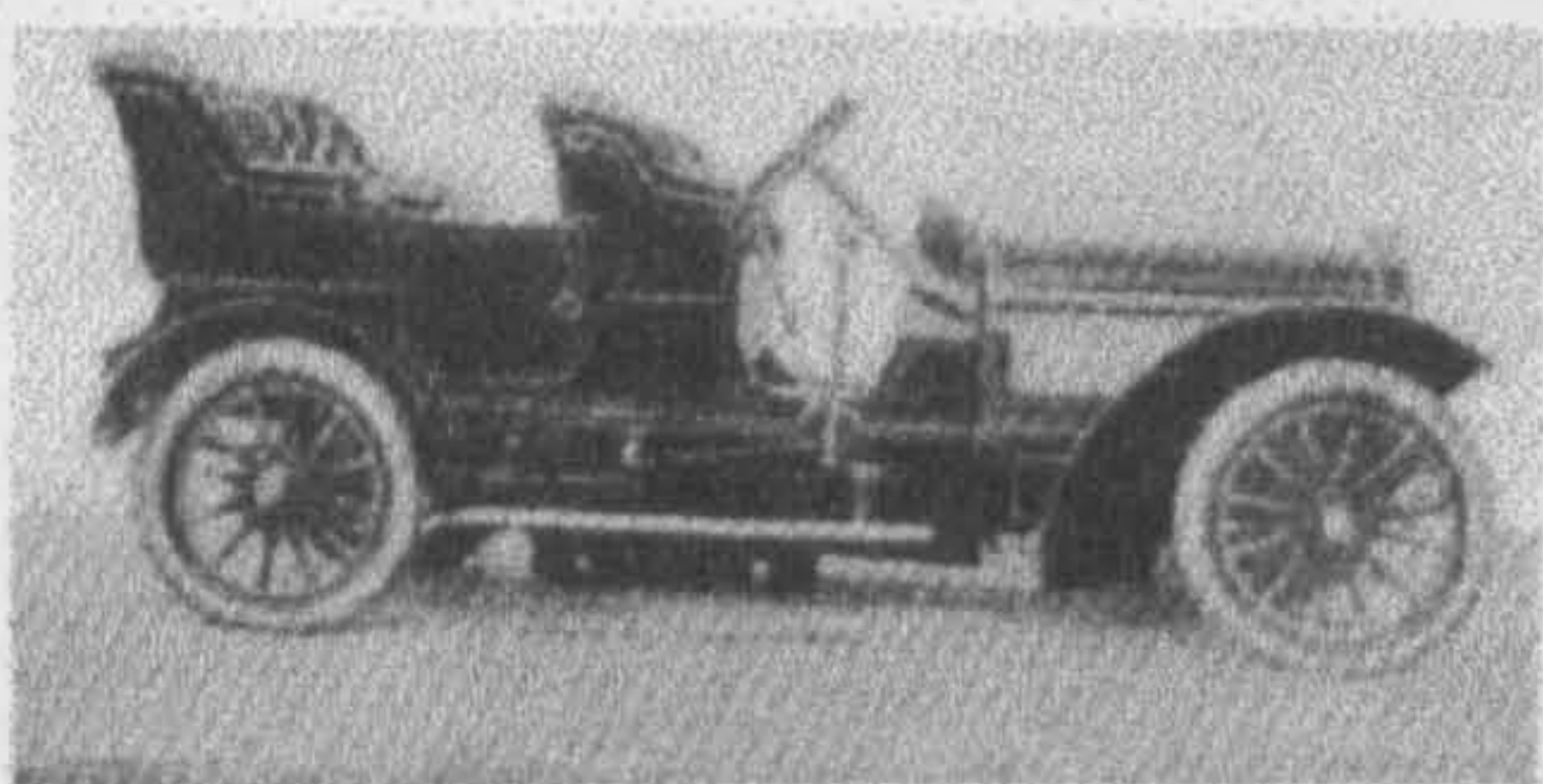
Potential for Architecture: 'Resources'

After the brief *Une Maison* history of the primitive hut and its diverse architectural offspring, Le Corbusier presents two contemporary structures: a turf-roofed lean-to on a Brittany farm, and Auguste Perret's concrete church at Raincy⁹⁵. The rude agricultural shelter, he says, is informed by the same architectural *resources* [Fr. *réserve*] as those ancient structures. The term *Réserve* is awkward to translate with a single word in this context: 'capacity',



PAESTUM, 600-550 B.C.

When once a standard is established, competition comes at once and violently into play. It is a fight; in order to win you must do better than your rival *in every minute point*, in



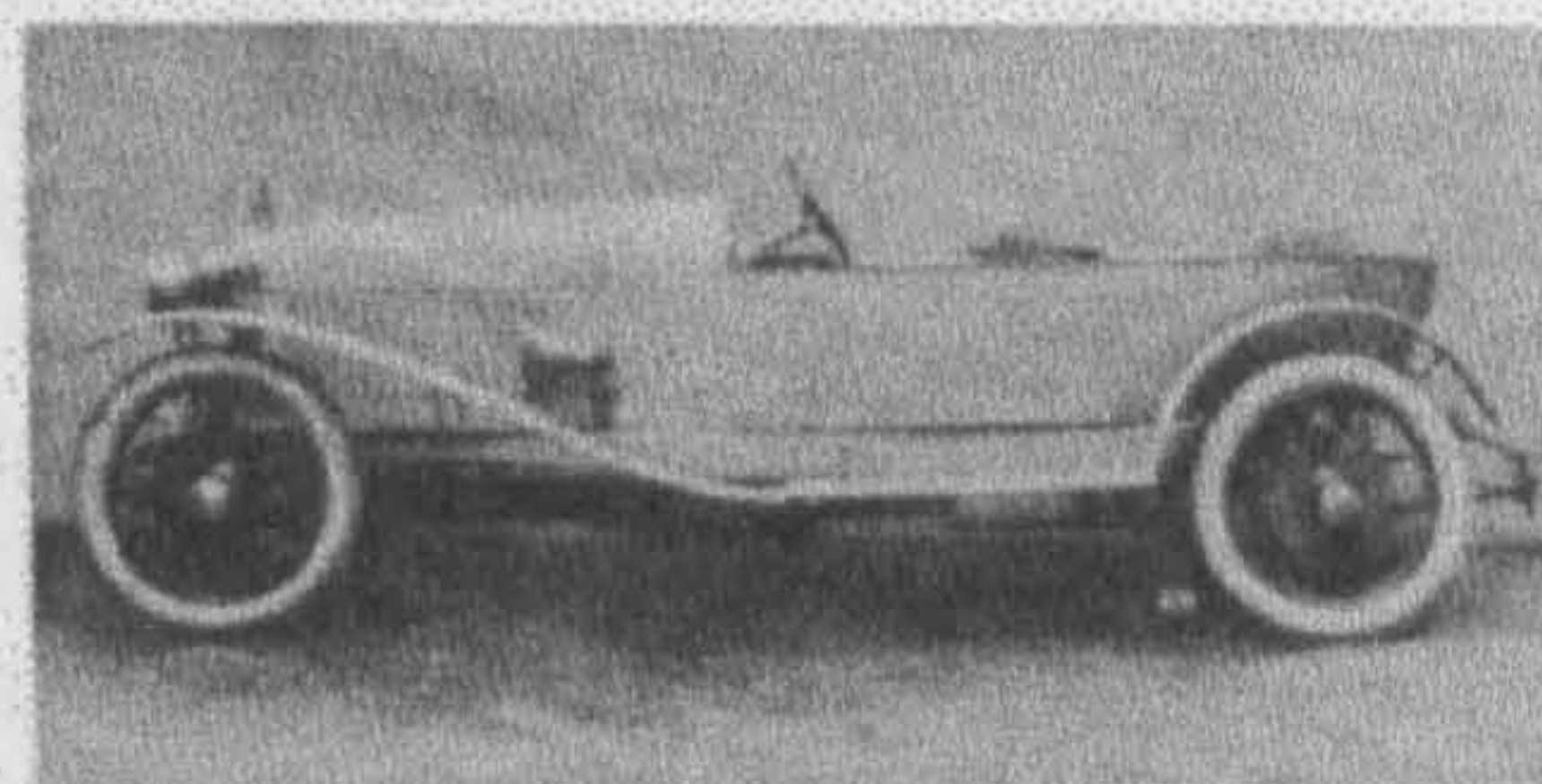
HUMBER, 1907



THE PARTHENON, 447-434 B.C.

the run of the whole thing and in all the details. Thus we get the study of minute points pushed to its limits. Progress.

A standard is necessary for order in human effort.



DELAJE, "GRAND-SPORT," 1921

Vers une Architecture p124
The Parthenon and the motorcar

'means', 'resources', 'stock', all carry some of the implications intended. I have used 'resources' and 'means' in my translation. Le Corbusier explains himself as follows:

Now, astride twenty centuries, at the other end of Europe, in the courtyard of a Brittany farm, we note the same experience. Here too are the very same architectural *resources*.

I say, *resources*. Resources, that is to say, a fund, a force, a potential for architecture; the elements are there, available, so that with a lyrical invention, the imagination of the artist creator, they may be put to work, may be cultivated, made to flower, made to shine in a splendid work, a firm, plump fruit from a high thought. Yet again it must be that one day the spirit will understand and seize the powers in its hands. This was not yet the case here in Brittany.

Where the potential for architecture exists unrealised in the Breton peasant structure, Auguste Perret's Raincy Church⁹⁶ is a lesson in the application of the means we have acquired. Perret learned to use concrete when he built warehouses and factories; years later he applied that experience to this notable church:

Auguste Perret, architect, erects [...] from his architectural *resources* [...] the nave of the church at Raincy. Nothing has changed in principle. But a categorical intention to elevate the work above utilitarian ends causes the close examination of the proportions of elements: here the shed for merchandise is a shed for priests, and a feeling of calm and jubilation reigns. No need for accessories indicating "religious style" supplied by tradition. An architect has exploited his *resources*.⁹⁷

Embedded in this paean to concrete and Perret's mastery of it, we find again the typological notion of origins: the 'shed for merchandise', becomes a 'shed for priests'. The possibility that one functional architectural type might be transmuted into another became central in the thought of Le Corbusier and has been noted by a number of writers, among them Kenneth Frampton, who has observed

This transposition of a house into a palace and vice-versa is a key notion underlying Le Corbusier's output and the elaborate metaphorical substance of his entire endeavour is incomprehensible if we do not understand that it is grounded in this fundamental notion of a transposable hierarchy. The house/palace syndrome is conceived by Le Corbusier as the archetypal double. On this dialectical base, compounded of both classicism and utopian socialism, he established his metaphorical fulcrum: a Purist mythology derived in part from the antique and in part from the technology of the nineteenth century.⁹⁸

Sometimes the 'transposable hierarchy' appears uni-directional: there is a notion of progress, both of culture and of means. This is obvious in the next paragraph in

Une Maison: where Le Corbusier first illustrates a house-become-church in the Arcachon Basin, and then tells a story of peasants in Brittany discovering the use of reinforced concrete, and the revolutionary effect this had on 'local architectural events'⁹⁹ [fig. 12]. This latter example was taken directly from *L'Esprit Nouveau*, and Le Corbusier used the same illustration¹⁰⁰. Here a mechanism for change was provided by scientific discoveries and developments, and although the resulting changes may be startling, they are not random:

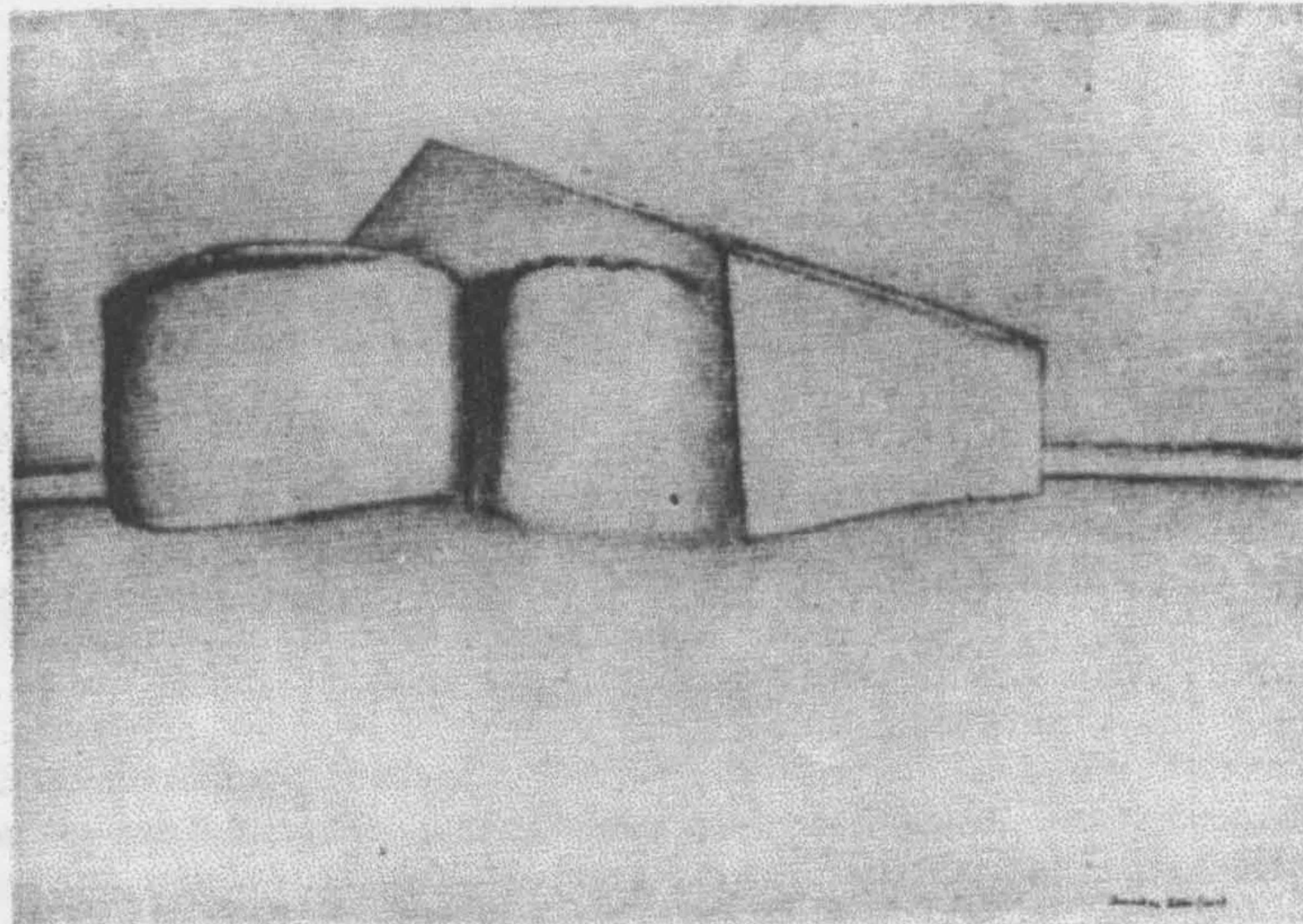
Architecture is a tree from profound roots. In it, nothing is caprice; [...] when a new event seizes us, we prefer to think that it is spontaneous, incongruous, random, in the incoherence of present times. In architecture, there is a point of spontaneity, but a long, minute conditioning: types established with profound reasons, architectural resources; let us examine them attentively. It is from them that we will make *a palace from our house*...¹⁰¹ [my emphasis]

Yet the primitive house is always relevant to the Modern: the solid foundation of all architecture, a permanent type-component of our architectural 'means'. The emphasis on the primitive [and on nature¹⁰²] in *Une Maison* - and an oppositional idea of primitive and modern standing juxtaposed - is new in Le Corbusier's writing, and was to become an important aspect of his work in the thirties. As we shall see, he examined the primitive house, as exemplified by a fisherman's shack, in great detail in the following pages.

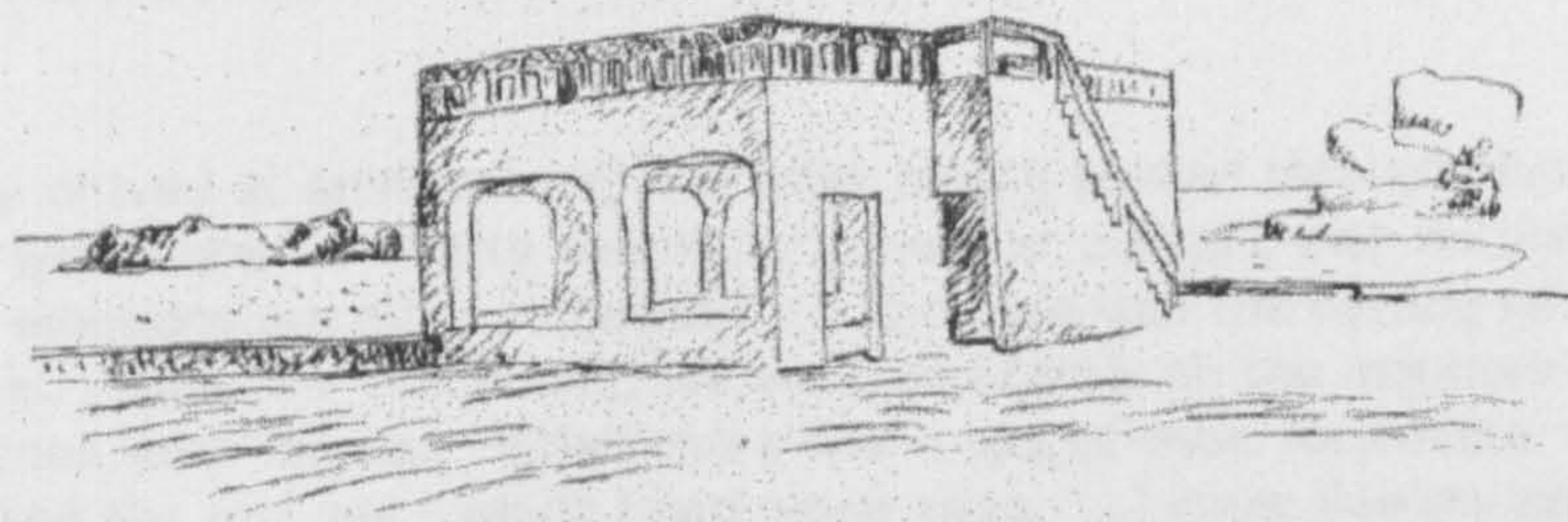
According to Mary Patricia May Sekler, the likely origin of the image of architecture as '*a tree from profound roots*' is in Le Corbusier's earliest education in La Chaux de Fonds, where he attended art school from 1902 to 1906¹⁰³. The school placed a Ruskinian emphasis on the analysis of natural forms with the intention of developing a local vocabulary of decorative motifs, and the application of these motifs may be seen in Le Corbusier's earliest houses¹⁰⁴. But as Sekler noted, this derivation of decorative schemes 'was not an exercise in empty formalism'¹⁰⁵. The writings of both Owen Jones [*A Grammar of Ornament*] and Ruskin, which underpinned the art course at La Chaux, have strong moral undertones. This is Ruskin in *Modern Painters*:

The power of every great people as of every living tree, depends on its not effacing but confirming and concluding, the labours of its ancestors.

- a sentiment mirrored in Le Corbusier's '*architecture is a tree from profound roots*'. Ruskin found a special significance in the pine tree, the 'wild builder with



Dessin d'Ozenfant.



Une Maison - Un Palais p47
Transformations in Arcachon & Brittany

the sword':

Of the many marked adaptions to the mind of man, it seems one of the most singular, that trees intended especially for the adornment of the wildest mountains should be in broad outline the most formal of trees...The pine, placed nearly always among scenes disordered and desolate, brings into them all possible elements of order and precision....¹⁰⁶

Stylised pine-tree motifs are dominant in the decorative schemes for Le Corbusier's Swiss Regionalist houses, and it seems that Ruskin's view that the character of a local flora exerts some influence on those dwelling within range, impressed the young Charles Edouard Jeanneret. Sekler writes:

Once one has read Ruskin on trees, one cannot walk in the woods without being haunted by the imagery of his vivid descriptions and analogies. For someone Swiss-born, and especially for someone from the Neuchâtel Jura where majestic white pines are the dominant features of the landscape, the image of the pine tree would become mingled with prevalent visions of patriotism, with God's justice, with the uprightness of the individual, with an active building principle - warring for the good of right and brother, with potency, strength, dignity and resolve¹⁰⁷

Years later Le Corbusier admitted to this grounding in Nature. In *L'Art Decoratif d'Aujourd'Hui*, in the 'Confession' at the end we read

If I have today arrived at architecture, it is after having passed through those stages of art where greater liberty seems to prevail, or contact with nature is direct, or the emotions are more immediate. [...] nature was the setting where, with my friends, I spent my childhood... We were constantly on the mountain tops: the vast horizons were familiar. When there was a sea of mist, its infinite expanse was like the real sea - which I had never seen. ...I knew flowers inside out, the shapes and colours of birds, how a tree grows and how it keeps its balance even in the eye of a storm.¹⁰⁸

This youthful period of the study of nature is also referred to in the *Thèse of Une Maison*: the leaf of a lime tree drawn in those early days is held up to us as an example of a 'clear organism'

Look at this twig of lime; in drawing this leaf [and so many others in the days when I used to occupy myself thus, diligently studying the marvels of nature], one becomes aware of something that is a clear organisation, of that which, harmoniously, without hurt nor rupture, born from within, is stretched out, flows limpidly, and is stopped by an edge, that limit of contour which creates a visage entirely filled with its essence, presented to the exterior.¹⁰⁹

Although the use of decoration in his work had ceased by 1914, and although he saw the Ruskinian movement as reactionary¹¹⁰ by the time *Une Maison* went to press in 1928, Le Corbusier's interest in trees remained. In *Urbanisme*, they humanise the vast machine city

...a tree is a thing that pleases us all, since, however remotely, we are still children of Nature; and we have seen that an urban manifestation which completely ignored Nature would soon find itself at odds with our deepest primeval impulses. The tree modifies a scene that is too vast, and its casual forms contrast with the rigid forms which we have conceived and made by the machinery of our epoch. It would seem that the tree is an element essential to our comfort, and its presence in the city is a sort of caress, a kindly thing in the midst of our severe creations.¹¹¹

And the Pine tree reappears in *Une Maison*, not as decoration, but as one of the natural components of the specific and extraordinary landscape in the Arcachon basin, contributing to the form of the fisher-shacks there both contextually and as building material¹¹². Both sketches of the shacks show the pine forest, as well as the fig trees planted by the fishermen for shade [Fig. 13].

From Collins Road Atlas - Europe



Une Maison - Un Palais p49
The Fisherman's Hut

A Palace is made of the House: *Transformation*

The *house-palace*, 'synthetic product of the spirit and the heart' is always to be found, Le Corbusier says, in the simplest rural conditions¹¹³, and here he returns to a particular Primitive Hut: the one illustrated on the cover of the book. He describes at length - and this is one of the most poetic passages in the *thèse* - how the fishermen's shacks near Le Piquey in the Arcachon Basin came into being, and the factors that informed their appearance¹¹⁴. According to Christopher Green, writing about his paintings in '*Le Corbusier Architect of the Century*', Le Corbusier spent his summer holidays between 1928 & 1932 in Le Piquey, where he made numerous drawings and sketches. But Le Corbusier had known this landscape years earlier: he had links to the area through Henri Frugès, for whom he built ten small houses at Lèges [just north of the Arcachon Basin] in 1923. These houses served as a test project for the much larger estate at Pessac, west of Bordeaux, which was built a couple of years later¹¹⁵. Apparently Amedée Ozenfant first introduced him to the region: according to Susan Ball, Ozenfant had been sent to the Arcachon to recover from pleurisy in 1900. He returned to the area in 1917, and, says Ball,

it was there that in 1918 he formulated his Purist ideas, and collaborated with Jeanneret on *Après le Cubisme*. And there that they also painted their first "proto-Purist" paintings.¹¹⁶

It seems that Le Corbusier would always associate the Purist notion of the *objet-type* - conceived here in the closing months of the First World War, and deliberately applied to architecture [*house-type, palace-type*] in the project for the Palace of Nations - with these unique landscapes: it is here that the house-palace couplet originates, with a specific shack in Le Piquey. As Christopher Green put it

A remarkably high proportion of Le Corbusier's most ambitious paintings of the 1930's had their origins specifically in drawings made at Le Piquey [...] His mornings spent painting in Paris constantly kept in view that other, simpler world, where *he believed all standards and attitudes could find their measure*.¹¹⁷

[My Italics] That 'other simpler world' is certainly manifest in Le Corbusier's

description of the shacks at Le Piquey. He begins with the very particular conditions of the place:

...the eternal architectural fact was rethought, humbly, and in all the simplicity of normal conditions: because the railway ended at the edge of the sands of the heath that threaten the pine forest. This tongue of land is isolated from the world because the railway ended; one of its flanks is battered by the quick-tempered and thieving ocean: the winds uproot everything, the dunes are nothing but a desert. The other flank is caressed by a quiet tide which flows through a gully into an interior basin. Isolation, separation from the world.¹¹⁸

In addition, the fishermen did not own the land:

They cannot build stone houses founded on a soil which is not theirs. They only come here with the idea of sojourning. This precariousness puts them in the type condition of the house builder; they make themselves a *hut*, a *shelter*, nothing more, totally simple, totally plain. They achieve a pure programme which is entirely unencumbered by pretensions to history, to culture, to the taste of the day: from day to day they build a hut, a shelter, with the poor materials found round about.

But they were attentive to detail, and had an instinct for 'the point of balance':

They weigh up, calculate unconsciously, they find the point of balance, the centre of gravity. And in a harmonious cadence, intuition proposes and reason reasons. And they allow themselves to carry along a scrap of lyricism...

They proceed along simple, practical lines:

This fisherman, why should he not be a poet? Primitive man is indeed a poet, very much so. He begins with the *hall*. And the pines of the forest are felled. The sun is strong: a visor is made above the eyes of the house. He has dug the well, installed its pulley; the place for the well was carefully chosen.

Then he considers his comfort: one or two bedrooms.

The first evening, he pushes the table under the shelter of the porch, in the open air. A bench - a plank nailed onto two posts driven into the sand - has taken a definite place. Ah, this bench is in the right place; it is there that one sits when "at home", this bench is a monument. He devises something for doing the washing, necessary in such a place (because of the wind); at such and such a distance he has constructed the washing copper; one might as well speak of a device from Knossos or from Mycenae. It is a monument.

While building the house, he plants a fig tree. Each house has its fig tree, because the fig pushes into the sand and gives a dense shadow. The fig tree is a monument and its place is unquestionable.

In order to raise the fowls off the ground, he has arranged, at a fair distance, a small kiosk in the air on wooden feet, and hutches, sound in construction and beautiful as the Lycian tombs.

So that the sea at certain equinoctial tides does not carry the earth of the vegetable garden away, he has surrounded it with a palisade constructed with

native sagacity.

By their underlying *order* these huts are elevated above the merely utilitarian: the orderly sequence of functions presented here, linked most efficiently, achieves the *organic*:

The elements of great orderings are there: the facades, the porticos, the monuments that one arranged in order to ennoble the ensemble. They are there with a total truth, one born of the other, one depending on the other, being linked, rhythmically, in the most effective conjunction. An organism is unfurled, is expressed, is presented in the order. Nothing is to be thrown back. Everything gels. Not one excess, a single needless repetition but total efficiency.¹¹⁹

Thus the hut is transformed and the palace is achieved: here the idea of the 'transposable hierarchy' is exemplified:

Maximum economy.

Maximum intensity.

One glorious day, having suddenly understood them, we exclaimed:
"But these houses are palaces!"

Le Corbusier's definition of the palace is this:

And one characterises the palace, first of all, simply: a palace is a house striking in the dignity of its aspect.

Dignity is a dominant attitude which issues from proper control.

It is dominant because that which constitutes it is of a monumental order.

Pure forms assembled according to a harmonious law, these we call monumental.

In this tale of the fisherman's hut and its metamorphosis into a palace, all the arguments of the *Thèse* come together: from our need and our spirit - which is natural and mathematical - we achieve the type-object and the type-house; in the perfect meeting of form and utility, the organism becomes monumental; the house becomes a palace. The fisher-hut provides us with a model¹²⁰ of the application of architectural '*means*'. Using these '*means*', we may likewise 'achieve the palace':

Let us transform these ephemeral hovels into solid buildings intended for our contemporaries; let us achieve a metamorphosis by maintaining a quality of equivalent spirit. In place of the pine from the forest, reinforced concrete; in place of the rustic programme, the "machine for living in"; in place of the single-minded lyricism of the fishermen who built these enduring houses after the great war, the aspirations of the cultured man.

How is this transformation to be accomplished? Architecture arises from a conjunction of spirit and utility: he returns to the visionary definition of architecture with which the book began¹²¹:

I achieve the palace by the incessant work of architectural feeling which perturbs my spirit, stimulates it, incites it, uplifts it.

Because architecture is an inevitable event which springs up suddenly in a creative instant: where the spirit, anxious to ensure the solidity of the work, to fulfil the desire for comfort, is found to be uplifted by an intention higher than that of simply serving, and tends to manifest those lyrical forces which animate us and give us joy.

He then predicts that the old architectural order - the Beaux Arts - will be swept away by the new technologies, which he depicts as a cleansing process:

It may be that, suddenly, under the machinist blast, the collapse of all the means now in use will occur: no longer will anything of the palace-up-to-now, remain. The palace of our last decades, produced by the academies, has hideously soiled the meaning of the term. This palace was nothing more than the image of a filthy pretension. It was not dignified by any healthy spirit, by any pure aim. The palace was nothing but a rotten stew around which they swarmed. Our stomachs as men of the machine age can no longer assimilate a food so close to corruption.

122

His specific complaints are of the false use of materials: that Academic architects use concrete frames while simulating load-bearing stone structures, and of costly, pretentious and empty show in the unthinking reproduction of the motifs of the pre-machine age past:

Life is below: the bank, the offices with their cabinets, their efficient furniture, their reinforced concrete skeleton... death is above; a stone mask, an absolutely useless stone mask, that was achieved by exhausting the quarry, *once the house was finished*. [...] Domes to crown everything, refuges for rats and for mouldering files, while the most beautiful surface of the whole building on high, in the air, far from the noise and dust, could have been the roof garden. In a word, the reviled *credits*, gold thrown from the window for show.

... It was in the hands of the architect; he is bankrupt. He has plastered the flashy rags of the palace onto the house. The house has not become a palace.

Because of the collapse of all the old formulae under the blast of machinism.

Domain of the pawnshop, of rags!

These passages read as a response to the remarks made by M. Nénot to

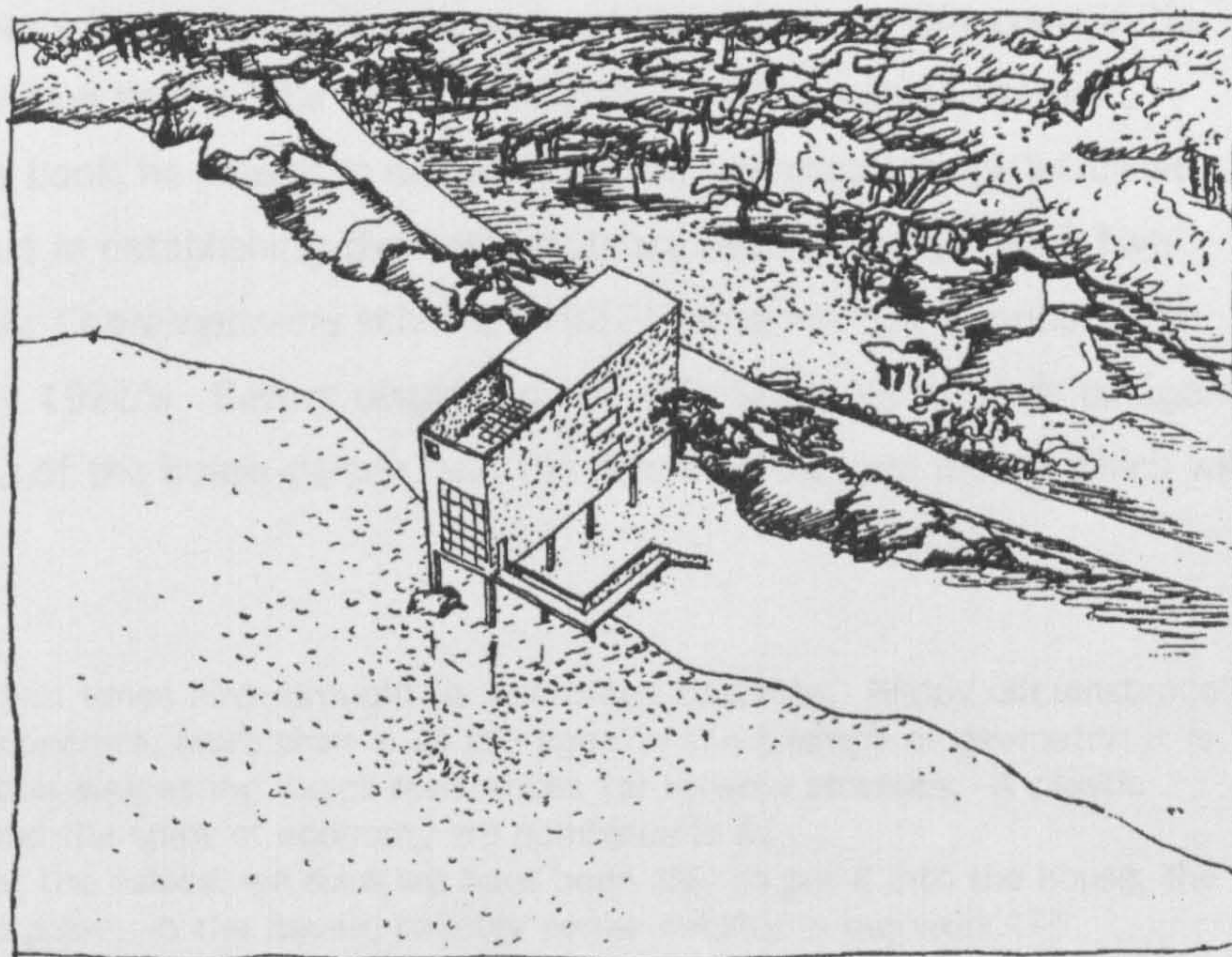
Intransigent after his team had been awarded the commission for the Palace, and which must have infuriated Le Corbusier:

"I am happy simply for art," M. Nénot said to us gaily this morning; "*The goal of the French team, when it was in the running, was to hold Barbarism in check. What we call Barbarism is a certain architecture, or more exactly, a certain anti-architecture which has been causing an uproar for some years now in Eastern and Northern Europe, no less horrible than the "Coup de Fouet" style which happily we have crushed over the last twenty years. It denies all the belles époques of history, and insults common sense and good taste in every way. It is defeated, and all is well.*"¹²³

He inverts Nénot's argument: accusations of barbarism are countered by an exposition of the potential of the 'ephemeral hovel'. And Le Corbusier's reaction to Nénot's complacent dismissal of modernism is a direct attack on the Beaux-Arts School, here accused of pretentiousness, corruption and 'bankruptcy'.

This unillustrated tirade against the Beaux-Arts, reproduced above, sets the stage for a photographic parade of Le Corbusier's 'true' houses. The oppositional construction of this section of the *Thèse* benefits the display of his own work which follows; the Beaux-Arts school is confronted directly, a presentation of the 'Academies' versus Modernism; good facing evil, life challenging death, new accusing old. The *fait accompli* of real modern buildings presented in a modern way, ie., in photographs, routs the fading productions of the Beaux Arts, become more insubstantial here because they are pictured only in words. The first protagonist from Le Corbusier's own Modern oeuvre is a modest example of the 1922 Citröhan house in an arcadian setting, a crystalline prism elevated in the wilderness¹²⁴ [Fig. 14]: the Arcachon shack transformed. The small scale of this plain, reinforced concrete house, 'rational, explicit, true', contrasts with the lumbering, ornamented monsters conjured up in Le Corbusier's text.

In the next few pages of *Une Maison*, he expands on the architectural means employed in the new house; here the 'Five points of a New Architecture' [presented as such in the first volume of his *Oeuvre Complète* issued the following year] are seen applied. The two houses for the Weissenhofsiedlung and Maison Cook¹²⁵, all completed in 1927, provide examples. Each of the 'five points', much explored by scholars, has at once a utilitarian justification and a poetic implication. The pilotis remove us from the unhealthy damp - and lift our spirits above the mud; the long window floods our rooms with light - and enlightens us; the roof garden reclaims nature for our health and peace of mind, elevating it above the



Côte d'Azur.

Une Maison - Un Palais p55
Citohan house on the Cote d'Azur

stained streets; it becomes 'monumental', a container of the gardens of paradise. The free plan and free facade are not just strategies for improving the organisation of the house, they free our spirits. He concludes:

A spirit careful to observe, to debate, a spirit tending to express the quintessence, leads reinforced concrete step by step towards the most noble destinies of architecture. With this new material, everything is turned upside down. By the spirit's command, *the house becomes a palace*.¹²⁶ [my emphasis]

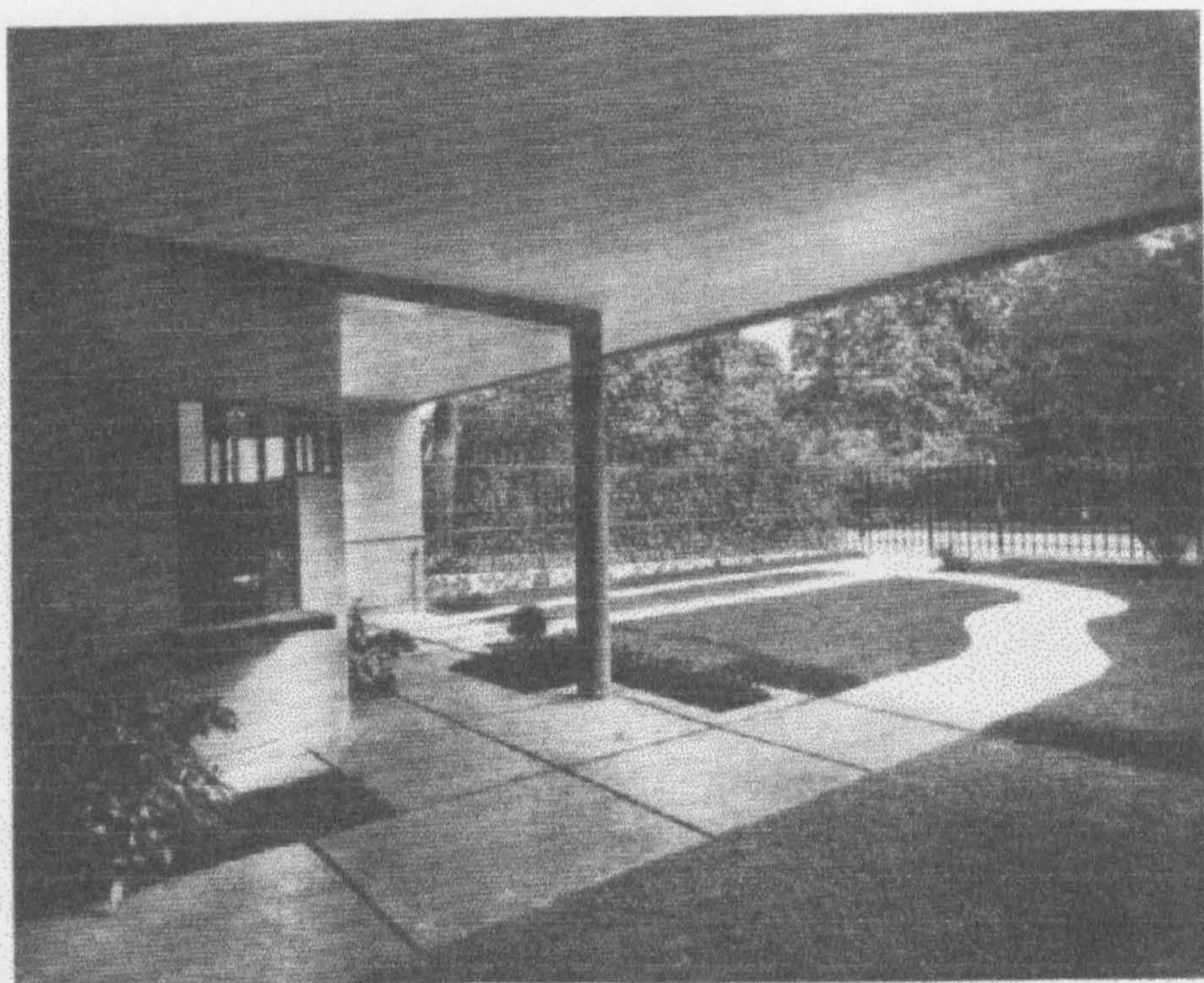
The house is literally turned upside down, with the garden above, and air flowing below, the bedroom and living levels inverted accordingly: thus the new house opposes the old in a direct and material fashion. This inversion is made specific in the direct photographic juxtaposition of the void below the house, and the roof garden above, repeated with both the Weissenhofsiedlung houses and Maison Cook.¹²⁷ [Fig. 1 5]

Le Corbusier's latest house is reserved until last, and at this point in the text, as an introduction to the Villa Stein-de-Monzie, which occupies the next eleven pages of the book, he pauses to remind us of the new machine age which we inhabit, and his part in establishing the contemporary architectural style. Two drawings of the *Ville Contemporaine* scheme [1922] recall his contentious urban visions of the early 1920's. Before displaying the Villa Stein, he reminds us again of the constituents of the house-palace, and the new architectural means which will achieve it:

Modern times have brought us reinforced concrete. Happy circumstance! Reinforced concrete, more than in all the ages, is the triumph of geometry; it is the calculation suggesting exact resistances for diverse stresses. A plastic sentiment and the spirit of economy are combined in it.

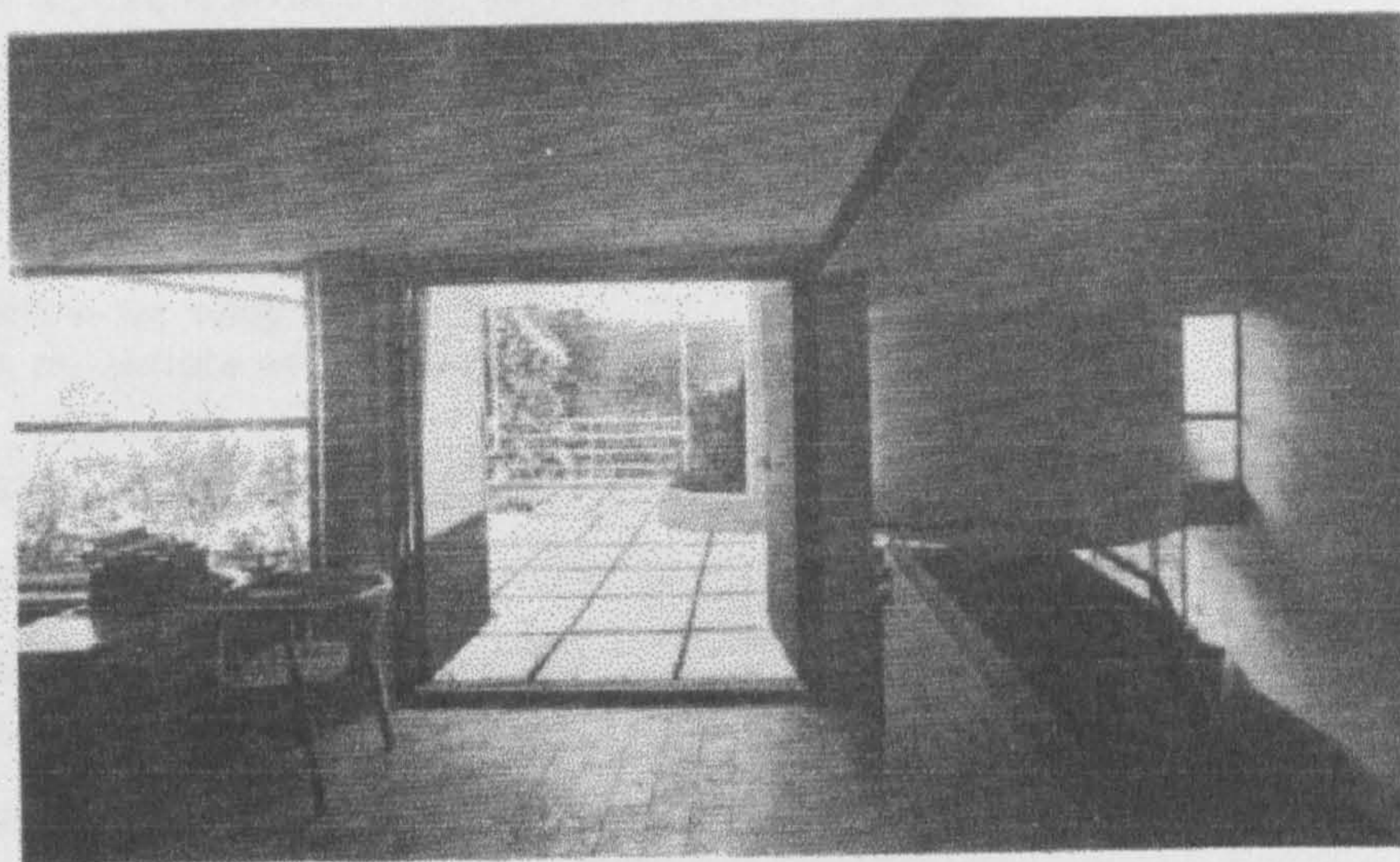
Now, the palace: we think we have been able to put it into the house, the spirit of the palace in the house, to truly evoke nobility in our work.¹²⁸

The Villa Stein must have been completed just about when *Une Maison* went to press: the photographs included here show the interior before the client furnished it and with Le Corbusier's car in the garage, so they probably date from September 1928¹²⁹. The original *Une Maison* lecture [November 1927] probably provided the first opportunity to display this house; certainly it was included then¹³⁰, but as the building work was not finished until March 1928¹³¹, only drawings could have been presented at this stage. In the *Une Maison* presentation, seven pictures accompanied by a running commentary, the underlying Purist grammar is assumed without elaboration, and the house is presented as the pure descendant of the primitive hut; like that first shelter, it is shaped by the human 'need' for



L. C. et P. J.

On entre sous la maison.



L. C. et P. J.

De la bibliothèque on passe sur le toit-jardin.

Boulogne-sur-Seine.

Une Maison - Un Palais p63
Maison Cook

mathematical harmonies. Here the 'true' solution is a 'crystalline' cubic form, endlessly resonant in the harmonious conjunction of its many underlying geometries and the shifting needs it serves:

We drew heavily on the past, because the past had proved to us that in conditions of clarity and of lasting equilibrium, the house was type, and that when type was pure it possessed an architectural potential, genuine architectural means; it could be raised to the nobility of the palace. There, perhaps, is the source of the modern spirit: achieving dignity by truth.[picture]

Truth is stark and cutting. From the constraints of contingent forces, freedom flowers. The pure solution [2 pictures] concentrated by constraints appears like a crystal. The rules of the game become apparent, the game is won. And [picture] one grasps that this box, smooth and taut, flexes under the pressure of multiple intentions; there we find the infinitely perceptible; [picture] sated, yet we will discover new intentions. And the architectural work participating in the site which surrounds it has never uttered its last word.[picture]

My lecture is ended; I can say: *the house is a palace*. [picture]

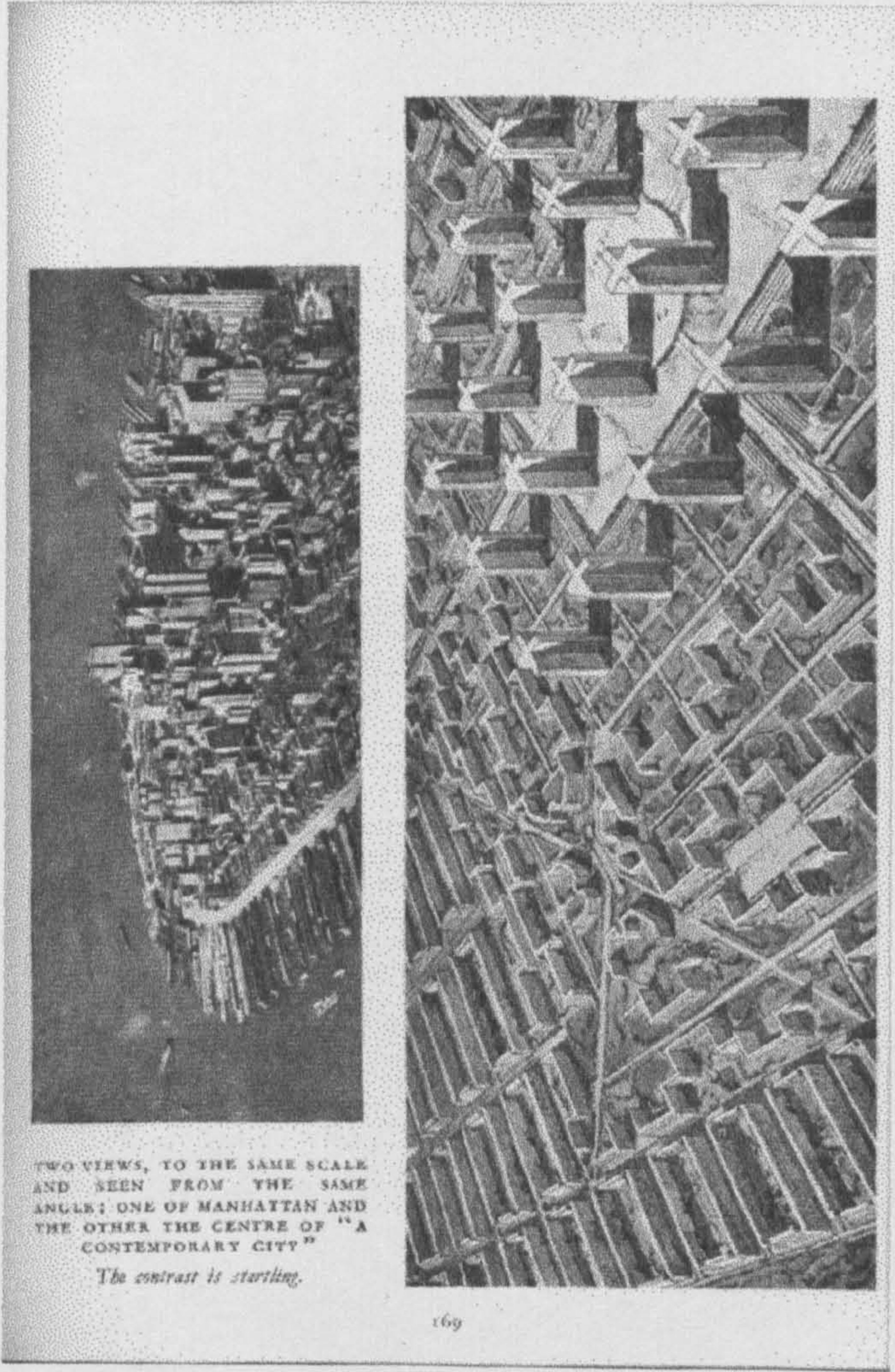
As with the preceding Citröhan houses, this house is declared 'a palace', and in the last sentence quoted above, the introduction to part II of the book, the presentation of Le Corbusier's Palais des Nations project, begins:

My lecture is ended; I can say: *the house is a palace*.

But taking into consideration the confusion which encumbers the spirit in a ghastly misunderstanding [I dream of the palace-palace], I must repeat again: *And the palace is a house*. It remains for me to demonstrate this. The palace at Geneva, of which I am going to speak, is the house of Nations, the house of the administration of Nations. It is an organism, it is a mechanism with precise ends. It is a machine for living in.

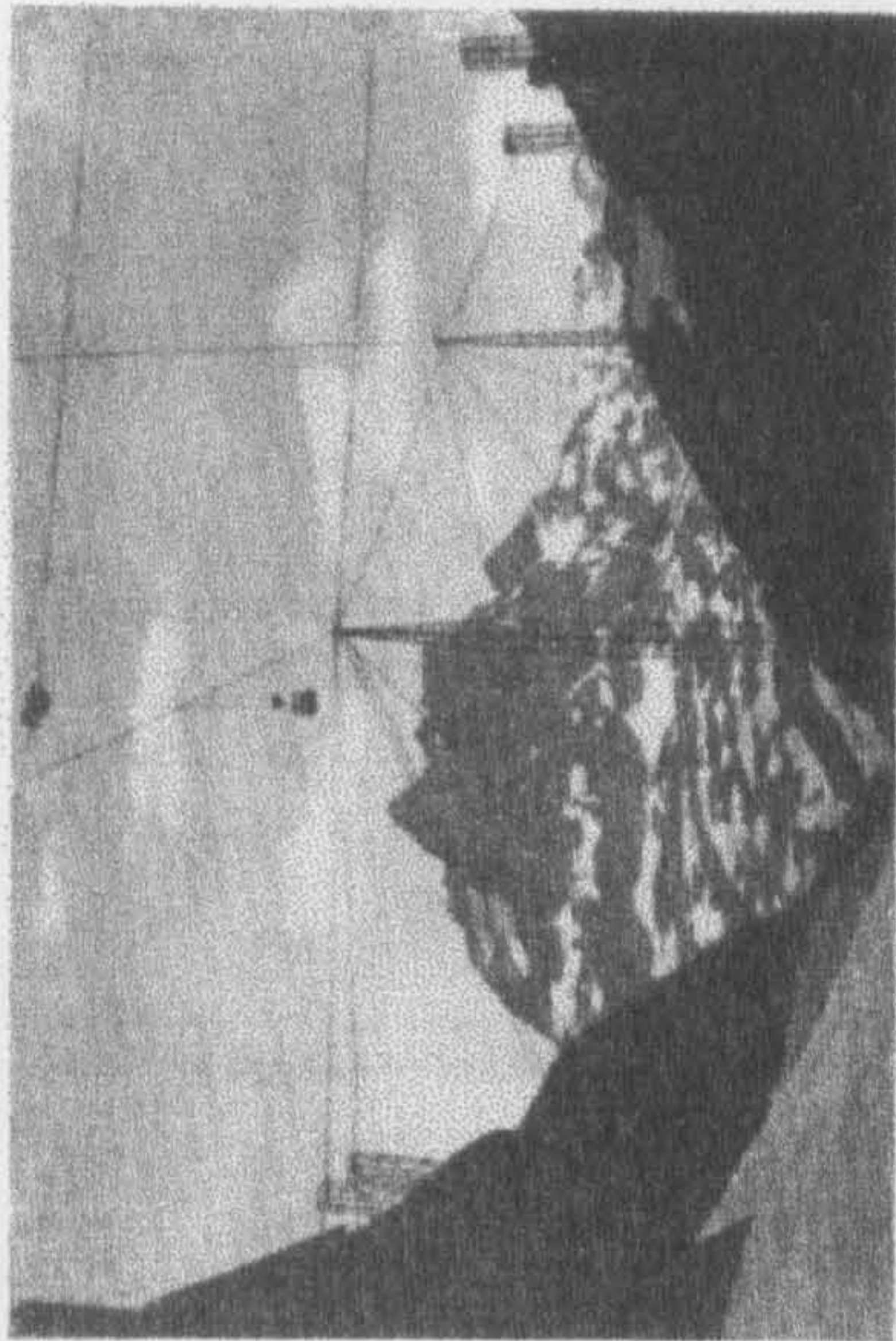
So my lecture will continue.....

As Kenneth Frampton observed¹³², and as Le Corbusier makes clear here, the house-palace couplet is two-way, each construct informing the other, alternating readings of a single organism. The introduction to the Palace of Nations section continues for several pages, and consists of a reminder of modern circumstances, the Corbusian assertion of the necessity for renewal, and a brief reiteration of the Corbusian definition of architecture. Our technical ability to achieve the new city is illustrated by the Barberine Barrage project, subject of a whole chapter in *Urbanisme*, and Le Corbusier reminds us of the scale of our urban problems and of his own previous proposals for their solution by picturing New York and then his *Contemporary City* and *Plan Voisin*. This is the same juxtaposition found in *Urbanisme* three years earlier[Fig. 16]¹³³:

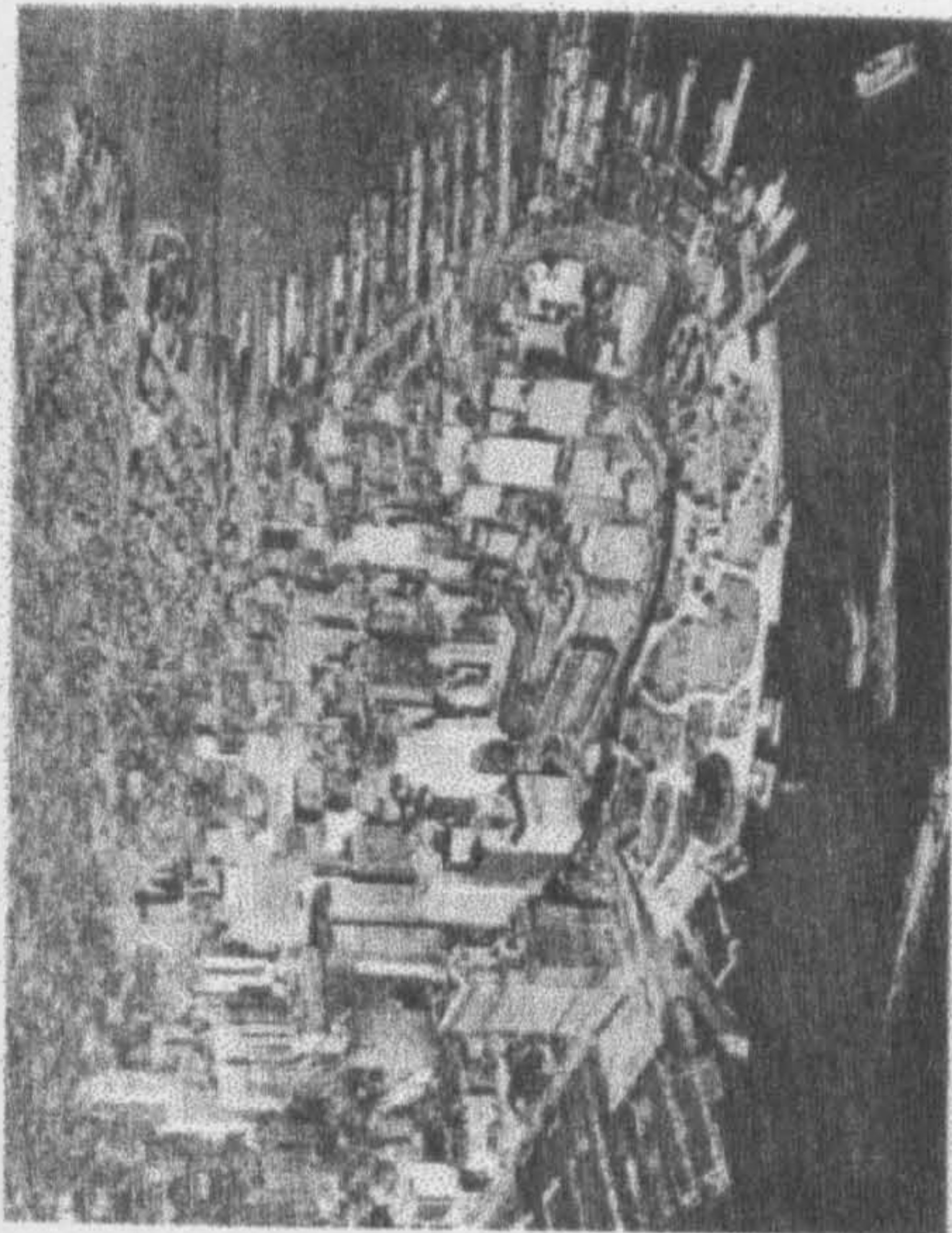


Above:
Urbanisme p169
New York & the Ville Contemporaine
Right:
Une Maison - Un Palais p81
The Barberine Barrage & New York

UNE MAISON - UN PALAIS



Barrage de Barberine



New York.

figure 16

...Let me promote the following aspects of the gigantic city: coldly it discloses to us the results of calculation established by statistics; it is an imminent reality. [...] The cities disintegrate and in forcibly swallowing the new organs of the modern life, their deaths are hastened ... A new frame is necessary for our initiatives. Only a creative synthesis will unite the functions of serving with those of delighting: *the house is a palace*. And by the urgency of the principle of unity, *the palace will be a house*.¹³⁴

The *Thèse* concludes with a definition of architecture which at once returns us to the opening premise of the book, and to Le Corbusier's words in *Vers Une Architecture* six years before¹³⁵: he defines the joys of architecture as follows:

These joys are in the skilful, correct and magnificent play of forms in light. They are in the relation of cause and effect which discovers the intention, which unveils the game of the spirit, which shows the rules of the game without ambiguity: in this they are *simple*, apparent, like a hard and shining crystal locking in compressed forces. They are there in a measure which determines an attitude of dignity.

We are not at a carnival where upstarts romp. Clear intentions and pure thought are demanded of us.

Are not this clarity and this purity the sign of modern times? And are they not also the very sign of that new institution which, in Geneva, must respond to the hope of new societies?¹³⁶

The *Précisions* Version

The text of the lecture given in Buenos Aires in the Autumn of 1929 and reproduced in *Précisions* in 1930, is a very abbreviated version of the original 1927 piece; Le Corbusier apparently felt that he had already explained himself at length in this area, as he said

Last year I wrote a whole book on this subject: A House, a Palace. I subtitled it "in search of a unified theory of architecture".

I went into a lot of detail to explain myself. Nevertheless I shall again go through the technical aspects of our project for you. You will find the elements of what it is useful to emphasise here.¹³⁷

In the *Précisions* lecture, this opening remark is followed by a brief definition of architecture, the essential Corbusian view first expressed in *Vers une Architecture* and the *L'Esprit Nouveau* articles from which it derived, now emphasising the geometrical basis of visual poetics:

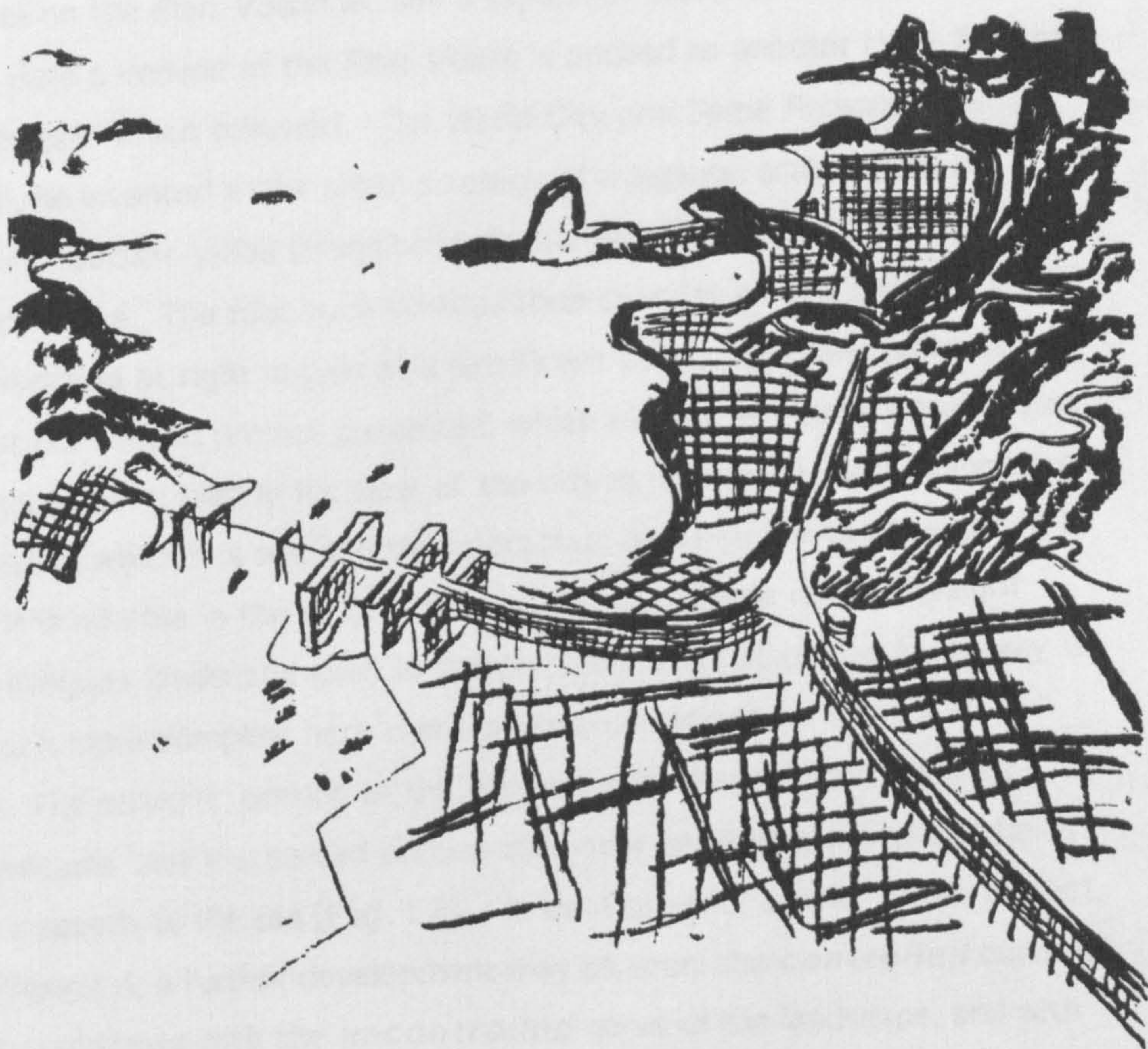
Architecture is a series of successive events going from an analysis to a synthesis, events that the spirit tries to transmute by the creation of relations so precise and so overwhelming that deep physiological sensations result from them, that a real spiritual delectation is felt at reading the solution, that a perception of harmony comes to us from the clear-cut mathematical quality uniting each element of the work to the others and the whole to that other entity which is the environment, the site.

It is then that everything that serves, everything that is useful is transcended. An overwhelming event: creation. A phenomenon of poetry and wisdom that is called beauty.¹³⁸

The sentences which follow, sprinkled with etceteras, seem to indicate Le Corbusier's feeling that his definition of the term *palace* with its functional-poetic basis has now become axiomatic; here this foundation is used to tackle the next mountain; his focus of interest has shifted from the problem of the public building to town planning:

And, from the moment that we have based the notion of *Palace* on indispensable functional elements - on utility - and have claimed to tend toward the sublime as a consequence of a high intention, we feel, we architects and planners, empowered to design the city. The city is a whole. A city must be beautiful because a high intention etc., raises above the brutal satisfaction of functions elements that...etc.¹³⁹

As we know, his interest in town planning may be traced as far back as 1910 when he was still in La Chaux de Fonds, and he publicised the ideas in his 'City for Three Million Inhabitants' [1922], and the 'Plan Voisin' [1925]



Precisions p243
Urban project for Rio

throughout the 1920's. A lecture is devoted to each of these projects in the *Precisions* collection. But by 1930 he had tackled the specific problems of a number of sizeable buildings, both public and private, and with the Palace of Nations competition and the Mundanæum project of 1929, his ideas about the context of public buildings and their arrangement as foci in the constitution of significant public spaces in a city became much more developed. In his South American lecture on the *Plan Voisin* we see a significant advance in his thinking on town planning. Here a version of the *Plan Voisin* is applied to another city - Buenos Aires. In the lecture which followed, '*The World City and Some Perhaps Untimely Considerations*', he invented a new urban strategy of a gigantic scale: a kind of linear city of *immeubles-villas* strung beneath immense highways threaded through the landscape. The first such configuration consists of two straight, aerial highways intersecting at right angles at a significant point, the pre-existing city of Sao Paulo. But the second project presented, which was for Rio, closely anticipates the first Algiers project: clearly his view of the city is now much more responsive to the landscape in which it is set, and the interaction between the two has gained in importance. It is notable in the project for Rio that the simple rule of straight roads versus irregular landscape used in the previous urban plans has given way to something much more complex: here there are two conditions for the linear highway-city. The straight portion of the highway cuts through, and contrasts with, the mountains, and the curved portion sails over an orthogonal grid of fields or streets as it speeds to the sea [Fig. 17]. In Le Corbusier's next urban project, the *Algiers Project A*, a further development may be seen: the *controlled* curve of the linear city contrasts with the *uncontrolled* curve of the landscape, and with the straight line of another highway that soars over it [Fig. 18].

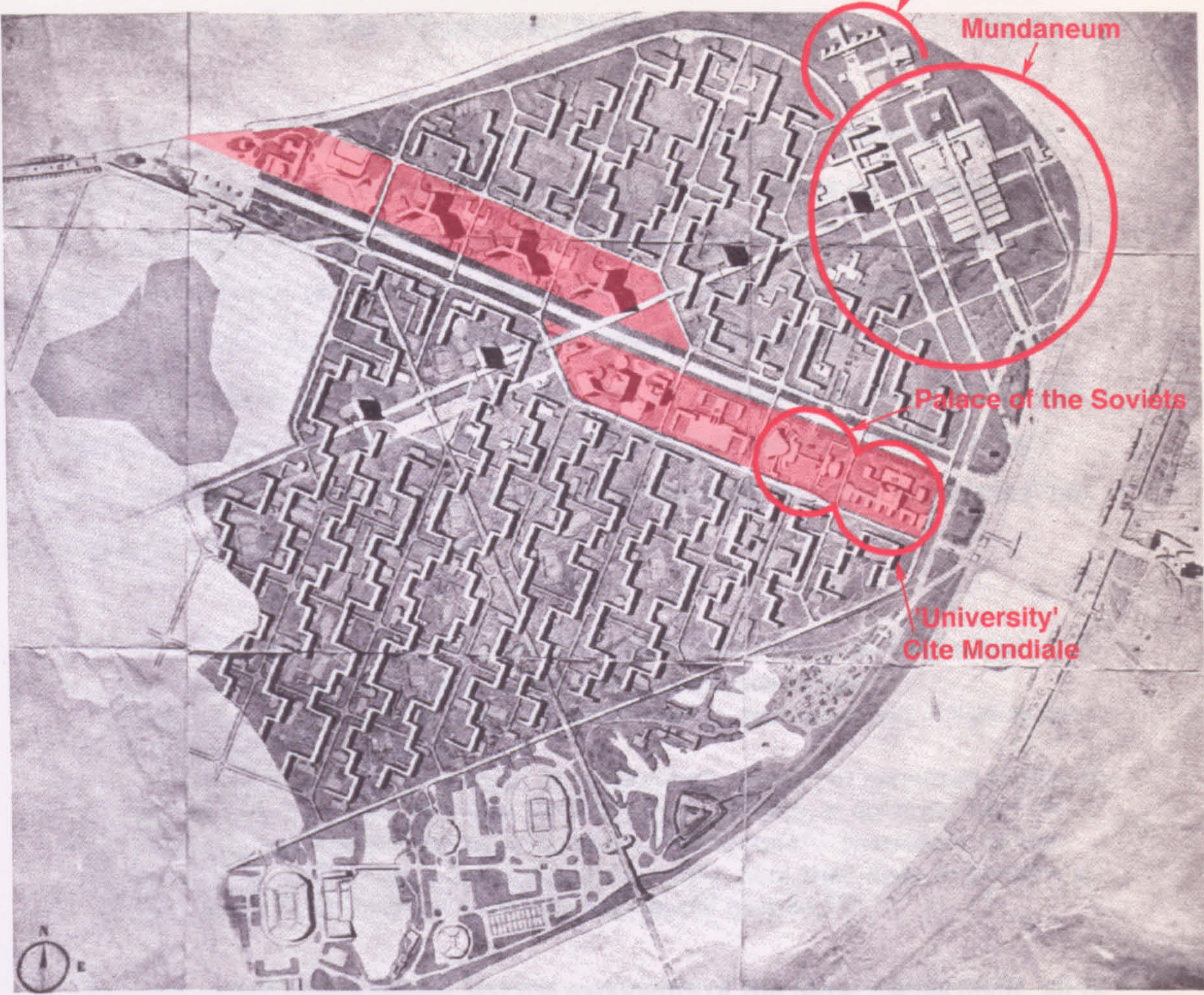
To investigate these schemes any further is outside the scope of this project, but an examination of Corbusian town planning schemes of the 1930s reveals that a number of them incorporate groups of forms that are clearly public buildings in deliberately configured public spaces, based on the Palais des Nations, Centrosoyuz, the Palais des Soviets, and the Mundaneum. The Anvers project of 1933 is a case in point [Fig. 19]. Here, a succession of public monuments which recall Le Corbusier's first palaces flank the main east-west route on the south-east side, balanced by a business district consisting of three, y-shaped skyscrapers to the north-east. A separate area to the north is given over to a museums complex based on the Mundaneum. Drawings published in the *Oeuvre Complète*¹⁴⁰ reveal the



Vue générale du projet General view of the project Gesamtansicht

Oeuvre Complete 1910-1960, p300
Algiers Project A

underlying multi-level circulation matrix that links these public buildings to the rhythmically distributed *redents* housing round about; the whole city is overlaid on a parkland which meanders through the pilotis of Corbusian modernism. Notice the different ways in which public buildings and housing interact with the circulation routes: the public buildings are either framed by roads which form inviolate, green islands, or highways pass beneath them axially. By contrast, the *redents* blocks intersect with the circulation routes in a non-hierarchical fashion: here there are regular and undifferentiated encounters with the traffic passing below. It is clear that by the early 1930s, Le Corbusier had located the house-palace in his utopian modern city¹⁴¹.



Urbanisation de la rive gauche de l'Escaut à Anvers Town-planning for the left bank of the Scheldt at Antwerp Überbauung des linksseitigen Ufers der Schelde in Antwerpen

Oeuvre Complete 1910-1960, p304

Anvers project, 1933
Incorporation of Palais
elements into urban plan

In Defense of Architecture: Le Corbusier & the Constructivist Critique

Le Corbusier referred obliquely to other Modernist views of architecture in the *thèse* of *Une Maison*. Two of these references were brief asides concerning ‘the Young’ [*les jeunes*], the third was specifically concerned with Constructivism. The audiences for the first *Une Maison* lectures were students in German-speaking Swiss cities such as Zurich, Basel and Berne, where functionalist tendencies held sway among the local avant-garde; it follows that Le Corbusier would acknowledge the functional position as compared to his own. His first mention of ‘the Young’ carries a qualified compliment: they are fellow soldiers against ‘the Academies’ but their reaction ‘denies’ architecture:

The moment of architecture IS NO MORE in the dying, stinking output, the carrion of the *Academies*, blind curators of pre-machine epochs. Architecture is the result of the spirit of the age: it goes on ahead, following the law which controls the world.

And this normal conception of architecture: one is not permitted to disturb it at this moment by the young, those who come, and who, in open war with the Academy, wrestle with that which is called “architecture”. Nauseated by the lies of Schools, driven by a fierce desire for purity, here they deny that which at the bottom of their hearts is their only and special passion.¹⁴²

The reference to the Functionalists and the exponents of the *Neue Sachlichkeit*, all of whom were uneasy with Le Corbusier’s poeticism, is rather indirect, as is the second mention of ‘les jeunes’ a few pages later, which picks up the thread of the previous argument:

....the great architectural work, participant in the site which surrounds it, has never uttered its last word, Because the light changes and the seasons pass, and the young do not see what the old do, for the old have a soul which predisposes them differently to the young to things offered to their passion.¹⁴³

The implication is one of maturity versus immaturity: Le Corbusier appropriates the role of mature savant¹⁴⁴; ‘les jeunes’, he implies, will eventually concede his point of view.

His remarks about Constructivism, which arise from a discussion of the effects of the Great War on artistic and architectural production, are as follows:

When, after the war, the new generation understood the event of the machine, a prescience of tomorrow illuminated their hearts: the way appeared, leading us to a conclusion. As I said, a great emotion seized us. And ten years later, this explosive form of the verdict was declared a spiritual movement: *Constructivism*, a term for the less optimistic.

This is the joyous event of the machine: this is the joyous acquiescence of the young who come and *who go*.

Then - a bubbling over of joy, a voracious appetite and the digestion of a serpent; a style becomes established: Constructivism. Where does the meaning of this vague word begin, where does it end? It is vague because it contains too much. It defines neither an aesthetic, nor a category of human production. It is, quite honestly, a word which belongs to the psychology of history, a generating word; wishing to indicate an optimism.¹⁴⁵

This critical glance at Constructivism, along with the passages quoted earlier, are the main indicators in *Une Maison* of a major disagreement between Le Corbusier and the functionalist representatives of the Modern Movement in the Germanic countries and in Soviet Russia. Links between Le Corbusier and those other avant-garde theorists go back to around 1920, when the ideas which constitute Constructivism began to take shape; originally an art movement, the first Constructivist manifesto was composed by Alexei Gan in 1922, but it was followed by a number of other, varied, defining statements by a number of theorists: both the artistic and the architectural goals of the movement are difficult to pin down. Commentators on the movement have noted the vagueness of the term, as did Le Corbusier¹⁴⁶.

Karel Teige's thinking on Constructivism evolved over a number of years: his first usage of the term, more as a description than as a label, was in 1923, and in 1924 he produced a manifesto of 'Poeticism'. In this manifesto, *Constructivism* is viewed as 'a methodology of all productive work' and *Poeticism* is its opposite, a 'necessary aesthetic orientation'. This division corresponds to Teige's activities in two spheres: that of politics on the one hand, and of art and poetry on the other. Unlike Le Corbusier, Teige did not achieve a synthesis of his activities, but deliberately maintained a rigid separation between the two. This purposeful separation is exhibited in his 1924 scheme for satisfying the hunger for art of the inhabitants of a 'scientific', Constructivist town: special, separate areas, "magic cities of the new poetry" were to be added.¹⁴⁷ In 1925, Teige produced a second manifesto, this time entitled '*Constructivism and the liquidation of "art"*'¹⁴⁸. This thesis recalls Le Corbusier's vision of the type-object, here

the “elimination of art” became understandable: the new beauty made no distinction between the beauty of the work of a paver, whose perfect and harmonious forms were the outcome of a specific functionality, and a modern poem, representative of modern poetics.....Functionality, the purpose of the form achieved through the mathematical perfection of the machine, is the new beauty, the new poetry.¹⁴⁹

By 1928¹⁵⁰, Teige, increasingly interested in developments in Soviet Russia, saw Constructivism more as a tool for Socialist ends, serving the needs of the masses, and providing a critical commentary on contemporary life at the same time. As for Architecture, he saw its purpose as the provision of ‘a socially committed science devoted to the requirements of housing and town planning’¹⁵¹. But the flowering of Constructivist architecture in Russia was brief: between 1925 and 1932 only a handful of Constructivist designs were realised. The end of Constructivism in Russia is marked by the outcome of the Palace of the Soviets competition in 1932: the winners were the Academic and historicist architects Zoltovsky, Iofan and Hamilton. By the early 1930’s, Teige had stopped using the term ‘Constructivism’ in the context of architecture and substituted ‘Functionalism’. At that time he developed an interest in Surrealism and after 1935 himself became a prolific exponent of the Surrealist collage¹⁵².

L’Esprit Nouveau [1920-1925] reached Eastern European Avant-garde circles, and so did *Vers Une Architecture* when it appeared in 1923. Moisei Ginsberg’s book *Style and Epoch*, published in Russian in 1924¹⁵³ draws heavily on *Vers Une Architecture* as a comparison of the two shows¹⁵⁴, although its emphasis is socialist rather than ‘bourgeois’: where Le Corbusier illustrates the liner, Ginsberg presents the battleship; where Le Corbusier exalts the automobile, Ginsberg prefers the locomotive. The most significant difference between the texts is this: Ginsberg, himself trained both as engineer and as architect, saw no difference between the two disciplines, and regarded engineering as subsuming architecture. Le Corbusier, on the other hand, made a distinction between ‘The Engineer’s Aesthetic and Architecture’¹⁵⁵, and as Kenneth Frampton put it

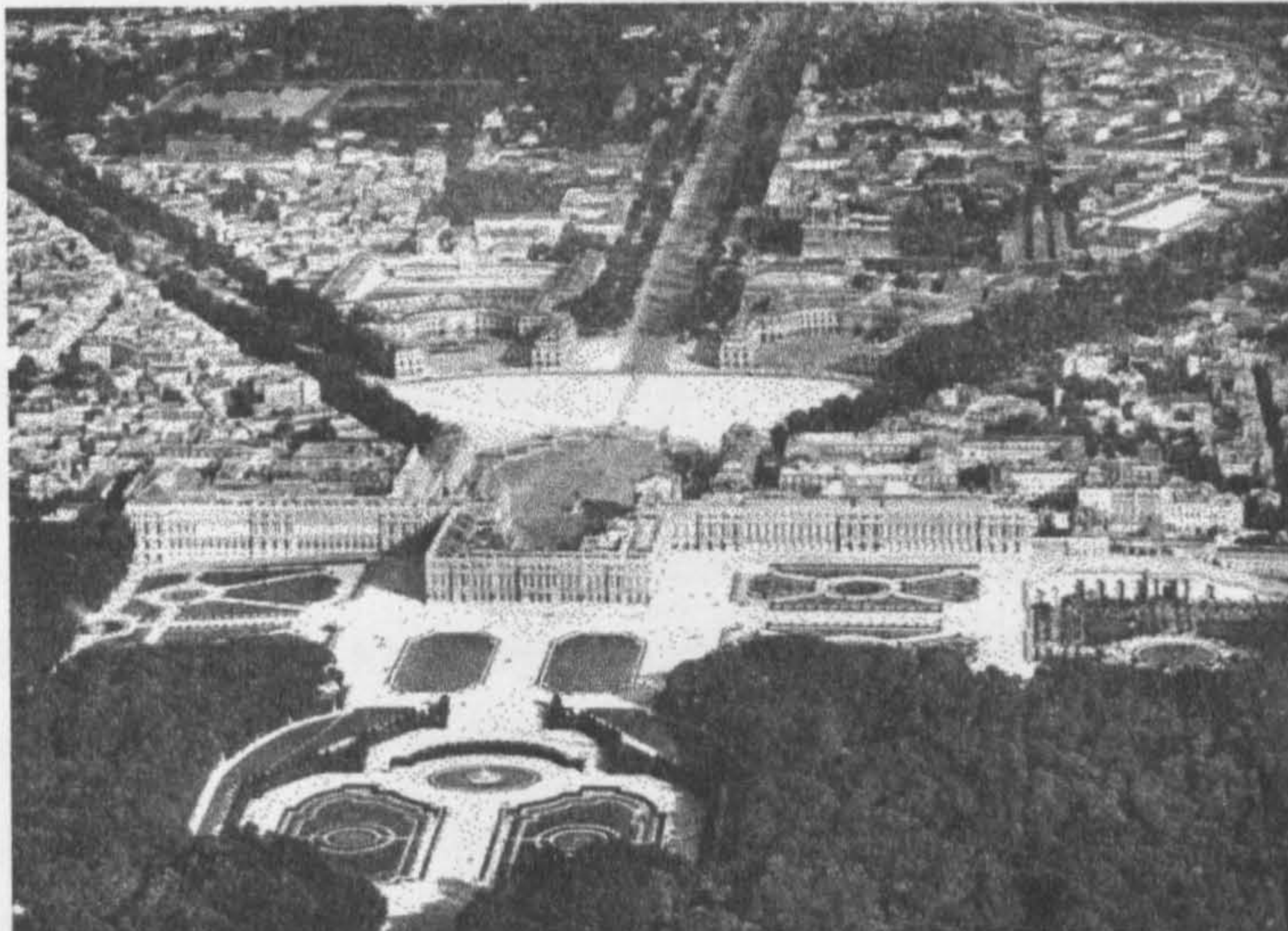
...while championing the scientific industrial world, [Le Corbusier] still posits the necessary presence of a poetic “will-to-form”, which would on occasion be capable of raising the calculated elegance of engineering form to a higher, Neoplatonic plane.¹⁵⁶

The growing disagreement between Le Corbusier and the Functionalists is rooted in this difference. The split had hardened by the time of the League of Nations

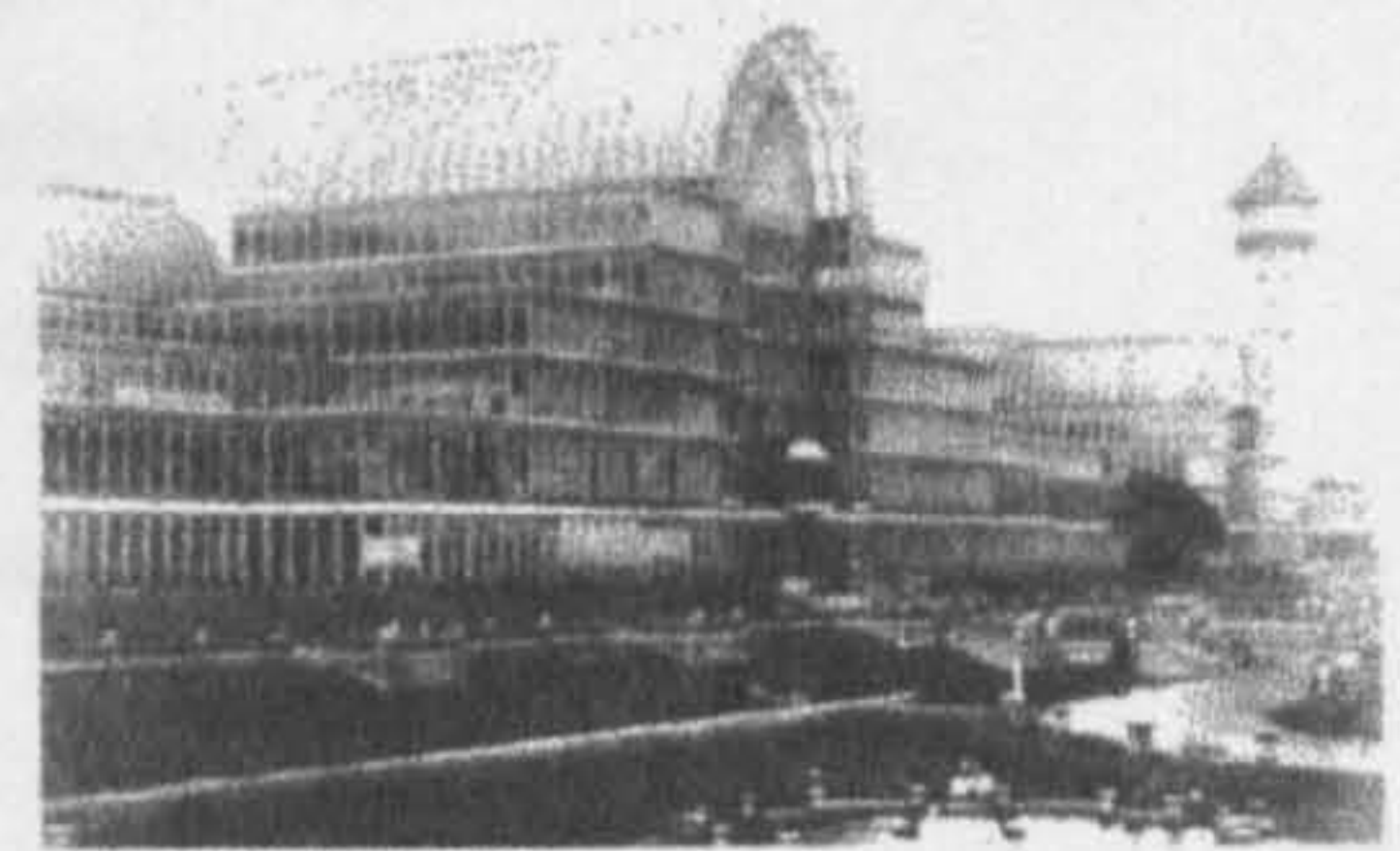
competition in 1927; and as Frampton observed, a comparative examination of the projects by Le Corbusier and Hannes Meyer for the Palais des Nations clearly displays these divisions of Modernism.

Frampton's succinct definition of this confrontation of the two most significant modern projects in the competition as 'the humanist v. the utilitarian ideal' has not been bettered¹⁵⁷. As he pointed out, although both use reinforced concrete, and thus have superficial structural similarities, the Meyer and Le Corbusier projects demonstrate fundamentally different approaches which reflect their authors' divergent thinking. Where Meyer ignored the character of the site, concentrating on orienting his buildings for efficient lighting and traffic circulation, Le Corbusier strove for a 'synthesis' of buildings and nature. When the spatial arrangements within each building are considered, it is clear that Meyer's irregular plan arises directly from an agglomeration of the required areas in the brief, while Le Corbusier organises those required spaces hierarchically to achieve a formal sequence which he considers appropriate to the special function of the League of Nations. Where Le Corbusier is willing to modify the basic, repetitive structural grid implied by the choice of reinforced concrete to accommodate spaces of greater cultural significance, Meyer is not, and his egalitarian columns are dispersed uniformly throughout, yielding only where a greater functional necessity requires it: the grand salle must be an unobstructed, multi-level space, and its roof is therefore formed by an ovoid dome rather than a slab on a field of columns¹⁵⁸. Le Corbusier developed two significant facades on his ensemble, which relate the buildings to the entry and garden aspects of the site. In Meyer's scheme, the facades have no meaning other than as indicators of the limits of the internal spaces; where these occur, a skin which admits light and protects from weather, is installed. Frampton identifies the Crystal Palace as the prototype for Meyer's palace, the 'industrialised reiteration of a structural invention with no content other than itself'. He recognises in Le Corbusier's project 'a Renaissance palace - the form is an expression of a hierarchy of values eventually distinguishing the valued from the less valued'; in this context he noted that Meyer's palace was faced in 'eternit' and Le Corbusier's in polished granite [fig.20].

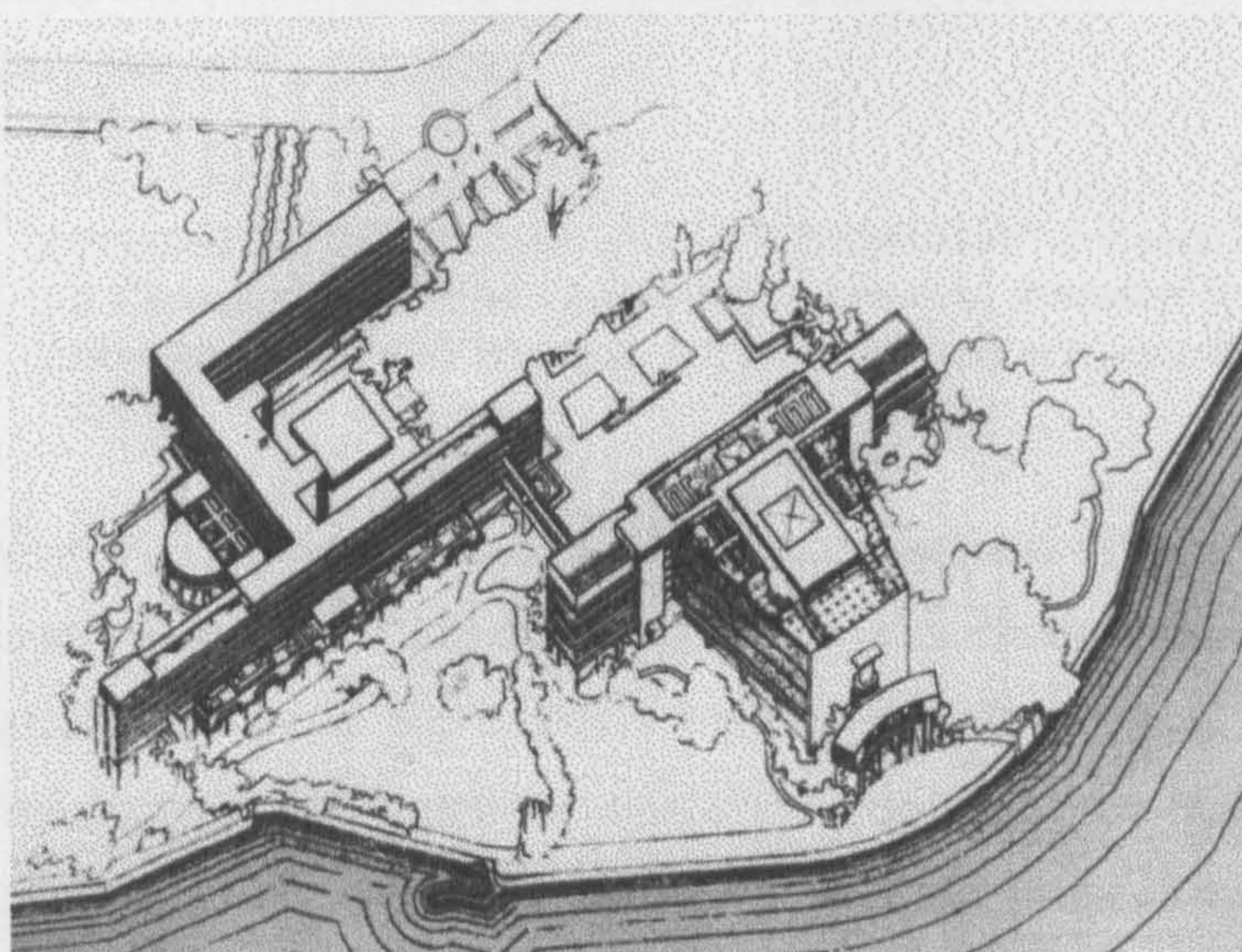
From Le Corbusier himself we learn that this difference of opinion surfaced at the very first CIAM conference in 1928:



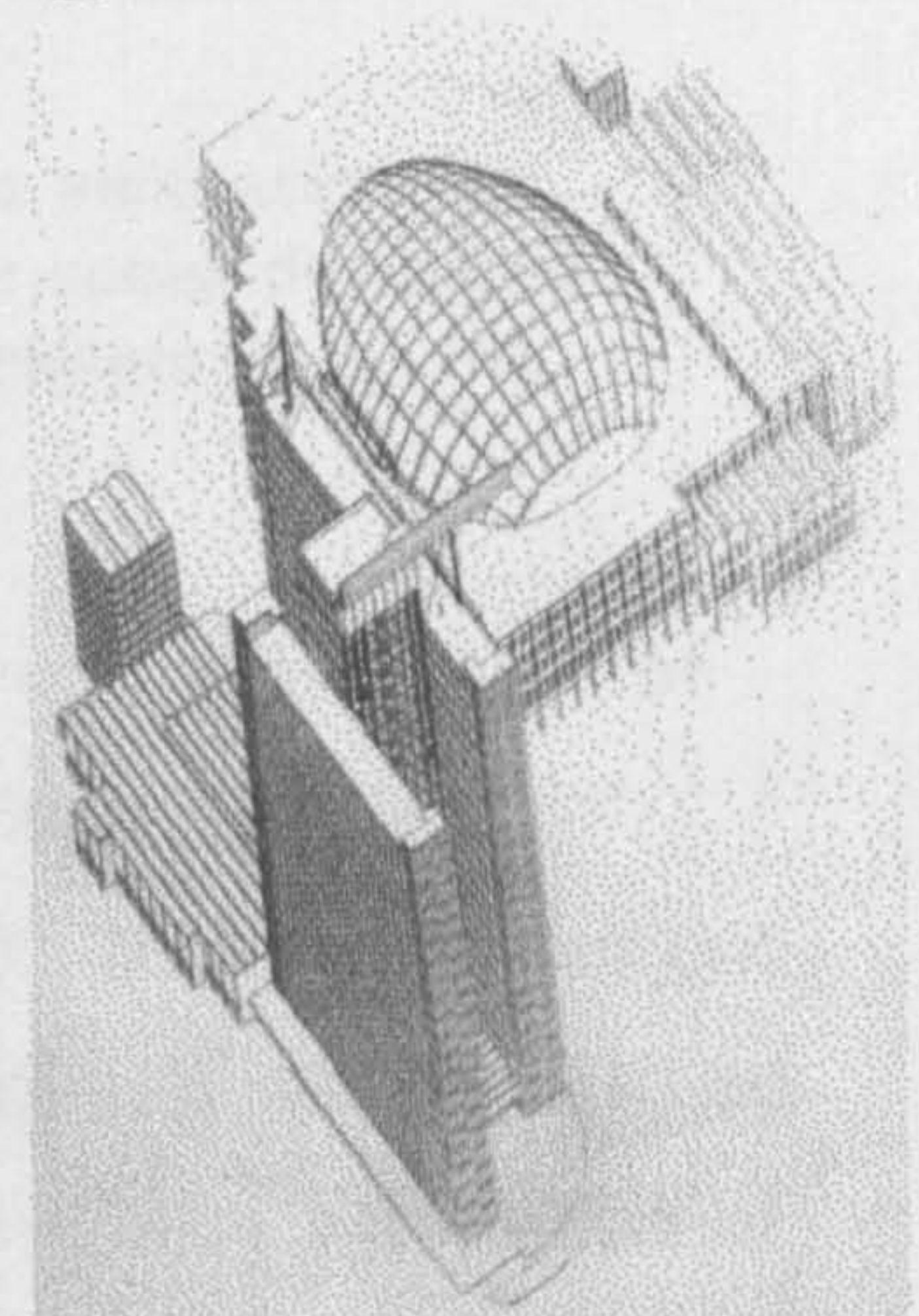
Left: Chateau de Versailles
Below: Crystal Palace, London



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Le Corbusier & Pierre Jeanneret



H. Meyer & H. Witwer

The Humanist v. the Utilitarian Ideal

The foundation of CIAM, the International Congress of Modern Architecture, at La Sarraz, in 1928, had been the occasion of a harsh battle. The German delegates were on the offensive, strong supporters of innumerable so-called modern houses. I led a combat in which what was at stake was a coherent line of force, a line which would lead the congress towards useful tasks. They blocked the way, calling us “poets, utopians”! And that was an insult! I spoke of “reason” and “objectivity”, but I wouldn’t accept definitions which left architecture under a shadow. Today the resolutions of the fourth congress [at Athens, 1933] make appeal to the eloquence of architectural splendour.¹⁵⁹

Although Modernist support for Le Corbusier’s campaign for his Palais des Nations project had been unanimous, with the exception of the Russians, who were not League members, and thus unconcerned with the débâcle of the competition; by 1928, the division between the functionalist and ‘humanist’ positions of the Moderns began to emerge into public view. An article by El Lissitzky, *Idoly i Idolopoklonniki* [Idols and Idolaters] was published in *Stroitel’naja Promyslennost*¹⁶⁰, in September 1929. The title recalls, no doubt deliberately, the chapter ‘Iconology, Iconolaters, Iconoclasts’ in *L’Art Decorative d’Aujourd’Hui*¹⁶¹. The subject of Lissitzky’s essay was Le Corbusier and according to Otakar Mácel¹⁶², Lissitzky

criticised his “Constructivist and Functionalist” colleagues admiration for Le Corbusier, which he considered excessive, stressed the social difference between Soviet and Western Architecture and still saw Architecture as the mother of the arts.

Lissitzky deplored Le Corbusier’s ‘individualism’ and accused him of being out of touch with the expectations of the masses. He touched on the *Palais des Nations* project, but it was Le Corbusier’s *Mundaneum* project [1929], that he marked out for criticism¹⁶³. He took issue with the existence of the ‘Sacrarium’ and he charged Le Corbusier with historicism in his use of the pyramidal form. The application of the golden section to the layout of the *Cité Mondiale* was also decried: Lissitzky considered it an appropriate device for ordering in two-dimensions, but ‘meaningless in three’¹⁶⁴. Le Corbusier must have known of the existence of this article: his project for the Centrosoyuz was published alongside Lissitzky’s article in the same issue of the journal. Besides, Lissitzky had visited the Villa Stein de Monzie with Le Corbusier and Pierre Jeanneret in 1928, and reported this visit unfavourably in his article; in addition, Le Corbusier had carried on a voluminous correspondence with many of his avant-garde colleagues, including Karel Teige¹⁶⁵ and Mosei Ginsberg in those years. At any rate, he did not respond publicly to this

critique.

Among the newspaper clippings included in *Une Maison* to demonstrate support for Le Corbusier's project is this piece by Teige:

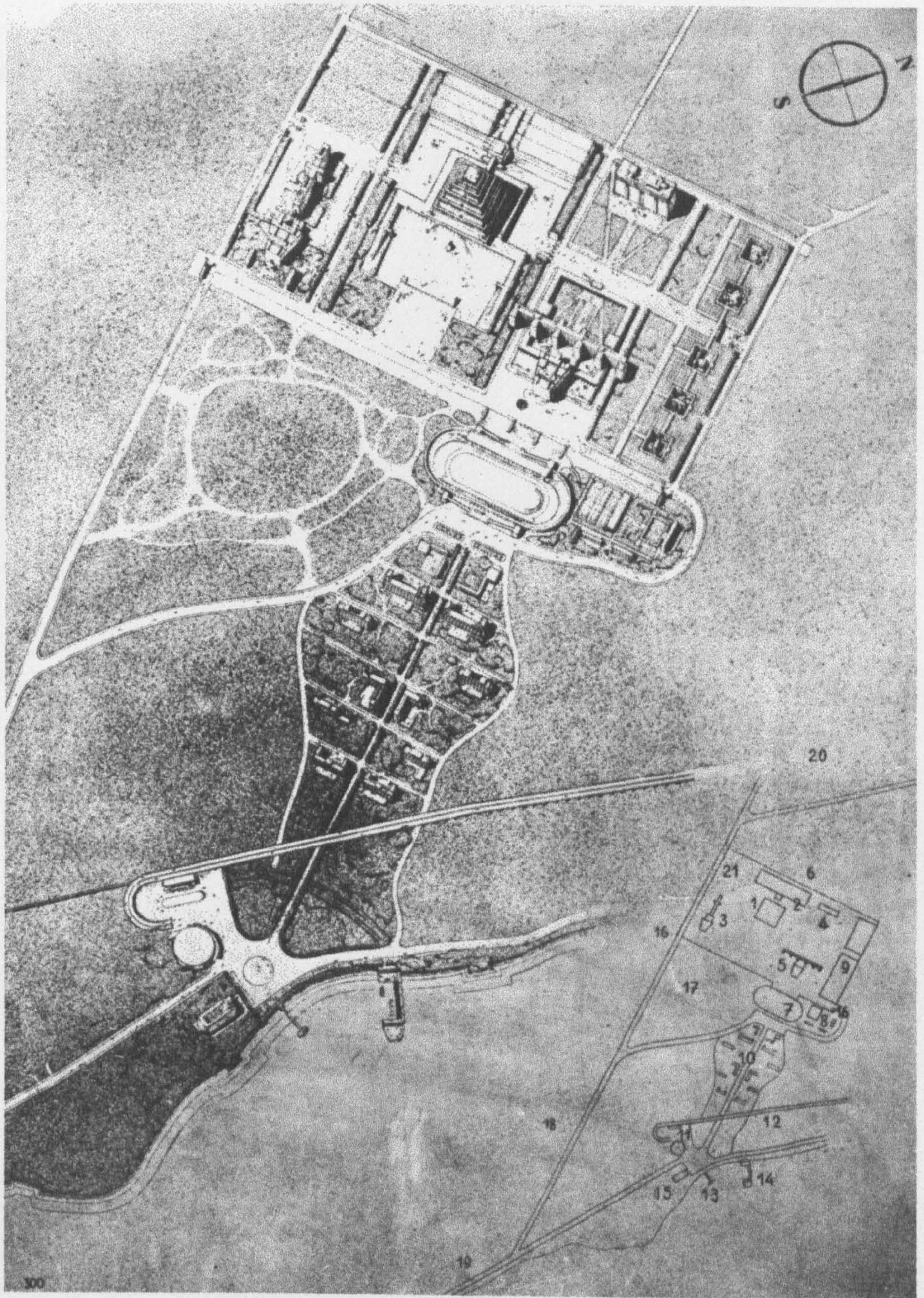
L'Europe Centrale (Prague, 5th November 1927):" ...This project, the only one representing the modern spirit, is due to Le Corbusier and Pierre Jeanneret: two Swiss architects based in Paris. It is clearly the most interesting entry of all, worthy of the proposed goal on all points, and of the reputation of its authors, Le Corbusier in particular, who may be considered as one of the inspirers of our modern architecture.

"...Let us suggest that the project of le Corbusier-Jeanneret win the votes of all disinterested professionals, of the associations of architects from all parts of the world, and even of the personnel of the League Secretariat.

"...Also the Czechoslovakian artistic milieu have judged it necessary to impress upon the representative of their country that all their sympathy, and that of the public, is with Le Corbusier, with this great architect who has previously exercised a marked influence on the development of Czechoslovak architecture. And it may be hoped that French opinion, which sees in Le Corbusier one of the most remarkable architects of the time, will have the courage to emphasise this. Then it will really be necessary for the League of Nations to decide in favour of the greatest worth."

But by April 1929, Teige had shifted his position, and joined the fray with a public attack on Le Corbusier which did elicit a response. This critique, 'Mundaneum', which bears some resemblance to that of Lissitzky¹⁶⁶, was published in *Stavba*¹⁶⁷. Teige's attack on the *Mundaneum* is relevant to this study of *Une Maison* and Le Corbusier's *Palais des Nations* project for the following reasons. Firstly, Le Corbusier's thinking extends directly from the *Palais des Nations* to the *Cité Mondiale*: his 'transposable hierarchy' extends from house to palace or temple, and ultimately, to the city. It is in *Une Maison* that the intellectual basis for the *Mundaneum* is to be found, and Teige pinpointed this underlying structure in his critique, and condemned it. Secondly, both the League of Nations, however it may have turned out in practice, and the Union of International Associations formed by Paul Otlet, have identical idealistic intentions; a utopian concern with the promotion of world peace and understanding. For Teige, the idealism of the programme in each case was delusory, and such programmes were false. Thirdly, the *Cité Mondiale*, in which the *Mundaneum* is located, includes the League of Nations - literally; in Le Corbusier's scheme his *Palais des Nations* is one of its organs¹⁶⁸. [Fig. 2 1]

Teige's polemic was published in April 1929, and Le Corbusier formulated his reply, *In Defense of Architecture*, around the end of May of the same year, when



Cite Mondiale

figure 21

he was travelling through Poland to Moscow. It is not clear to me whether his *Defense* was published in Stavba or elsewhere that year, but it appeared in French in L'Architecture d'Aujourd'hui in 1933. Teige responded to Le Corbusier's rebuttal in *Musaion* in 1931¹⁶⁹, and he continued to fan the flames of their disagreement up to the time of the Palace of the Soviets competition.

The Teige Polemic

In *Stavba* No.4 [1929], an extended presentation of the *Mundaneum* project, neutral in tone, is followed by a detailed and harsh critique, both of the programme, and of the architecture. Teige sees in the *Mundaneum* an application of the thesis expounded in *Une Maison* at its most extreme, and for him, the crux of the matter is what he terms 'the error of monumentality':

The error of Le Corbusier's proposal is the error of monumentality [a monumentality different from and less brutal than the German monumentality of the architecture of megalomania], the error of the "palace". It reveals the danger [exposed already in Le Corbusier's book *Une Maison-Un Palais*] of the definition that a palace is a house, a "machine for living in" which is endowed with a certain dignity and architectonic potential. Le Corbusier sins against harmony; having formulated such a clear and comprehensible notion as the "machine for living in," he depreciates it by adding vague attributions of dignity, harmony and architectonic potential, through which he can then embrace all æstheticism and academism [I mentioned in a review of *Une Maison, Un Palais* in *Stavba*, VII, 6,¹⁷⁰ that the slogan "house-palace" can lead to serious error, to the neglect of physical and concrete needs in favour of more or less fictional requirements]. In its obvious historicism and academism, the *Mundaneum* project shows the present non-viability of architecture thought of as art. It shows the failure of Le Corbusier's aesthetic and formalistic theories, which we, from the point of view of Constructivism, have always fought against: the theories of the Golden Section and of geometric proportion. In short, all those *a priori* aesthetic formulae which have formalistically been deduced from historical styles, in our times are unproven and unsupported.¹⁷¹

The 'error of monumentality' exhibited in the *Mundaneum/Cité Mondiale* projects occurred, Teige asserted, when Le Corbusier loaded his machine house with emotive - and 'unreal' - constructs such as 'dignity'. In Teige's view, this simply resulted in buildings of poor utility. For Teige, the *Mundaneum* was a case in point and he produced a detailed criticism of its problematic entrance at the apex of the pyramid, its spiral circulation and the lighting of the spiral galleries, which bore no relation to the compass points. In addition, he took issue with the dimly lit, and thus functionally defective, 'Sacrarium' beneath the spiral-pyramid museum and indeed with the very notion of a 'Sacrarium', deeming it not appropriate for a town of modern science:

This is not the place to outline in detail the errors in the ideological programme for the *Mundaneum*: To ask how a "Sacrarium" got into a town of Modern Science (could it just be that the idea of the pyramid led to the idea of a sanctuary?)...¹⁷²

Both Lissitzky and Teige were unhappy with the pyramidal form of the Mundaneum because of its historic and sacred associations, notably with the Meso-American sacrificial pyramid and Sargon's pyramid at Khorsabad. For Le Corbusier, the historic aspect is an essential part of the notion of architectural *type* as he understood it and his presentation of architectural progress and modernity often depended on allusions to the architectural past: in this system of cultural reference much of the poetic power of his architecture is to be found. For Teige, the constructs of the past were entirely 'moribund' and to promote them was reactionary. He saw the purpose of Modern architecture as a purely functional one: any dialogue with past architectural traditions was inadmissible:

...the only aim and scope of modern architecture is the scientific solution of exact tasks of rational construction. An artistic solution of a metaphysical, abstractly speculative task, by means of monumental composition is the wrong approach, as is shown by the Mundaneum project.¹⁷³

The Cité Mondiale layout was composed according to the Golden Section, and Le Corbusier published drawings demonstrating this. Teige condemned this usage as 'Antiquarianist' and anti-functional. To support his position, he reproduced a passage from Hannes Meyer's manifesto *Bauen* [1928]

Hannes Meyer wrote:

all things in this world are a product of the formula:
(function times economics)

so none of these things are works of art:

all art is composition and hence unsuited to a particular end.

all life is function and therefore not artistic.

the idea of the "composition of a dock" is enough to make a cat laugh!

but how is a town plan designed? or a plan of a dwelling?
composition or function? art or life?????174

Teige's representation of Le Corbusier's dualist architectural thesis is this:

According to Le Corbusier, architecture as art believes that its mission begins where construction ends, namely with the rational solution and products of the engineer. It aspires to eternity, while the engineer responds to actuality [...] according to this argument, to be come dignified as architecture, there must be added some “plus” to the rational solution. Now this “plus” can either help purposefulness and strengthen function, in which case it is simply purpose and function and is not a “plus”, or hinder it, in which case it is of course a minus. Further, it can neither help nor hinder, in which case it is superfluous and unnecessary, and that is a minus as well. The criterion of purposefulness: [...] *instead of monuments, architecture creates instruments.* If aesthetics intervene in the production of utilitarian results, there follows imperfection in architectural creation, and this is its mark.¹⁷⁵

In *Une Maison*, Le Corbusier advocates a return to the primitive hut in order to avoid the errors of rhetoric and pomposity committed by the ‘Academies’, and to build appropriately in Modern times. In the conclusion to the *Mundaneum* article, Teige accuses Le Corbusier of falling into the very same errors that he himself had previously condemned. The solution would be to return to the machine house from the dangerous notion of the ‘house-palace’, and to forge a new, ‘scientific’ way:

The Mundaneum illustrates the fiasco of aesthetic theories and traditional prejudices, of all the dangers of the slogan “house-palace” and thus of utilitarian architecture with an artistic “addition” or “dominant”. From here it is possible to go all the way to full academism and classicism, or on the other hand, to return to the solid reality of the starting point demonstrated so precisely by the motto, the “house as a machine for living” and from there, once again to work towards a scientific, technical, industrial architecture. Between these two poles, there is space only for half-baked projects and compromised solutions.¹⁷⁶

In Defense of Architecture

Le Corbusier's rebuttal is at least twice as long as Teige's *Mundaneum* critique¹⁷⁷. All of Teige's accusations are answered, and he moves from a general, critical discussion of architecture as he and the Functionalists perceived it, to the specific dispute concerning the Mundaneum.

Unlike Teige, who penned a remote, dispassionate commentary, he is personal and conversational, a difference in style that mirrors the difference in opinion. The *Defense* begins with a critical acknowledgement of this difference:

Today, in the avant-garde of the *neue Sachlichkeit*¹⁷⁸, two words have been killed: *Baukunst* [architecture] and *Kunst* [art]. We have replaced those by *Bauen* [construction] and by *Leben* [life]. Two notions which have been refined by the effect of cultures [...] there is in this a loss of clarity.¹⁷⁹

Le Corbusier accepts the Functionalist intention to begin again and agrees that he too had pursued a similar strategy:

In 1921, in *L'Esprit Nouveau*, we too had gone back to zero in order to try to see things clearly. But if we did go back to zero, it was with the intent not to stay there, but only in order to reestablish our footing.¹⁸⁰

Teige, he asserts, is 'taking up anti-subjectivity', which is dismissed as a 'game', and as a denial of Teige's own poetic inclinations. He argues that words should retain their old meanings so that dialogue may be possible:

If one deprives words of their meaning, no further dialogue is possible, and confusion results. In your case, it is dilettantism of a new romanticism, a romanticism of the machine. With the others [the practitioners], it is a police measure [...] as for me, I who claim fiercely to preserve my freedom in its entirety, my artistic or creative spirit, I intend to remain in my anarchy [in respect to your police measures] and to pursue day after day a passionate quest: the quest for harmony.

His point is that aesthetics are a necessity, not an indulgence, and that the aesthetic function exerts at least as much influence on our lives as any functional tool which contributes to 'progress'; and that progress is a path and not a destination:

Let me tell you then, without further delay, that in my opinion, aesthetics are a fundamental human function.

I would add that this function surpasses, in its effect on the governing of our existences, all those benefits which have been brought by progress. [...] Essentially, progress is not an end but a means. [...] Every tool of progress is perishable, especially any tool which is considered to be reduced to its specific utilitarian function. [...] ¹⁸¹

He enlarges upon the subject of tools, and the dual nature of the toolmaker:

Now, any tool, whatever it is, is conceived by a human brain. [...] A man is a brain and a heart, reason and passion. Reason knows only the absolute of current science, while passion is the vibrant force which tends to attract whatever is at hand.

I think that any man in conceiving anything at all is moved in the search for a solution [...] to create something which is less expensive, more beautiful. This notion of perfection [in any sense at all] is an aesthetic notion.

Let us talk about tools.[...] Given equal efficiency, order arises in the realm of “elegance” -the “elegant solution” of the mathematician, the engineer. An exclusively aesthetic notion.

In this *aesthetic* act of creation and of problem-solving, architecture is to be found:

I have written in *Une Maison - Un Palais* that all human acts tending towards the solution of a given problem imply the function of architecture; so that today, when mechanisation has brought us to an enormous productive capacity, architecture is everywhere: in the battleship [Hannes Meyer], in the conduct of war, and in the form of a pen or a telephone. Architecture is a phenomenon of creation which follows an order.¹⁸²

Whoever talks of ordering, he observes, talks of composing and

A composition is the essence of human genius; it is there that man is architect and there indeed is the precise meaning of the word “architecture”.

He does not accept that the advent of the Machine Age means that we must abandon this ‘basis’, and he examines the notion of *Sachlichkeit*, and finds it lacking:

Sachlichkeit... implies in the spirit of its inventors an incompleteness. If one wanted to be completely *sachlich*, one would say: this works; but I expect it to please me, to satisfy me, to quench my thirst, to interest me, to titillate me, to overwhelm me, etc.

From this argument Le Corbusier’s usual definition of architecture naturally arises:

... Architecture is a phenomenon of creation which follows an order. Whoever talks of ordering talks of composing. A composition is the essence of human genius; it is there that man is architect and there indeed is the precise meaning of the word "architecture".¹⁸³

The *Sachlich* alternative, as we saw [above], is half formed, incomplete:

Teige's accusation that Le Corbusier damages his own concept of the "machine for living in" by loading it with 'vague notions of dignity' is tackled next:

"Machine for living in" was the succinct term with which in 1921, I challenged the academies. [...] Setting aside the dispute with the academies and returning to our own, I immediately ask myself the question: "for living in - *how?*" I pose here simply the question of quality. I can find it resolved only in composition, that is to say, in the manner in which the creation of *sachlich* objects has been conceived, such objects constituting the whole of my problem however small it may be.

He reminds Teige of his famous definition of architecture, first published in *L'Esprit Nouveau* in 1920:

Architecture is the masterly, correct and magnificent play of masses brought together in light.

and points out that these masses are derived from a functional basis: they arise naturally out of the utilitarian plan and section.¹⁸⁴ He asserts that there is architecture

the instant a human being begins to pursue a creative end, that is to say, to order, to compose the elements of a problem to create an organism.¹⁸⁵

And he is sceptical of the *sachlich* refusal to admit the influence of aesthetics in their choice of forms:

You, poet, and I, architect, we are both only interested in the means that lead to the purest quality. Because [...] we know perfectly well, looking at ten solutions, the one which is elegant, and we will applaud it!¹⁸⁶

The specific charges against the Cite Mondiale/Mundaneum were of the poor functionality of the spiral ziggurat museum, of a dubious, illusory programme, and of academic and historicist tendencies in the choice of the pyramidal form and in the use of the Golden Section. They are answered as follows: Le Corbusier says that the Mundaneum was designed alongside the Centrosoyuz palace, which the Constructivists admire, and claims that both buildings have the same rational basis; both emerge from his *Five Points*, those rules for the use of concrete and steel in modern building methods. Although the *Five Points* emerged during the development of Le Corbusier's Purist house, it is clear in this passage that he regarded them as providing an adequate representational and practical basis for much large buildings ¹⁸⁷.

Then he explains at some length that the spiral form of the museum was the only possible functional form that was expressive of the continuity of history, and that the Sacarium exists to celebrate human genius, because

great geniuses have, in their time, incarnated the general current of ideas and have convulsed the world. For new things haven't convulsed the world, new ideas have: an idea is the evidence of a fire which [...] agitates the multitudes. And as we are now right at the birth of a new agitation, the study of history is a useful activity.

There is no common ground here: the Functionalists were not concerned with individual genius, but with mass needs. Returning to form and function, he agrees with Teige that 'needs pose programs'; as proof, he reveals that in 1928 he refused a commission for a Catholic church which was to have been built in concrete because

I felt that reinforced concrete simply couldn't become a true expression of a Catholic cult, which is formed by the dense stratification of secular usages which derive their vitality as much in the principle as in the form that has been conferred upon them, and which our memory has retained¹⁸⁸.

Le Corbusier then enlarges at length on the ideas, personality, and achievements of Paul Otlet, commissioner of the world city studies, a section which I do not intend to examine. The refutations of the charges of academism and historicism which follow this biography are relevant to the Palais des Nations because both *Palais* and *Cité Mondiale* projects were composed using similar means [as the Constructivists knew very well: the Corbusian employment of 'regulating

lines' dates back to at least 1922¹⁸⁹]. Although the *Palais des Nations* lacks an overtly provocative form such as the pyramid of the Mundaneum, it has aspects that must have bothered the Functionalists, such as the accumulation of symmetries based on the centre line of the assembly hall, and the wedge-shaped parterre before its entrance that mirrors the plan of the auditorium. Nevertheless, as we saw, Teige joined with other modernist supporters of Le Corbusier in 1927, calling it 'the only [entry] representing the modern spirit'¹⁹⁰. [Fig.22]

Le Corbusier maintains that the Golden section was overlaid on the Cité mondiale plan once functionality had been achieved, as a 'purifier'. He also demands to know why parallel lines and the right angle are permissible in architectural organisation, but proportional systems are not:

The buildings were grouped in logical, reciprocal relationships that seemed normal. These relations having been established, the organisation having been rendered "functional", coherent, we then laid upon it regulating lines based upon the Golden Section [...] you admit that an architect uses on his drawing board what we call a set-square and a T-square. These two instruments establish lines that are exactly parallel, and define angles that are rigorously true [...]
Well, I don't consider regulating lines to be any different. They are purifiers. They render composition precise and clear; they are tremendously *sachlich*. [...] I claim the right to do my work precisely and neatly by means of regulating lines.

The argument for the form of the pyramid is fought on two fronts. As mentioned previously, Le Corbusier declares that in the case of the Mundaneum, it provided the best solution for the requirement to exhibit a sequence of world history; a new argument inserted at this point is that the pyramid is one of the Euclidian forms and therefore permissible for architecture:

No one accuses the cube of academism; we consider it rather as the definitive contemporary expression of architecture [...]
The cube is modern because it maximises the usage of a plan for a place of work or a dwelling. It is "contemporary" because, in our climate, only the recent advances of reinforced concrete have permitted its realisation. In any case, it is a beautiful pure form.
But if a precise, undisputable function requires that spaces be organised along an axis that unfolds as a spiral, should I deny myself the architectural consequences of this function just because the cube is contemporary? [...]
I note in passing that the dictionary of architecture has always been limited to the geometry of Euclidian forms, and the cube, the sphere, the cylinder, the pyramid, and the cone are our only, uniquely architectural words.

His defense concludes with a persuasion by poetry: a lyrical description of the Mundaneum as he sees it, in its magnificent setting of mountains, lakes and

trees, and the effects that the conjunction of building and landscape will have on men. Such Virgilian descriptions of buildings and nature recur in Le Corbusier's writings: examples in *Une Maison* include his own Purist houses, the Palace of Nations, and the primitive shanties of the Arcachon¹⁹¹. Colin Rowe has discussed the Corbusian vision of the ideal villa in its ideal landscape in his essay, *The Mathematics of the Ideal Villa*; as he pointed out, Le Corbusier's description of the Villa Savoye in *Précisions* includes its location:

Leur vie domestique sera insérée dans un rêve virgilien¹⁹².

Finally Le Corbusier picks up Teige's reference to Eiffel¹⁹³, and reminds him that the Eiffel Tower was originally non functional:

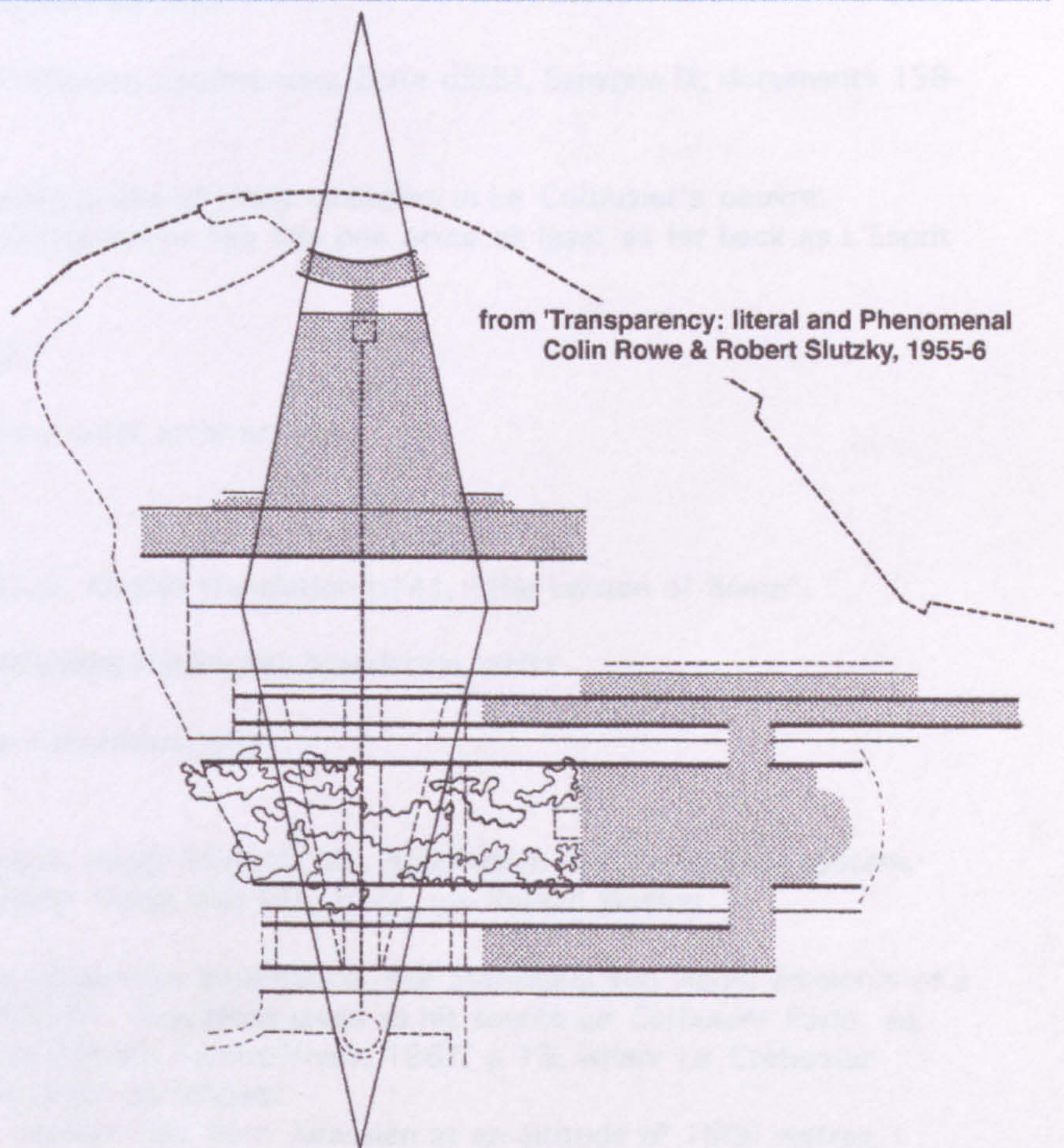
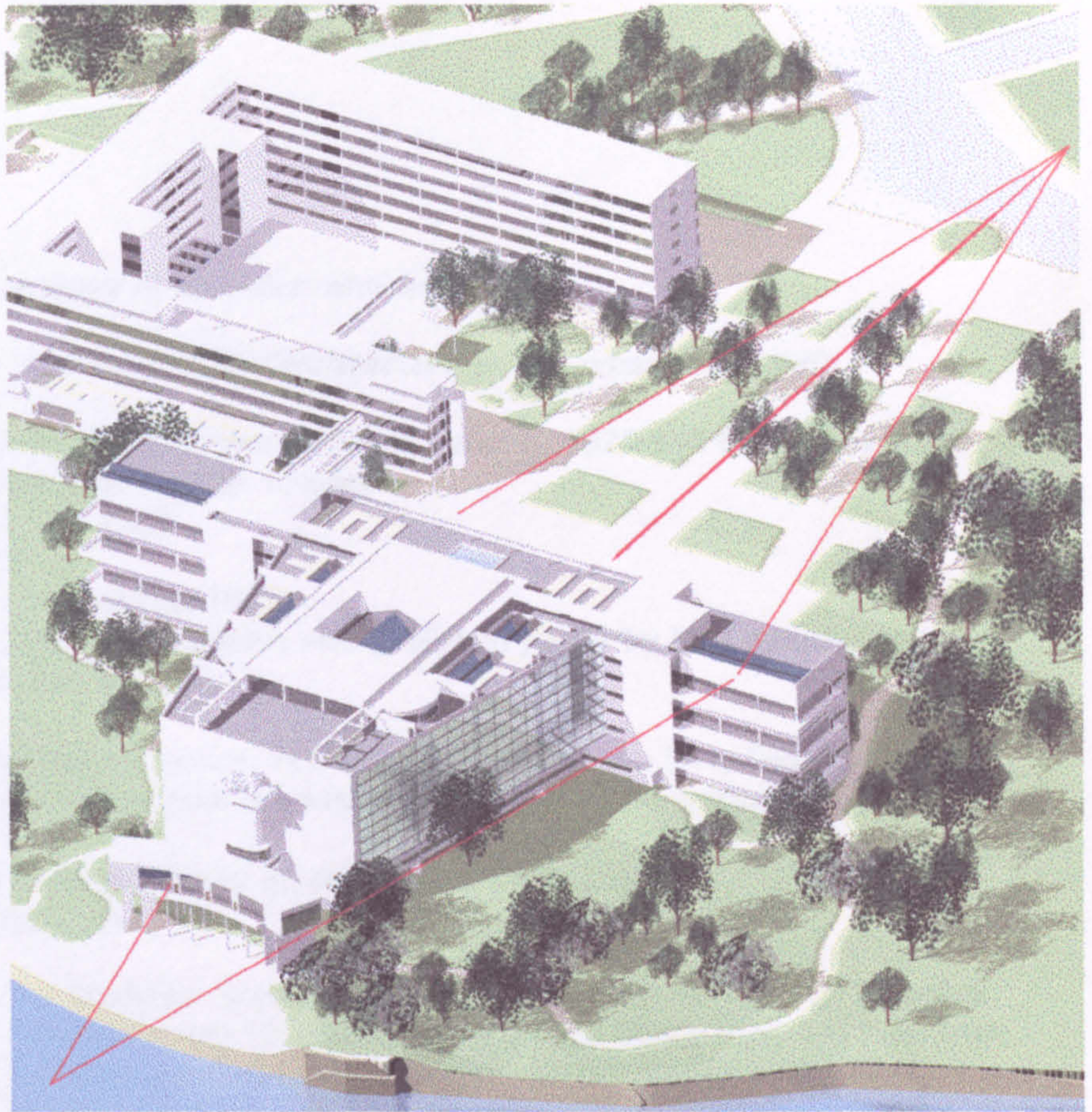
My dear Teige, would you also ponder on your own enthusiasm for the Eiffel Tower - a constructive phenomenon which you deem exclusively *sachlich*? Remember that in 1889, the Eiffel Tower was used for nothing; it was a temple to calculation [a temple, a palace, a castle of calculation]. It was an aesthetic manifestation of calculation.

Musing on Eiffel's achievements leads him to Paris, and to ask Teige and his *Sachlich* colleagues why they visit the city. He answers for Teige

...preoccupied with architectural phenomena, you come to Paris, seeking by instinct your well-being in places of harmony, and not in the places where ugliness reigns.

It is beautiful, is it not, when things are organised in deference to order? [...] Organisation itself is the key, virile substance that guides and corrects all that is *sachlich*, all that is muscle and bone. But what intention does this organisation have? The *sachlich* I do not even discuss, conceding it to be evident, primary, inevitable, like the bricks with which one builds a wall. But what wall?

Did Le Corbusier win this debate? Although Teige responded to his *In Defence of Architecture* in *Musaion* in 1931, I have not been able to find a translation of this piece, either into French or English, so I suspect it was not widely known in avantgarde architectural circles; in a sense then, the French reprint of Le Corbusier's *In Defence of Architecture* in *L'Architecture d'Aujourd'Hui* [1933] gave him the last word on the matter. Whether the 'Humanist' or the 'Utilitarian' should prevail is still a matter of opinion, but those 'mysteriously elusive, even ineffable qualities' noted by Paul Turner¹⁹⁴ which make the work of Le Corbusier so fascinating, are not perceptible in Functionalist buildings. For how can there be multiple meanings equivalent to the complex, cultural and technical dialogue broadcast by any Corbusian building, where there is only a single, material intention: shelter - according to the limitations of our 'objective' means?



from 'Transparency: literal and Phenomenal'
Colin Rowe & Robert Slutzky, 1955-6

Axial Symmetries on the Assembly Hall
figure 22

NOTES TO PART I

1. Dedicated to the memory of his father who died in 1926.
2. *Précisions sur un état présent de l'architecture et de l'urbanisme*, 1930.
3. 28 issues of *L'Esprit Nouveau* were published between 1920 and 1925. The books collected from their pages are as follows:
Vers Une Architecture 1923
Urbanisme 1925
L'Art Decoratif d'Aujourd'hui 1925.
 A fourth book, *La Peinture Moderne*, was published jointly by Le Corbusier and Amedée Ozenfant, also in 1925.
4. Pencil draft of *Une Maison* lecture: FLC Boîte 3(4) V, 504 to 541, *Conferences à Zurich*. The lecture was written on surplus *L'Esprit Nouveau* stationery.
5. Studentische Vortragsuasschüsse an den universitäten Zurich/
 Bern/Basel/Freiburg I.B.R
6. Presumably an E.T.H Students' Society. See correspondence between Le Corbusier, Ernst Mäder and P.Hans Bertmer (? - illegible) from 22nd September, 1927 to 14th October, 1927. Fondation Le Corbusier: *conferences*: Boîte c3(5) , Suisse III, documents no.s 59, 60 - 62, 67.
7. See Fondation Le Corbusier, *Conferences*, Boite c3(5), Espagne IX, documents 158-168.
8. This dialectical graphic is one of many examples in Le Corbusier's oeuvre. Significant visual juxtapositions like this one occur at least as far back as *L'Esprit Nouveau*.
9. *Une Maison* p48-52
10. "A la recherche d'une unité architecturale".
11. *Une Maison* p1
12. *Vers une Architecture*, English translation p141, "The Lesson of Rome".
13. *L'Art Decoratif d'Aujourd'Hui* English translation, p181
14. *Urbanisme*, English translation, p59
15. See also Paul Turner's essay *Romanticism, Rationalism and the Domino system*, published in *The Open Hand*, pub MIT, 1977, ed. Russell Walden
16. for Le Corbusier's Albigenian inheritance, see Stanislaus von Moos, *Elements of a Synthesis*, MIT 1979, p1. Von Moos gives as his source *Le Corbusier Parle*, ed. Jean Petit, Pub. Les Editions Forces-Vives, 1967, p 13, where Le Corbusier himself claims this origin as follows:
 How can I explain that, born Jurassien at an altitude of 1500 metres, I

have always experienced an irresistible attraction to the mediterranean other than by the fact that my ancestors were driven from France by the Albigeois. A tricky fact. Without the Albigensian wars.... [my translation]

There are many studies concerning Medieval heresies.

- Medieval Heresy, Popular movements from Bogomil to Hus, M.D.Lambert, pub. Edition Arnold, 1977.
- Dualist Heresy in the Middle Ages, Ilan Loos, 1974.
- The Treasury of Monteseur: A study of the Cathar Heresy and the nature of the Cathar Secret. Birks & Gilbert, 1987.
- A History of the Crusades Vol II: The Albigensian Crusade, Wolff & Hazard.

17. Paul Turner, *Romanticism, Rationalism and the Domino system*, in *The Open Hand*, p18.
18. Turner, *ibid*
19. Alan Colquhoun, *Displacement of Concepts in Le Corbusier*. See 'Essays in Architectural Criticism: Modern Architecture and Historical change', published by Oppositions Books, MIT, 1981
20. *Une Maison - un Palais*, p2
21. This image of the human spirit as winged and prescient with its implications of swiftness, embodied in speeding machines, is very much of its time, the 'machine age' of the 1920's.
22. *Une Maison - Un Palais*, p2. There are other passing references to this rival strain of Modernism (Constructivism) further on in the *Une Maison* text, see the tailpiece to this chapter on Le Corbusier & Karel Teige.
23. *L'Art Decorative d'Aujourd'Hui*, p52
24. *L'Art Decorative d'Aujourd'Hui*, English translation, p54
25. Fr. 'rapports'.
26. *Une Maison - Un Palais*, English translation, p3.
27. *Vers Une Architecture*, English translation, p23.
28. *Vers une Architecture*, p31, 'Three reminders to architects'
29. *Vers une architecture*, p146, 'The lesson of Rome'.
30. *Une Maison*, p84.
31. *Une Maison*, p14
32. *Vers une Architecture* p199 and *Une Maison* p31.
33. The use of regulating lines in Le Corbusier's own previous work is a clear instance of such [desirable] rules, although he does not provide any such example here.

34. *Une Maison* p80

35. See *Une Maison*, pages 67, 82-83, 85.

36. See *Une Maison*, p6:
we have acquired a tradition of the complicated... [p6]

When the century of the machine was born, a coalition of hearts attempted to oppose it [the Ruskinian Crusade - and this made a suffocating paradox].
[p18]

In a way, the assertion that clarity is to be found in the orthogonal also implies a criticism of the picturesque [p24]:

If though, conditioned in our acts by the necessity for clarity, we will draw the enclosure where our house will be constructed *square*.
Everything is there.
this is our fate.

37. The original French is
Voilà qui est fondamental en notre nature:
ordonner;
ordonnancer.
Ordonner, ranger, disposer, mettre en ordre.
“*Dieu a tout ordonné dans l’Univers.*” Le Dictionnaire nous renseigne en ces termes majestueux.
Ordonnancer, acte émanant d’une autorité suprême.
De notre autorité vient le *normal*.
De notre laisse-aller surgit l’anormal, l’anormal envhissant, destructeur;
où la volonté déchoit, il s’implante et ravage.

38. *Une Maison*, p6

39. *Une Maison*, p10

40. *Urbanisme*, English translation p21, chapter II, ‘Order’.

41. *Urbanisme*, English translation p23.

42. *Urbanisme*, p28-29

43. *Urbanisme*, p30

44. *Une Maison*, p8

45. *Urbanisme*, p31

46. *Une Maison*, p8

47. *Urbanisme*, p31

48. *Urbanisme*, p49. Illustrating the chapter heading ‘Permanence’.

49. *Une Maison*, p12

50. *Une Maison*, p12
51. Le Corbusier's obsession with the Parthenon dates back to his *Voyage d'Orient* of 1911. The image of the Parthenon reproduced in *Une Maison* is from that travel diary [p211 in the English translation]. Even then, the Parthenon represented for him the highest achievement of architecture:

I don't know why this hill harbours the essence of artistic thought. I can appreciate the perfection of these temples and realize that nowhere else are they so extraordinary; and a long time ago I accepted the fact that this place should be like a repository of a sacred standard, the basis for all measurement in art. [p216]

The same image was used in *Vers une Architecture*, [p206] where an entire chapter, *Architecture, pure creation of the Mind*, was devoted to the Parthenon.
52. *Une Maison*, p14.
53. *Une Maison* p16. The unidentified American scheme is contrasted with a picture of the great staircase at Versailles which reveals its underlying mathematical structure.
54. *Une Maison*, p18. [*Diapason* : French - tuning fork; also, a fixed standard of musical pitch - *diapason normal* - concert pitch; etc].
55. *Une Maison*, p20. See *Vers une Architecture*, part III, *Architecture, Pure Creation of the Mind*, p187, p192 for previous usages of the phrase 'a table of harmony':

This sounding board which vibrates in us is our criterion of harmony. This is indeed the axis on which man is organised in perfect accord with nature and probably with the universe, this axis of organisation which must indeed be that on which all phenomena and all objects of nature are based [...]
56. *Une maison*, p26. This passage recalls the *L'Art Decoratif d'Aujourd'Hui* section 'Iconoclasts again: MAN, MAN QUITE NAKED':

[....] And when he finds harmony, this thing that is a creation of his spirit, he experiences a shock that moves him, that exalts him, that encourages him, that provides him with support in life.[p23]
57. See *Vers une Architecture*, 'Eyes which do not see', p81.
58. *Une Maison*, p28:

the 'passionate search for this harmony'

|

[history of progress=equipment] + [history of culture=spiritual architecture]
59. *Une Maison*, p32.
60. *Urbanisme*, p38; *Une Maison*, p29.
61. *Vers une Architecture*, p199; *Une Maison*, p31.
62. Le Corbusier has both good and bad things to say about Versailles: in *Vers une Architecture*, it appears in the chapter *The Illusion of Plans*, as an example of transgression of the rules of the plan

Louis XIV... is the ROI-SOLEIL. Immense vanity! At the foot of the throne,

his architects brought to him plans drawn from a bird's-eye view which seem like a chart of stars; immense axes, formed like stars. The Roi-Soleil swells with pride; and gigantic works are carried out. But a man has only two eyes at a level of about 5' 5" above the ground, and can only look at one point at a time. The arms of the stars are only visible one after the other, and what you have is really a right angle masked by foliation. A right angle is not a star; the star falls to pieces [...] a snare and a delusion. [p182-183].

In *Urbanisme*, it is praised as an example of good planning [when compared with the chaotic Medieval city]:

Louis XIV, after trying to tidy up the Louvre... became disgusted and took bold measures: he built Versailles, where both town and chateau were created in every detail in a rectilinear and well-planned fashion [p14, *The Pack -donkey's Way*]

In *Une Maison*, the only direct reference to Versailles is on p16, where Le Corbusier declares that American planners have not understood what is of value at Versailles: the clarity and spaciousness of its plan.

63. *Une Maison*, p32
64. This image is reproduced in Von Moos' *Elements of A Synthesis*. [See the chapter 'Urbanism']. He gives *Urbanisme* as the source [which is incorrect].
65. The image in *L'Art Decoratif d'Aujourd'Hui* is from Larousse, and Le Corbusier comments
Faced with the task of providing a definition of man, Larousse calls on just three images to portray his anatomy; the whole machine is there, the structure, the nervous system, the arterial system, and this applies to every single one of us exactly and without exception. [p72]
66. *Une Maison*, p34
67. A factory which I suspect may be by Auguste Perret, but so far I have not been able to confirm this.
68. *Une Maison*, p36
69. *Une Maison*, p36
70. Anthony Vidler -*The Writing of the Walls*,', p147 'From the Hut to the Temple; Quatremère de Quincy and the idea of Type'. Published 1989, Butterworth.
71. See H.Allen Brooks, *Le Corbusier's formative years at La Chaux-de-Fonds*, originally published in *The Le Corbusier Archive*, by Garland Publishing, and then in an essay collection entitled *Le Corbusier*, edited by H.Allen Brooks and published by Princeton University Press in 1987.
Also, Russell Walden, *New light on Le Corbusier's early years in Paris: the La Roche-Jeanneret Houses*, published in *The Open Hand*, MIT, 1977 . Paul Turner's essay in the same collection, *Romanticism, Rationalism and the Domino System*, is also of interest., as is his thesis, *The Education of Le Corbusier* , Garland Publishing, 1977.
72. Antoine Chrysostome Quatremère de Quincy, *Dictionnaire Historique d'Architecture*, Paris 1832. In the British Library, alongside the *Encyclopédie*

Méthodique, Paris, 1788-1825, for which he wrote the volumes on 'Architecture'. For extracts from the *Encyclopédie Methodique* in English see Tanis Hinchcliffe's translation in *9H*, no.7, 1985.

73. Quatremère de Quincy's *Dictionnaire Historique d'Architecture*, definition of *Type*, my translation.
74. See *L'Art Decorative d'aujourd'Hui*, 'Type-Needs: Type-Furniture'.
75. Stanislaus von Moos, '*Le Corbusier: Elements of a Synthesis*', pub, MIT, 1979.
76. *Une Maison*, p46.
 Le fait architectural exprimé par la géométrie, raciné dans de profondes causes standart [types], besoins et moyens, s'élève de l'inconscient vers la conscience.
 [French typo: 'standart' should be 'standards'].
77. Paul Venables Turner, *The Education of Le Corbusier*, Doctoral thesis, pub. Garland Publishing, 1977; see the concluding chapter, "Le Corbusier's Synthesis".
78. The Parthenon - as a type:
79. see Paul Turner's thesis, p182
80. Turner, p181.
81. *Une maison*, p30.
82. *Vers une Architecture*, p89. This passage follows on from the well-known definition of a house:
 A house is a machine for living in. Baths, sun, hot-water, cold-water, warmth at will, conservation of food, hygiene, beauty in the sense of good proportion. An armchair is a machine for sitting in and so on.
 Our modern life.....[etc]
83. See *L'Art Decoratif d'aujourd'Hui*, p27, 'Comoy's pipe', image on the title page of the chapter 'Plagiarism: Folk Culture'.
84. *L'Art Decoratif d'Aujourd'Hui*, p72.
85. *Une Maison*, p4.
86. *Vers une Architecture*, p86-88.
87. 'Mass Production Houses': there are also a number of references to the standardised house in *Urbanisme*, where Le Corbusier's concern is with a universal standard and complete uniformity in detail:
 'Under such conditions the mind is calm.
 Ideas on a noble scale can make themselves be heard'. [p76]
 See also p231 on the 'human cell' and the Pavilion *L'Esprit Nouveau*, that 'document of standardisation' which exemplified it.
88. See *Oeuvre Complète*, vol I, p128-129.
89. *Vers une architecture*, p 90.

90. *Une Maison*, p55-79.
91. See Joseph Rykwert, *On Adam's Hut in Paradise*, pub. Museum of Modern Art, NY; 1981. Also Anthony Vidler, *The Writing of the Walls*, [ibid]; and Donald Drew Egbert *The Beaux-arts Tradition in French Architecture*, pub. Princeton, 1980 for the Beaux-Arts interpretation of *type* and *character*.
92. *Une Maison*, p38.
93. *Vers une Architecture*, p130-131.
94. *Vers une Architecture*, p219-245.
95. It is curious that the Perret church is not illustrated; the format of the page [p45] suggests a missing photograph.
96. Église de Notre Dame du Raincy, 1923 -1923
97. *Un architecte a exploité ses réserves* . See *Une Maison* p44
98. Kenneth Frampton, *Le Corbusier's designs of the League of Nations, the Centrosoyus and the Palace of the Soviets, 1926-1931*, from the essay collection *Le Corbusier*, edited by H.Allen Brooks, pub. Princeton, 1987; see p60.
99. *Une Maison*, p46
100. See the *Almanach d'Architecture Moderne*, a collection of *L'Esprit Nouveau* pieces issued in November 1925 as the 'Livre d'Or' of the *Pavillon de l'Esprit Nouveau* which was exhibited earlier in the same year. The article is *Un Standart Meurt, un Standart Nait*, p83-90. Here Le Corbusier presents the Breton vernacular in a series of sketches with a running commentary:
 ...Les Maisons, les sites, les cultures sont un, comme la tête et le corps...
 Une maison est pure, comme est vrai un fruit, - une pomme, une poire...
 ...Ce fronton est dans le paysage comme un cristal dur. Géométrique, il signale le travail de l'homme et réconfort de loin. Son couronnement est la seule horizontale sur le ciel, qui le soit comme les confins de la mer sur le ciel...
101. *Une Maison*, p46
102. Emphasis on the primitive and on nature: the primitive is *natural*.
103. See Sekler's doctoral thesis, *The Early Drawings of Charles Edouard Jeanneret, 1902-1908*, Harvard, 1973.
104. Villa Fallet, 1905, with René Chapallaz. See *Le Corbusier: Early Works by Charles Edouard Jeanneret-Gris*, Academy Editions, 1987. According to Geoffrey Baker, 'Ruskinian references proliferate in a design in which every element seems to be a literal transcription of Nature. Trailings, strapwork to doors, elevations, timber brackets and stucco patterns are all abstractions of the pine tree'[p11].
105. Mary Patricia May Sekler, *Ruskin, the Tree and the Open Hand*, published in *The*

OpenHand essay collection, MIT, 1977. See Von Moos, *Elements of a Synthesis*, for a similar discussion.

106. *ibid.*
107. *ibid.*
108. *L'Art Decoratif d'aujourd'Hui*, p194.
109. *Une Maison*, p78.
110. See *Une Maison*, p18.
111. *Urbanisme*, from *The Hours of Repose, The Human Scale*, p237.
112. The fisherman's hut is clearly constructed from pine logs. the natural shelter offered by the pine canopies mirrored by the rude porches with their pine columns. Note the canonical, isolated tree to the right ['architecture is a tree from profound roots' - see *Une Maison*, p46 precedes the description of the fisherman's hut]. Pointed out by Peter Jenkins.
113. *Une Maison*, p48.
114. See *Une Maison*, p48-50.
115. See *Le Corbusier en France*, Gilles Ragot & Mathilde Dion; pub. Electa Moniteur, 1987.
116. Susan L.Ball, 'Ozenfant and Purism: The Evolution of a Style', Doctoral thesis, pub. UMI Research Press, 1978. See 'Pre-Purism', p8, p34.
117. See "The Architect as artist", p114 from *Le Corbusier Architect of the Century*, pub. Arts Council of Great Britain, 1987, ed. Tim Benton.
 Looking at the manuscript of the Zurich lecture [the original presentation of the *Une Maison* material - 9th November, 1927, FLC B3 - 504 to 541] confirms that Le Corbusier was already familiar with the area by late 1927: the - largely improvised - description of the houses at Le Piquey, [see sheet 528] was already a part of that lecture.
 There is a problem for researchers here: Le Corbusier's sketchbooks from the years 1920-1930 are missing, and so are his 'Agendas' [diaries] for the whole of 1927. It is thought that a number of documents were lost when he moved house in the early 1930s. [See *Le Corbusier Sketchbooks*, pub. Thames & Hudson]. Thus many clues to his visual thought in the years with which we are concerned, are not available. Some sketches from Le Piquey survived and are published in the *Le Corbusier Sketchbooks*.
118. *Une Maison*, p28.
119. *Une Maison*, p50.
 The paragraph which follows this anticipates the concerns of Le Corbusier's *Modulor*, worked out around 1950:
 These house, one hundred, five hundred, isolated in the folds of the pine forest or grouped in hamlets on the beach, have a common measure: the human scale. Everything is to scale; one measures the step, the shoulder, the head.

120. model: the type embodied in the specific example. See Quatremère de Quincy on *Type*.
121. Derived, as discussed earlier, from *Vers une Architecture*, see p187, *Architecture, Pure Creation of the Mind*.
122. *Une Maison*, p51.
123. From *Intransigent*, 18th January, 1928. In *Une Maison*, p173.
124. This Citröhan house is a project from 1922. Two pages are given to Citröhan houses in *Vers une Architecture*, in the chapter 'mass-production' houses, but this particular example is excluded. The citröhan house is often used to illustrate the 'Five points'. It is a *studio* house - the double height living room is an artist's studio, and therefore the projected inhabitant is an artist, or a 'cultured man'. Embedded in this is a notion of progress, and of housing the elevated spirit. The Citröhan is also an *urban* type, for all that it is often shown in Arcadia in Le Corbusier's drawings. This urbanity is implied by the concentration of meaning in the facades on the short sides of the elevated box of the house: it might fill a narrow city plot, or be slotted into an accommodation block. Alan Colquhoun's comments on Le Corbusier's 'strategies of the Grands Travaux' - themselves urban types - is applicable to the citröhan as well: its elevation on pilotis gives it the same ability to straddle earthbound circulation routes and thus 'dissolve the urban texture', albeit on a smaller scale than the grands travaux.
125. Almost all the photographs of these houses chosen for the book have views of distant landscapes in the background. This may be interpreted with respect to the "moments of synthesis" (between man and nature) theme promulgated earlier in the book.
126. *Une Maison*, p64.
127. The text accompanying the roof garden - and - pilotis images of the Weissenhof houses, is as follows:

One climbs up to the roof of the house where a garden is planted. The ancestral plan has been returned to: the living room is on high, near the roof garden, not below. The house is in the air, on pilotis.

[My emphasis]. Since there are no representations of primitive, elevated houses in *Une Maison* [with the possible exception of the structures on the Irish Crannog [p39]] and nor, as far as I know, did he ever call on any such house to justify his *pilotis*, one can only surmise that he has in mind either the kind of situation depicted on p40 - the mountain hut in the Alps is 'high in the air' without the assistance of pilotis, or he is recalling the roof terraces of peasant houses in the near east.
128. *Une Maison*, p66.
129. See Tim Benton, *The Villas of Le Corbusier*, pub. Yale University Press, 1987. p219, a brief chronology of the project indicates that the client moved in October 1928. [ie., *Une Maison* would have been published late in 1928].
130. See lecture manuscript, FLC B3-4-534. Page 534 carries a fragment of the text associated with the published photographs, and an indication of a series of illustrations marked 'de Monzie'.

131. See Tim Benton, *The Villas of Le Corbusier*, as before.
132. See earlier note re Frampton on Le Corbusier's three palaces [Palace of Nations, centrosoyuz, Palace of the Soviets] in the essay collection *Le Corbusier*, ed. H.Allen Brooks, pub. Princeton, 1987. Frampton also wrote an essay entitled '*Le Corbusier and the Dialectical Imagination*' published in '*In the Footsteps of Le Corbusier*', Rizzoli, 1989. In this essay we read:

Some note requires to be taken of a book published by Le Corbusier in 1928 under the title *Une Maison-Une Palais* - ostensibly a defense of his disqualified League of Nations competition entry of 1927 - but in fact the paradoxical assertion of a Neo-Palladian principle that was central to his work. This principle argued that by virtue of honorific treatment a house may become a palace and conversely, that a palace may be graced with all the convenient informality of a house.

Is the nature of the house, as opposed to the palace, really to be found in its 'convenient *informality*' ?
133. See *Urbanisme*, chapter XI, '*The Contemporary City*', p169.
134. *Une Maison*, p80.
135. *Vers une Architecture*, '*Three reminders to Architects*' : First reminder - Mass, p31:

Architecture is the masterly, correct and magnificent play of masses brought together in light....
136. *Une Maison*, p84.
137. Translated by Edith Schreiber Aujame.

See English translation of Précisions:- *Precisions on the present state of Architecture and City Planning*, pub. MIT, 1991. The subtitle of *Une Maison* is better translated as "In Search of an Architectural Unity". Le Corbusier did not use the word 'theory', and 'Unified Theory' carries an echo of Einstein's *Unified Field Theory*, which was only published in 1953; this usage feels anachronistic.
138. From Précisions, p160, Edith Schreiber Ajaume's translation as previously.
139. *ibid.* Schreiber Ajaume.
140. *Oeuvre Complète* vol2, p158-159.
141. Le Corbusier's next book about town planning, *La Ville Radieuse*, was published in 1935 [re-issued 1964, English Edition 1967]. In this book, the *Plan Voisin* is presented alongside the projects of the 1930s; it is not rendered obsolete by later, more specific plans.
142. *Une Maison*, p2
143. *Une Maison*, p10
144. See *Une Maison*, p32 for Le Corbusier's claims of 'mastery' ['*maître*'], in the passage about the systematisation of the works of the master by his pupils:

'Systems only arise afterwards; they are not preconceived. Systems are revealed by the pupils. The master always escapes from the system. By his claw one recognises the lion. And we are not interested except when, in

the midst of the yelling mob, we recognise the potent voice of the lion...'

145. *Une Maison*, p18.
146. Anatole Kopp [*Town and Revolution*], Jean-Louis Cohen [*Le Corbusier and the Mystique of the USSR*]. Kopp points out that the meaning of 'constructivism' changed after 1925,
147. See Rostislav Svácha *Karel Teige and the Devetsil architects*, *Rassegna* 53, 1993, p7.
148. See *Rassegna* 53, March 1993, p73. The manifesto, *Konstruktivismus a likvidace 'umeni'*, was originally published in *Disk*, No.2, 1925.
149. *Rassegna*, as prev.
150. His article "On Constructivist theory"[1928], makes this clear. *ibid.*, Otakar Macel.
151. *ibid.*
152. Teige made over 400 surrealist collages, only one of which was published in his lifetime. They are preserved in the Archives of National Literature in Prague. A number of them are illustrated in Hana Cisarova's article, 'Surrealism and Functionalism: Teige's Dual Way'. [*Rassegna* No. 53].
153. Translated into English in 1982.
154. See Frampton's foreword to the English version of *Style and Epoch*, pub. Oppositions Books, MIT, 1982.
155. See *Vers une Architecture*, p15.
156. See foreword to English translation of *Stil' i Epokha*, p8-9.
157. See Kenneth Frampton's article in *Architectural Design*, Vol XXXVII, n.3, March 1968; 'The Humanist v. The Utilitarian Ideal', which compares the two projects in detail.
158. Although the ribs to the dome conform to the general column-grid spacing of 4.5m.
159. Le Corbusier, *In Defense of Architecture*, 1929. English translation published in *Oppositions* 4, October 1974. This was written in 1929 as a reply to Karel Teige's critical article on the Mundaneum project, printed in the Czech avant-garde review *Stavba*, vol 7, in 1929. Le Corbusier's reply was supposedly written for *Stavba*, but whether it was actually published there has not been confirmed; at any rate, it appeared in *L'Architecture d'Aujourd'Hui*, in 1933
160. *Strojitel'naja promyslennost*, V, No.11-12, 1927-8, pp.854-8. German Translation 'Idolen und Idolvereher' [Idols and Idolaters]
161. It has been suggested that Lissitzky's motive may have been one of revenge: an article submitted by him to *L'Esprit Nouveau* in 1924 was rejected. See Jean Louis Cohen, *Le Corbusier and the Mystique of the USSR*, English translation pub. Princeton, 1992; chapter 5, 'Le Corbusier and Soviet Avant Garde Theory'. Cohen

provides a detailed analysis of Lissitzky's article, as well as of the later and much better known attack penned by Karel Teige.

162. See *Rassegna* 53, March 1993, special issue *Karel Teige, Architecture and Poetry*. Otakar Mácel, 'Paradise Lost: Teige and Soviet Russia'.
163. This article is not available in translation, and I have no further information on Lissitzky's attitude to Le Corbusier's Palais des Nations.
164. See Jean-Louis Cohen, as before.
165. The Fondation Le Corbusier holds many letters from Teige covering the period 1923-9.
166. See Jean-louis Cohen, as before.
167. *Stavba*, vol.7, p145, April 1929.
168. In its most developed manifestation, the *Cité Mondiale* is placed outside Geneva on a fairly level site north west of the Perle du Lac site for the Palais des Nations, and directly linked to it and the adjacent International Labour Organisation [B.I.T.] by road.
169. *Musaion*, No.2 [1931], p52-3: Karel Teige, "Odpoved Le Corbusierovi" .
170. I have no information about this review of *Une Maison* in *Stavba*. Presumably it remains untranslated.
171. The whole of this text, 'Mundaneum' was reproduced in translation in *Oppositions* 4, [1974], followed by Le Corbusier's reply, *In Defense of Architecture*, which was intended for *Stavba*, and eventually appeared in *L'Architecture d'Aujourd'Hui* in 1933.
172. Teige, *Mundaneum*, translation by Ladislav and Elizabeth Holovsky, and Lubamir Dolezel in *Oppositions* 4, p88.
173. Teige, *Mundaneum*; see *Oppositions* 4, p89.
174. *ibid.*, *Oppositions* 4 translation of *Mundaneum*, p90.
175. *Oppositions* 4, p91.
176. *ibid.*
177. I exclude the presentation of the *Mundaneum* which precedes it, and is neutral in tone. In the *Oppositions* 4 translation, Teige's critique occupies 4 pages to Le Corbusier's 10.
178. *neue sachlichkeit*: the new objectivity.
179. Le Corbusier, *In Defense of Architecture*, *Oppositions* 4 translation, p93.
180. *ibid.*
181. Compare this with

The history of progress, which is a question of tools, and the history of culture, which is a question of spiritual architecture [architecture, putting in order, creating order] are both made in the passionate search for this harmony.
[*Une Maison*, p28]

182. Compare this with
...it is in the manner of the ordering [meaning of *architecture*] that the moving moment of the work is inscribed. [*Une Maison*, p28].
183. Note Le Corbusier's tendency to refer to his own previous writings to support his point. Other examples of this are to be found in *Une Maison* and previous books.
184. He gives as an example the fact that he designed the elevations of the Palais des Nations in three hours using the plans and sections.
185. This terminology directly recalls *Une Maison*; see earlier discussions.
186. *Oppositions 4*, October 1974. translation p96
187. *Oppositions 4* translation p99.
Yet you want to persuade me that the Centrosoyuz, headquarters of the administration and soviet club, is modern architecture, while the Mundaneum, centre of intellectual inquiry, is academic. Both of them were strictly based on the famous five points of contemporary architecture, that is, pilotis, roof garden, the independent skeleton, the free plan and the free facade.
188. This view is somewhat contradictory with respect to his favourable comments about Perret's concrete church at Raincy, published in *Une Maison* a year earlier.
189. The Villa Schwob at La Chaux des Fonds [1916], is illustrated in *L'Esprit Nouveau* and in *Vers une Architecture* along with the regulating lines which control its facades. But of course those illustrations were drawn some years *after* the house was built.
190. *Une Maison*, p223.
191. Modern city plans may be treated in a similarly ecstatic fashion, as a glance at *Urbanisme* will show.
192. From *Precisions*, English version p139. See Colin Rowe, *The Mathematics of the Ideal Villa*, p2.
193. Teige's observation about Eiffel was this:
Wagner and Le Corbusier see the ultimate aim of architecture, which they believe to be "queen of the arts" to be to erect some cathedral or sanctuary; they ponder this cathedral whenever they are not employed in the solving of concrete problems Meanwhile, Gustave Eiffel, for example, despite his mistrust of all aesthetics, believes that he will equal Phidias, and that it is much more significant to be a great modern engineer than a craftsman of the past. [*Oppositions 4* translation, p89.]
194. Paul Turner, *Romanticism, Rationalism and the Domino System*, in *The Open Hand* essay collection.

PART II

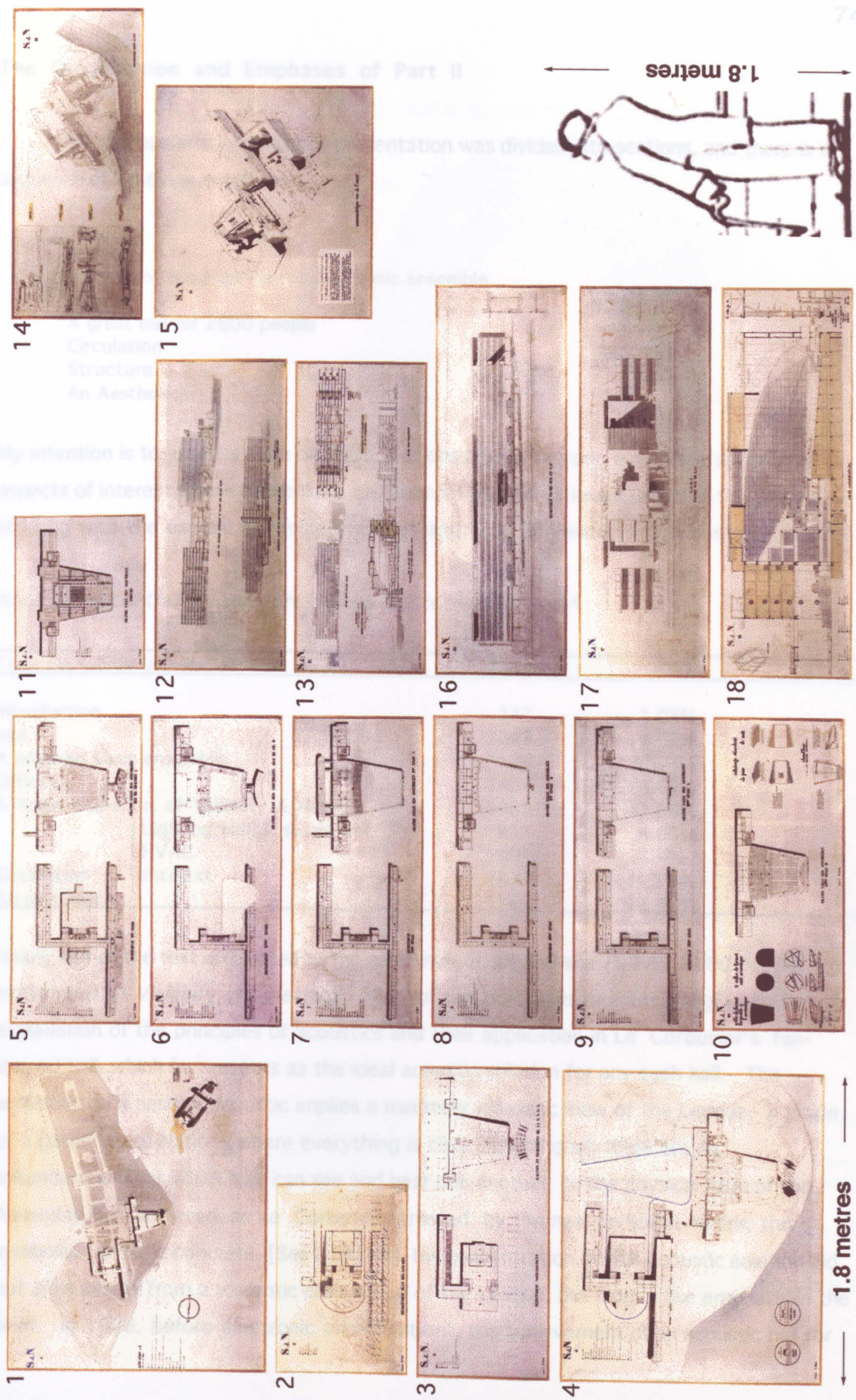
LE CORBUSIER PRESENTS HIS PROJECT: Une Maison - Un Palais 'Explications'

The central section of *Une Maison* is devoted to a detailed presentation of Le Corbusier's project for the Palace of Nations, and consists of a description and a number of photographs and drawings, most of which are from the competition submission set.

The Drawings Set

The competition submission [fig. 1] consisted of 18 drawings and most of these are included in the *Une Maison* presentation, along with some additional perspectives. The original drawings were sold to the E.T.H in Zurich in 1939, when Le Corbusier needed money; the sale was arranged by Alfred Roth¹. Reproductions of the full set, restored in the 1980s, may be found in *Le Corbusier & Pierre Jeanneret - Das Wettbewerbsprojekt für den Völkerbundspalast in Genf 1927*². The eighteen drawings were hand-coloured pale blue and yellow by spraying³, and the black & white reproductions in *Une Maison* do not do justice to the originals. Most of the drawings are 1.8m long, the largest ones - the main facades of Assembly Hall and Secretariat, and the longitudinal section - measure 2.25m across. Looking at this set, one of 377 entries, received by the Secretariat, all of which were submitted framed, one has some idea of the problems of handling and display faced by the competition organisers.

In the *Une Maison* presentation, four of the drawings from the set, all intermediate level plans, are omitted entirely [SDN6-SDN9]. Drawings SDN13 and SDN14 are incomplete: one of the small sketches from SDN14 is missing, and so is the Assembly Hall entry facade from SDN13. All the rest are included, many of them broken up and dispersed through the text as appropriate. A list of the drawings as they appear in the text is included in the addenda to this thesis, along with larger reproductions of the set taken from the ETH publication mentioned above; without these drawings, we cannot talk about the project. The Fondation Le Corbusier holds drawings which are clearly the originals of the presentation set, but these often consist of several pieces which were later combined; in addition, some of the longer drawings in the archive have been filmed in sections: it is easier to look at the final set.



The Le Corbusier & Pierre Jeanneret submission for the Palace of Nations Competition.
 Le Corbusier's sketch of himself taken from drawing No. 18

figure 1

The Organisation and Emphases of Part II

Le Corbusier's *Une Maison* presentation was divided into sections, and there is a sequence of headings as follows:

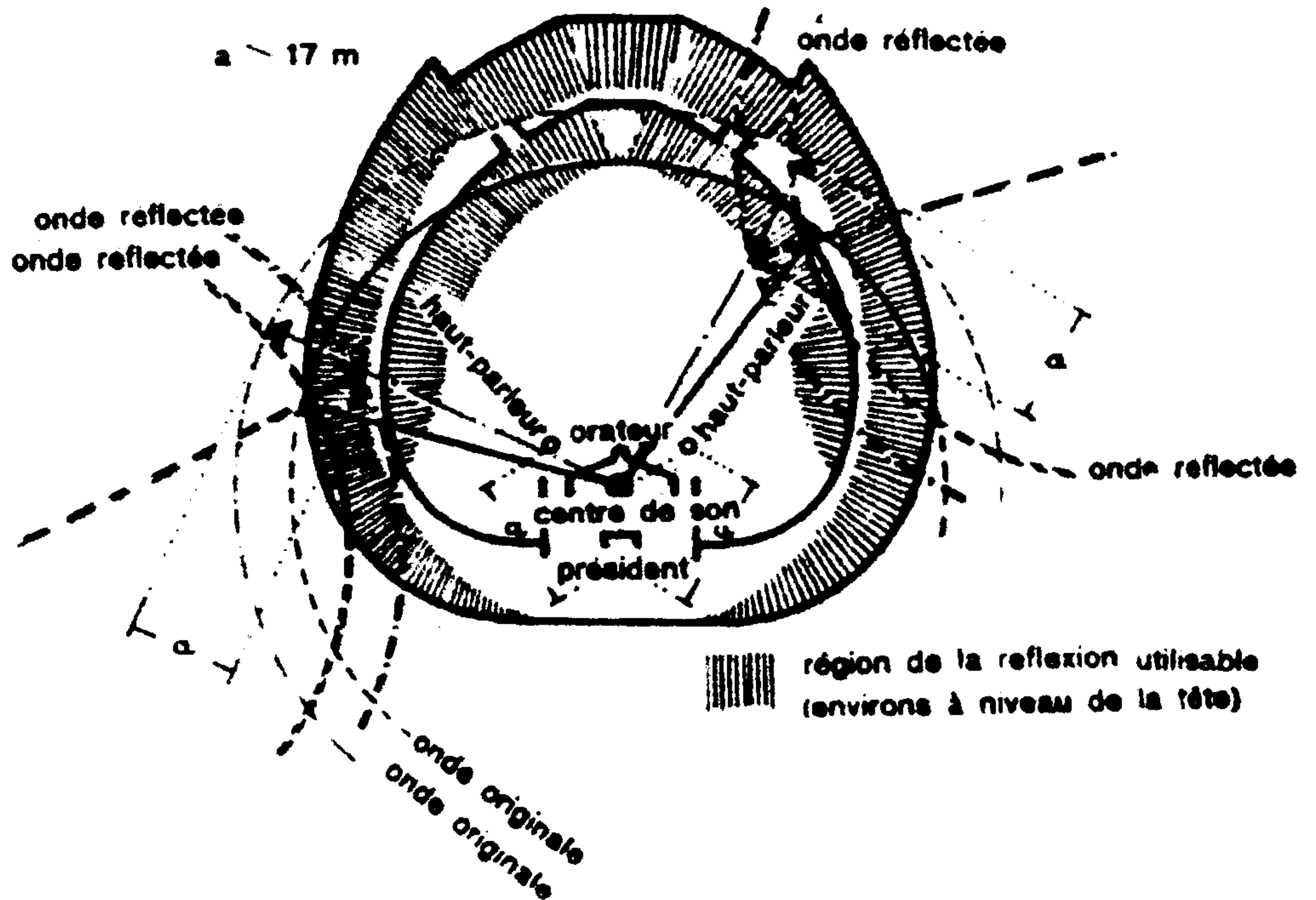
- A site
- A group of buildings - a required basic ensemble
- Offices
- A great hall for 2600 people
- Circulation
- Structure
- An Aesthetic

My intention is to discuss each of these sections briefly in order, expanding upon some aspects of interest where convenient, and then to analyse various aspects of the project, starting with the earliest surviving sketches and with reference to previous critical work.

A word count of *Une Maison* Part II gives the following result⁴ :

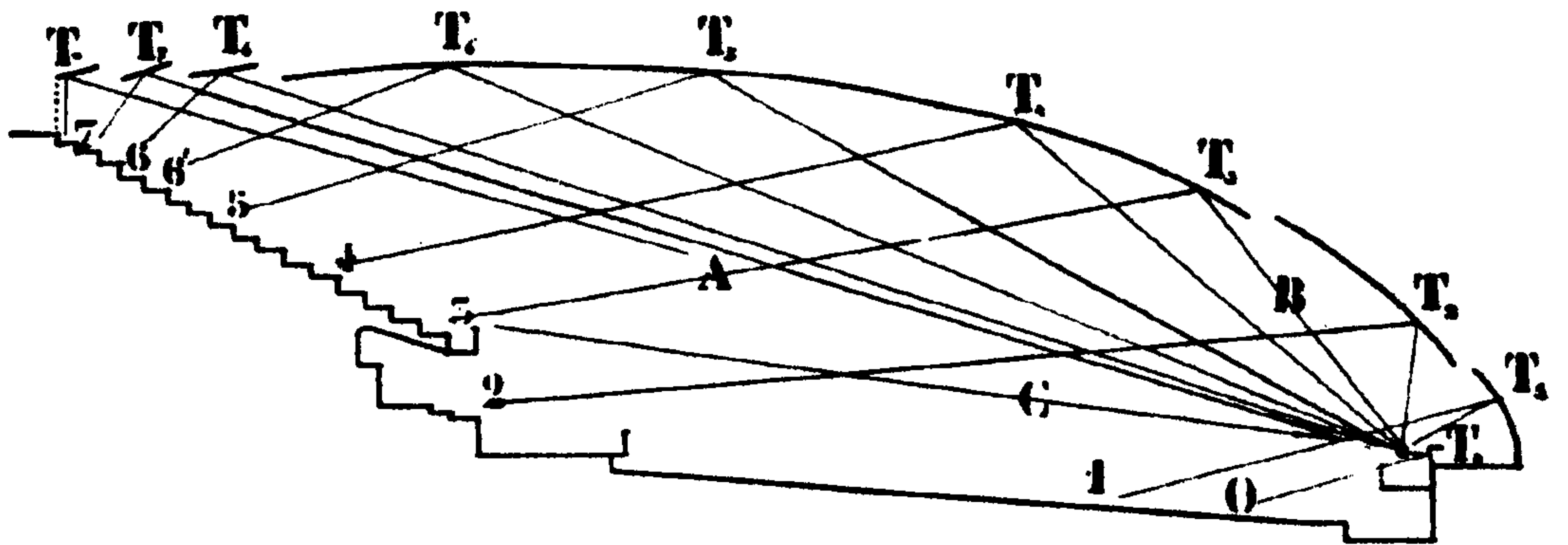
Total No. words <i>Une Maison</i> Part II:		13682	%
Introduction		142	1.04%
site		1043	7.62%
A required basic ensemble		126	0.92%
Offices		1454	10.63%
A Great Hall-instr. of Visibility & Hearing		5686	41.56%
	-Lighting hall[& structure]	913	6.67%
	-HVAC	1081	7.9%
Circulation	-int&ext	1674	12.23%
An aesthetic		1563	11.42%

Nearly half of the text is devoted to the section entitled '*A Great Hall for 2600 People, Instrument of Visibility and Hearing*'. Most of this portion is an astonishingly detailed explanation of the principles of acoustics and their application in Le Corbusier's fan-shaped hall, which he presents as the ideal acoustic solution for any such hall. The emphasis on a perfect acoustic implies a markedly idealistic view of the League - a vision of a gathering of Nations where everything is clear and rational; there are no misunderstandings when men can see and hear one another. In the physical form of the Assembly Hall, achieved, as Le Corbusier stressed, by the new technical means, this symbolism is made concrete. [See SDN 1 8] His concentration on the acoustic solution did not arise simply from a romantic conception of the League, but from a like emphasis in the brief. In 1926, before electronic amplification⁵, the achievement of an acoustic hall for

système de réflexion de son (rez-de-chaussée)

Hannes Meyer

**from: Hannes Meyer: Architekt, Urbanist, Lehrer 1889-1954.
Ernst & Sohn; pub. Berlin, 1989.**



$$(A+B) - C < 22 \text{ m}$$

La courbure théorique du mur-plafond étant obtenue (épure de gauche) cette courbure est sectionnée en divers points, et les éléments en sont abaissés de telle façon que la hauteur totale de la salle corresponde à celle du bâtiment déterminé par les hauteurs d'étage des ailes des commissions. En résumé, la même courbure est maintenue (même réfraction des ondes) mais la hauteur de la salle est abaissée d'environ six mètres.

Le Corbusier

Acoustic Studies for Assembly Hall

the business of a body such as the League of Nations must have been of paramount importance, and the brief stated

The acoustics of the Assembly Hall should be as perfect as possible⁶

As the jury notes are lost, and the jury's report revealed nothing at all of its architectural opinions, we do not know if the men who laid down the above requirement actually went on to consider the acoustic efficiency of the entries. Of the twenty-seven winning designs, only a handful of Modernist entries suggest anything remotely like the fan-shaped acoustic hall which has since become a common solution for such a space: the entry by M.E. Van Linge has a definite fan-shaped plan; similarly the hall by H.Th. Wijdeveld approaches this acoustic footprint⁷. Hannes Meyer's acoustic diagram indicates that he too considered the acoustics of his hall [fig.2]. Le Corbusier himself considered that 360 of the 377 Assembly Halls in the competition entries were anacoustic; as he put it, 'offered to acoustics only *enemy surfaces*'⁸. When the 'Committee of Five' examined the schemes after the failure of the competition, the experts appointed to advise them did not comment on the acoustic forms of the winning designs in their assessments at all⁹. Of course, as Le Corbusier admitted, all halls are correctable¹⁰, so perhaps this lack of official emphasis is understandable.

Le Corbusier's hall is a machine for hearing as the house was a *machine for living in*; his love of the technical solution, displayed here in his lengthy acoustical explanation, and his use of technical means to justify syntax and form, recurs throughout his work; the typical Corbusian conjunction of functional and visionary aspects is evident in his conception of the Assembly Hall, as he himself makes plain in the introduction to this central section of the book, a quotation from Montaigne:

Si haut que soit le trône,
si moelleux que soit le siège,
on n'est jamais assis que sur son cul¹¹

is juxtaposed with an image of an airplane soaring above clouds [Fig.3A]: the magical, machine-age flight is firmly rooted in practical thinking.

The Site and the Horizontal Character of his Project

The section '*Un Site*' is structured so that his project is presented as a response to its location, and is illustrated with two of the site photographs supplied with the competition brief [p89], and with four pictures of the Geneva waterfront. In the second picture, the building to middle right is the old Hôtel National, then the seat of the League of Nations. [Fig.3A]. In his description of the site, [fig.3B, 3C] Le Corbusier emphasises the *horizontal* nature of the landscape:

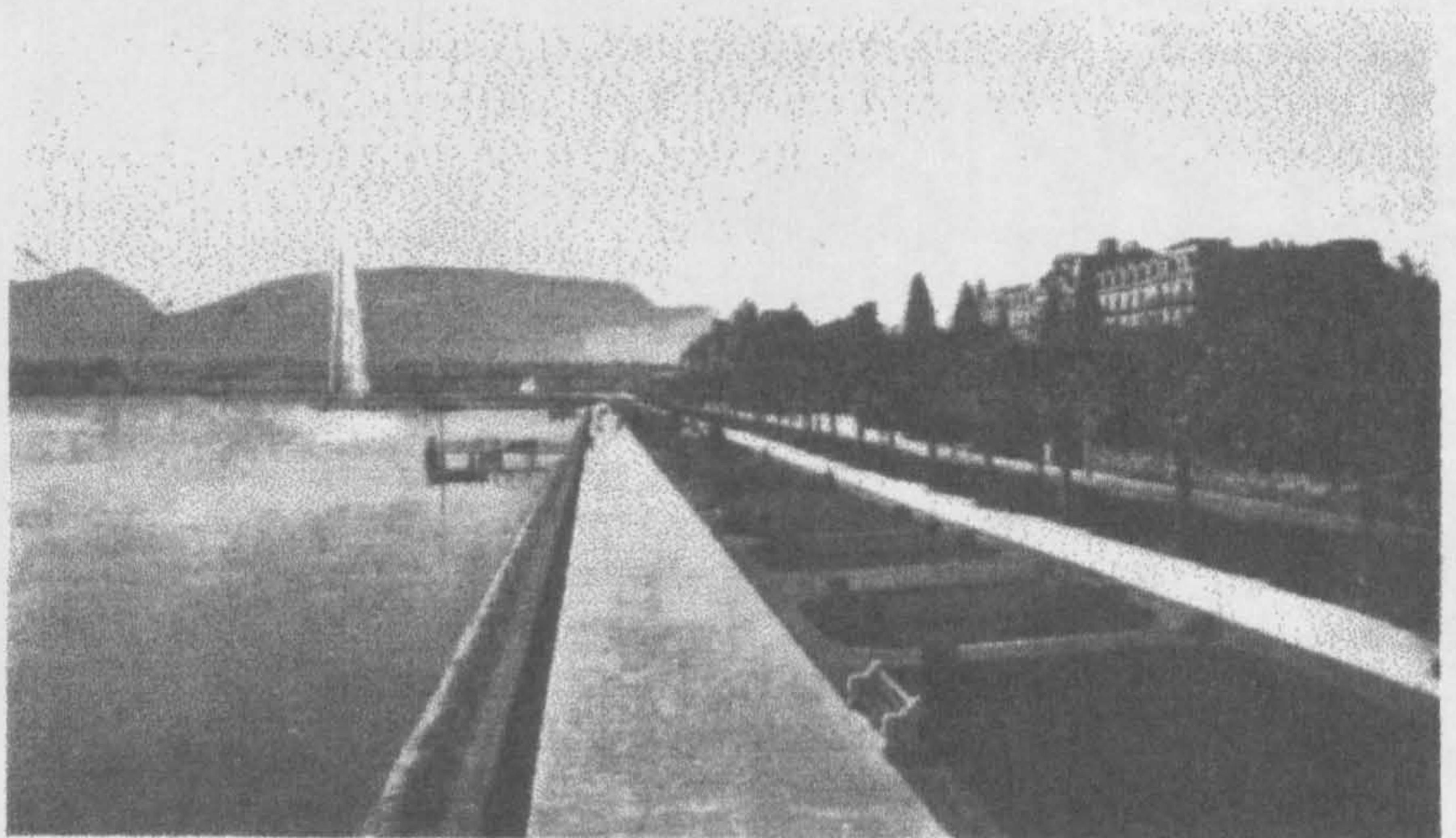
It is all powerful: a place of magnificent forests and of green grass mirrored in the sparkling water of the lake. so, in front, the fan of the Alps opens, behind is the horizontal barrier of the Jura. The lake spreads its smooth surface: its line against the Savoie bank is a pure horizontal which gives to the Alps their respective heights. We observe on the left that Geneva.....extends itself in continuous horizontals,Above Geneva the Salève raises an outcrop all striped with long, parallel bands of rock. There is no doubt of the dominance of the horizontal: the diapason.' 'It is all powerful: a place of magnificent forests and of green grass mirrored in the sparkling water of the lake. so, in front, the fan of the Alps opens, behind is the horizontal barrier of the Jura.¹²

His project, sensitive to this 'diapason', is of like horizontal character: it ranges across the site and maintains a series of horizontal levels over the steeply sloping terrain as it falls away to the lake. [Fig.4, Fig.5] The main access to the site is from the Geneva-Lausanne road, then bordered by factories and workshops, but protected from their "degrading proximity"¹³ by a grove of trees. Beyond the trees is another world of mountains, greenery and water:

...you thrust yourself into the grove towards the majestic trunks; you forget the road; you emerge where the land slopes down to the lake; you have forgotten the road, and Geneva, and Lausanne, because there before you, suddenly, is the important site, dazzling in the light, extending before you, to left and to right, and outlined with ravishing clarity. then you are in the "promised land" of Nations, and you may dream of generous acts. Who knows?¹⁴



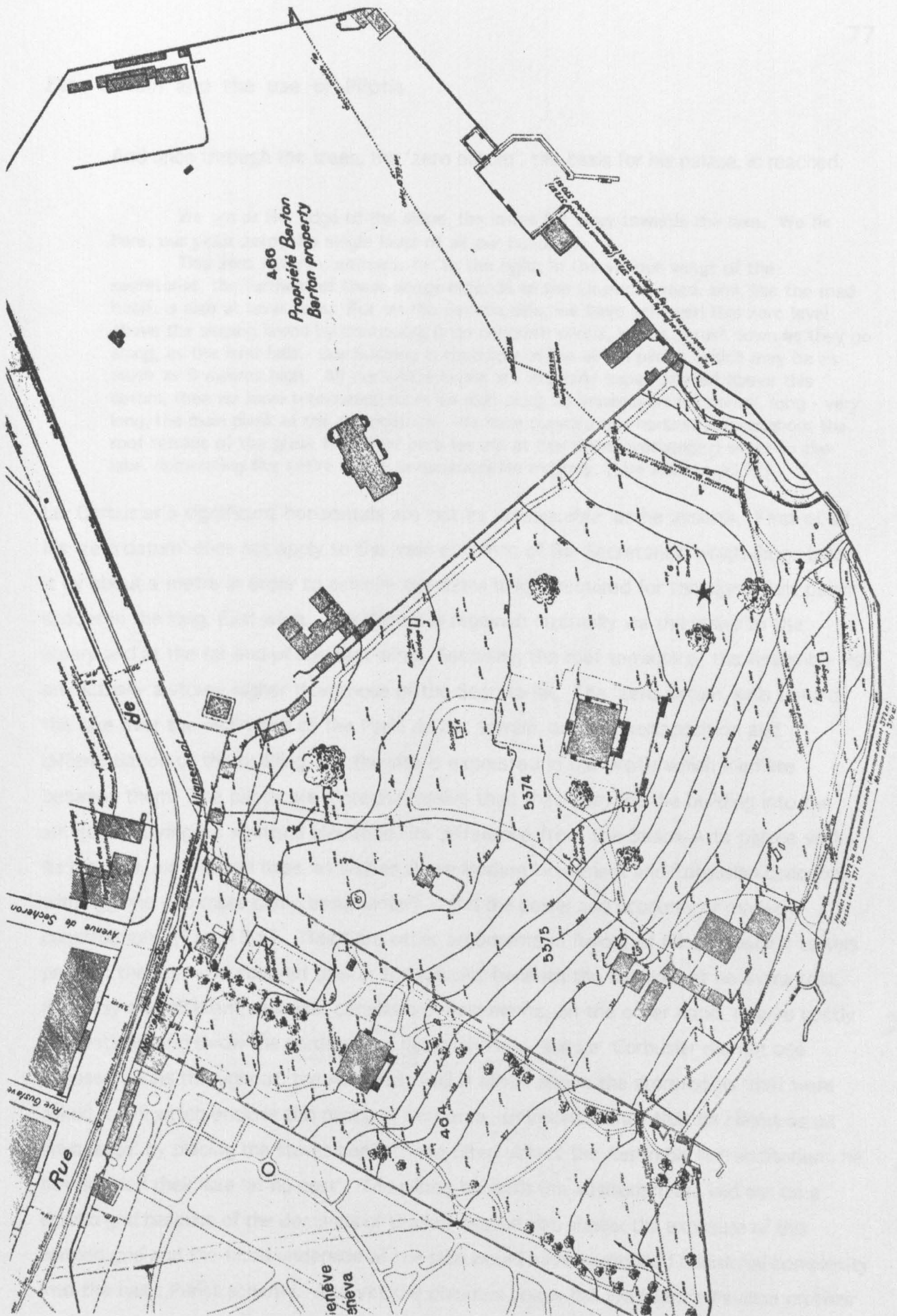
'Une Maison - Un Palais', p87



**The Hotel National,
First HQ of the League of Nations**



League Sites in Geneva



Site Plan - Parc Perle du Lac
 issued by League with Competition documents

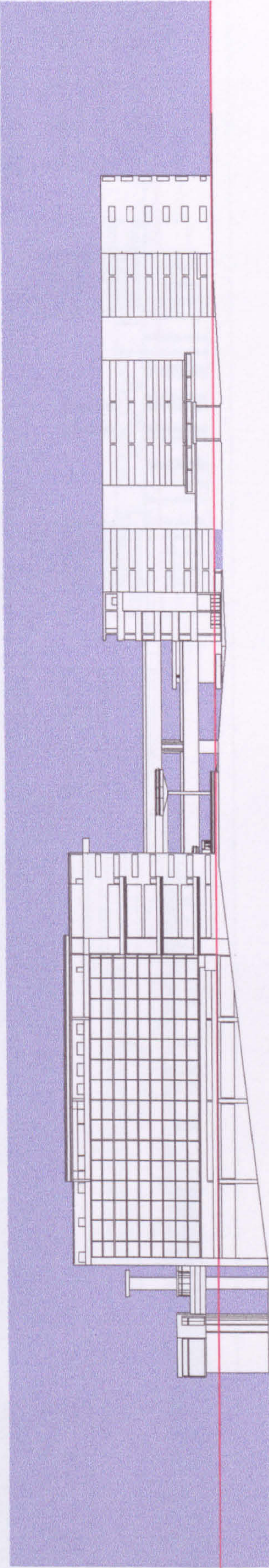
Zero Datum and the use of Pilotis

And once through the trees, the 'zero datum', the basis for his palace, is reached:

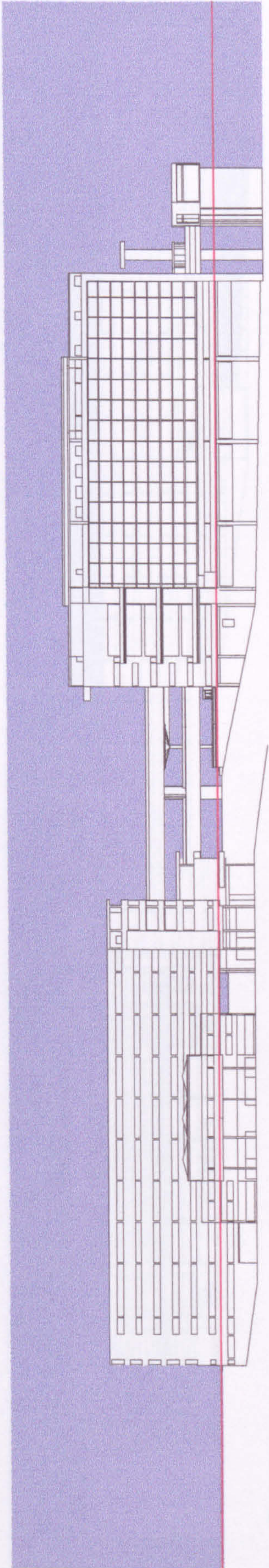
We are at the edge of the slope, the lawns fall away towards the lake. We fix here, our point zero, the single level of all our buildings.

This zero datum continues, far to the right, in the various wings of the secretariat, the furthest of these wings extends to the Lausanne road, and, like the road itself, is also at level zero. But on the Geneva side, we have achieved this zero level above the sloping lawns by continuing it on concrete pilotis, which, thrust down as they go along, as the land falls. Our building is therefore in the air on pilotis, which may be as much as 9 metres high. All our office levels are regularly superimposed above this datum, then we have terminated them on high using an impeccable horizontal, long - very long, the main plank of the composition. We have pursued this horizontal throughout the roof terrace of the great hall. And here we are at this point overhanging sheer to the lake, dominating the entire site in unquestionable majesty. [*Une Maison*, p192]

Le Corbusier's significant horizontals are not as 'impeccable' as he asserts. First of all, his 'zero datum' does not apply to the main entrance of the Secretariat, which drops below it by about a metre in order to achieve the extra height required for the significant public spaces in the long, East wing. This datum is regained internally via the stairs to the library and at the far end of the East wing. Secondly, the roof terraces of the Assembly Hall are actually a storey higher than those of the Secretariat. The 'zero datum' sails towards the lake over the declivities of the Perle du Lac terrain, and the juxtaposition and differentiation of the building and the site is expressed in the pilotis which mediate between them. The pilotis are more expressive than that: they lift the building into the air, so signifying its spiritual elevation, its difference from the Beaux-Arts palace with its massive, earthbound base, as well as those Modern Movement and Corbusian concerns with hygiene - no more damp basements¹⁵ - and the power and economy of modern construction. [Fig.4&5]. There are other arguments in favour of Pilotis specific to this project: they provide covered shelter for vehicles beneath the building, at no extra cost, and easy and efficient vehicular circulation. Basements, on the other hand, require costly excavations, and throw the gardens into heavy shadow. But Le Corbusier did not use exposed pilotis throughout: the Assembly Hall is raised above the storerooms 'that were asked for'¹⁶ which enclose the pilotis in that area, an inconsistency that he claims as an advantage: by placing the stores beneath the tilted slab of the Assembly Hall auditorium, he has doubled their size 'at no cost'. The pilotis beneath the auditorium are laid out on a curved grid because of the demands of the fan-shaped slab above: the exposure of this warped grid and the tilted underside of the slab would have introduced additional complexity into the basic Purist schema. And yet the columns below the President's Pavilion on their



North Elevation

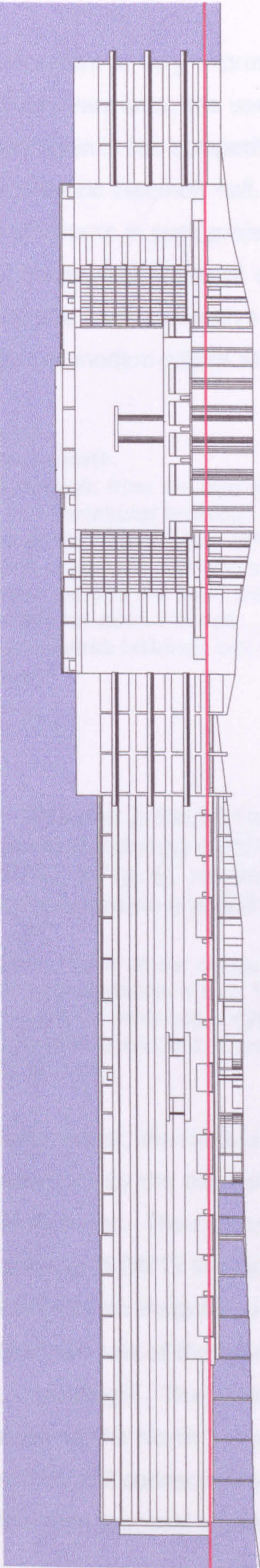


South Elevation

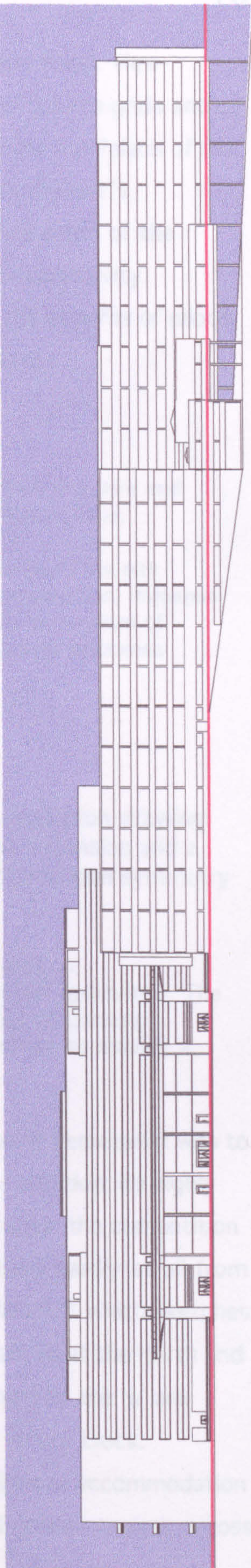
1:1250

Zero Datum

figure 4



East Elevation



West Elevation

Zero Datum

1:1250

figure 5

curved grid are revealed; this local curvature is very expressive of the focal, view-gathering character of the pavilion. Four years later, the use of angled column grids and of pilotis beneath tilted slabs may be seen again in the competition entry for the Palace of the Soviets¹⁷; the special demands of the acoustic assembly hall, and Le Corbusier's persistence with axial and symmetrical layouts in such projects, reveals some of the limitations of the rules for the Purist house, limitations of scale and expressivity.

The *Une Maison* passage on the site concludes with a hymn to the benefits of pilotis in achieving the harmonious conjunction of modern palace and landscape:

Here: the sunlight passes beneath.
the garden passes beneath.
the view passes through; from the high ground one will see here and
there, beneath the Secretariat buildings, the scintillating lake;
and there will never be damp or dark offices.

Such an arrangement of buildings is a *pastoral conception*. We understood the site perfectly; we are far from the city; here is the lake, trees, plains mountains, immense horizons. One could not contemplate an urban concept..... where the succession of streets, of squares, the masses of diverse buildings can support cupolas or domes crowning pyramidal compositions.¹⁸

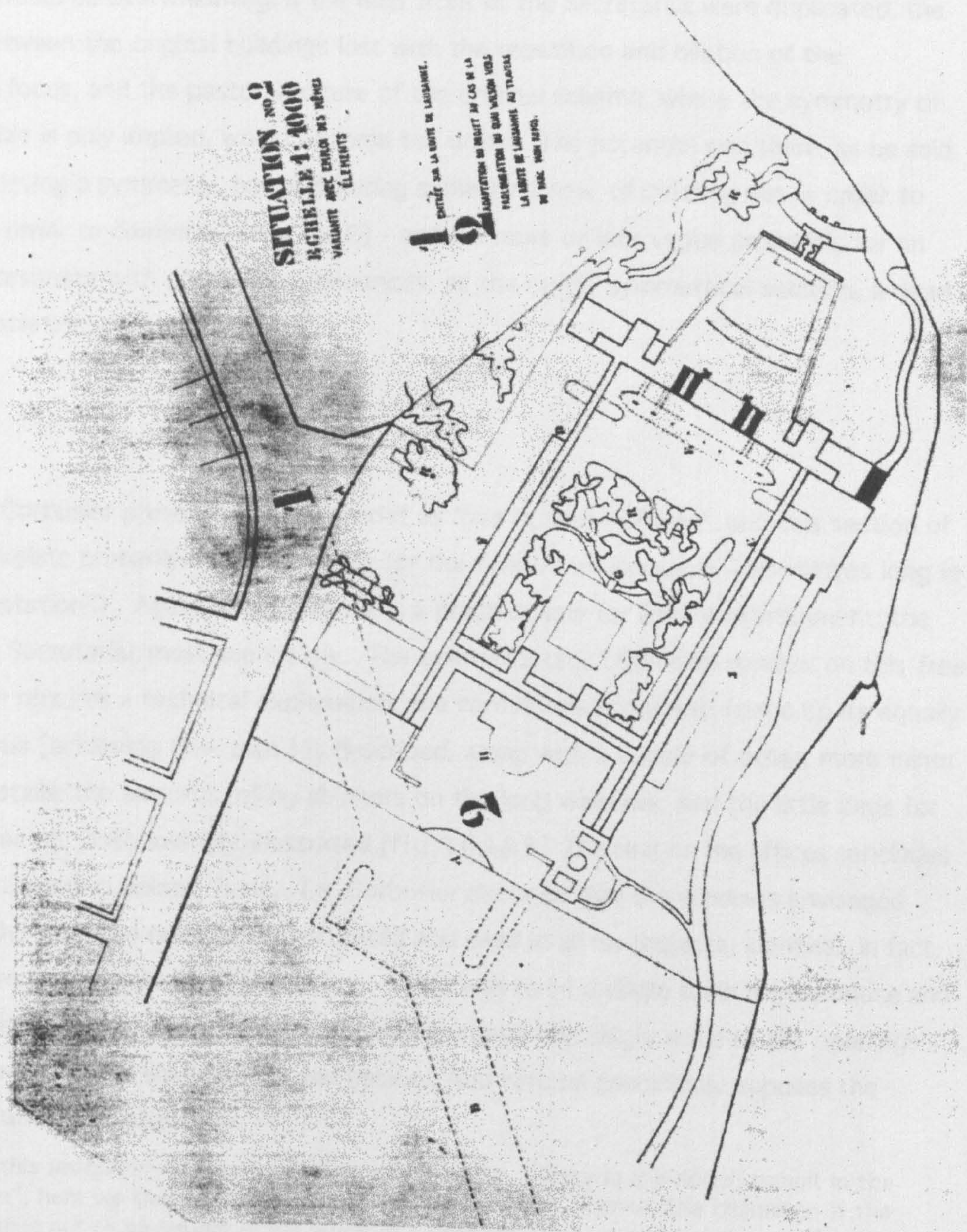
A Required Basic Ensemble

This section is very brief: Le Corbusier presents the first competition drawing: the site plan showing the whole composition including a possible future extension and a possible alternative arrangement. [SDN1 & Fig.6] He remarks on the hidden symmetry of the scheme which is revealed when the extension is added:

Thus the - temporarily asymmetric - form of our project is explained.....
I do not however, attach any significance to a "school-boyish" symmetry. The future allows us every possibility, not of achieving a symmetry, but of creating something new, of creating not *in order to end*, but *in order to continue*, to amplify a rhythm previously sufficient and taut.¹⁹

The future symmetries are not absolute: rather, the mass of the present Secretariat was to be balanced across the main axis of approach by the mass of the later addition; its highly symmetrical East facade would not be repeated. The extension proposal in the competition submission is indicated on only one drawing [SDN1] in plan, and differs hardly at all from studies 23.382 and 23.318²⁰. This depicts an irregular, u-shaped block²¹ which sketches an extended court at right angles to the main axis of the ensemble, cranked at the North end to indicate a connection with the B.I.T. building²². The gardens enclosed by the 'u' are simple and formal, with a sunken garden to the North balancing the library block.

Although early sketches show the Assembly hall connected by two bridges to accommodation on either side [see Figs. 17 & 19], this final proposal shows a raised garden terrace across



23.215

figure 6

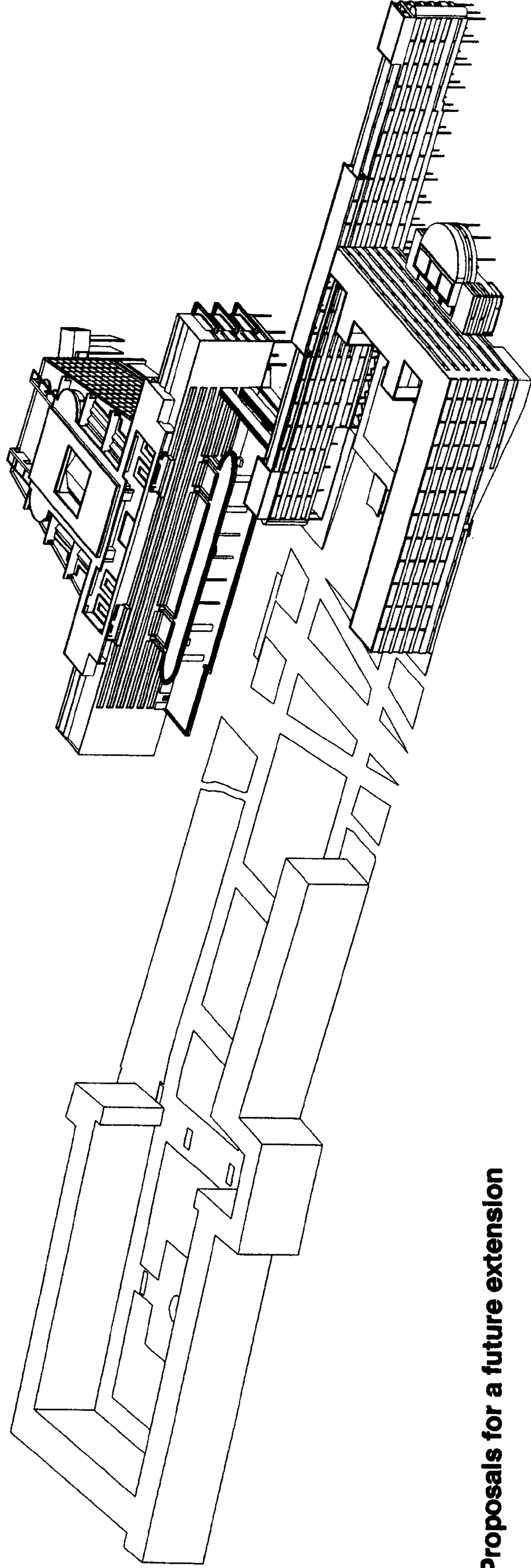
the axis of symmetry, in the only place where additional offices might have such an internal connection: the annex becomes a self-contained island. No explanation for this arrangement is offered, perhaps it is simply that the formality and directionality of the ensemble would be overwhelming: if the east front of the Secretariat were duplicated, the balance between the original buildings lost with the repetition and dilution of the Secretarial focus, and the pastoral nature of the original scheme, where the symmetry of the ensemble is only implied, would become too urban. The potential was there, as he said, 'not of achieving a symmetry, but of creating something new, of creating not *in order to end*, but *in order to continue*.' [fig. 7 & 8] - and his more or less vague proposals for an extension resonate with possible continuances, as the rigidly symmetrical solution, a dead end by completion, could not [fig. 9].

Offices

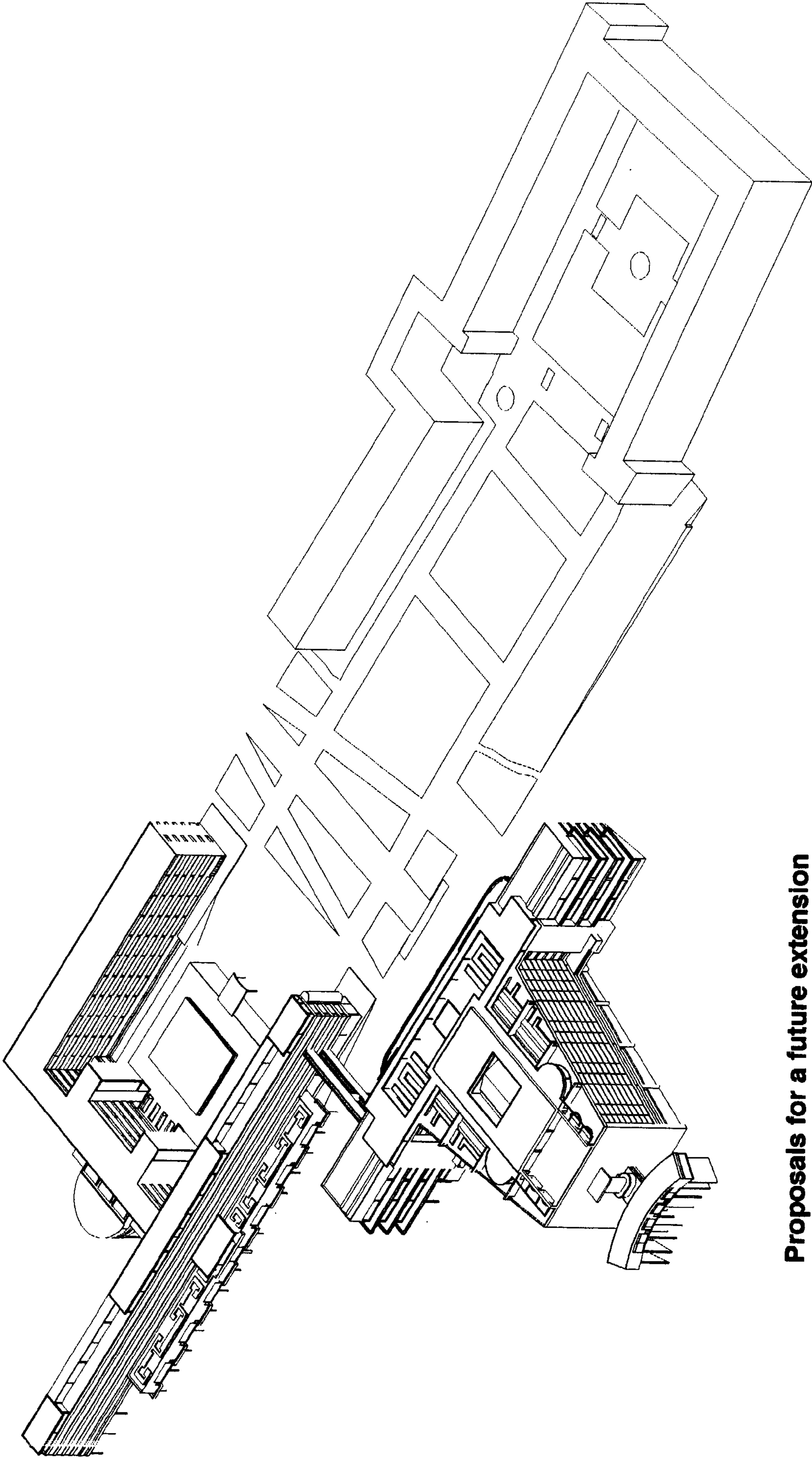
Le Corbusier presents his Secretariat as 'five hundred offices', and this section of the text consists primarily of an argument for the *fenêtre en longueur*, 180 metres long in this manifestation²³. Again, the argument is a practical one for light/enlightenment: the men of the Secretariat must see clearly. The uninterrupted, 180metre window on this *free facade* then requires a technical explanation: the cantilevered concrete frame on its equally spaced pilotis [achieving *free plan*] is described, along with a couple of other, more minor technical details: the external rolling shutters on the long windows, and the little cage for window cleaning, both lovingly illustrated.[fig. 10 A & B] The text on the offices concludes with two interesting points: firstly, Le Corbusier declared that the windows envisaged here were the standard ones he had patented and used in all his projects, identical, in fact, to those used for the Villa Stein at Garches. There was to be a single scale for the house and for the palace - the human scale. This standardisation - the single scale of the openings - achieves a *unity* which linked house and palace. And here he specifically opposes the Beaux-Arts notion of *character*.

And this *uniformity* is a precious element of *unity*. "Unity in the detail, tumult in the whole", here we think all at once of calling on the town planner. The character of the palace is not to be sought in the study of a span where sacred "canons" are to be applied. Character will be found in the gesture of unity of the building. Ours extends over 180 metres, frontal, facing towards Mont Blanc, dominating the meadows.²⁴

The second point of interest is that the Secretariat was not laid out as a closed-courtyard building, because of the unequal conditions that would result in the offices ranged around it:

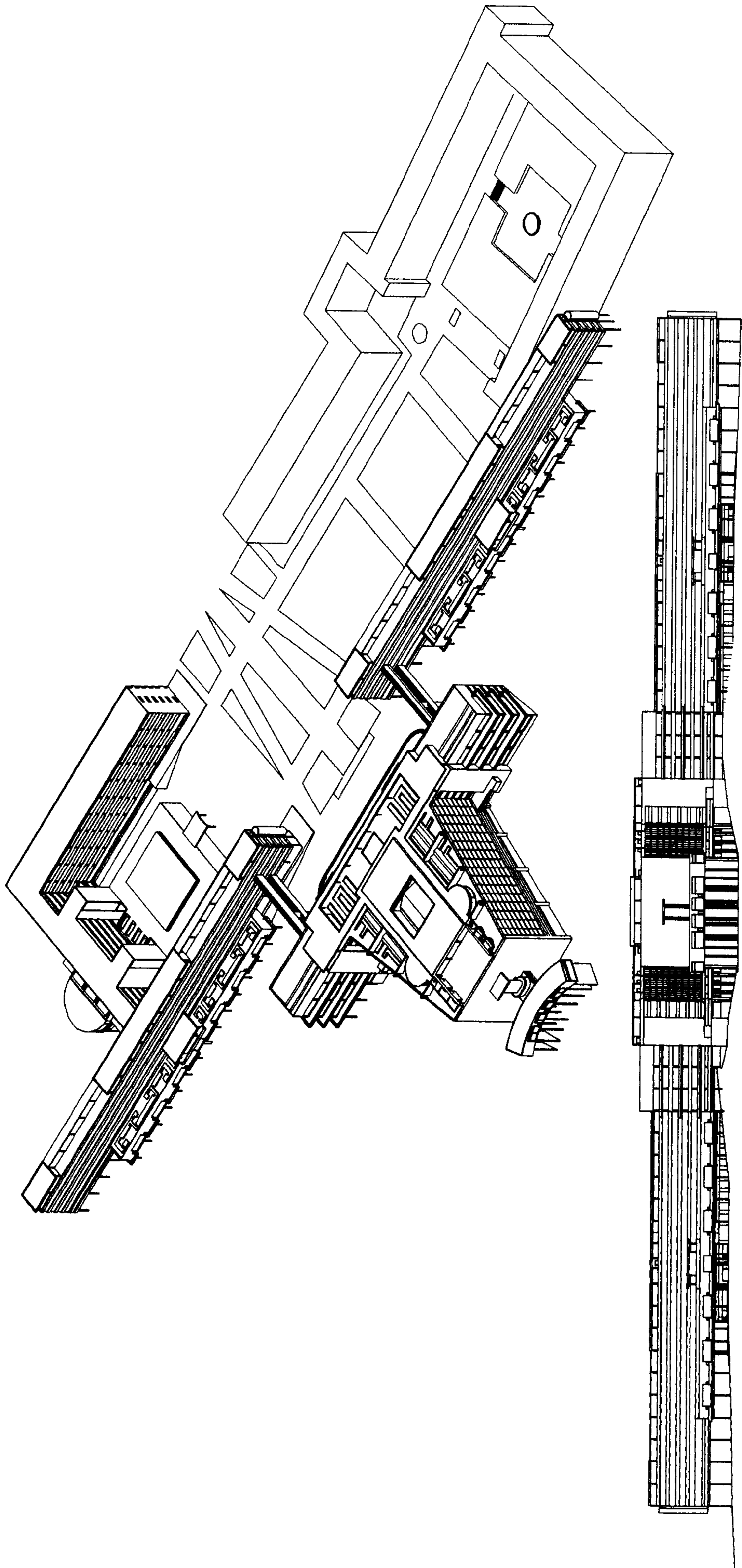


Proposals for a future extension

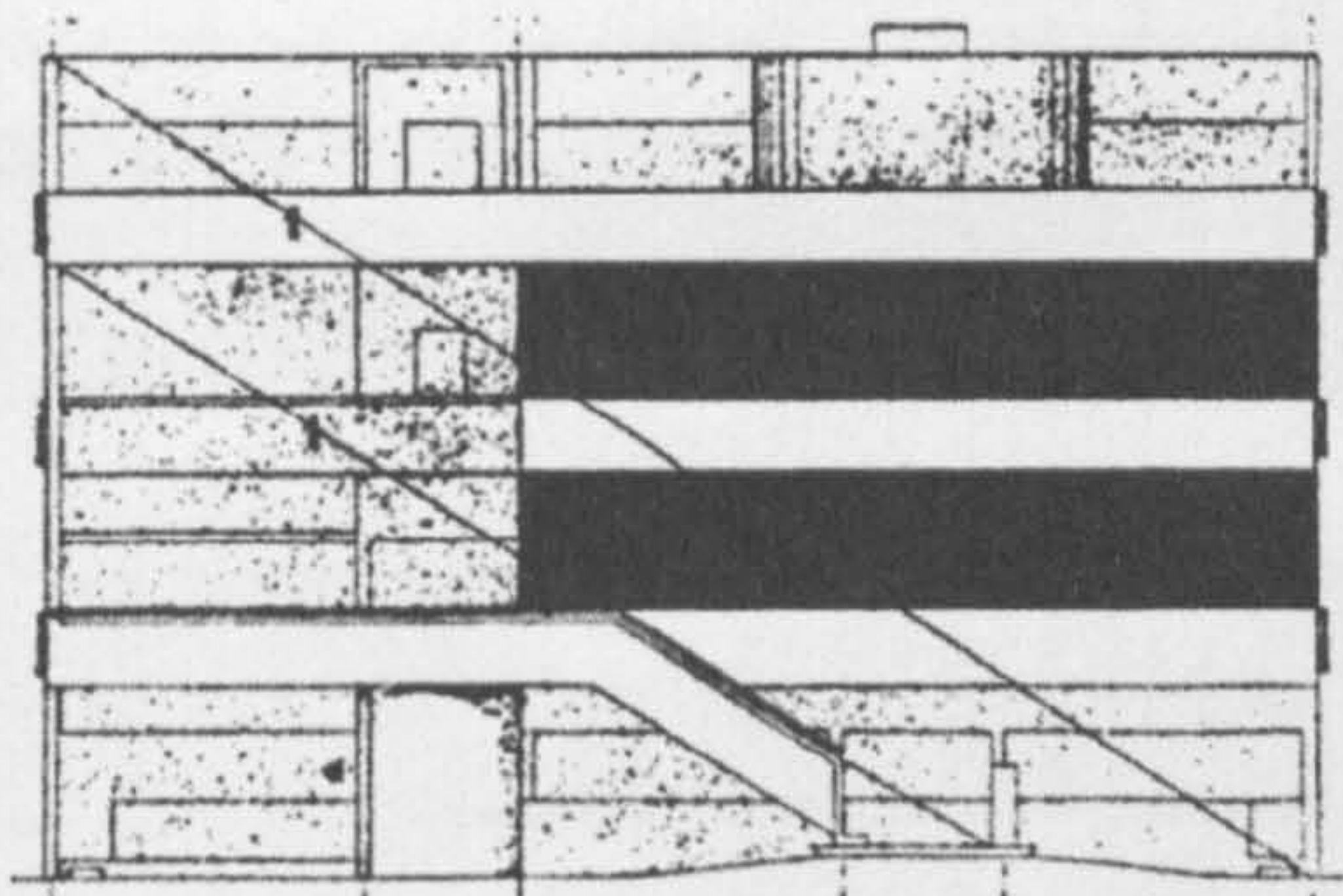


Proposals for a future extension

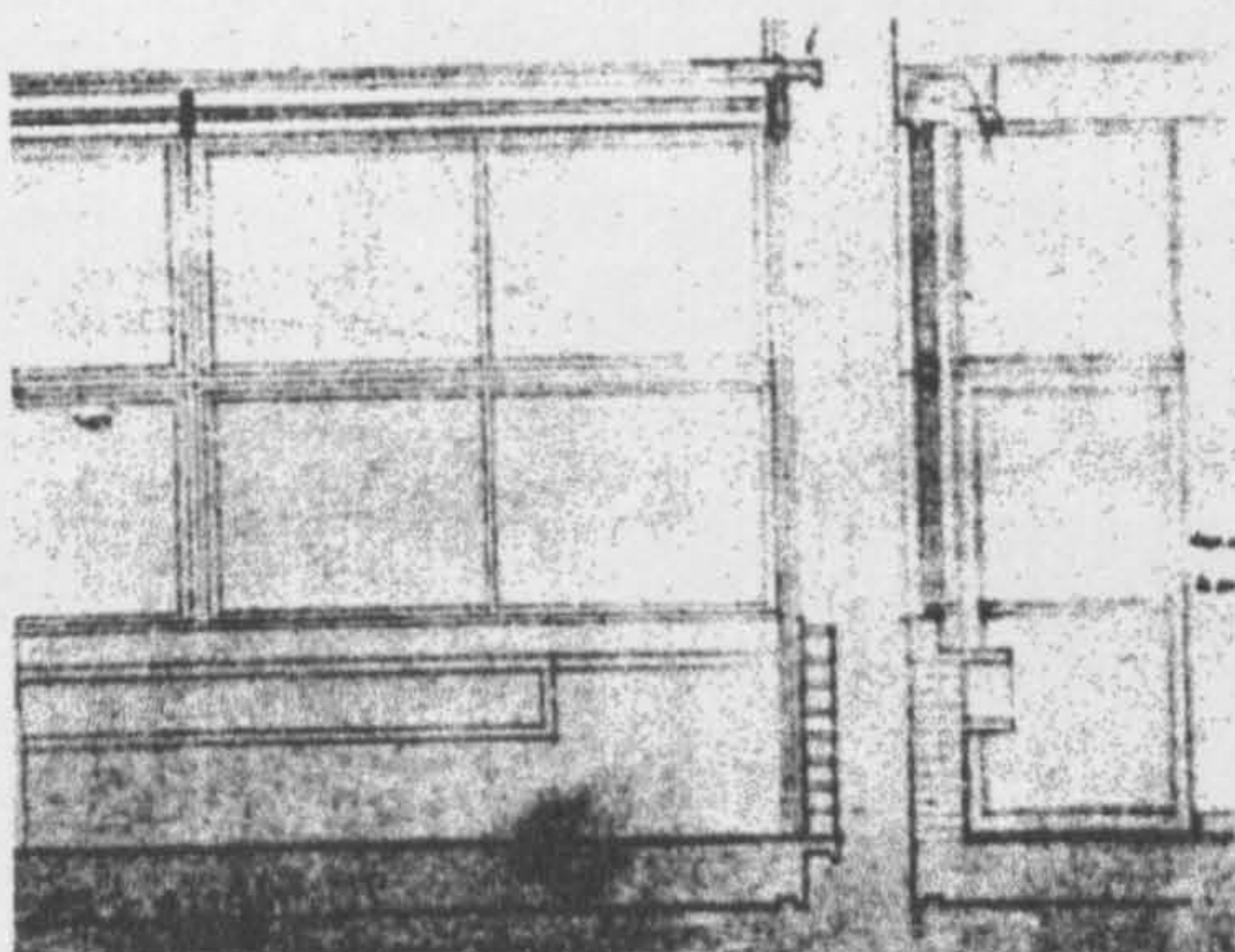
figure 8



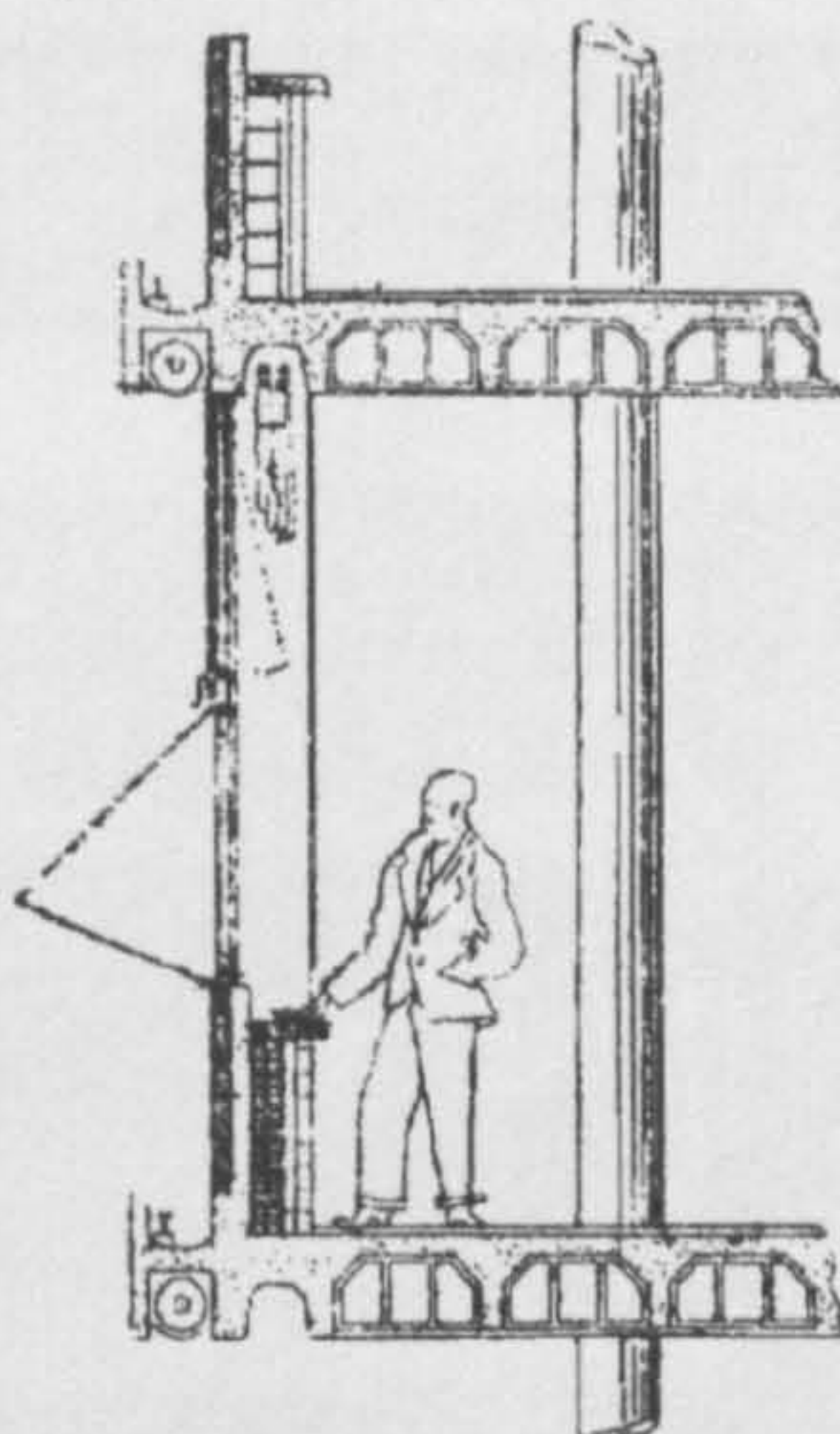
The consequences of symmetrical extension: this possibility was NOT considered.



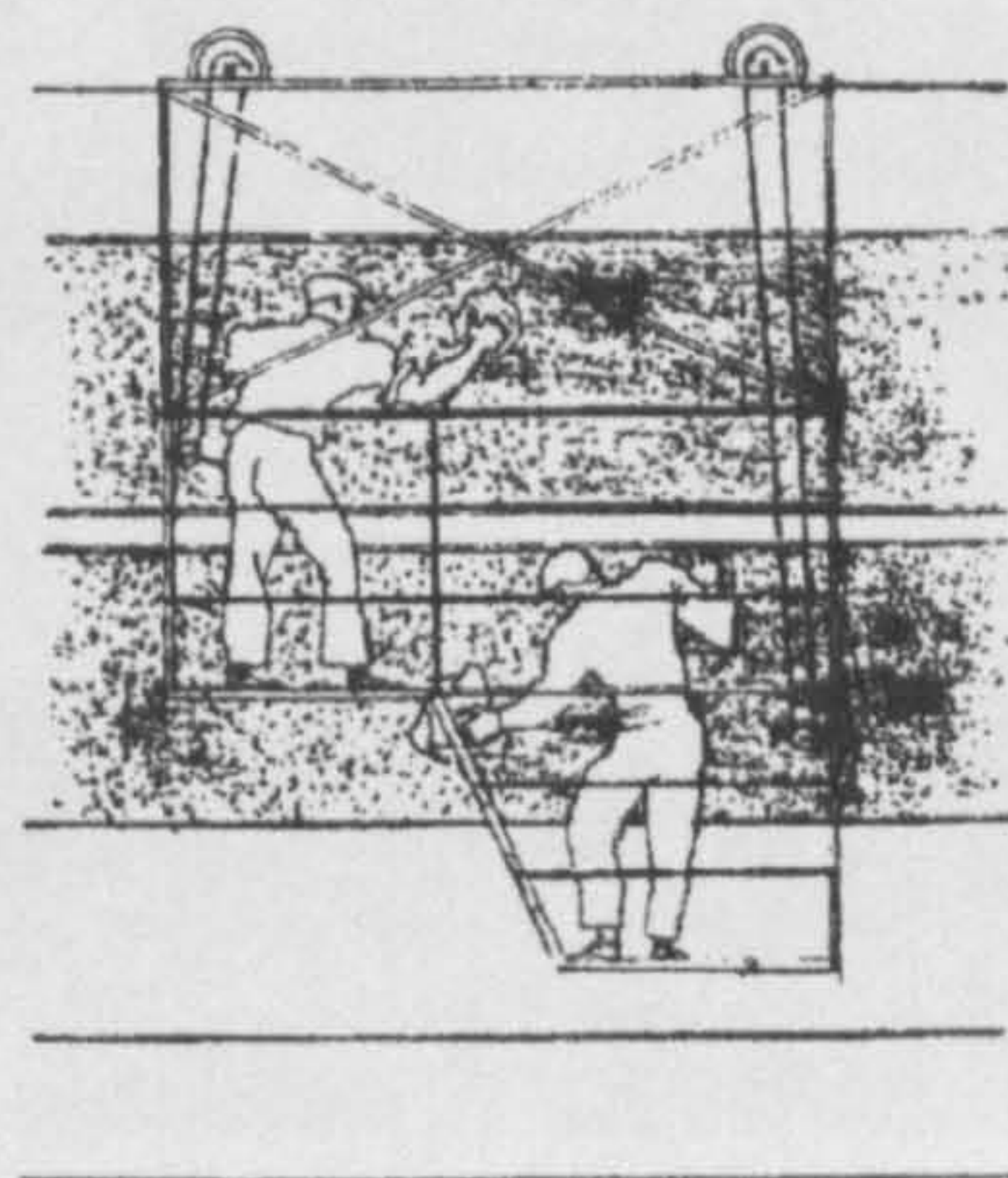
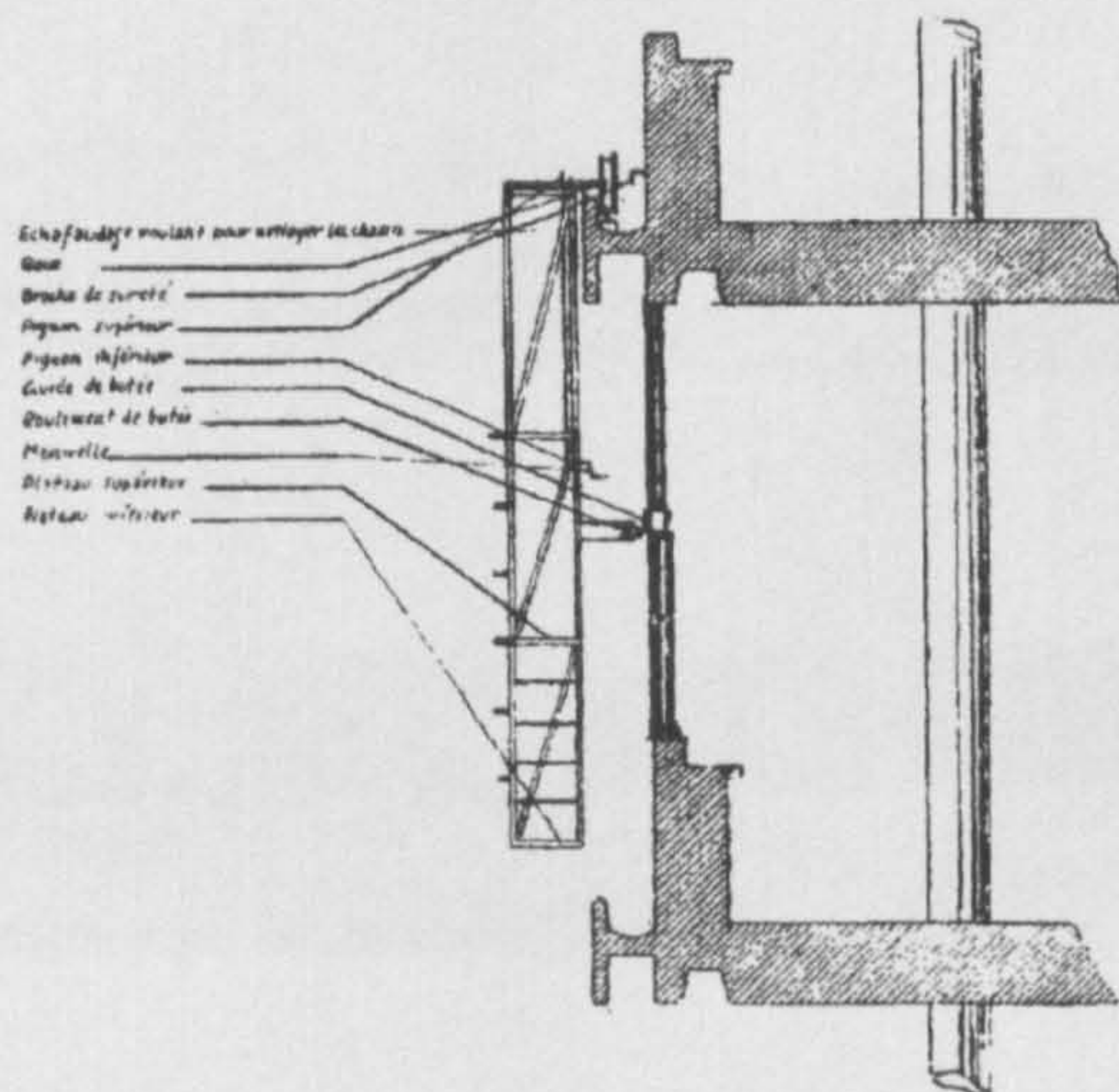
Villa Stein, Garden Facade
From Oeuvre Complete, Vol.1



Windows from Villa Stein
Garden facade [FLC10425]



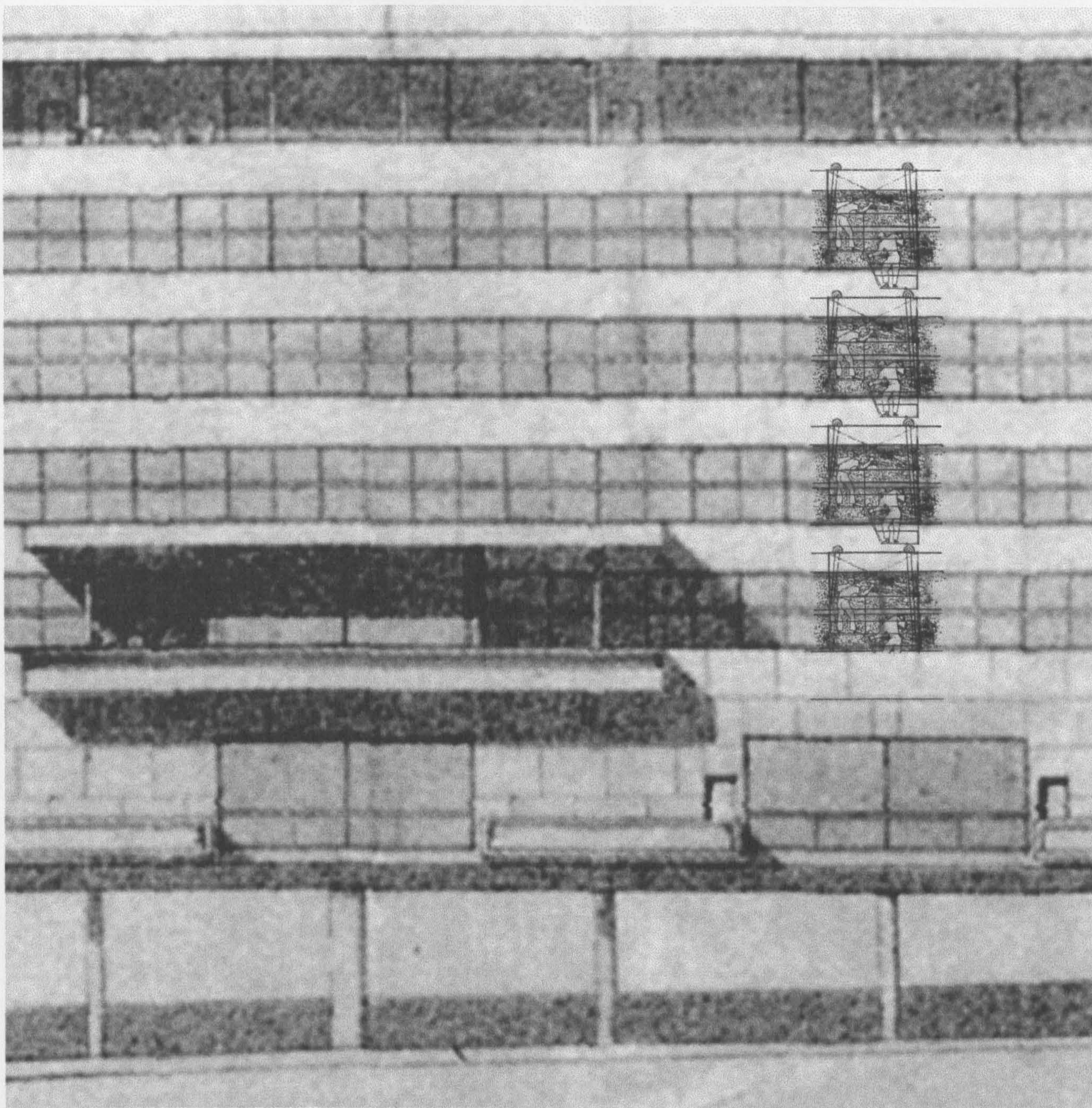
La façade ne porte plus les planchers; elle est portée par les planchers. Les poteaux de structure sont à 1 m. 25 à l'intérieur de la façade. La façade est entièrement libre. Les fenêtres sont continues, sans jamais d'interruption. Chaque pièce réalise l'éclairage théorique, parfait. Les fenêtres coulissent latéralement (Brevet L. C. et P. J., exploité par les Manufactures de Saint-Gobain).



VUE DE L'ECHAFAUDAGE ROULANT

La « passerelle-bicyclette » de nettoyage des fenêtres. La solution des fenêtres (ossature de béton, fenêtres coulissantes, caisson extérieur des volets roulants) est une solution technique pure. Elle apporte une solution esthétique pure.

Technical details of the Secretariat facade. [Une Maison]



Cleaning cage drawing superimposed on lakeside elevation of the Secretariat. The visual and practical implications of the system have not been worked out.

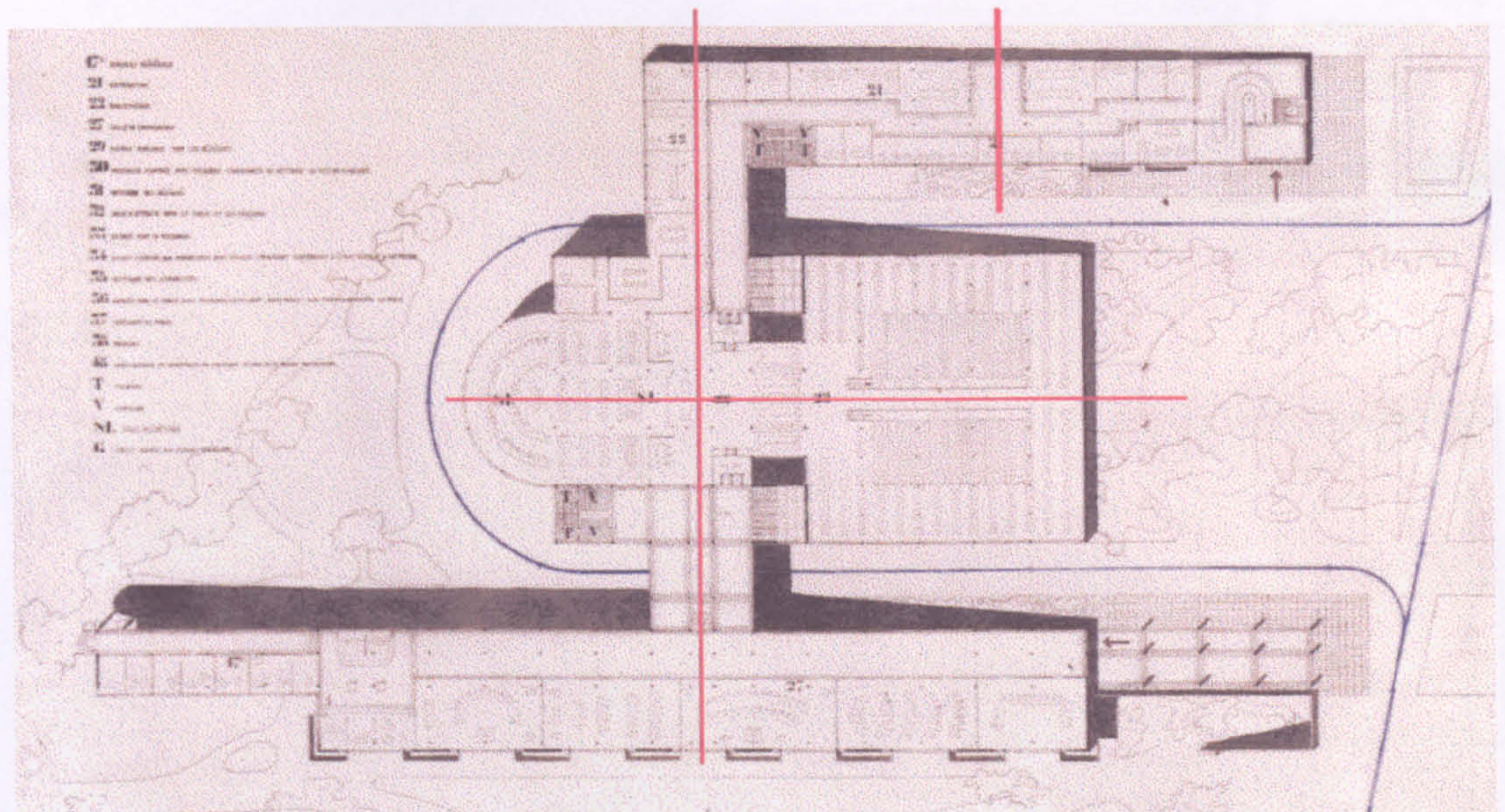
not discussed
in main text!

You have allowed an ideal office-type. You have been obliged to accept that the 500 offices might conform to an ideal type. One of the offices opens out onto the vast open spaces - light and view; - then you must accept that all 500 offices should face the light and the view.²⁵

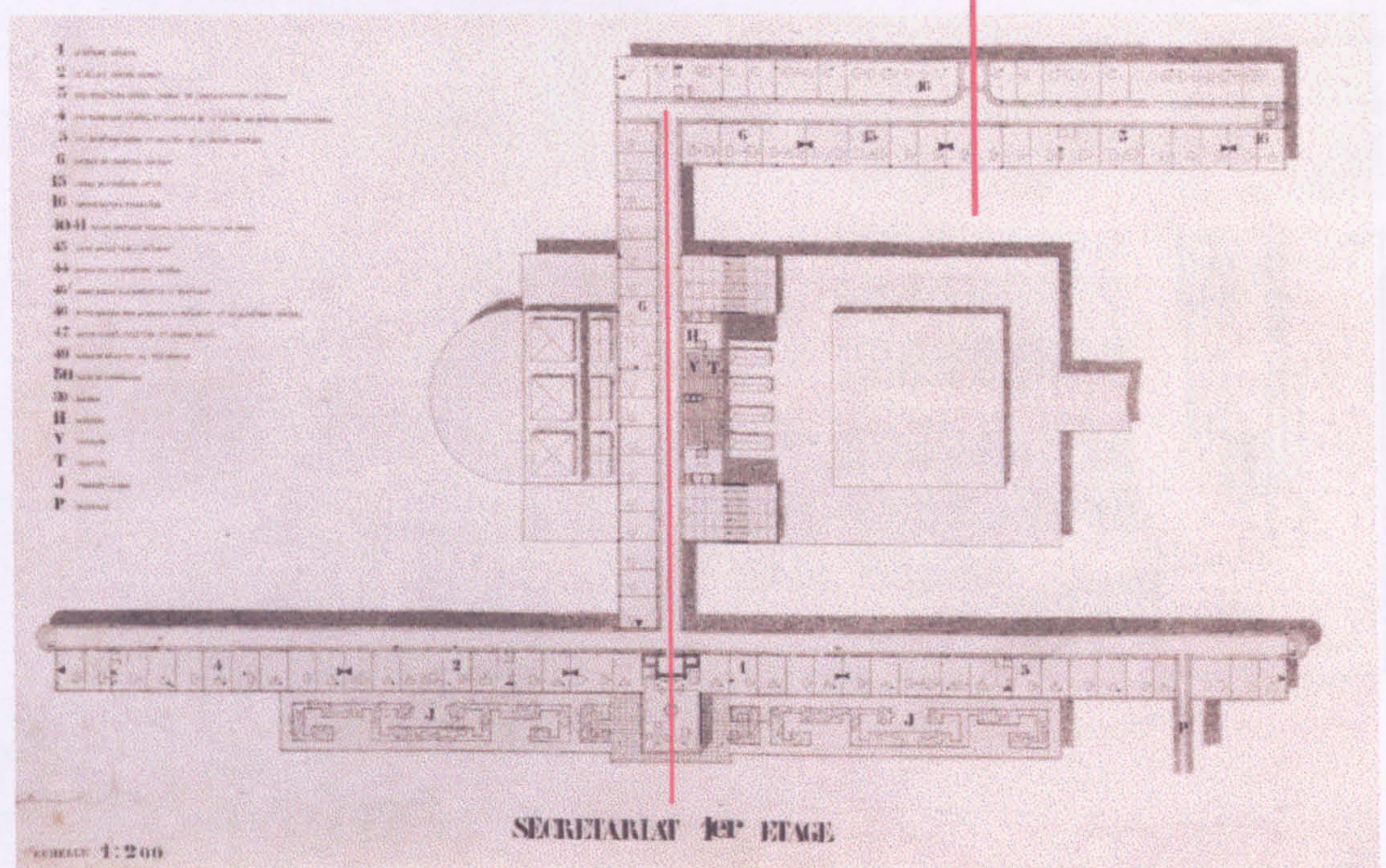
The arrangement of the Secretariat accommodation specified in the brief is not mentioned in Le Corbusier's text, except for the offices and Commissions Halls in the lake side wing. In fact the internal planning exhibits an odd mixture of pragmatism and formality. [See SDN3-SDN9] For instance, the shorter, west wing has an entrance on the [west] Lausanne Road side, which leads directly to the Dispatch Section of the Secretariat. This facade, with its setback columns and continuous long windows, has the same potential for frontal facade development as the lake side facade of the east block, but the modest central entrance is the only interruption to the series of long windows. Actually, this entrance is not in the middle of the face of the block, it is centralised on the shorter, east facade of this west block [fig. 11A]. Within, each floor of this wing²⁶ shows a corresponding, centralised development of the corridors, with a pragmatic distribution of functions around them which is not reflected externally. At the same time, the corridors extend to the very end of the block²⁷, beyond the junction with the crosswise link block, implying a possible future extension to the south which would make a nonsense of these rather nominal symmetries²⁸. There are other examples of a clash of formal and practical concerns on the entrance level plan [SDN4]. The link block joins the long, east block centrally, and this junction is developed internally at ground floor level as a formal entrance to the library, and echoes the centralised east facade. But the planning of the range of Commission Halls and their partitions does not acknowledge this axis internally, and the corridor beyond the library is shifted off axis to the north so that some of the larger library offices can be accommodated. Planning on the floors above is generally regular and formal.

A Great Hall for 2600 People

As I indicated, the text concerned with the acoustic solution to the Assembly Hall makes up a significant portion of the *Explications* section of *Une Maison*. From his very detailed description it is clear that Le Corbusier had a thorough grasp of acoustics and of 'modern' solutions, no doubt gleaned from Gustave Lyon, who designed the Salle Pleyel in Paris, and the acoustics expert consulted for this project. This general acoustics



SDN 4 - ground floor

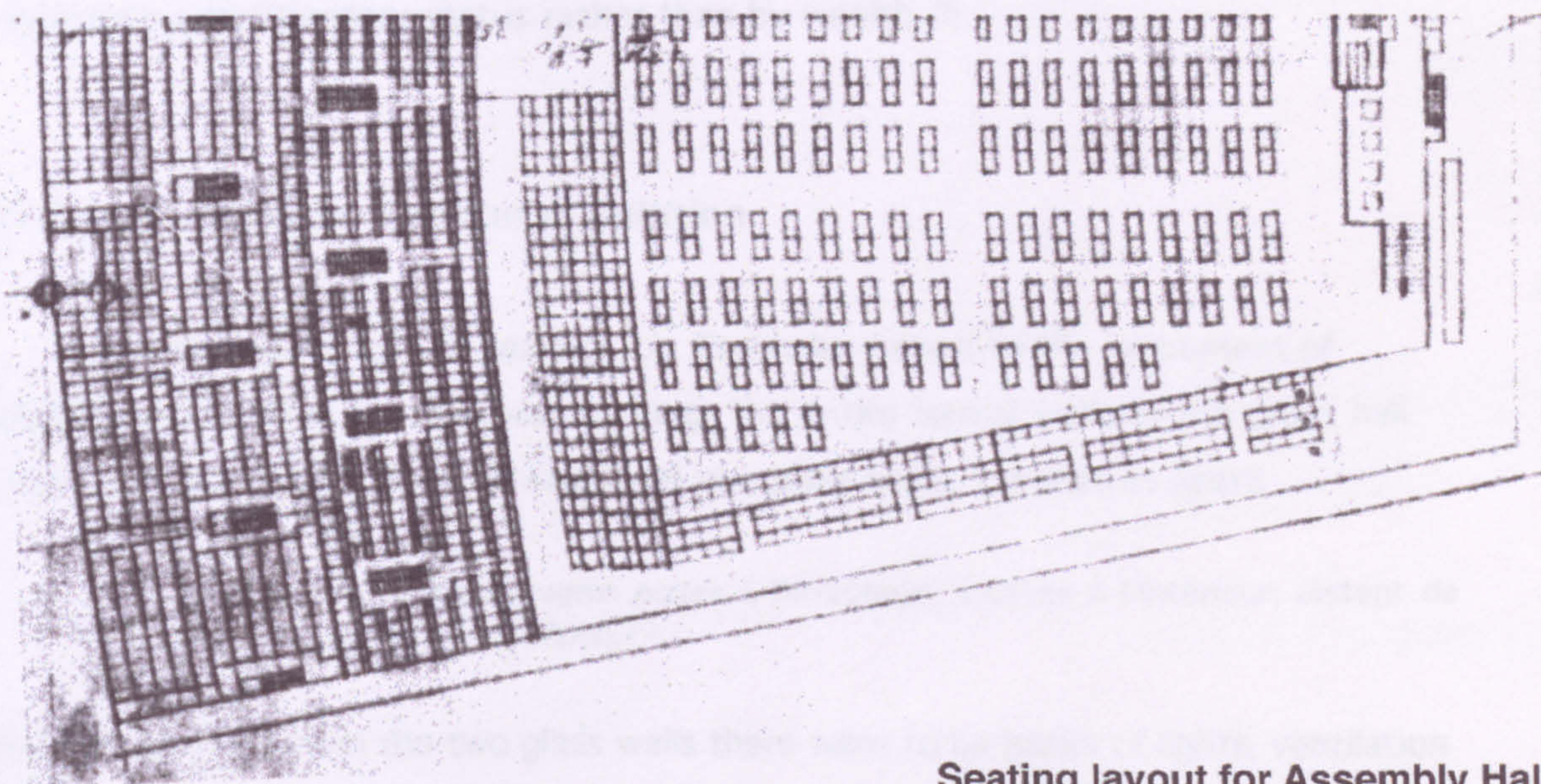
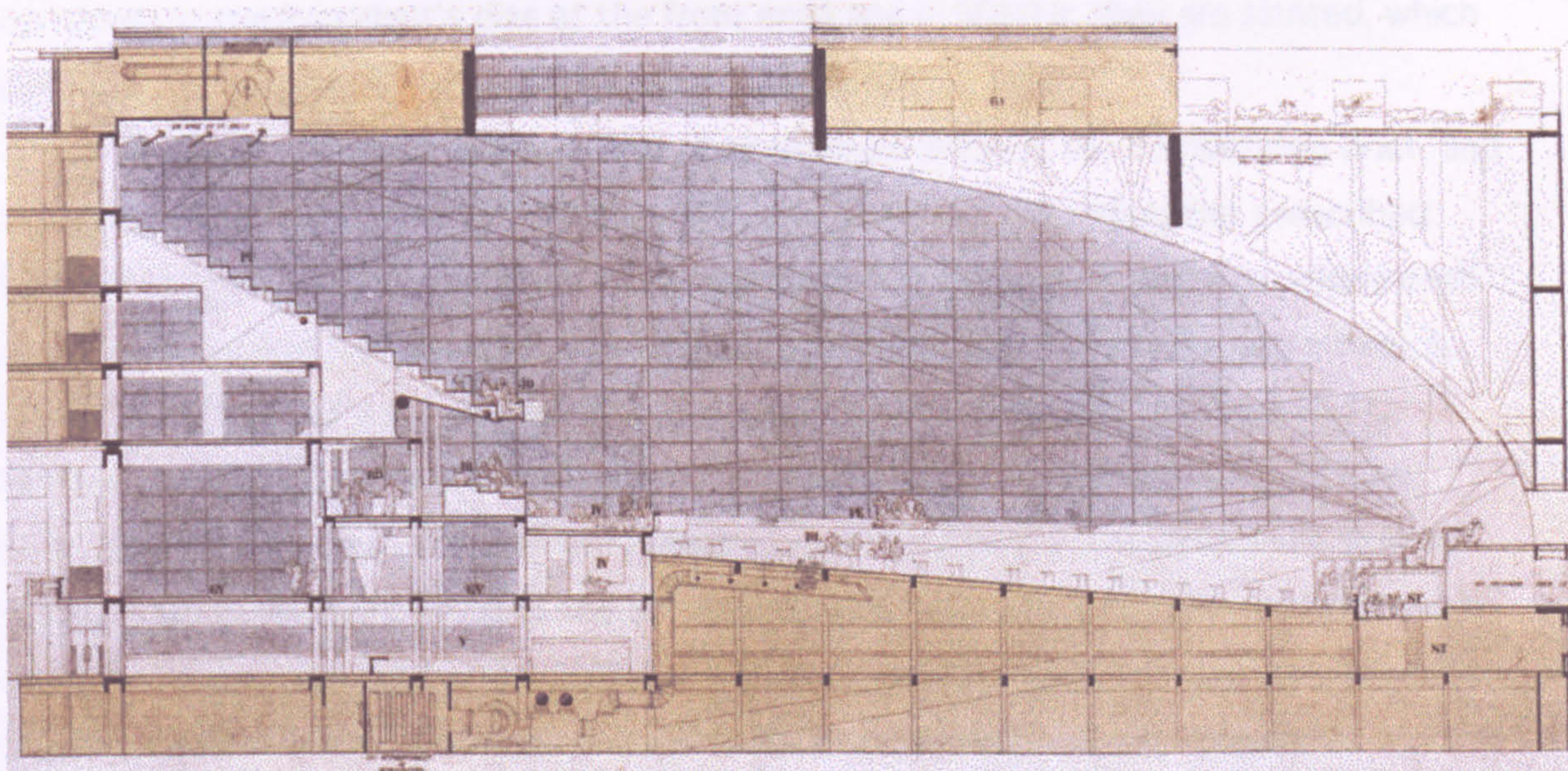
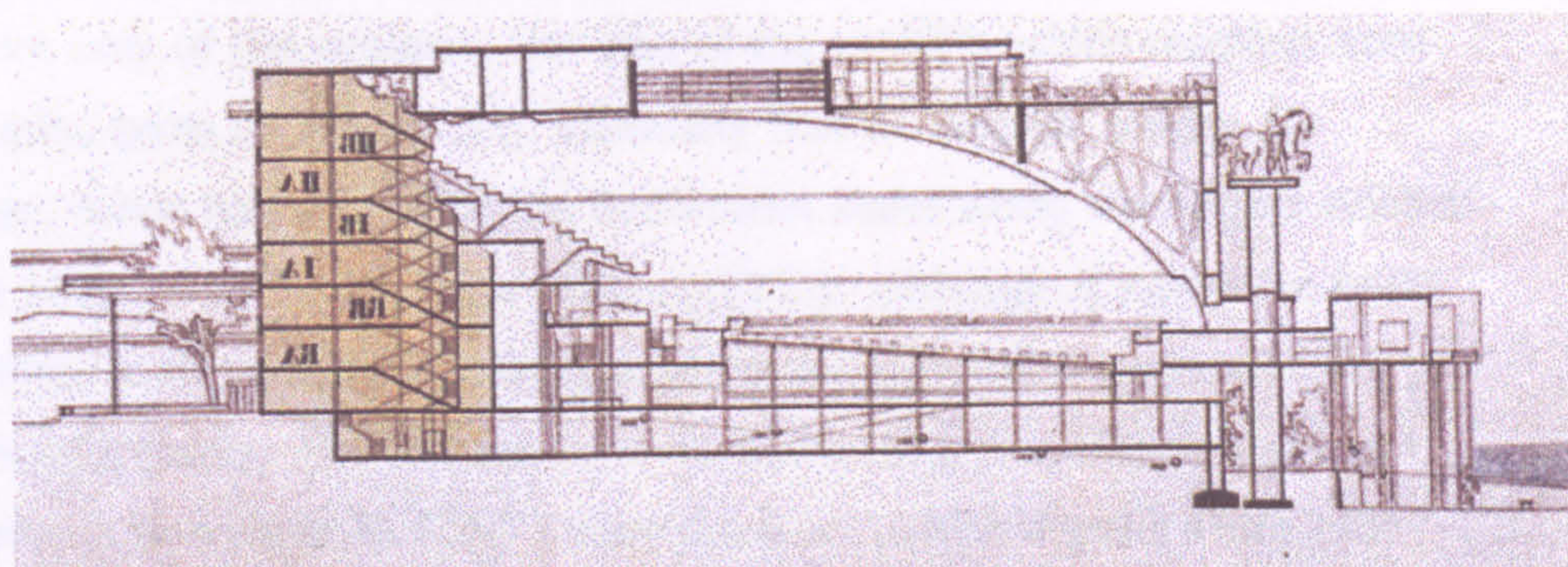


SECRETARIAT 1^{er} ETAGE

SDN 5 - First floor

Axial planning in the Secretariat

Side galleries
shown level
[SDN13 right]
and tilted
[SDN18 below]



Seating layout for Assembly Hall.
from SDN13 [reversed], SDN18 & FLC23.255

peroration is followed by a description of the seating arrangements in the Assembly Hall, and the excellence not only of the acoustic, but also of the visibility which resulted from the fan-shape. Actually, some of the seating, especially that of the side gallery, in Le Corbusier's project is not fully resolved: the Secretariat seats along the angled sides of the fan face slightly away from the speakers' rostrum [11°]. Although it may have been more important for these staff to see the delegates whom each served, the arrangement seems somewhat uncomfortable. The two sections in the drawings set, SDN13 and SDN18, show the side galleries in two ways: in SDN13 they are level [which implies a need for steps down to the President's dias at the front end] and in SDN18, they are slanted, which means that the seating shown in plan would not work [fig. 11 B].

The seating requirements are described in great detail in the competition brief, and Le Corbusier's arrangement follows the description closely, extending the prescribed division of users beyond the confines of the hall and back to the entrance quai, where each category of user has his own entrance. It could well follow that this order was a French conceit, arising out of a French architectural tradition stemming from Ledoux's classification of the audience in his Besançon Theatre, which Le Corbusier must have known, but it is not clear whether the French competition jurors formulated the seating requirements, or what the input of the Secretariat was. At Besançon, Ledoux's solution to the seating arrangements was to invert the traditional seating layout so that 'he who pays the most should be closest'. At the Palace of Nations, proximity to the rostrum is determined by participatory status rather than by wealth ²⁹.

Lighting the Hall: a Structural Solution

From the instrument of hearing, Le Corbusier moved to the instrument of enlightenment, and his proposal was striking: the entire lateral walls of the great hall were to be glass screens, each consisting of two glass skins, 1.5 metres apart:

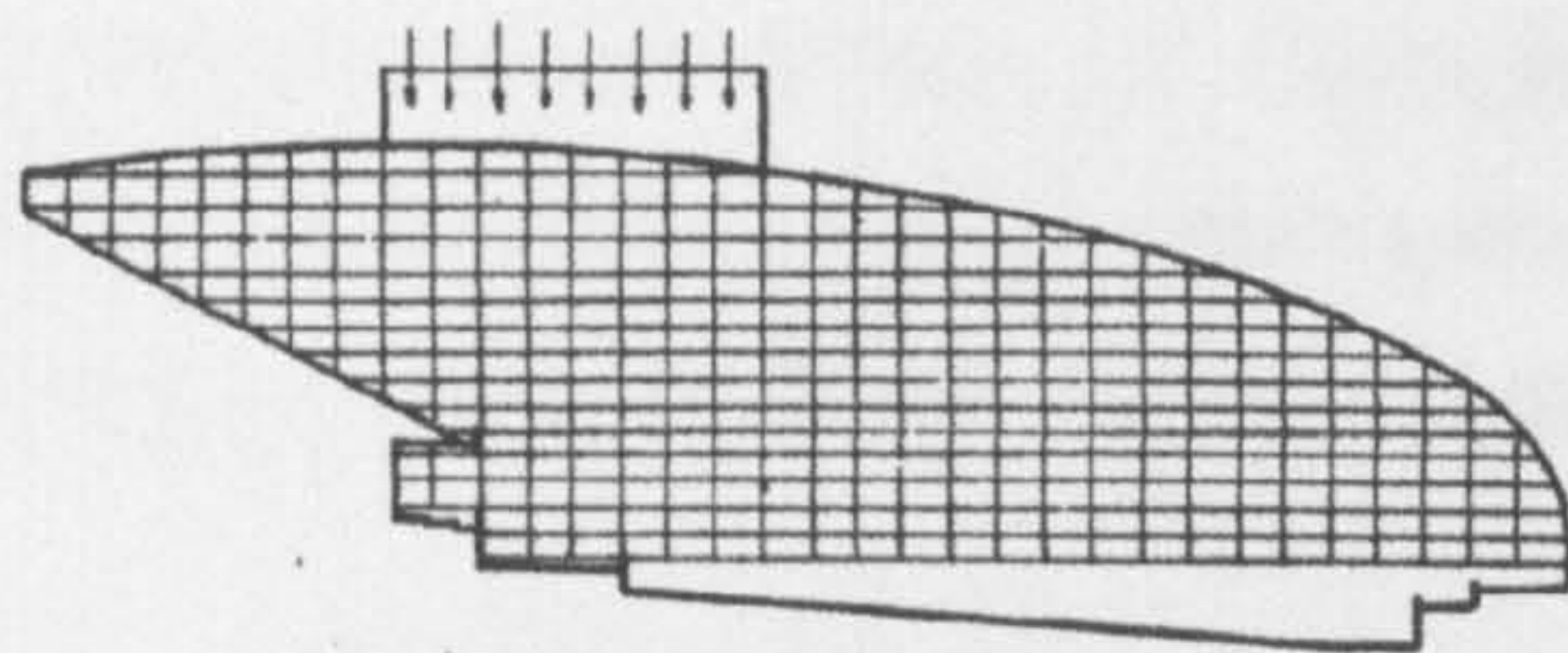
...mur extérieur de dalles de verre polies à l'extérieur, sablées à l'intérieur; distant de 1m 50, second pan de verre dépoli.³⁰

In the 1.5m gap between the two glass walls there were to be banks of lights, ventilation shafts, cleaning and service galleries etc,. By day, sunlight would stream through the glass; at night the banks of lights within the gap would light the hall, and externally, no doubt, the building would appear as a shining beacon by the lake³¹ [fig. 12]. But to build

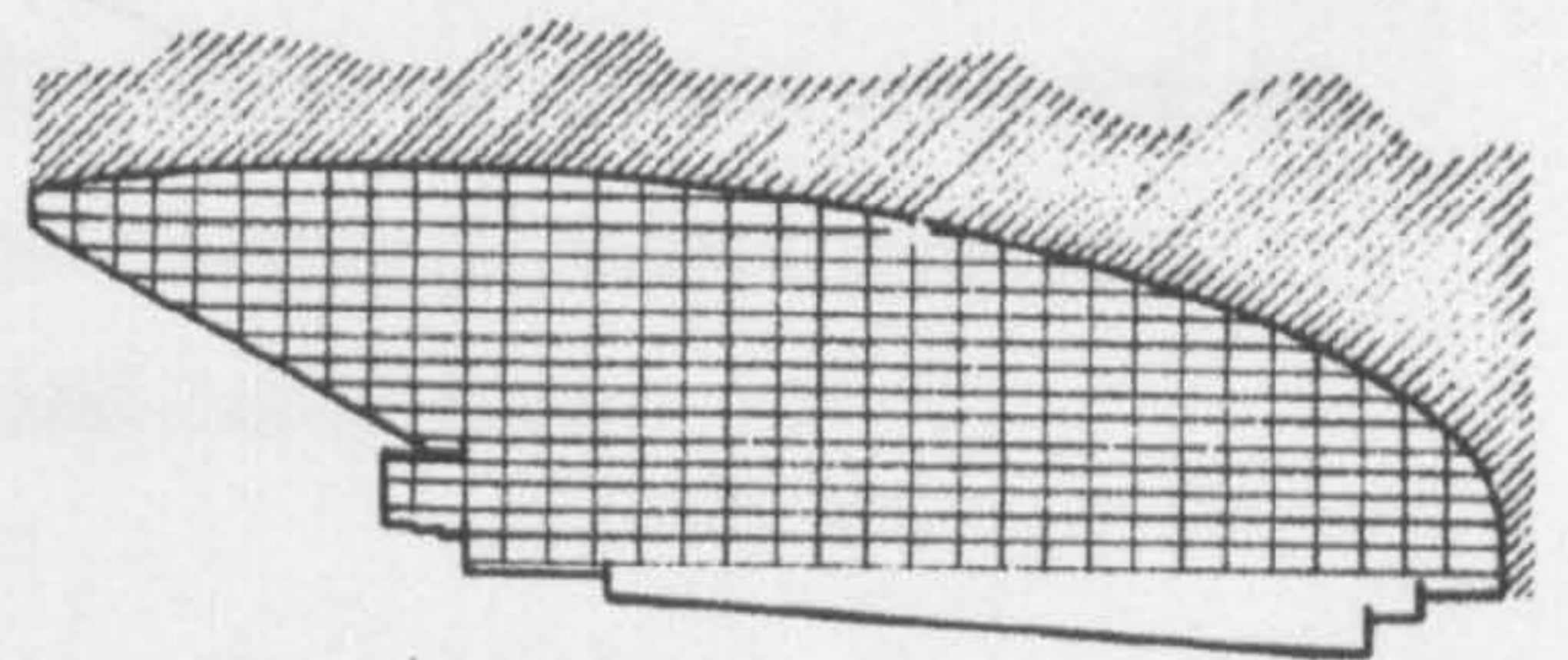
éclairage étincelant

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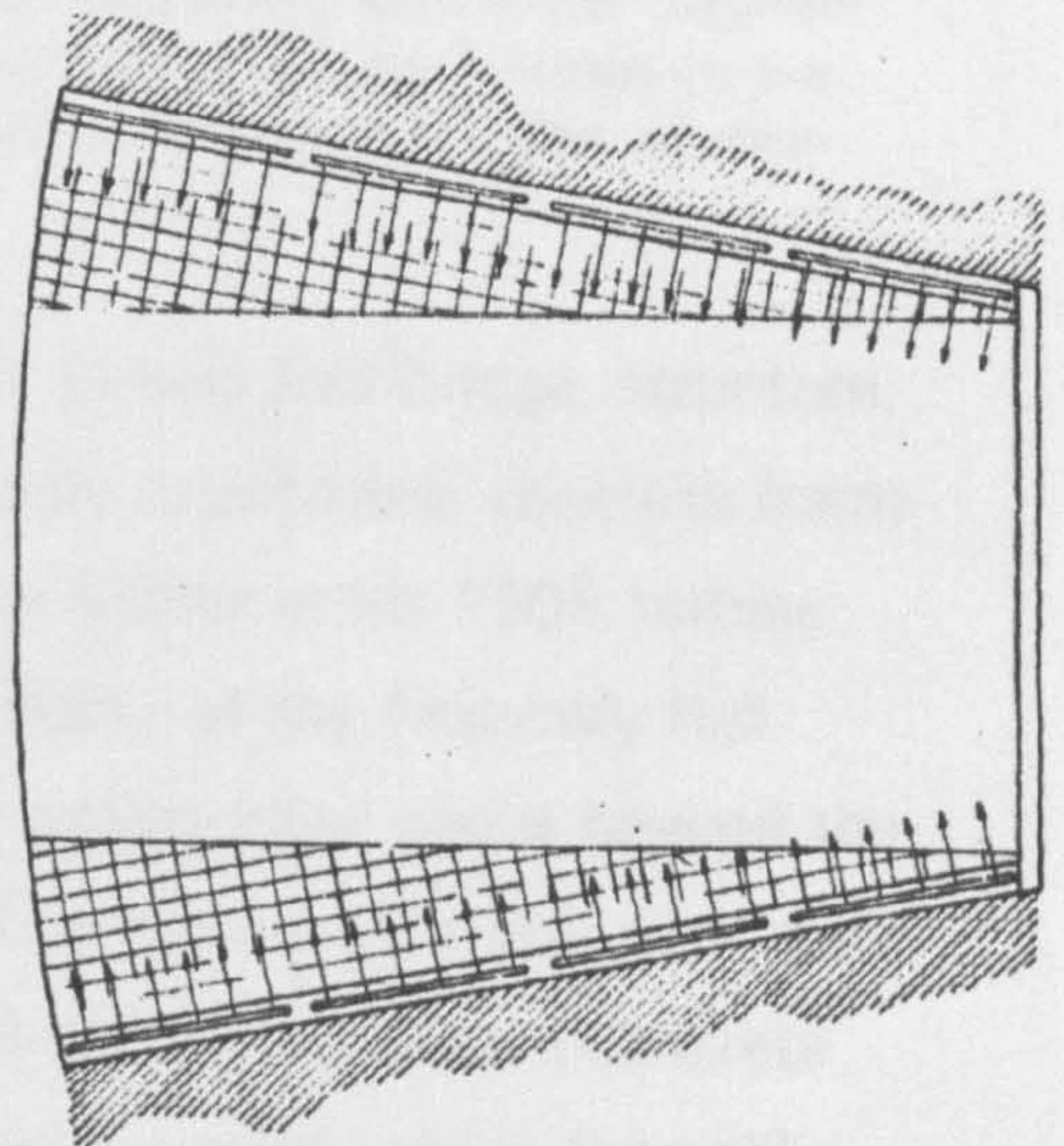
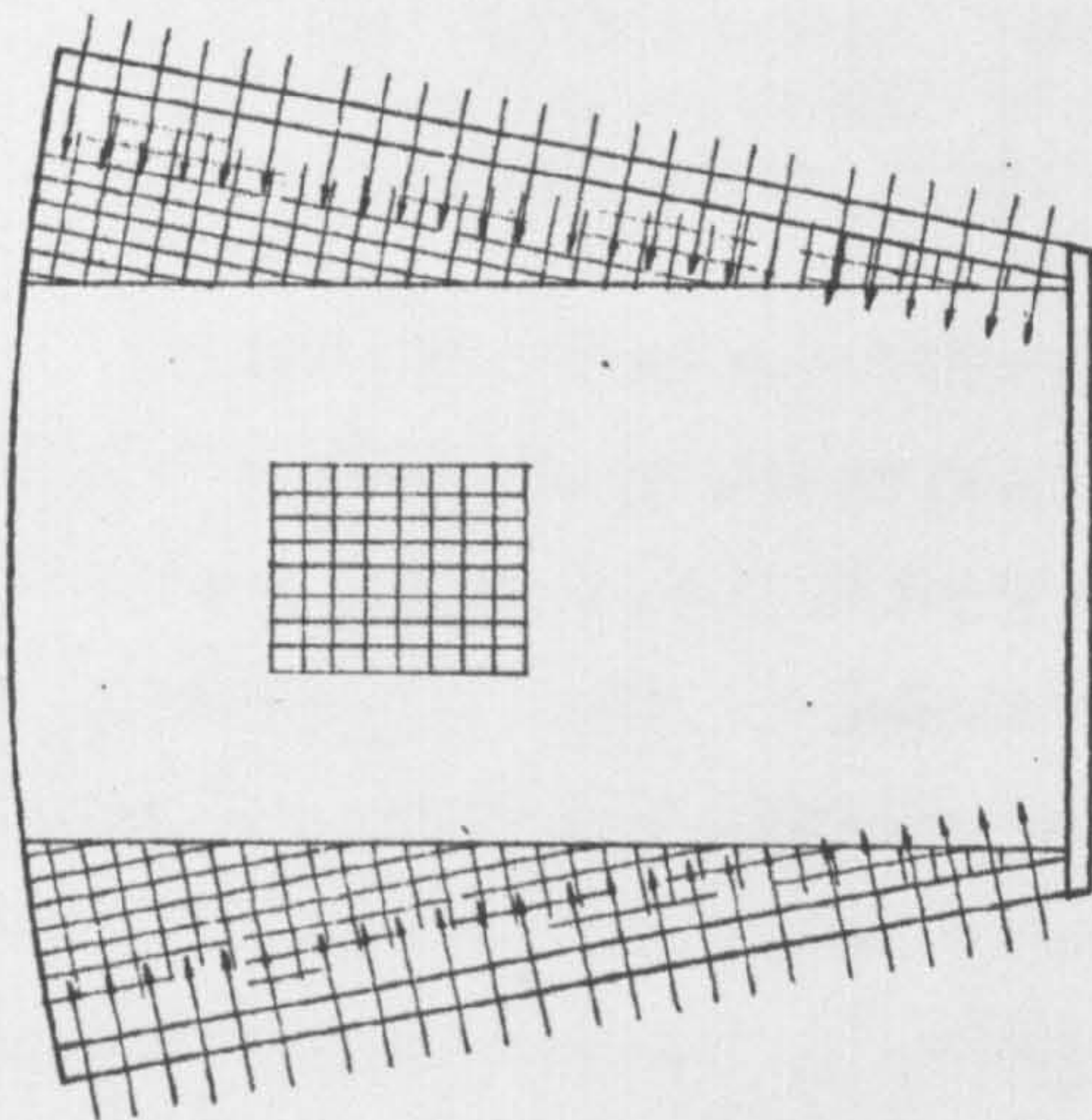
de nuit



DOUBLE MEMBRANE ISOLANTE EN DALLES
DE VERRE. A L'EXTÉRIEUR GLACE BRUTE POLIE
UNE FACE



A L'INTÉRIEUR, GLACE DÉPOLIE RAMPES
ÉLECTRIQUE ENTRE LES DEUX MEMBRANES



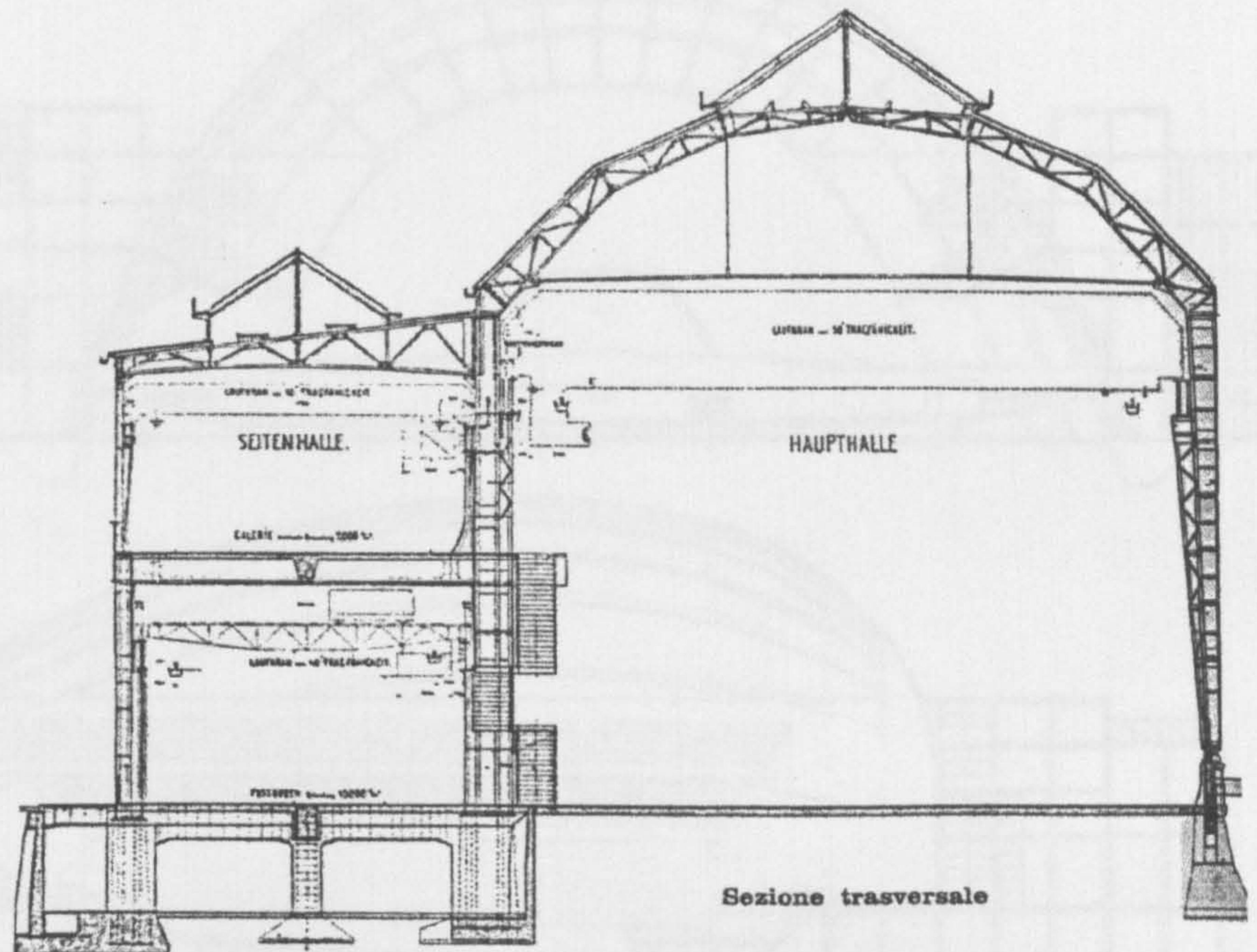
Lighting the Assembly Hall

glass screens of such dimensions would have been an extraordinary technical feat at that time, and most of the description is taken up with explaining the Assembly Hall structure which allegedly made the glass screens possible. And yet there are Perret buildings from as early as 1919³² with large expanses of glass set in concrete frames which Le Corbusier would certainly have been aware of, and which imply that the techniques required for the Assembly Hall screens would soon be available. A very early exemplar of the glass screen enclosure is provided by the hexagonal panels of Perret's 1903 apartment block at the Rue Franklin; there are similar precedents for the horizontal glass-block, or leaded glass panel infill shown between the entrance canopy and the Assembly Hall facade - without any structural explanation - in Perret's work, for example, the glass roof of his 1925 *Théâtre de l'Exposition des Arts Décoratifs* in Paris³³.

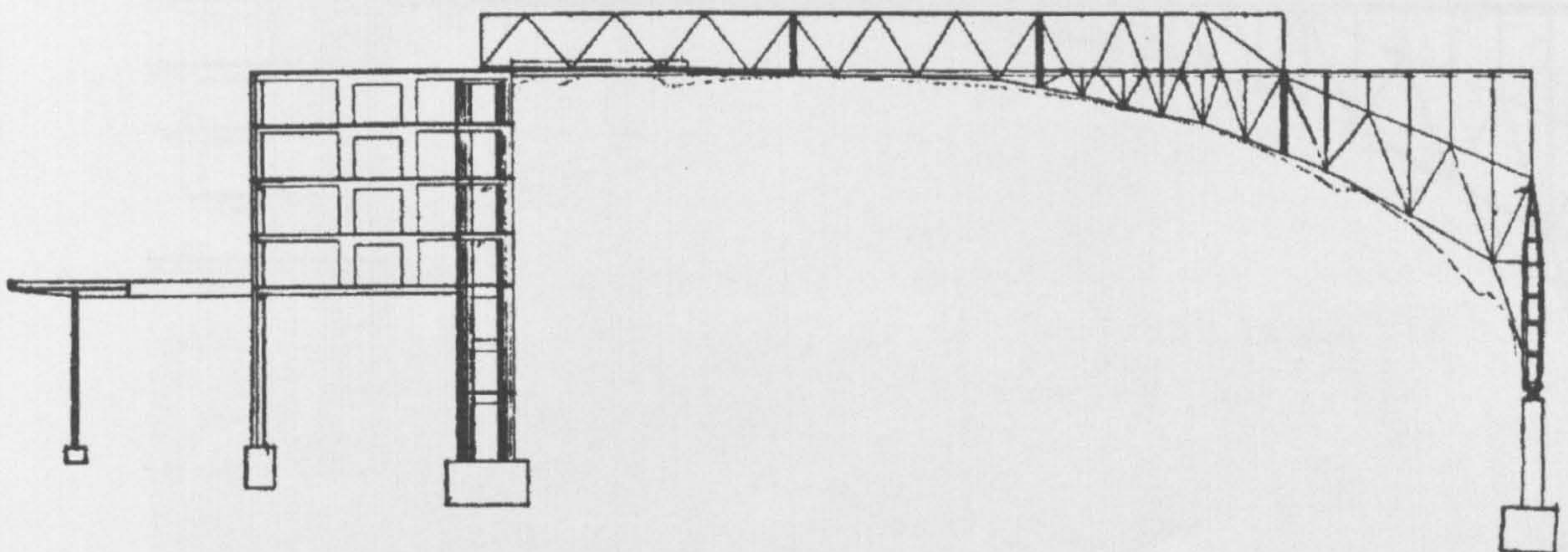
Le Corbusier's engineers were Terner and Chopard of Zurich, although in this anecdote from *Une Maison*, Le Corbusier claimed the credit for his structural concept: his version of events fits his design mythology better - the clear-sighted master architect quickly finds the 'natural' solution rooted in the practical and contingent:

The chief engineer who is at present calculating the extraordinary cupola of the hall of Anthroposophes in Dornach, (knowing the question well, because his problem gave him a particularly severe headache) said to me, during my recent visit to his building site: "Your section (structure of the hall) is a masterpiece of simplicity; who is the engineer who gave you the principle?" I answered him: "Common sense has given wings to our ingenuity, and as we thought not at all of "academy" nor of "modern art", the solution suggested itself, entirely simply".³⁴

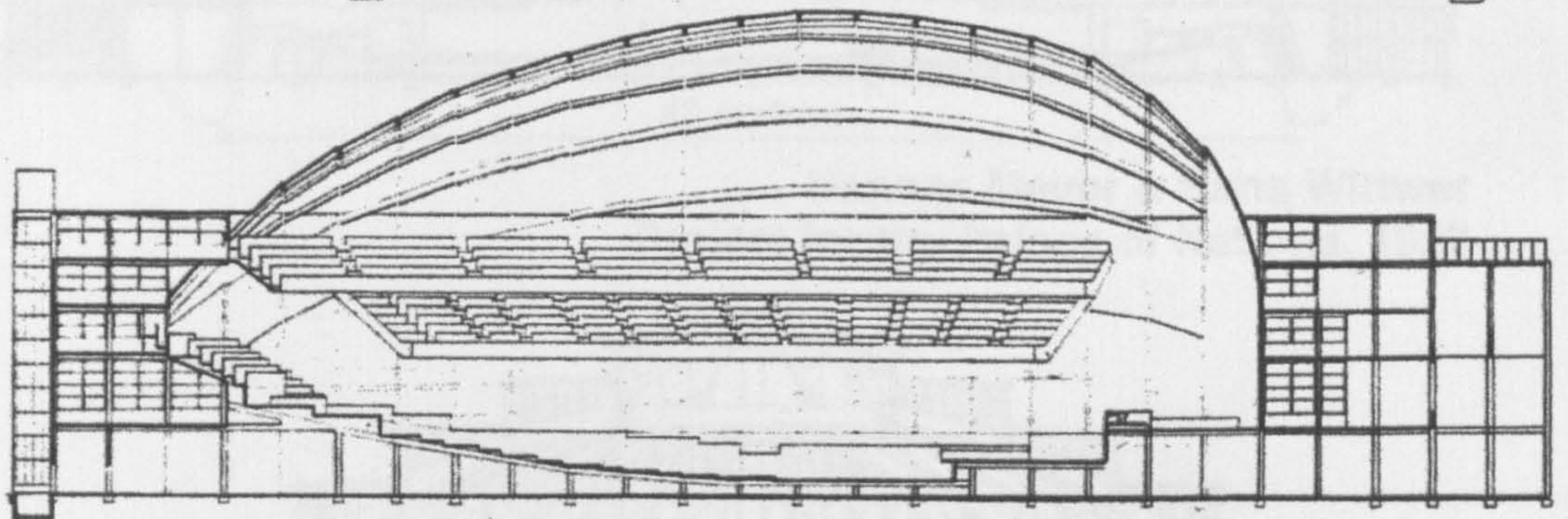
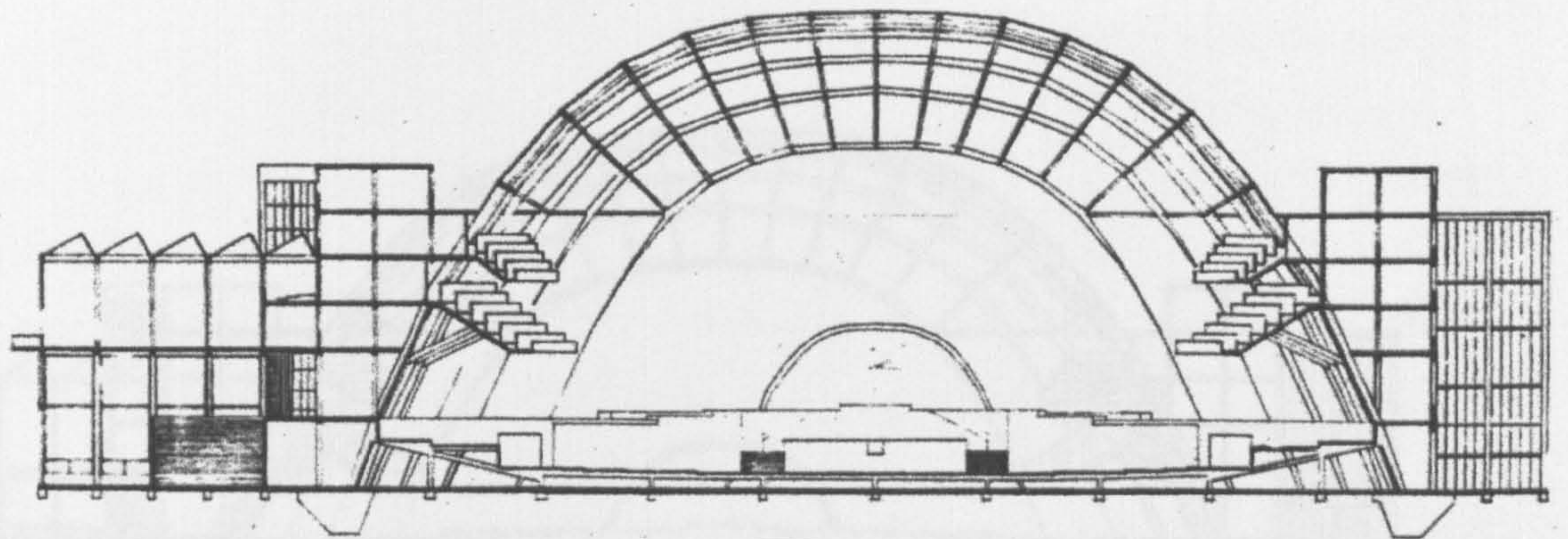
As Kenneth Frampton has observed, Le Corbusier's arched half-bridge structure, which springs from the ground on one side and is supported by an adjacent, concrete frame on the other, is not original: Behrens used something very similar in his 1909 turbine hall for AEG³⁵[fig. 1 3 A]. To determine the technical feasibility of the Assembly Hall structure proposed by Le Corbusier would require an engineering input and is beyond the scope of this dissertation, but a brief visual comparison of Le Corbusier's structure with the one proposed by Hannes Meyer [fig. 1 3 B] is of interest: Meyer has chosen concrete, and the complex, ovoid form of his hall thrusts out of the gridded matrix of his Assembly Hall block with a deliberate pragmatism, almost as if the grid of beams has simply been displaced upwards. Substantial footings are shown taking up the outwards thrust of Meyer's deformed concrete grid, but the angled members springing from them appear slender for their task. If this hall is placed alongside a built example such as Max Berg's Jahrhunderthalle [Breslau. 1913, fig. 1 3 C], although Meyer and Wittwer's ovoid 'dome'



Behrens: Turbine Hall for AEG, Berlin 1909
Main hall is 25.60metres wide
 [from Casa Bella, June 1960]

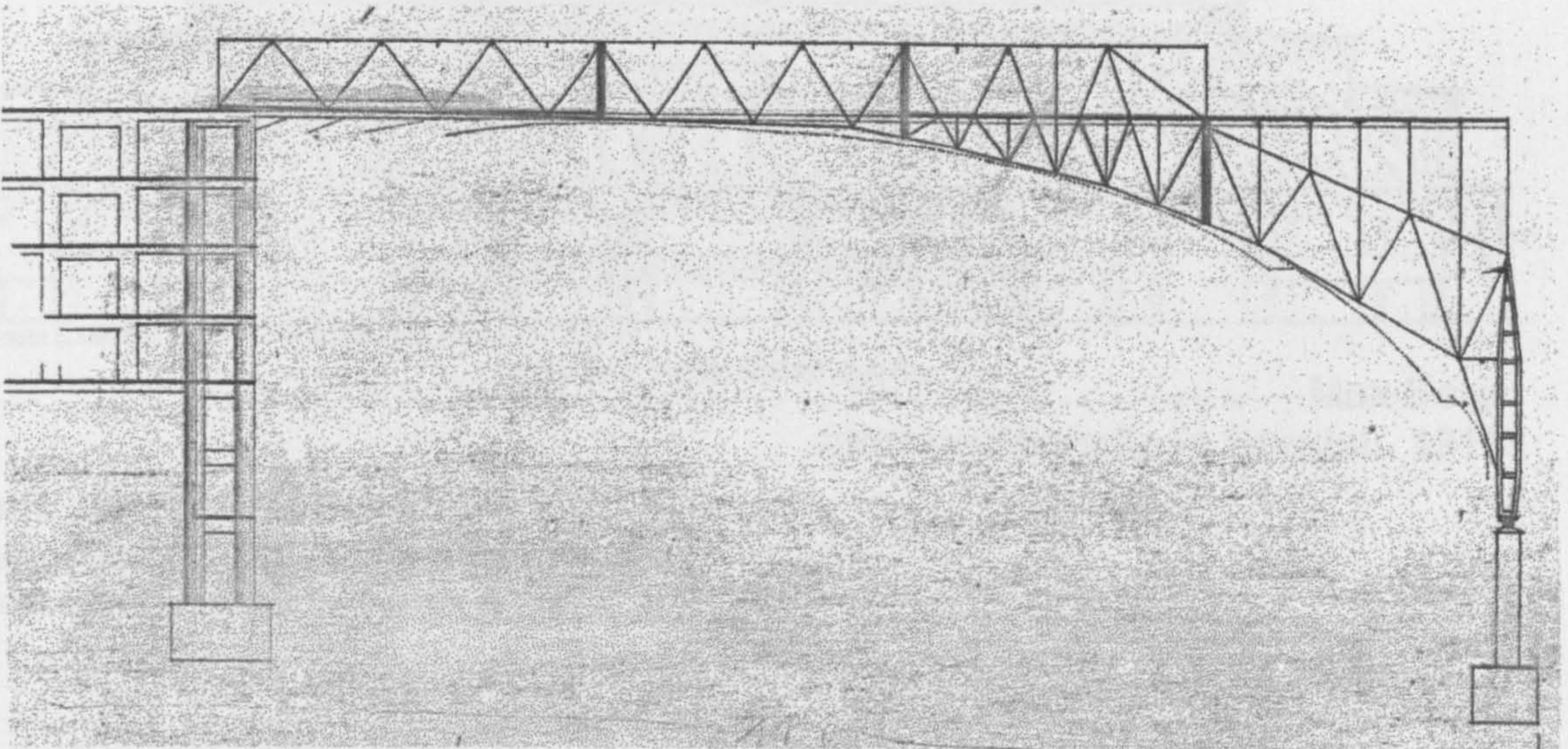


Le Corbusier: Steel structure for Assembly Hall, 1927
The arched, half bridge spans 70 metres

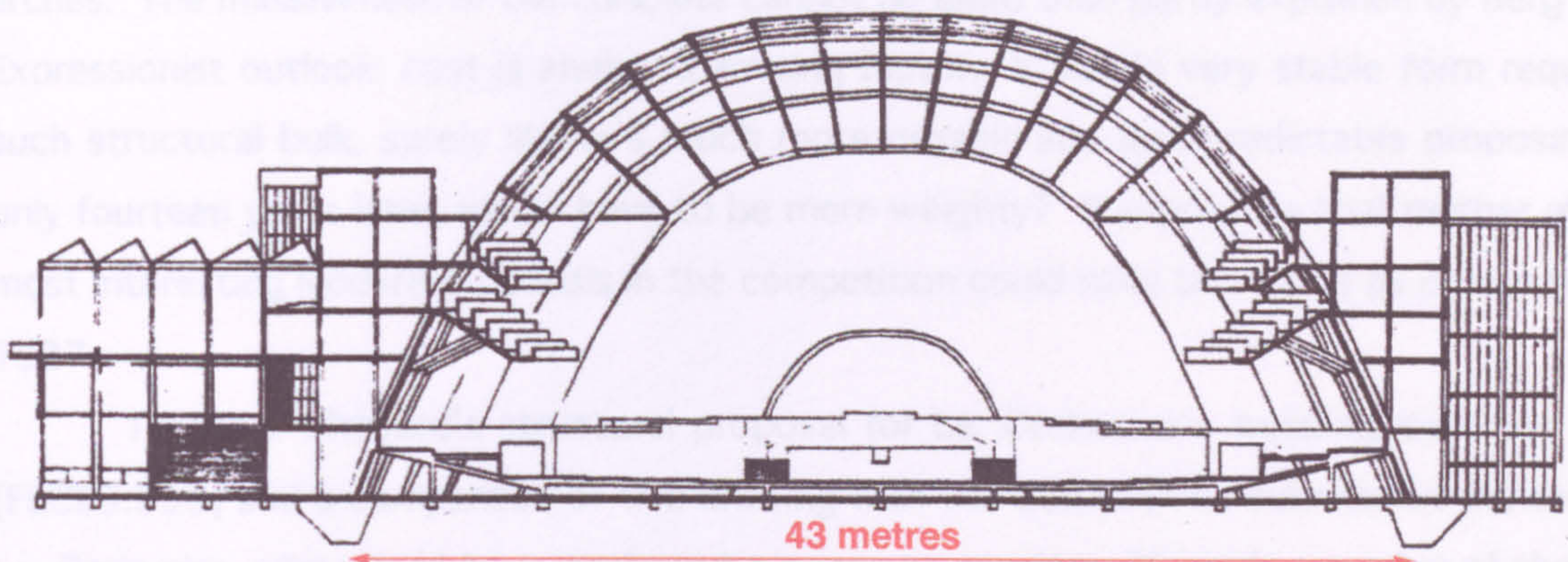


Hannes Meyer's Assembly Hall

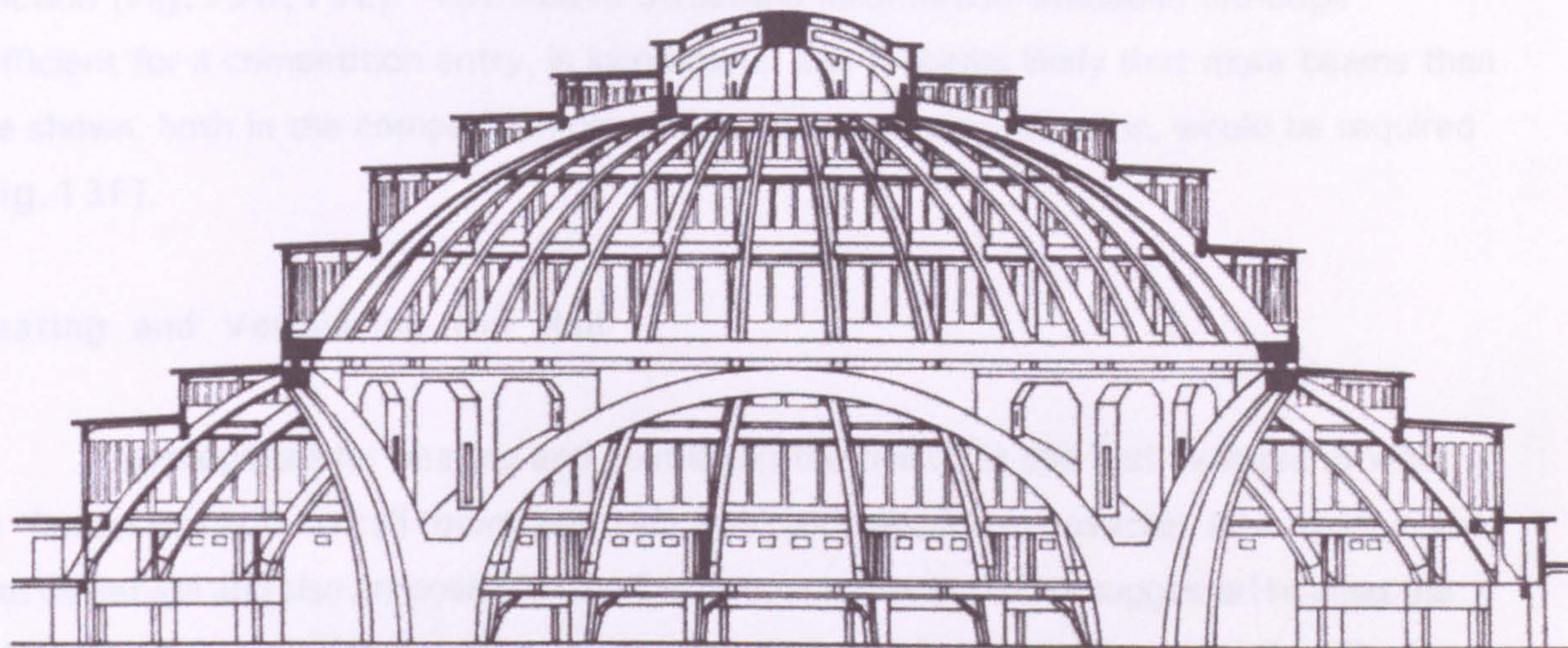
from: Hannes Meyer: Architekt, Urbanist, Lehrer 1889-1954.
Ernst & Sohn; pub. Berlin, 1989.



Le Corbusier's Assembly Hall FLC 23.219



Hannes Meyer & Hans Wittwer
Project for the Palace of Nations, 1927



from: Gossel & Leuthauser, 'Architecture in the Twentieth Century'

65 metre diameter dome

Max Berg
Jahrhunderthalle in Breslau, 1911

Sections scaled as if both domes had the same diameter, to emphasise the structural differences between them.

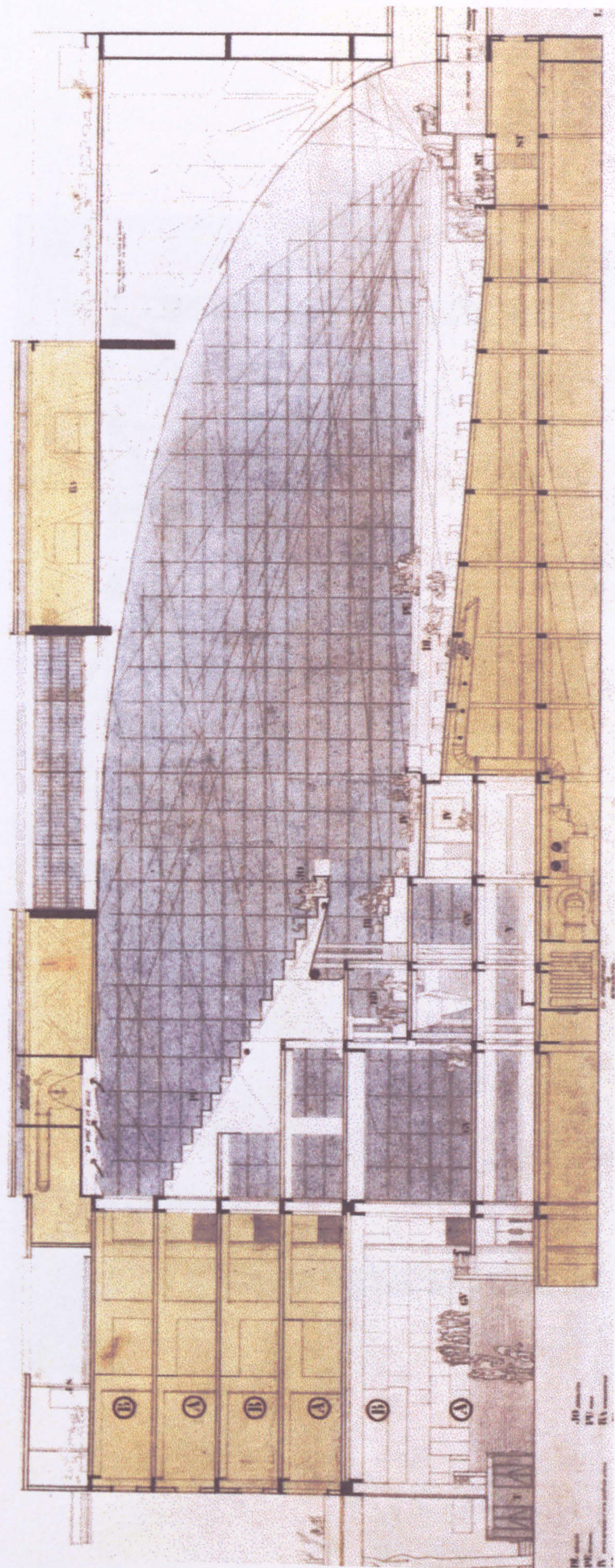
is somewhat smaller than Berg's, the impression that Meyer's concrete structure is undersized, is strengthened. Berg's hall, 65 metres across, has a very stable shape - a flattened circular dome with heavy ring beams - and is supported on a truly massive set of arches forming a pierced drum and buttressed by subsidiary structures outside the drum arches. The massiveness of the concrete cannot be more than partly explained by Berg's Expressionist outlook: cost is always a limiting factor. If Berg's very stable form required such structural bulk, surely Meyer's much more organic and less predictable proposal, only fourteen years later, would have to be more weighty? It is possible that neither of the most interesting Modern proposals in the competition could have been built as proposed in 1927.

Terner & Chopard's structural proposal for Le Corbusier's building survives [FLC23.396] and a comparison of this drawing with the Competition submission shows that Le Corbusier, who would have preferred a concrete structure³⁶, made a number of changes and omissions for aesthetic reasons which may well have compromised the engineers' solution [fig. 13 D, 13 E]. The limited structural information available, although sufficient for a competition entry, is incomplete, and it seems likely that more beams than are shown, both in the competition drawings and in my reconstruction, would be required [fig. 13 F].

Heating and Ventilating the Hall

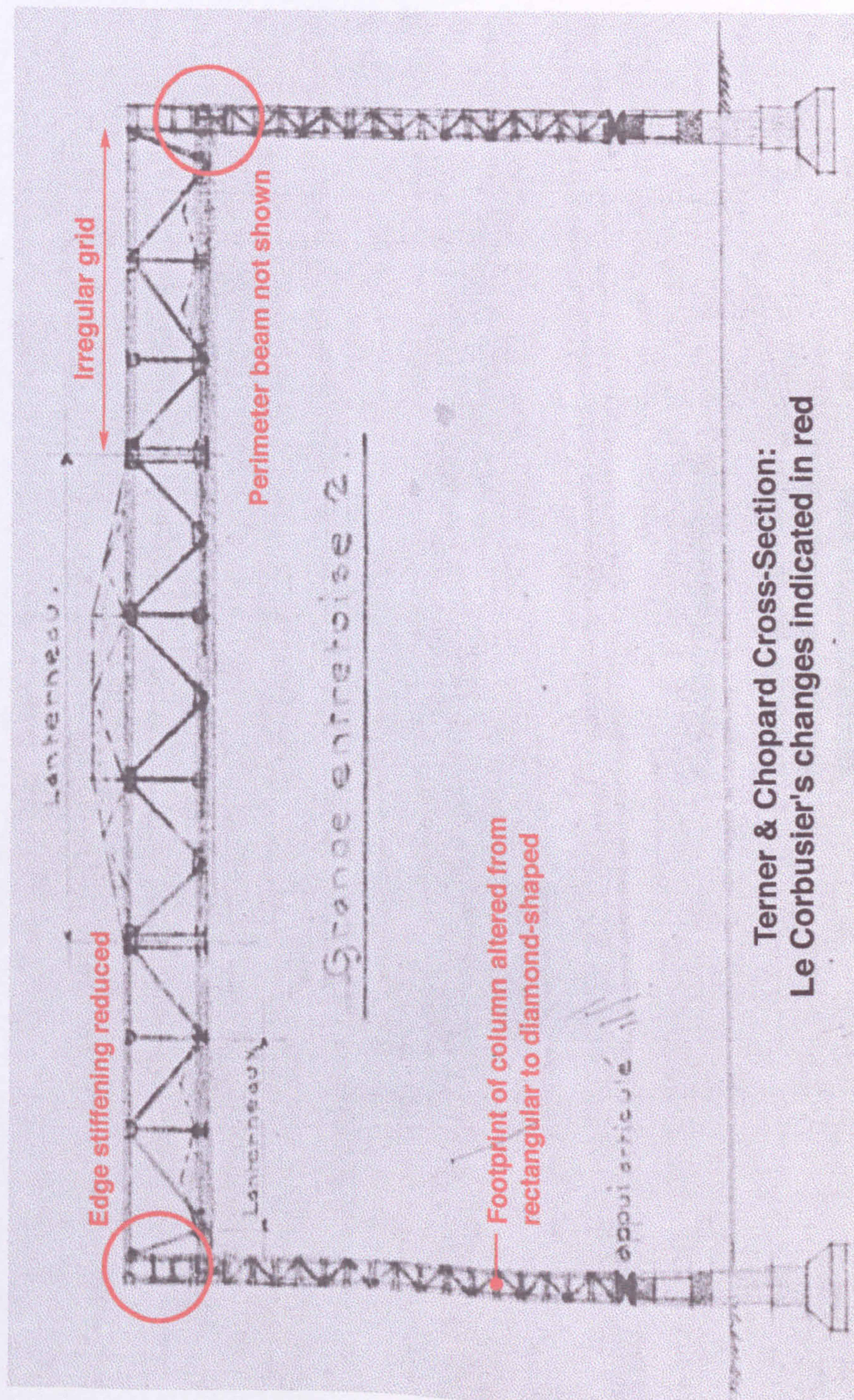
The proposals for heating and ventilating the hall offer the first example of what Le Corbusier came to call '*murs neutralisants*' and '*respiration exacte*', later used in the Cité de Refuge and also proposed for the Centrosoyuz in Moscow. He suggested heating the 1.5metre voids between the glass walls, and within the hollow blockwork wall to the lake, to '*annuler la puissance réfrigérante de nos murs de salle*'³⁷. At the same time, fresh air from the outside, drawn in and heated to 18°C was to be introduced beneath the seat of each listener, and the foul air extracted at ceiling height, and pulled down via ducts within the voids of the glass walls to the air treatment plant located in the basement³⁸. He claimed that this untested arrangement, which was a failure in the Cité de Refuge, would be so efficient that the air might become too hot, and there would need to be refrigeration plant alongside the banks of heaters. This concept is explained by an expressive section showing the cycle of pumping and heating. [fig. 14 A]

To modern eyes, the machinery shown looks inadequate to the task: it seems likely that a whole series of ducts and pumps running from front to back of the hall, both above

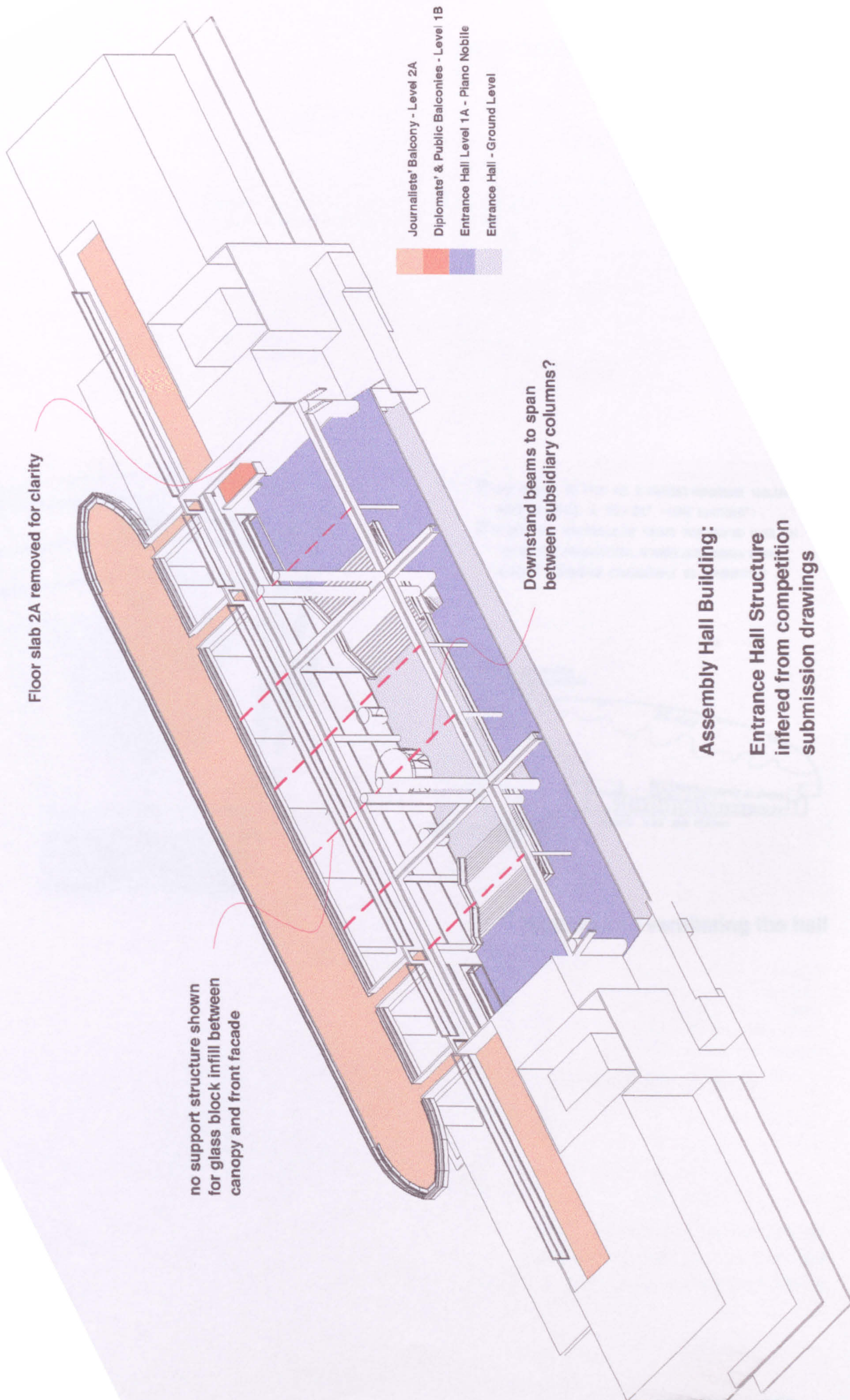


Longitudinal Section
from Competition Set SDN18

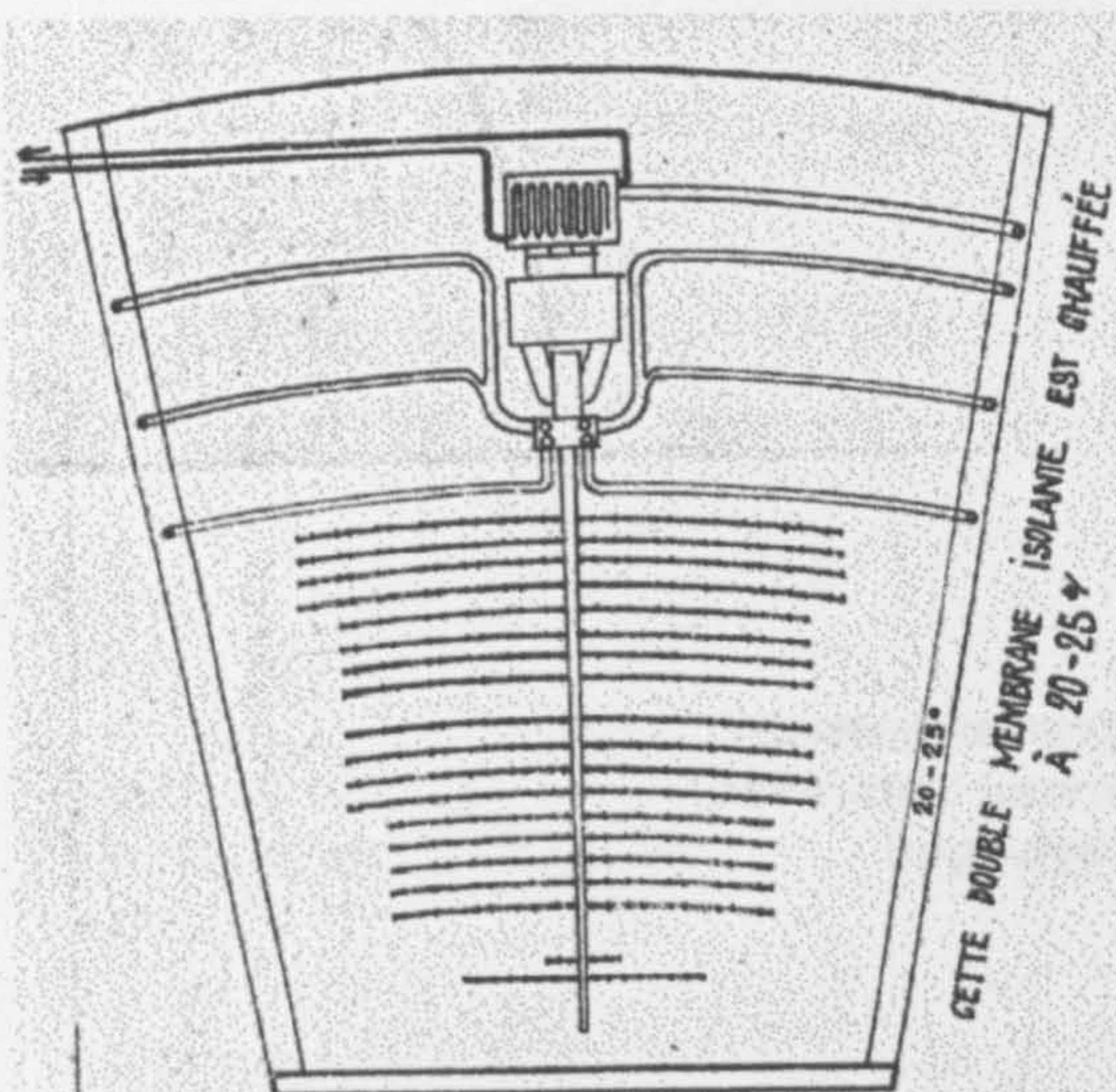
figure 13D.2



**Terner & Chopard Cross-Section:
Le Corbusier's changes indicated in red**

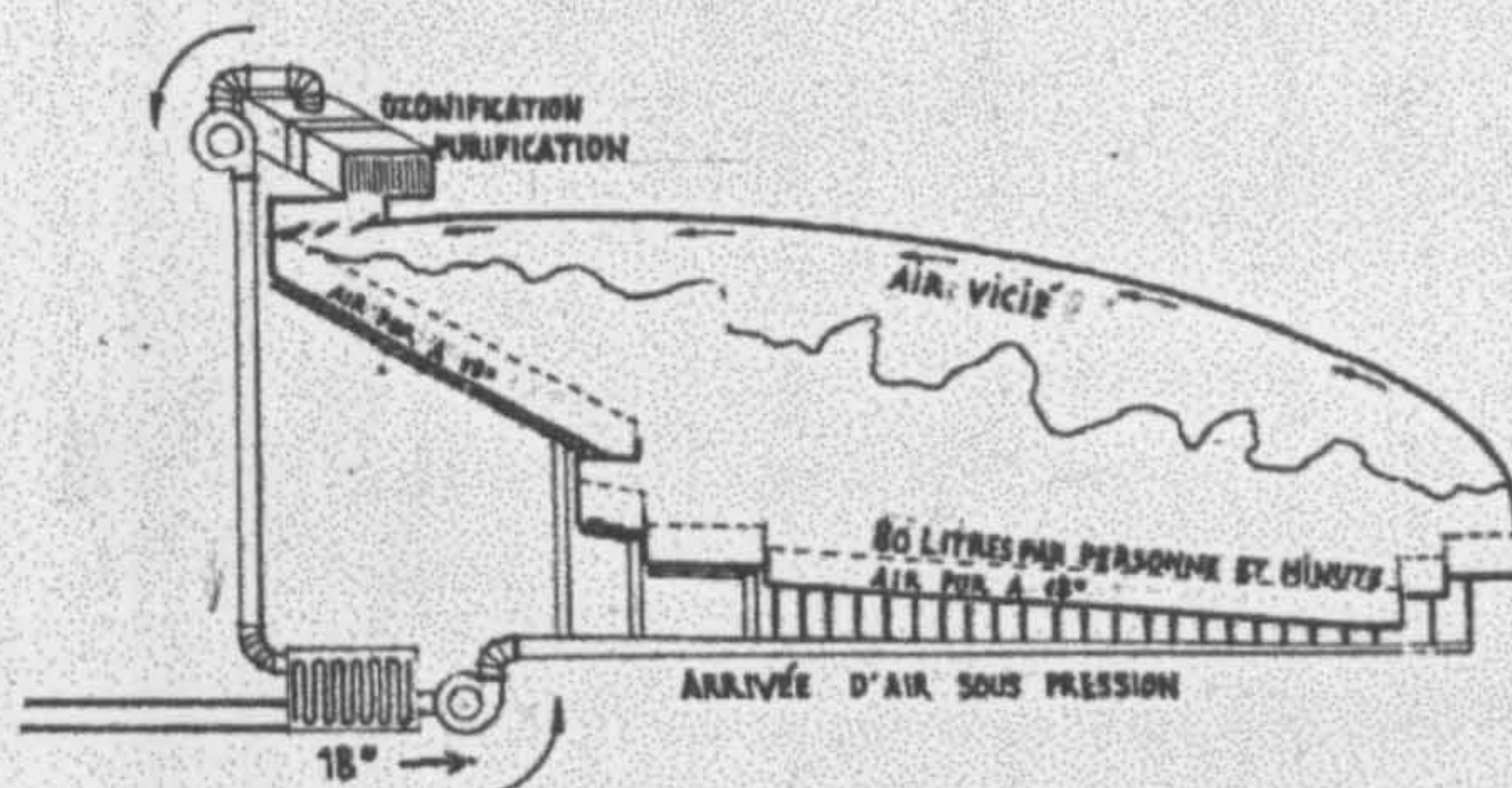


Assembly Hall Building:
Entrance Hall Structure
 inferred from competition
 submission drawings



CHAQUE AUDITEUR REÇOIT SOUS SON SIÈGE
80 LITRES-MINUTE D'AIR PURIFIÉ-OZONIFIÉ
À 18° (HIVER ET ÉTÉ) PAR BATTERIE DE
RECHAUFFEMENT OU DE RÉFRIGÉRATION.

- 1° LES ESPACES DE 1^{er} 50 DES 2 GRANDES MEMBRANES ISOLANTES
SONT CHAUFFÉS À 20-25° (CUBE RESTREINT).
- 2° L'AÉRATION PONCTUELLE NE TRAITE PLUS QUE DE L'AIR EN
CONSTANTE PURIFICATION, N'AYANT PLUS BESOIN D'ÊTRE
CHAUFFÉ = ÉCONOMIE CONSIDÉRABLE DE COMBUSTIBLE.



Heating and ventilating the hall

Through structural junction
of trussed column and beam

Ceiling profile varies:
may not be practical to
pass through slab on the
inside of the column.

Passing through
all bracing members

Window cleaning would be
obstructed internally by the
large ducts required

Passing above floor slab
and beneath seating platform:
vertical dimension
probably inadequate

Rainwater pipe from gutter to
glass screens: only the lowest
pipe is shown. Three more gutters
are ranged above; presumably
each would drain via pipes running
inside the trussed columns alongside
the HVAC ducts.

Passing vertically through
ground level of entrance hall:
no provision made.
Hollow columns?
-Pilotis are too slender.

HVAC - Vertical Connections:
Integrating the ducts into the
design presents some problems

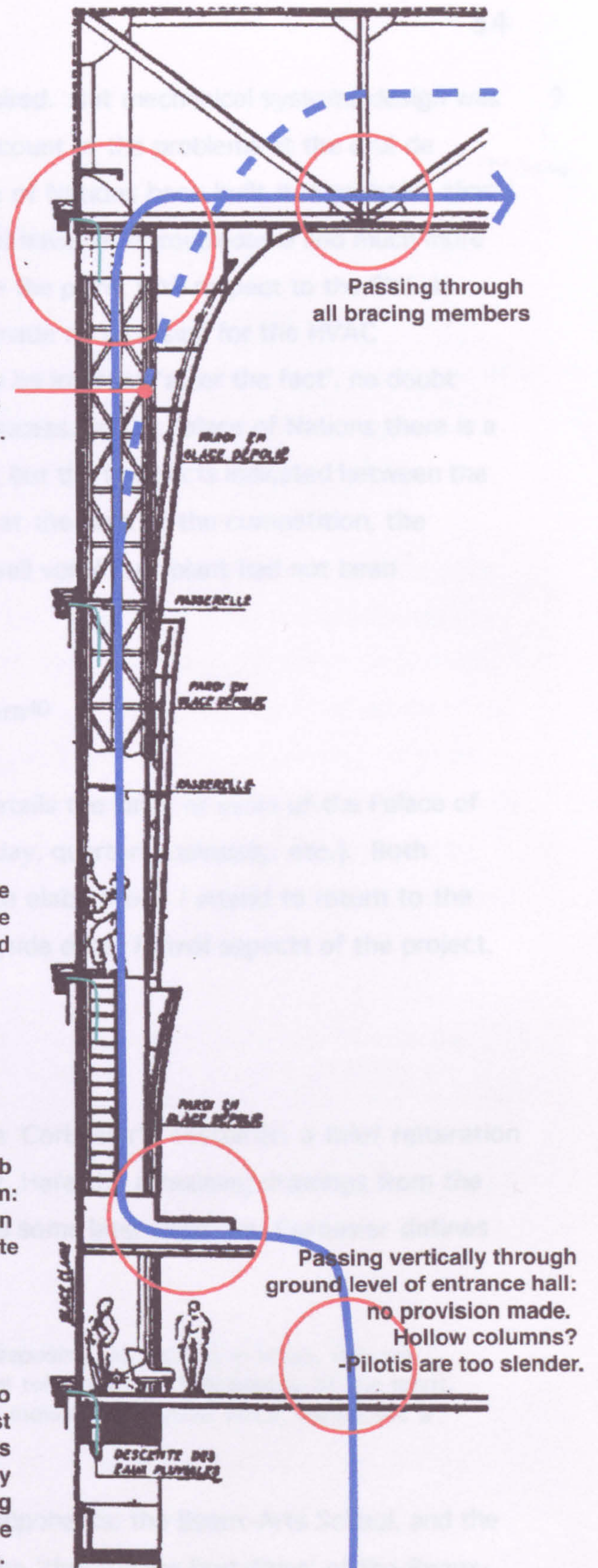


figure 14B

the ceiling and below the hall floor, would be required. But mechanical systems design was a new area then, and from Brian Brace Taylor's account of the problems at the Cité de Refuge³⁹ one can see that if Le Corbusier's Palace of Nations been built it is probable that whatever HVAC system had been installed, it would have been troublesome and much more expensive than envisaged. Brace Taylor also made the point, with respect to the Cité de Refuge, that the architects in their inexperience made no provision for the HVAC installation in their design, that the system had to be installed 'after the fact', no doubt breaking through the concrete structure in the process. In the Palace of Nations there is a vast cavern beneath the hall for plant and storage, but the few ducts indicated between the glass walls fall far short of the likely reality, and at the time of the competition, the necessary links between basement plant/ glass-wall void/ roof plant had not been considered [fig. 1 4 B].

Circulation, An Acute Circulation Problem⁴⁰

This section is entirely descriptive and details the kinds of users of the Palace of Nations and the frequency of their usage [everyday, quarterly, annually, etc.]. Both external and internal circulation arrangements are elaborated. I intend to return to the circulation later in the chapter to discuss it alongside other formal aspects of the project.

An Aesthetic

Part II of the book ends with a piece on Le Corbusier's aesthetic: a brief reiteration of the *Thèse* interspersed with a visual anthology. Here the remaining drawings from the competition submission are to be found, alongside some later ones. Le Corbusier defines his aesthetic as

...this system of organising, of ranking, of disposing, of putting in order, this act emanating from the will, these mathematical relationships, this quality of the spirit, which in itself achieves purity, and through individual creative force, expresses a coherent whole, an entirety.⁴¹

and his case for this view is argued against two opponents: the Beaux-Arts School, and the Functionalists. On the one hand, he dismisses the 'threatening brutalities' of the Beaux-Arts and their plunder of historical styles, on the other, he finds the Functionalist notion - 'that which is useful is beautiful' - lacking. His argument is for the humanisation of the functional, which is to be achieved by the [individual] passion of the artist, and this

passage, similar to one in the thèse⁴² reveals Le Corbusier's view of himself as visionary innovator:

There is in aesthetics then, a factor which determines the immortality of the work and which assures us that there will always be the possibility of immortal works suddenly appearing: *this is the individual*.

Individuals can, at one moment, provoke this unanimous support; its expression in the common output will effectively systematise the existing formulae in the provocative work: an aesthetic is then "grammatised", is petrified. It is certain that whatever was at the origin of this systematisation had itself created a method. What is this method, other than a knowledge of technical means, a perception of the spiritual dominants animating the epoch, a crystallisation of a maximum of chosen elements, effective, having great potential, with a minimum of implementation of materials and of plastic means?⁴³

The Palace of Nations project is then presented as exemplar of this aesthetic: twelve pages of pictures, a slide show with commentary. Here Le Corbusier's main emphasis is on the integration of building and site, the horizontality of both, and the harmonious conjunction of the hard geometry of the buildings⁴⁴ and the curves of the pastoral site. His aesthetic, he asserts, is an *honest* one: the interior functions are clearly revealed externally, and the light reaches into every corner. The structural system is revealed in all its simplicity and daring, and the clear plane of the roof, where the accommodation ends is not obscured by domes and cupolas that falsely inflate the volume, nor are there additional honorific spaces beyond the requirements of the brief. And there is this basic honesty,

the elementary honesty of the honourable man: to design a building where the cost was exactly that of the funds allowed [and not triple or quadruple, O, S.D.N. protector of treaties and of the law!] - such an aesthetic is not a manifestation of academism. It is the manifestation of an ethic; the manifestation of an individual mental state, it is a personal attitude. An idea is never carried except by an individual. At the origin, beneath, inside, at the base, there is something intangible, pure, true, and inalienable thing, unadulterated, an individual passion.

We are far from the Academies!

We are at the very heart of *responsibility*.

We are far from the Prix de Rome here,

from "palace", in all its hideous, cowardly and demoralising senses!⁴⁵

This last passage leads into the third section of the book, the *Appendice*, a collection of documents of the history of the competition up to 1928 and of Le Corbusier's failed campaign for his project, which I have covered in other chapters.

Early Sketches

From the first sketches in the Fondation Le Corbusier, it seems that work began on the project some time in October 1926. Surviving initial studies consist of a series of sketches and accommodation calculations drawn on old L'Esprit Nouveau stationery⁴⁶. The most informative sketch⁴⁷ from this series is examined in *Le Corbusier à Genève*⁴⁸ [fig. 15] and shows a rectangular assembly hall enclosed on three sides with other accommodation, perhaps lobbies or *pas perdus*, and with twin staircases on the fourth side. Already these parts are symmetrically disposed about a central axis which bisects the hall longitudinally. Other sketches on this sheet further emphasise this symmetry: additional significant spaces placed on axis behind the hall, and a great, glazed, vertical slab block in front of it, which indicates an early concern with the view. Also on this sheet are some suggestions as to how the Assembly Hall building - this is already a two-building scheme - might be connected to the Secretariat. Here are [more or less] the two alternatives represented in the final scheme [see SDN 1]: the Secretariat alongside the Assembly Hall, or [variant scheme] the Secretariat behind the Assembly building, on axis. Of course, if Le Corbusier's suggestion for a symmetrical extension to the Secretariat in his competition submission is taken into account, then both possibilities are subsumed in the final scheme: the original Secretariat, behind the Assembly Hall with respect to the lake, but sliding laterally to take in the view, is then mirrored about the main axis of the hall.

The bridge that links the two parts in the competition submission is already shown, although arched supports are depicted rather than the massive pier of the final scheme: the choice of bridge and not of solid, linking block all the way down to ground already implies some sort of significant external circulation. [Arches are also indicated in a later sketch of the main facade, FLC23.402 fig. 24A, in a way which recalls Le Corbusier's 1915 project for the Pont Butin, see fig. 37A & later discussion]. A sketch at the top of the sheet seems to indicate a rough section through the Assembly Hall and its seating; interestingly the external spaces which result from this configuration are indicated: here is the genesis of the elaborate section [SDN 18] where entrance halls and Assembly are fitted together.

The next sketch in the series⁴⁹ [fig. 16] shows the side-by-side arrangement of Assembly and Secretariat again. In this proposal, the Secretariat is laid out around a closed courtyard of similar proportions to the adjacent B.I.T. building⁵⁰ [see SDN 1 for plan of B.I.T.]. But the enclosed courtyard building was to be rejected in favour of the much more flexible, extensile 'h' of the final scheme, and when Le Corbusier wrote *Une Maison*, he

44-33 } ELASTES
40-38 }
40-37 } TELERPHONES

REVUE INTERNATIONALE ILLUSTRÉE DE L'ACTIVITÉ CONTEMPORAINE

MONUMENTAL SPIRIT

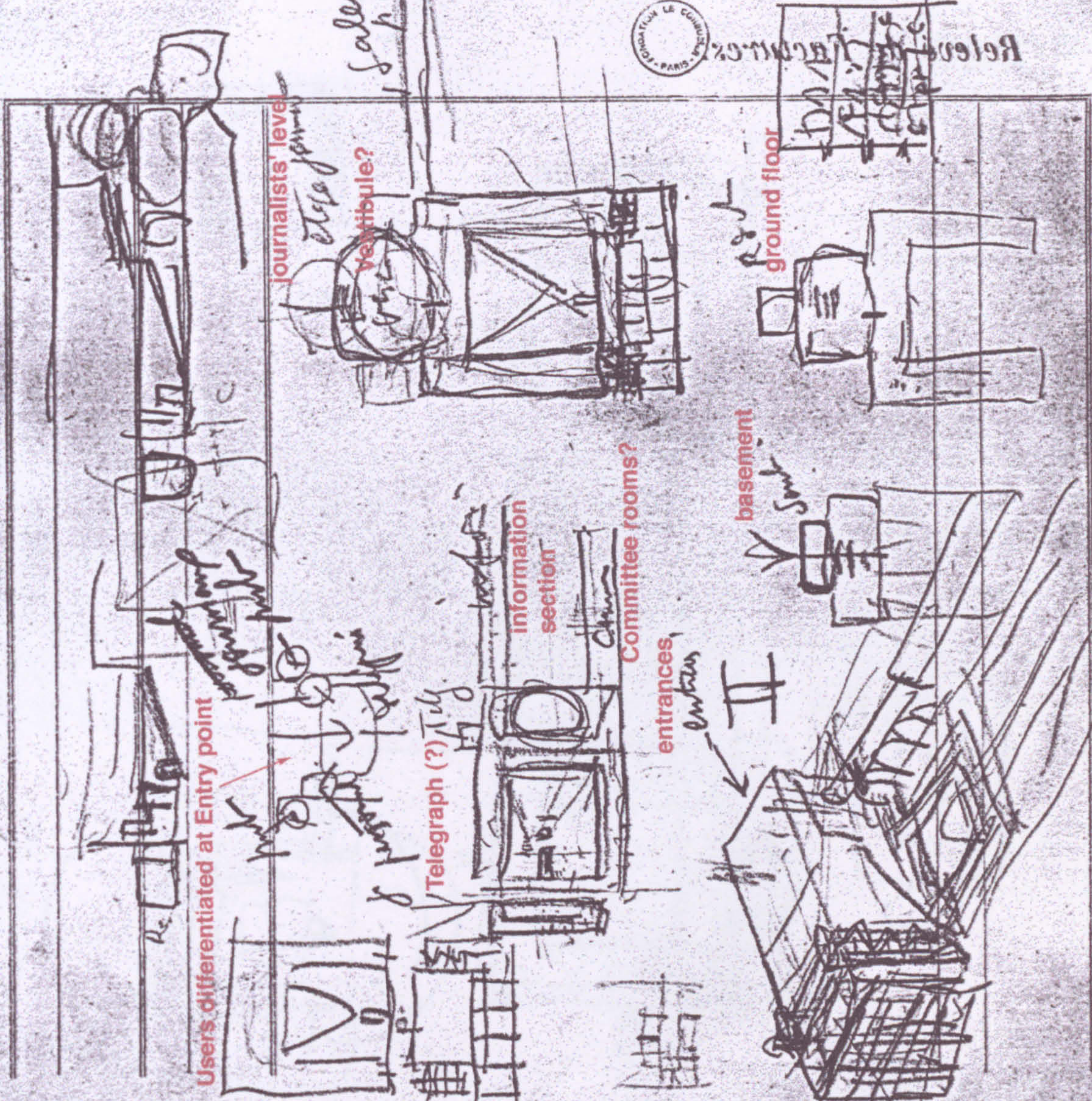
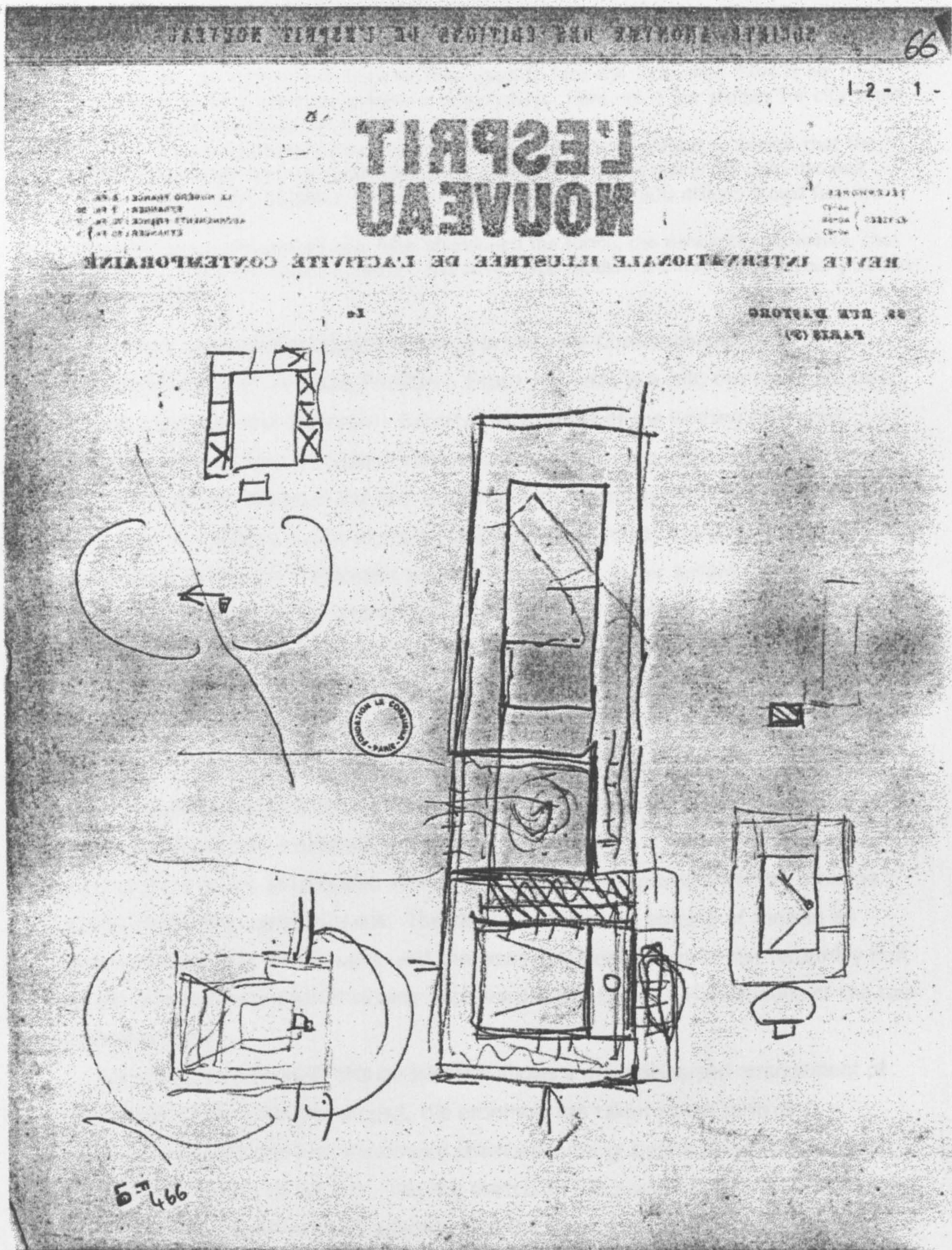


figure 15



This arrangement is reminiscent of Perret's entry - see p167 for illustration

figure 16

declared that the closed court solution was invalid, an academic solution:

The offices turn first to face Geneva, then again to face the Jura. And there is no courtyard. Here is the town planner's contribution. Here, as in our studies for city plans (1922) *there are never courtyards*.

You have allowed an ideal office-type. You have been obliged to accept that the 500 offices might conform to an ideal type. One of the offices opens out onto the vast open spaces - light and view; - then you must accept that all 500 offices should face the light and the view.

Everything is accomplished: you have abandoned the forms, the concepts, the habits, the means, the recipes of the Academy. *You have made modern architecture* and your position is unassailable.⁵¹

[Of course there are closed courtyard buildings in the *Ville Contemporaine*: the accommodation blocks of which the *Pavillon L'Esprit Nouveau* is a unit, but these are on a much vaster scale than the courtyard - Secretariats of most of the winning Academic entries in the competition.] Notable in this sketch are the strong indications of external [motorcar] circulation, between the two buildings with a turning circle, and all around the Assembly Hall. In addition, a new element, which, by its symmetrical position and directional form, infers the President's pavilion, appears: it is set before the hall in one sketch, and tried centred on the lateral facades of the hall in the next.

In sketch 71 [fig. 17], dated 31st October, we see an initial proposal for the assembly entrance facade. It is symmetrical, with a series of entrances along the facade, the centre blank, the stairs pushed to the outside edges, and the outermost bay is labelled 'entrée public'. The label implies that Le Corbusier already had in mind his elaborate entrance system whereby the users of the Assembly Hall would be sorted into groups, each with their own entrances, explained at length in *Une Maison*⁵². The drawing below this proto-elevation shows a perspective view of two buildings on pilotis linked by a bridge, with traffic circulating beneath them. The secretariat with its striping of *fenêtre en longueur* is recognisable on the right, and the powerful, blocky form of the Assembly Hall, on the left: a formal distinction is already expressed in the facade differentiation of the two parts of the scheme.

The plan drawn beneath this perspective shows a more dispersed arrangement of accommodation than in the final project: the ensemble has taken on the form of a symmetrical *redents* block with the council chamber forming a centralised head, and the Assembly Hall slotted in to the left. The last sketch on this page, labelled 'cour d'honneur' seems to show the central external space behind the Council chamber in the plan above, with Mont Blanc in the distance⁵³. The use of the term 'cour d'honneur', typical of grand Beaux Arts schemes- M.Carlu, the winner of the 1919 Grand Prix [Palais pour la Ligue des nations] groups his buildings around a *Parvis de Honneur* - is interesting given the

1-2-1

NOUVEAU L'ESPRIT

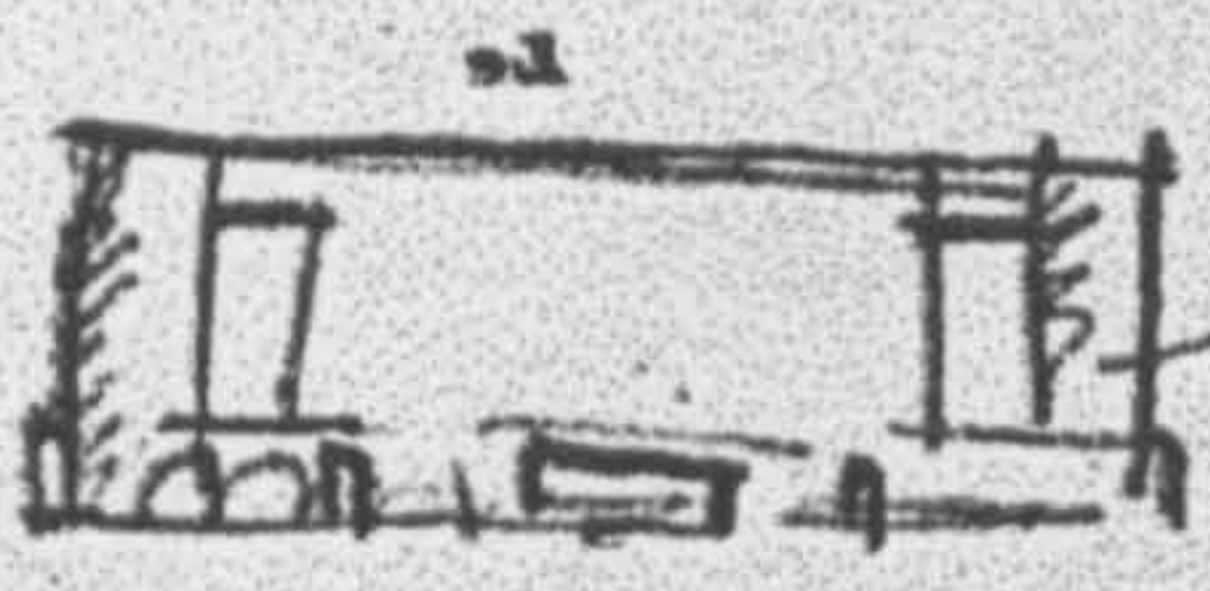
no 18

LE NUMÉRO FRANCE : 6 FR.
ÉTRANGER : 7 FR.
ABONNEMENTS FRANCE : 25 FR.
ÉTRANGER : 35 FR.

TELEPHONES
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40-88
40-89

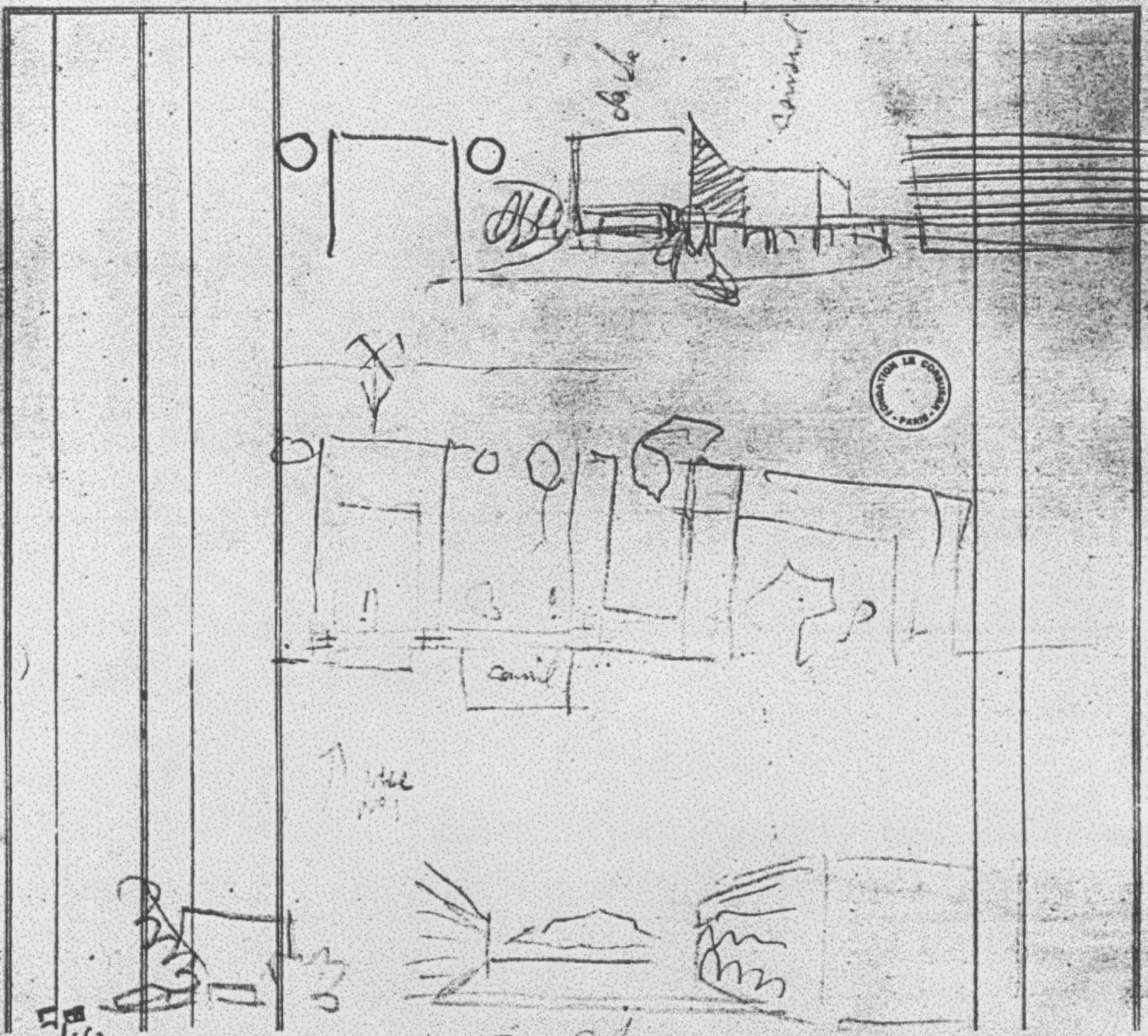
REVUE INTERNATIONALE ILLUSTRÉE DE L'ACTIVITÉ CONTEMPORAINE

80, RUE DASTORG
PARIS (9^e)



Relevé de Factures.

entre autres



462

Cave 9 heures rue 103

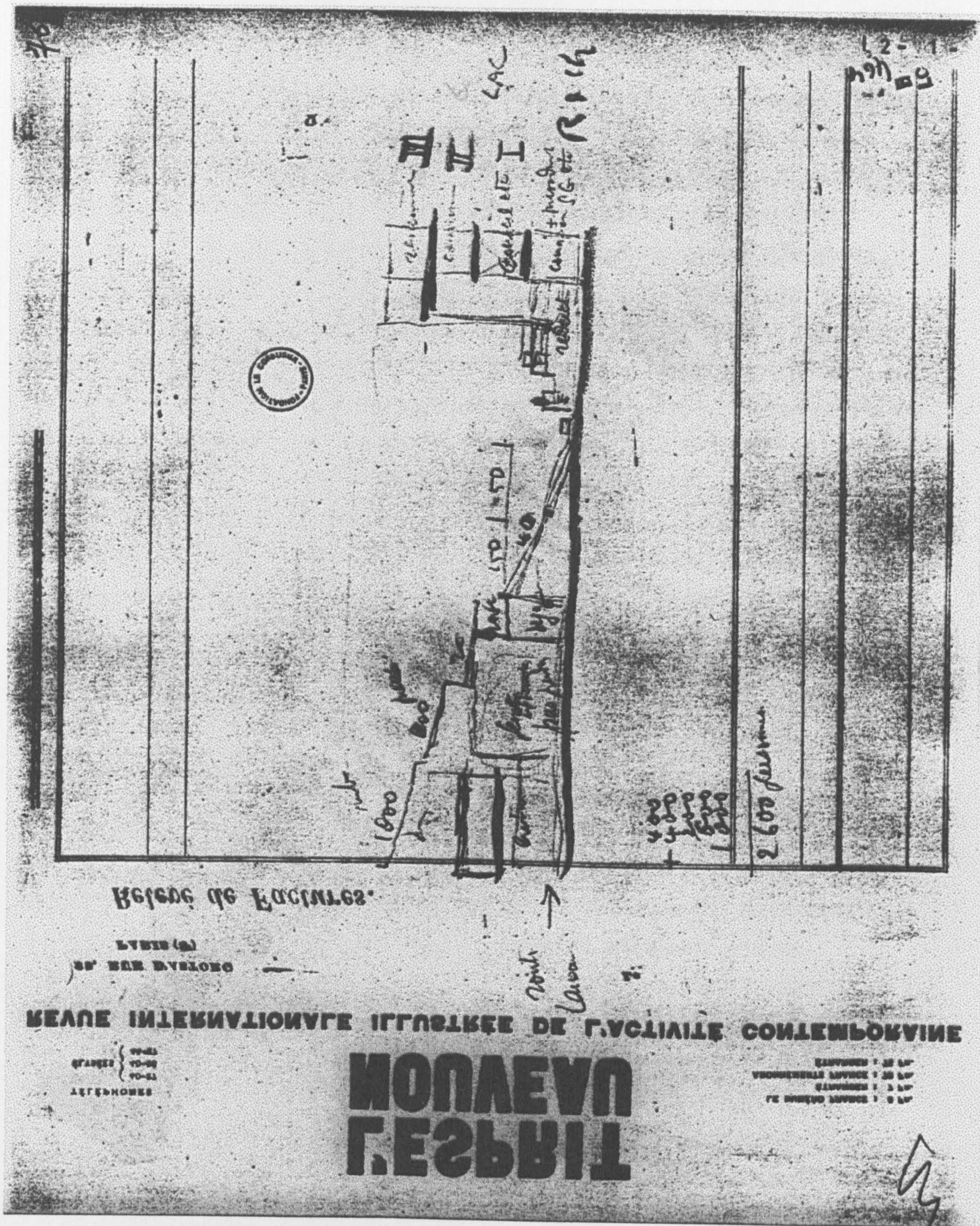


figure 18

Une Maison presentation of Le Corbusier's project as directly opposing those of the 'Academy'. In Le Corbusier's competition scheme there is a kind of cour d'honneur in front of the Assembly Hall, but land-side and not lake-side, part of the approaches pointing to the building rather than a space contained by it from which to enjoy the landscape.

A final sketch from this archive group, most of which are taken up with attempts to organise the accommodation, is no.76 [fig. 18]. This shows a diagrammatic seating arrangement for the Great Hall, seen in section. As in the previous sketch, the council chamber is placed at the head of the hall, but here it is placed in a vertical stack of Commissions Halls. A later sketch [23.368, 9th November - fig. 19A] from the Garland archive⁵⁴ shows, alongside an early version of the final configuration, a plan of the Assembly Hall with the wings that housed the Commissions placed at the lakeside nose of the hall, rather than flanking its entrance. Only the President's pavilion, treated as a freestanding sculpture in the final project, retains the position shown in sketch 76. Two of the sketches shown in fig. 19A&B suggest that the ends of the Commissions Halls wings might be curved, and 23.368 even has two small accommodation studies of this possibility. Here the assembly Hall plan becomes a caricature of an aeroplane: the winged spirit of modern times; this crude literalness was not retained in the final solution. [fig. 19B]

The earliest drawings in the Le Corbusier Archive date from the first week of November, 1926 [these dates are in Le Corbusier's hand] and by this time the basic configuration of the ensemble on the site was fixed. See fig. 19A for the earliest study of this layout [23.318]⁵⁵. In this drawing, the relationship of Secretariat and Assembly have been determined, the projected extension of the Secretariat across the central axis of the main hall is almost as the final project, and the President's pavilion is beginning to take on its final form. The parterres that articulate the entrance court have not yet taken on the triangular shapes that echo the plan of the fan-shaped hall, and the wings of the Commissions flanking the Assembly Hall building are at right-angles to the main facade; later they were aligned to it. The library was embedded in the secretariat and faced the lake so that a single axis parallel to that of the Assembly Hall was set up; it would later be turned 90 degrees so that both buildings would focus on the entrance court. By late November of 1926, the entrance canopy to the Assembly Hall was a protruding square flanked by stairs expressed externally, and there seems to have been an elaborate viewing gallery placed on the south facade to encompass Mont Blanc. Notice, too, the indication of subsidiary entrances on the Secretariat extension which influence the forms of the parterres aligned to them.

By the time drawing no.23.382 [fig. 19B] was made, the parterres of the entrance

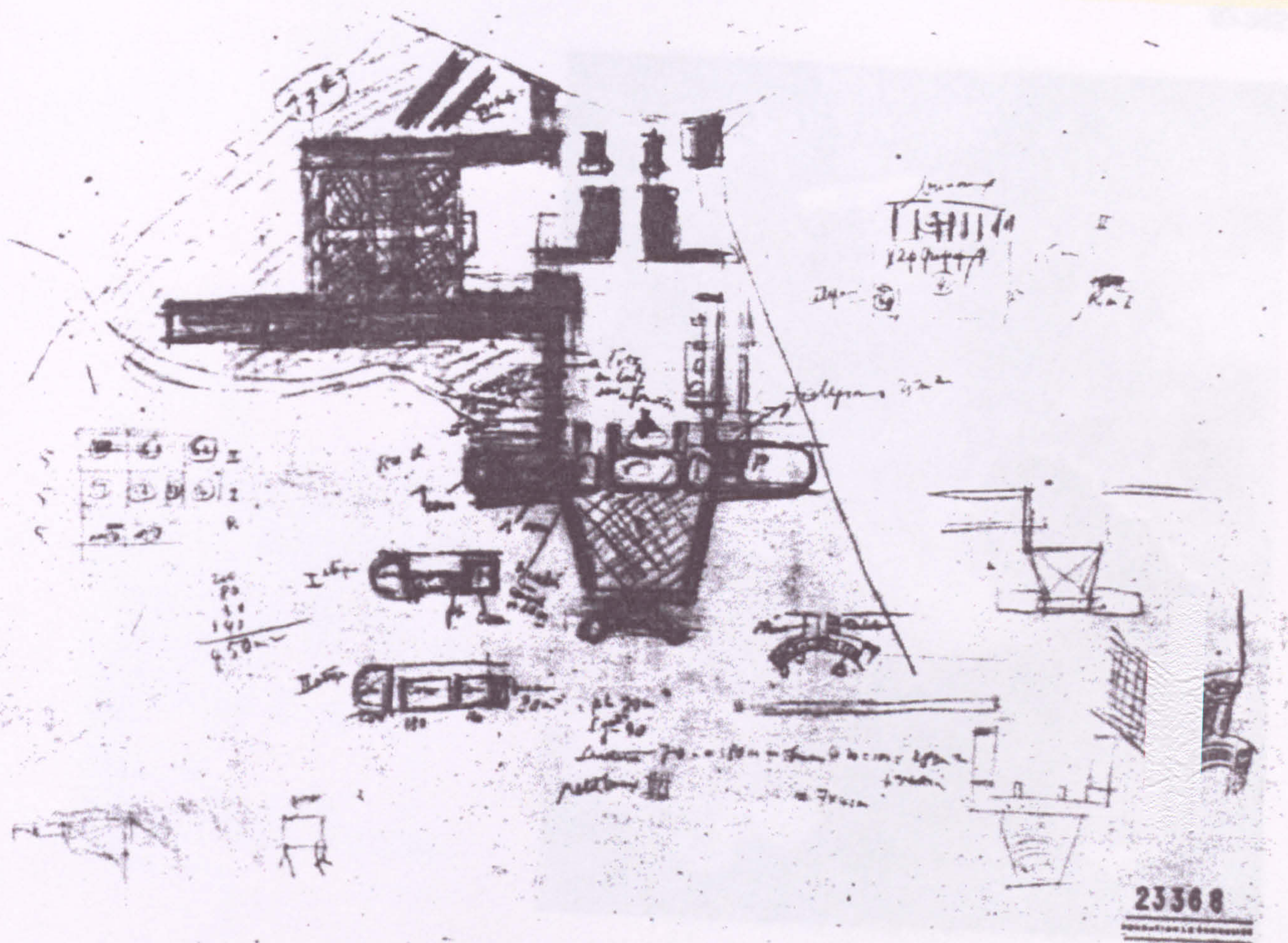
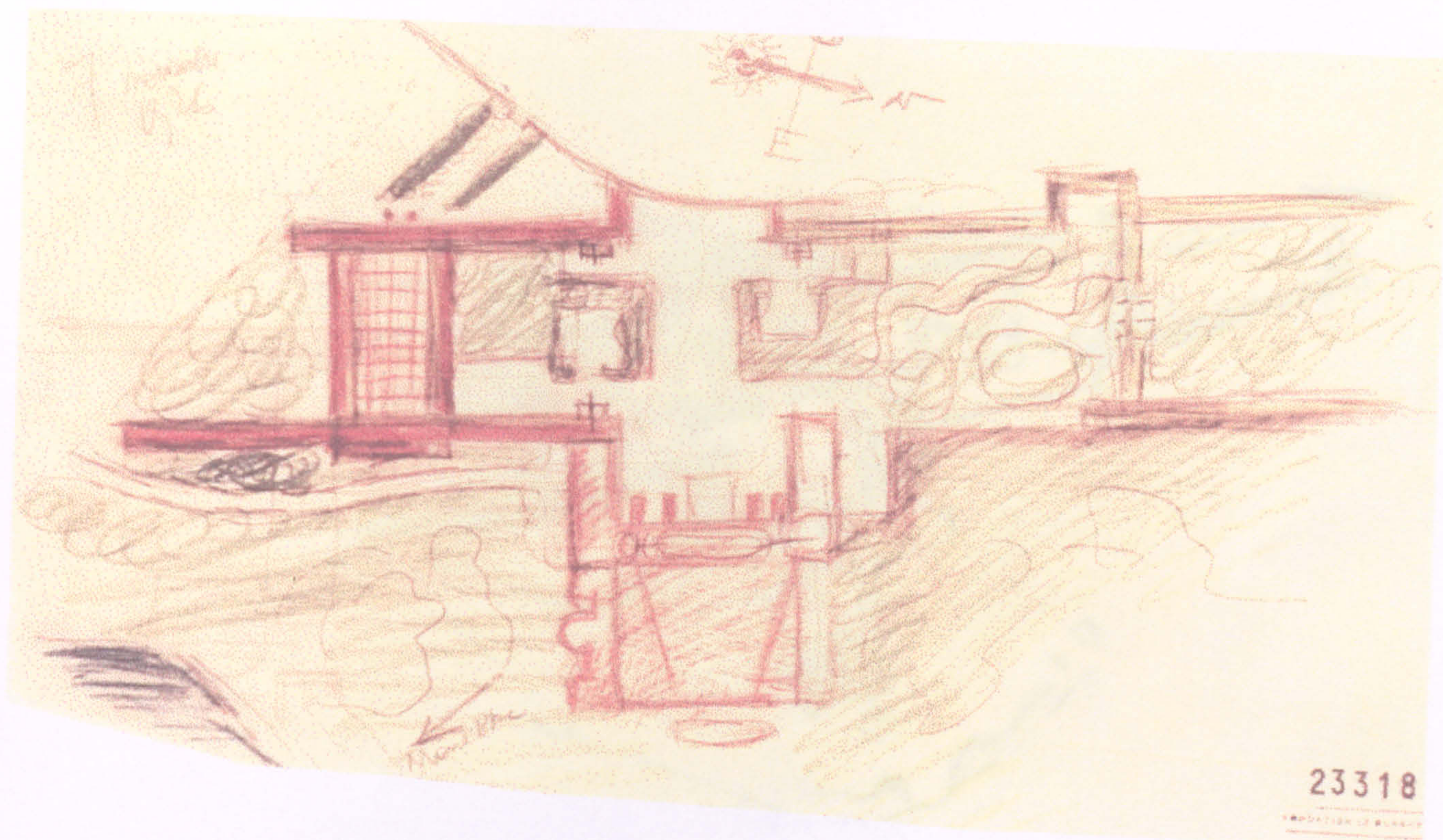
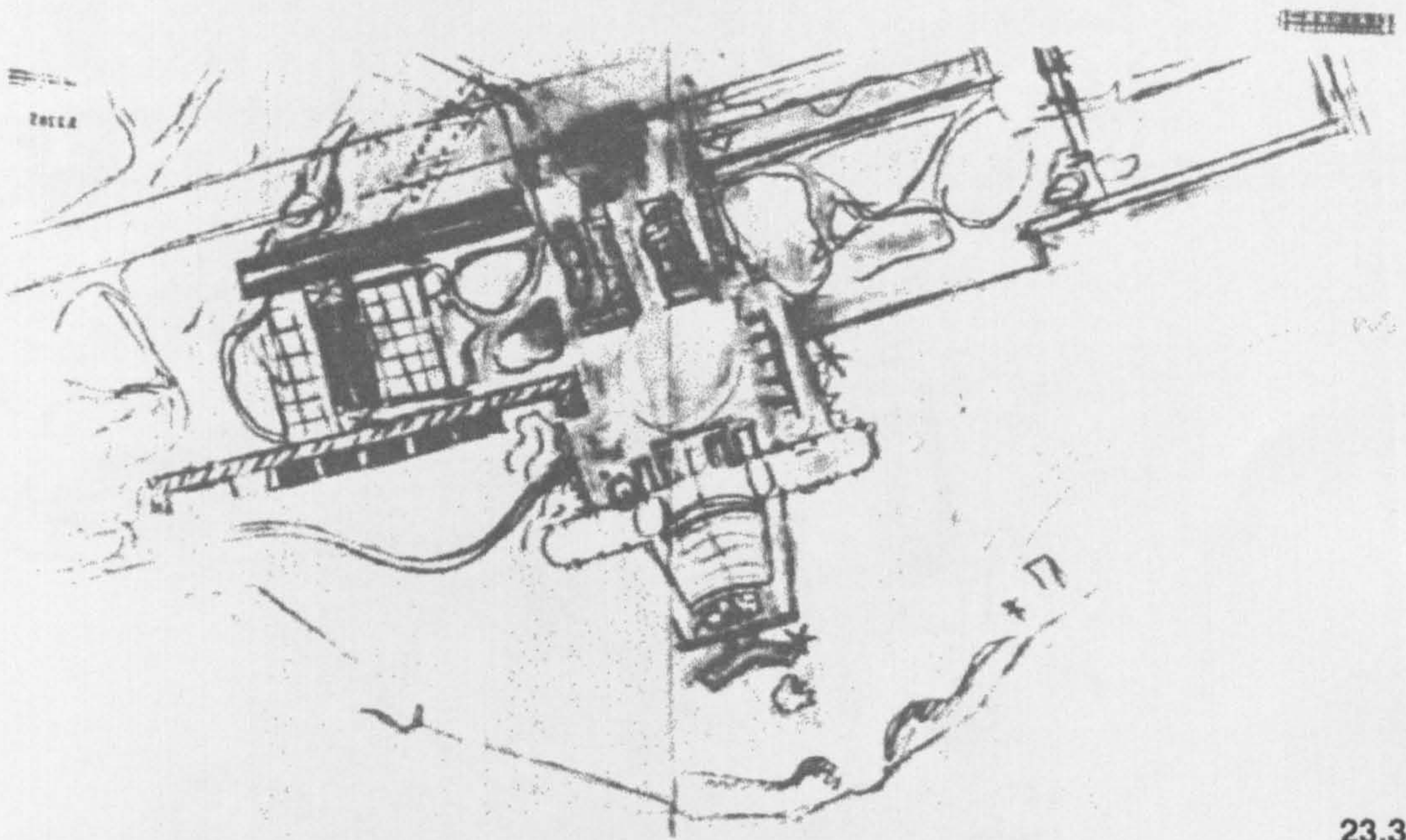


figure 19A



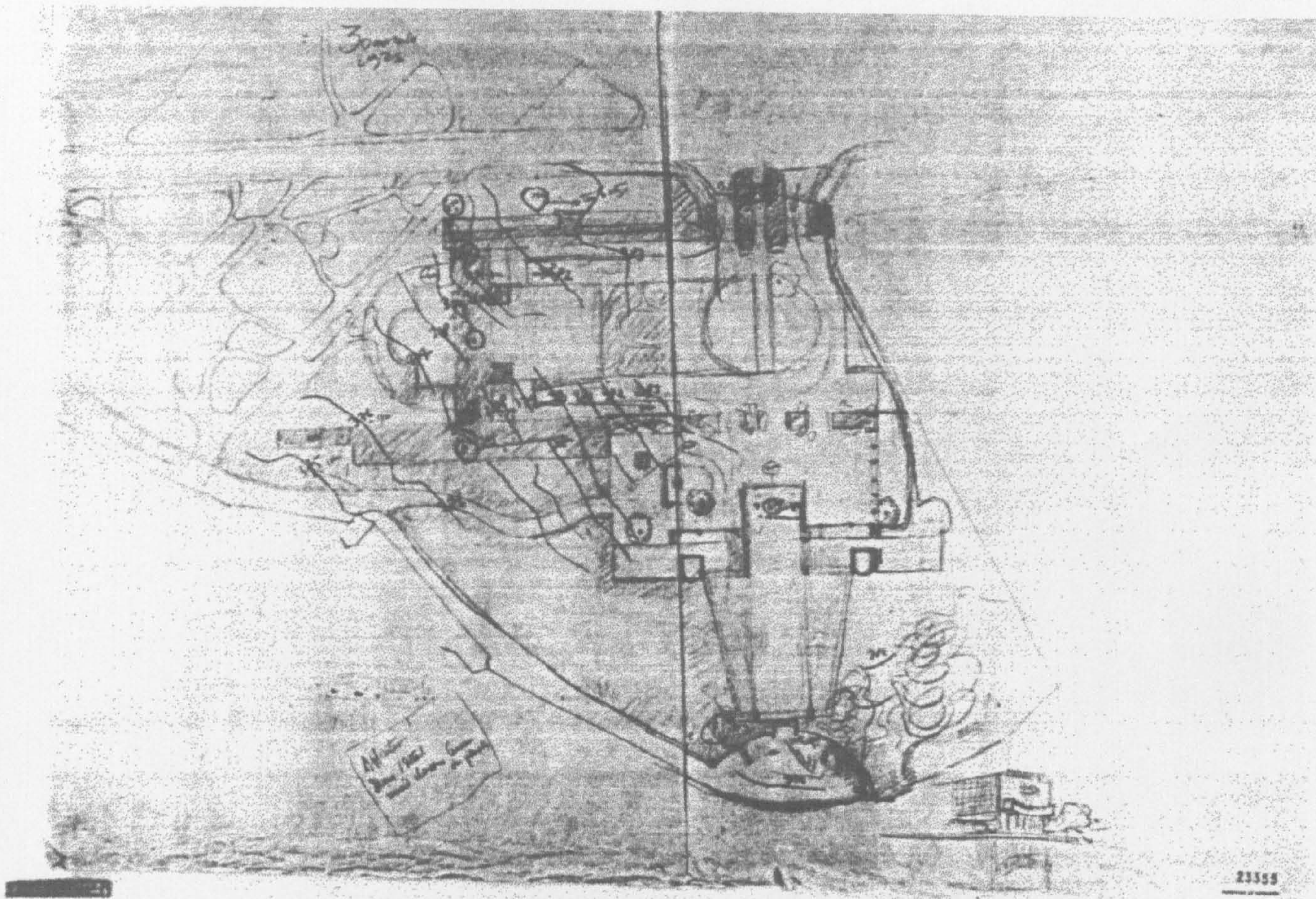
23.382



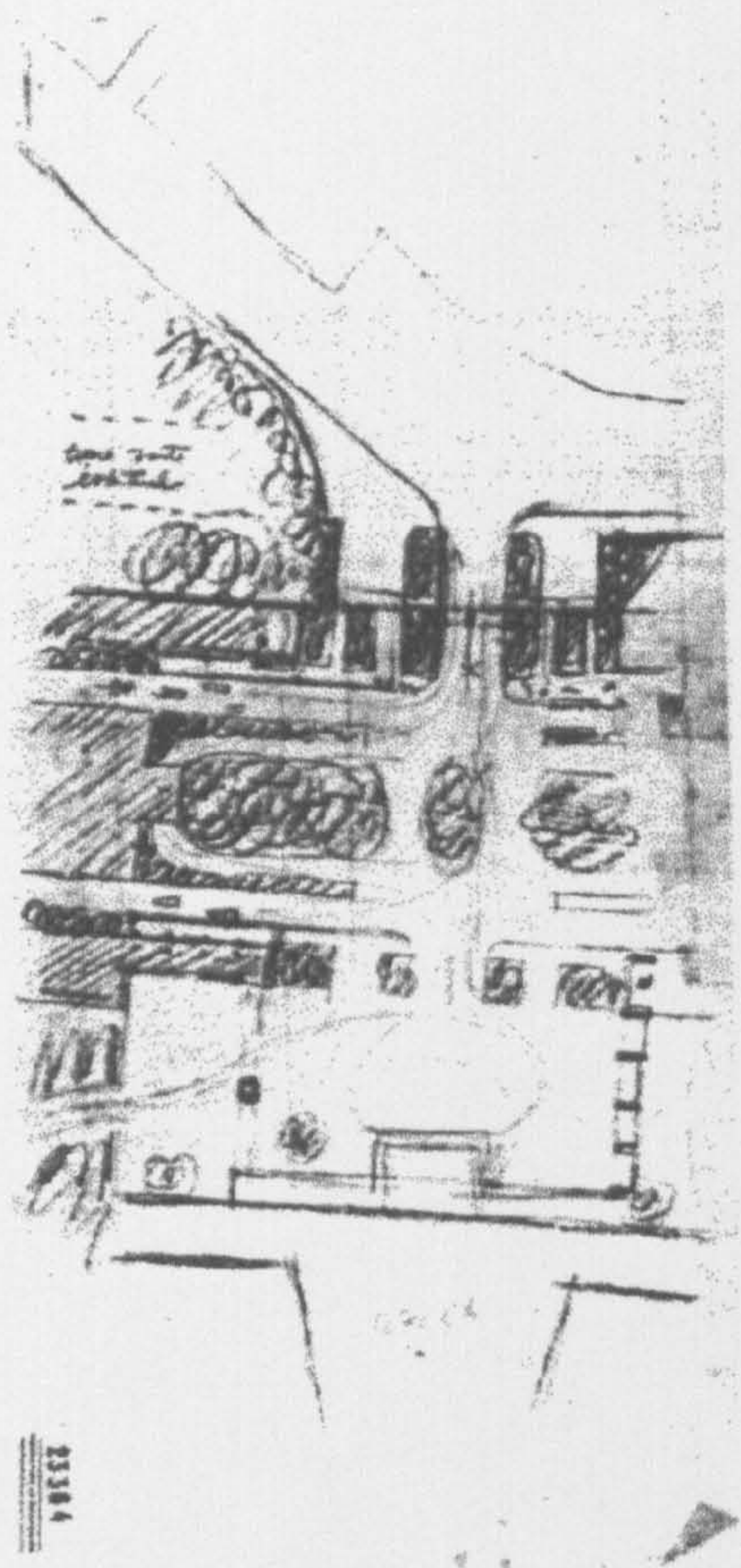
Une Maison p87

As it develops, the Assembly Hall plan briefly describes the outline of an airplane

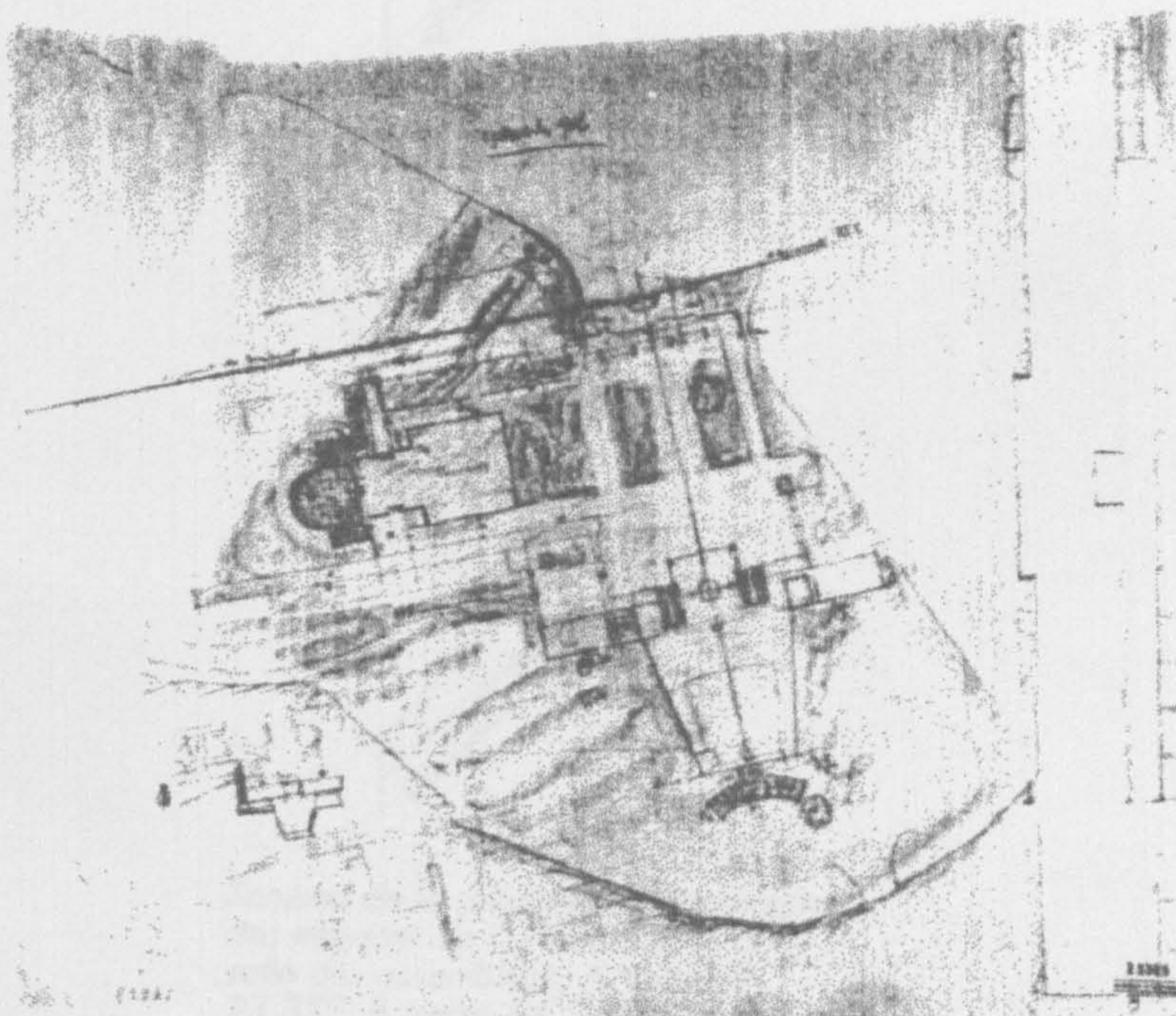
figure 19B



23.355



23.364



23.385

From Devanthery and Lamuniere:
'S.D.N. Un Palais Moderne?'

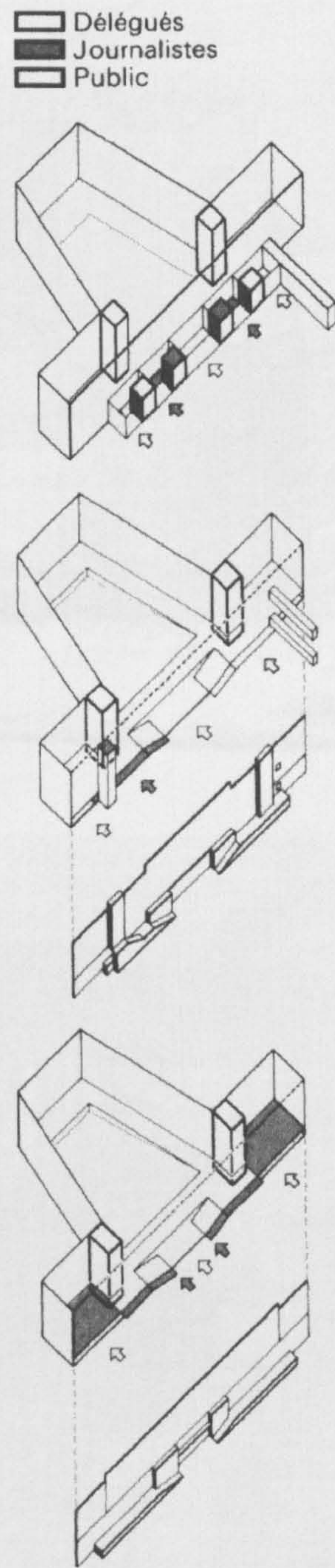
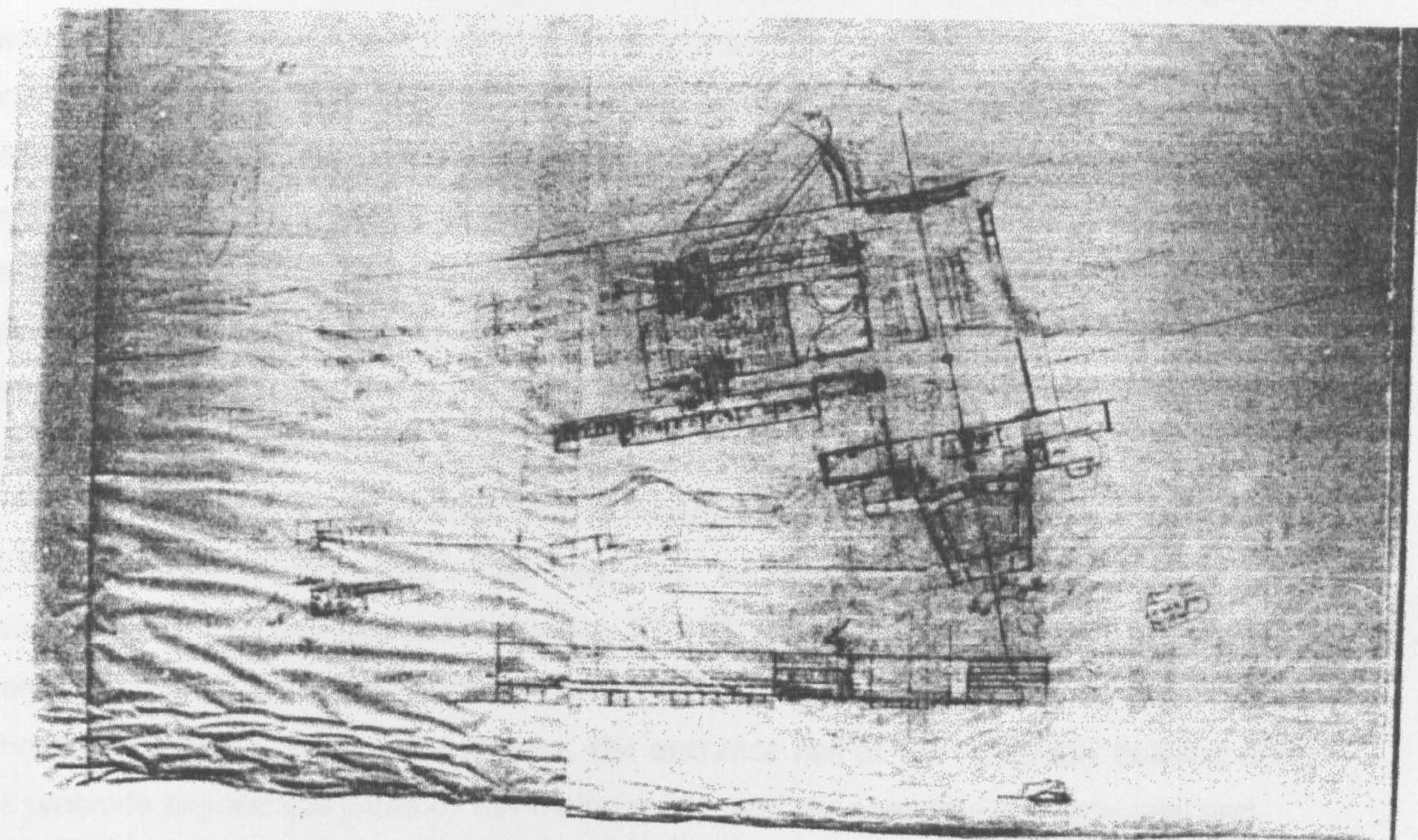
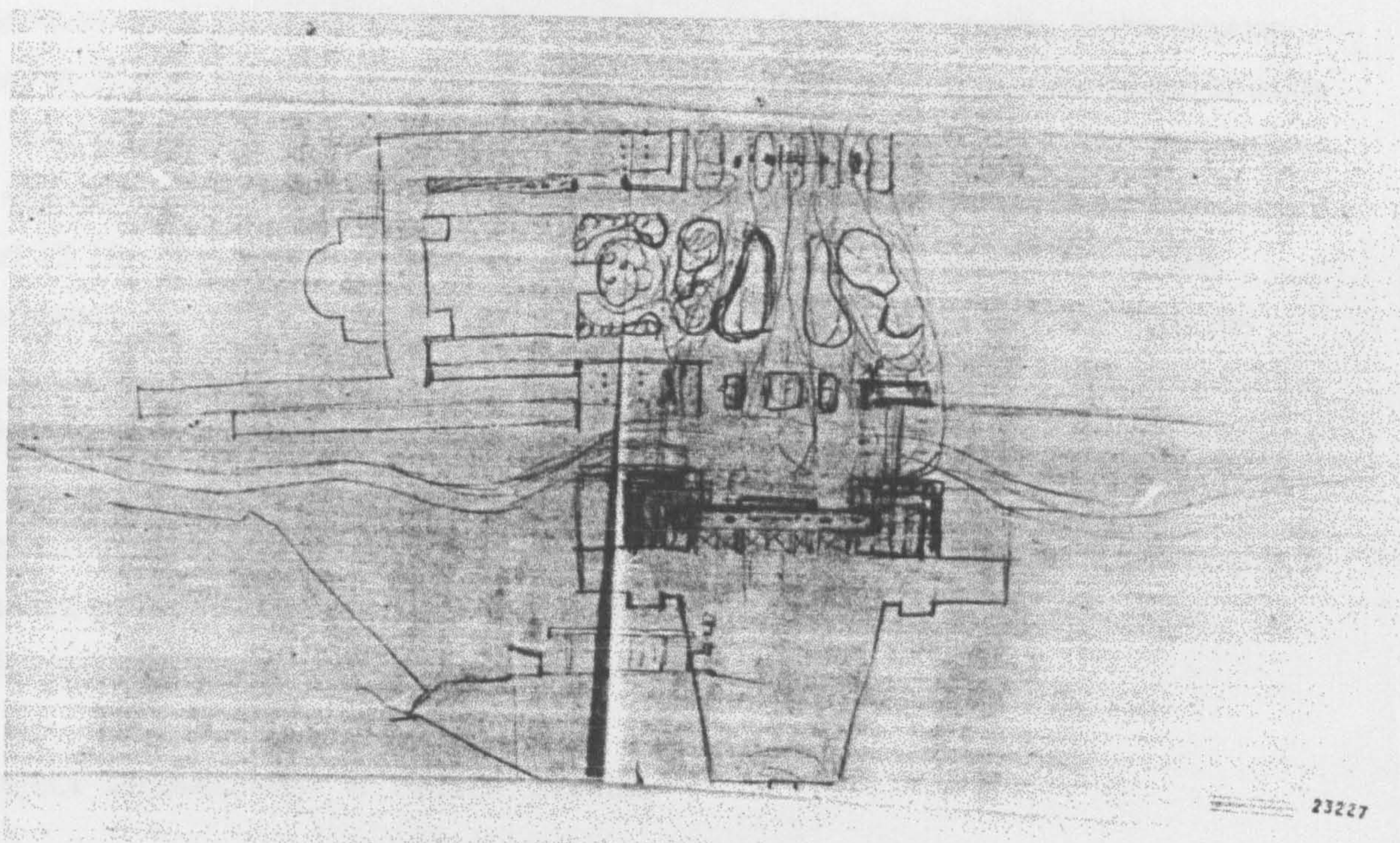


Schéma de la progressive compression
des espaces de l'entrée à la Grande
salle des assemblées, A. selon FLC
23.379, B. selon FLC 23.402b
(les auteurs, dessin F. de Giorgi).



23.391



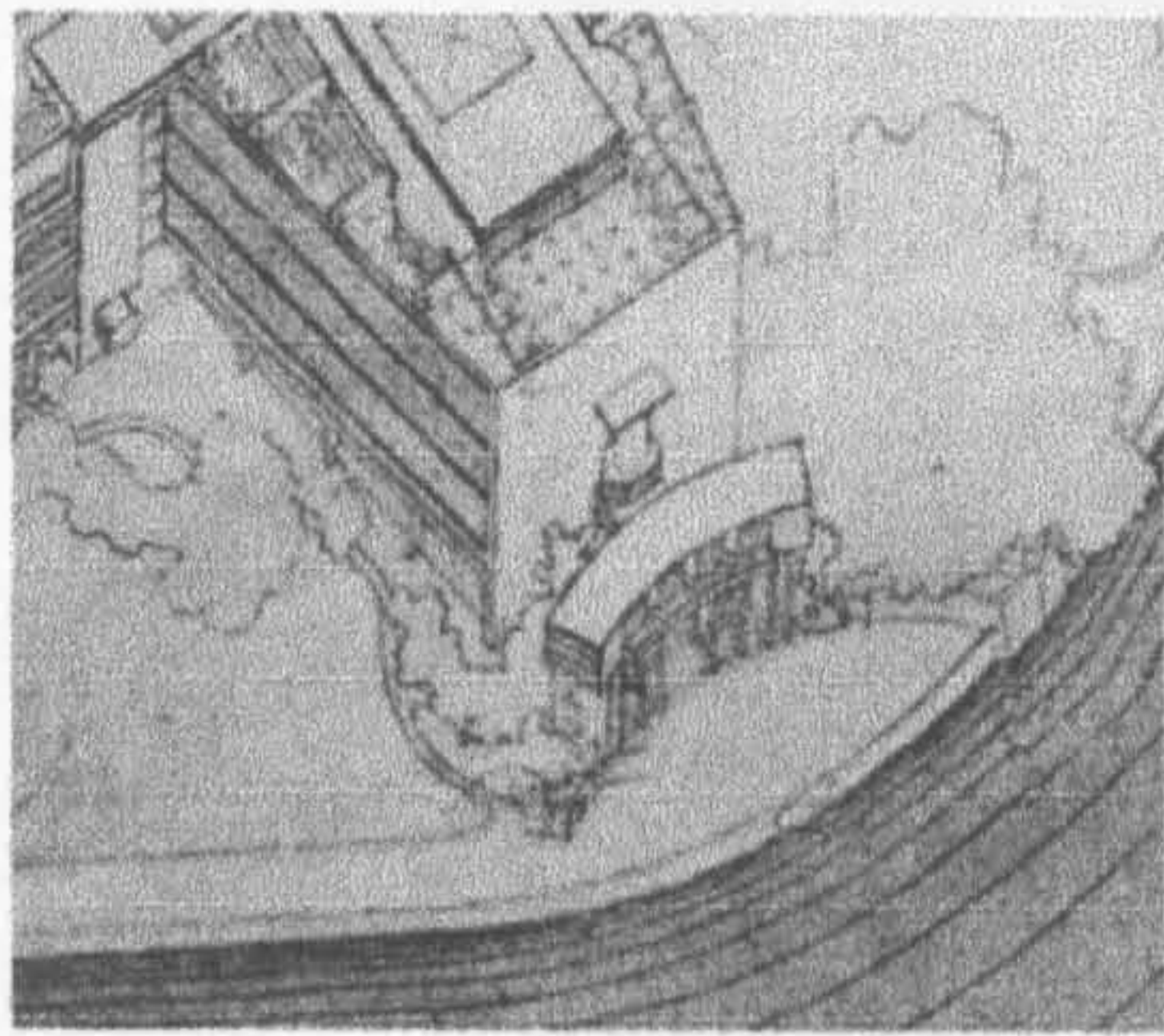
23.227

court had begun to participate in the axial symmetry of the Assembly Hall, the wings of the Commissions Halls were aligned with the main entrance and had acquired rounded ends; the library had been rotated and passed beneath the central block of the Secretariat. Here the lakeside block of the Secretariat shows some development of the central section with its range of conference chambers for the Commissions: this symmetrical treatment is emphasised by the matching square blocks, presumably vertical circulation elements, attached to the ends of the lakeside facade. In the final solution, these blocks become half-cylinders on the ends of this main range of offices, and they do not go down to ground. The final motor circulation scheme is also in place here.

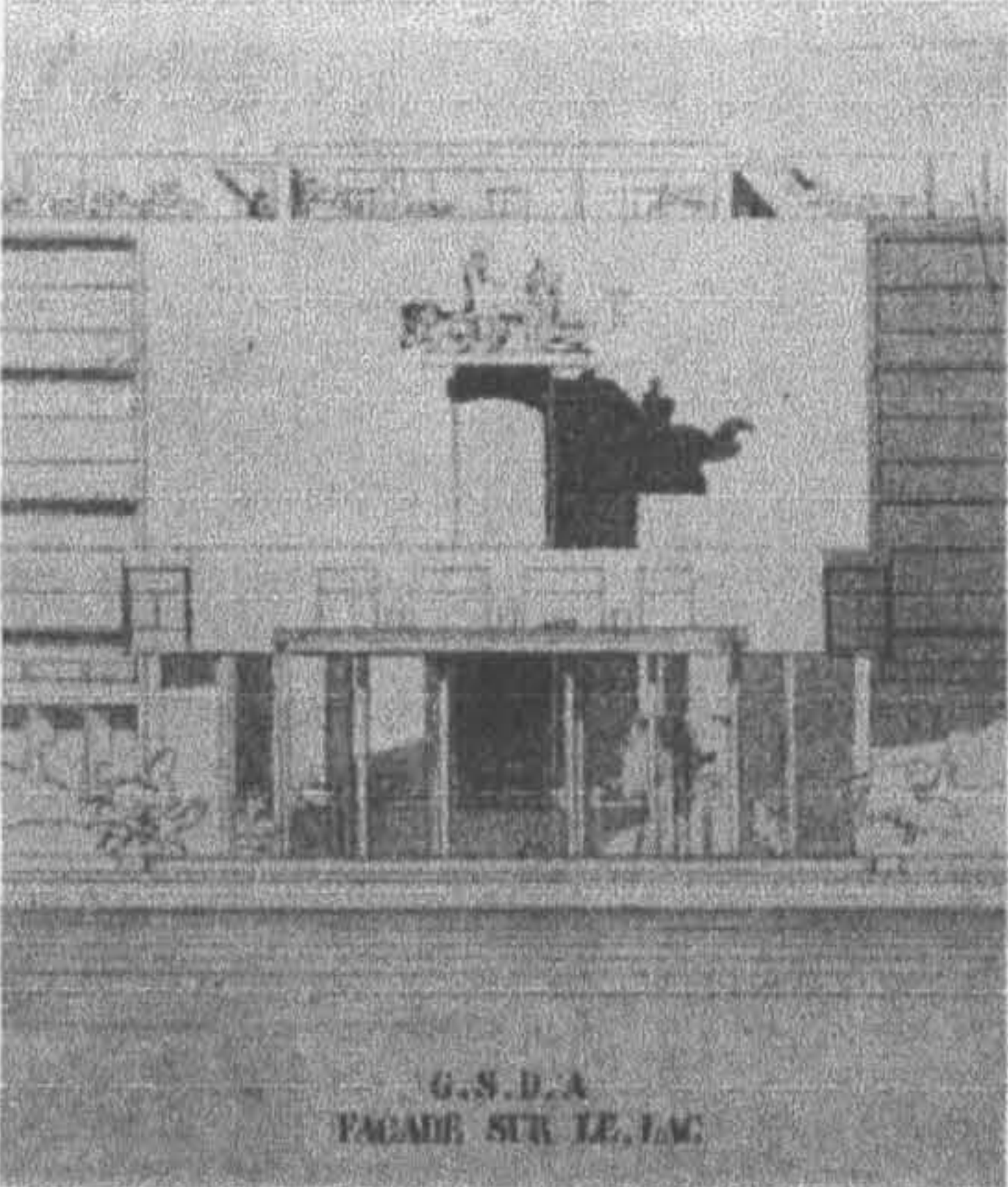
The square entrance portico of the Assembly Hall is retained in drawings 23.385, 23.364 [parterre study] and 23.355 [fig.20]. An axonometric interpretation of the main entrance scheme indicated in drawing 23.385 and other Garland Archive drawings has been published by Devanthery and Lamuniere, [fig.21] and I will return to this later [see elevations analysis]. In the final project, the entrance hall of the Assembly building does not protrude beyond the plane of the main facade, and the liner-like entrance quai and canopy replace the square portico. Drawing 23.391 [fig.22] appears to show the condition where the grand stair has been pushed back behind the facade. In this drawing [and in 23.369, see fig.30] freestanding vertical circulation elements are added lakeside of the Commissions wings, but these are not retained in the final scheme, where the paired *triple* stairs [see circulation studies] are hardly expressed externally. Drawings 23.355 and 23.385 [fig.20] also show the rounded rear of the library which picks up the circulation curves Le Corbusier sketched so often. In drawing 23.391 [fig.22], the library is still entirely rectangular, although the shape of the Assembly Hall entrance has apparently moved towards that of the final project. Of course these studies were produced in a relatively short time; they may have been under consideration simultaneously, as alternatives. In 23.227 [fig.22], the final form of the canopy is apparent, although it is flanked by twin square terraces which imply a concern with signalling an external differentiation of users before the entrances are reached.

Project Development & Facade Studies

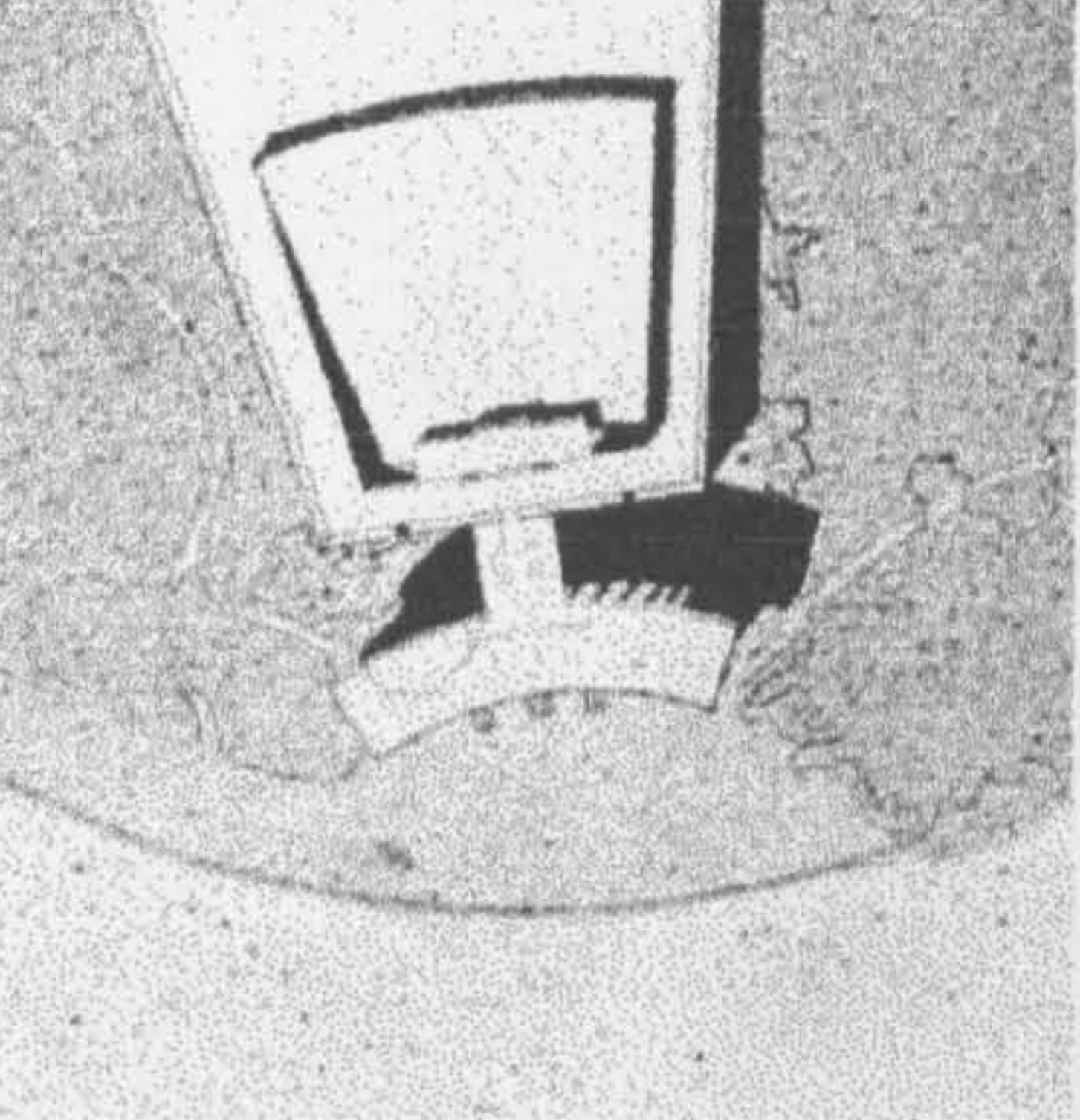
Even in the project submitted to the League in January 1927, there are facade variations in the drawings set, for example, the long, curved balcony to the President's Pavilion [SDN14, SDN17] is sometimes replaced by three small cubic balconies [SDN1], and in SDN5 both versions exist simultaneously. Similarly, there are drawings



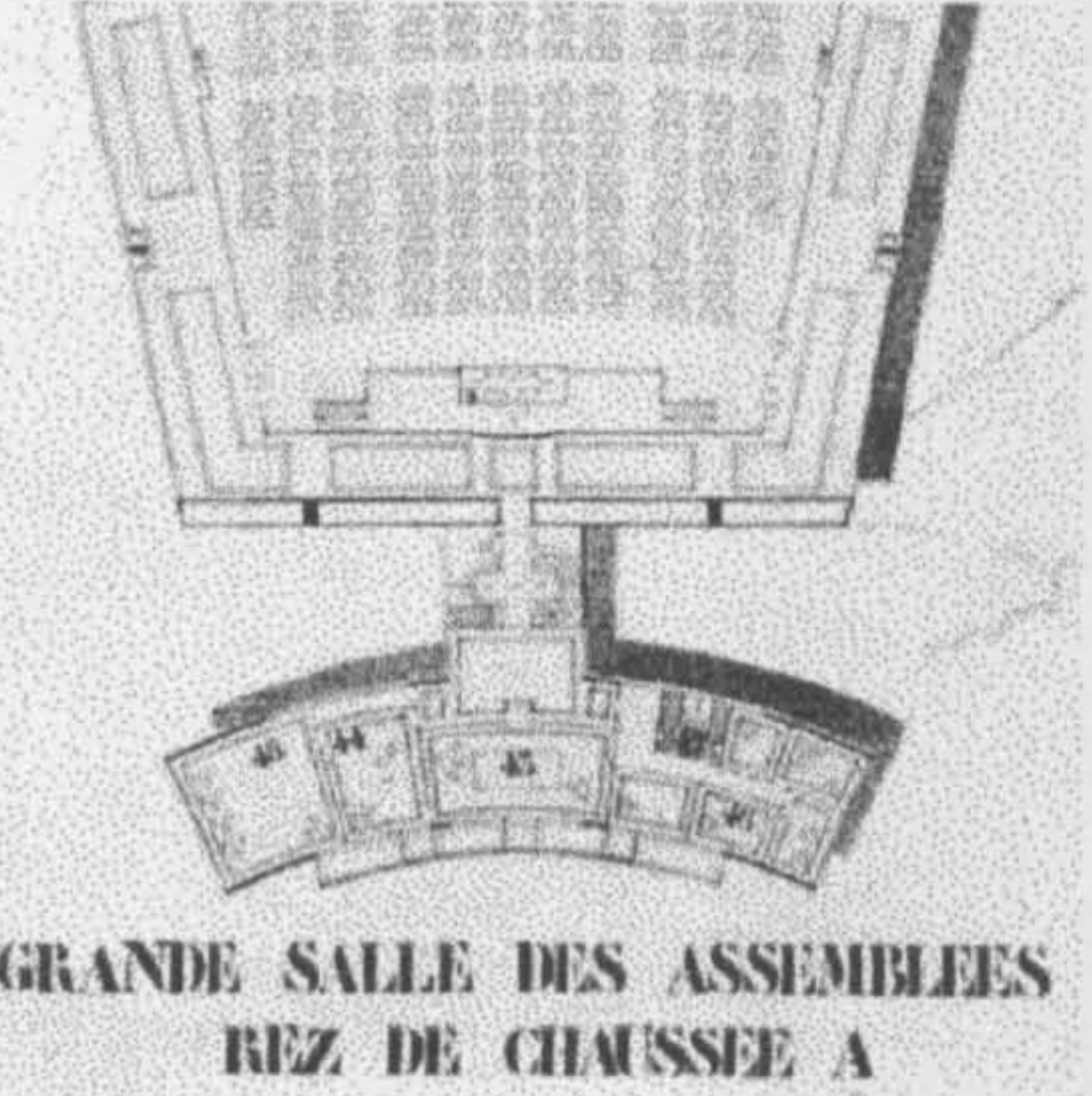
from SDN14



from SDN17

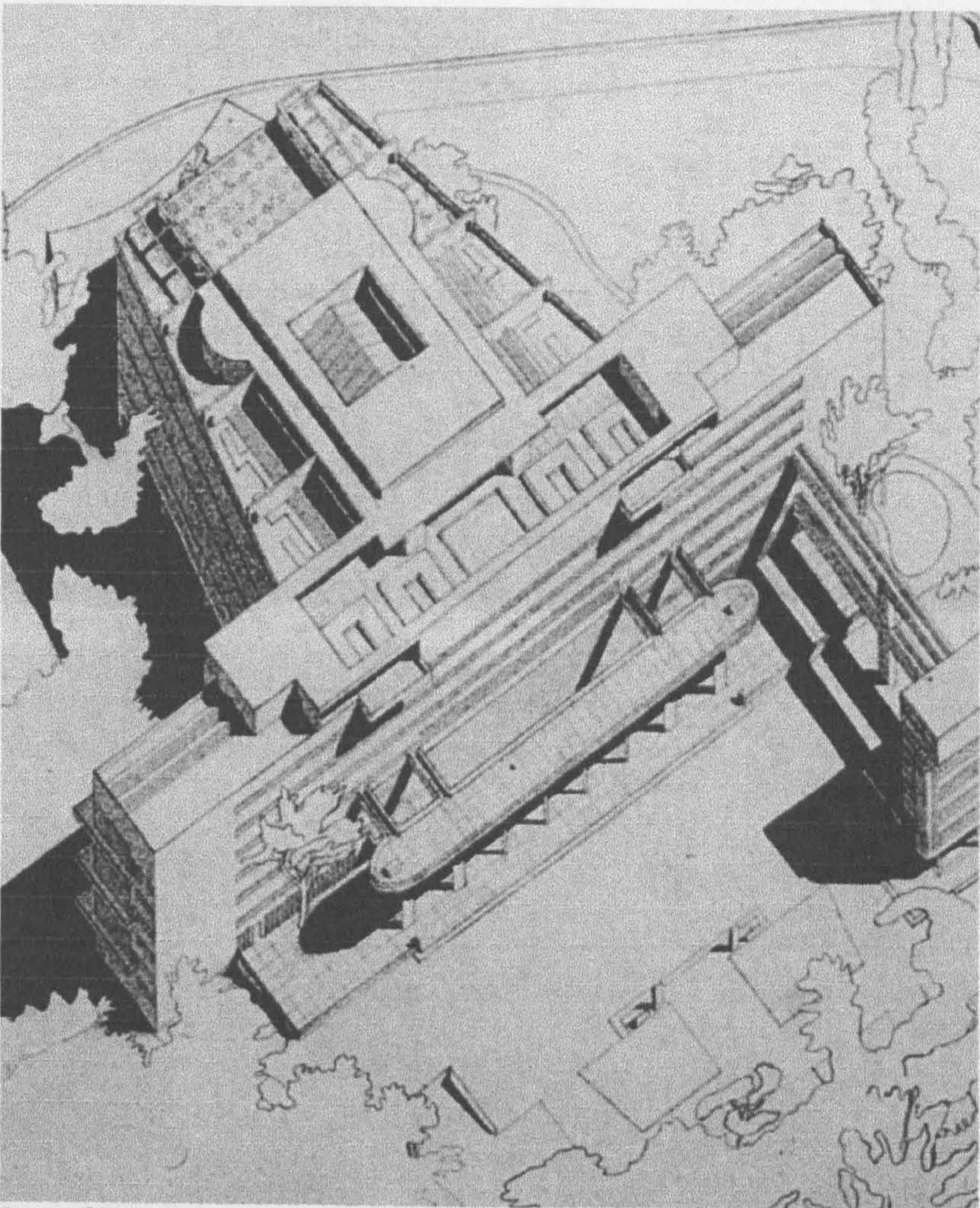


from SDN1



from SDN5

President's Pavilion balcony variants

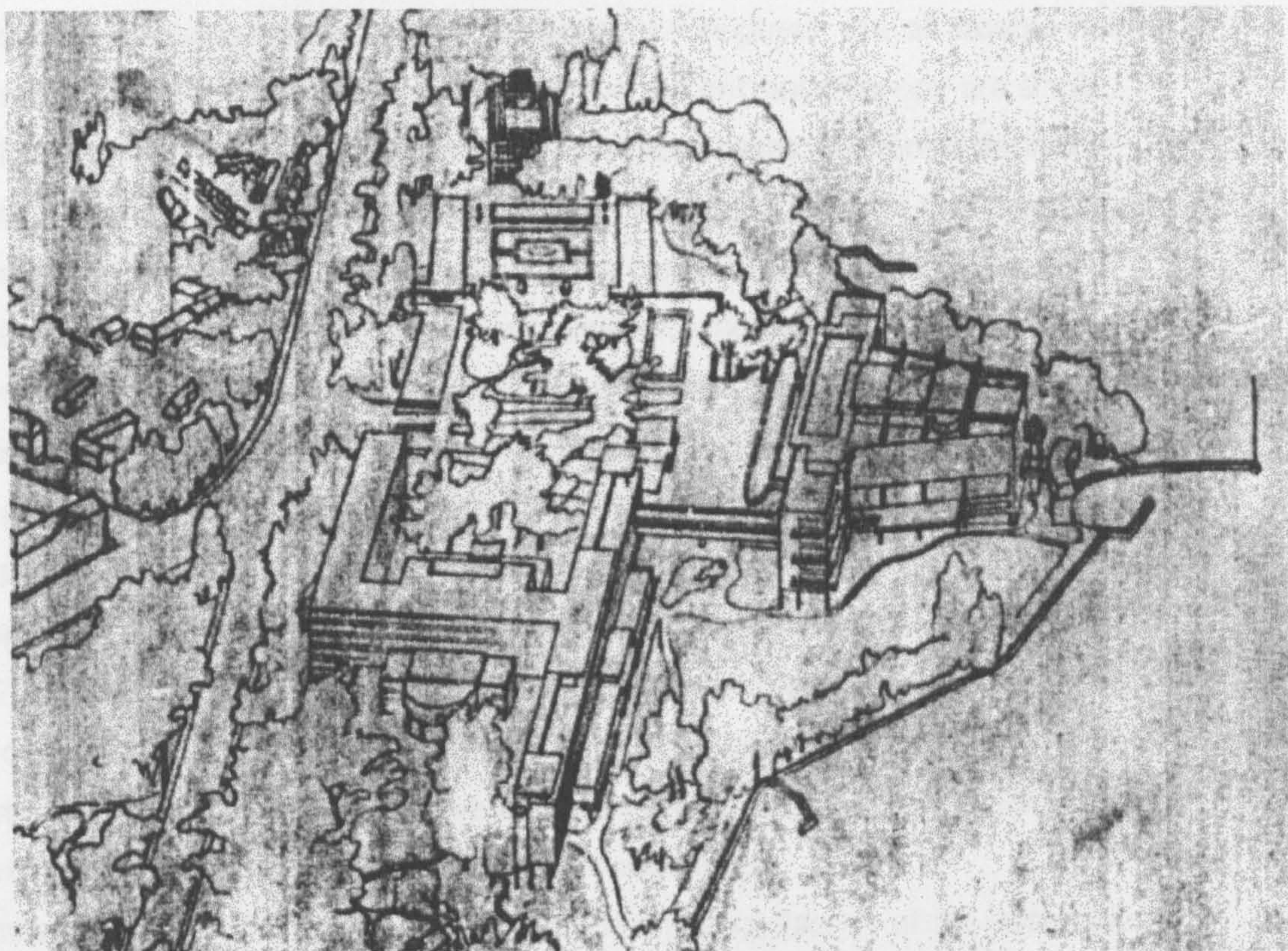


from SDN15

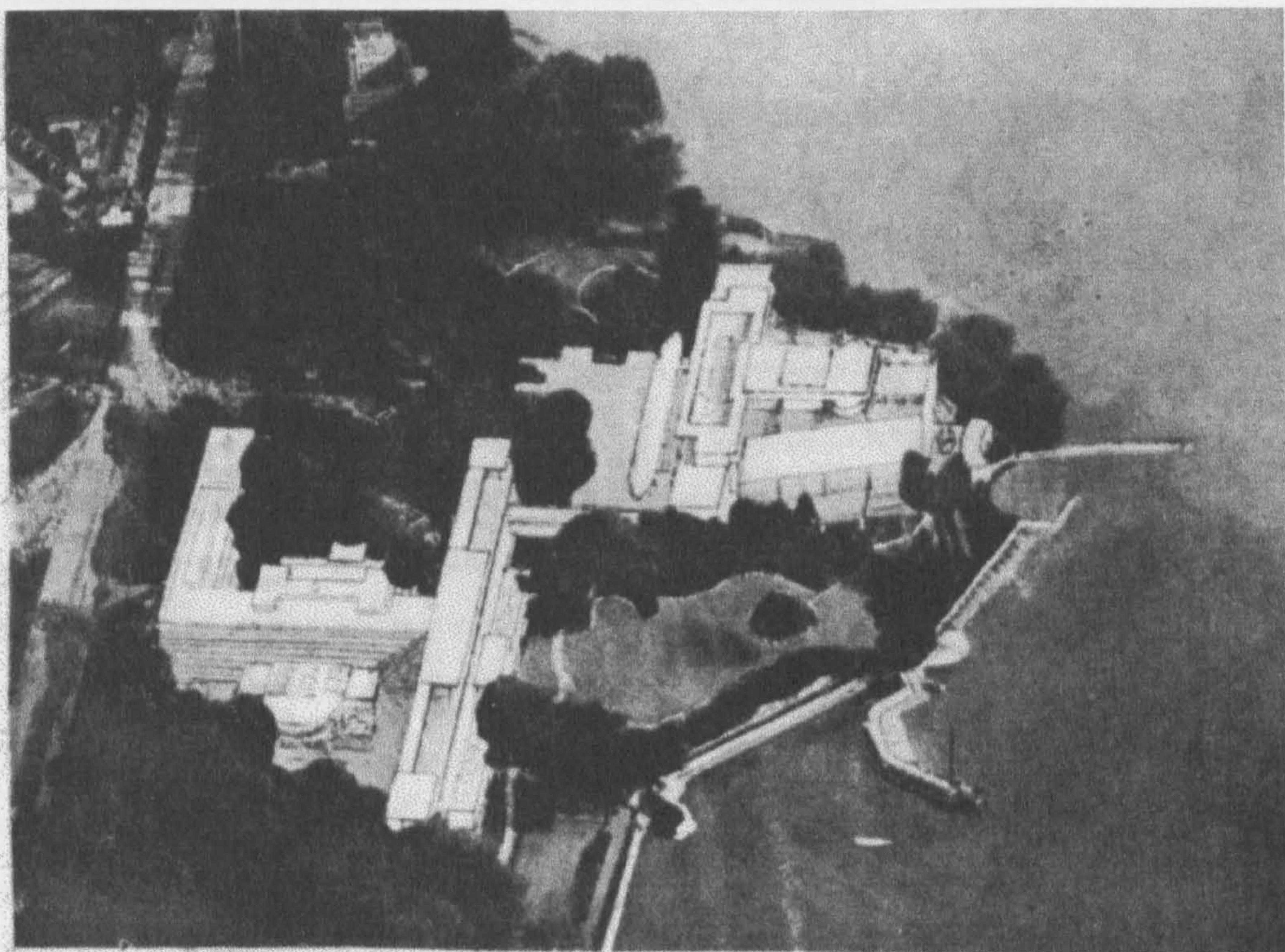


from SDN13

Fenetre en Longueur varied on Assembly Hall entrance facade



from FLC 23.186

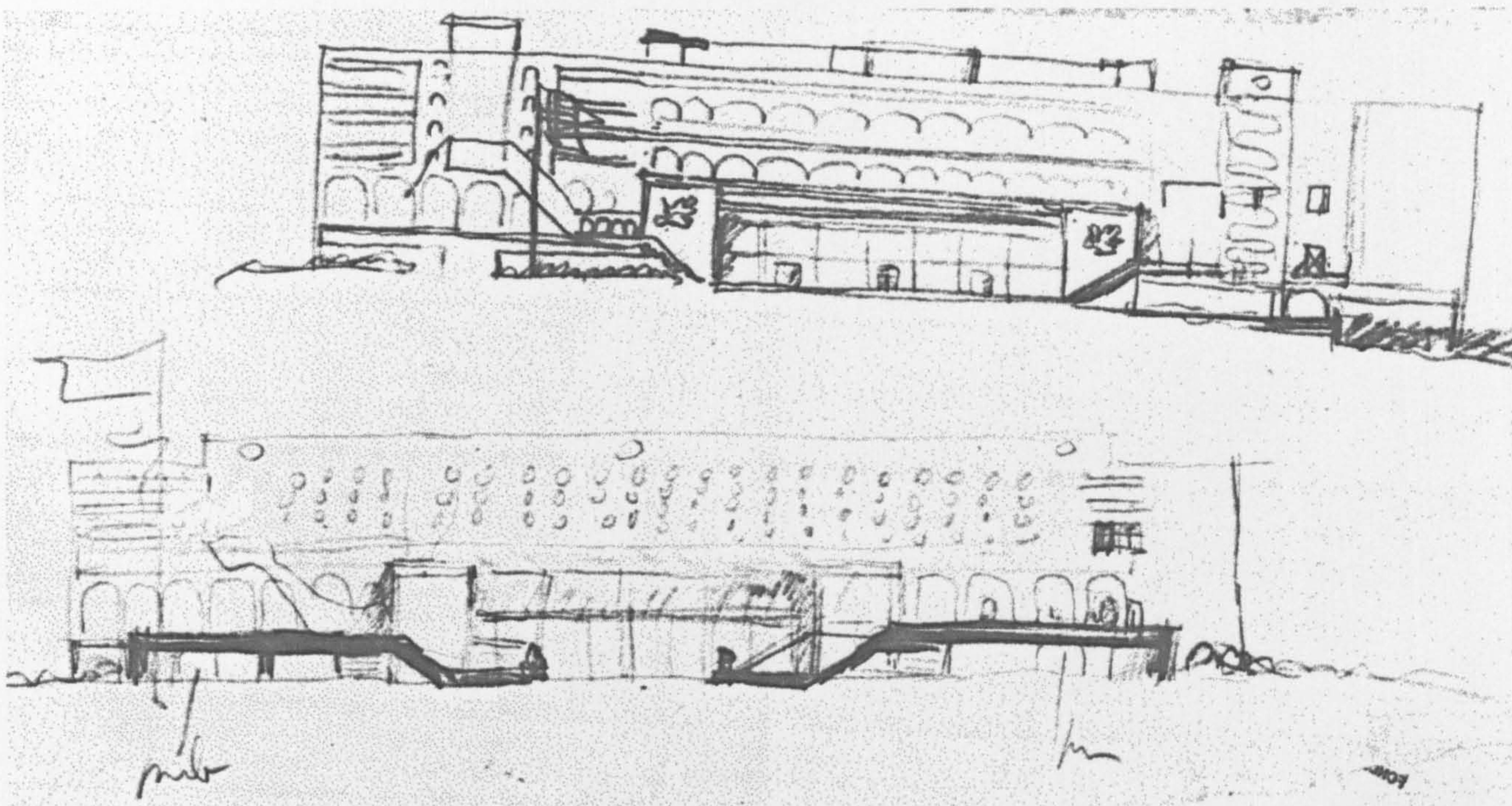


Une Maison version, p172

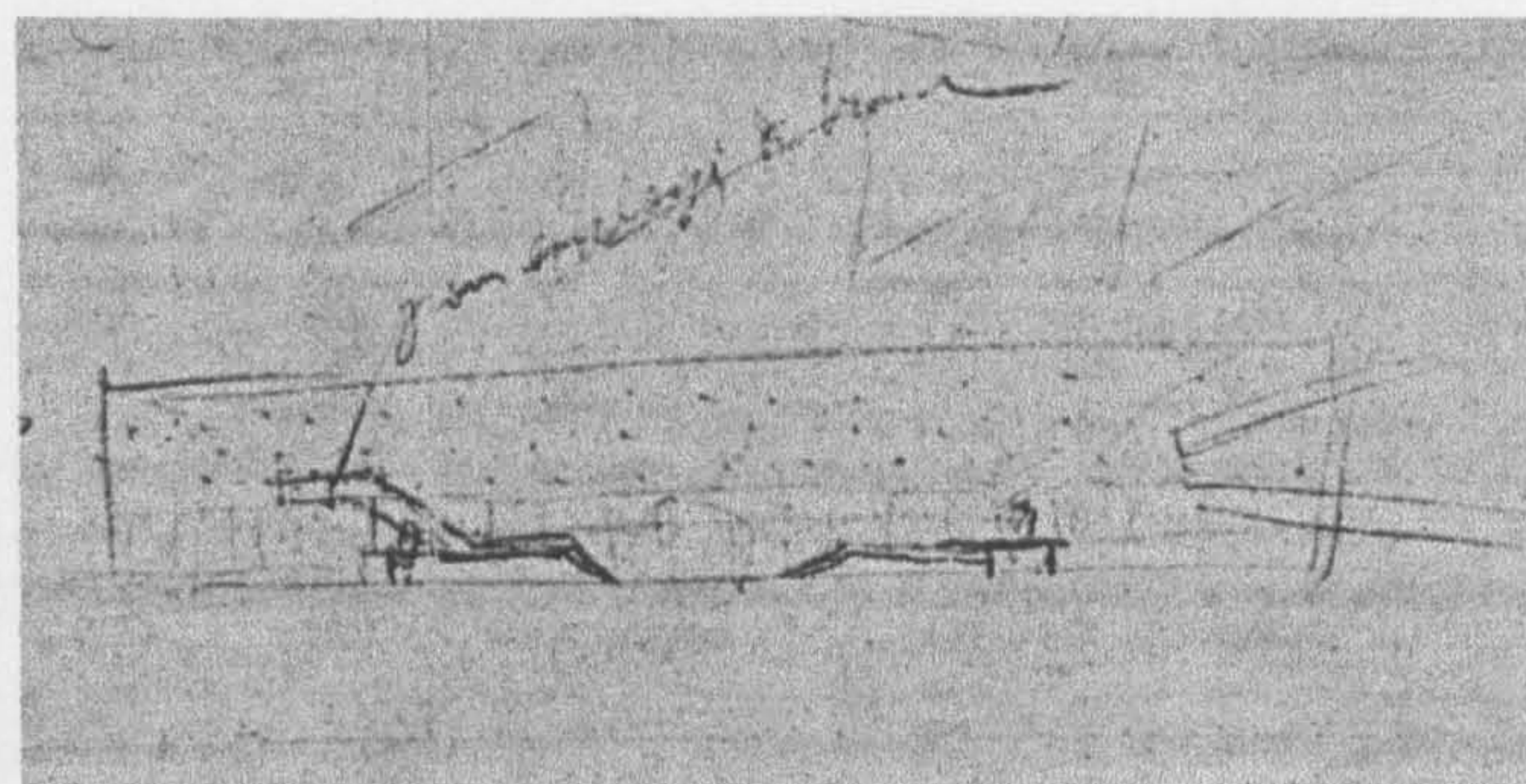
figure 23B

of the main Assembly building facade where the *fenêtre en longueur* are all double-height, and others where all but the central long window above the entrance canopy are single height [SDN1 5(axonometric), SDN1 3(facade)]. In these cases, is there a definitive version? As regards the President's balcony, the large balcony consumes the three small ones in drawing SDN5; as for the long window, only a careful examination of the axonometric drawing reveals the anomalous long window, whereas the alternative version is very clear on the elevation [fig.23A]. There are also ideas that were not submitted to the competition but published later. For example, the aerial view collaged into one of the photographs provided with the competition brief and published in *Une Maison* p172⁵⁶ [Fig.23B], shows a new harbour created beneath the President's Pavilion, and extending its curved shape to form a constructed edge to the lake. This drawing is clearly pre-January 1927 because it shows an earlier version of the lateral facade of the Assembly Hall. Foliage disguises this difference to some extent, but perhaps not enough. Also, no system of entering the building from the lakeside was ever worked out, so the poetic idea of water access had to be omitted from the competition submission.

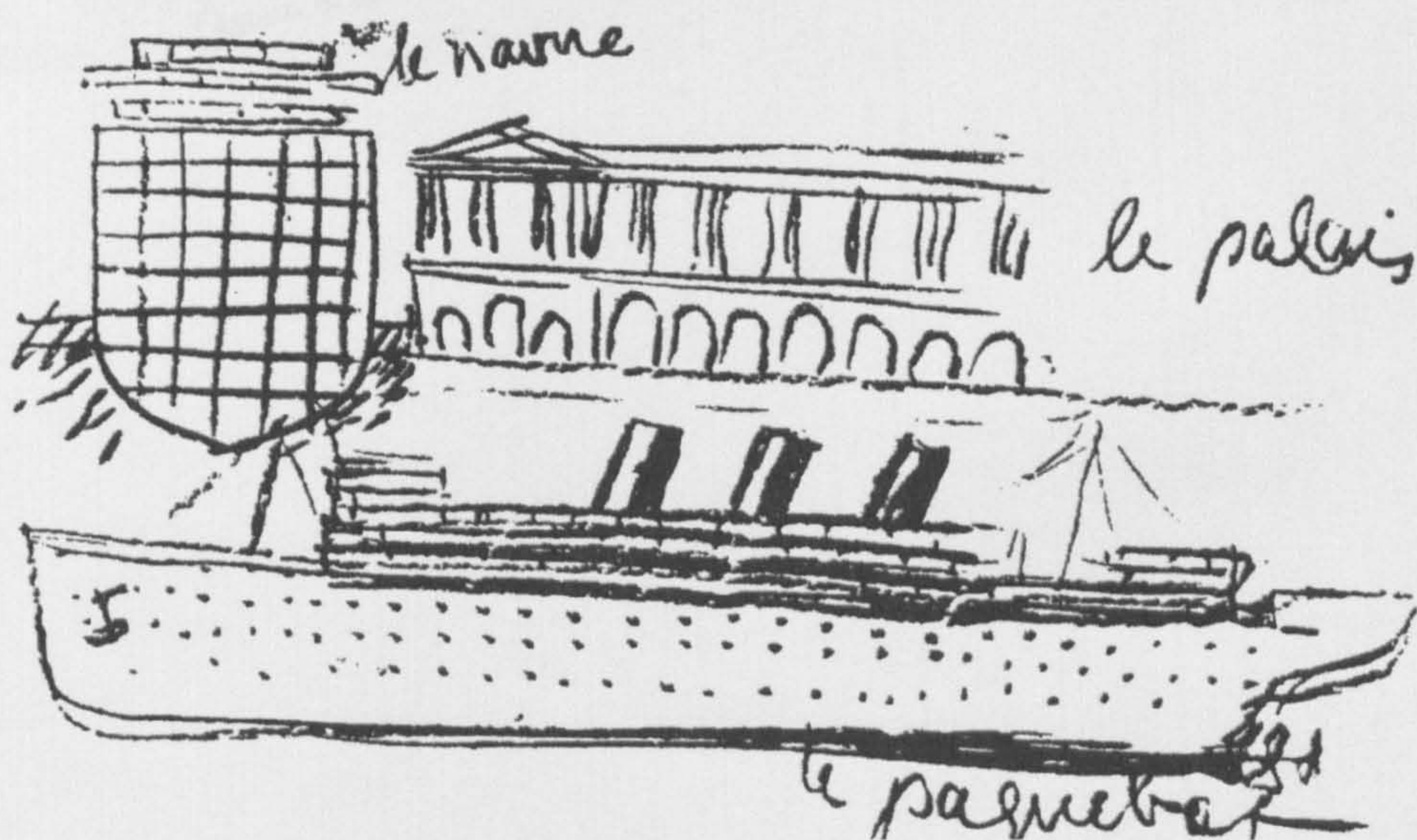
A number of studies exist in the archive for the entrance facade of the Assembly Hall - the most important facade of the ensemble - and for Le Corbusier, inseparable early on from the question of circulation and the related differentiation of users, each category being assigned its own entrance and different sections of the interior. Apart from the general site layouts discussed above, drawings indicative of Le Corbusier's thinking are the facade sketches 23.402 and 23.317⁵⁷, [fig.24A&B] and the plan studies 23.379, 23.353, 23.381 [fig.25] 23.370⁵⁸, and 23.334.[fig.26] As I mentioned before, these studies have attracted the attention of Devanthéry & Lamunière, who extracted the developmental sequence shown in their diagram [fig.21] from these drawings. Here a first suggestion of a series of external stair blocks separating a number of entrances is replaced by the twin lateral staircases of the final project, now divided by the facade into internal and external portions to serve several categories of users. The left hand external stair is then developed further so that an asymmetry is introduced, but this is only a temporary manifestation; in the second study on sheet 23.402 it vanishes. As Devanthéry & Lamunière observed, the grand double stair is then squeezed towards the centre and eventually retreats behind the glass and the external access balconies disappear. A sketch mentioned by the above writers but not illustrated, is 23.317 [fig.24B], dated 16 November, 1926. Although this sketch is as strongly symmetrical as the other two, it indicates two different external stairs, and a proliferation of internal staircases, including one placed on the central axis and expressed externally at roof level.



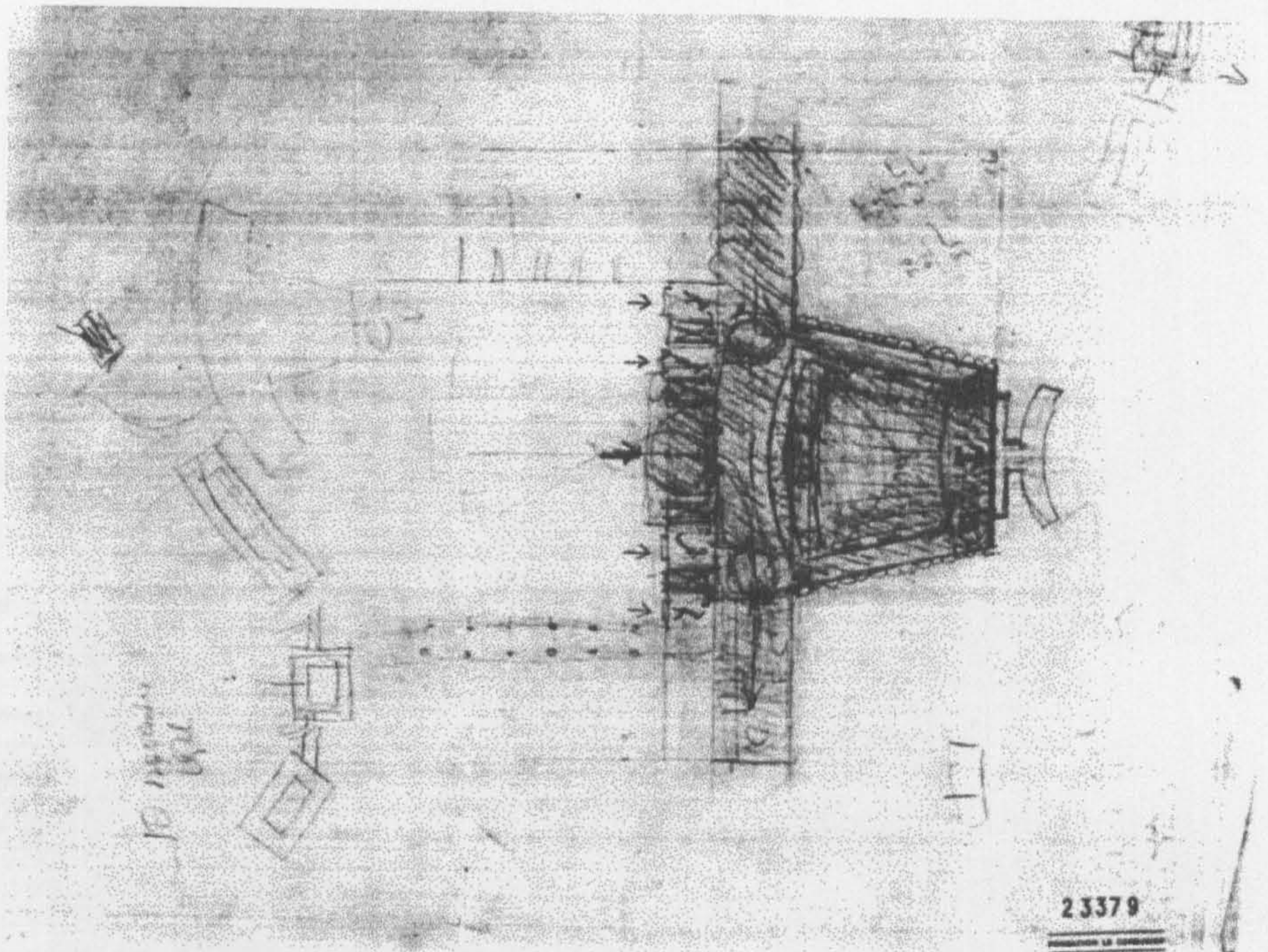
23.402



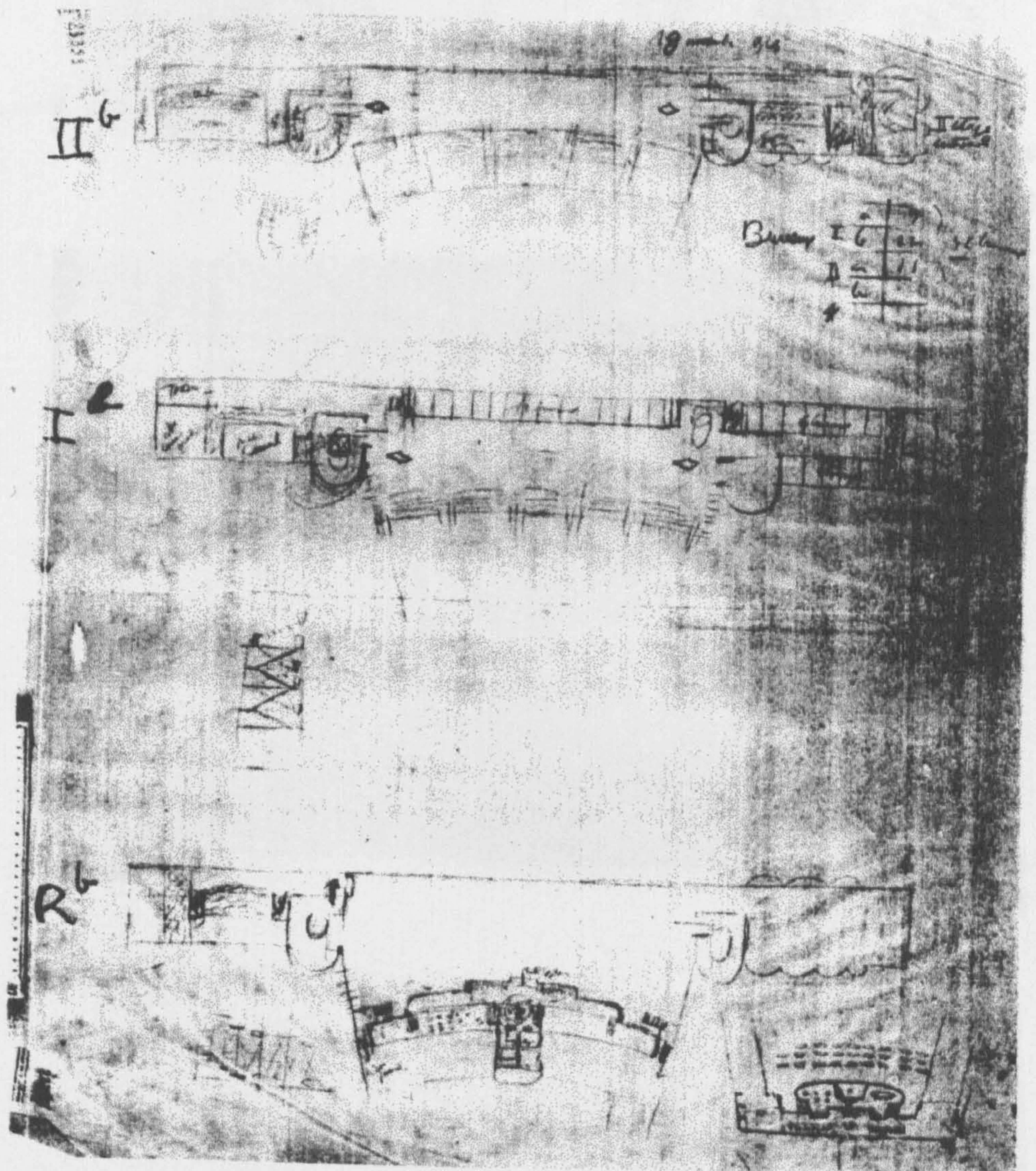
Sketch from 23.370



Liner image from *Precisions*

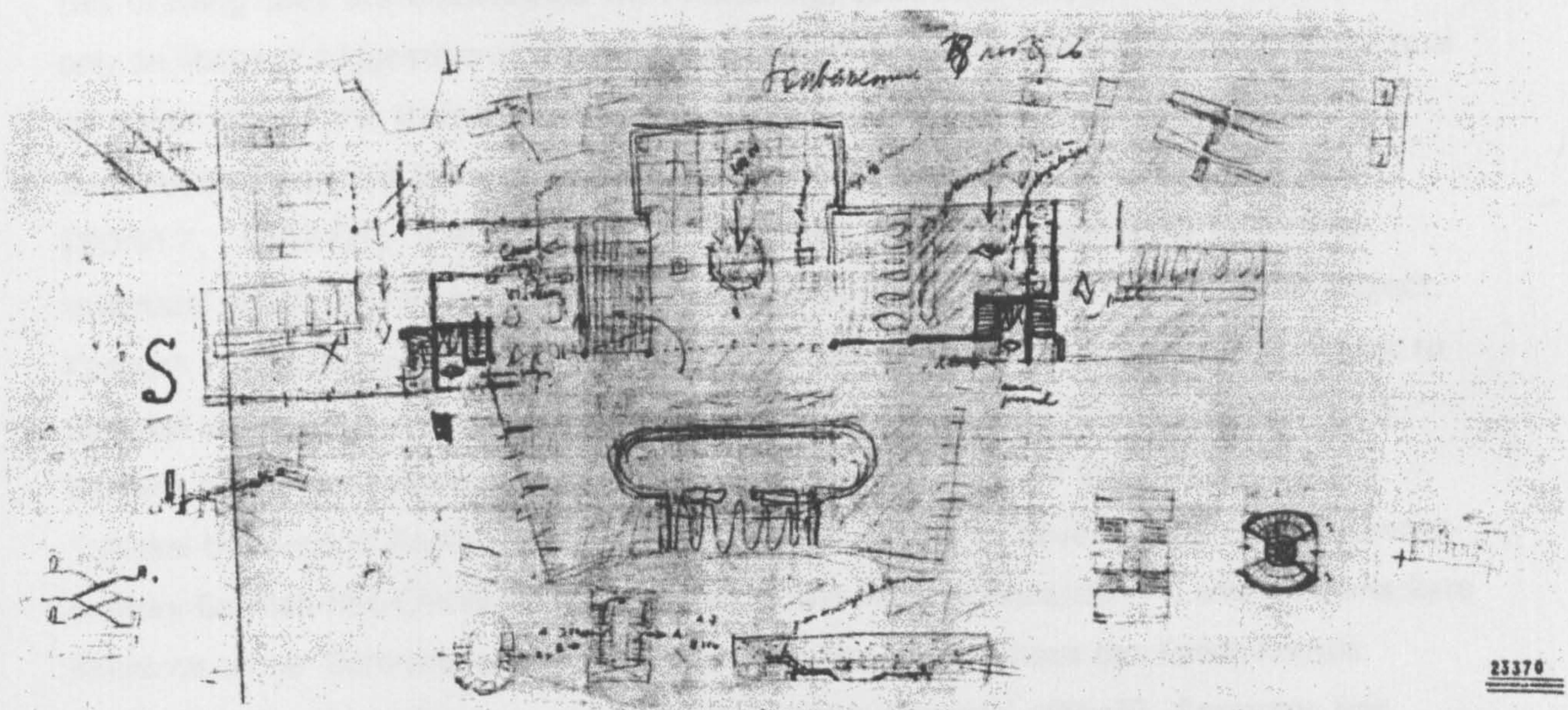


23.379



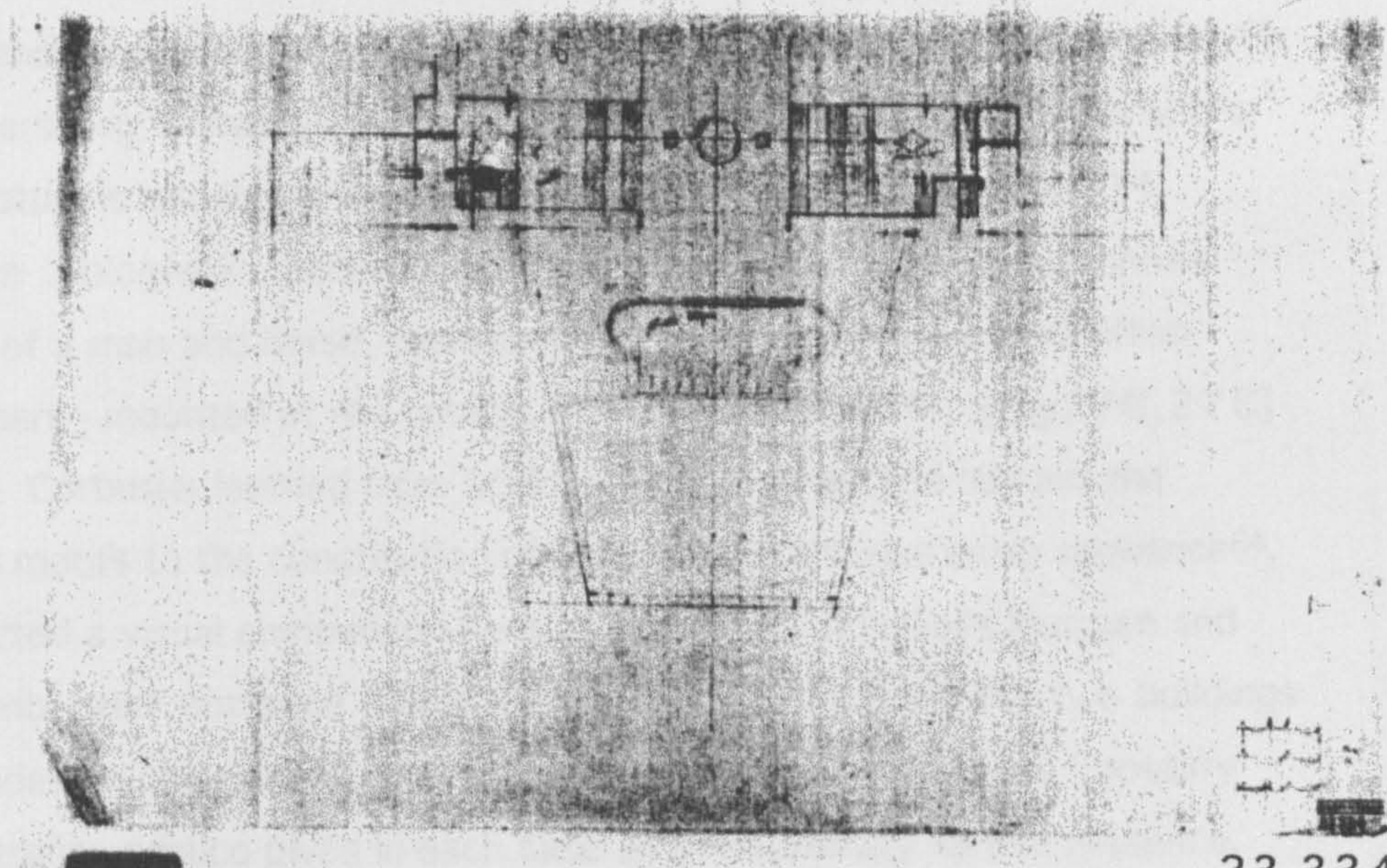
23.353

figure 25



23370

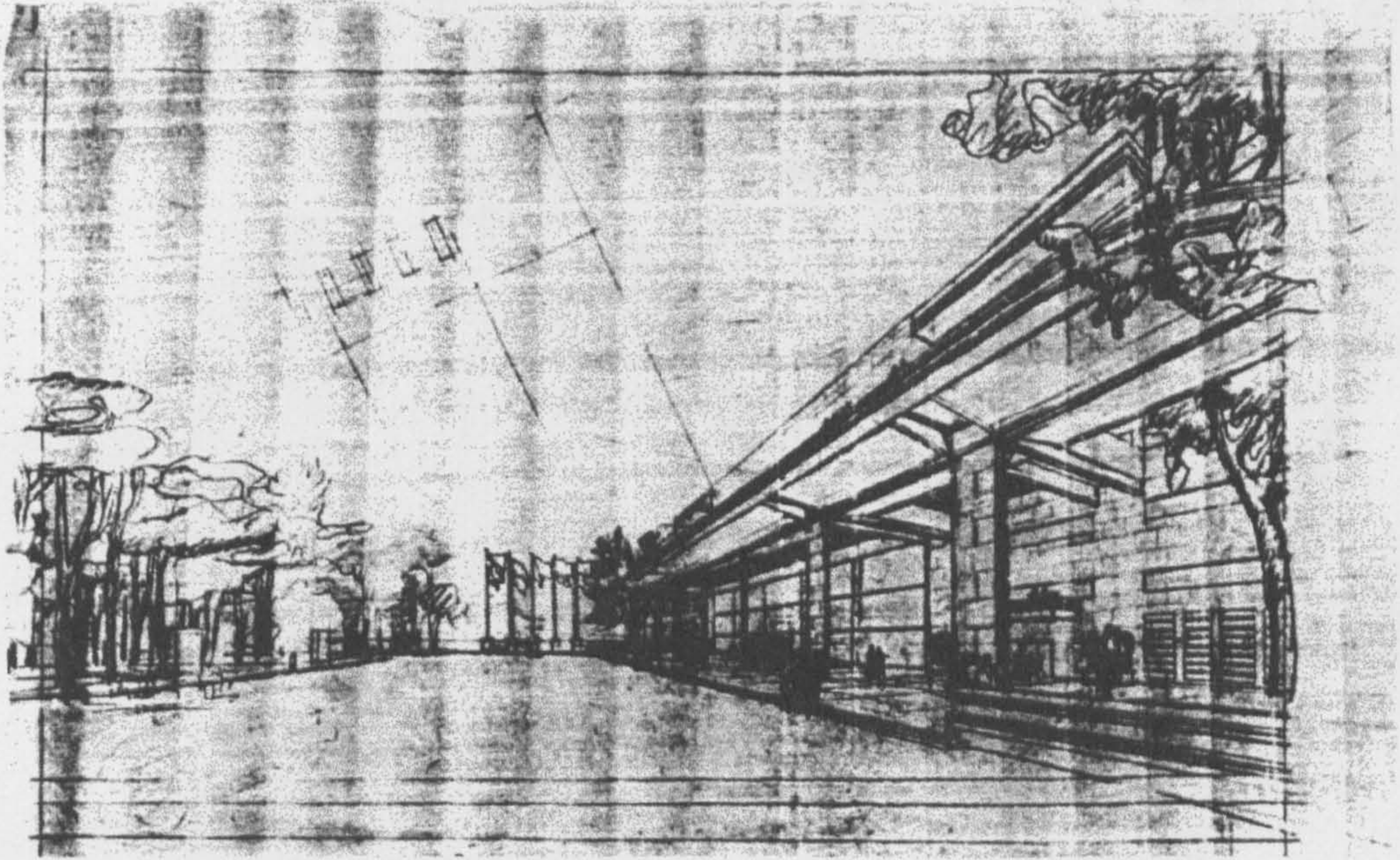
23.370



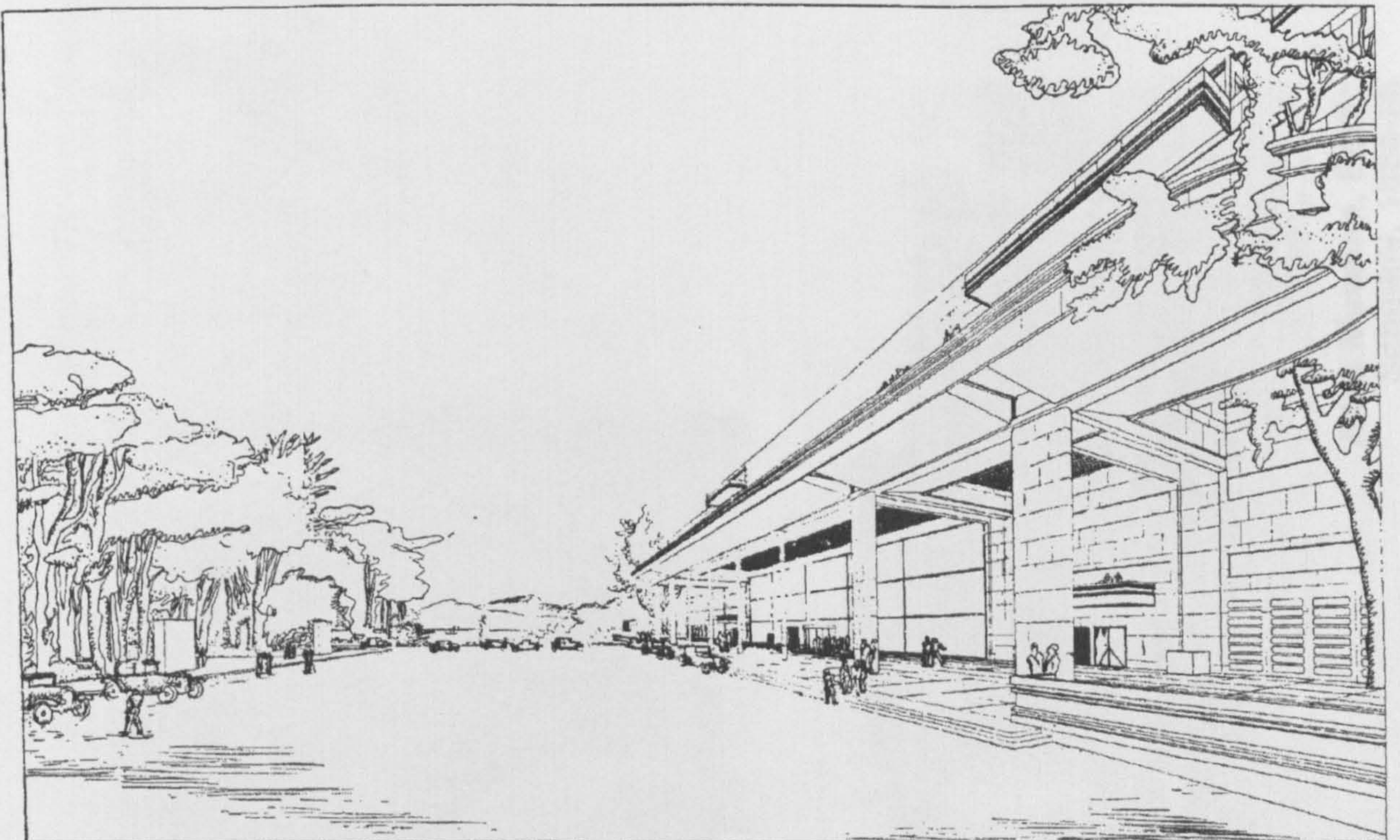
23.334

FLC23.402 [fig.24A] has several other interesting aspects: firstly, the two external blocks that flank the central glass plane and divide internal and external stairs. These seem to be remnants of the previous series of external stair blocks, and here they act to reinforce the symmetrical tendency of the facade, and suggest a great, central portico. In this drawing they are embellished with matching, sculptural reliefs. In the final project, only an abstract suggestion of these remains: two cubic plinths placed on the entrance quai on either side of the journalists' and visitors' entrances [fig.27A]. However, a freestanding sculpture is raised above the President's pavilion on the lakeside facade [SDN17, fig.27D]. It is convenient at this point to include some remarks on this sculptural group, and likely Germanic influences on the general aesthetics of the project. Kenneth Frampton saw Schinkesque origins in the sculpture group: he traced it back to Schinkel via Peter Behrens, for whom Le Corbusier worked for five months in 1910. Behrens was a great admirer of Schinkel, and reportedly took his staff to see various Schinkel buildings in Berlin. At that time, Behrens is said to have viewed the nineteenth-century German Neo-Classicalists as pioneers of the Modern Movement⁵⁹, and his immediate influence on Le Corbusier is evident if one considers the La Chaux des Fonds houses designed before and after young Jeanneret's stint in Behrens' office⁶⁰. Frampton has identified the man with his horse at the centre of Le Corbusier's sculpture as one of the Dioscuri, and the lion and crow as standing for Jeanneret and Le Corbusier respectively⁶¹. Behrens' 1912 St Petersburg Embassy is crowned with a sculpture of the Dioscuri and a cast of the same sculpture is set above the entrance to his Festival Hall for the 1914 Werkbund Exhibition in Cologne⁶². Schinkel's perspective of his Altes Museum shows four sculptures, each of a man and horse, representing the Dioscuri - who were often depicted as horse-tamers - mounted at the corners of the rotunda roof⁶³. [fig27B,27C]

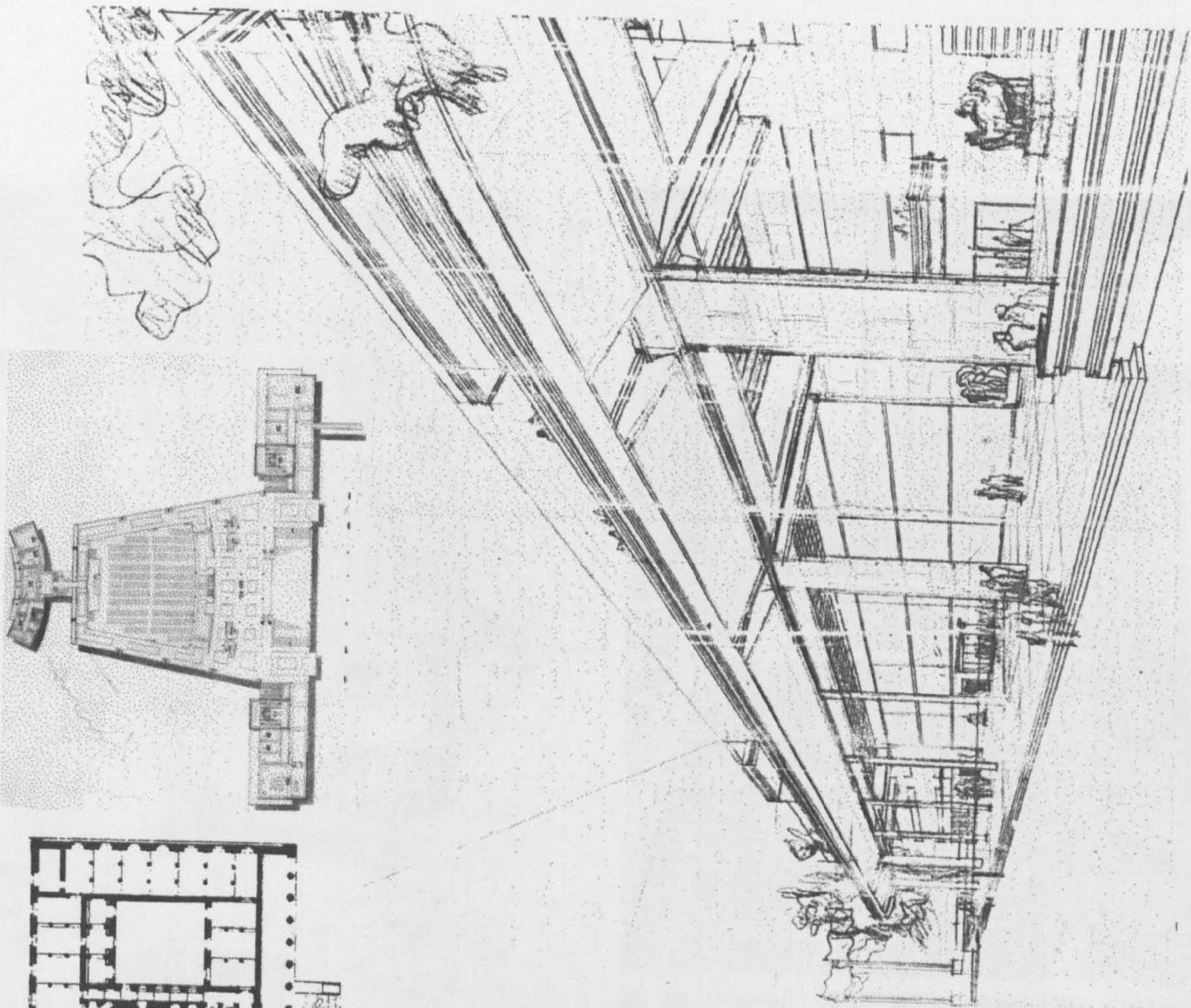
The lessons Le Corbusier learned from Schinkel appear to extend beyond the borrowing of mythical motifs to the constitution of his Palace of Nations entry sequence⁶⁴, and I here I have inserted a visual comparison here of aspects of Schinkel's Museum and Le Corbusier's Assembly Hall entrance hall [fig27B-27D]. Certainly the two buildings indicate similar attitudes on the part of their designers, and the symmetrical frontality exhibited by each entrance portico gives in each case an extraordinary formal presence. Although Schinkel's porch is re-entrant - carved out of the solid mass of his building - and Le Corbusier's portico is a separate structure standing in front of the entry block, each precedes a double height void of entrance behind which twin staircases are visible. In each case the lateral extent of the entry porch is marked by a large, blank, containing element: in Schinkel's case, the two big, square pilasters which terminate the giant order, in



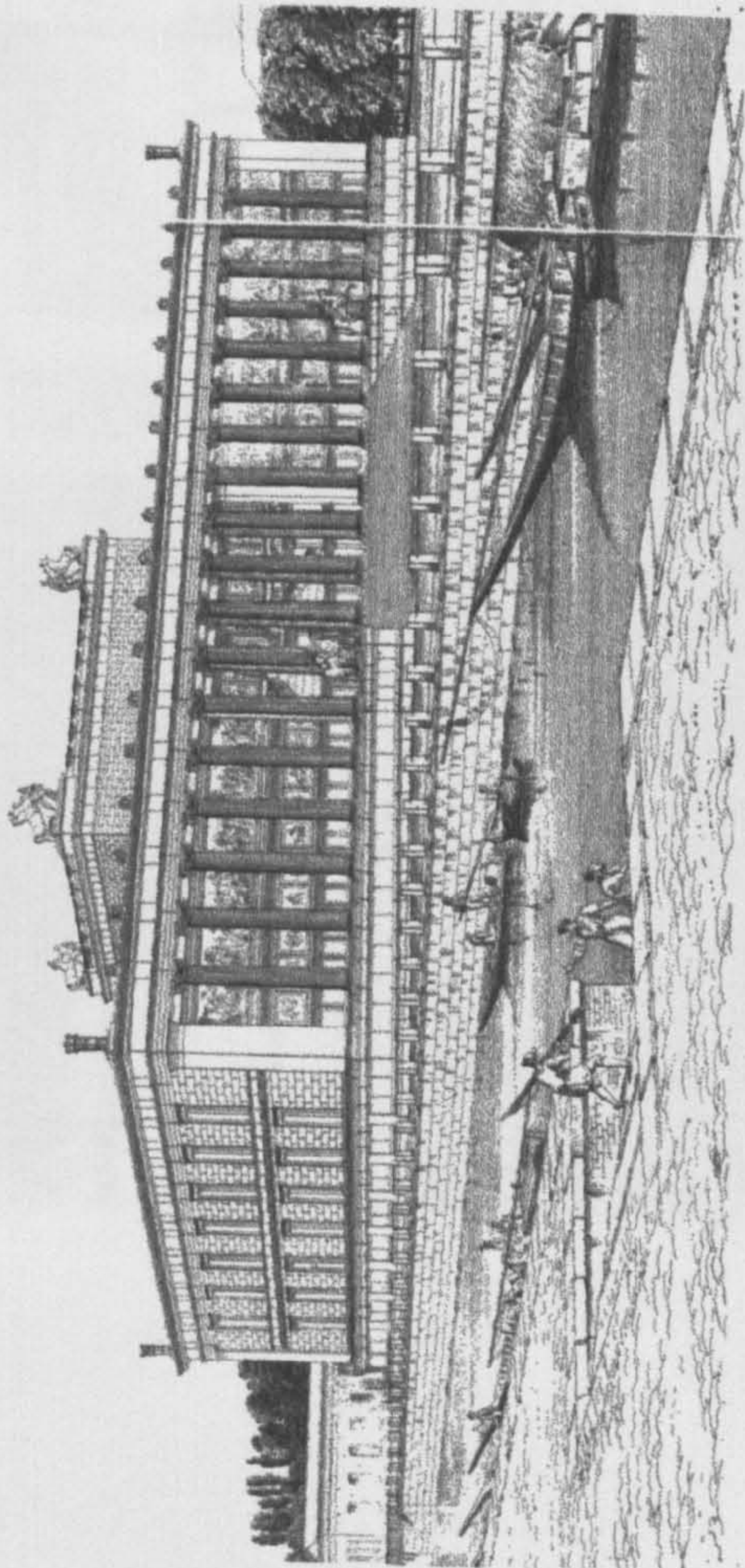
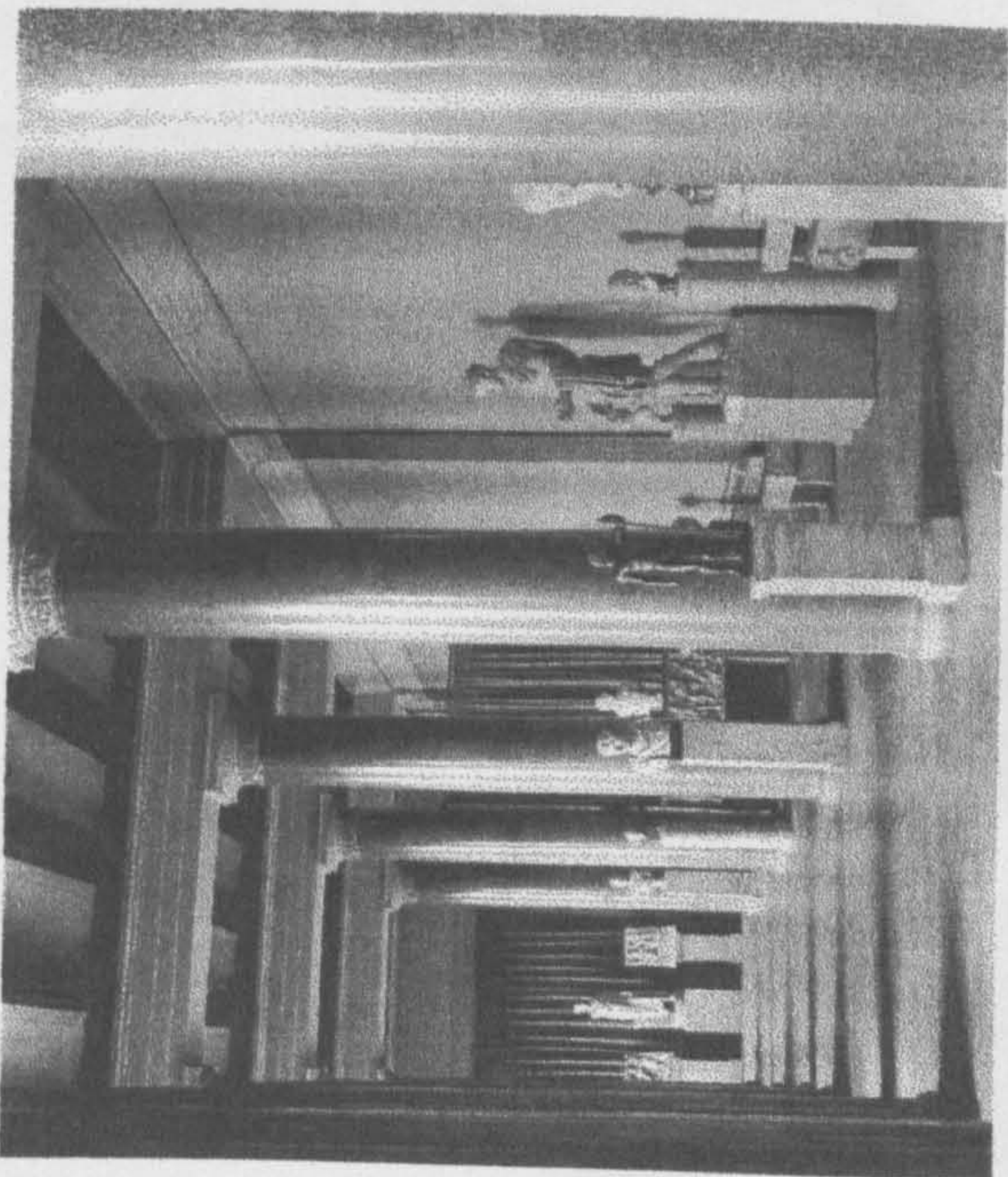
23.246



Assembly Hall Entry Quai
From Oeuvre Complete Vol1

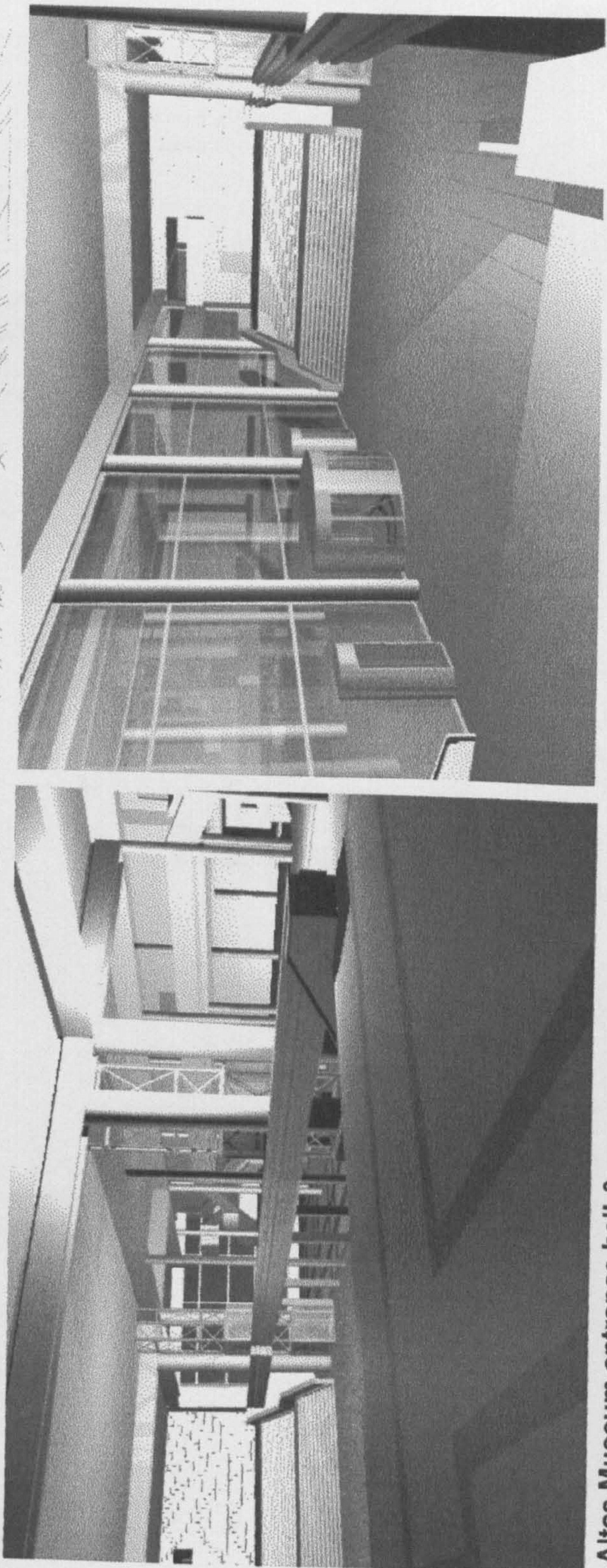
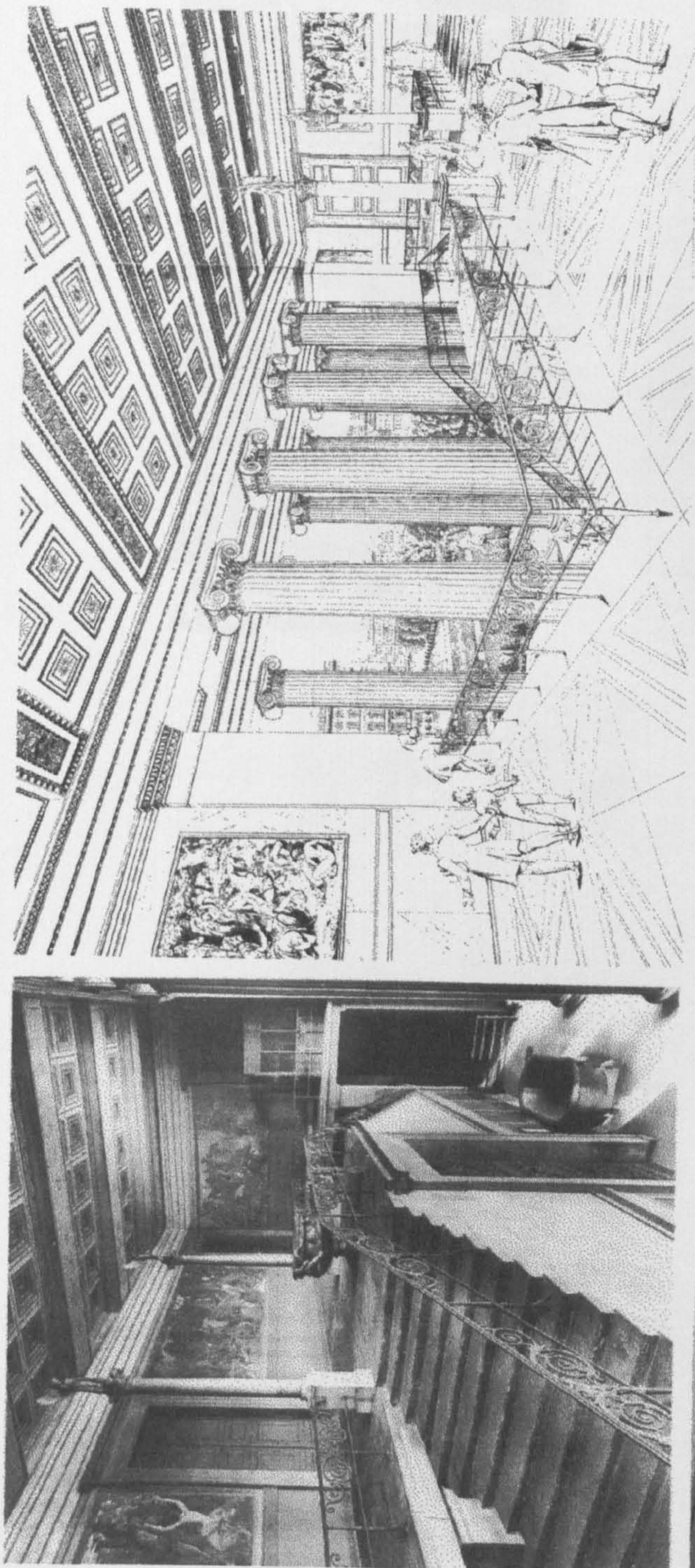


FLC 23.246

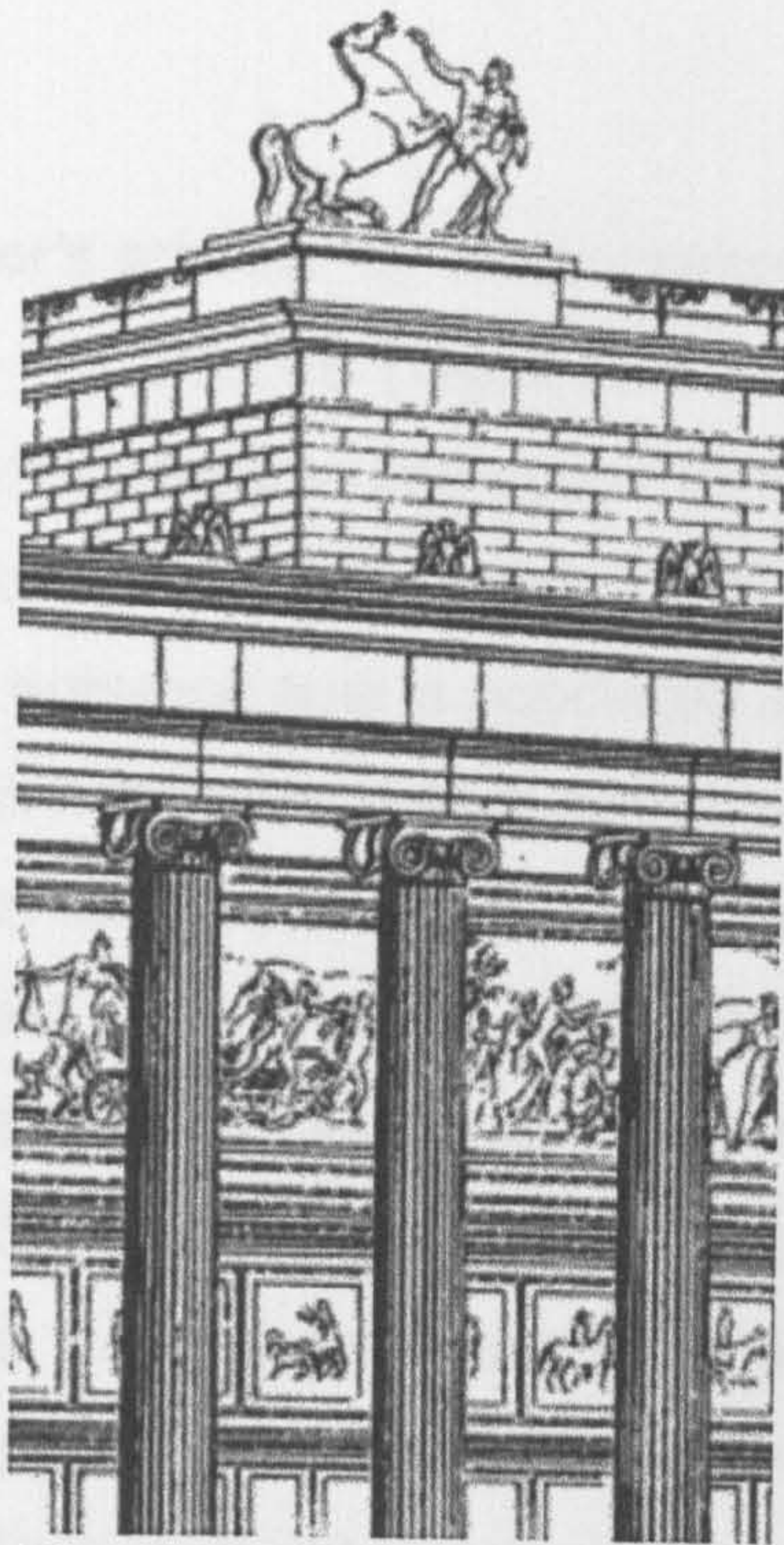


Altes Museum, Berlin
Schinkel, 1824-28

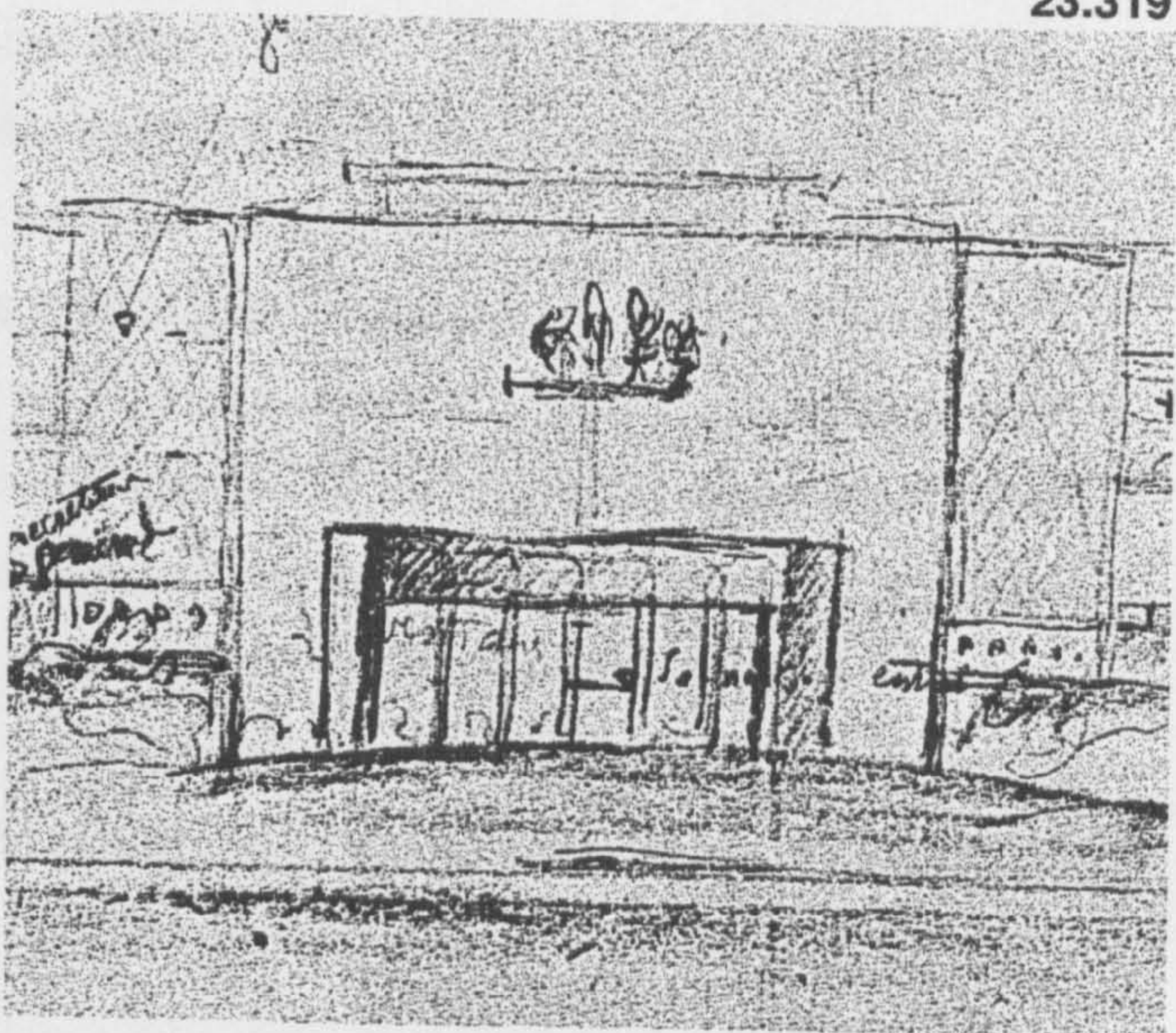
figure 27B



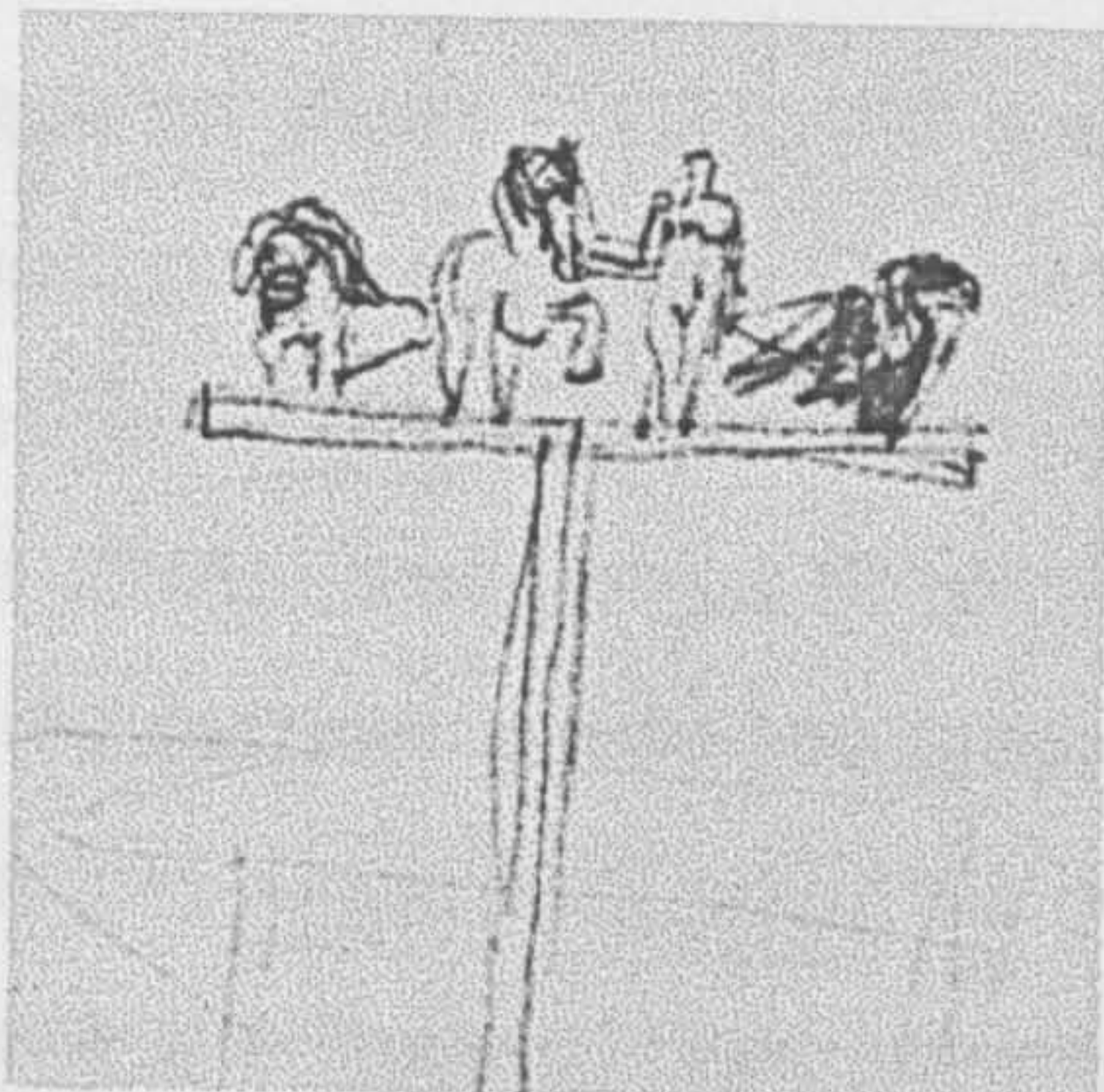
Altes Museum entrance hall &
Le Corbusier's Palace of Nations



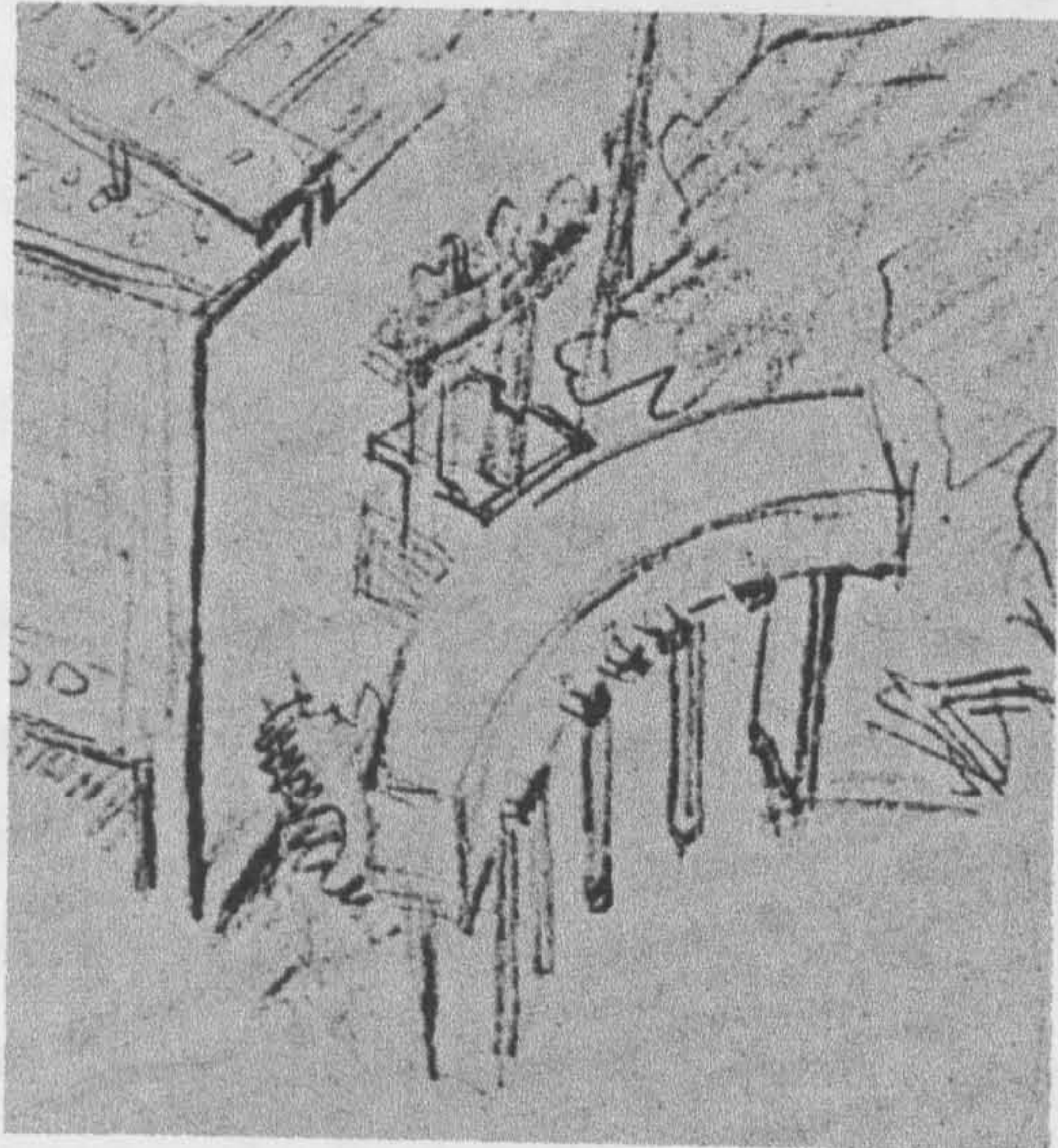
Altes Museum



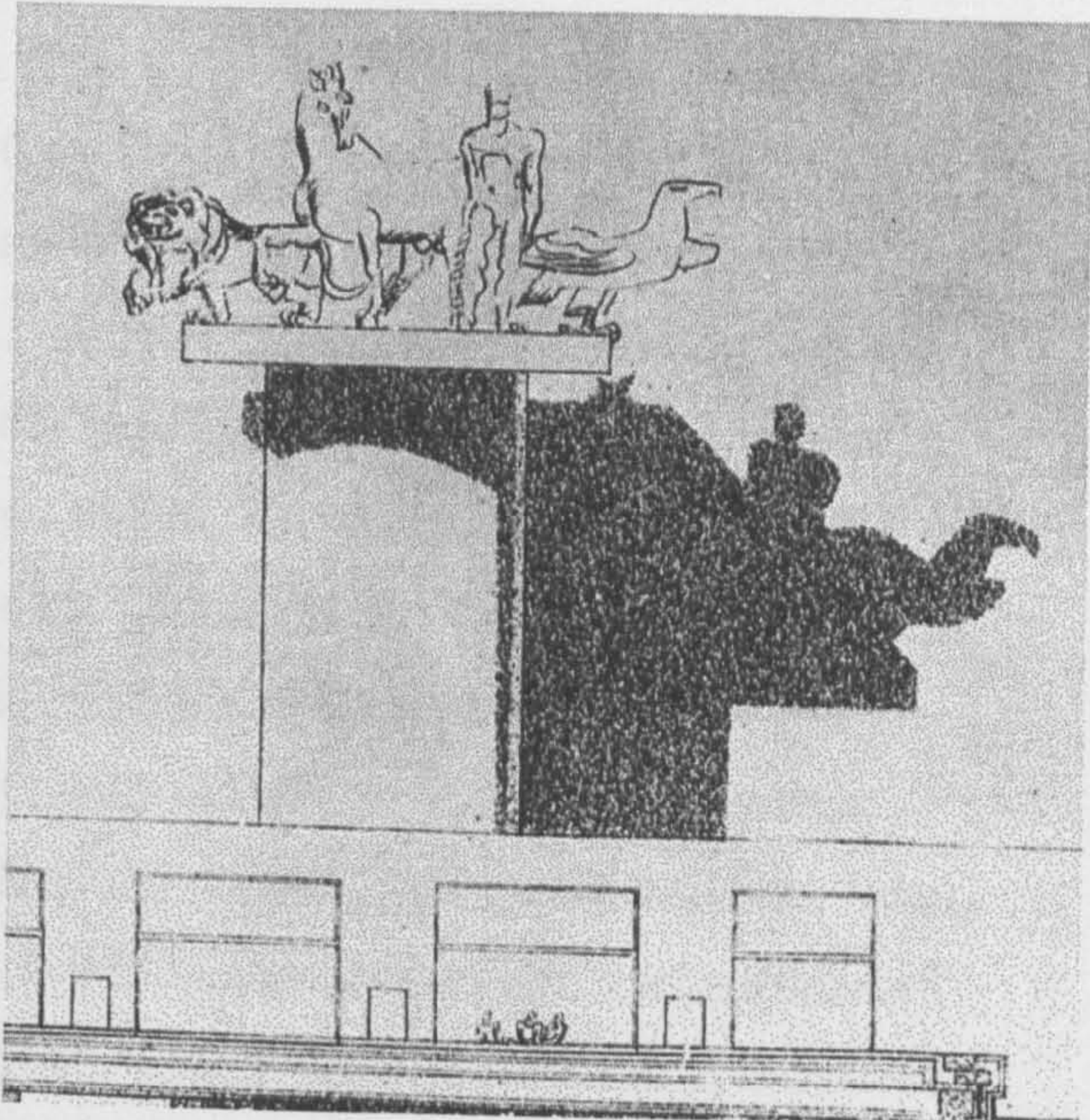
23.319



23.319



23.369
Note twin support
beneath sculpture



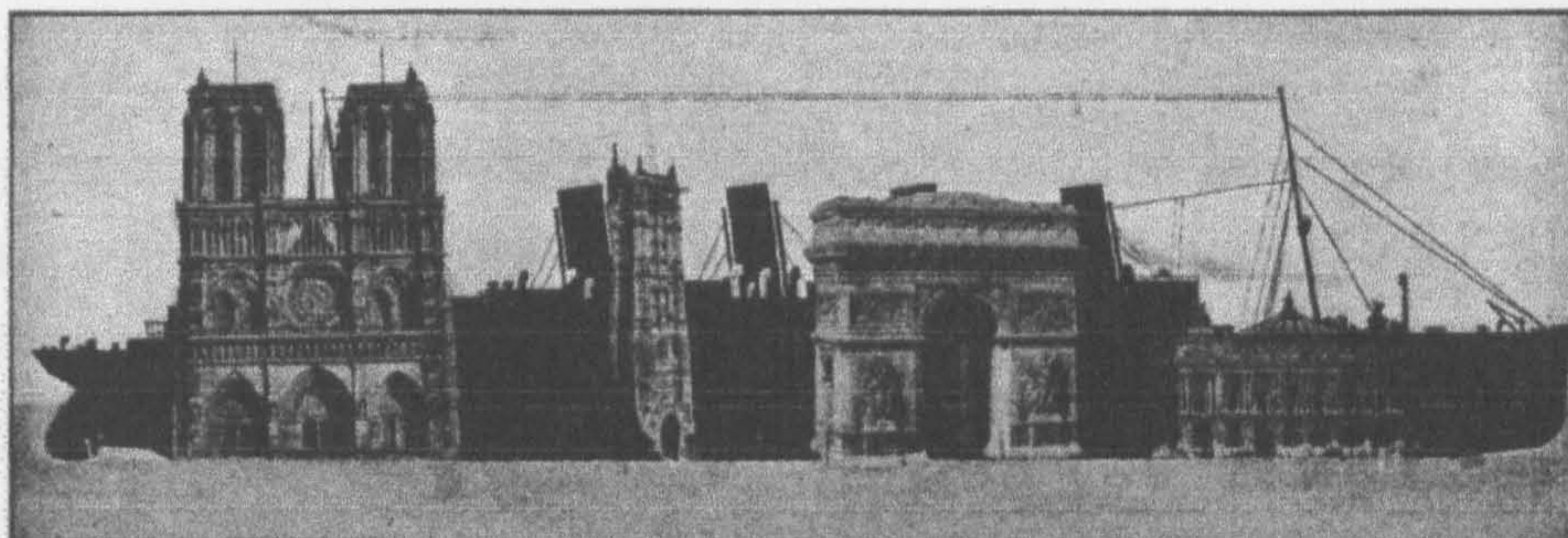
SDN17

Lakeside Sculpture Group

Le Corbusier's scheme, by the unpierced ends of the entry facade. The orderly stone coursing in FLC 23.246 [fig. 27B] echoes Schinkel's careful delineation, and the placement of sculptures and people in the same sketch, almost interchangeable, recalls the placement of the stone figures in Schinkel's museum, although in Le Corbusier's final project the entrance quai is populated solely by men. Moving into the interior of each building, it is noticeable that in both buildings a strong connection back to the external gardens is evident, achieved in both cases by rotating the stairs 90 degrees from the axis of approach, and treating *piano nobile* level as a viewing platform. Superficially at least, the deep beams on their cylindrical pilotis in the Palace of Nations are the structural concrete equivalent of Schinkel's great, Ionic columns and massive entablature beams; and, like Schinkel, Le Corbusier chooses to mark out his floor with abstract, geometric patterns, although Schinkel's floor patterns counter his structural grid and unify the floor plane, and Le Corbusier's break up the vastness of the floor, responding to local structural incident.

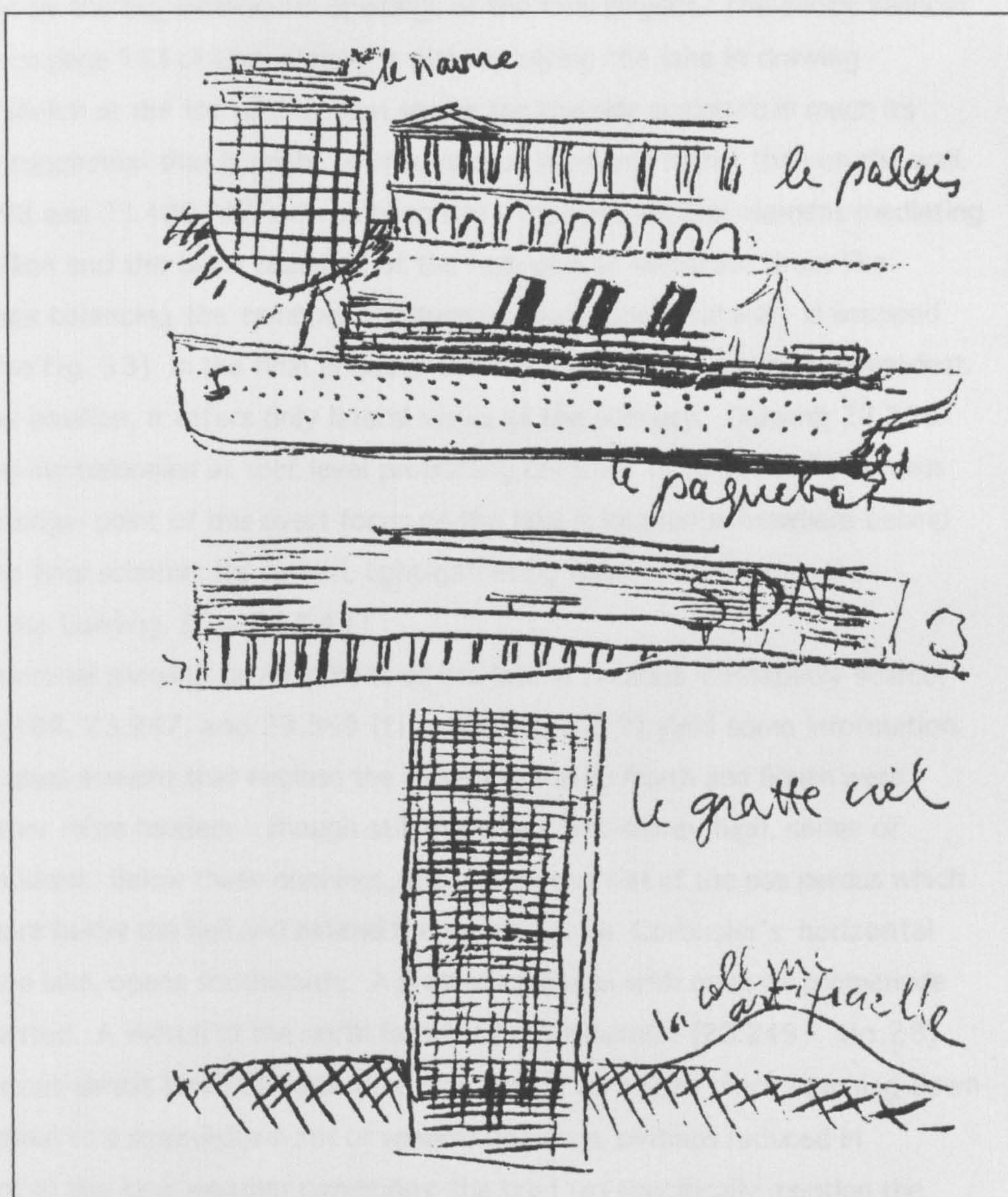
The first sketch on sheet FLC23.402 also shows symmetrical roof structures reminiscent of the built project for Villa Stein at Garches which contribute to the accumulating symmetries of this facade. The notation used for openings in sketch 23.402 is also of interest: Le Corbusier appears to show arches in the first study, and arches and rows of portholes in the second. Given the graphical depiction of movement up the stair in the first study, one might argue that what we have here is similarly a rapid shorthand laying out the structure and fenestration; however Le Corbusier did use arches and vaults in his work both before and after this project [although they are not to be found in the houses of the 1920's⁶⁵] and his interest in viaducts etc., is evident in his books at that time. It must be remembered that the Palace of Nations was his first public building: how might it be constituted, and were the rules of the Purist house appropriate and sufficient? Perhaps the anomalous arches and portholes point to a search for other means appropriate to the scale and formality of the (*house* -) Palace.

When taken in conjunction with the raised external decks, the flag, the lake behind and the general linearity of the facade, the myriad portholes in the second drawing - later replaced by *fenêtre en longueur* and formally equivalent to them - imply a liner⁶⁶. [Although it could be argued that this reading is countered by the three large, circular openings at roof level which restate the frontal symmetry of the facade]. Clues to this vision retained in the final project, besides the linearity of the long window, are to be found in the references to the elongated external porch as the 'entrance quai'⁶⁷, and to the boat-like form of its canopy. That the image of the liner informed this project is



THE CUNARDER "AQUITANIA," WHICH CARRIES 3,600 PERSONS,
COMPARED WITH VARIOUS BUILDINGS

**Vers une Architecture:
The liner and various buildings**



**Precisions Lectures:
The palace / the liner / the Secretariat**

confirmed by a drawing made in 1929 during Le Corbusier's lecture 'Techniques are the very basis of Poetry, and published in *Precisions* the following year. Here liner and Palace of Nations are juxtaposed, but the Secretariat is shown rather than the Assembly Hall. The liner, Le Corbusier declared, 'is a big house'[fig.27E]⁶⁸

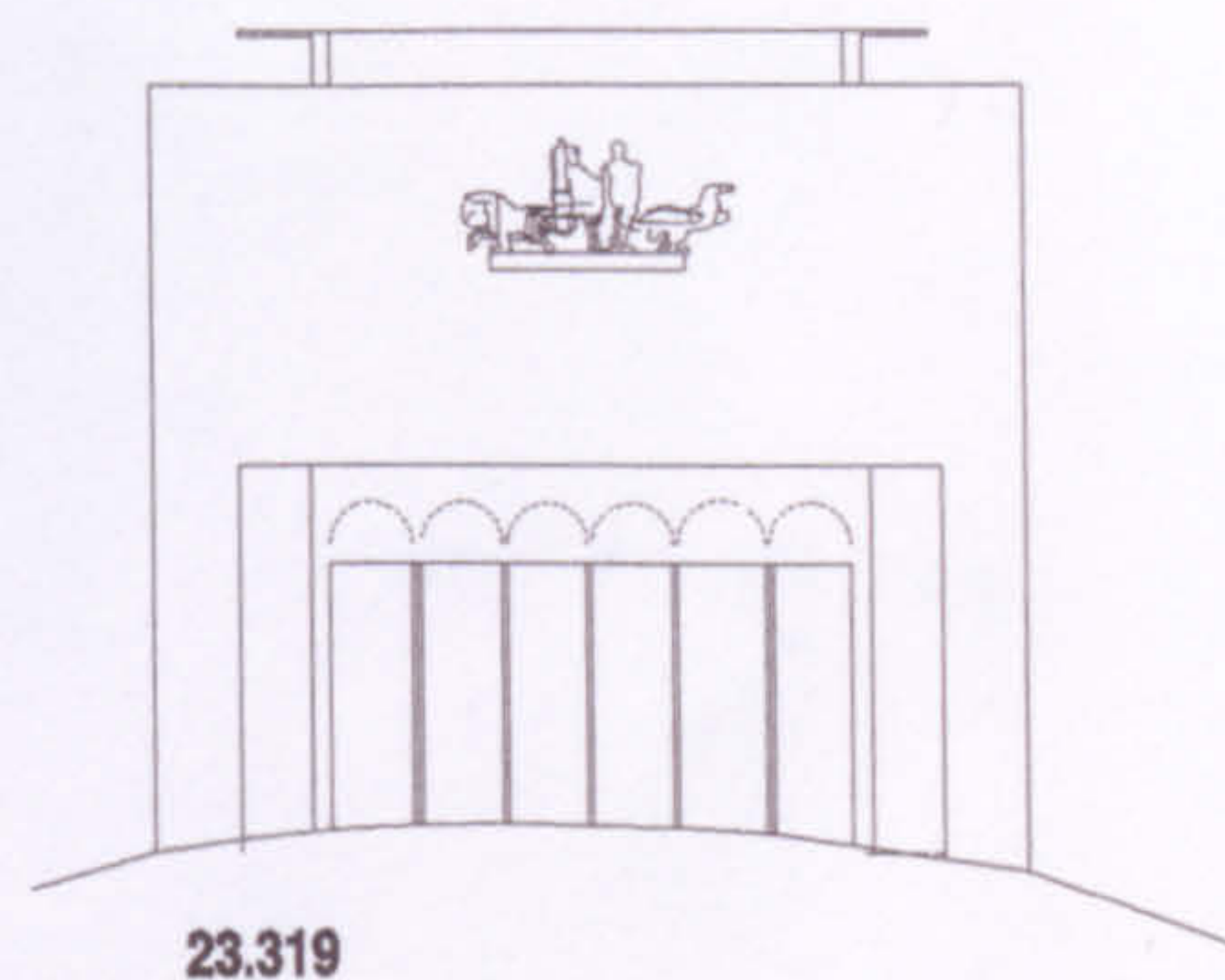
A series of studies for the President's pavilion [fig.28] shows an initial design for a structure rather more earthbound than the final construct, with a sculptured relief cantilevered off the end wall of the great hall high above the pavilion.[23.319, 14th November 1926] This drawing also carries a suggestion of arched openings [see fig.27D for enlarged portion of this sketch], soon to be replaced by a glass screen [23.398, 23.400], and then by the big rectangular openings of the final project. The exotic sailboat seen in the image on page 163 of *Une Maison* is already plying the lake in drawing 23.319⁶⁹, and a sketch at the top of the sheet shows the lakeside sculpture in much its final form, with a suggestion that it might be mounted on a column rather than on the wall. In drawings 23.398 and 23.400, the column becomes a massive vertical element mediating between the pavilion and the blank rear wall of the hall, and an elaborate drum-like structure - perhaps balancing the *tambour* entrance on the opposite facade - is wrapped around it. [See also fig.53] In the final project, the drum element is much more modest; hidden behind the pavilion, it offers only lateral views of the scenery. Drawing 23.398 also indicates viewing balconies at roof level protruding centrally from each of the main stair blocks. The origin point of this overt focus on the lake is located somewhere behind the pavilion in the final scheme: its curved, light-gathering form concentrates the directionality of the building. [fig.29&41]

Archive material showing development of the lateral facades is relatively scarce, but drawings 23.186, 23.247, and 23.369 [figs.23B,30,31] yield some information. Before the great glass screens that enclose the Assembly hall to North and South were thought of, a rather more modest - though still massive - two-storey high, series of openings was proposed. Below these openings, the continuous slot of the *pas perdus* which flank the main store below the hall and extend the reading of Le Corbusier's horizontal datum towards the lake, opens southwards. A protruding annex with open air promenade above, is thus created. A sketch of the north facade of the ensemble [23.249 - fig.28] hints at a similar out-thrust here, but this time it is shown as a solid block reaching down to ground, and linked to a scaled-down set of window openings, perhaps reduced in acknowledgement of the local weather conditions: the brief did specifically mention the very cold winds blowing from the north in winter. I have found no plan sketches to show how these out-thrust blocks might have tied in with the rest of the layout [fig.31]. A

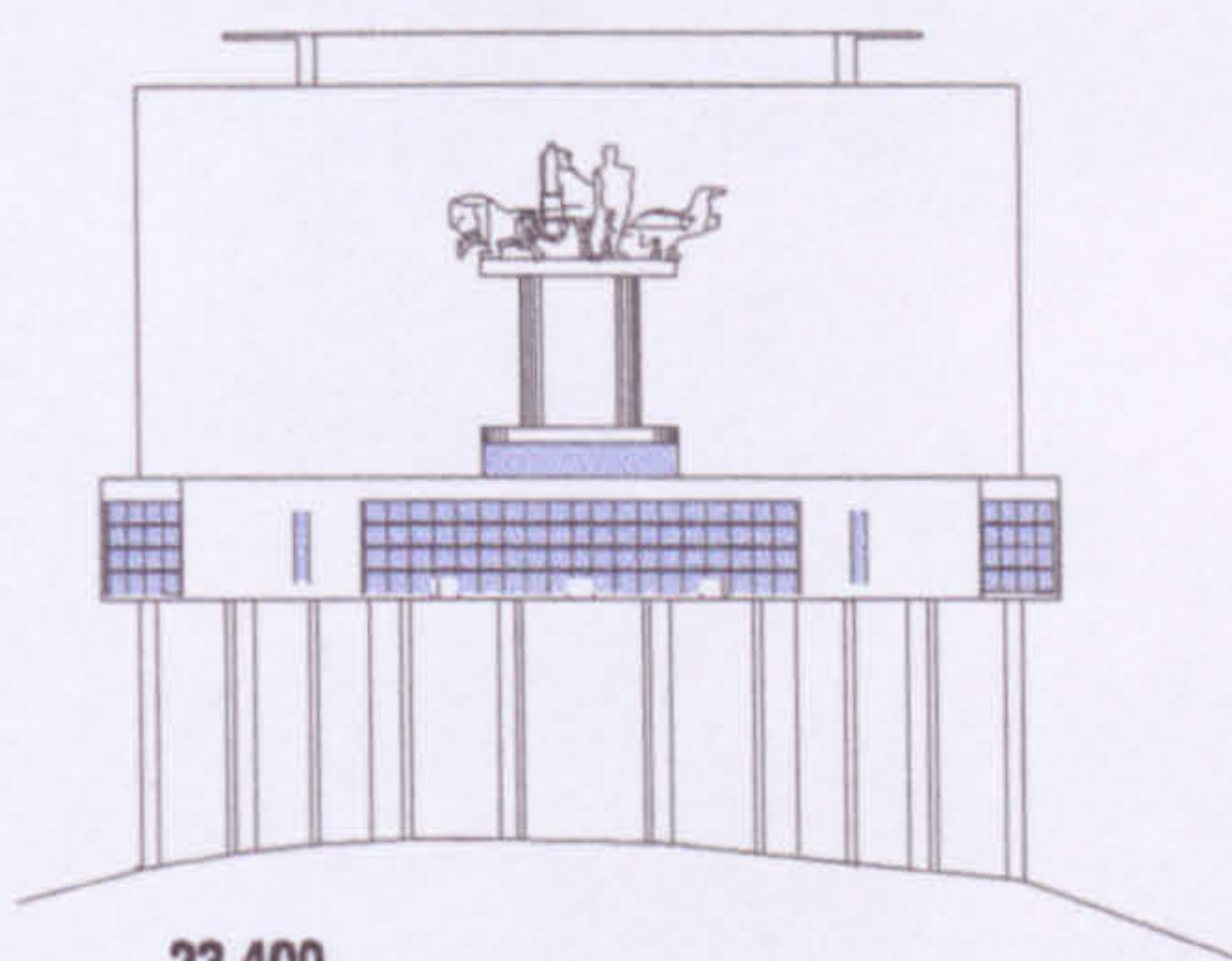
vestige of this idea survives in the external passages at ground level which link the main staff staircases with the grand entrance hall. Drawing 23.369 [fig. 32 B] shows the glass skin of the great hall in place, but the slot windows beneath it are replaced with a suggestion of portholes.[fig. 32 A&B] This study also shows other proposals which were not incorporated into the final project. The roof top pool, which did survive, has a curved side towards the lake, and a vertical stele placed in it on axis⁷⁰. In the end, the pool retained some sort of unspecified central punctum, but whatever was envisaged, it would not have been visible on the entrance facade as finally constituted; a blank central wall hides it from view. In addition, a free-standing circulation element which appears to be a Corbusian stair with rounded ends, stands to the north of the hall, apparently connecting the roof garden and park. This object is indicated in only one other drawing, 23.391, [fig. 22] where it is mirrored across the central axis. Drawing 23.369 [fig. 32 A&B] also shows a balcony variant on the Assembly Hall wings which contain the double-height Commissions Halls: a series of semicircular balconies are sketched on the south wing, underlining Le Corbusier's preoccupation with the experience of the view. But these lack the severity of the final version: their multiplicity implies a more domestic scale, albeit the scale of an apartment block rather than that of the single house.

The Palace of Nations and the Villa Stein at Garches

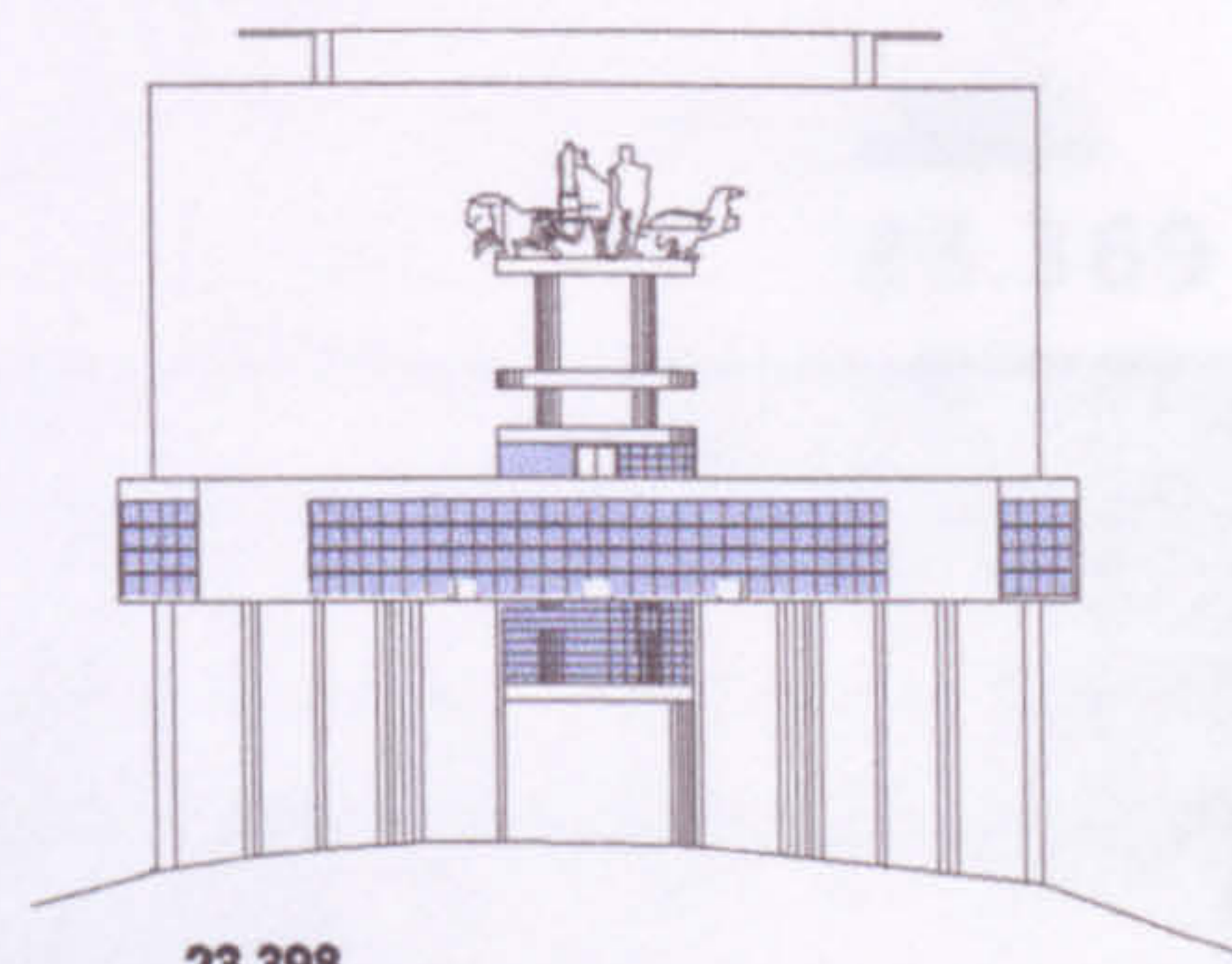
The facades for both the Palace of Nations and for the final Villa Stein project are exactly contemporary: both were designed in November/December of 1926. Le Corbusier himself tossed in several clues to the fact of their simultaneous consideration: he added a scaled diagram of the garden facade of Garches next to the lakeside elevation of the Secretariat in *Une Maison* [fig. 33]; in addition, twelve pages of the *Thèse* are devoted to pictures of the Villa Stein⁷¹. Looking at the Palace of Nations, it is clear that all the characteristic elements of the Purist house have been employed here. Each of the 'Five Points of a New Architecture'⁷², may be observed: pilotis take up the declivities of the site and maintain the required 'zero datum' of the brief [figs. 4, 5], the fenêtre en longueur ranges across the main facades of both buildings, and each has its terraced roof gardens. The linked concepts of *free plan* - *free facade* also apply; the free-standing columns in corridors and halls which release the facades from their old load-bearing function - and which were so unacceptable to the Academic jurors and the later assessors⁷³ - are found here in abundance. But the palace of Nations is much larger than the villa at Garches: juxtaposing the two entrance facades, we see that the Assembly Hall is nearly seven times



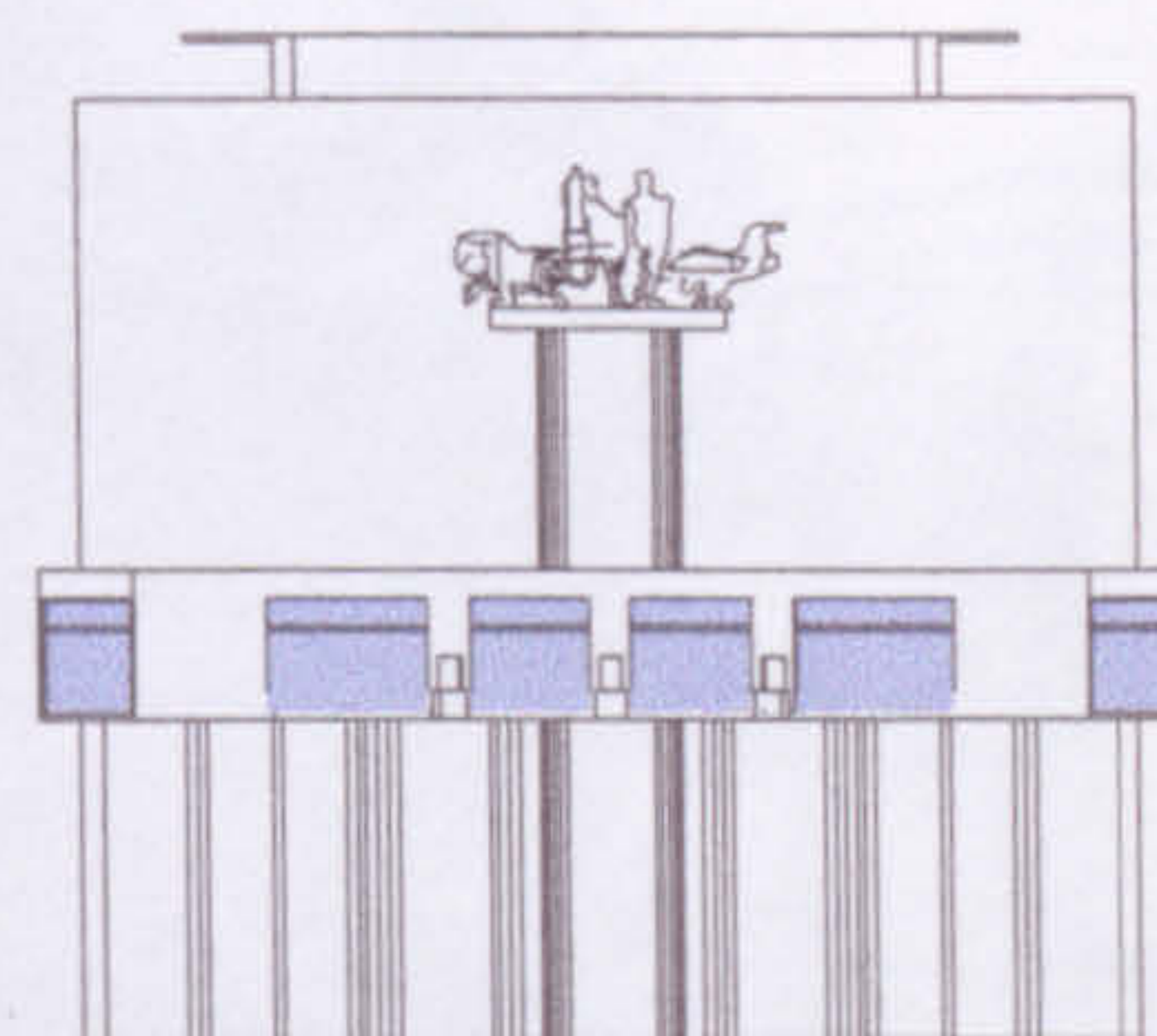
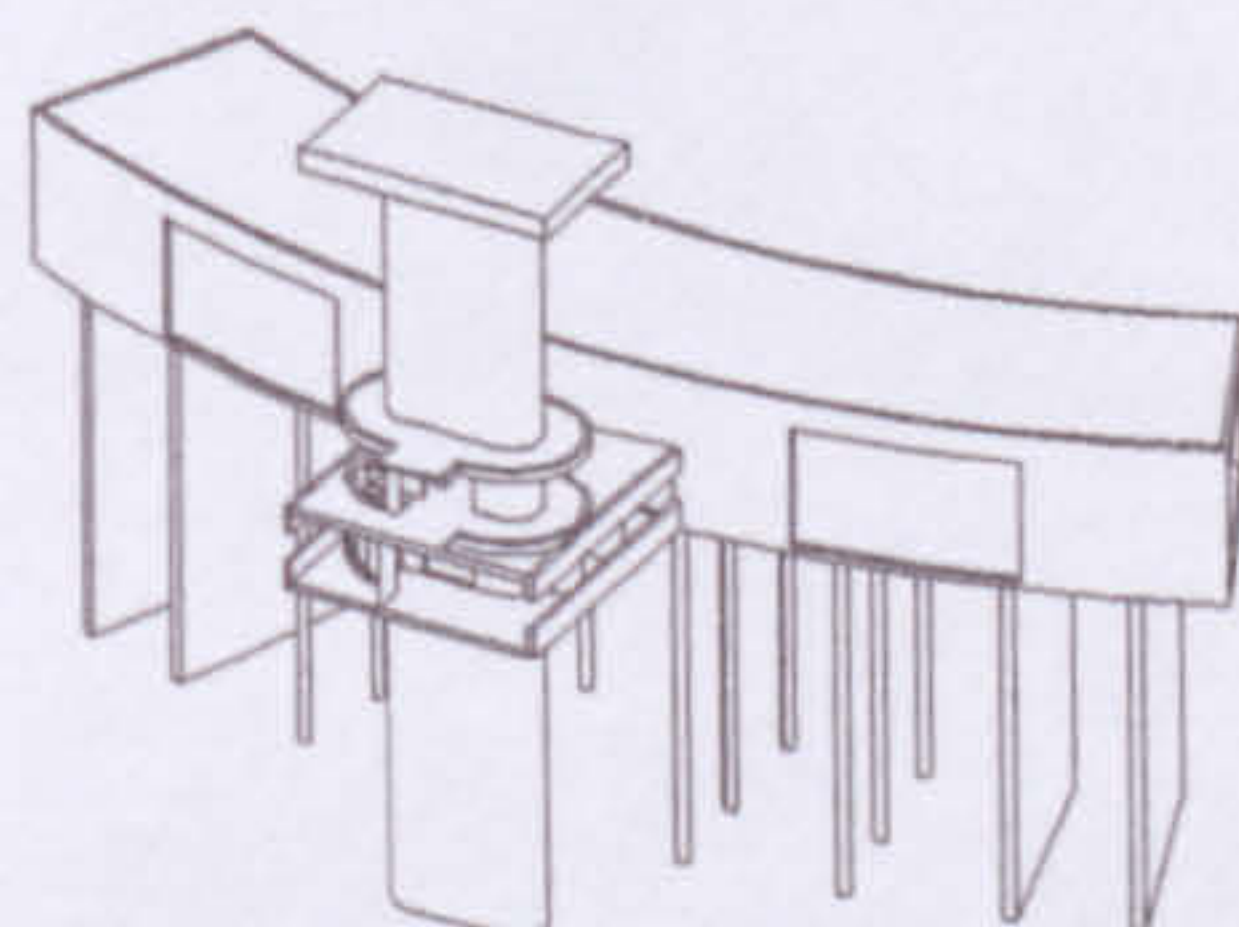
23.319



23.400

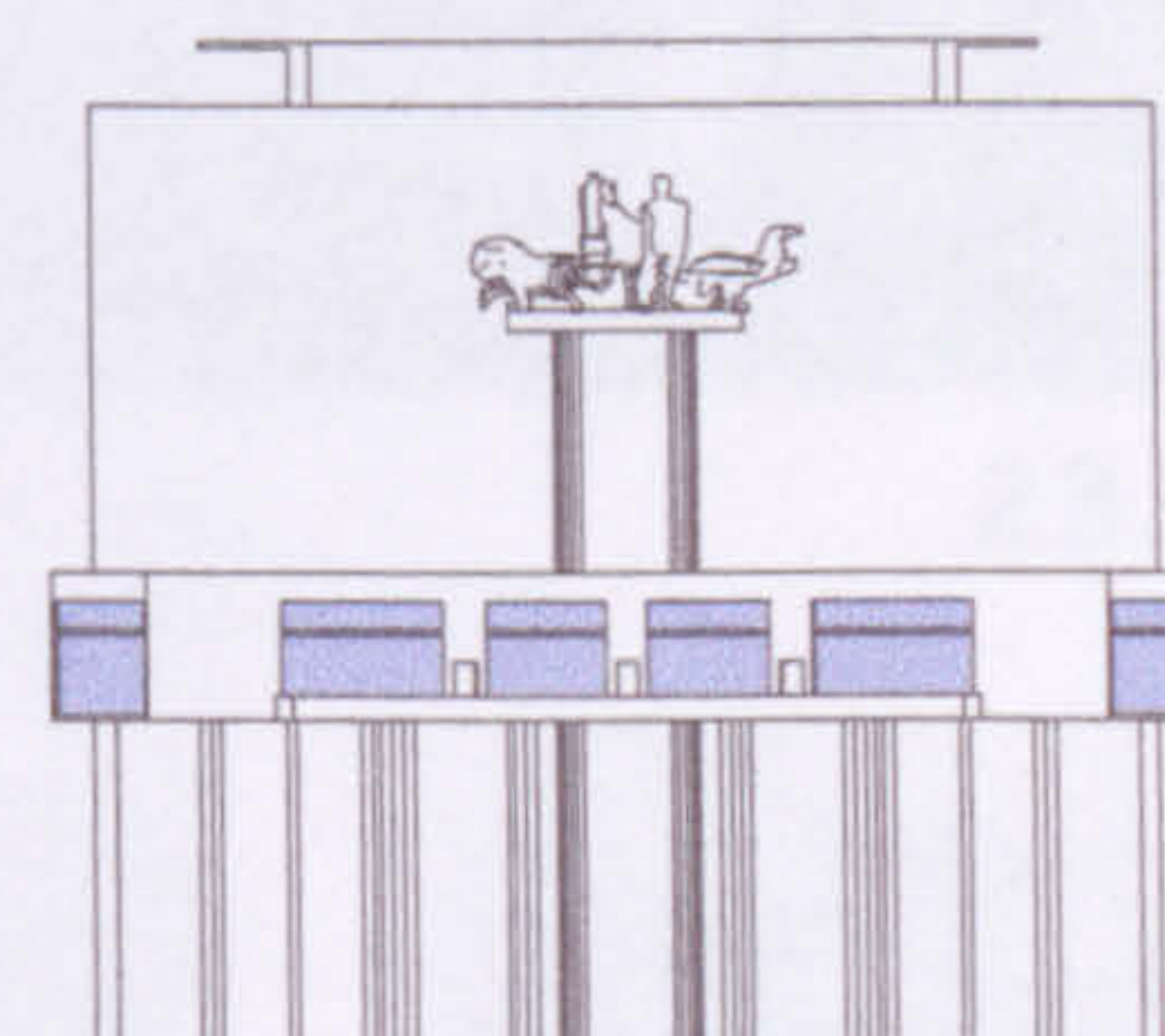
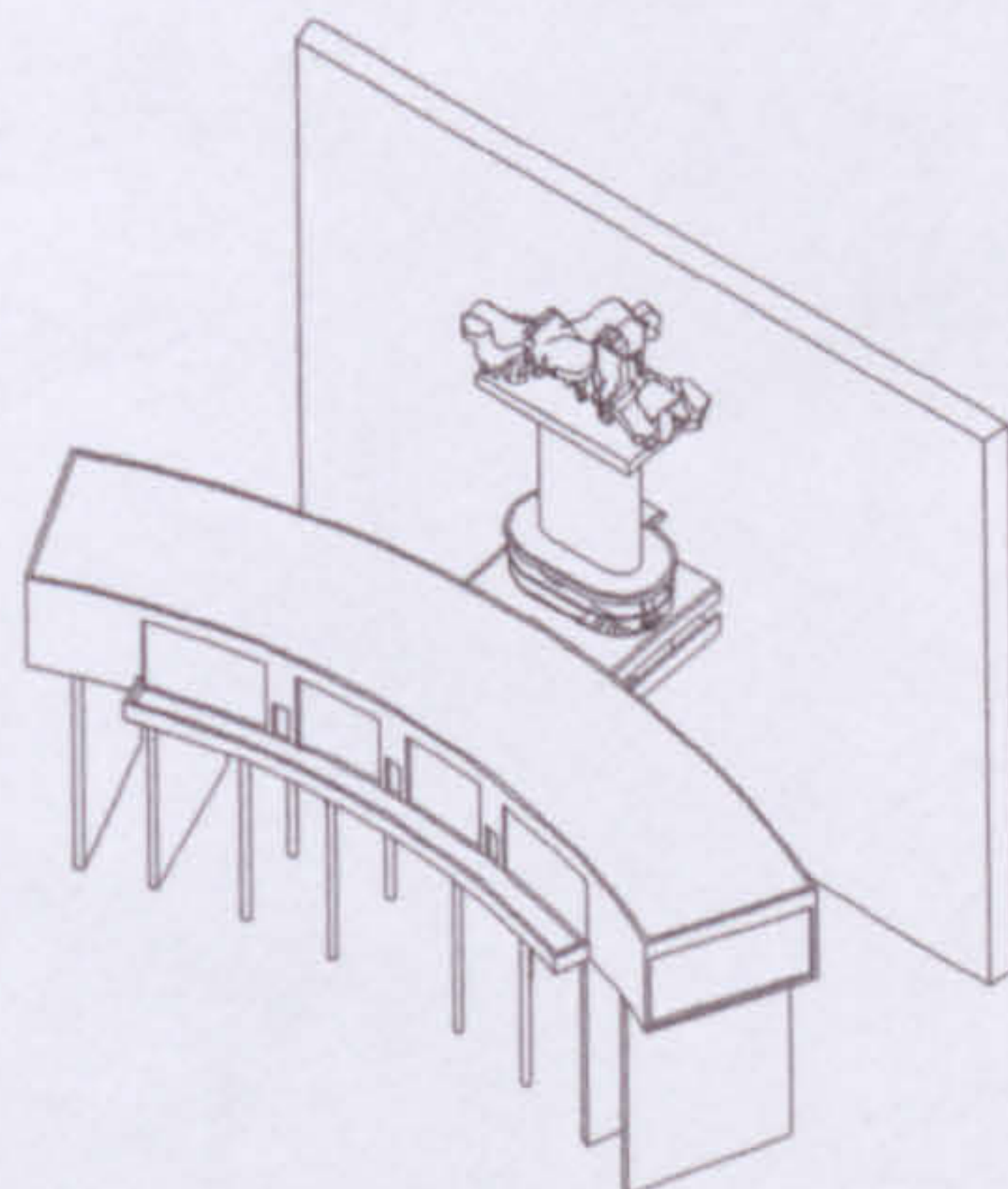


23.398



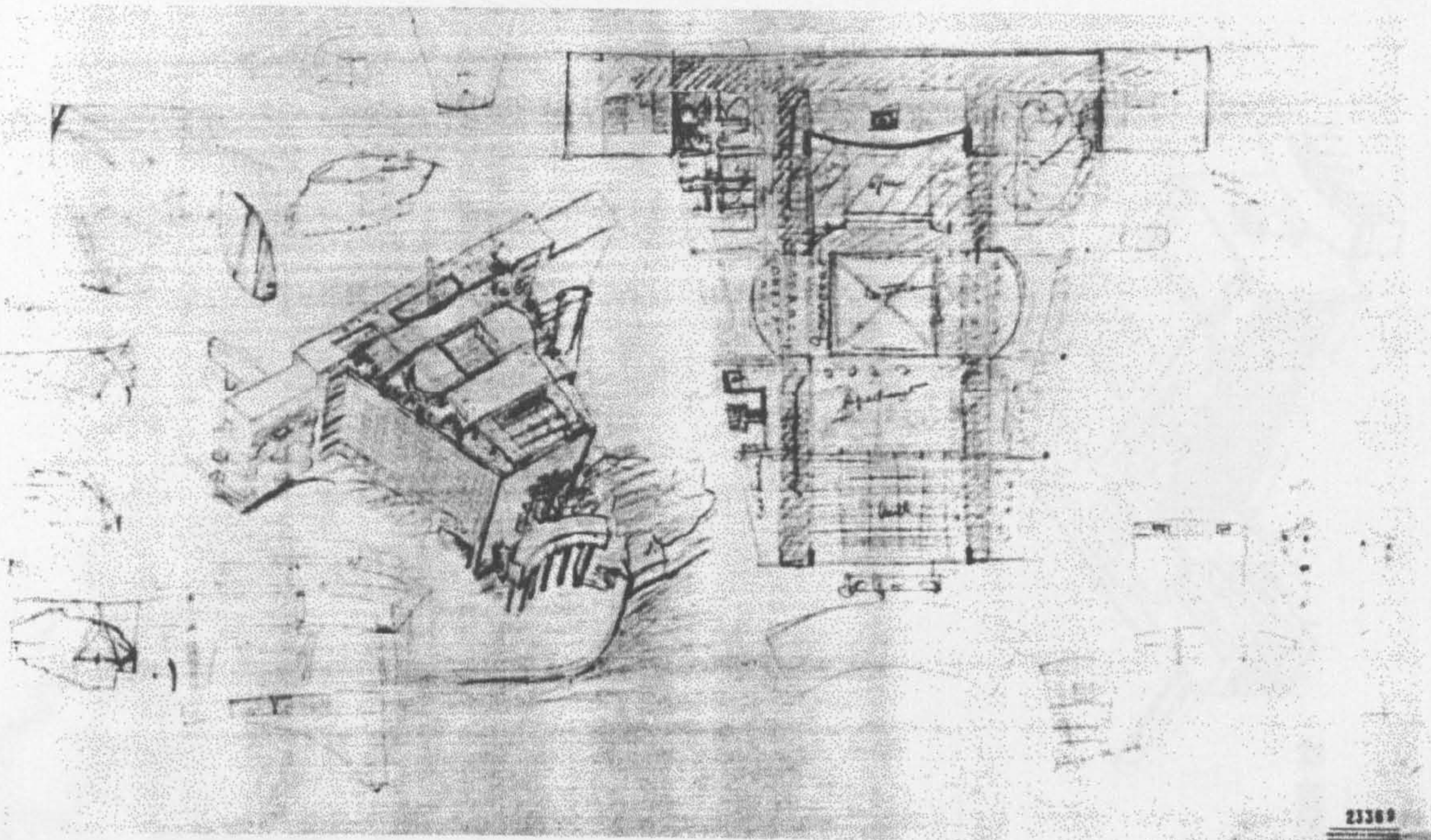
SDN 1

At one stage the sculpture plinth was much narrower; see 23.380 [1 Dec 1928]

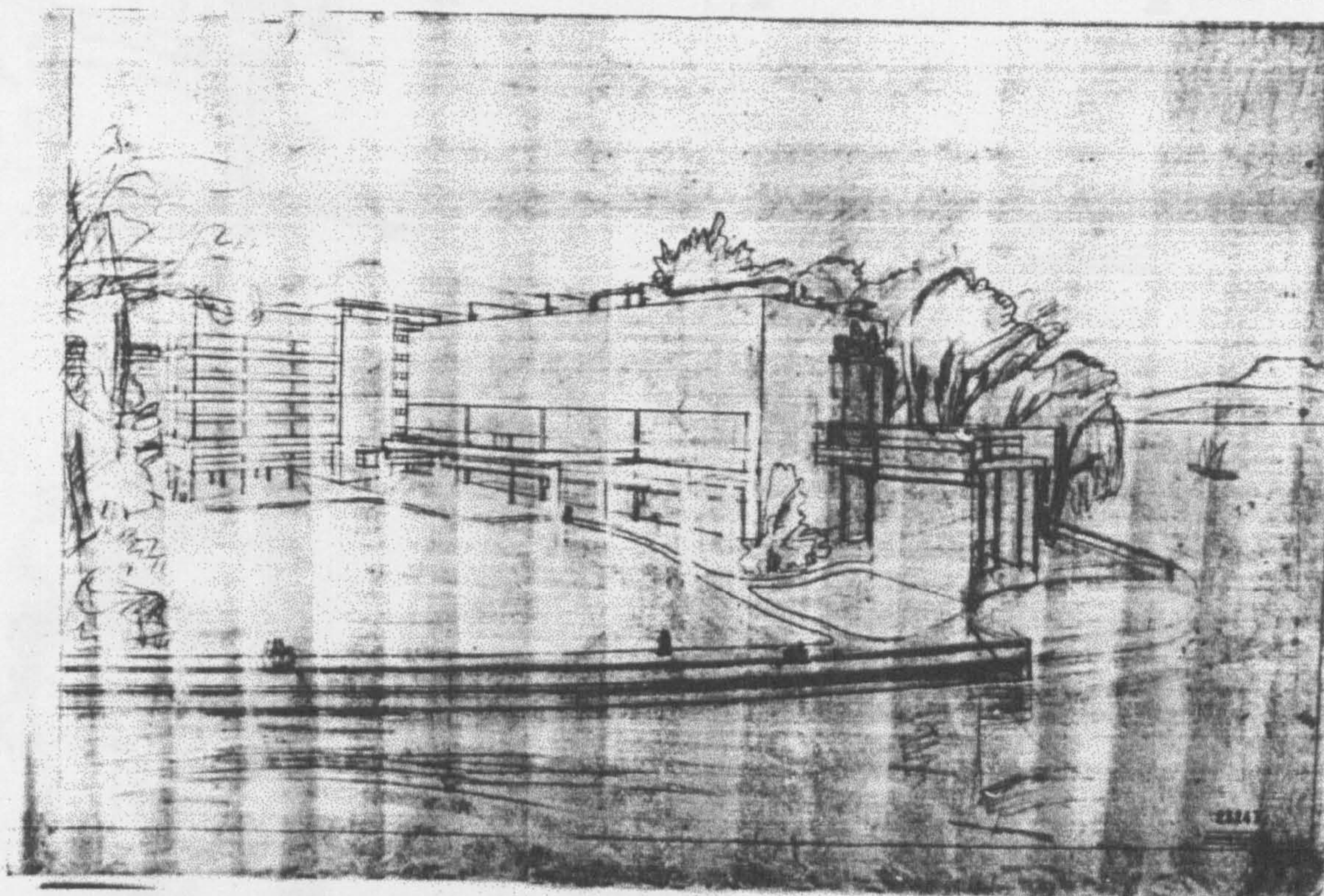


SDN 17

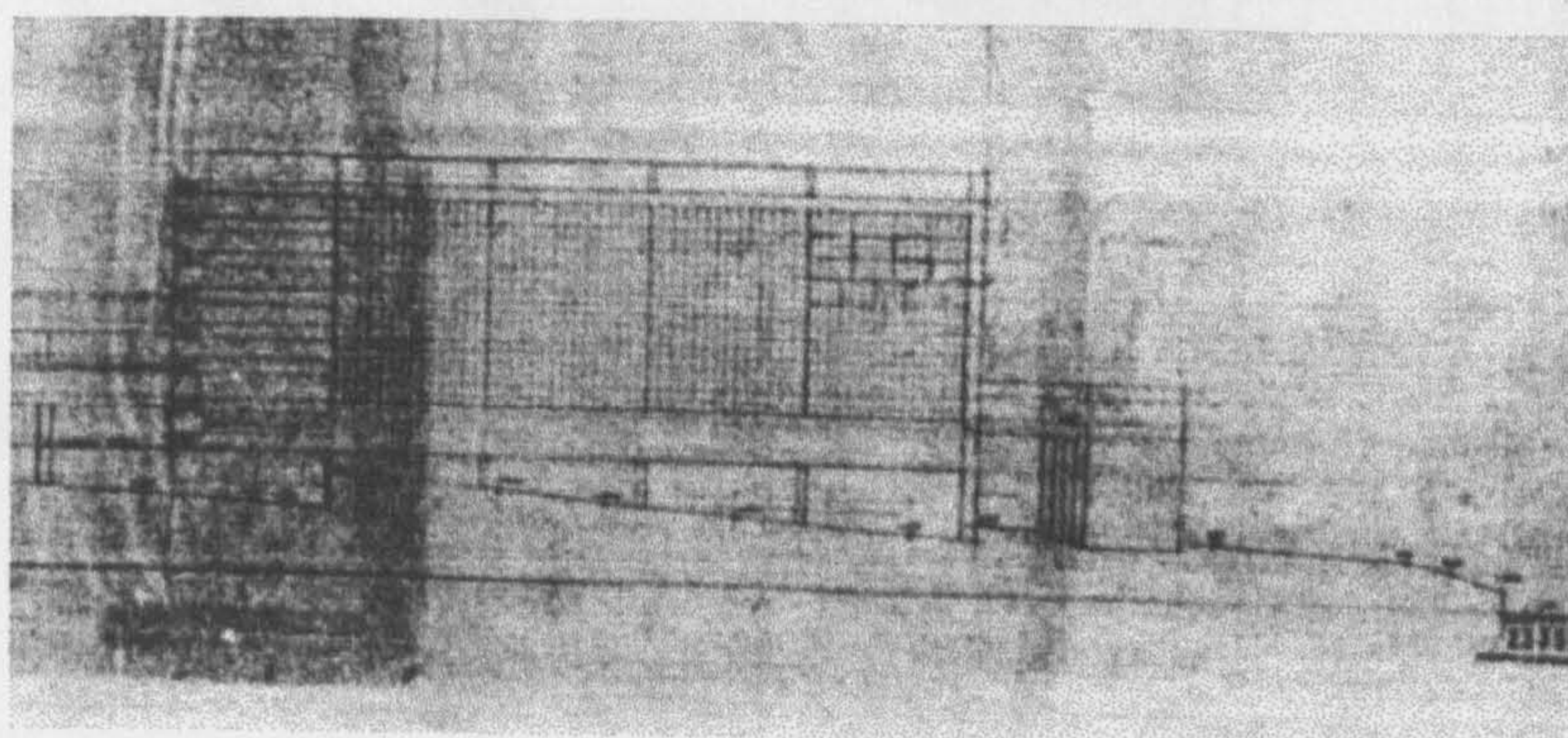
Development of Lakeside facades:
The President's Pavilion



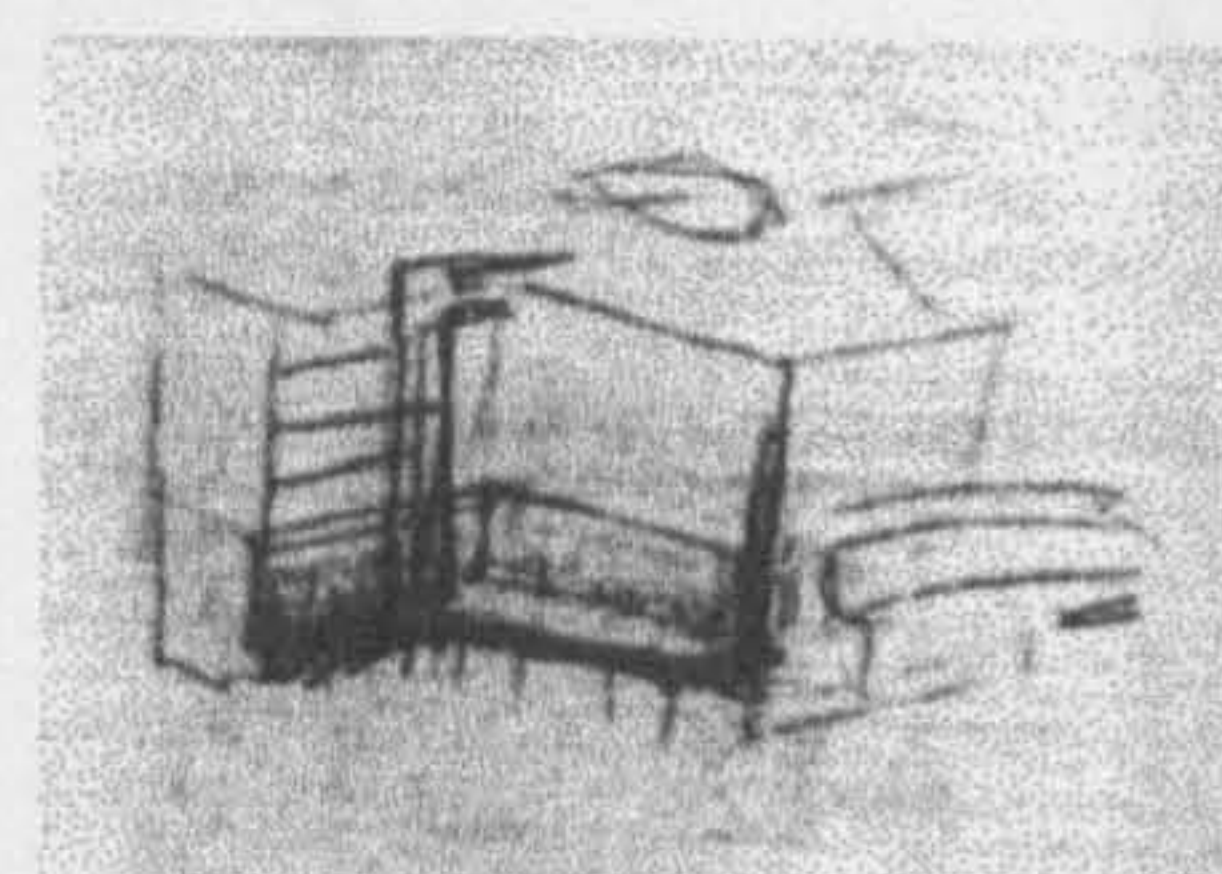
23.369



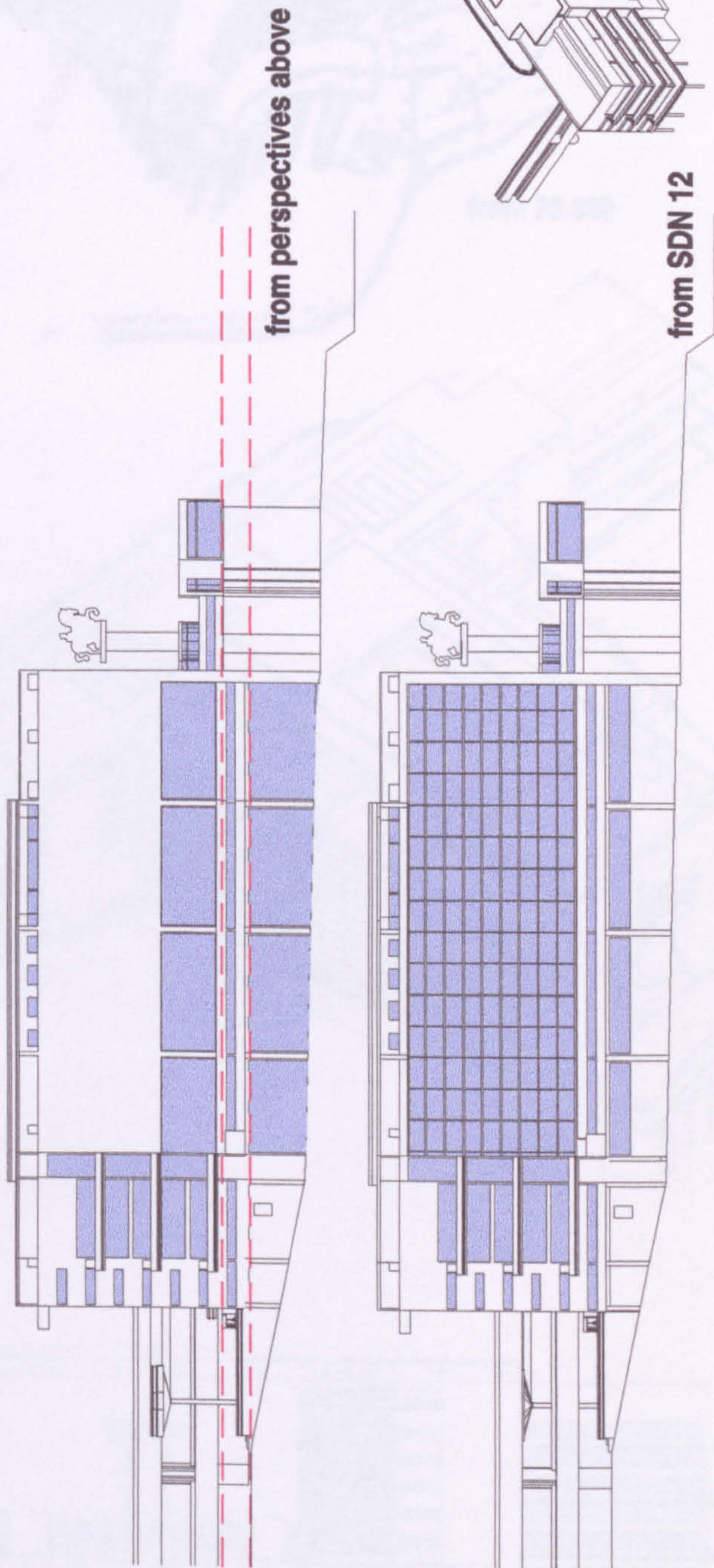
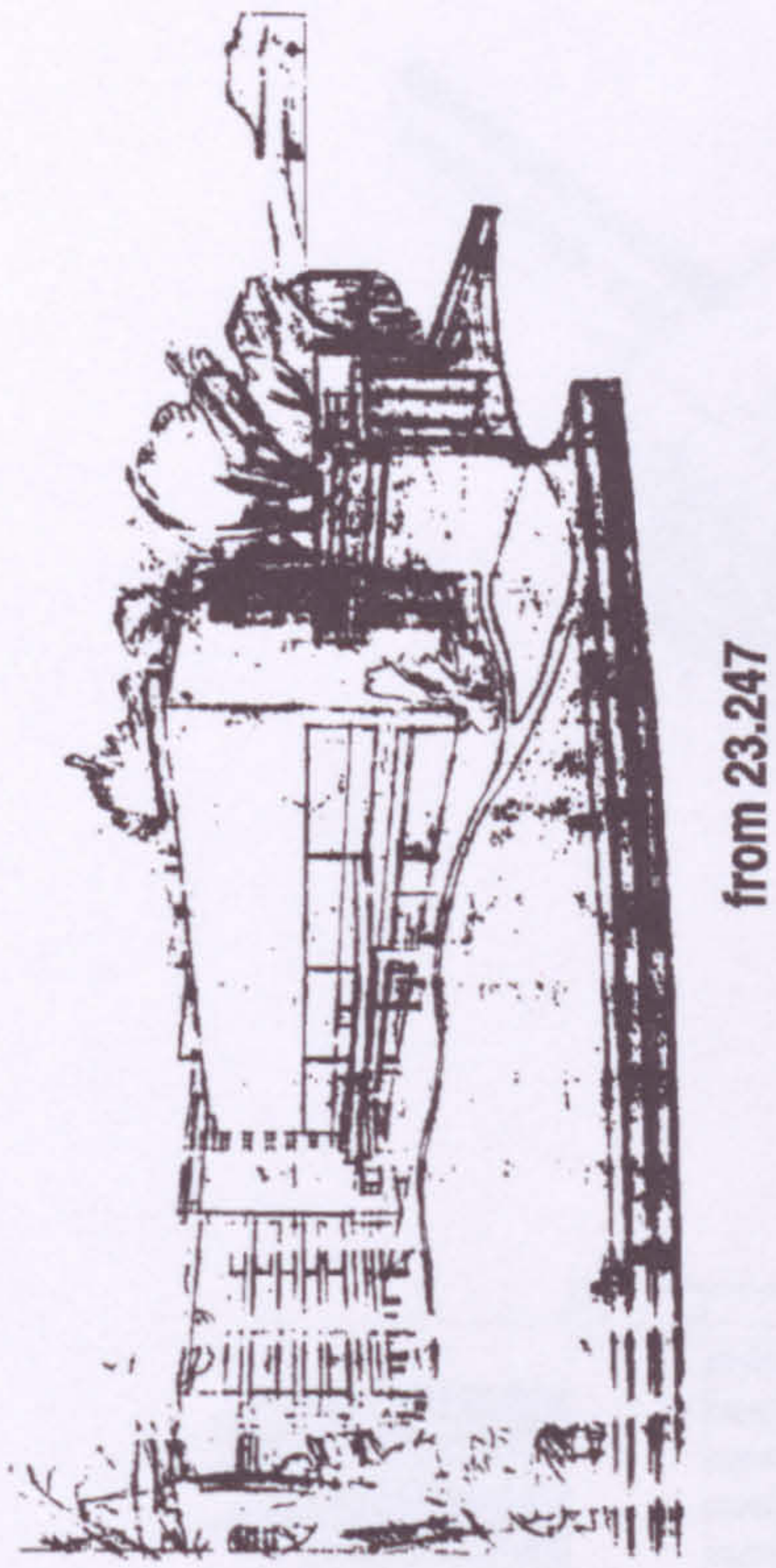
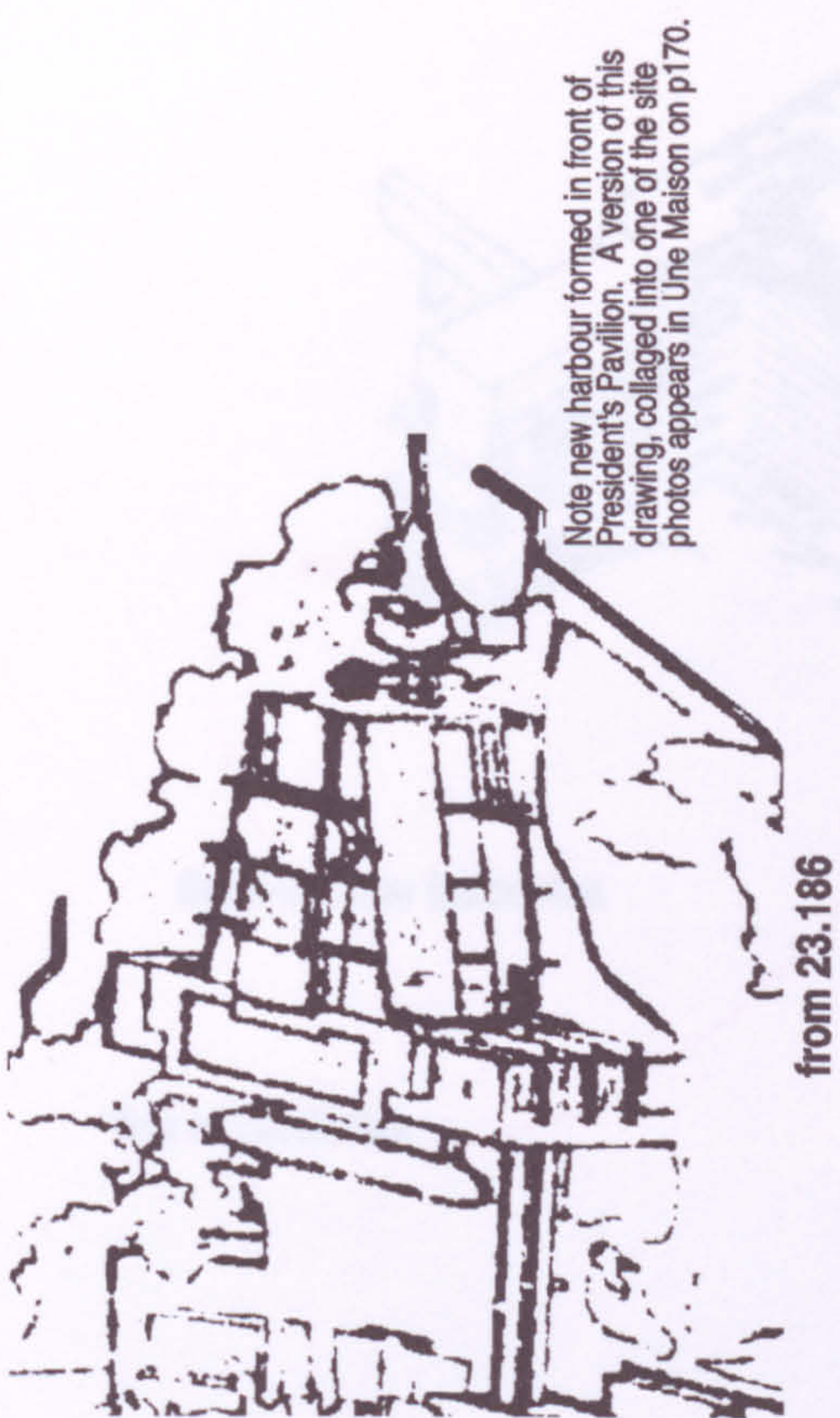
23.247



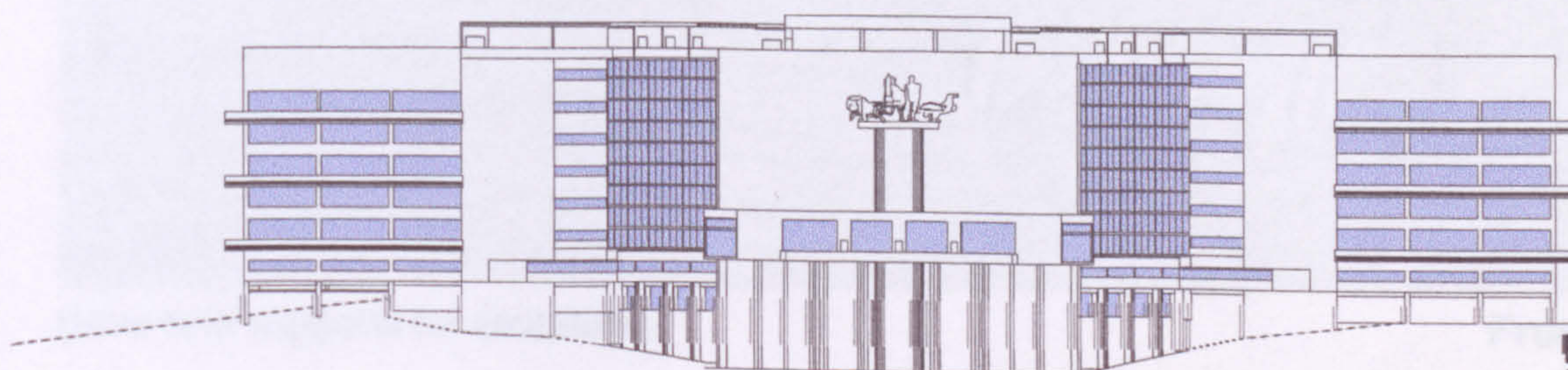
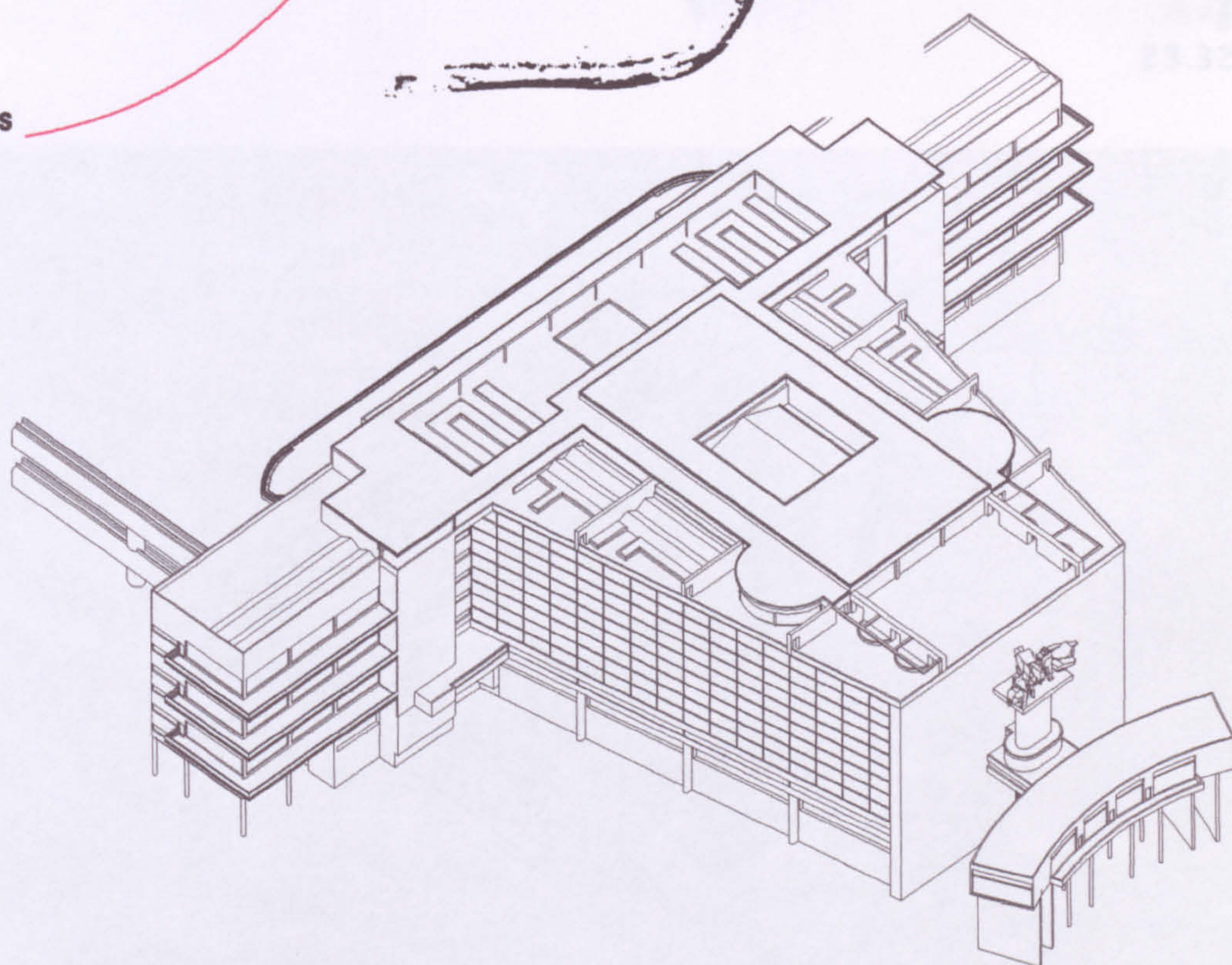
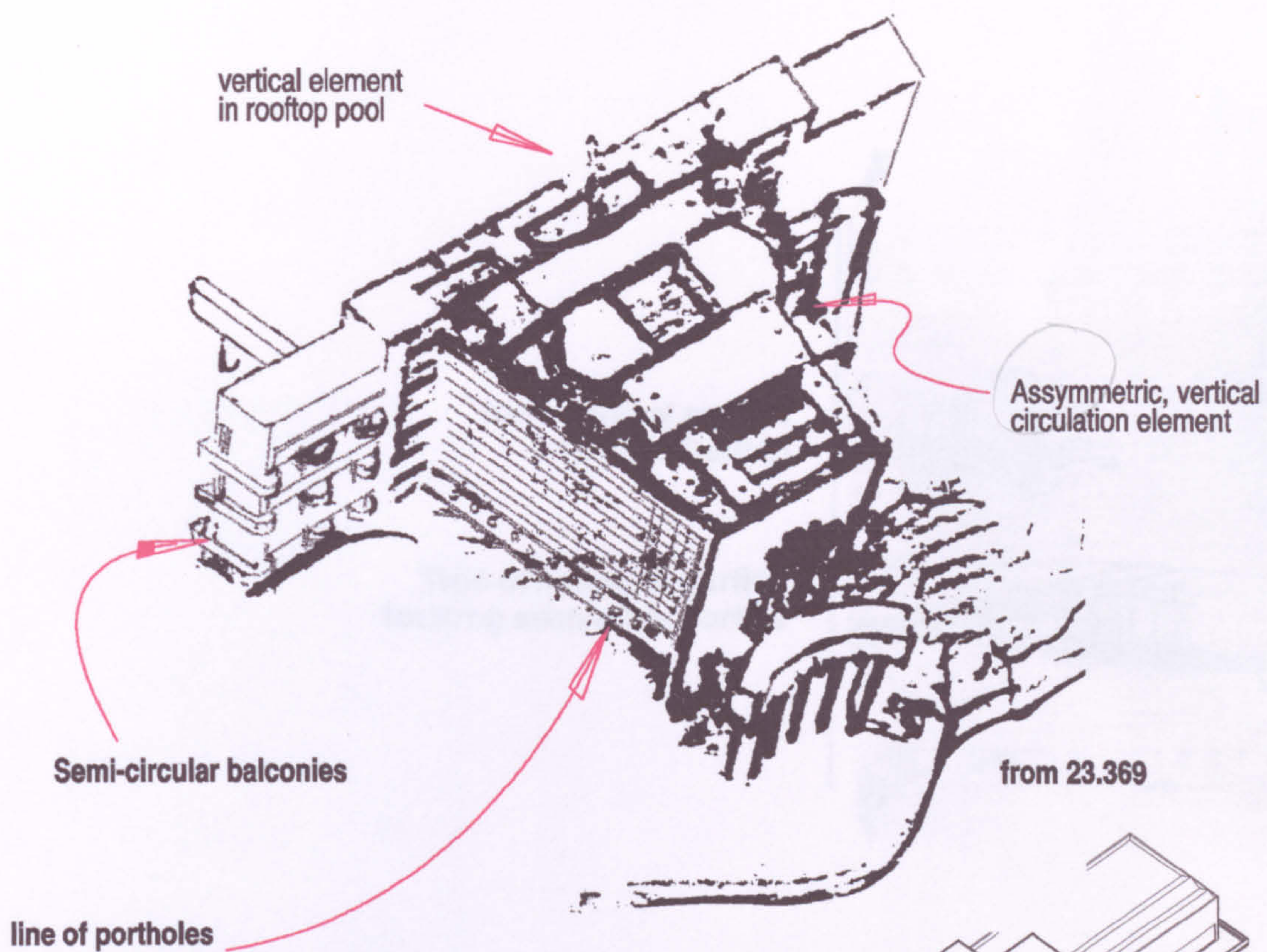
23.358 [part]



23.321 [part]



Assembly Hall: facade variations
lateral facades & balconies / pas perdus



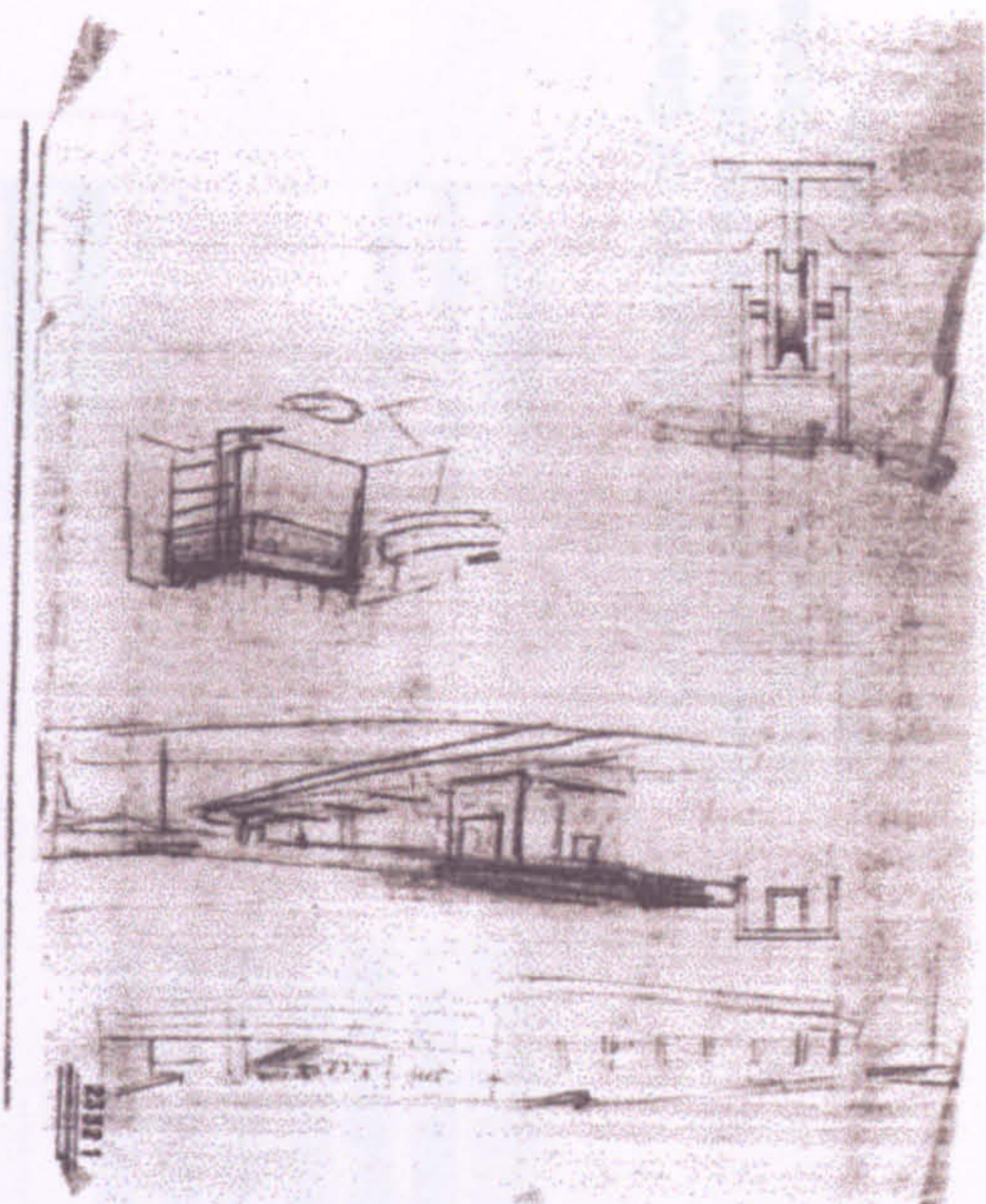
Final Version
from SDN 17

Assembly Hall: facade variations
Lakeside facade

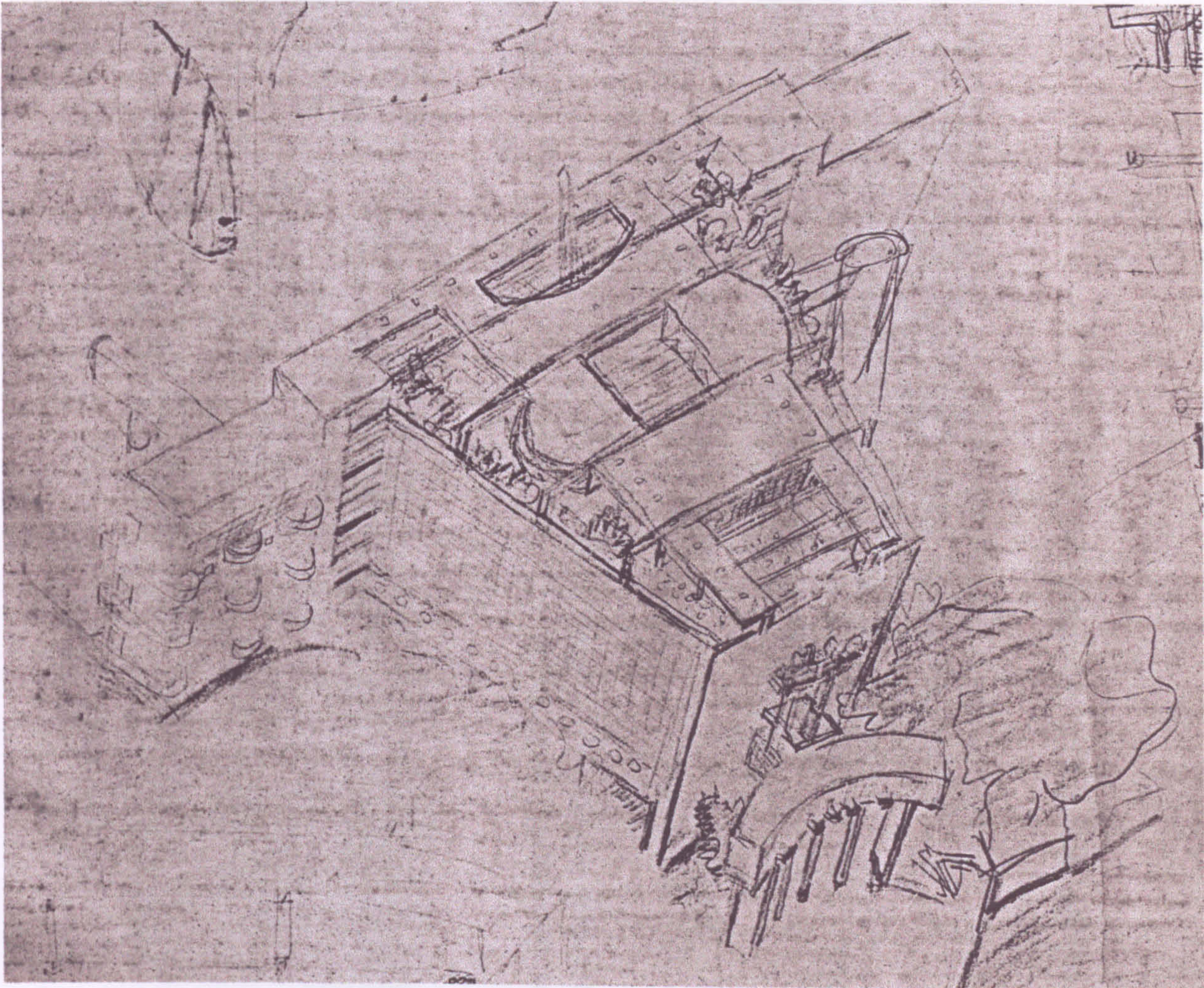
figure 32A

**Note vertical access
to Roof Garden**

**Twin columns to portico
forming secondary portals**

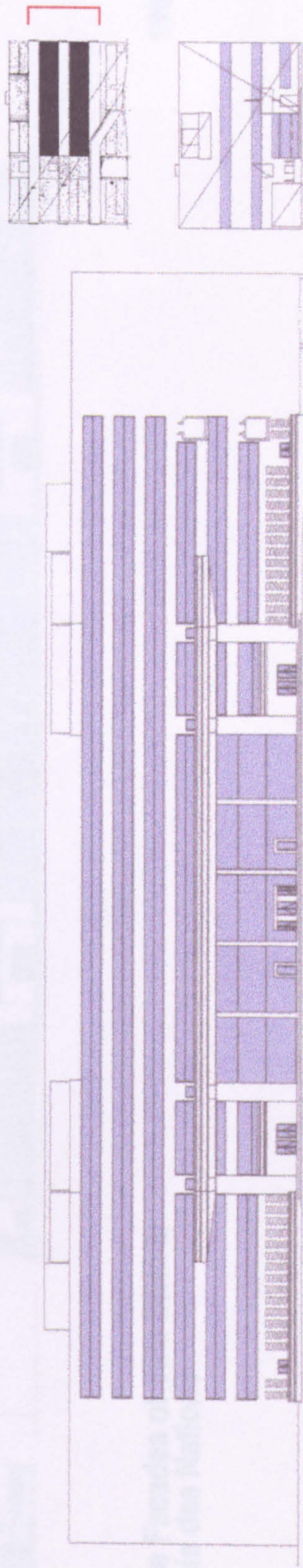
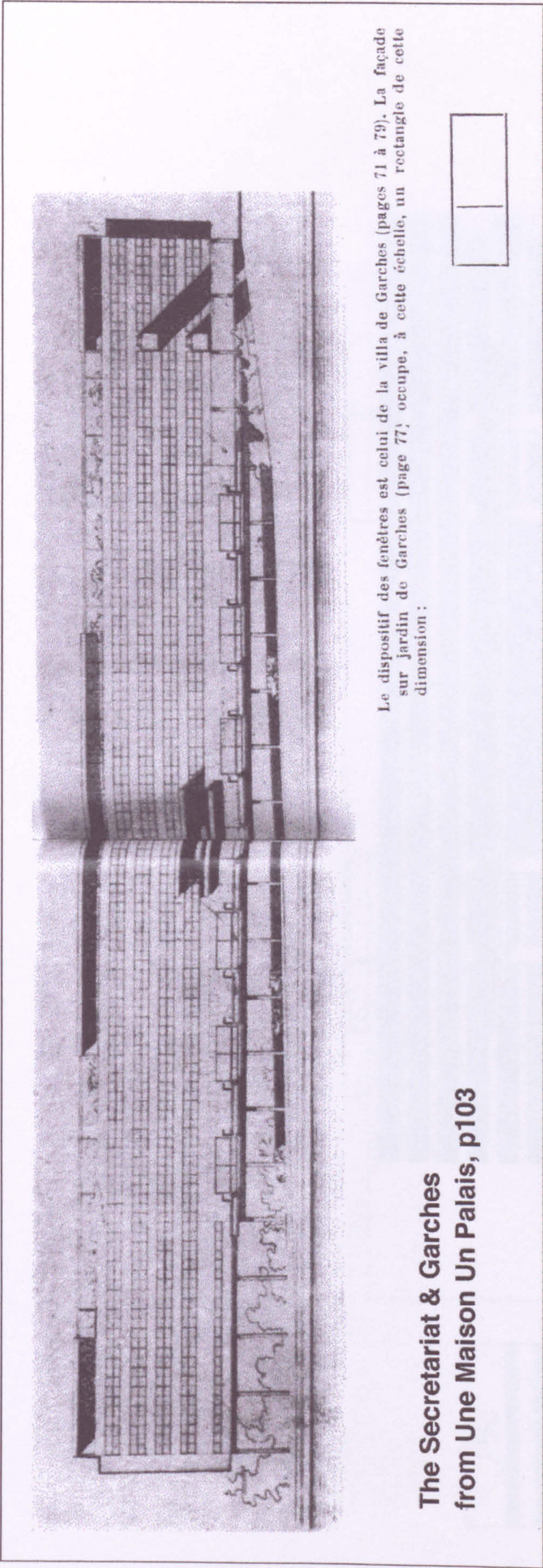


23.321

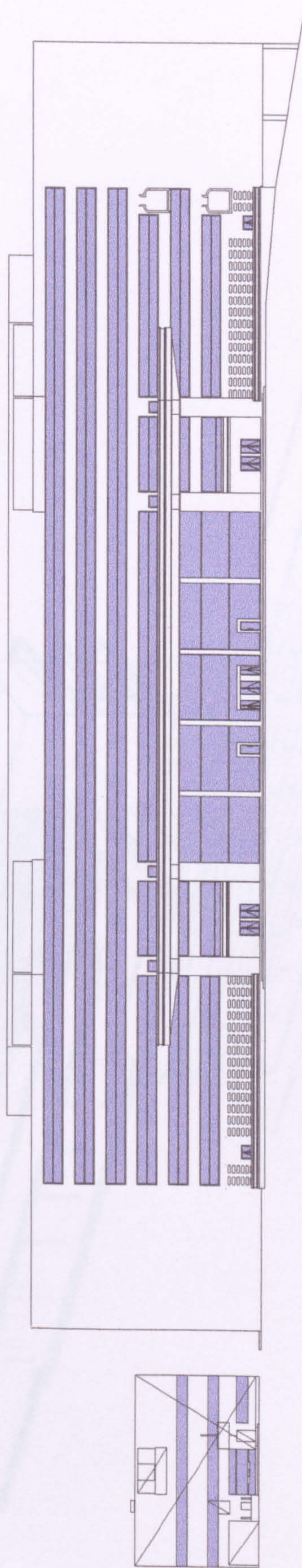


[Note twin supports for sculpture]

From 23.369



Le Corbusier's diagram of Garches [see above] indicates the plane of the garden facade, which exists at 1st and 2nd floor level only.



**Entrance Facades of Villa Stein &
the Palais des Nations**

1:750

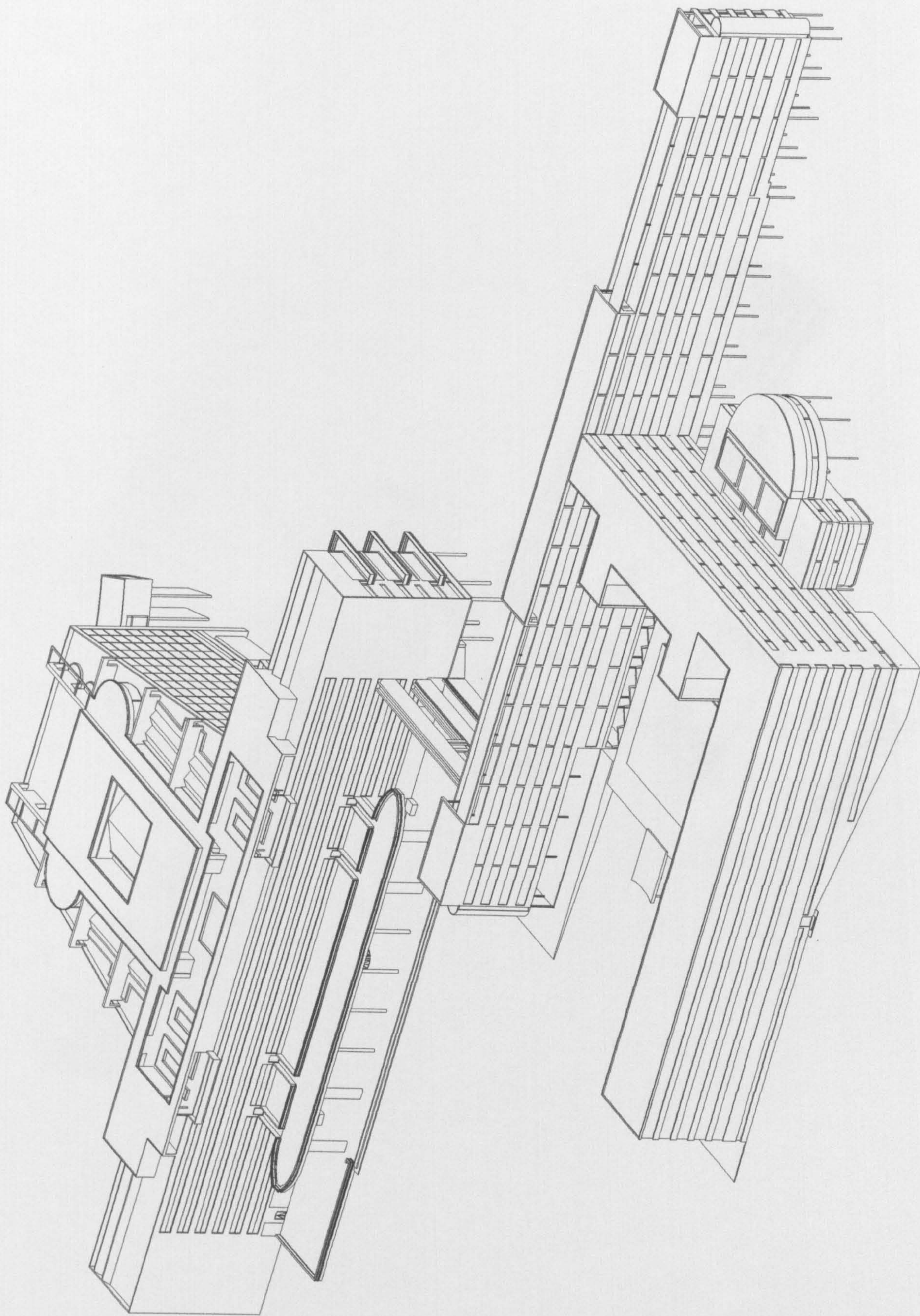


figure 35

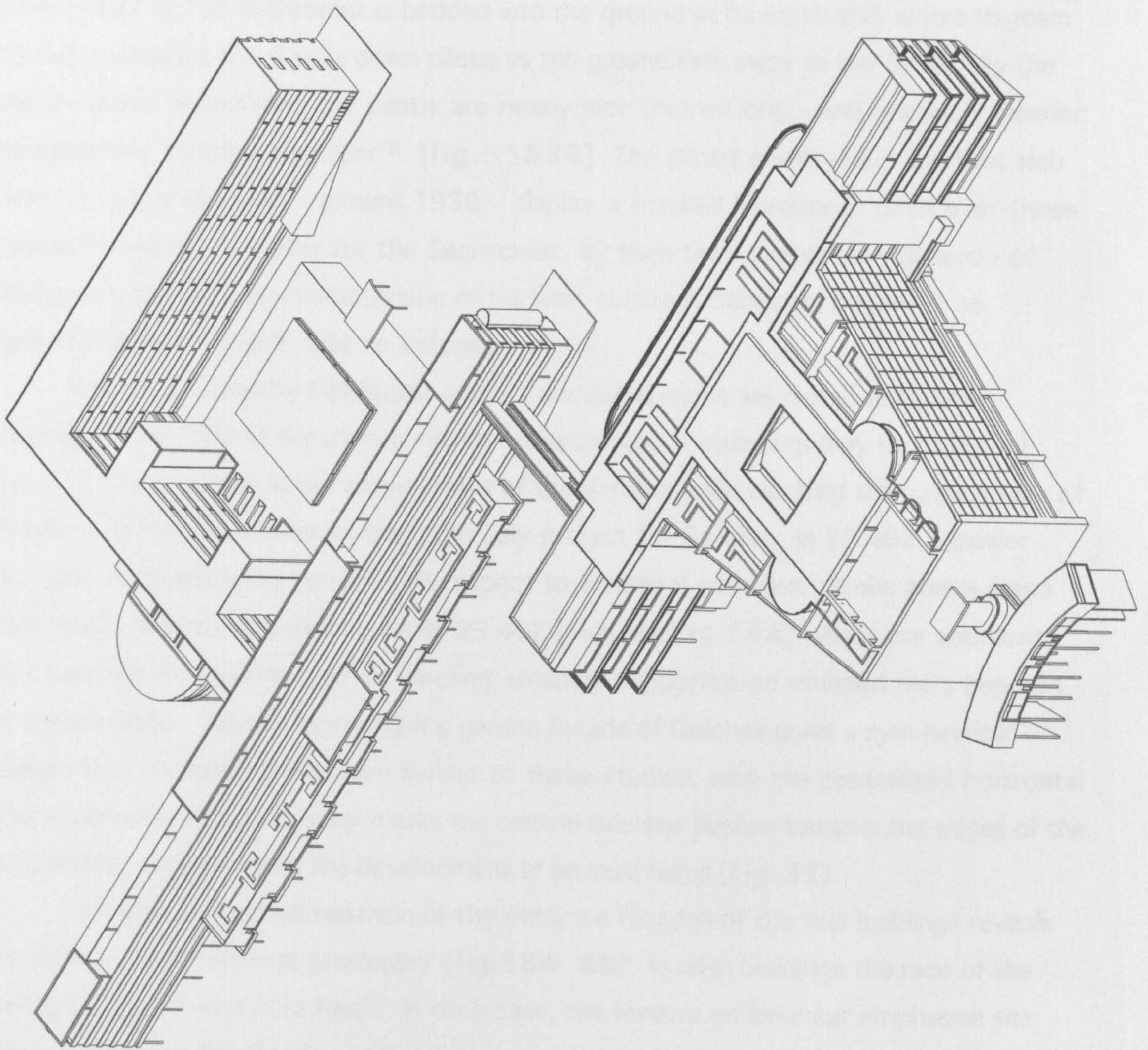


figure 36

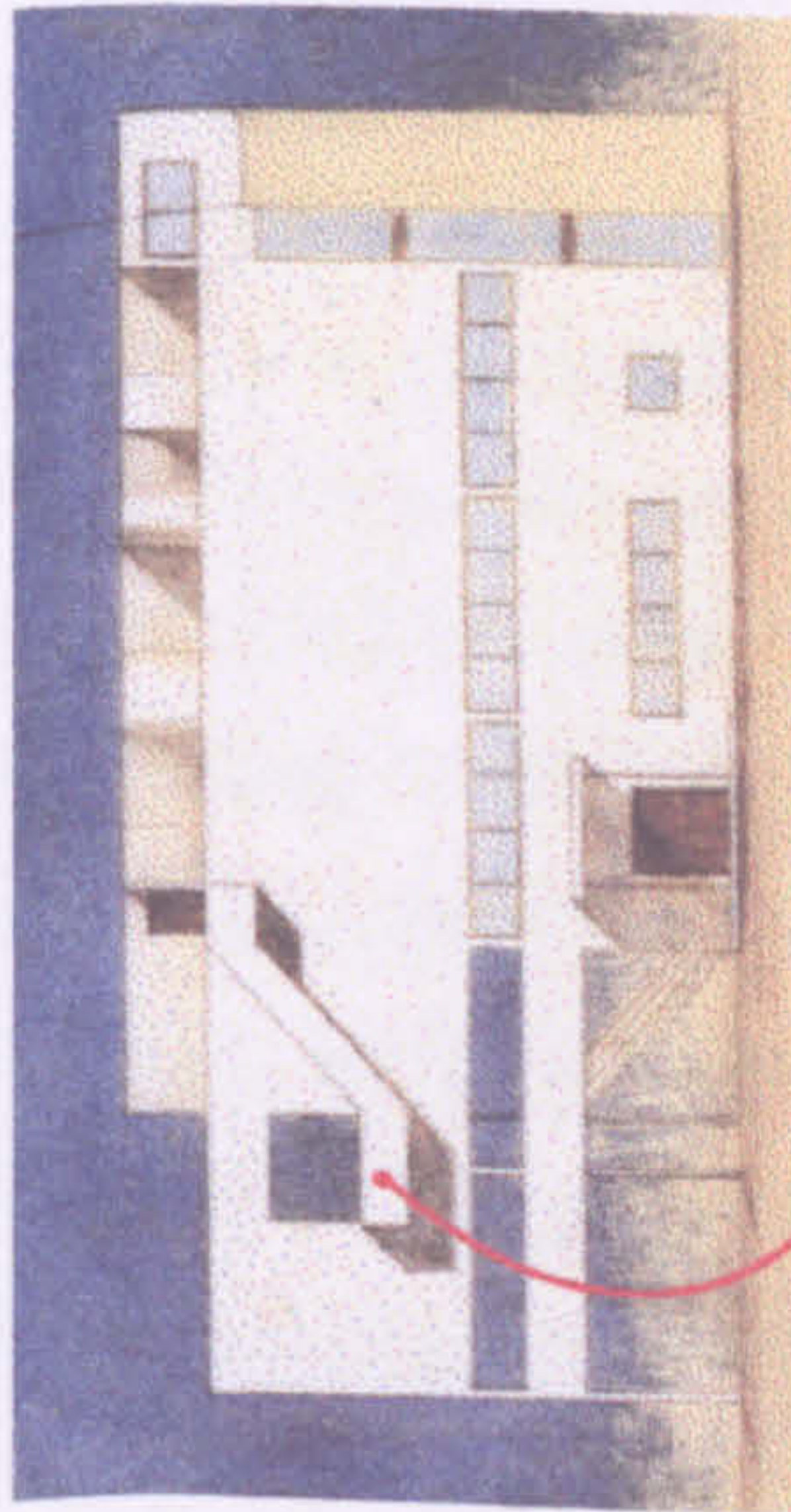
longer than the Villa Stein, and twice as high. [fig. 34] Although some pilotis are used beneath the Assembly Hall wings, other, weightier elements are already being invented to replace them: the elongated, coupled columns of the porte-cochère, the massive, piston-like structure supporting the lakeside sculpture, the series of buttress-like walls protruding laterally from beneath the auditorium, and the mix of walls and columns that elevates the President's pavilion. Supports for the Secretariat are not so varied: the main, lakeside block of the Secretariat is bedded into the ground at its north end, where its main entrance is located, but it puts down pilotis as the ground falls away to the South. By the time the block terminates, the pilotis are nearly nine metres long - and relatively slender: approximately 350mm diameter⁷⁴. [fig. 35 & 36] The pilotis employed in the first slab blocks Le Corbusier built - around 1930 - display a marked increase in girth over those proposed three years earlier for the Secretariat; by then that sculptural expression of load-bearing capacity so characteristic of his late concrete buildings, begins to be apparent. [Pavillon Suisse, Cité de Refuge].

When the Assembly Hall facade studies discussed above are placed alongside drawings for the Villa at Garches, a similar manipulation of elements may be observed. [fig. 37] Most notable is the employment of the external stair climbing the outside face of the house at high level seen in the 20th July project for Garches; in 23.402 a similar stair, also asymmetrically placed with respect to a central entrance, climbs above piano nobile level. In both drawings on sheet 23.402 [See also fig. 24A], there are additional staircases like the garden stair at Garches, similarly supported on rounded piers beneath the access decks. Indeed, mirroring the garden facade of Garches gives a symmetrical arrangement compositionally very similar to these studies, with the centralised horizontal fenestration that simultaneously marks the central axis and pushes towards the edges of the facade plane, counteracting the development of an axial focus [fig. 37].

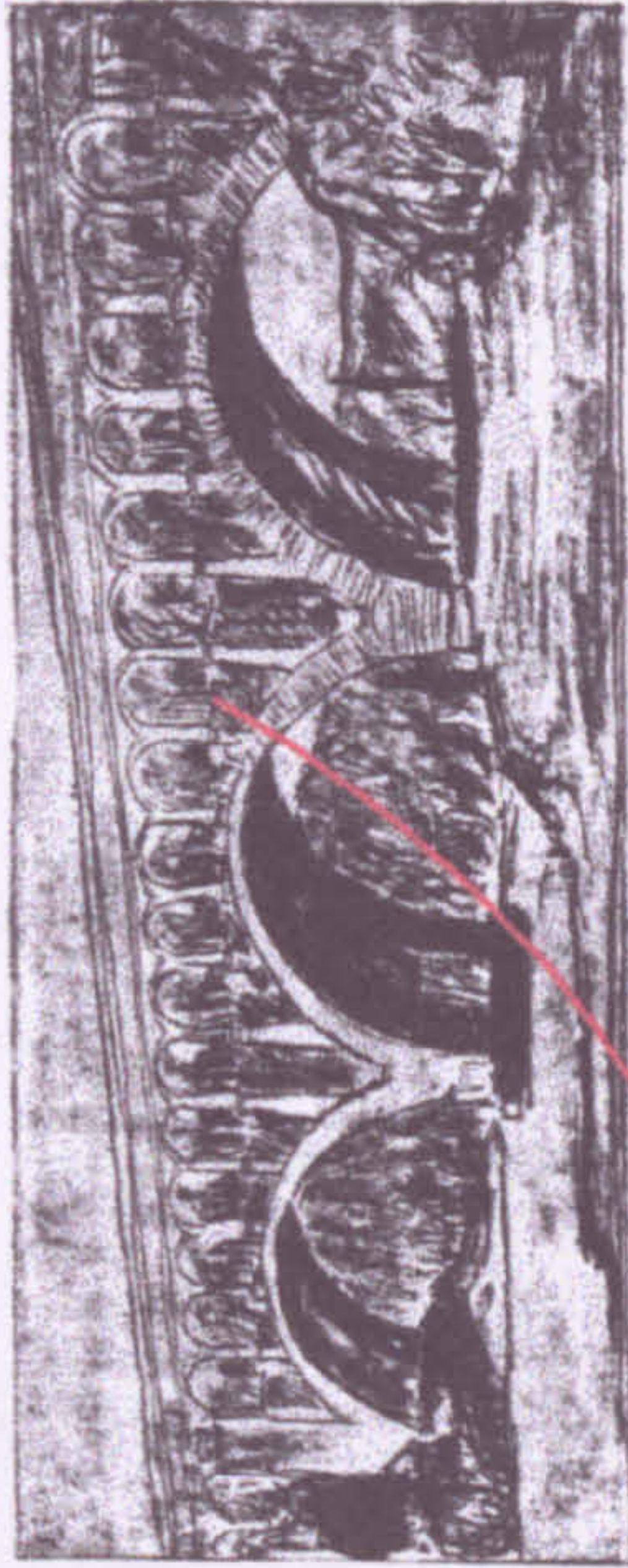
Certainly a direct comparison of the entrance facades of the two buildings reveals very similar compositional strategies [fig. 38A & B]: in both buildings the face of the building is treated as a pure block. In each case, the fenêtre en longueur emphasise the severe planarity of the facade. At Garches they continue to the very edge of the plane: they would travel to infinity were it not for the limit of the block of the house; in the Assembly Hall they are contained by the blank walls of the Commissions Halls and their horizontal extension is stopped and reflected back towards the centre. And at Geneva the rhythmical continuity of the fenêtre en longueur is implied rather than literal: they are interrupted, not only by the central glass screen, but also by the paired, subsidiary entrances to either side of this screen which at once affirm and deny the central visual focus of the facade and

Project for the Villa Stein at Garches
20th July, 1926
FLC 10407

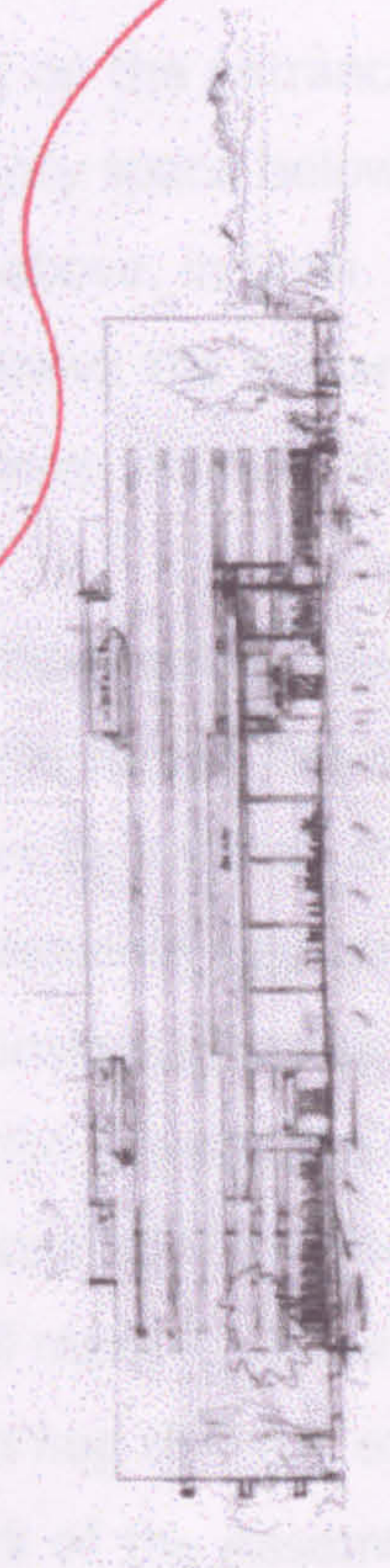
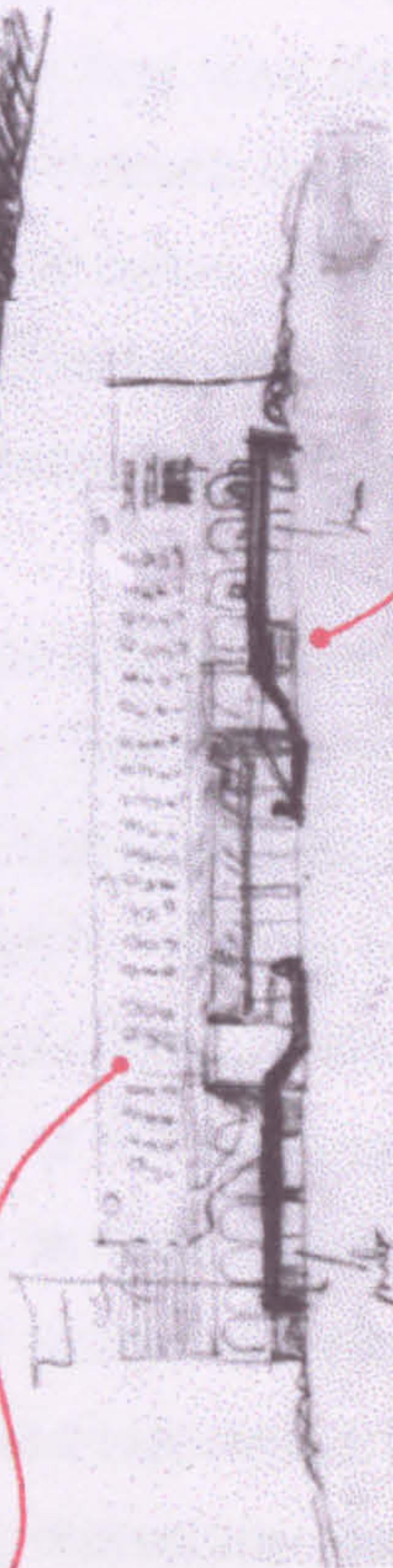
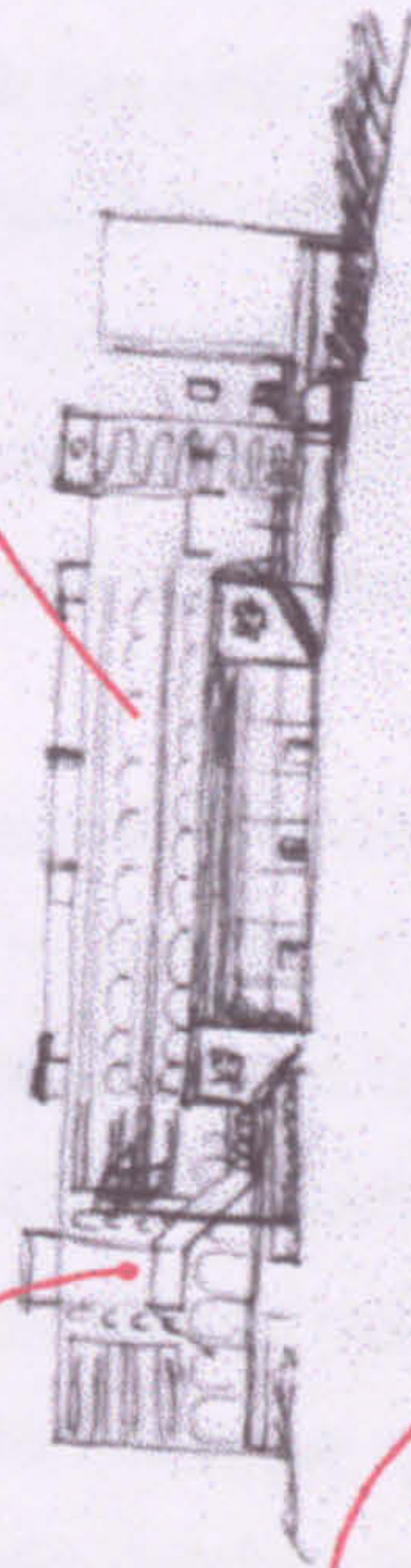
See Tim Benton,
‘The Villas of Le Corbusier



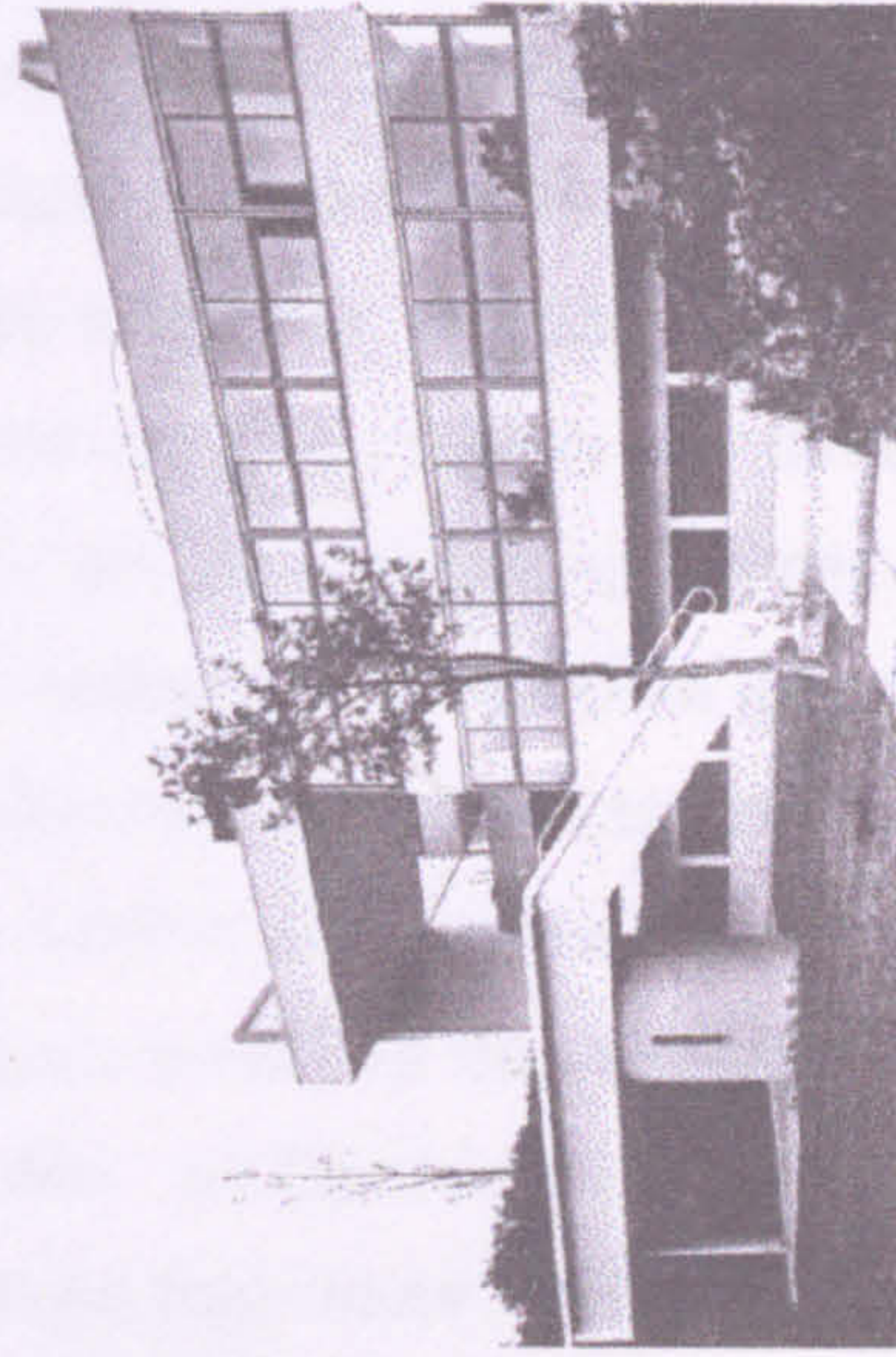
Project for the Pont Butin
Le Corbusier, 1915
from Oeuvre Complete vol 1



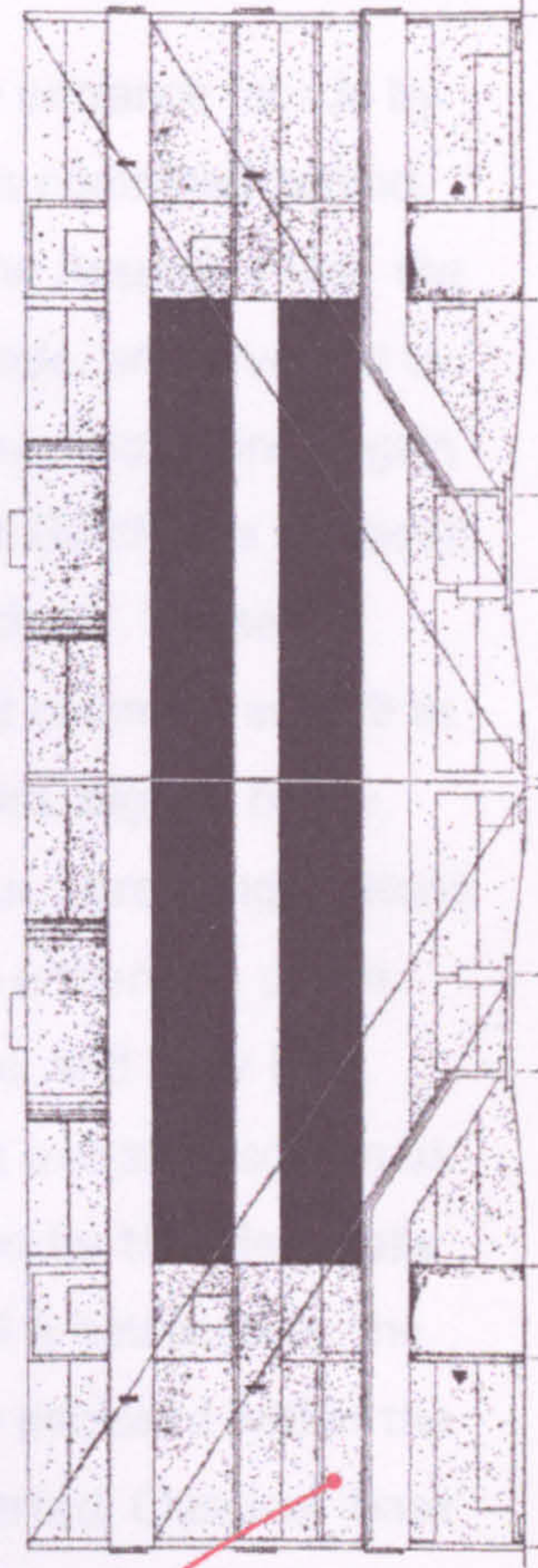
Portholes:
the liner analogy



FLC 23.317
FLC 23.402
FLC 23.397
[see Devanthery & Lamuniere - fig.21]



The garden facade of the
Villa Stein at Garches, 1927.
Similar organisation of
external stair and balcony/
promenade.

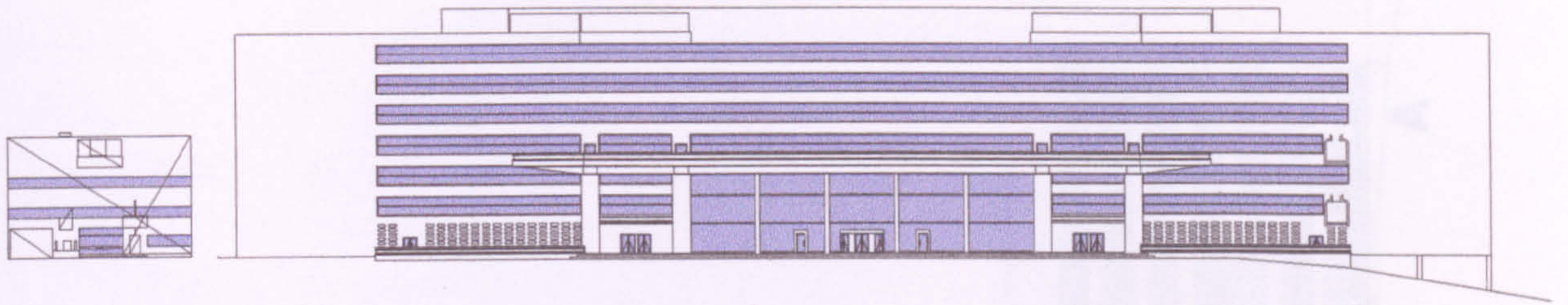


The garden facade of the Villa Stein mirrored for
symmetrical layout as Assembly entrance

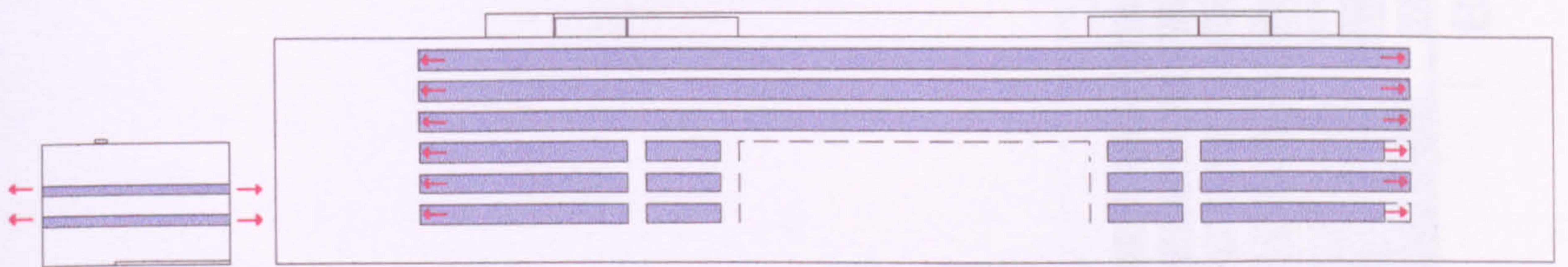
mark the limits of the great hall behind the entry block[fig.38C].

At Garches the existence of a roof garden is only indicated on the entrance facade by the complexity of the elements viewed through the central balcony; it is contained behind, and shielded by, the blank upper portion of the facade. In the case of the Assembly Hall, the roof terraces are at once hidden by the raised central portion of the facade, and revealed by cutting it away and pushing balconies through it at the edges of this raised wall. Once again the arrangement is symmetrical, but the central, roof-level balcony at Garches is replaced by two balconies displaced from the centre, with a blank wall between them. These balconies, in conjunction with the entrance quai canopy and its coupled columns, as well as the entrances for journalists and visitors with their associated balconies aligned below, counteract the great central entrance with its glass screen and tambour, spreading interest throughout the facade. At Garches, there are also coupled entrances on either side of the central axis, balanced - canopy and box-balcony - rather than identical, and they hold between them a large, screen-window, formally equivalent to the great entrance screen at Perle du Lac. While the central screen-window at Garches is countered by the identically sized balcony above it, the glazed entrance screen of the Assembly hall is balanced by the blank, solid wall in front of the roof garden. At Garches the pilotis are enclosed within the cube of the house, nevertheless the ground floor level reads as an inverted, Classical 'base' with weighty piano nobile raised above it. This is very clear on the garden facade with its close, horizontal banded windows set back beneath the first floor slab; on the entrance facade the varied, multiple openings piercing the cube indicate the empty space below the regularly glazed, main levels above. The choice of void below - solid above, in both projects, is consistent with the formal parti of the purist house: at Geneva the entrance wall of the great hall dissolves into a screen with pilotis behind it, above which is the bulk of the building [fig.38B].

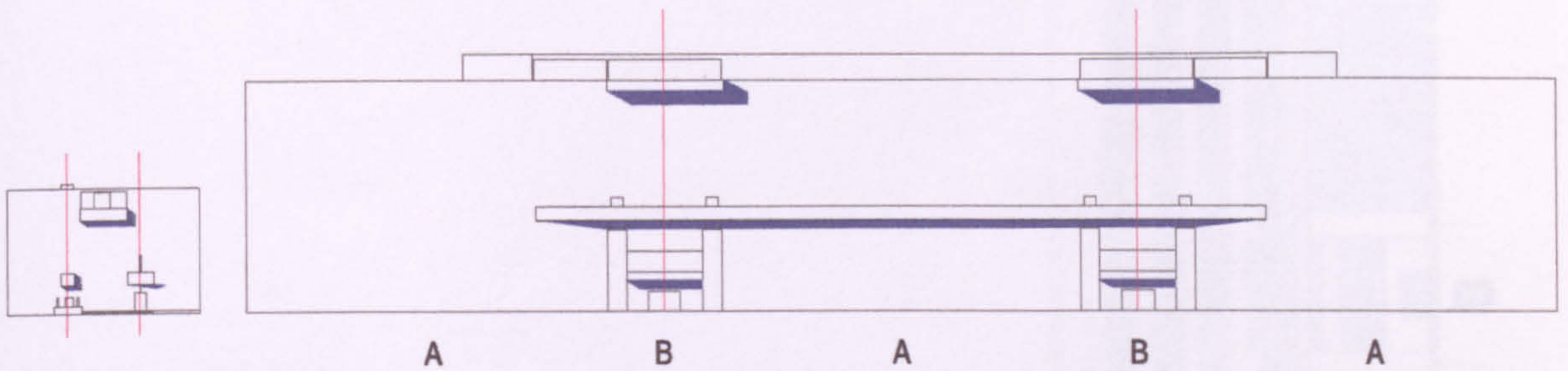
As I said, the boundaries of the fan-shaped hall coincide with the coupled columns of the entrance canopy, and the Journalists' and Visitors' entrances on the facade line up with the left and right Assembly Hall entries beyond; the hall itself may not be entered on its axis of symmetry [fig.38C], except by the President⁷⁵. And his ceremonial approach, from the lakeside pavilion to the hall, is not related back to the main entrance facade and the approach of all other participants. The pressure of the curve of the fan-shaped hall causes no displacement of the planar facade; instead, as images produced from the computer model show, the great lightness and transparency of the entrance hall make it certain that the highly complex internal promenades and the curved balconies that hug the rear of the hall would have been visible from outside. The long, rectangular block of the Assembly



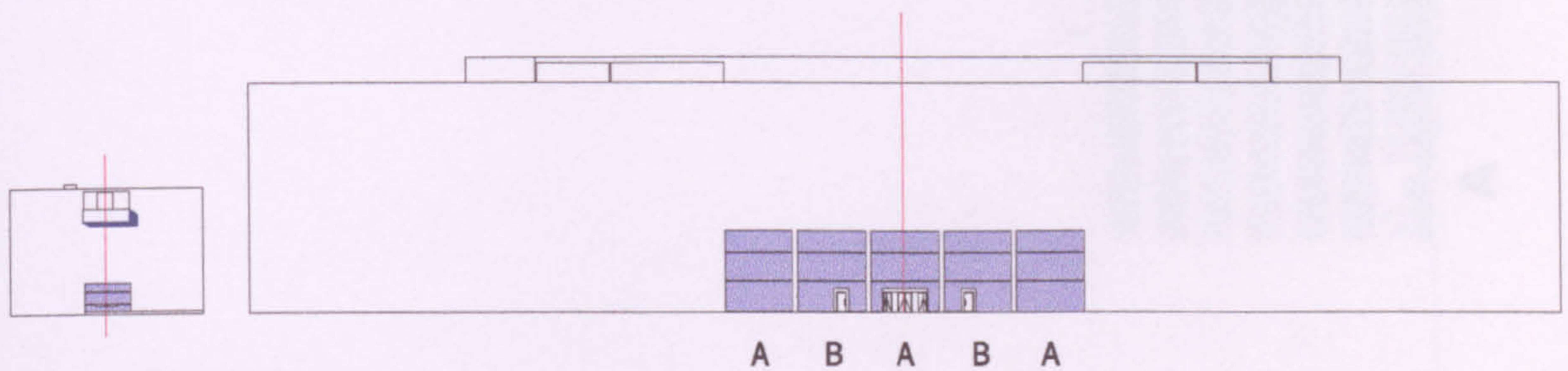
Final elevations



Fenetre en Longueur



Secondary entrance and balcony configurations displaced from centre



Balancing central elements

Entrance Facades of Villa Stein & the Palais des Nations

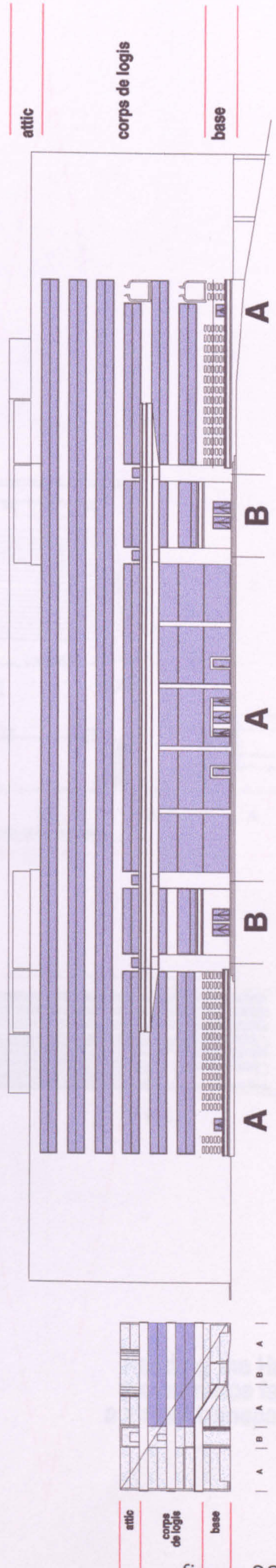
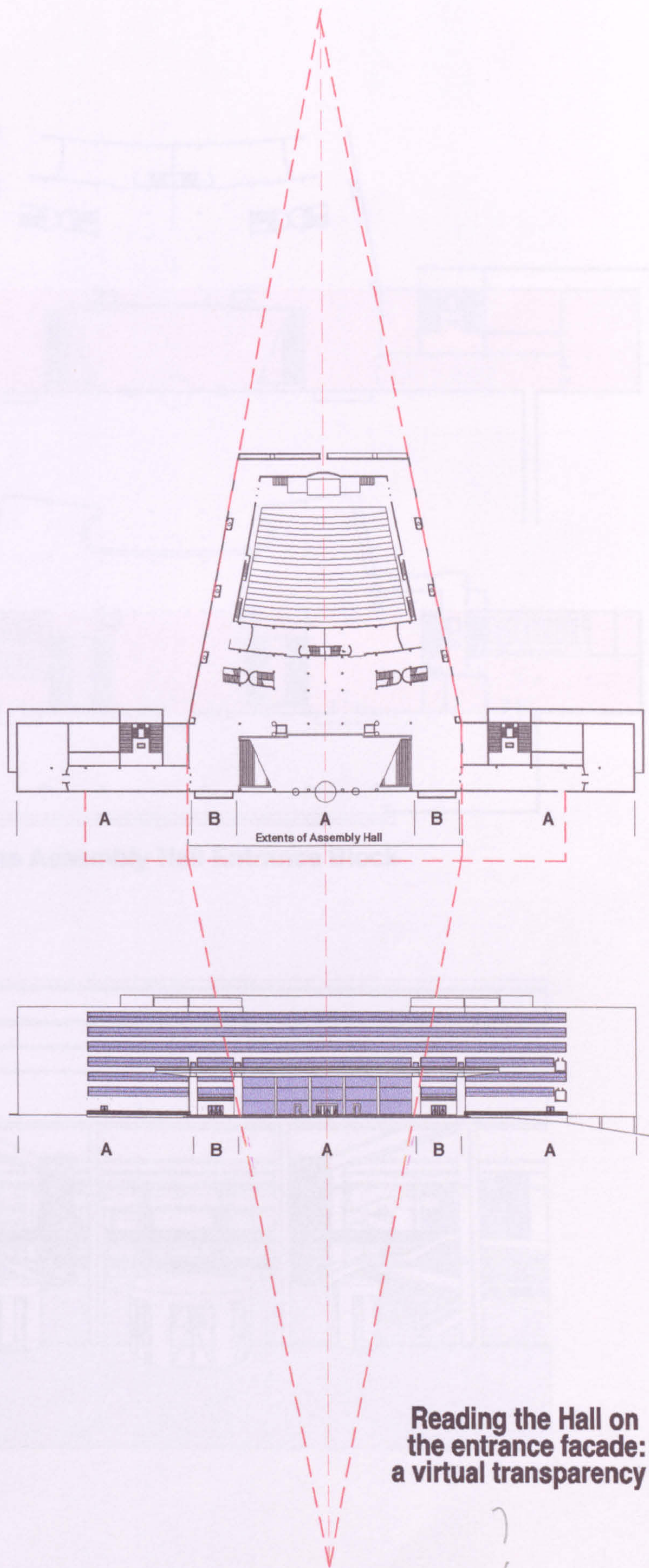


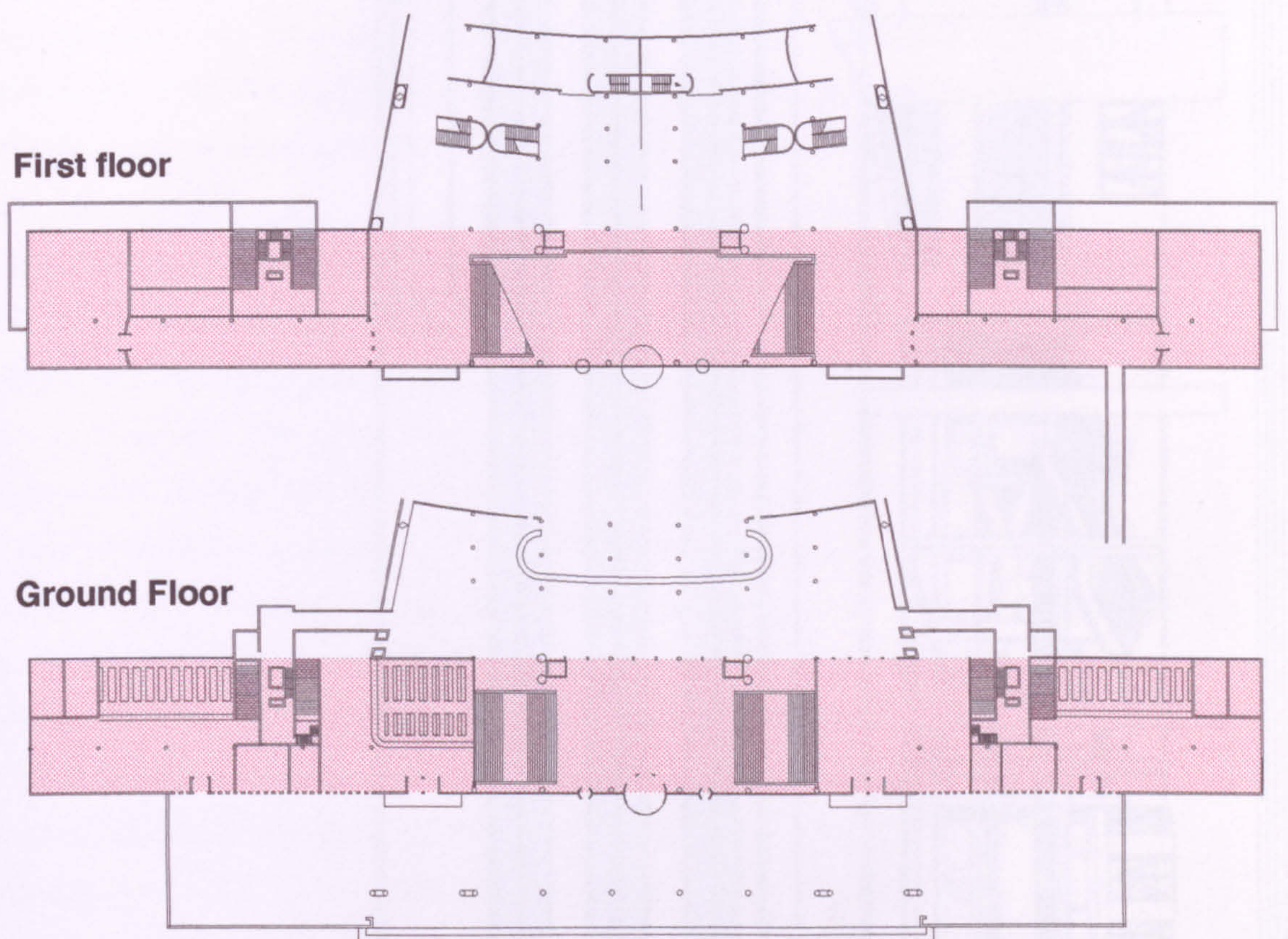
figure 38B

Garden Facade of Villa Stein &
Entrance Facade of the Palais des Nations

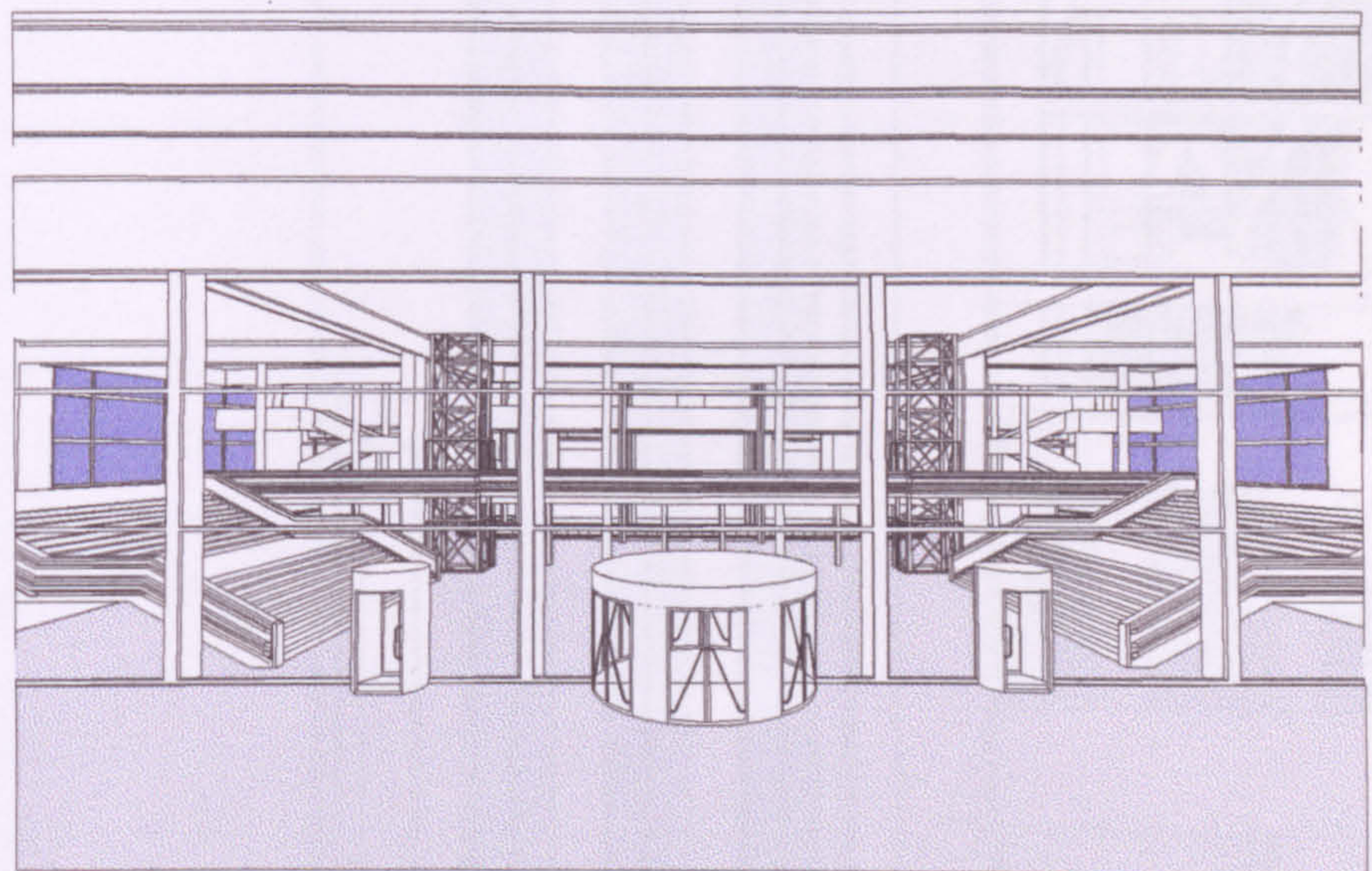


**Reading the Hall on
the entrance facade:
a virtual transparency**

figure 38C



The Assembly Hall Entrance Block



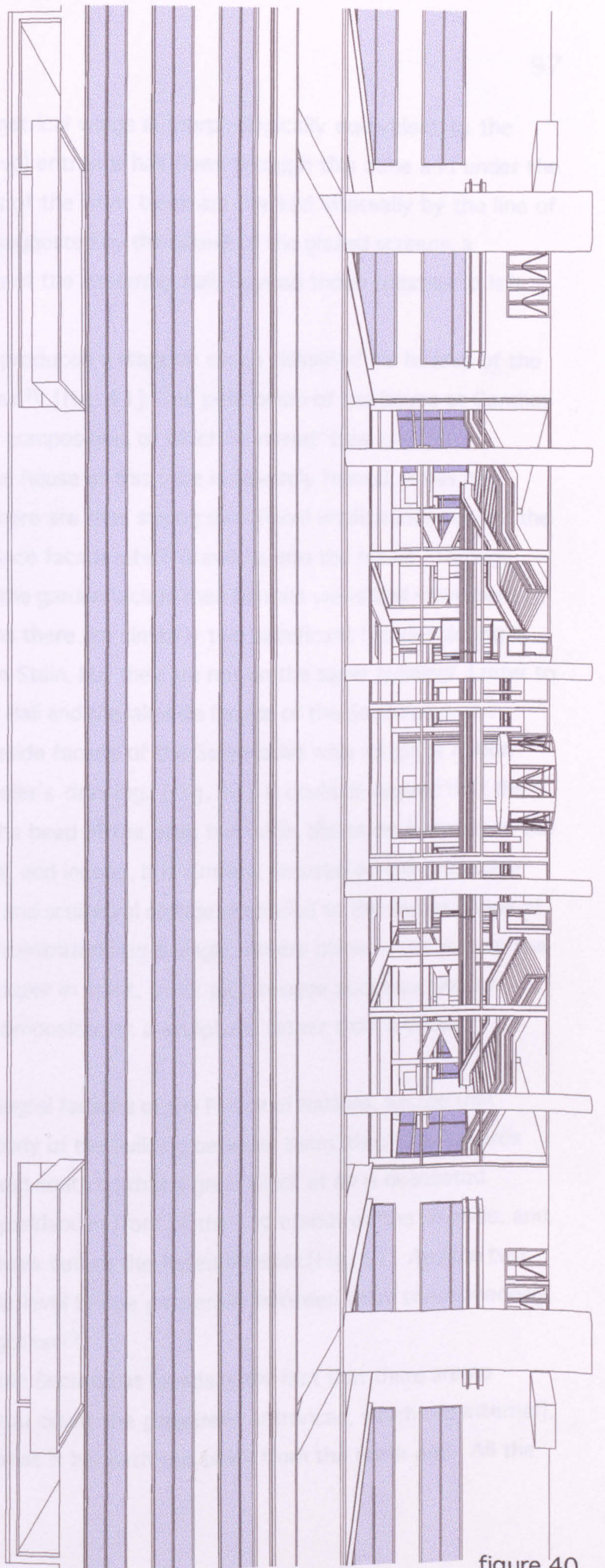


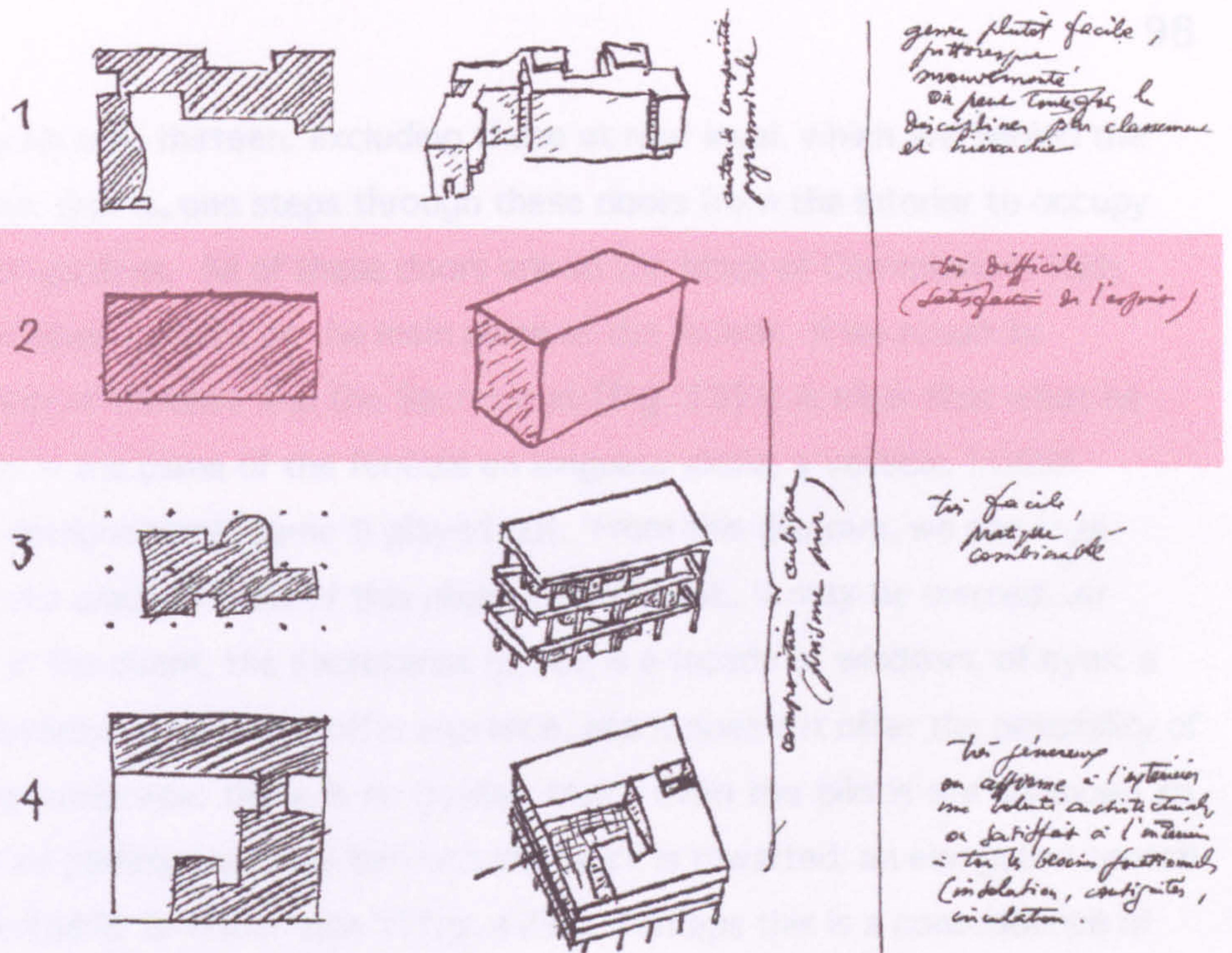
figure 40

building entrance hall with its symmetrical wings is morphologically equivalent to the Garches prism: although the multilevel entrance hall flows through this zone and under the acoustic hall, lakewards, the extents of the front block are marked internally by the line of columns between the main lifts, and suggested by the extent of the glazed screens, a continuation of the lateral glass walls of the Assembly hall, beyond those columns to left and right [fig.39 & 40].

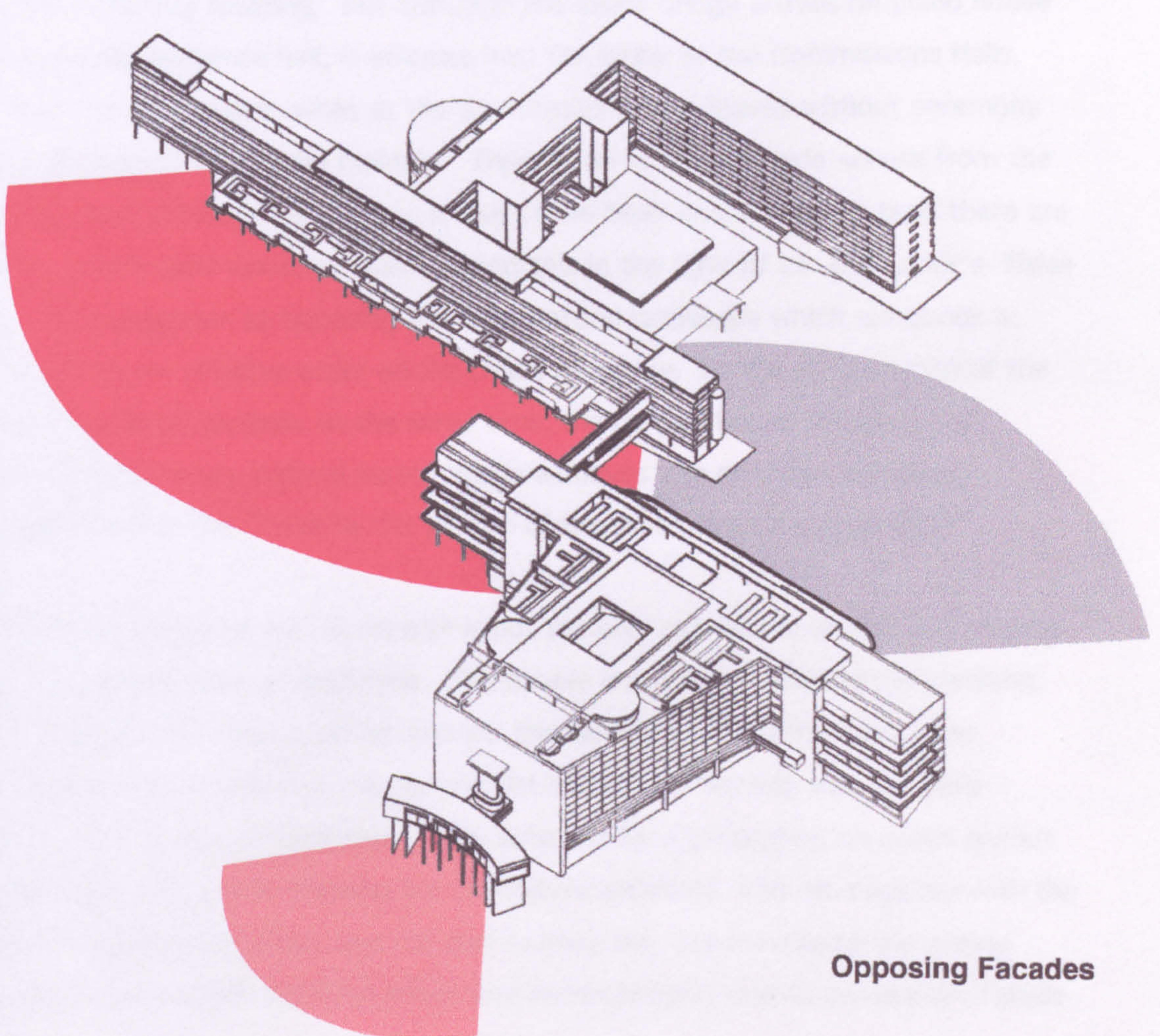
Around 1928, Le Corbusier produced a diagram which classified his houses of the Purist period into 'four compositions'⁷⁶. [fig. 41] The pure prism of the house at Garches is recognisable in the second type of composition, of which he noted '*très difficile (satisfaction de l'esprit)*'. The cubic house of this type is severely frontal: it has two meaningful, opposite facades, and there are thus strong directional implications set up: the first facade encountered is the entrance facade which draws us into the house - through which one progresses to the garden: the garden facade then permits views and movement to the outside. At the Palace of Nations there are similarly two significant facades acting in concert as do the facades of the Villa Stein, but they are not on the same building! I refer to the entrance facade of the Assembly Hall and the lakeside facade of the Secretariat: the planar and frontal quality of the lakeside facade of the Secretariat with its great ribbon windows, is very clear in Le Corbusier's drawing. [fig. 33] It could be argued that the President's pavilion assemblage at the head of the main hall fulfils the same function as the garden aspect of the Villa at Garches, and indeed, it is similarly focused on the landscape before it. But it is part of a complex and sculptural collage appended to the wedge shape of the great hall: its meaning is not concentrated into a single, severe plane, it gathers up the landscape in a radial fashion; it is closer in spirit, in its picturesque accumulation of elements, to the first of the 'four compositions'; a sculptural rather than a planar configuration.

Returning to these two meaningful facades of the Palace of Nations, we see that instead of facing outwards with the body of the building between them, they face towards each other, and slide away to north and south so that a great block of air is delineated between them: it dissolves into the parkland in front of the Secretariat on the lakeside, and shades away into the entrance parterres before the Assembly quai. [fig. 41] And the two facades are in fact linked: the double-level bridge *passerelle* between them simultaneously holds them apart, and pulls them together⁷⁷.

A significant aspect of the main Secretariat facade is the fact that there are no entrances on it, only exits [unless you count the *passerelle* entrances, which are internal]. The primary entrance to the Secretariat is beneath this block from the north end. All the



The Four Types
from Oeuvre Complete, Vol I

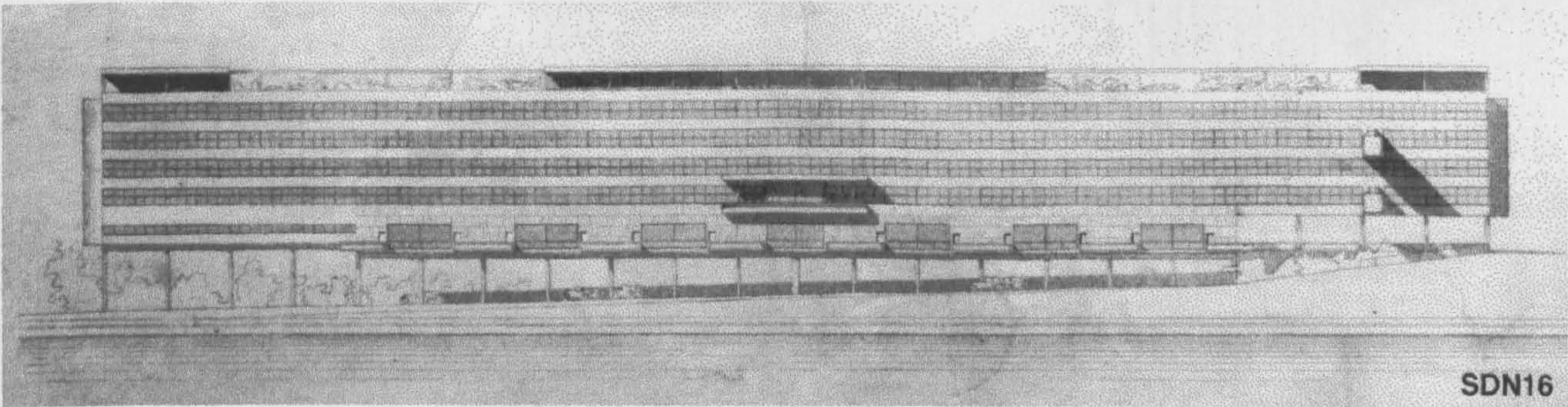
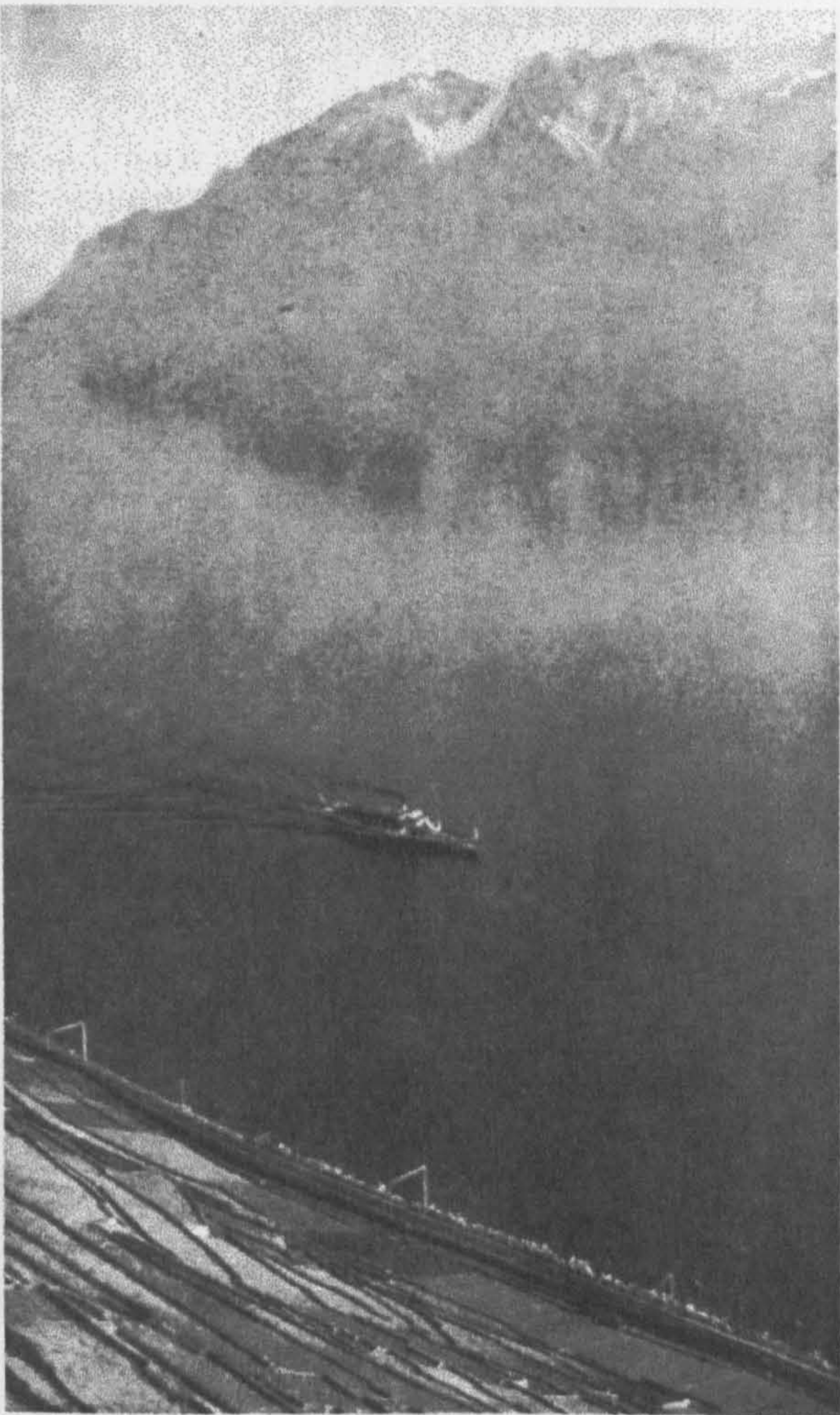
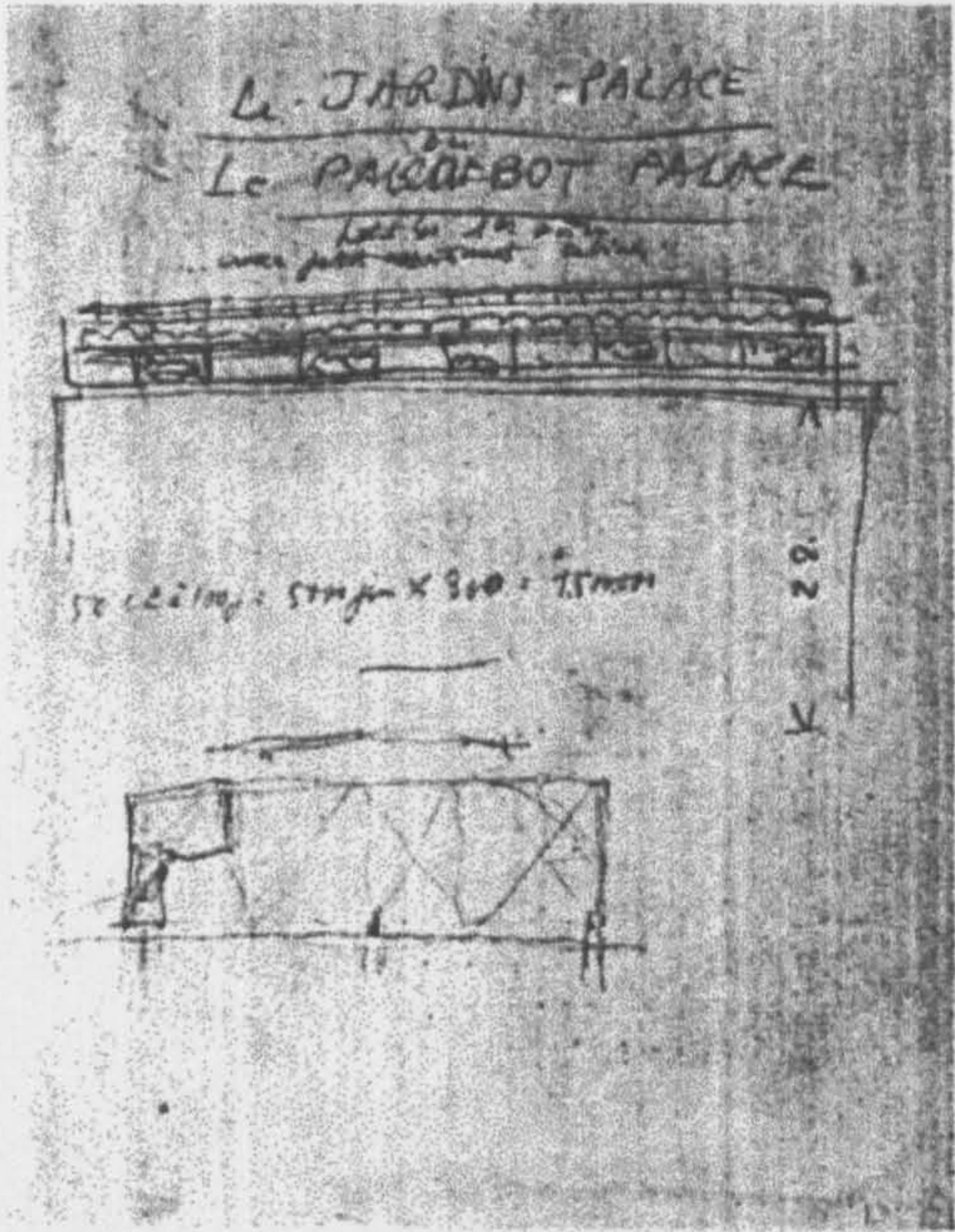


doors on the lakeside facade, thirteen, excluding those at roof level, which are behind the facade plane, are exits, that is, one steps through these doors from the interior to occupy the balconies and roof gardens. All of these doors are on the block of Commissions Halls added at 'zero datum' level, and not on the main plane of the facade. If we return to Le Corbusier's diagram of Garches and the Secretariat [fig. 33] it is clear that what he designates the facade is the plane of the *fenêtre en longueur* alone, a vertical, frontal ground on which the compositional game is played out. From this diagram, we see that facade events may take place in front of this plane, or behind it.. it may be pierced...or explored by stairs... In the event, the Secretariat facade is a facade of windows, of eyes: a facade that looks outwards. It does not offer entrance, and it does not offer the possibility of literally exploring the landscape: there is no garden stair. Even the pilotis are arranged so that any expectation of passing centrally beneath the block is thwarted: an elongated central column displaces the traffic to either side⁷⁸[fig. 42 B]. Perhaps this is a consequence of the secondary place of this building in the symbolic hierarchy of the League: if there is a facade element here equivalent to the garden stair at Garches, it is the *passerelle*-bridge leading into the Assembly building. But although the lower bridge arrives on piano nobile level of the Assembly entrance hall, it empties into the lobby of the Commissions Halls, rather than into the main space, while at the Secretariat end, it leaves without ceremony from the first level of offices in the building. There is no formal lakeside access from the Assembly Hall either [although, as we saw, it must have been considered] instead there are extensive roof gardens and terraces. Interpreting this in the light of Le Corbusier's *Thèse* we can read the roof garden as opposing the wild, natural landscape which surrounds it: man opposes nature, or, imposes order on the chaos of nature. So the civilised men of the Assembly inhabit ordered gardens; at the same time, the conjunction of the Palace of Nations and its extraordinary natural surroundings achieves one of those 'dazzling syntheses' illustrated in the *Thèse* by the picture of the steamship on Lac Lemman⁷⁹ [fig. 42 A].

The lakeside facade of the Secretariat is not the only example of an outward looking facade in Le Corbusier's work at that time. The double house at the Weissenhofsiedlung, completed in August 1927, has a similar aspect: the same linearity, achieved by the conjunction of the strip window and the framed slot of the roof terrace, and the same suggestion of a central axis of symmetry, here achieved by a protruding fin which divides the facade into two, rather than drawing the two halves together. The fin, together with the long window, recessed ground floor and the roof terrace slot, contributes to the strong directional gaze of the facade; the Weissenhof houses are entered from below and the facade

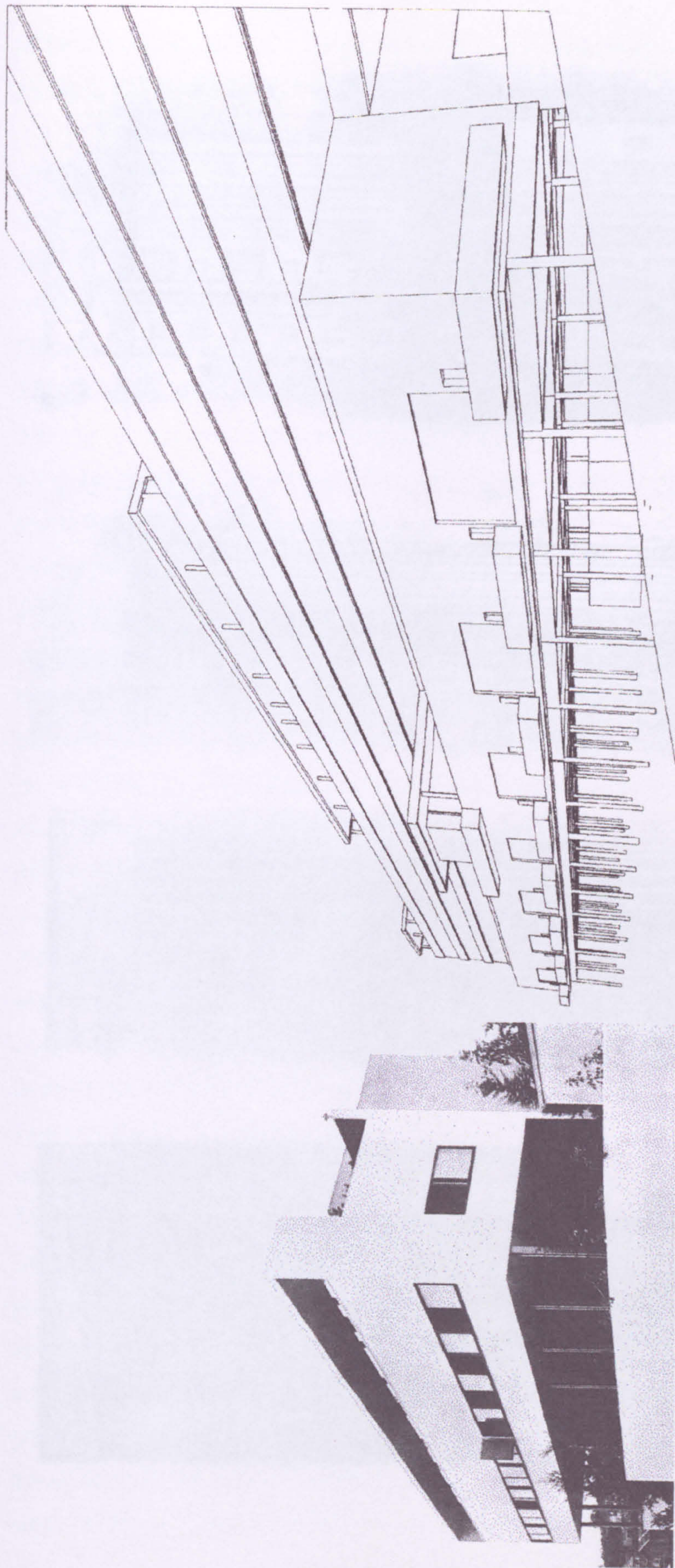
Steamship on Lac Lemman
Une Maison, p27

From FLC23.414, one of several sketches
fixed to a single sheet. The remaining
sketches are drawings for the 2nd
Palace of Nations project [Parc Ariana]
but I suspect this sketch has been
misidentified, and relates to studies for
the Cite de Refuge, 1929.
[Note double height roof structures].
See also fig.27E.

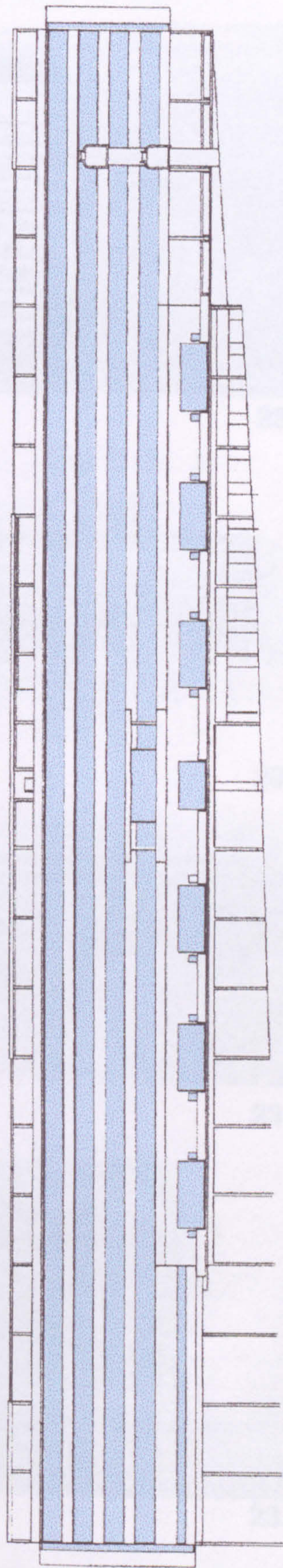


SDN16

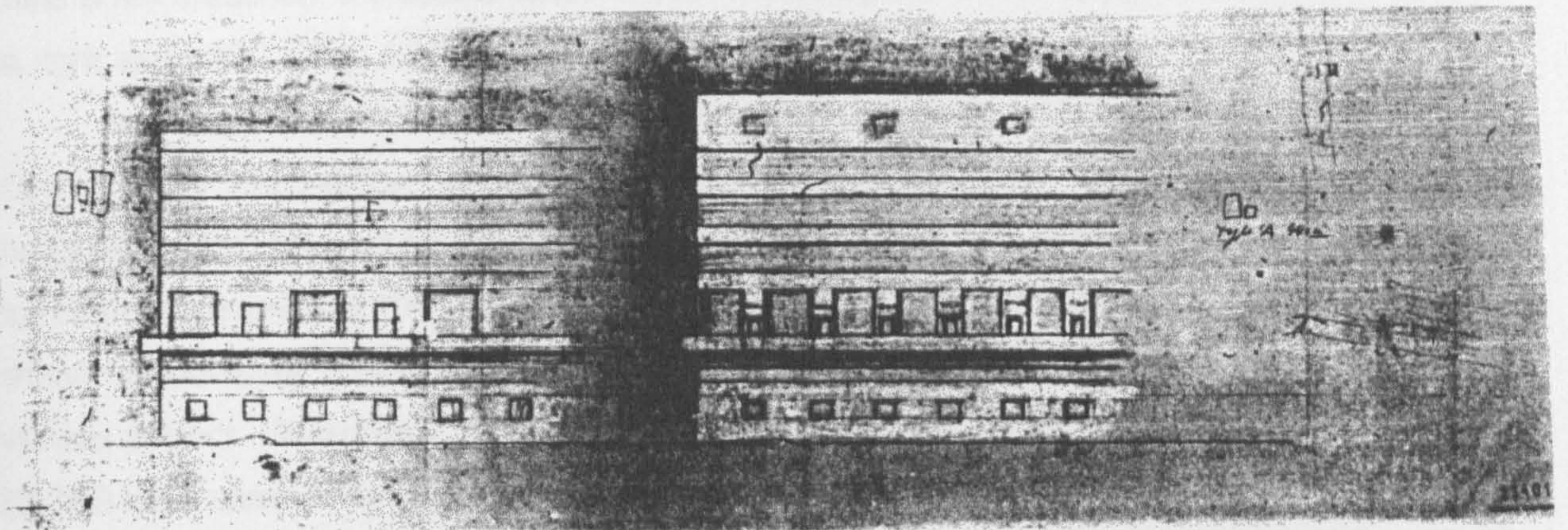
The Liner Metaphor



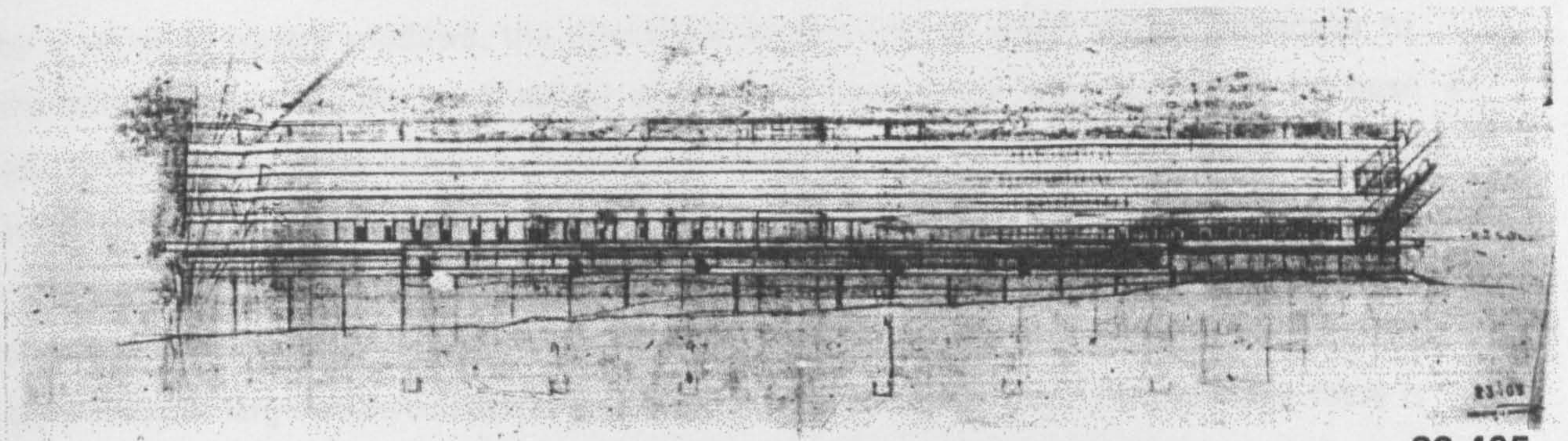
Weissenhofsiedlung 1927
The double house



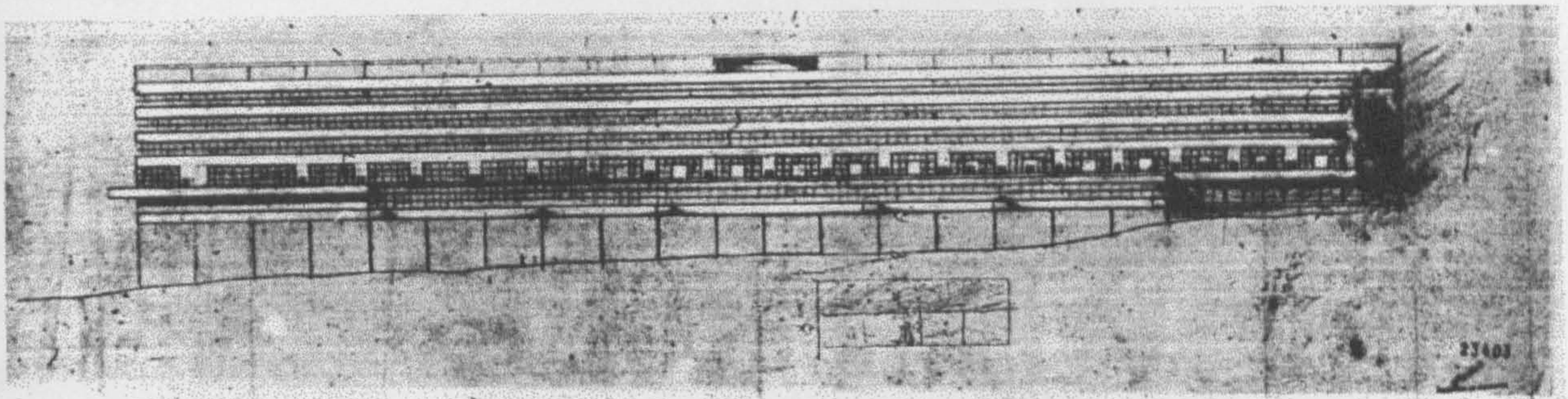
Secretariat: Lakeside facade
The outward-looking facade



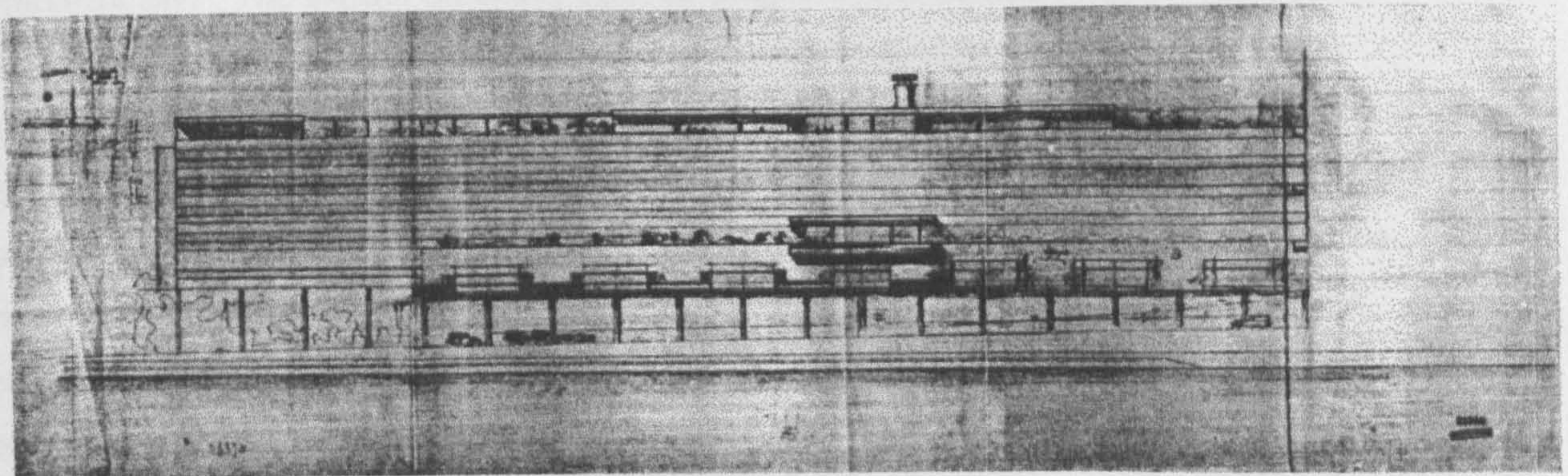
23.401



23.405



23.403

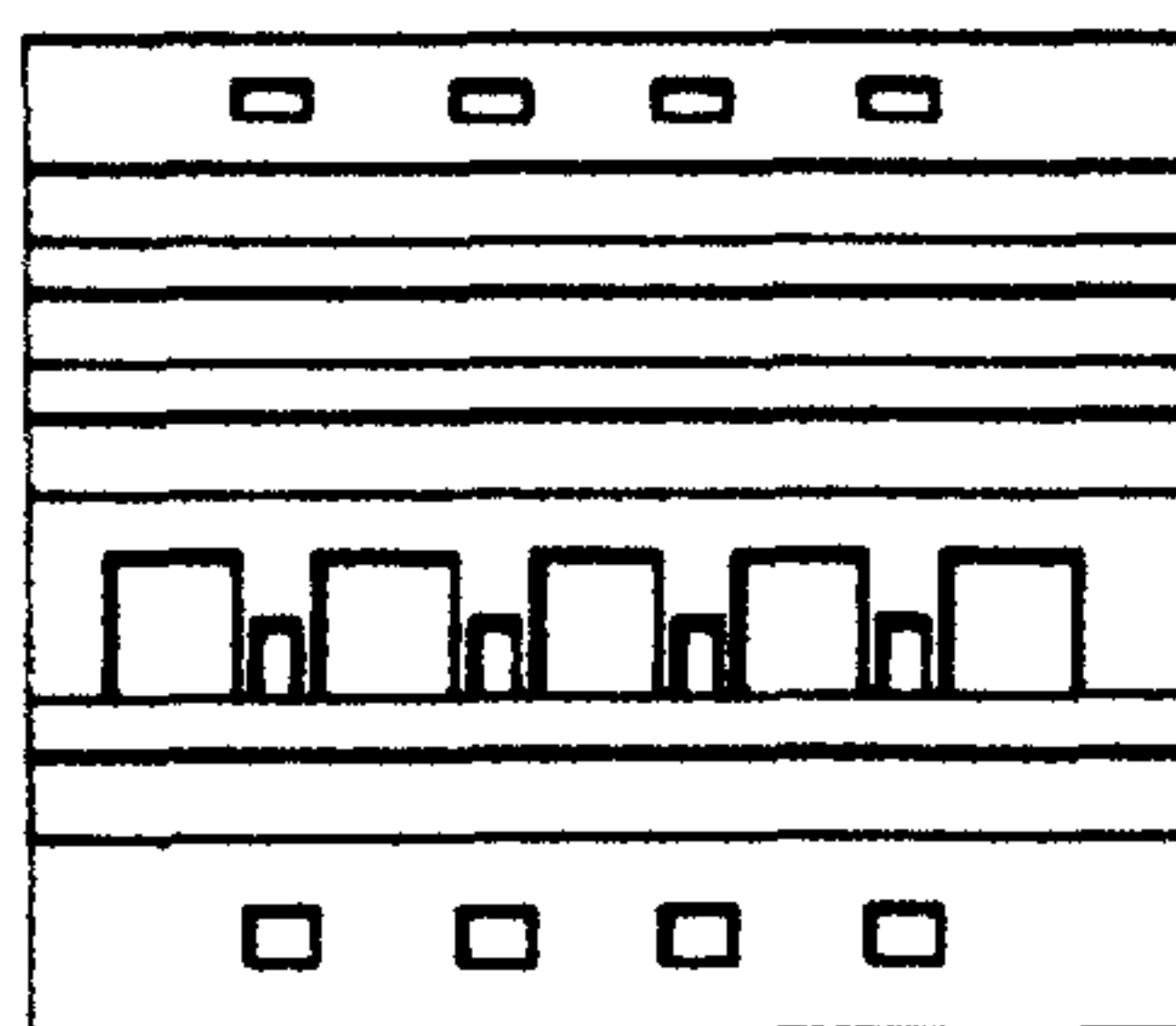


23.388

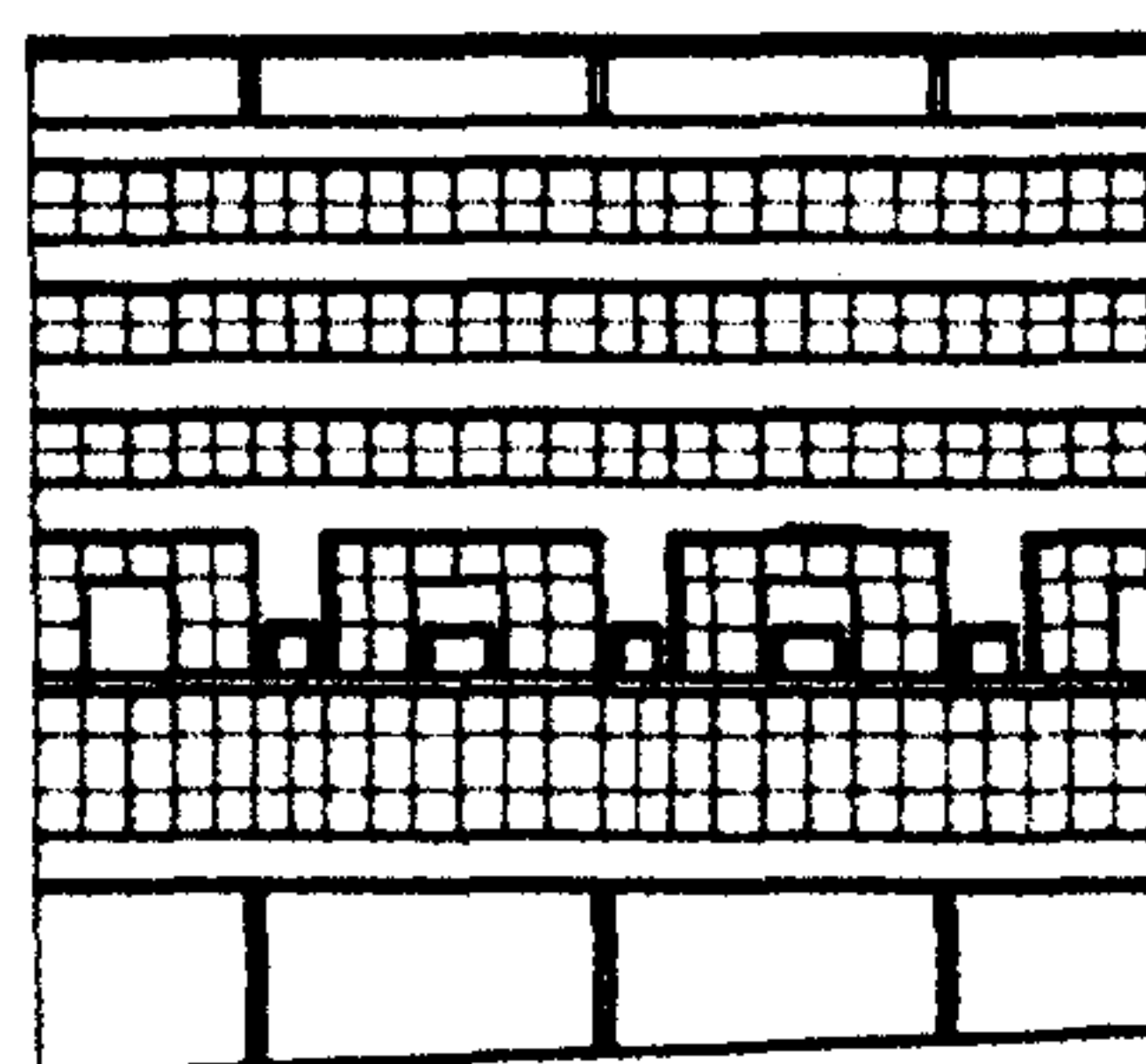
figure 43

plane is not breached; the access doors to the recessed ground floor spaces are tucked away to right and left⁸⁰. [fig. 4 2 B]

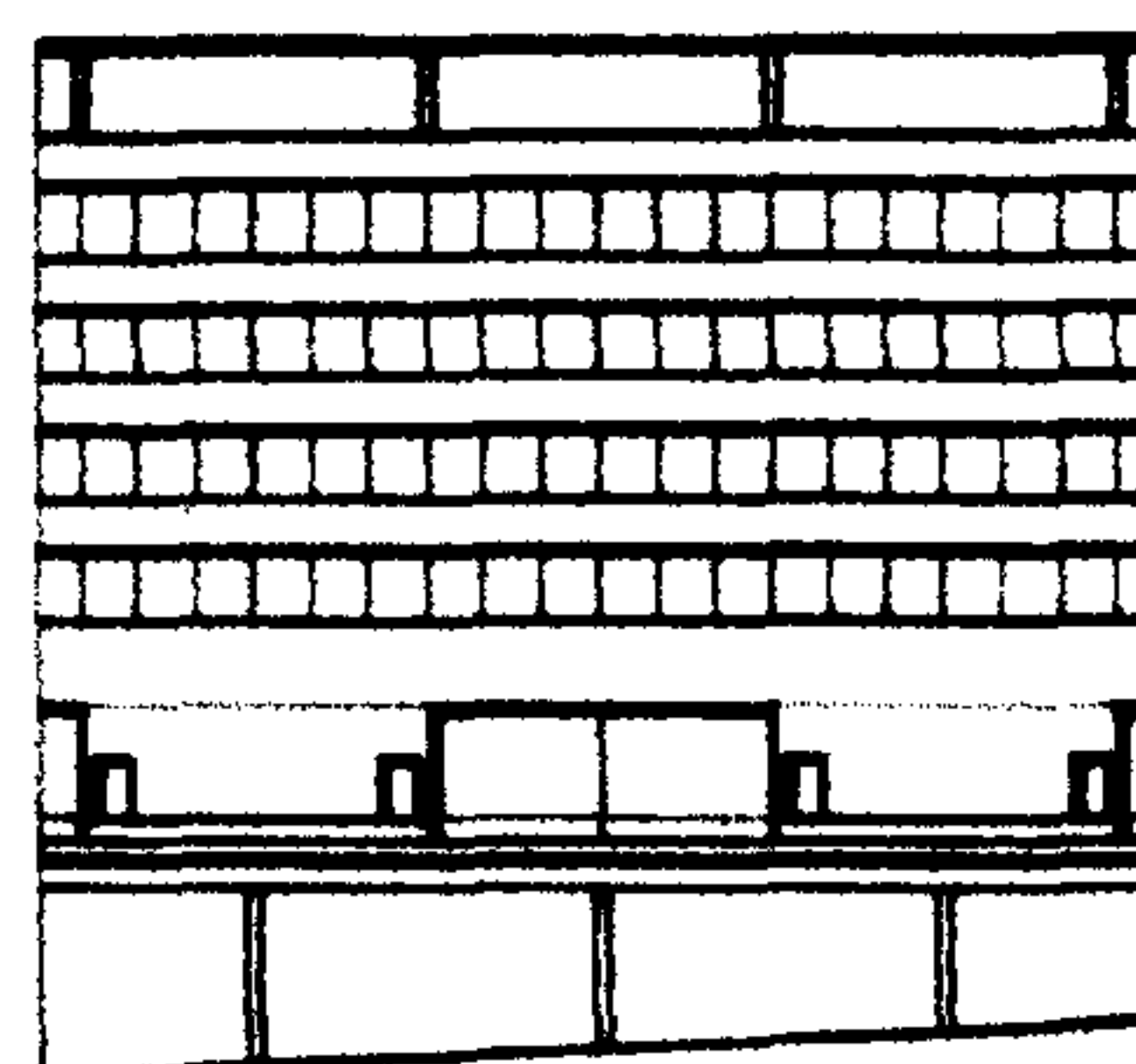
Relatively few studies for the Secretariat facades exist; in fact Le Corbusier claimed in his 1929 piece, *In Defense of Architecture*, directed at Karel Teige, that he designed the two facades for the Palace of Nations in three hours, at the very end of the competition period, and that they emerged naturally from the plans and sections⁸¹. This remark supports my contention that there are only two significant facades in the Palace of Nations project. Sketches 23.401 [2 studies], 23.403, and the 14th November sketch 23.260 show some of Le Corbusier's thinking on the Secretariat facade [fig. 43]. In 23.401, of unknown date, both drawings show the Secretariat block on a solid base pierced by a series of square windows, the directional implications of which are perpendicular to the ribbon windows on the levels above; space flows through the holes punched in the base as it would through the ranks of pilotis which replaced the base in drawing 23.403, but the effect is more traditional, and here the new means - reinforced concrete - is not overtly expressed. Both these drawings show the classical threefold division of the building into base, piano nobile, and upper [attic] floors, and the piano nobile level shows a rhythmical alternation of large and small openings behind a continuous balcony. At this stage there is no indication that the small Commissions Halls located behind these openings, would eventually stand proud of the facade plane. Sketch 23.403 shows the offices below these halls in the previous sketch [which may be inferred by the use of the long window] gaining in importance: the strip window becomes a full height glass screen. These differentiated offices must be those of the Secretary General and his personal staff: in the final scheme their location is exchanged with that of the Commissions Halls, and their relative importance is indicated by means of symmetry - a central glass pavilion for the Secretary General, and private roof terraces formed above the halls, which now extend out symmetrically. The sketch on sheet 23.260 [fig. 45] shows this outward extension - although here the significant offices [enlarged lakeside windows] are still below the Commissions halls, and it is the halls which gain hanging gardens. Devanthery & Lamunière have proposed a developmental sequence based on drawings 23.401 and 23.403 but omitting 23.260, and I reproduce their diagram here for its clarity [fig. 44]. The arrangement of openings moves from simple alternation through a rather busy ABABA scheme to the rather subtler pattern of the final project, where the openings form ABA groups of door - great window - door separated by blank portions of the facade. Elegantly, the solid walls between the grand windows containing the flanking doors are exactly the same width as those windows; this measured, rhythmical repetition knits the elements



A



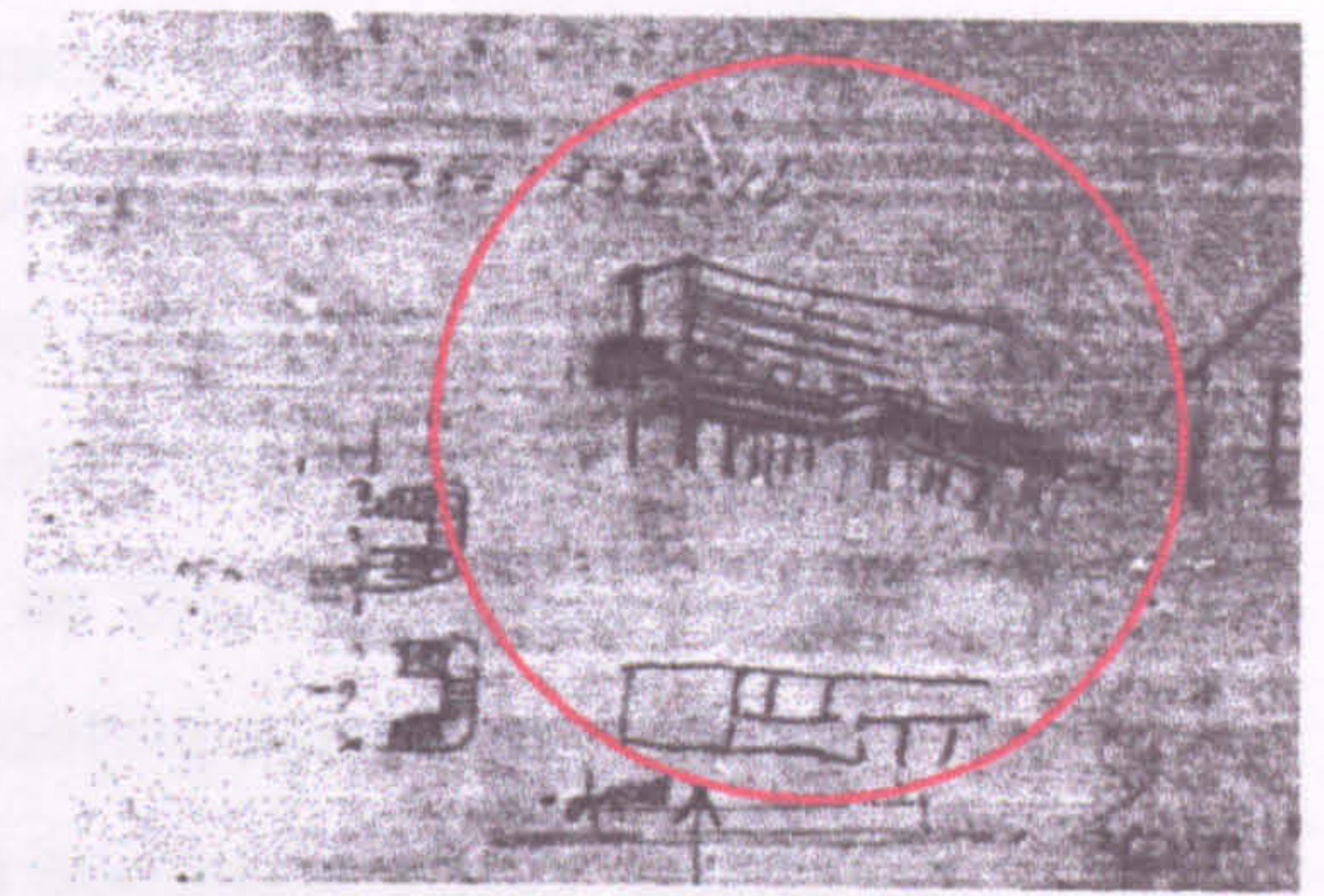
B



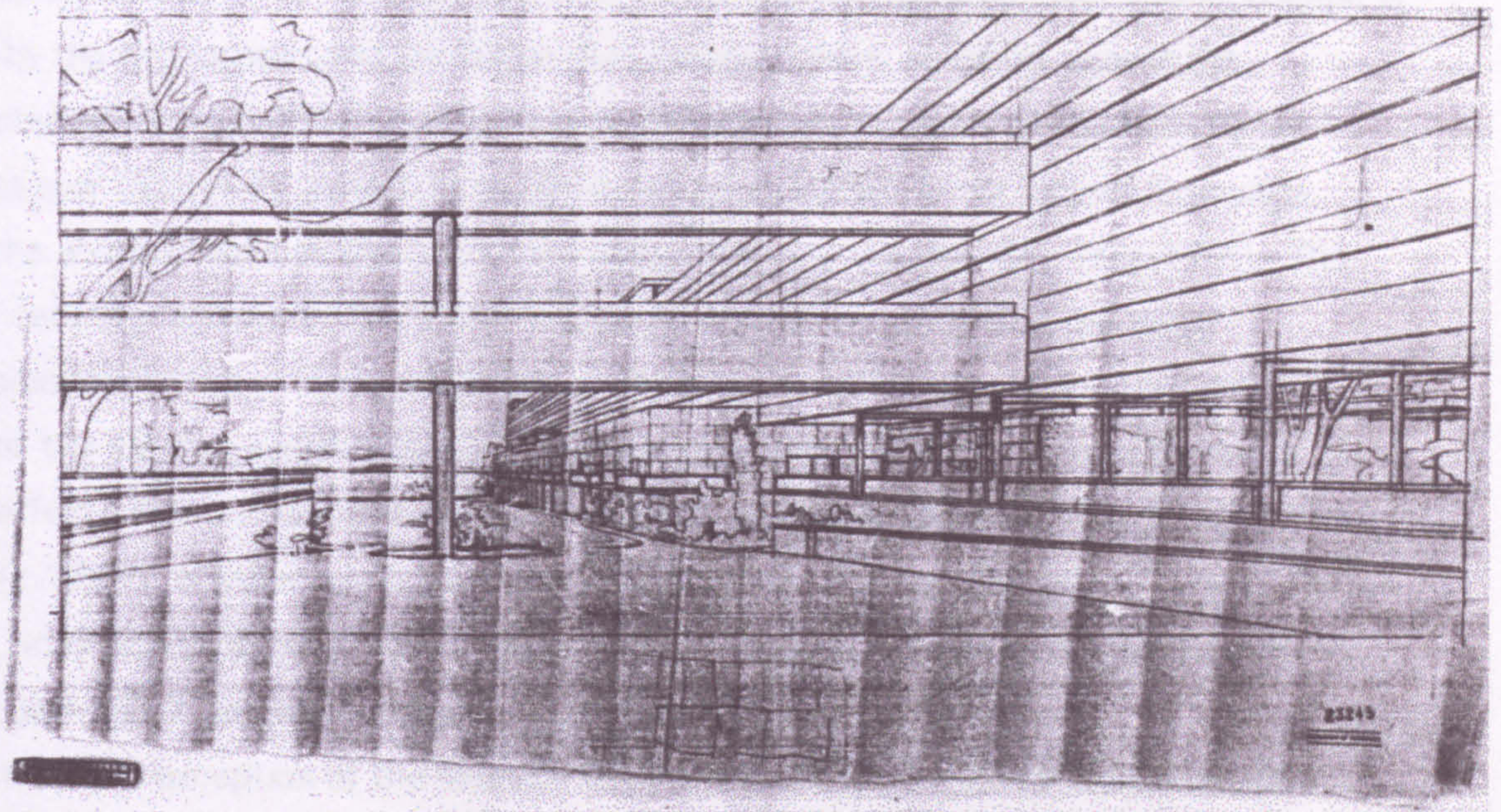
C

*Schéma de l'évolution de la façade
«lac» du Secrétariat: A. d'après le cro-
quis FLC 23.401, B. d'après le croquis
FLC 23.403, C. d'après la solution
finale (les auteurs).*

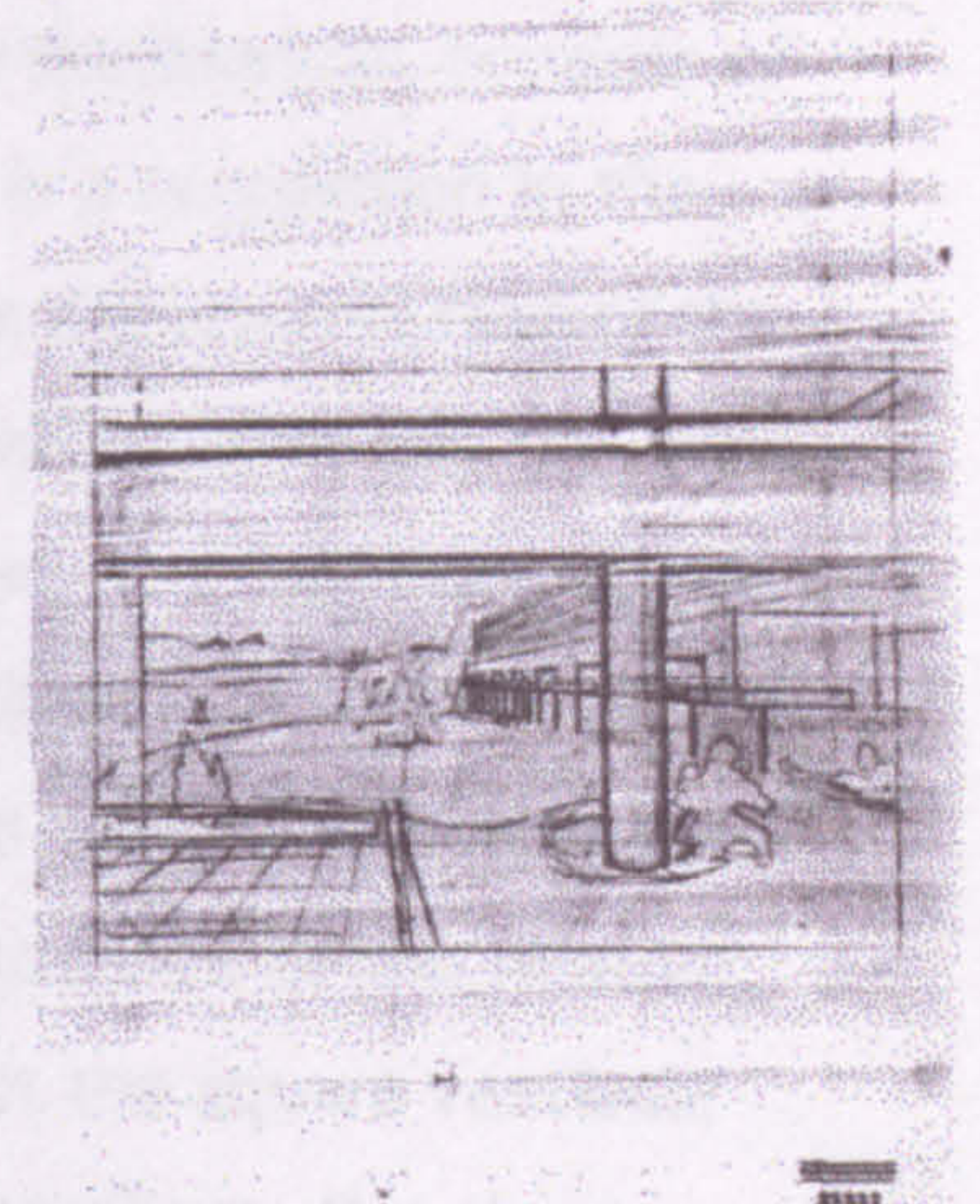
**From Devanthery and Lamuniere:
'S.D.N. Un Palais Moderne?'**



Part of 23.260



23.245



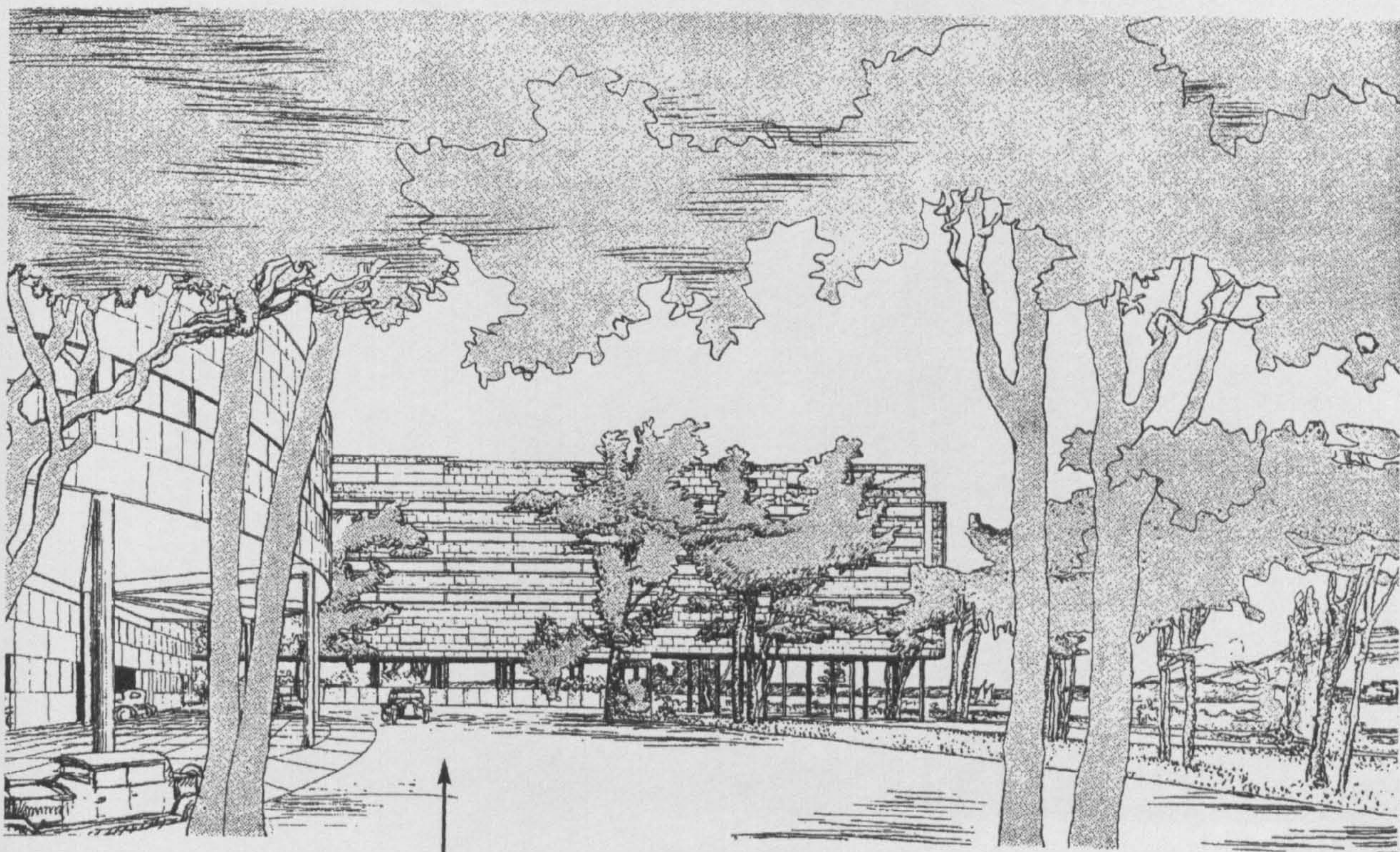
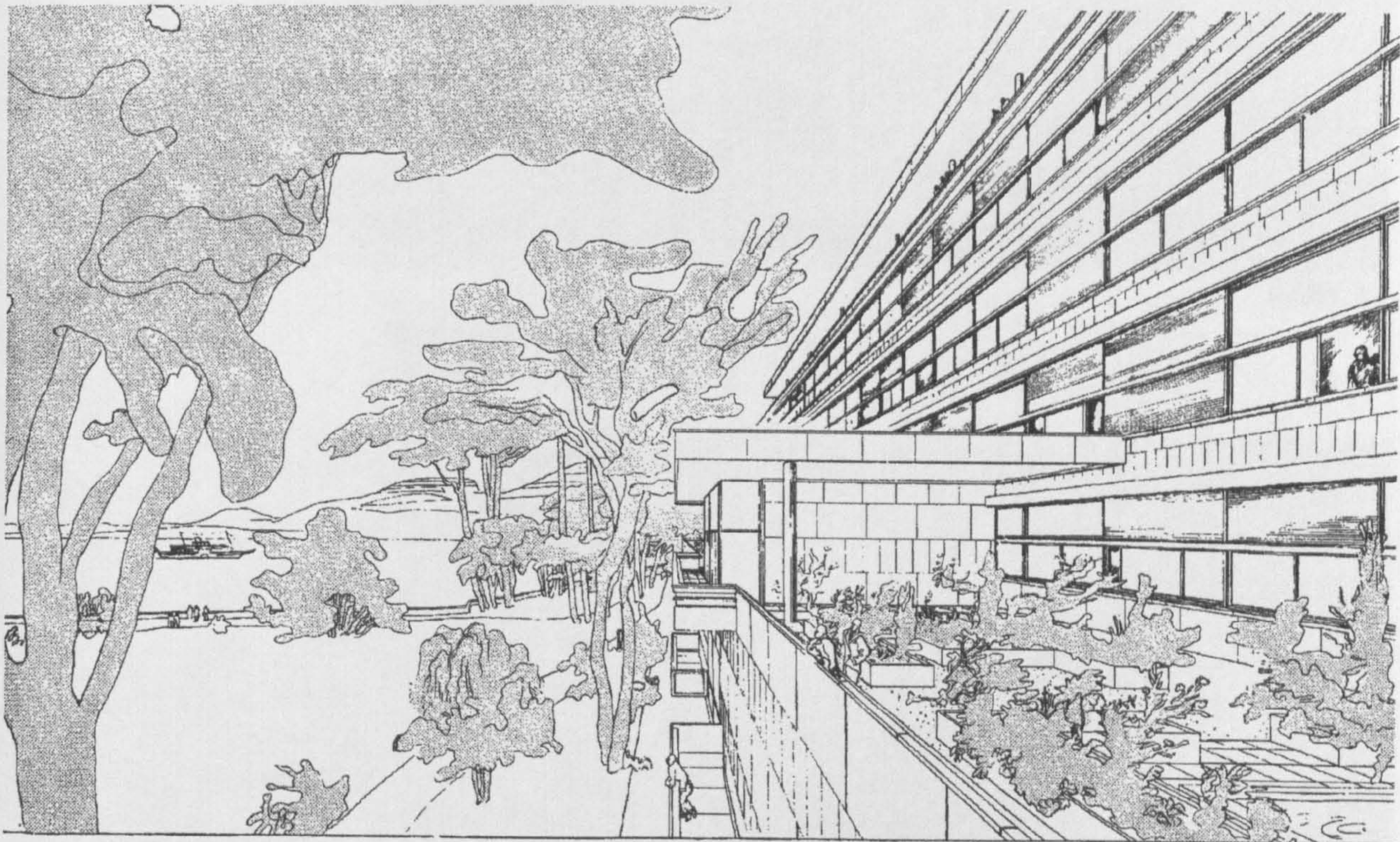
23.331

The view towards Geneva

together.

Sketch 23.260 also shows, as Devanthéry & Lamunière observed, a centralised element added to the south end of the Secretariat block, which they interpret as a 'tribune'; a centralised, pulpit-like balcony facing Geneva. In the final scheme this element, which would have strengthened the somewhat weak axis of entrance, vanishes; it is replaced by one of the paired, semi-circular stairs which are proposed as the solution to the problem of vertical connection in this very long office block. The fleeting appearance of this 'tribune' placed in the best possible position to take in the southerly vistas, points to Le Corbusier's interest in these spectacular views towards Geneva; later this landscape is framed by the two facades and the bridge that connects them, as can be seen in the perspective sketch 23.331 [fig. 45]; it appears beyond the pilotis of the Secretariat entrance quai [SDN 14], as well as in the drawings published in the *Oeuvre Complète* where the striped flanks of the Salève are recognisable in the distance. [fig. 46A]. The tribune centrally applied to the planar facade is a small instance of a recurring compositional strategy in Le Corbusier's work: that of adding simple platonic elements axially to the existing assemblage and thus, by symmetry and repetition, achieving a formal effect. This can be seen in sketches dating back to his days at L'Eplattenier's art school (c.1905): another example is the project for artists' studios from 1915. *Maison Planiex*, another of the houses more or less contemporary with the Palace of Nations project, provides a domestic example. [fig. 47A]

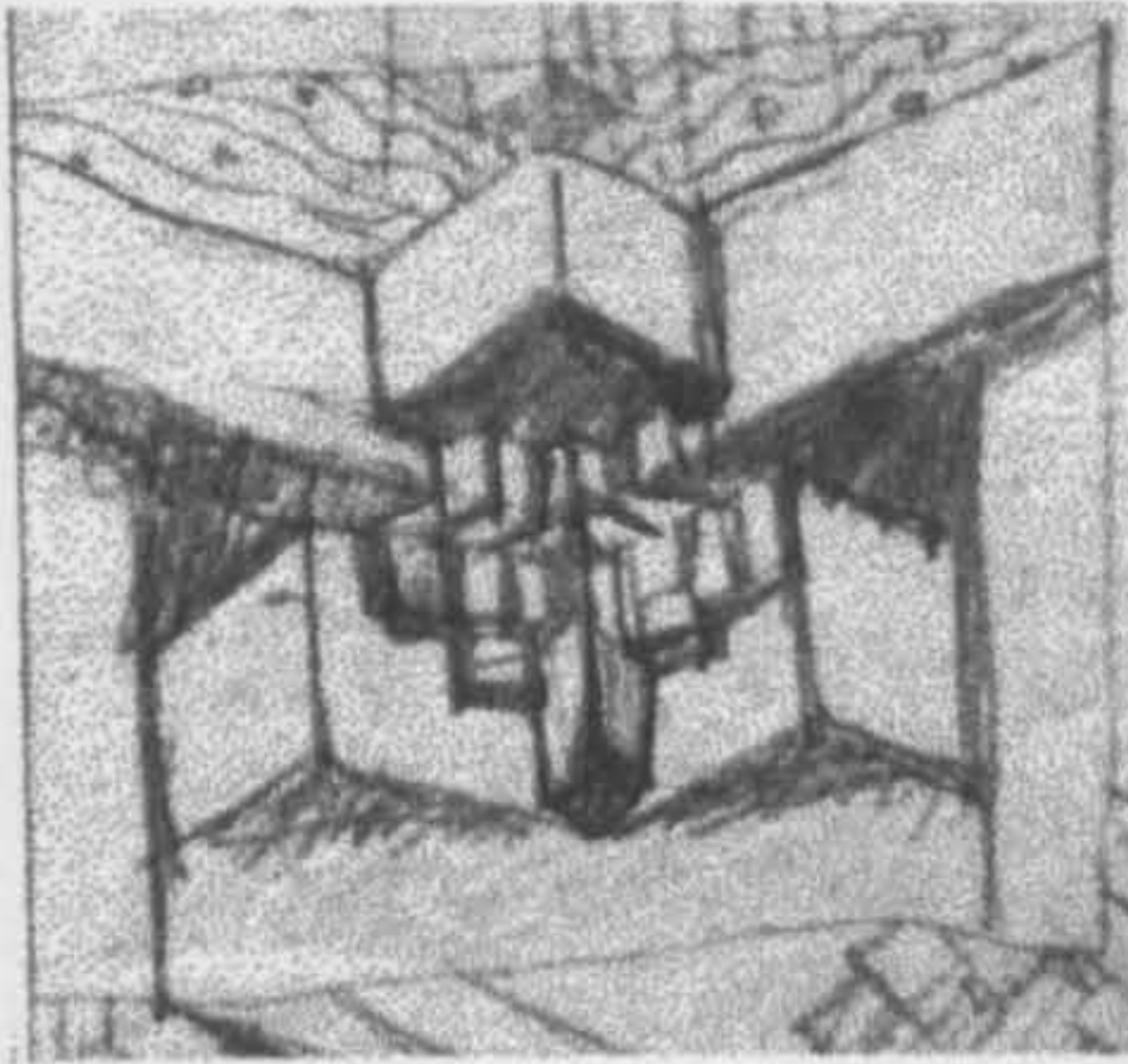
With the exception of the lakeside facade, the external walls of the Secretariat blocks are undifferentiated; the *fenêtre en longueur* rules throughout, appropriately enough, since the accommodation behind them, secondary to that on the lakeside, consists of offices and other service spaces [corridors, postrooms etc]. There is a suggestion in the post-competition, *Oeuvre Complète* perspectives [fig. 46A] that on the obverse face of the lakeside range the long windows to the ground level corridor - which is, after all, the main entrance and vestibule to the Commissions Halls - should be replaced by a series of square, punched-hole openings, which locate the significant spaces behind them - an echo of sketch 23.401 [fig. 43]. One would expect these openings to be centred on the great glass screens which frame the lake in each hall, but this is not the case, as a comparison of the relative positions of the openings and the pilotis on each facade shows: in fact the square vestibule openings would align with some of the internal entrances to these chambers. But these square openings are a post-competition proposal: the competition set shows *fenêtre en longueur* as the rest of the building in SDN 15, and ribbon windows of increased height in the sectional elevation SDN 12, fig. 46B. In fact, the *depth* of the *fenêtre en longueur* is



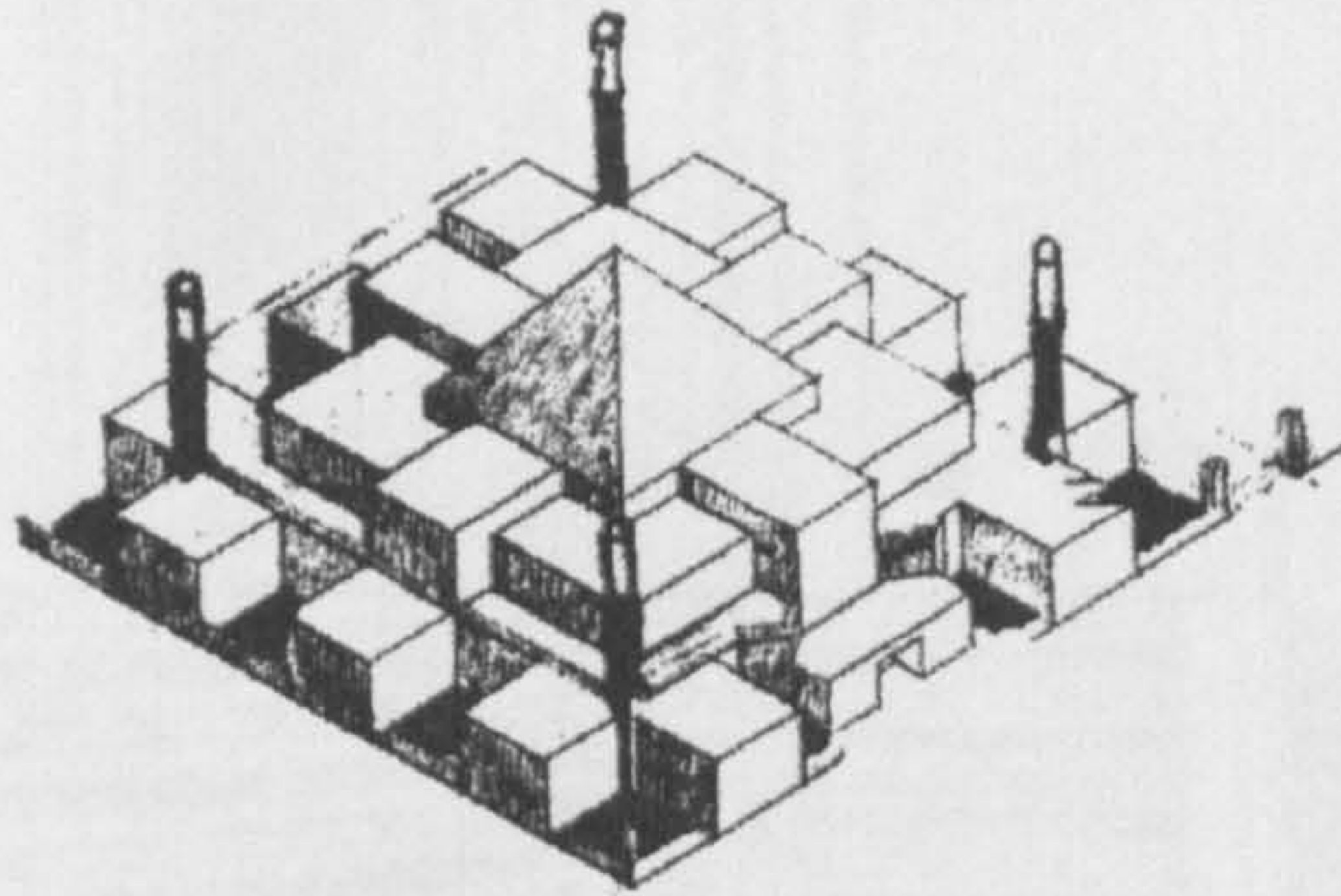
punched-hole windows

Perspective views of the Secretariat
From Oeuvre Complete, vol 1

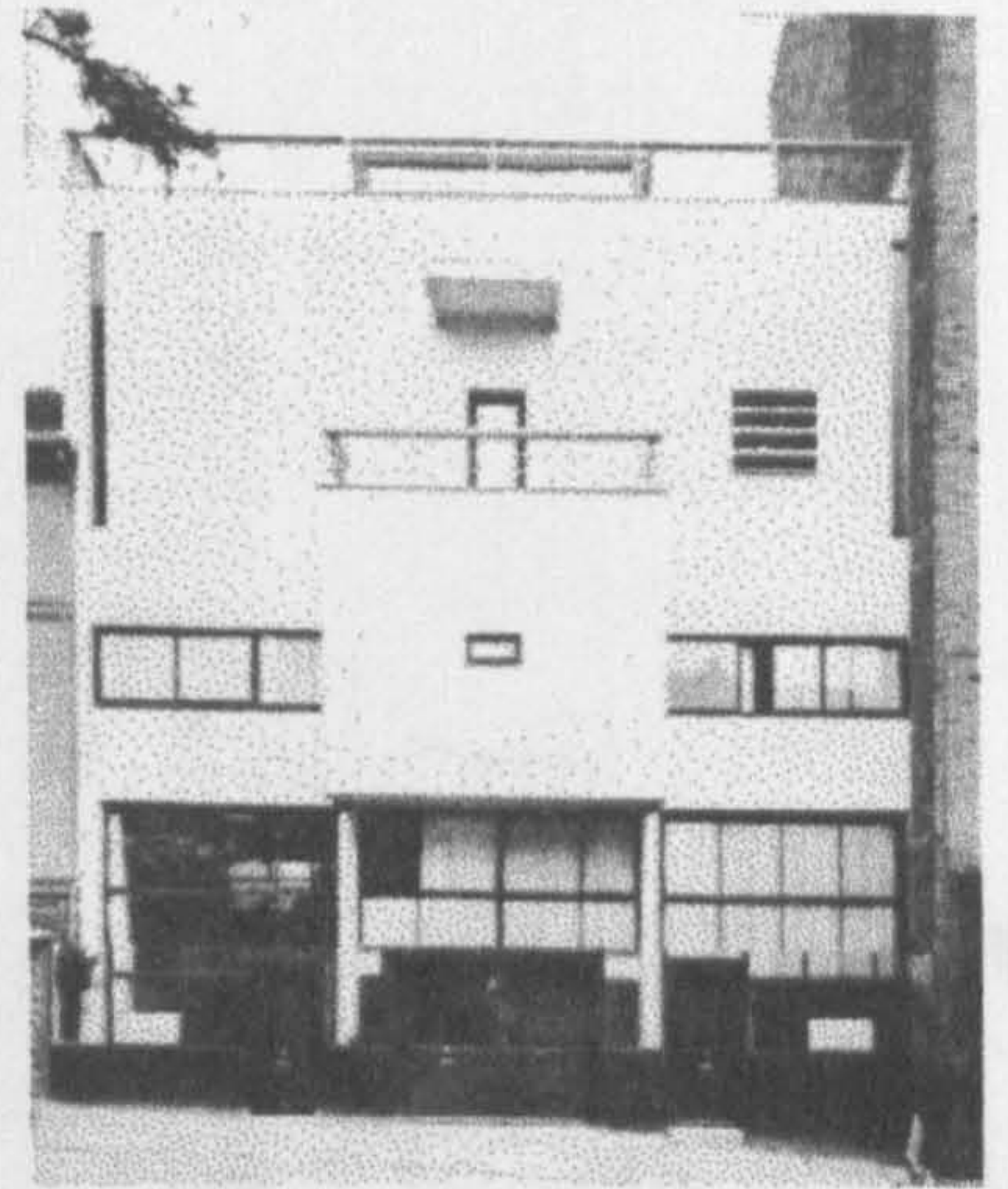
figure 46A



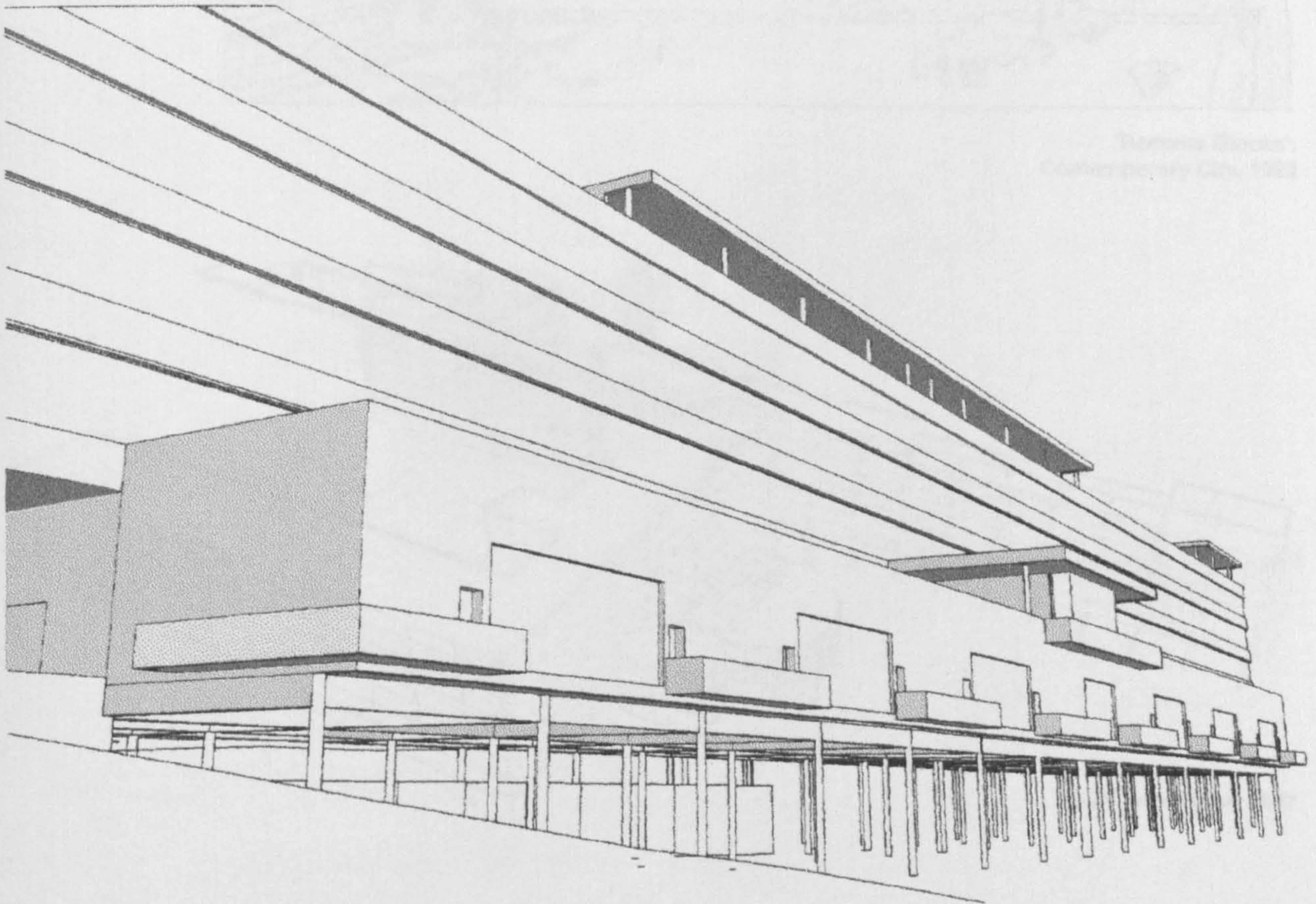
Sketch, c.1905



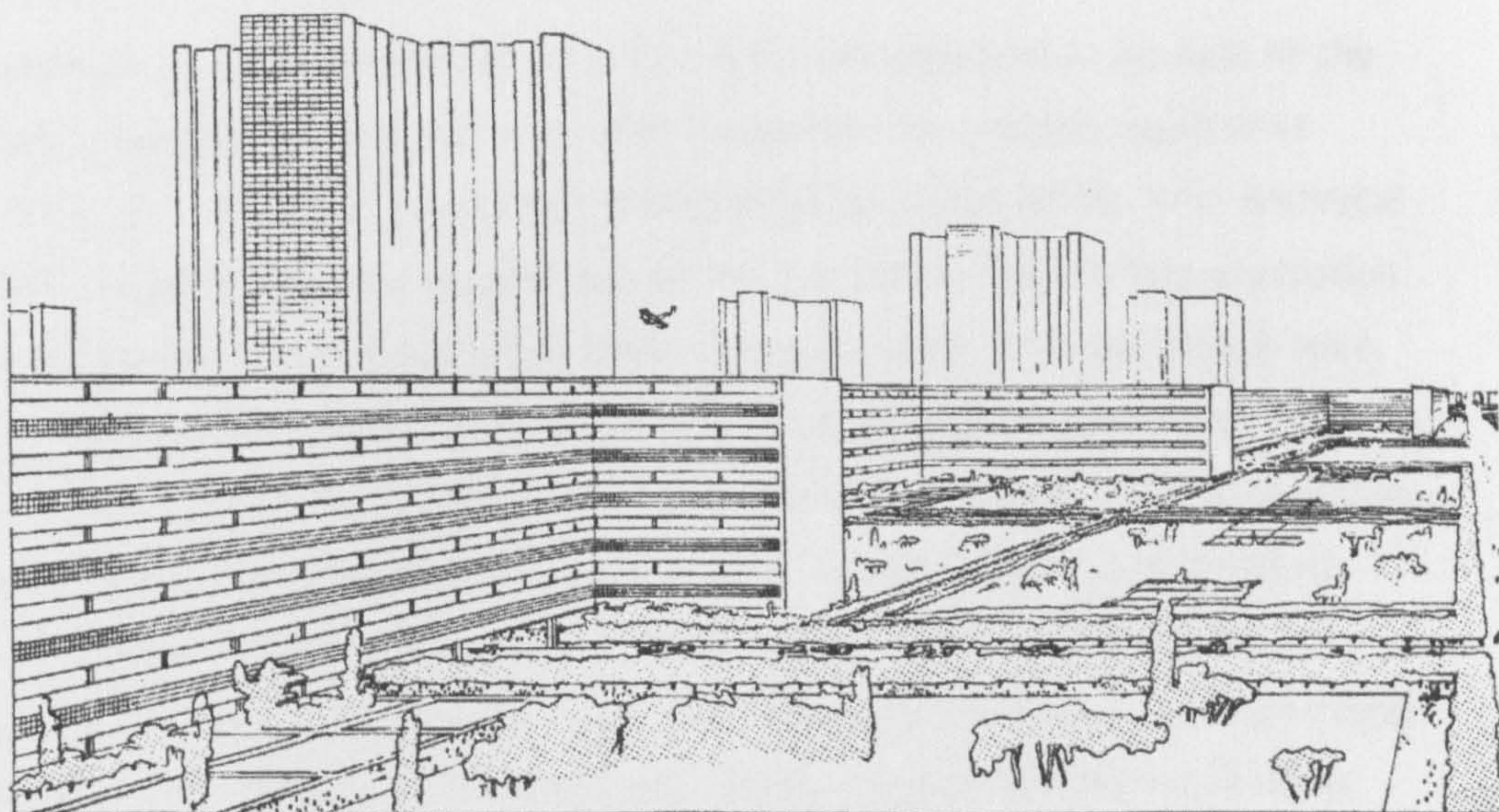
Artists' Studios, 1910



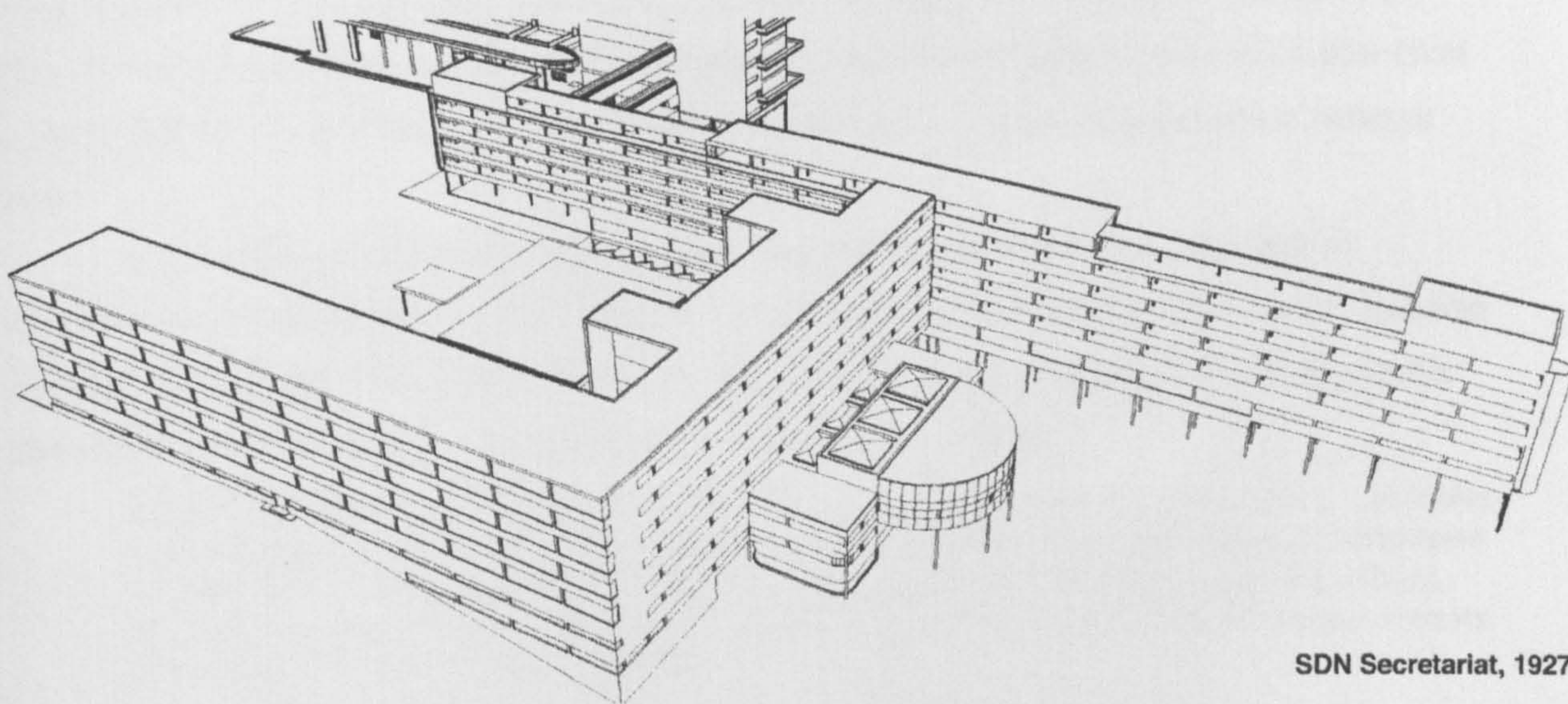
Maison Planiex, 1927



**Compositional Strategies
for the Secretariat:
additive blocks**



**'Redents Blocks':
Contemporary City, 1922**



SDN Secretariat, 1927

**Sources for the form of the Secretariat:
The Contemporary City**

increased: the Commissions Halls have higher ceilings than in the rest of the building, and the smooth integration of halls and offices is achieved by dropping the floor of the Halls to meet the zero datum; thus the ceilings of the halls and the adjacent offices to the south, are aligned [see fig. 4 & 5].

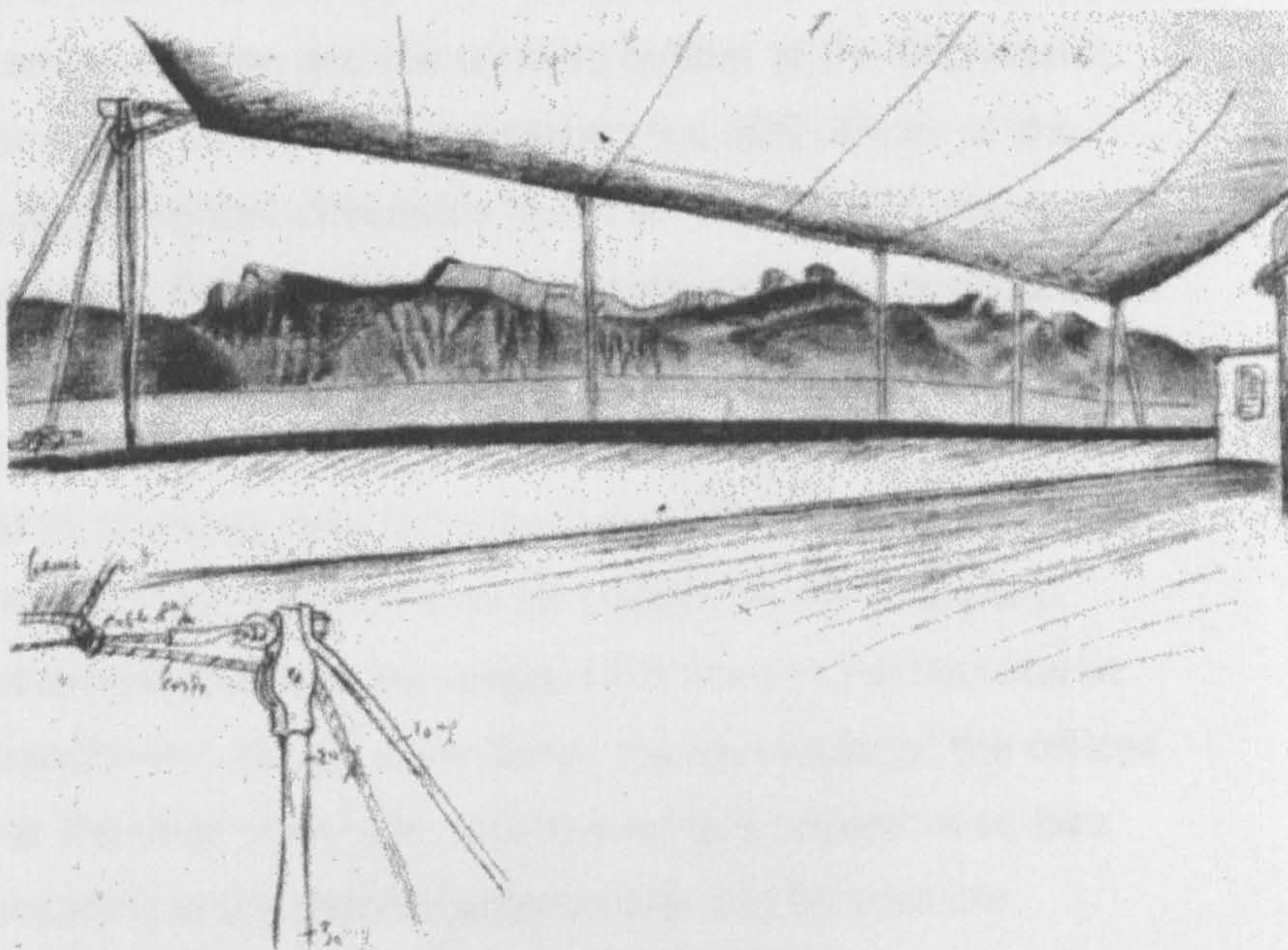
We have noted a uniform distribution of ribbon windows throughout the rest of the Secretariat, but why should the long window be used to denote the uniform, egalitarian office? In the 1920s, Le Corbusier proclaimed it first of all as a sign of the new technical means. Reinforced concrete, the new possibilities of the cantilever, the implied separation of the structural and enclosing functions which makes possible *plan libre* and *facade libre*, all this may be signified by the *fenêtre en longueur*. Le Corbusier used the long window in the earliest of his Purist houses; it appears in the little house at Vaucresson [1922] and in the studio house for the painter Ozenfant of the same year. In both cases it is associated with the secondary domestic spaces. But he had another use for it: the facades of the accommodation blocks of the Contemporary City exhibit the same repetitive striping of long windows seen in 1927 on the lesser faces of the Secretariat. [fig. 47 B] There are other similarities here: the six-storey redents blocks in their [urban] parks are raised on pilotis above the motor circulation, and their meandering plans resemble the disposition of offices seen at La Perle du Lac. The main theme in the *Thèse* in *Une Maison* concerns the transformation of house into palace; at Geneva the apartment house, a textural rather than a focal element in the Contemporary City, is transformed into an administrative *redents* block.

But the long window also has another implication: in *Une Maison*, the idea of *enlightenment* is subsumed in the function of lighting. The men of the Secretariat, likewise the Diplomats at the Assembly, must be bathed in light so that they can see clearly: in his description of the offices in *Une Maison*⁸² Le Corbusier writes

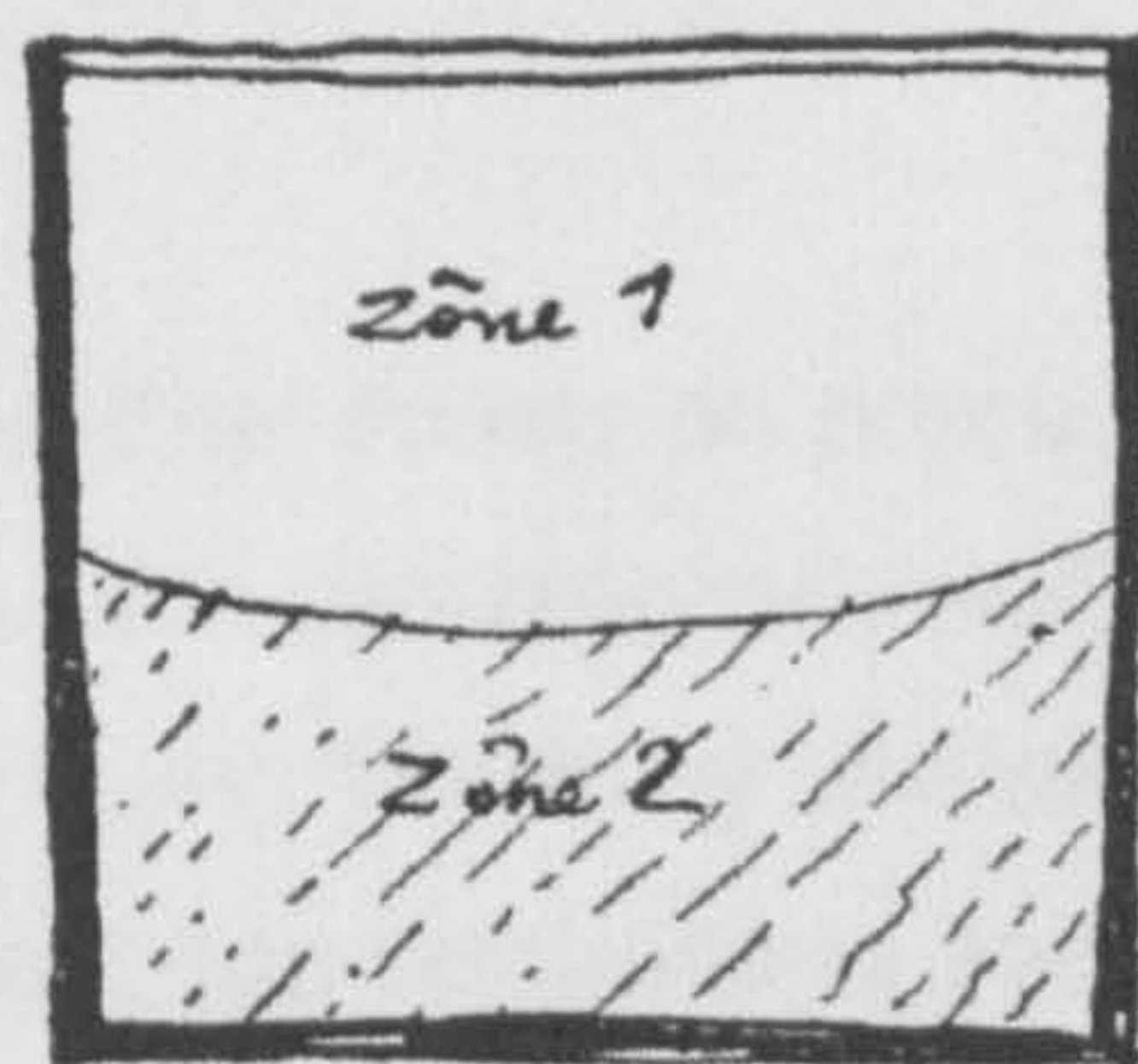
Writing and reading require full light, the rays of a constant and adequate light... only this remains constant: the wall on which the window opens should not have piers, or shadowed corners. The window should rule from the edge of one cross-wall to that of the other... the light must be *constant* and omnipresent; it is everywhere, there are no longer corners of shadow; the whole room is useable.

The choice of the long window is supported by scientific 'proof' - a physician approves the long window as a more efficient giver of light than the traditional vertical window⁸³ - and a visual demonstration that more of the magnificent view will be available through the long window, here the covered deck of one of the *vapeurs* of Lac Lemman sketches a nautical *fenêtre en longueur*. [fig. 48]

Devanthéry & Lamunière posit a relationship between Le Corbusier's *Dom-ino*

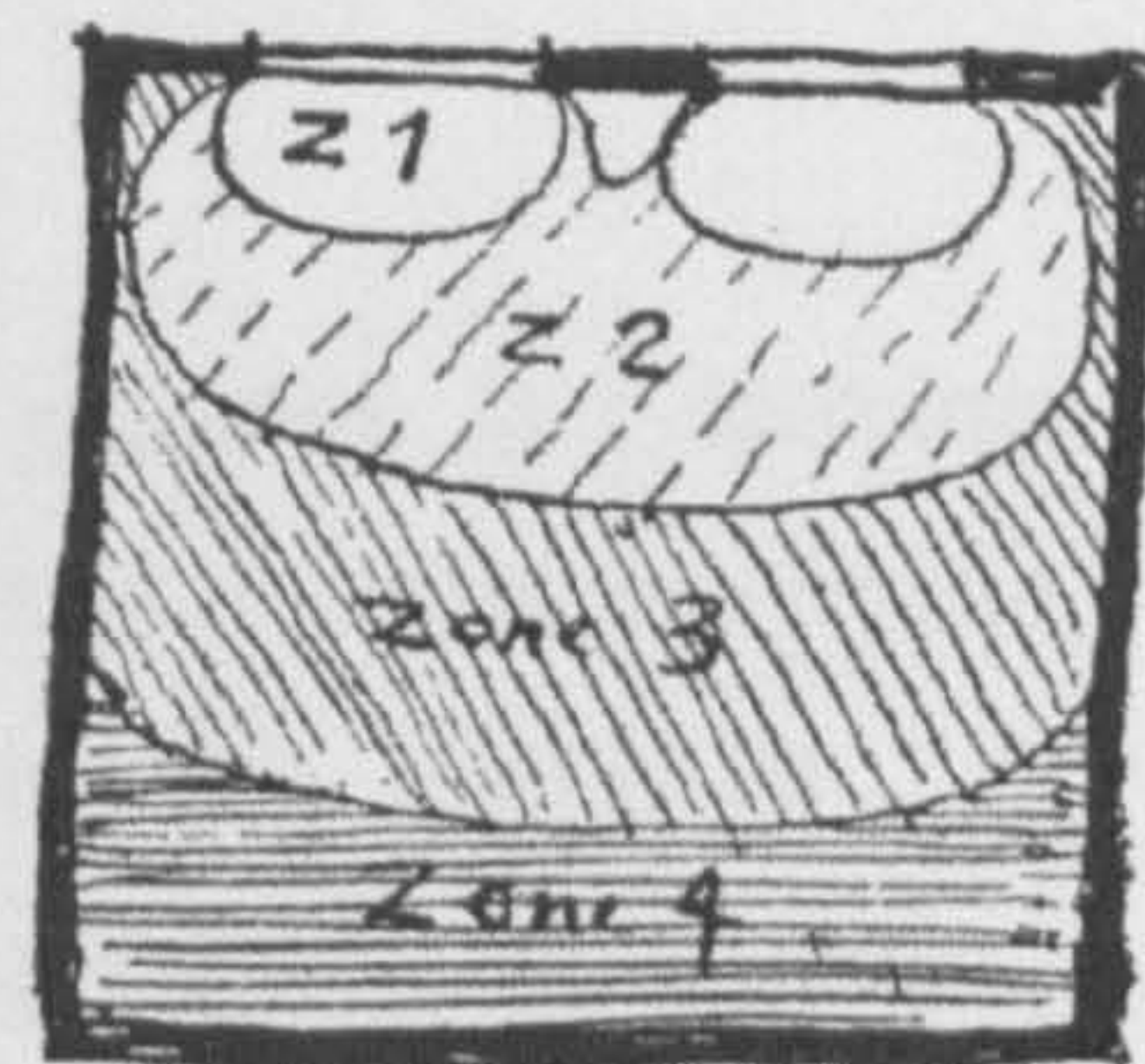


Cette promenade sur l'un des vapeurs du lac Léman nous confirme, au point de vue du spectacle, le principe de la fenêtre en longueur.



Fenêtre « en longueur » contiguë aux murs latéraux.

(Pièce A.)



Fenêtres en « hauteur » classiques.

(Pièce B.)

La surface vitrée est égale dans les deux pièces.

structure, and the organisation of the office floors of the Secretariat. The Dom-ino was conceived around 1914 as a structural solution for mass-produced housing; since it is constituted as a reinforced concrete frame, it exhibits the same potential for the free facade and the same longitudinal extensibility⁸⁴ as the frame structure of the Secretariat. Also the first multiple configurations of Dom-ino that Le Corbusier produced are reminiscent of the redents plans of the contemporary city, and the cranked outline of the Secretariat. Why should the Dom-ino plan not simply be scaled up to contain the 500 offices of the Secretariat? But there is a significant formal difference between the two structures which this theory ignores: the columns in the Dom-ino are *square*, implying their incorporation into internal walls, while those of the Secretariat are *circular*, and may not be so easily banished from the interior spaces. Indeed, the implication that the square column marks out internal divisions is realised in the very first Dom-ino houses⁸⁵; this was, of course, before the formulation of the 'Five Points' with the circular column of the free plan. Devanthéry & Lamunière have observed that only the ranges of offices at the Secretariat facing the lake and the Jura respectively, exhibit *plan libre*; the remainder of the offices are simply cellular. It is true that the floor slabs are cantilevered only along those two edges of the building, and that columns, which then become square, and facades are coincident on the other edges. The arrangement is perhaps not as pure as that of the Dom-ino frame⁸⁶, but here, even when the internal circular columns of the *plan libre* abut walls or straddle them, their identity is not lost [See SDN4-SDN9].

The Roof Garden

The roof garden, justified in the *Five Points* on practical grounds, but carrying symbolic and poetic overtones - of elevation and enlightenment - had become one of the essential indicators of Le Corbusier's Purist house by the mid-1920's, and both Assembly Hall and Secretariat have roof-top restaurants and open-air terraces with formal planting. All the Corbusian houses of c.1927 are thus equipped and some of these have multiple levels: the Villa Stein, for example, has an ovoid observatory on the roof with its own small, spiral stair. Also, and this is evident both at Garches and at Maison Plainex, the exploration of roof spaces may extend vertically to levels below, and may be physical or visual only: at Garches the garden is linked to the roof garden via the sequence of garden stair - terrace - overlooking balcony - hole in roof slab, an observable assemblage of levels. In Maison Plainex, the roof garden proper is reduced to a covered terrace alongside an artist's studio, but it is linked to a raised, terraced garden behind the

house by bridge and stair, and thus an elaborate, exploratory promenade is constructed [fig.49A]. An early scheme for Garches shows a precarious, high-level stair clinging to the outside of the facade, and as we have seen, Le Corbusier considered this possibility for the Assembly Hall entrance facade [fig.37]; he also sketched something similar on the lakeside facade at roof level, a kind of stair-bridge which sets up a dialogue between the [internal] roof garden and the external vista. An alternative expression of this idea, also associated with the main vertical stair, is the balcony applied to the lakeside facade of this stair at the level of the top landing. [fig.28 - 23.398] In the final project the notion is simplified and the wall to the top landing is cut away lakewards like a nautical promenade deck [see SDN17 for lakeside elevation]. Le Corbusier described the roof terraces at Geneva as follows:

All our office levels are regularly superimposed above this datum [*the 'zero datum'*], then we have terminated them on high using an impeccable horizontal, long - very long, the main plank of the composition. We have pursued this horizontal throughout the roof terrace of the great hall. And here we are at this point overhanging sheer to the lake, dominating the entire site in unquestionable majesty. Imagine on this immense terrace, the throngs of the General Assembly of Nations, gathered from the four corners of the earth, coming after the work sessions *simply to see*. *To see* is enough here. Such a belvedere facing such a site exists nowhere else in the world. To see such things predisposes the soul. So it is with the soul of the diplomat.⁸⁷

Perhaps this horizontal emphasis, which, Le Corbusier asserts, mirrors the horizontals of the Jura and of the Salève, explains the choice of a single level for each of the roof gardens of the final project⁸⁸.

The roof gardens of both Secretariat and the Assembly hall buildings are governed by the symmetries of their facades,[see fig.35 & 36] but for all its width, that of the Assembly building is much more constrained: the terraces must be disposed about the structures of the hall which emerge through it. The two great arched trusses rise on either side of the axis of symmetry and divide the roof space longitudinally, as the trussed beams which intersect them divide it laterally, and the plant required for heating and ventilating the hall is housed in a centrally-placed chamber to the west. In addition, five large rooflights occupy a substantial portion of the remaining space. [fig.49B] The trusses shown in the large section SDN18 are visible nowhere: within the hall, they are behind the acoustic ceiling, and on the roofgarden they are boxed in and appear as heavy, pierced walls. The existence of the bridge-like steels is only indicated by the shadowy presence of the diamond-shaped, trussed columns rising between the lateral glass walls of the hall. Why did Le Corbusier, with his passion for the engineering solution, choose not to reveal his technical means here? Certainly the juxtaposition of naked steel trusses with the

restaurant terraces would have posed questions of scale and formality; besides, so technical an intrusion would surely have displeased the most conservative of the competition judges. The roof terraces are directed towards the enveloping landscape and its elevating effects on the men occupying them: revelation of the structural means of the hall might have reduced the roof spaces to a mere adjunct, at the very least, the observers' attention must have been caught by such prominent machinery of support and partially re-directed inwards.

In the same way, the steel frame structure which would have been required for the main lifts in the entrance hall, is omitted from all drawings. [In my reconstruction, I have indicated a nominal lift structure to give some idea of the visual consequences of the technology of the time]. The structural steels required for supporting both building and lift have a nineteenth century feel: a fin de siècle iron frame lurks beneath the white stuff of Modernism. Turner and Chopard, the structural engineers for the project, wrote to Le Corbusier that the reinforced concrete solution required disproportionately large foundations, and that, anyway, there was no time to do anything other than stick with their initial assumptions and calculate the steel frame solution⁸⁹. So this contradiction apparently arises from the cost limitations of the competition brief and a lack of time: had Le Corbusier built the palace it is possible other structural schemes might have been explored, as happened with the Pavillon Suisse. Le Corbusier's desire for a concrete frame solution is betrayed by the small axonometric of the structure in the top left corner of his large section SDN 18 [See 4 9 B], where the members are depicted as if they were concrete, although the main section on the same drawing shows the trussed steel arch. The heavy concrete gutters running across the great glass screens on either side of the hall, which stiffen the lateral facades, but do not appear to be adequately supported by the diamond-shaped columns, also seem to indicate this preference.

The question of the integration of large-scale structure into significant architectural spaces also arises at Centrosoyus and the Palace of the Soviets. The Centrosoyus hall is relatively small, and the structure is entirely of reinforced concrete. Here, two of the massive supporting columns appear internally, flanking the stage, and emerge at roof level transformed into smoke stacks - precursors of the sculptural funnels on the roof of the Marseilles Block. At the Palace of the Soviets, the halls were much larger⁹⁰, and the dramatic structural solution is revealed externally in its entirety. The first project shows curved observation galleries emerging out of the vertical circulation at the rear of both halls, close to the huge structures raised above the swelling roofs, but in the later project they have disappeared, although the upper levels of the library/offices still support the beams of the smaller hall, and this additional level of structural

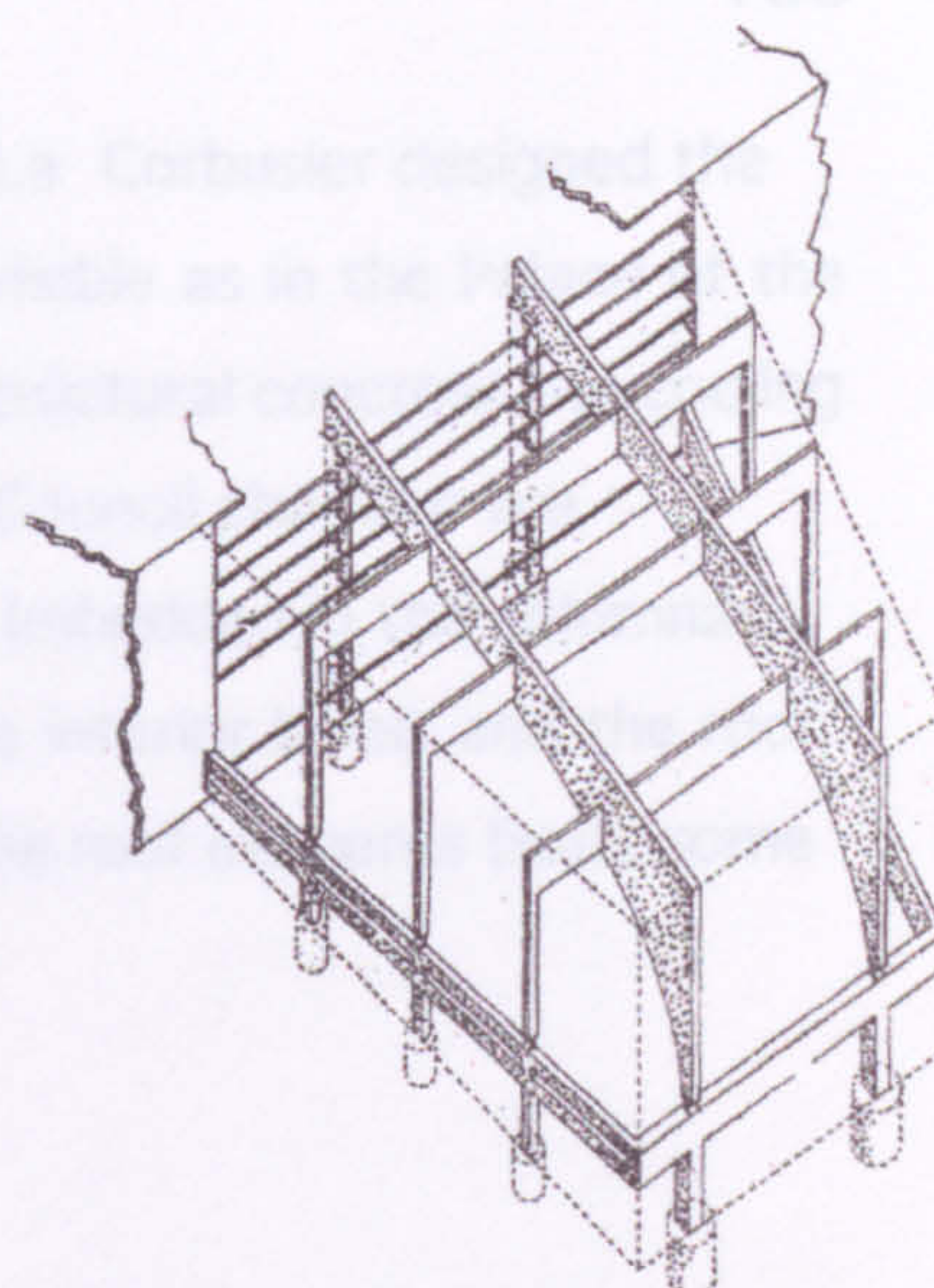
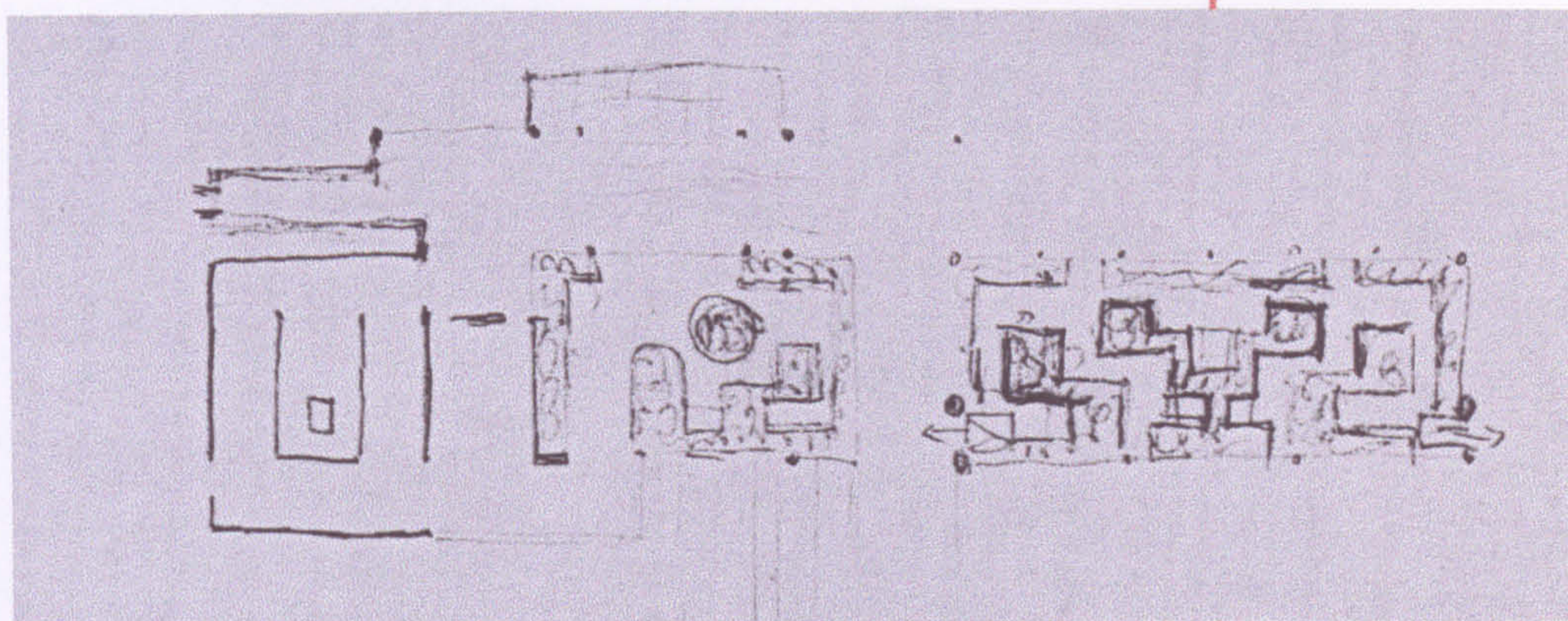
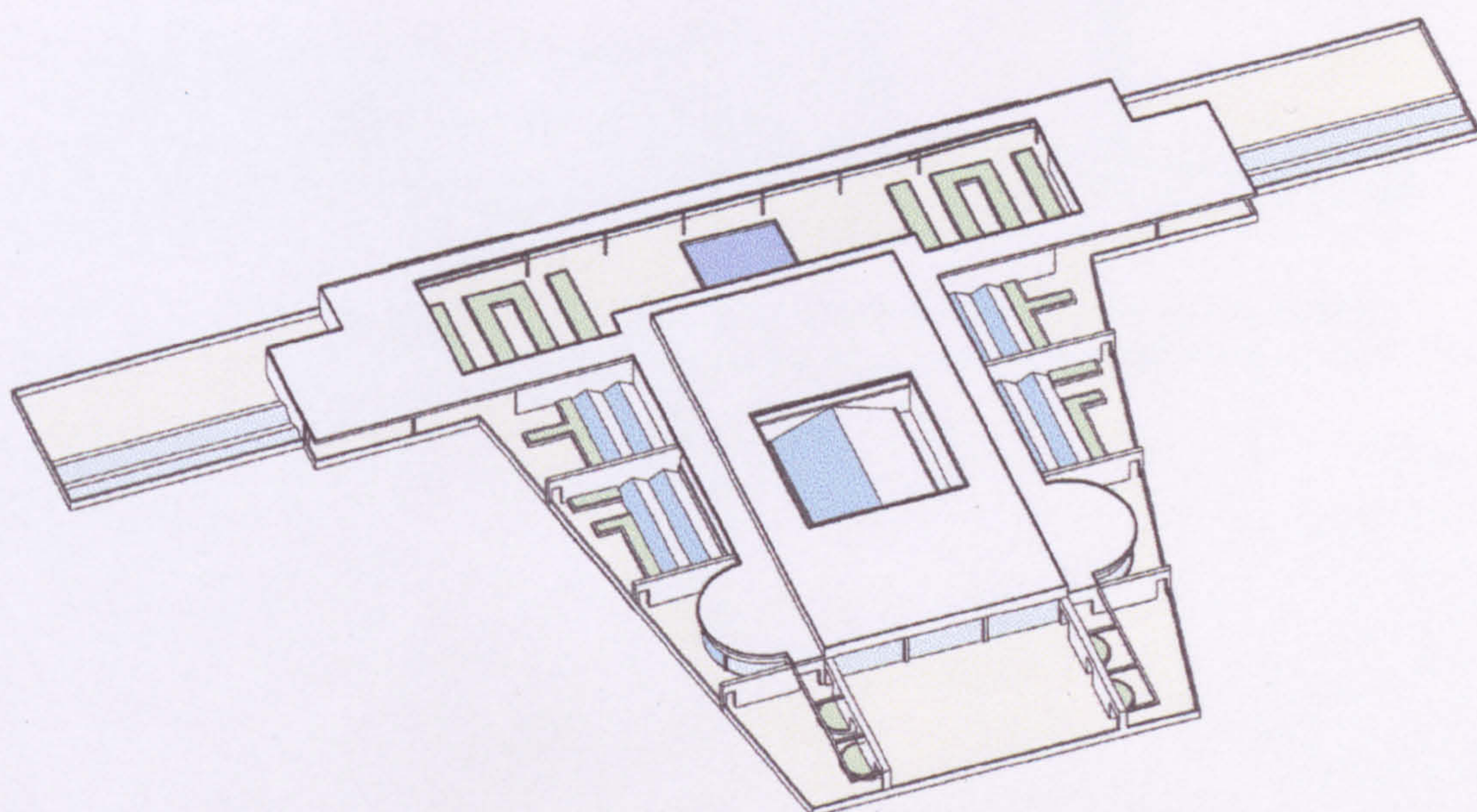


Diagram of Structure from SDN18

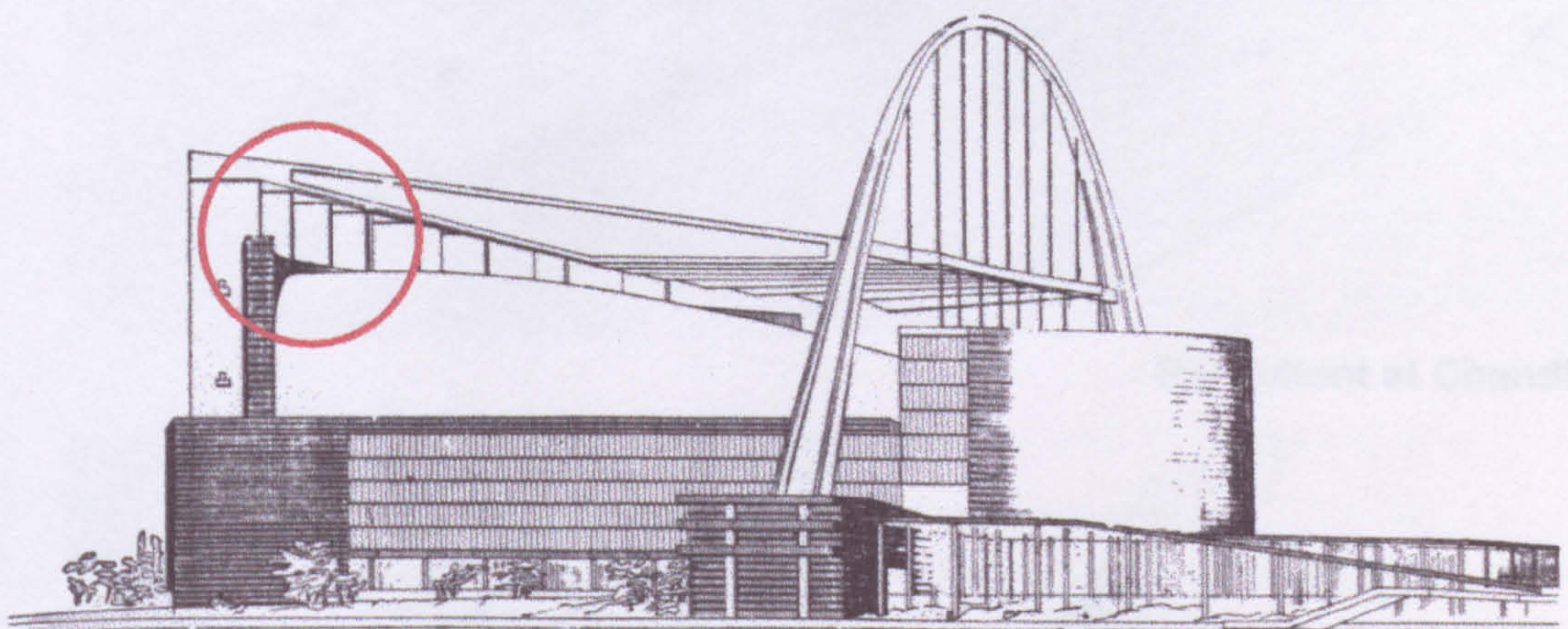
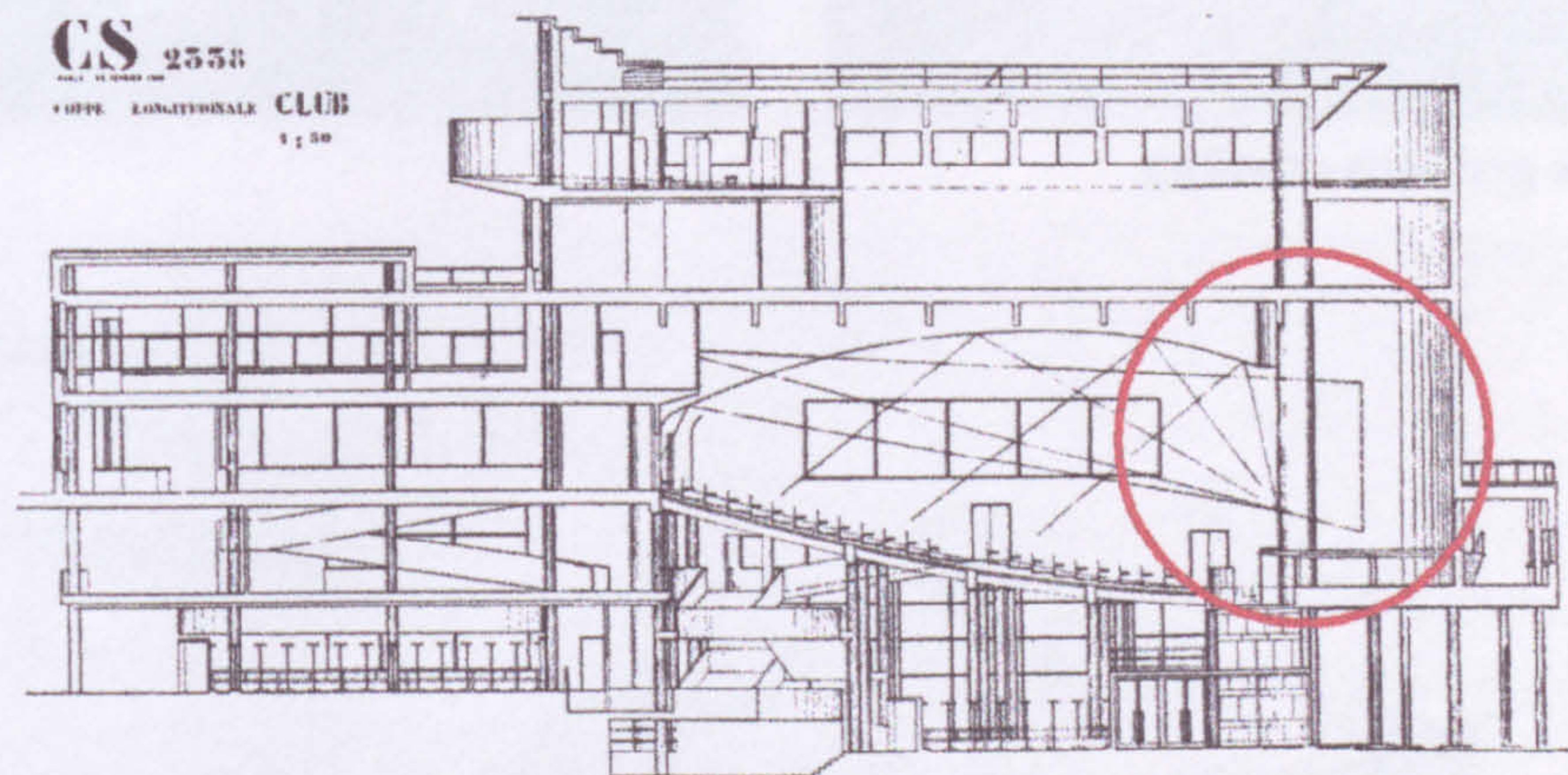


Parterre study from 23.347.
Note central parterre later replaced with pool.
A number of studies explore ways of building
up a central focus at this point; see fig.32, 51

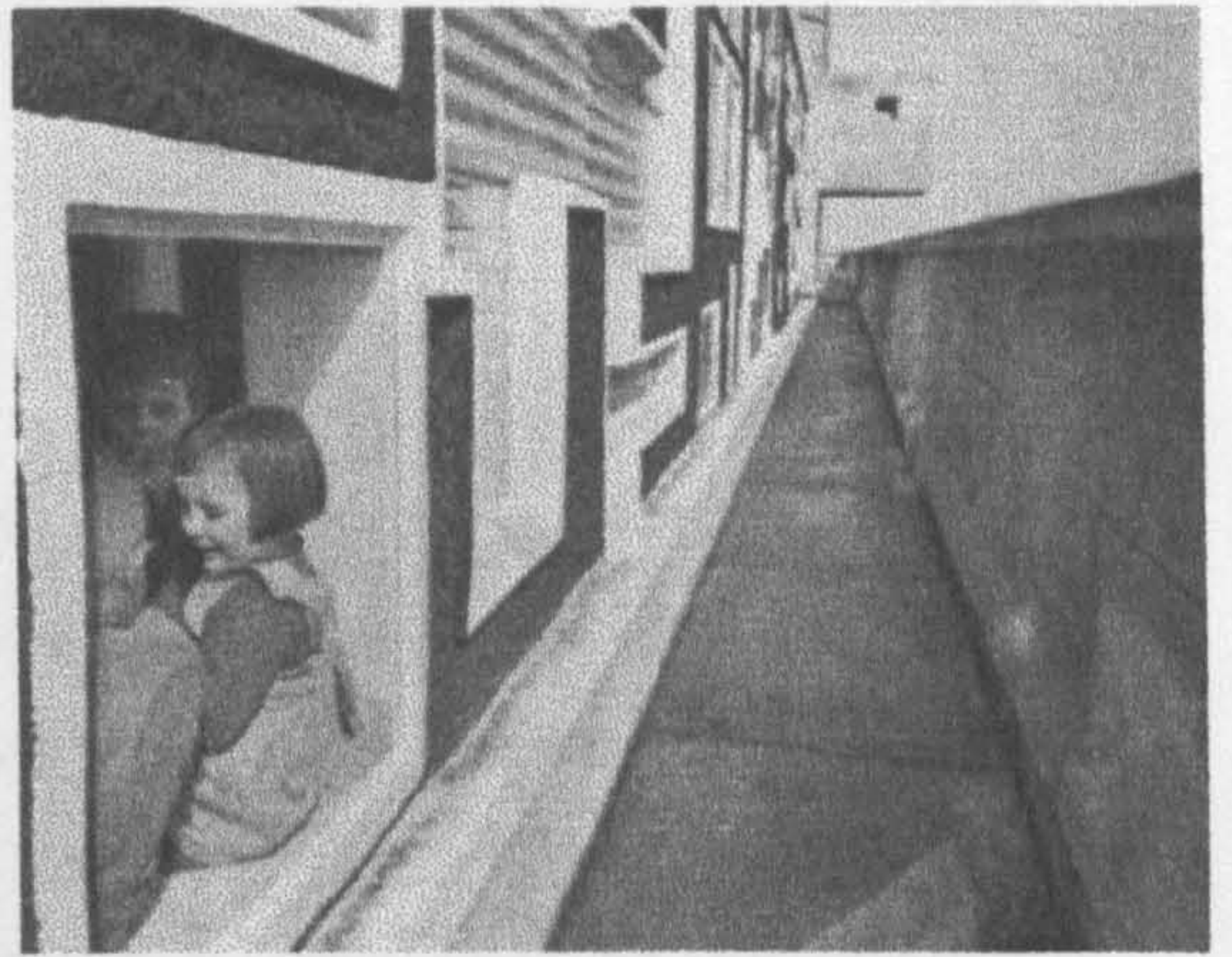
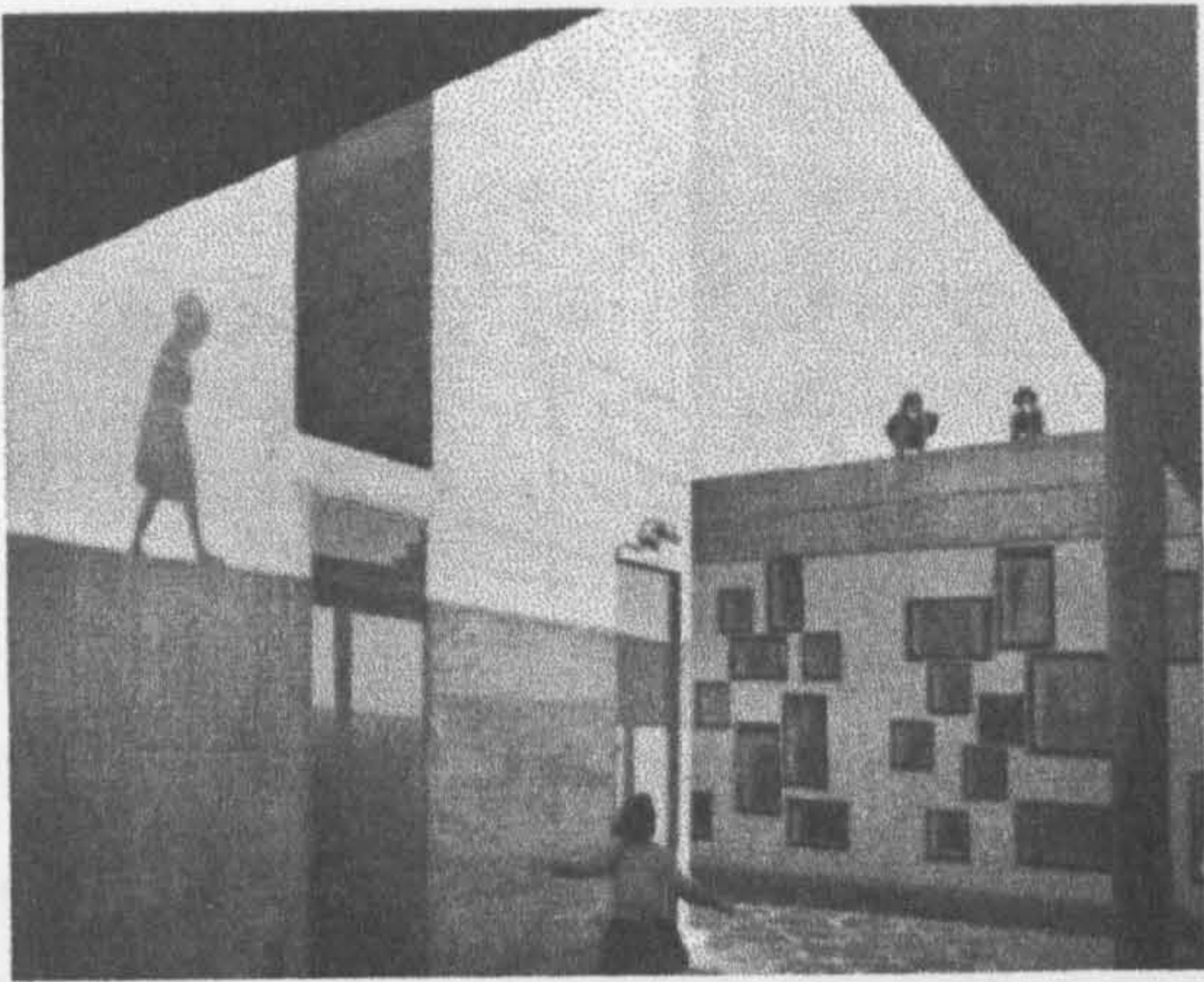


Final arrangement of roof garden elements

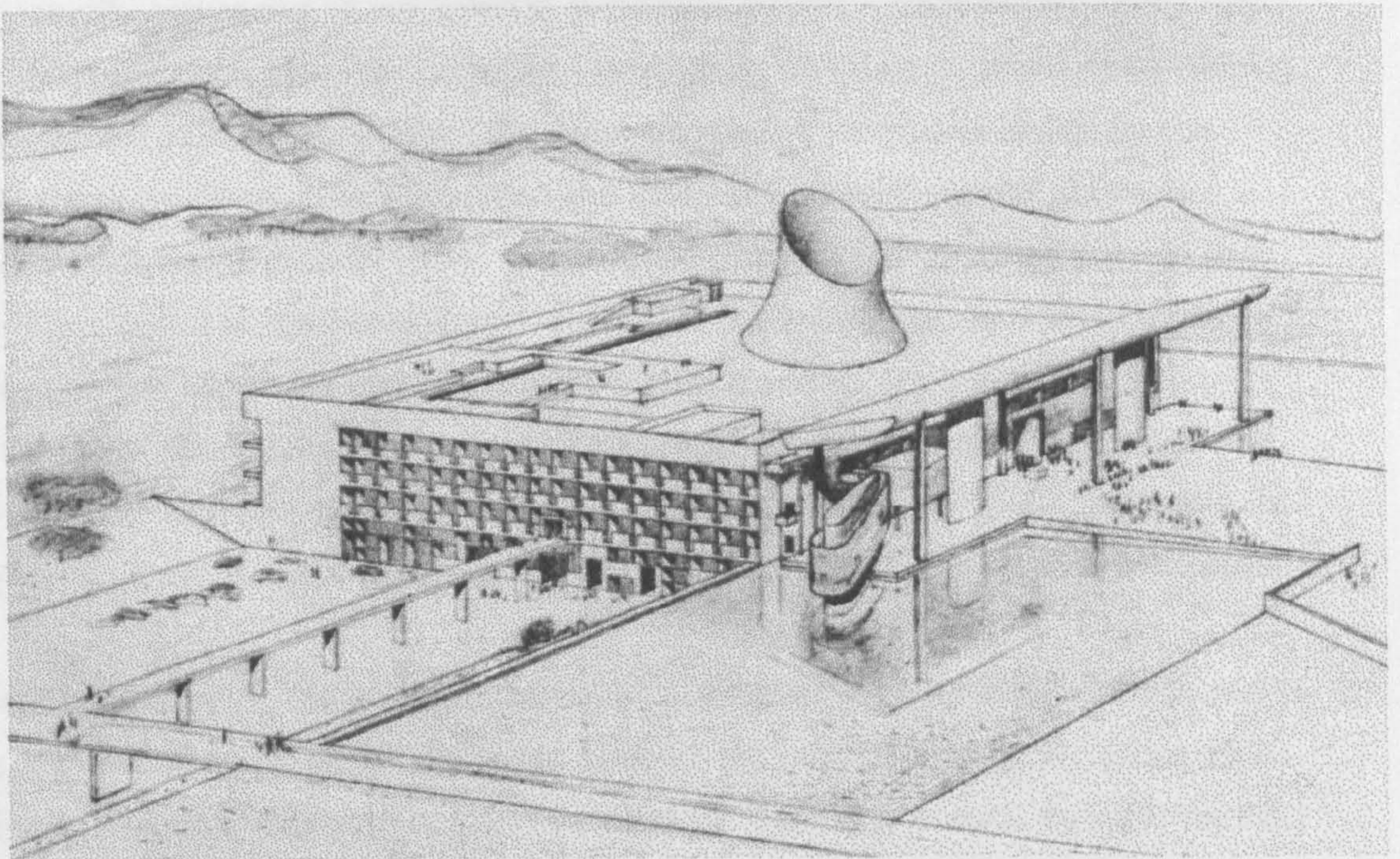
exploration is no longer offered [fig 50A]. Much later, when Le Corbusier designed the parliament at Chandigarh, the structural solution was just as visible as in the Palace of the Soviets, but the means had changed: by the sculptural use of structural concrete the cooling tower form of the Assembly and the asymmetric prism of the Council chamber are integrated into the roof terraces. The halls at Chandigarh are imbedded in the columnar matrix of a rectangular block of fora and offices, thus both the interior levels and the roof spaces of the block exhibit *plan libre*, and the disposition of the roof elements bears some resemblance to that seen at the Villa Stein [fig. 50B].



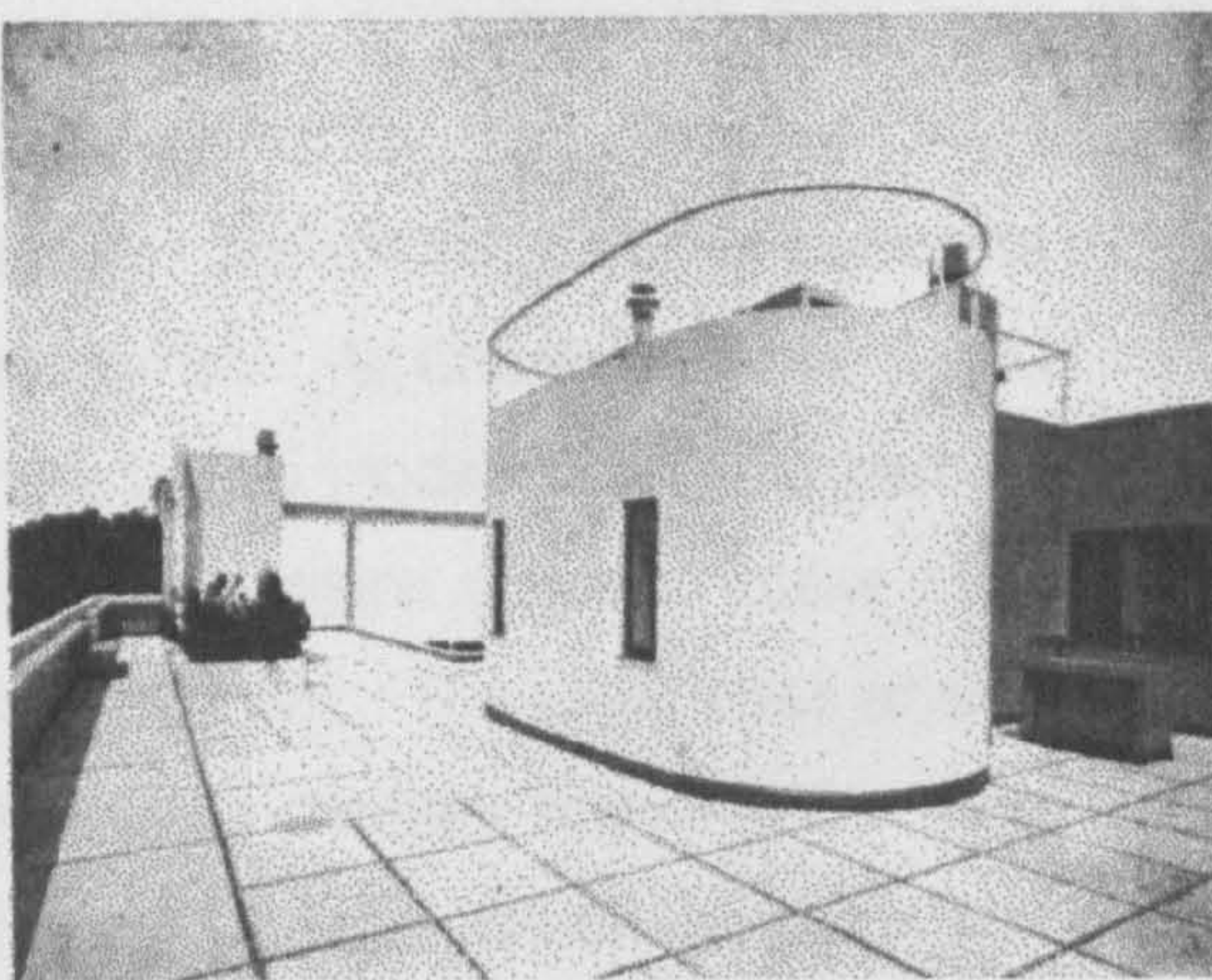
**Centrosoyuz & The Palace of the Soviets [not to same scale]:
Juxtaposition of Large-scale Structure and Habitable Space**



pattern-making at Nantes



Parliament at Chandigarh



Roof structures at Garches

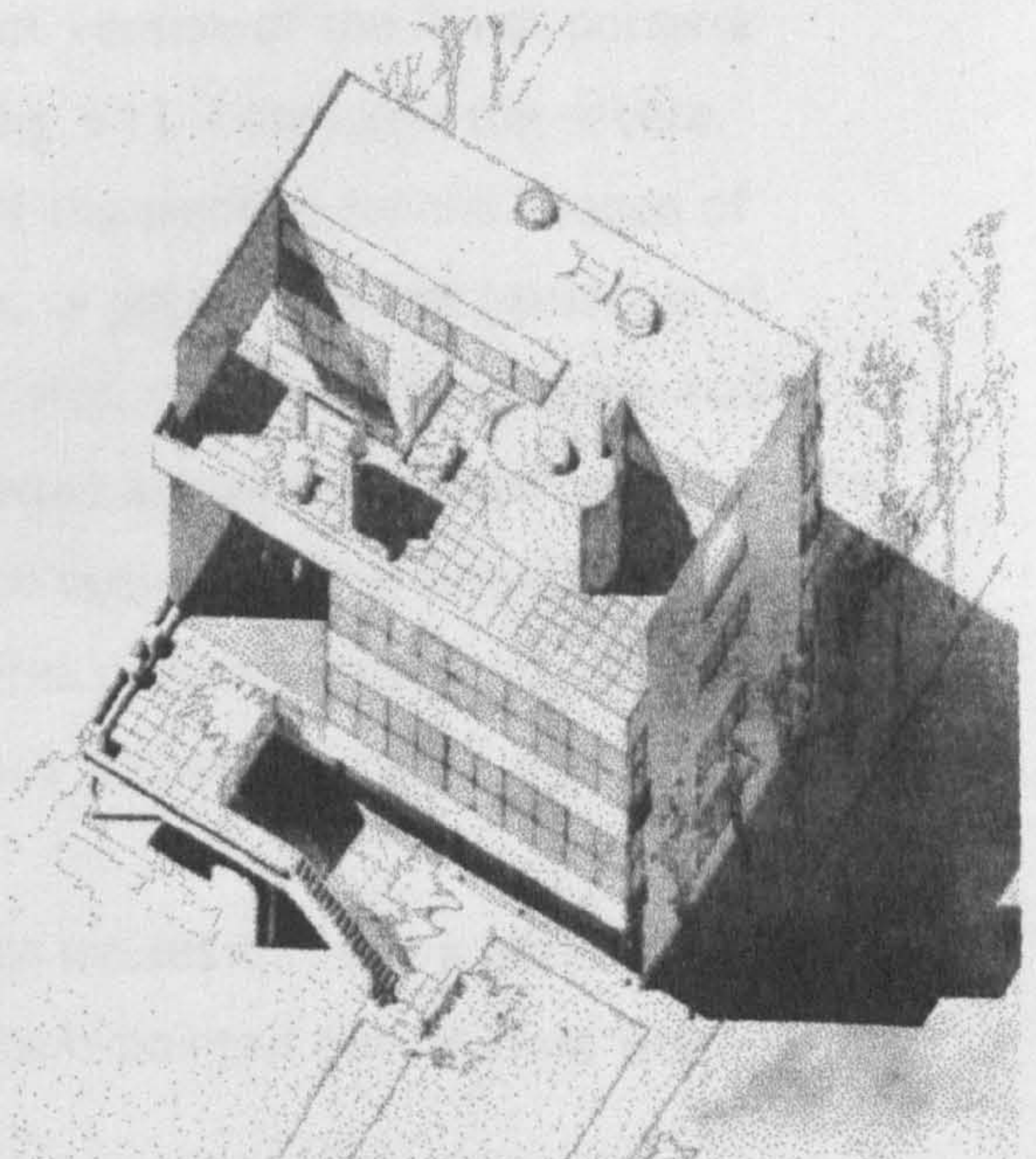


figure 50B

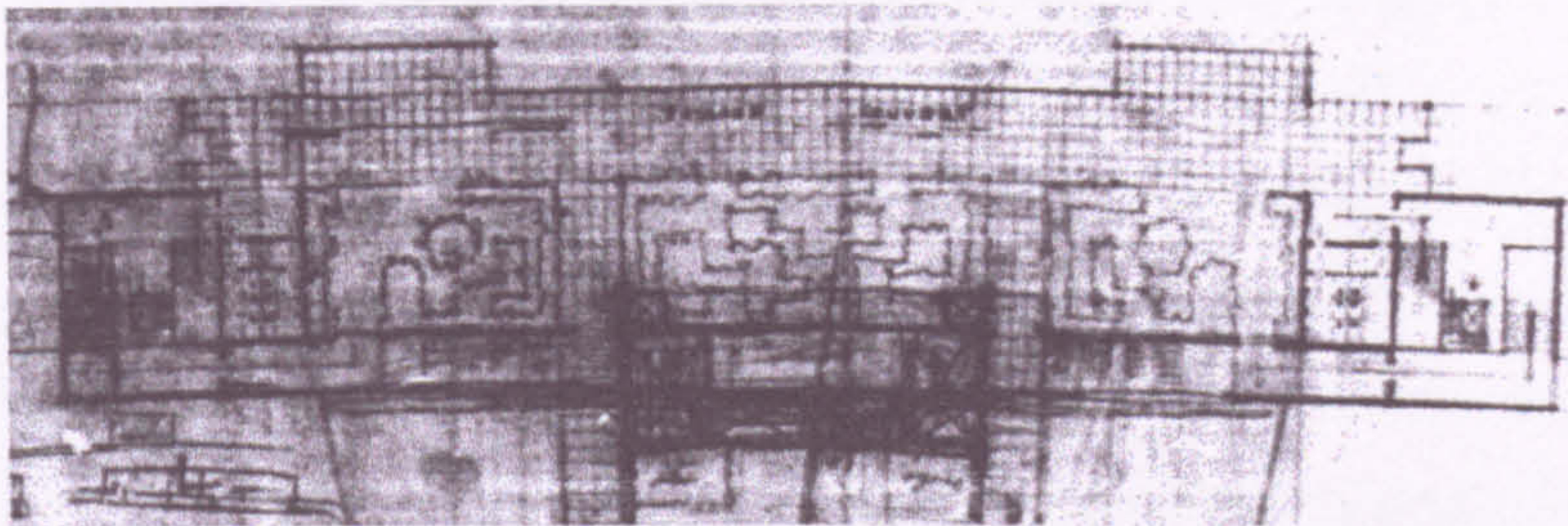
Parterres and a Continuity of Pattern Making: Geneva to Chandigarh

The garden aspect of the roof terraces is indicated at Geneva, as in the houses, by formal planting schemes and carefully considered paving patterns: several studies for the Assembly Hall parterres survive and these drawings show designs recognisable from the Purist houses: for example, the roof terrace parterre of the double house at the Weissenhofsiedlung, or the entrance parterre of the Villa Stein. The origin of the parterre patterns, generally composed of meandering rectilinear figures - fragmentary Greek key borders with the occasional circular punctum - is again to be found in Jeanneret's training at the art school in La Chaux des Fonds. The Swiss-Regionalist method of design by the abstraction of natural forms, which produced the kinds of figures described above, is demonstrated in his watch case of 1905. The layering of parterre and paving pattern seen at Garches is analogous to the overlapping L-shapes of the watchcase; by 1927 a circle stands in for the bee. Again the paired opposition: nature and human order stand in contrast. Curiously, the geometrical portion of the watchcase⁹¹ resembles the plan of the Assembly Hall roof, with its symmetrical disposition and winged outline, and, rooted in its pastoral grounds, there is a like relationship in the juxtaposition of natural and manmade [fig. 51].

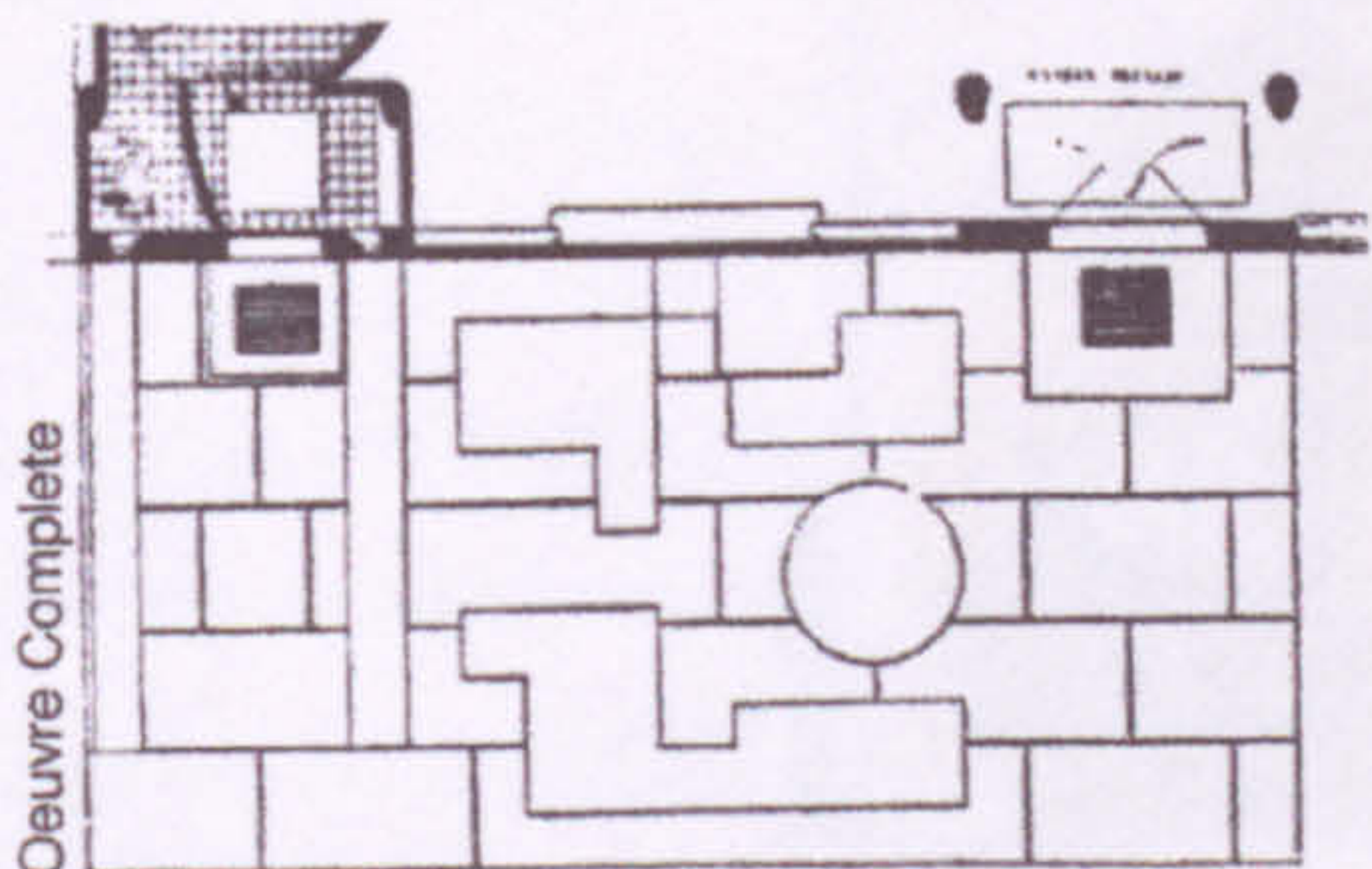
The final design for the Palace of Nations parterres is a simplification of the earlier studies, in recognition, perhaps, of the larger scale of the public building. By about 1930 the use of such parterres in private houses ceased in Le Corbusier's work, but this method of animating external spaces, and generating formality in contrast to the natural surroundings, was not forgotten: an even more abstract version of the Purist parterre appears on the roof of the Secretariat at Chandigarh [fig. 51] - compare the severe, paired rectangles and circles with the elaborate detail of the planting for the League of Nations Secretariat. At Chandigarh, the Capitol layout, a gigantic formal garden, is of similar syntax to the modest entrance parterre at Garches, designed thirty years earlier, and an overscaled version of one of those 1920's parterres animates the roof terrace of the Chandigarh parliament. The same class of patterns also occurs in other situations in the 1950's: the rooftop nursery school in the Unité at Nantes presents a perforated wall of similar feel, and the side wall of the same block displays a concrete relief, a vertical, Corbusian parterre [fig. 50B]⁹².

The external circulation for the Palace of Nations passes through a pattern of formal planting, an angled parterre, which, as Colin Rowe pointed out, mirrors the

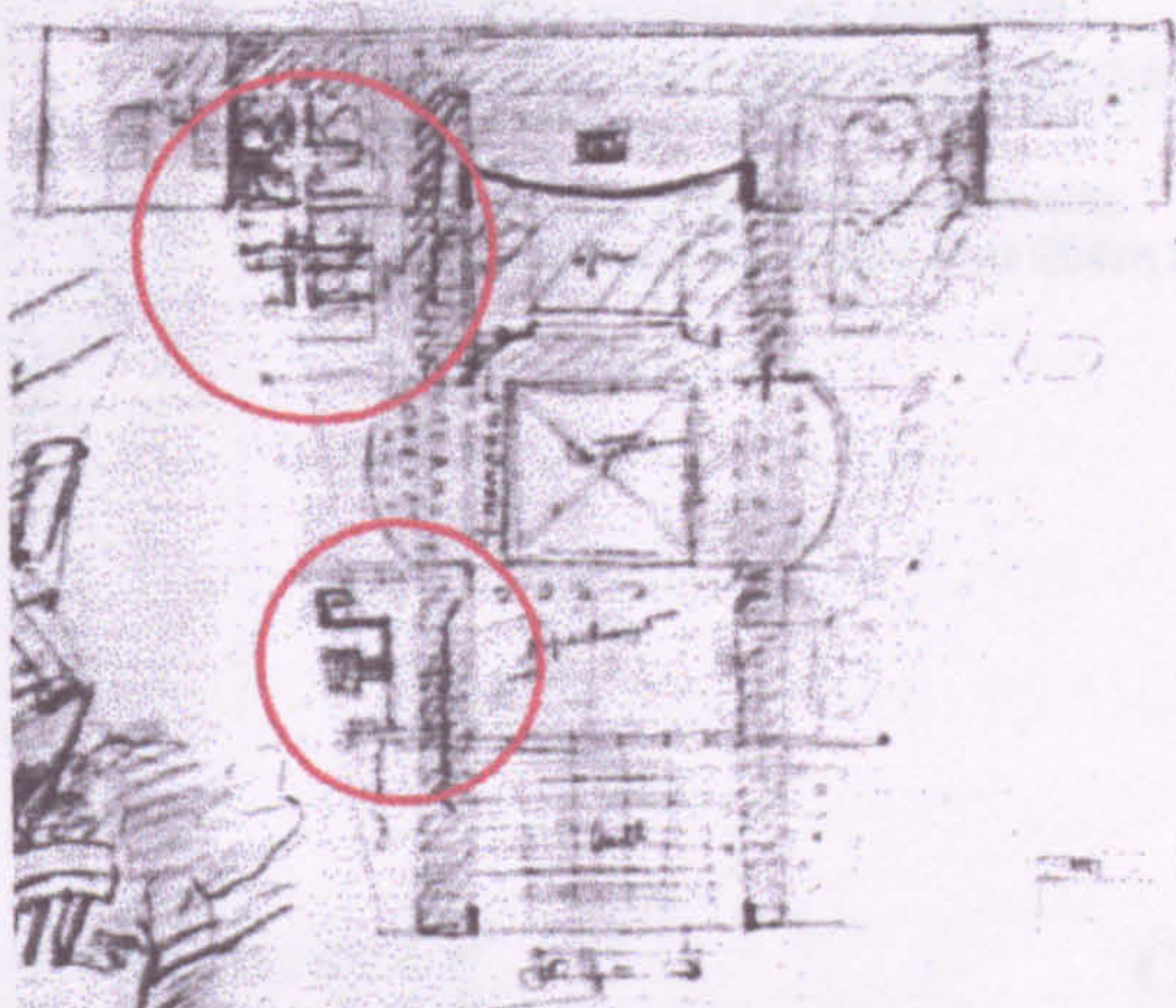
Parterre studies for Assembly Hall roof terraces



from 23.236



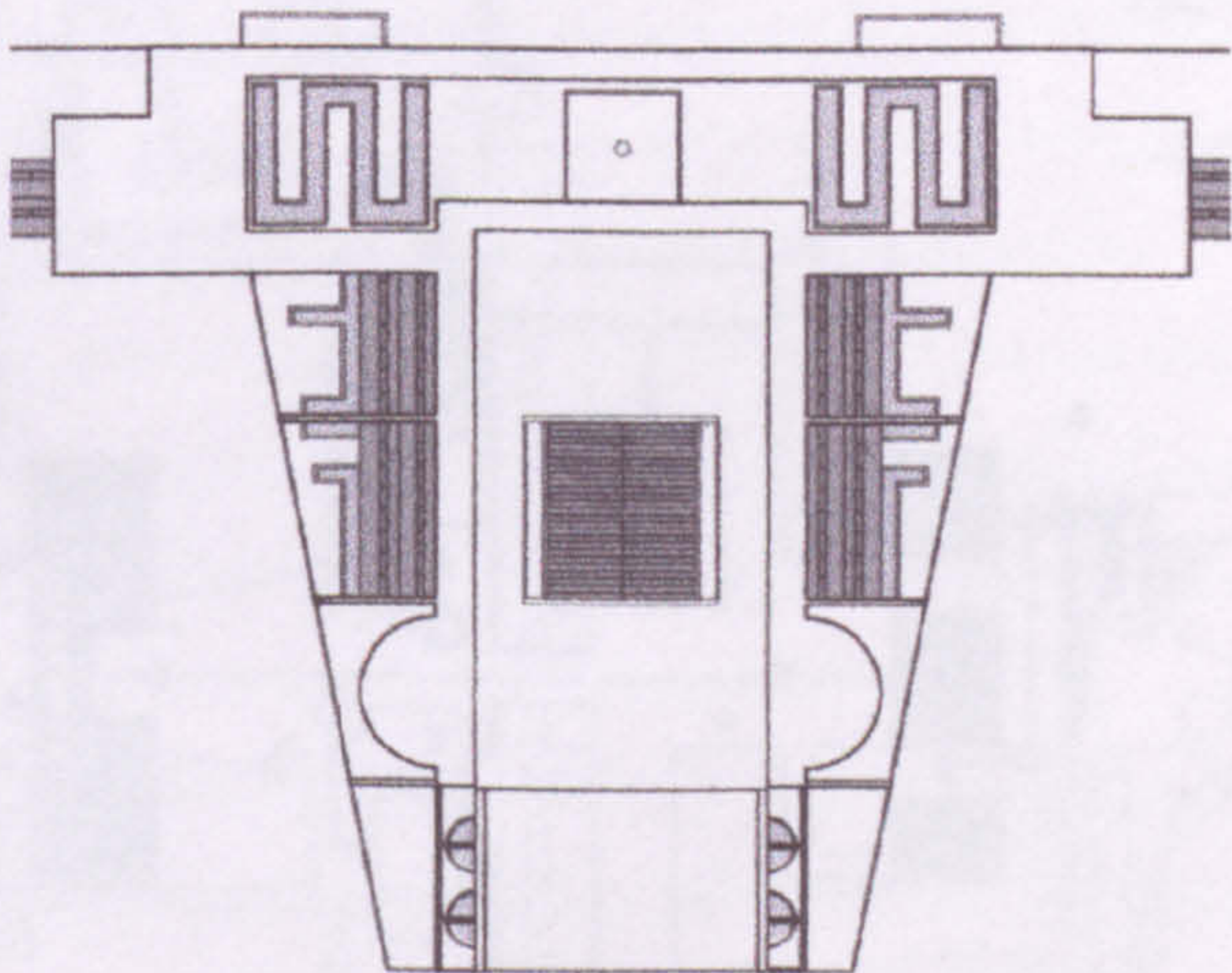
**Entrance parterre
at Garches, 1927**



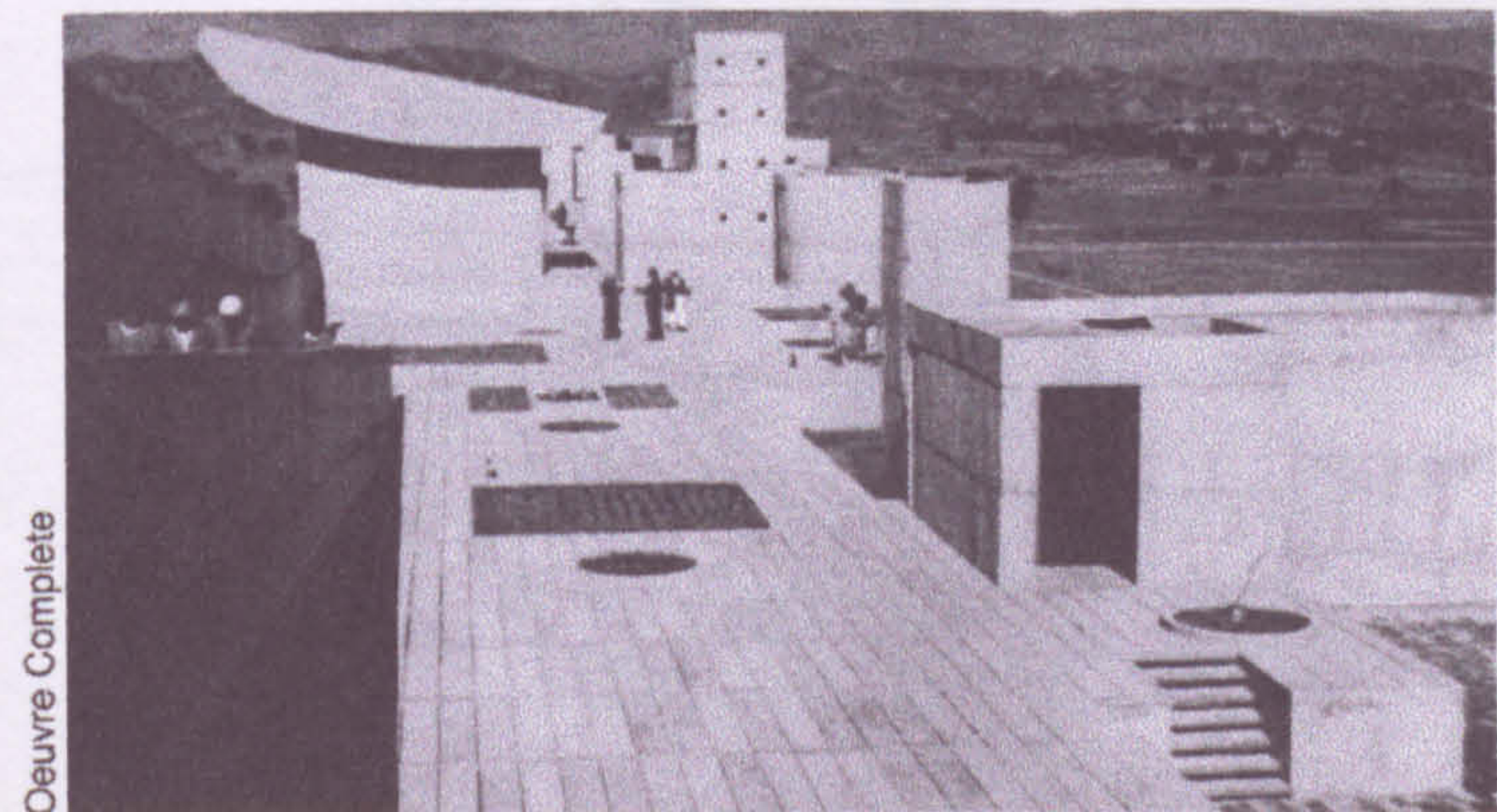
from 23.369



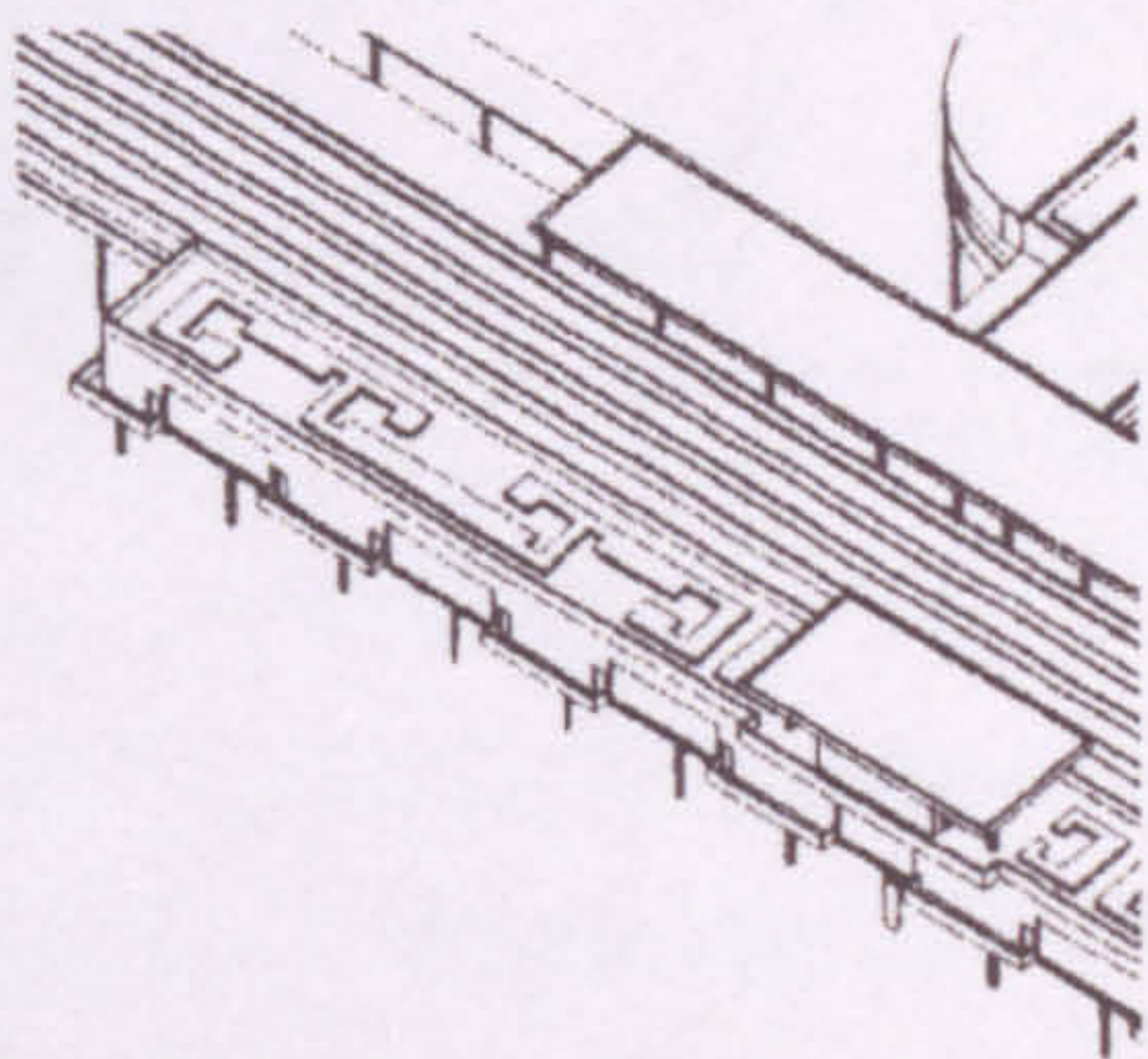
**watchcase made by
Le Corbusier, 1905**



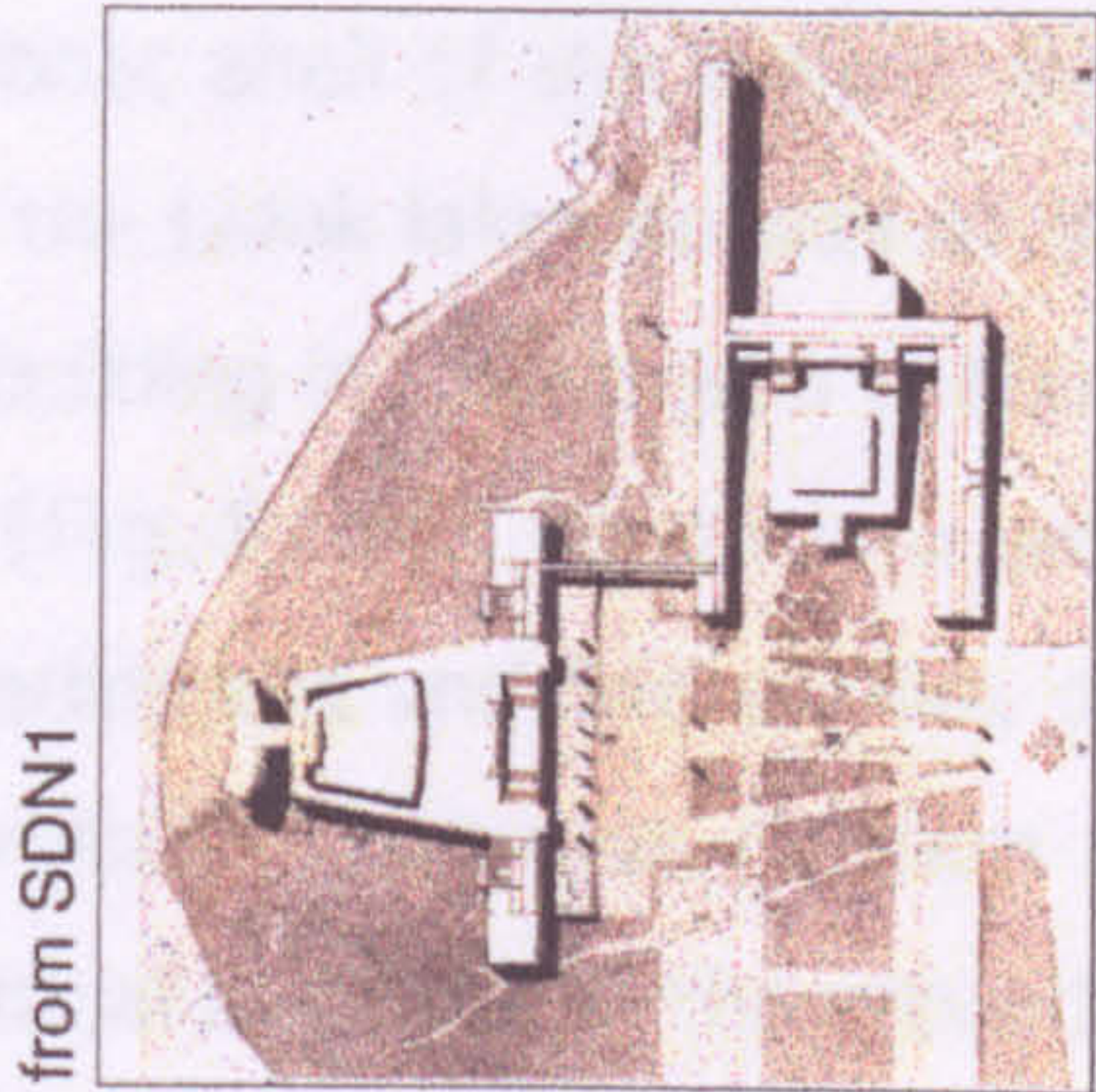
**Assembly Hall roof terraces
Final arrangement, 1927.**



**Roof terrace,
Secretariat at Chandigarh
1958**

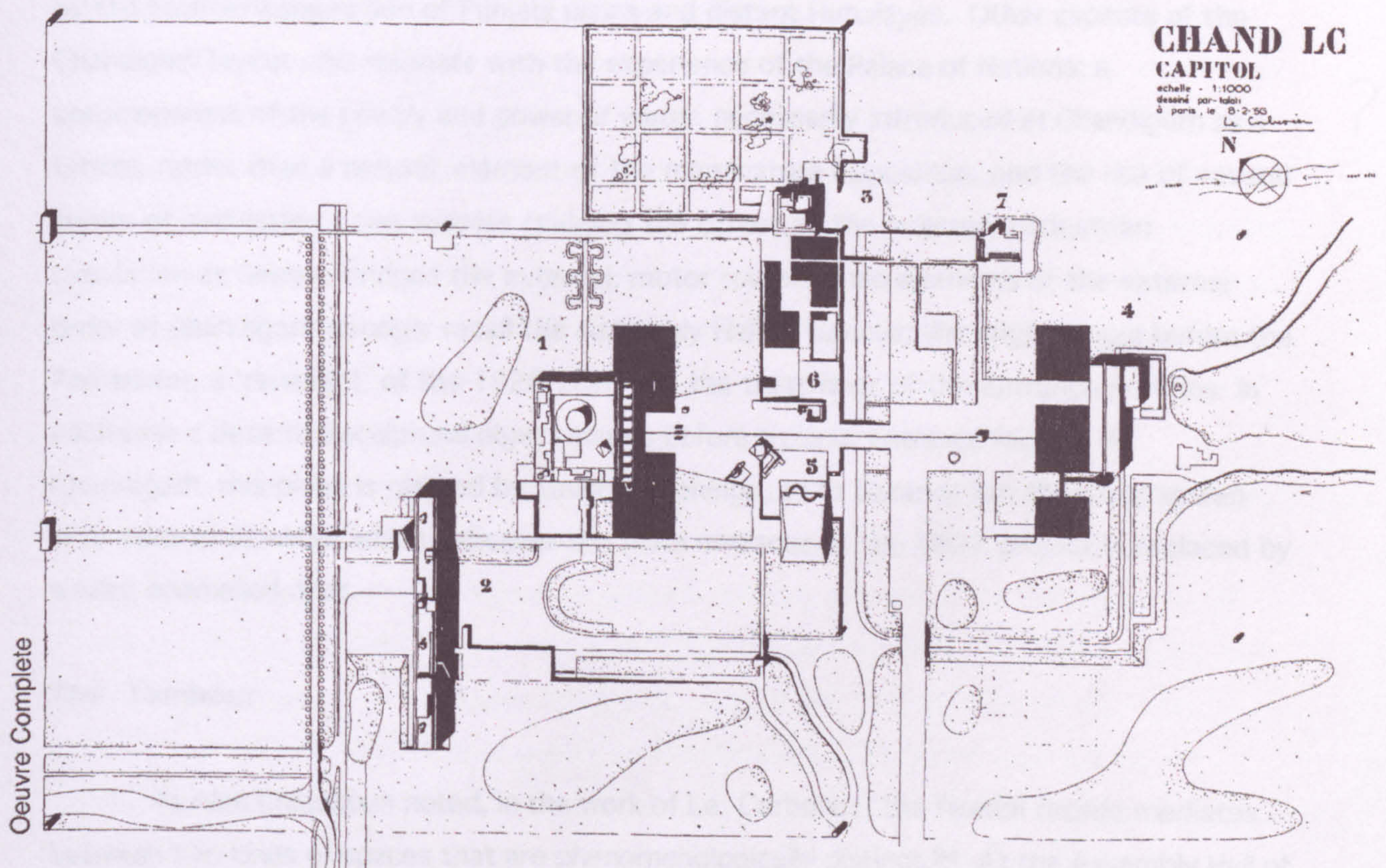


**Final project, Secretariat
Palais des Nations, 1927**



COMPARISON OF LAYOUTS
AT GENEVA [1926] & CHANDIGARH [1956]

approximately the same scale:
Secretariats are 180m and 254m long respectively



Oeuvre Complete

figure 51B

trapezoid Assembly Hall⁹³. A direct comparison of the site layouts for the Palace of Nations and the Parliament at Chandigarh shows a continuity of approach over thirty years.

[fig. 5 1 B] Although the site at Chandigarh is much larger - the Parc Perle du Lac would just about fit in the unbuilt Mogul garden proposed for the Governor's palace - the buildings are of a similar scale. The Parliament building at Chandigarh is not very large: the main facade is under 100metres long, where the League Assembly hall entry block is 144m long. The hyperbolic shell of the Punjabi Assembly chamber is about 40m in diameter at its largest, the blank lakeside wall of the League Assembly Hall is also 40m wide. The Secretariat building in Chandigarh is about 1.5 times the length of its counterpart in Geneva [fig. 5 1 B]. There is a similar axial formality, a similar relationship between Parliament and Secretariat, a like concern with patterns of circulation, and the inevitable Corbusian concern with oppositional juxtapositions: within the Capitol, the geometrical divisions of the ground plane are countered by stylised organic mounds; again, the landscape is very strong: the lake and mountains of Geneva are replaced by the twofold conjunction of Punjabi plains and distant Himalayas. Other aspects of the Chandigarh layout also resonate with the experience of the Palace of Nations: a consciousness of the poetry and power of water, necessarily introduced at Chandigarh as a formal, rather than a natural, element of the man/nature opposition, and the use of several layers of circulation - one system bridging the other, as the internal, pedestrian circulation at Geneva bridges the external, motor routes. Two elements of the external order at Chandigarh strongly recall the Assembly Hall at Geneva: the angled plaza before the Parliament, a 'revenant' of the 1926 plan, and the treatment of the entrance porticos: in each case a detached sculptural object stands before a planar entrance facade. At Chandigarh, this plane is pierced by several openings, as at Geneva, but the glass screen with central *tambour* which indicates the main entrance in the 1927 project is replaced by a vast, enamelled door.

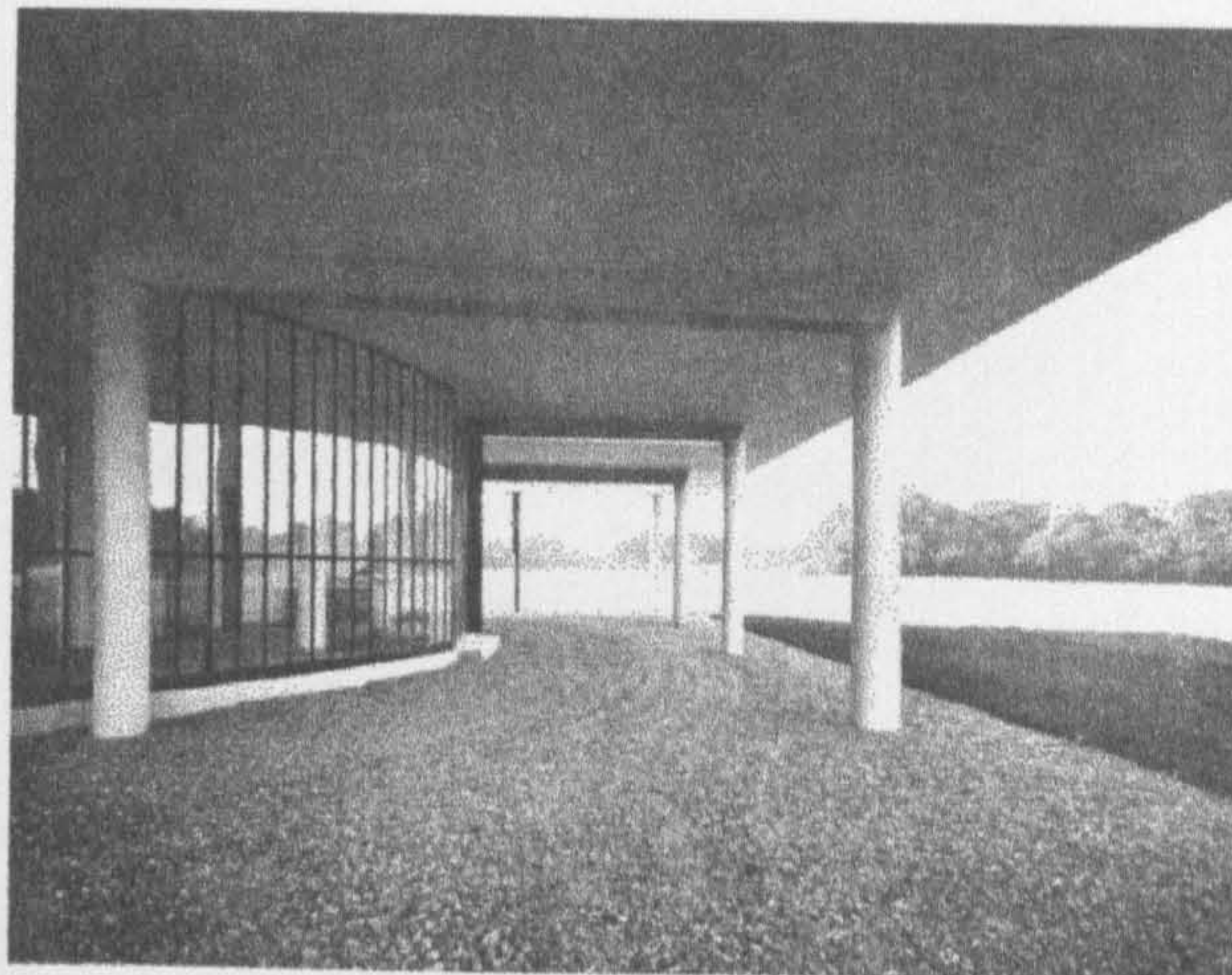
The Tambour

As Alan Colquhoun noted, in the work of Le Corbusier, the frontal facade mediates between two kinds of spaces that are phenomenologically distinct.⁹⁴ At the Assembly Hall of the Palace of Nations, the point of transition between the two is marked by a special element of entrance: the central drum of doors, or *tambour*, as Le Corbusier labelled it on the plans. There are actually three drums here - the conjunction of the circulatory requirements and the formal nature of this facade led to an arrangement where the central

tambour is flanked by two smaller ones which emphasise the axial position of the most important entrance, but early sketches [fig.26 -23.370, 23.334] show the large drum and two smaller, rectangular, airlock-type entrances flanked by diamond-shaped entry chambers for additional classes of user. But the notion of signalling entry differentiation by varying the door in each case was resolved much more subtly in the final project. This usage - the drum pushing through the glass screen as entrance - is the only instance I have found in Le Corbusier's work. In later buildings, entrance is often from below: a pavilion of entrance at ground level, often of organic form, is located below the first floor slab, partially emergent. The slab above is then pierced by a stair or ramp rising within the pavilion. Examples include the Pavillon Suisse, and the Unité d'Habitation at Marseilles. In one case, the Villa Savoye, the entire glass entrance pavilion below the slab takes on a curve centred on the main door, which is perhaps formally equivalent to the Palais des Nations arrangement of *tambour* and glass entry screen. Le Corbusier's differentiated entrance pavilion may also exist alongside the slab block - which forms a background to it - as part of a sculptural ensemble, and the entrance sequence for the Cité de Refuge is a case in point. Here, bowing to the irregular and constrained site, Le Corbusier has set up a similar entry sequence to that of the Assembly Hall: steps, a two-part entrance canopy, the first portion of which serves to turn the entrant towards the main axis of entry, the second, hovering over a bridge which confirms the entry datum and its separation from the street, leads to the door - which is set into a cylindrical entrance drum: mediator between inside [great hall] and out [street and portico]. The *tambour* of the Assembly Hall entrance screen is transformed from airlock door to cylindrical entry chamber - with its own airlock door [fig.52].

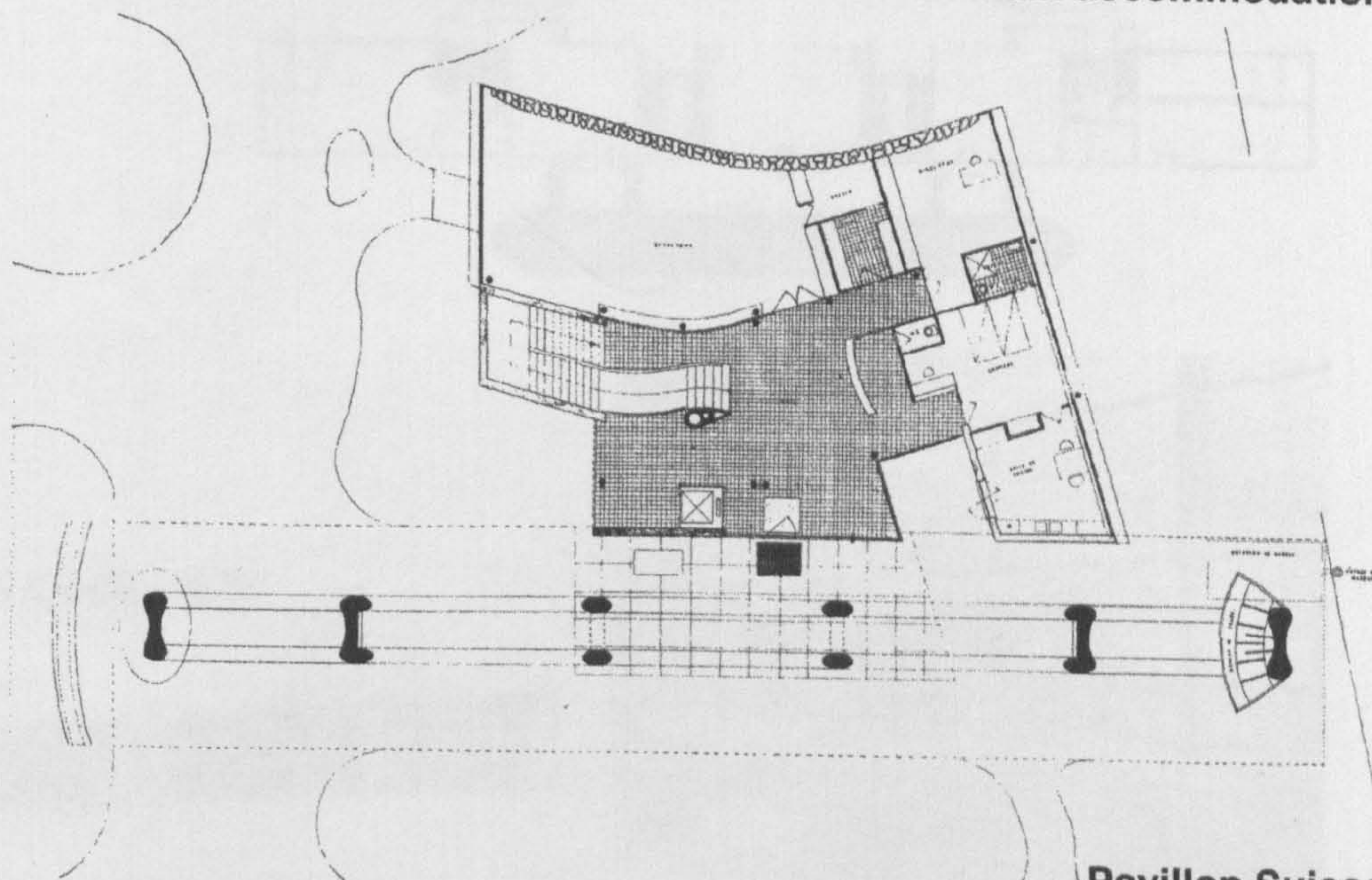
Curved elements in Corbusian entrance configurations are more often used to direct the movement of the user: curves as circulation indicators around which people are deflected, and therefore, they nominally become flanking elements. Two elements in the Palace of Nations project are used in this way and neither relates to significant entrances: the rear of the library which draws the traffic around the Secretariat, and the ovoid cylinder supporting the sculpture group on the lakeside. The spiral stair linking the President's dias to the lakeside pavilion is wrapped about this cylinder. Parterres may be employed in the same way, and the curved parterre in front of the blank, north face of the library echoes the plan of the reading room apse and is similarly used to direct traffic. Examples of other projects where a curved element gives directional impetus towards the main entrance include Maison Cook, and the pilgrimage chapel at Ronchamp [fig.53].

Oeuvre Complete

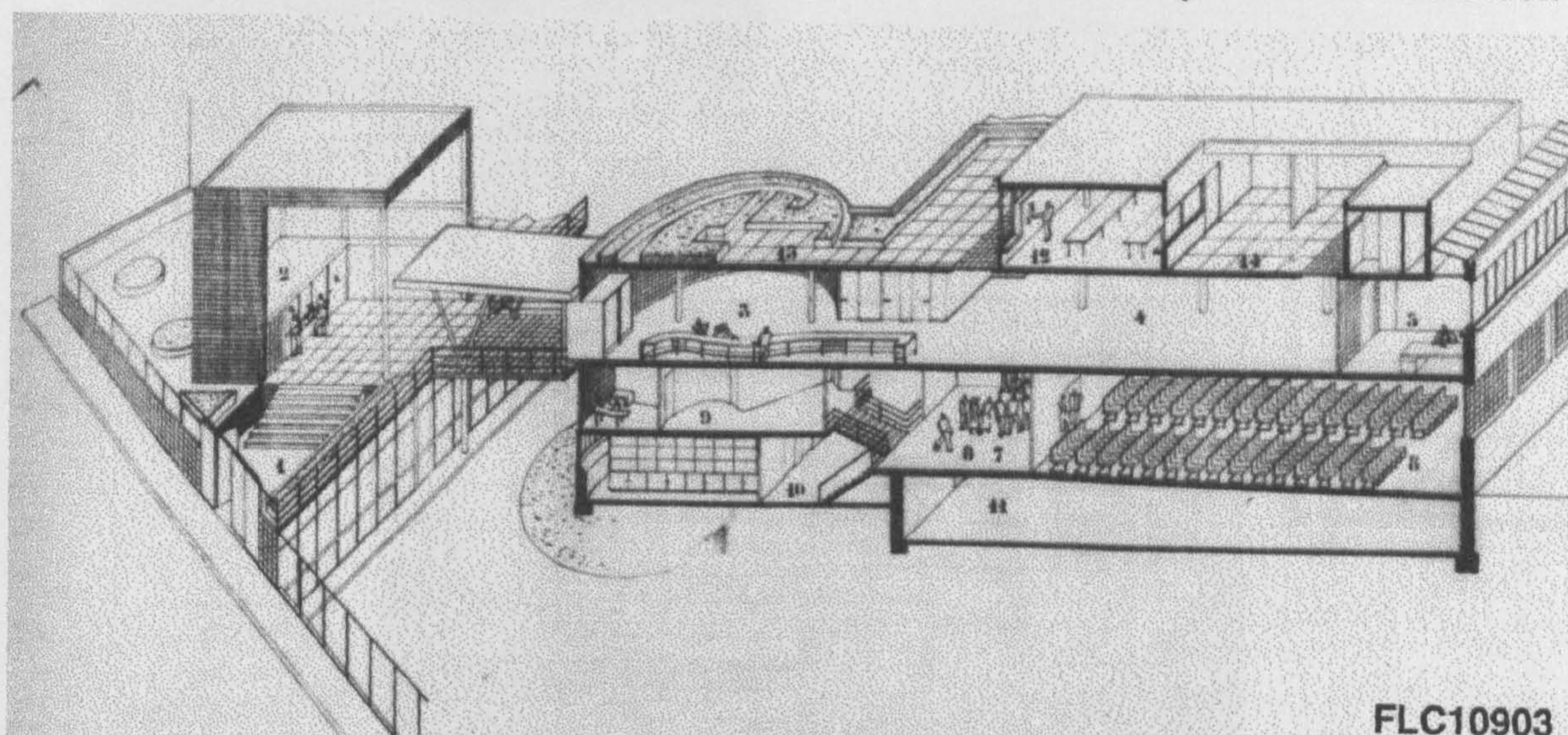


Villa Savoye
Curved glass entrance hall
beneath main accommodation

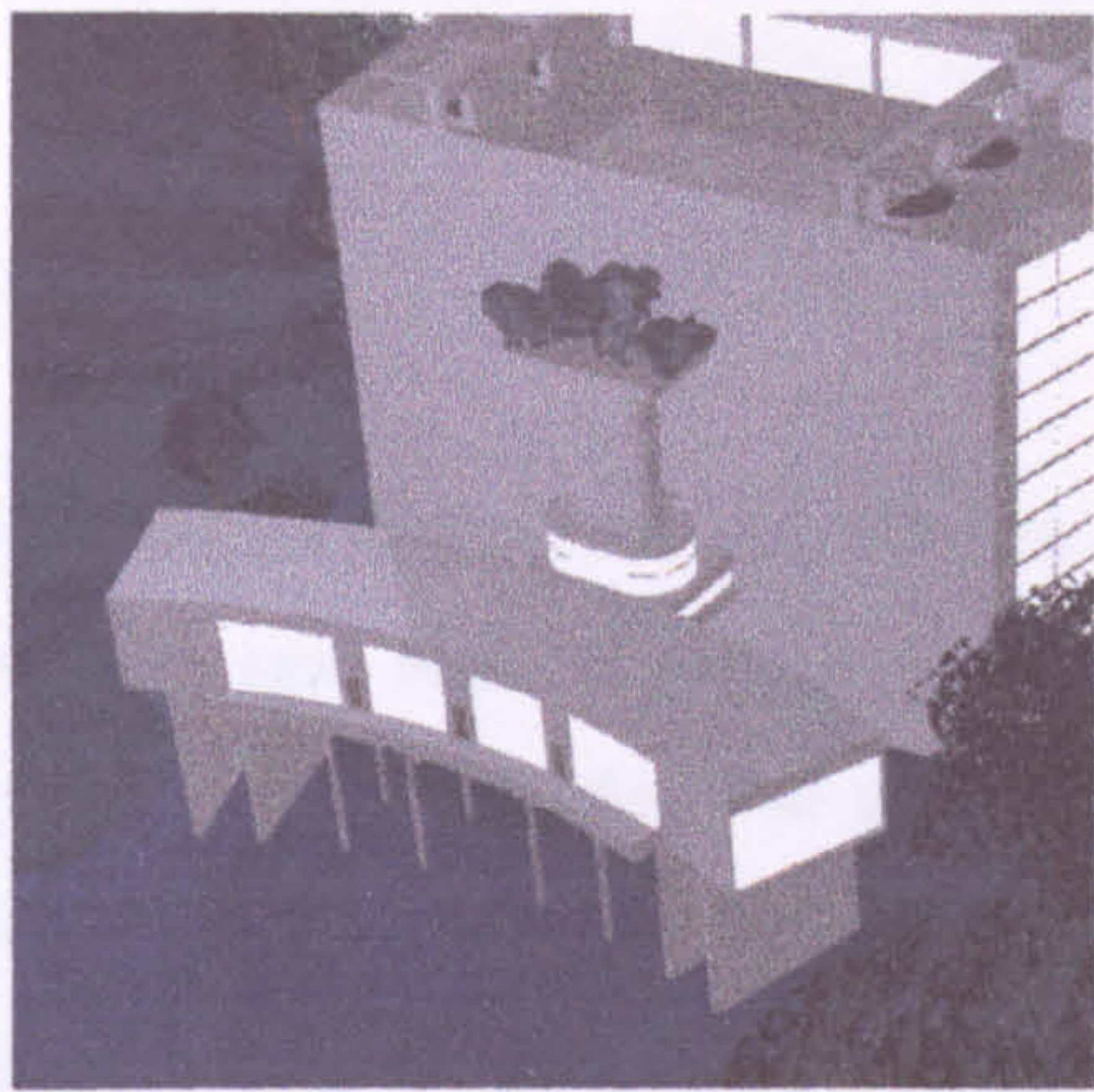
Oeuvre Complete



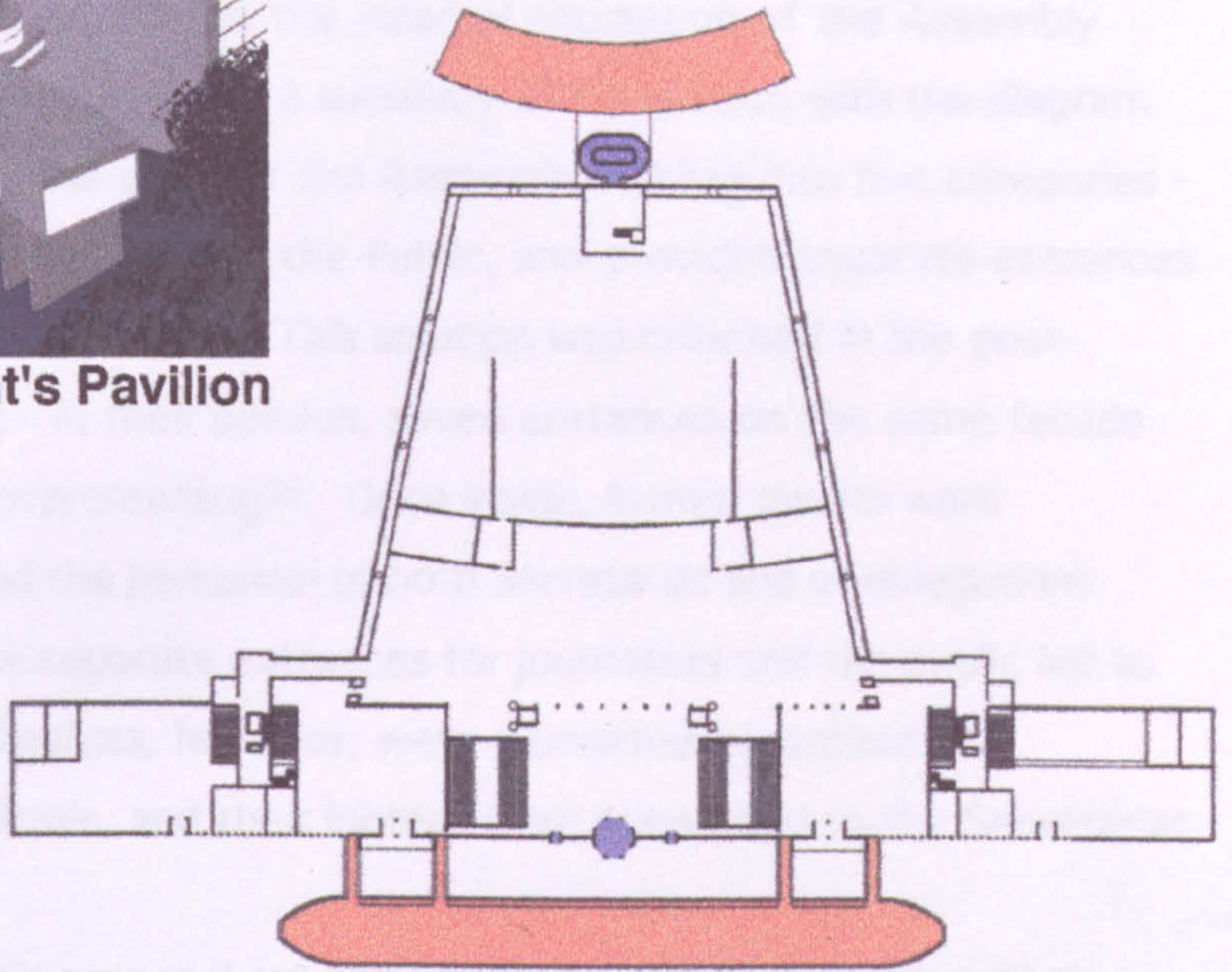
Pavillon Suisse
Entry beneath slab block



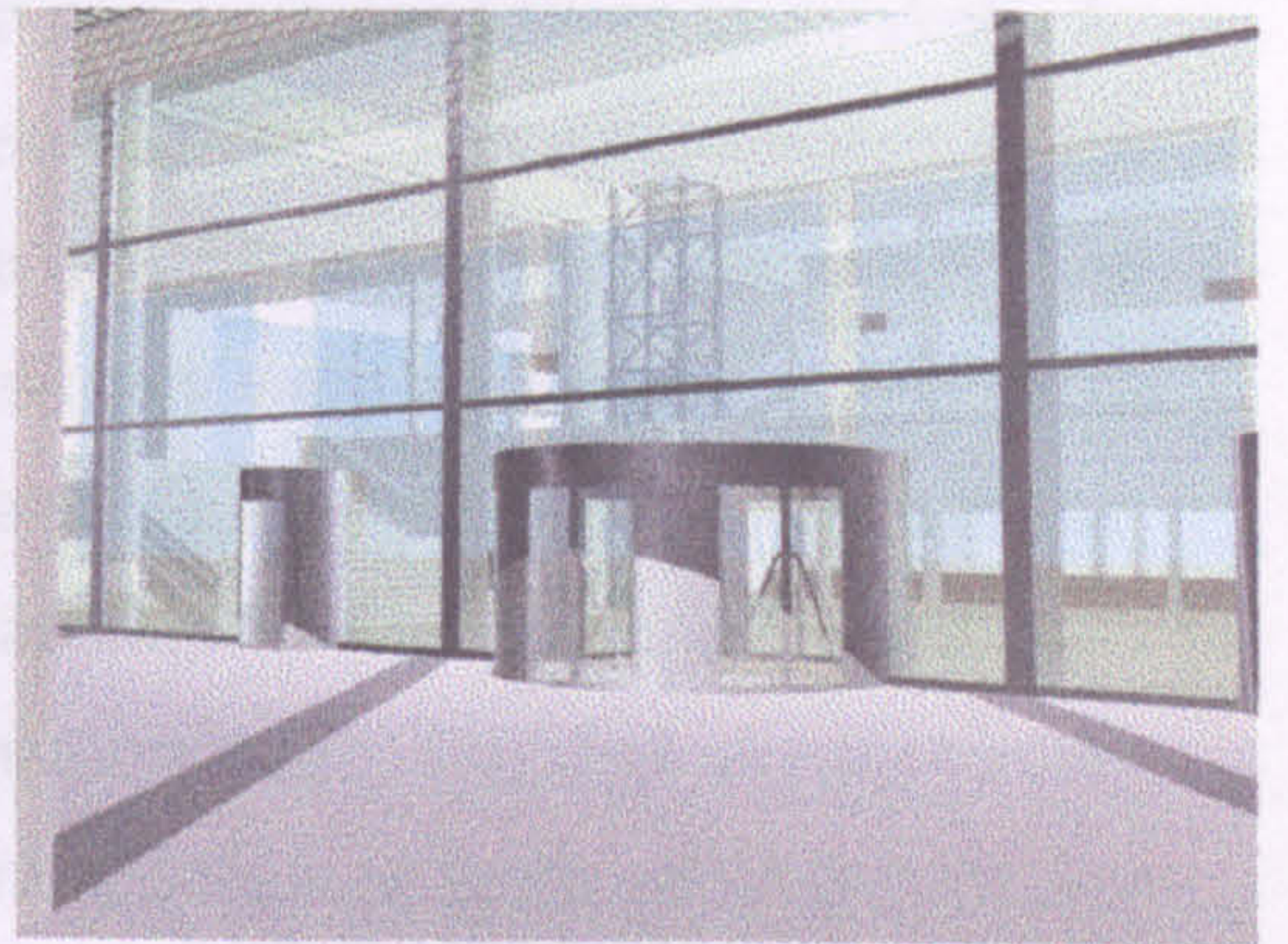
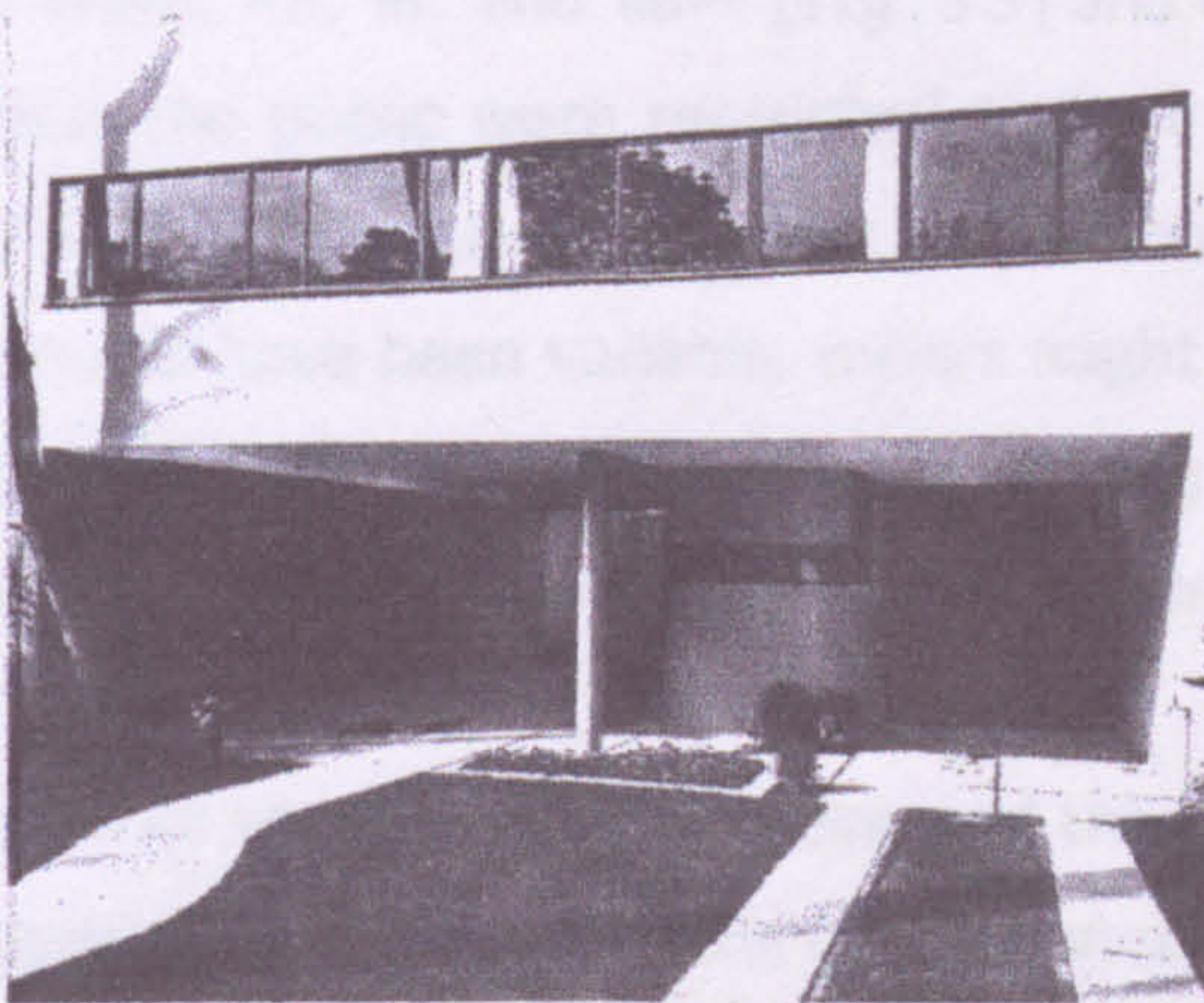
FLC10903
Entry Sequence Cite de Refuge
figure 52



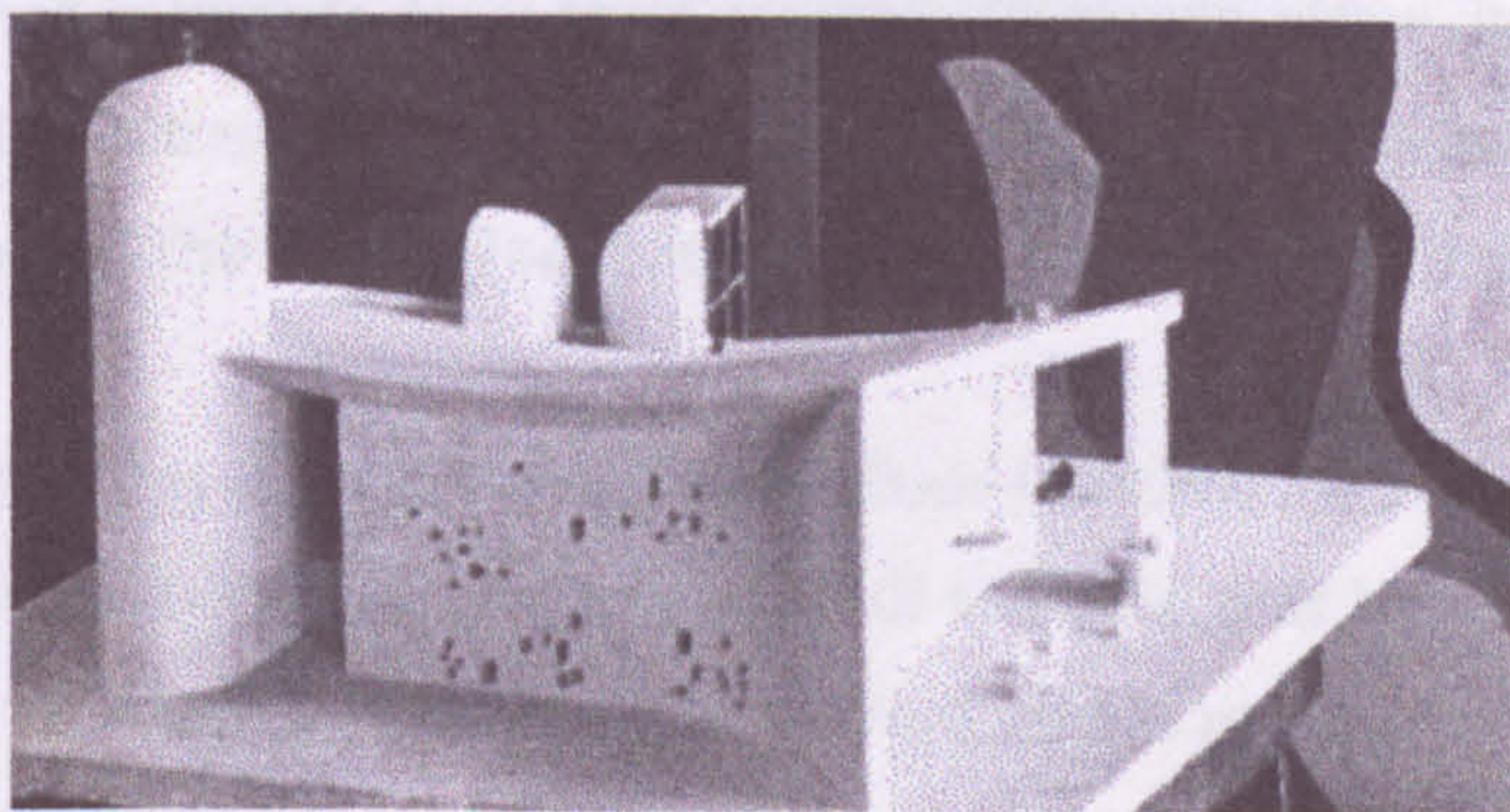
President's Pavilion



Maison Cook, 1927



Tambour



Chapel at Ronchamp, 1951

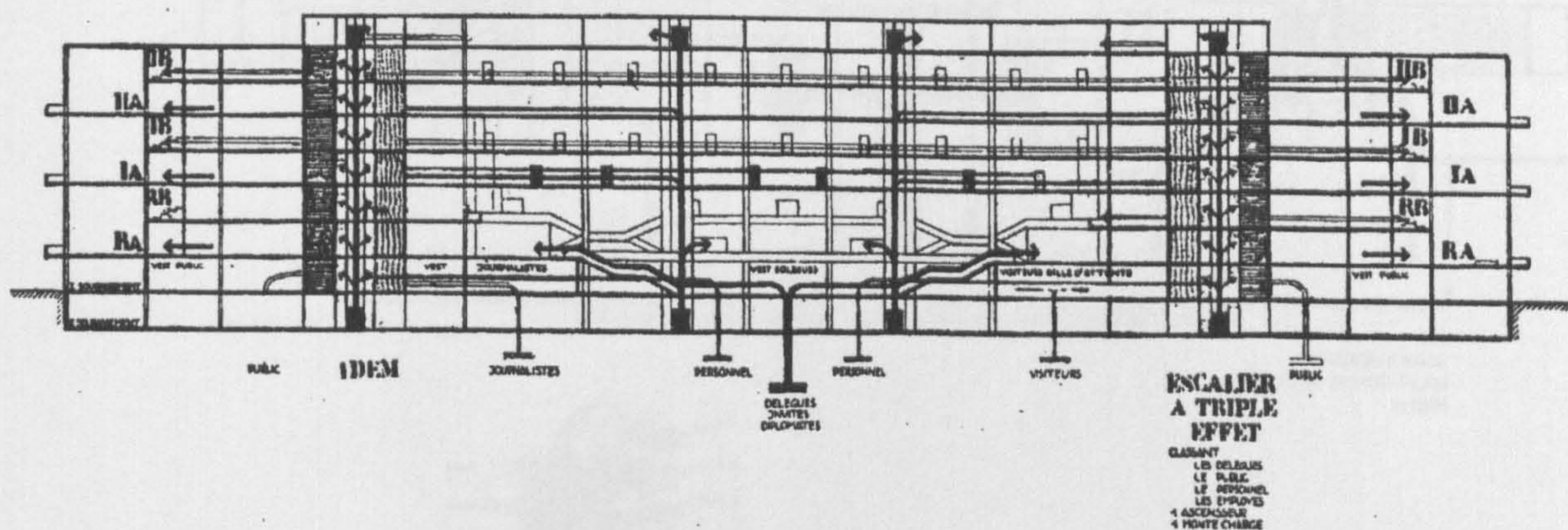
Internal Circulation

Le Corbusier explained his solution to the internal circulation of the Assembly building at length in *Une Maison*, and provided a summary of his system with the diagram on page 139 [fig. 54]. He divided the users of the Assembly building into five categories - Delegates, Personnel, Journalists, Visitors and the Public, and provided separate entrances for each along the 140m long entrance quai. This solution was criticised in the post-competition Swiss experts' report - in their opinion, seven entrances on the same facade would produce moments of great overcrowding⁹⁵. Once inside, invited guests were permitted to join the delegates, and the personnel of both Secretariat and of delegations moved freely among them, but the separate entrances for journalists and the public led to their own designated levels. Journalists, however, were permitted controlled opportunities for contact with officials, and their lobbies were connected to the Secretariat by the upper bridge [fig. 55].

Of particular interest in this proposal are the 'grands escaliers à double effet' ^{triple} which serve all categories of user simultaneously: each one contained three staircases. A smaller, central stair and lifts for the Secretariat personnel served as a core about which the other two staircases were wrapped, one above the other, serving alternate levels. The Commissions Halls stacked at each end of the entrance block were double height with public galleries on levels RB, IB, and IIB⁹⁶ [fig. 55] and the public stair opened only onto these 'B' levels, thus the public were restricted to their galleries.⁹⁷ The journalists used the same staircase as delegates on their way to the Commissions Halls, and their access to the delegations would have been variable: ushers might grant or refuse them admission to any part of the building. At roof level, the half-landing of the public stair coincides with the roof slab and all stairs in the circulation towers give access to the restaurants and terraces.

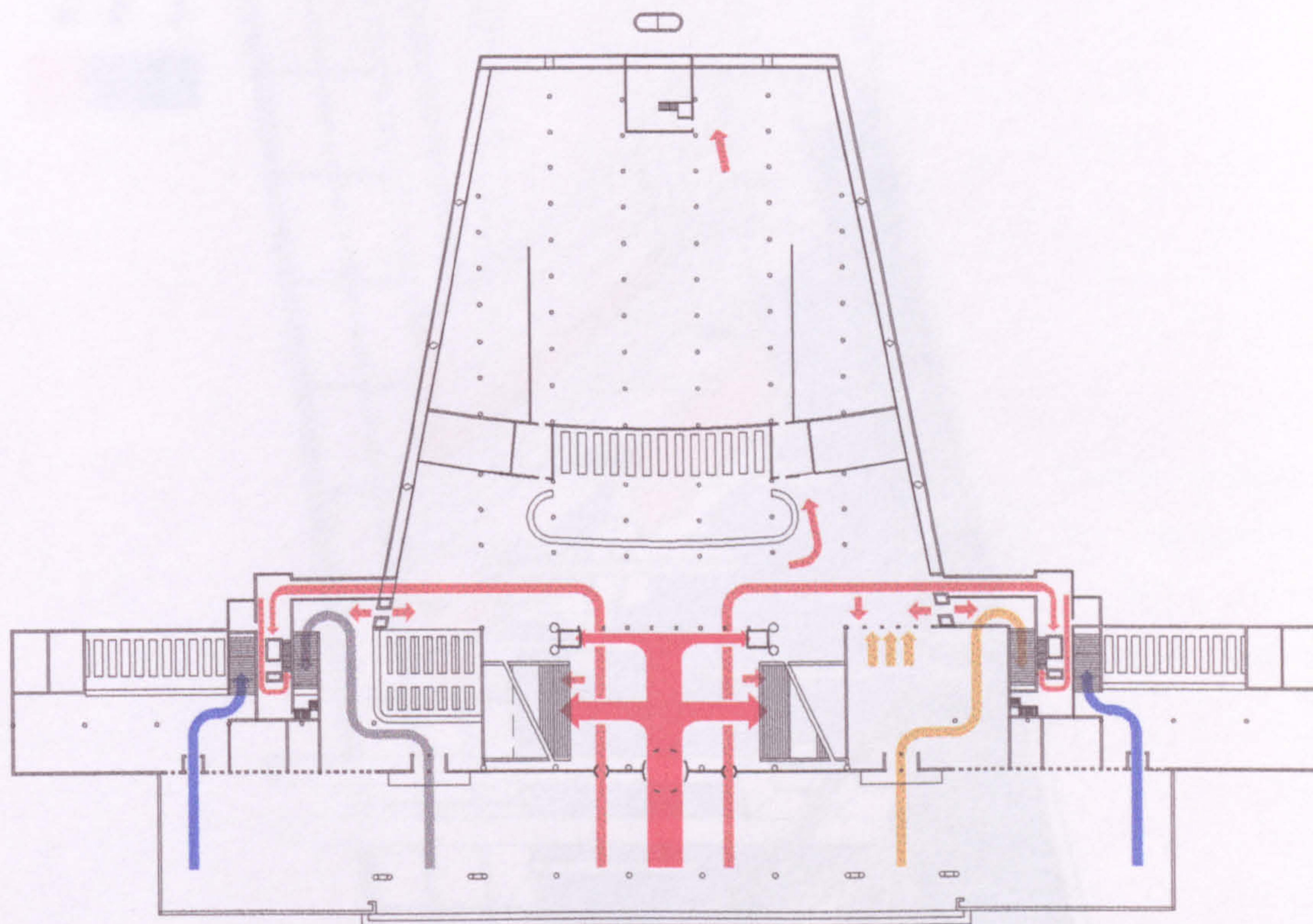
Because of the size of the building and the linear disposition of the office accommodation across the site, some circulation routes are quite extended: the Presidents' Pavilion at the head of the hall is remote from the Secretary General's office, but passages on both sides of the Assembly hall extend from the entrance hall at piano nobile level, and these 'pas perdus' rejoin behind the hall at the axially placed entrance to the President's suite [fig. 56 & 57A].

It seems appropriate at this point to mention the floor patterns indicated on the plans of the Assembly Entrance hall: given the huge scale of the Palace of Nations submission drawings, I have wondered if these patterns were added merely to enrich the

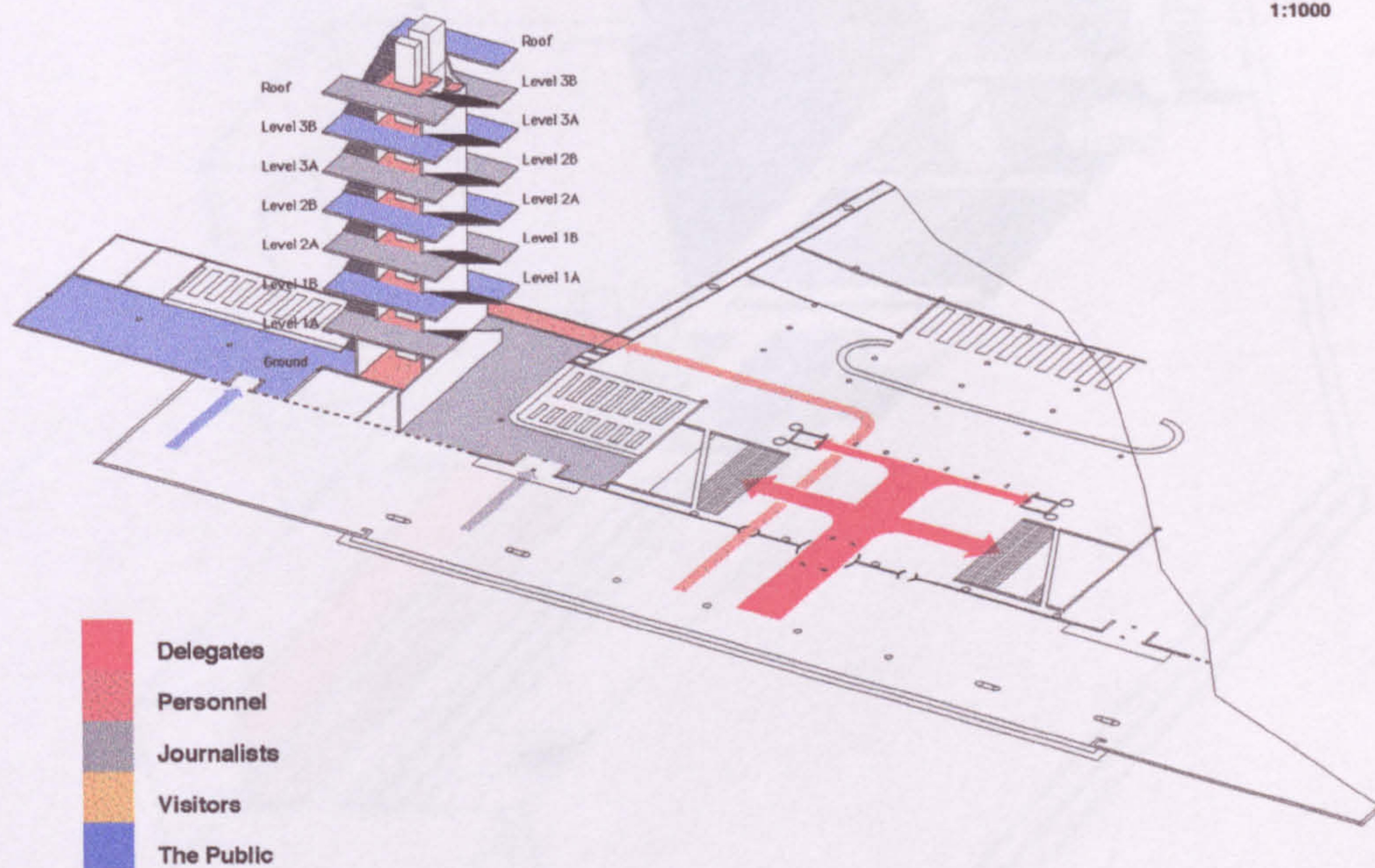


La circulation dans le bâtiment de la Grande Salle des Assemblées, du Conseil des Nations, des Grandes Commissions
(classement automatique de la circulation).
Coupe verticale (cette coupe, avec ses flèches de circulation, était établie en diverses couleurs rendant la lecture très claire).

From: Une Maison - Un Palais



ASSEMBLY HALL
GROUND FLOOR PLAN
1:1000



- Delegates
- Personnel
- Journalists
- Visitors
- The Public

**Patterns of Movement:
Access to the Assembly Hall**

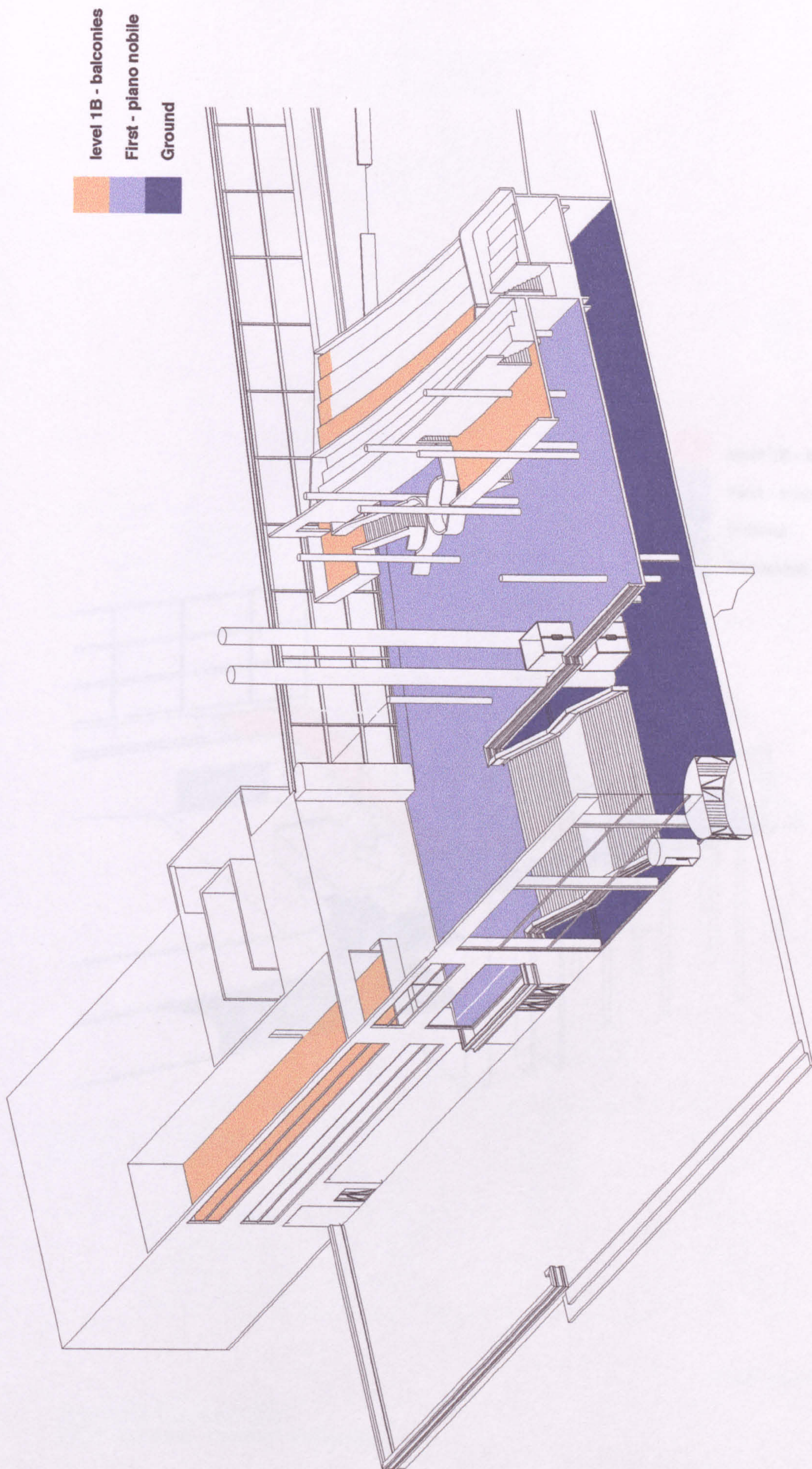


figure 56

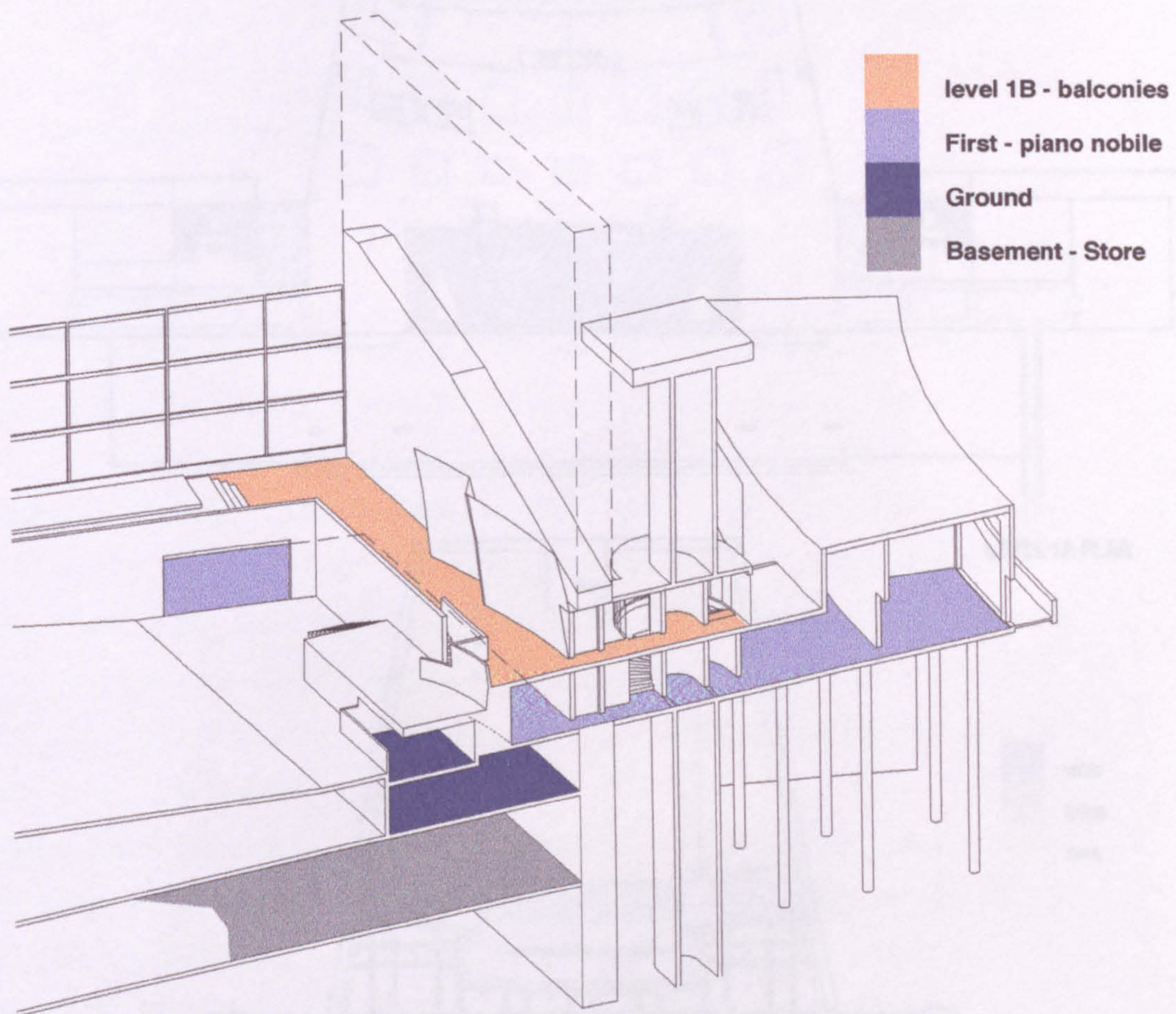
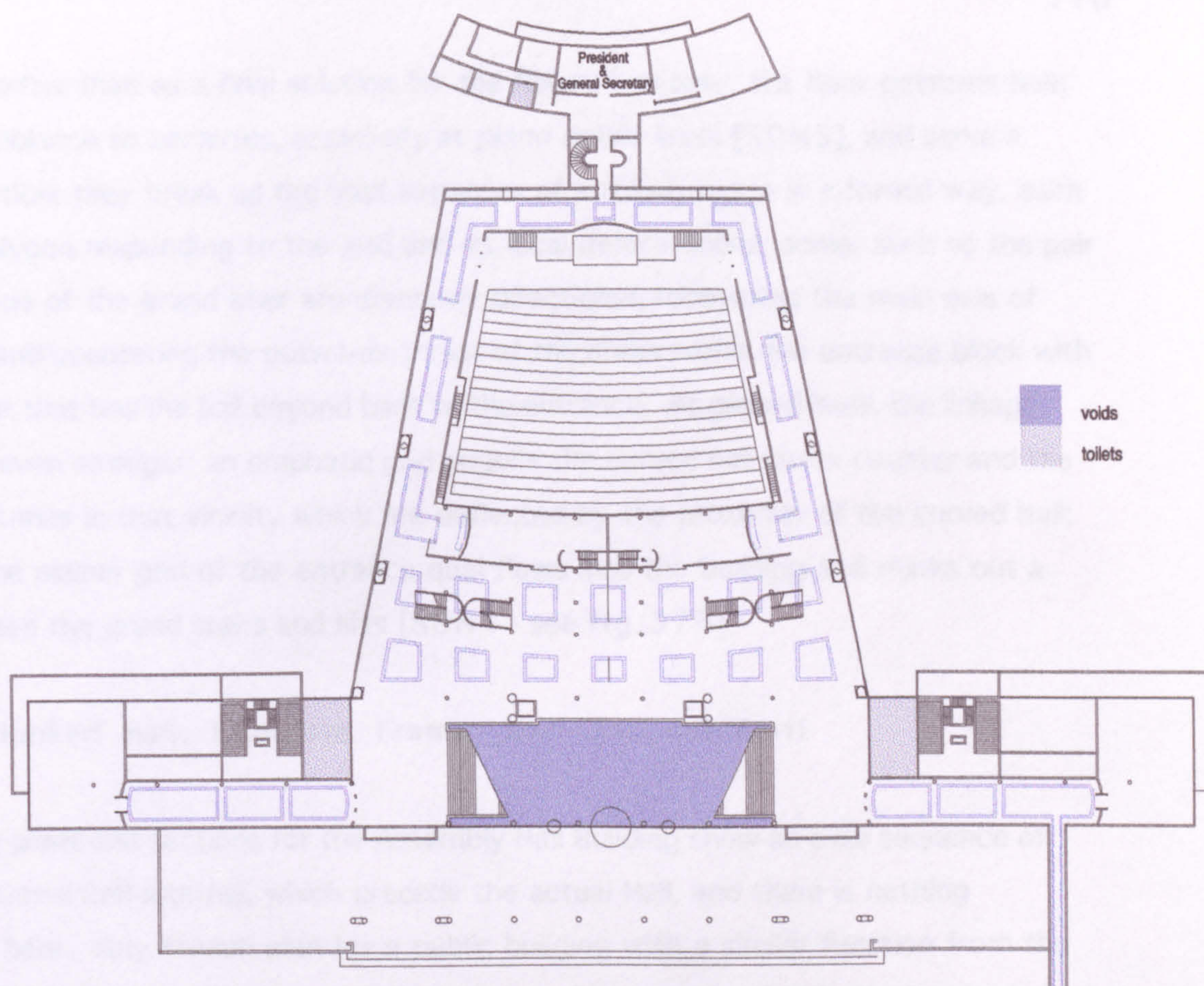
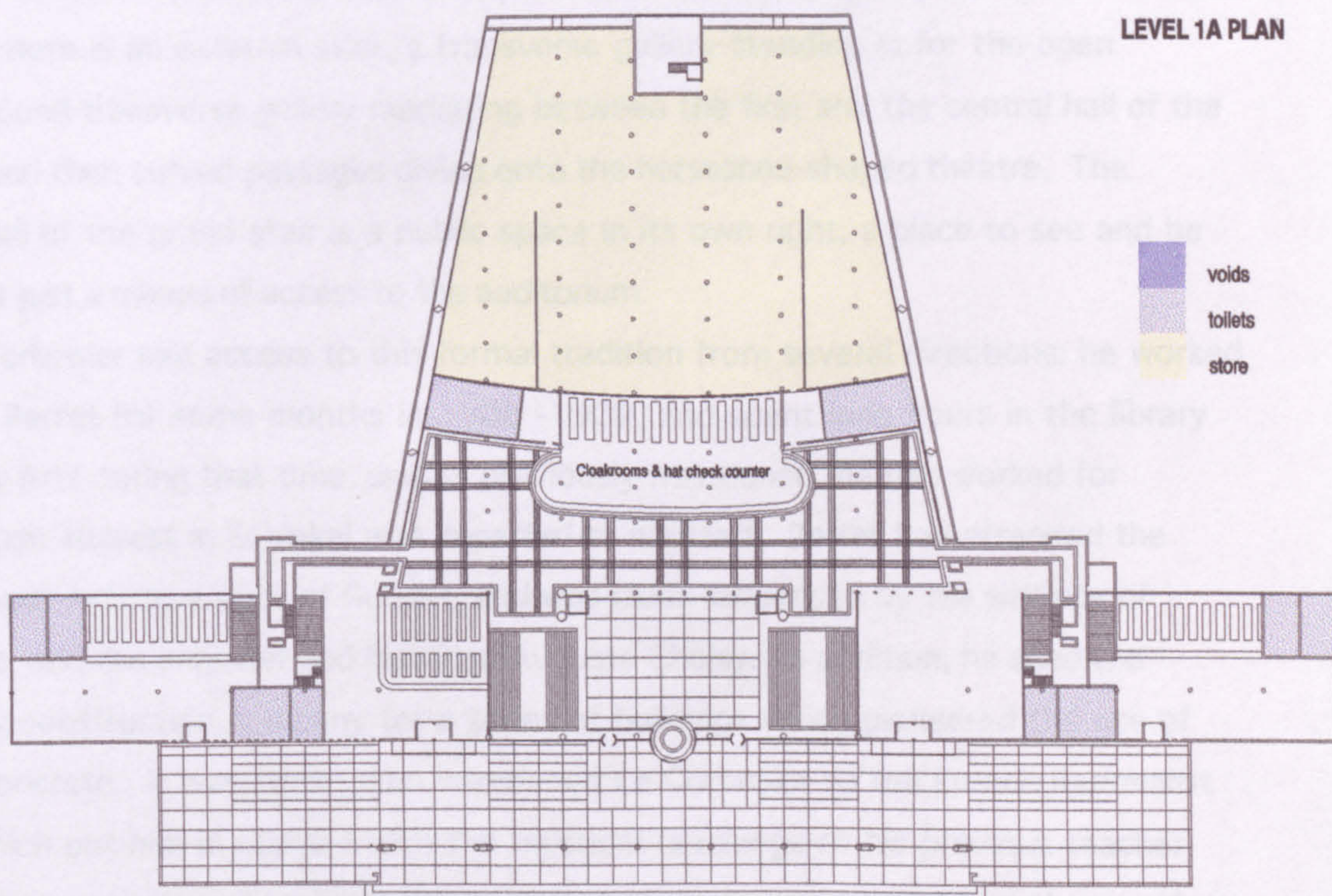


figure 57A



LEVEL 1A PLAN



GROUND FLOOR PLAN

**Assembly Entrance Hall
Floor Patterns - internal 'parterres'**

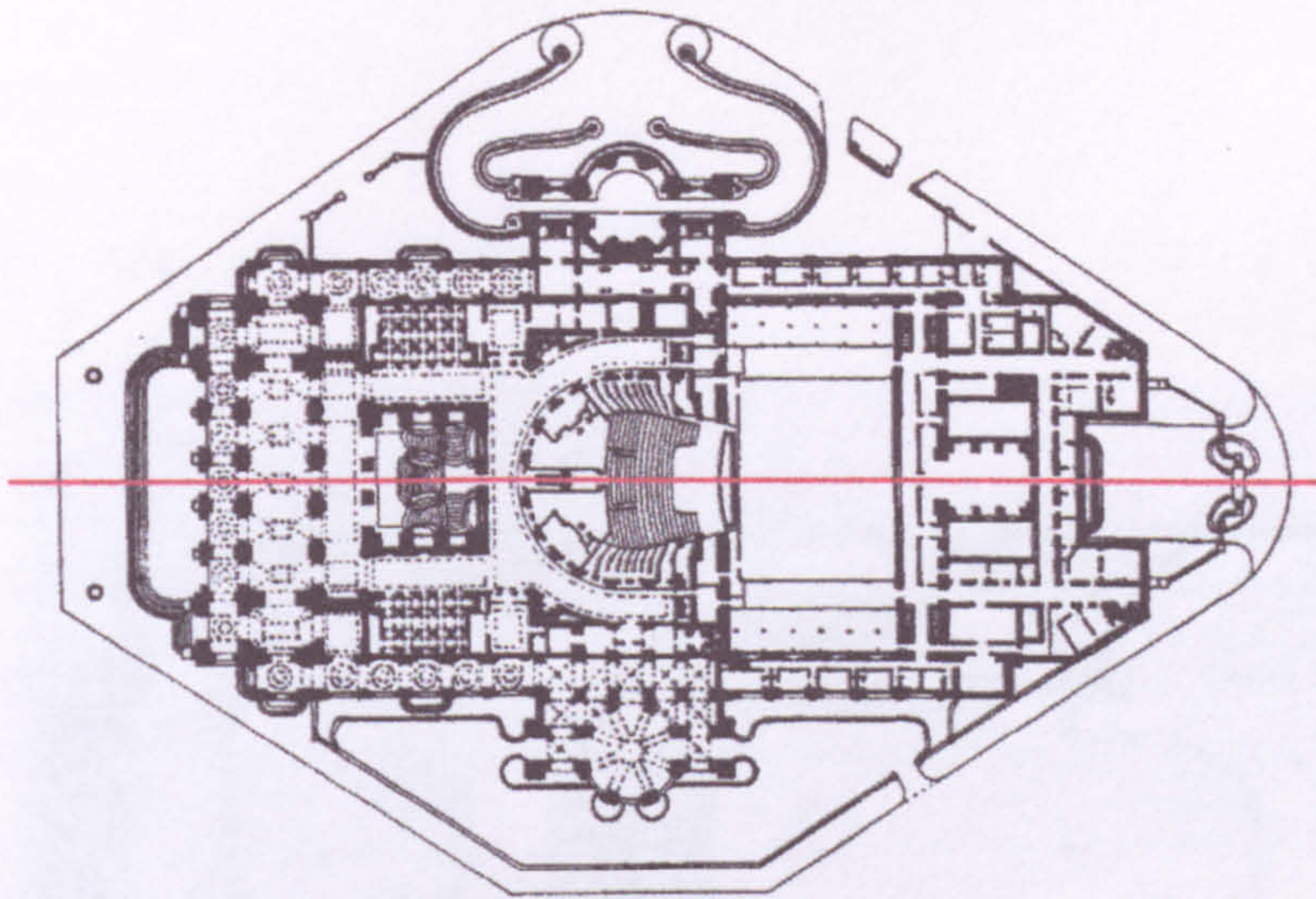
figure 57B

drawings, rather than as a final solution for the floors, however, the floor patterns bear some resemblance to parterres, especially at *piano nobile* level [SDN5], and serve a similar function: they break up the vast expanses of strolling space in a formal way, each parterre-polygon responding to the grid and its local deformations; some, such as the pair on either side of the grand stair are distinctly directional, recovering the main axis of symmetry and countering the outwards thrust of the stairs within the entrance block with a movement that ties the hall beyond back to the entrance. At ground level, the linkage function is even stronger: an emphatic grid engulfs the curved hat-check counter and the rows of columns in that vicinity which are deflected by the proximity of the curved hall; similarly, the plainer grid of the entrance quai flows into the building and marks out a plain between the grand stairs and lifts [SDN4 - see fig. 57B].

The Overlooked hall: Concrete Frame, Neo-Classical Parti

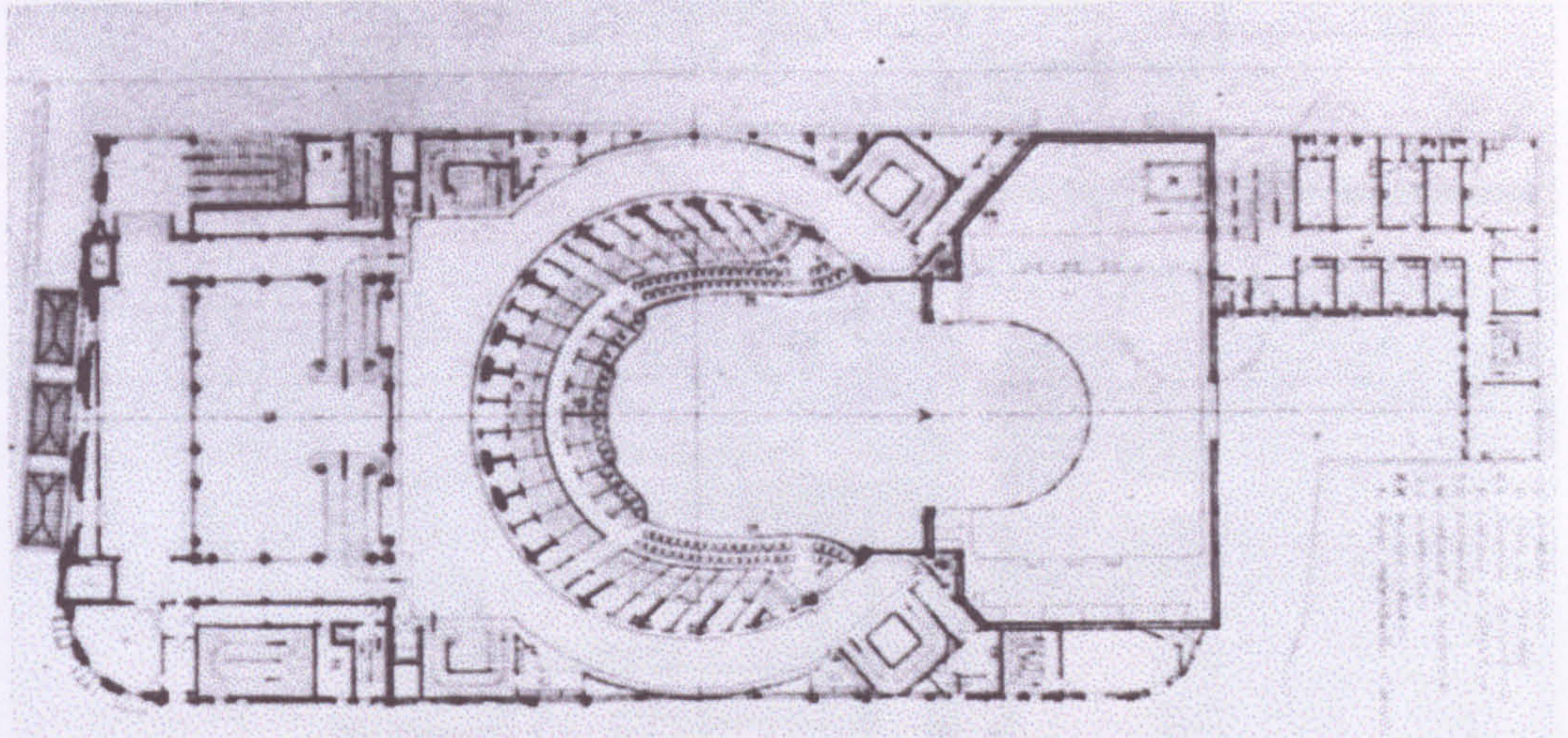
The plans and sections for the Assembly Hall Building show an axial sequence of spaces, external and internal, which precede the actual Hall, and there is nothing innovative here. Any French plan for a public building with a similar function from the previous two centuries possesses such a sequence, for example, the Opéra Garnier in Paris [fig. 58A]. Here is an external stair, a transverse gallery standing in for the open portico, a second transverse gallery mediating between the first and the central hall of the grand stair, and then curved passages giving onto the horseshoe-shaped theatre. The multi-level hall of the grand stair is a public space in its own right, a place to see and be seen, and not just a means of access to the auditorium.

Le Corbusier had access to this formal tradition from several directions: he worked for Auguste Perret for some months in 1908 -1909, and spent long hours in the library of the Beaux-Arts during that time, and as previously mentioned, he had worked for Behrens, whose interest in Schinkel was imparted to his staff. Perret had attended the Ecole des Beaux-Arts as a pupil of Guadet, and was much influenced by the writings of Viollet le Duc, and the engineer and historian Auguste Choisy. In addition, he used the Perret family construction company for a series of buildings which pioneered the use of reinforced concrete. It was Perret who introduced Le Corbusier to the French Rationalist tradition, which put him in conflict with the mystical teachings of his previous teacher, L'Eplattenier; a resolution of these opposing points of view is evident later in the manifest dualism of Le Corbusier's mature work⁹⁸. There is no doubt that Le Corbusier's interest in concrete frame structures derived from his encounter with Perret, and he acknowledged



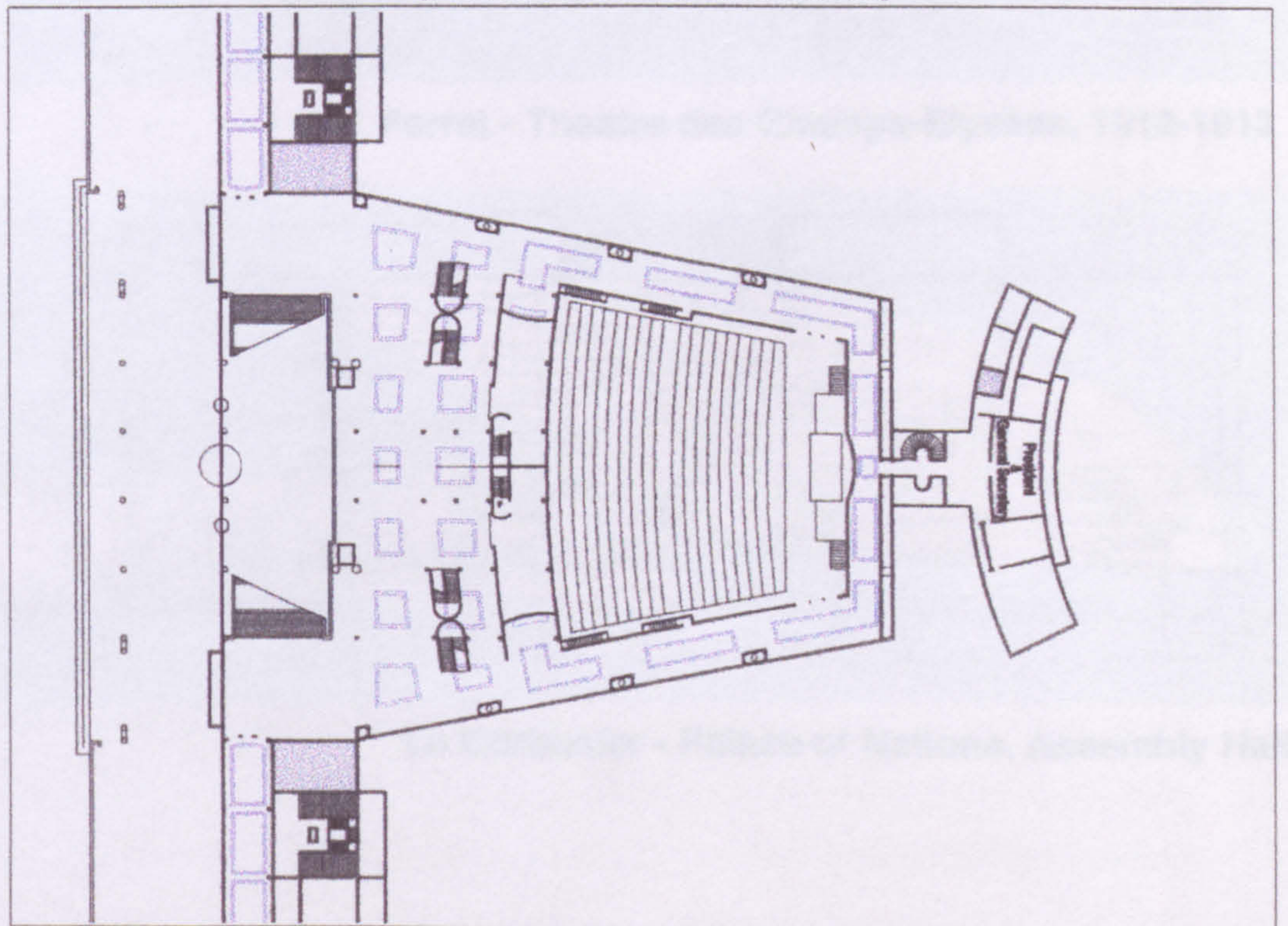
Opera Garnier. Paris, 1861-74

[From John Summerson, 'The Classical Language of Architecture']



Perret - Theatre des Champs-Élysées, 1912-1913

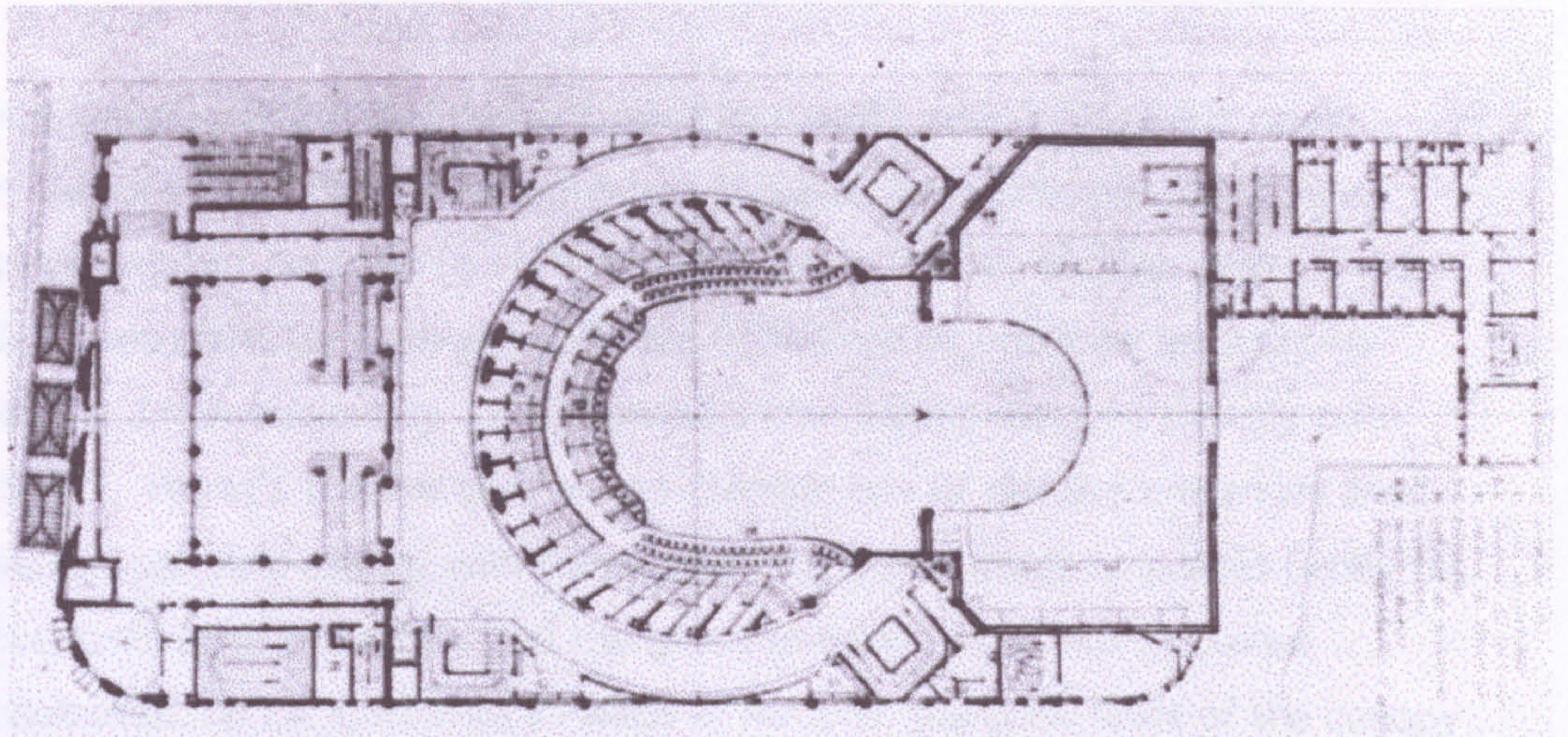
[Plan from 'Perret e Le Corbusier confronti']



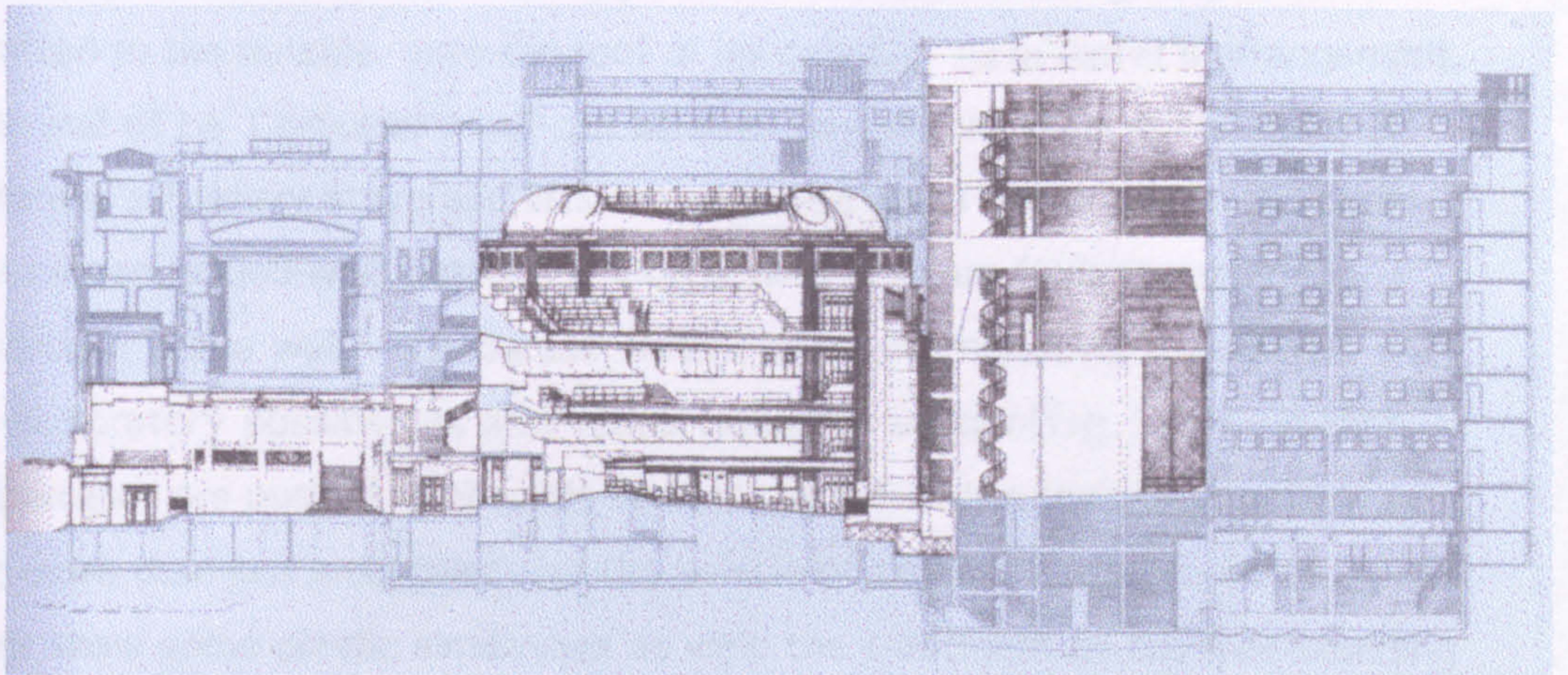
Le Corbusier - Palace of Nations, Assembly Hall

[plans not to same scale]

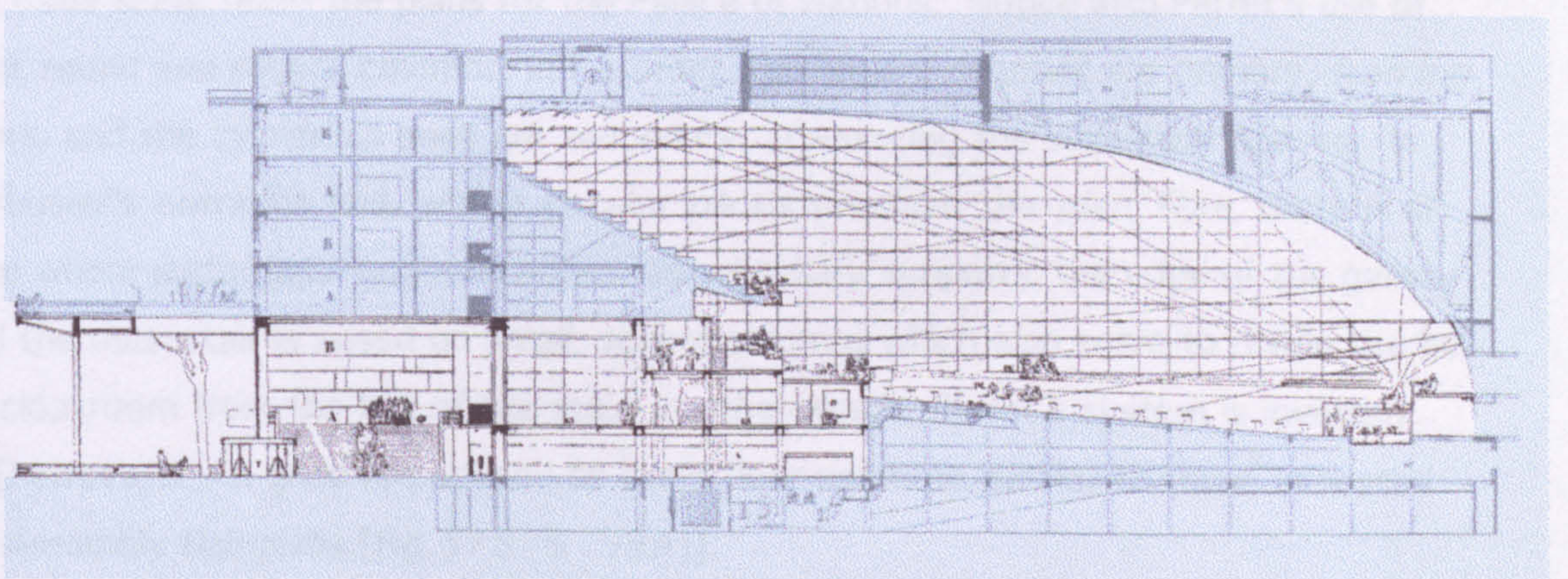
figure 58A



[Plan from 'Perret e Le Corbusier confronti']



Perret - Theatre des Champs-Élysées, 1912-1913

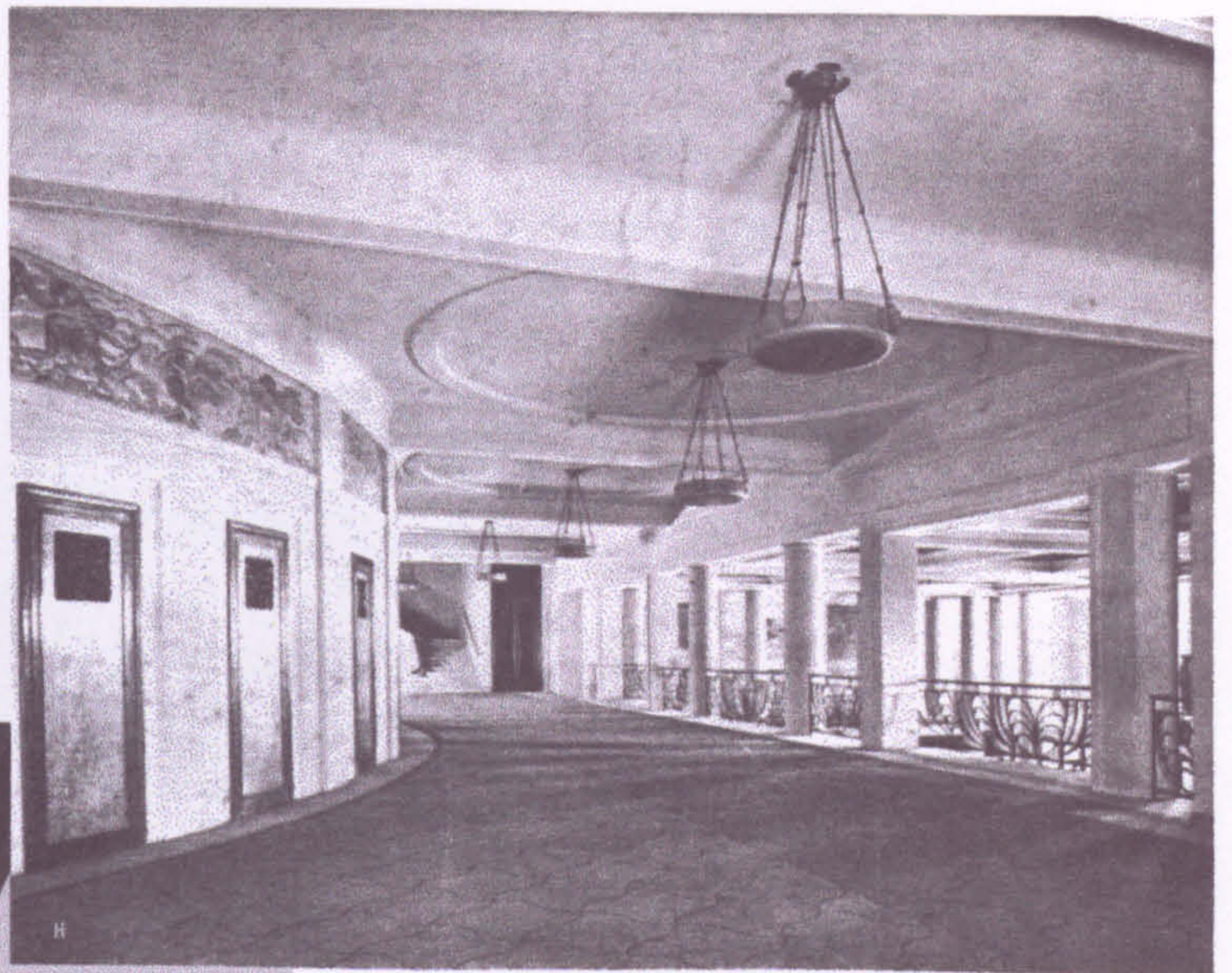
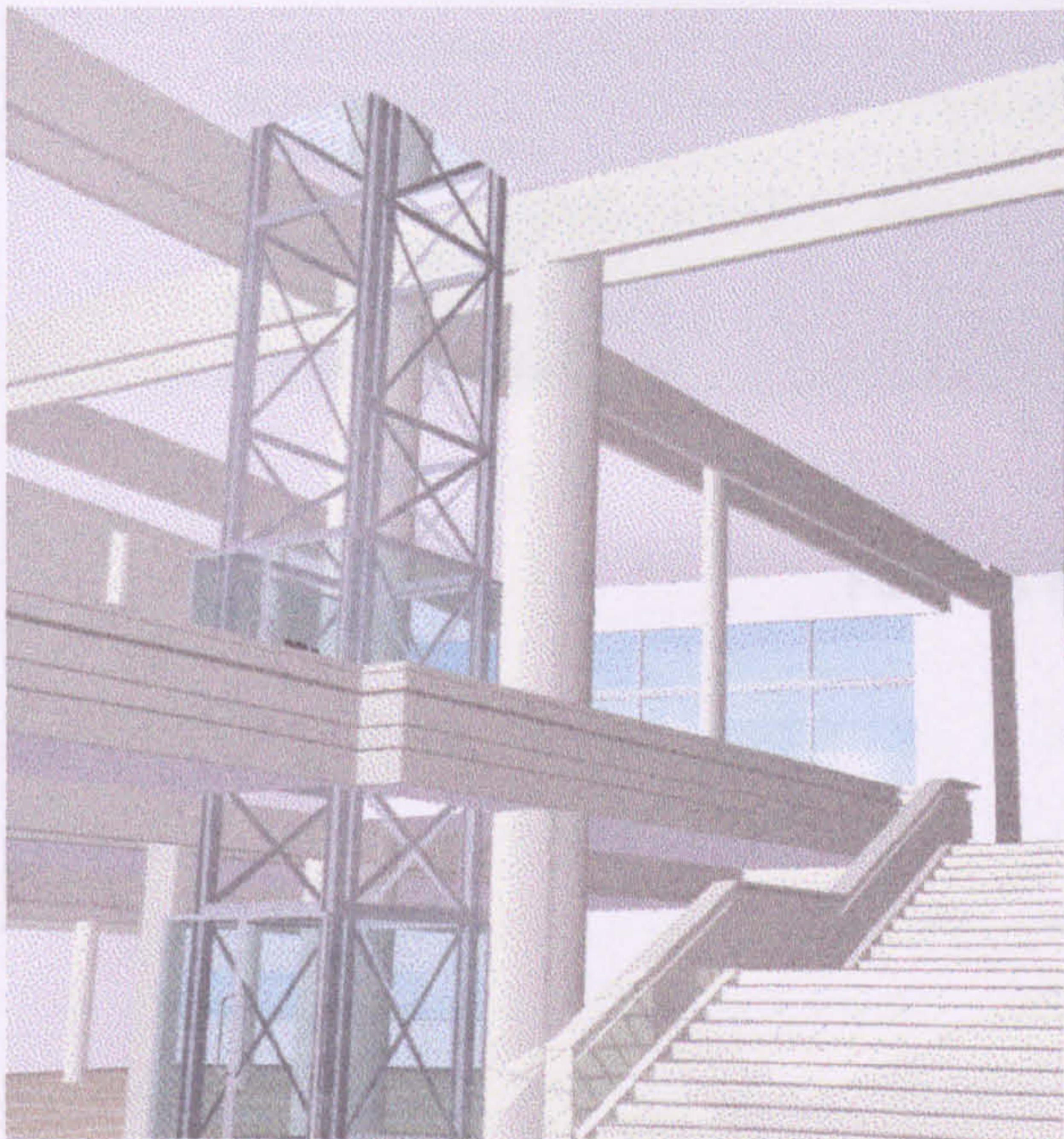


Le Corbusier - Palace of Nations, Assembly Hall

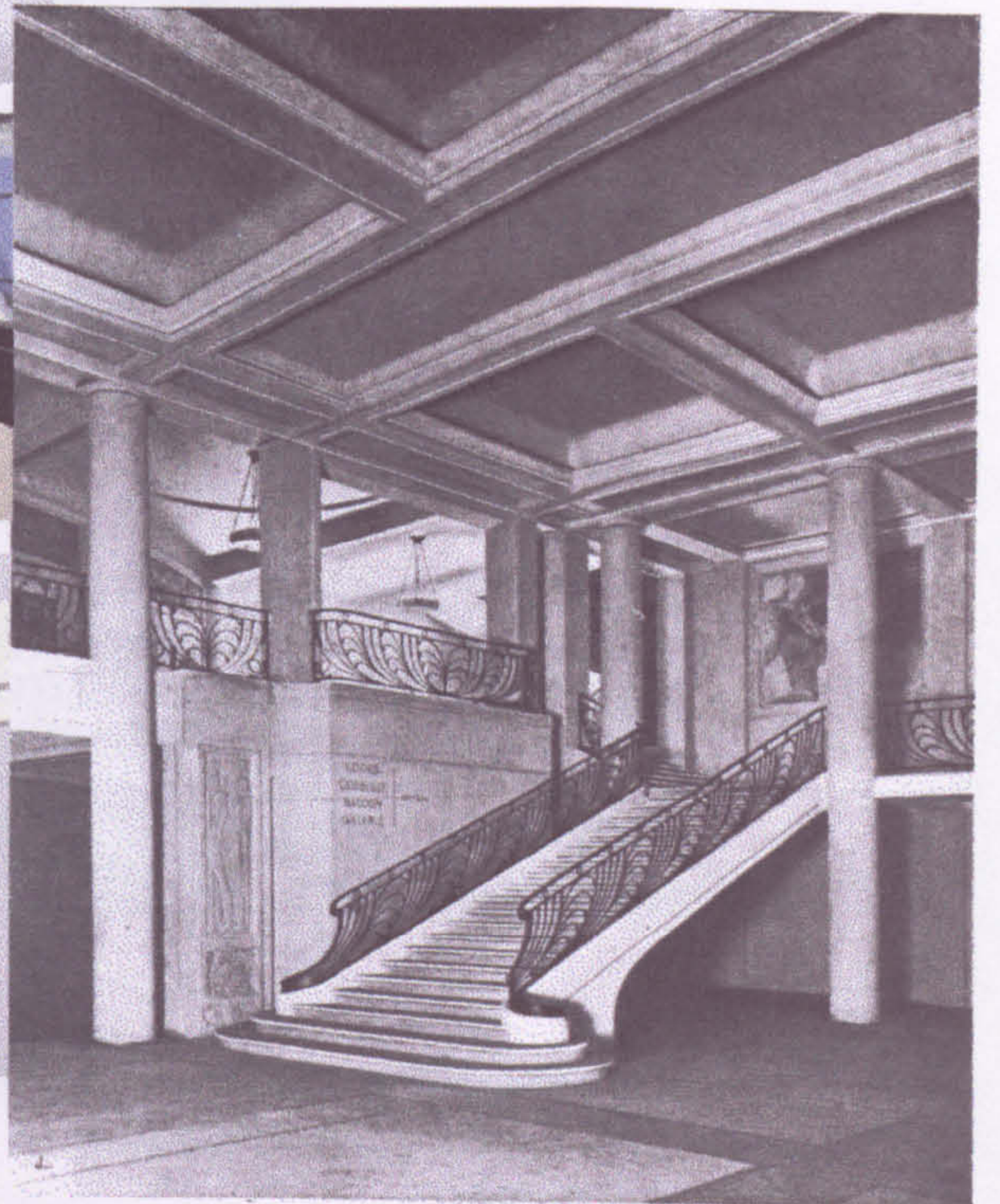
this influence: the two figures drawn by Le Corbusier on the long section for the Assembly Hall have been identified by Kenneth Frampton as Auguste Perret and himself: a most direct tribute⁹⁹.

The extravagant progression from entrance to theatre seen in Garnier's opera house recurs in Perret's 1913 Théâtre des Champs-Élysées. Le Corbusier might have worked on this theatre, but declined Perret's offer¹⁰⁰; nevertheless, a comparison of the plan forms of the theatre and Le Corbusier's Palace of Nations at entrance level shows striking similarities: organisationally Le Corbusier's plan can be mapped directly onto Perret's [fig. 58A]. Perret's theatre goer enters through one of the five entrances lined up beneath a pierced concrete canopy with three glass roofs; once inside he passes beneath a gallery which overlooks both the street and the grand entrance hall, with its paired staircases and balconies. In Le Corbusier's Palace of Nations, the glass roofs of the canopy are replaced by the glass blocks between canopy and main facade, as the gallery over the entrances is shifted to the outside, onto the roof of his canopy. As in Perret's arrangement, the curved rear wall of Le Corbusier's hall can be seen beyond the main stairs and their associated galleries; subsidiary stairs and lifts are gathered up to either side in the same way. Even the curved 'sound-wall' behind Le Corbusier's rostrum finds its analogue in Perret's semi-circular stage wall. The parallel nature of these multilevel sequences, each with identical exploratory possibilities also reads clearly in section [fig. 58B]. In each building, the staircases are pushed to the side so that the hall of the stair is occupiable, a place to linger; more than just a container for the vehicle of ascent. Photographs of Perret's theatre show some plastic similarities as well: the treatment of the free-standing columns and grid of downstand beams, some coupled, and the continuous balcony running around three sides, recall the plans for the Palace of Nations. Notice also Perret's use of adjacent round and square columns: in his order, the square columns are primary, *framing* members, and the cylindrical ones are secondary, articulating the subsidiary spaces. In Le Corbusier's entrance hall, where circular pilotis proclaim the *plan libre*, there is an instance where rectangular columns appear as subsidiary supports: the edge of the gallery beyond the main stair is raised on small, square columns which also serve to divide the hall of the cloakroom from the hall of the stair; in other words, Perret's system is inverted here. [Perret's beam grids are echoed as inlaid floor patterns, similar to those indicated on the Assembly Hall plans [fig. 57B & 59A]].

Other compositional similarities between the two buildings suggest that Le Corbusier had absorbed something of Perret's approach to the formal constitution of the concrete frame and its application to the Neo-Classical parti. Common to the entrance

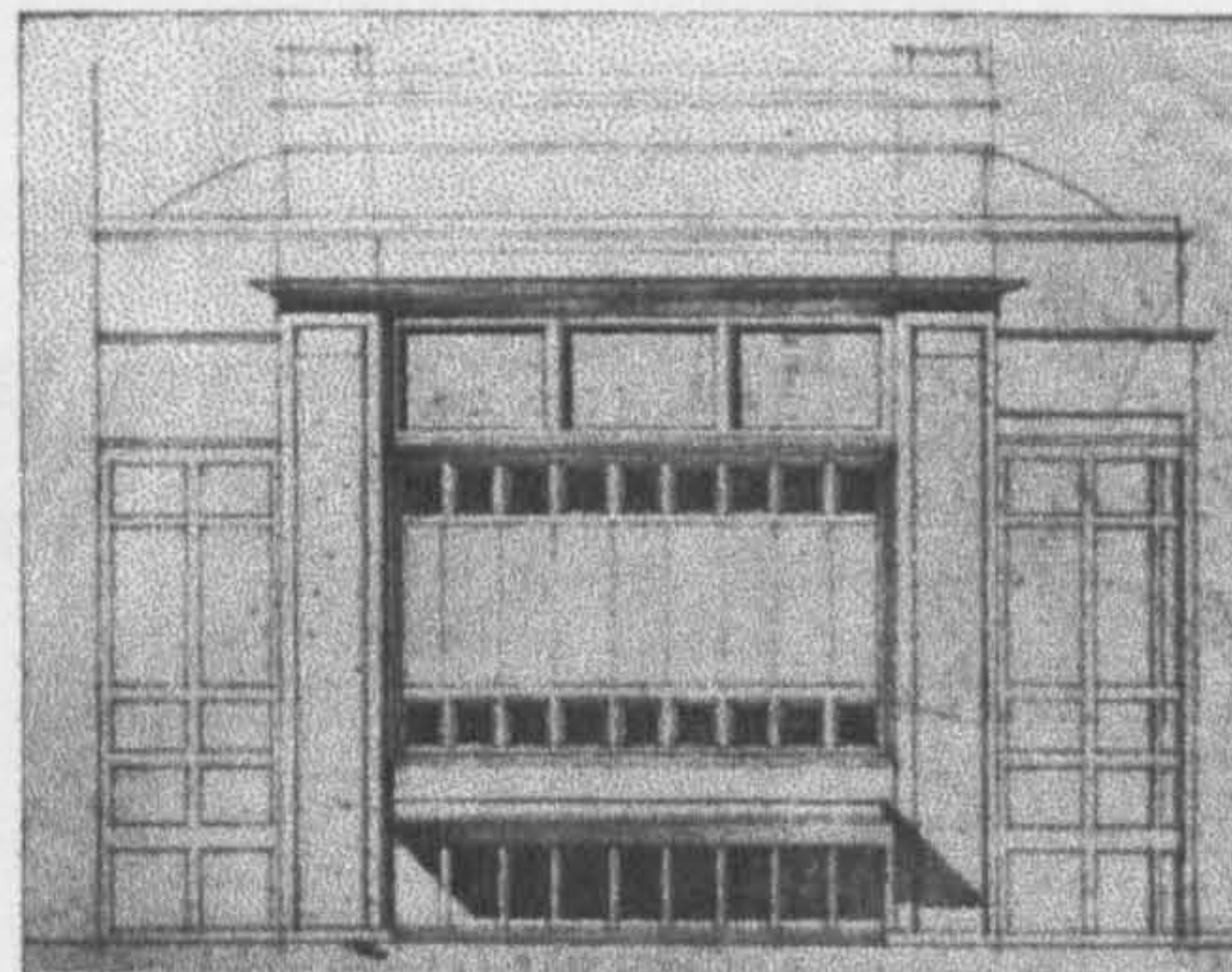


**Theatre des Champs-Elysees:
Gallery overlooking grand stair,
curved wall of theatre to left**

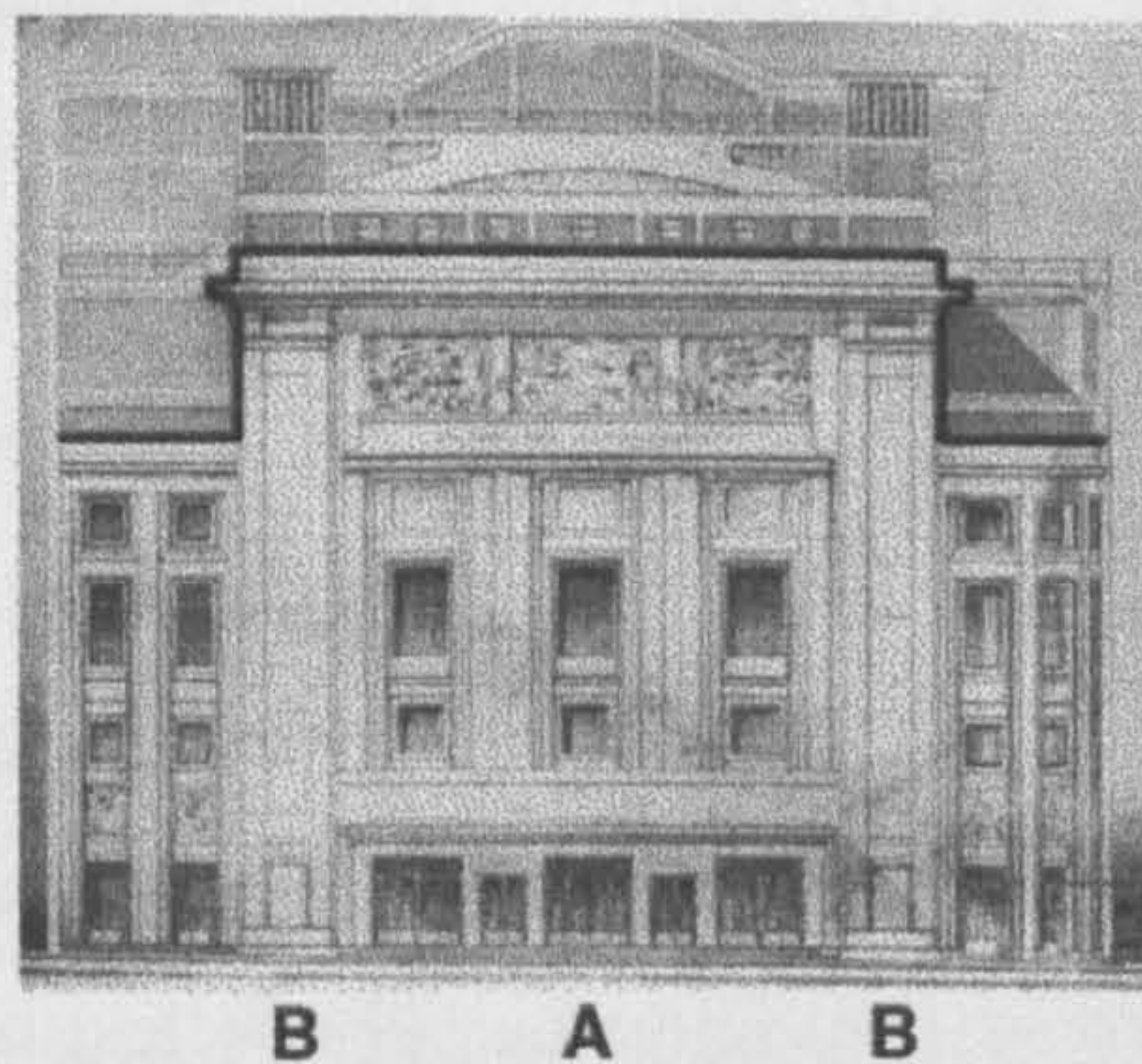


**Theatre des Champs-Elysees Entrance Hall:
floor pattern reflects beam-grid of ceiling**

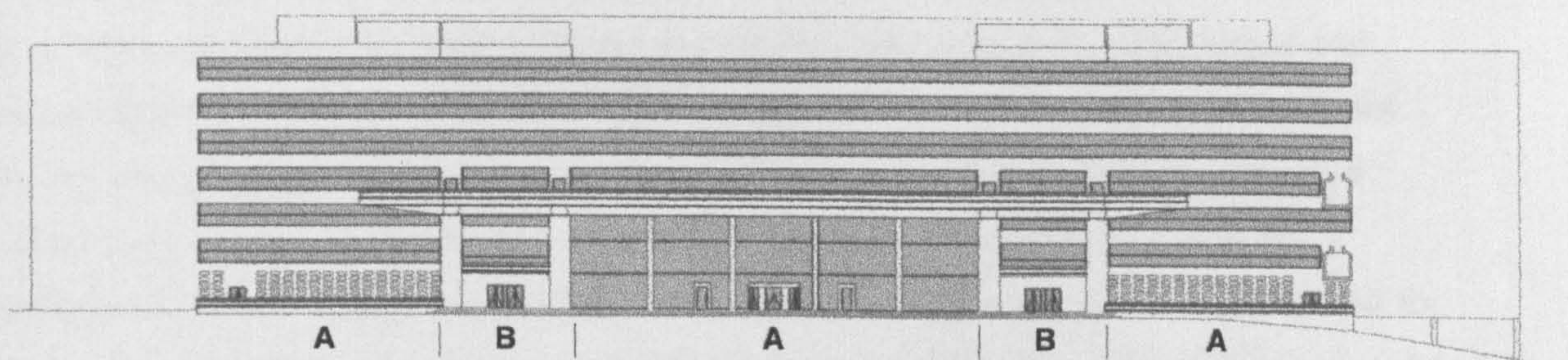
Images from L'Architecture D'Aujourd'Hui,
Special Perret, No.VII, 1932



facade study for theatre, 1912



B A B



A B A B A

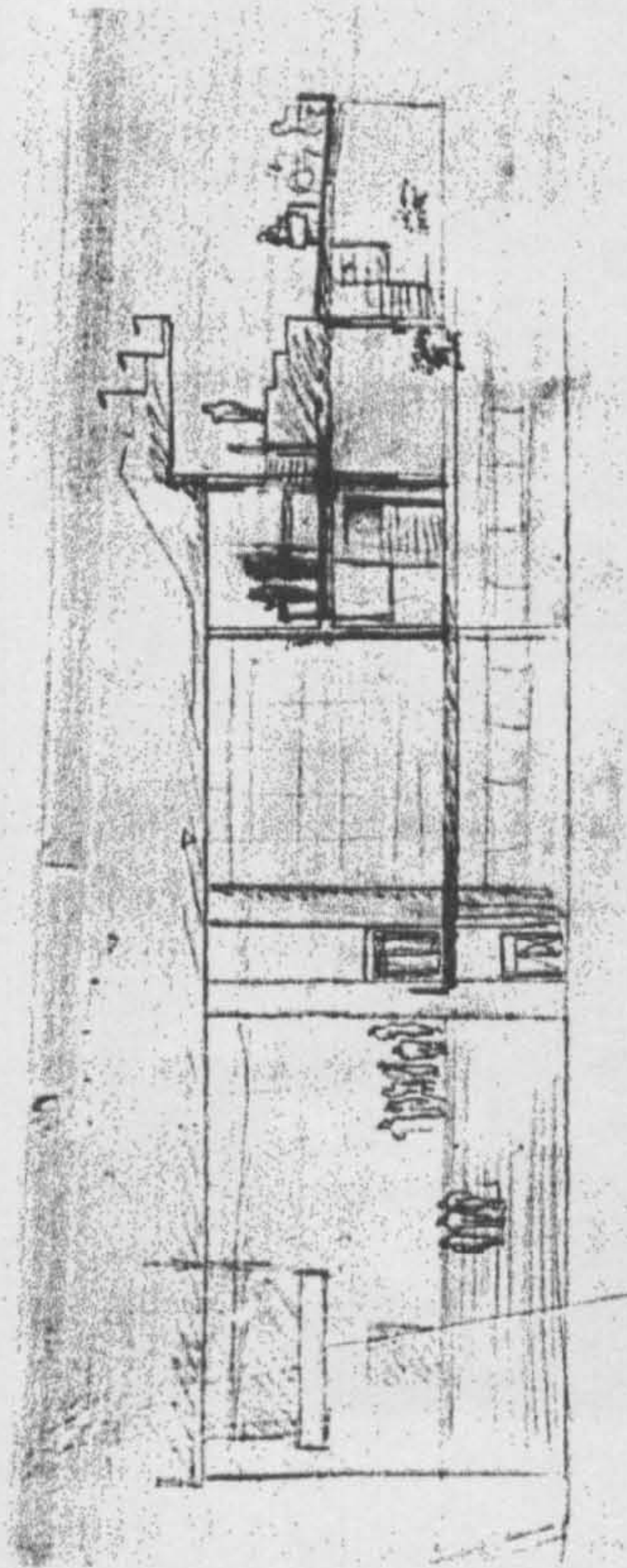
Facades of Perret's 1913 Theatre des Champs-Elysees
& Le Corbusier's Palace of Nations, 1927.
[Not to the same scale]

Theatre images from L'Architecture D'Aujourd'Hui,
Special Perret, No.VII, 1932

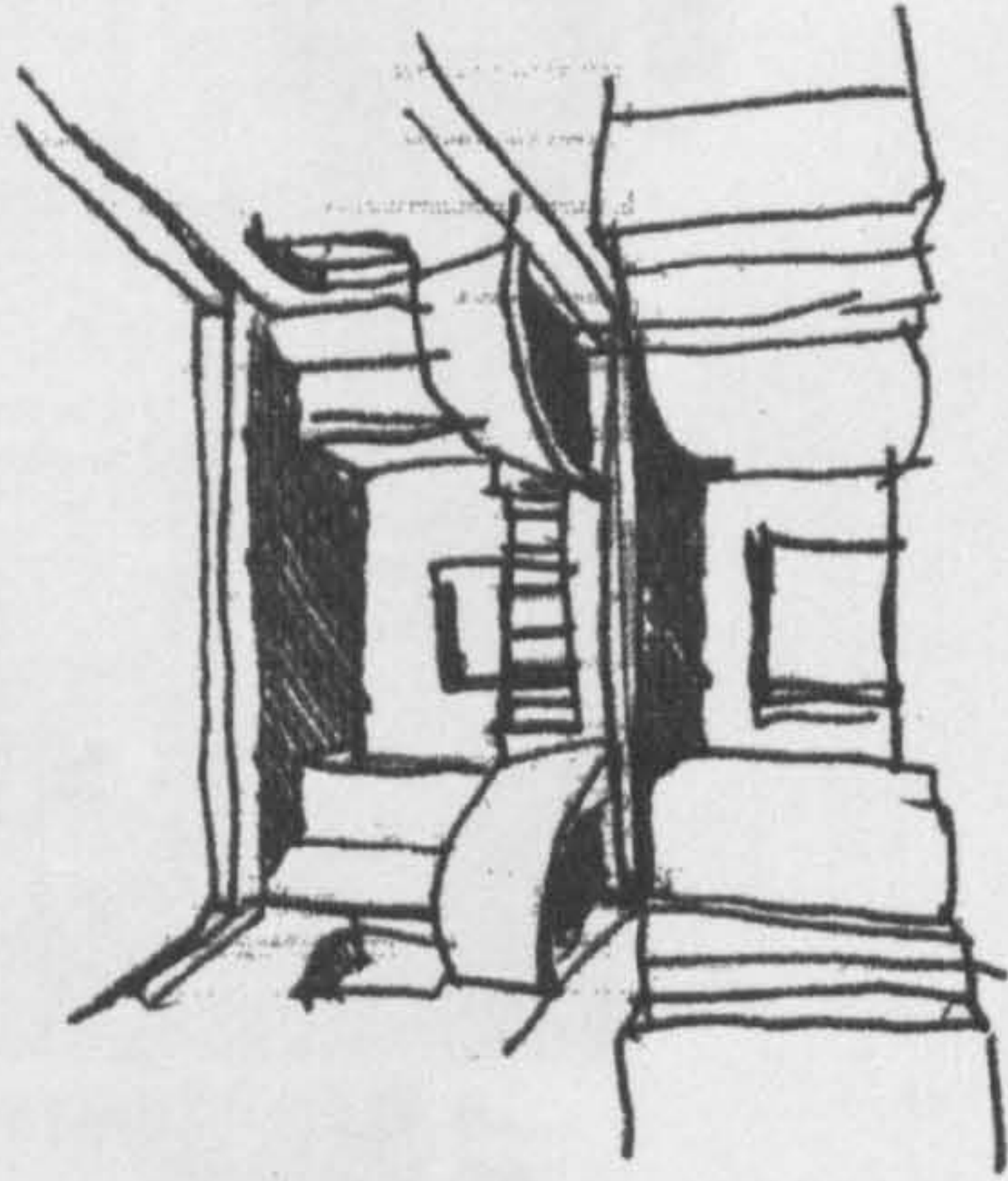
facades of the two buildings, both of which are organised rhythmically on an ABABA scheme, are the coupled columns/piers to either side of the main range of entrances. In Le Corbusier's project, there are additional entrances between the pairs of columns, in Perret's, door-sized blank panels are delineated. Perret's frame-columns continue uninterrupted to roof level while Le Corbusier's are tied back to the building by twin bridges to the roof of the portico; the vertical 'B' zone of the facade thus constituted is reinforced at roof level by matched balconies. Le Corbusier replaces Perret's figurative frieze with inhabited roof terraces. [fig. 59B]

To return to the interior: the multilevel hall is not new in the work of Le Corbusier. Such spaces in his domestic interiors may be traced back to at least 1916 and the central, livingroom/hall of the Villa Schwob is an interesting example, not least because of its intricate formal symmetries, and the curved balconies that overhang the central space. Compare this with the graceful sequence of balconies and stairs slung around the curved rear of the Assembly Hall [fig. 60]. At the Villa Schwob, the staircase between the two levels is hidden, but by the early 1920's Le Corbusier had begun to exploit the suggestive and dynamic possibilities of the stair. This may be seen in Maison La Roche, Maison Cook, and the garden terraces of the Villa Stein. [fig. 61, 62] This last is of course an external space, but it has many of the same elements: the offset stair leading down into the garden, the main space of the covered terrace overlooked by a large balcony and the vertical slot window at the side; the promise of further habitable spaces beyond and above. The entry hall at the Palace of Nations exhibits the same exhaustive visual and physical exploration of space: balconies look into the hall on several levels and back out onto the entrance quai; the grand stairs are so wide that the half-landing is as much a destination as a pause in the upward progress of diplomats. All classes of user are permitted a part in this pageant of diplomacy, although the general public is restricted to observing from the balconies to left and right of the grand stair [fig. 63A]. This is a space for social display in the Parisian tradition, and as potent as its best known exemplar, the great staircase of the Opéra Garnier.

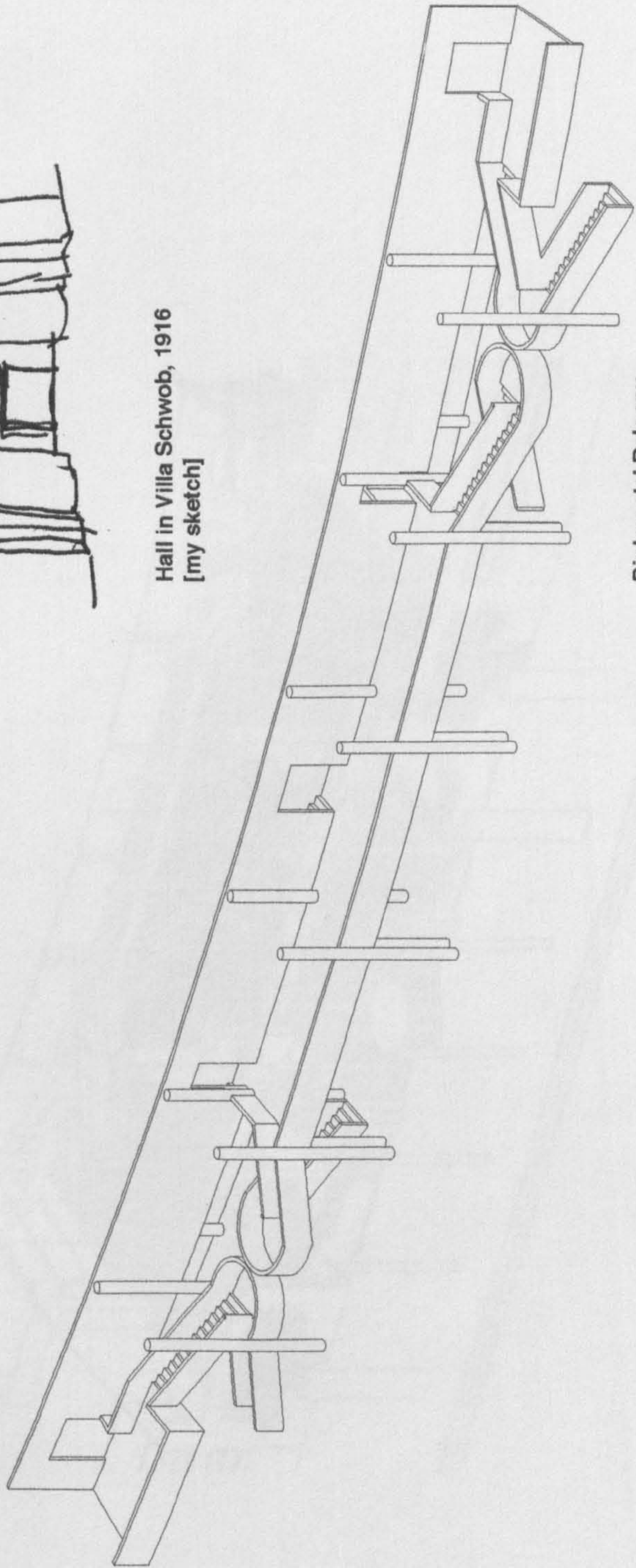
Reading the hall from outside to inside, it is clear that the main architectural events are organised as a series of porticos and screens across the approach axis through which the observer passes, but these events are not the entirely planar constructs of the Purist house: the rounded rear of the assembly hall around which the entrance hall flows, warps the last balconies. [fig. 60 & 63B]. This could be thought of as an instance of 'revealed poché'¹⁰¹: the Assembly hall is, after all, an 'instrument of visibility and



23.361



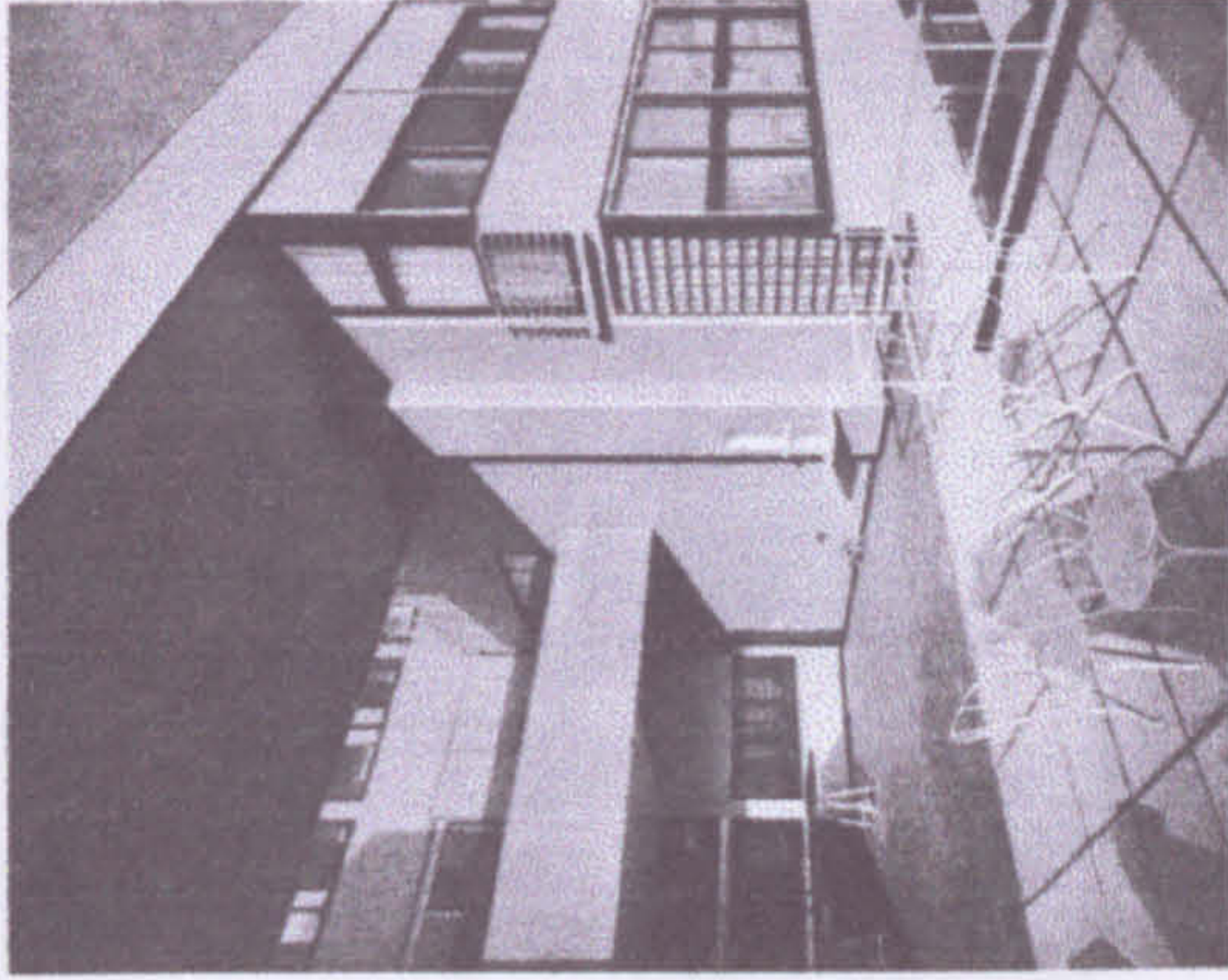
Hall in Villa Schwob, 1916
[my sketch]



Diplomats' Balcony
Assembly Hall,
Palace of Nations

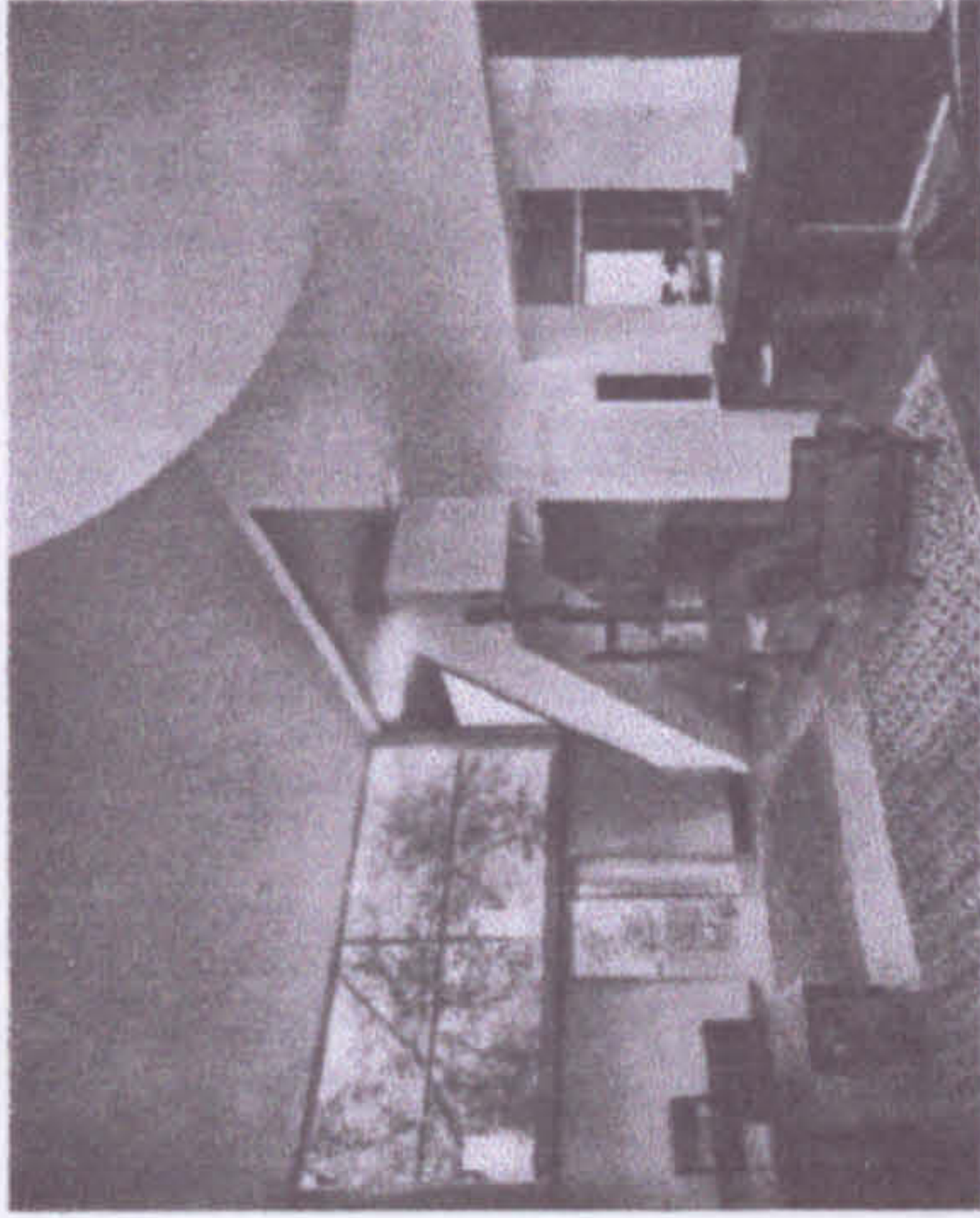
The Overlooked hall

Villa Stein at Garches



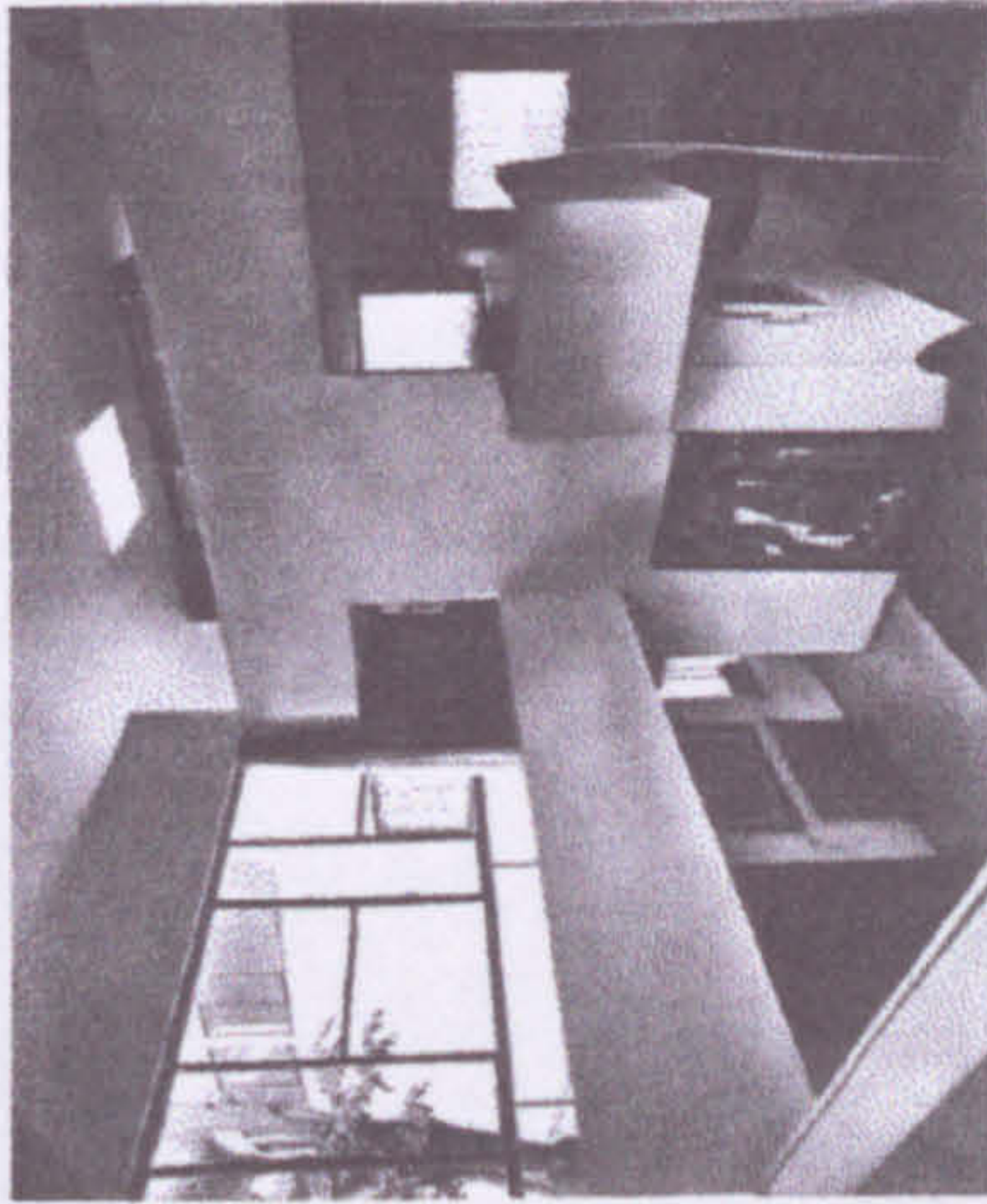
1927

Maison Cook

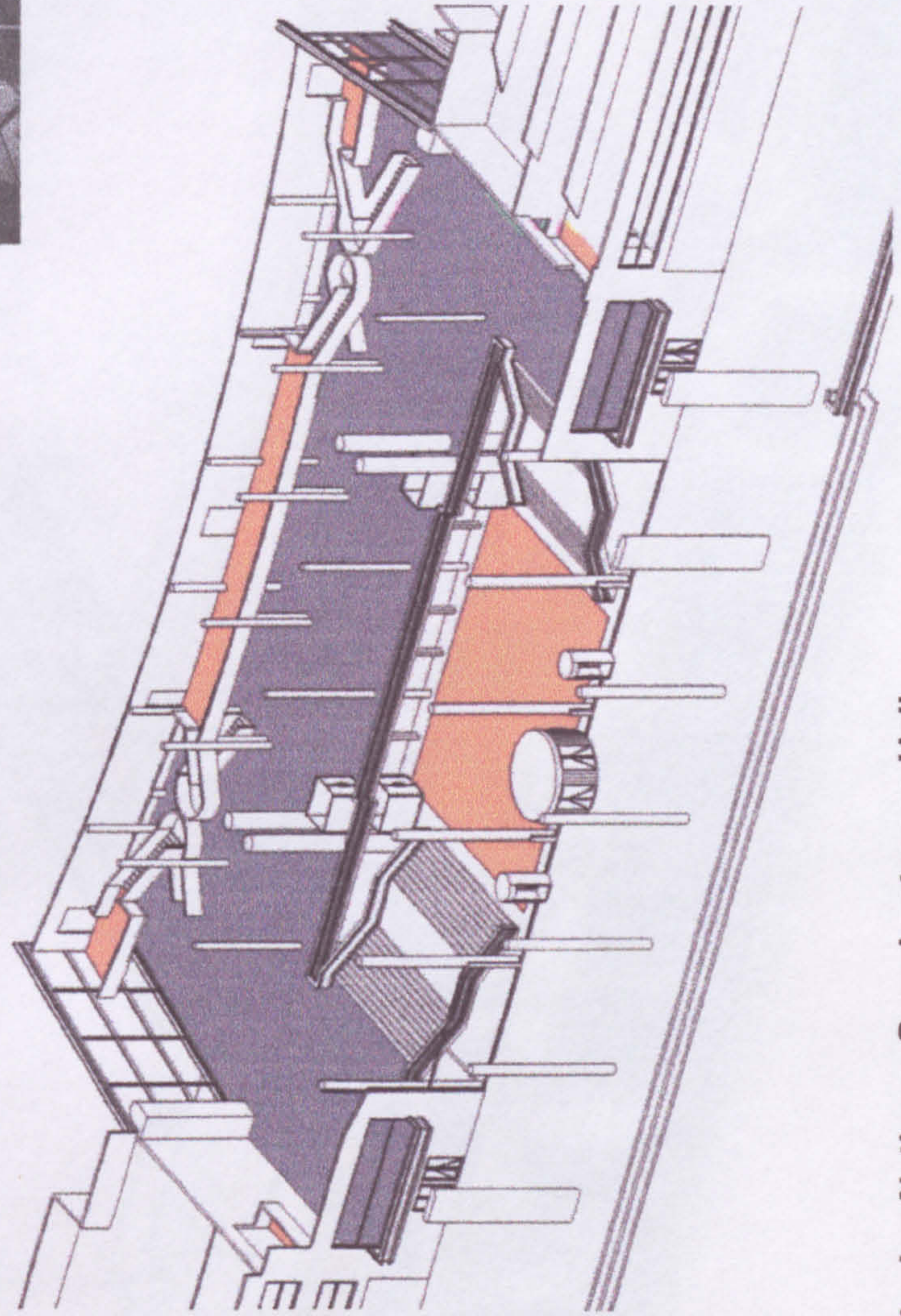


1927

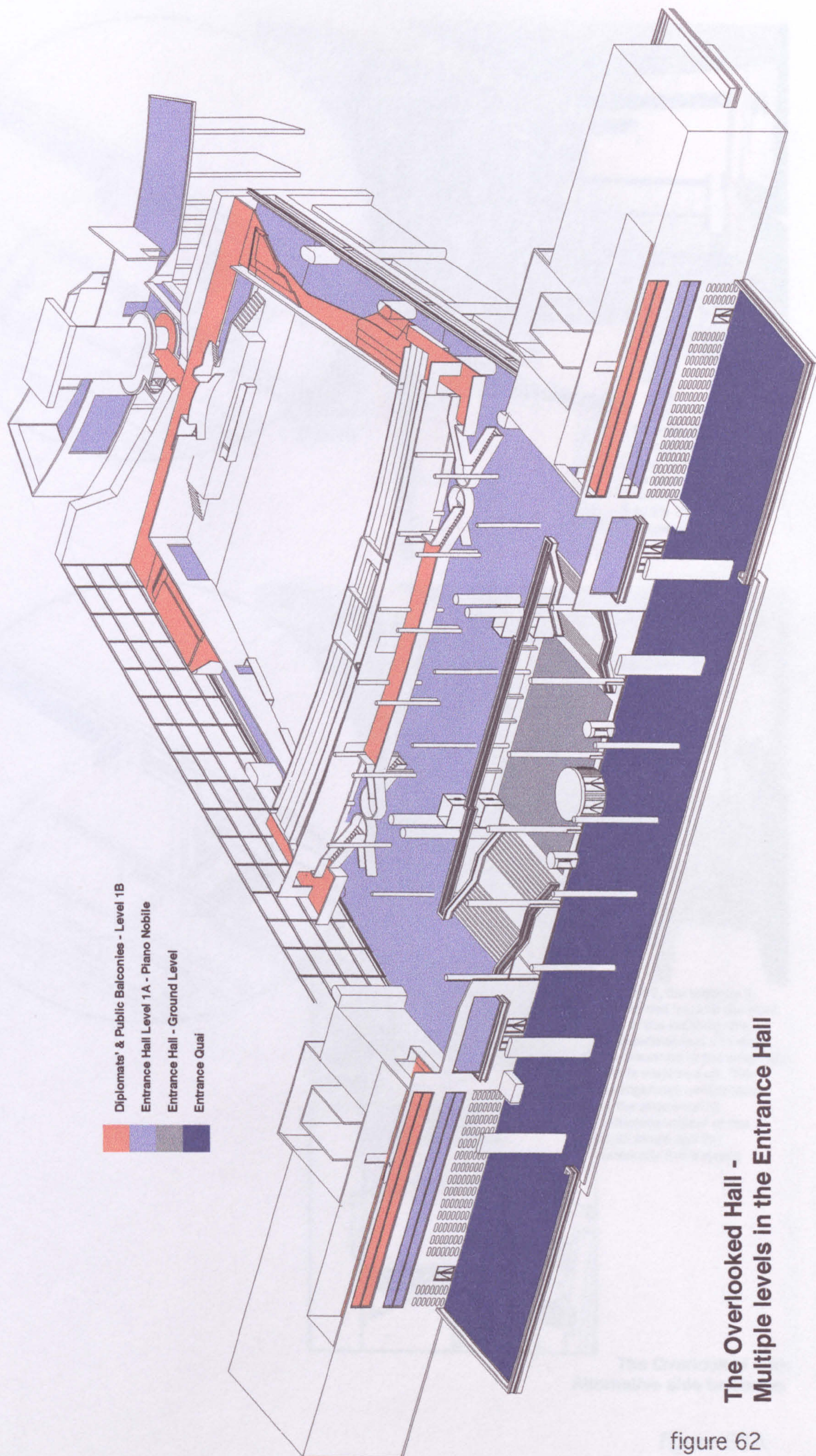
Maison La Roche



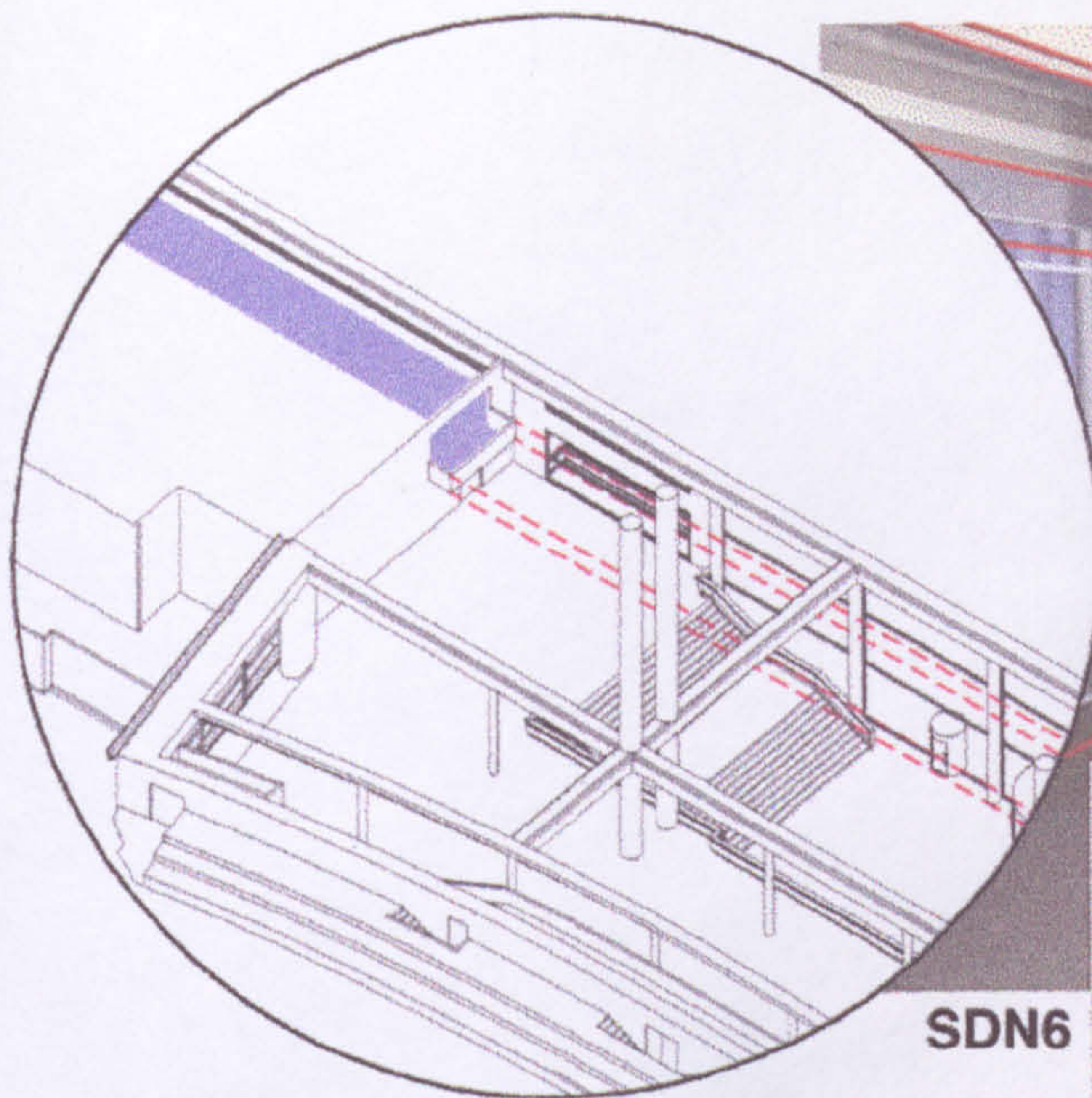
1923



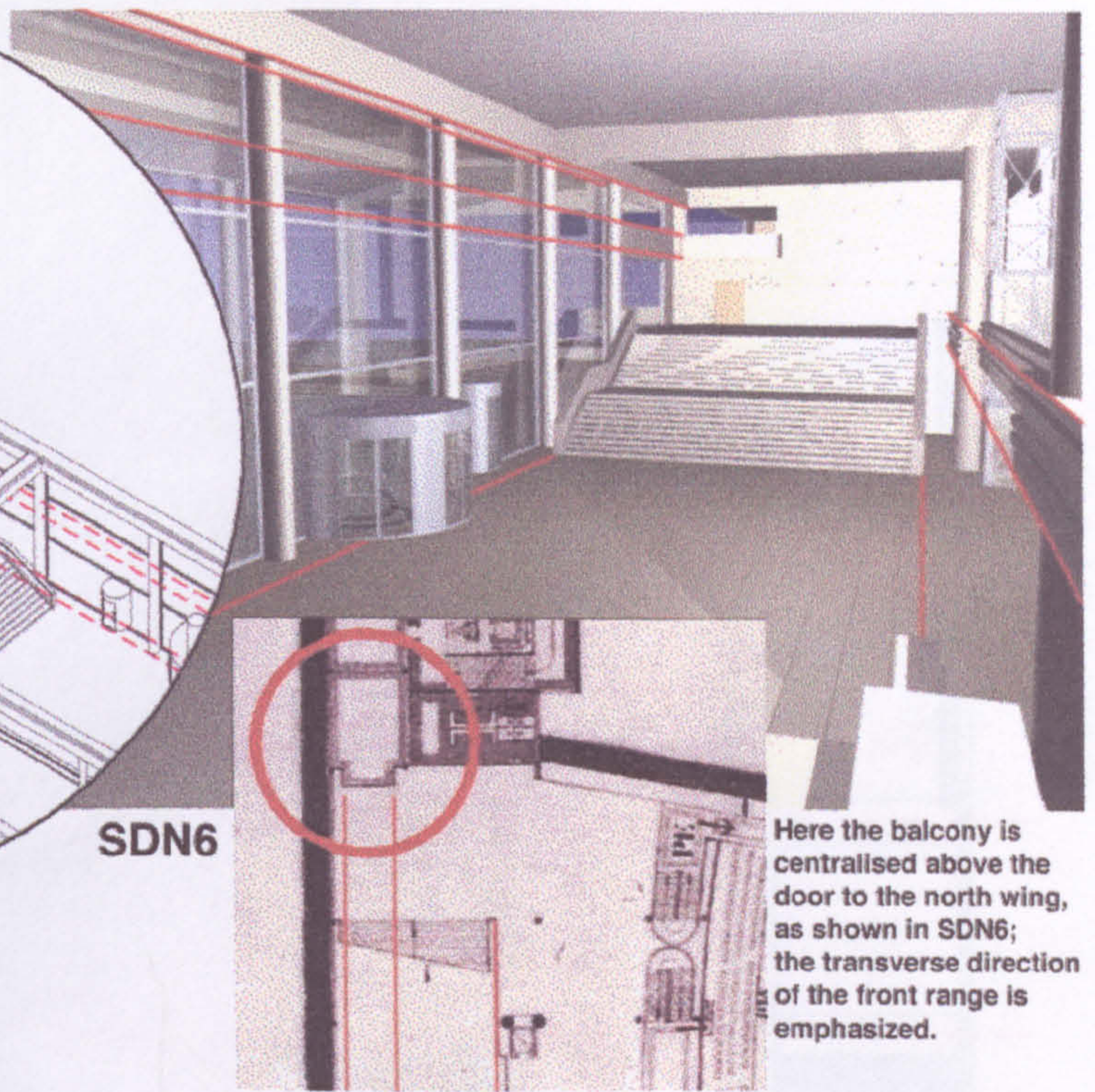
Palais des Nations: Grand entrance Hall
The overlooked Hall



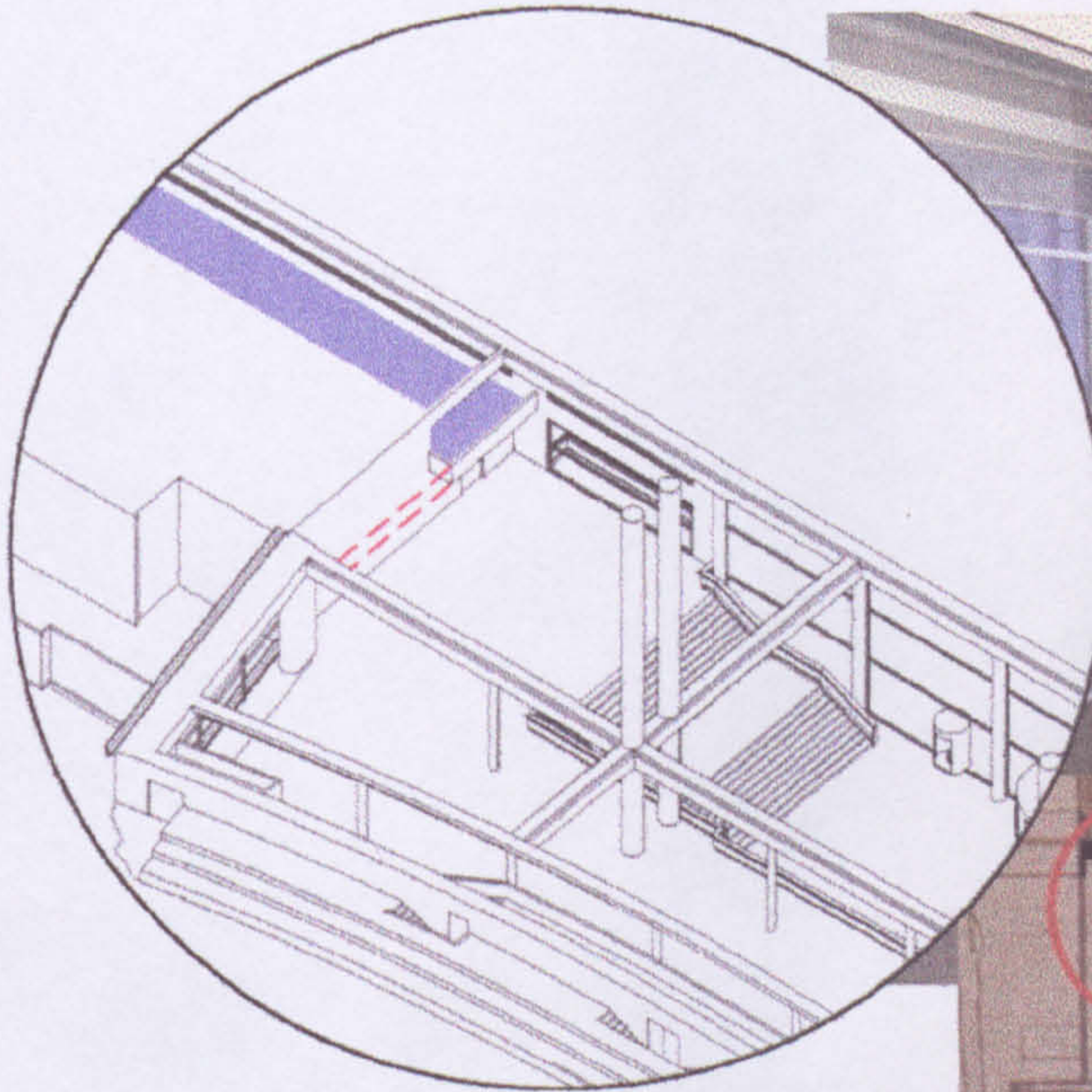
The Overlooked Hall -
 Multiple levels in the Entrance Hall



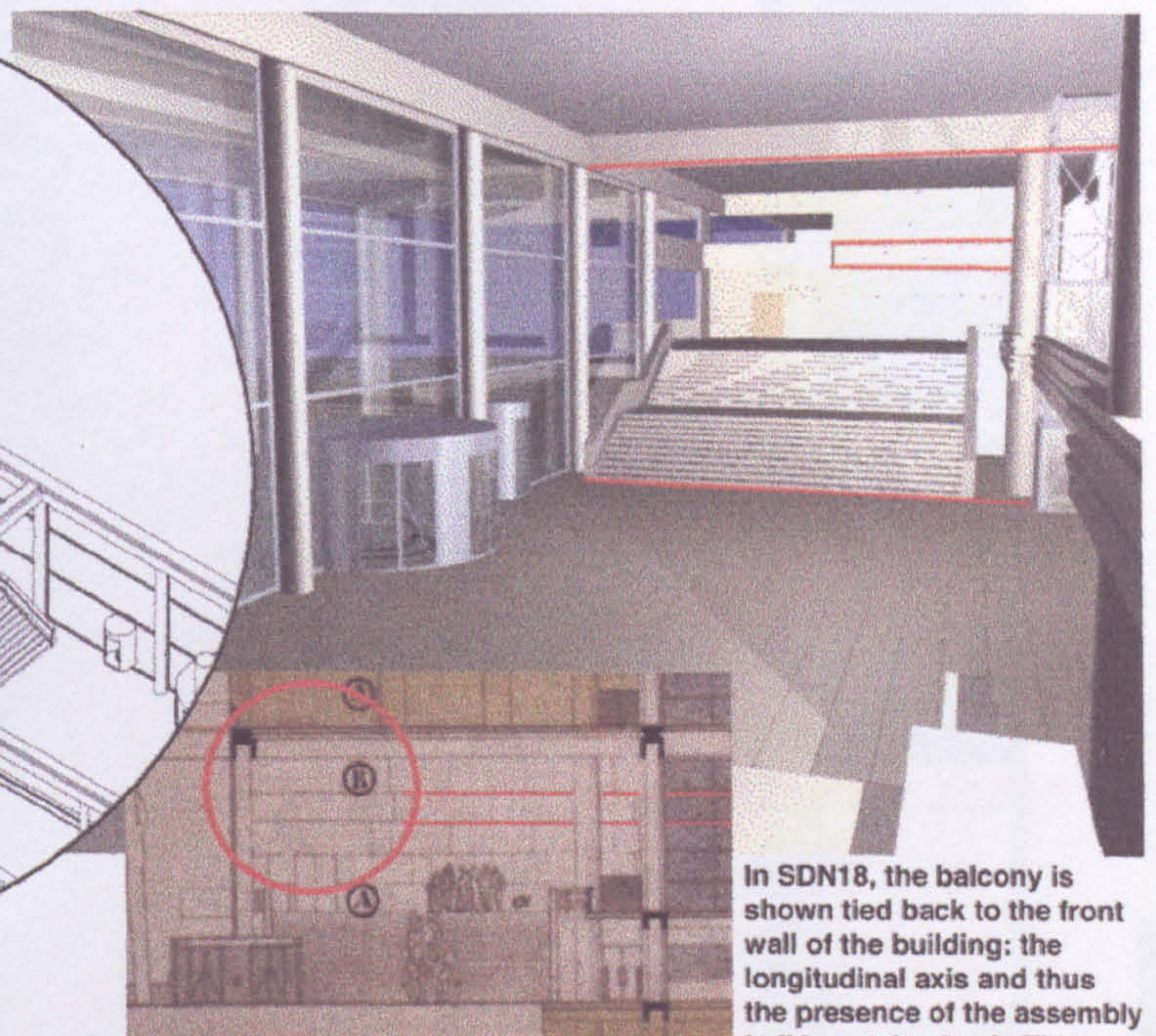
SDN6



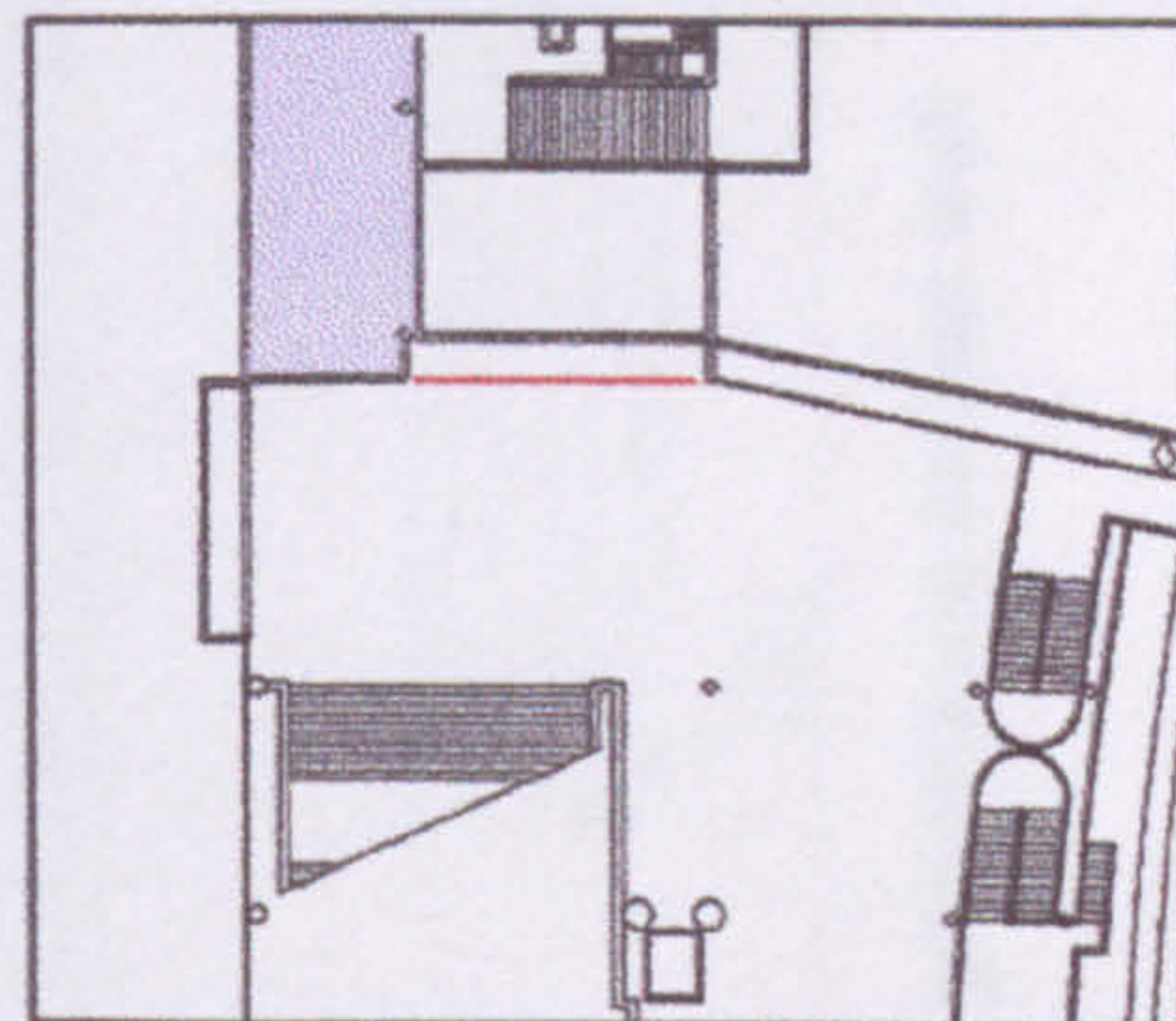
Here the balcony is centralised above the door to the north wing, as shown in SDN6; the transverse direction of the front range is emphasized.



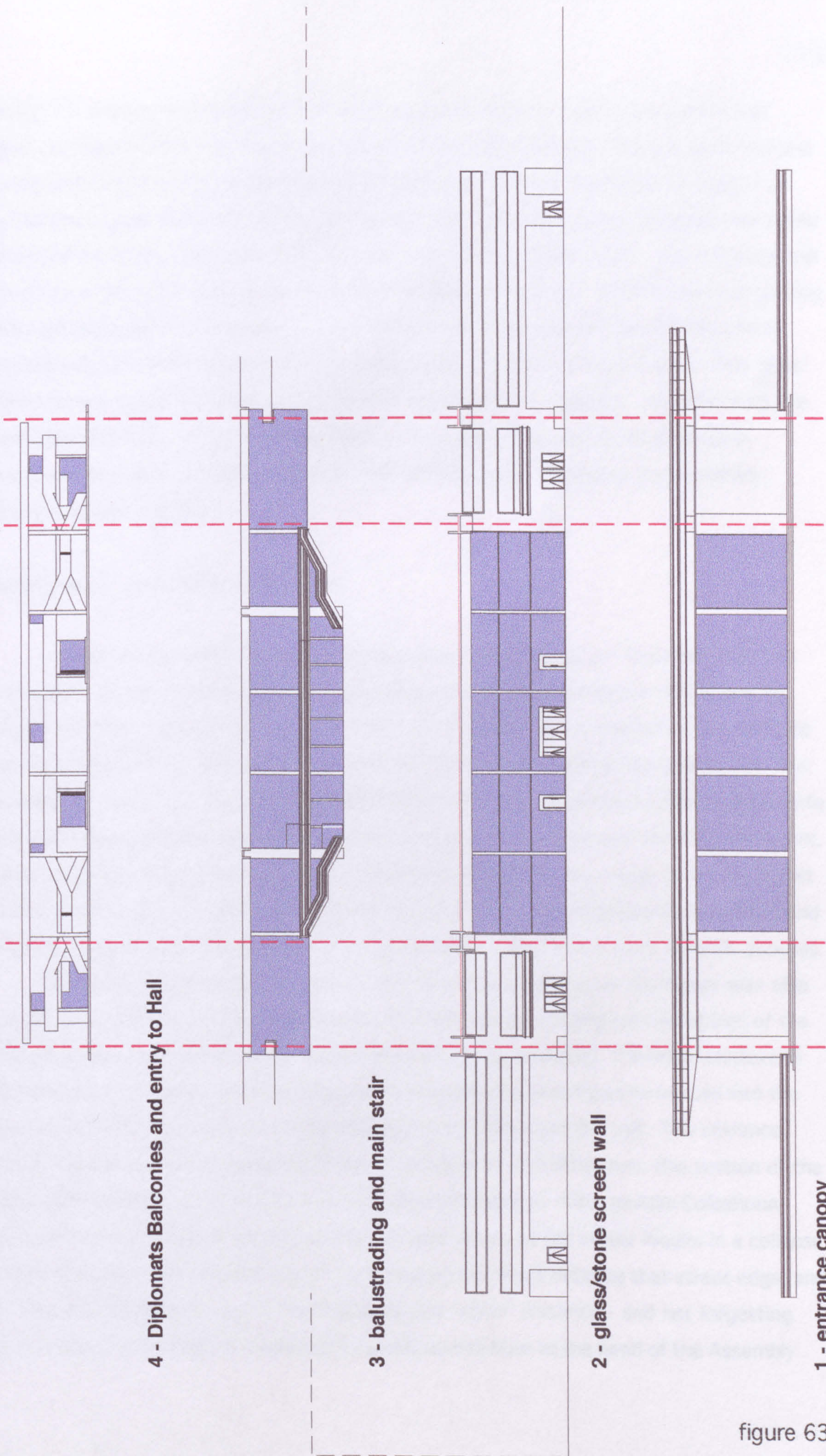
SDN18



In SDN18, the balcony is shown tied back to the front wall of the building; the longitudinal axis and thus the presence of the assembly hall is emphasised. This arrangement contributes to the phenomenal 'interpenetration' of the front range and the assembly hall beyond.



**The Overlooked Hall:
Alternative side balconies**



4 - Diplomats Balconies and entry to Hall

3 - balustrading and main stair

2 - glass/stone screen wall

1 - entrance canopy
**Assembly Hall Entry Sequence:
a series of porticos**

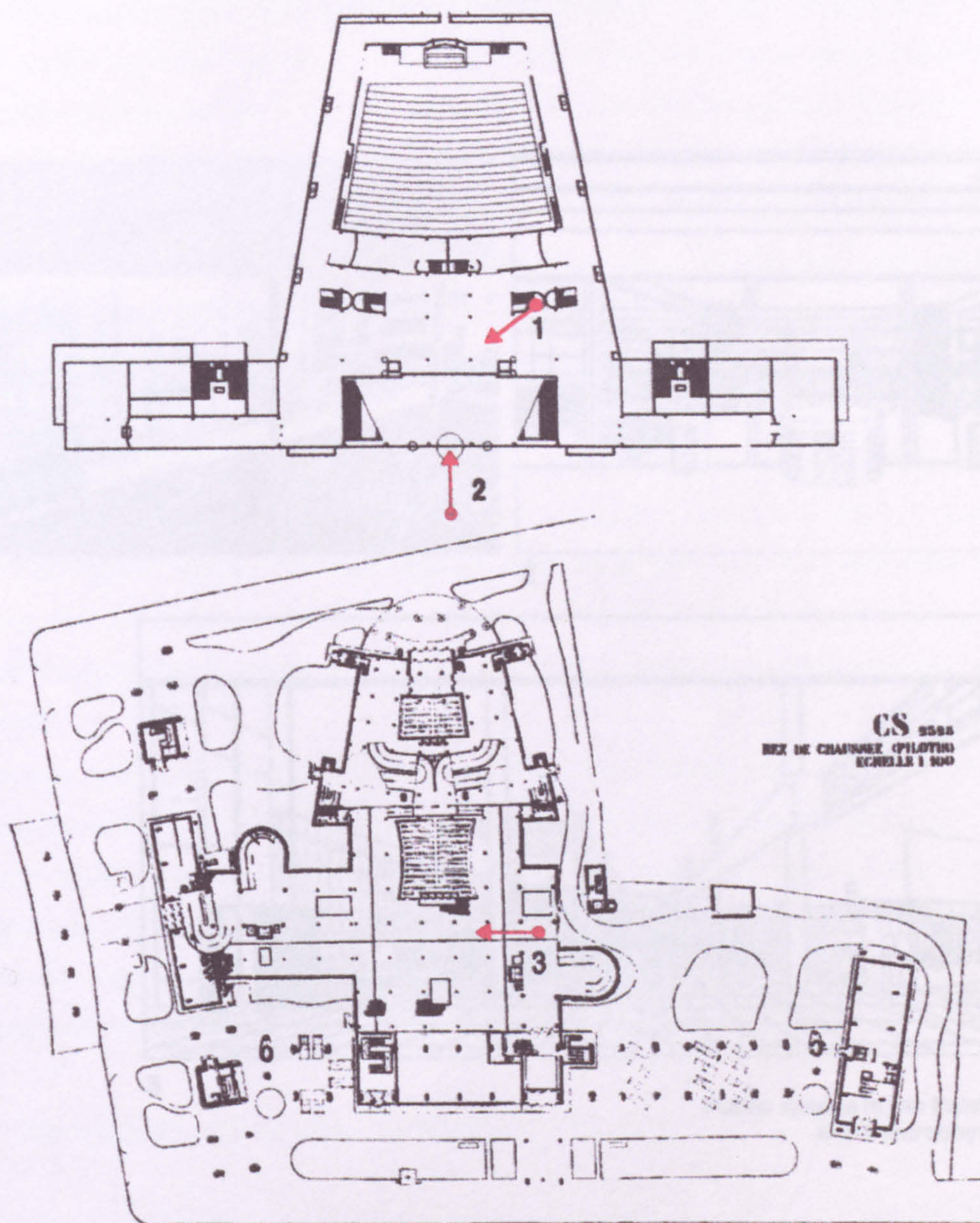
figure 63B

hearing'¹⁰², a functional space, just as much as those domestic utilities, expressed as curved capsules pushing into the living spaces of the Purist houses. The entrance hall and the Assembly Hall are then, of at least equal importance, and Le Corbusier envisaged an informal and casual diplomacy of the lobbies and roof terraces existing alongside the public orchestrations of the Assembly Hall. At first floor - *Piano Nobile* level - the entrance hall extends arms on either side of the Assembly, entirely enclosing it -and the external glazing of the hall descends on either side to offer almost continuous lateral views of the site¹⁰³ along the way to the President's Pavilion at the head of the hall. [fig. 57, 62] This little pavilion curves to gather in the view, and thus the exterior is regained: we pass from the formal Cour d'Honneur of the front entrance to the pastoral glories of the Genevoise countryside and lake; the internal journey through the public spaces of the Assembly building links the two¹⁰⁴.

Development and Site-Specificity

It is convenient to note at this point that one of the changes Le Corbusier made to the elements of the ensemble when he rearranged it on the Parc Ariana in 1929, was to straighten out the curve of the pavilion, which was site-specific: it countered the rounded cape of La Perle du Lac, and echoed the curve of the proposed harbour beneath it. The Parc Ariana site is further up the hill, and much bigger; the tight constraints of the original site which necessitate a concentrated composition and the forward thrust of the hall, are absent. [One of the unqualified criticisms of Le Corbusier's project in the Jungo & Martin report was that the hall was too near the lake]. At the Ariana site, the relationship of building and landscape is much less intense; viewing would no doubt have been a more leisurely process.

During his long fight for the Palace of Nations commission, Le Corbusier was also engaged on his first design for Centrosoyus. It is interesting to compare the lobbies of the definitive scheme with those of the Palace of Nations.[fig. 64 A&B] The urban context of Centrosoyus gave it three street facades, each of which has centralised entrances into the public lobbies which give access to the slab blocks of offices and the hall. The entrance beneath the hall on New Myasniskaja Street is different to the other two: this portion of the lobbies could be shut off to restrict access to the hall above it. Also, as Alan Colquhoun observed¹⁰⁵, the rotation of the hall so that its apse points at the street results in a collapse of contextual discipline with the loss of the elevated slab block defining that street edge, and that elevation becomes a 'back'. Setting aside this 'minor' entrance - and not forgetting that it is quite likely that Le Corbusier intended an entrance at the head of the Assembly



Plan d'ensemble à l'échelle de 1/500, montrant les salles pour la circulation automobile, et le hall central groupant l'entrée de l'édifice sur la place de la République et celle du parc central dirigé sur le boulevard à créer. On voit l'entrée du club, ses vestiaires et rampes.

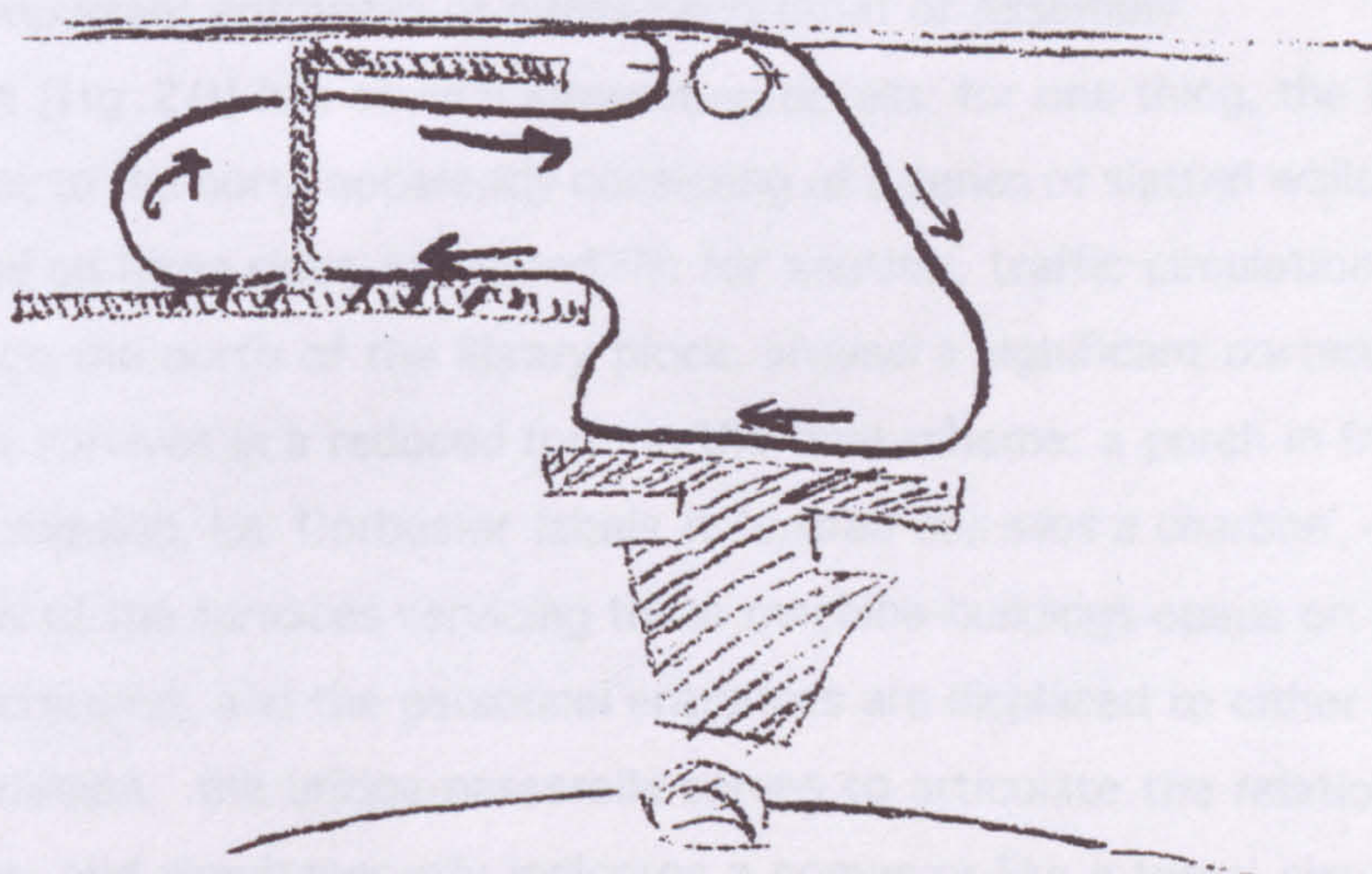
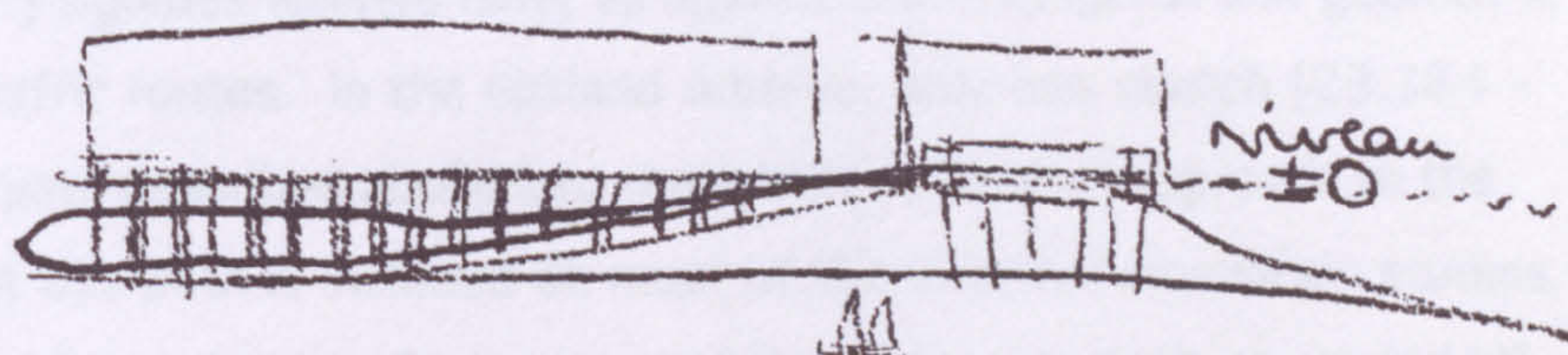
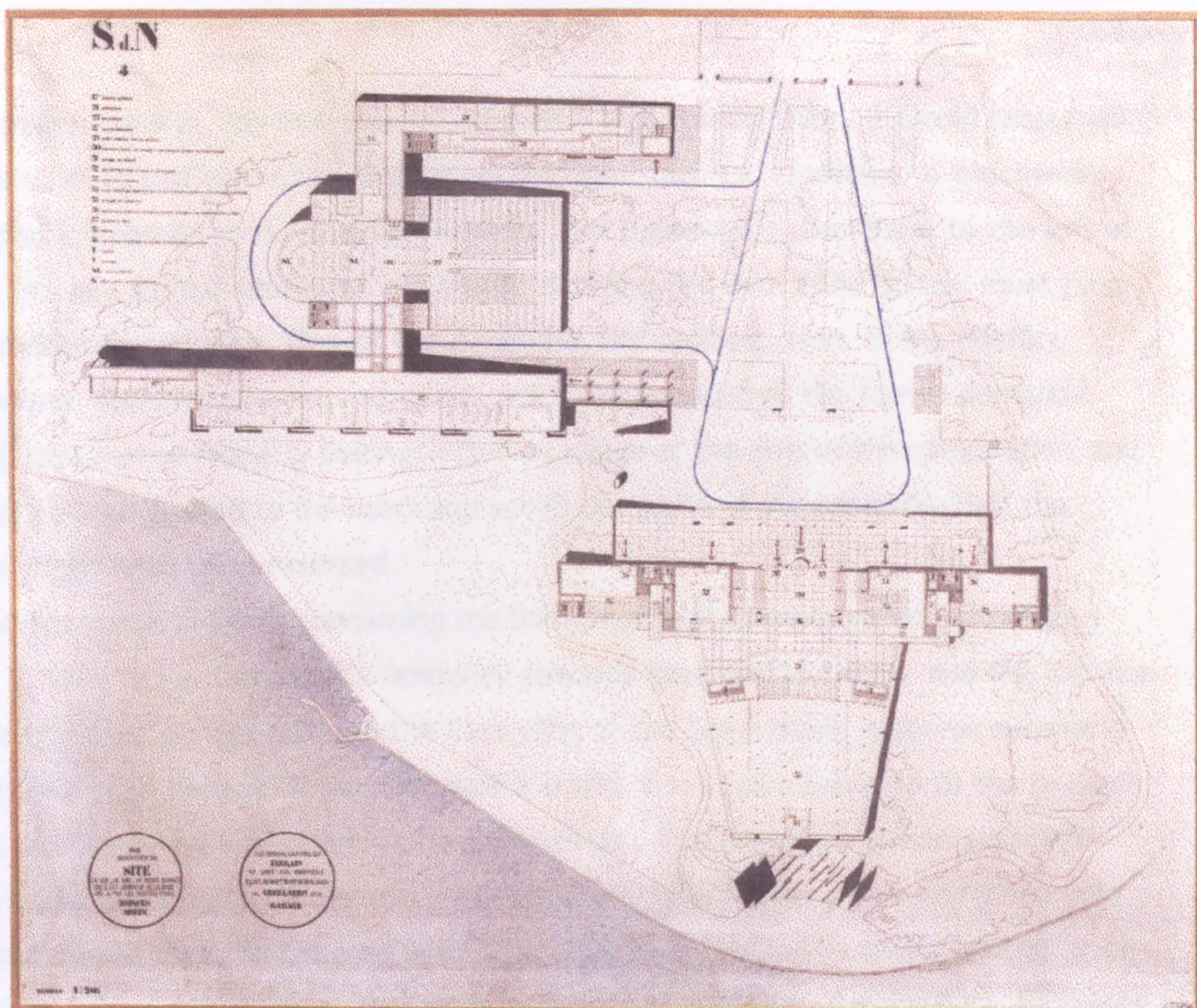
Palace of Nations & Centrosoyus
See 64B for views 1,2 & 3.

Hall in Geneva to accommodate arrivals by boat to his new harbour - one can see that the irregular site and urban context of Centrosoyus has contributed to the splitting of the single entrance sequence into two, more or less equal sequences related diagonally to each other and to the hall above. The axis setup by the hall and cloakrooms is deliberately stopped, and the entrance on Old Myasniskaja Street slides to the right so that it is centralised on the slab block above it. Any suggestion of a cross axis on which the other main entrance might be located - and the paving pattern in the perspective suggests one - is deliberately subverted with elements of the architectural promenade sliding to left and right all along the sequence. Even the helicoidal ramp which might have terminated an entrance axis has shifted off axis. So Le Corbusier uses the 'irregular site' decried in *Une Maison*¹⁰⁶ to generate a dynamic and sculptural composition. Although many of the architectural aspects seen in the Centrosoyus perspective are familiar from the Palace of Nations: the pilotis, the stone coursing, the balconies overlooking the space, the glazed screens in the distance, there are new elements too: the helicoidal ramps, the circular skylight in the roof slab, the complex curve of the cloakroom. And the paving has changed. The floor is no longer marked out with vaguely civic, inlay patterns that mirror the beams above them, but by a crisp grid-within-a-grid: the perspective effect of the main grid emphasises the length of the hall; the secondary gridding divides the space into several smaller units.

But one cannot plot a linear progression in Le Corbusier's work from the axial and symmetrical layout to the balanced, and sculptural asymmetry of the late projects. Le Corbusier returned to an axial and symmetrical solution for the Palace of the Soviets project [although, he recorded a number of other possibilities]: here the huge size of the site and the ceremonial nature of the project meant that the ensemble was free from the physical and contextual constraints bearing on the Centrosoyus project.

External Circulation: Tying the Building to its Site

The site constraints - shape, declivities, location and orientation - play a large part in the organisation the ensemble of buildings on the site, and thus in fixing the arrangement of the external circulation[Fig. 6 5], which, I suspect, would have required 'in' and 'out' signs on the gates, at the very least¹⁰⁷. Most users of the Palace of Nations would have approached from Geneva, along Quai Wilson and the Lausanne road, and, as the Swiss drive on the right hand side of the road, it would have been better, from a traffic-flow point of view, to enter the Parc Perle du Lac from the southern gate, and leave it from



As sketched for the 'Precisions' lectures

External Circulation.

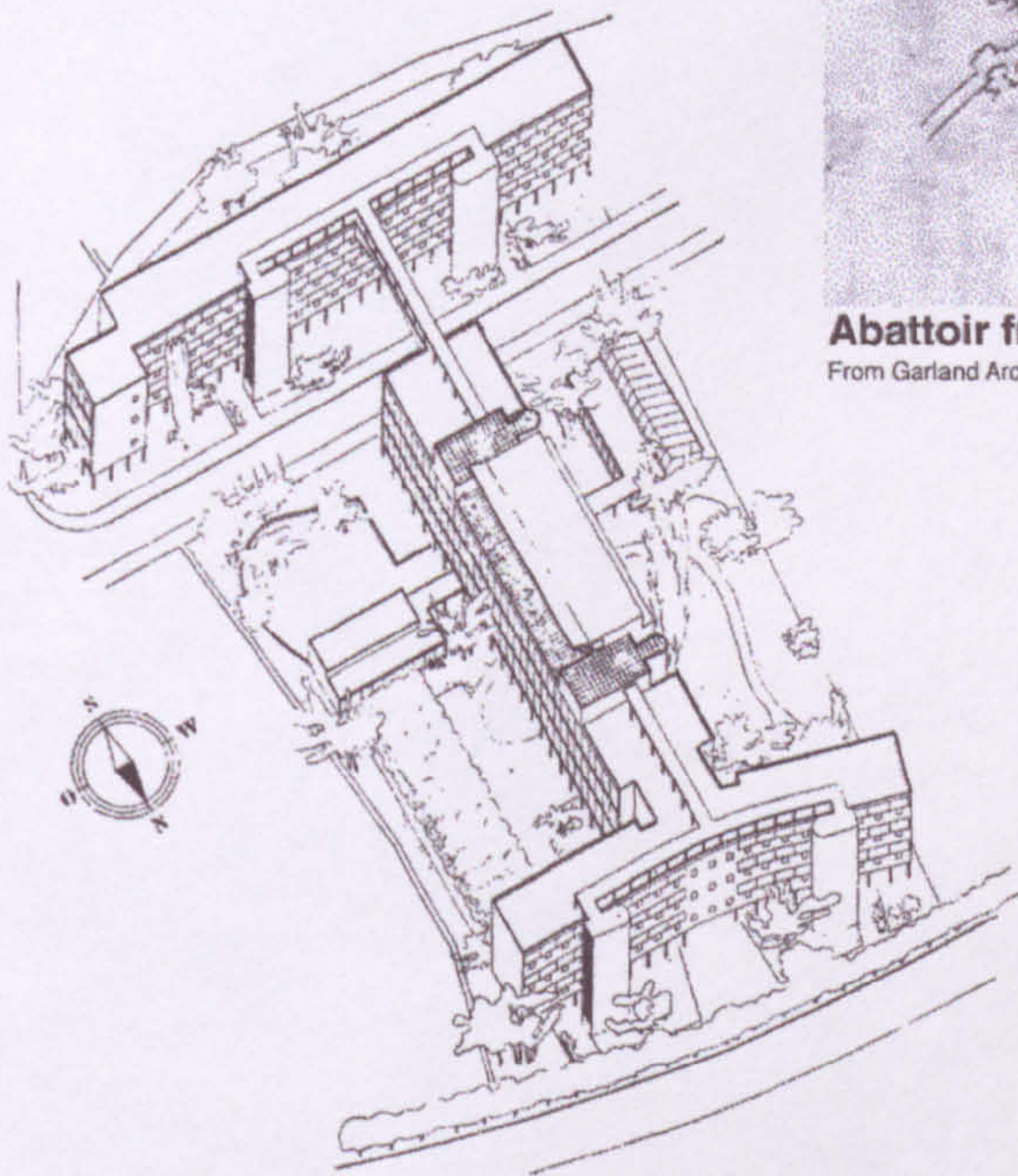
figure 65

the northern one; as it is, the two streams of traffic must cross. Also, it would presumably be more 'natural' to pull up and disembark on the right, but Le Corbusier's clockwise, uni-directional circulation system is organised so that passengers disembark to the left of this flow. This is a formal necessity: the traffic entering the Parc Perle du Lac must pass the most important entrance, that of the Assembly Hall building, first. In the conflict between prosaic and symbolic thus revealed, practicalities yield to the formal demands. Had the adjacent Barton Property belonged to the League at the time of the competition, and the Secretariat been located to the north and not to the south of the Assembly Hall, the traffic flow might have been reversed.

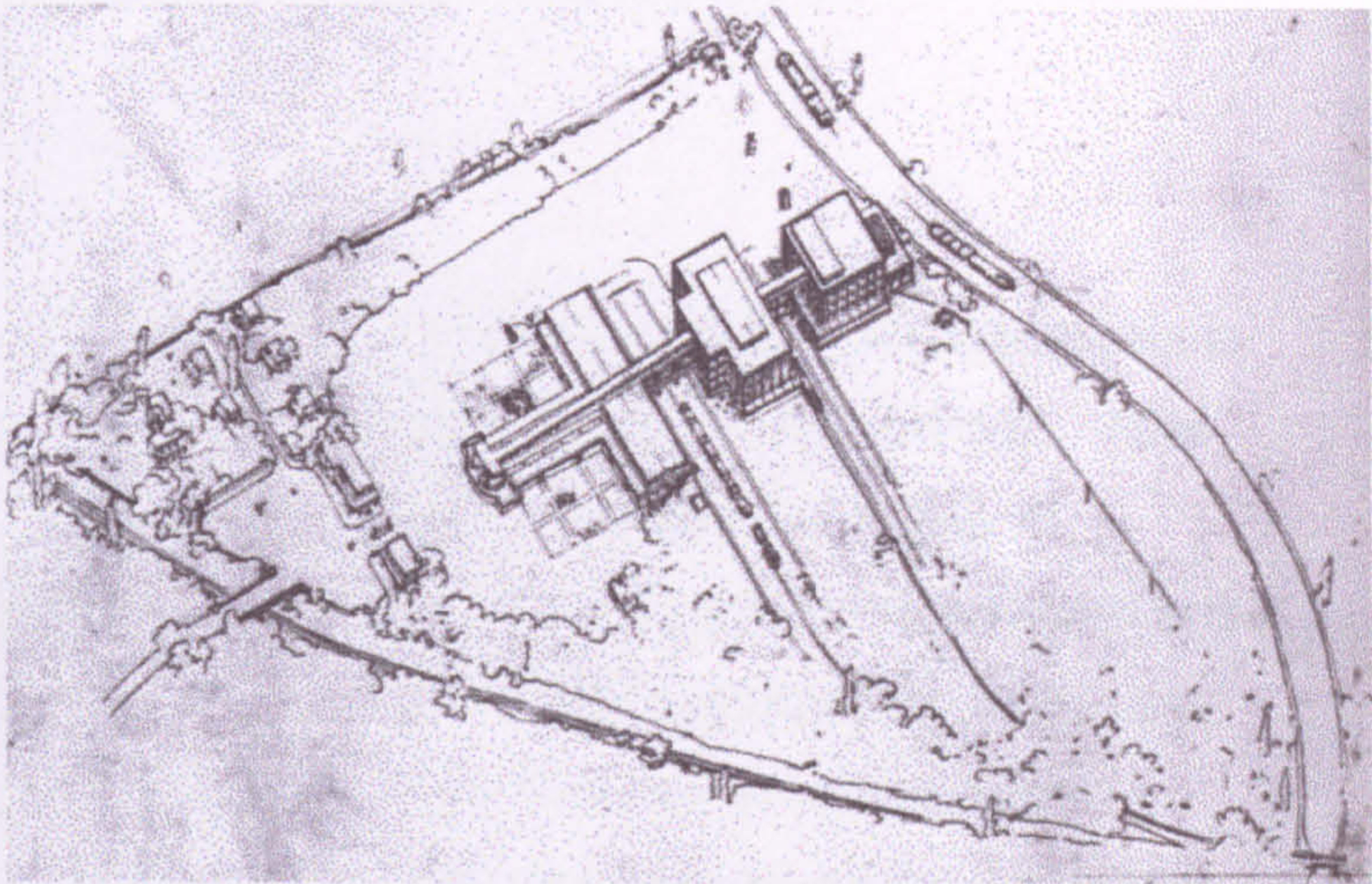
Another question arises concerning the bridge element connecting the two League buildings. In view of Le Corbusier's tendency towards spatial exploration, and the location of the 'open' parking garage beneath the East wing of the Secretariat, it seems surprising that cars do not pass beneath it. In fact, motor traffic is entirely restricted to the landside of the site; the lakeside being reserved for pedestrians. The meandering lane passing in front of the lakeside wing of the Secretariat and beneath the bridge is derived from an old path connecting the Perle du Lac villa with its outbuildings and tennis court; another such survival is the path running along the northern border of the site. The irregular path [the pack donkey's way?] signifies walkers here, as against the orthogonal and geometric system of motor traffic routes. In the Garland Archive, only one sketch [23.364 - fig. 20] draws the path described above into the system of formal approach to the Assembly Hall. But this path is included on most of the external circulation studies, and we discover in *Une Maison* that Le Corbusier envisaged '*les grands de ce monde*'¹⁰⁸ walking through the Parc Mon Repos and arriving on the site via this path, which delivers them directly to the most important entrances of either Secretariat or Assembly.

Sketch 23.364 [fig. 20] has several interesting details: for one thing, the bridge is matched by an element to the north apparently consisting of a series of slatted walls so that an entry square, closed on three sides, is defined¹⁰⁹; for another, traffic circulation past a centralised entrance on the north of the library block, around a significant parterre, is clearly described. This survives in a reduced form in the final scheme: a porch in front of a blind wall. In the submission, Le Corbusier labels it '*entrée des silos a charbon*' - the coal-hole. So the maw of the furnaces servicing these machine-buildings opens on the central axis of the Secretariat, and the personnel entrances are displaced to either side. In the competition submission, the bridge-passerelle serves to articulate the relationship between the buildings, and simultaneously indicates a conveyor-like internal circulation [fig. 65B]. And it at once indicates the edge of the *cour d'honneur* and frames some of the

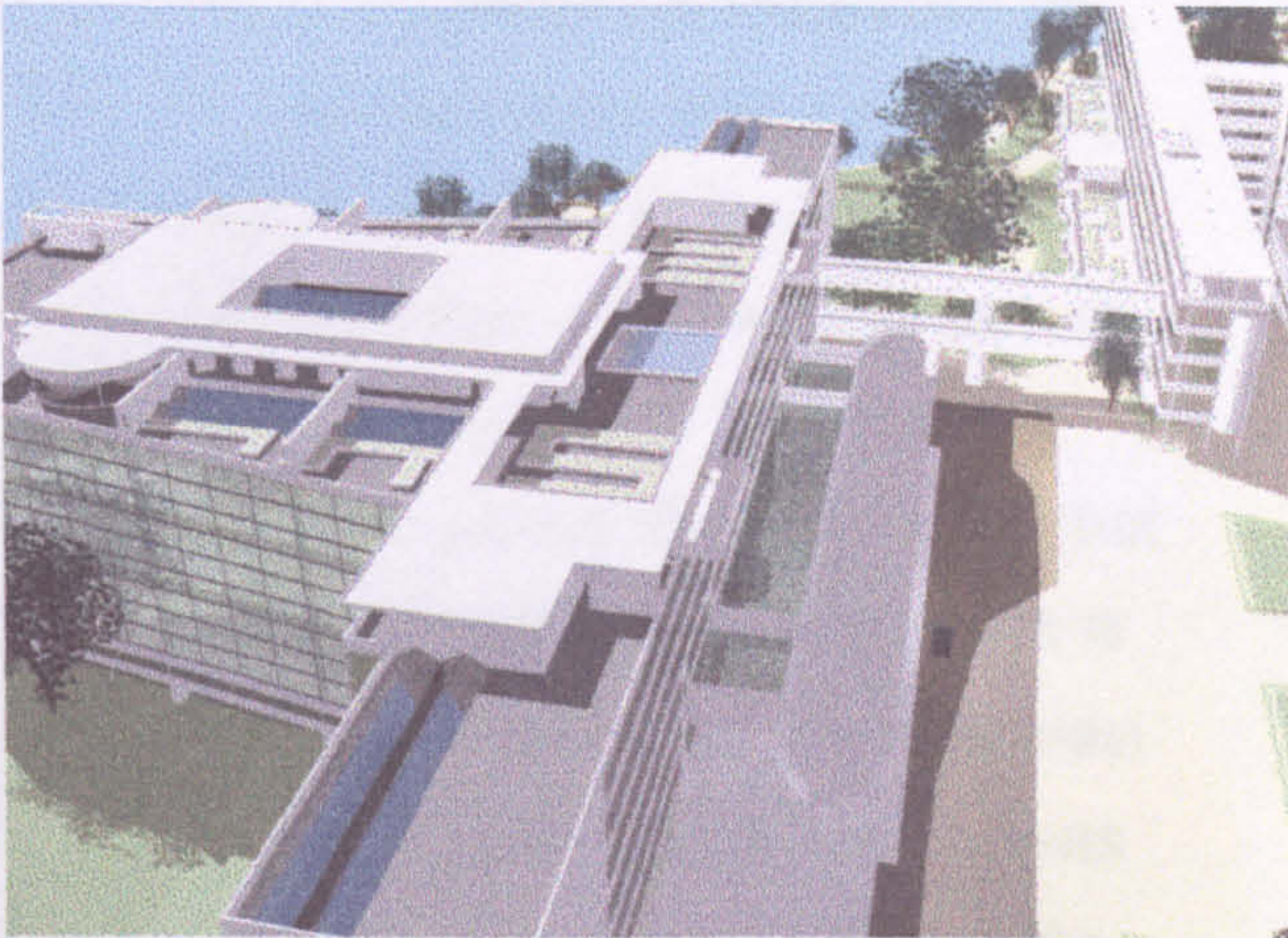
The abattoir is not a 'public' building but its formal, axial organisation suggests transformational possibilities



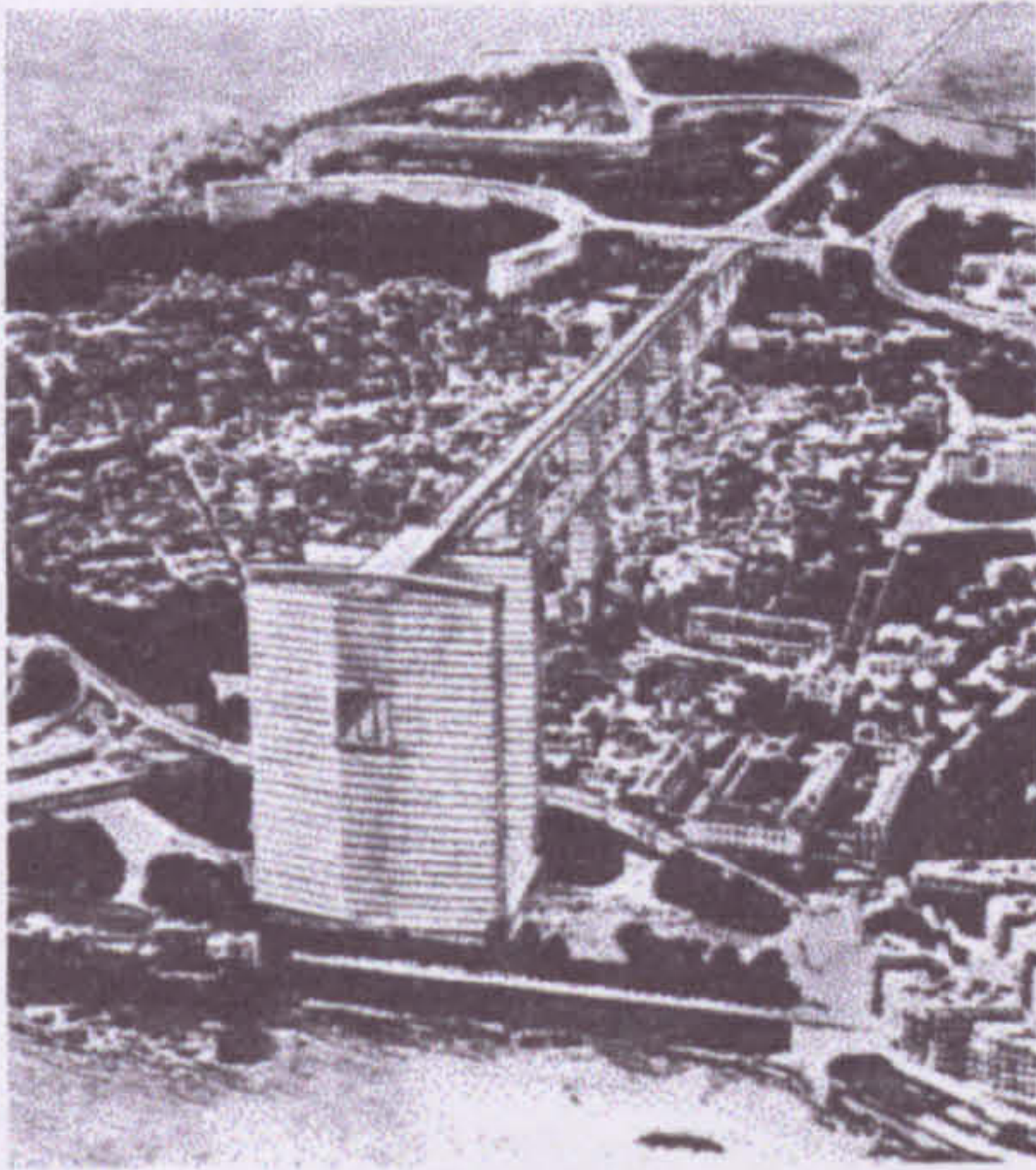
Workers Housing, Zurich, 1932-33



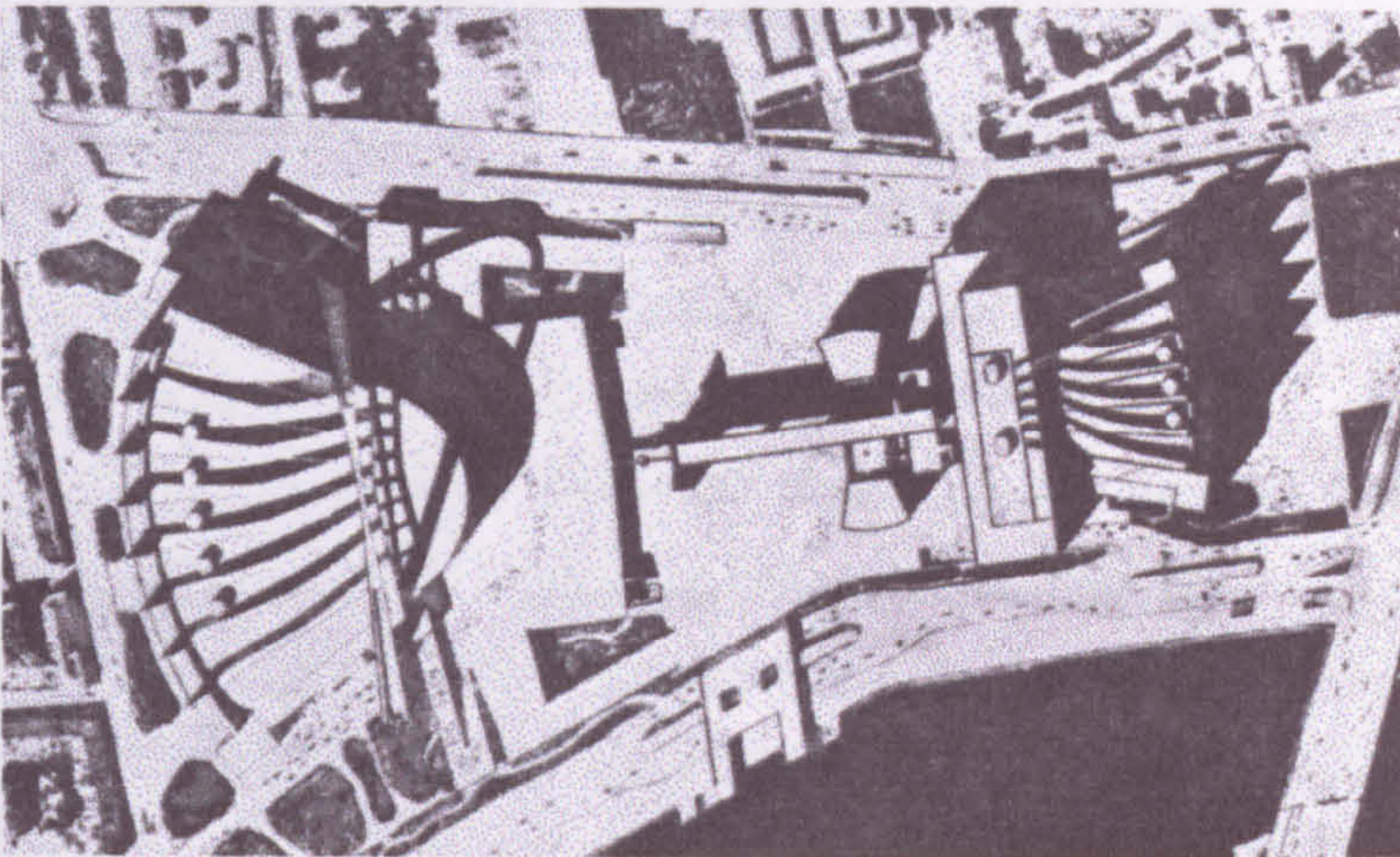
Abattoir frigorifique - Challuy, 1917 [unbuilt]
From Garland Archive, see Ragot & Dion, 'Le Corbusier en France'



Palais des Nations 1927



Algiers Project B, 1931-34



Palais des Soviets, 1931

Overhead linkages 1917-1934

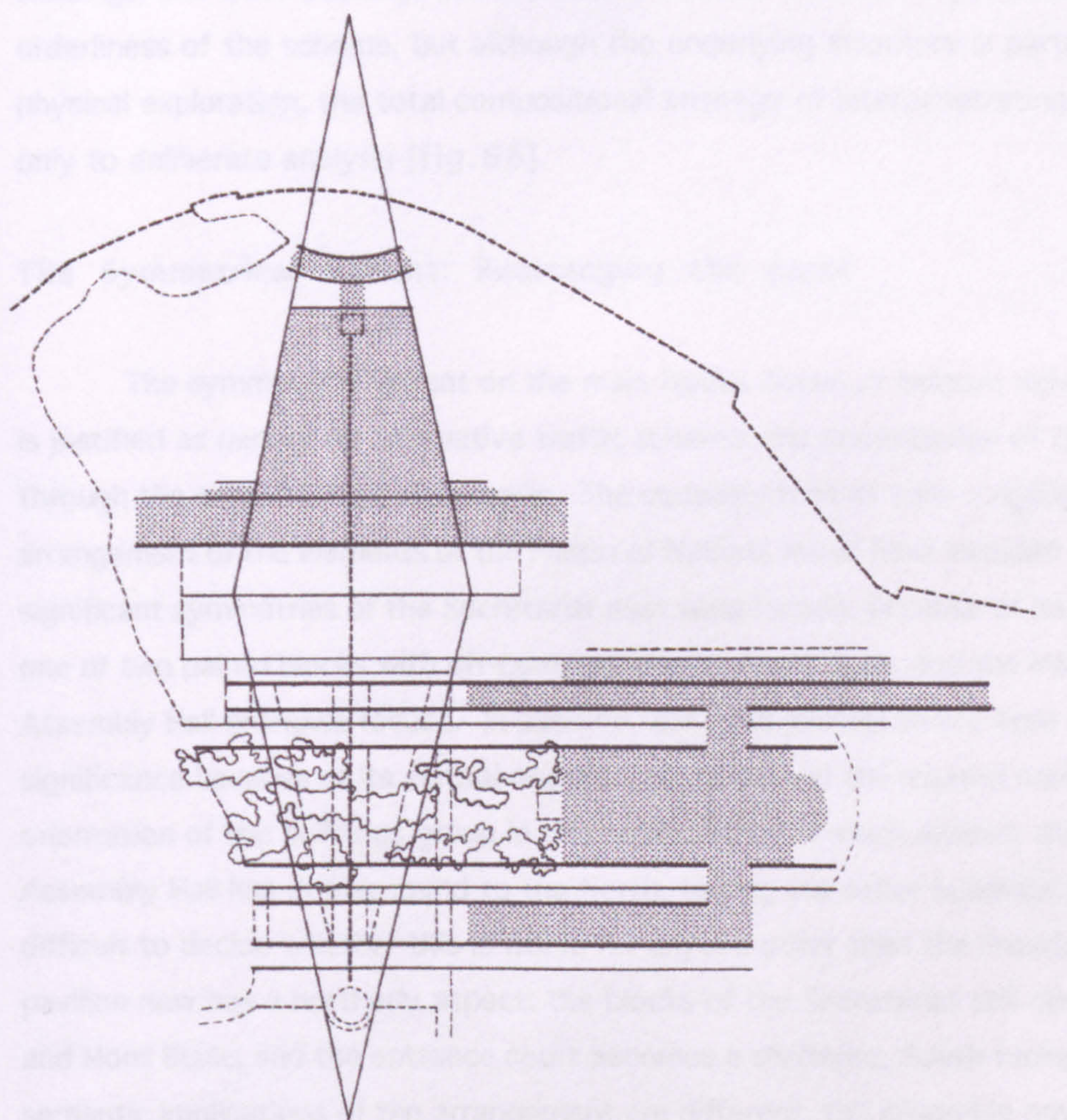
views beyond it. Diplomats stroll beneath it, staff and journalists pour through its elevated conduits, and automobiles are constrained to turn right by its presence.

Rowe's Phenomenal Planes

This project is one of the examples used by Colin Rowe to support his arguments in the much quoted essay, *Transparency, Literal and Phenomenal*¹¹⁰. 'Transparency', Rowe said, 'may be an inherent quality of substance... or it may be an inherent quality of organisation'. He suggested that Le Corbusier had a tendency to organise his compositions as a series of planes, real or virtual, through which the approaching observer must pass when experiencing the building, and which contradicted the premise of 'deep space' indicated by that approach with a set of shallow, transverse spaces constructed by these perpendicular, planar striations. The Villa at Garches, with its deliberate separation of both significant facades from the block of the building¹¹¹ provided Rowe with a convincing example for his thesis. But the Palace of Nations ensemble is more complex. The analytical diagram which accompanies his essay [fig. 66] indicates every wall *surface* in the project perpendicular to the axis of approach, extending these 'planes' to cross that axis. Now it seems to me that any axial organisation implies a sequence of events along that axis, the boundaries of which would be perpendicular to the direction of the axis, and it is clear that the approach to the Assembly Hall of the Palace of Nations is axial, that the main entrance facade is frontal and planar, and that a series of natural and architectural events are encountered along the way. The parterre is divided, not only by the main axis and the mirrored footprint of the hall, but also crosswise, by extensions of the roads serving the Secretariat. In addition, Le Corbusier indicates a grove of trees dispersed across the central section of the parterre, with, in his drawing, at least, a definite transverse direction. But although this approach space is 'striated', the striation is volumetric rather than strictly planar, at least as regards the Secretariat. Only one of the faces of the Secretariat is developed as a centralised, planar facade and that is the main, lakeside facade of the east wing which cannot be seen from the Lausanne Road entrance: it is true that the columns set back on Jura and lakeside facades to give uninterrupted *fenêtre en longueur* do create a narrow zone of space behind each, but these notional 'slots' are not developed on the end facades as at Garches. And the *fenêtre en longueur* on the Lausanne Road block might equally be seen as setting up a system of *horizontal* striations through the block from top to bottom.

The geometrical scheme - Rowe's 'phenomenal organisation' - used by

Le Corbusier to organize his ensemble is as subject to what he himself termed "the fluxion of plans"¹² as any other designed from above and viewed from "5 feet 5 inches from the ground". Following the external spaces via the computer animations, it is evident that both blocks of the Secretariat read as linear volumes together enclosing a notional courtyard across which a vigorous diagonal of trees cuts. The parterre tends to fall apart, one is not really aware of passing through a sequence of linear spaces as its crosswise divisions approach and recede, and the fact that the axes of the auditorium are mirrored in the plan of the parterre would not be obvious without a thorough exploration of the buildings, and quite possibly not even then. One could observe that the axis of the auditorium is not a straight line, but although the underlying structure is a series of parallel planes, the plan of the auditorium is a series of parallel planes, the plan of the auditorium is a series of parallel planes, the plan of the auditorium is a series of parallel planes.



from 'Transparency: literal and Phenomenal'
Colin Rowe & Robert Slutzky, 1955-6

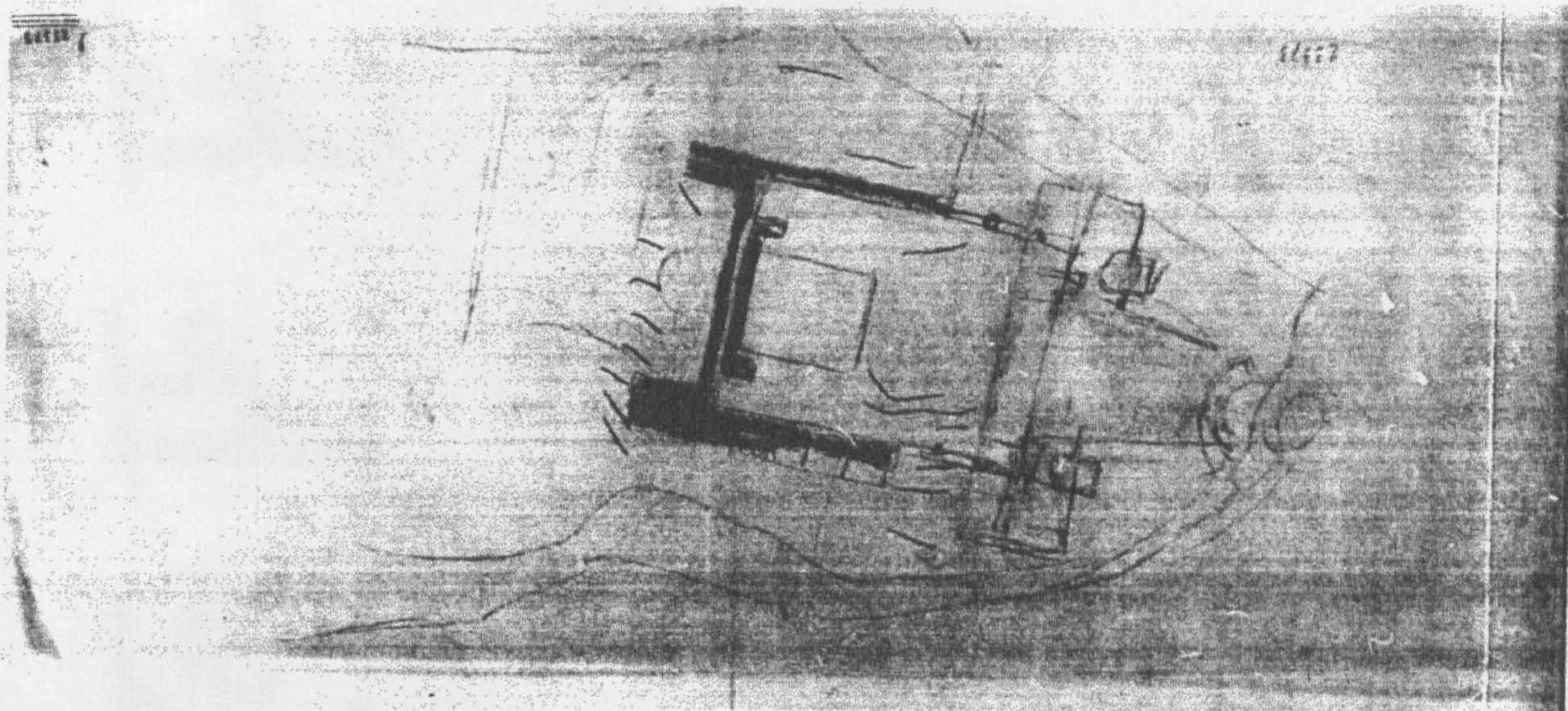


Sequence of views from
main entrance to Assembly
Hall along main axis.
Camera angle 70 degrees.

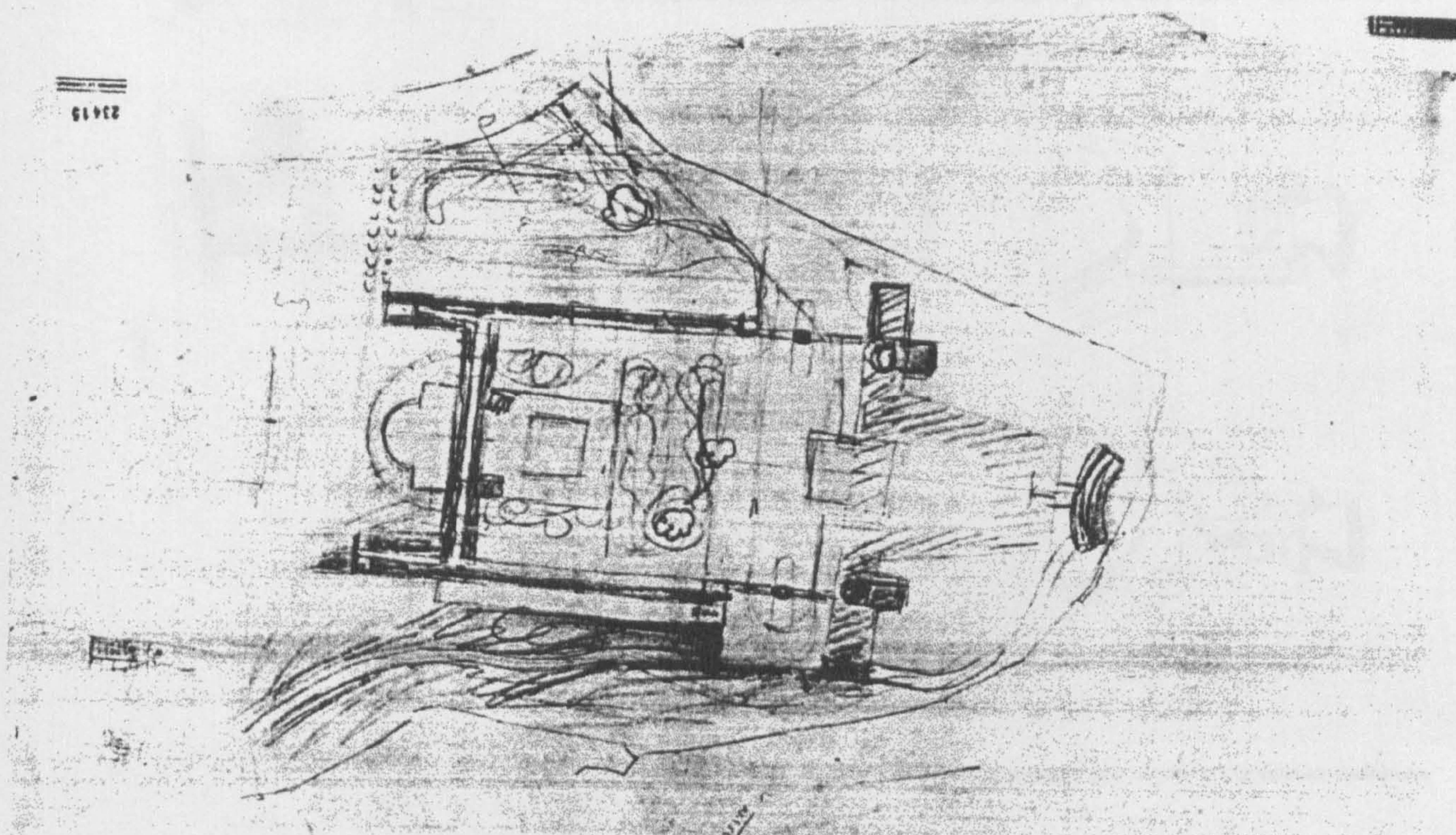
Le Corbusier to organise his ensemble is as subject to what he himself termed 'the illusion of plans'¹¹² as any other designed from above and viewed from '5 feet 6 inches from the ground': exploring the external spaces via the computer animations, it is evident that both blocks of the Secretariat read as linear *volumes* together enclosing a notional courtyard across which a vaporous cloud of trees drifts. The parterre tends to fall apart: one is not really aware of passing through a sequence of linear spaces as its crosswise divisions approach and recede, and the fact that the angles of the auditorium are mirrored in the plan of the parterre would not be obvious without a thorough exploration of the buildings, and quite possibly, not even then: a casual observer might absorb the orderliness of the scheme, but although the underlying structure is partially revealed by physical exploration, the total compositional strategy of interpenetrating spaces yields only to deliberate analysis [fig. 66].

The Symmetrical Variant: Rearranging the parts

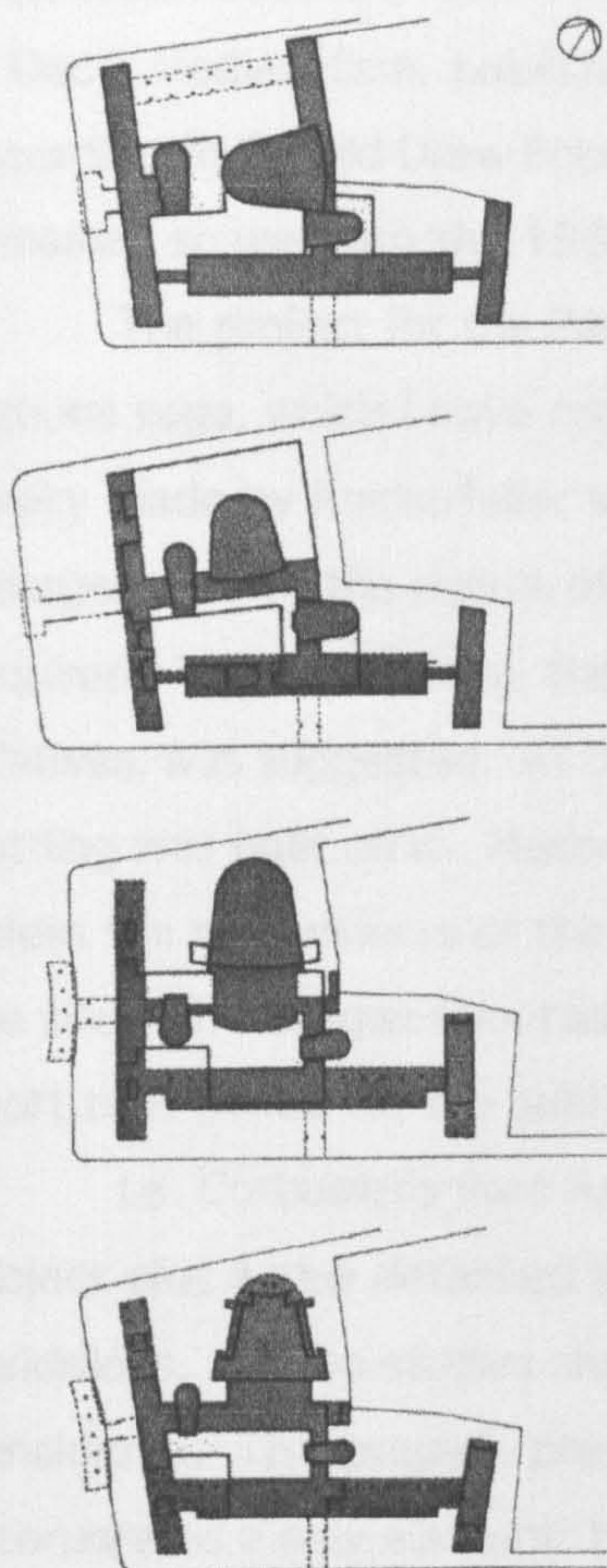
The symmetrical variant on the main layout drawn at bottom right of drawing SDN1 is justified as part of an alternative traffic scheme: the continuation of Quai Wilson through the adjacent Parc Mon Repos. The consequences of such a rigidly symmetrical arrangement of the elements of the Palace of Nations would have included the loss of the significant symmetries of the Secretariat east wing facade, because of its new position as one of two paired blocks with off-centre and end connections, and the internalising of the Assembly Hall entrance facade. In addition, the undeveloped library apse would have gained significance because of its central and frontal position on the rotated main axis. The orientation of the buildings group in this arrangement is much altered: the nose of the Assembly Hall has swung round to the North, towing the other buildings behind it. It is difficult to decide whether this is worse for anyone other than the President, whose pavilion now has a northerly aspect: the blocks of the Secretariat still open onto the Jura and Mont Blanc, and the entrance court becomes a sheltered, South-facing area. But the semantic implications of the arrangement are different: the ensemble now points away from Geneva, and does not engage directly with the Jura and Mont Blanc. [Fig. 67] The closed composition has the disadvantage of completeness, it is non-extensible and cannot imply further architectural possibilities. The multiple possibilities inherent in a compositional strategy of recombining the entirely disengaged functional components of a building in new relationships, as indicated in drawing SDN1, were also explored by Le Corbusier in his later Palais des Nations scheme for the Parc Ariana site, and in both



23.373



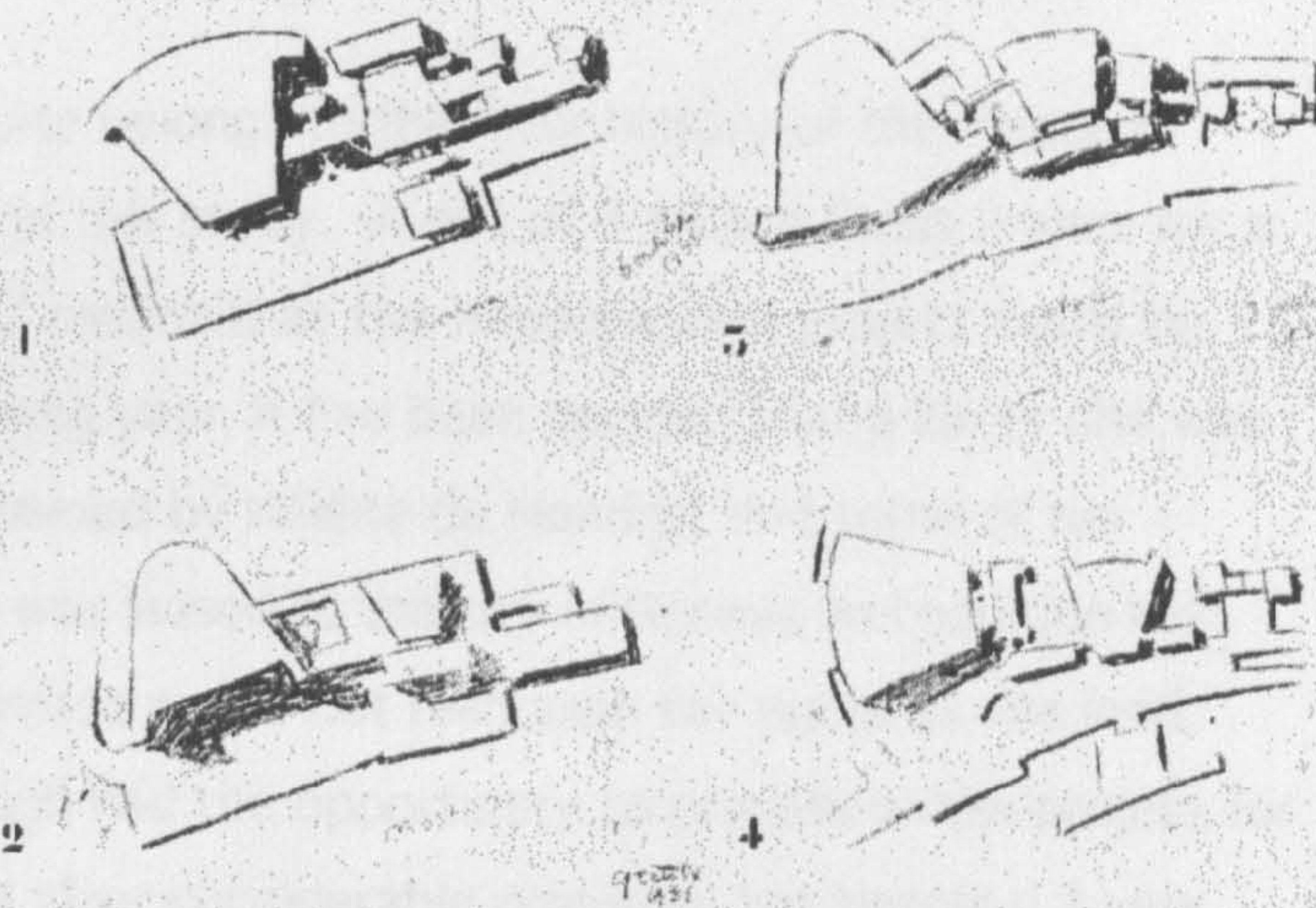
23.415



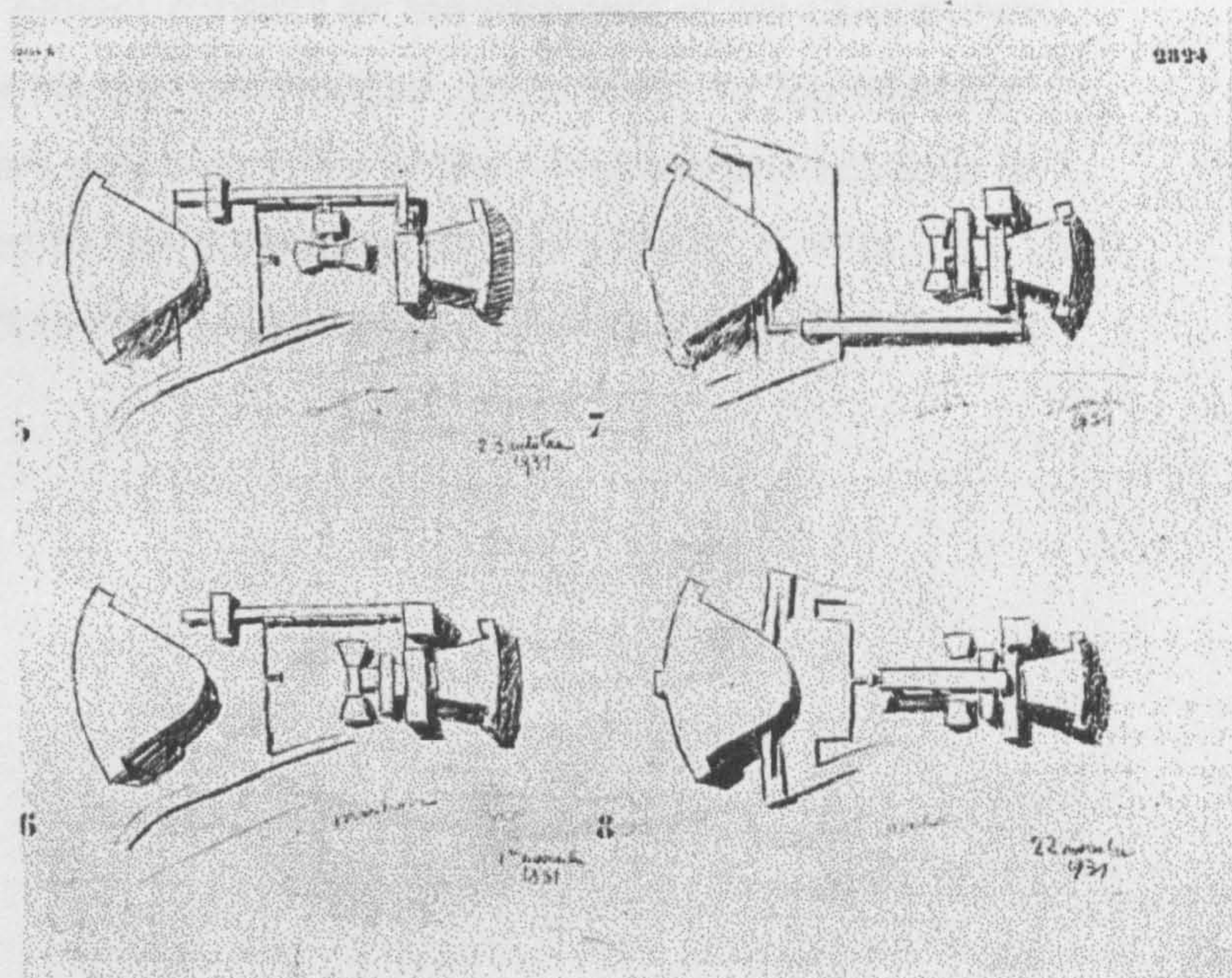
1

P.S

ETAPES DU PROJET



Les diverses étapes du projet, où l'on voit les organes, déjà fixés indépendamment les uns des



autres, prendre petit à petit leurs places réciproques pour aboutir à une solution synthétique

2

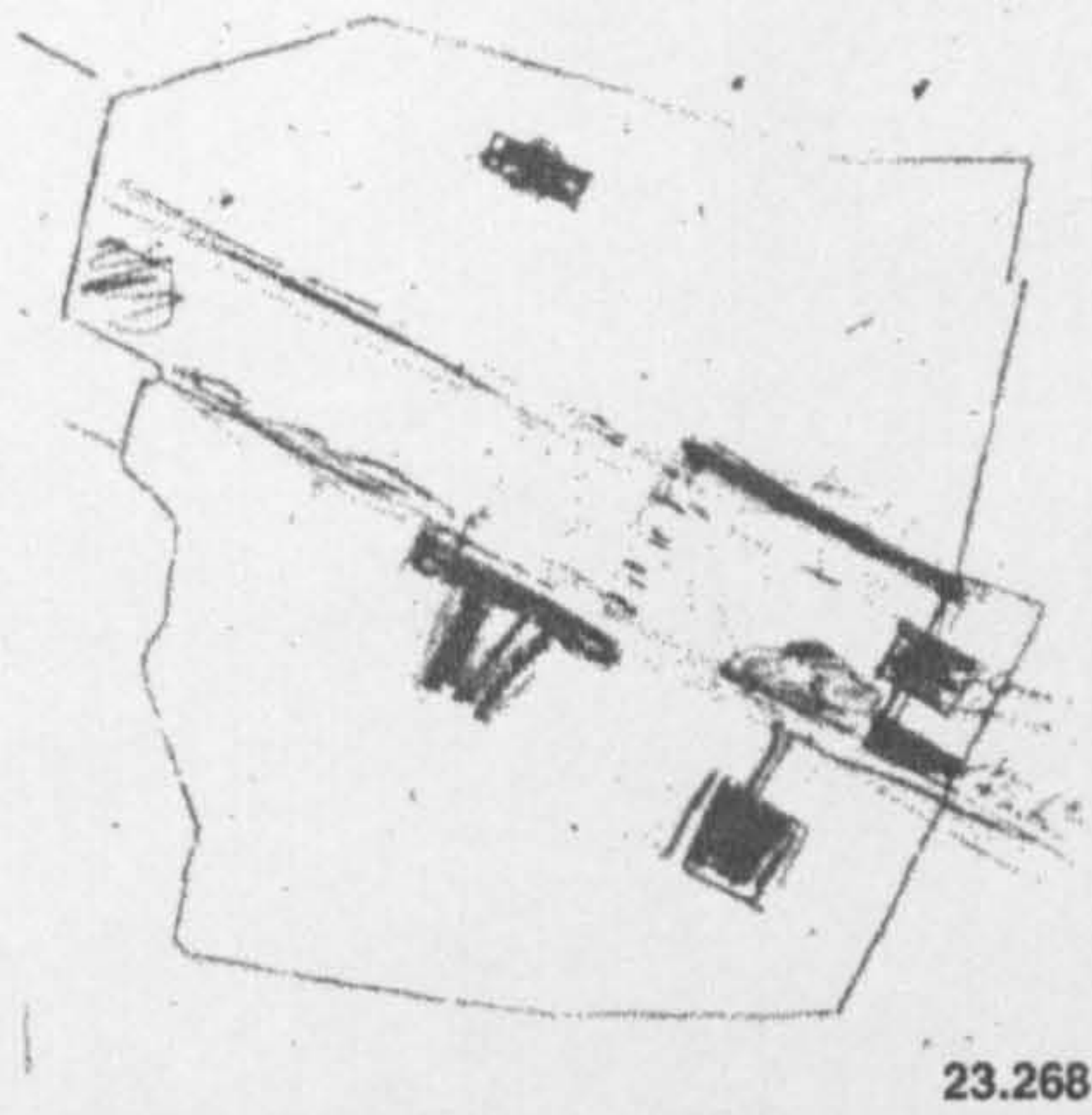
1: Sequence showing the shifting elements of Centrosoyuz.
From Cohen: 'Le Corbusier and the Mystique of the USSR'

2: Le Corbusier's own presentation of similar shifts in the Palace of the Soviets.
From Oeuvre Complete, Vol II.

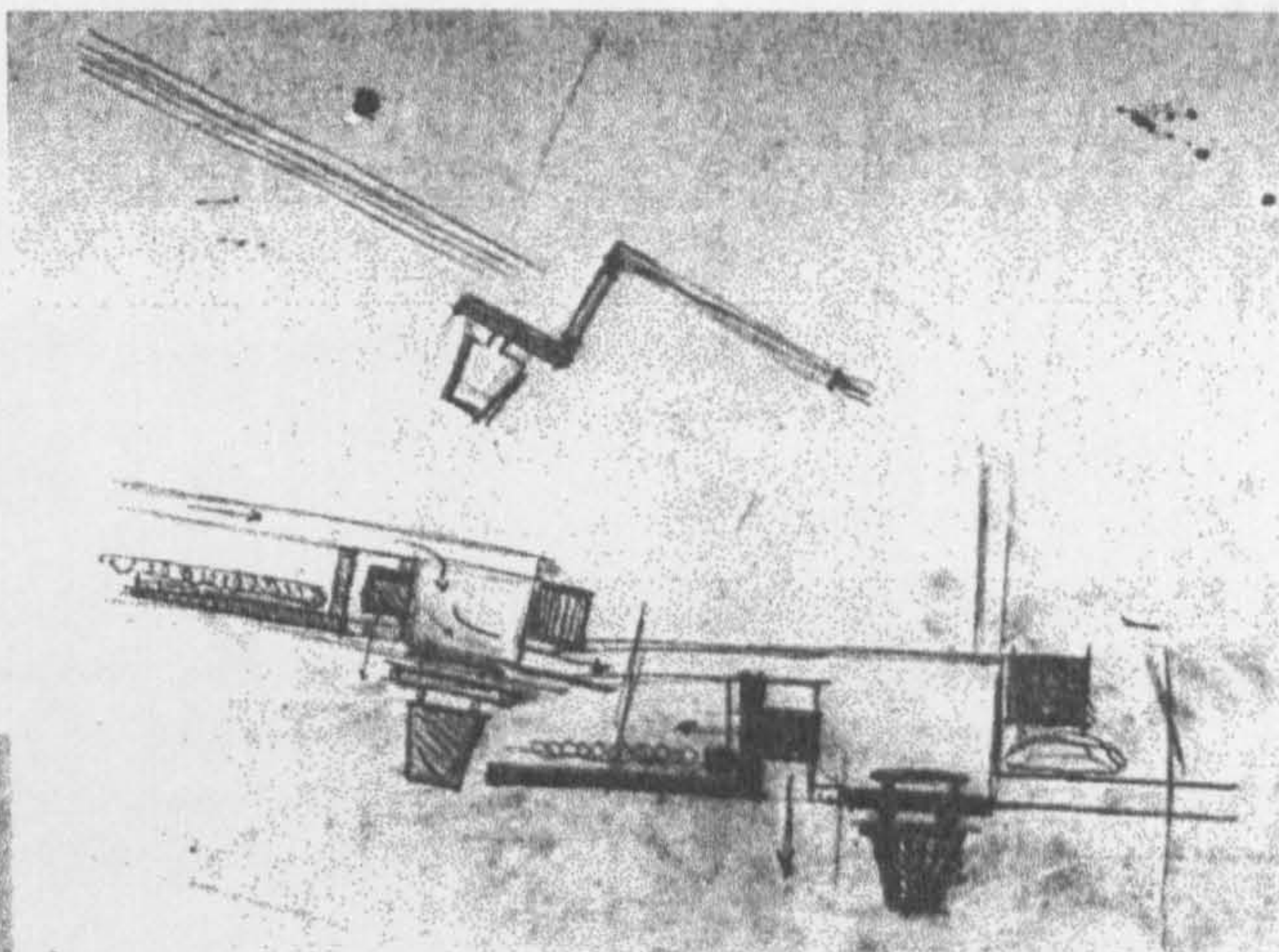
Centrosoyuz and the Palace of the Soviets projects¹¹³. [fig. 68, 69] Kenneth Frampton has traced this *Elementarism* back to Perret, and to his teacher at the Ecole des Beaux-Arts, Julien Guadet [1834-1908]. Guadet, a pupil of Labrouste and an opponent of Viollet le Duc's Medievalism, published his *Eléments et Théorie de l'architecture* in 1901, and according to Donald Drew Egbert¹¹⁴, these lectures became a kind of Bible at the Ecole, and remained so well into the 1930's.

The project for the Parc Ariana site belongs to the later history of the Palace of Nations saga, which I have not covered in this study. A gift of 4 million Swiss Francs for a library made by Rockefeller in late 1927 meant that the headquarters project could be enlarged, and by the middle of the following year, it had been decided that a larger site was required. The Parc Ariana, then jointly owned by Hélène de Mandrot and some of her relatives, was suggested. At the time, it was leased to the city of Geneva on condition that nothing was built on it. Madame de Mandrot would not relinquish her rights to the land unless the nine winners of the competition had the opportunity to present a new project for the site. The League reluctantly agreed after considerable pressure, but imposed a very short time period for the submission, and only two of the winners responded.

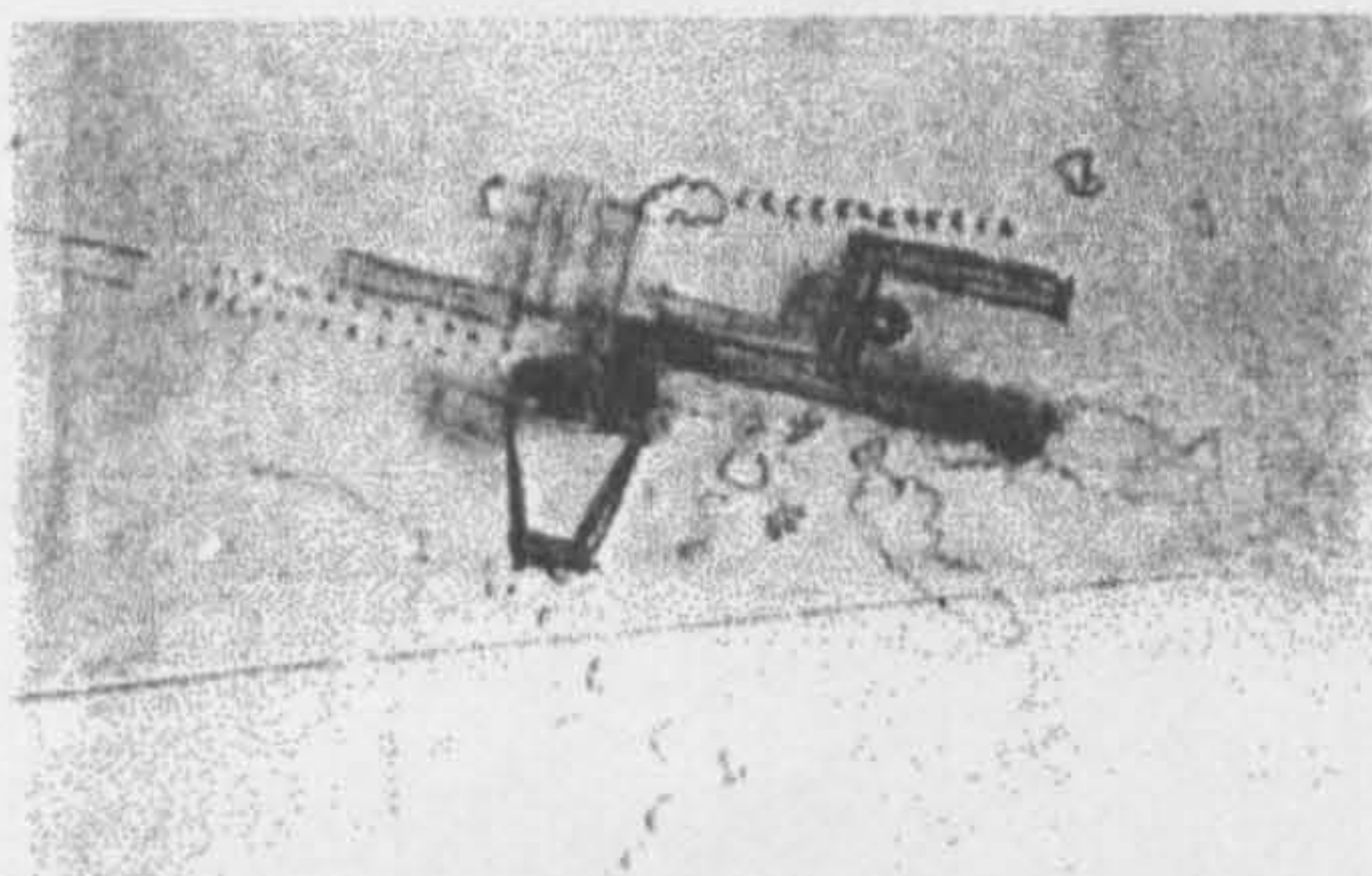
Le Corbusier's Parc Ariana project consists of the elements of his Competition project plus a new detached library element, rearranged, in response to the new site conditions, and the studies shown are only a very few of the numerous permutations he considered. This project, presented to the Committee of Five in Paris on 12th April, 1929, incorporates a new element: the horse-shoe shaped ramp first seen in the Centrosoyuz projects of 1928 [fig. 69].



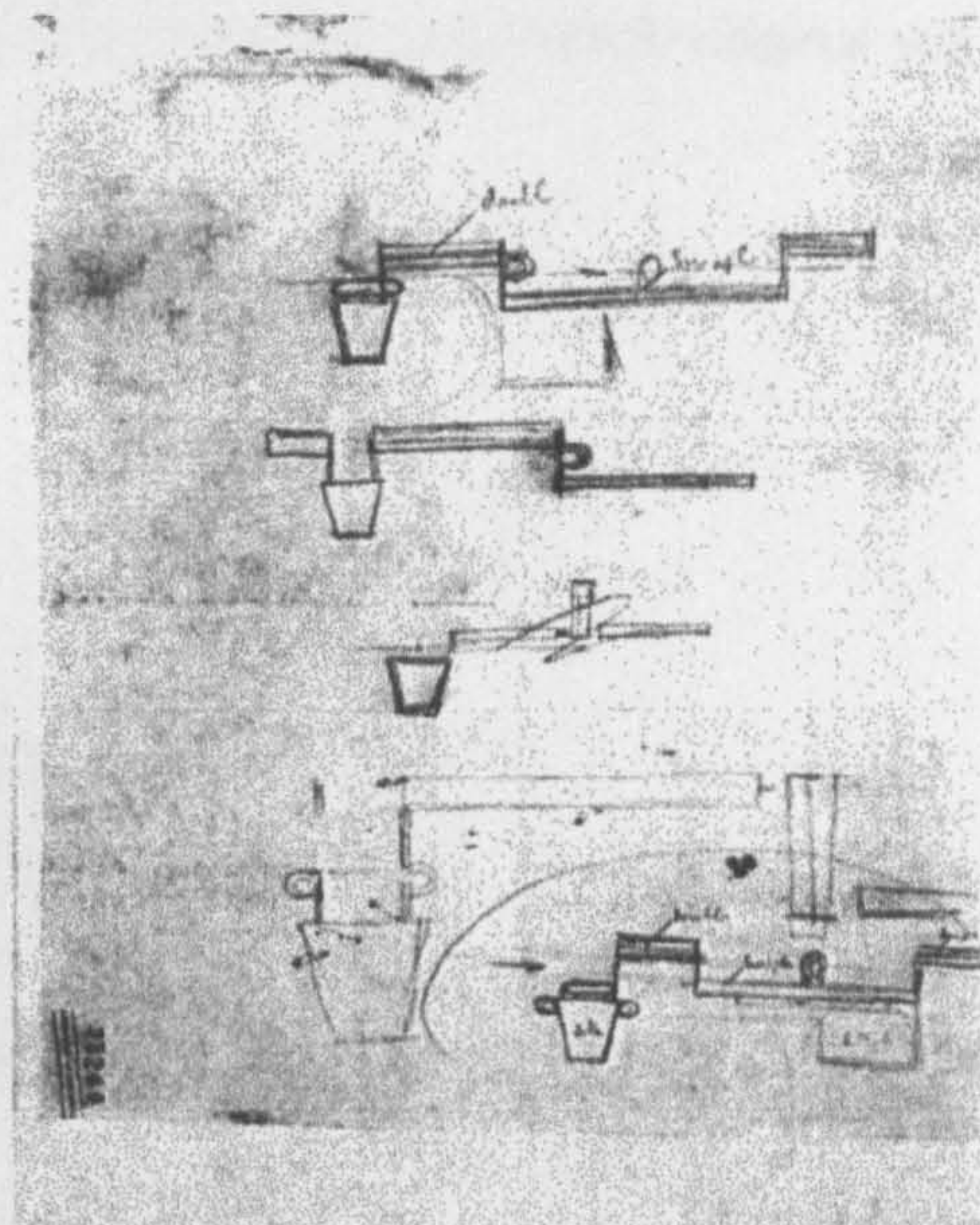
23.268



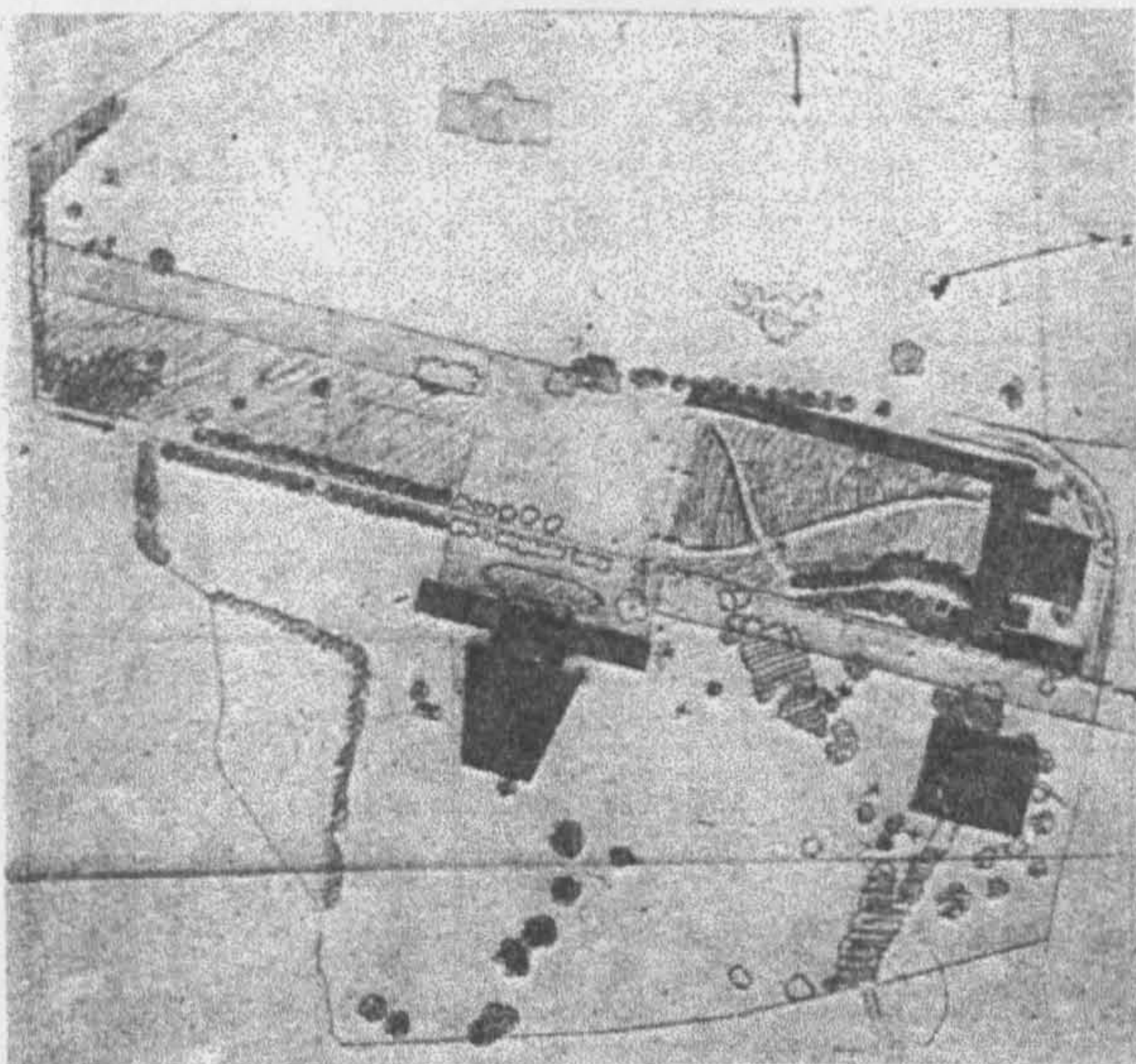
23.280



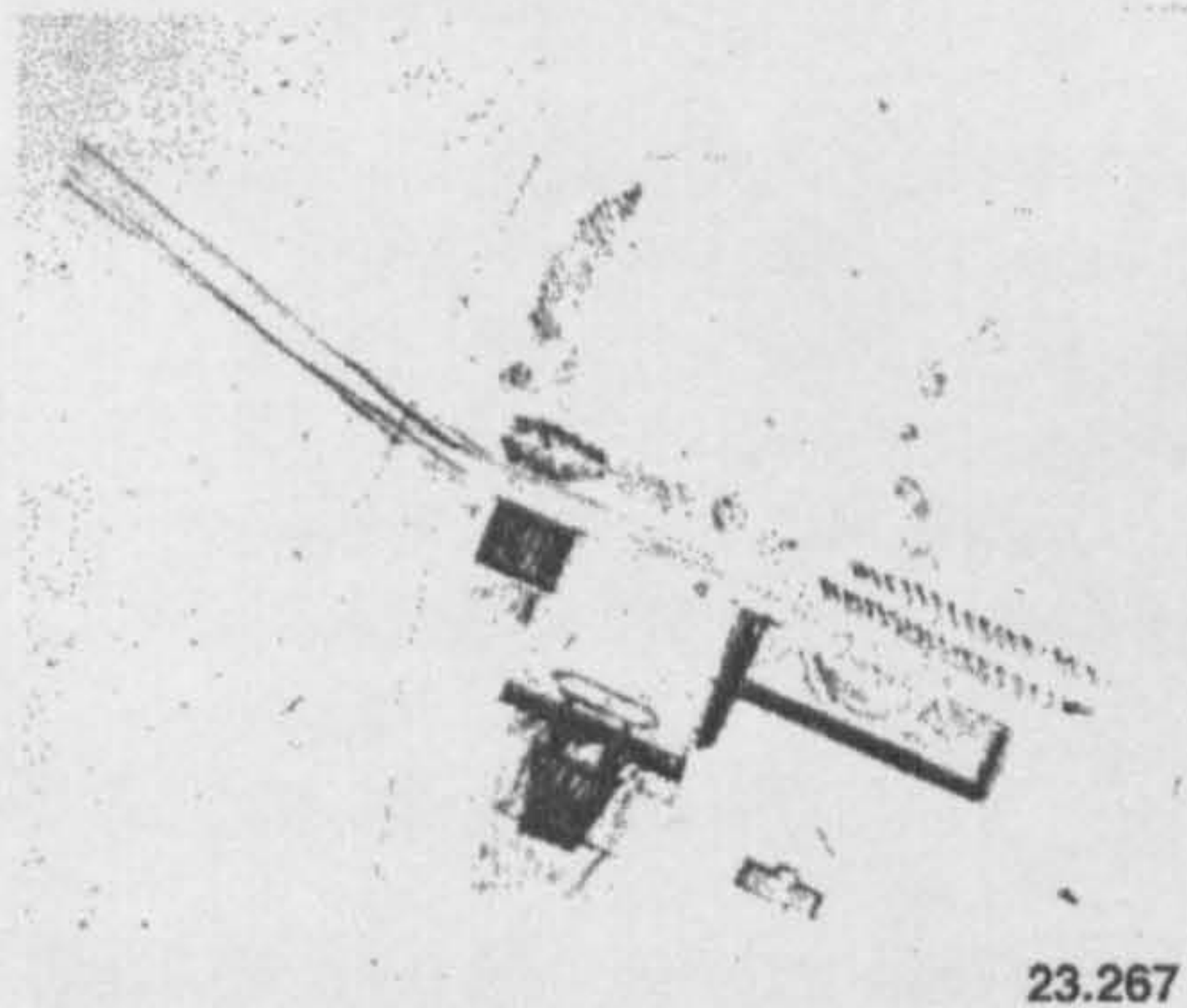
23.265



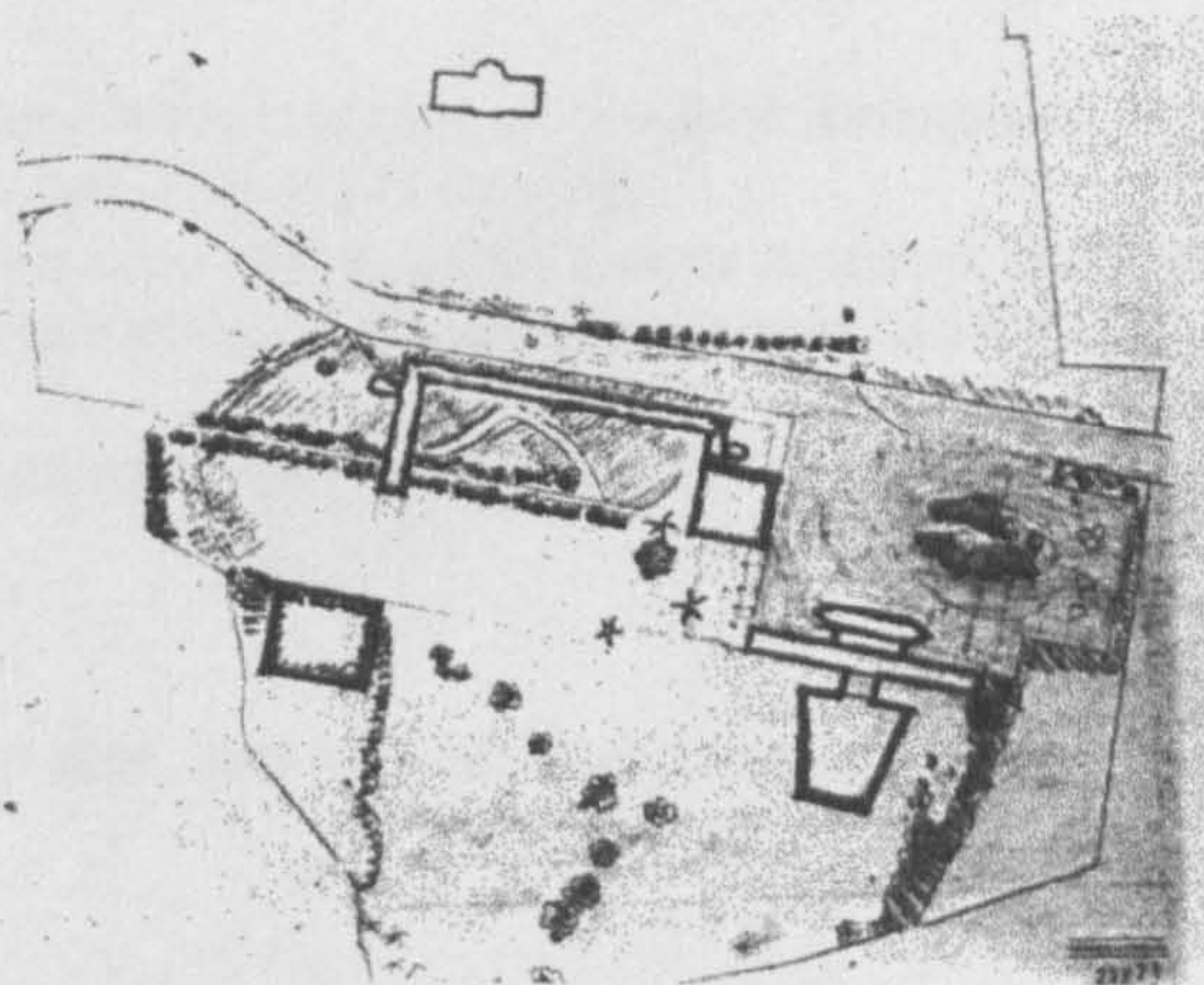
23.269



23.296



23.267



23.271

**Palace of Nations Project for Parc Ariana Site,
January 1929.**

Notes to Part II

1. Some correspondence with Roth about the sale is preserved in the FLC.
2. Published by GTA/Amman [E.T.H] 1988.
3. See Roth's memoir of the competition period, published in *Le Corbusier & Pierre Jeanneret -Das Wettbewerbsprojekt für den Völkerbundspalast in Genf 1927*. Roth says the drawings were printed on special paper and then mounted on lightweight wooden frames by a specialist company, before the competition team added colour. See Part III Section 2 of this thesis for more on Alfred Roth's account of working on Le Corbusier's project.
4. Based on my English translation, which I have as a computer file: the French original will no doubt give a slightly different result.
5. Some electronics dates:
 1858: first Atlantic telegraphic cable was laid
 1876: Invention of telephone
 1885: dictaphone
 1894: Marconi invents microphone?
 1905: first directional radio antenna
 1906: amplifier vacuum tube
 1927: radio considerably developed - BBC founded
 Negative feedback in audio amplifiers introduced.
6. Competition Brief, p13.
7. A comparative study of the acoustics of the halls of the 27 winning designs would be of interest here.
8. *Une Maison*, p112.
9. See *Le Corbusier à Genève*, p155, for extracts from the report by the Swiss experts Jungo & Martin. Copies of the report are held in the Geneva State Archives and in the UN library in Geneva.
10. Although Le Corbusier did admit that all halls were capable of acoustic correction:
 'Let us remember this well: *every hall may be corrected*.
 And let us remember this too a corrected hall supplies a pure acoustic, but this acoustic may be reduced [by the truncation of the greater part of reflected waves] almost to zero.
 And here then is the problem. An acoustic hall is intended to allow the listeners to hear.
 From *Une Maison*, p112.
11. However high the throne, however soft the seat, one is never seated other than on his arse. See UMUP p86.
12. *Une Maison*, p88.
13. *Une Maison*, p92.
14. Ibid.

15. *Une Maison* p94.
16. Ibid.
17. *Oeuvre Complète*, Vol 2, p127.
18. The Palace of Nations project is presented as a pastoral rather than an urban concept, although it uses many of the same compositional and organisational strategies as Centrosoyus, and the Palace of the Soviets project, which are indisputably urban. See Alan Colquhoun "The Strategies of the Grands Travaux". There is also the matter of the incorporation of ensembles of public buildings - which may be traced back to this project and the related Cité Mondiale - in Corbusian urban plans of the thirties: another transposable hierarchy? [In the same essay Colquhoun notes Le Corbusier's 'tendency to treat each of his projects as a prototypical element in a new urban reality'.]
19. *Une Maison*, p95.
20. These are the catalogue numbers of archive drawings held by the Fondation Le Corbusier, and published in several dozen volumes as the Garland Archive.
21. The particularities of this cranked u-shaped block are inexplicable: I cannot locate features of the terrain, or previous elements on the Barton land that account for things like the extra 'u' inserted in the extension at the point of change of angle.
22. The B.I.T. building now houses GATT, as current tourist maps of Geneva show.
23. He refers to the East block; the west block, also with a cantilevered slab and uninterrupted fenêtre en Longueur to the west side, is only about 95 metres long.
24. *Une Maison*, p106.
25. Ibid.
26. With the exception of the basement. Note that on the fifth floor the centre has shifted so that the entire length of the block is included.
27. Except at entrance level.
28. Sketches in the Fondation Le Corbusier show that the possibilities of extension were thoroughly explored. See FLC23.385, where the Secretariat footprint becomes a capital 'H', and then the lake side range grows wings at right angles on either end.
29. One of the documents supplied to the competitors with the competition brief was a table of the rooms required in the Assembly and Secretariat buildings which is known to have been drawn up by Victor Horta. This may imply a significant input into the description of the Assembly Hall seating arrangements [League Archives: Jury session minutes 14.04.26: 32/50354/28594].

There is an extended discussion of the Besançon Theatre and the debate about the reform of the public theatre and its seating arrangements that was going on in France at that time, in Anthony Vidler's book, 'Claude Nicolas Ledoux' [MIT, 1990]. See p165.
30. *Une Maison*, p129, description accompanying cross-section and plans of the double skin glass screen.

31. Le Corbusier made a curious and whimsical suggestion at the end of this section of the text: that the lights within the glass walls might be linked to the speaker's rostrum and be at his disposal - a 'light organ'. A joke left over from the lecture? See *Une Maison* p128.
32. Ateliers Marinoni, 1919. See *L'Architecture d'Aujourd'Hui*, Perret special edition, October 1932, reprinted February 1991. Probably the best known glass *block*-enclosed structure of the 1920's is Pierre Chareau's *Maison de Verre*, on site in 1928, ie., a year after the Palace of Nations competition.
33. *Ibid.* p56-58.
34. *Une Maison*, p126. See my remarks on the choice of steel frame over concrete by Terner & Chopard in the roof-garden section of this study.
35. Frampton in *Le Corbusier's designs for the League of Nations, the Centrosoyus, and the Palace of the Soviets, 1926-1931* [Garland Archive Essays, 1982-85].
36. See further discussion on the Assembly Hall structure in the Roof Gardens section of this chapter.
37. *Une Maison* p130.
38. This system, termed '*aération ponctuelle*' he credited to Gustave Lyon]. *Une Maison*, p132.
39. Brian Brace Taylor, 'The City of Refuge, Paris 1929/33'. English version, pub. University of Chicago Press, 1987. See p95 for a discussion of mechanical heating and ventilation systems.
40. "Circulation, An Acute Circulation Problem': this is Le Corbusier's title for the *Une Maison* discussion of the circulation.
41. *Une Maison*, p146.
42. Compare the passage on p147 with the piece on p32 :

Let us speak of eloquence. The geometry of iron; in producing steel, the artist deforms it, the skilful, subtle artist. In hard steel the pure edge is the *perceptible* thing. The artist skilfully, subtly, deforms to render perceptible this geometry, naked like Diogenes, which will become *eloquent*. The thing will be *perceptible*. Too bad if this word hurts the young generations who refuse to be aroused. In the end there is no true joy other than in the *quality of play* and it is on this truth that history is repeated unceasingly.

Quality of play, finesse, nuance. There are no other reasons for living. All should become simply "system" in the immediate 'popularisation'. Systems only arise afterwards; they are not preconceived. Systems are revealed by the pupils. The master always escapes from the system. By his claw one recognises the lion. And we are not interested except when, in the midst of various cries of the crowd, we have recognised the potent voice of the lion. We are only interested, that is to say that we only quake, where we recognise, by the infinitely strong, by the infinitely perceptible, a man, a brother, a master, -a heart, a free being, a spirit.

[*Une Maison, Thèse.*]
43. *Une Maison*, p148-150.
44. This is the only place where he mentions that the cladding would be of polished grey granite.
Annex VII of the Competition gives prices for various, locally available, kinds of stone,

including several Swiss granites: Valais at SF350.00/cubic metre and Tessin at 400.00/cubic metre.

45. *Une Maison*, p170.
46. See FLC archives, Société des Nations, Genève, box 12-1-I, 1-154. The documents referred to are no.s 50-84.
47. Document no.65 from above archive.
48. Devanthery & Lumiere: *S.D.N. un Palais Moderne?*, p19.
49. Document 66 in the same archive.
50. International Labour Organisation. This building was completed a few years before the Palace of Nations competition, the successful outcome of a local architectural competition, and which the League had hoped to emulate.
51. *Une Maison*, p106.
52. See *Une Maison*, Part II: *Circulation, An Acute circulation Problem*.
53. Mont Blanc is some sixty kilometres away, towards the south-east. Nevertheless, it is apparently visible from Geneva: see the second postcard reproduced on p91 of *Une Maison*.
54. Garland Archive 23.368.
55. Reproduced by Devanthery & Lamunière in colour, see p 20, *Le Corbusier à Genève*.
56. Drawing no. 23.186 in the FLC is the original for this collage, and a little clearer: the proposed extension and its relation to the BIT building can be seen in the background. There are other drawings in *Une Maison* for this harbour, see p145, 153.
57. 23.402 has been published in *Le Corbusier à Genève*, p29.
58. For 23.370 see *Le Corbusier à Genève*, p30.
59. According to Alan Windsor, 'Peter Behrens, Architect & Designer 1868-1940', see p121. See also 'Mies van der Rohe: a Critical Biography', Franz Schultze, p42. pub. University of Chicago Press, 1985.
60. Aspects of Jeanneret's Villas Jeanneret-Perret and Favre-Jacot, both designed in 1912 strongly recall Behrens' Schroeder and Cuno Houses of 1909 and 1910 respectively, whereas the first three houses Jeanneret built have nothing of this 'Rationalist' Neo-Classicism.
61. Kenneth Frampton, *The League of Nations, the Centrosoyus and the Palace of the soviets, 1926-31*. Pub. in the 32 volume Garland Archive of Le Corbusier's drawings, and republished by AD in *Drawings from the Le Corbusier Archive*, in 1986.
 'The strange iconography of this sculptural group requires some explanation. The central figures are apparently derived from the Dioscuri, transposed by Behrens (after Schinkel's Altes Museum) into a symbol for the German State and used by him on top of his St.Petersburg Embassy of 1912 and again in the Festhalle erected for the Werkbund Exhibition of 1914 . Le Corbusier's free interpretation

of this Icon is not without certain implications, for the horse, instead of being restrained by a man, is now running free - surely a sign of Dionysian energy - while the remaining male figure, instead of being rigidly frontalized, as in Behrens' version, adopts a graceful asymmetrical posture, evocative of Apollonian calm. The attendant beasts left and right comment at a more intimate level on the generic meaning of the inner dialectical pair, for the lion seemingly stands for Jeanneret, while the crow, poised as if on the verge of flight, is clearly meant to signify as the image of a pun, the "crow like" one, that is, the volatile personality of Le Corbusier himself. Le Corbusier's awareness of being technically dependent upon the expertise of his more technocratic cousin is confirmed by the compensatory statement which he made late in life: "I am the sea and he is the mountain and as everyone knows these two can never meet."

62. See Alan Windsor, 'Peter Behrens, Architect & Designer 1868-1940' p122 & p138 for illustrations of these buildings with the Dioscuri group.
63. According to Barry Bergdoll ['Karl Friedrich Schinkel: an Architecture for Prussia', pub. Rizzoli NY, 1994]:
 'Schinkel devised a complex series of references to classical mythology, united around the theme of art as the means by which humankind triumphed over a baser nature. Crowned by the pendant statues on the roof of the Dioscuri, whose duality symbolises art's role in human spiritual triumph over barbarian matter, the decorative program underscores the extent to which Schinkel viewed both the building and its contents equally as works of art and encapsulates his notion of art as the means by which everyday phenomena give access to a higher understanding.'
64. See the discussion of Perret's influence later in this chapter: Schinkel and Perret deal with architectural sequences in a similar fashion.
65. Examples: Pont Butin competition, [1915], Villa Mandrot [1930-31], Maisons Jaoul [1954-6], Chandigarh Palace of Justice [1956].
66. *Vers une Architecture* includes numerous images of liners.
67. Entrance 'quai' - *Une Maison* part II Circulation (p???)
68. *Precisions*, English translation, p63.
69. Also drawn in the *Precisions* sketch of the lakeside elevation: the boat is part of the project!
70. A number of archive drawings record other options considered for achieving a central focus at this point. There are sketches for centralised parterres and for a monument.
71. Other houses illustrated in the *Thèse* are the Weissenhof houses [6 pages], Maison Cook [4pages] and an early project for a Citrohan house on the Côte d'Azur [1 page]. The Weissenhof houses and Maison Cook were also completed in 1927; in August and December respectively [See Benton, *The Villas of Le Corbusier*, and Kirsch, *The Weissenhofsiedlung*].
72. Formulated in 1926; See *Oeuvre Complete*, Vol 1, p129.
73. Jungo & Martin, Architectural experts' report for the Committee of Five.

74. See *Une Maison* p102 -103 for an elevation of the Secretariat and 1:100 sections showing the columns. Le Corbusier gives the length of the longest pilotis as nine metres [p92].
75. There are minor entrances to the Assembly Hall on the main axis, but these are not part of the main entry sequence in any case: the numerous entrances to the public galleries sprinkled along the curved end of the hall are all of equal importance including those on axis; there is no hierarchical build up here.
76. The Four Compositions: *Oeuvre Complète*, Vol 1 p189. When this diagram dates from is not certain, however it is placed in the *Oeuvre Complète* after the penultimate project for the Villa Savoye at Poissy [1928], which illustrates the 4th type.
77. This bridge recalls the overhead passages linking the various abattoir buildings in Le Corbusier's 1917 project at Challuy. At Challuy, motor vehicles circulate beneath these *passerelles*; at Geneva, only pedestrians. See *Le Corbusier en France*, Gilles Ragot & Mathilde Dion. pub. Electa Moniteur, 1987.
78. This column uses the same footprint as the paired, Assembly Hall portico columns flanking Journalists' and visitors' entrances; in a way it functions similarly, displacing traffic away from the centre, as the Assembly Hall column pairs draw pedestrians to either side.
79. *Une Maison*, part I, the *Thèse*, p27.
80. The entrance doors to the double house at the Weissenhofsiedlung are aligned with the short ends of the house-block, and the ground floor lobbies are painted a dark colour which has the effect of making the white first floor and roof terraces hover above an apparent void; entrance is thus not expressed on the main facade.
81. 'After three months of strenuous labour with ten draughtsmen, three days before the project was to be shipped to Geneva, I designed the two elevations of the Palace, devoting exactly three hours to them - one and a half hours to each - all the plans and sections having already been finished and inked. The elevations emerged quite naturally, the architecture being totally generated by the plans and sections.'
From '*In defense of Architecture*', *Oppositions* translation, as before.
82. *Une Maison*, p98.
83. *Une Maison*, p99.
84. See Peter Eisenman on the syntax of the Dom-ino. *Oppositions* 15&16, 1979.
85. *Oeuvre Complète*, Vol 1 p25. See also Peter Eisenman's article, 'Maison Dom-ino and the Self-Referential Sign', in *Oppositions* 15/16.
86. It is often difficult to tell from the microfiche reproductions of the drawings when the internal columns are square and when they are round, because of the floor patterns which edge the corridors and coincide with these columns.
87. *Une Maison*, p92.
88. The *Une Maison* text seems to imply that the roof gardens of the Secretariat and Assembly hall are at the same level: this is not so - the Secretariat is several levels

short of the Assembly Hall. Devanthéry & Lamunière also make this assumption.

The essential *horizontality* of the Jura and of the Salève asserted by Le Corbusier [*Une Maison*, p90] appears to be his interpretation of the exposed rock formations: '.....une croupe toute zébrée de longs bancs parallèles de rochers. Il n'y a pas de doute, la dominant est l'horizontale: le diapason.'

89. FLC12-1-I, documents 109 & 110. Letter from Turner & Chopard, dated 13.01.1927.
90. The larger of the two halls in the Palais des Soviets project was to accommodate 15000 people - the League of Nations held a mere 2600.
91. I chose this example rather than the many surviving sketches of this time because it is a finished object: the design process has been completed, and the relationship of the parts is fixed.
92. There are numerous examples: the random windows at Ronchamp provide another, and the interest in paving patterns, where the slab divisions relate to architectural incident, which is seen in the interior at Ronchamp, is also obvious on the entrance hall Quai at the Palace of Nations, on the roof Gardens of Garches and earlier houses, such as the Maison La Roche.
93. Colin Rowe with Robert Slutzky, *Transparency, Literal and Phenomenal*, written 1955-6. Pub *Perspecta*, 1963.
94. Alan Colquhoun, *Displacement of Concepts in Le Corbusier*.
95. Jungo & Martin report, November 1927, Geneva State Archive.
96. Le Corbusier designated the first-floor, 'piano nobile' level 'rez-de-chaussée, and, starting there, calls the paired levels RA & RB, 1A & 1B, 2A & 2B.
97. See *Une Maison*, p142-143 for Le Corbusier's detailed explanation.
98. See Paul Turner, *Romanticism, Rationalism and the Domino System*, and Donald Drew Egbert, *The Beaux-Arts Tradition in French Architecture*.
99. Kenneth Frampton, *The League of Nations, the Centrosoyus and the Palace of the soviets, 1926-31*. Pub. in the 32 volume Garland Archive of Le Corbusier's drawings, and republished by AD in *Drawings from the Le Corbusier Archive*, in 1986. Frampton asserts that all the judges would have recognised the pair:
 '....the seated figure with his high-heeled boots and boater is patently Auguste Perret, while the standing silhouette with homburg and walking stick is Le Corbusier himself. The ironic reference is clear enough: the old and the new representatives of rational classicism are here, situated side by side on the threshold of a new era.'
100. See the chronology in *Le Corbusier, Architect of the Century*.
101. Colquhoun, *Rules Realism and History*.
102. *Une Maison*, title of section in Part II 'Explications'.
103. The views from these passages are not quite continuous: the diamond-shaped trussed columns are enclosed in solid casings at this level. Actually they are never revealed at close quarters: Le Corbusier had not resolved the conjunction of brute engineering and

prestigious formal architecture at that time. Today of course, such a structure would be required to be enclosed - for fire safety.

104. The cour d'honneur and the lakeside park are two phenomenologically different kinds of spaces, as Alan Colquhoun has pointed out. Urban & formal gives way to pastoral and 'natural'.
105. *The Strategies of the Grands Travaux*, Alan Colquhoun, pub. in *Modernity and the Classical Tradition*, MIT., 1989.
106. The irregular site becomes the norm. *Une Maison*, p6&7:
Ce polygone irrégulier est un événement sans contrôle..... Nous avons admis de vivre dans l'arbitraire.....
107. In the same way, Le Corbusier envisaged his internal circulation scheme manned by ushers with coloured cards. *Une Maison*, p138.
- 108.. Siège une Grande Commission avec public, siège le Conseil: les grands de ce monde, arrivant par le parc Monrepos, traversent les jardins étalés au pied du Secrétariat, et viennent accoster au grand quai de 140 mètres de long de la grand aile du bâtiment de la Salle des Assemblies. *Une Maison*, p138.
109. This mysterious element is replaced by a line of flagpoles in later studies, see FLC23.246, fig.27 A.
110. Rowe & Slutzky, *Transparency, Literal & Phenomenal*, pub. *Perspecta*, 1963.
111. See the essay: a continuous slot of space behind both entrance and garden facades is set up by the vertical glazing aligned on each floor.
112. See *Vers Une Architecture*. English translation, 1927, p164.
113. *Oeuvre Complete*, vol2 p130: Studies for various configurations of the parts of the Palace of the Soviets.
114. Donald Drew Egbert, 'The Beaux-Arts Tradition in French Architecture', Pub. Princeton, 1980.

Chronology of the Competition and its context

1914-1918		First world War [Russian Revolution in 1917].
1919	January	Peace conferences in Paris.
	June 29th	Treaty of Versailles signed. The Covenant of the League of Nations was integrated into the Treaty.
1920	January 20th	Treaty came into force.
	January 26th	Council of League of nations met for the first time in Paris.
	Autumn	League moves to Geneva and buys the Hôtel National.
	September	1st Assembly , held in Salle de la Reformation.
1923		League required additional accommodation. Feasibility study for site adjacent to Hôtel National carried out by local architect, Marc Camelotti. Estimated cost 3 million Swiss Francs. Question deferred for financial reasons, until 1924 Assembly.
1924	September	5th Assembly directs six of its most prominent member countries to nominate architect-jurors to devise and run an international competition for a new League building.
1925	January	First jury meeting. Jury dissatisfied with proposed site, and with budget of 4.5 million Swiss Francs.
1925	September	6th Assembly . League approves a budget of 8 million Swiss Francs
	September 23rd	Second meeting of 6-man jury. Additional members nominated bring total to nine.
1926	January	Second Jury conference. Jury looks for a site themselves and suggests the Parc Perle du Lac.
	March 5th	Comparative Report on both possible sites published. Lakeside site would cost twice as much and not solve the accommodation in the short-term. League starts negotiating for the lakeside properties.
	April 7th - 16th	Third Jury conference. Programme and Rules for the competition written and agreed with the Secretariat.
	June	Copies of the Programme and Rules sent to all member countries so as to arrive on the same day.
	July 25th	The competition opened.
	September	7th Assembly
1927	January 25th	Last dispatch date for entries. Entries shipped from all over the world continue to arrive for the next three months. Final total is 377.
	March 25th	1st jury session
	May 5th	Public announcement of outcome.
	May to June	General dissatisfaction with results. Publication of winning designs in countries of origin. Outcry from Press and Modernist professional bodies, orchestrated by Le Corbusier. Support of Moser, Giedion and Berlage.
	July 3rd - 24th	Exhibition of designs in Electoral Palace, Geneva.
	September	8th Assembly . Rockefeller makes a gift of 4 million Swiss Francs for a library for the League.
	September 10th	League nominates a committee of 5 diplomats to consider the Palais des Nations question.
	November 16th	Technical report on nine winners commissioned by the committee of 5 from architects West & Jezek. Swiss Federal authorities submit their own report by Leon Jungo & Camille Martin.
	November 19th	Georges Labro [French 1st Prize winner] protests about the press campaign in support of Le Corbusier.
	December 27th	The Committee of 5 prefers the Nénot-Flegenhaimer project, but consider that some changes are required. Also, the Rockefeller gift means that the budget for the whole is substantially increased. Nénot and Flegenhaimer appointed to develop a new project in collaboration with the authors of three other winning projects: Broggi, Lefèvre, and Vago.

1928	January	Further interventions by Le Corbusier - Berlage and Moser petition their diplomats on his behalf
	February 28th	Le Corbusier's first <i>Requête</i> [petition] presented to the League.
	March	The Council of the League ratifies the committee decision.
	March 13th	Le Corbusier informed after ratification that it is inappropriate for private individuals to petition the Council, and that his petition has not been circulated to the Committee. He then sends it to committee members himself. Nothing happens.
	?month unknown	<i>Une Maison Un Palais</i> published by Le Corbusier
	June	First CIAM conference held at La Sarraz [Hélène de Mandrot's chateau]
	September	9th Assembly. Because of the Rockefeller gift, Perle du Lac site now too small for the enlarged project. The city suggests the Parc Ariana, then leased to the city on condition that nothing be built on it. Hélène de Mandrot is one of the owners of the land..
	September 19th	Mme.de Mandrot informs the League that she is willing to renounce her rights over the land if the nine winning architects are permitted to submit projects for the new site.
	September 21st	The League concedes that the winners may do so at their own expense, but does nothing about the matter.
	December	Hélène de Mandrot's lawyers press the League.
	December 26th	The League responds that her request has put them in an embarrassing position.
1929	January 19th	Hélène de Mandrot puts pressure on M.Politis, one of the members of the Committee of 5.
	January 26th	League agrees to invite the other five winning architects to present their projects, but imposes a very short time-period in order to discourage them. Only Le Corbusier, and Putlitz, Krophaus & Schoch [Hamburg] respond.
	March 11th	Le Corbusier informs the League that his project is ready.
	April	Hélène de Mandrot insists that Le Corbusier present his project personally to the Committee of 5
	April 12th	The Committee of 5 travel to Paris to see Le Corbusier's project.
	April 17th	Hélène de Mandrot signs over her rights over the Parc Ariana.
	September	10th Assembly
	September 7th	Foundation stone of Palais des Nations laid.
1930	September	11th Assembly
	September 18th	Le Corbusier writes to the President of the League accusing the committee of architects of plagiarism. There is no response.
1931	July 2nd	Le Corbusier submits a second <i>Requête</i> protesting the plagiarism of his project [<i>Le Plagiat</i>] and demanding compensation. Visits Geneva with his lawyer, but gets no further than the Secretariat.
	September	12th Assembly
	November	L'Architecture d'Aujourd'hui publishes the <i>Requête</i> , but allows Joseph Vago [one of the architects for the Palace] to state his own case. Vago claims that the new Palais des nations project is based on his own winning project and threatens to sue Le Corbusier for defamation.
1933	November 6th	Palais des Nations inauguration ceremony.
1936	February	Secretariat move in
1937	September	18th Assembly. Assembly Hall inauguration.
1939	September	Germany invades Poland. Britain declares war on Germany. Activities of League suspended.

This chronology was compiled using the article 'Le Champ de Bataille du palais des Nations, 1923-1931' by Richard Quincerot in *Le Corbusier à Genève, 1922-1932*, pub. Payot Lausanne, 1987, as well as documentation from the United Nations archive in Geneva, information in *Une Maison Un palais*, and various histories of the League of Nations. See bibliography.

PART III

A Brief History of the Competition c.1925-1927

SECTION 1

- The Formation of the League of Nations
- The Structure of the League
- An Architectural Competition
- Who were the Jurors?
- The jury defines the problem
- Writing the Programme
- The Competition Programme and Rules

The Formation of the League of Nations

When the First World War ended in 1918, casualties numbered over ten million. Another twenty million had been wounded. The fervent hope that such tragedy and waste might be avoided in future led to the formation of the League of Nations. The concept of such a League was not new in 1918. The idea has been around for several centuries, and emerges with new strength whenever nations are most grievously wounded by the convulsions of war¹. This time, however, circumstances combined to make the dream concrete.

In October 1918, Germany was in retreat, and Kaiser Wilhelm II had abdicated. The Germans approached President Woodrow Wilson of the United States of America on the 4th October to arrange a general armistice². The armistice was signed on 11th November 1918³, and peace conferences began in Paris in January 1919. A committee under the chairmanship of Woodrow Wilson⁴ was set up to draft the Covenant of the League of Nations. The covenant was

the statement of aims, responsibilities of membership, the rules by which it should conduct its business and the prescription for corporate action, which was at once the foundation-stone of the League and also the holy book to which, throughout its life, members so often turned for guidance and authority.⁵

Wilson himself chose the word "Covenant" to describe this document and he also insisted that it should be integrated into the treaty being drafted at the peace conferences; that it was so important that it took precedence over all the other territorial disputes and questions of reparation which were the business of the

conference. Nations which ratified the treaty would automatically agree to abide by the terms of the covenant. This is what happened: the Covenant of the League of Nations forms the first part of the Treaty of Versailles⁶, and if one hopes for poetry and idealism in the treaty, the only place it may be found is in the preamble to the Covenant:

THE HIGH CONTRACTING PARTIES,

In order to promote international co-operation and to achieve international peace and security

by the acceptance of obligations not to resort to war,

by the prescription of open, just and honourable relations

between nations,

by the firm establishment of the understandings of

international law as the actual rule of conduct among

Governments, and

by the maintenance of justice and a scrupulous respect for

all treaty obligations in the dealings of organised

peoples with one another,

Agree to this Covenant of the League of Nations.⁷

In fact, the Treaty of Versailles was a bitter treaty for a bitter war, and the treaty and subsequent interpretations of its clauses contributed to later problems in Europe⁸. In the Treaty of Versailles, the Covenant of the League is followed by a series of clauses stripping Germany of all her overseas possessions, and anything else that might indicate an international power: her submarine cables, for example. Her enemies, especially France, were determined that they should never be overrun again, and that Germany, deemed the aggressor, should pay the whole cost of the war. The losses incurred by the civilian population alone were estimated at \$33,000,000,000. and although economists at the time did not believe that such a sum could ever be collected, the Treaty imposed huge reparations on Germany.

The treaty of Versailles was signed on 28th June, 1919, and came into force on 20th January, 1920. Six days after ratification, the Council of the League of Nations met for the first time [26th January, 1920]. The first meeting was held in the Quai d'Orsay Hotel in Paris, and was attended by Britain, France, Italy and Japan, representing the 'great powers', and Greece, Belgium, Spain and Brazil representing the 'lesser powers'.

The United States of America played no part here: Woodrow Wilson's success in drafting the Covenant and ensuring its inclusion in the Treaty of Versailles was followed by his failure to get the American people to accept it. America never ratified the treaty, although Wilson, worn out from his labours in Paris,

campaigned for it until struck down by a thrombosis which partially paralysed him⁹. His difficulties had two basic causes, both arising out of his idealistic and arrogant personality¹⁰. Firstly, he had made many enemies among powerful Republicans, and he had not included a single Republican representative in the Peace delegation. Secondly, he failed to explain to the American people why they had entered the war, and why, therefore, they should help to maintain the peace. America did not go to war in order to found a League of Nations and thus ensure peaceable relations between all nations, but to maintain American security¹¹. Wilson's idealistic oratory represented America as a great crusader entering the war altruistically, when the reality was that she could not allow an aggressive Germany to gain control of the Atlantic ocean¹².

In the presidential elections of November 1920, Warren Harding, a Republican, became president, and America signed a separate peace accord with Germany and Austria in 1921. The election of Harding marked the beginning of twenty years of American isolation, the whole period of existence of the League, and it is certain that both European political relations and the power of the League were affected for the worse by the absence of the United States in the interwar years.

The Structure of the League

In 1920, 42 states became members of the League when the Treaty of Versailles was ratified. By 1926, when the competition for the Palace of Nations was organised, there were 55 Member States. The main political organs of the League were the *Assembly* and the *Council*, which were supported by committees, technical bodies, and by the *Secretariat*¹³. The Assembly, Council, and Secretariat were all permanent and public bodies, and committees and technical groups which might be temporary or permanent, could be appointed when needed. The Assembly consisted of representatives of all member states. Each state could have up to three representatives, but each, whatever its size, had only one vote. In practice, this meant that a delegation to the Annual Assembly might consist of a dozen people, including deputy and substitute delegates, and experts. The Assembly met in full session, and also divided itself into six main committees, often subdivided further, which sat in the intervals between the Assembly sessions.

The Council, much smaller than the Assembly, was its executive body. It settled political disputes, dealt with current business, and saw that the League's

decisions were carried out. In 1926 it consisted of ten members. Four were permanent - the British Empire, France, Italy and Japan - and six were non-permanent. Many states sent their Ministers for Foreign Affairs to represent them at Council sessions. The council met every three months, usually for a week at a time, and any state with a special interest, whether a member of the council or not, could send a representative. It was not uncommon for there to be fifteen representatives from non-member countries at a Council session. In addition, representatives would be accompanied by technical advisers and secretaries, and special advisory committees of experts. The Council generally met in public, but also occasionally in private and sometimes in secret.

There were also a number of advisory bodies, both permanent and temporary: the Commissions. Among the permanent commissions were the *Mandates Commission*, the *Opium Commission*, and the *International Committee on Intellectual Co-operation*.

The 'Technical Organisations' were the *Organisation for Communications and Transit*, the *Economic and Financial Organisation*, and the *Health Organisation*. Both the Commissions and the Technical Organisations met several times a year, usually at the League's Geneva seat.

The Secretariat, the permanent administrative office of the League consisted, by 1925 of 500 full-time staff based in Geneva. It was directed by a Secretary-General and his deputy, assisted by two Under-Secretaries-General. It was divided into *sections*, some of which were devoted to the League's areas of interest, and some of which were service sections. Examples of the former are: the *Political Section*; the *Financial and Economic Section*; the *Mandates Section*, and the *Disarmament Section*. Service sections included the *Financial Administration* of the League, *Translation and Interpreting*, *Précis-Writing*, *Publications*, *Registry*, *Library*, *Distribution*, and *Central Typing and Shorthand Services*.

Finding a seat for the League

Initially the Secretariat was based in London, in Sunderland House, on the corner of Piccadilly and Down Street. After its first, ceremonial meeting in Paris, the League Council met regularly in the European Capitals, in London, Paris and Rome. At the second meeting of the Council, held in the picture gallery of St James Palace in February 1920, the foundations were laid for organisations now familiar to everyone: the first moves were made to set up a permanent *Court of International Justice*, and a *Health Organisation*. A body for 'Communications and Transit' was formed. At the same session, a resolution was passed that would enable Switzerland to join the League without losing her traditional neutrality. The Swiss were divided on the matter, but joined after a referendum later in the year.

There was much discussion as to where the permanent seat of the League should be. Brussels was one of the candidates, but it was felt that she was associated too strongly with the war. The neutrality of Switzerland made Geneva ideal¹⁴, and the Swiss Government reacted warmly, suggesting the creation of an international city at Creux-de-Genthod, 8 kilometres North of Geneva, by the lake¹⁵. The Secretariat moved to Geneva before the first Assembly was convened in the autumn of 1920, but with America out of the League, its budget was much more limited than originally envisaged, and the Secretariat had to be satisfied with whatever the city could provide. In the event, it bought the Hôtel National, the largest hotel in Geneva, on Quai Wilson, overlooking the lake. Geneva was a small city, and the Hôtel National, which still exists¹⁶, was not particularly large; however, it was much more comfortable than Sunderland House, and it had the advantages of permanence. The council met monthly in the glass-sided dining room, around a circular table. As the Hôtel National lacked a large enough space for the Assembly, it was to meet in the Salle de la Reformation, across the lake. The first Assembly was held on November 15th, 1920¹⁷, and it was in session for five weeks, sometimes in public, and sometimes as a series of open and closed committees. The main work of the Assembly was to review the activities of the League over the past year and comment on it, which it did, sometimes quite critically. Although the League was dominated by the British and French, it nevertheless provided an equal platform for the smaller powers of which they took full advantage. This first Assembly set the pattern for all future ones, and it was decided then that the Assembly should meet annually.¹⁸

An Architectural Competition

By 1923, the League needed additional accommodation, and the City of Geneva offered a site adjacent to the Hotel National. A feasibility study was carried out by a local architect - Marc Camelotti¹⁹ - who estimated a cost of 3million Swiss Francs for an extension to the Hôtel National. Lacking the necessary funds, the League deferred the question until the 1924 Assembly.

In the same year [1923], the International Labour Organisation [B.I.T.], formed as an arm of the League in 1919, and also based in Geneva, held a local architectural competition for its Headquarters building, which had a successful outcome²⁰, ie., an architect was found, and a building constructed with a minimum of fuss. The League would have liked a similar solution, as an international competition would be much more difficult and costly to organise, the whole procedure would take longer, and judging would be more problematic. But, as the premier international organisation, the League was uncomfortable with the idea of limiting the competition to Swiss architects; besides, an international competition fitted exactly the idealistic picture of a peaceable tournament between Nations of just the sort the League wished to promote²¹. That autumn, the Swiss Society of Architects and Engineers submitted its "*Principes à observer dans l'organisation des concours d'architecture*" and sought assurances that Swiss architects would be represented on the competition jury²². The International Congress of Architects reacted similarly and offered to supply members for the jury²³. The League's solution was to get six of its most prominent member countries to nominate jurors, and to delegate the entire task to them²⁴. Each country chose its most renowned architect, and the initial team was composed as follows:

John James Burnet	Britain
C. Lemaesquier	France
Victor Horta	Belgium
J. Hoffmann	Austria
Karl Moser	Switzerland
A. Muggia	Italy

Holland and Spain nominated two men as substitutes:

H.P. Berlage	Holland
C.Gato	Spain

Mussolini had originally proposed Marcello Piacentini for Italy, but he declined on grounds of ill-health, but later participated in the competition and gained a second honourable mention. The first six nominees attended the first jury meeting on 23rd September, 1925. Victor Horta was elected chairman, but the other jurors refused to allow him a decisive vote²⁵, and, since there were an equal number of members, there was the possibility of deadlock. The League therefore increased the jury to nine by including the two substitute jurors and by asking the Swedish Government to nominate an extra member; thus Ivar Tengbom was chosen. Each juror was also required to nominate a deputy²⁶, although in the event, none of the original jurors stepped down in the course of the competition.

Who were the Jurors?

Naturally, all the jurors were eminent architects in their own countries, and the work of some of them - Horta, Hoffmann and Berlage - is still renowned. By the time of the competition, the majority of these men were over sixty²⁷. They represented several different architectural schools of thought, ranging from the Beaux Arts to Modernism, and encompassing Art Nouveau/Jugendstil and Neoclassical tendencies along the way.

The French Ecole des Beaux-Arts was represented by Charles Lemaesquier, who had been a student in the Atelier Laloux at the Ecole des Beaux-Arts, and himself won the Prix de Rome (Deuxieme Second Grand Prix) in 1900. Later, he assisted M.Laloux, whose atelier he inherited in 1923. By the time of the competition, he was probably the Beaux-Arts' most influential member, and his students were still winning the Grand Prix de Rome as late as 1959²⁸.

M.Lemaesquier had previously given the programme for a Palace of Nations some

thought, as the subject for the 1919 Grand Prix competition, had been "Le Palais pour la Ligue des Nations à Genève." This was the first international subject in the entire history of the French Grand Prix, and the first three prizes were taken by pupils of Laloux and Lemareshquier²⁹.

Sir John Burnet, representing the British Empire, was also Beaux-Arts trained; he attended the Atelier Pascal until 1878 and obtained a first class pass there. His teacher, Jean-Louis Pascal, whom he revered, became his life-long friend, and Burnet was a member of the Institute de France, and held the Bronze and Gold medals³⁰ of the French Salon. He had other close friends in the Ecole des Beaux-Arts, such as Henri-Paul Nénot, another student of Pascal, and whose competition project eventually became the basis of the new League buildings. It is certain that Burnet was already acquainted with M.Lemareshquier. At home, he was a member of the Royal Scottish Academy, and of the Royal Academy. He held an LL.D honours degree from the University of Glasgow, his native city, had been knighted by Edward VII, and had received the RIBA Gold Medal in 1923. His practice was responsible for, among other things, the north extension to the British Museum, Adelaide House [No.1 London Bridge], the Kodak building on Kingsway, the Daily Telegraph Building in Fleet Street, and, apparently, Sydney Harbour Bridge³¹. One of Sir John's partners at the time of the competition was Thomas Tait, an early British "modernist"³², but it seems that in his dotage, Sir John's Beaux-Arts inclinations overrode any modernist tendencies in his office.

Victor Horta, later knighted Baron Horta³³ for services to his country, was not only Belgium's best-known architect, but Europe's foremost exponent of Art Nouveau. At the time of the competition, he was a professor at L'Academie Royale des Beaux-Arts at Brussels and its director; an executive member of the Belgian Royal Academy, and a member of numerous other Belgian Commissions and Academies. He was also a professor at the Institut Supérieur des Beaux Arts à Anvers and an honorary member of both the French Institute and of the Royal Academy of Milan. In 1884 he had won the Belgian Prix de Rome, and in 1887 the Belgian Grand Prix d'Architecture.

The Austrian juror, Joseph Hoffmann, had studied architecture in Vienna in the 1890's under Otto Wagner, and won the local Prix de Rome in 1895. Hoffmann was interested in design trends in the rest of Europe, and had explored Art Nouveau at that time before being drawn to the more severe world of the Arts and Crafts movement. He was in contact with Ashbee and the Glasgow group, whose work was

exhibited in Vienna in 1900, by which time he was dividing his time between teaching and designing furniture, decorative arts objects, and architecture. In 1903 he founded the Wiener Werkstätte with Kolomon Moser. This was a manufacturing guild of craftsmen who made all the objects and furniture designed by Hoffmann and Kolomon Moser. Later an architectural practice and a building office were added to these workshops. At its peak the Wiener Werkstätte included over a hundred masters and artisans. Hoffmann's best-known architectural project is the Palais Stoclet in Brussels (1905-1911), and in the 1920's he was mainly occupied with a series of country houses, as well as designing the Austrian pavilion for the Paris Decorative Arts exhibition in 1925 - the exhibition for which Le Corbusier designed his Pavillon de L'Esprit Nouveau. In Paris for the exhibition, Hoffmann, always interested in the most recent trends, took some of his students to see a new house by Le Corbusier³⁴. He had met Le Corbusier in 1908, when the latter lived in Vienna for some months at the end of his Italian journey. The young Charles-Edouard Jeanneret³⁵ had agreed to work for him, but then left for Paris and did not return, later apologising by letter. Le Corbusier thought well of Hoffmann ever after this meeting³⁶.

It seems that Hoffmann also knew Ivar Tengbom, the Swedish juror, or perhaps, became friends with him as a result of the competition³⁷. Tengbom built nothing outside Sweden, but he taught both Gunnar Asplund and Sigurd Lewerentz, and he was important as a theorist for early modern architecture in Sweden; in his time he was well-known throughout northern Europe. After rebelling against the Neoclassicism that dominated the Stockholm Academy of Arts - along with Asplund, Lewerentz and others in 1910, he taught at the independent school thus founded. Here a style of "National Realism" was evolved, where 'traditional Swedish vernacular and structural elements were mixed with a straightforward approach to design that attempted to return to first principles'³⁸. Tengbom gradually moved towards Modernism from this position. He won many architectural competitions in Sweden, such as the Borås Town Hall competition of 1907 and the Stockholm Enskilda Bank competition of 1912. He also won joint first prize in the Stockholm Concert Hall competition of 1920. His international status was indicated by the award of the RIBA Gold Medal in 1938.

H.P. Berlage, the Dutch juror, was also awarded the RIBA Gold Medal in 1932. He had originally intended to be a painter, but soon transferred his interests to architecture. He received his architectural diploma from the E.T.H.³⁹ in Zurich,

under Semper, in 1878 and in the same year was to be found lecturing there, where he met Karl Moser, later the Swiss Juror for the competition. After extensive travels in Italy and Germany, Berlage set up in practice with the engineer Th. Sanders in 1884. After 1889 he was in private practice until his death in 1934. As a socialist, he regarded architecture and society as inseparable, and rejected historicism as being false and extravagant. He was much influenced by Semper and Viollet Le Duc, absorbing from Semper a respect for materials and an interest in the decorative arts, and from Viollet le Duc his structural rationalism. He

insisted that architecture was first and foremost a spatial art and that one must design from within outwards. He propagated the concept of *Sachlichkeit*, a functionalist doctrine stressing sobriety of form and economy of means. Also seminal was his use of geometry as the chief ordering element of design.⁴⁰

He was responsible for innumerable buildings in Holland, such as the Amsterdam Stock Exchange building (competition 1897). He was much honoured in his lifetime, holding honorary doctorates from two Dutch universities; Groningen, (1911) and Delft (1926); and also from the E.T.H. in Zurich (1926). Berlage was the only member of his generation to sign the CIAM manifesto in 1928⁴¹.

Karl Moser (1860-1936) was a highly respected teacher of the Swiss architects of the modern movement. Alfred Roth⁴², one of his students who worked on Le Corbusier's entry for the League of Nations competition, said that

Karl Moser was to Switzerland what H.P. Berlage was to Holland, Otto Wagner to Austria and Peter Behrens to Germany, namely the founder of modern Swiss Architecture and the teacher of the generation of architects that achieved the final breakthrough of the new ideas in the spirit of their founder⁴³

Moser, the son of an architect, was himself a student at the E.T.H. and gained his diploma in 1881. He spent a year at the Beaux-Arts school in Paris (1883-1884) and ran a successful practice in south-west Germany (Karlsruhe) and in Switzerland with Hans Curjel. Eclectic in outlook, he was initially much influenced by Viollet le Duc, and had worked his way through Gothic and Romanesque tendencies by 1900; classical and Baroque elements then began to appear in his work, examples of which are provided by the Zurich Fine Arts Museum (1907-1910), and the main building of Zurich University (1911-1914). He was impressed by modern developments in Holland, especially the work of W.M. Dudok, and this, combined with the Modernist views of some of his students, gradually turned him

towards the Modern Movement. His late buildings, such as the concrete Antoniuskirche in Basel (completed in 1927, the year of this competition⁴⁴) are notable in the early Swiss-Modern oeuvre. His essential architectural concern was, says Von Moos⁴⁵, with the organic treatment of space, and with the integration of art and architecture, evident in all his buildings. That Moser and Le Corbusier knew each other well before the competition is clear although the origin of the connection between them is obscure. Moser became the first president of CIAM⁴⁶, which was formed in 1928 as a direct result of the outcome of the League of Nations competition.

Neither of the two remaining jurors, the Spanish and Italian representatives, A. Muggia from Bologna and C. Gato from Madrid, achieved a lasting reputation, and no trace of them is to be found in English architectural writing covering this period. One can only deduce from their choice of schemes in the League of Nations competition that they were confirmed Beaux-Arts traditionalists⁴⁷.

The jury defines the problem⁴⁸

At its very first meeting, which must have been in January 1925⁴⁹, the initial six-member jury decided that the available funds of 4.5 million Swiss Francs were insufficient, and that the site adjacent to the Hôtel National was inadequate, both physically and symbolically. The jury concluded that the only solution would be to find a new, much larger site and to build a new complex of League buildings there. Horta wrote as much to the Secretary General⁵⁰ on the 16th January. By April 1925, the League had started to search for an alternative site. By the time of that year's Assembly, the League's financial position had improved greatly, and the Assembly approved a budget of 8 million Swiss Francs for the building programme.

The second jury conference was held the following January with the now enlarged jury. Victor Horta was re-elected president by the other eight, and they occupied themselves with various practical matters such as whether French should be the only language of the competition, and if the costing should be by the cubic metre or by a bill of quantities. They decided that their own fees were inadequate and should be increased. They were much concerned with the symbolic content of the brief, to the extent that Hoffmann's deputy suggested a manifesto⁵¹. They

visited the proposed site, which the League was in the process of buying at that time, and were unimpressed. They looked for an alternative themselves, and discovered a park-like area on the shores of the lake. They did not have to go far. The site they suggested is adjacent to the BIT building, a little north of the old Hôtel National. Their recommendations were extremely firm:

Il s'agit pour le jury d'architectes de protéger le client contre toute petitesse de vues qu'il pourrait avoir.⁵²

The League accepted this advice and set out to examine both sites with the assistance of the Geneva Authorities. A joint report was published on 5th March 1926 which shows the two options⁵³. A comparison of the two options shows that the lakeside site would be nearly twice as expensive as the land behind the Hôtel National (4,050,000 Swiss Francs). And building a new complex from scratch would not solve the pressing need for extra accommodation for the Secretariat in the short term. The report suggests that an annex would have to be constructed in the meantime anyway, and it could be either a permanent structure designed in such a way that it could be used as hotel rooms if the Hôtel National was later to be sold off, or it could be a temporary wooden structure which would take only five months to build and would be taken down when the new, lakeside premises were complete. The Geneva Authorities' experts who viewed the two sites reacted neutrally to the plots adjacent to the Hôtel National, and effusively to the lakeside group:

There is no need to dwell upon the admirable situation of this group of properties, bounded on the east by the lake, on the south by the Parc Mon Repos, on the West by the cantonal main road to Lausanne and on the North by the Labour Office property. To appreciate the attractions and advantages of this unique site, one need only take a boat and go out some little distance from the shore, as the experts did. The length of the lake frontage (about 260 metres), the valuable works - harbours, breakwaters, protective walls, etc - overlooked by the delightful, park-like grounds, and the small number of buildings on the property, all combine to invest this corner of Geneva with an air of charm and distinction.⁵⁴

In March, the League started negotiations for three of the Lakeside plots, including the Bartholoni property and "La Perle du Lac", and planned to buy the fourth (the Barton property), adjacent to BIT, later.

Writing the Programme

The third jury conference was held from the 7th to the 16th April, 1926. Their task now was to prepare the programme and rules for the competition. The minutes of the jury meetings have survived⁵⁵ and give some indication of how the work was distributed amongst the jurors. At times members of the Secretariat were present, supplying information about the League's present and future requirements and the Geneva authorities were also represented on occasion.

In the first session the jury congratulated itself on getting the site that it preferred, and in persuading the League to increase the budget for the project to 12million Swiss Francs. It considered that it had done the League a favour, and that now it would be possible, without being unduly extravagant, to achieve a building expressive of the status of the League⁵⁶. On the second day, they discussed whether the Barton property, which was to be bought by compulsory purchase, should be included in the brief. In the event, competitors were merely advised that the plot would be purchased, and that they should bear in mind a possible future extension to the Secretariat on this land. There was also a debate as to whether the services of the League should be organised into one building or two (Secretariat and Assembly), and a discussion as to whether the bearing qualities of the ground should be examined before fixing a final price for the work. At the third session, several days later, they read the latest draft of the brief, and arguments about its form, style and organisation continued the following day. Moser and Lemareshquier produced alternative layouts, and Moser's version was chosen⁵⁷. Victor Horta worked out a table of required floor areas, and Lemareshquier and Gato rewrote the introductory statement with the aim of impressing on the competitors the magnificence of the site and the inspired architecture that was required⁵⁸. At the fifth session, there was an 8:1 majority in favour of the revised programme, rules and annexes⁵⁹. The question of prizes was also discussed. The sessions the next day were attended by Mssrs Boissonas and Martin of the city of Geneva, to give the authority's views on access and services to the new complex. They were unwilling to allow motor access through the adjacent Parc Mon Repos, and preferred to widen the Lausanne road and to create a new square at the point of entrance. There were also discussions about the parking facilities required on the site.

The last session was held the following morning, Saturday 17th April, 1926, and the final version of the brief was approved. A total budget of 13million

Swiss Francs, including architects' fees was agreed⁶⁰. It was decided that the exhibition of entries would be held at the Palais Electoral. They had no idea how many entries there would be, and therefore could not estimate in advance how many people would be required to handle the projects when they arrived.

The Competition Programme and Rules

The final version of the brief, the main text of which is included here as an annex, was extremely comprehensive. The large format programme document was supplemented by ten annexes, among which were a plan of the site (1:500), ten photographs, and a series of geological sections from newly commissioned borings to aid foundation calculations. The whole package was collected into a boxed portfolio⁶¹. The detail of the annexes supplied gives every indication that the competition was to be treated as a real project and that construction would begin almost immediately a winner was declared. Annex VII was a specimen bill of quantities, with prices for various materials, which competitors were to use to cost their entries, and Annex VIII was a scale of fees for architectural members of the Swiss Association of Engineers and Architects. From the specimen bill of quantities it is clear that the jury was expecting a conventional structure which would require extensive earthworks to construct the necessary foundations for loadbearing masonry walls. Horta's table of floor areas is included as Annex V. Annex IV, the portfolio of photographs by J. Boissonas succeeds very well in conveying the idyllic quality of the site: mature trees, light shimmering on their leaves, cast dappled shadows on the grass below; hazy mountains rise in the distance beyond the lake. Three of the photographs are aerial views, but it is not clear whether these were specially commissioned or pre-existing.

In the brief, honorific requirements are scattered among the detailed specifications for numbers and sizes of offices, numbers of garages, heating systems, etc. For example, the building was to be designed

not only to provide *accommodation of the most modern and practical kind* for all the organisations essential to the League's work, but also to symbolise in style and outline, the pacific ideals of the twentieth century [My italics]⁶².

The demand for symbolism was to produce some bizarre entries, a globe-shaped one among them. The only other reference to the 'high purpose' of the League is to be found in Annex IX, the note on its organisation.

The question of whether the services of the League should be organised into one building or two is to be found on page 9. If the entrant decided upon two buildings, it would be preferable if the ground floor of each was on the same level. Given the steep slope of the ground, this implied a semi-basement level to at least the lower building. If there were two buildings, they were to be linked 'by galleries or colonnades.

Concerning the site, the brief writers remarked on its great beauty, on the magnificence of the view across the lake, and on the very cold north east winds blowing across the water in winter. There was a requirement that the existing trees be retained as far as possible: the building would be set into the existing park. The possibility of expanding the grounds northwards by buying the Barton property, is mentioned. Even in 1926, the Lausanne road was one of the most heavily used motor routes in the area, and, foreseeing an increase in traffic due to the new League buildings, the brief required that the building should 'stand at least 15 meters back from this road in order to avoid dust'.

Another requirement, which was to be solved with great ingenuity by Le Corbusier, was that of separate entrances to the Assembly Hall Building for delegates, Secretaries, the press, and the general public. As for the Assembly Hall itself, its acoustics were to be "as perfect as possible"⁶³, a condition which very few entries met, as we shall see.

Finally, the cost requirements were laid down:

The cost of construction, including the architect's fees, should in no case exceed the total sum of 13 million Swiss Francs. This price must include all general installations (heating, electricity, cold and hot water, lifts, ventilators, etc.).
[page 16]

This budget turned out to be too low for the kind of building many jurors had in mind; in any event the cost restriction was largely ignored by the 377 entrants, which contributed to the jury's problems during the judgement period.

NOTES TO PART III, SECTION 1

1. George Edwin Scott: The Rise and Fall of the League of Nations. 1973. p16
2. America entered the war in 1917; the first U.S. troops went into battle in June 1918.
3. Wilson had been making public declarations about the form a humane peace should take for some time. His "14 Points" were published on January 8th 1918, his "4 Ends" on July 4th, and his "5 particulars" on September 27th. [Most of the declarations published after the "14 points" were merely idealistic expansions of them]. He was therefore the obvious choice for the German chancellor to approach, quite apart from the now recognised power and wealth of the United States.
4. G.E.Scott: The Rise and Fall of the League of Nations, p12:
[Woodrow Wilson] was not the first, nor the last American to believe it was his mission to straighten out the wayward Europeans. Wilson was an idealist and he had a vision, a noble vision, of how man should live and his code for international standards of behaviour was not less exacting than that for individuals. Woodrow Wilson personalised the aspirations of mankind. This lofty, arrogant sermoniser inspired ordinary men and women to the hope that all the misery and grief had been worthwhile. He embraced their inarticulate yearnings in his own giddy oratory, lifting up their hearts with his talk of 'eternal principles of right and justice,' telling them that life need not be what it had always been before, showing them a world where man had been cleansed of envy and greed and lust, and where statesmen would greet each other as brothers and would work together to advance, not the selfish interests of their individual nations, but the transcendent interest of all mankind.
5. G.E.Scott: The Rise and Fall of the League of Nations, p14.
6. Treaty of Versailles. British Library [classmark U.N.p.208]
7. See Appendix 1 for the full text of the Covenant of the League of Nations.
8. Dockrill, M.L. & Goold, J.D. "Peace without Promise: Britain and the Peace Conferences 1919-1923. 1981.
9. During a whistle-stop tour of the country in the summer of 1919. This was followed by another stroke when he returned to the White House. He never recovered, dying in 1924, still refusing to compromise in any way on the wording of the Covenant, which to him was as important as the content. [G.E.Scott].
10. An influenza epidemic was sweeping across Europe at the time of the Peace Conferences, and Woodrow Wilson caught the virus. His brain, heart, respiratory system and prostate were found to be affected, which suggests that either another virus frequently found alongside influenza - *encephalitis lethargica* - was at work, or he suffered a stroke at the same time; one of his top aides noticed that his demeanour changed overnight, as did his attitude to the Germans. Before the influenza attack, he had wanted Germany to be a viable member of the League of Nations. After it, he was contemptuous of the German diplomats and proposed that the former Emperor be tried. When he returned home, he suffered from

further strokes: his attempts to get the treaty ratified were, says William H. Calvin, clumsy and authoritarian.

See *The Throwing Madonna: Essays on the Brain*, Wm. H. Calvin, pub. McGraw-Hill, 1983, also *Woodrow Wilson: A Medical and Psychological Biography*. Edwin A. Weinstein, pub. Princeton University Press, 1981.

11. Walter Lippmann, *U.S. foreign Policy*, Hamish Hamilton, 1943, as quoted by G.E. Scott.
12. G.E. Scott: *The Rise and Fall of the League of Nations*, p48
13. This description is derived from a "Note on the League of Nations, Its constitution and organisation", which was included as an annex in the competition programme in 1926.
14. Andersen and Hébrard published their utopian *International World Centre* in 1919, at the very time the Covenant of the League was being written. Consequently, the project was identified with the League, and the architectural press took it extremely seriously. Both the *A R* and the *Architects Journal* (March 26th 1919) discussed at length possible locations for the new World City:

From the historic and supremely idealistic view, Jerusalem might have been chosen. Centrally placed as it is between the three continents, Asia, Africa and Europe, under perhaps the special protection of America, it would seem to be an ideal place..... Constantinople, the great meeting point of East and West, has been suggested... Belgium, the great scene and centre of the world's struggle through which we have passed, has a special appeal; but it is, perhaps, not to be regretted that the home of the League of Nations will not be in a country which for generations to come must be surrounded with an atmosphere of sadness and sorrow.

Geneva has many qualifications. There are surroundings of great natural beauty. With the mountains as background, the waters of the lake as foreground, you have the same setting that gave the Greek cities their charm. It is, moreover, in a land where, on a small scale, a union has already been achieved of three great peoples of Europe, who there dwell in amity, the French, Germans and Italians. Most of all, perhaps, it is a place of happiness, a place of welcome, where men from every land have consorted for pleasure and recreation... Centuries ago, Calvin aimed to make it the city of God; and if he failed with narrowness of vision, it may be that the ideal he set before him will yet be achieved., and that Name which stands for Oneness be honoured in a city where men shall resort to compose their differences, to remember their common life, to associate in co-operation for the world's welfare.

Major H. Barnes, M.P., F.R.I.B.A., in the *Architectural Review*, vol 46, July-Dec 1919
15. Slightly further away from the centre of Geneva than Le Corbusier and Paul Otlet's 1929 *Cité Mondiale* project, which was to have been located approximately where Geneva Airport is now. See *AR* vol 46, July-Dec. 919, p143, "*Geneva: Capital of the League of Nations*", reprinted from an article in *L'Illustration* (Paris), 24th May 1919, by Noëlle Roger.
16. Now called Palais Wilson. Semi-derelict in 1993 when I saw it.
17. Scott gives a vivid description of the First Assembly; of the small town bulging at

the seams with delegations and journalists, and of the ceremonials surrounding the first Assembly. p68.

18. Although this was problematic for distant member-countries such as Japan, because the round trip to Geneva by sea took four months, and the Assembly lasted at least a month, so that the delegates would spend nearly half the year away from Japan.
19. Drawings exist in the League archives 32/30681/28594, 25. August 1923
20. The I.L.O. [B.I.T.] building occupies a site to the North of that chosen for the 1926-27 competition for the Palais des Nations. It now houses GATT, and BIT has moved to a large building further up the hill behind the present United Nations buildings.
21. See Quincerot, '*Le Champ de bataille du palais des Nations, 1923-1931*', p36, in *Le Corbusier à Genève*, pub. Payot Lausanne, 1987.
22. Letter to the Secretary General 17th October 1924, SDN archives 32/29206/28594
23. SDN 32/39306/28594.IX. The CIA, founded in 1867 is distinct from CIAM which was formed in 1928 in the service of Modern architecture. Henri.- Paul Nénot, whose entry for the 1927 competition was later chosen as the basis for the final project, was one of its vice presidents. See Quincerot, *Le Corbusier à Genève*, p37.
24. Quincerot, *Le Corbusier à Genève*, p37.
25. Quincerot, *Le Champ de Bataille du Palais des Nations*. League of Nations archive, letter from A.Muggia. SDN 32/42450/28594
26. See Quincerot, note 13 page 47. SDN archives 32/43289/28594.
27.

J.J.Burnet	1857-1938	70 in 1927
C.Lemaresquier	1870-?1960	57 in 1927
V.Horta	1861-1947	66 in 1927
J. Hoffmann	1870-1956	57 in 1927
K.Moser	1860-1936	67 in 1927
H.P.Berlage	1856-1934	71 in 1927
I.Tengbom	1876-1968	51 in 1927
A.Muggia	?	
C.Gato	?	
28. Donald Drew Egbert; *The Beaux-Arts tradition in French Architecture illustrated by the Grands Prix de Rome*. Pub. Princeton University Press, 1980. Egbert gives this information on the later years of Lemaresquier: He only 'retired' in 1953. At that point his son, who had assisted him for years, was made patron of one of the official *ateliers Libres*, and Lemaresquier Père continued as his son's assistant until 1960, when he was 90 years old.
29. The programme and prints of the first prize drawings still exist: the RIBA has a copy of the album covering that year.

30. Gold medal for Adelaide House, London 1922.
31. Sydney Harbour Bridge design: This is credited to Burnet by one of his obituarists.
32. Tait's modernity is more to be found in the restrained elegance of his facades than in the organisation of his plans. However, he used Modern means: his 1928 house at Silver End in Essex, was for Crittal Windows.
33. In 1932. More honours followed.
34. Edouard F. Sekler, *Josef Hoffmann, the Architectural Works*, Princeton University Press, 1985. See chapter VIII.
Sekler says, a house that was just being completed. There are several candidates for that house. It could have been the la Roche-Jeanneret house, now the Fondation Le Corbusier, or the Lipchiz-Miestchaninoff house, both completed in 1924, or possibly the Petite maison d'artistes a Boulogne, completed in 1926, and now destroyed. The Oeuvre Complete does not list any Parisian houses completed in 1925. My guess would be the La Roche house, which is more central than the other two, and was certainly more advertised by Le Corbusier. It would have been of interest for the Swiss owner's collection of modern paintings as well.
35. Charles-Edouard Jeanneret was then 20 years old.
36. See the piece Le Corbusier wrote on the occasion of Hoffmann's sixtieth birthday, [1930] for example.
37. Edouard F. Sekler, *Josef Hoffmann, the Architectural Works*, Princeton University Press, 1985. See chapter VIII. Some post-competition correspondence between the two exists, and given Hoffmann's willingness to travel in search of new design developments, it is possible that they had met previously in Sweden.
38. James Curl, in *Contemporary Architects*, pub. MacMillan, 1980.
39. Eidgenössische Technische Hochschule - Swiss Federal Institute of Technology.
40. See MacMillan Encyclopaedia of Architects, 1985(?) for summary of Berlage's achievements. Entry by Helen Searing.
41. *ibid.* Helen Searing.
42. Roth gained his diploma in 1926 and became Moser's assistant soon afterwards. When Le Corbusier asked Karl Moser for the names of students to help him with the League of Nations competition, [letters survive in the FLC] Roth was among those who went. He remained with Le Corbusier after the competition was over, later supervising the Weissenhofsiedlung houses [Stuttgart, 1927].
43. Alfred Roth quoted in *Alfred Roth, Architect of Continuity*, page 12 pub. Waser Verlag, Zurich, 1985; from *Begegnung mit Pionieren*.
44. *Antoniuskirche in Basel*, pub. 1991 [in RIBA library], also featured in *Betonkirchen*, Ferdineant Pfammater, Zurich 1948, page 85. Very reminiscent of Perret's church at Raincy (1923).
45. Much of the information about Karl Moser presented here is drawn from the MacMillan Encyclopaedia of Architects, and the entry on Moser is by Stanislaus

Von Moos. About Moser's spatial concerns he says:

"The powerful handling of space functions as an organising principle in his buildings not only in that it effectively unifies their often diverse formal elements but also in that it secures a coherence of style among buildings emphatically different in their stylistic preferences. Moser was an eclectic able to practice a wide range of styles without ever betraying his strong authenticity as an artist."

46. Congrès Internationaux d'Architecture Moderne. Founded in 1928 by Le Corbusier and others.
47. Beaux-Arts trained, according to Tim Benton. *Le Corbusier Architect of the Century* pub. Arts Council of Great Britain, 1987 p172.
48. Research on the period leading up to the publication of the competition brief on 1st June 1926 has also been carried out by Richard Quincerot, and his description is supported by documentation in the Geneva State Archive, the League of Nations archive, and in the British Library. See *Le Corbusier à Genève*, p36-38.
49. Because Horta wrote to the Secretariat about the funds and the site at that time. Letter from Horta to the Secretary General, 16th January, 1925. SDN 32/43591/28594
50. Letter from Horta to the Secretary General, 16th January, 1925. SDN 32/43591/28594
51. "De l'idée intellectuelle de la Société doit émaner la réalisation architecturale. Le Palais des Assemblées à construire formera le foyer de l'âme fraternelle du monde." E.Steinhof, quoted by Quincerot, p37.
52. The jury absolved itself from any responsibility if the League did not proceed along this course. Quincerot, *Le Champ de Bataille du Palais des Nations*, (*Le Corbusier à Genève*), p37.
53. Erection of an Assembly Hall and of Annexes for the use of the Secretariat. British Library, UN.d./54/3/92.6
54. As note above.
55. League of Nations Archive. SDN 32/50354/28594. French text only. The sessions were as follows:

Wednesday	7th	11.00am	1st session
Thursday	8th	10.00am	2nd session
Monday	12th	11.00am	3rd Session
Wednesday	14th	10.30am	4th session
Thursday	15th	3.00pm	5th session
Friday	16th	10.00am	6th session
		3.30pm	7th Session
Saturday	17th	10.00am	8th session
56. "Le président rapelle que le Jury d'architectes a rendu service à la Société des Nations en faisant porter son étude sur la choix du terrain. Il pourrait encore lui rendre un service certain en essayant de prévoir un devis de 12millions... Il s'agirait donc de concevoir une construction qui soit digne de la Société des Nations et qui ait une certain grandeur sans verser dans une richesse excessive"

Jury minutes, as above.

57. Qincerot, as previously
58. See Programme introduction.
59. With Sir John Burnet dissenting.
60. They expected the total costs, including holding the competition, the prizes, the exhibition costs, and the building costs, to be around 14,138,000 francs. Minutes, SDN archive, as before.
61. The RIBA has two intact copies of the portfolio [S.R.725.11(00).08L.28], and The British Library has a partial copy [U.N.e.43]. There are some fragments of the programme in Le Corbusier's papers at the FLC, including some of the photographs. It would be interesting to know whether the League estimated correctly the likely demand for the competition documents: considerable time, effort and expense would have been incurred if additional copies of the package were required. However, I found no reference to the production of the brief in the UN archive.
62. Programme and Rules, Introduction.
63. See p13 of the brief.

PART III

A Brief History of the Competition c.1925-1927

SECTION 2

A beaux-Arts Precursor

The competition period

The entries arrive

377 entries - the state of Architecture in 1927

- Planning strategies of entrants
- British Entries: the Beaux-Arts seen from afar
- Visions of a Palace: a multitude of Styles
- Notable entries
 - A&G.Perret
 - Eliel Saarinen
 - J.Duiker
 - R.Neutra & R.Schindler
 - H.Meyer & H.Wittwer

A Beaux-Arts Precursor: the Grand Prix Programme of 1919¹

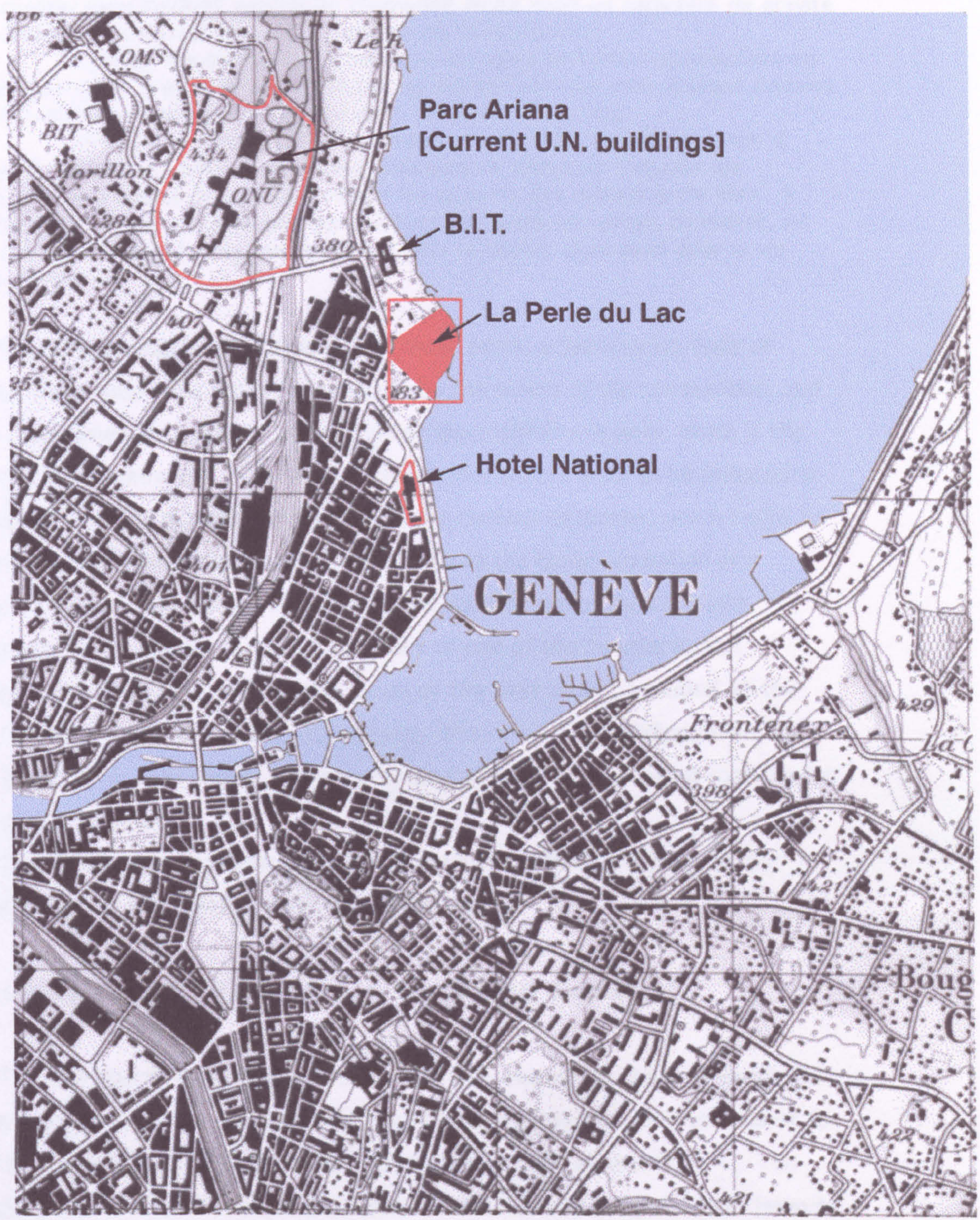
The subject of the 1919 Grand Prix de Rome competition set by the French École Nationale des Beaux-Arts was for 'Le Palais pour la Ligue des Nations à Genève' and the Premier Grand Prix was taken by M.Carlu, élève of MM.Laloux, Duquesne and Recoura. There are a number of reasons for examining this programme and its winning project alongside the entries for the 1927 League of Nations competition. Firstly, the École des Beaux-Arts had defined and represented the official architecture of France since its first incarnation as the Académie Royale d'Architecture (founded 1671): it had survived the French Revolution, and still held that supreme position in 1927. The influence of the Beaux-Arts school throughout Europe was enormous: as we have seen, several of the League of Nations jurors had spent time there and at least two - Lemaesquier and Burnet - still had connections at the time of the competition. As mentioned previously, Lemaesquier was by then the school's most influential member [which may be inferred anyway by the fact that he was representing France in the League competition]. He must have been actively involved in the Beaux-Arts competition of 1919, because three of the winners were from the Atelier Laloux, where he was teaching at the time, and which he later inherited². It follows that he already had strong ideas about the form

and style of a Palace of Nations which may be illustrated by the 1919 example. Secondly, the majority of the 160 surviving entries³ for the 1927 competition are Beaux-Arts derived⁴, so the 1919 exemplar, of which some of the entrants would have been aware, since Grand Prix winners were published, not only in journals but in a series of albums⁵, provides some insight into the Beaux-Arts approach to the programme evinced by these competitors.

The most powerful member countries in the League were Great Britain and France: the two official languages of the League were French and English; French had always been the language of diplomacy. Given this, the most powerful men on the jury, ostensibly a democratic body, were Charles Lemaire and John Burnet. That is not to say that the jury procedures were other than correct. When the 1927 competition failed - the jury selecting nine equal first prizes - the League decided to choose an architect from among the entrants by bureaucratic means and the task was assigned to a committee of five diplomats from non-winning countries. It was inevitable that these men would all be conservative members of the establishments of their respective countries so that it was more than likely that the architect chosen would represent the Beaux-Arts style: before 1925, Beaux-Arts style provided the primary language for the European public building, and there would have been a presumption - among bureaucrats, diplomats, and at least some members of the architectural jury - that the Palace of Nations would be a Beaux-Arts building. In a way, France was the - previously unchallenged - keeper of public architecture: certainly the eventual choice of Henri-Paul N  not represented a victory for France, and N  not himself saw the decision as a triumph for the Beaux-Arts over the forces of 'barbarism':

"I am happy simply for art," M.N  not said to us cheerily this morning; "*The goal of the French team, when it was in the running, was to hold Barbarism in check. What we call 'Barbarism' is a certain architecture, or more exactly, a certain anti-architecture which has been causing an uproar for some years now in Eastern and Northern Europe, no less horrible than that "Coup de Fouet" style which happily we have crushed over the last twenty years. It denies all the belles   poques of history, and insults common sense and good taste in every way. It is defeated, and all is well.*"⁶

The 1919 Grands Prix Programme began



Rectangle indicates 300x400m
ideal site for 1919 Grand Prix
project superimposed on Perle
du Lac site

League Sites in Geneva

Ce Palais où les délégués de toutes les nations doivent se réunir pour travailler dans l'intérêt général de l'humanité devra avoir un caractère de gravité et de richesse en rapport avec la grandeur de sa destination.

Placé sur les bords du Lac Léman, il occupera un terrain rectangulaire en bordure sur le quai du lac, et limité sur les autres côtés par trois grandes avenues en communication directe avec les voies principales de la ville.

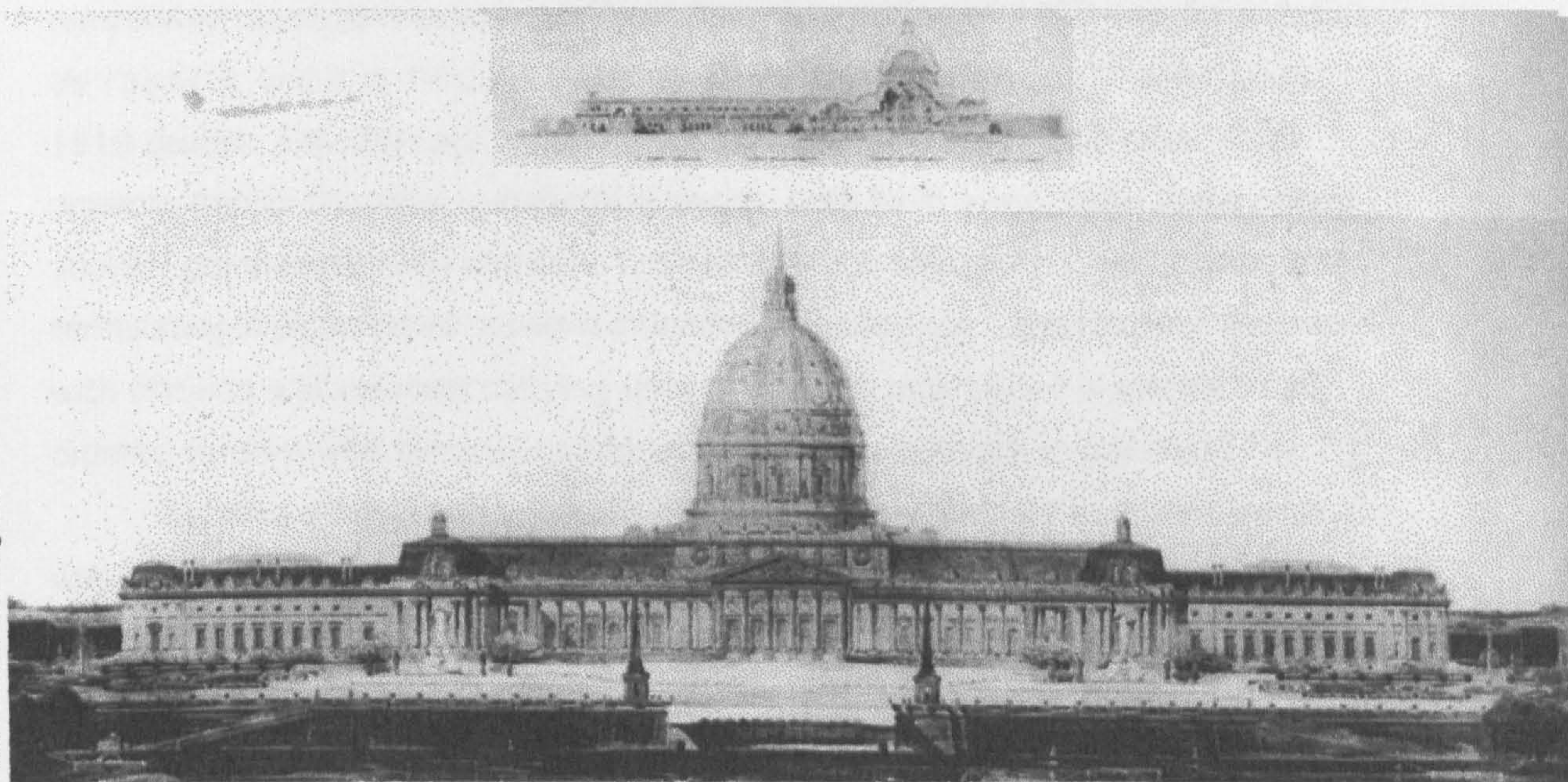
Ce palais sera le siège du Comité permanent de la *Ligue des Nations*: il devra également abriter les diverses Commissions chargées d'étudier les questions d'intérêt général et de régler les rapports des nations entre elles. Il devra enfin offrir aux délégués qui viendront de toutes les parties du monde, les facilités les plus grandes, non seulement pour le travail, mais aussi pour la vie matérielle.⁷

The accommodation was divided into three parts, a Secretariat, Halls of Assembly, and a hotel. The second part was to be the centre of the composition, and to have a monumental character 'expressive of the magnificent work which is the object of this programme'⁸. A number of ceremonial spaces were to be included; a grand reception room, a 'galerie des fêtes', and a number of salons, which might be used in the event of exceptional celebrations such as the commemoration of a significant day (*un date glorieuse*), or the celebration of one of the League's achievements, or to honour 'a remarkable man, or one of the benefactors of humanity'. The third part, a 'veritable hotel of the first order', included all the service functions such as parking, restaurants, lifts, etc. The buildings were to provide lodgings for 300 people, and were to be surrounded by pleasant gardens for the use of the diplomats.

The buildings and gardens were to occupy a site 300m by 400m and the drawings asked for were plans, sections and elevations.

The Winning Project of M.Carlu: a Beaux-Arts Exemplar

The site specified is large - around twice the area of the 1927 Perle du Lac site; the buildings of the winning project would have occupied an area equivalent to that of the Plainpalais, the largest building in present-day Geneva [fig. 1]. The flat, rectangular field of the site is inconsistent with the hilly geography of Geneva: as a consequence of this geography, the street pattern of Geneva is irregular, and for the most part lacks the ceremonial, axial sequences of the ideal Beaux-Arts city. But the Prix de Rome competitor was not concerned with the particularities of place; he was trained to strive for an ideal beauty based on the axial and symmetrical, on classical forms and ornaments from ancient times and from the



Jean-Karl Niermans
'Palais de l'Institut'
Grand Prix, 1929

Renaissance. According to Donald Drew Egbert, architectural design in the Beaux-Arts school was based on the notion of *bongoust*⁹ - good taste - which was held to be universal and unchanging, therefore, certain forms and arrangements were, and always would be, beautiful. The universal nature of *bongoust* and the ideal forms and proportions its possessors selected meant that it took precedence over any local particularities, such as utilitarian requirements, historical time, or even the 'idiosyncratic genius of an architect'¹⁰. This insistence on the unchanging classical model led to a very great rigidity in Beaux-Arts design by the late 19th Century. A comparison of Carlu's 1919 project with a later Grand Prix winner shows a remarkably consistent vision: the Grand Prix competition of 1929 was for a *Palais de l'Institut*, and it is difficult to distinguish between this project¹¹ and Carlu's 1919 design. Elevation and section are practically identical in each case. Both projects display the ideal, symmetrical layout, both have a very large dome poised above a grand ceremonial entrance, both have wings embellished with a giant order terminating in pedimented pavilions extended on either side. And both are decorated with obelisks and columns carrying urns or statues, and placed in symmetrically ordered gardens with terraces and fountains. Both are immense buildings [fig.2].

Running alongside the doctrine of *bongoust* and partially in opposition to it, was an idea about architectural 'character'; that is, the interior of a building should be indicated in some way on the exterior. I have deliberately avoided saying that the *function* of the building should be expressed, because in Beaux-Arts theory, there were several kinds of 'character'. Egbert defined them as *general* character, *type* character, and *specific* character¹². In practice in the Beaux-Arts, the first two kinds were prevalent: the third kind conflicted too directly with a pursuit of the ideal. *General* character might be 'monumental' or 'French' or 'Public', that is, it was non-specific as regards function, structure or site. *Type* character related to the use of a building - an exhibition hall would be different to a hotel - and was best achieved by using forms that had become associated with each kind of building, by traditional usage. *Specific* character

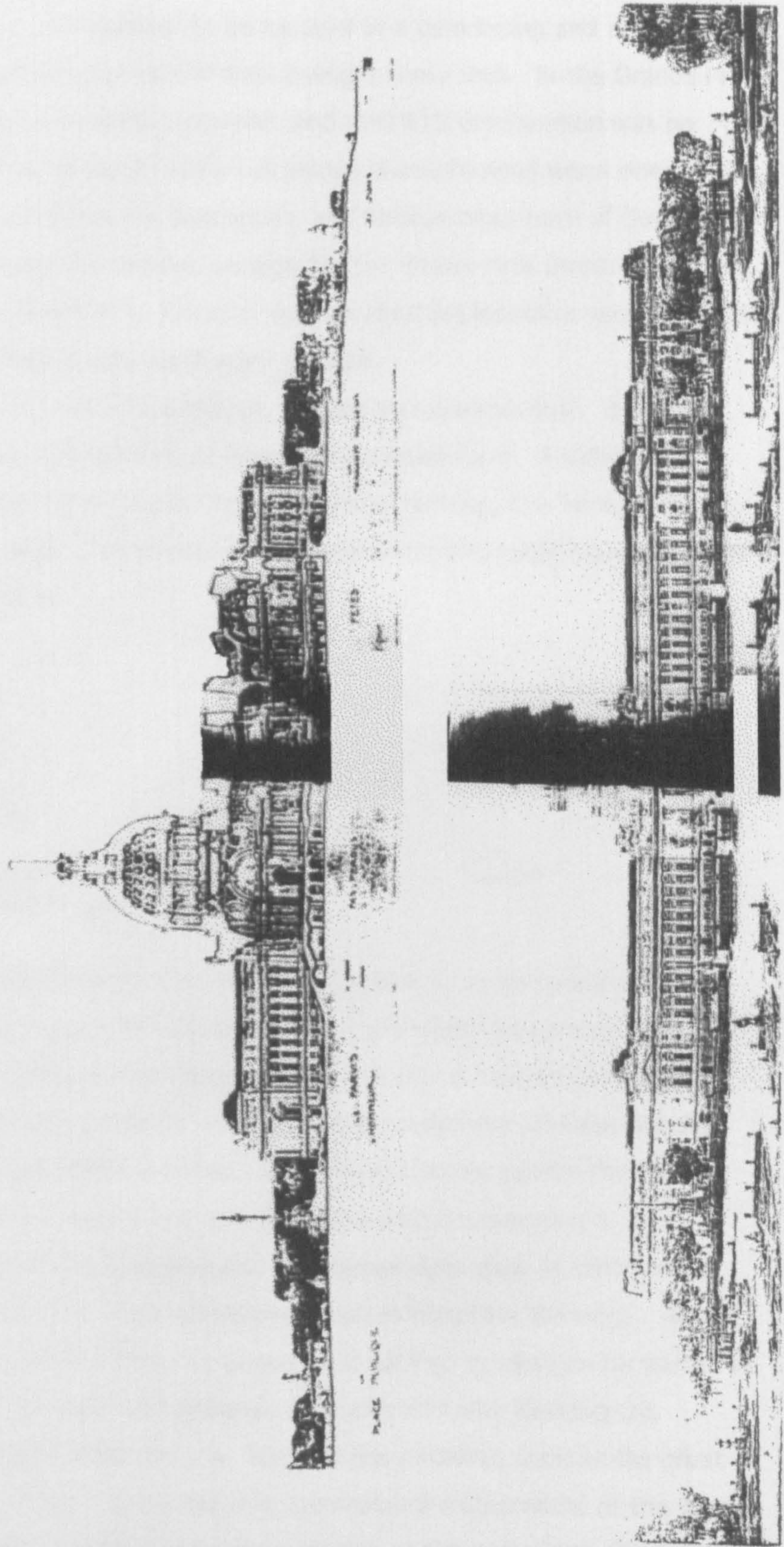
...refers to the expression of elements and forms directly determined by the particular site, the climate, materials and methods of construction, utilitarian requirements, genius and originality of the architect, and so on, and which are thus peculiar to, and expressive of, the individual building at hand as a unique entity. A concern for specific character arises from functionalism.¹³

Carlu's 1919 project [fig.3&4] exhibits *general* character: it is monumental and civic. The 1919 programme actually suggests the appropriate character for this

building - *un caractère de gravité et de richesse en rapport avec la grandeur de sa destination*. Type character is also expressed to some degree: the building is palatial in the same sense as the Louvre is, or Versailles; it has the long colonnaded wings, rich decoration and formal gardens of the French Palace. Specific character is not expressed at all, either in the competition programme, or in the winning entry. The small scale of Geneva and its hilly terrain was disregarded, and the cost of such a huge scheme simply was not a factor to be considered when pursuing the ideal programme. Beaux-Arts Architects had constructed a hierarchy of building programmes which mirrored closely that of the *Ancien Régime* of pre-revolutionary France, and they judged the value of the work according to the nobility of the subject matter¹⁴. They themselves held a high rank based on their 'aristocracy of intellect'¹⁵, and their lack of interest in utility and total disregard for economy is a result of these factors. This attitude persisted in the Beaux-Arts and its Prix de Rome competition well into the twentieth century, and carried over into real building projects: none of the Beaux-Arts entries for the 1927 League of Nations competition could possibly have been built for the specified sum of 13 million Swiss Francs, as the jury discovered when examining them¹⁶.

Beaux-Arts theory was non-progressive, and the structural advances of the nineteenth and early twentieth centuries were largely ignored. The possibility that iron and concrete structures might have a new and expressive impact on the facades they carried, and even on plan forms, held no interest for theorists fixed on the ancient past. In the Beaux-Arts world, the new structural systems, if used, were masked by the same *idiomorphic* facades as always, as Le Corbusier pointed out in *Une Maison*¹⁷. Carlu's section illustrates Le Corbusier's complaint rather well. It is taken through the dome and the assembly hall behind it, and the outline of the ceiling and the external delineation of the roof enclose white areas which are simply not described. They represent the roof structure, and are more than a storey deep in places, but are apparently of no interest to Carlu or his assessors. Beaux-Arts architecture was not an architecture of structure, more one of surface modulation, where the ideal surface was or appeared to be the worked exterior of a carved stone mass, and the ideal modulations were a succession of rhythmically repeated, classical motifs. It is interesting that Beaux-arts designs, at least for the Grands Prix, were generally represented by plans, sections and elevations only: as the ideal form of a building was fixed, so was its ideal representation. Plans and elevations are much more abstract than perspectives and other three-dimensional

1919. LES GRANDS PRIX ROME D'ARCHITECTURE



Grands Prix Winner 1919

drawings, which require the building to be located in a convincing and realistic setting, and give a much better idea of how it might really look. In the Grands Prix programmes perspectives were not required, and the 1919 competition was no exception. The idealised nature of Carlu's drawings is emphasised when one realises that he did not indicate the spectacular and famous mountains of Geneva. Were such wild mountains not urbane enough for the Beaux-Arts project? For the purposes of the 1919 Grand Prix, 'Geneva' was an abstract location; specifics that might clash with the Beaux-Arts ideal were ignored.

Carlu's 1919 plan, as noted before, is axial and symmetrical. It is also difficult for the modern eye to read, at least in its printed form. A substantial portion of the 400m by 300m site is occupied by the building, the front range of which is about 250m wide. The sequence of spaces from the public square in front of it to the lake behind, is

Court of Honour

Hall of the Dome
Assembly Hall
Galerie des Fêtes

garden terraces and parterres
lakeside avenue or promenade, and pier

Cour de Honneur

Corps de Logis

Jardin

This pattern of [semi-enclosed] court, building, garden, is to be found in French hôtels or town houses of the 18th century, such as the Hôtel Guimard by Ledoux¹⁸. The same sequence is exhibited at Versailles, and at Vaux le Vicomte, although in both these cases, the lakes in the far reaches of the garden are artificial and thus possess satisfactorily geometric outlines. Carlu does what he can for the much bigger lake at Geneva by regularising the shoreline. and ornamenting it symmetrically with fountains and statues. The Beaux-Arts view of ornament is most evident in Carlu's plan, more so perhaps than in his other drawings. All the surfaces depicted are ornamented, by patterns of paving, by designs for parterres, by coloured inlays in the halls and galleries, by ranks of trees flanking the ceremonial avenues that border the site. Many of the patterns, such as the great rosette on the floor of the circular hall, are symmetrical microcosms of the rooms that enclose them. The plan itself is a larger pattern of the same kind, the elaborate outlines of walls and piers not very distinct from the decorated floors. These patterns, standing in for the coloured marble, gilded wood and plaster of a real

building, provide the '*richesse*' called for in the brief; the sequence of oversized halls no doubt indicates the required '*grandeur*' - at least half of the plan consists of honorific spaces as opposed to working rooms of specific function - and the great mass of the building, its heavy base and massive dome gives it a '*caractère de gravité*'.

The Competition for the Palace of Nations:

The Competition Period - July 1926 to January 1927

Copies of the competition brief were sent to all member countries so as to arrive on the same day. The competition opened on 25th July 1926 and the last dispatch date for entries was 25th January 1927¹⁹, so entrants had a period of six months to complete their proposals. There were a number of official requests for an extension of time from the professional bodies of various countries including Britain, which probably indicates the complexity of the requirements, and there were counter-protests from French associations. In the end, no concessions were made²⁰.

Le Corbusier's activities during the competition period

Le Corbusier and Pierre Jeanneret visited the site separately, early during the competition period, and Le Corbusier was told by the caretakers that there were building restrictions in force on part of the site. As this was not mentioned in the brief, and he was unable to contact any of the Secretariat staff, he wrote to Moser on 30th November 1926 to confirm it²¹. At that time, Le Corbusier and Pierre Jeanneret's office consisted of just the two of them and they badly needed help drawing up the competition. Alfred Roth, who later became a notable figure in Swiss Modern Architecture in his own right²² has written an account of how he and some of his fellow students from the ETH in Zurich came to form Le Corbusier's Palais des Nations team. Le Corbusier gave two lectures in Zurich in late November 1926 at which Ernst Schindler and Walter Schaad, both ex-students of Karl Moser, were present, along with Moser himself. They wanted to work for Le Corbusier and asked Moser to introduce them. Le Corbusier was delighted to accept their help, and they arrived in Paris a few days later. Other '*Moser-Schüler*' were roped in as well: Hans Neisse, J.J.DuPasquier and Zvonimir Kavuric came in December, and Roth himself, who had been bound for the Bauhaus, was advised by Moser to go to Le Corbusier, and arrived on 5th January, just three weeks before the submission date: a sword of Damocles over our heads²³, says Roth.

As we saw in Part II, very few preliminary sketches for Le Corbusier's project have survived²⁴. Le Corbusier's diary²⁵ for the whole competition period is also missing, and is thought to have been lost when he moved to the Rue Nungesser-et-Coli in the 1930's: it may be that other papers relating to this project were lost at the same time²⁶. Roth's article sheds no further light on the development of the project: he reports that by the time the first of the students arrived, the project had already been worked out in its entirety, and existed as a series of hand-drawn sketches. Roth and his comrades had eighteen large presentation drawings to complete and they worked late into the night. Roth's first task was to work out the section for the Assembly Hall. Pierre Jeanneret, as the studio boss, was always there, and says Roth, always helpful. Le Corbusier himself continued his usual practice of painting in the morning and only came into the studio in the afternoon. The acoustics expert Gustave Lyon, famous for the Salle Pleyel in Paris, often came to the office during this period to advise on the innovative fan-shaped hall proposed by the *équipe* Le Corbusier for the League

Assembly²⁷. After the drawings were printed on special paper, Le Corbusier himself drew in the trees and figures, and the prints were then mounted on stretchers. Skies, shadows and reflections were then sprayed on in light blue and grey. Three days before submission date there was a near disaster: during the night the leaky heating system discharged oily water onto the main auditorium plan leaving a brown puddle. It was too late to redraw it, and the team managed to save it by very careful washing and erasing and retouching. Before the boards were sent to Geneva, Le Corbusier arranged for a group photograph to be taken of the whole team seated before some of the most characteristic drawings, and a copy was given to each team member. Le Corbusier gave an extra copy to Roth and suggested that Karl Moser would no doubt be delighted to have this record of his former students' achievement. Roth sent the picture to Moser without further thought, only to have it returned two days later by an angry Moser who felt that this was an attempt to compromise his integrity as a juror. Roth indicates that Le Corbusier deliberately sent the picture to identify his project to Moser. The drawings are instantly recognisable in the photograph, and Moser did recognise the project during the judgement period, a point he made in a letter to his wife: he was extremely impressed by the project but said that he felt that he was not unduly influenced by this knowledge²⁸. After the project was dispatched, Le Corbusier and Pierre Jeanneret took their helpers on an outing to Chartres and gave them dinner in a local restaurant. During the dinner, and with great embarrassment, Le Corbusier informed Roth and his comrades that he could not afford to pay them. Roth remembers that the previous atmosphere of high spirits was replaced by a stricken silence, as the students, by now running out of money, had expected something for their long hours. Le Corbusier and Pierre Jeanneret, sensitive to this change in mood, saw that something had to be done, so he asked the team to return to the studio the following morning and gave them all their travelling expenses and inscribed copies of *Vers une Architecture* and *L'Art Decoratif d'Aujourd'hui*. All but Roth then returned home; he stayed on to work on the two houses for the Werkbund exhibition at the Weissenhofsiedlung in Stuttgart which was to open on July 23rd, 1927. By that time, Le Corbusier and Pierre Jeanneret were so involved with the fight for their Palais des Nations scheme that neither of them attended the opening, and Roth not only supervised the building works, but also furnished the houses, mostly from his own pocket.²⁹

The Entries arrive

The projects were to be hung in the Electoral Hall in Geneva for assessment and exhibition, and Victor Horta designed a partition layout for the exhibition. The projects started to arrive in the last week of January 1927. By the 31st, there were 200 submissions. By the 9th February, there were 314, most of them requiring at least 50 square metres of exhibition space, as shown by letters from the Secretariat to Horta³⁰. The Electoral building was far too small for the flood of entries and the Secretariat looked for alternative premises, but eventually accepted Moser's suggestion that a temporary annex adjacent to the Electoral building might be built³¹.

By 13th April, when the jury met again, almost a year after they devised the brief, there were 377 cases of projects to open and check³². As we know, Le Corbusier's submission has survived intact, and there are eighteen drawings: the smallest measures 750mm X 900mm, and the largest are 750mm x 2250mm. The competition rules required that the drawings be glued to a stretcher or cardboard, so the huge dimensions and weight of the packing cases for each submission can be imagined. The largest case delivered was apparently 6.5m long³³.

377 Projects - The State of European Architecture in 1927

Sigfried Giedion reported in his 1941 book, *'Space, Time, and Architecture'* that the projects submitted for the League of Nations competition

"permit an exceptionally wide survey of the state of architecture at that time. All the architectural fashions of the late nineteenth century are represented, together with all the experimental developments in contemporary architecture.... The jury was left to thread its way through this confusion of crosscurrents, a confusion that was reflected in its own composition.

In fact, the state of architecture in each of the European countries appeared in its choice of a distinguished man to represent it on the jury."³⁴

Of course this cross-section of 1920's architectural practice lacks the multistorey, steel-framed skyscrapers of contemporary American architecture and the constructivist projects of revolutionary Russia; but the influences of both are evident in some of the entries. The periodicals of the time yield traces of some 160 entries and most of these (135) have been collected by Ciro Anzivino and Ezio Godoli, and published as *Ginevra 1927: Il Concorso per il Palazzo della Societa delle*

*Nazione e il Caso Le Corbusier*³⁵. Many of the same projects and a few additional ones were found by John Ritter who referred to them in his earlier (1964) AR article '*World Parliament*'³⁶. It is unfortunate that the information available is so fragmentary: it is impossible to collect a representative set of plans for comparative analysis. Apart from the entries of Le Corbusier and Hannes Meyer, it appears that no other complete entries survive, and the greater part of the submissions of even such notable entrants as Richard Neutra or J. Duiker, have been lost. I include a brief survey here of the surviving material in order to show the architectural context in which Le Corbusier designed his palace.

Planning strategies of the competitors

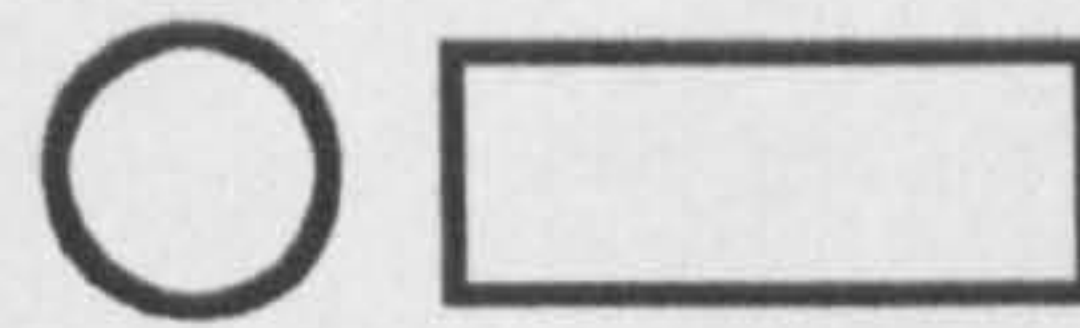
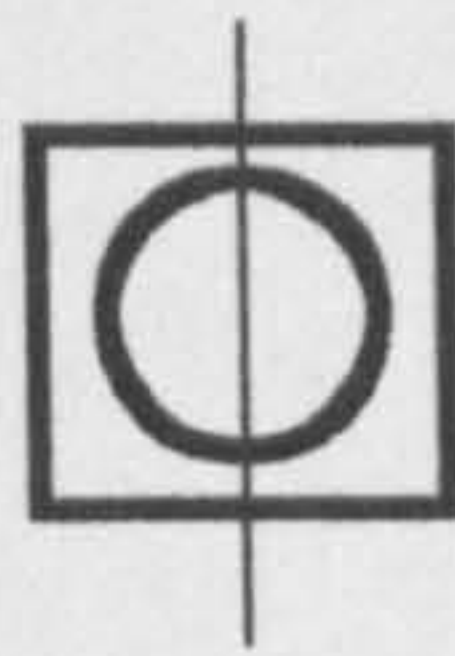
The competition programme required an Assembly Hall and a Secretariat, arranged with reference to the peculiarities of the Perle du Lac site: triangular and sloping, bounded by the lake to the east, the Lausanne road to the west, and parkland on the other two sides. The two functions of the Palace of Nations, the brief stated, might be combined in one building or separated into two, in which latter case, an efficient connection between the parts should be arranged. Competitors also had to remember that the League planned to buy the adjacent northern plot of land, for future extension of the secretariat.

One of the two basic solutions [fig. 5 A] was to wrap the offices of the secretariat around the assembly hall, the other was to place the two parts adjacent to one another and to devise a link between them [1]. These two planometric types are the basis for are numerous variants devised by competitors [2]. There were a number of examples of the first solution, a single, multifunction building, among the entries, all of which displayed axial symmetries focused on the central hall [fig. 5 B]

Examples of the two-building scenario were organised in several ways. These two solutions recur:

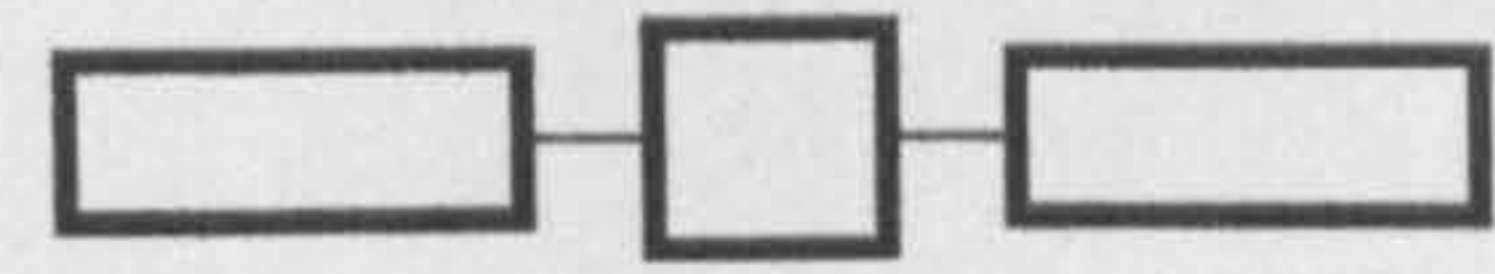
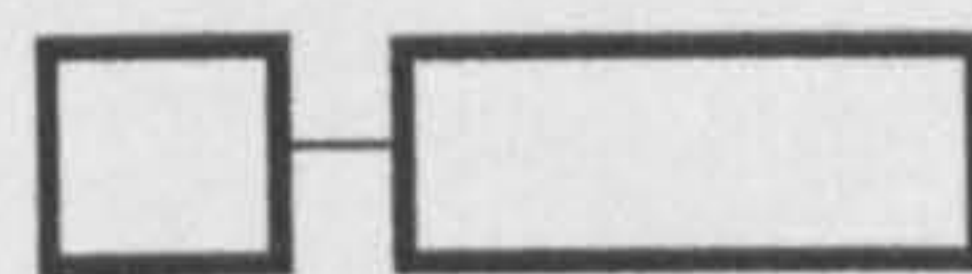
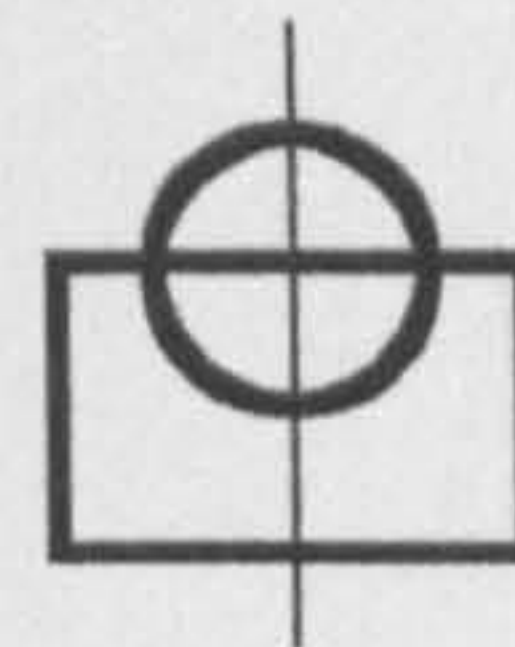
- a) the linked assembly hall and secretariat were placed side by side along the shore, or
- b) the assembly hall was next to the water with the secretariat directly behind it, a central axis running through both buildings.[3]

A variant of a) which might take into account any future expansion was to organise the secretariat as two arms extending out from the assembly hall on either side of a



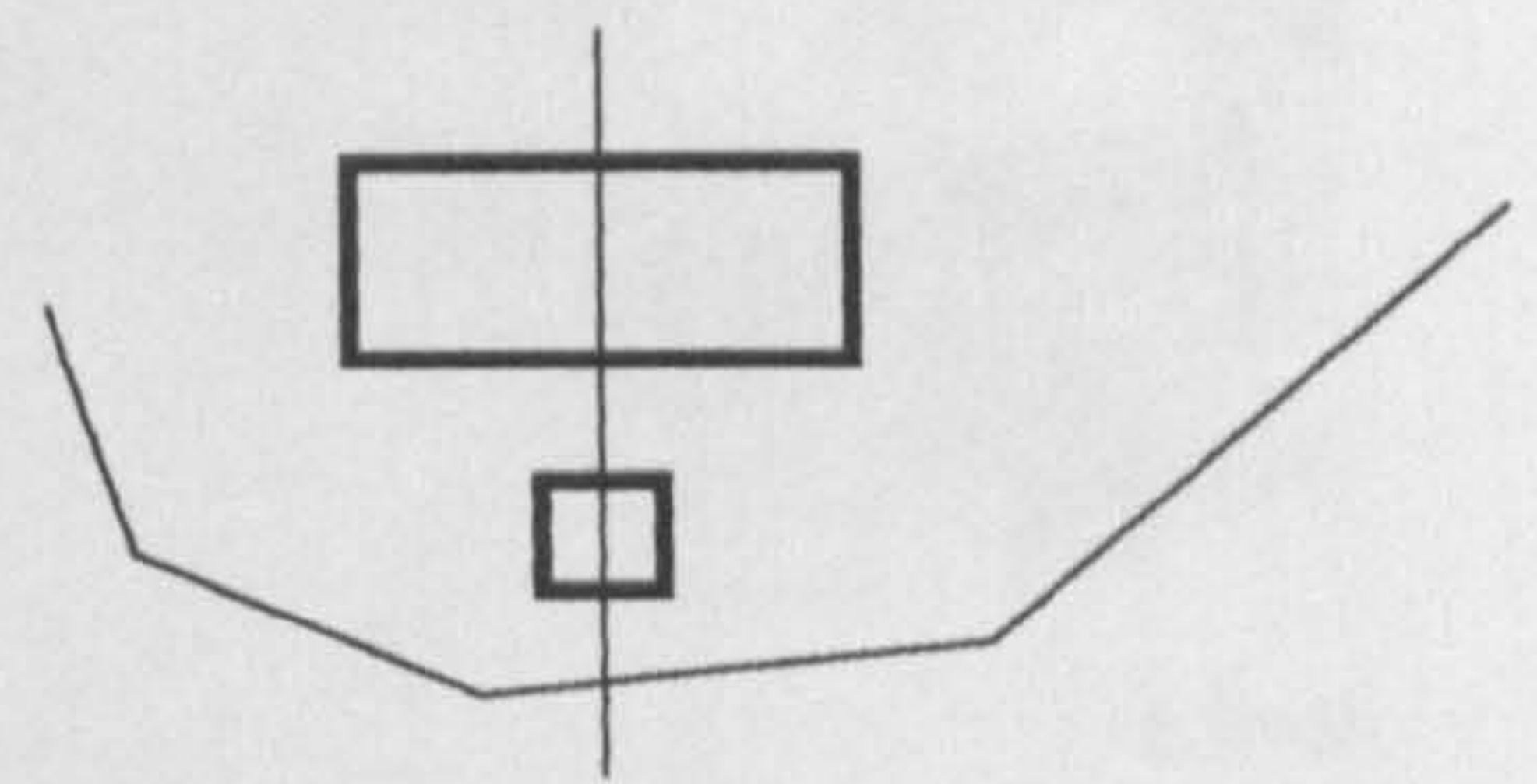
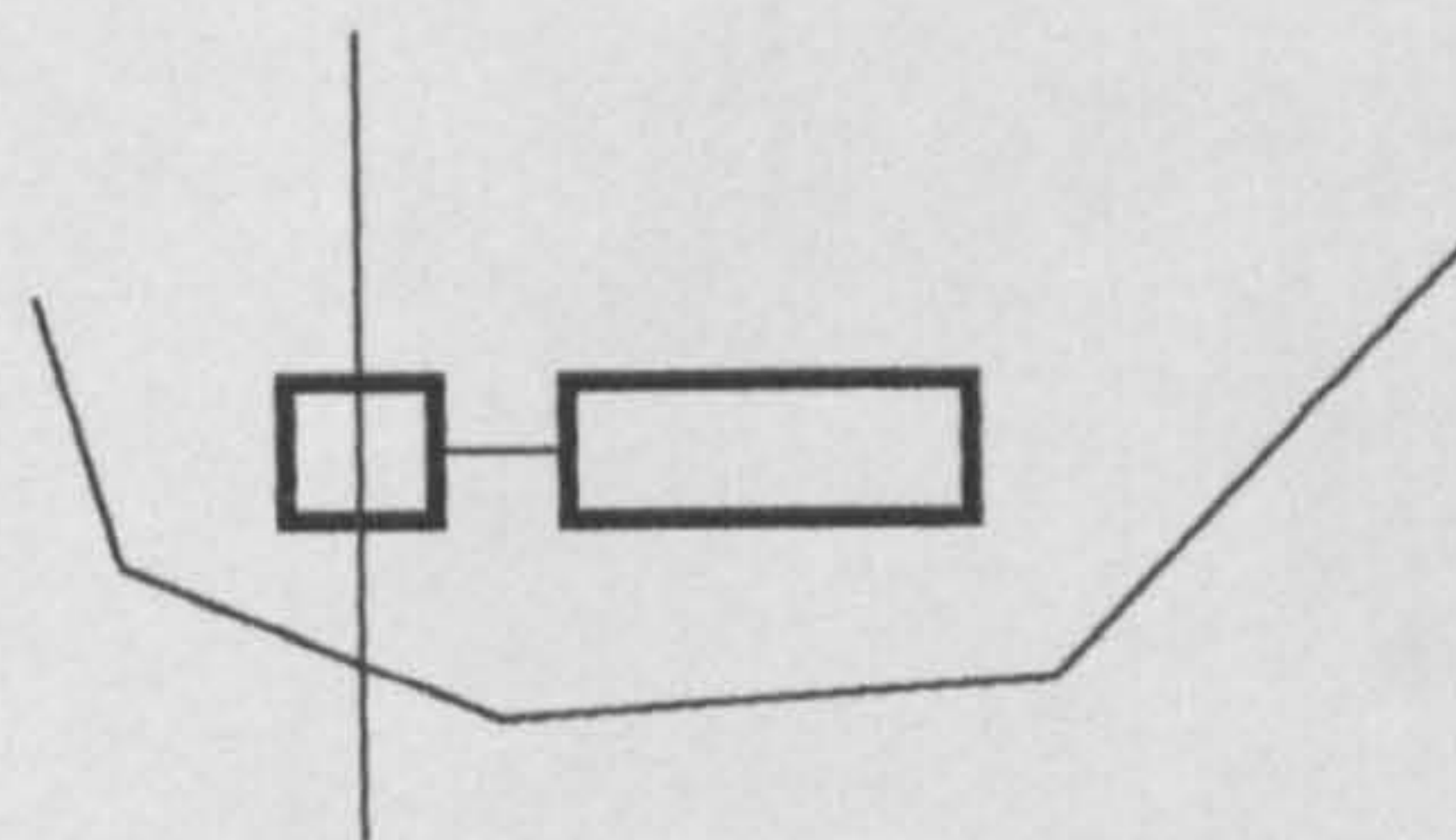
offices wrapped around Assembly Hall,
or Assembly and Secretariat as separate buildings

1



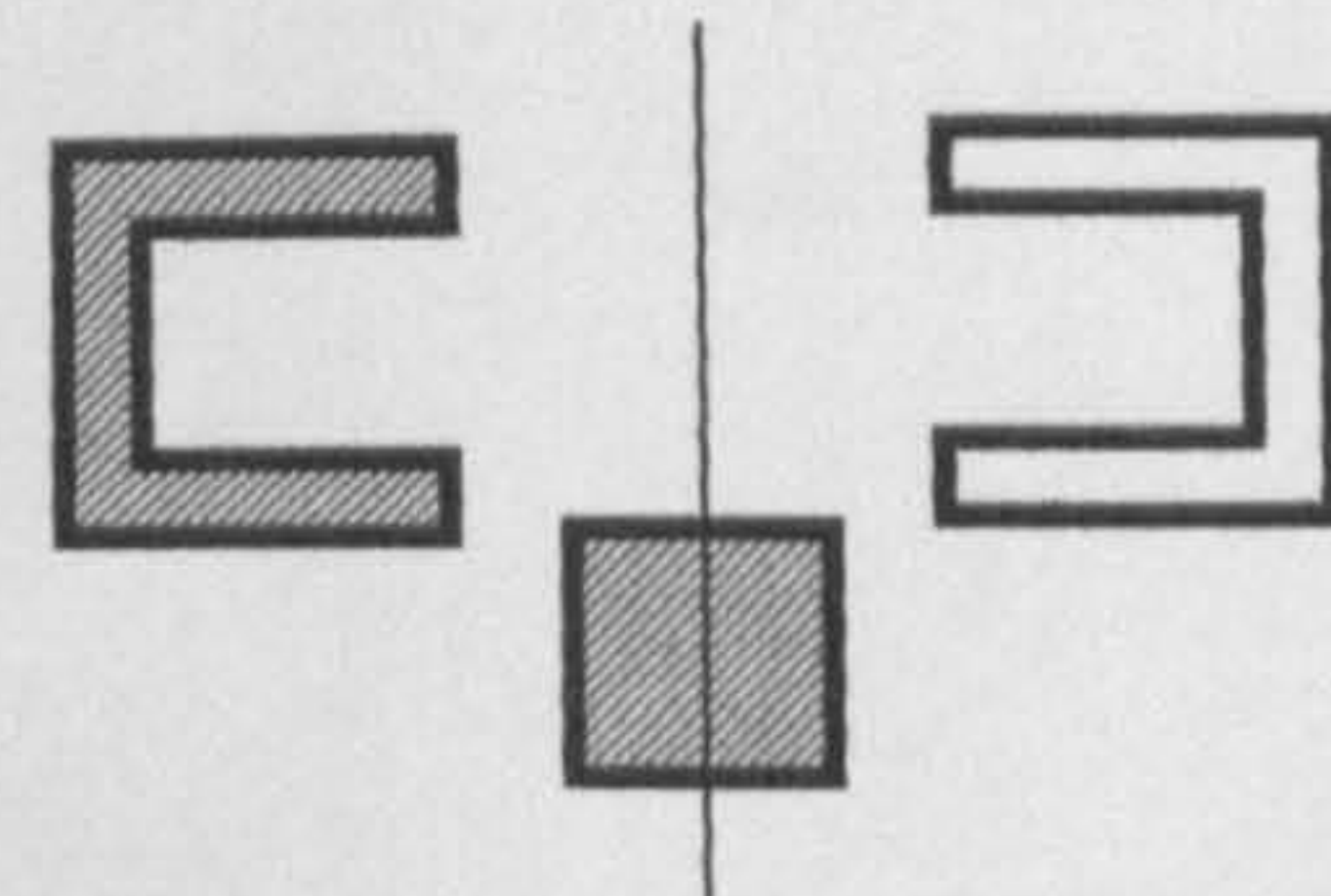
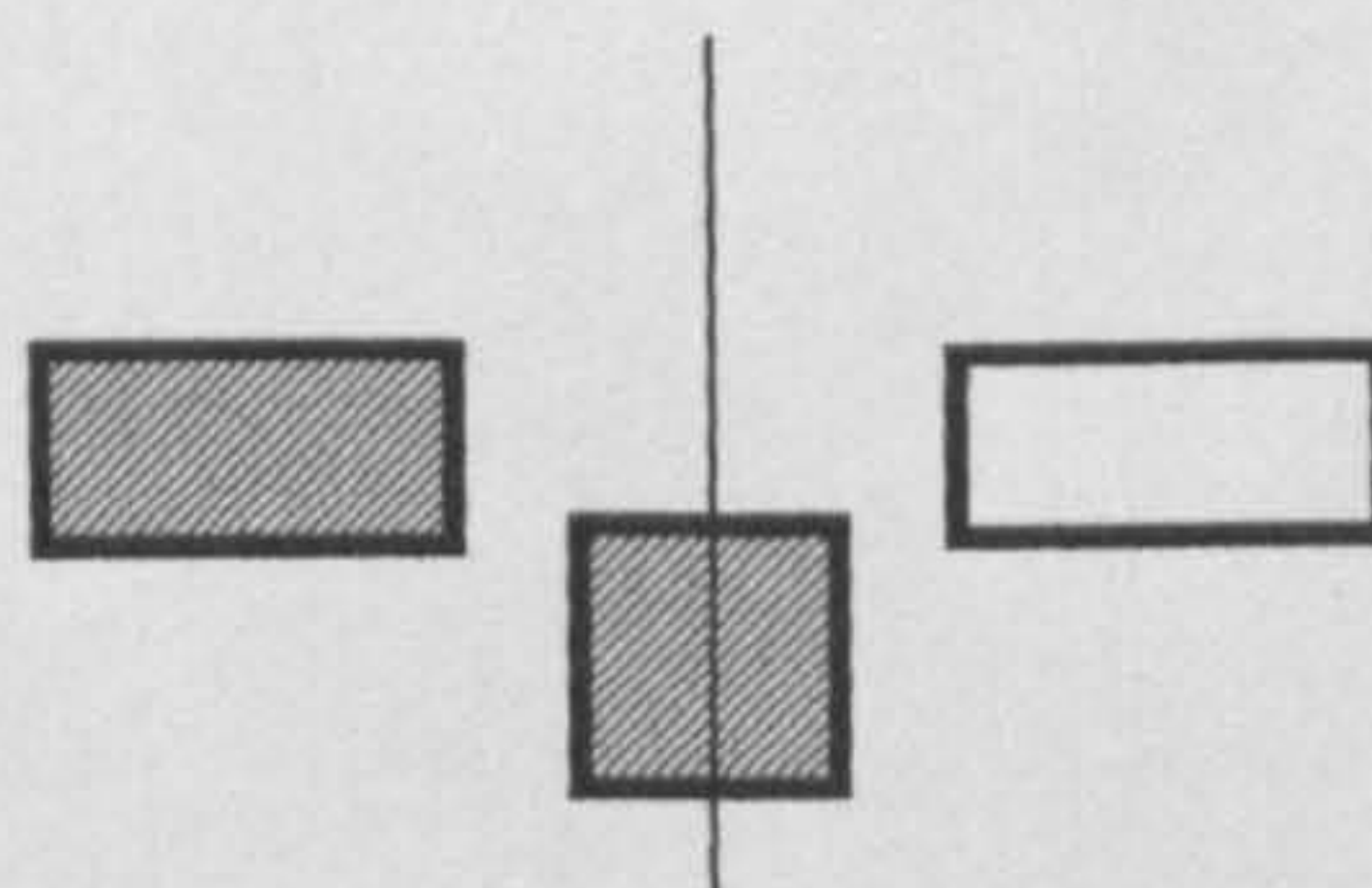
Variants

2



axis and orientation

3



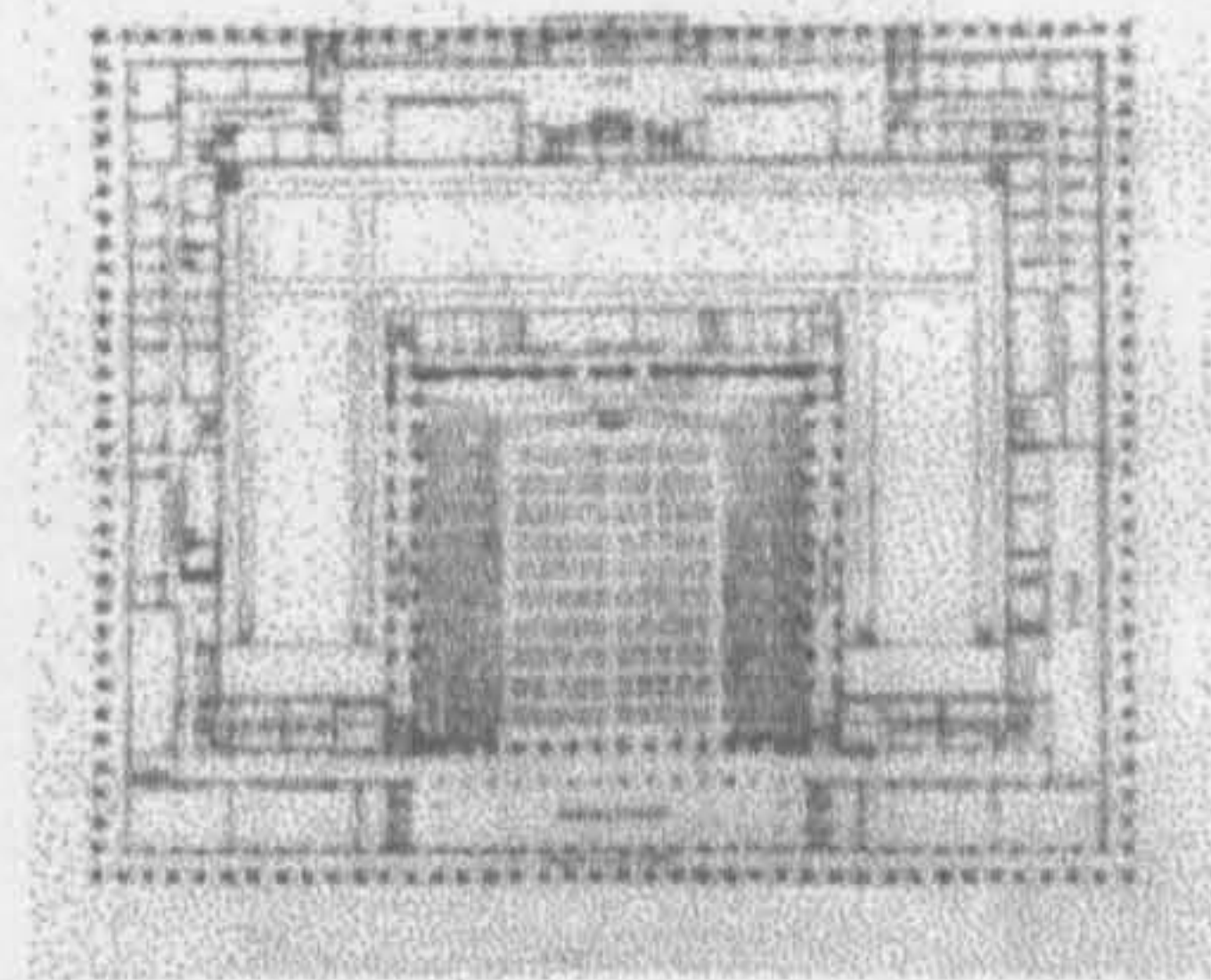
extension and symmetry

4

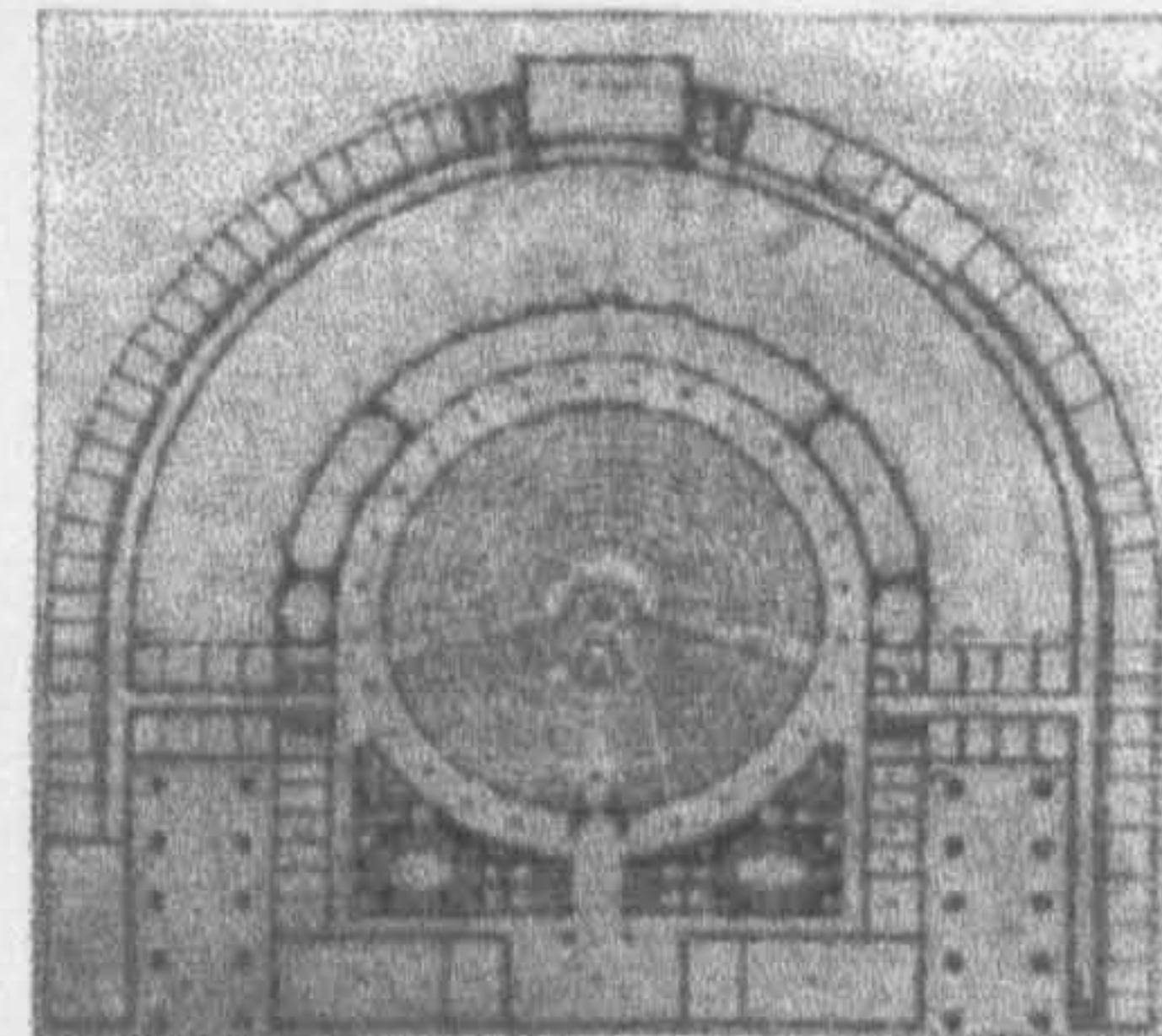
Planning the Palace of Nations:
basic possibilities

figure 5A

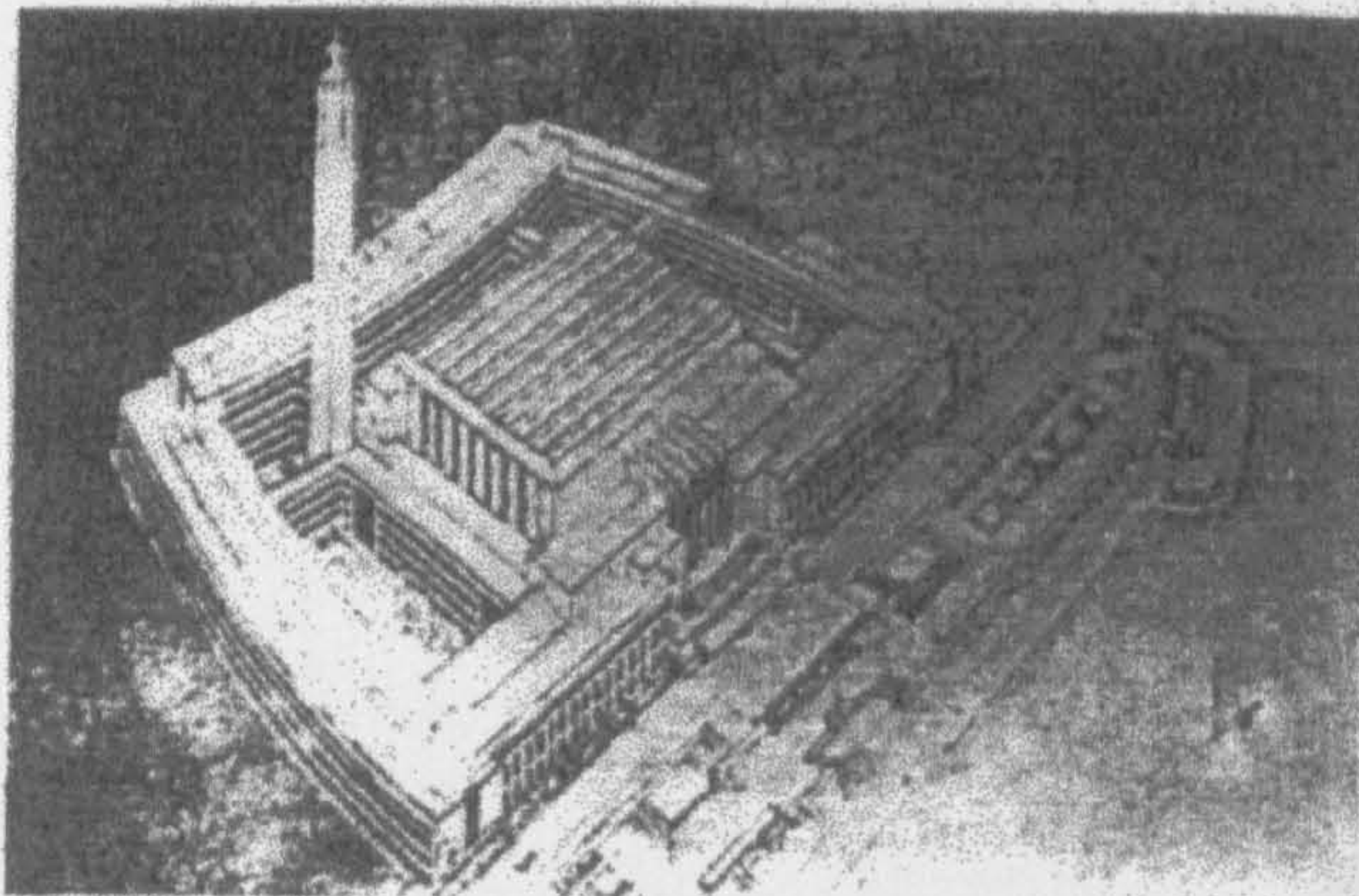
EXAMPLES OF THE SINGLE-BUILDING SOLUTION



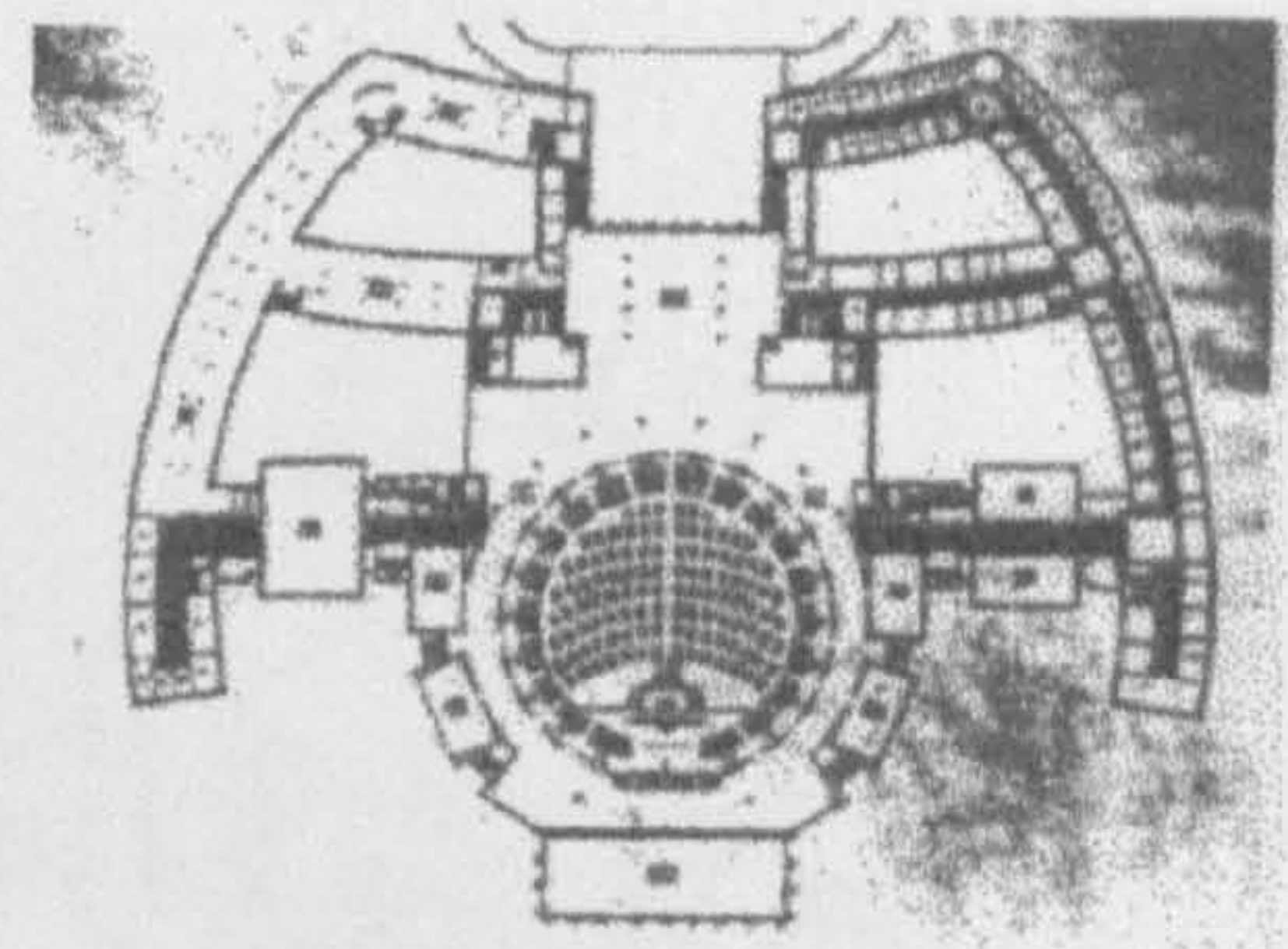
E. Zu Putlitz
R.Klophaus
A.Schoch



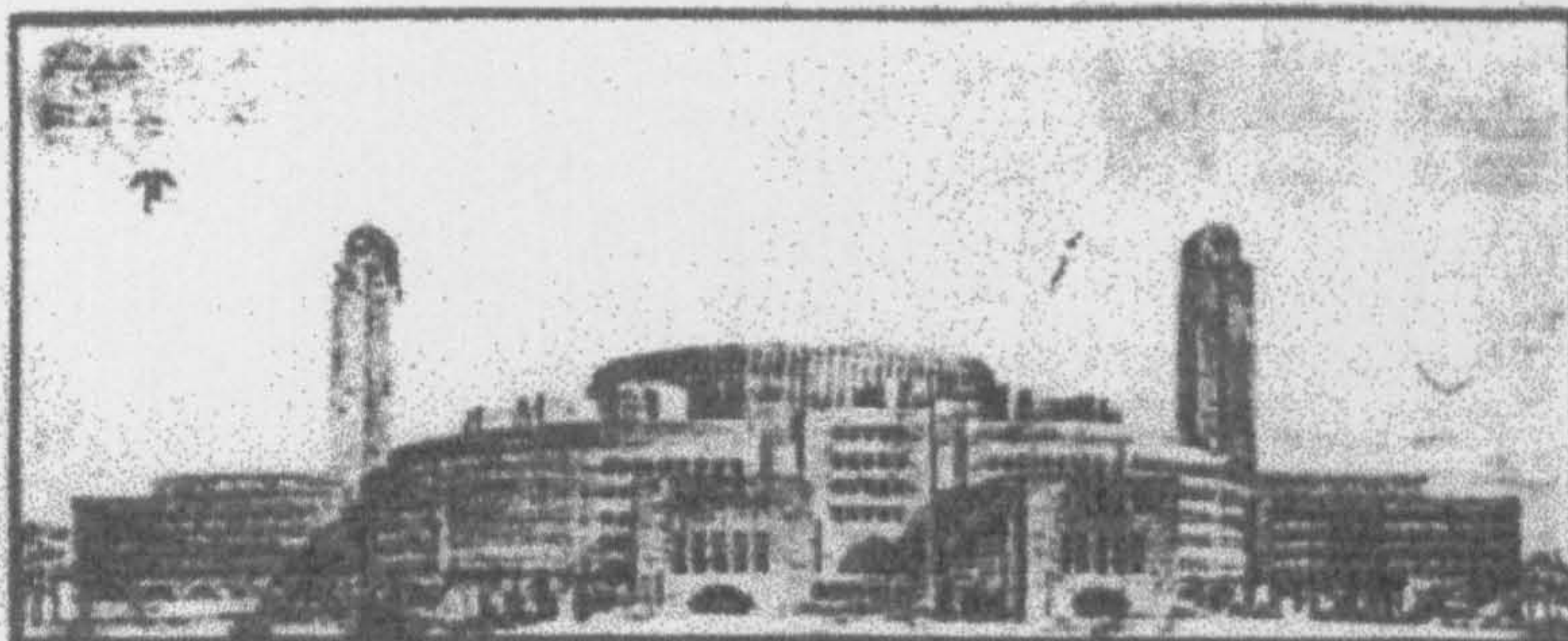
C.M.T. William-Olsson



G.Friedhoff

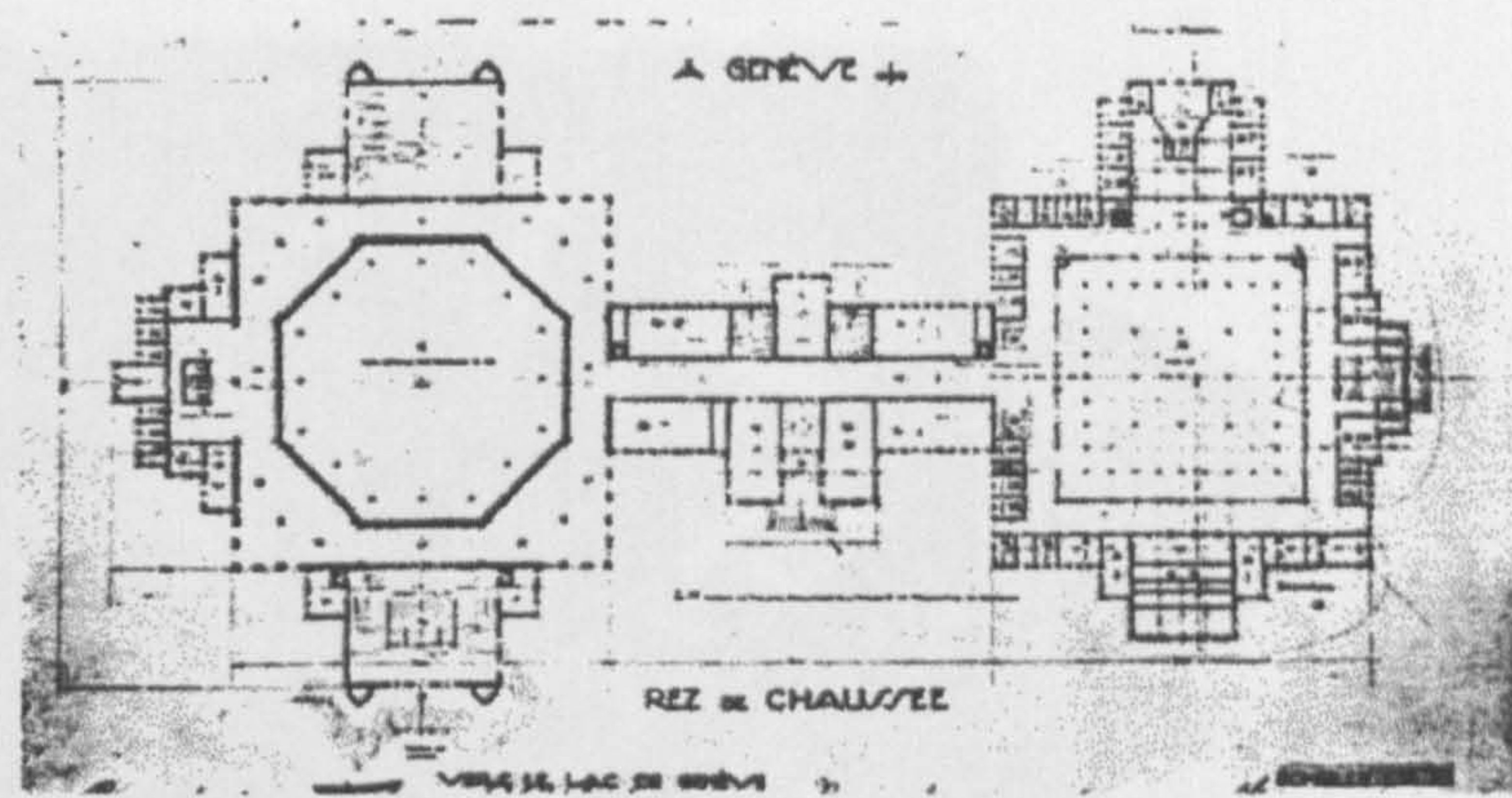


E.Brill

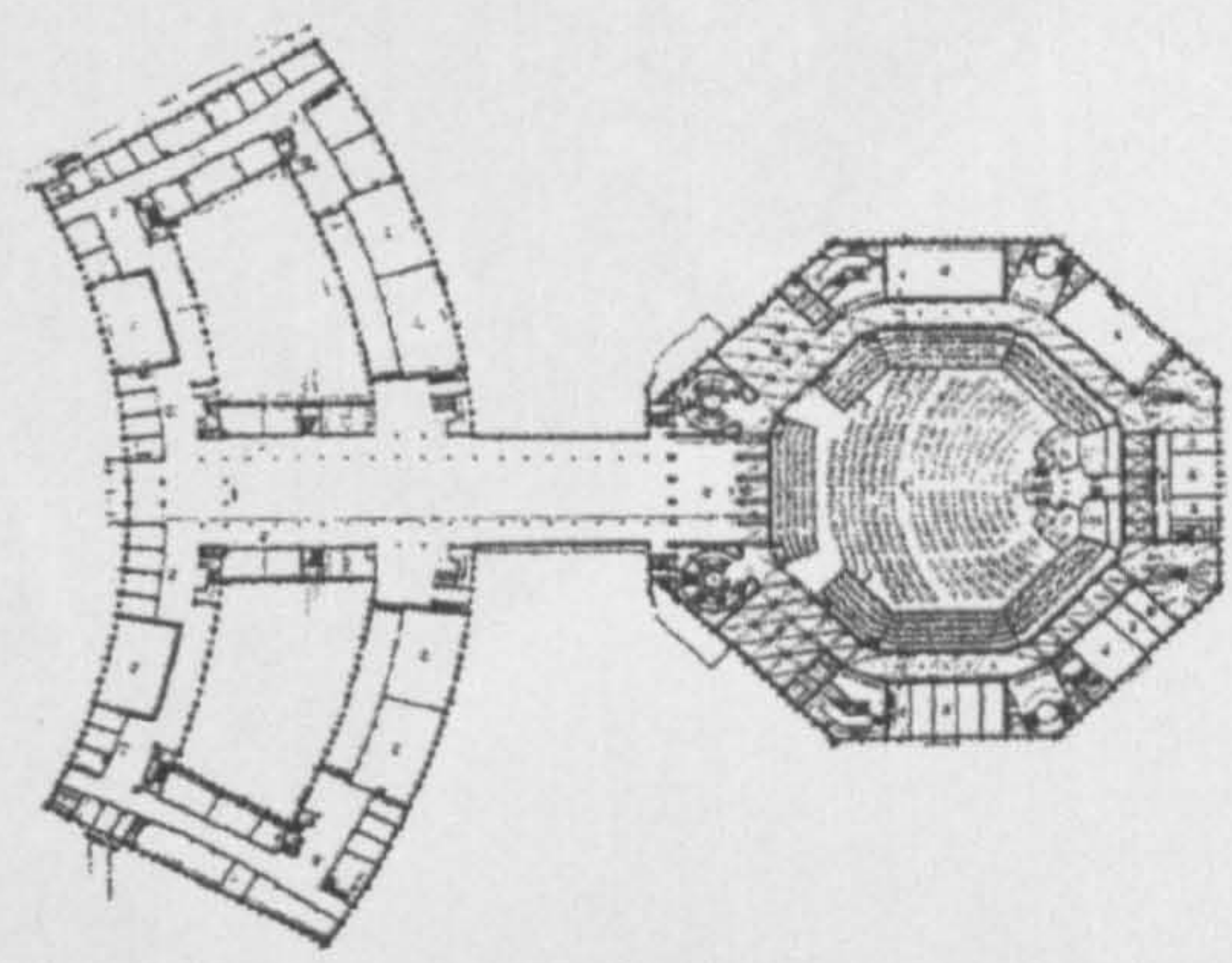


H.F.Mertens

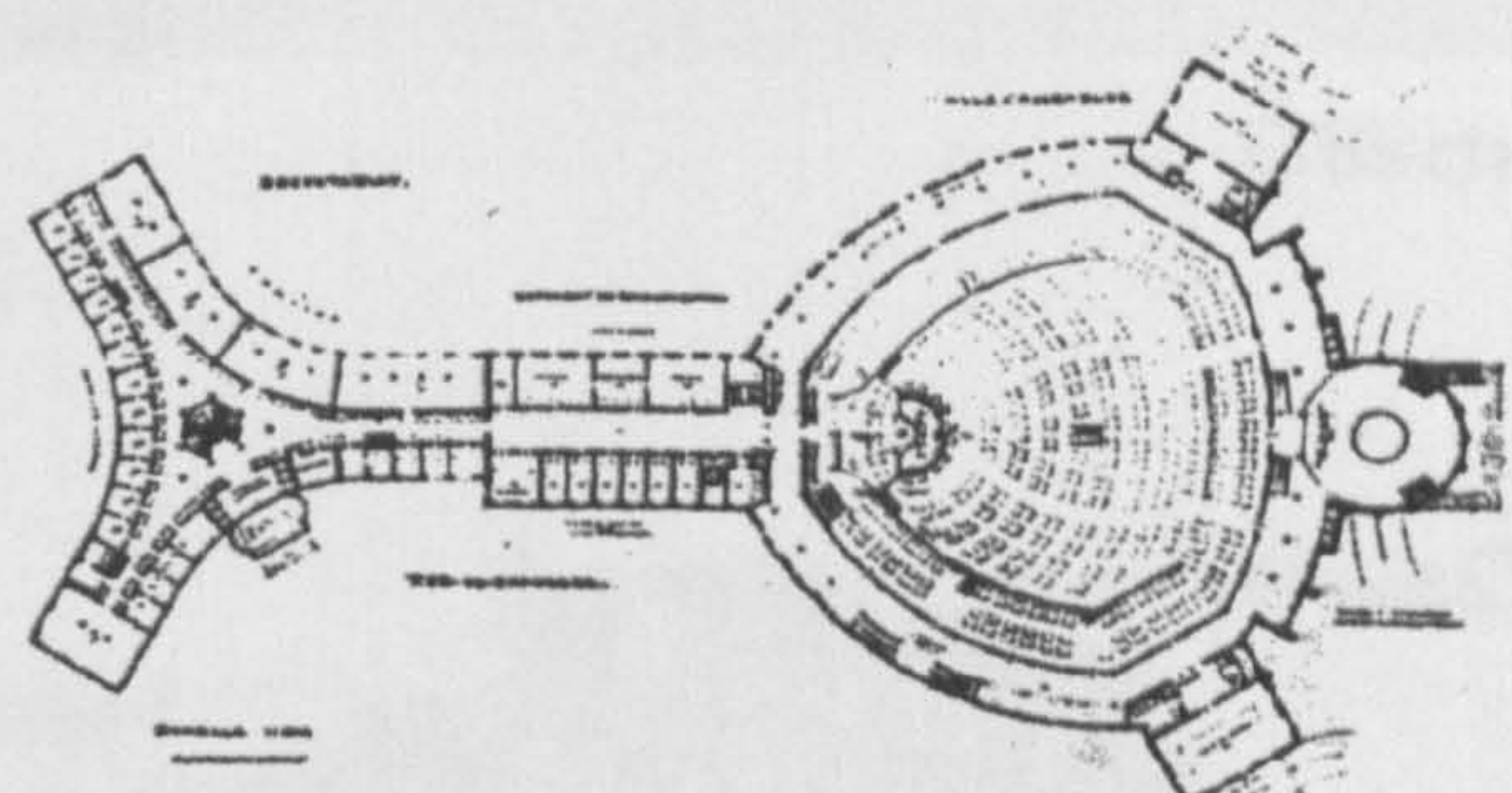
EXAMPLES OF THE TWO - BUILDING SOLUTION



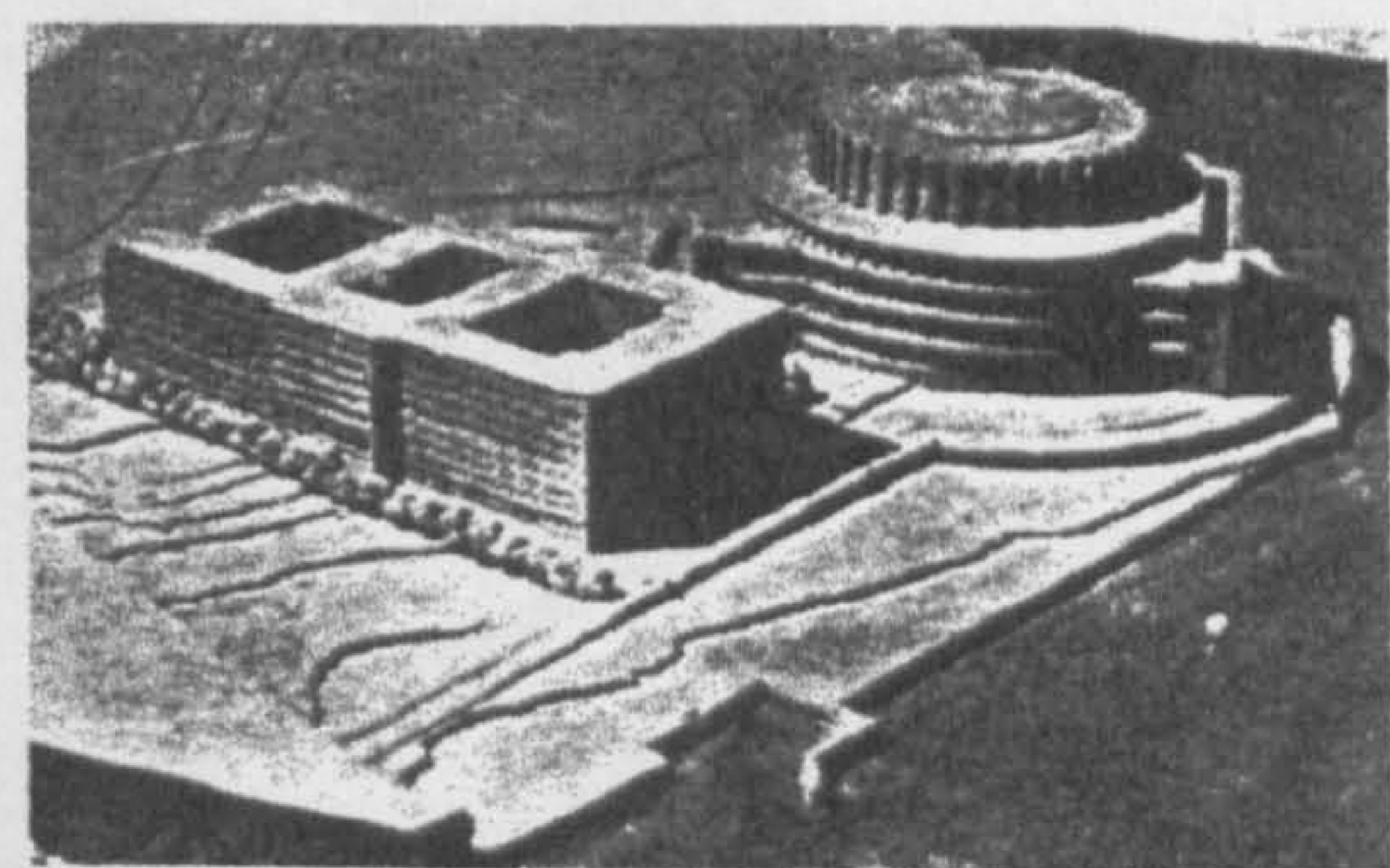
P.Ghilain, L.David, H.Lamarche, A.Lecomte, F.Marechal



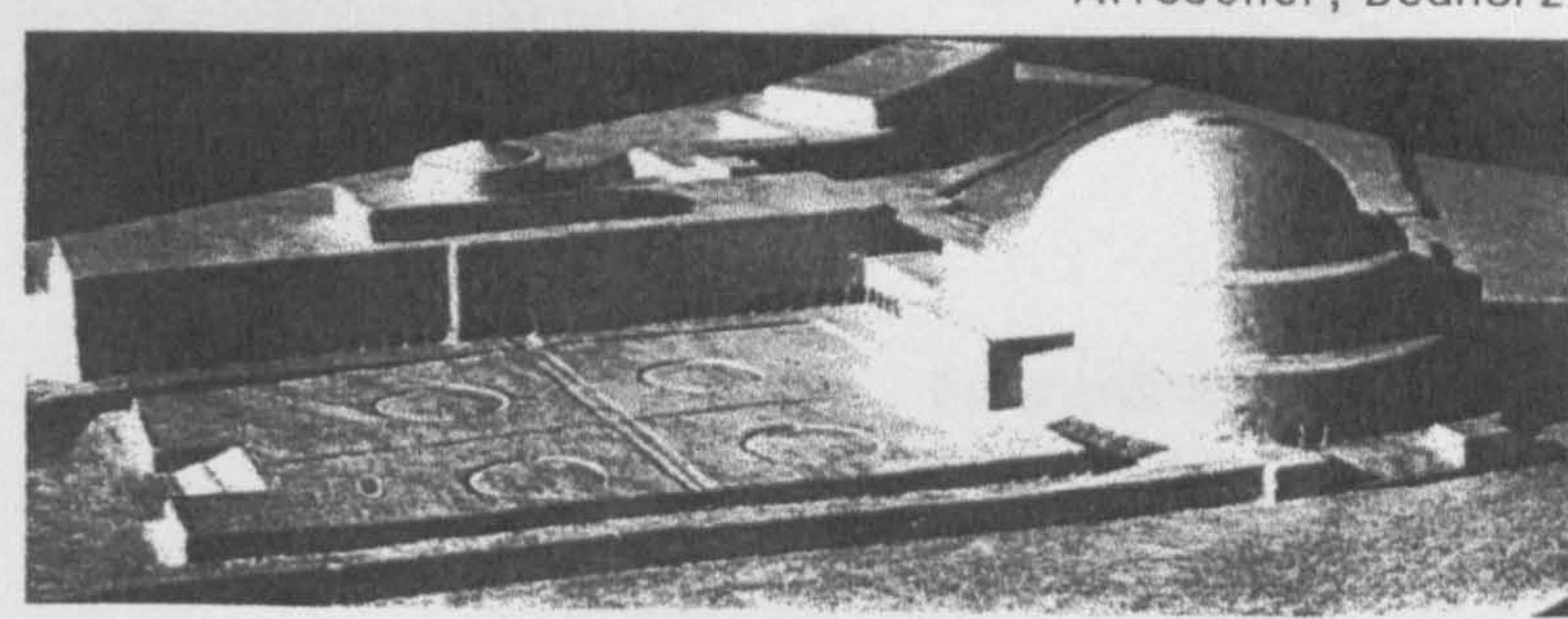
H.Poelzig



E.Voellmy, E.F.Baumann

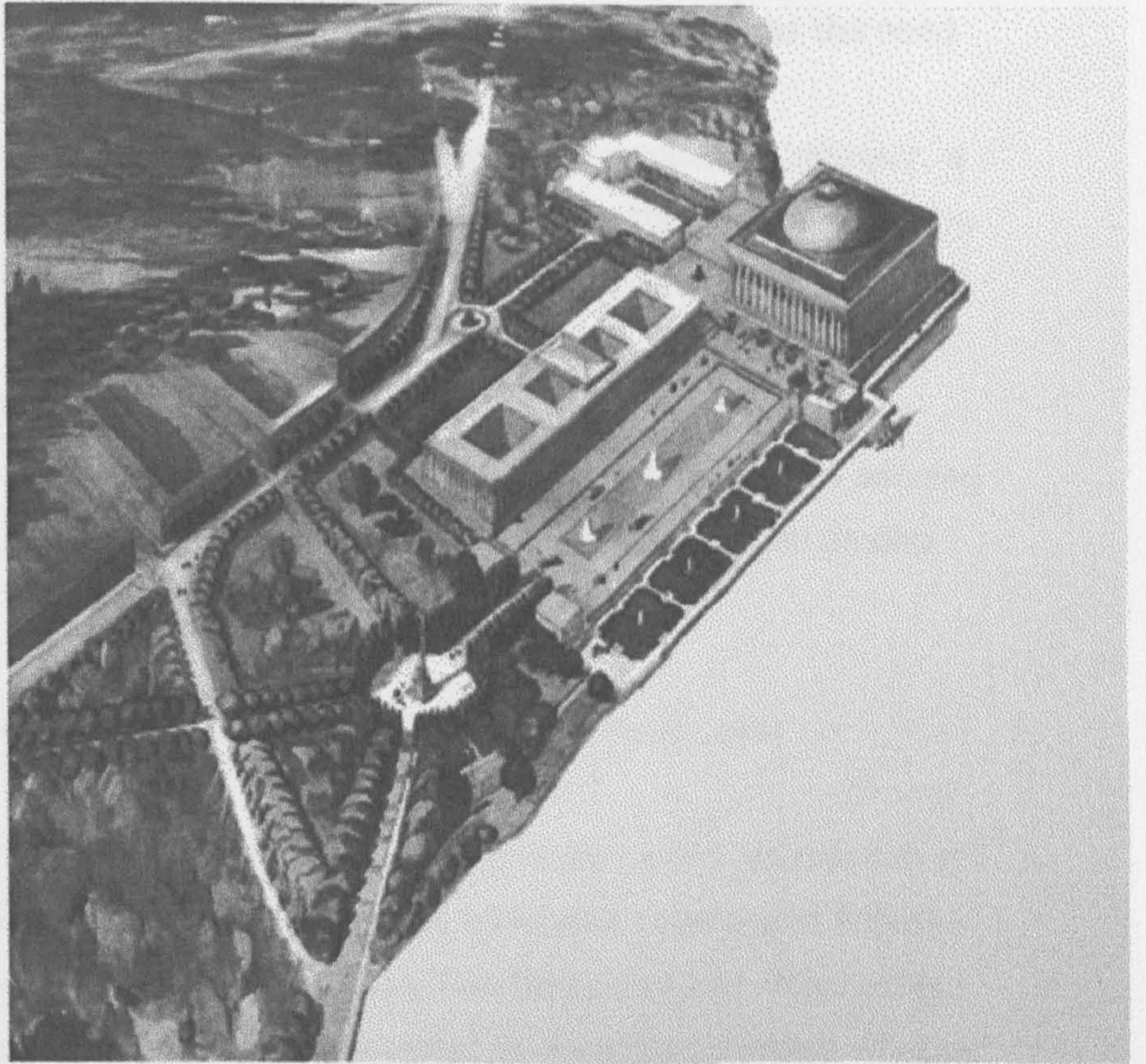


Allescher, Bednorz

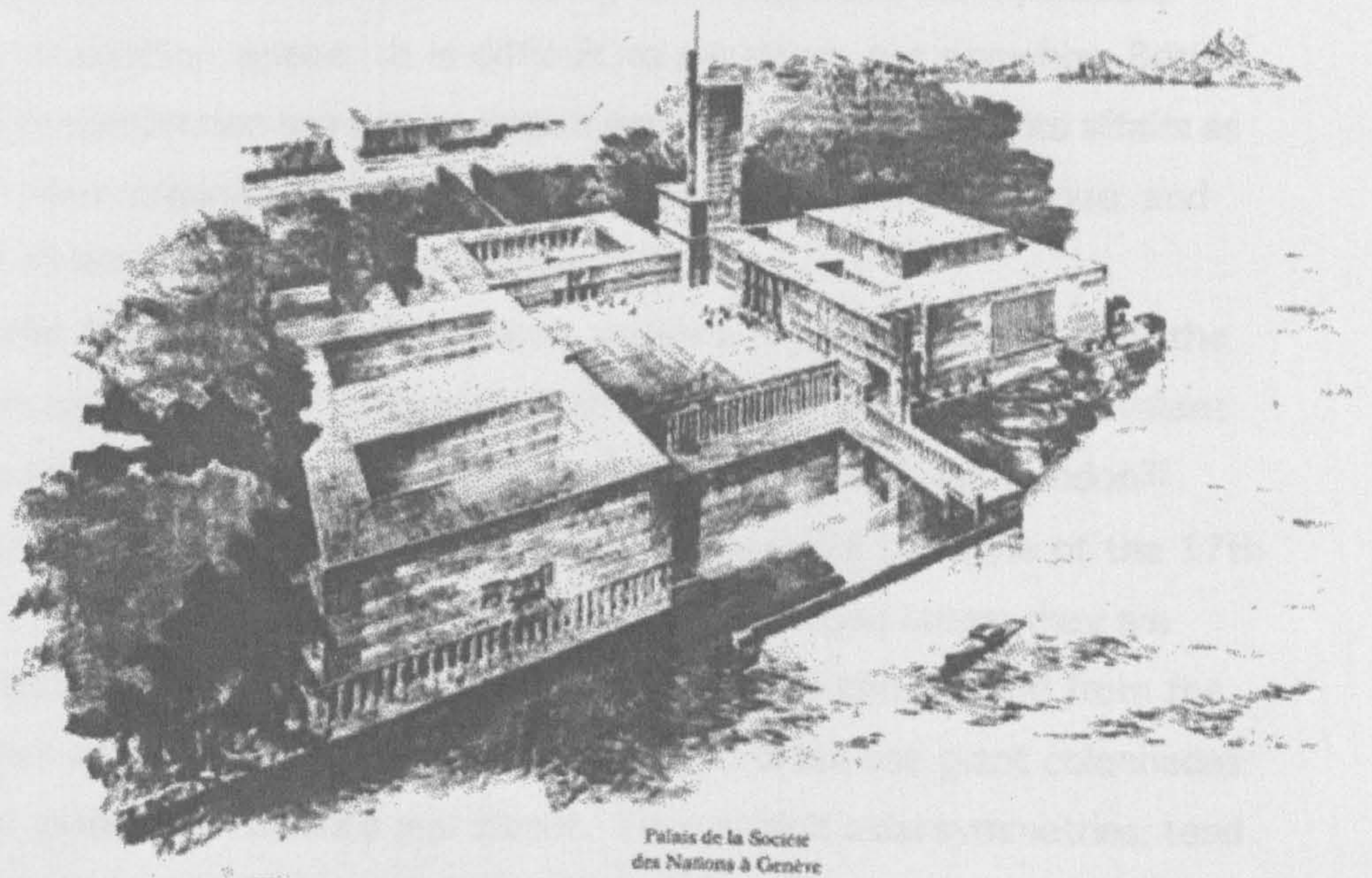


R.Fick, R.Menzel

figure 6



G. Birch-Lindgren



Palais de la Société
des Nations à Genève

Fahrenkamp & Deneke

central axis of symmetry, the first to be built immediately, the second as the need arose: [4]

Le Corbusier's project is one such, H.-P.Nénot's project is another. Curiously, a number of entries use this arrangement but organised so that the implied extension thrusts southwards into the Parc Mon Repos, which was never available for purchase.

A selection of two-building examples, the last two of which are asymmetrically disposed in a picturesque and non-axial fashion, is shown in fig.6, and the winning projects by G.Birch-Lindgren, and Fahrenkamp & Deneke, are to be found among these [fig.7].

The British Empire Entries: The Beaux-Arts seen from afar

None of the British Empire entries appear remarkable, as far as one can tell from the surviving perspectives. Judging from the extensive coverage in English architectural journals, and in newspapers such as *The Times* and *The Manchester Guardian*, the competition was followed with interest by member countries whether or not they had any winning designs to their credit. Britain did not, but an exhibition of the British Empire entries was held at the RIBA. There were only eleven exhibitors and *The Architect and Building News* reported the exhibition, publishing one illustration apiece. It is difficult to pin down, but somehow British reportage of the competition suggests a British view of the League and its affairs as being just one more organisation of many serving Britain's interests abroad, and the paucity of British entries tends to confirm this.

From *The Architect and Building News* articles, it is clear that most of the English designs conformed to that English-Civic style of architecture so prevalent between the wars, the most familiar example of which is County Hall, London³⁷. These buildings are more-or-less Baroque, that is, they recall the style of the 17th century; heavy facades with elaborately devised, stone-coursed bases; they are massive, institutional, generally undistinguished. They are constructed from the familiar Palladian parts: base - piano nobile - attic, and often use giant colonnades and pediments to indicate entrance and status. They exhibit axial symmetries, tend to be built around closed courtyards which add greatly to their external bulk, and sometimes incorporate classical elements: clearly the Beaux-Arts model forms the basis for the constitution of these buildings. But they are generally pale shadows of

their Beaux-Arts cousins in terms of scale, elaboration and richness, and in the expression of prestige.

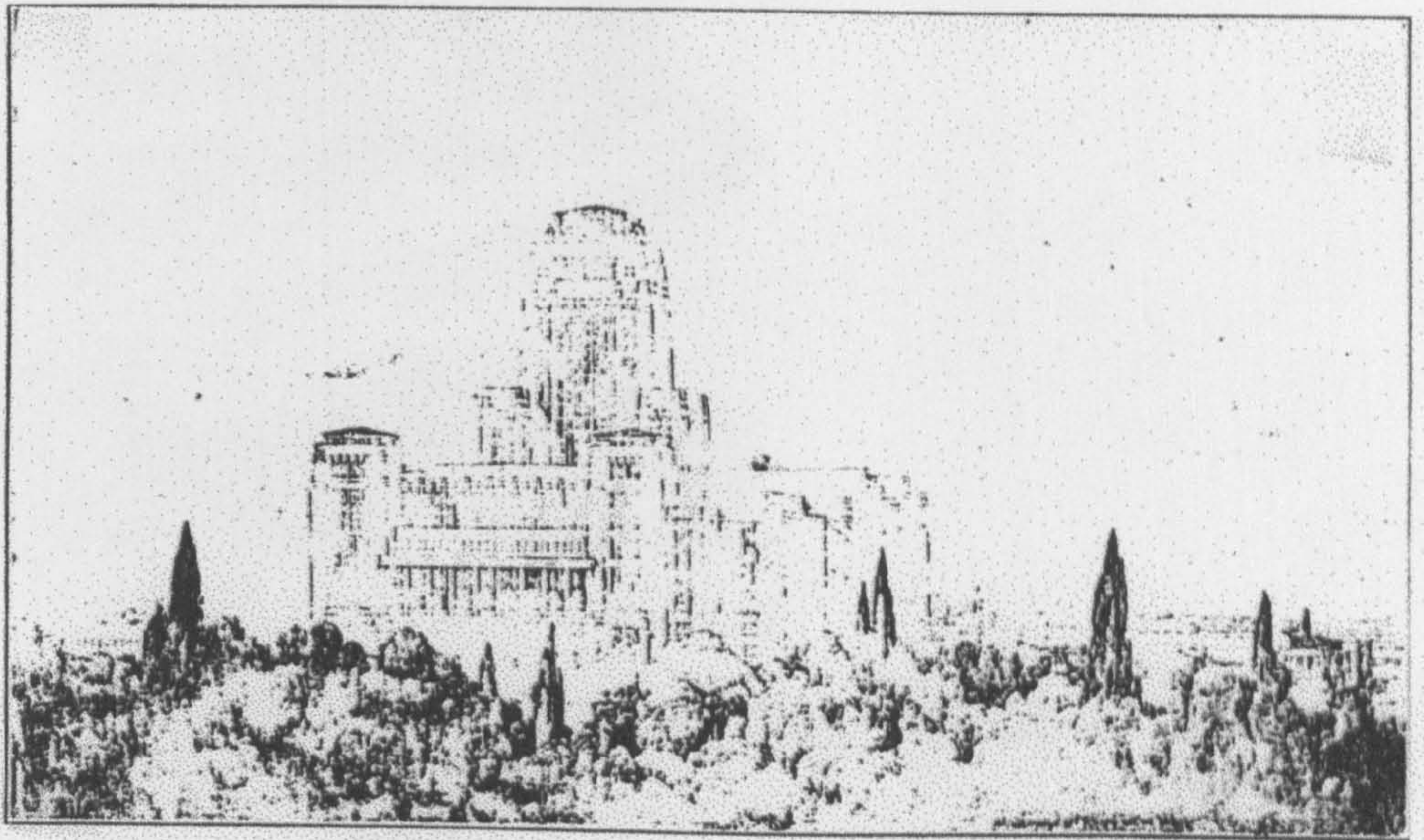
Many of the British entrants paid great attention to the landscaped site, carefully drawing the existing trees that they retained around their buildings. Perhaps the picturesque nature of the planting which may be seen in one of the aerial views issued in the competition programme³⁸ struck a chord here: it recalls the naturalistic landscape traditions of late eighteenth century England; at any rate, several of the British entrants succeeded in conveying the impression that their [admittedly bulky] buildings rose from a pleasant park.

A design by E.S.Bell³⁹ has a completely circular plan with a large central dome, which formalism recalls some of the designs of Boullée and Ledoux [and perhaps Durand]. A design by Mears & Carus Wilson has a central tower of offices and is composed and elaborated in a faintly expressionist manner [fig. 8]. The scheme by James Burford is possibly the most '*moderne*': the use of repeated, vertical strips or fins to indicate entrances in a basically horizontal scheme recalls Frank Lloyd Wright. An Australian entry from William Lucas has the most unusual plan - a semi-circular courtyard is partly occupied by a similarly-shaped Assembly hall swelling from the straight side of this court - a similar arrangement to the project by C.M.T. William-Olson of Sweden, which won an honourable mention. But the Australian scheme has in addition a number of u-shaped office blocks, each enclosing what would be a very gloomy service court, thrown off the outer curve of the courtyard. A design by Alexander Patterson, more-or-less conventionally civic, is of interest only because Patterson was a close associate of John Burnet, the British juror. Patterson, five years younger than Burnet, also attended the Atelier Pascal at the Beaux-Arts school, and worked for Burnet for a while⁴⁰[fig 9]. Another of the British entrants, S.W.Milburn, attended the Geneva exhibition of the competition and reported on it for *The Builder*⁴¹. He was very impressed:

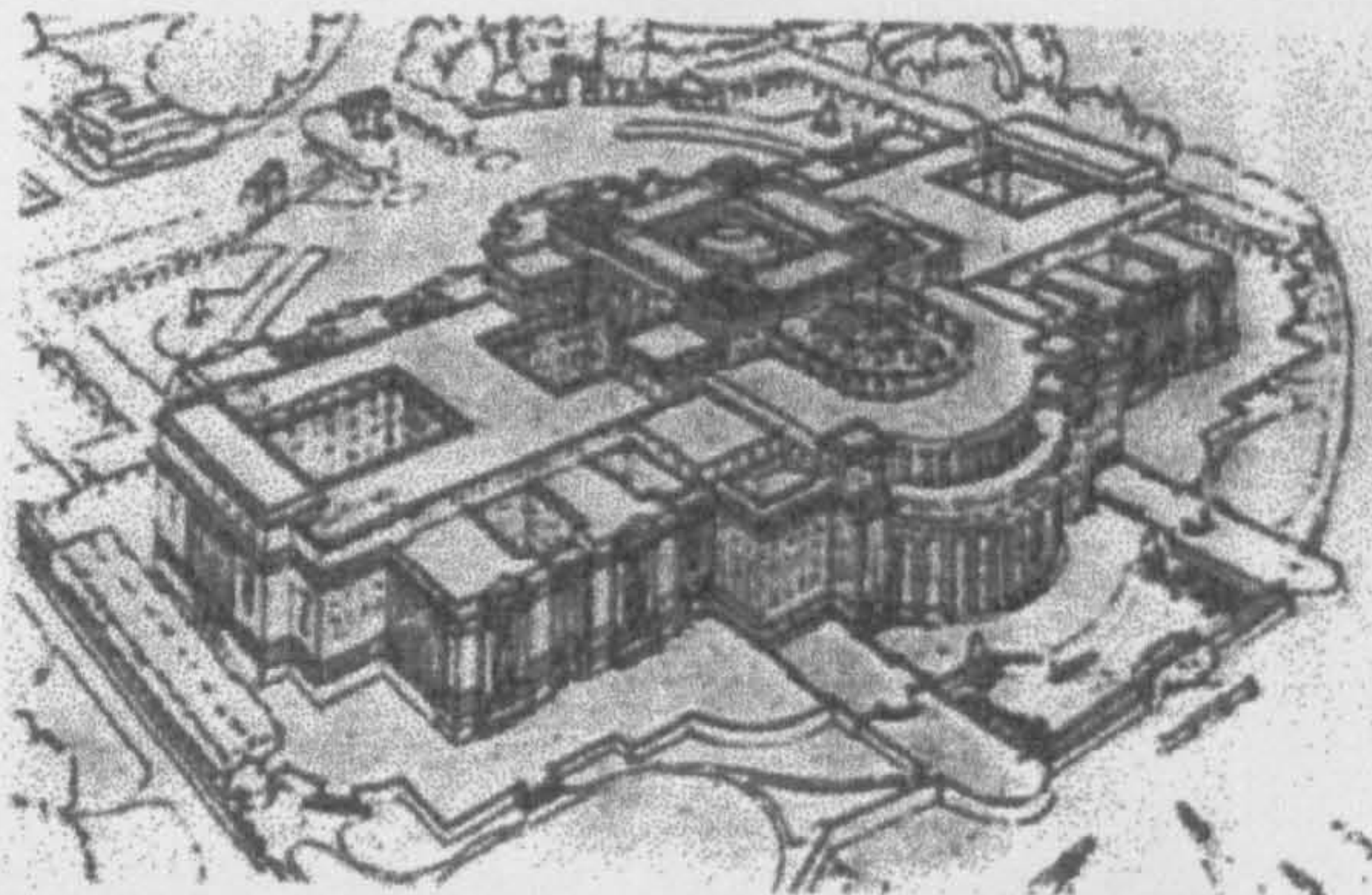
" After a first, brief survey of the exhibition, one is absolutely amazed at the excellence of the work displayed. Probably never before has such a wonderful show of architectural competitive designs been held. Every conceivable solution of the problem seems to be here, worked out in detail and illustrated by beautiful perspectives and plan and elevational drawings.

A.S.G.Butler is notable for his architectural connections: he compiled the Memorial Volumes of Lutyens' drawings, and his entry, with its elongated, polygonal plan and

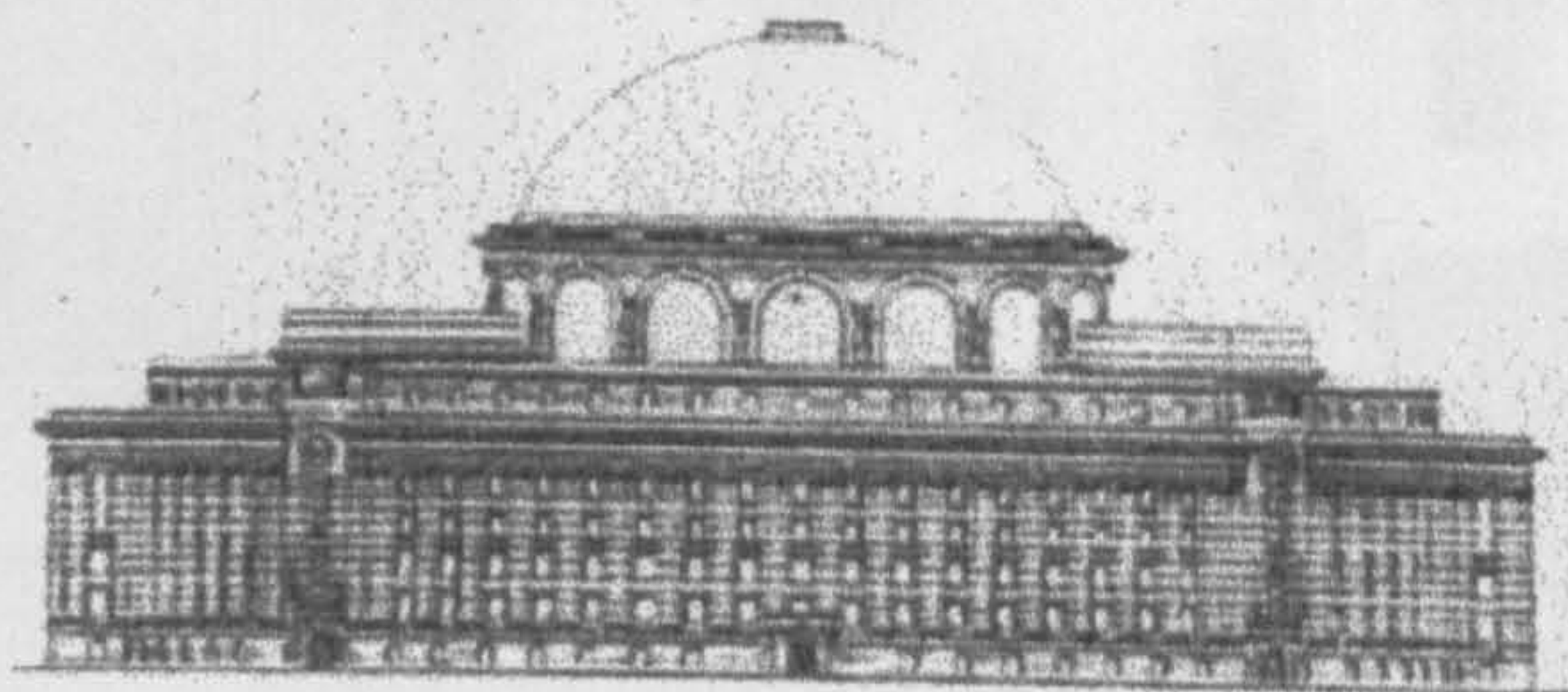
British Empire Entries



Mears & Carus Wilson

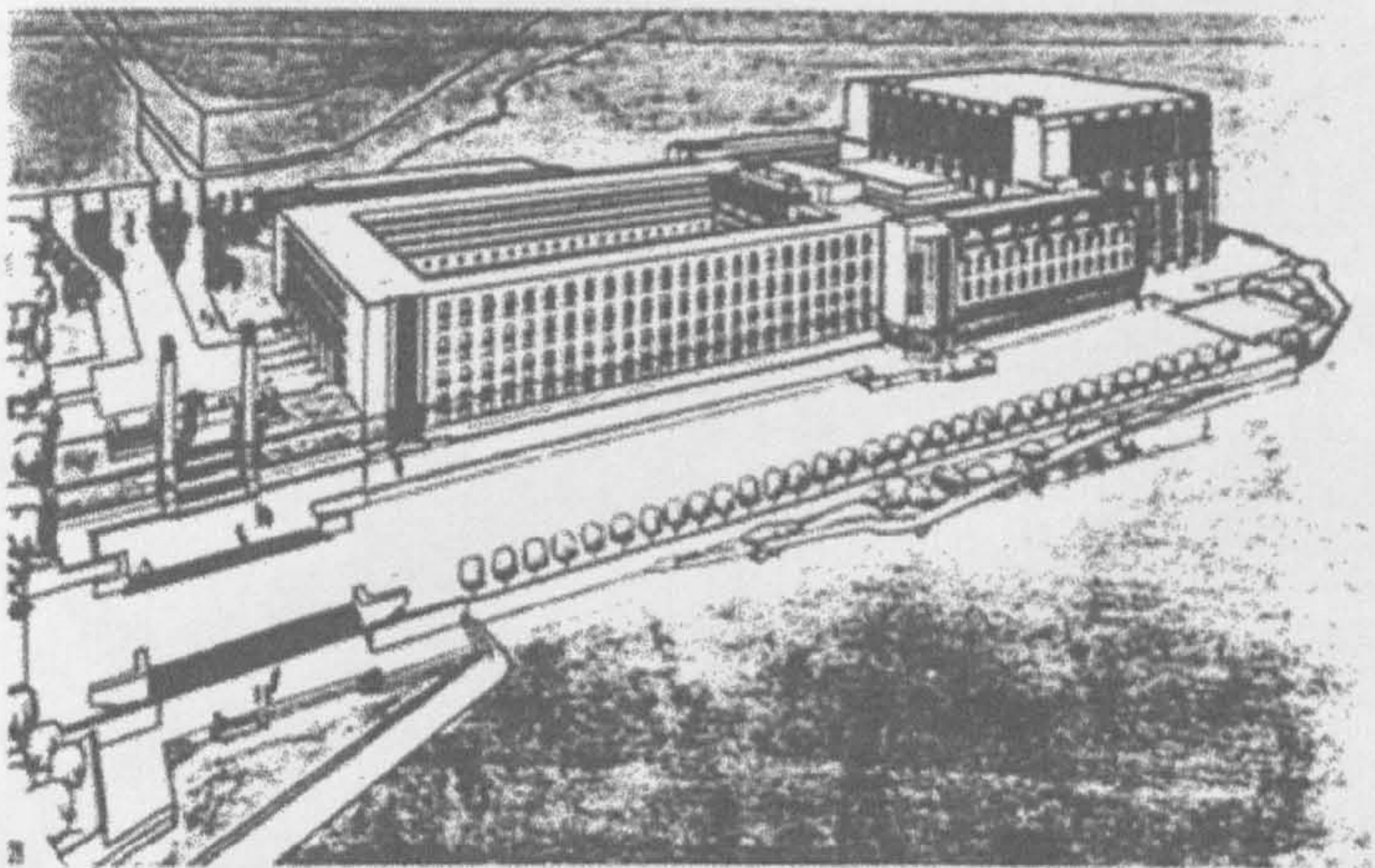


S.Woods-Hill
C.H.Hignett

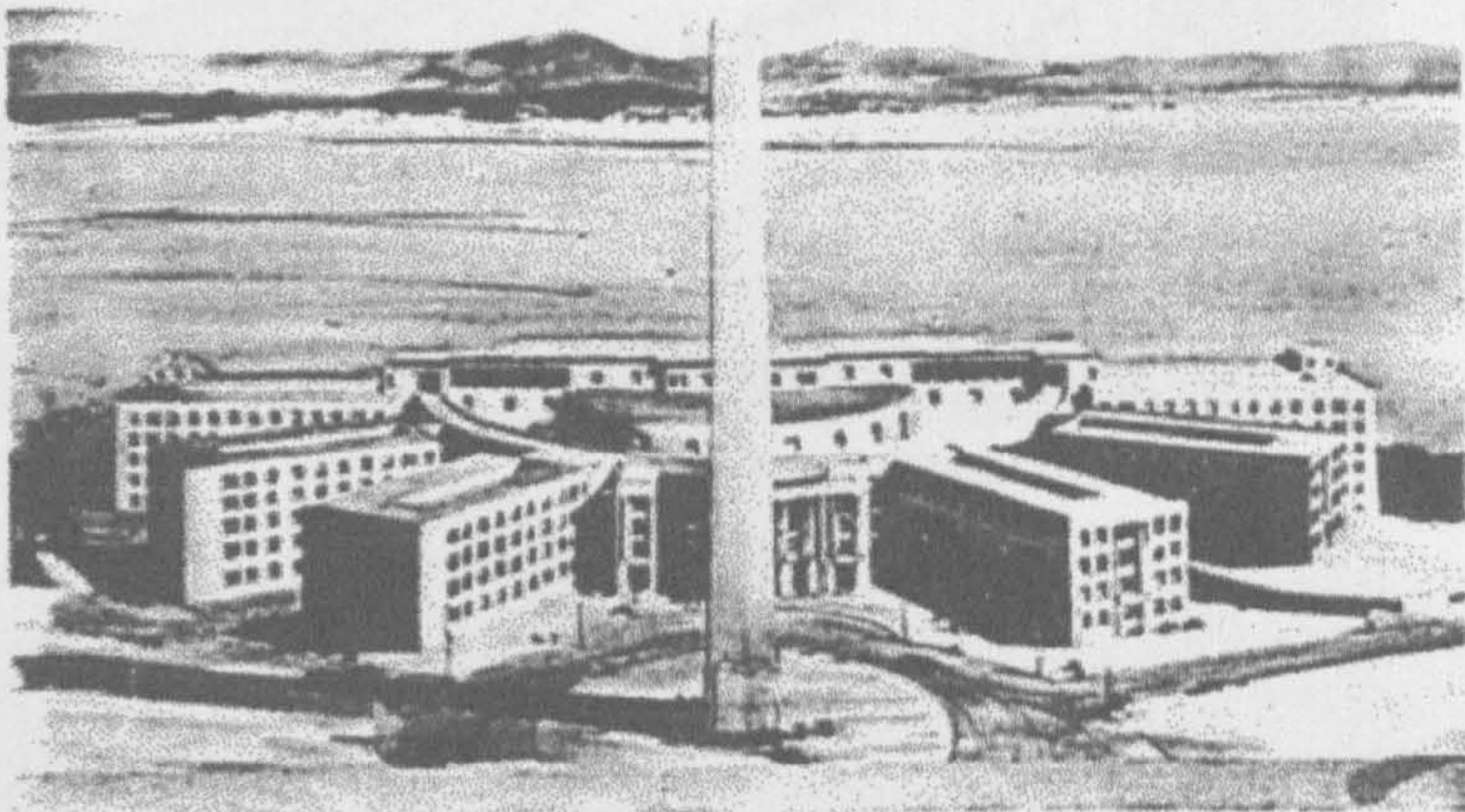


E.S.Bell

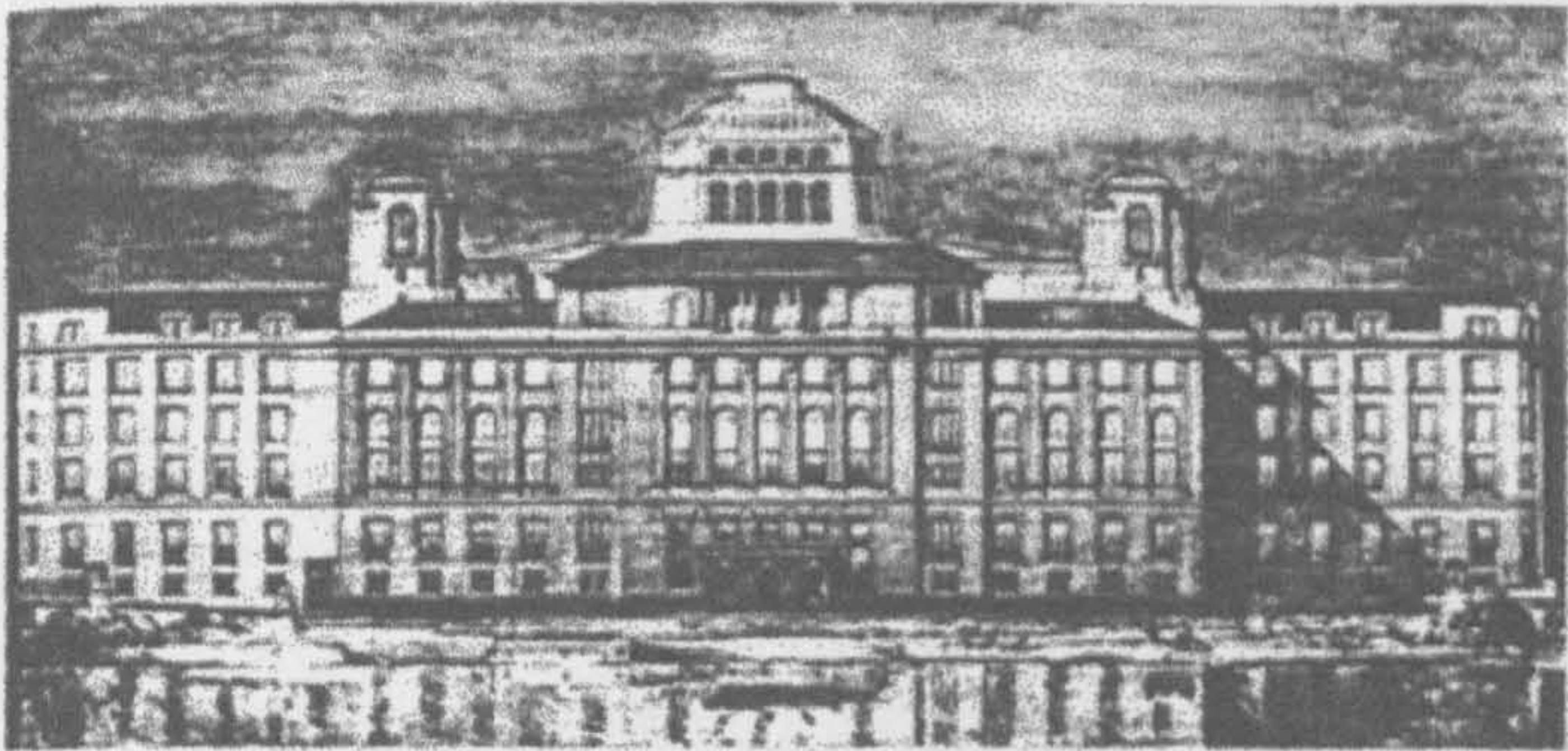
BRITISH EMPIRE ENTRIES



James Burford



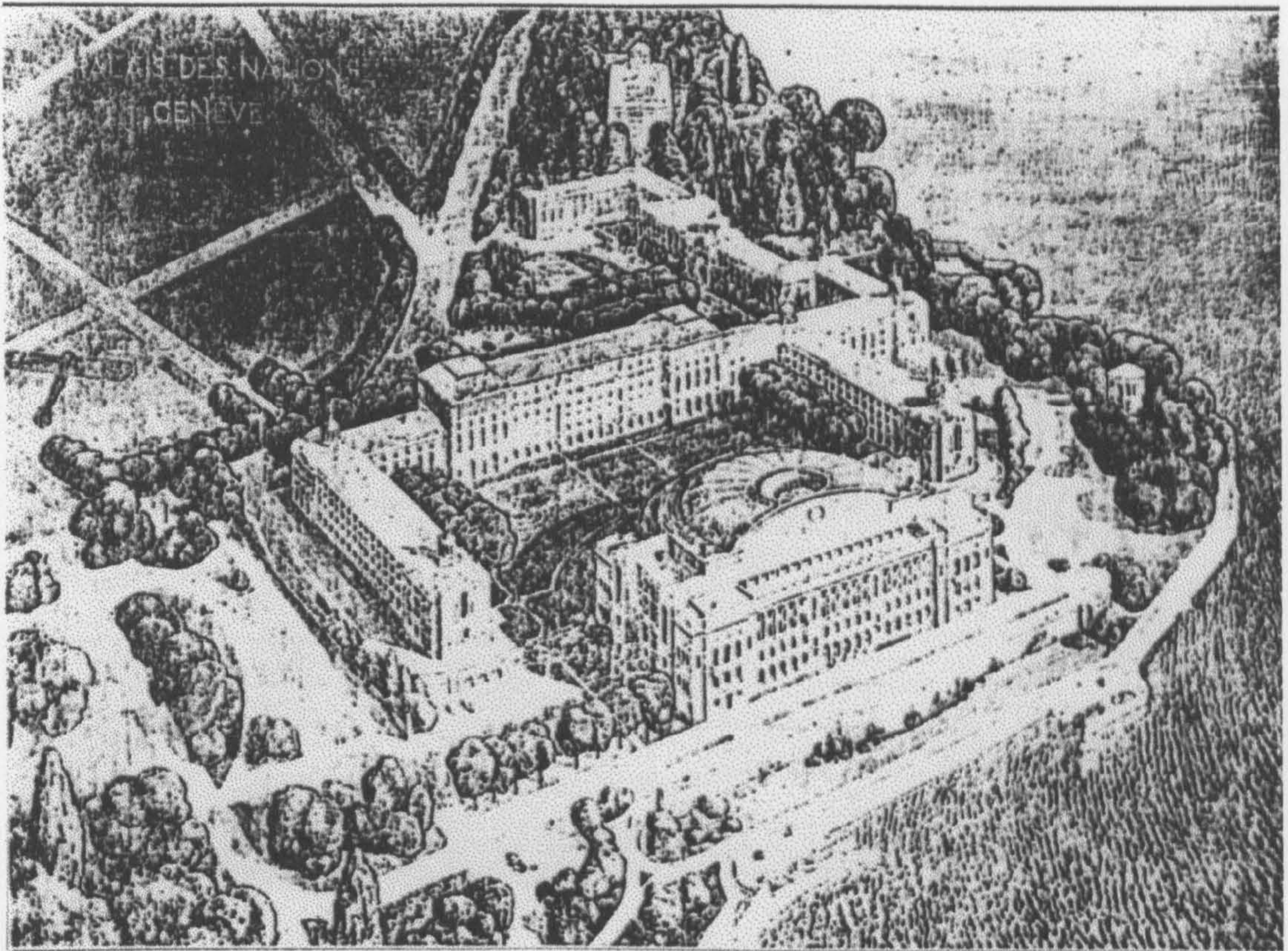
W.Lucas



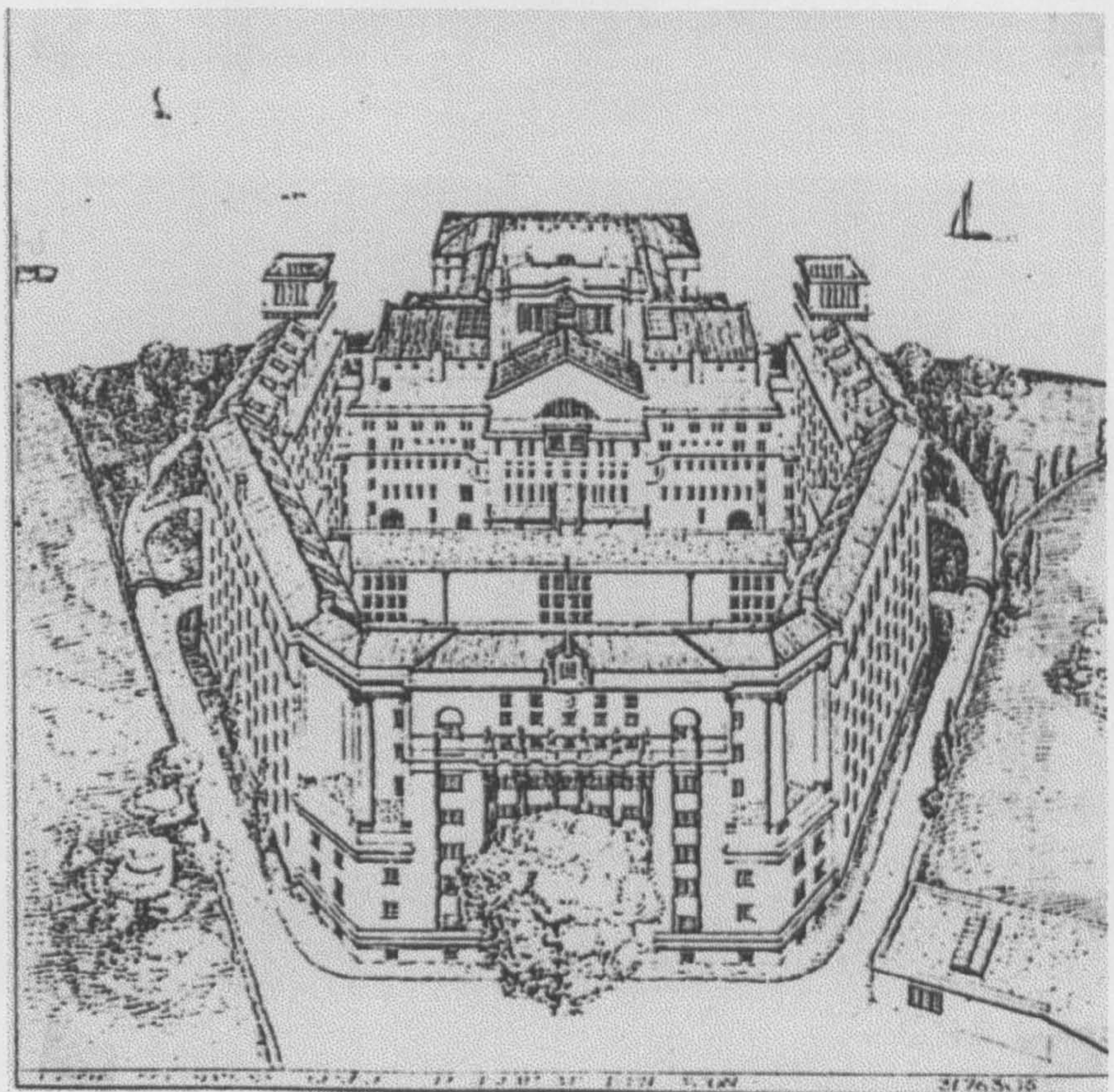
A.Patterson



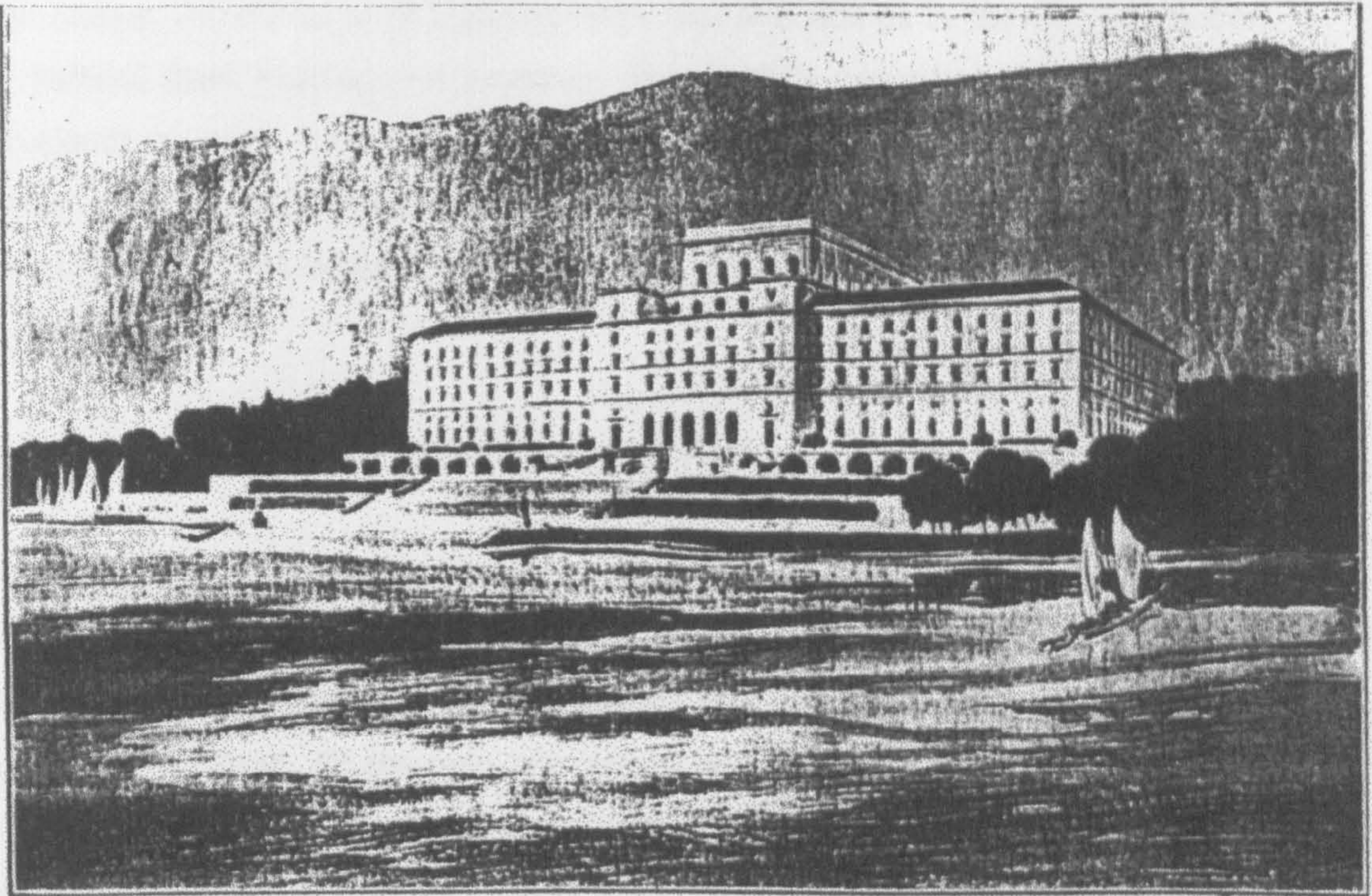
S.W.& T.R.Milburn



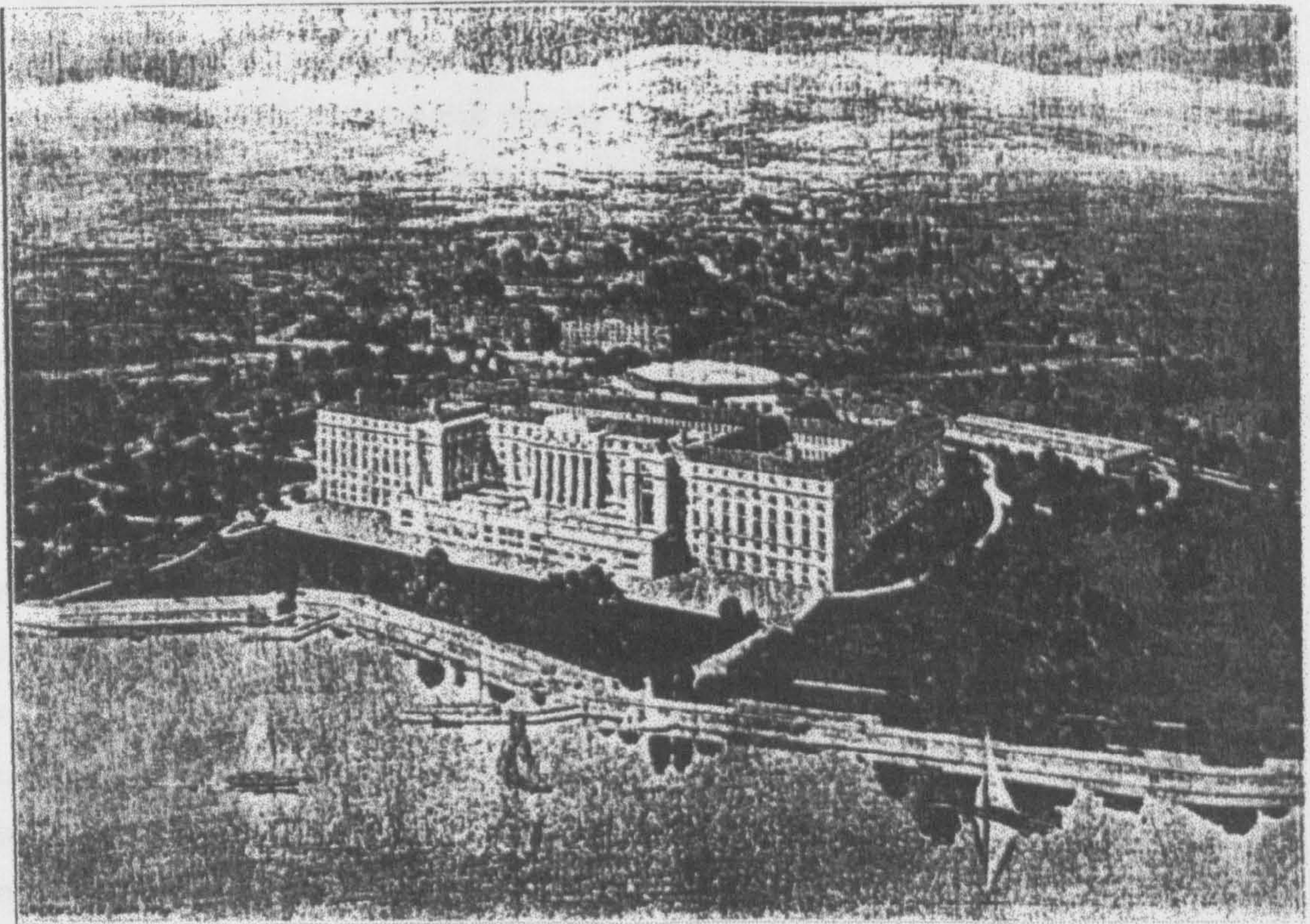
Prof. P.E.Nobbs [Canada]



A.S.G.Butler



Keiffer & Fleming



G.H.B. Gould

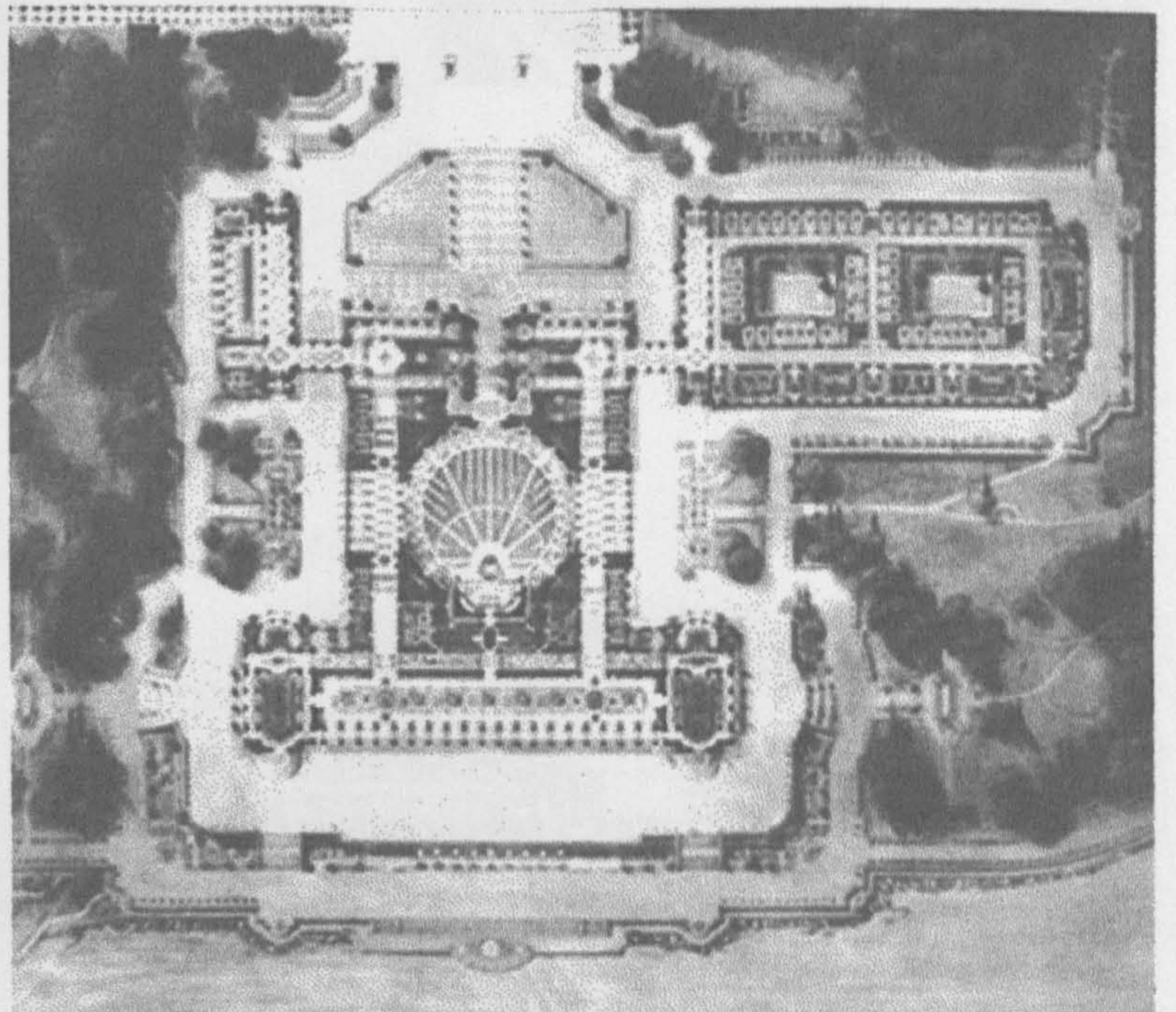
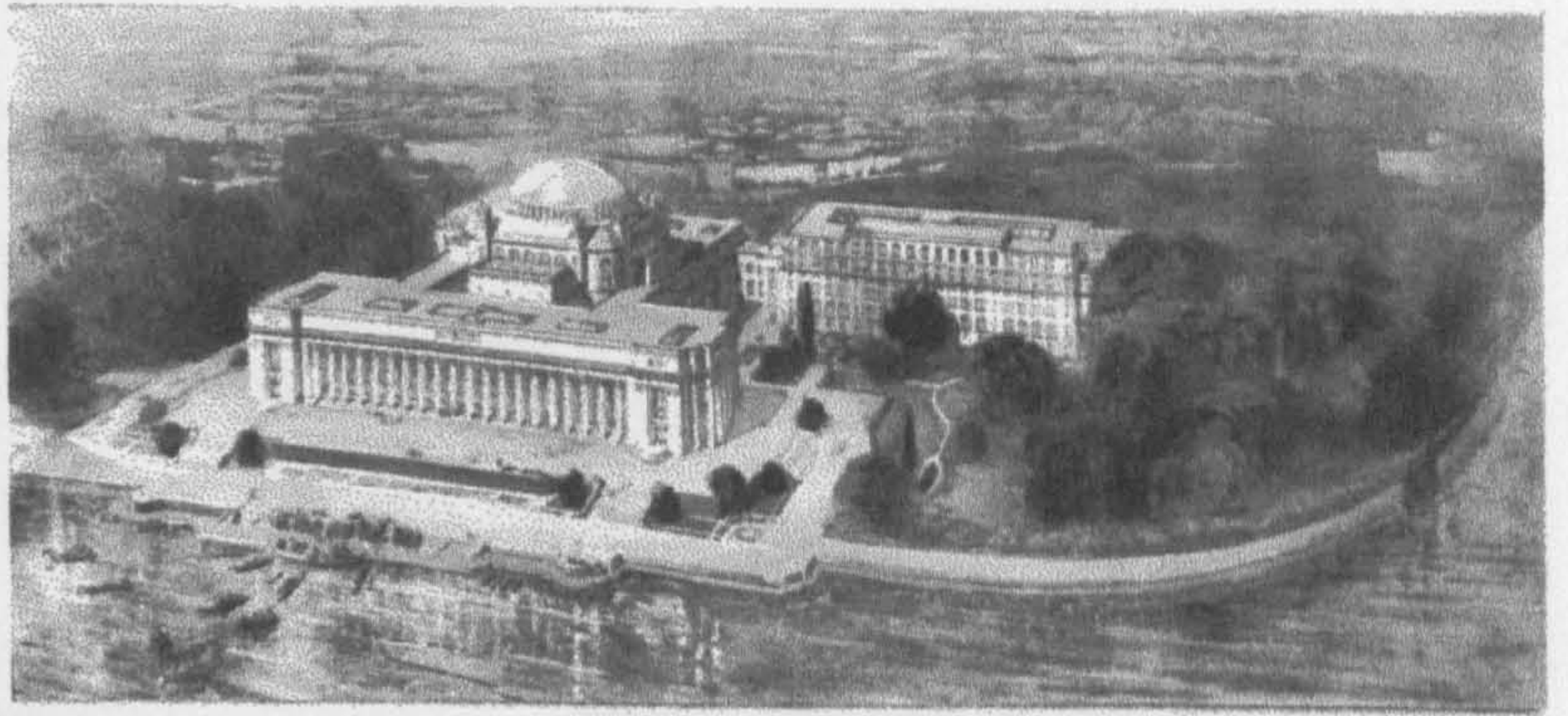
giant orders, recalls some of Lutyens institutional buildings in the City of London, the Midland Bank building, for example. It is slightly surprising that Lutyens did not submit an entry: he was only fifty-eight in 1927, and at the height of his career. Perhaps his absence indicates a British Empire view of the relative unimportance of the League. The remaining British entries are illustrated in fig.10 & 11.

Visions of a Palace: a Multitude of Styles

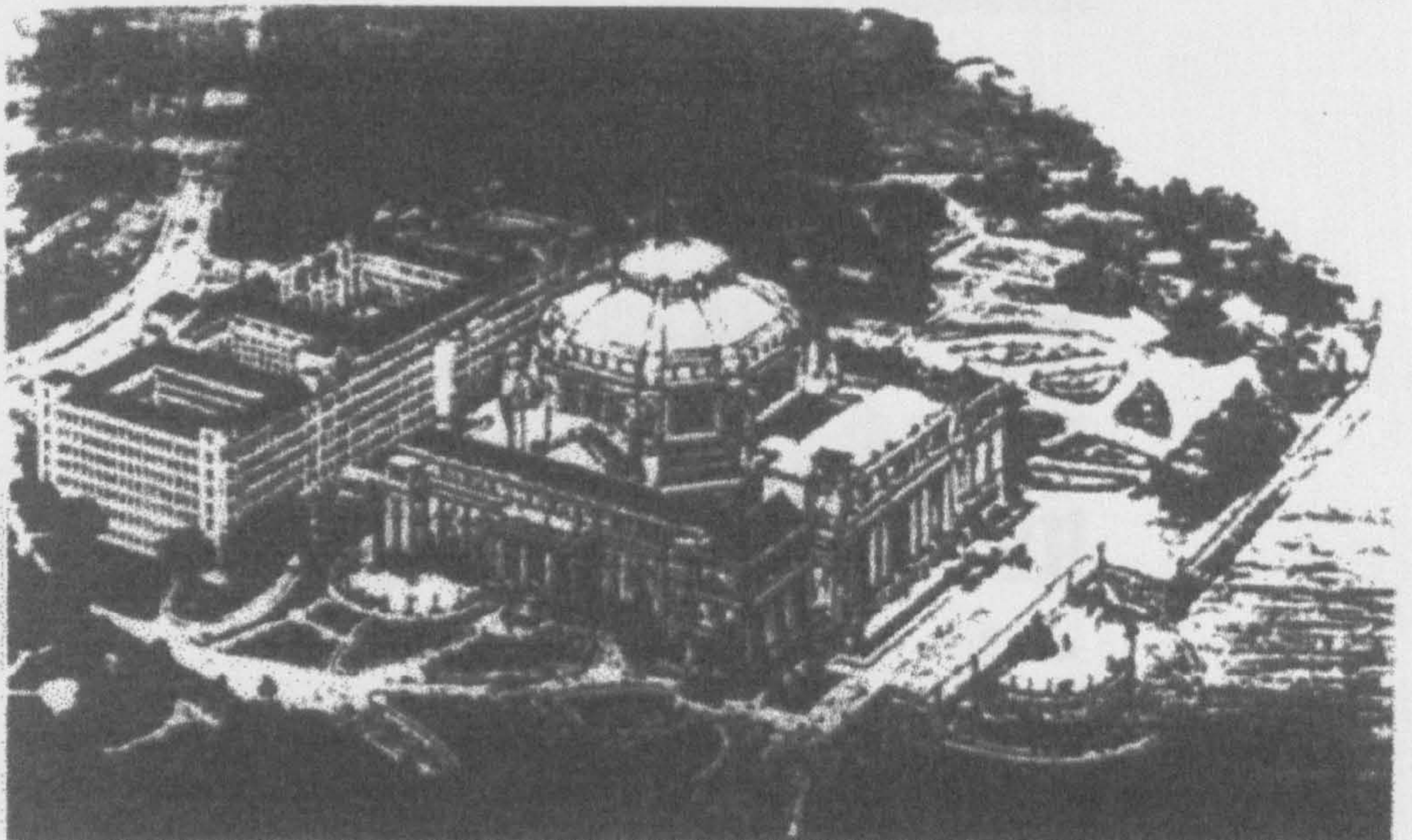
Among the unpremiated entries, there are several which are of particular interest because their authors are notable. These are the submissions of Eliel Saarinen, J.Duiker, Hans Poelzig, Richard Neutra, and Auguste Perret, and I will return to them later. Of the rest, the largest group of entries [Ritter estimates one third of the total] were designed in accordance with Beaux-Arts principles. These are identifiable, as is their 1919 precursor, by their plan forms: symmetrical, often bi-axially so, and with an inclination towards elaborate sequences of galleries and salons; by their large size, by a thorough disregard for the small, woody site - they often encroach on the adjacent park, or are built out into the lake - and by their characteristically ornamental display of classical elements [fig.12].

Some of these entries incorporate regional details which suggest, for example, Dutch, or eastern European origins: see the entries of P.Smarandescu with its steep pitched roofs and little pinnacles, like a castle in a northern European forest, or the heavy, pedimented facade by M.Radoslavoff. Here the ingredients which indicate a Czech, or Hungarian origin are difficult to pinpoint, but the fortress-like, blank walls on either side of the pediment, the way the temple front is framed by elaborate panels, the oversized crests to either side, and the emphatic delineation of the pediment by repeated parallel edgings could not be French... An entry by F.Otto has octagonal turrets topped with onion domes, one by Heysa and Wensky has faintly oriental domes of various shapes above a typically Beaux-arts grand order [fig.13]. Whether these entries exhibit regional *character* in the Beaux-Arts sense, or are imbued with the nationalistic and naturalistic Romanticism prevalent in Europe in the early years of the century, is a moot point⁴².

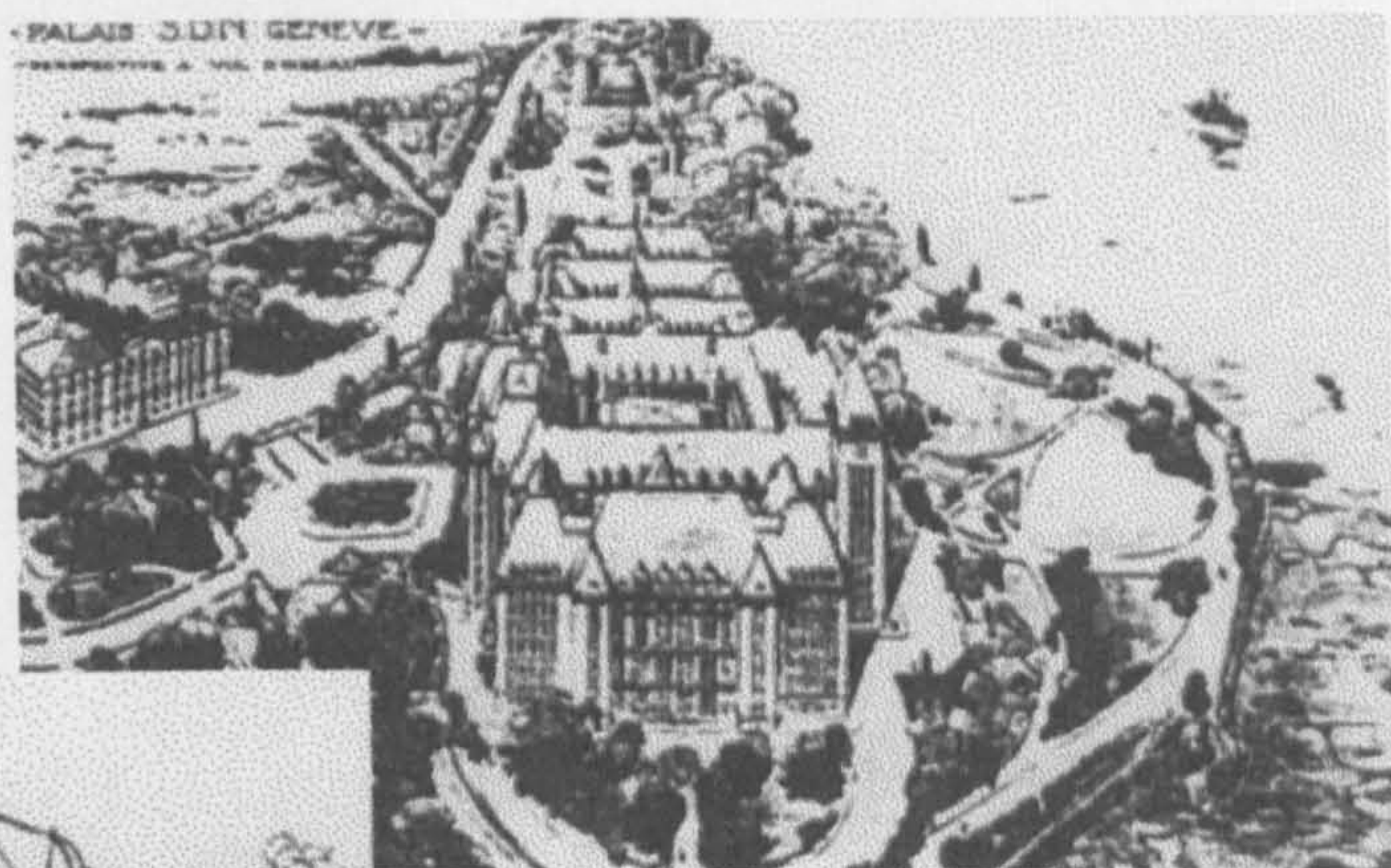
Among the very few Japanese entries collected by Anzivino and Godoli is one by K.Shimoda which uses Beaux-Arts elements but achieves a facade so distinctly



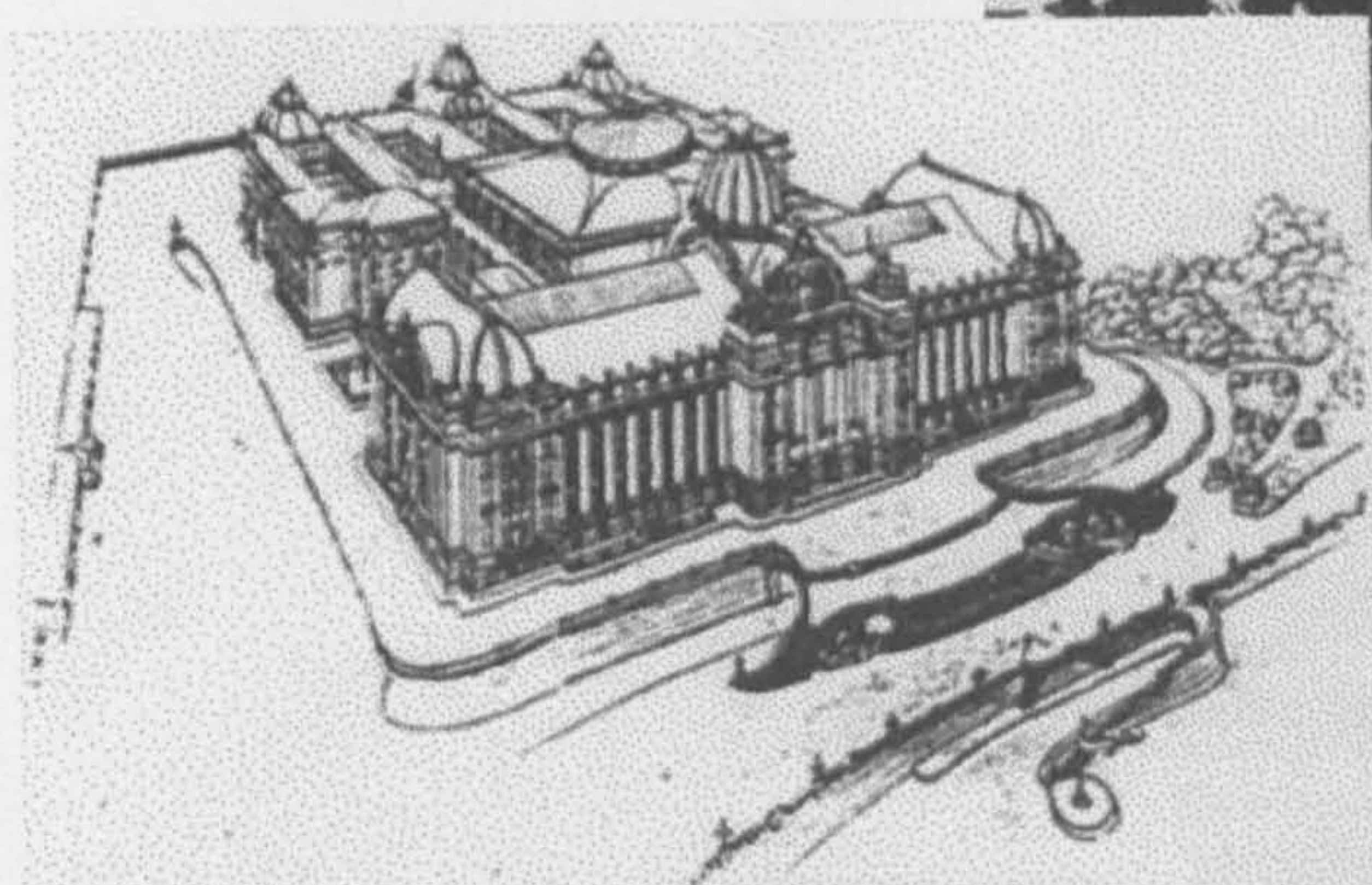
F.G.Lambert & G.Legendre
[2nd Honourable Mention]



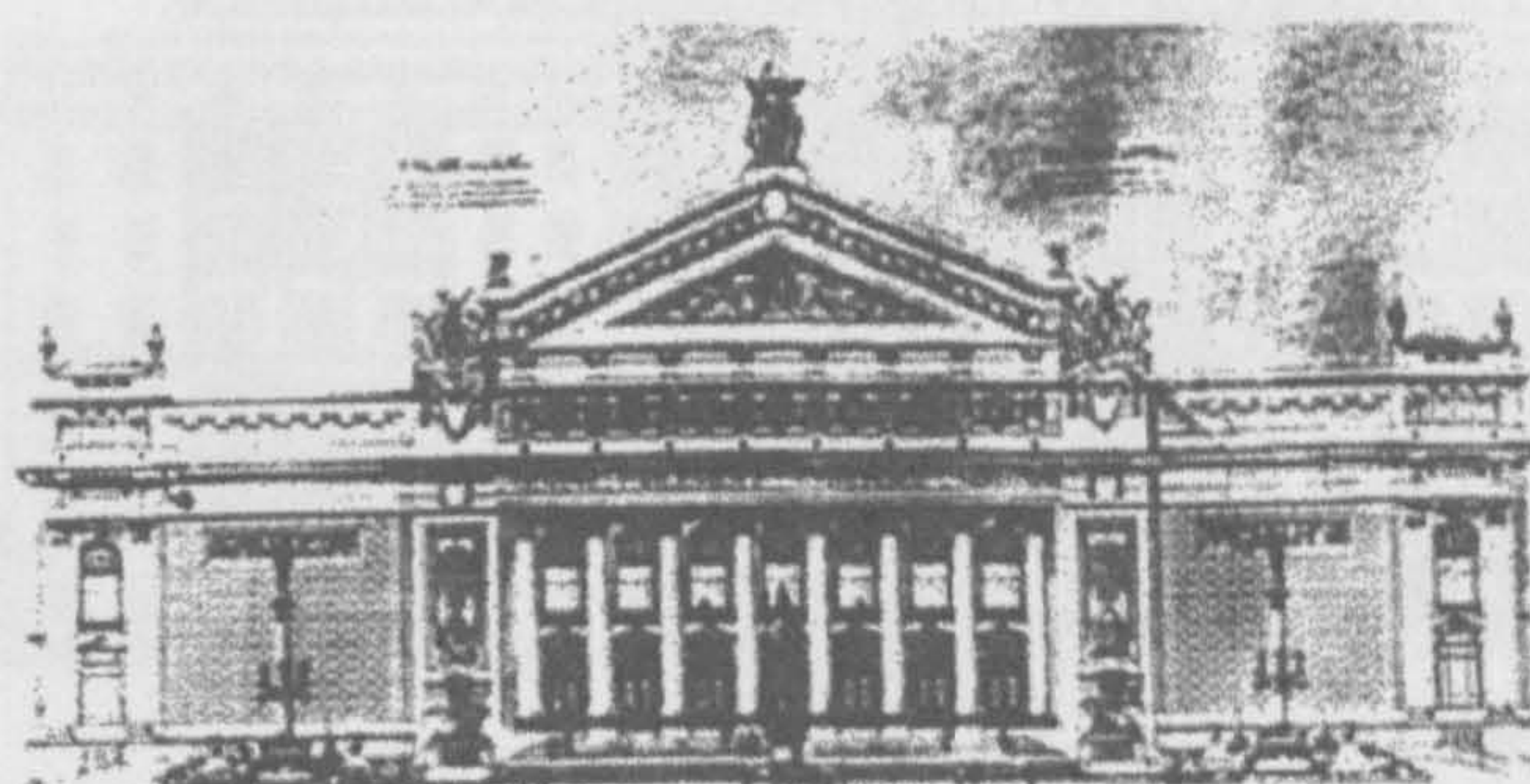
M.Cifuentes Gomez



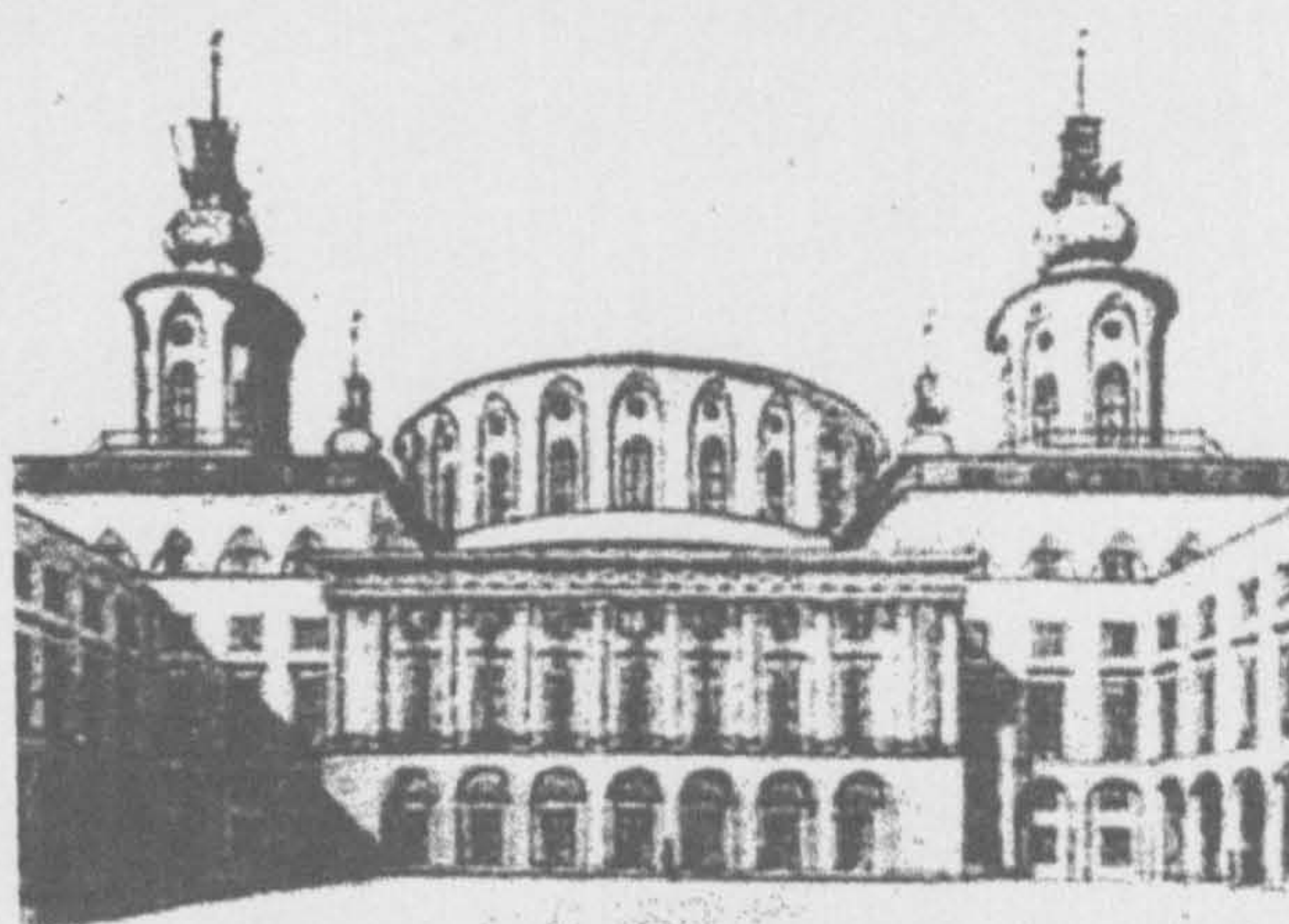
P.Smarandescu



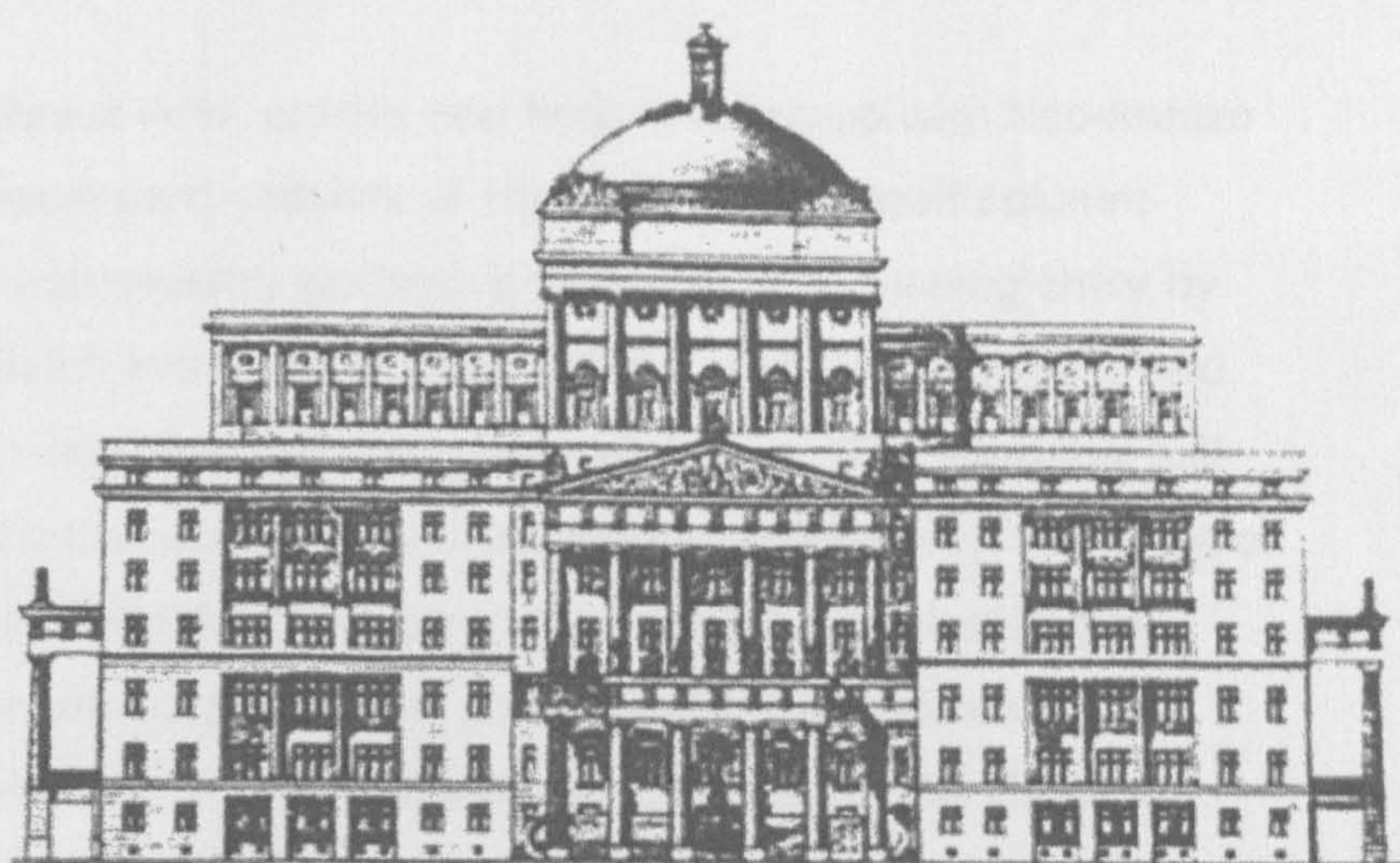
Ch.Heysa, F.Wensky



M.Radoslavoff



F.Otto

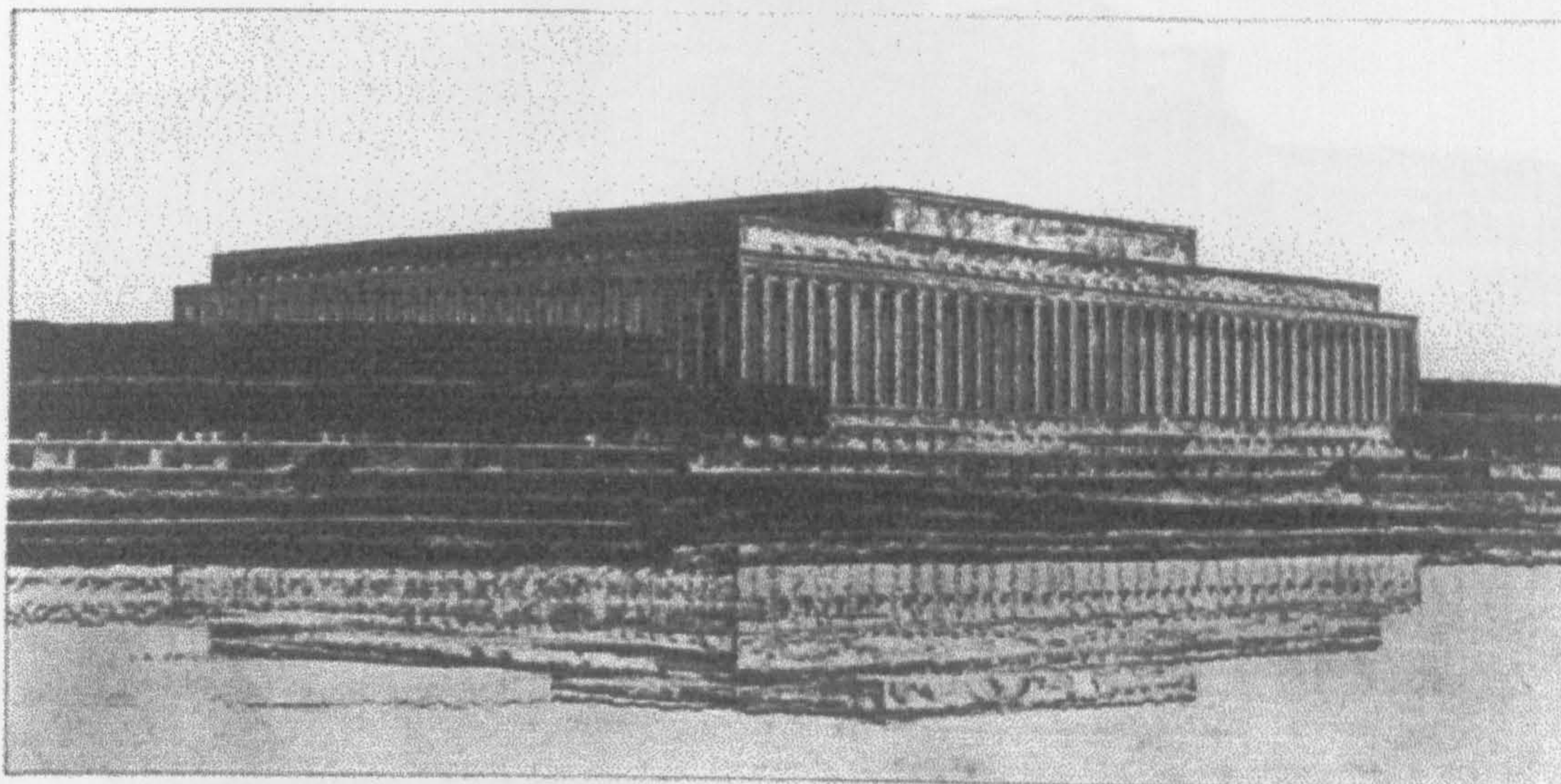


K. Shimoda

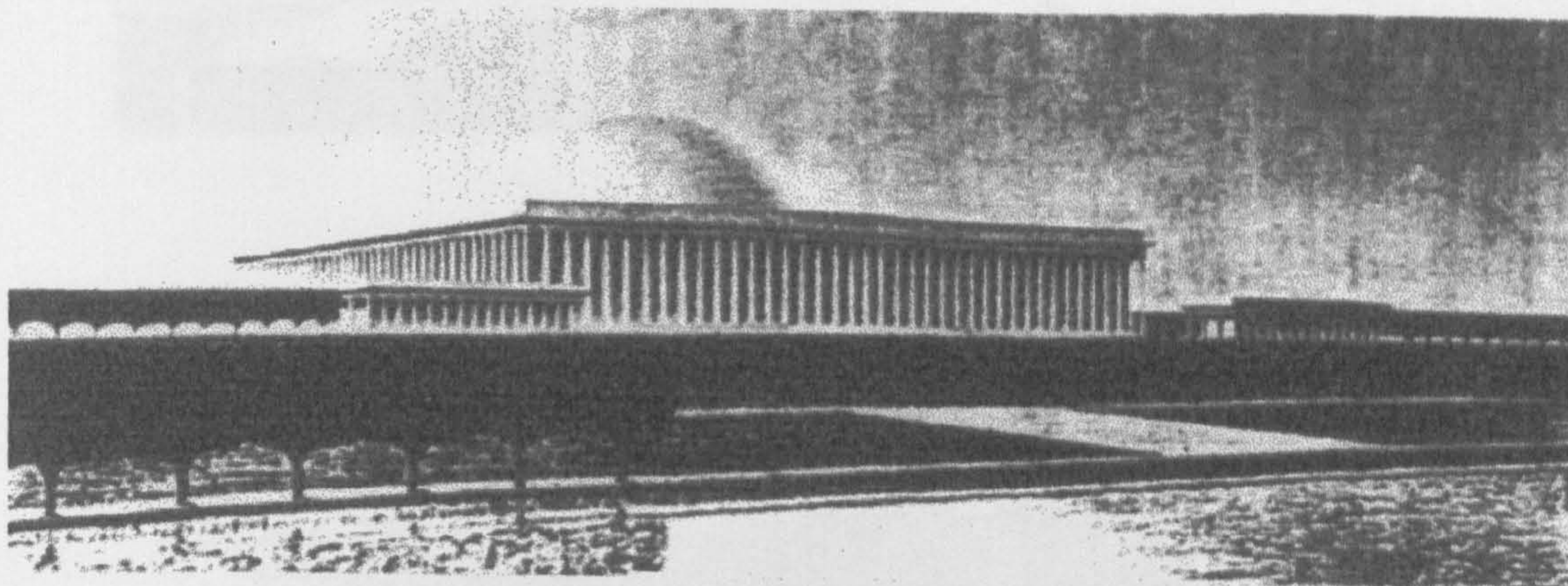
foreign in its composition and proportions that it could never have been acceptable to the jury: the heavy dome with its massive cornices and very slender lantern, rises abruptly from the rectangular block of the building below, on columns spaced too far apart. The solid drum which they enclose is pierced by small rondels above modest windows which together occupy too little space to relate satisfactorily to each other or to the framing columns. The decorative band between these two sets of openings disrupts the vertical link between them but binds the dome ensemble horizontally in a distinctly un-European way. The rest of the building has the same, slightly strange proportions and unexpected use of classical elements; it looks more like a Post Modern building of the 1980s than its Beaux Arts exemplars [fig. 14].

Alongside the 'Beaux-Arts' entries one finds a subgroup with Neo-Roman leanings. Here the classical parti consists of rhythmically repeated columns applied in great numbers to severely geometric volumes. The winning entry by Putlitz, Klophaus and Schoch is one of the most austere: a great rectangle is held within a barred cage of columns which completely enclose it. The assembly hall embedded in the centre is indicated only by a second rectangular mass rising out of the first. In this proposal, even the trees stand to attention. The building by Ch. Skagen is in a similar vein: a great, bald dome rises above a similarly columnated rectangle, and two smaller, flanking pavilions emphasise the most important axis. Of comparable feeling are the schemes by Berger and Voehring, and by Haffner, Wechs and Schweighart [fig. 15]. There are two entries where the underlying geometric forms consist of concentrically stacked cylinders with radiating, rectangular blocks. In both of these entries, the topmost cylinder supports a ring of linked statues, and in both entries, the radial blocks are terminated more-or-less classically: by stripped temple fronts in the case of Holtzmeister and Egli, and by single story loggias in the case of M. Hinder. The Skagen scheme is the most extreme example in this group, both in terms of its unrelieved geometry and in its severe and dominating presence across the lake, and is reminiscent of some of Boullée's projects: a strange, hybrid offspring of his *Cénotaphe à Newton* and the 1784 *Bibliothèque Publique* ⁴³.

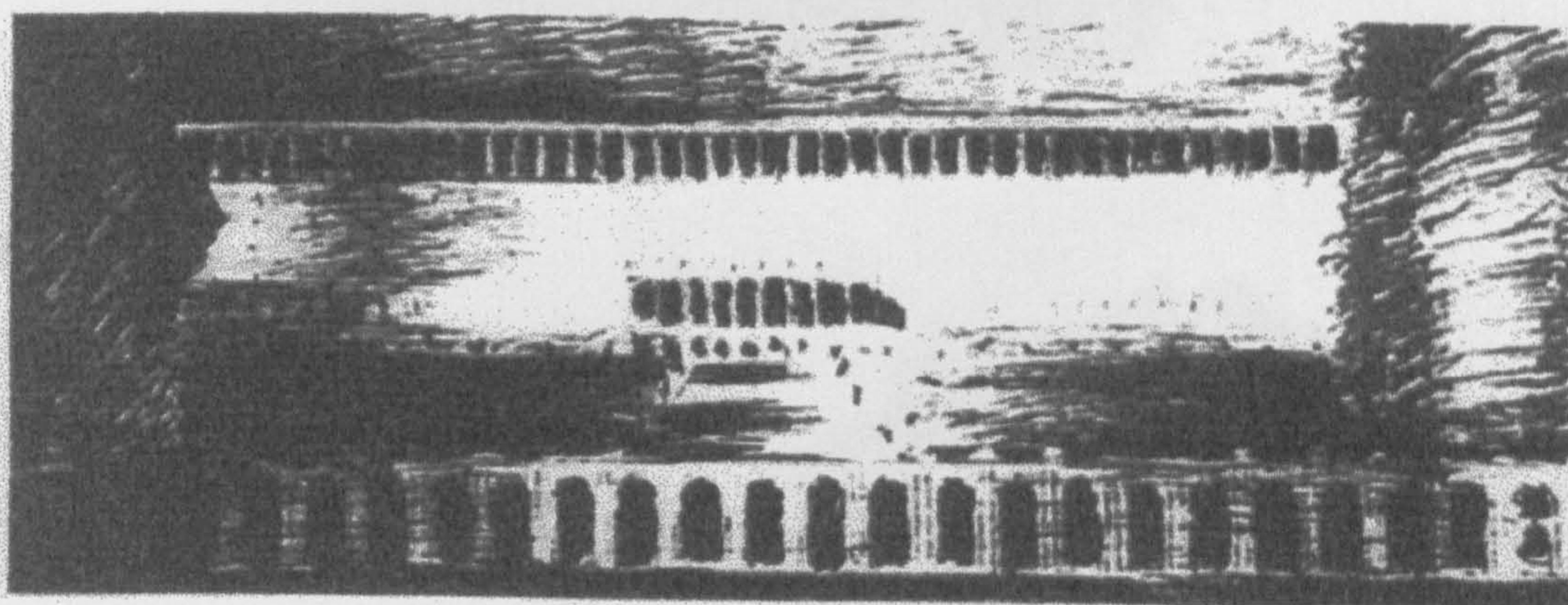
A design by Piacentini and colleagues which achieved a second honourable mention is a cousin to the schemes just described, or at least, his Assembly Hall is: his Secretariat is so different in flavour and scale that it looks as if it might be by another hand; perhaps the team divided the parts between them. Alternatively, this



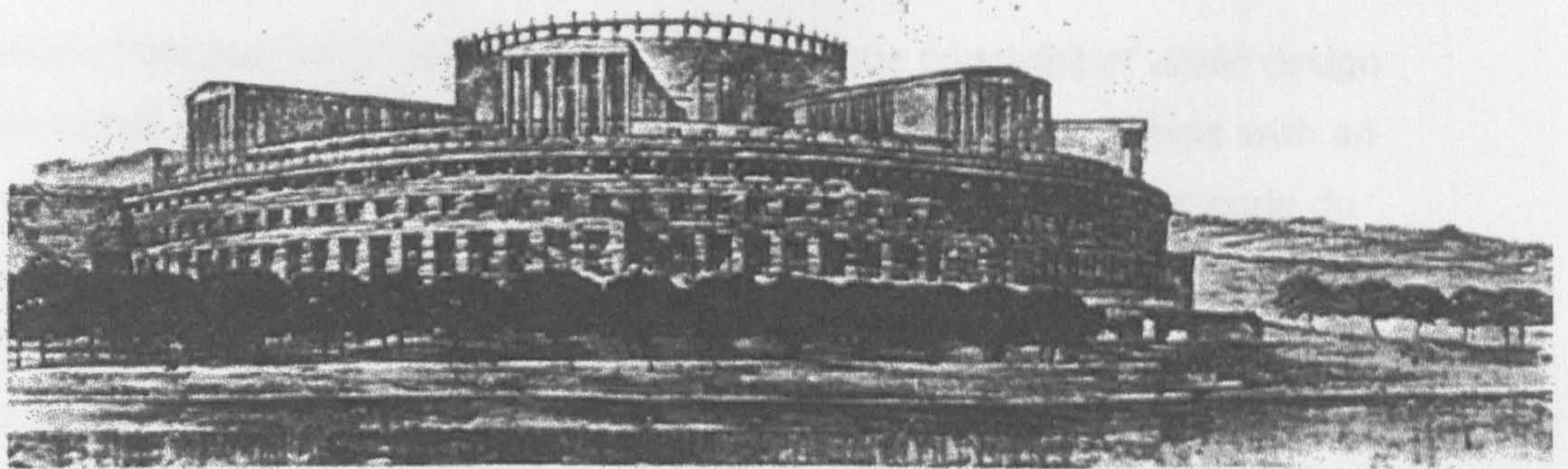
Putlitz, Klophaus & Schoch



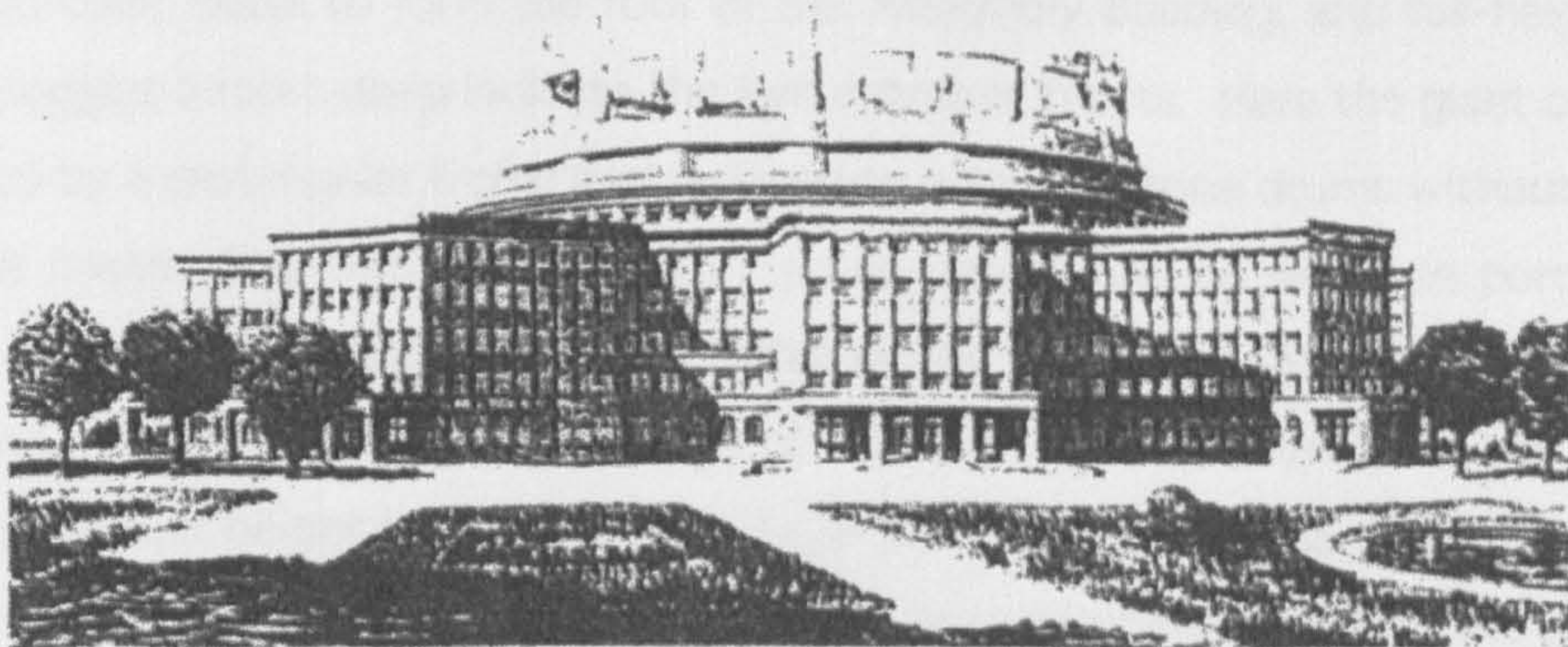
Ch. Skagen



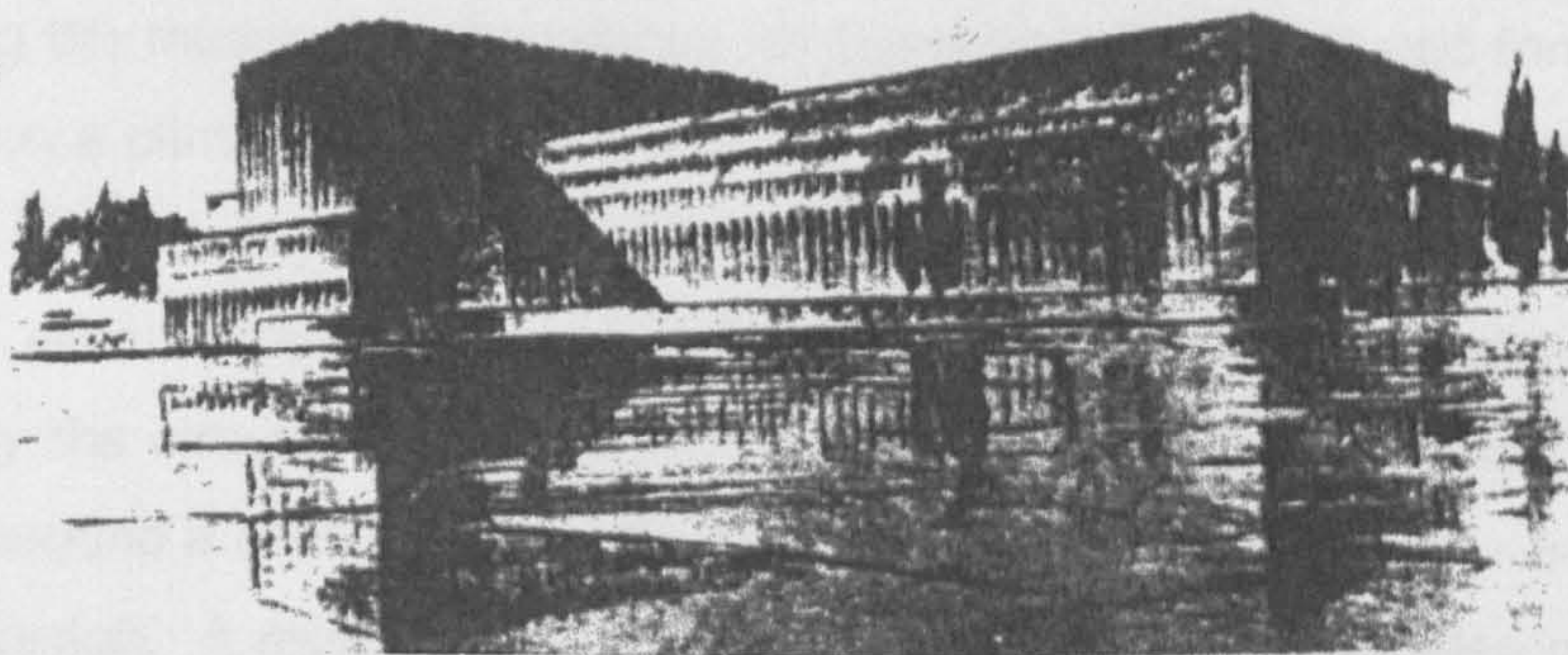
Berger & Voehring



C.Holzmeister, E.Egli



M.Hinder



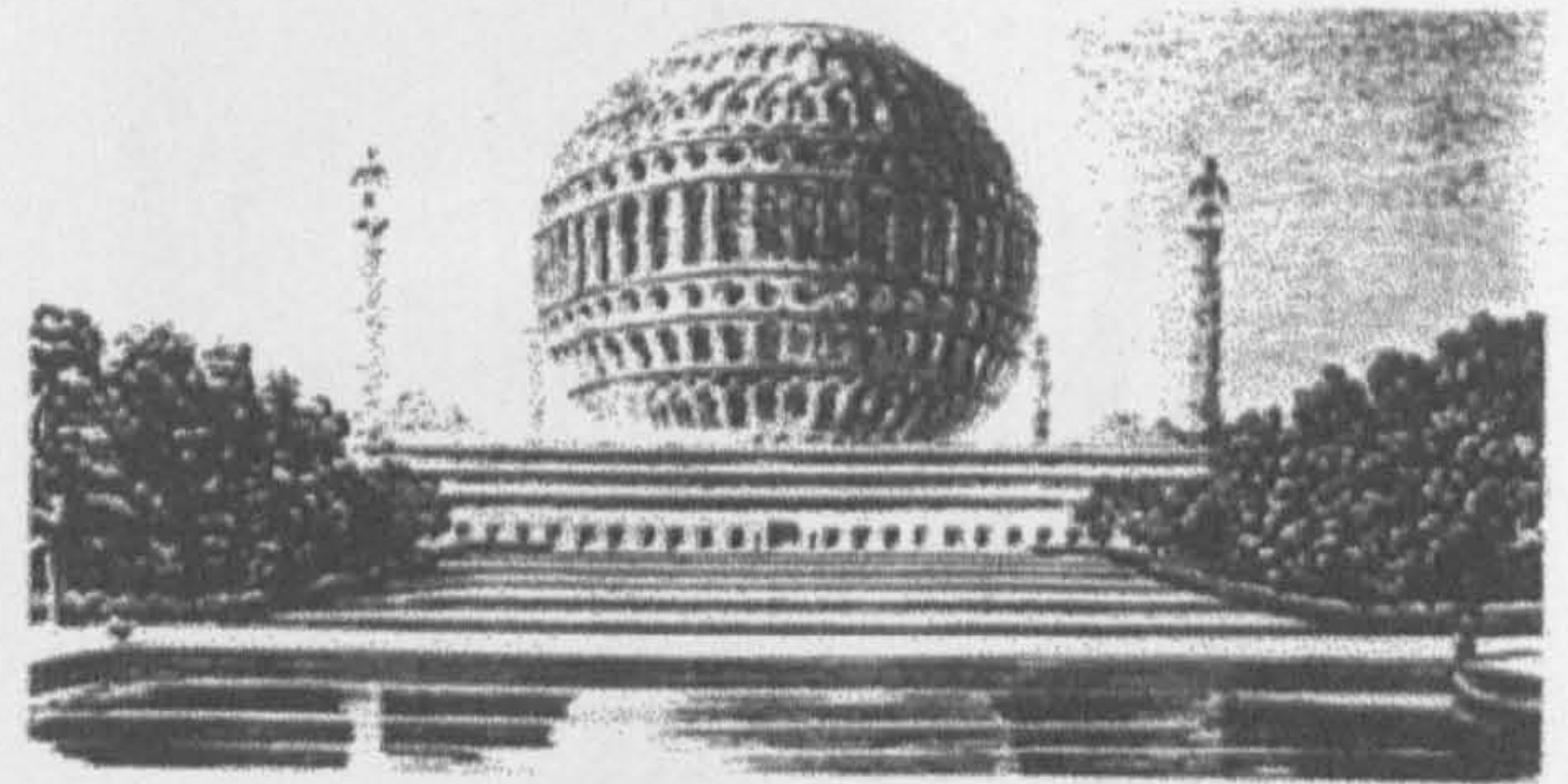
R.Haffner
Th.Wechs
Th.J.Sschweighart



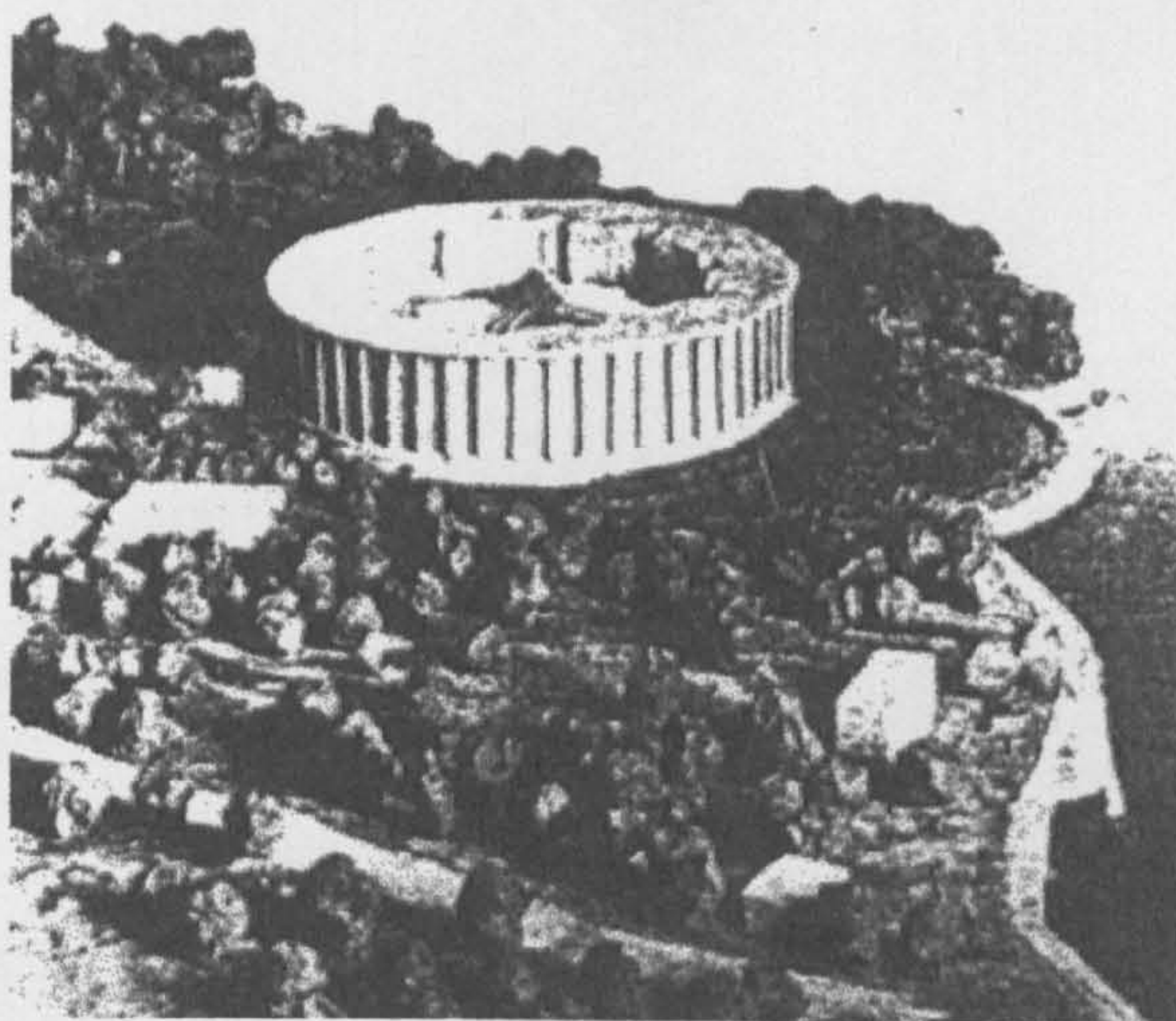
M.Piacentini

mismatched effect may be an expression of the Sittesque principles of urban design which interested Piacentini; more successful perhaps, in an urban context with an historic accretion of disparate buildings than on the pastoral site of Parc perle du Lac. Piacentini's Assembly Hall is an early example of that monumental, stripped classicism which was to become identified with Italian Fascism, and it is a direct precursor to his design for the post office in Brescia designed in 1927 as part of the Piazza della Vittoria project. Two shallow, superimposed drums rise out of an articulated cubic mass to form the roof of the Assembly Building, and full-height, enclosed loggias a room deep indicate the two entrance fronts. Here the giant order is enclosed by a rectangular frame and reduced to a row of stone drums without capitals or bases. The loggia form is repeated as a much smaller entrance porch standing in front of it, interrupting the rhythm of the giant order and somewhat diminishing it by supplying an implication of multiple stories contrary to the impression of vast height indicated by the huge column drums. The classical sequence of *court - corps de logis - jardin* is recoverable here, although the garden is no more than a paved promenade by the shore of the lake [fig. 16].

There were a number of competitors who were mainly concerned with symbolising the meaning of the League for humanity. This produced forms such as the globe on a plinth with palmate columns at each corner - organisationally somewhat like the Taj Mahal with its flanking minarets, but ridiculous rather than exquisite - entered by P. Birkenholz. There were a number of circular entries: presumably the circular form indicated wholeness and equality⁴⁴; most of these are organised around a central dome [the sphere of Heaven/the earth?] - an example is E.S. Bell's design. A more severe variant is the cylindrical colonnaded entry by O.&E. Gerson, flat-roofed, with the assembly hall sunk into the centre. A different symbolic form was used by J. Rings, who designed a structure with a cruciform plan in the middle of the lake, linked back to shore by a causeway enclosing a rectangular harbour [fig. 17]. There are also a number of more-or-less Expressionist entries, and here the meaning of the League is expressed in the accumulation of pinnacles and in crystalline glass domes. The plan forms of these are often crystalline too: hexagons, octagons, diamonds are used as generators. Many of the entries which propose towers are to be found in this group. Among them is the illuminated parabolic tower of J. van Laren, and the stepped, cathedral-like assembly halls of D. Roosenburg and of H.J. Huygh. Occasionally the entire programme is fitted into a tower: the stepped tower of E. Josephson is an example of



P.Birkenholz



H.&O.Gerson

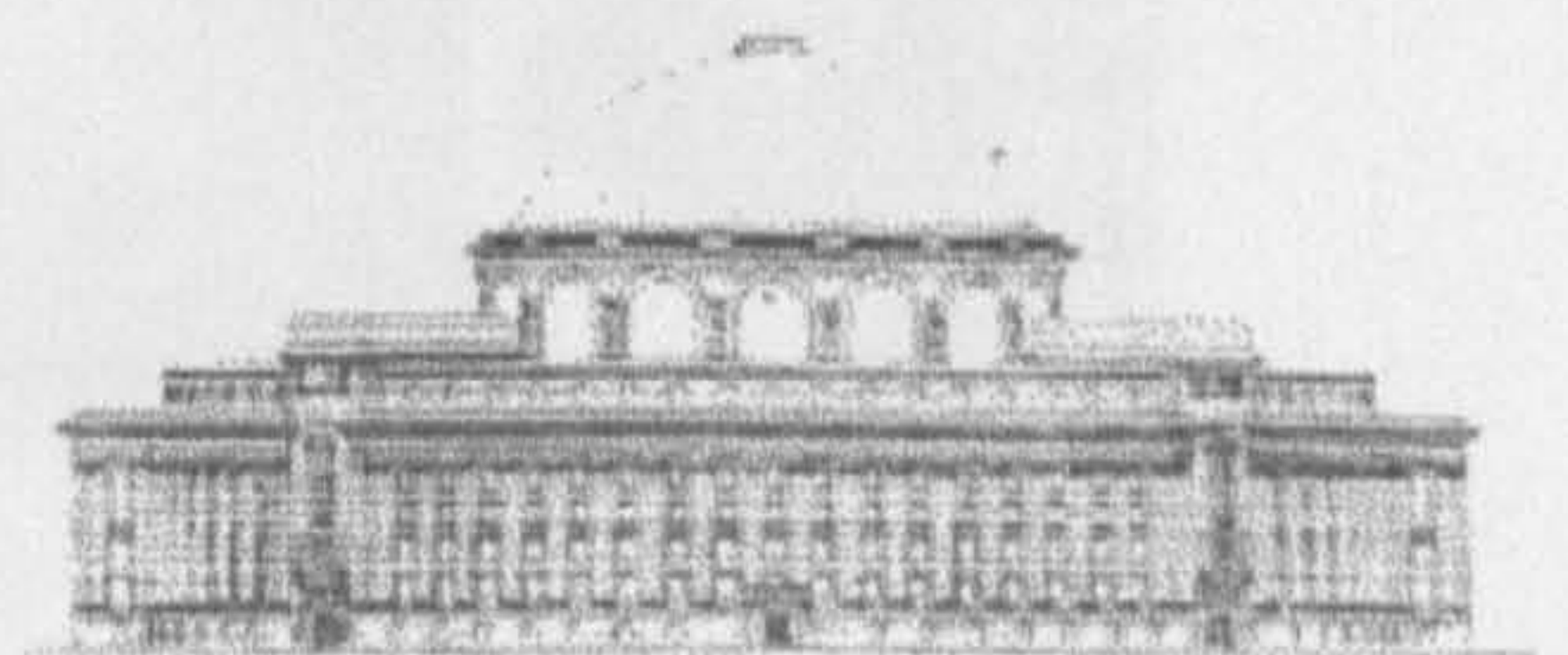
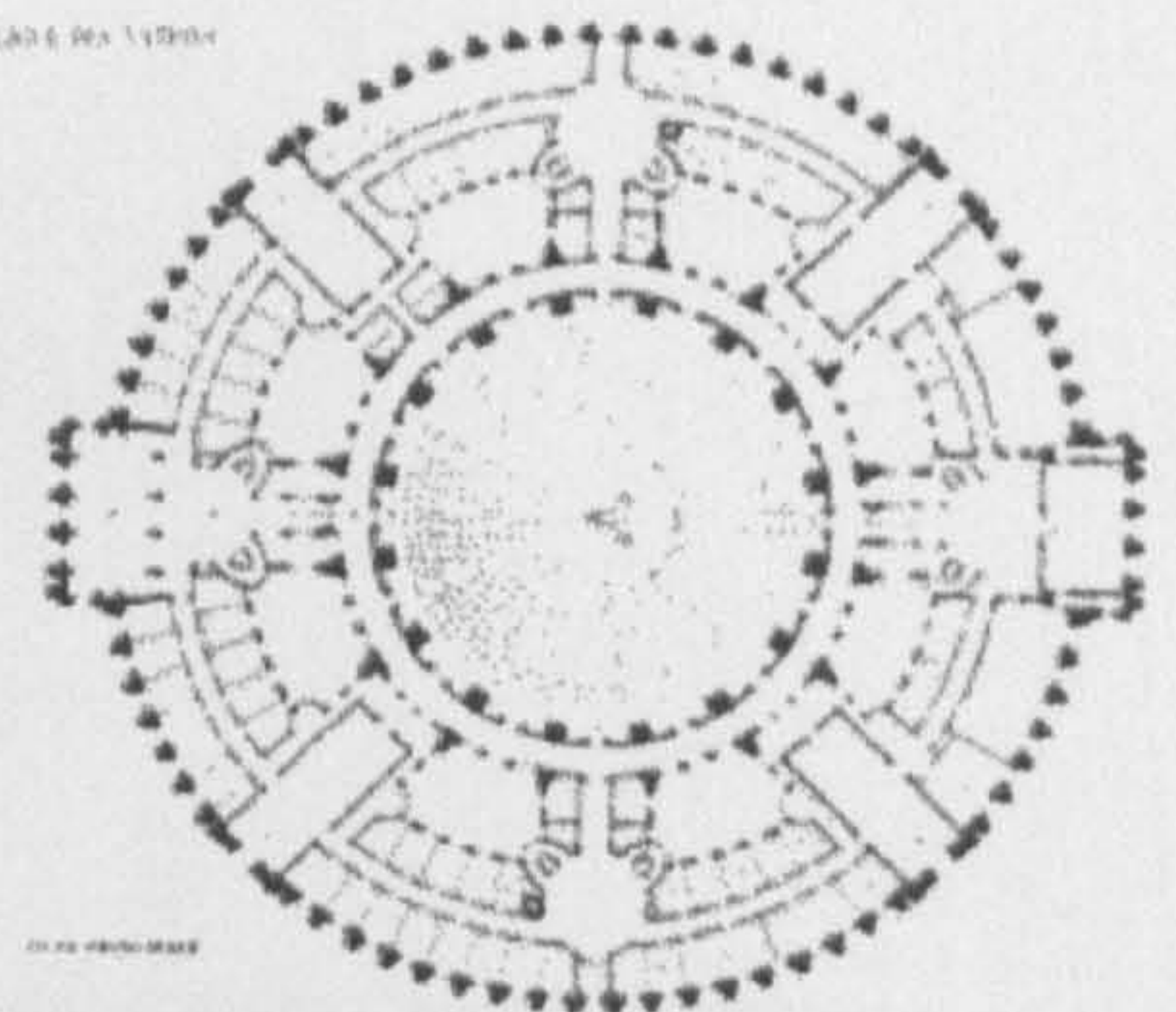


ILLUSTRATION LANDSCAPE

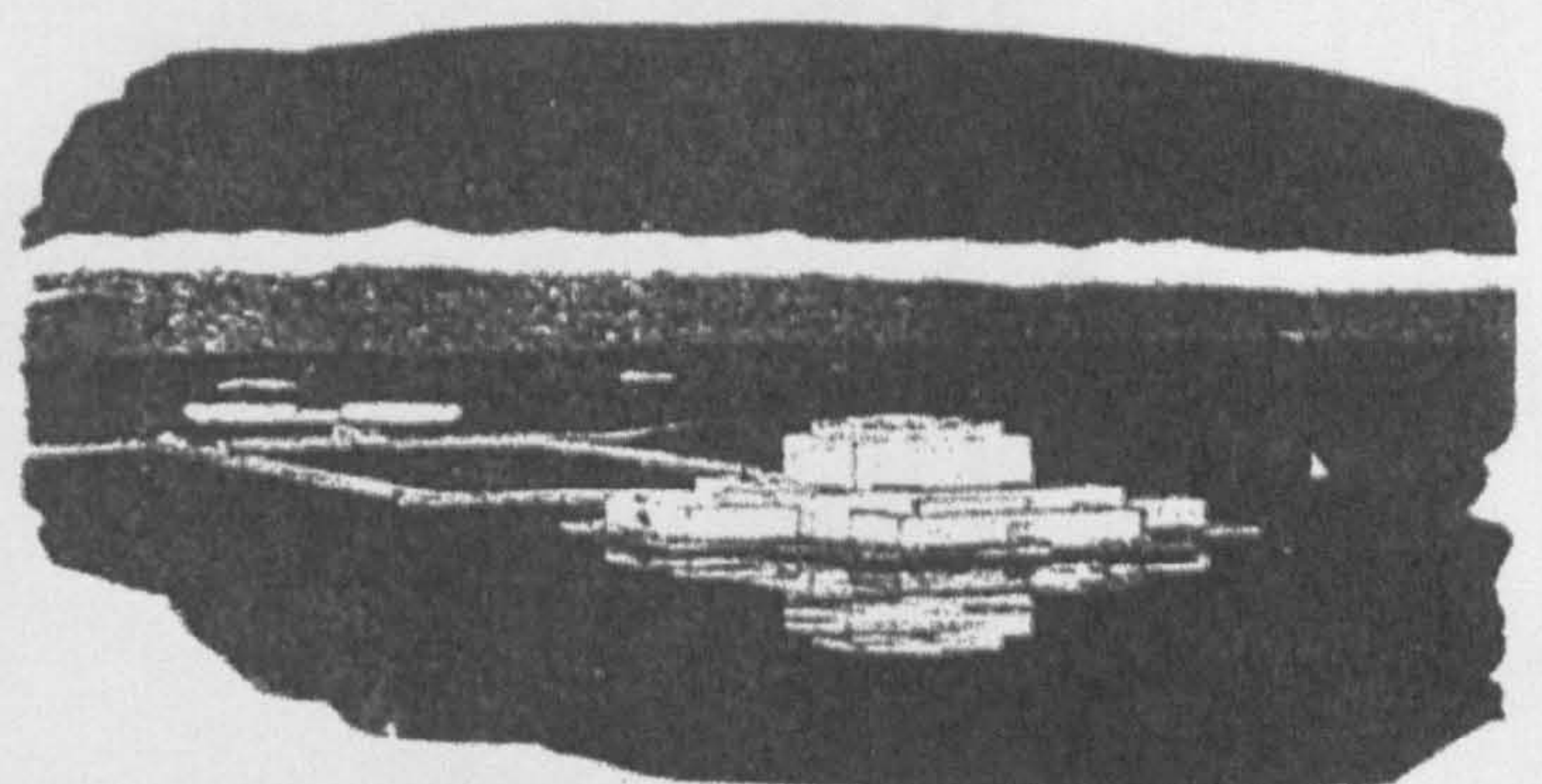
CONCEPTUAL DESIGN OF A CULTURAL CENTER

LANDSCAPE DESIGN

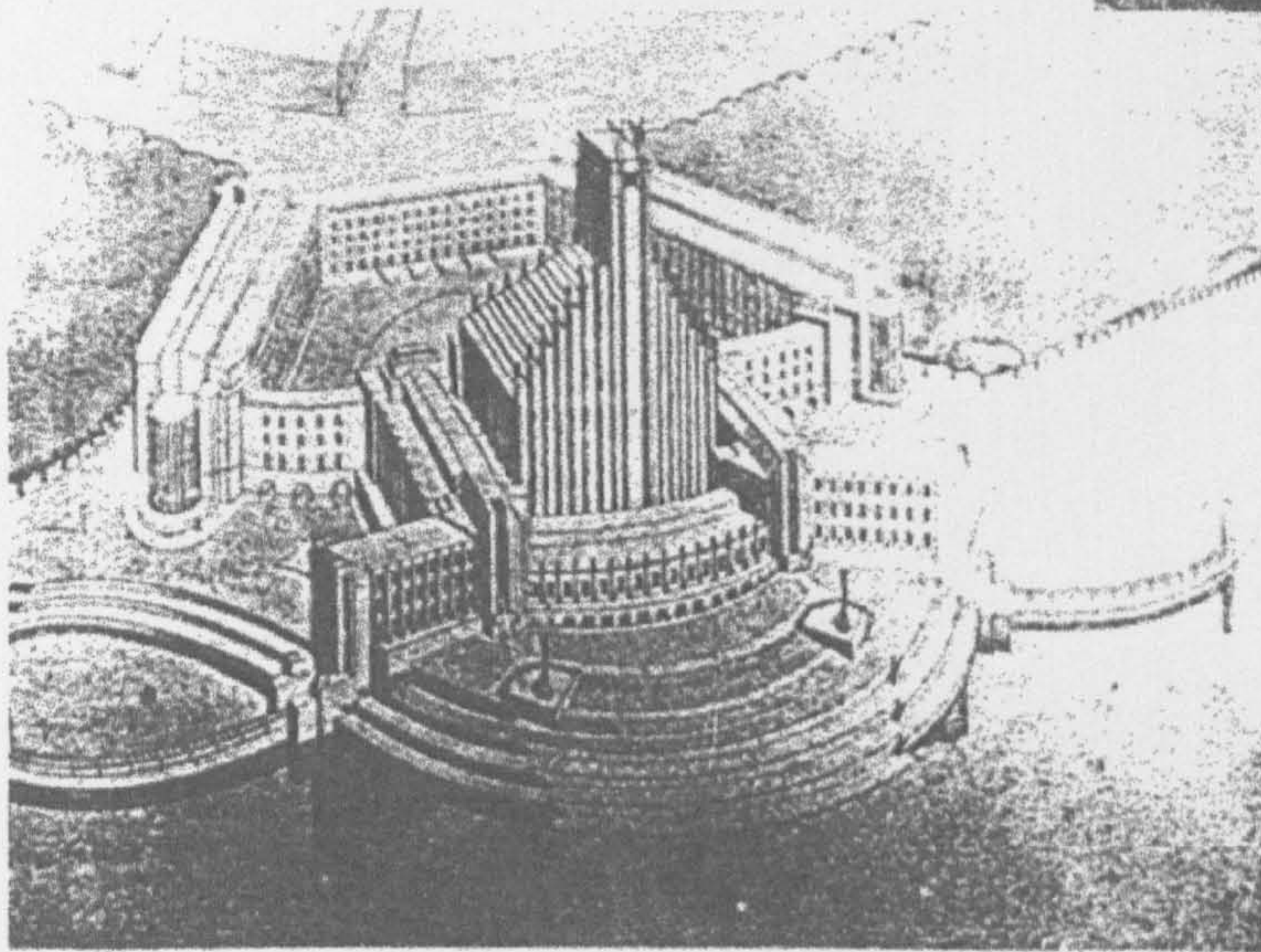


PLAN OF THE CULTURAL CENTER

E.S.Bell



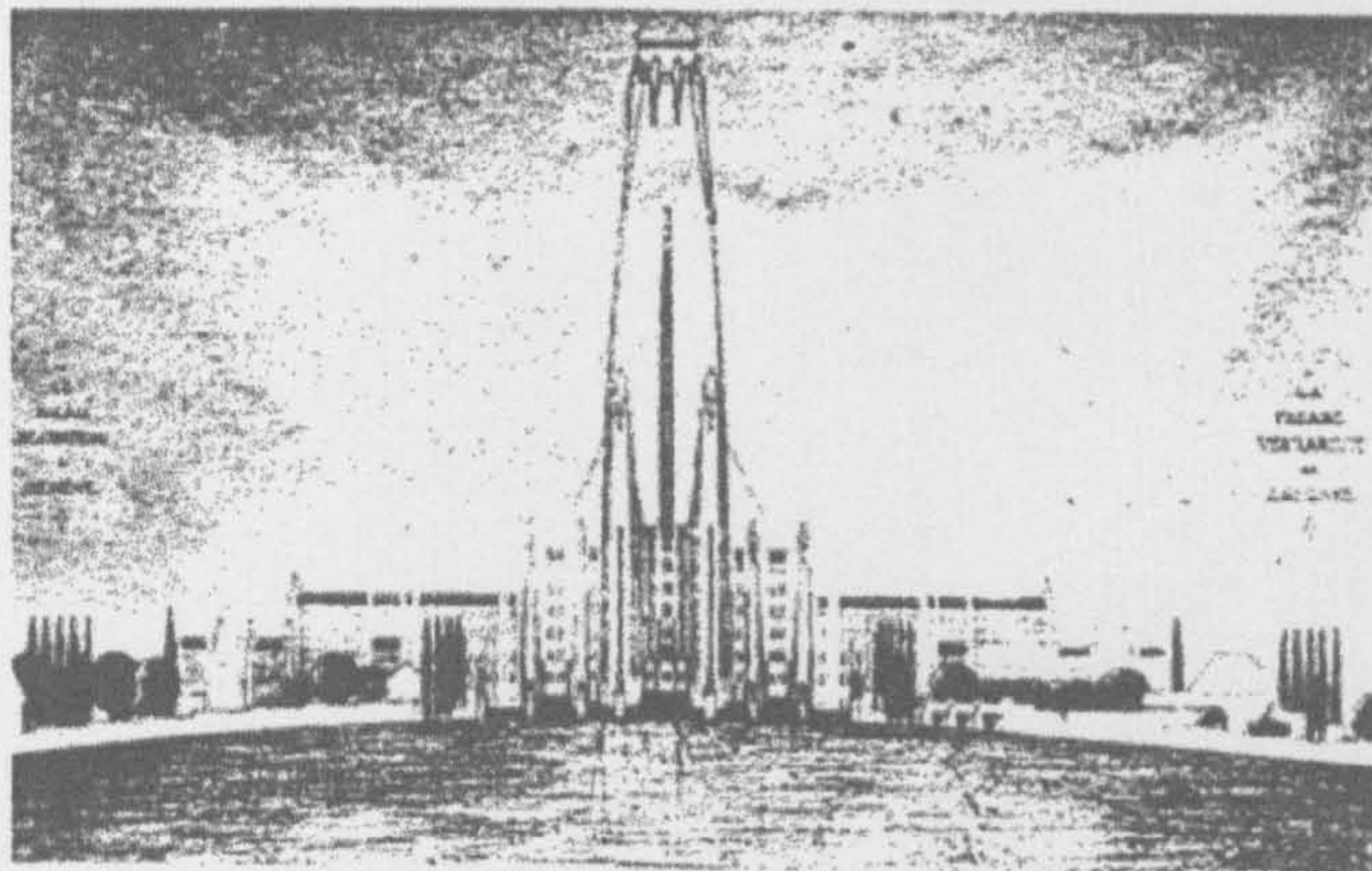
J.Rings



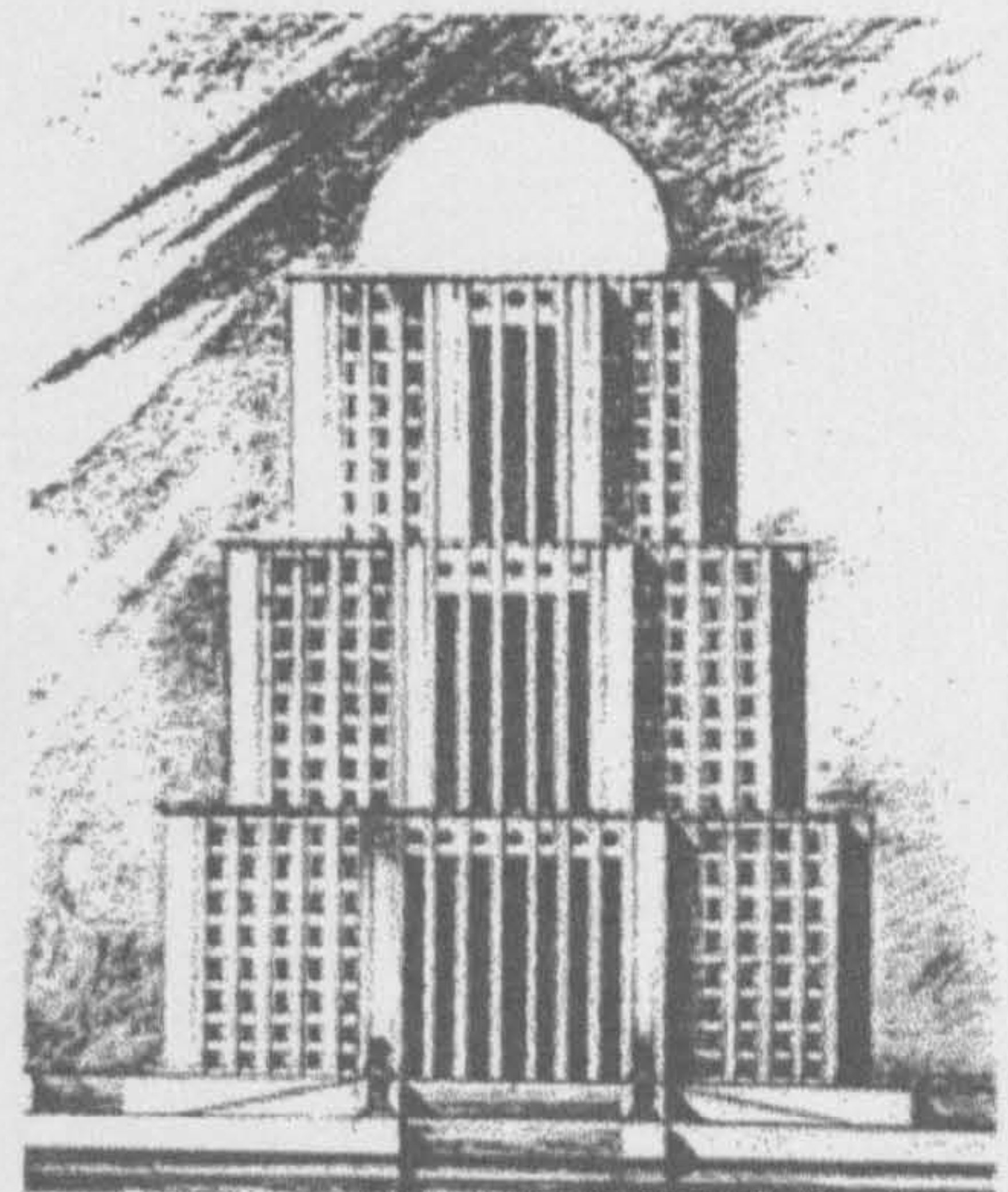
D.Roosenburg



J.van Laren

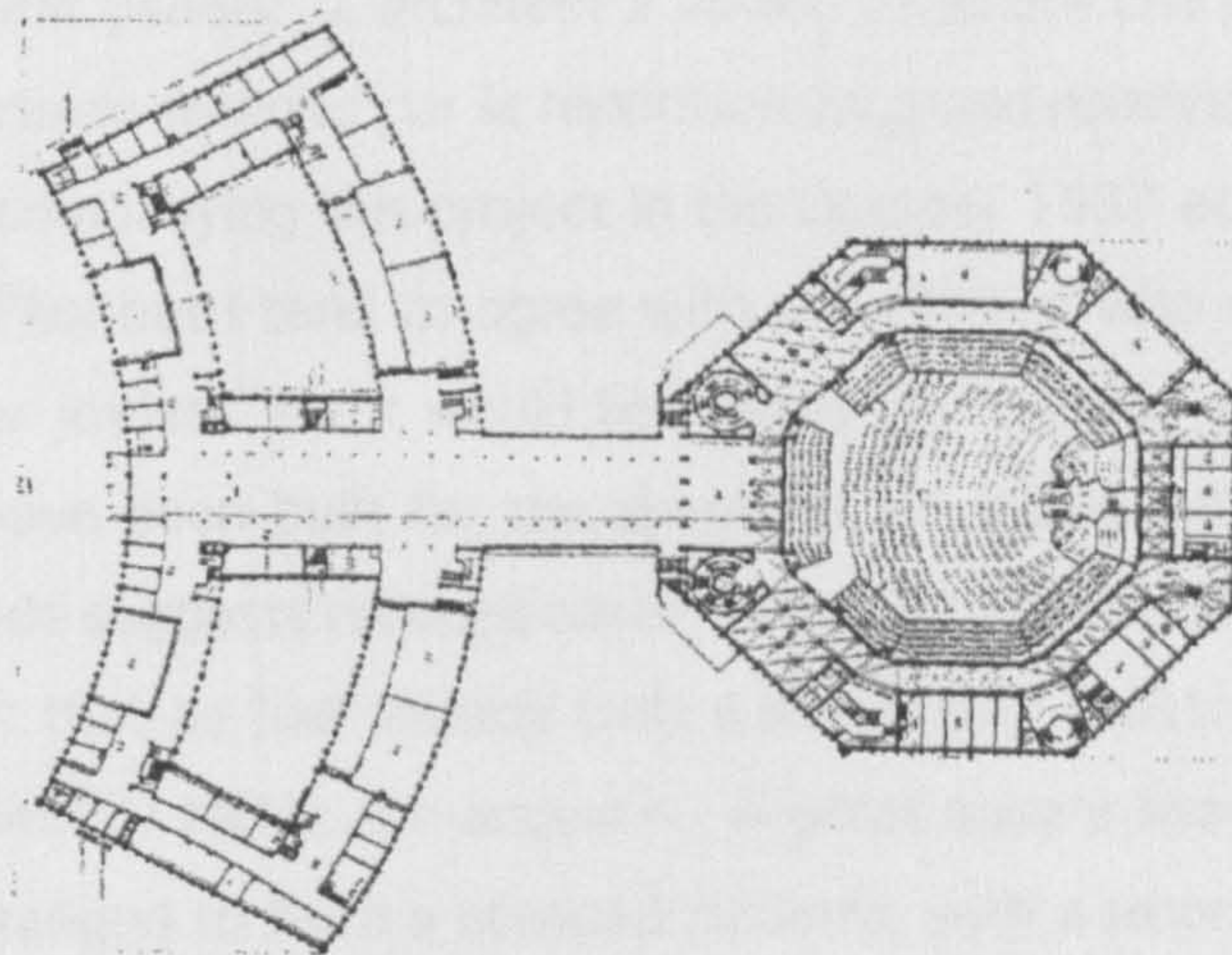
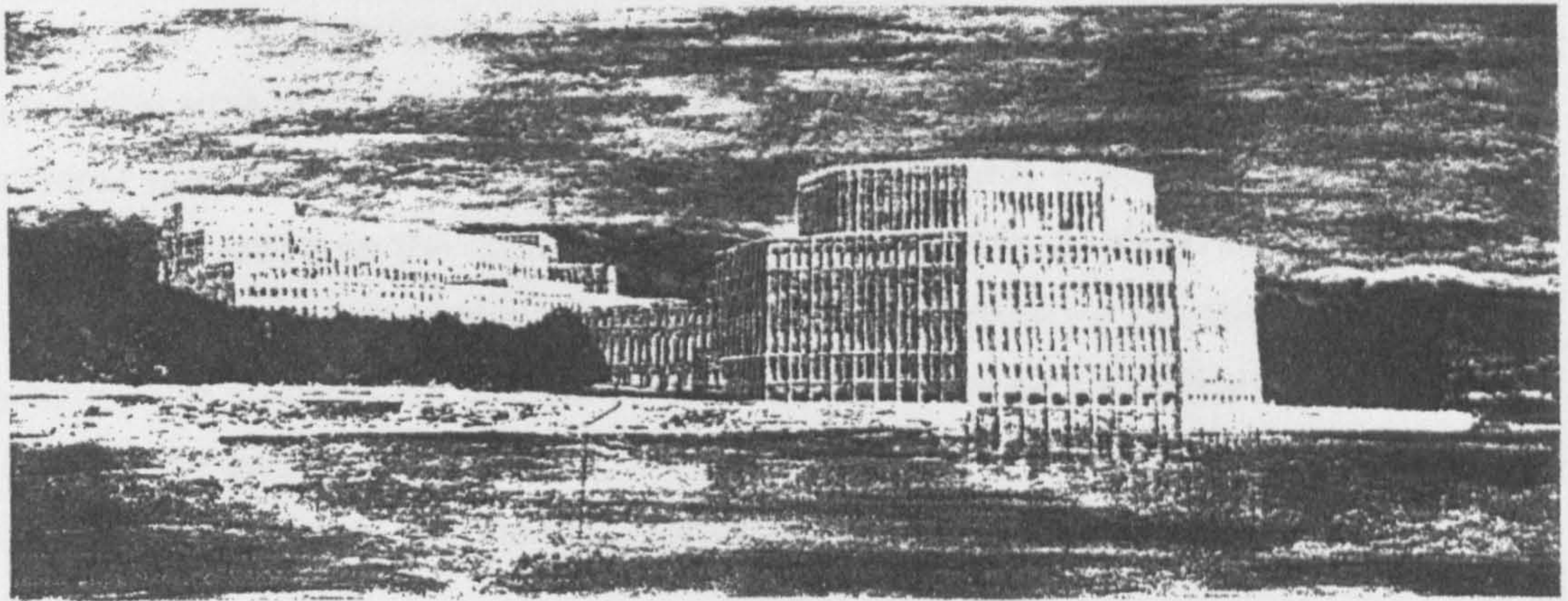


H.J.Huygh



E.Josephson

this. His Assembly Hall is buried within a layer of offices, and toplit via a steel and glass hemisphere many stories above it [fig.18]. There is an entry by Hans Poelzig, master of the younger Berlin 'visionary' architects, and I include the only remaining drawings [fig.19].



Hans Poelzig

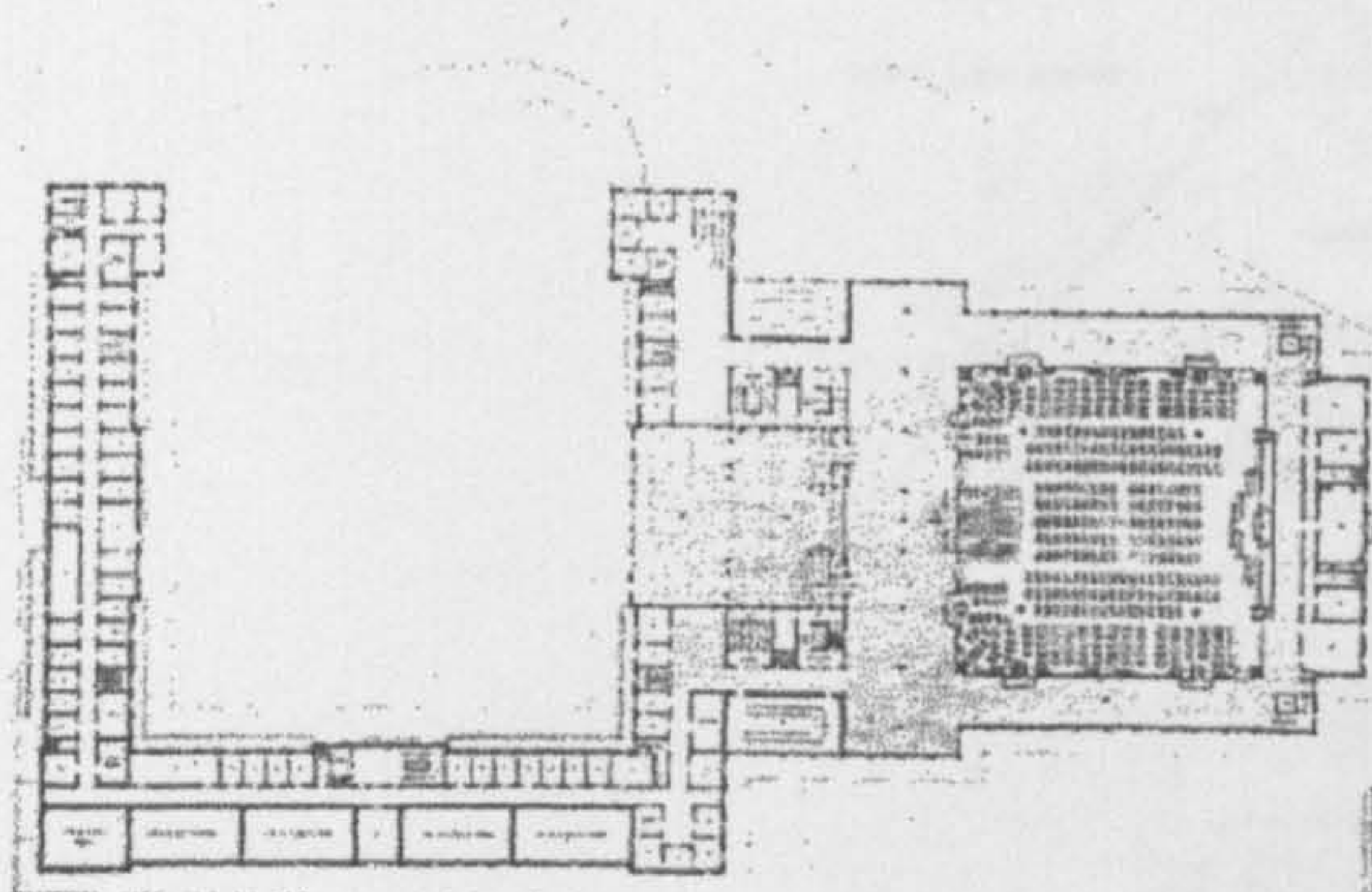
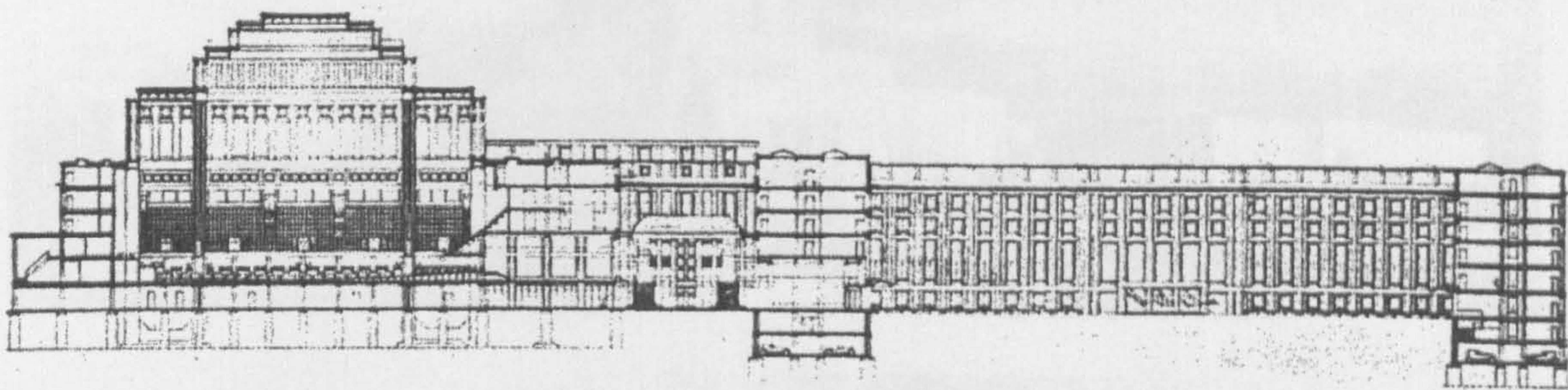
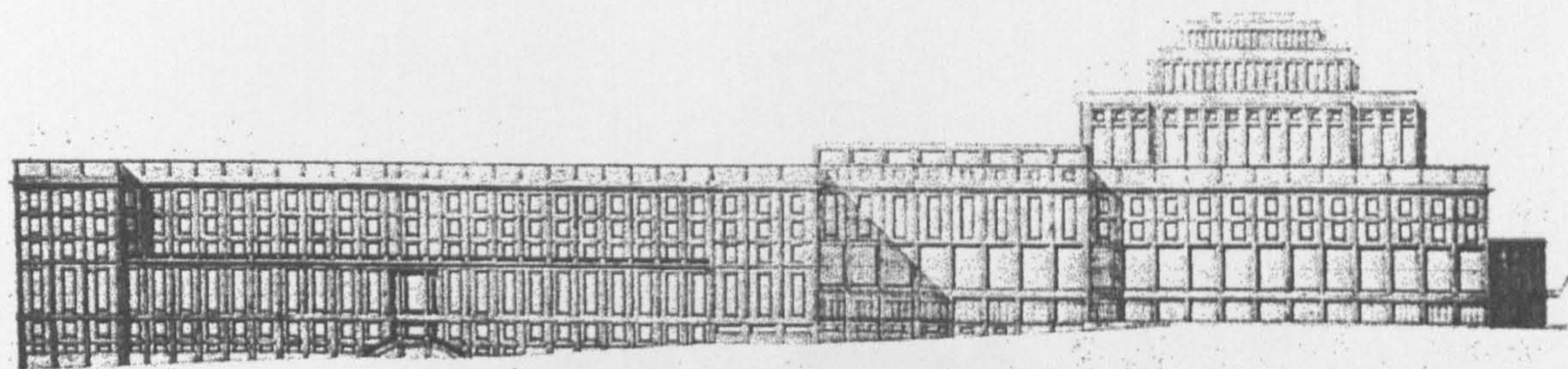
Notable Entries:

The A. & G. Perret Project

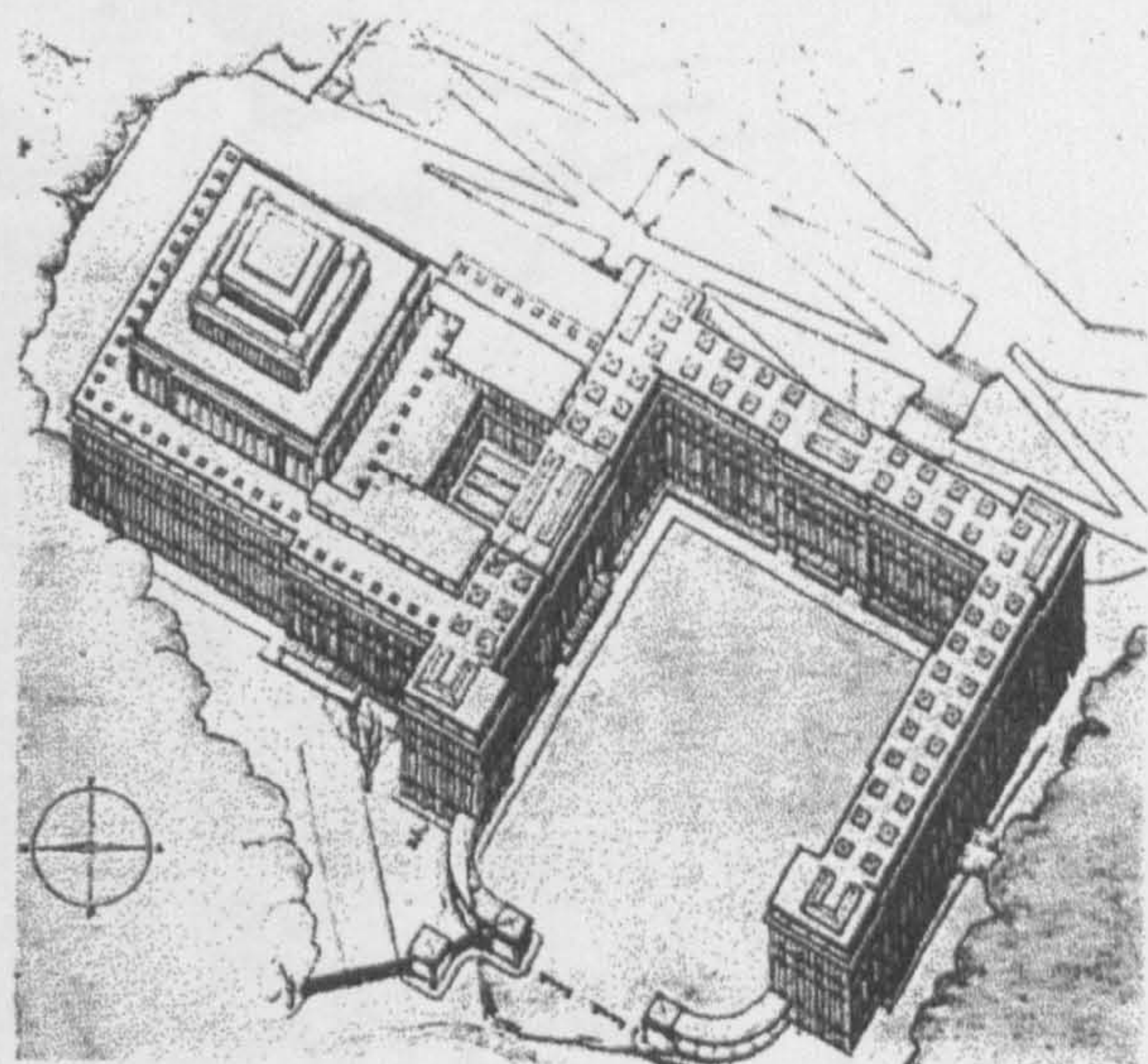
A number of drawings of Auguste Perret's project have survived⁴⁵. The building consists of two parts: a u-shaped range of offices enclosing a cour d'honneur opening onto the Lausanne Road, and a stepped block containing a square Assembly Hall. The planning is lucid but not inspired: the assembly hall is attached to one of the arms of the u-shaped secretariat by a wide entry hall. The choice of attachment point seems to be governed by pragmatism alone: there is no corresponding feature on the opposite arm of the secretariat, although one would expect a major cross-axis at this point given the arrangement of the cour d'honneur. The buildings are apparently placed on the flattest and highest part of the site and the garden falls away to the lake beyond them. Thus the building becomes more imposing, and the maximum acreage of uninterrupted garden is provided.

The construction is typical of Perret projects: concrete frame with classically elaborated infill panels: '*L'architecte a voulu atteindre une grande monumentalité et une grande sérénité par la répétition en grand nombre de la même travée*' runs the text accompanying this project in the October 1932 edition of *l'Architecture d'Aujourd'hui* but I tend to agree with John Ritter, who calls the result "stern and rather joyless"⁴⁶. It would be interesting to know whether Perret's project could have been built for the specified 13 million Swiss Francs; the plainness of the facade suggests reduced costs. Given Perret's much vaunted practicality and the fact that he had already built a well-known theatre in Paris⁴⁷, it is curious that his assembly hall is non-acoustic. A great square space toplit by a series of clerestories arranged to form a stepped pyramid, with a sloped gallery on three sides and partially supported by four immense columns which clearly would interrupt the view of spectators sitting in the corners. Perhaps there was no clear precedent for such a hall in such a programme at that time [fig.20].

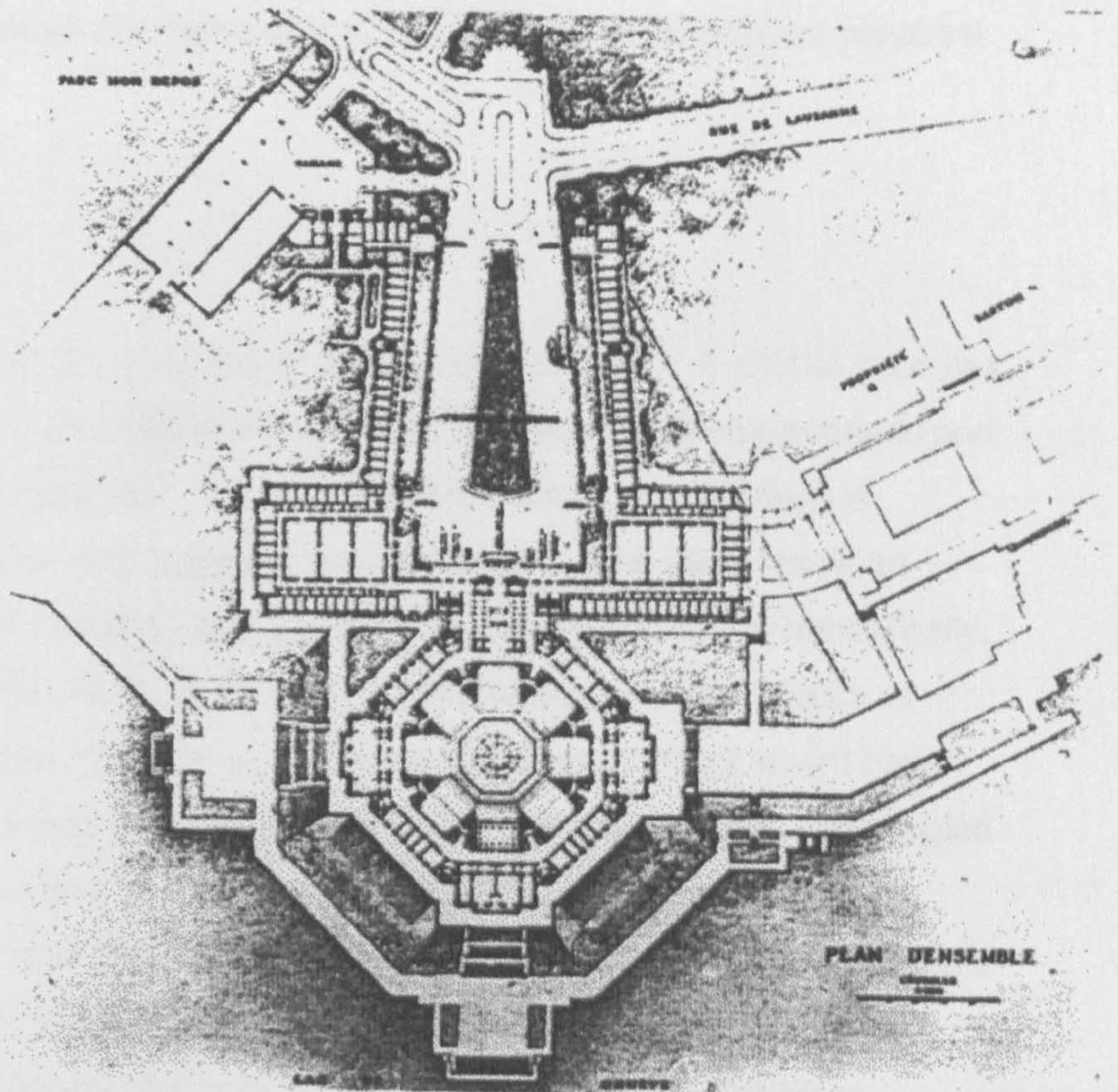
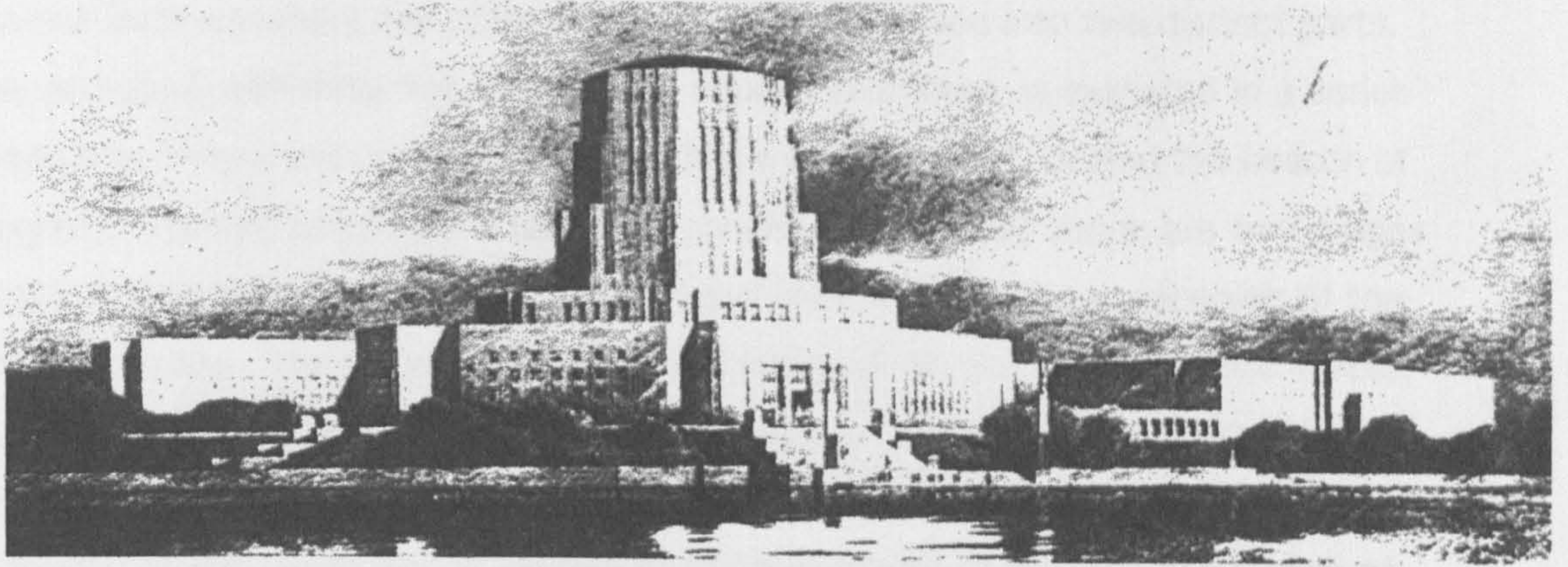
Curiously, some of Le Corbusier's earliest sketches for *his* project recall, organisationally at least, Perret's finished entry, revealing perhaps, an absorption of Perret's approach to the architectural problem⁴⁸. [See Part II of this thesis for a discussion of Le Corbusier's early sketches - illustrated in Part II, fig.s 15 & 16].



128



A.&G.Perret



Eliel Saarinen

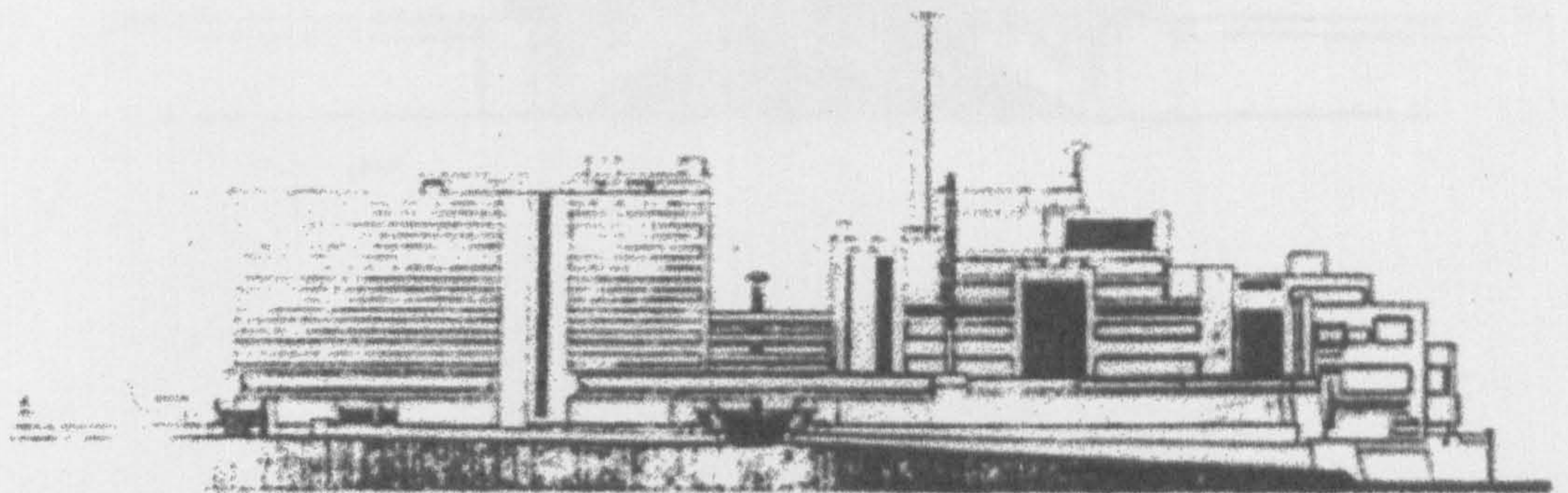
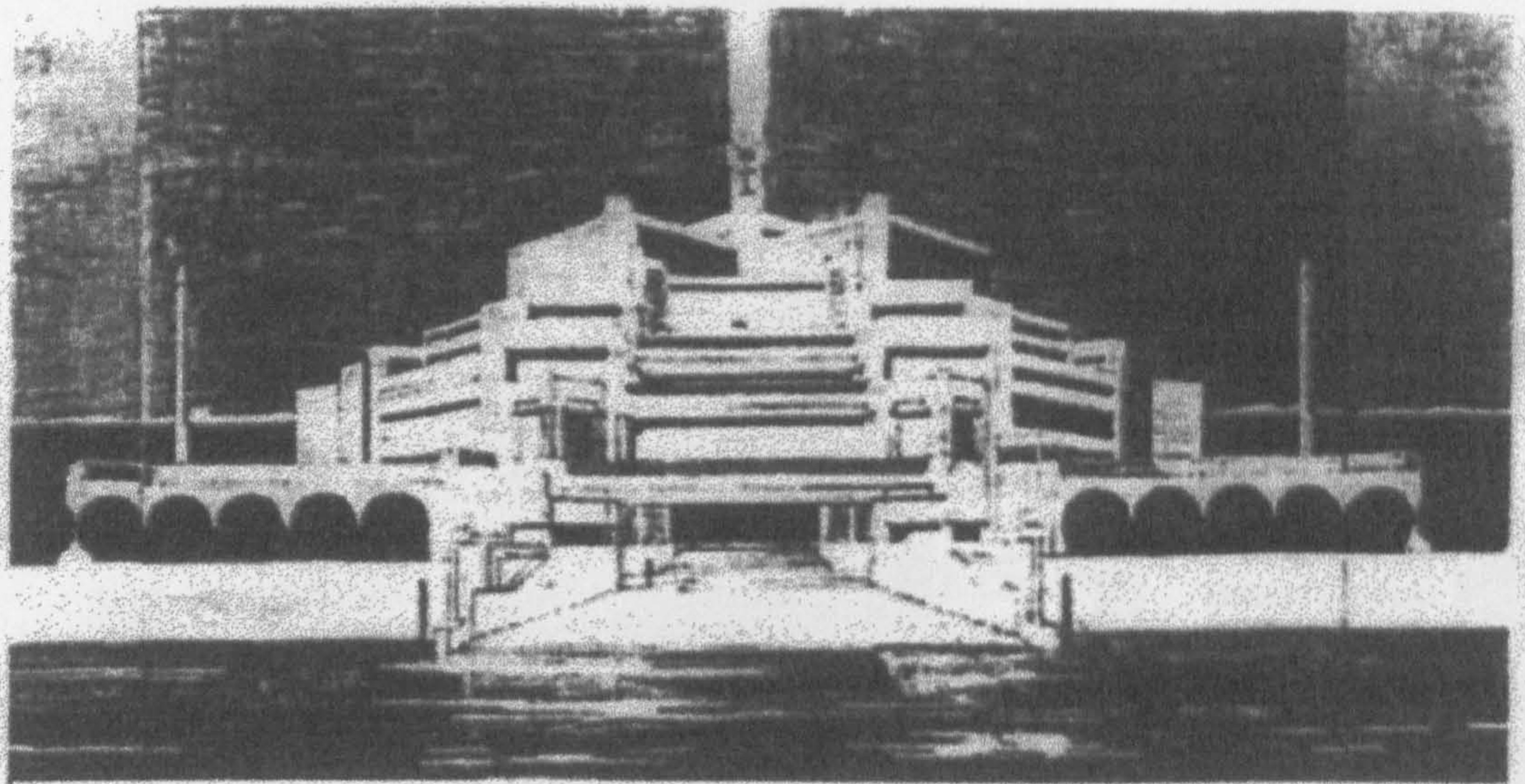
The Eliel Saarinen Project

Saarinen's project is illustrated by John Ritter and by Anzivino and Godoli with the same two drawings - a site plan and a perspective from the lake. This is another instance where the programme has been organised into two distinct parts. The octagonal assembly hall, ringed with council chambers, is extruded in a series of steps to make a truncated tower topped by a shallow dome. Behind this beacon of progress, oriented towards the lake on a considerably altered shore, are two ranges of offices on either side of a formal entry court which tapers to take account of the site boundaries. The project is elegant and assured, its classical roots are visible, but it is unencumbered by any decorative excesses. A light surface articulation of the facades mitigates the bold geometry of the building envelope. A northwards extension of the secretariat is envisaged which is angled to follow the shoreline of the adjacent site in very much the same way as Le Corbusier's extension proposal [fig.21].

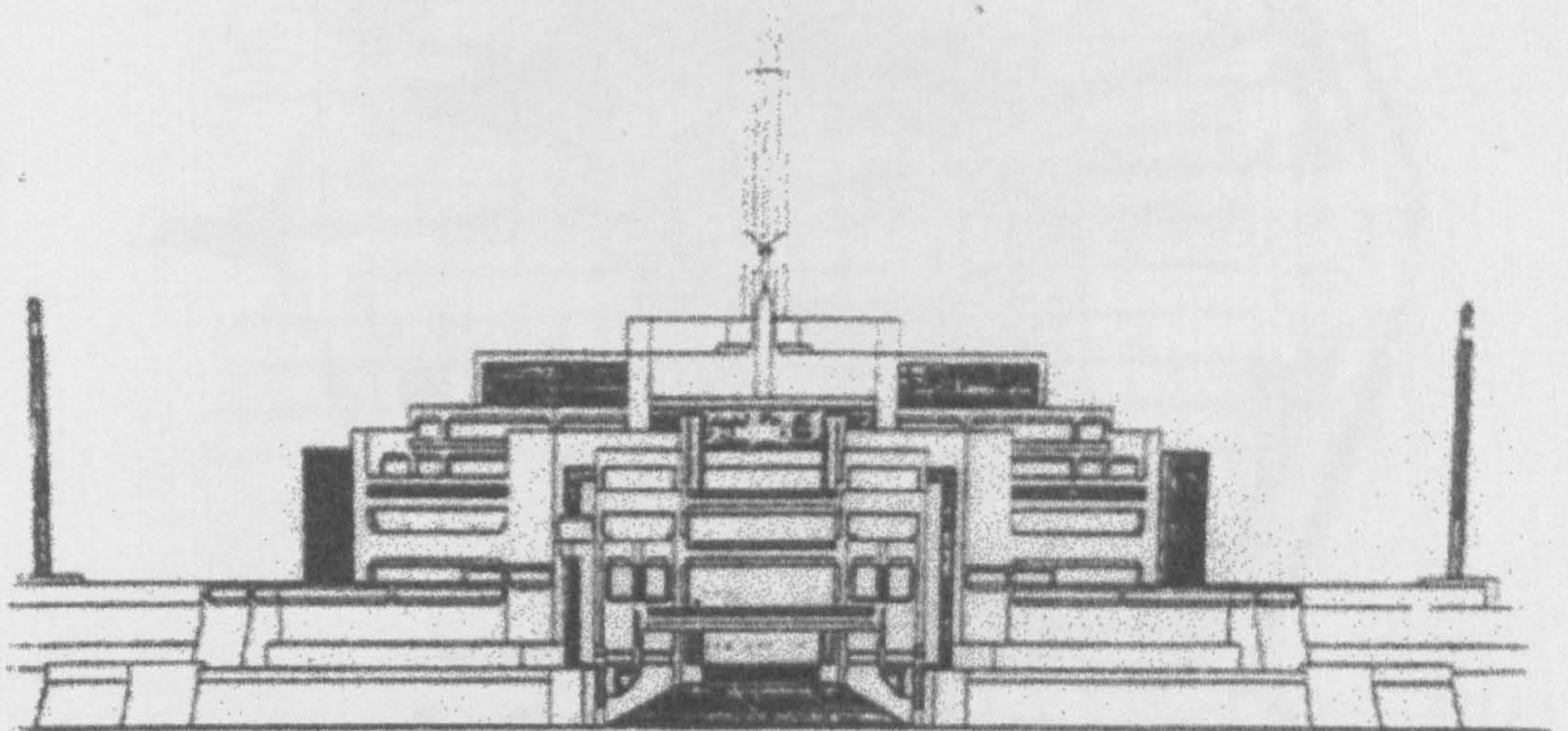
The J.Duiker Project

Very little information is available for Duiker's project. A partial plan has been published by Werner Oechslin⁴⁹ and Anzivino & Godoli give two elevations and a perspective of the Assembly Hall. The exact orientation of the buildings is unknown, but it is clear that the Assembly Hall is placed by the lake, above an elaborate arrangement of terraces, and the other parts are laid out symmetrically, directly behind it. The plan, with its two courts and radiating office blocks, is rather complex, and judging from the perspective, the overall effect would have been highly sculptural and dynamic. An intricate sequence of orthogonal and angled shapes accumulate both in plan and in section so that there is no flat entrance facade, rather, a highly three dimensional object, additively constructed, indicates points of entry with foci achieved by the use of symmetry. The employment of a rotated geometry in organising the plan recalls Duiker's Open Air School in Amsterdam [1930]; the radial arms of offices spun off their polygonal courtyard are like the ward blocks of his Zonnestraal Sanatorium, Hilversum, completed a year after the competition [1928].

The black areas in the elevation are open to interpretation: their disposition is typical of De Stijl compositions, but whether they represent areas of contrasting



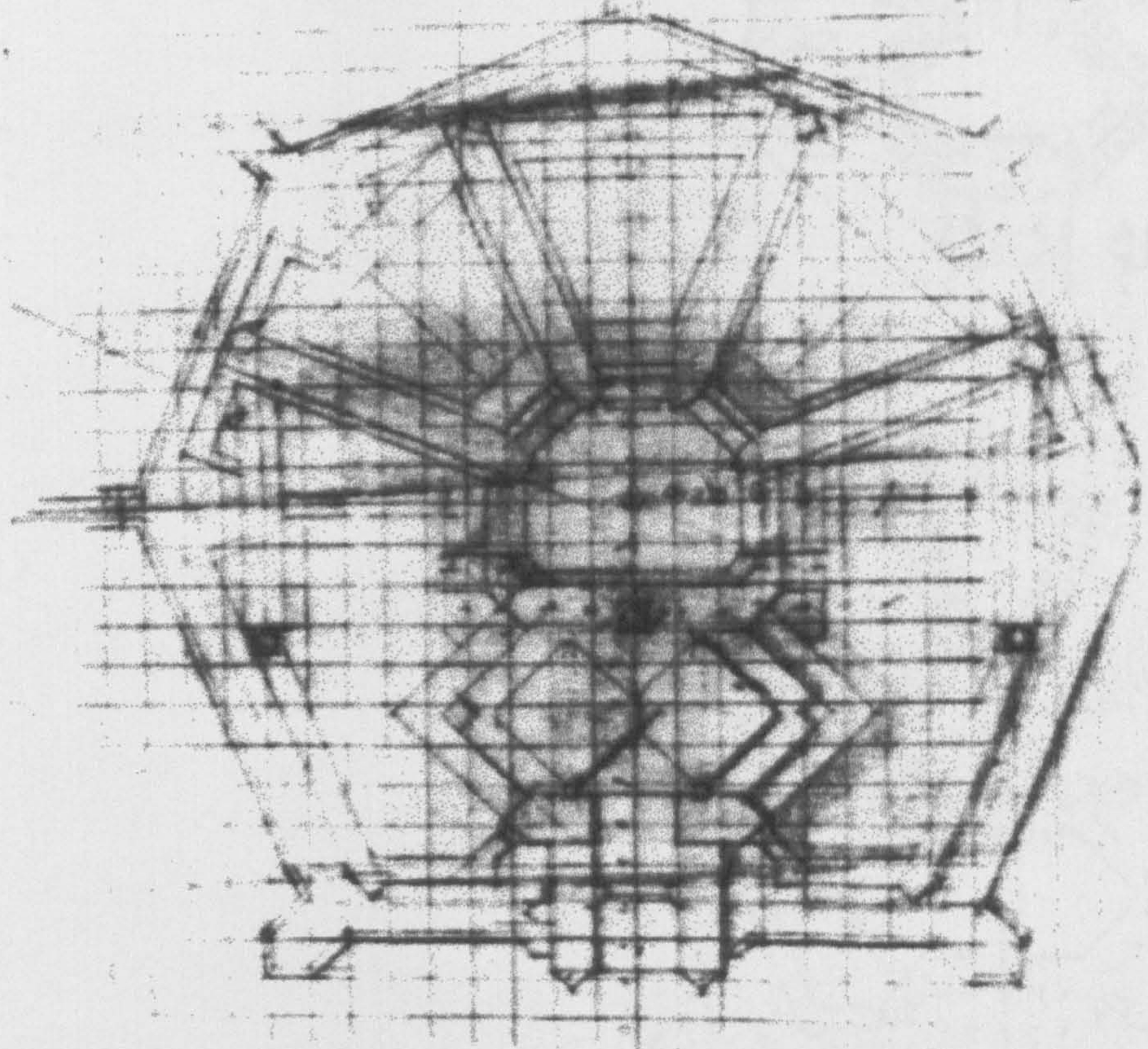
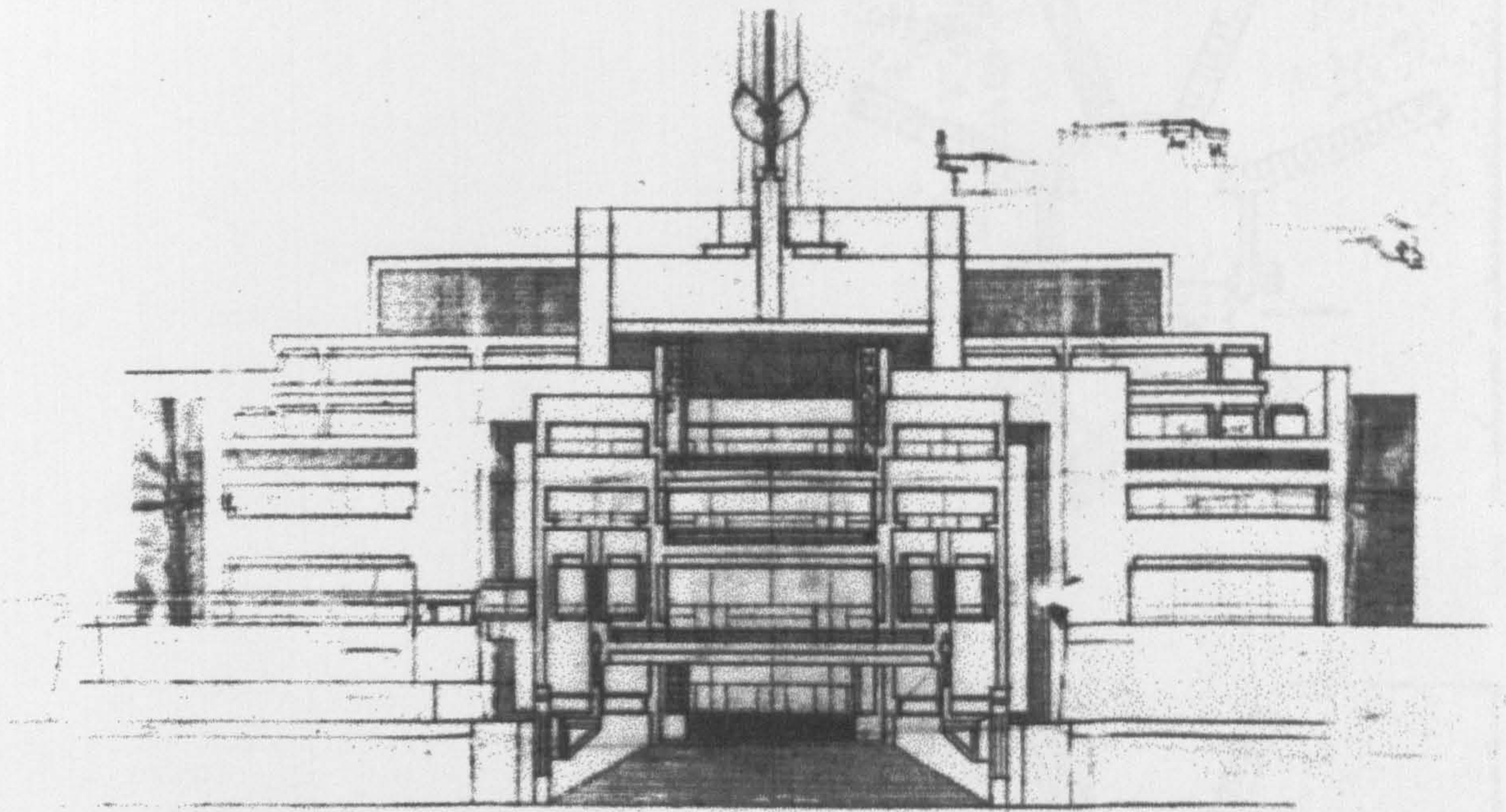
PAIS DE LA SOCIÉTÉ DES NATIONS



PAIS DE LA SOCIÉTÉ DES NATIONS

Project by J. Duiker

figure 22A



J. Duiker

figure 22B

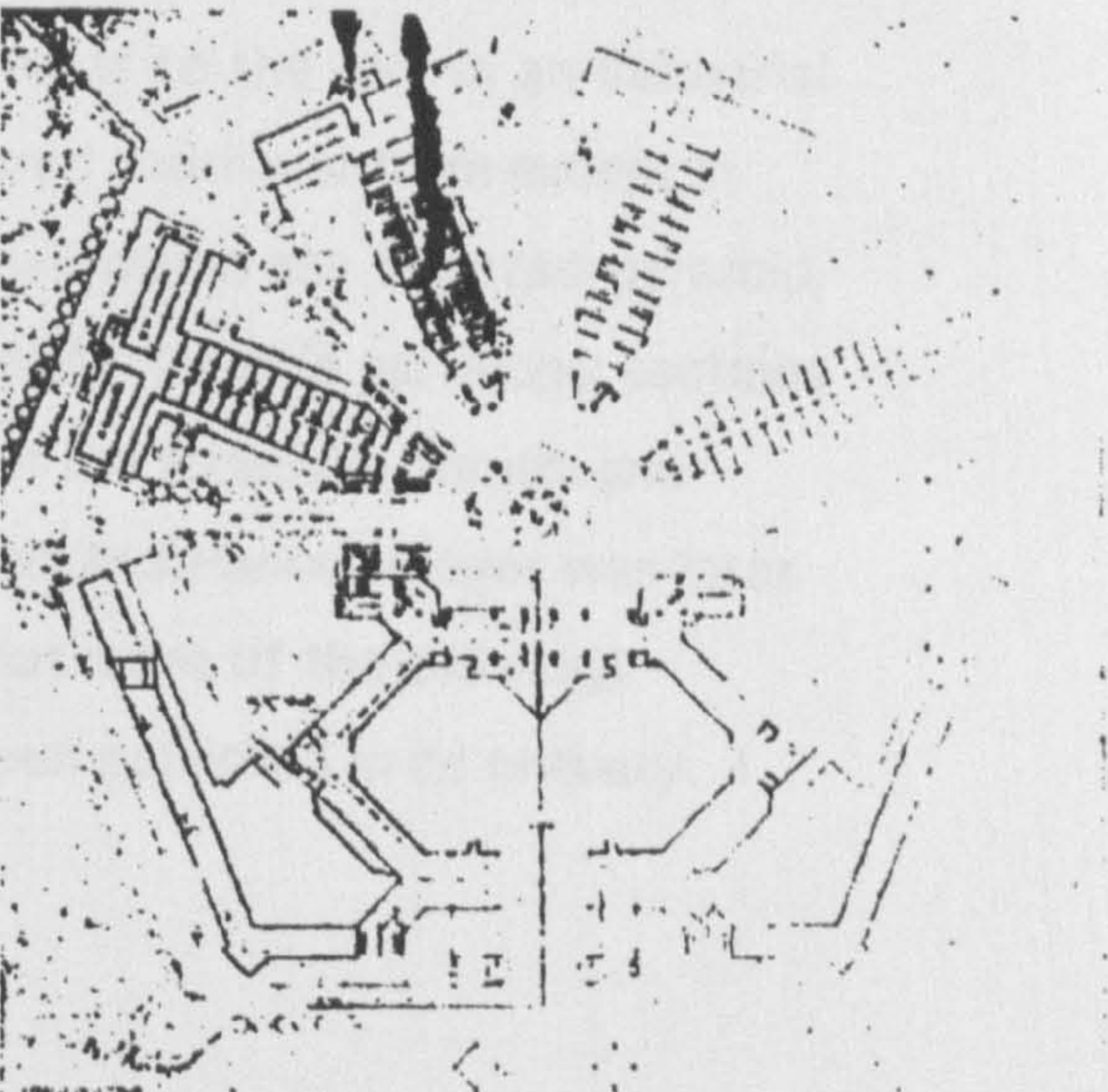
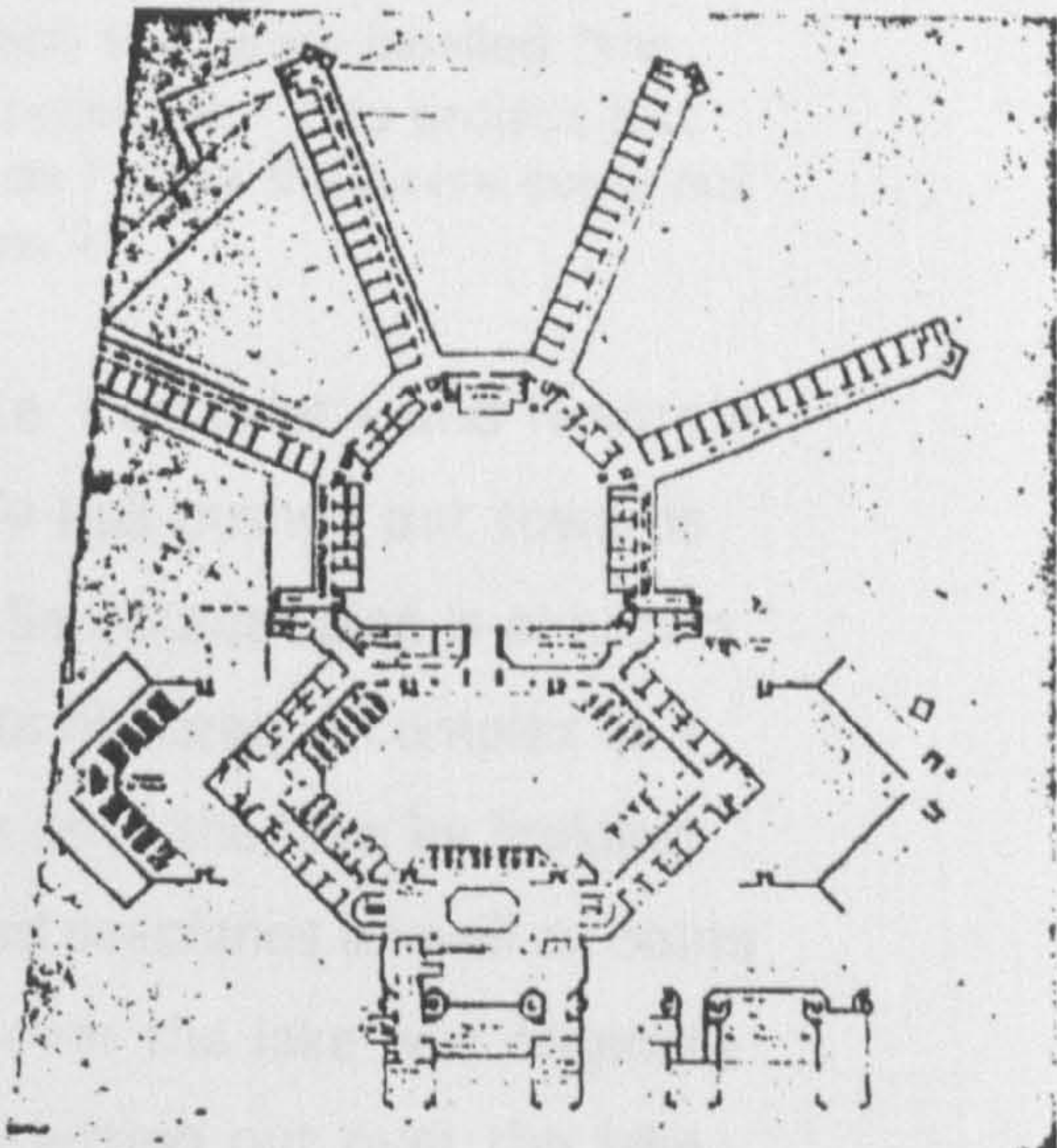
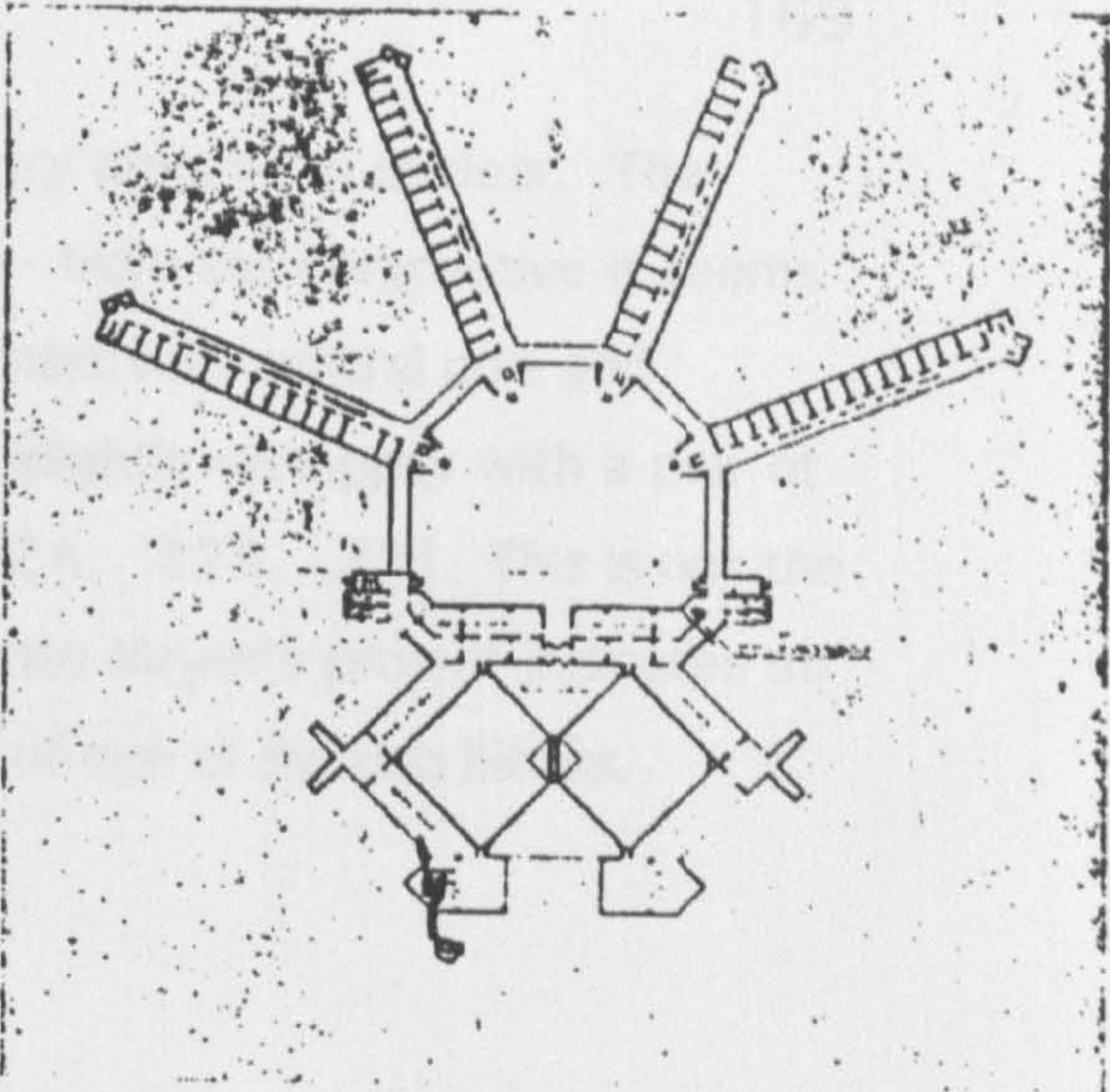


figure 23

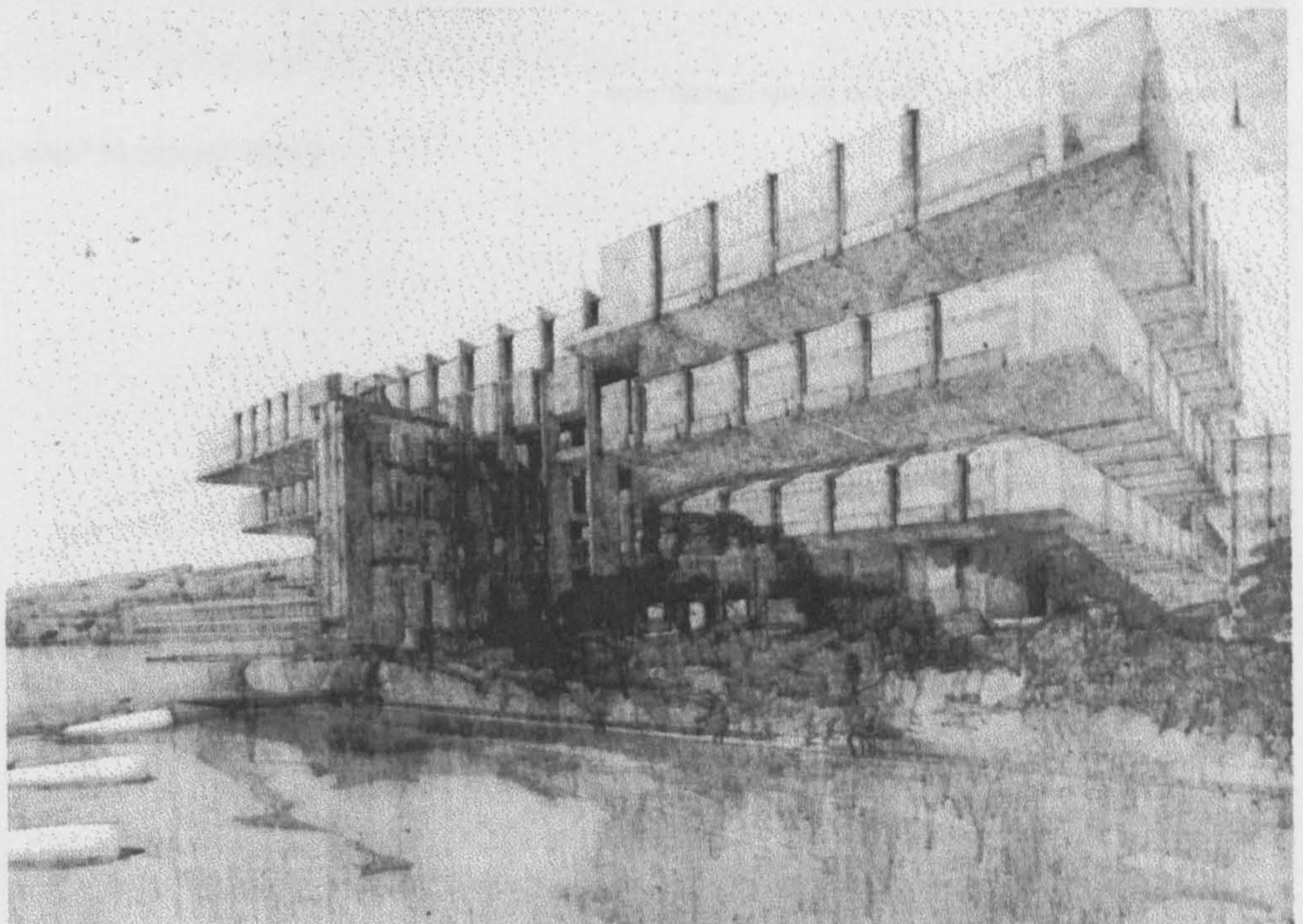
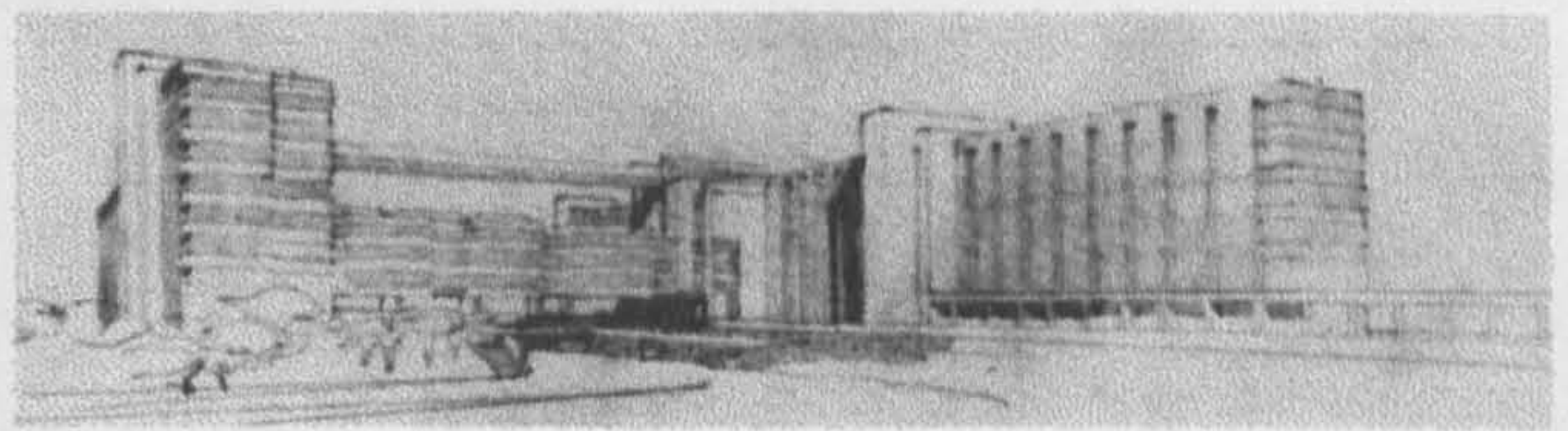
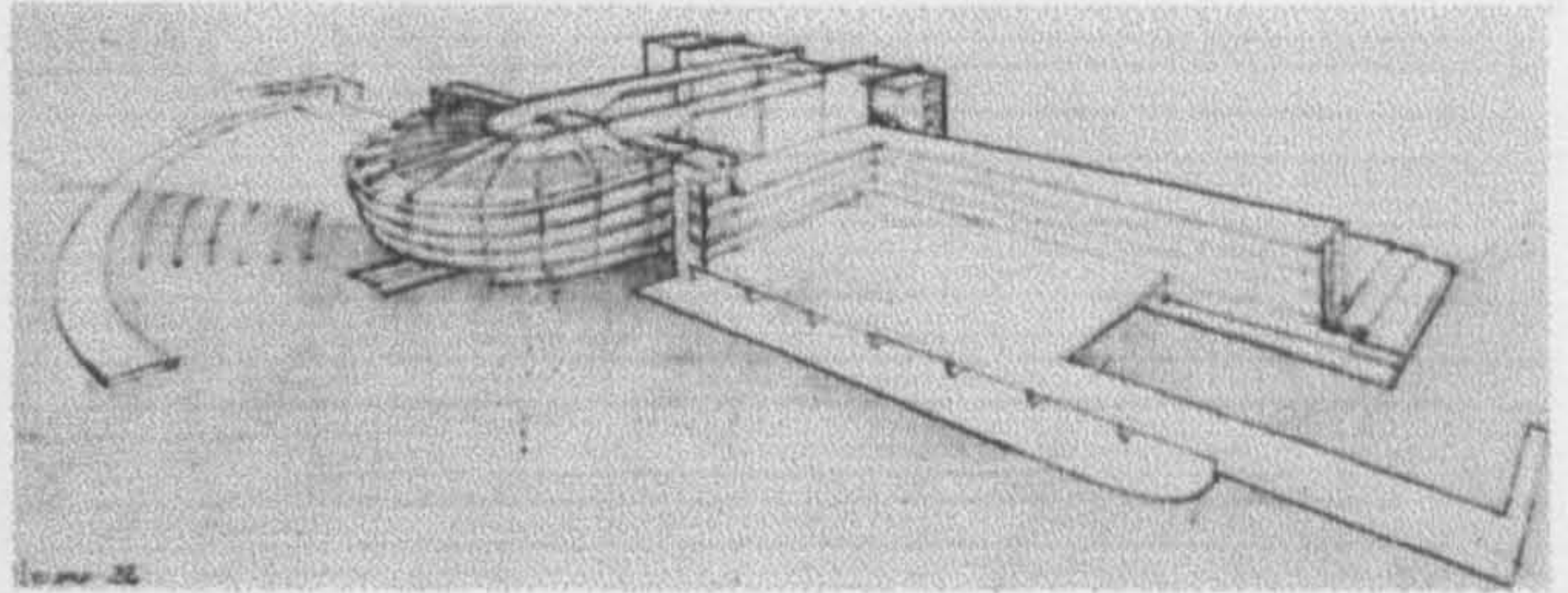
stone, glazing, or merely patches of paint in primary colours, is unclear. The vertical element fixed to the roof may be symbolic - from the perspective it seems to be a flaming torch: of course it could be a radio mast with central pole and vertical antennae in a radial pattern. It competes slightly unhappily with a pair of columns which flank the lakeside elevation [figs.22A, 22B, 23]. This is not the only radio aerial proposed in this competition: Hannes Meyer's project indicates an aerial slung horizontally between two masts on top of one of his slab blocks.

The Neutra and Schindler Entry

According to Karl Moser's son Werner, this entry very nearly won a prize :

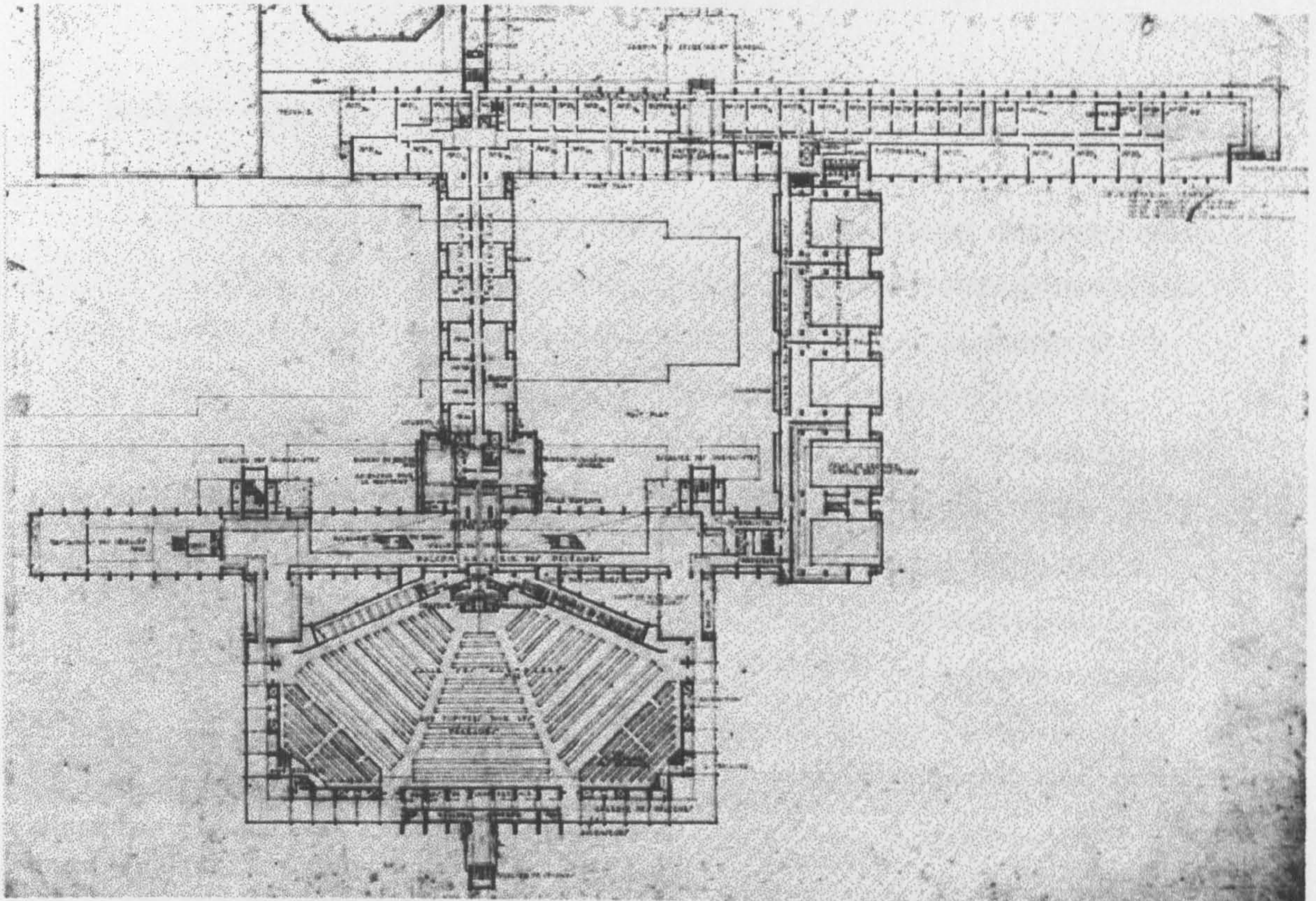
[Werner] Moser said: 'that must be the project which the jurors labelled "the airplane project." I gleaned this from my father's notebook. This project just missed by a hair's breadth winning a prize. As far as I know the jurors could not understand the meaning of the overhanging balconies.'⁵⁰

There are organisational similarities between Le Corbusier's and Neutra's project. They are similarly oriented, with the Assembly Hall pushed out towards the lake, and the Secretariat ranged behind - Neutra's Secretariat plan is almost a rotated version of Le Corbusier's. But Neutra⁵¹ orients his League complex in a much more southerly direction, extending the buildings onto the lake by building out landing platforms and a curved harbour: he envisaged seaplanes as well as boats arriving. The inverted, stepped pyramid cantilevered over the lake was originally semicircular [fig.24B]; the final, rectilinear version jutting out over the lake, is as radical in appearance as Le Corbusier's project, with its use of pilotis and strip-windows: these elements must have been familiar to the jury in an industrial context, whereas I can find no precedent for the tiered cantilever form except in Schindler's own previous work. In the Assembly Hall within the inverted pyramid, a degree of acoustic control was achieved by the use of moveable partitions; sections of the Hall could be closed off depending on the size of the audience. Neutra and Schindler's project, along with those of Le Corbusier and Hannes Meyer was later selected for a travelling exhibition. It is possible that more of the drawings survive, but the scheme does not appear to have been published in its entirety. I include everything found [fig.24A & 24B].



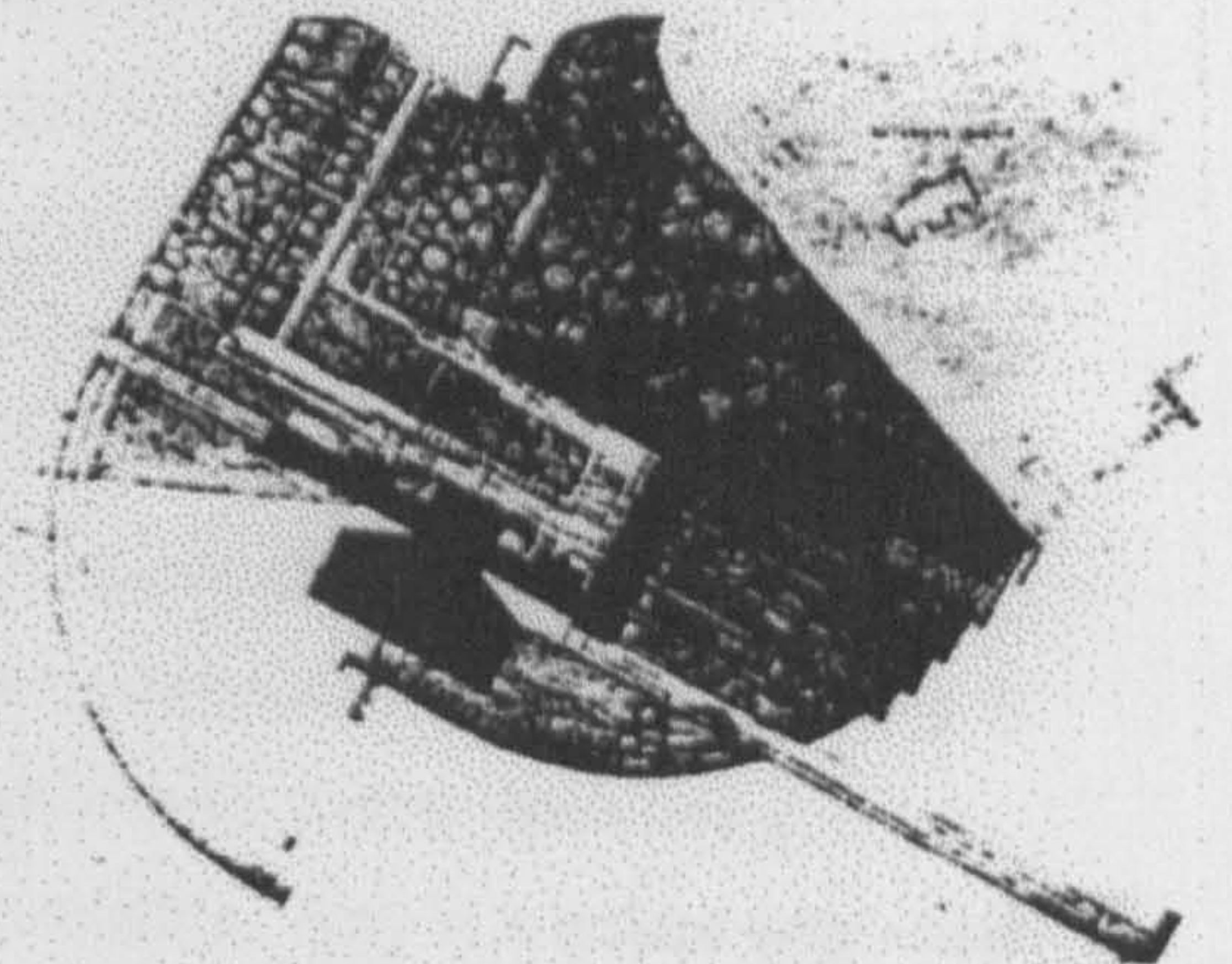
from 'Richard Neutra and the Search for Modern Architecture'
Thoma S.Hines, 1982

R. Neutra and R. Schindler
The "Airplane" entry



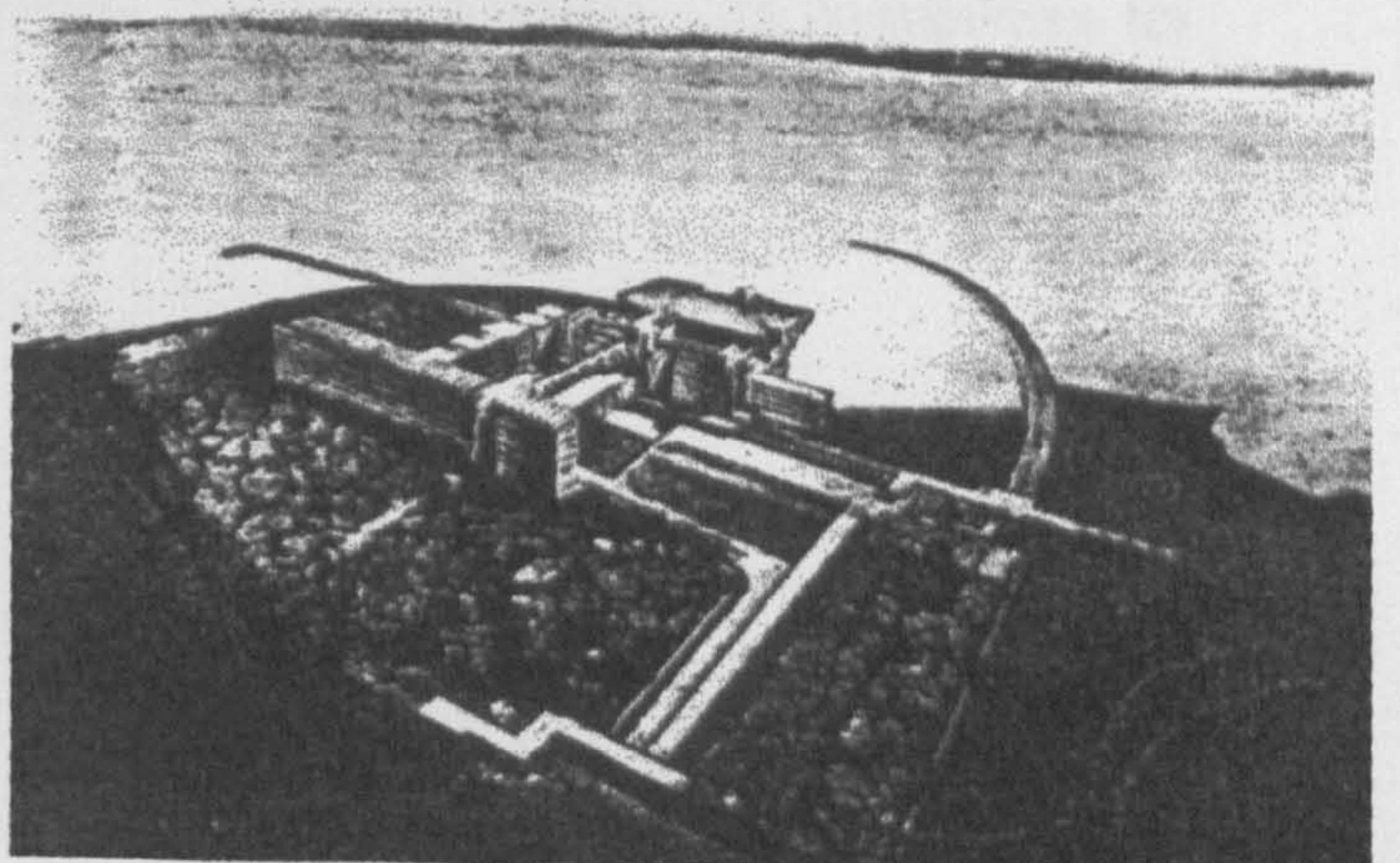
from 'Richard Neutra and the Search for Modern Architecture'
Thoma S.Hines, 1982

Neutra & Schindler, the "Airplane" entry



Site plan.

from W.Boesiger, 'Richard Neutra' 1951



from Anzivino & Godoli

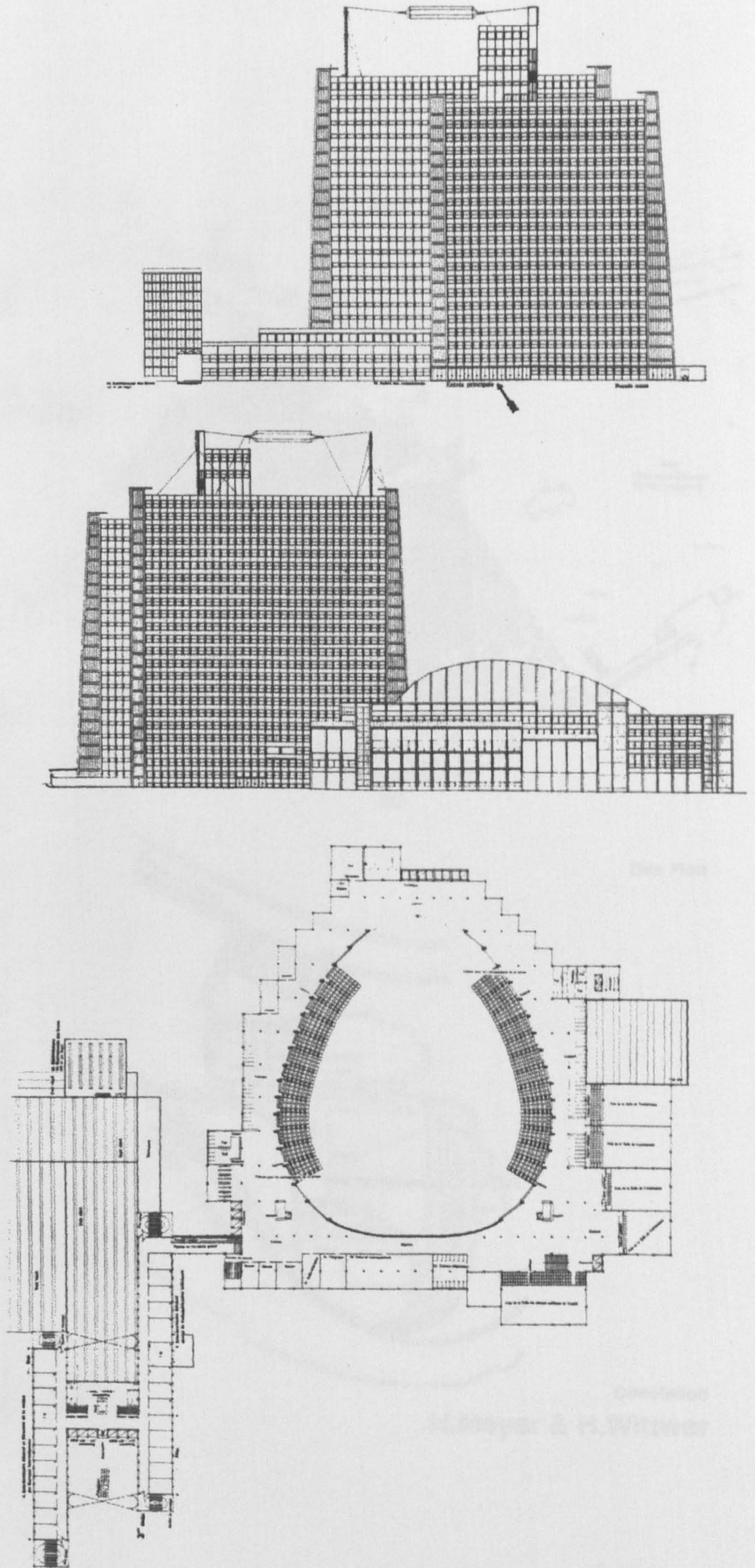
figure 24B

The Hannes Meyer & Hans Wittwer Project

With the exception of that of Le Corbusier, this is the most discussed entry in the competition, and a full set of drawings exists. Kenneth Frampton has drawn attention to the radically different approaches of Meyer and Le Corbusier in his 1968 article, *The Humanist v. the Utilitarian Idea*⁵². It is evident from the drawings [fig. 25A, 25B, 26], that the two entries share a structural system, and a concern with the demands of the brief, and that in both, the accommodation is organised as two, linked buildings. Here the similarities end: Le Corbusier's feeling for landscape is absent in Meyer's project, as are the Corbusian strategies for ordering the required spaces into formal hierarchies to express the cultural importance of the project. In the opinion of Meyer and Wittwer, these concerns were not *sachlich*, and the form of their building is dictated by an interaction between the sizes of the accommodation required, the convenient location of each space with respect to the others, and the structural module available, given the budget and the engineering possibilities of 1926.

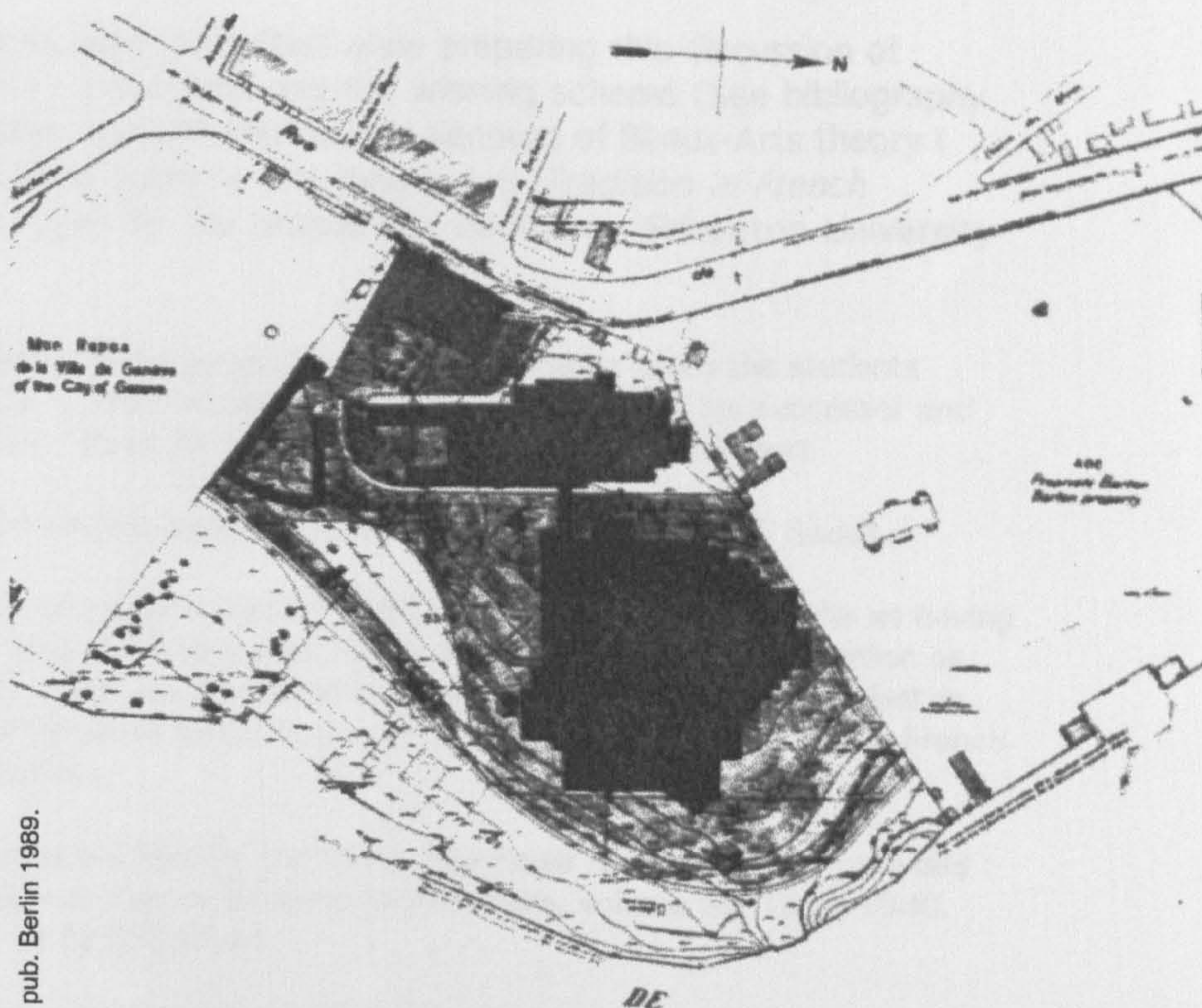
And yet, the claims of formal artlessness cannot entirely be sustained: although traditional proportional systems are not to be found here, the ensemble is visually arresting; the placement of each element with respect to the others seems not entirely arbitrary. Why, for example, does the more important building in the - rejected - traditional hierarchy, the assembly hall, occupy the more prominent position by the lake? Why are the two slab blocks staggered with respect to each other? Is the extraordinary fire escape chute looping between the two really only a *practical* invention? Compositionally, the arrangement of forms 'satisfies the spirit'⁵³: the assemblage celebrates the modern technical feat in a lyrical way - the romance of modern technology in general - the radio mast, the electric signage, the acoustic implications - and the concrete frame in particular - its possibilities for lightness, tall structures, and very large spans, as in the ovoid hall - is much in evidence.

Drawings from Ernst & Sohn, 'Hannes Meyer: Architekt, Urbanist, Lehrer 1889-1954', pub. Berlin 1989.

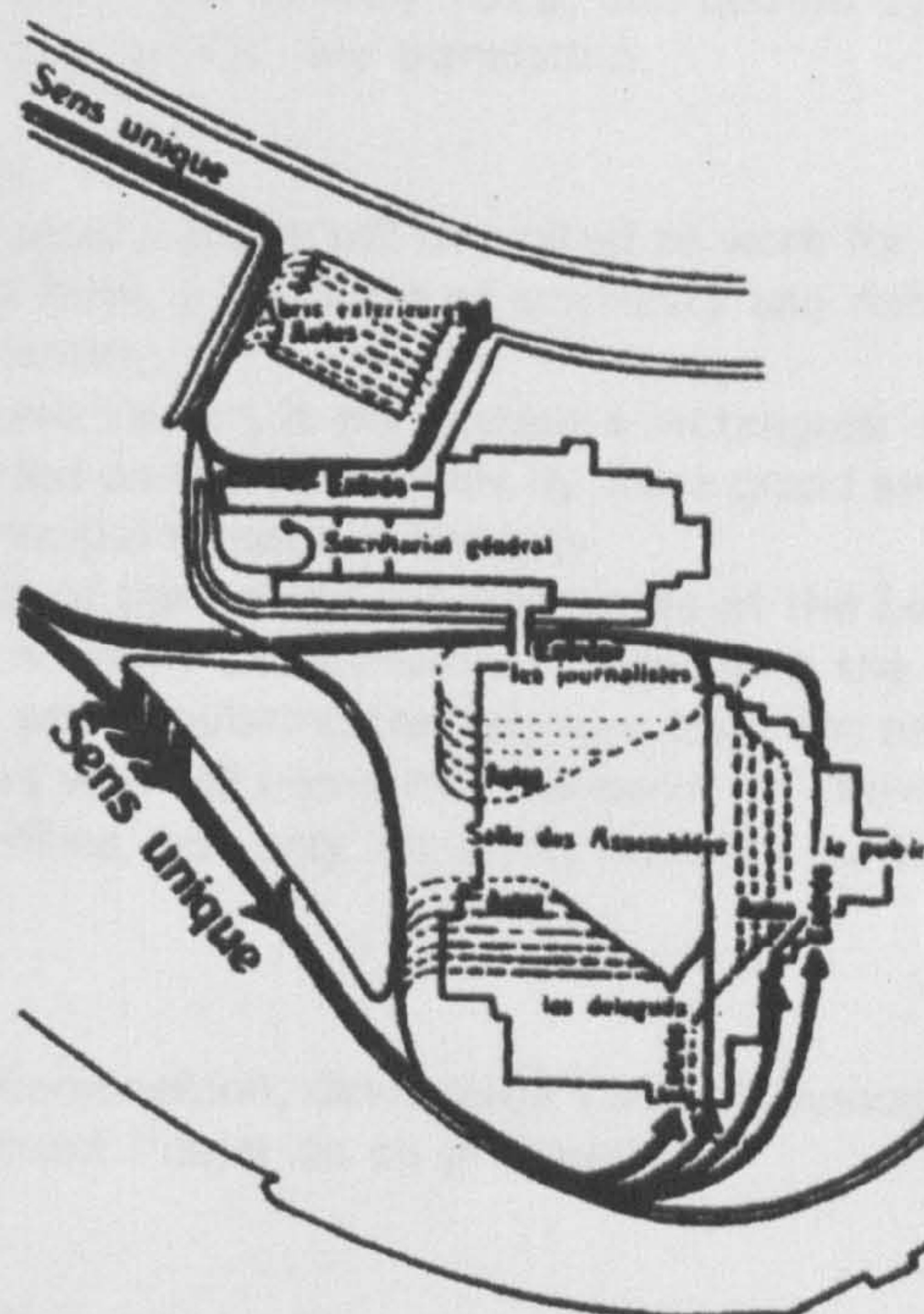


H.Meyer & H.Wittwer

figure 25A



Site Plan



Circulation

H.Meyer & H.Wittwer

Drawings from Ernst & Sohn, 'Hannes Meyer: Architekt, Urbanist, Lehrer 1889-1954', pub. Berlin 1989.

NOTES TO PART III, SECTION 2

1. A number of sources were consulted while preparing this discussion of the 1919 Grand Prix competition and the winning scheme (See bibliography). The most informative, elegant and concise account of Beaux-Arts theory I found was Donald Drew Egbert's *The Beaux-Arts Tradition in French Architecture: illustrated by the Grands Prix de Rome*. Princeton University Press, 1980.
2. The Beaux-Arts school ran a system of official *ateliers* to which the students attached themselves. Lemareshquier was selected by Laloux as his successor and assisted in the Atelier Laloux for some years. See Donald Drew Egbert.
3. Traces of about 160 entries remain. See John Ritter and Anzivino & Godoli.
4. Although Moser's notes indicate that he and Lemareshquier regarded Horta as having the most influence with the Secretariat simply because of his official position as chairman of the jury. See *Das Wettbewerbsprojekt für den Völkerbundspalast in Genf 1927* for Ernst Strebel's presentation of these notes; also published in French in *Le Corbusier à Genève*.
5. Some of these volumes are held by the RIBA. See *Ecole Nationale Supérieure des Beaux Arts - Les Grands Prix de Rome d'Architecture*, volume for 1850-1900. RIBA catalogue no. SR 72:37(07)44
6. Nénot interviewed by L'Intransigeant, 18th January 1928, and quoted by Le Corbusier in *Une Maison Un Palais*, p173. My translation.
7. Prix de Rome programme 1st July, 1919.
 'This Palace where the delegates of all nations will be united to work for the general interest of humanity must have a character of solemnity and richness in keeping with the grandeur of its destiny.
 Placed on the shores of Lake Lemman, it will occupy a rectangular site on the edge of the lake, and will be bounded on the other sides by three grand avenues in direct communication with the principal streets of the city.
 This palace will be the seat of the permanent committee of the *League of Nations*. It must shelter equally the many Commissions charged with the study of questions of general interest and with regulating the relations between nations. Finally, it must offer the delegates who will come from all parts of the world the most noble (*les plus grandes*) facilities, not only for work, but also for the material life.'
 [my translation]
8. *La Deuxième Partie* centre de la Composition, devra avoir l'aspect monumental qui convient à l'oeuvre grandiose formant l'objet de ce programme.
 [1919 Grands Prix programme].
9. *Bon goust*: the 17th Century spelling used by Blondel; 'good taste', a major concern of the Académie Royale d'Architecture in his time. See Donald Drew Egbert, *The Beaux Arts Tradition in French Architecture*, p99.
10. Donald Drew Egbert, p99, Theory of Design.

11. By Jean-Karl Niermans, Grand Prix 1929. See Egbert, plate 28.
12. Egbert p122
13. See Egbert, as previously.
14. *ibid.* p110.
15. *ibid.*
16. See Programme and Rules for the architectural Competition for the erection of a League of Nations Building at Geneva, p16:
 'the cost of construction, including the architect's fees, should in no case exceed the total sum of 13 million Swiss Francs'.
17. *Une Maison Un Palais* section I, p54.
18. See *Court and Garden* by Michael Dennis, MIT 1986.
19. Any entries arriving after 31st March would be disqualified.
 See Brief, section IV and annex X.
20. Quincerot page 39, and note 29: Requests from the Dutch Architects' Union, from the RIBA, the Modern Architects Group and Franz Jourdain, from Belgian, German, Swedish, Italian and Spanish associations.
21. FLC Letters I.2(1)147. (All Le Corbusier's letters of this period were handwritten). It seems, from the content of the letter, and given the fact that the League archive has a copy (SDN 32/39306/28594, typed transcription) that both Le Corbusier and Moser were anxious that this communication should not jeopardise their respective positions. I have not found a reply from Moser to this query. There are a few sketches of the site in one of Le Corbusier's *agendas* dating from the end of November 1926. [FLC F3(4) V]
22. Roth stayed on afterwards and became site architect for the two Weissenhofsiedlung houses in Stuttgart (completed in 1927).
 He later taught at the E.T.H. in Zurich, and is remembered for his book *The New Architecture*, published in 1940 by Les Editions d'Architecture SA, Erlenbach-Zurich, in French, German and English.
23. See Alfred Roth's account of the competition period, in *Das Wettbewerbsprojekt für den Volkenbundspalast in Genf 1927*.
24. Surviving early sketches for the project were drawn on the back of old L'Esprit Nouveau stationery, and are held in the Le Corbusier Archive with other Palais des Nations papers. See FLC 12-1-I- items 53-84. Here bubble diagrams and calculations of the square footage are interspersed with attempts to organise the required accommodation architecturally and sketches of presentation drawing layouts. (There are 255 drawings for this project in the FLC drawings archive; most of them relate to the final project).
25. For years Le Corbusier did not keep a formal diary, only a blank notebook in which he scribbled some of his appointments and sketched anything of interest. The FLC has most of these *agendas*, with this disappointing exception.

26. What exist in the Le Corbusier archive in abundance are records of the planning of the final drawings, and documents relating to other last-minute preparations: for example, the order for stretchers for the presentation drawings set is there (FLC 12-1-I-135. Letter to M.Louis, Courbevoie, 17th January 1927).
27. Le Corbusier claimed that the fan-shaped hall was completely new but this was later disputed by Vago, one of the competition winners, who produced an earlier example from Hungary to counter Le Corbusier's claims.
28. Letter to his wife from Karl Moser 20th April 1927 published in *Das Wettbewerbsprojekt für den Völkerbundspalast in Genf 1927*
29. See Alfred Roth: *Zwei Wohnhäuser von Le Corbusier und P.Jeanneret*, Stuttgart 1927
30. Letters from Huston to Horta, January 31st, 1927 and 9th February, 1927, both SDN 32/55158X/28594. Also quoted by Richard Quincerot.
31. Documented by Quincerot, from correspondence in the League archives, SDN 32/55158X/28594
32. The initial check was apparently for anonymity. See the account in *Le Corbusier à Genève*.
33. According to Quincerot, who also says that says that the two heaviest cases weighed 800kg. It seems likely that this is a typing error. From letters from Huston to Horta - See note 4. Quincerot's account in *Le Corbusier à Genève*.
34. Sigfried Giedion, *Space, Time and Architecture*. See p525 of English Version, 3rd Edition, 1954.
35. *Ginevra 1927: Il Concorso per il Palazzo della Società delle Nazioni e il Caso Le Corbusier* by Ciro L.Anzivino and Ezio Godoli, pub. Modulo, Florence, 1979.
36. 'World Parliament' by John Ritter. *Architectural Review* No. 136, July 1964.
37. County Hall, London: Ralph Knott, 1931 Competition-winning scheme. River frontage of over 220 metres. (The 1919 Prix de Rome scheme discussed earlier has an entrance facade approximately 245m long).
38. This particular view was also used by Le Corbusier who collaged his buildings into it. See *Oeuvre Complete*, vol I.
39. The design of E.S.Bell.
40. He was one of Burnet's obituarists. See *RIBA Journal*, 18th July 1938.
41. *The Builder*, August 5th, 1927, p210. Article by S.W.Milburn F.R.I.B.A. "The Geneva Competition".
42. See Donald Drew Egbert for a discussion of the idea of *character* in the Beaux-Arts.
The earliest buildings of Le Corbusier are in the 'Swiss Regional' style which was heavily influenced, for example, by the teachings of Ruskin: these youthful efforts attempt to express the natural specifics of the locale. See Paul Venable Turner,

Mary Patricia May Sekler.

43. Having said this, this particular conjunction, of oversized dome and *square*, columnated base, does not occur in the work of Boullée: the gigantic dome rises from cylindrical walls of gigantic proportions. Where a square structure has a central dome, it is of relatively modest proportions: there are often a number of internal courts and the dome covers only the central crossing of the internal ranges between these courts. For example, see his Palais National of 1792. But the Skagen project certainly has the geometric severity of Boullée.
44. Historically the circular form recurs as a signifier of equality, eg., Arthur's Round Table, and wholeness.
45. It is reproduced in the October 1932 issue of L'Architecture D'Aujourd'Hui, a special edition on Perret.
46. John Ritter - *World Parliament* - Architectural Review No. 136, July 1964.
47. The Théâtre des Champs Elysées, completed in 1913. Le Corbusier could have worked on this project, but had declined Perret's offer.
48. See Paul Venables Turner in *The Open Hand*, for a discussion of the relationship between Le Corbusier and Perret. There is also an Italian text, *Perret e Le Corbusier Confronti*, [Fanelli & Gargiani, 1990] which deals with the architectural and cerebral relationship between the two.
49. See *Das Wettbewerbsprojekt für den Volkerbundspalast in Genf 1927*
50. Quoted in *Richard Neutra and the search for Modern Architecture*, Thomas S.Hines, pub. OUP, 1982.
51. Apparently Schindler's input was much less than that of Neutra - see *Richard Neutra and the search for Modern Architecture*.
52. *The Humanist v. the Utilitarian Ideal*, Kenneth Frampton, AD vol XXXVIII, 1968, p134-136.
53. As Le Corbusier might have put it. I refer to this remark
'trés difficile (satisfaction de l'esprit)'
 on the severe constitution of the Villa Stein in his sketch of *The Four Types*, see *Oeuvre Complète*, Vol 1, p189.

PART III

A Brief History of the Competition c.1925-1927

SECTION 3

Judging the Competition -

- The missing jury notes
- Moser's Account - Deadlock between Academicians and Modernists
- The Jury Report
- The Jury's Choices - 27 winning Designs
- Public Reactions - the English Press

Judging the Competition

Horta and his colleagues estimated that they would be able to choose a winner in about three weeks. In fact, they deliberated for twice as long as that - their first session was on 25th March 1927, and they gave their judgement on 5th May, 1927. The minutes for the jury sessions are missing from the archive of the League of Nations in Geneva, but correspondence between two of the secretaries - Huston and Lloyd - is preserved in the archive and indicates what happened to them. Attached to the file copy of a letter from the Secretariat to Horta is a handwritten note from Lloyd to Huston:

Mr Huston-

I have said nothing about the minutes of the Jury's meetings in this letter to Horta. I think we should keep them in the office unless he insists again on having them.¹

On the 10th August, 1927 Lloyd wrote to Horta about the minutes as follows:

With regard to the Minutes of the Jury Meetings, I feel a certain hesitation about confiding these to the post, and I think - if you do not mind waiting a little longer - I would prefer to bring them when I come through Brussels which I am rather hoping to do on my way to London this autumn.²

It seems that Horta did not get the minutes until a year later: also in this file is a letter from Horta to Lloyd dated 2nd August, 1928 and postmarked 'Carlsbad', to which is attached a handwritten note from Lloyd:

I left the copies of the minutes at Mr Horta's home in a sealed envelope with a personal letter as he had not returned from Carlsbad (Monday August 13th, 1928).

One can only wonder why Victor Horta was so insistent about keeping the minutes himself. He destroyed most of his own papers and many drawings in 1945 when he moved house, by selling them as scrap paper to the company De Vriendt³. Almost all of the documentation on his work was lost as a result, and the minutes have not been found. Of the other jurors, only one is known to have kept his own notes: Karl Moser. I had hoped that John Burnet would have kept notes, but my inquiries drew a blank⁴. Karl Moser's notes, in German, were unearthed in the 1980's and Ernst Strebel has written an account of the nearly sixty sessions which he reconstructed from these notes⁵.

According to Strebel, the six-week period was broken down as follows:

reception of submissions, preliminary checks &	
First group examination	2.5 weeks
First individual selections	0.5 weeks
Search for a unanimous judgement	2.0 weeks
final bargaining for a compromise	0.5 weeks

First the jury checked that the entries conformed to the requirements of the brief: that they were the correct scale, were mounted as specified, had accompanying texts in French or English, etc. Moser suggested that they divide the projects into three categories -

- "Beaux-Arts School"
- "Modernist without being Modern"
- "Modern School, practical in situation, in construction, in organisation"

but this suggestion was rejected by a majority of the jurors, perhaps because of the criticism of the Beaux-Arts implicit in his definition of the "Modern School". Instead, they agreed on voting criteria for the initial selection of projects:

rejected	- fewer than 5 votes out of 9
doubtful	- 5 votes out of 9
accepted	- 7 votes out of 9

In the first two and a half weeks, when the 373 submissions conforming to the brief were reviewed, this voting system produced the following results: 223 were

rejected, 59 labelled 'doubtful' and 91 accepted. According to Moser, this selection procedure was accompanied by extremely long and lively discussions which covered topics such as 'Modern Architecture v. Academic', 'Industrial architecture', 'engineer v. architect', 'building v. machine', and 'architecture and functionalism'.

After making these initial selections, the whole group revisited the site, and then each juror personally selected the projects he preferred. According to Strebel⁶, the jury was already starting to feel that a new project would have to be worked out by the chosen architect. The next two weeks were spent trying to agree on a winner to no avail. By the 18th April, there was considerable doubt as to whether a single winner might be found: Moser spoke to Horta that day and told him that in the opinion of the four 'moderns' a first prize should be awarded and that project number 273 - Le Corbusier - was worthy of that honour. The jury looked at the submissions again, and managed to reduce the number of acceptable projects to 62, including some previously rejected projects. Then they compared these in terms of function and cost. They estimated that only nine projects could be built for the specified 13 000 000 Swiss Francs. Notable among these were the projects of Le Corbusier and Pierre Jeanneret, the Neutra-Schindler project, the Flegenhimer-Nénot project and the Bonatz-Scholer project. Considering this selection of entries, M.Lemaresquier said that a prize should not be awarded. Berlage disagreed, and they re-examined the cost estimates, presumably hoping to extend this very limited selection. By the 22nd April, Horta had declared his opposition to project 273, and in this he was supported by the Academic jurors - the '*latins*' [die Romanen], as Moser called them. He noted

The brutal tactics of the Latins and of the English representative will succeed in compromising the success of the competition⁷

The Academic majority then defined new criteria by which the entries would be assessed. In Strebel's report it is not clear what these criteria were - probably Moser did not say - except that they permitted a strict application of certain competition rules, *excluding* the original, emphatic cost restriction! All submissions were re-examined, which took three days, and 32 were found to conform to the new set of requirements. By the 28th April, there were three groups of projects under consideration: the 9 respecting the budget, the 32 'formally conforming' and 4 other projects that interested the minority Modern jurors. Le Corbusier and Pierre Jeanneret's project featured in all categories. Strebel reports that the Modernists asked for the assistance of the Secretariat.

Lemaresquier and Gato opposed this but they were overruled and Horta wrote to the Secretary General. From his letter [see addenda] it is clear that the budget of 13,000,000 Sw. Francs was far too low for the kind of building the Academic jurors thought appropriate for the League. Horta went into detail about the jury's difficulties. The number of projects was far too large to check the submitted costings [the implication being that most entrants had submitted estimates below the 13,000,000 Franc ceiling and that many of these claims seemed unlikely]. The jury had accepted the costings submitted by nine entrants, and then they had applied the following check: they calculated the gross volume of each project and multiplied that figure by a mean price of 50 Francs per cubic metre. This left a single project which conformed to the budget. Horta did not say so, but post-competition costings suggest that only two of the winning projects could have been built for 13,000,000 Sw. Francs⁸ - the Eriksson project and Le Corbusier's project. Le Corbusier's project was probably the single conforming project. By increasing the cube figure by 10%, Horta says, 4 additional projects could be considered; by increasing it by 45%, 14 other projects would qualify. But the Modernist jurors [he says, *une partie du jury*] disagreed with this strategy, and Horta felt that if they were dissatisfied, the competitors would be too. Horta's suggestion was to judge the entries on programme only and modify the cost requirement as follows:

S'il m'était permis de suggérer une idée personnelle, si le jury ne trouve pas le premier prix dans les projets réglementaires, je transposerais le concours du règlement-programme au programme seul, j'accepterais un cubage théorique de 60% de la moyenne des estimations des concurrents, ainsi seraient retenus la plupart des projets ayant une valeur artistique et le but final poursuivi par la Société des nations: découvrir une oeuvre d'art ou un maître digne de synthétiser son oeuvre dans l'édifice qui doit l'abriter serait atteint.⁹

The Secretary General responded as follows:

I appreciate your action in informing me of the matter which you mention in your letter, but I regret that the questions in connection with which you are so good as to refer to me, are not within my competence. On the one hand, I have no power to authorise any departure from the conditions fixed for the architectural competition for the erection of a League of Nations building at Geneva by the Programme and Rules of that competition. On the other hand, the application of those conditions is, I think, a matter for your jury.¹⁰

By this stage, the jury knew that it could not agree on a single winner. They talked over the possibility of a second competition between eighteen of the projects

under discussion, where two projects would be chosen by each juror. Moser considered that this would not solve anything as the jurors would be just as likely to disagree on a second competition. By Tuesday 3rd May, it was clear that the only possible solution for this jury would be to select multiple winners. On that morning, the Modern group approached Lemaesquier in the vestibule of his hotel, where he was in discussion with Gato, Muggia and Burnet. Lemaesquier suggested that each of the opposing groups decide on a winner and Moser suggested that each juror choose three projects. This was agreed. Lemaesquier then suggested a distribution of equal prizes, ie., nine first prizes, nine honourable mentions, and nine second honourable mentions. The Moderns were disinclined to accept that, but Hoffmann thought it was the best result they would get, and Moser conceded that at least each of them would have the opportunity to reward the entrants they thought the best. Attilio Muggia was then sent to put this to Horta at the Secretariat, where he was meeting one of the secretaries-general¹¹. Horta also agreed and joined the rest of the jurors for a final session and a vote on the proposal, which was unanimous. They spent the afternoon choosing the projects, and the following day Moser drafted the final report, which was approved by both the League and the jury. On Thursday 5th May 1927, the envelopes identifying the competitors were opened and the results were announced.

The Jury Report

The jury report, in French and English, exists in several forms. On 5th May, 1927, the Information Section issued a duplicated typescript report of the announcement of the competition result at a public meeting held on the morning of that day, and I have found copies of this in the Fondation Le Corbusier, in the League of Nations archive, and in the British Library¹². This document paraphrases Karl Moser's text in a slightly abbreviated form. On 23rd May 1927 a printed version of the report was released. Later, the report was published in a commemorative album of the winning designs. This is undated, but from Lloyd's letter to Horta about bringing him the minutes [10th August 1927], it is clear that the album was produced between May and August of 1927. The album, '*rather an expensive production*', Lloyd wrote to Horta¹³, was a slim, beige, clothbound book and I have managed to acquire a copy of it. Here, two pages are devoted to each of the winning schemes; three drawings of each project, usually a plan, an elevation, and a perspective from the lake¹⁴.

The jury report, reproduced in French and English, is extremely brief. The text of the 5th May report reads as follows:

The Jury of Architects set up to examine the designs submitted for the League Building Competition held this morning a public meeting under the chairmanship of M. Victor Horta (Belgium).

In his opening speech the chairman recalled briefly the conditions of the competition and the which the Jury was called upon to accomplish.

A report was then read on behalf of the Jury by Mr. Karl Moser (Swiss). The rapporteur (sic) paid a tribute to the endeavours of the Architects taking part in the competition, whose designs had shown an extraordinary wealth of ideas and declared that the Jury's task had been rendered difficult by the fact that a considerable proportion had not adhered strictly enough to the material conditions laid down by the programme and rules.

After jointly and severally studying the plans with care and at great length and after forming an opinion as to their material and artistic value the Jury unanimously decided that the results of the competition did not justify it in recommending the execution of any of the plans.

The jury has unanimously decided to distribute the sum of 165,000 Swiss francs, placed at its disposal, as follows: Nine prizes of 12,000 Swiss francs each; nine honourable mentions, Class 1: 3,800 francs each, and nine honourable mentions, Class 2: 2,500 francs each.

The Jury has unanimously awarded the prizes and mentions to the architects whose names will be found on the attached list.

In Moser's draft report the key paragraph about the competitors' lack of adherence to the rules reads as follows:

The Jury was confronted with an extraordinary wealth of ideas, but was reluctantly compelled to realise that its work was made difficult enough by the fact that a considerable proportion of the competitors had not adhered strictly enough to the material conditions required by the programme and rules. With regard to the carrying out of the programme, the fact that the designs show fundamental differences in their conception of the scheme is explained by the evolutionary phase through which contemporary architecture is now passing.

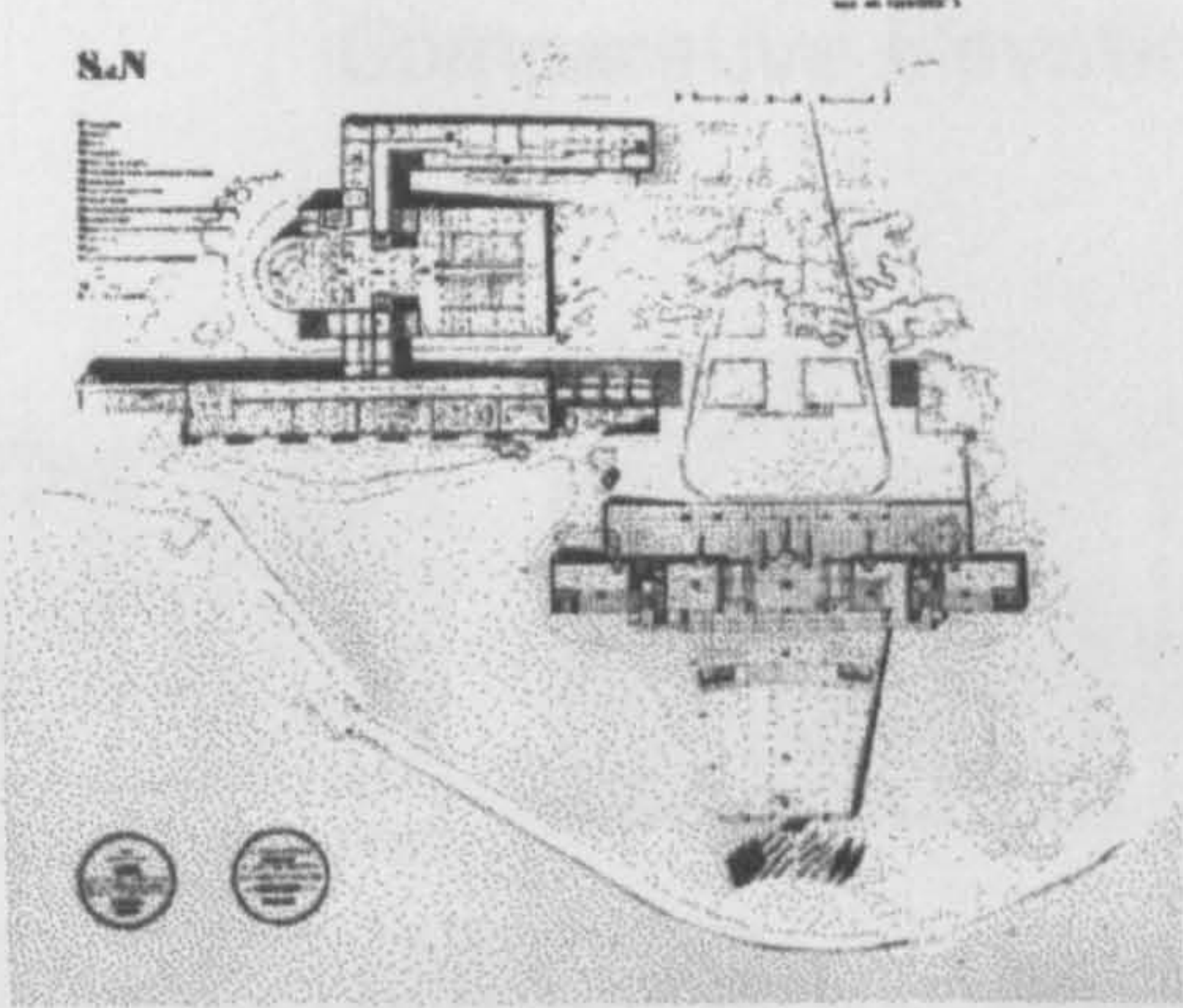
The only, oblique hint of jury differences is to be found in the last sentence quoted above which reads only as a passing remark on the diversity of entries. The report does not describe at all the alleged failings of the entries which resulted in this very disappointing outcome: how could it, when the outcome was really a result of irreconcilable jury differences, and a budget, set by that same jury, that was too low for the kind of building the majority felt was suitable? That the jury report for the most prestigious international competition of the 1920s - a contest which had engaged the time and resources of hundreds of architects for up to six months - should be so lacking in detail, was one cause of the general dissatisfaction felt by the public, the press and various professional associations on hearing the result.

27 winning Entries: the Jury's Choices

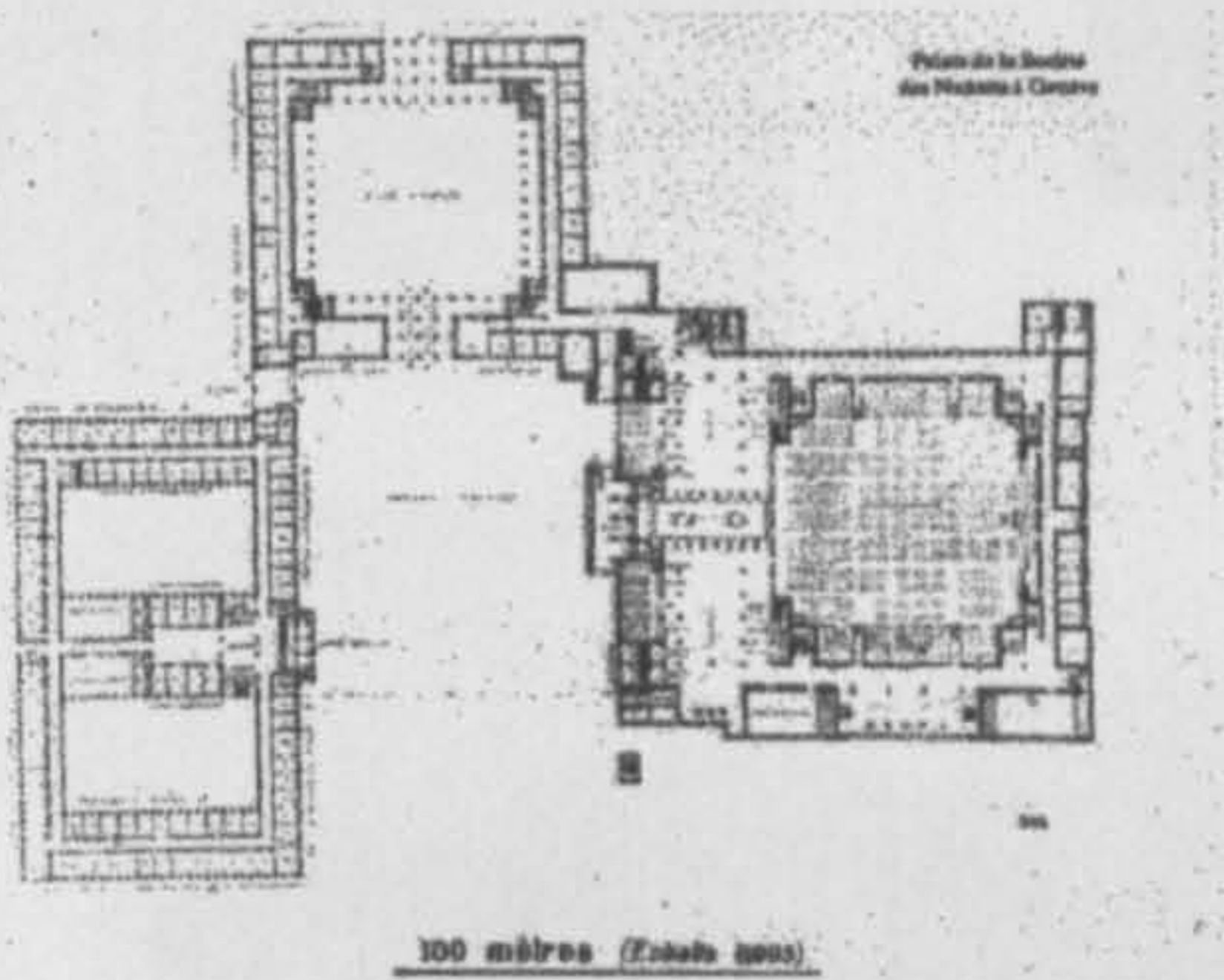
The stylistic diversity of the 377 entries is maintained in the winning selection [fig.26&27]. This is no surprise given the composition of the jury. It is also clear that these differences had a geographical [cultural] basis. For example, compare the nationalities of the jurors and their individual choices of prizewinners in the following table¹⁵:

Plan Forms of the nine 1st Prize Winners

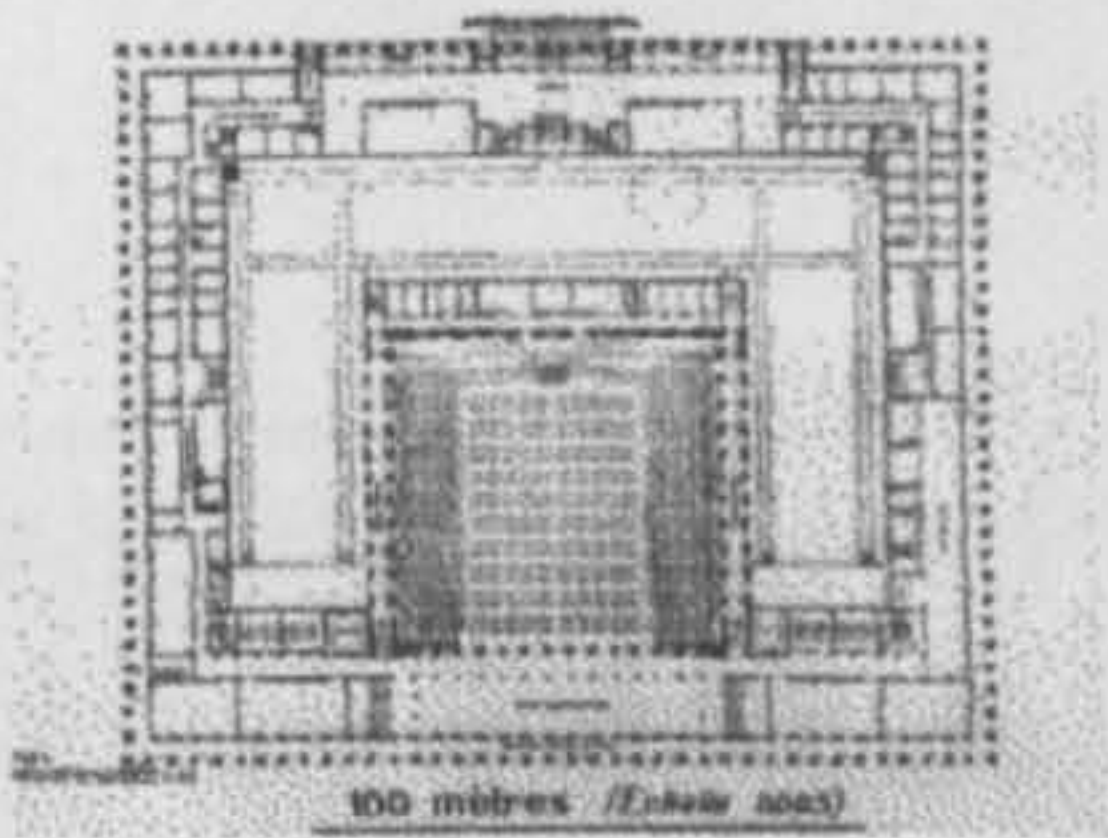
'Moderns'



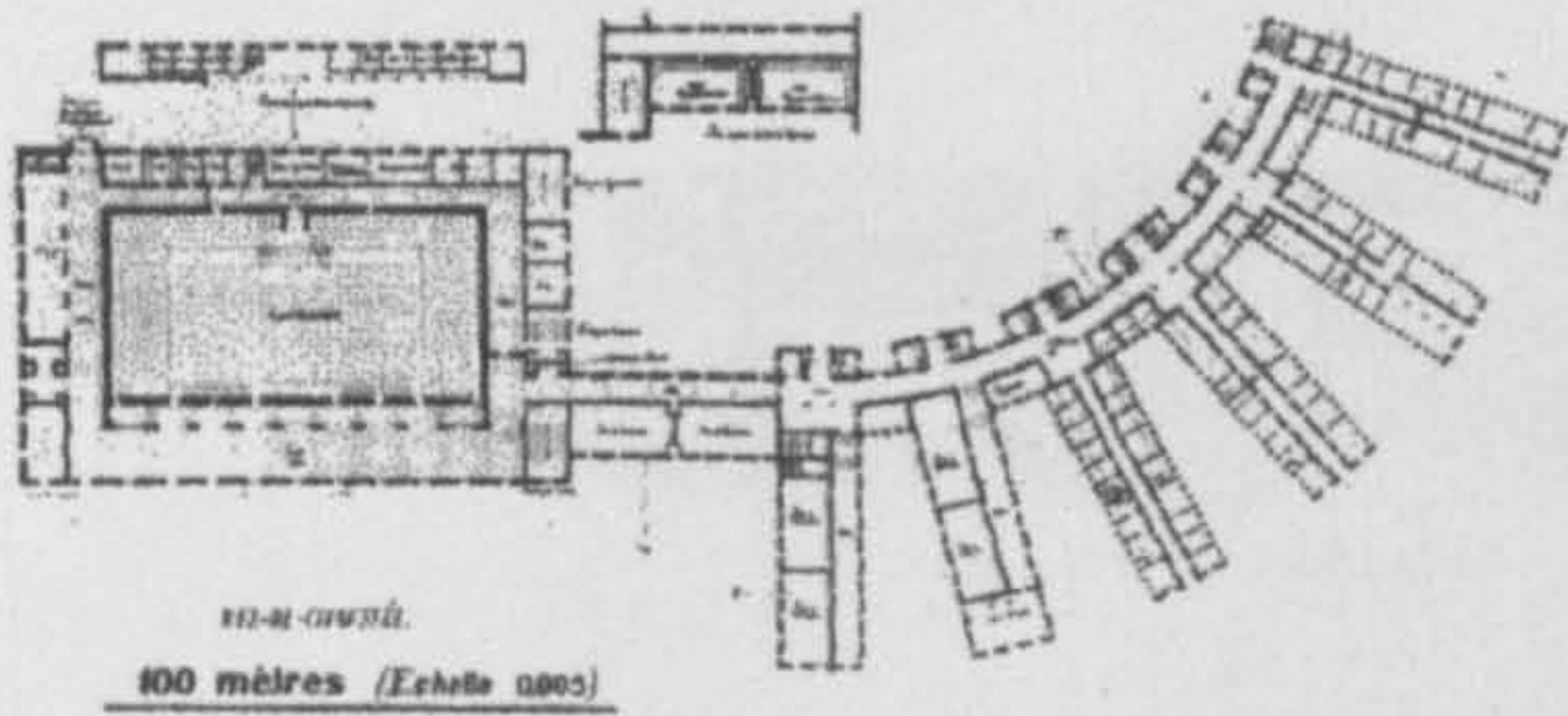
Le Corbusier & Pierre Jeanneret



Fahrenkamp & Deneke



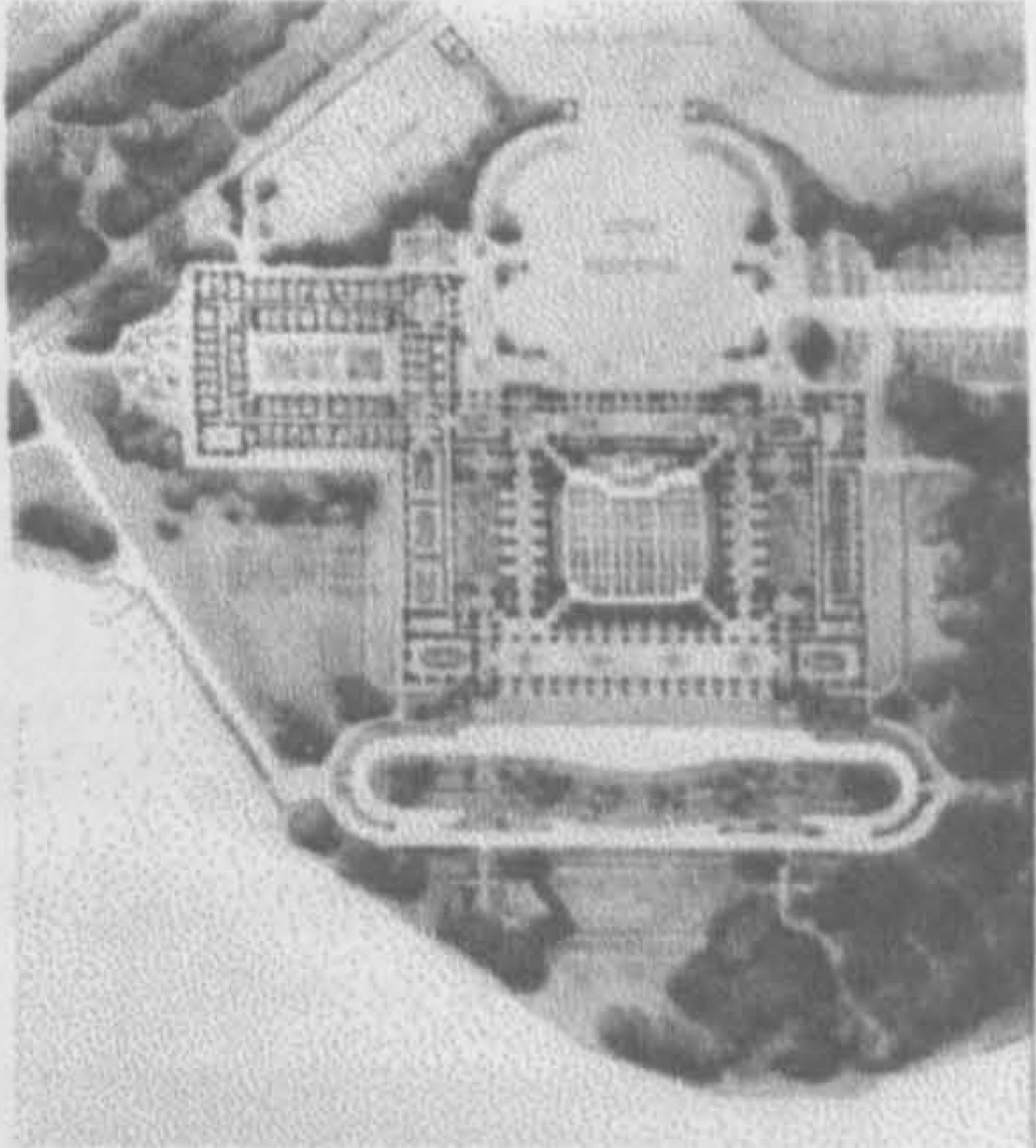
Putlitz, Klopheus & Schoch



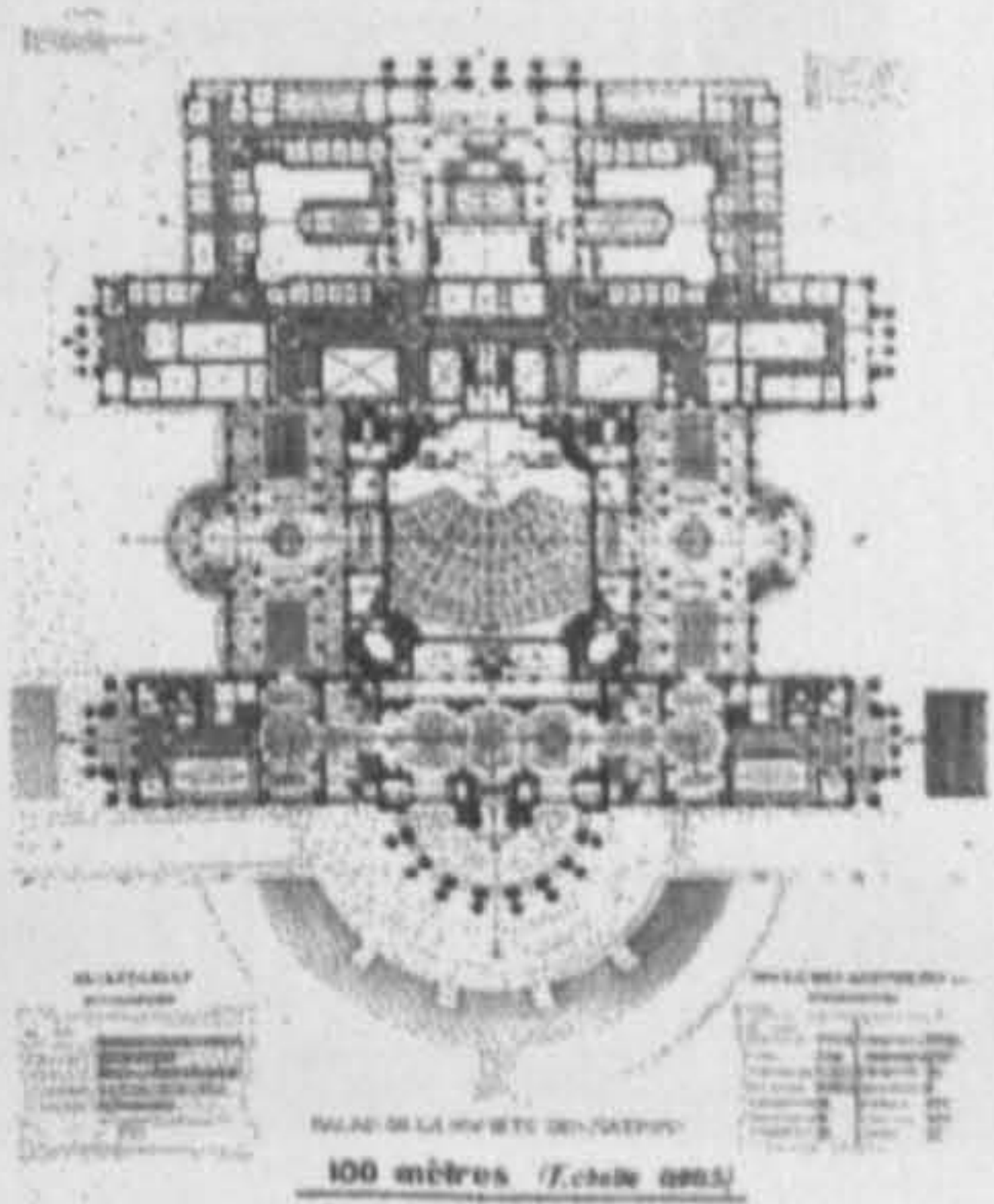
N.E. Eriksson

The architects Nenot & Flegenhaimer were eventually chosen to develop a new project for the League, in collaboration with Broggi, Lefevre and Vago. H.-P. Nenot, already an old man, was killed in a car crash during the project, and G. Vago, more than anyone else, was responsible for the final design.

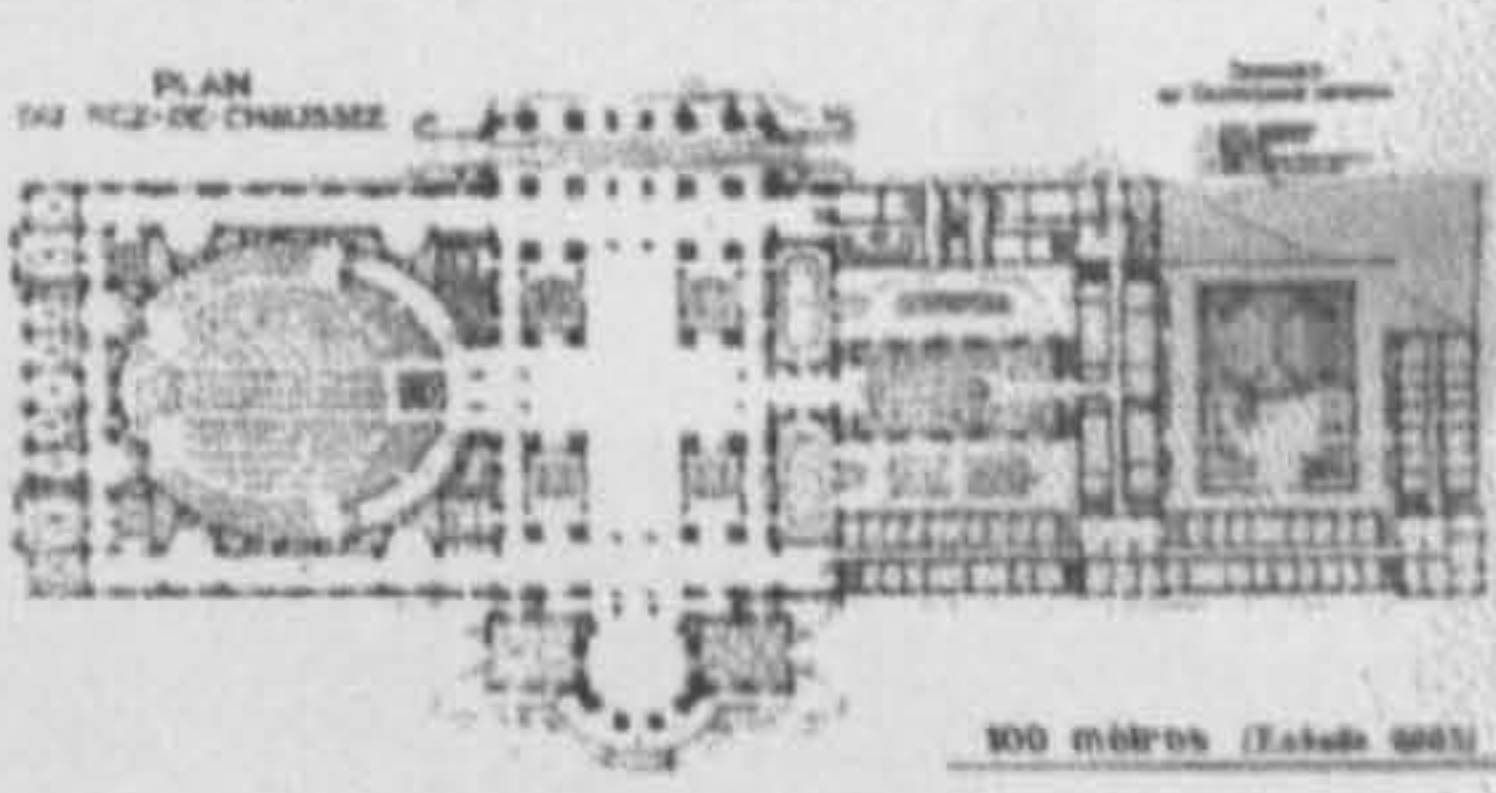
'Academics'



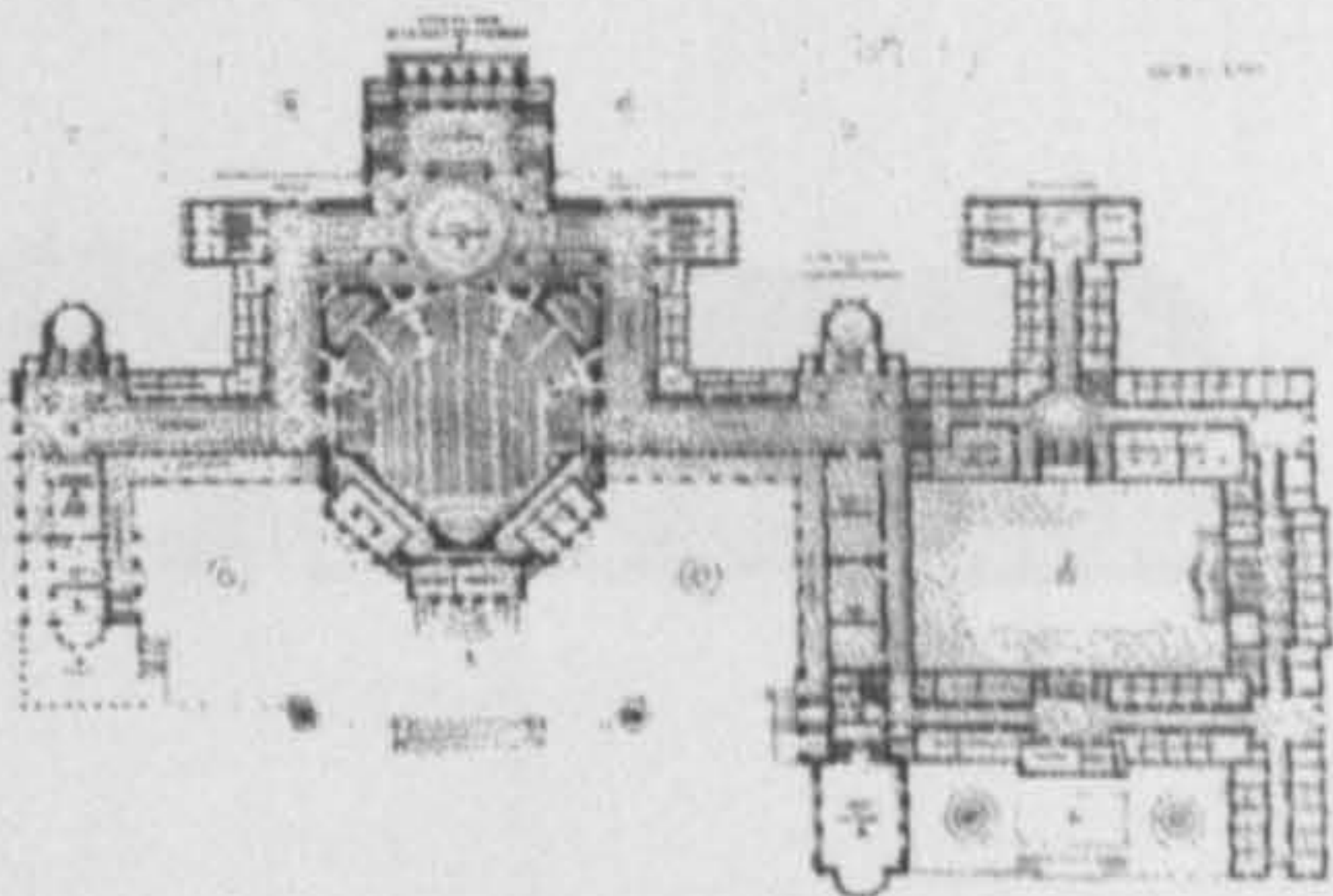
Nenot & Flegenhaimer



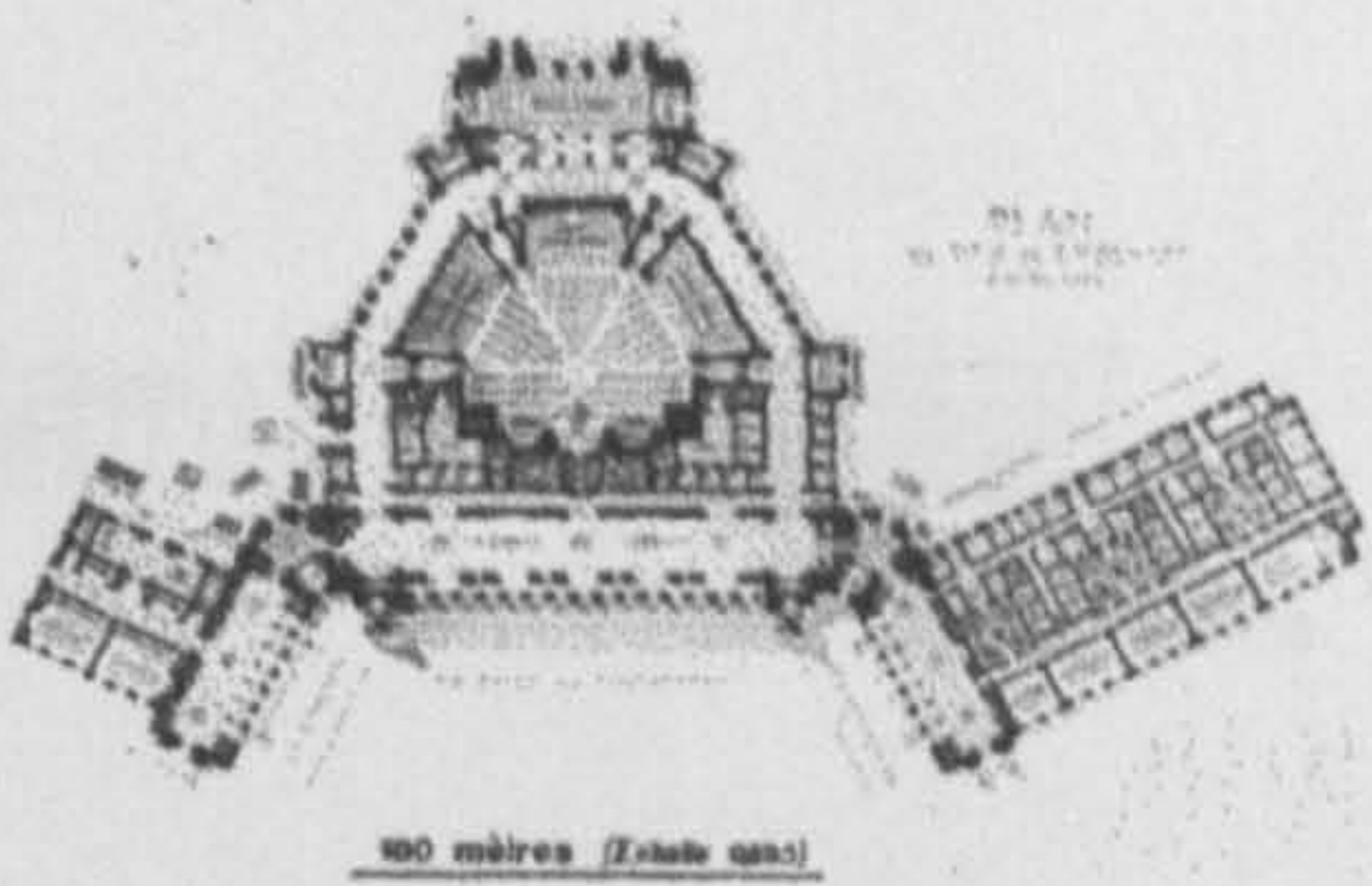
Broggi, Vaccaro & Pransi



C. Lefevre

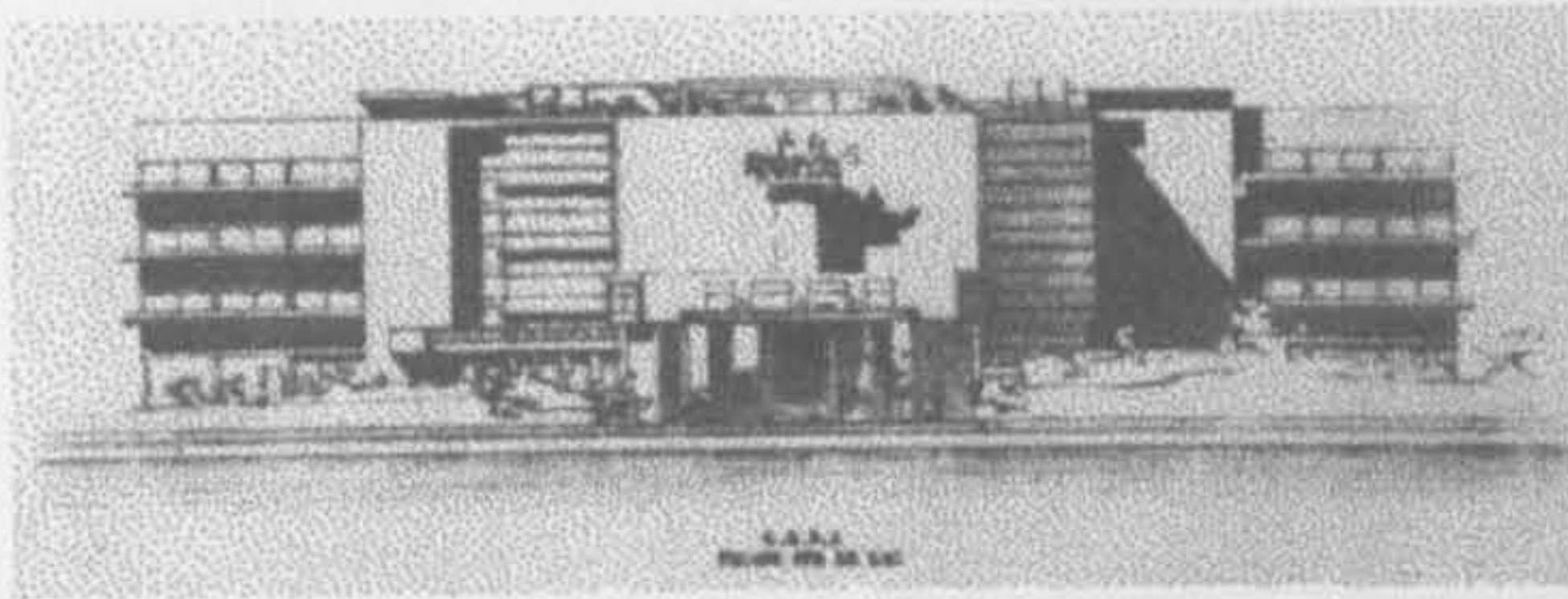


G. Vago



G. Labro

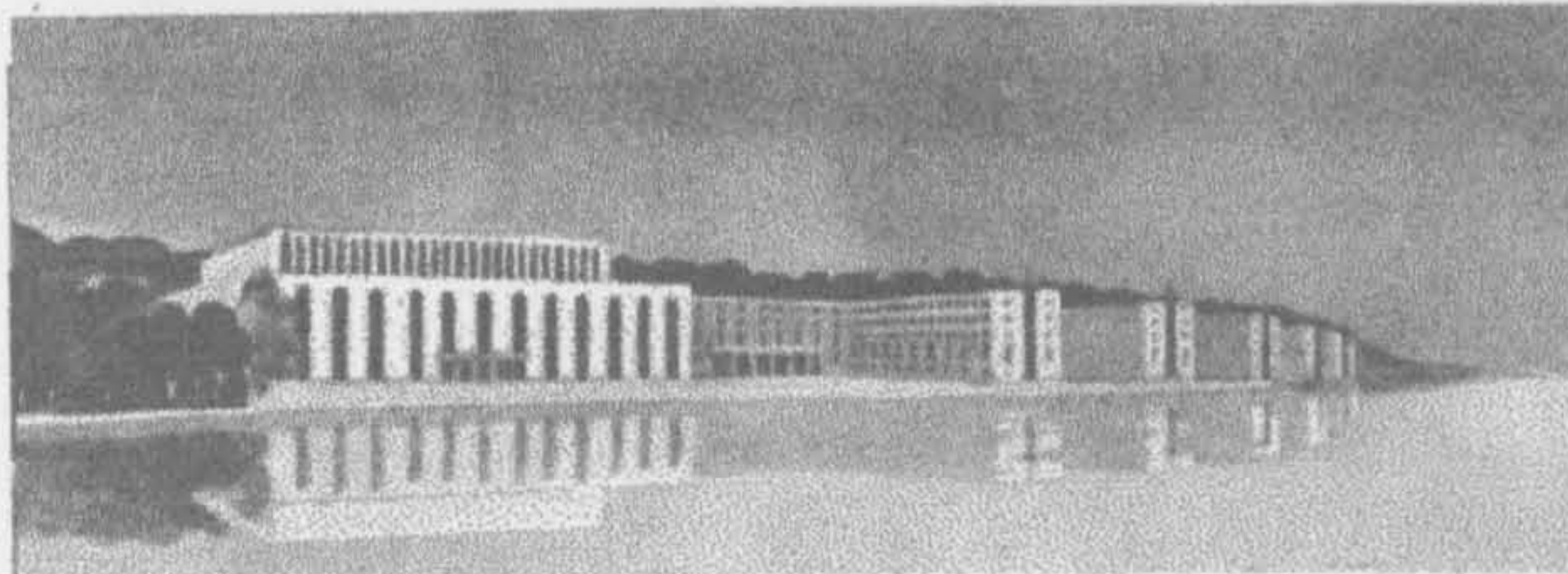
Comparative Elevations of Nine Winning Projects



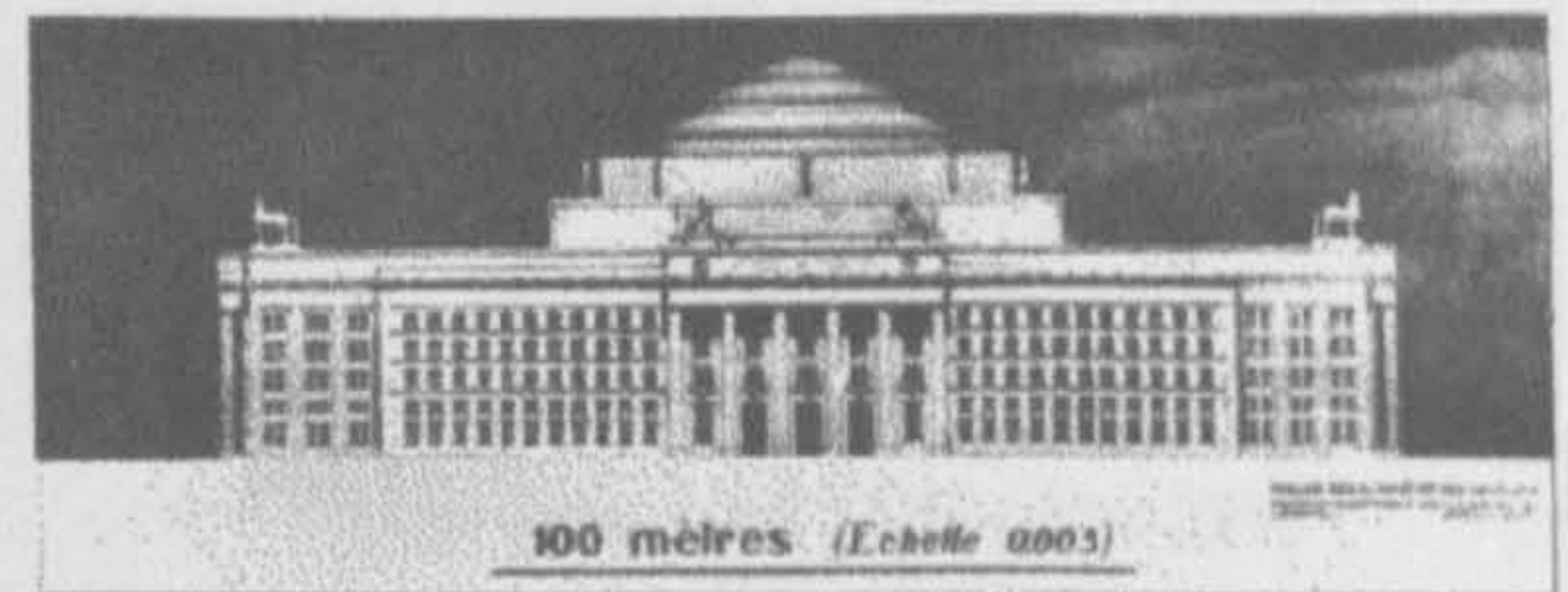
Le Corbusier & Pierre Jeanneret



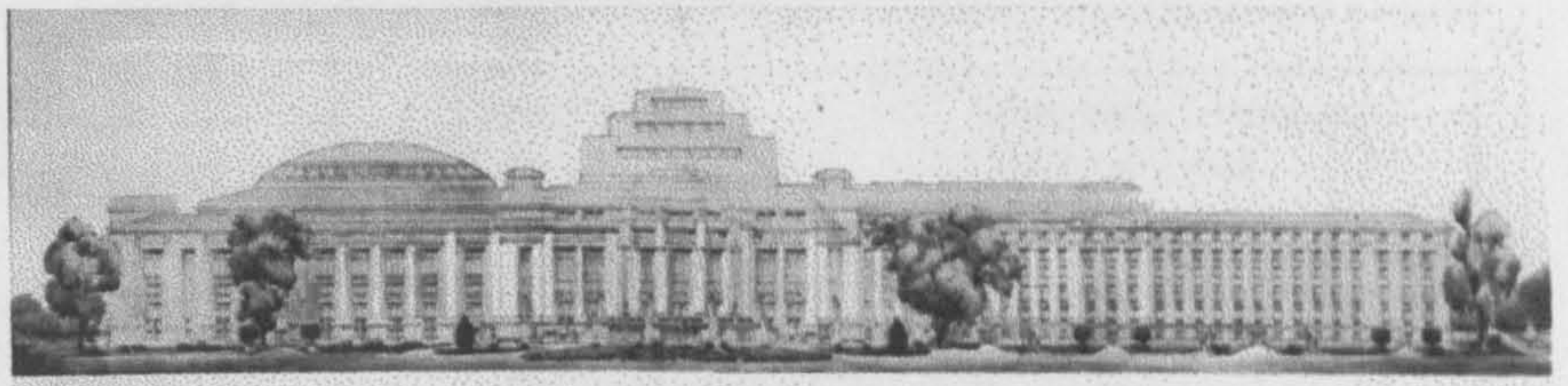
Nenot & Flegenhimer



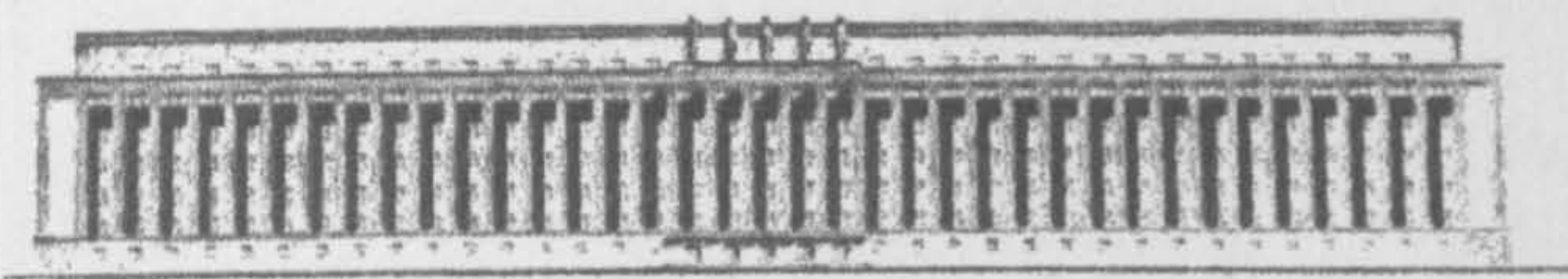
N.E. Eriksson



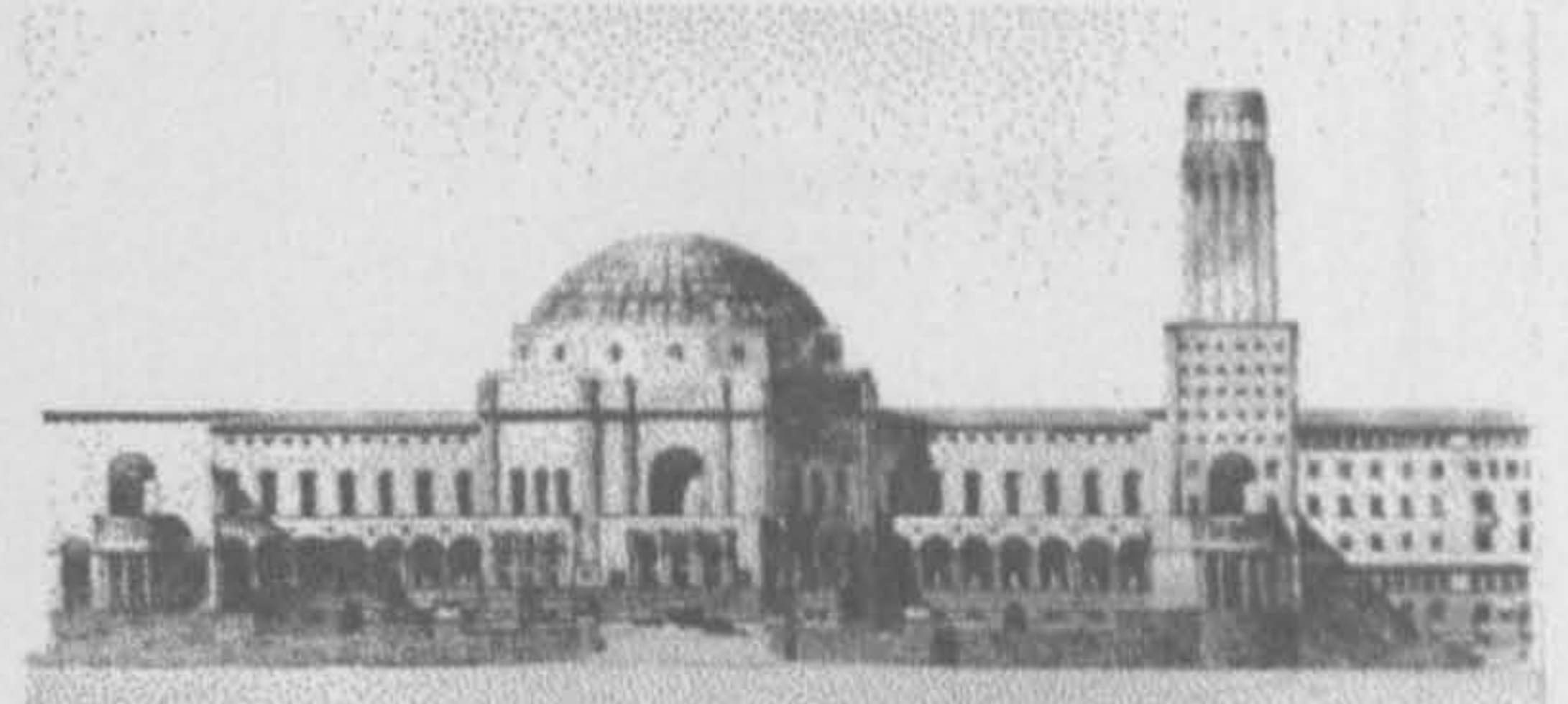
Broggi, Vaccaro & Pransi



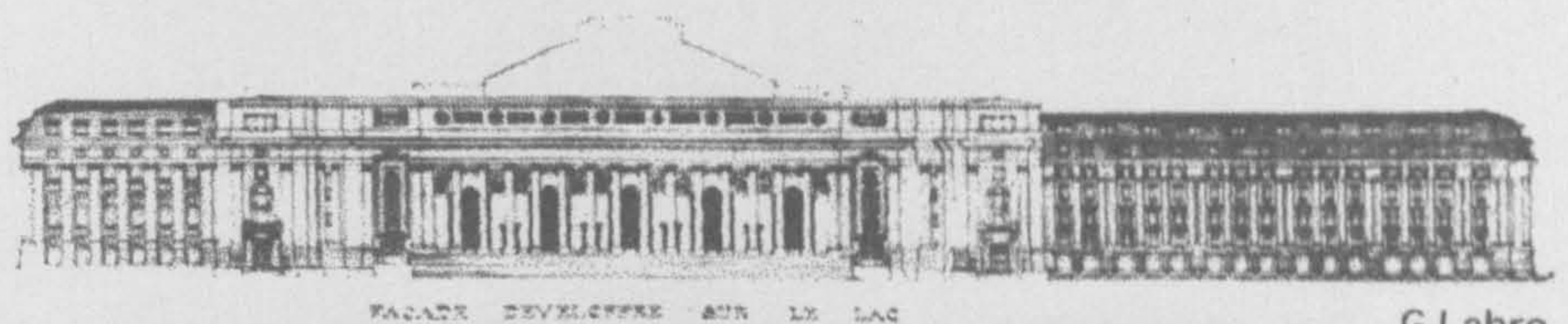
C. Lefevre



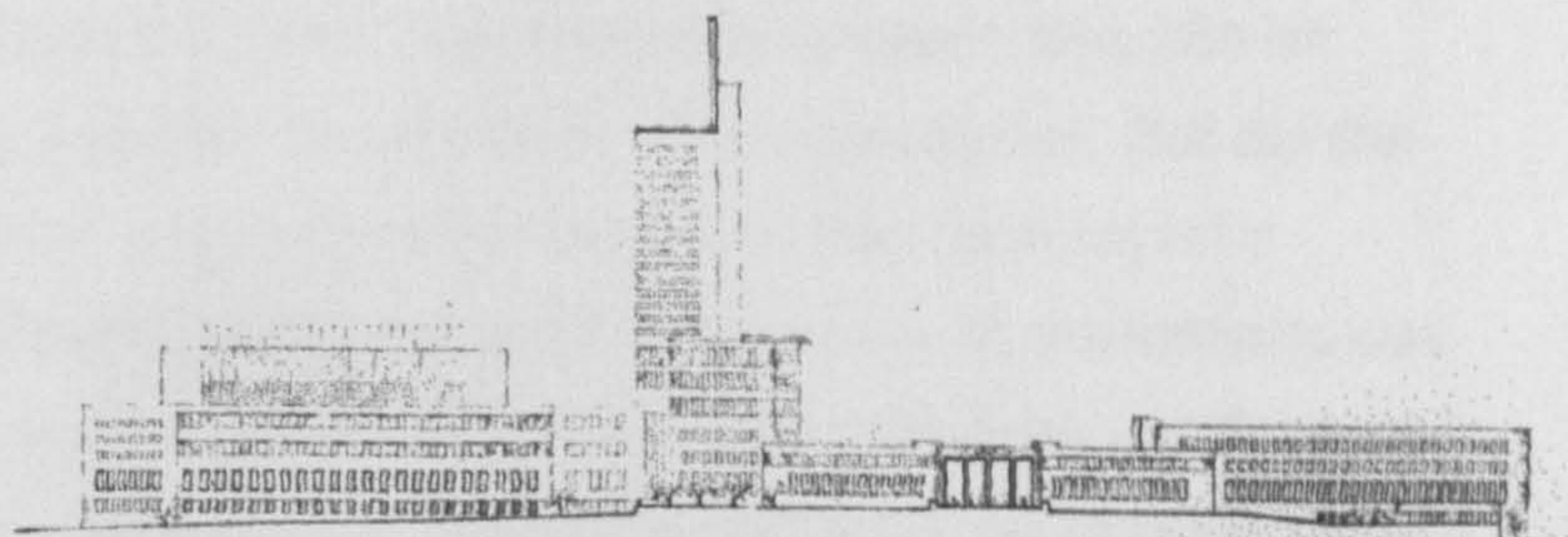
Putlitz, Klopheus & Schoch



G. Vago



G. Labro



Fahrenkamp & Deneke

Juror	First Prize Ex Aquo	1st Honourable Mention	2nd Honourable Mention
Modernist Jurors			
Berlage Holland	E.Fahrenkamp, A. Deneke Germany	Van Linge Holland	Rosen Holland
Hoffmann Austria	E.Putlitz, R.Klophaus, A.Schoch Germany	Fischer-Speidel Germany	Ahlberg Sweden
Moser Switzerland	Le Corbusier, P.Jeanneret Switzerland	Bonatz-Scholer Germany	Meyer-Wittwer Switzerland
Tengbom Sweden	N.E.Eriksson Sweden	W.Olsson Sweden	Birch-Lindgren Sweden
Chairman			
Horta [Chairman] Belgium	C.Lefevre France	P.&L.Guidetti France	Hendrick-de Ligne Belgium
Academic Jurors			
Burnet Britain	G.Vago Italy/Hungary	Wijdeveld Hollande	Laverriere-Thevenaz Switzerland
Gato Spain	H.P.Nénot, J.Flegenheimer France/ Switzerland	Boileau-Le Bourgeois France	Lambert-Legendre- Camoletti France/ Switzerland
Lemaresquier France	G.Labro France	Patouillard France	Luthmann-Wouda Holland
Muggia Italy	C.Broggi, G.Vaccaro, L.Franzi Italy	Boni-Boari Italy	Piacentini-Rapisardi- Mazzoni Italy

As we know, Karl Moser had identified Le Corbusier's project from the photograph sent by Roth and then picked it as his choice for first prize. From Roth's account and from Moser's own letters to his wife during the competition, he was an honourable man: he tried not to let this knowledge influence him, and his conclusion that Le Corbusier's project was the best was an honest one. But did the other jurors pick their winners guided by anything other than local stylistic preferences? There is no evidence to suggest that the anonymity of the entrants was breached anywhere else. And yet Lemaresquier's choice for first prize was Georges Labro, one of his own pupils. Who can say whether something in his drawing style,

or some distinctive architectural device in his composition might have identified Labro to his master? Looking at the complete selections, it is striking that the Italian Muggia selected only Italian prizewinners, and the Swede, Tengbom, selected only Swedish entrants. The winning Swedish entries are recognisably in the Swedish Neoclassical style, and Tengbom, teacher of many Swedish architects must have been responsive to the visual nuances of these projects. As for Muggia, his choices for 1st prize and second honourable mention [Broggi and Piacentini respectively] are understandable from the surviving perspective views - they both exhibit that heavy, militarised classicism which was to blossom in Italy in the Fascist years. His choice for first honourable mention, a project by professors Boni and Boari of Rome - is more perplexing: a massive, anonymous Beaux-Arts block without any regional clues.

Many accounts of the competition, including Le Corbusier's book *Une Maison Un Palais* - which may be the source of all the rest - say that the Le Corbusier-Pierre Jeanneret project was marked out as the likely winner early in the judging process, until Lemareshquier had it disqualified because the drawings had been mechanically reproduced, and the competition rules specified that the drawings should be in india ink.¹⁶ In the absence of the jury minutes, this cannot be verified. Certainly Lemareshquier opposed Le Corbusier's project: what exponent of the Beaux-Arts would not have done so? But did Lemareshquier suspect the identity of the author of project no. 273? It is possible that Le Corbusier's drawing style, and devices such as the *fenêtre en Longueur* and *pilotis* were recognisable to any informed observer, and Le Corbusier, a skilled self-publicist, had already published three books and his *Pavillon L'Esprit Nouveau* had caused a scandal in Paris two years previously¹⁷. Also the two had already encountered each other, if not in the flesh, at least by reputation. Donald Drew Egbert relates the story:

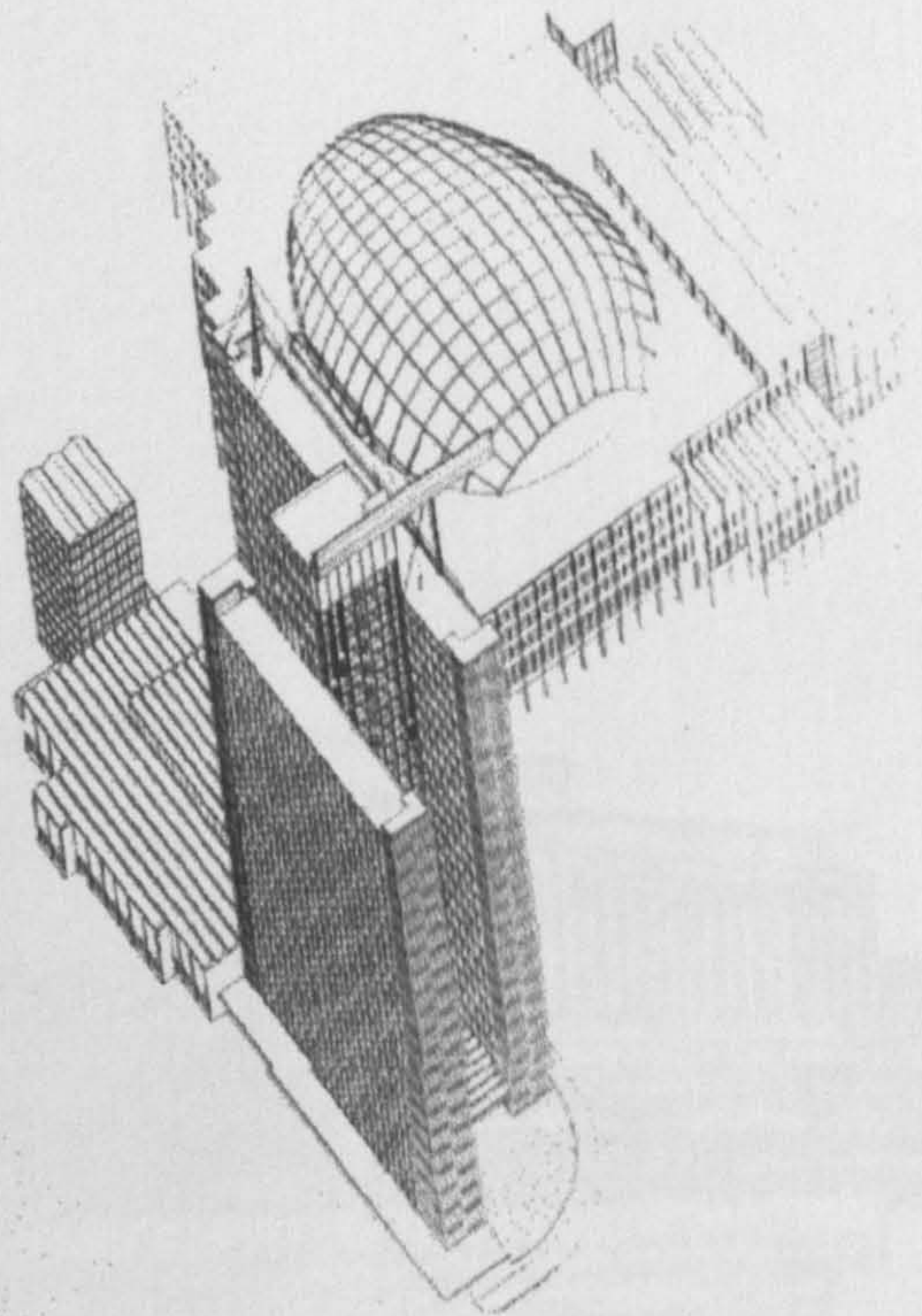
In 1923 several of the more progressive students in Laloux's *atelier* became unhappy, especially at his choice for a successor as *chef d'atelier*, Charles Lemareshquier [...]. With friends from another *atelier*, they went to Le Corbusier to persuade him to become the patron of an *atelier extérieur* even though he had never attended the Ecole des Beaux-Arts. He declined to do so but suggested that they approach Auguste Perret, in whose office Le Corbusier had worked for some months in 1909. Perret (who in fact disliked Le Corbusier) agreed to head the new *atelier*, which opened in 1924.¹⁸

Of the winning entries, two are particularly significant for the Modern Movement: the projects of Le Corbusier and Pierre Jeanneret, and of Hannes Meyer

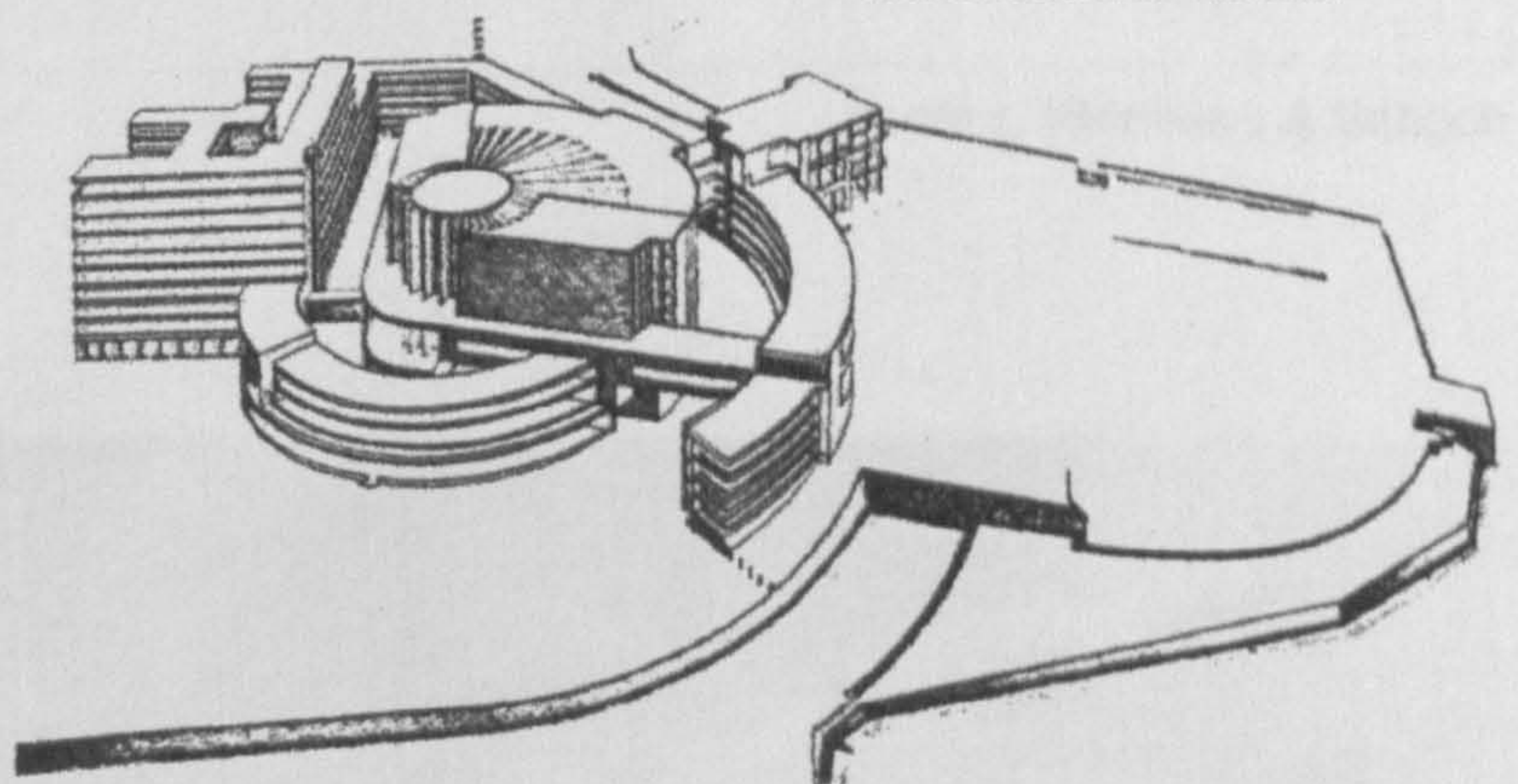
and Hans Wittwer [fig. 28]. Both of these were selected by Karl Moser -1st and 3rd places respectively. [His choice for 2nd place was a modest, uncontroversial scheme by Bonatz and Scholer which sits oddly with the other two]. Hannes Meyer's architectural vision was strikingly utilitarian, and the forms he used and the way he arranged them are unique in the context of this competition. This is partly explained by the exclusion of Bolshevik Russia from the League: there are only a couple of other surviving entries using remotely constructivist forms; the radially arranged scheme by Lachert, Szanajca and Hempel [fig. 29], and the proposal by Max Cetto, laid out like Nils-Einar Eriksson's prize-winning project, with a series of office blocks strung along the lake, but Constructivist rather than 'Neo-Classical'. Meyer's and Le Corbusier's projects share a modern construction method and the consequent use of pilotis. From that point on they diverge, but in 1927, Academic eyes saw only a shared, and inappropriate, factory aesthetic.

'Modernist' entries, mostly fitting Moser's category of 'Modernist without being Modern' are sprinkled throughout the catalogue of winners, and some of these were chosen by jurors with academic sympathies: Lemareshquier's third choice was a modernist scheme by Luthmann and Wouda [Holland], John Burnet's second choice was a modern project by Th. Wijdeveld with curious large-scale topiary gardens, while one of C. Gato's choices was the project by Boileau and Bourgeois, with its stepped Assembly Hall roof and deco styling¹⁹. Of course, many of the entries do not fit neatly into either modern or academic categories: an example is the project chosen for first prize by Joseph Hoffmann [Putlitz, Klopheus & Schoch]- probably the most severe of all the entries - which echoes Boullée's *Tombeau périptère*; it is only 'modern' when juxtaposed with the most elaborate Beaux-Arts schemes; it has a clarity of organisation that is unobscured by any but the most modest of decorations [fig. 30].

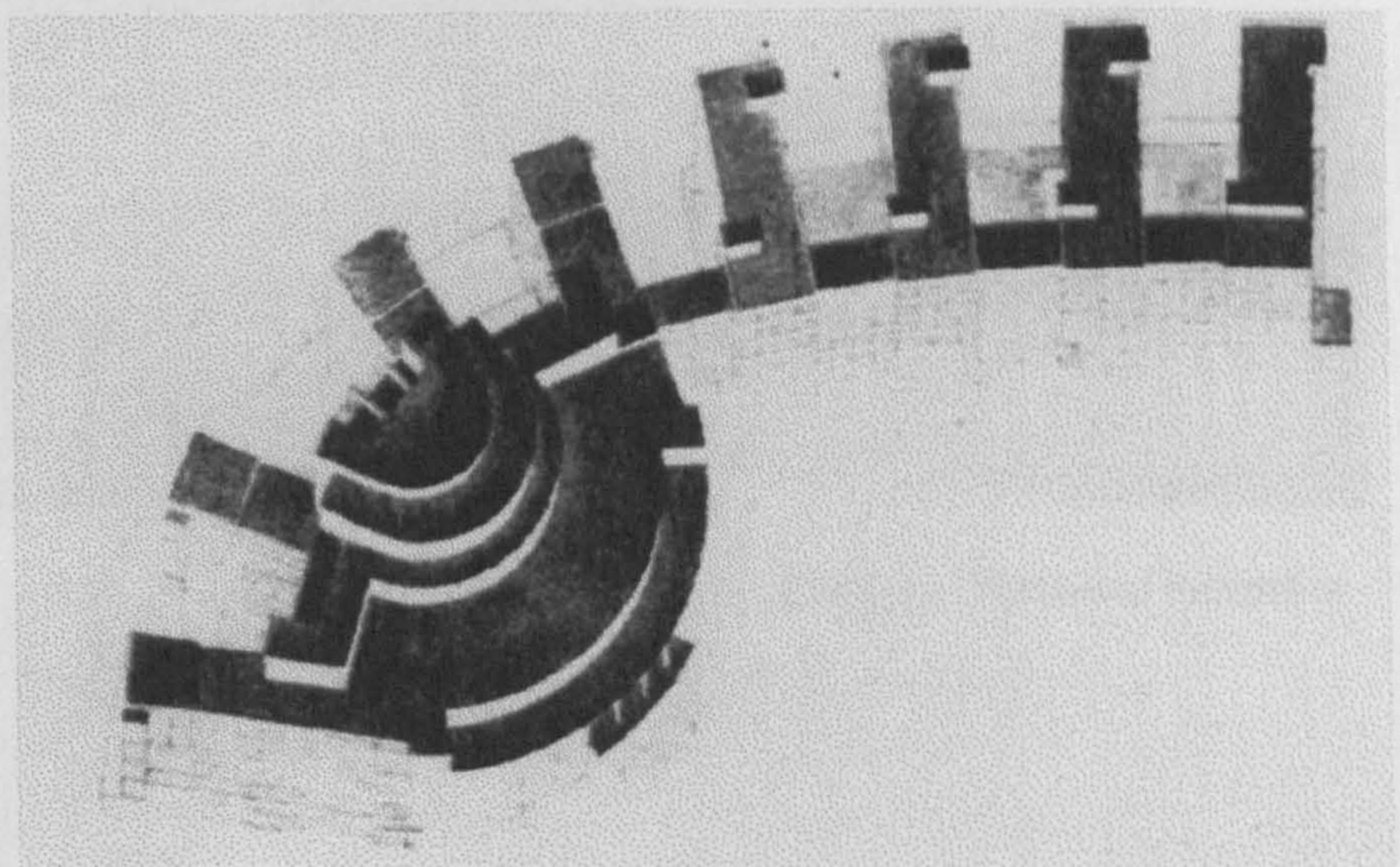
A majority of the winning entries use an arrangement of two or more linked buildings to accommodate the Assembly, Secretariat and Councils. As we saw, a solution that recurs amongst the winners and which was used both by Le Corbusier and by H.-P. Nénot, is that of two linked buildings with the Assembly building pushed towards the lake, and the Secretariat set back from it and to one side so that the envisaged future expansion would take place about an implied axis of symmetry:



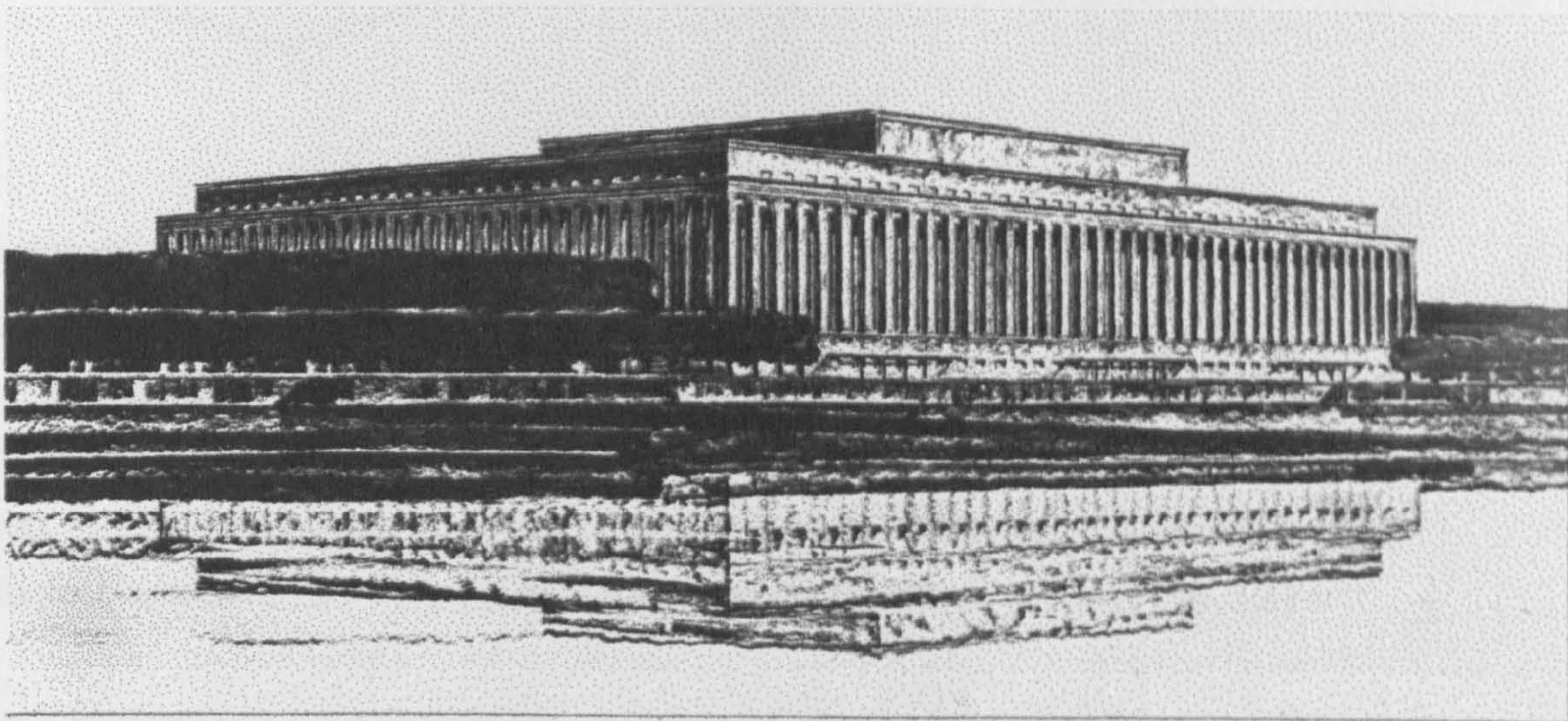
Hannes Meyer & Hans Wittwer
2nd Honourable Mention



B.Lachert, J.Szanajca & S.Hempel



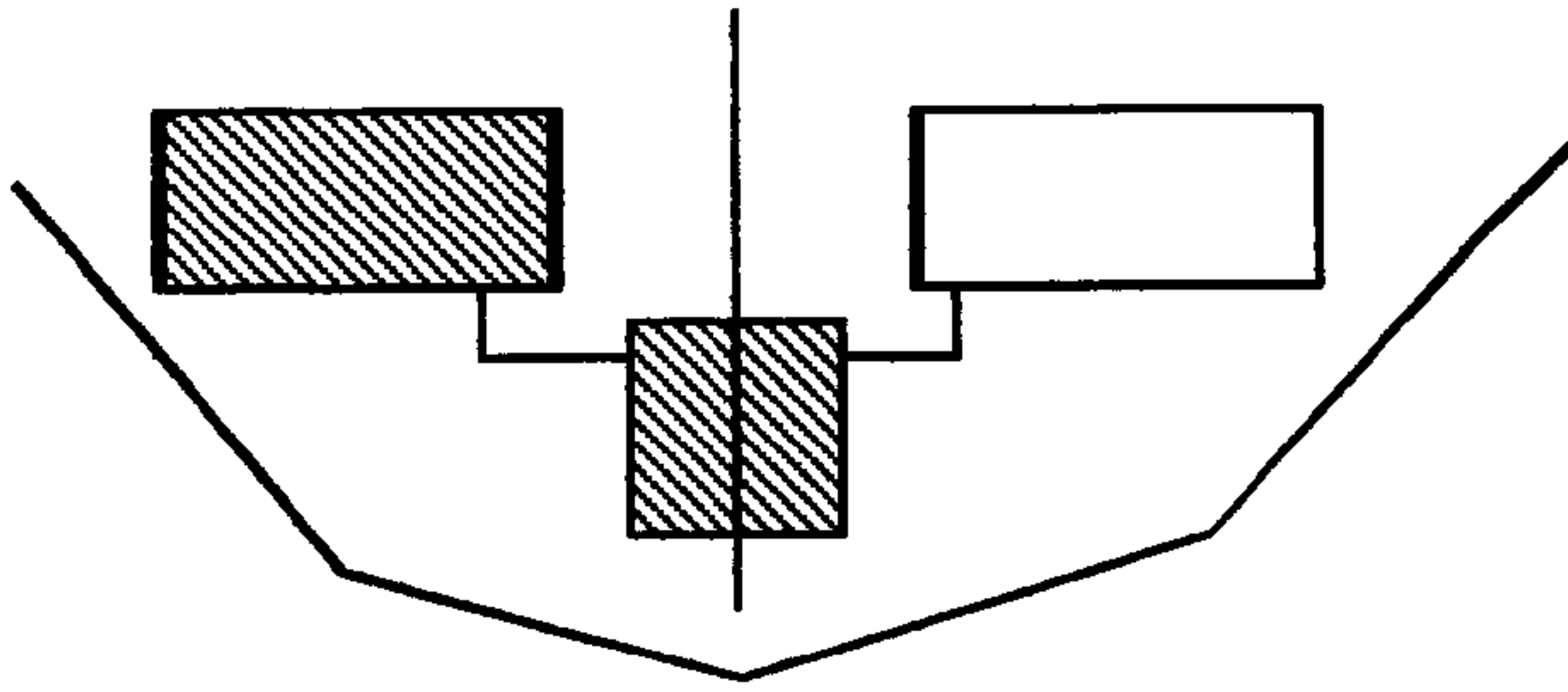
Max Cetto



Putlitz, Klopheus & Schoch



Boullée - Tombeau Périptère



Examples of this are illustrated in fig.31. The few, single-building solutions include the Putlitz scheme mentioned above, the strange, Neo-classical plan by the Swede William-Olson, and the Broggi-Vaccaro-Franzi project chosen by Attilio Muggia. The William-Olsson plan is organisationally very similar to the Putlitz scheme, but the front range of offices is pushed back on either side of the Assembly Hall to accommodate two colonnades inserted inside the rim of offices [fig.32].

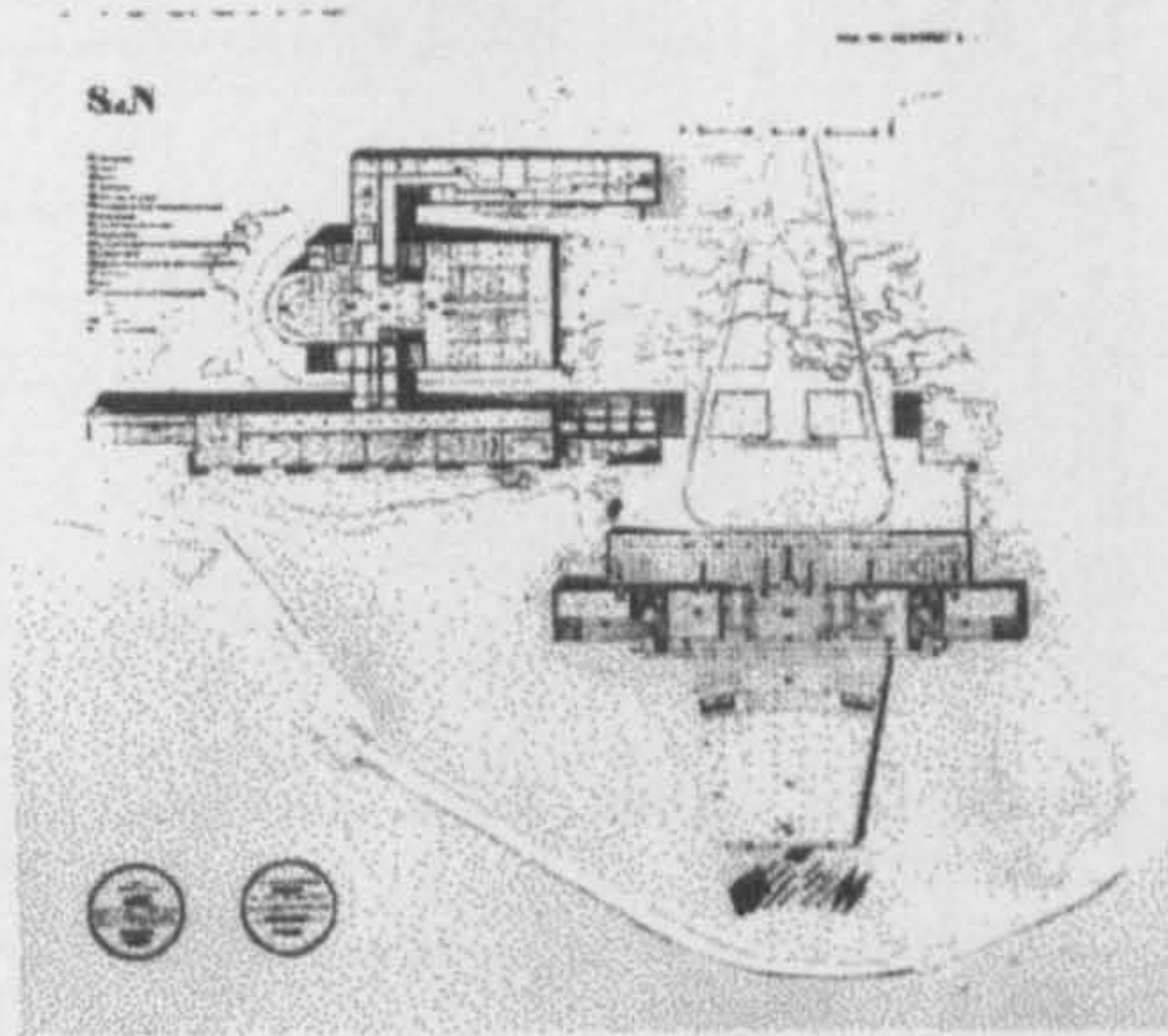
Public Reactions

Member countries took a great interest in the competition, and the general press and Architectural journals of each country published the winning entries and the entries of its own nationals²⁰. It is often said in later reports of the competition that there was a public outcry when the results were announced. What is true is that Le Corbusier and his supporters publicised his cause in those periodicals to which they had access in 1927. All the resultant favourable news items were published in *Une Maison* - Le Corbusier used a press cuttings service - and an examination of this collection shows the extent of Le Corbusier's influence: widespread throughout Switzerland, and among the French avantgarde. There were also some supporters in Belgium and Germany.

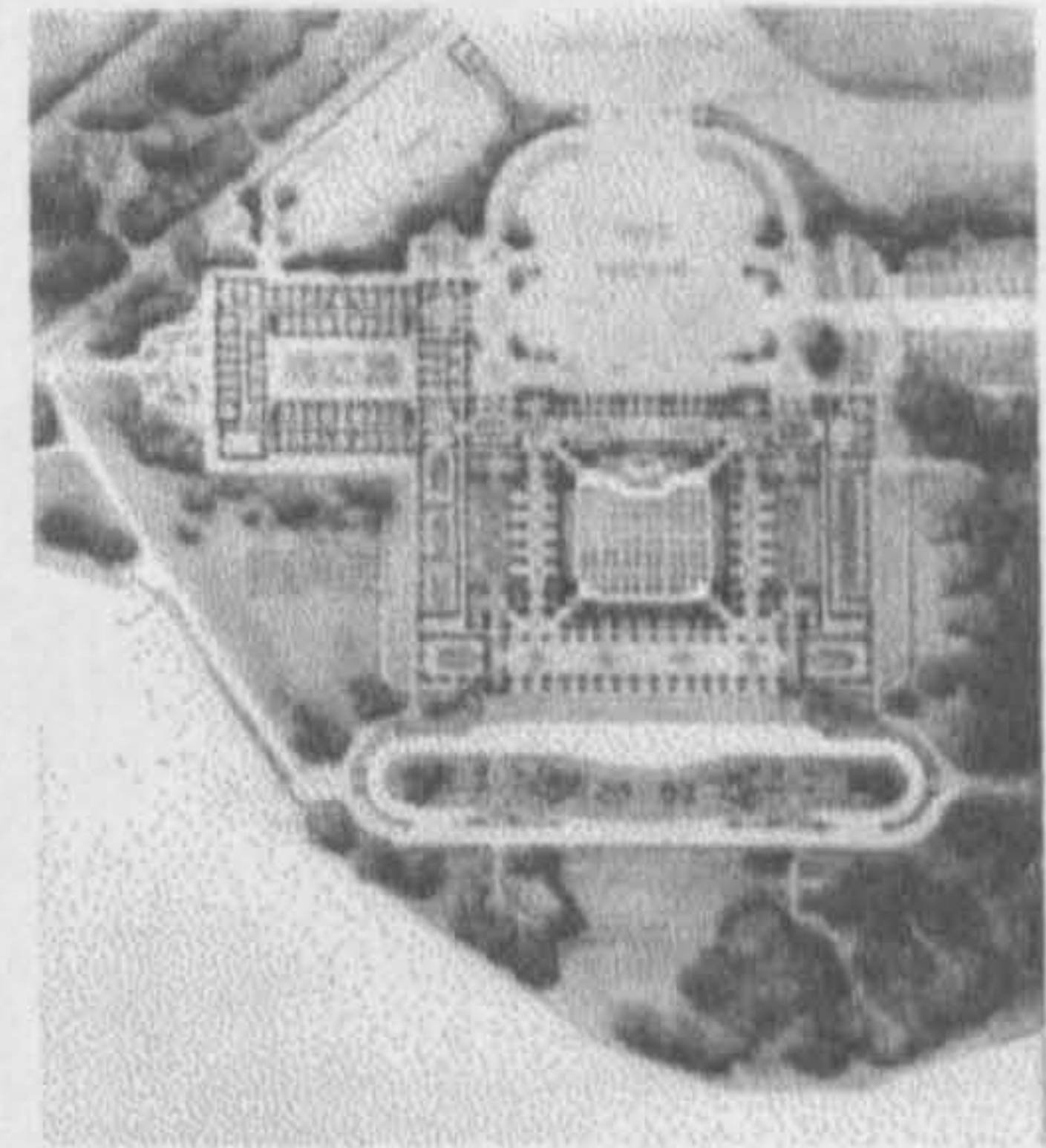
If Britain is at all representative, public reactions elsewhere were more muted: the competition was reported in both the national and the architectural presses, and certainly there was some disbelief that none of the 377 entries was found suitable. But the tone of the reportage, in Britain, at any rate, is less passionate than one would expect from Le Corbusier's account, and the fate of his project was not an issue. Of course, there were no British Empire winners at all and this may have contributed to English disinterest.

In Britain, the weekly journal *The Architect and Building News* published

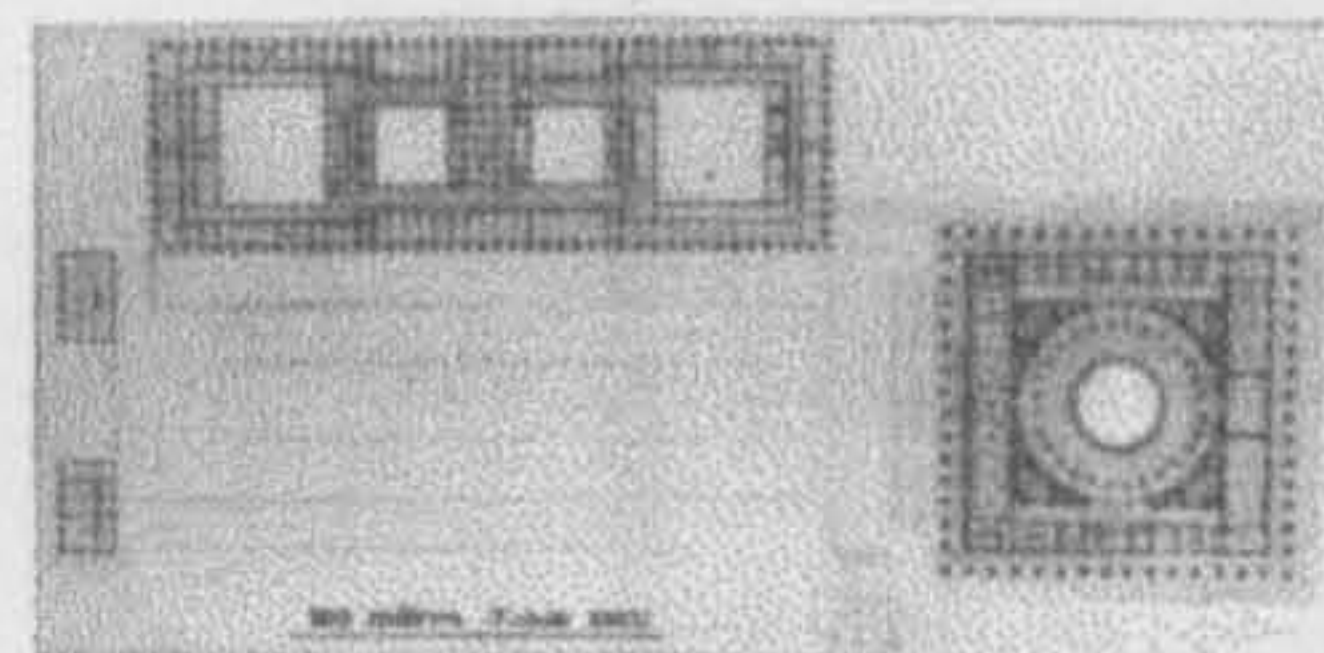
Winning Designs Plan Forms: two-building arrangements



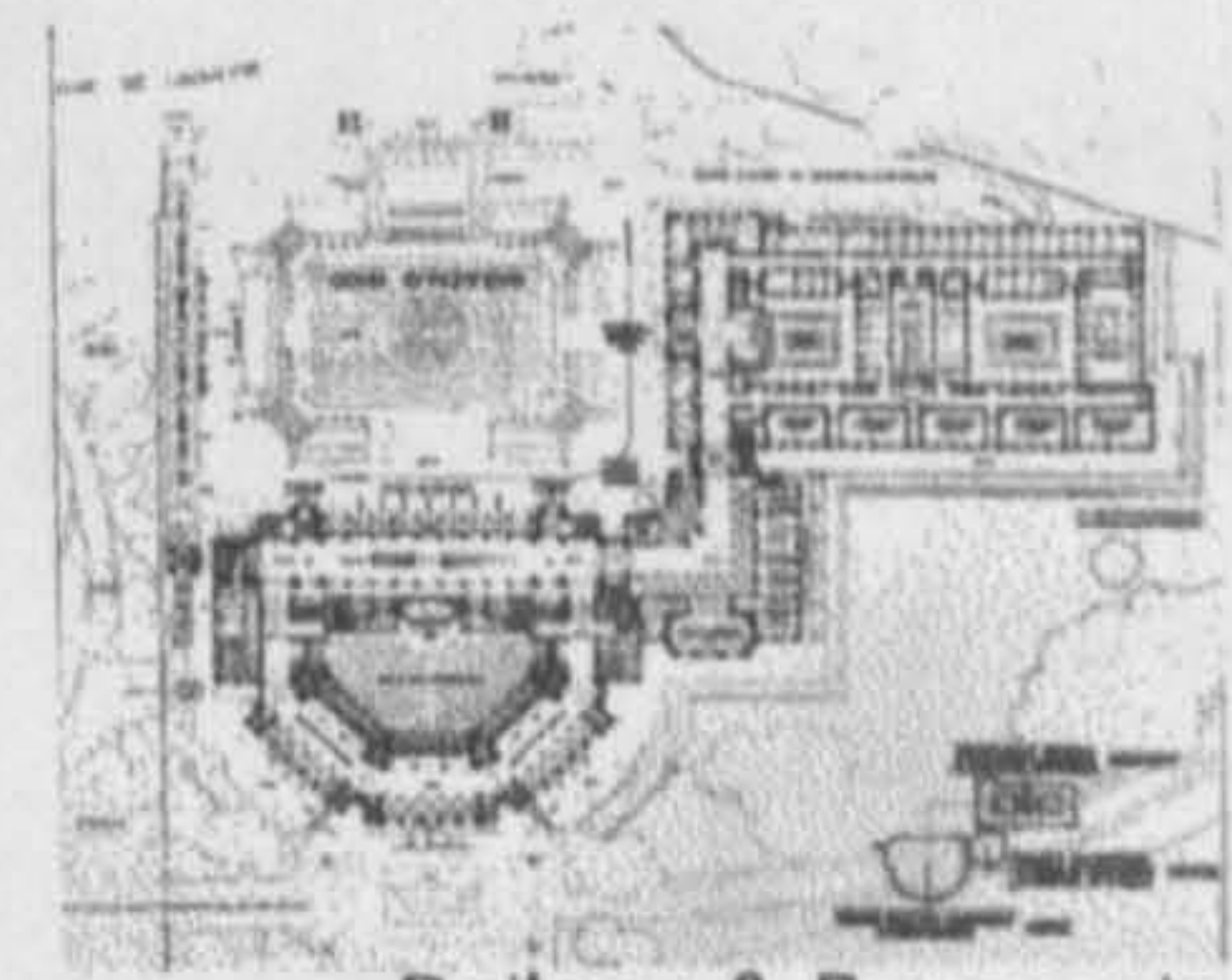
Le Corbusier & Pierre Jeanneret



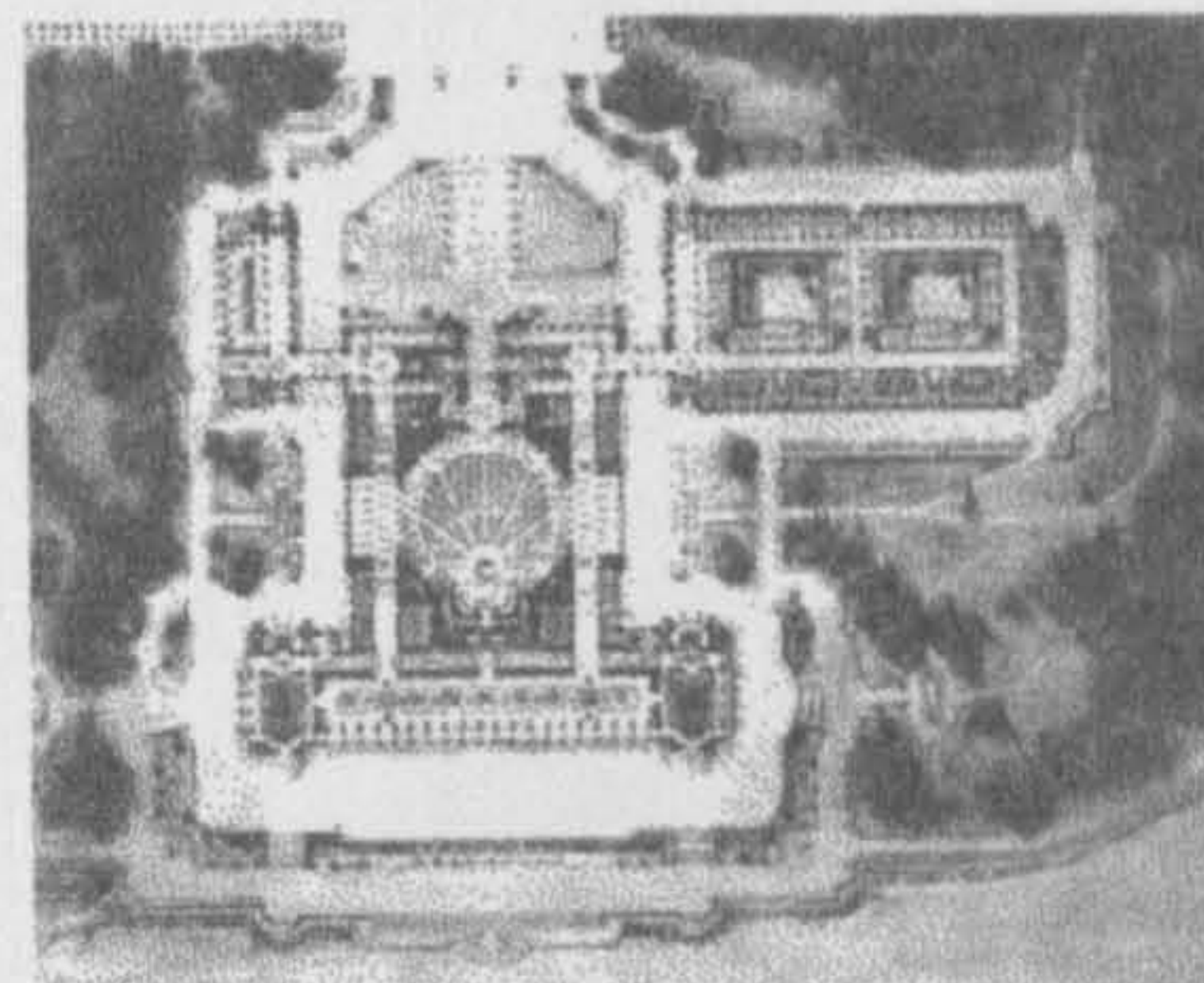
Nenot & Flegenheimer



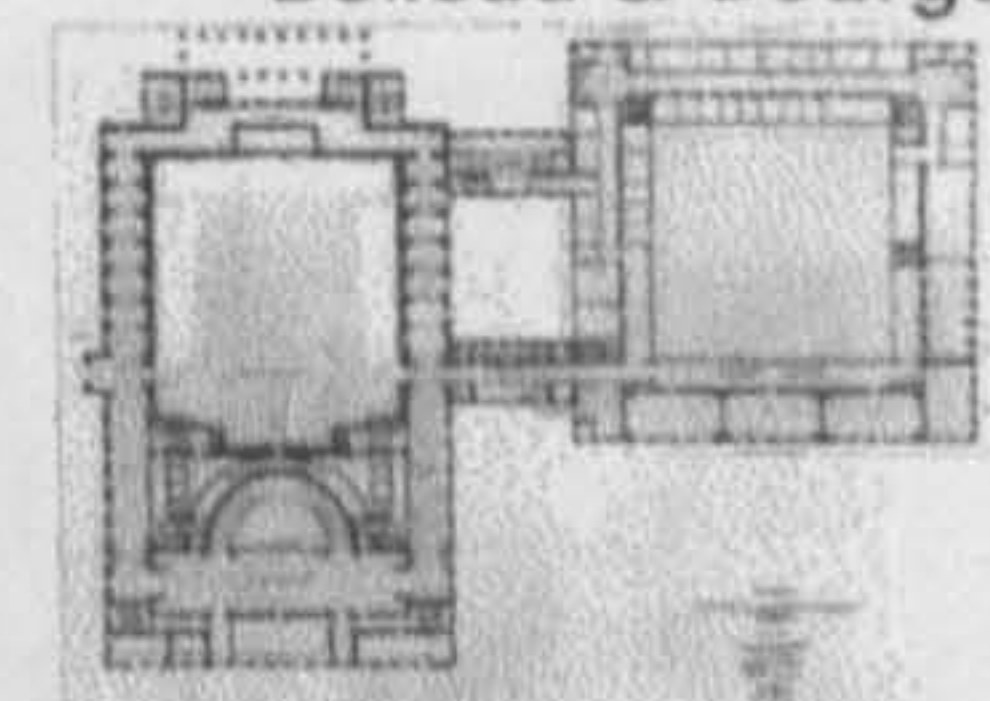
Birch-Lindgren



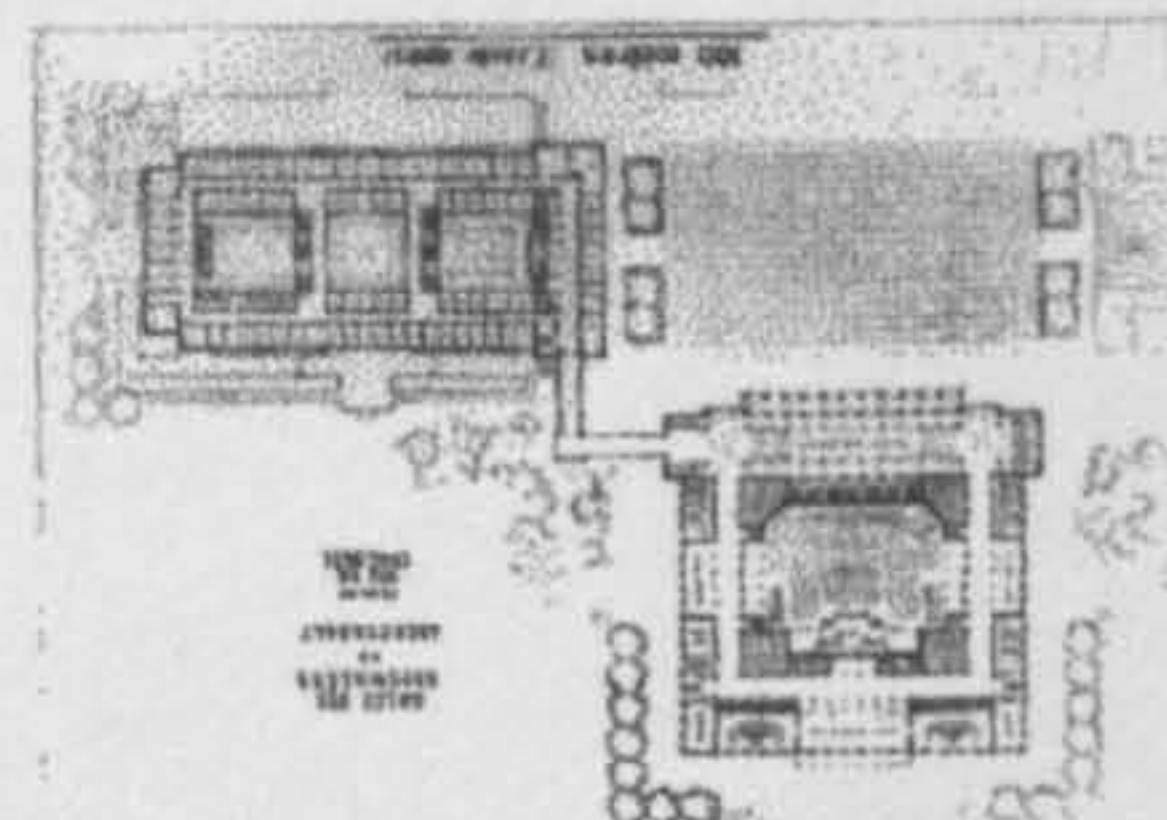
Boileau & Bourgeois



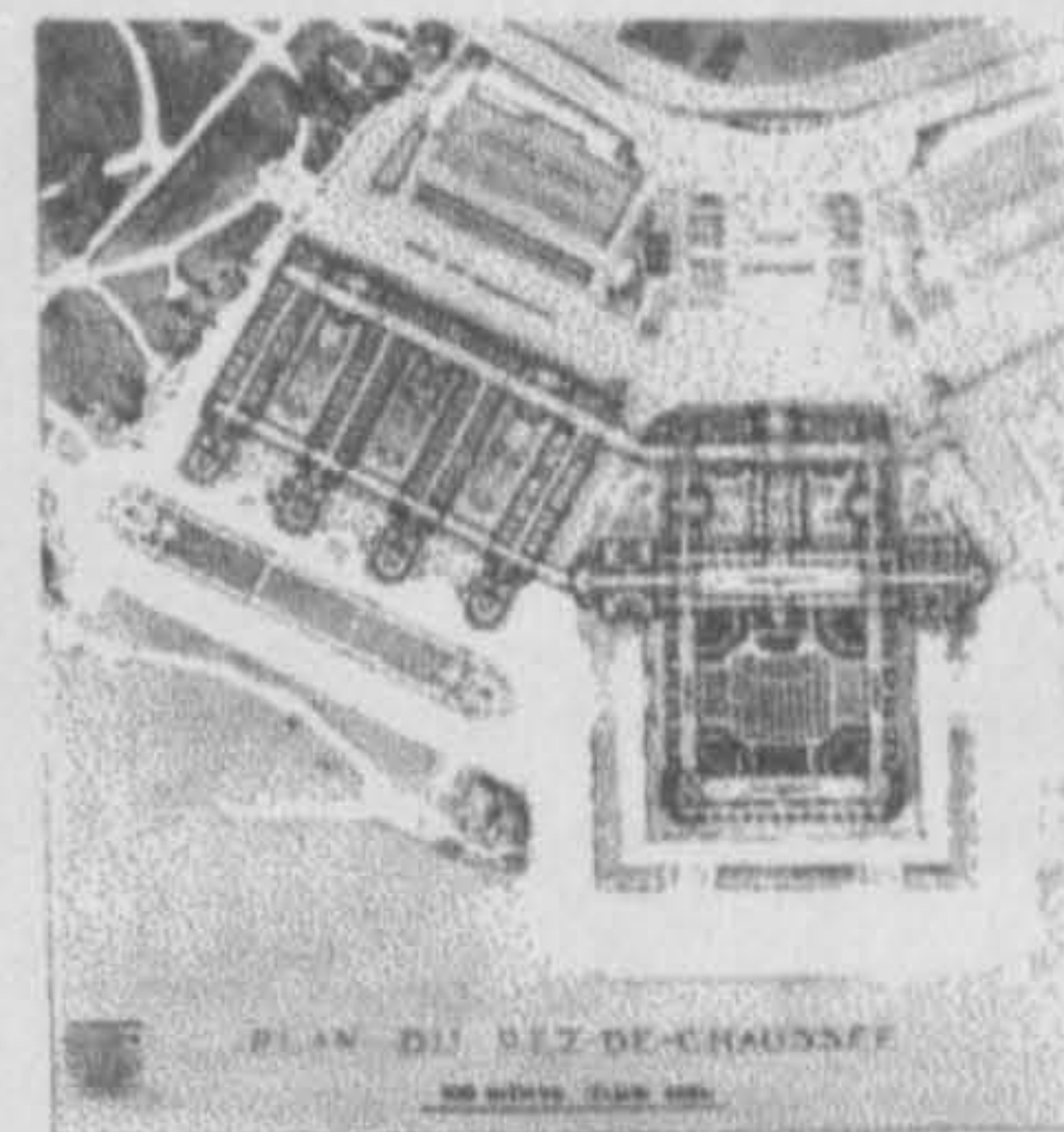
Lambert & Legendre



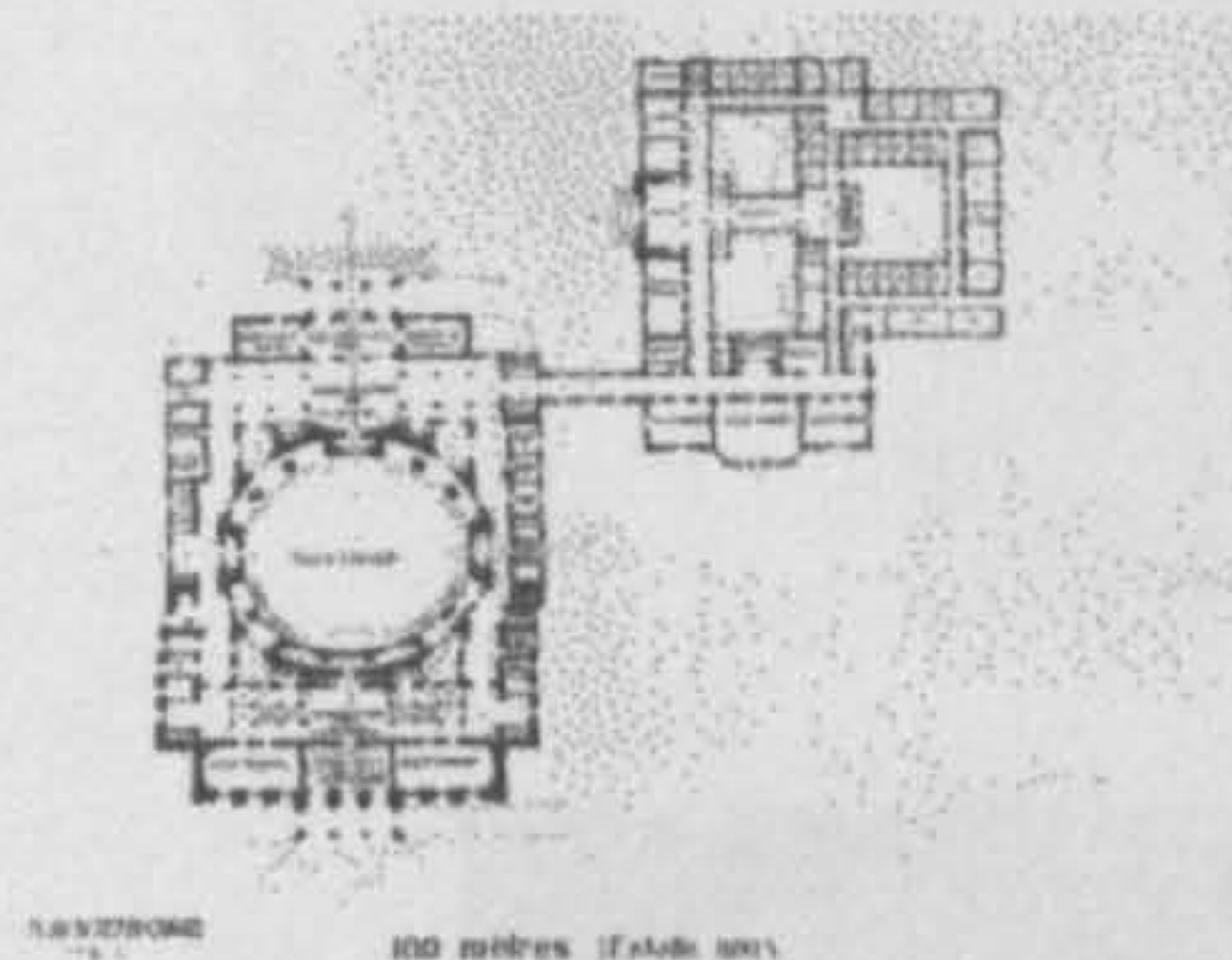
H. Ahlberg



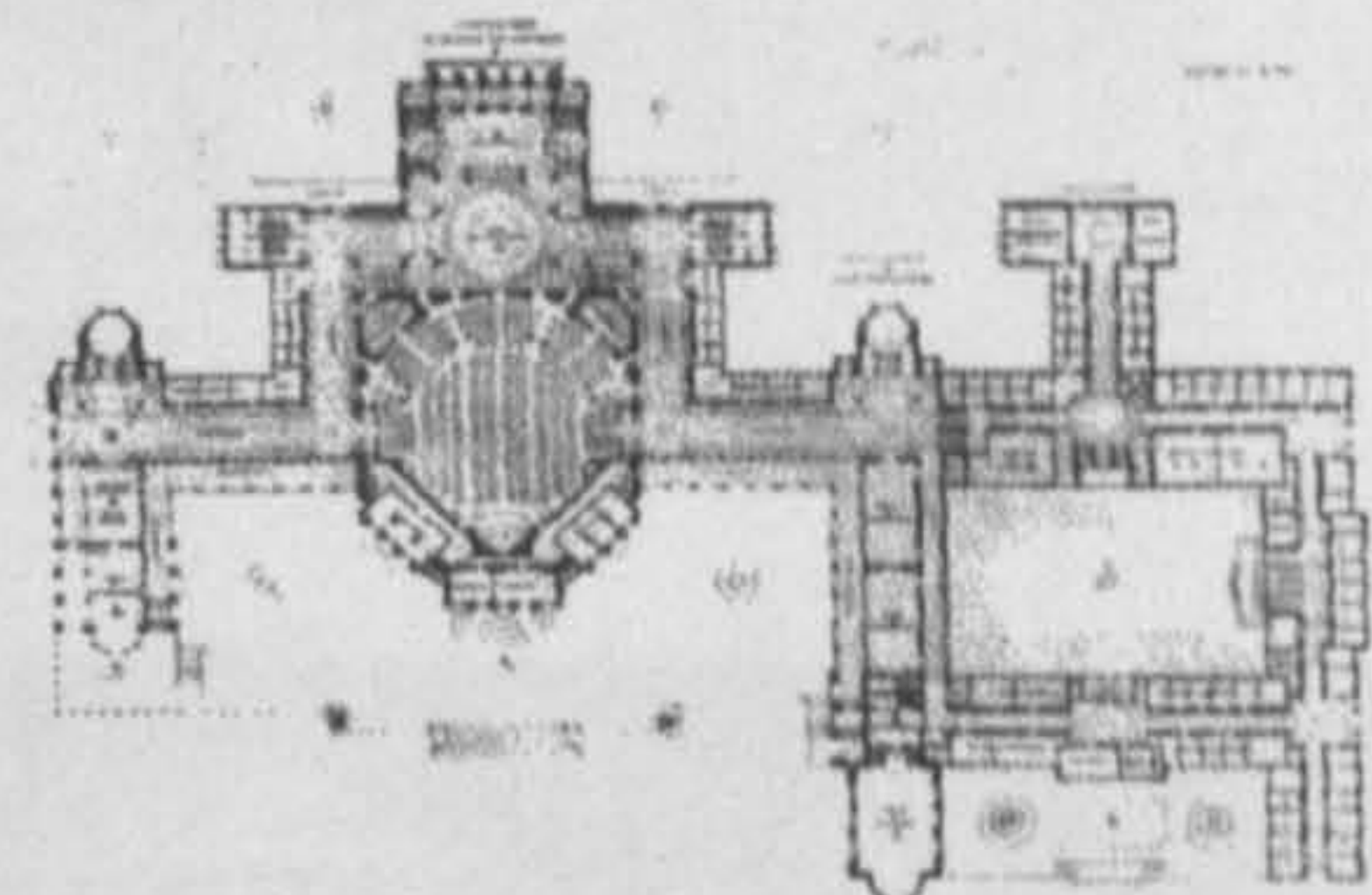
Lavierriere & Thevenaz



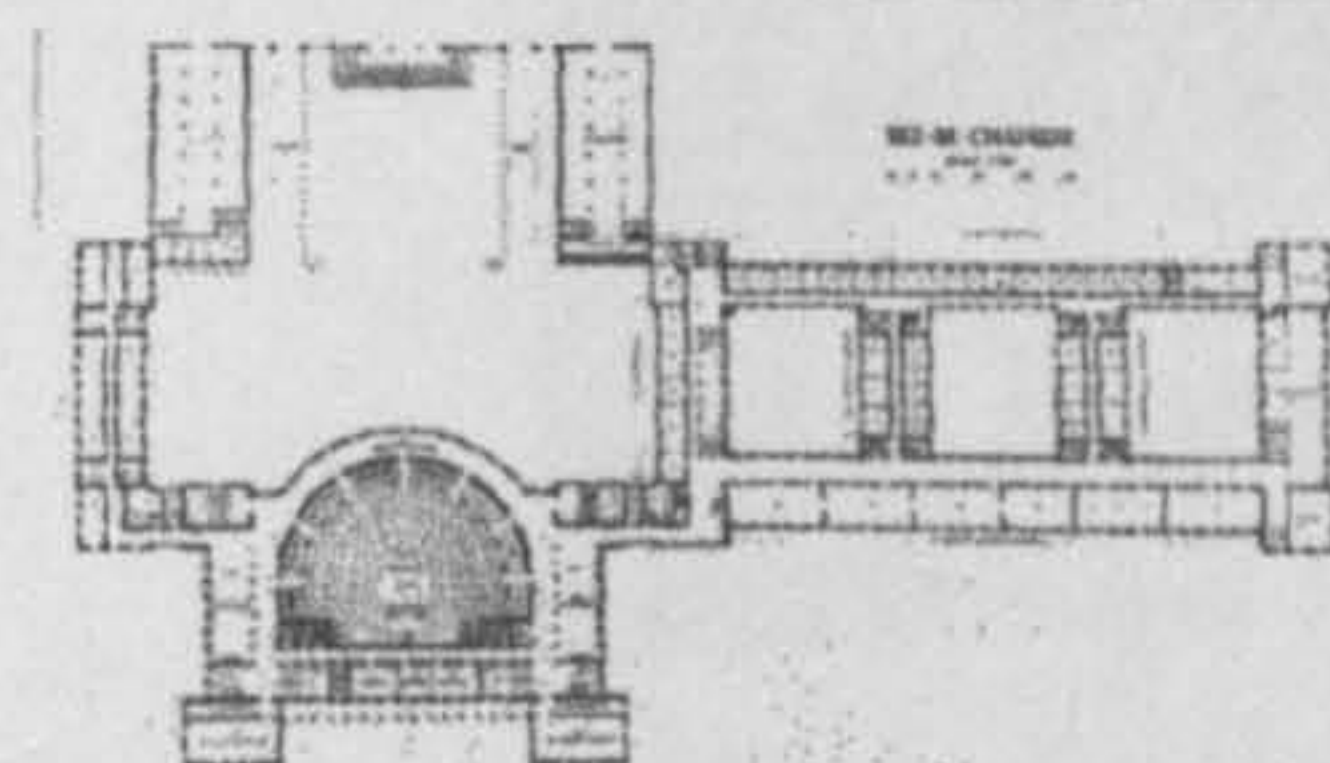
P. & L. Guidetti



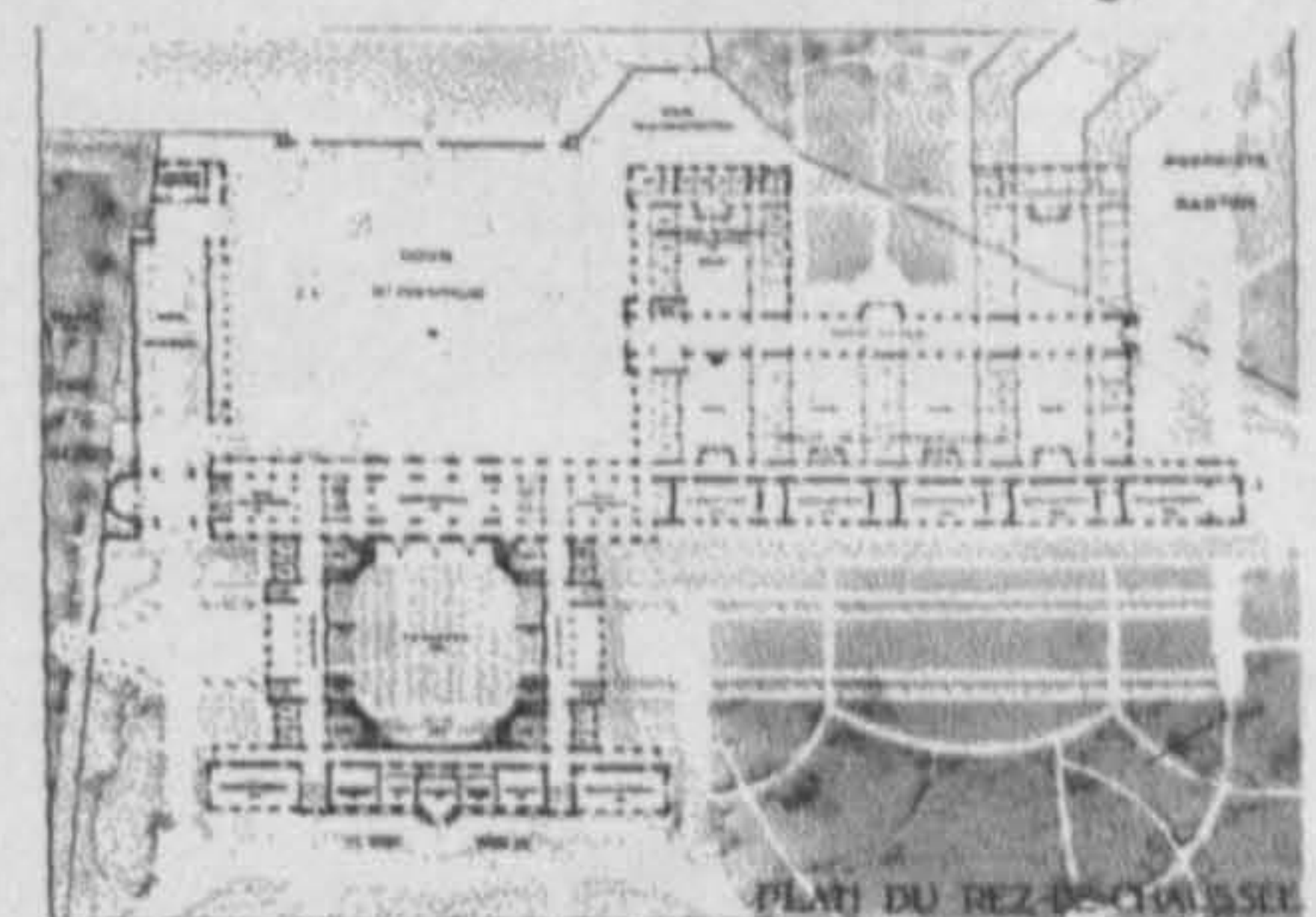
Piacentini, Mazzoni & Rapisardi



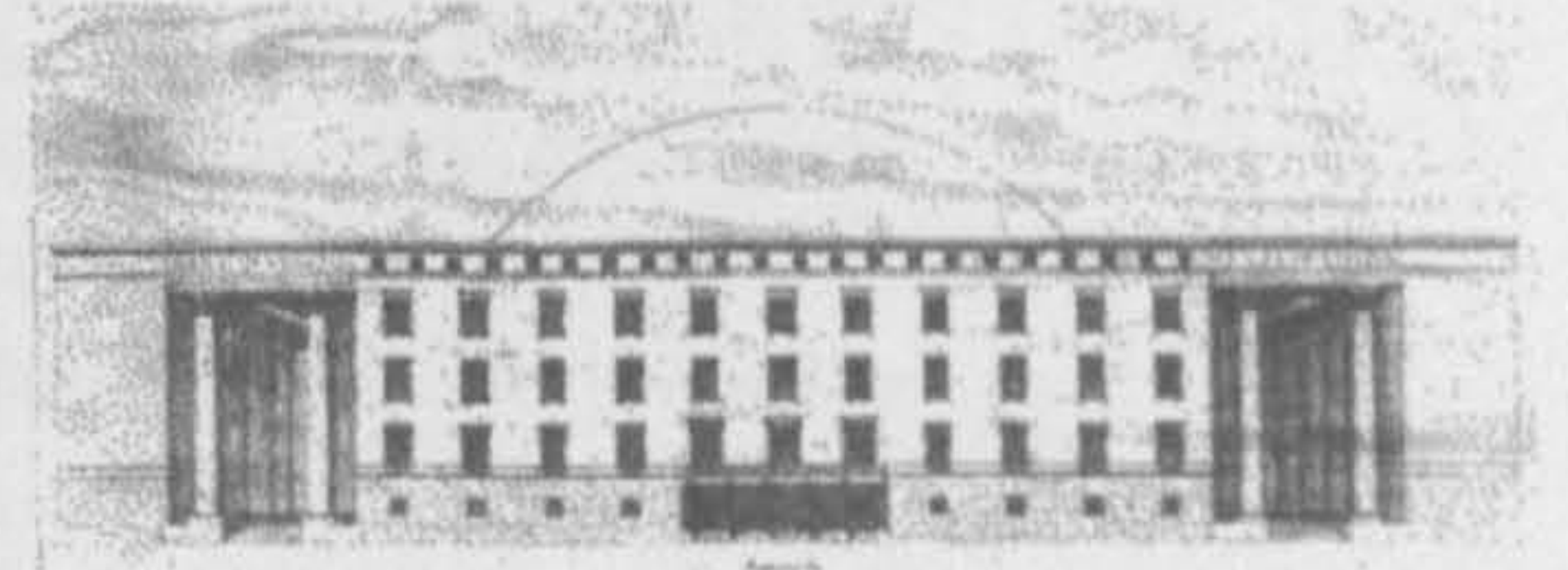
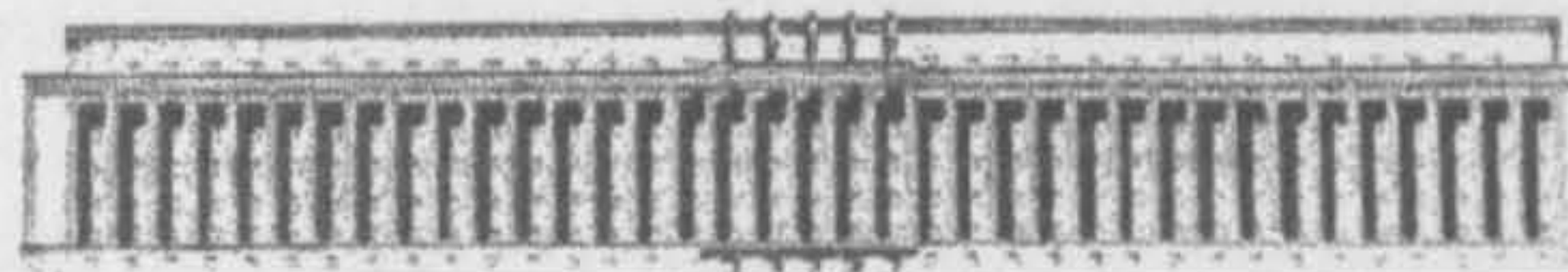
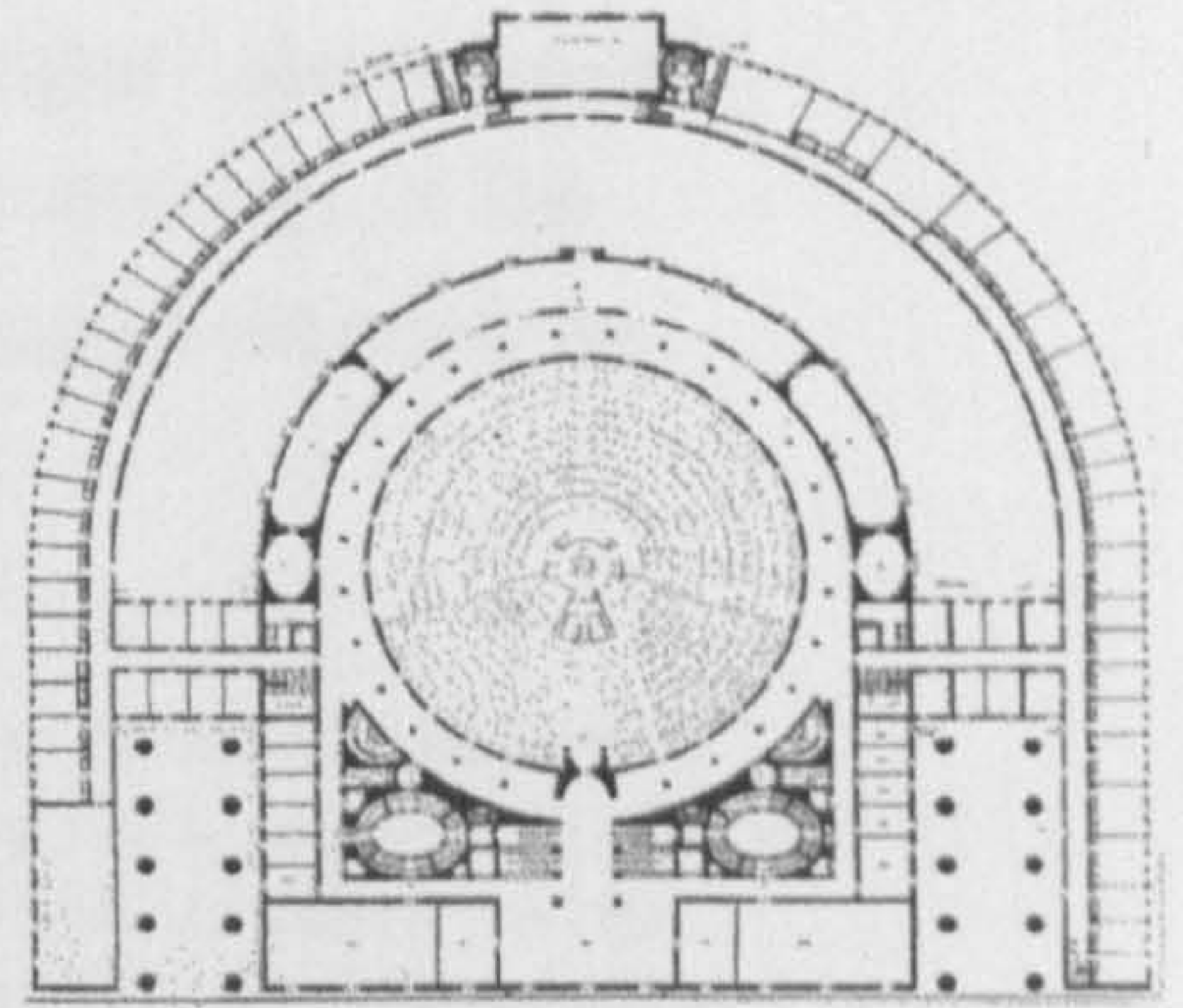
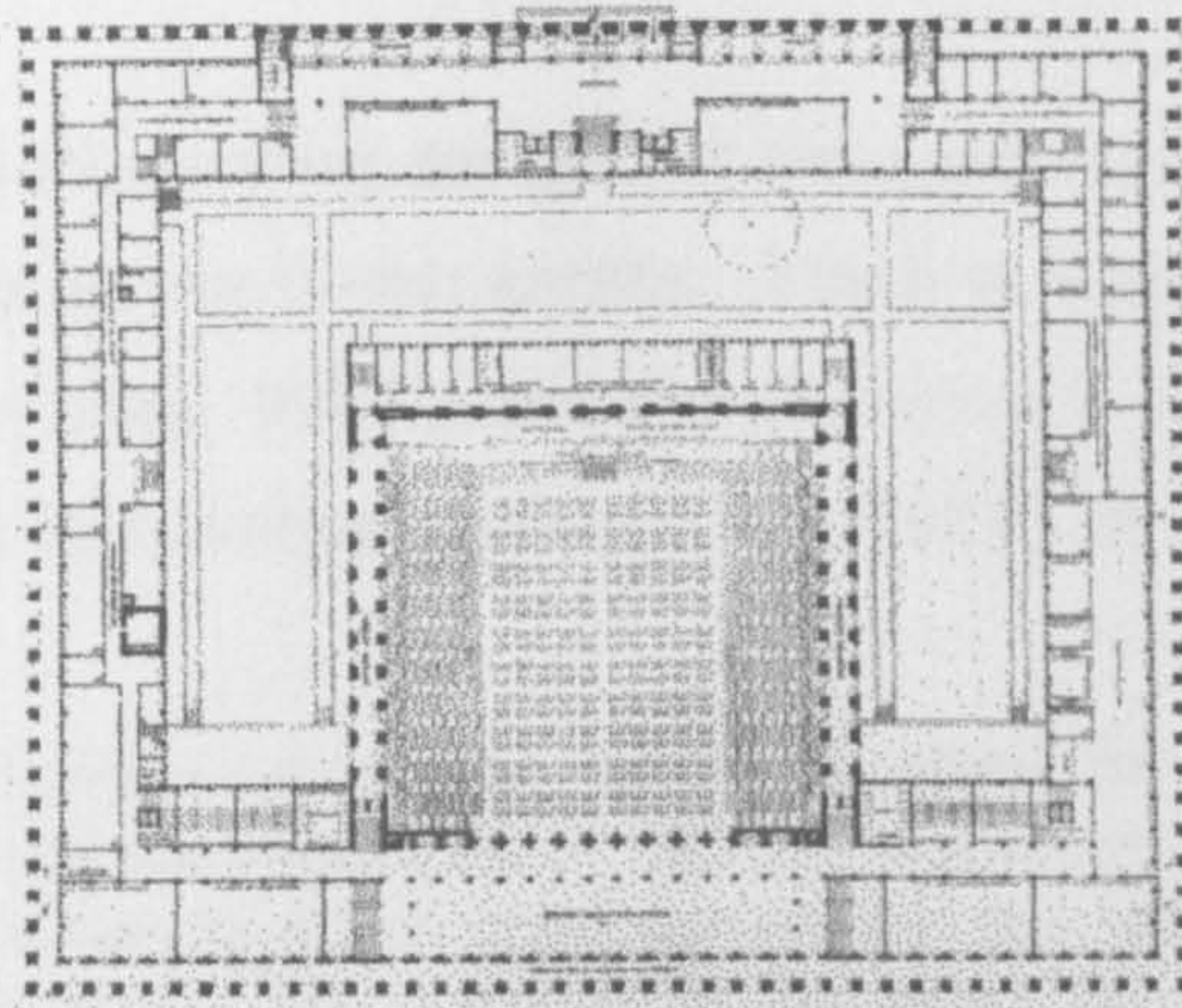
G. Vago



Bonatz & Scholer

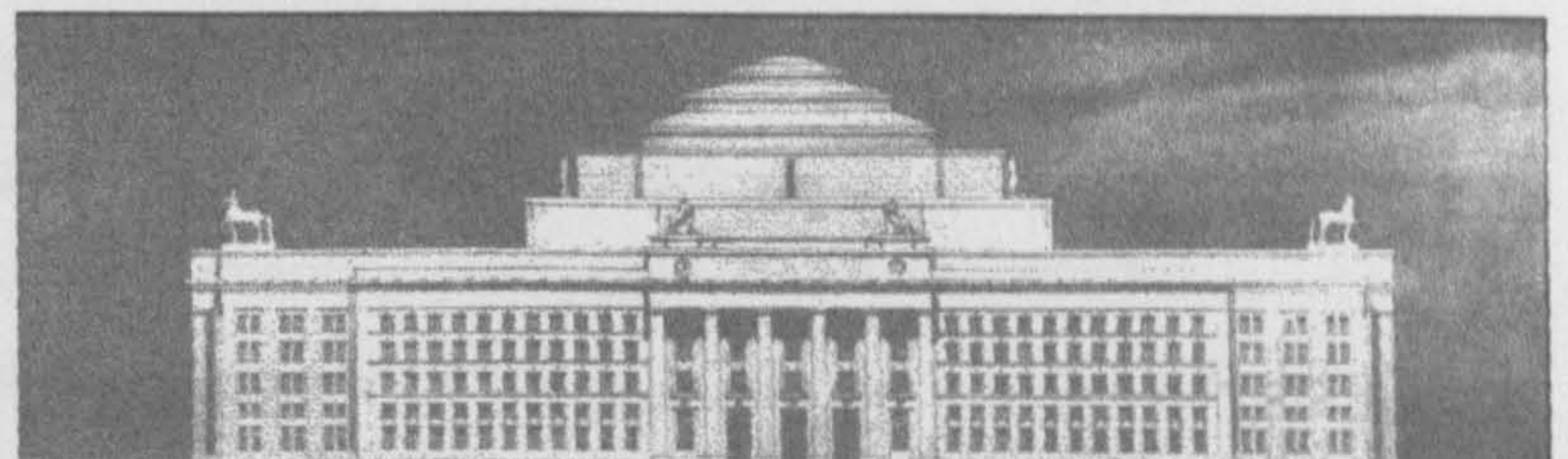
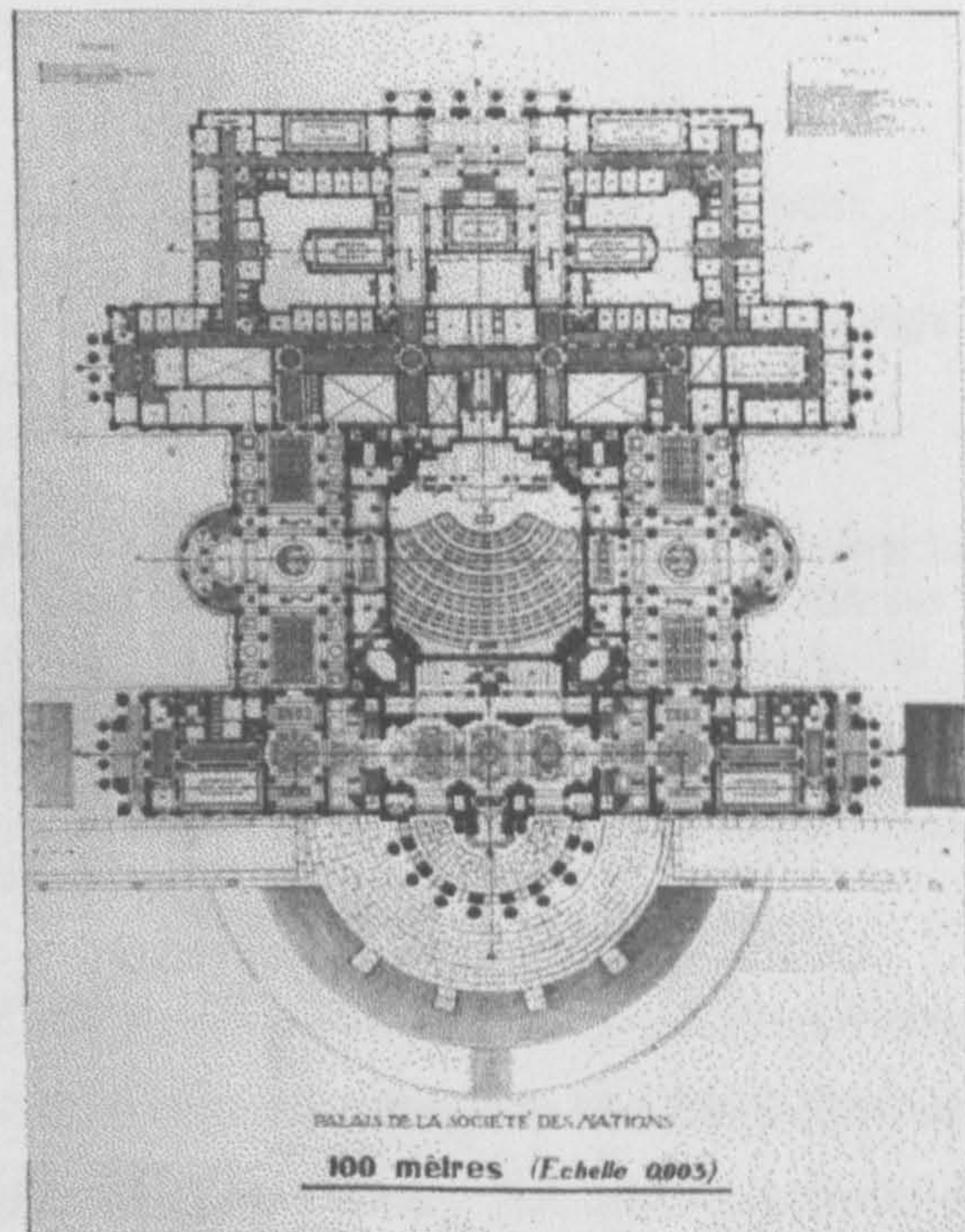


Patouillard-Demoriane



Putlitz, Klopheus & Schoch

C. William-Olsson



100 mètres (Echelle 0,005)

Broggi, Vaccaro & Franzi

Winning Designs Single Building Solution

articles about the winning designs for three consecutive weeks²¹, and concluded with an article on the British entries. There was also some coverage in *The Builder*, [July 29th, 1927], and the *Architect's Journal*, which reported the results of the competition on May 11th, 1927, as follows:

The international Jury of Architects which, for the past six weeks, has been examining the thousands of designs submitted for the world's competition for the construction of a new headquarters for the Secretariat and Assembly of the League of Nations, has given its decision. The jury declares, according to *The Times*, that though the competition has produced an extraordinary wealth of valuable suggestions and many original designs, the results do not justify the recommendation that any of the designs submitted should be carried out..... No British architect has received a prize, though it is understood that some hundreds of designs were received from Great Britain....

The reporter for *The Builder*²² expressed his confidence in the jury, although he conceded that the man in the street might consider that

architects as a class are a poor lot, poorer in fact than he already imagined'.....

The ideal [*of a League of Nations*] is at the same time splendid and stupendous, and we venture to assert that from the fact that from the thousands of designs submitted, not one has been considered sufficiently sublime to be worthy of realisation, is less a slur on the abilities of the competitors, than a tribute to the sincerity of the assessors.....

The absence of British names from the list of prizewinners is also open to misunderstanding, and yet, one must view it as a very natural outcome. Nature has given to our nation an insular position, which reflects itself in our daily life and in our arts. Is it remarkable that the British architect should find it more difficult than his European neighbour to find adequate expression for the aspirations of a number of nations divided by more or less arbitrary borders and subject to considerable interpenetration?

In the first of the three *Architect and Building News* articles on the winning designs, the author devoted half of his text to criticising the jury and the indications are that his surprise and displeasure at the result was widely felt among architects. Although the writer considered that it was not improper to reject all the designs if none were suitable, he felt that the competitors had not been treated with consideration. 377 architects had each spent a considerable sum - at least £100 apiece, he says - on their entries, not to mention much time and effort, and had a right to expect that the design placed first would be built. The jury had omitted to hold a preliminary competition with sketch designs which would have cut costs for the entrants. He criticised the report for its 'supererogatory' remarks and 'useless observations'²³, suggested that if a majority of the competitors had not

adhered to the rules, then the jury should have made them clearer; and complained that there was no critique of the designs in the report at all. Why, he asked, did the jury include the remark about 'the evolutionary phase through which contemporary architecture is now passing'? 'The Jury,' he asserted, 'were not required to write a general essay upon contemporary architecture, but to explain and justify their own award.' The unnamed writer also pointed out that the jury decision had left the League with a serious problem on their hands:

The difficulties in the way of holding another competition are considerable, not merely on account of the failure of the first one, but because the report of the jury has not vouchsafed the architectural profession the slightest inkling of the *reasons* why the various schemes submitted were rejected by them. To say that these schemes did not comply with the conditions is to say nothing, unless they specify the particular conditions which were violated. Moreover, it is assumed that at least the twenty-seven premiated designs did not violate the conditions. On what grounds then, was none of them thought suitable for execution?

He thought Nils Eriksson's project, hugging the shore in its wooded park, 'illustrated by a charming perspective drawing, perhaps the most attractive of the schemes submitted.' Broggi's single-building scheme was described as 'a fine conception....the plan, although logically constructed, is grandiose, is yet very wasteful of corridor space and could scarcely have been erected for the limited amount of money which the League possesses for building purposes.' On the other hand, the Putlitz, Klopheus & Schoch project, praised for 'simplicity in a high degree' and 'qualities of unity and great scale', was then criticised as producing 'an affecting dullness and boredom as if the League of Nations were a rather tedious conception'. Lefevre's project was criticised for having an entrance hall somewhat larger than the great Assembly Hall, which, the writer felt, emphasises the disparity between the hall and the secretariat which flank it. The Nénot and Flegenhimer project he considered undistinguished, similarly the immense Beaux-Arts pile by Georges Labro. The Fahrenkamp-Deneke project, with its urban arrangement of squares and quadrangles, he found 'a very clever composition'. Vago's project was 'a highly distinguished Italian design in which the parts are grouped to comprise a most interesting silhouette' but it lacked 'a certain cosmopolitan quality which would have made an acceptable representation of all the nations of the world. His most severe criticisms were reserved for the project of Le Corbusier. First of all, he felt that the two buildings, connected only by a single narrow corridor, 'lack the essential quality of coherence'²⁴. Later in the article, he denounced the scheme as follows:

No.273, another French example, represents the twentieth century in one of its most perverse architectural phases, and scarcely seems possessed of sufficient dignity and universality to express an institution such as the League of Nations, which hopes to have a long period of activity in front of it. The principal facade in front of the Assembly Hall, with its ramshackle portico with immense screen behind it, which looks as if it is waiting for cinematographic scenario to be flashed upon it, resembles the entrance to a fair rather than to an important public building, while the Secretariat, with its immense rows of windows in mechanical repetitive formation, suggests a home of bees rather than of men.

Hannes Meyer's project was the subject of even sharper criticism by this writer in the third of his articles for *The Architect & Building News*. It is clear from the following passage that Modernist views had not yet gained much of a foothold in Britain:

Unfortunately the "modernist" movement in architecture is not merely a reaction from the traditional forms of ornament which distinguish ancient styles, but too often appears to be directed to the violation of the most obvious principles of composition. In fact, it is not too much to say that to the modernists the absence of unity and coherence in a design is a mark of vigour, for it is only by defying formal conventions of all kinds that they can establish their claim to be creating something utterly new.

For instance, we may ask what aesthetic purpose is being served by a building such as No. 152. here illustrated. Is there any unity and coherence here? Is the author of the scheme even *striving* for unity and coherence? Putting aside all questions relating to his interpretation of the "programme", omitting for the moment to ask why on a site of very generous area it was necessary to arrange the rooms of the Secretariat in two "flat-iron" sky-scrapers, one cannot help looking for some formal relationship between the structure by virtue of which it might be considered to be an organic whole. [....]

in using this word "organic" one is appealing to a standard of criticism over and above an historical standard. There is nothing offensively "traditional" in the organic quality of architecture, for this is in fact the essential attribute which distinguishes architecture from mere building. It not only belongs to the best architecture of the past, but will also be the hallmark of the architecture of tomorrow. In an organic design, if a part is taken away or modified the quality of the whole is seen to suffer an injury. But in this particular building, the respective heights of the "flat-irons " are indeterminate, these features being without terminal emphasis seem cut off at random, nor is there anything inevitable in their disposition on plan. A little forward, a little backward, a little to the right or to the left- what would it matter? Cut off altogether the small block fortuitously hanging on to the low sheds (what else can we call them?) behind the flat-irons, and no one would miss it. The Assembly Hall, with its dome visible from the outside, is altogether ignored by the facades on either end of it, which seem deliberately asymmetrical, as if with the express purpose of showing their disregard for the principal feature of the building. Yet it would be an exaggeration to say that the design is *entirely* discordant. On plan the long axis of the Assembly Hall is set parallel to some of the wall planes on either side. It might have been crooked!

The writer understood that Meyer's architecture was an egalitarian architecture shaped by only the utilitarian demands of structural systems and required room sizes; he could not forgive the rejection of old notions of order and balance, of informative symmetries and hierarchies. It is interesting that although this writer makes no distinction between the Modernism of Le Corbusier and that of Hannes Meyer, the grounds upon which he attacked them were very different: in Le Corbusier's project it was the transformed facade elements which drew criticism: the long window, the 'ramshackle portico with immense screen behind it'²⁵; in Meyer's project it was the entire composition, as well as the lack of a facade in any traditional sense which was questioned. Le Corbusier's planning, with its implied symmetries and clear hierarchical indications arose from European humanist traditions, and his use of the 'industrial' long window and the overall horizontality of this group of buildings did not disguise that.

NOTES TO PART III, SECTION 3

1. Letter from Lloyd to Horta, 6.07.1927. Box 1538, U.N. archives, Geneva
2. Letter from Lloyd to Horta, August 10th, 1927 , UN archives Geneva: R1438, 32/40311x/285594
3. Mentioned in *Horta en Amerique*, Yolande Oostens-Wittamer, 1986, pub. Editions Lebeer Hossmann.
4. It seems that there is no surviving archive. The architectural practice Burnet founded survives as "The Company of Designers" and the London office is currently at 39 Chalton Street, NW1. Sir John spent his last years in Colinton, on the outskirts of Edinburgh - and suffered from 'growing feebleness and loss of memory' [Obit. RIBA Journal, 18th July 1938]. A check of the Scottish National library in Edinburgh also drew a blank.
5. Ernst Strebel 'Le Déroulement des Séances du jury d'après les notes de Karl Moser, le représentant suisse' in *Le Corbusier à Genève*, pub Payot Lausanne, 1987. Also German language original in *Le Corbusier & Pierre Jeanneret: Das Wettbewerbsprojekt für den Volkerbundspalast in Genf 1927* , pub. GTA/Ammann, Zurich 1987.
6. Strebel, *ibid*.
7. For Karl Moser's notes and letters on the jury deliberations, see *Le Corbusier & Pierre Jeanneret: Das Wettbewerbsprojekt für den Volkerbundspalast in Genf 1927* , pub. GTA/Ammann, Zurich 1987.
8. Costings by the Swiss Journal, *Schweizerische Bauzeitung*, official journal of the Association of Swiss Engineers and Architects.
9. Letter from Victor Horta to Sir Eric Drummond, 28th April, 1927. League of Nations archive, R1544.
10. Letter from Drummond to Horta, 30th April, 1927. League of Nations Archive, R1544.
11. Strebel says Secretary General Paulucci. From the letter from the Secretariat to Horta, it is clear that the Secretary General was Sir Eric Drummond. Paulucci must have been one of the deputies at that time.
12. The Jury report, Architectural competition for the erection of a League of Nations building at Geneva. League Archives, Geneva, C.239. M.97.1927.
13. Letter from Lloyd to Horta 10th August 1927; see note 2 above.
14. I have acquired a copy of this album, which is rarely to be found; neither the British Library nor the RIBA have it. Illustrations of the winning schemes are reproduced here from this source.
15. The personal choices of each juror are known, and have been published both in *Das*

Wettbewerbsprojekt and in Le Corbusier à Genève. The source is the League of Nations archive S.d.N. 32/39825/28594/VI, 23rd May, 1927

16. *Une Maison Un Palais* p195:
 "A la 63e seance du jury, M.Lemaresquier (juré Français délégué par l'Académie) fait tomber ce projet, prétextant qu'il est reproduit par un moyen mécanique(au lieu d'être directement dessiné à l'encre)."
 See also William Curtis, *Le Corbusier, Ideas and Forms* [Phaidon, 1986] p87; Stanislaus Von Moos, *Le Corbusier, Elements of a Synthesis* [MIT, 1979, 1982, 1983] p240. Sigfried Giedion, who was involved in the post-competition campaign for Le Corbusier's project does not mention this story in his account of the competition [in *Space, Time and Architecture*, OUP 1941]
17. Pavillon L'Esprit Nouveau - built for L'Exposition des Arts Décoratifs in 1925, and promptly hidden behind a 6-metre pallisade erected by the exhibition organisers. A diorama of *Une Ville Contemporaine de 3 millions d'habitants* was displayed inside.
18. Donald Drew Egbert -see previous notes. p74. Ernö Goldfinger was one of those students, and he wrote an account of Perret's atelier in the 1950's.
19. See L'Architecture, Vol. XL, No. 11, 15th November 1927 for some additional drawings from this project and some of the other French winners.
20. Today, the European architectural journals of 1927 are the only surviving sources for many of the entries.
21. *The Architect & Building News*, 1927, July 22nd, July 29th, August 5th.
22. *The Builder* Vol XXXII, No. 4400, June 3rd 1927.
23. The Jury... then "studied the plans and examined their architectural and artistic qualities from the point of view of site, facilities for movement inside the building and traffic outside, arrangement and form of the building, construction and harmonious and logical architectural development." But surely this statement is supererogatory. Does the jury (presumably paid for their services) expect to receive our praises for "studying the plans and examining their architectural and artistic qualities? And why "artistic" as well as "architectural"? It is without precedent that a report of a great architectural competition should be filled out with such useless observations.' *Architect & Building news*, July 22nd 1927.
24. This criticism was also made in the report by Camille Martin and Leon Jungo [September 1927].
25. Presumably the *Lakeside* elevation of the Assembly Hall? The blank end wall of the Assembly Hall behind the President's Pavilion might be described as an 'immense screen'.

PART III

A Brief History of the Competition c.1925-1927

SECTION 4

- Who will build the Palace of Nations?
The Committee of Five
- Le Corbusier campaigns for his project
 - 'The Press gives its verdict'
 - 'The professional associations act'
 - The first Requête

The indeterminate results of the Palace of Nations competition announced in May 1927 left the League in much the same position as before - with a site and modest funds, but lacking a project. The problem was returned to the 1927 Assembly, which would next meet in September; there was a four month delay before the problem could even be considered. In the meantime, the winning projects were published in the national and architectural presses of member states. The Exhibition of competition projects in Geneva was delayed until July because the jury conferences had taken twice as long as envisaged and the Electoral Palace was not available again before then. The exhibition closed on July 24th, 1927, just before the August holiday period, and therefore much of the reportage concerning the competition was delayed.

At that time, Le Corbusier was extremely busy. His houses at the Weissenhofsiedlung were on site, and he was sadly neglectful of them, missing the exhibition opening at the end of July, and only visiting Stuttgart on the 8th August. [Alfred Roth not only oversaw their completion and furnished them, partly from his own pocket, but even wrote the text for the *cahier extra* commissioned by Akademischer Verlag¹]. In the same year, Le Corbusier's Villa at Garches was completed, as well as several other houses, and some of the furniture designed in association with Charlotte Perriand. He was also much in demand as a lecturer by then, visiting architecture schools all over Europe. He and his allies began to campaign for his project immediately the competition result was announced, and Karl Moser was an especially active ally, writing innumerable letters to the League, to eminent architects of his acquaintance, and to Le Corbusier himself. His letters are to be found in the League archive in Geneva, in the Fondation

Le Corbusier, and there are also a great number in the Berlage archive².

Le Corbusier wrote to the League in June 1927 to plead his case, and so did Gustave Lyon, the Acoustics expert who advised on the acoustic form of Le Corbusier's Hall of Assembly. A general protest about the result was received from the Société Centrale d'Architecture de Belgique at the end of August, and there were also some letters from the public, such as the missive received from one Edmond Rochette of Geneva, which urged the League not to chose the project of Le Corbusier:

'Des qualités techniques mettent cette oeuvre en évidence et lui attirent quelques chauds partisans; toute-fois elle est si inesthétique, elle manque si totalement d'élégance et de beauté que le public ne comprendrait pas et ne pardonnerait pas le choix de bâtiments semblables ayant l'aspect de grandes usines mais nullement celui d'un Palais....'³

Who *will* build the Palace of Nations?

The 1927 Assembly of the League met at the beginning of September. On September 5th, the question of the new Palace of Nations was delegated to the General Committee of the Assembly. The committee decided that the best course of action was to appoint a small committee of five members to consider the matter, and reported as follows at the 10th September plenary meeting. The small committee was to study the following questions:

1. Ascertain the cost of the various plans and compare it with the funds available.
2. Examine the position resulting from this comparison. To what extent should the cost of plans which exceed the financial limits indicated in the programme be regarded as an eliminating factor? Where these limits are exceeded, is there any possibility of modifying plans so as to bring their cost within the limits?
3. Consider the prize plans from the point of view of convenience and administrative requirements.
4. If a suitable plan cannot be selected under satisfactory conditions, owing to the rejection of a large number of plans or the impossibility of bringing them within the required limits of expenditure, should the Assembly be asked to increase the credit vote?
5. If this proposal is not thought expedient, or if the Assembly does not agree to it:
 - (a) Should further consideration be given to the question of a building to accommodate the whole of the services? *or*
 - (b) Should a building be erected for the Assembly alone and the building occupied by the Secretariat be retained for use as at present?
6. No matter what decision is adopted regarding the financial conditions, a complete or a limited plan must be selected. Should a choice be made from

the prize-winning plans? If so by what method, taking into account considerations of a financial, administrative and aesthetic character? if not, what procedure should be followed as regards the actions to be taken?

7. If no final decision is taken before the close of the present session of the Assembly, must the matter be held over until the next session or who will be empowered to take a decision in the interval?

To determine these various points, the committee might consult all the members of the Jury of Architects or some of their number, the Swiss Authorities - in particular, the authorities of the Canton of Geneva - the members of the Building Committee, the Secretary General and his representatives, and, in general, any experts whose opinion might appear to be desirable.⁴

The five members proposed for this committee were

M.Adatci [Japan]

M.Osusky [Czechoslovakia]

M.Politis [Greece]

M.Urrutia [Columbia]

Sir Edward Hilton Young [British Empire]

These diplomats had one thing in common: none of their countrymen were numbered among the twenty seven competition winners. On 22nd September, they submitted an initial report to the Assembly. They concluded that more time was required to study the question, but they had two initial recommendations: firstly, that the budget should be increased, and secondly, that a choice of plan should be made from among the nine first prize winners⁵. At this point, mindful of its nationals' interests [three Dutch entries attained Honourable mentions], the Netherlands delegation proposed an amendment to the report to the effect that a plan should be chosen from 'the twenty-seven plans to which the jury gave precedence', but this amendment was overthrown. The committee had concluded from a study of the prize-winning entries that a sum in the region of 19,500,000 Swiss Francs would be required

to ensure that the new building or buildings shall, without being unduly luxurious, be satisfactory from the aesthetic point of view as well as from the practical. *The estimates of cost submitted by the various competitors in accordance with the rules of the competition appear to the Committee to be in nearly all cases inadequate.* [my italics]

The following day, the report was approved by the 4th committee, and the proposals of the Committee of Five were submitted to the Assembly on 27th September. The Assembly approved their proposals as to cost and retained the members of the

committee of five to study the nine winning plans and select the one 'with any changes that may be necessary....that in its opinion complies most nearly with the practical and aesthetic requirements.' The committee's decision was to be submitted to the *Council* of the League for ratification, and the Assembly would be informed at its 1928 session.

The Decision of the Committee of Five was published on 27th December 1927. In the meantime, John D. Rockefeller had given the League 2,000,000 Swiss Francs for the construction of a library, which meant that the 19,500,000 Francs available from the League's own coffers could now be spent on the Secretariat and Assembly Hall alone. During its deliberations, the committee commissioned a report by architects West & Jezek on the nine prize-winning projects. It also received the Secretariat's own report [neither of these two documents were to be found in the archive], and a report from the Geneva Federal authorities by Léon Jungo and Camille Martin. This survives, and has been published⁶. Various unsolicited documents also arrived, for example, a report by the local *Société d'Art Public "Heimatschutz"*. This was their opinion of Le Corbusier's project:

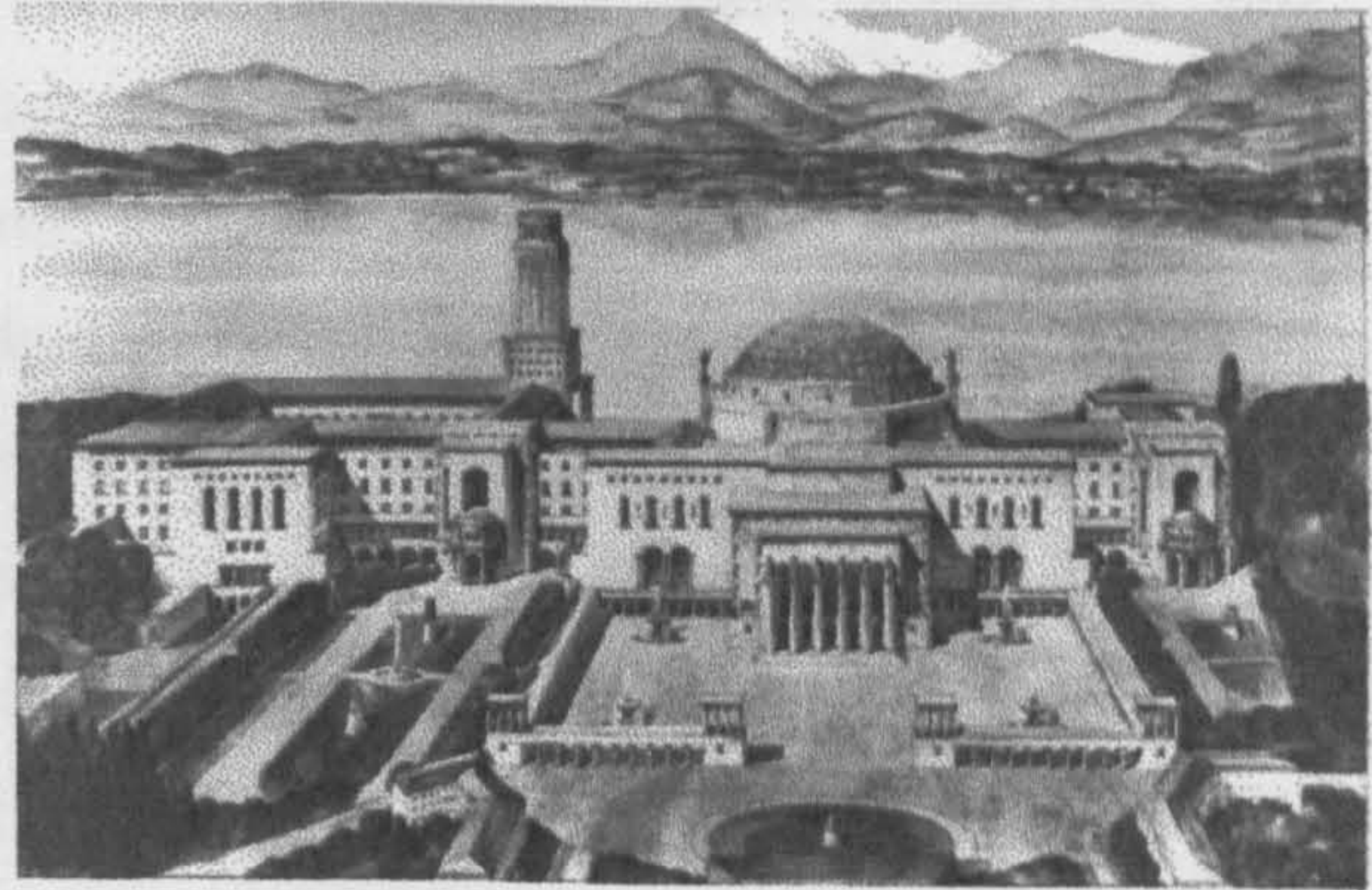
Projet séparant nettement la Salle des Assemblées et ses services, du Secrétariat. Plan très aéré, très dispersé sur le terrain mais trop ouvert au vent du Nord. Pas des cours intérieures. Conception générale très moderne qui doit être examinée attentivement. La situation du Secrétariat, du côté opposé au B.I.T. ne prête pas à un agrandissement futur des locaux. Les relations entre une partie du Secrétariat et les bureaux du Président et du Secrétaire général sont longues et tortueuse. Vues du lac, côté ville, les façades présentent un développement considérable. Expression des volumes peu satisfaisant. Construction sur pilotis donnant une impression des vide et d'instabilité. Grande façade nue au bord du lac et motif architectural inquiétants. Dans l'ensemble, facades dépouillées de tout élément d'architecture, de toute recherche d'ordre artistique et ne comportant, pour ainsi dire, pas d'étude. Projet intéressant mais dans son principe seulement.

The "Heimatschutz" Society considered Joseph Vago's italianate project to be the most suitable for the site and most expressive of the 'local character'⁷. They also indicated three projects of interest among the honourable mentions: the Birch-Lindgren project and the very similar designs by Bonatz & Scholer, and Laverriere & Thévenaz [fig.33].

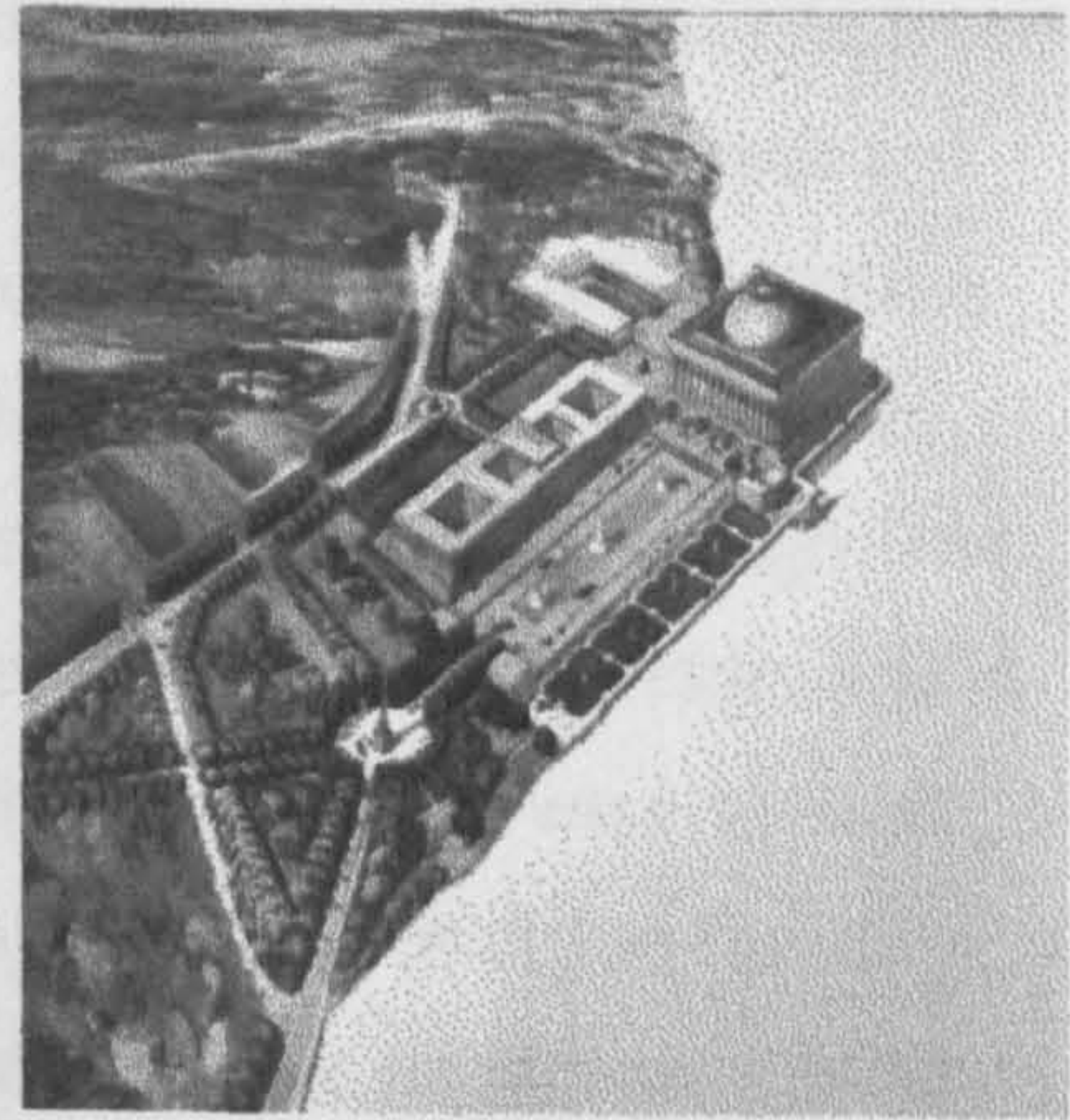
Camille Martin, co-author of the Geneva Federal Authorities' report was a supporter of Le Corbusier, and had previously written a favourable article about the Le Corbusier-Jeanneret project for *Das Werk* [June 1927] and part of this article was reproduced in *Une Maison Un Palais* in the section 'La Presse Européenne se prononce'⁸. However, the Federal Authorities report, written five months later [November 1927] made some specific practical criticisms of Le Corbusier's

Schemes preferred by the Societe "Heimatschutz"

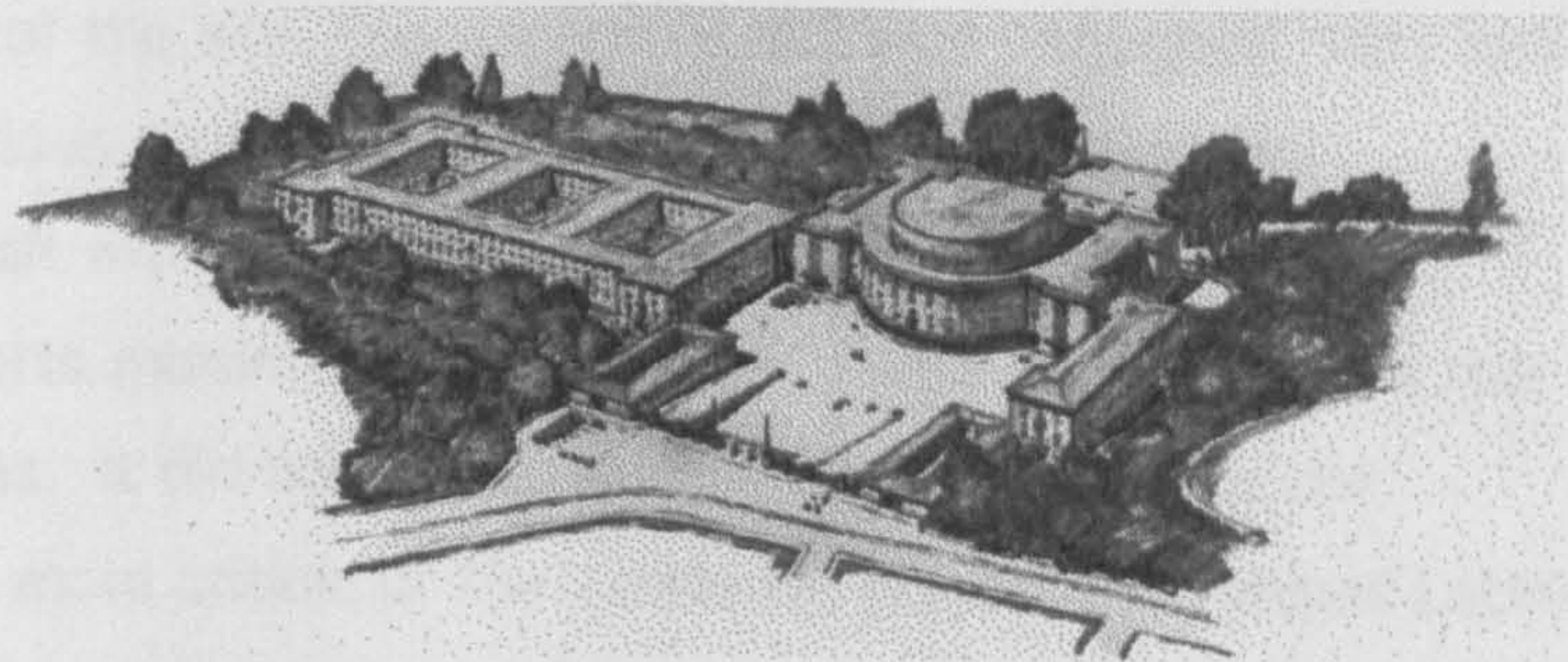
G.Vago



G.Birch-Lindgren



Bonatz & Scholer



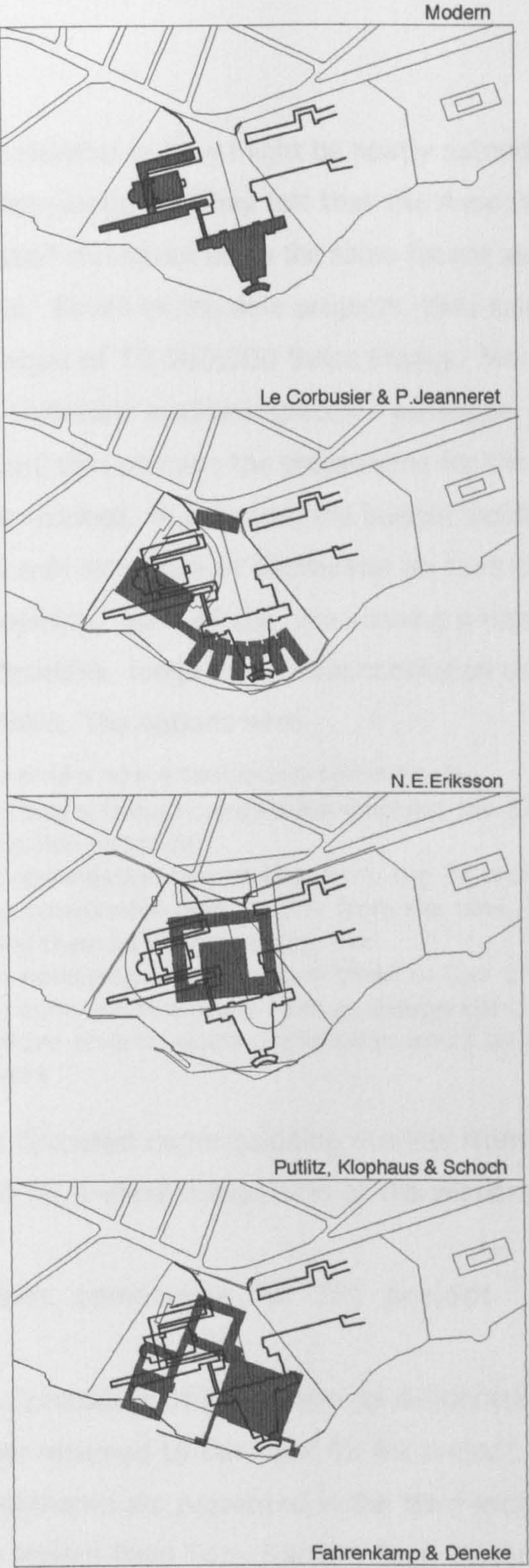
Laverriere & Thevenaz

project.

This report also criticised the jury for the elaborateness of the brief and suggested that it might have been better to have had a two-stage competition. The writers remarked that the *jury* did not abide by the rules of the programme. The nine prize-winning projects were looked at in terms of access, siting, possibility of extension, circulation, lighting, architecture, volume and cost. All the projects were found wanting. The criticisms of Le Corbusier's project were as follows: the Assembly Hall was thought to be too close to the lake; the external circulation was good, but the garages might be better arranged and the entrance to the Secretariat was not sufficiently conspicuous. The system of passages was simple but much too extended, and the vertical circulation points were too few, which meant that the different services were not well connected. The single, 2-storey bridge linking Assembly and Secretariat was noted, but not explicitly criticised. The writers queried whether the row of entrances along the Assembly Hall frontage might not produce moments of great crowding. The presence of columns in corridors and in offices was deemed unacceptable. The rows of fenêtre en longueur were seen as excessive with respect to the light required, and the development of the facade was seen as too schematic, too utilitarian. On the other hand, the project was praised for retaining the character of the site, the Assembly Hall was very good, very well lit, and the design had 'serious organisational qualities'⁹, was modern and innovative, and could be built with the funds available.

With the other reports missing, it is difficult to gauge how influential the Jungo and Martin report was. It did not favour either the Modernists or the Academics. Perhaps it was more critical of the Academic project by Georges Labro than of the others - his basic parti of three blocks each angled with respect to its fellows was found awkward, the architecture thought to be showy, very costly, and of an unsuitable character - in any event, Labro was eliminated from the committee's final selection. The architectural character of the project by Joseph Vago, the preferred choice of the local "Heimatschutz" Society, was thought by Jungo and Martin to be inappropriate both in terms of place and function.

Jungo and Martin felt that none of the nine contenders had suggested an architecture appropriate to the aims of the League. They thought that the buildings should be as high up on the site as possible, to give a substantial park by the lake, and advised that all the most massive solutions, so destructive of the park, be dismissed. They thought schemes aligned with the northerly portion of the Lausanne



The idea for this diagram came from
Le Corbusier a Geneva , see p155.

Comparative Site Plans
 Winners - first Prize EX AEQUO
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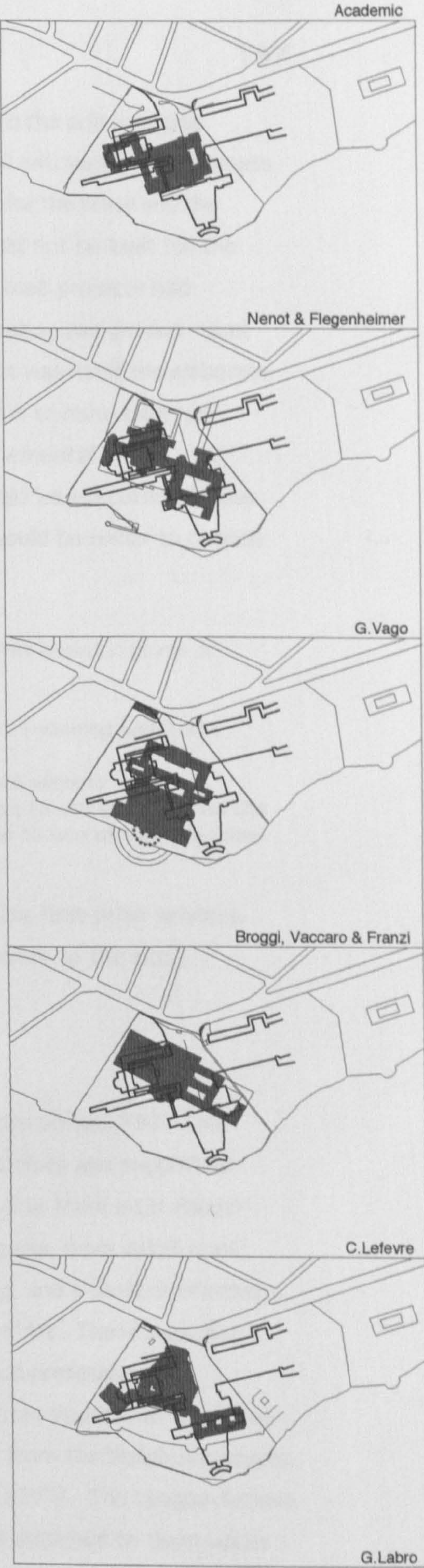


figure 34

road were preferable as they might be neatly extended onto the adjacent site without angled junctions. They felt that the Assembly Hall entrances for diplomats and League staff should not be on the same facade as those for the press and the general public. Seven of the nine projects, they said, could not be built for the increased budget of 19,500,000 Swiss Francs. Many of those projects had excessively elaborate auxiliary spaces - passages, vestibules, pas-perdus - and they suggested that perhaps the programme for the project was itself too elaborate and might be reduced. In any case, the budget would not run to more than '*une architecture très simplifiée et depourvue de tout luxe ornemental*'¹⁰.

As, in their opinion, none of the nine winning projects could be executed without major modifications, Jungo and Martin concluded that it would be unfair to choose any one of them. The options were

- 1) to hold a new international competition,
- 2) to hold a limited competition amongst the 27 schemes awarded prizes or honourable mentions,
- 3) to commission new studies from the 27 architects,
- 4) to commission new studies from the nine, first-prize-winning architects holding them to the new budget, or
- 5) to commission studies from three or four of the nine winners
- 6) to commission a study from an independent architect to use as a basis for the definitive project, which commission would be awarded to one of the nine prize-winners

The writers favoured commissioning studies from the nine first-prize winners. [See fig. 34 for a visual comparison of the winners' approach to the site.]

Le Corbusier campaigns for his project

The Committee of Five began its deliberations in November, 1927, and Le Corbusier returned to the fight for his project. The letters and supportive articles he gathered are presented in the third section of *Une Maison Un Palais*¹¹. There were letters from Tony Garnier, from Victor Bourgeois, from Adolf Loos, from Henri Van der Velde, from Hugo Häring and *Der Ring*, and a number of others, all written in November 1927 and published in *Cahiers d'Art*. There were also three petitions to members of the Committee from various professional associations, for example, from Swiss, German and Austrian Werkbund; from the Dutch Society of Architects, Sculptors and Painters, and from the Polish Architects and painters, which were sent to the League in October 1927¹². The League Archive copies of these petitions have a partially handwritten note attached to them which

states

The above does not seem to me to be a very considerable backing (for a suggestion in my opinion impracticable)¹³

Karl Moser had already written to various Secretariat officials [16th June 1927¹⁴] and now he and H.P.Berlage and Hoffmann added their voices to the others. Hoffmann and his Austrian colleagues declared that they were convinced that Le Corbusier's project was the best one - and that the definitive project should be a choice between the projects of Le Corbusier and Joseph Vago - an intriguing suggestion given future events and Le Corbusier's later accusations of plagiarism, directed largely against Vago¹⁵. At the same time there were other, more general protests: for example, the Society of Swiss Engineers and architects wrote to the Secretary General on 22nd October 1927 to make the point that in Switzerland and in many other countries, the programme and rules of an architectural competition were regarded as a binding contract on both entrants and judges¹⁶. The League official dealing with this correspondence noted that

Mr Wilson ...thought a formal acknowledgement was all that was necessary and I have therefore drafted one for the Secretary General's signature.

The Decision of the Committee of Five

The committee met in Geneva in November and also on the 19th and 22nd December. Their decision was published on 27th December 1927. They announced that they had studied the three reports submitted to them [the Jezek & West report, the Secretariat's report, and the Jungo and Martin report]. They reminded the public that their task had been to choose a project from among the nine premiated entries. They chose the project of H.-P.Nénot and J.Flegenhaimer as

'the project which.... satisfied most of the requirements of a practical and aesthetic order'

but they felt that the project needed modifying. They declared that a new project would be developed by Nénot and Flegenhaimer in collaboration with three other competing practices: Broggi, Vaccaro & Franzi, Camille Lefèvre, and Joseph Vago¹⁷. The budget for the Secretariat and Assembly hall alone would be 19,500,000 Swiss Francs. The library would be a separate project with a budget of 4,000,000 Swiss Francs. The buildings were to be oriented towards Mont Blanc and set back from the

lake as much as possible to retain the maximum number of trees. All the architects involved would be recognised as authors of the project. [This document is included as an appendix].

In other words, four out of five of the Academic first-prize- winners were chosen to build the new headquarters. But why the exclusion of the fifth? Georges Labro's design was not the most expensive of the Academic projects according to *Schweizerische Bauzeitung* [see below]. But it differs from the other four, orthogonally arranged schemes in that the three parts of the building are angled at 30° to each other. Evidently Labro was dissatisfied with the Committee's decision because he wrote to the League on 30th March, 1928 demanding money because the conditions of the competition had been broken:

...J'ai d'honneur de vous prier de vouloir bien me faire verser une somme de dix mille Francs Suisse, qui représente l'indemnité proportionnelle qui m'est due.

The attached note from Lloyd to Huston on the Secretariat's copy reads

Mr Huston.

Please see the attached letter from M. Labro which looks to me like a bare-faced try-on. I have made two alternative drafts for a reply, - one a blunt refusal and the other a refusal accompanied by a reason. Perhaps the Legal section should see and advise.¹⁸

In the event, the reply was

...J'ai l'honneur de porter à votre connaissance qu'il ne m'est pas possible de déférer au désir formulé par cette communication.

Le Corbusier's First *Requête*

When the committee's decision was announced, Le Corbusier engaged the Parisian lawyer André Prudhomme to petition the League. The petition or *Requête*, was signed in Paris on 28th February, 1928, and immediately presented to A.M.Tcheng Loh, the Chinese ambassador in Paris, who was also president of the League of Nations Council at that time.

The *Requête* is a lengthy document which Le Corbusier included in Part III of *Une Maison* [see English translation]. It sets out the history of the competition from March 1926 to the November 1927 decision of the Committee of Five. Here Le Corbusier set out his grievances, which range from trivial to serious. First he complained that his project had gained the support of four of the jurors until one of the others moved to disqualify it for breaking the rule that the drawings should be

in India Ink. This information may have come from Moser, but without the minutes it cannot be verified. His project *was* drawn in ink, he declared - and mechanically reproduced for clarity¹⁹. Then he protested the jury's explanation of its decision to award nine equal prizes - he claimed that this change in the rules exceeded the jury's powers. As regards the jury statement that its task had been rendered difficult by the fact that many competitors had not adhered to the rules, he pointed out that in fact most of the nine winners had not followed all the rules, especially as regards cost. Most of the competitors, he said, had contented themselves with merely stating perfunctorily that the cost of their project was 13,000,000 Swiss Francs. Being put on the same footing as those rule-breakers had wronged the Le Corbusier-Jeanneret team more than anyone else. He gave the comparative cost analysis published by the *Schweizerische Bauzeitung* [issue 1st October 1927]²⁰, and this makes interesting reading:

Le Corbusier	13,000,000
Eriksson	17,000,000
Fahrenkamp & Deneke	27,000,000
Nénot & Flegenhimer	27,000,000
G.Vago	30,000,000
Putlitz, Klopheus, Schoch	32,000,000
Broggi, Vaccaro & Franzi	40,000,000
G.Labro	43,000,000
C.Lefèvre	50,000,000

[Figures in Swiss Francs]

In other words, only Le Corbusier's project came in under budget, and even with the budget increased to 19,500,000 Francs, only one additional project was affordable. The decision of the Assembly to increase the budget to 19,500,000 Francs put Le Corbusier's modestly drawn project at an even greater disadvantage with respect to the others, as the *Requête* said

If MM.Le Corbusier and Jeanneret had been able to envisage a cost of 19,500,000 francs instead of 13million, they would have had much greater freedom in their concept. They would have been able to employ the most difficult materials, to envisage other decorative effects: the entire economy of their project would have been changed. How, from that moment on, could one legitimately, without authorising them to present a new project, force them to compete with candidates who had not concerned themselves with cost in envisaging their designs, and who, consequently, had been able to give free reign to their ornamental and architectural ideas?²¹

Of course, if the Committee of Five had taken the view that the chosen project should conform to the newly increased budget, then Le Corbusier would have had a 1 in 2

chance of winning the commission. As it was, they chose the Academic project with the lowest budget.

He appealed against the following three key decisions, which had removed the commission from his grasp, each time on the grounds that they infringed his rights:

The Jury's decision-	5th May, 1927
The Assembly's decision-	26th September, 1927
The Committee of Five's decision-	22nd December, 1927

The jury had itself broken the terms of their *contract* - the contract implicit in the programme and rules of the competition - with the entrants. Then the Assembly had seriously changed the status of the competitors by increasing the budget by 50% and by choosing non-professional judges without the consent of the competitors. And the Committee of Five was not authorised to choose *architects* to develop a new scheme, which is effectively what it did, but to choose a *project* from among the nine presented. Furthermore, the committee had declared a budget of 4,000,000 Francs for the library without any authority, and had then awarded the new and separate library project to the same four Academic architects whom they had chosen to develop a new project for the Assembly and Secretariat.

Le Corbusier had two further complaints about the committee's decision: firstly, that the Committee of Five had not required any guarantee that the Nénot-Flegenhimer-Broggi-Vaccaro-Franzi-Lefèvre-Vago consortium would not exceed the new maximum budget²²: none of them had respected the limit set in the original competition, why would they respect this new limit? The second complaint was about the Committee's requirement regarding the siting of the new project:

All the same, the committee judges that it will be desirable, if possible and feasible, that the projected buildings should be oriented towards Mont Blanc, and that they may be built and set back in such a way as to safeguard the greatest possible number of the trees which are to be found along the shore of the lake.

Le Corbusier commented

That was exactly the character of Le Corbusier's project.
In the case of the project whose authors have been chosen, this essential requirement of the programme was misconceived in the most complete fashion: therefore, a new project is required from them²³.

He went on to point out the problems involved in the collaboration of four architects whose original projects were very different:

The spirit of compromise, which has ended in grouping the authors of four projects, will also infuse their collaboration for a unique project; and if we take into account that certain of the projects in play already present a markedly composite character, we can expect to see from the hands of the associated architects a building which will hardly be stylistically pure....²⁴

Another problem raised in the *Requête* was the spectre of further delays arising from the committee's decision to commission a new project and of disagreements between the collaborators. Le Corbusier claimed that his project could be built immediately:

...building of the Le Corbusier-Jeanneret project might start tomorrow, if the Council had given its consent. Even if it had decided that this project, having been adopted completely in principle, should be revised in certain ways to take account of the adjustment of the financial limit and of the new resolution to be taken on the subject of the library, the way in which the undersigned have proceeded to finalise their project is a guarantee that this revision could be accomplished in the minimum time and without compromising the unity of the concept vital to every work of art.

It is unlikely that Le Corbusier knew how his project was regarded by the writers of the three reports studied by the Committee of Five. The surviving Jungo & Martin report is probably the most favourable one given Camille Martin's previous article in *Das Werk*, and yet Jungo and Martin thought that none of the projects were suitable. Here Le Corbusier argued that his project required only minor revisions, and that these would be required only because of external changes of circumstance, that is, because of the increased budget and the new, enlarged library project.

In conclusion, the *Requête* asked the Council to do two things:

1. to refuse to ratify the decision of the committee of Five on 22nd December, 1927, as required by the final clause of the resolution of 26th September 1927 of the Assembly.
2. To adopt a unified solution, which, respectful of those principles which are the basis of the organisation of the competition, and which inspired the mandate given to the committee of Five, will safeguard the legitimate rights and interests of the undersigned.

Twenty five copies of the *Requête* were sent to the Council of Nations, for its meeting on the 5th March 1928, when the decision of the committee of Five was to be ratified. But according to Le Corbusier, Sir Eric Drummond, Secretary General of the League, neither delivered them, nor acknowledged receipt of them. The Secretariat finally wrote to André Prudhomme, Le Corbusier's lawyer, on 31st March, 1928, and declared

qu'il n'appartient pas à des particuliers de saisir le Conseil de la Société des

Nations.²⁵

The *Requête* was sent to the Council again for the June session, but receipt was again not acknowledged. André Prudhomme sent a registered letter to the Secretariat which elicited the following reply on 25th June, 1928:

To make it absolutely clear to you, it is not the business of any individual to make representations to the Council of the League of Nations. For the rest, I am, in principle, without any power to present to this organ any communications from a non-official source.²⁶

At this point, Le Corbusier gathered up all the documents and letters supporting his cause and rewrote his *Une Maison - Un Palais* lecture as a three part book. The latest date of any document in the book is that of the above letter, so *Une Maison - Un Palais* was clearly published in the latter part of the year, after the first CIAM conference, held at Hélène de Mandrot's villa at La Sarraz in June 1928.

I have taken my brief history of the competition for the Palace of Nations up to this point in order to locate the book *Une Maison - Un Palais* with respect to the events of the competition. The formation of CIAM - the *Congres Internationaux de l'Architecture Moderne* - is beyond the scope of this project; suffice it to say that the events at Geneva described above contributed to the perceived need of Modern architects for an organised forum, and Le Corbusier was one of the primary founders of CIAM. Madame de Mandrot, a fellow Swiss, friend and patron, was involved in the later history of the project for the Palace of Nations: it was on her family's land, the Parc Ariana, that Nénot and Vago's palace was eventually built, and the fact that the city of Geneva and the League wanted this site enabled her to intervene on Le Corbusier's behalf. Her intervention was unsuccessful: Le Corbusier did present a project for this site, a reworking of the elements of the first project to accommodate the specifics of the new site, and presented it to representatives of the League, but the consortium of architects selected by the Committee of Five was not displaced. Even then, Le Corbusier continued to pursue the matter. When the plans for the built project were made public in 1930, he wrote to the League to protest the plagiarism of his designs. The League made no

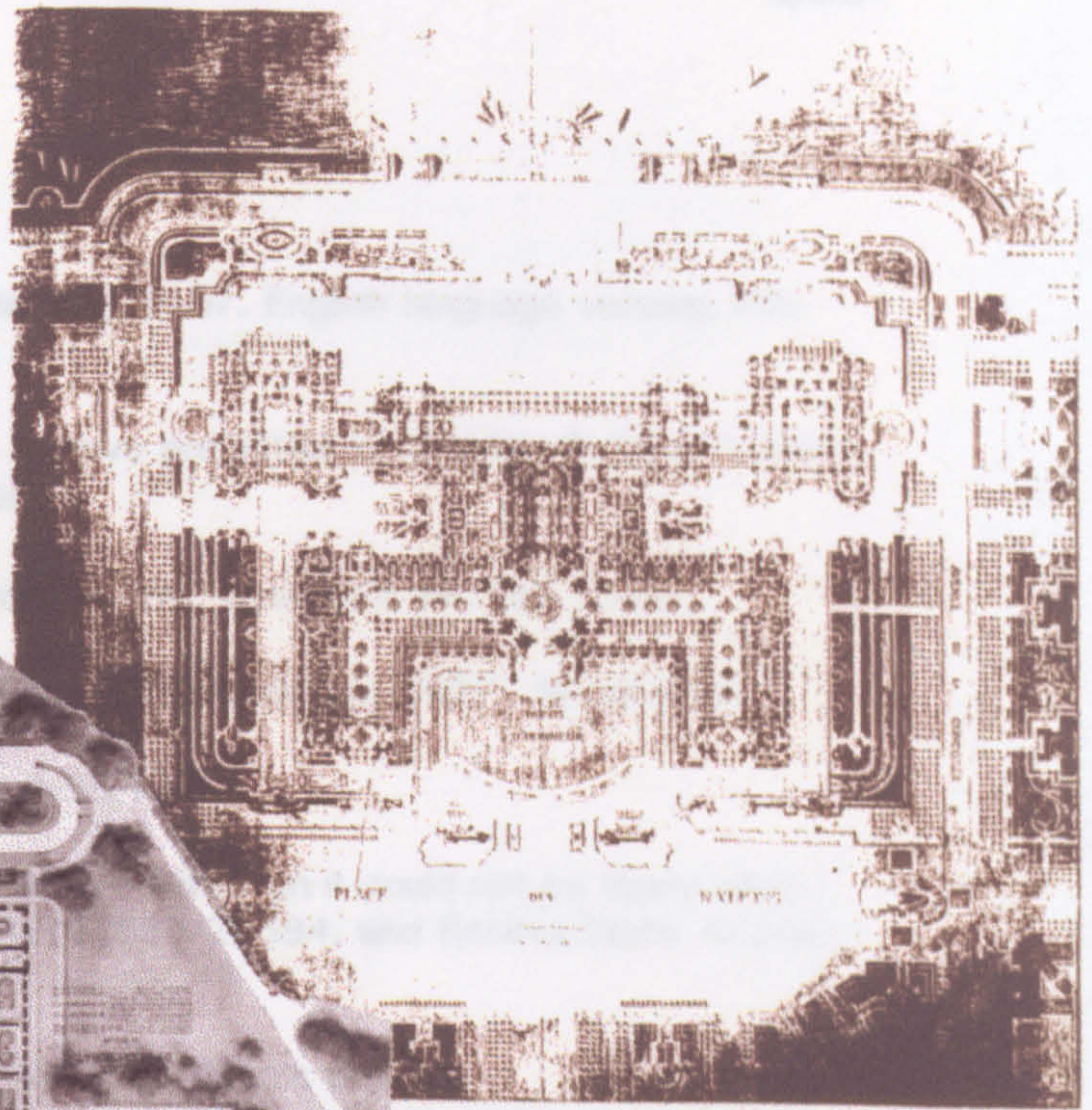
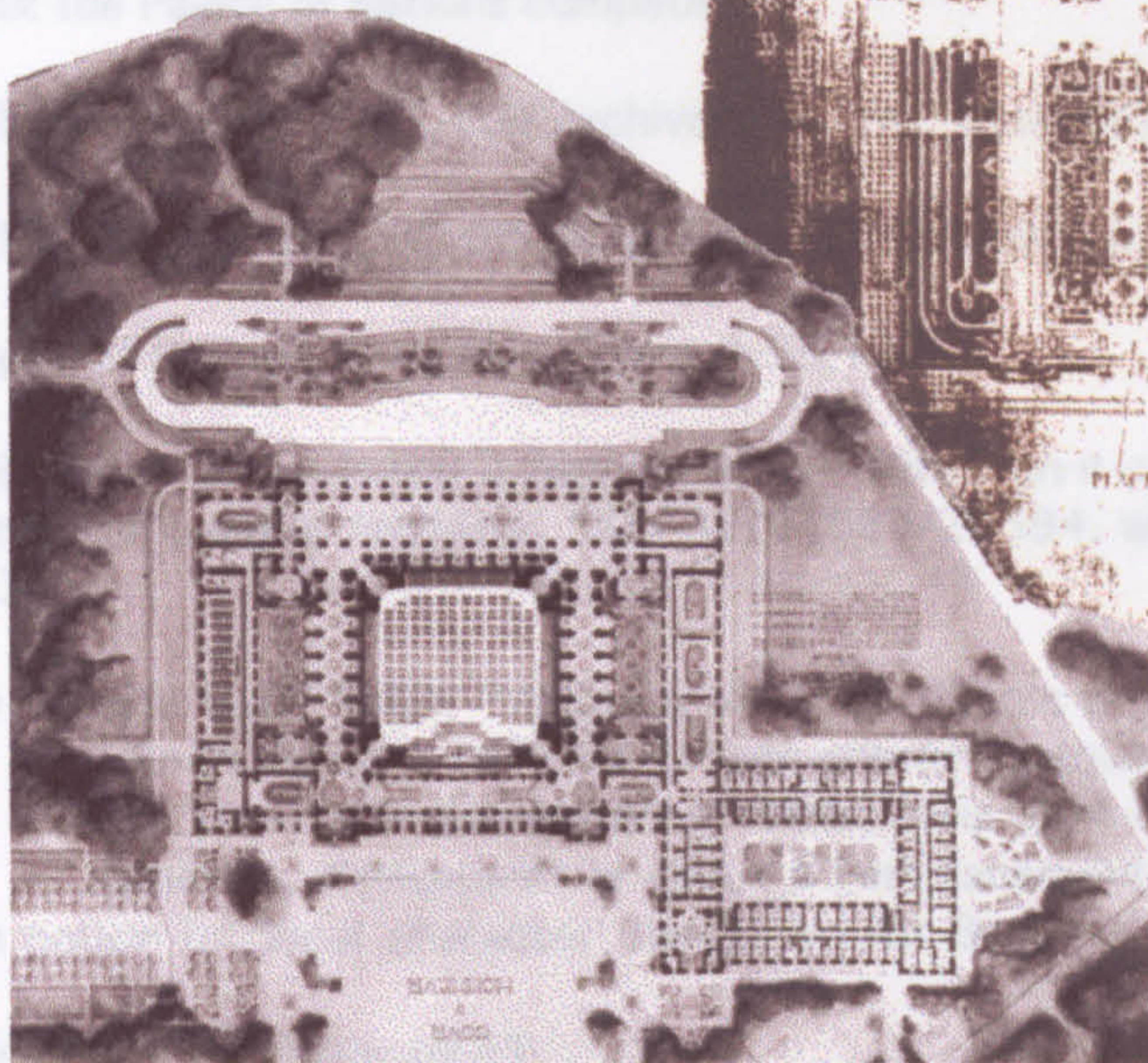
reply and he submitted a second *Requête*, '*Le Plagiat*', in July, 1931, detailing the supposed plagiarisms and demanding compensation. This document was published by *L'Architecture d'Aujourd'Hui* later in the year, along with a reply by Joseph Vago, by then the main architect for the built project [H-P.Nénot, an old man when the project began, died in a car crash during the construction period]. Vago threatened to sue Le Corbusier for defamation. After this exchange, Le Corbusier's interventions ceased.

Construction of the building was already well under way at the time of Le Corbusier's second *Requête*, and the Secretariat was completed in 1936, ten years after the first meetings of the competition jury [fig.35]. The Assembly Hall was inaugurated in September 1937 with the 18th Assembly. At last the League had its headquarters, but there were to be just two more Assemblies before Germany invaded Poland and all League activities were suspended. [See the chronology included at the beginning of Part III of this thesis]. When the League was recast as the United Nations after the war, Le Corbusier was involved in the initial studies for an American Headquarters, but the commission was awarded to the American architect Wallace K.Harrison. Le Corbusier would not build such a programme until 1950; in that year he was appointed as architect for the parliament at Chandigarh.

NOTES TO PART II, SECTION 4

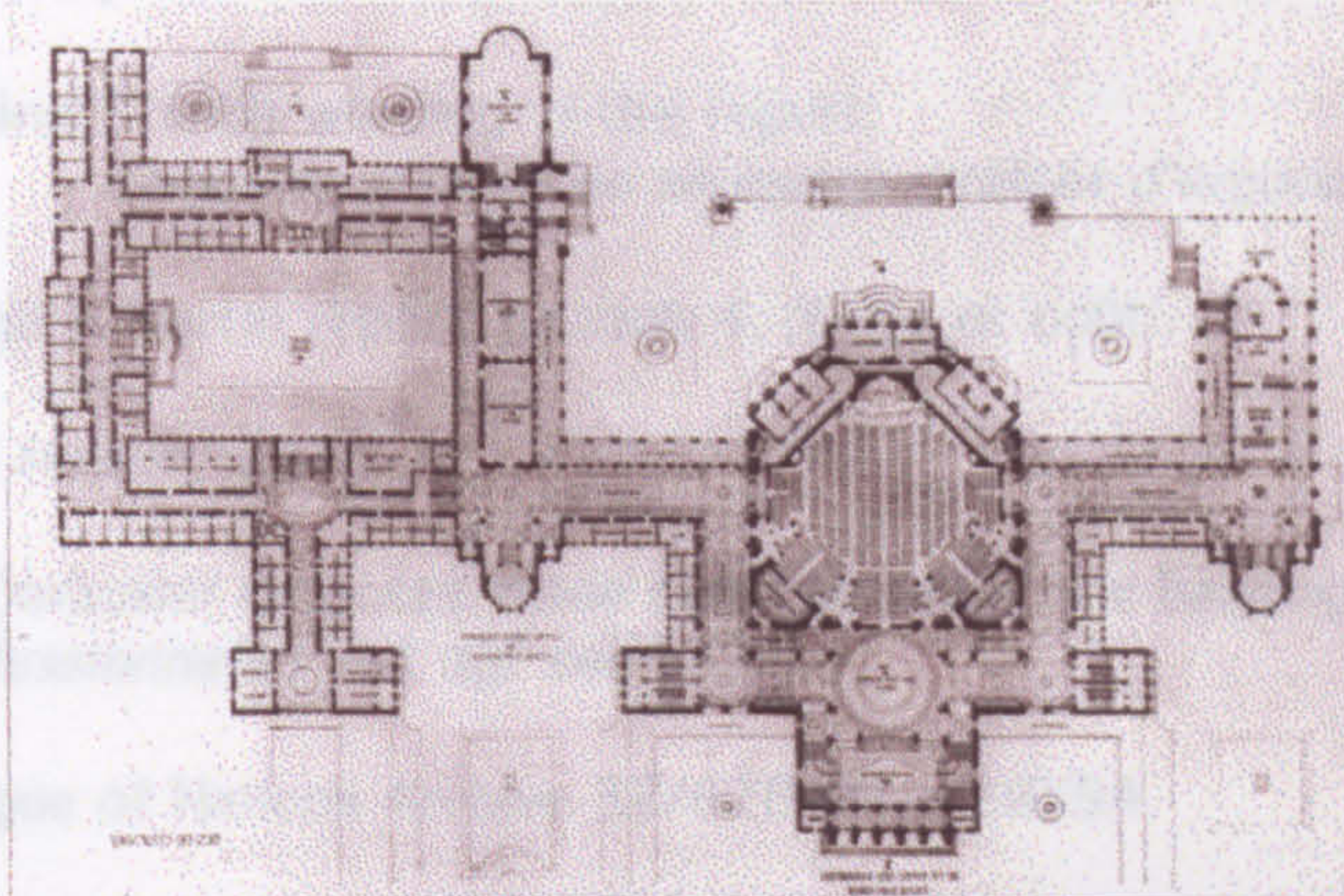
The First World War, The War of 1914-1918

War's impact on the world, the impact of war on the world



1919 Grand Prix Le Palais de la Ligue des Nations

1927 winning plan H.P. Nenot
1927 winning plan G. Vago



1928-1936 Palace of Nations, Geneva



figure 35

NOTES TO PART III, SECTION 4

1. See Karin Kirsch, *The Weissenhofsiedlung*, p107. English language version, Pub. Rizzoli, 1989
2. Moser's letters held in the Berlage Archive are listed in Anzivino & Godoli's book about the Palace of Nations competition.
3. 11th September, 1927, U.N Archives, Geneva, document XV, Box 1544.
4. 11th Plenary Meeting of the Assembly, 10th September, 1927. Question 45.
5. League of Nations Archives. Report A.93.1927
6. Published in *Le Corbusier à Genève*, 1987. Although it could not be found when I visited the League Archives. SDN 32/62683/28594, and Geneva State Archives B.13.
7. The Société d'Art Public "Heimatschutz" on Vago's project:
 En se limitant aux neuf projets primés ex-aquo, le projet de M.Vago est aux yeux de la Société d'Art Public, celui dont le plan, par sa disposition générale, s'adapterait le mieux à l'emplacement et au caractère local.
 The notion of 'local character' recalls similar Beaux-Arts ideas.
8. *Une Maison Un Palais*, p223
9. Original French wording in the report:
 Ce projet atteste de sérieuses qualités d'organisation.
10. Jungo & Martin report, section 4, 'Cube et coût'.
11. *Une Maison*, p218.
12. Le Corbusier collected these petitions under the heading '*Les Associations Professionnelles ont agi*' see p221.
13. League of Nations Archive 32/62813/ + 28594
14. SdN Archive R1438
15. See *Une Maison* p219, letter from Hoffmann etc 28th November, 1928
16. No doubt Moser had some involvement here as well. See *Requête* and *Schweizerische Bauzeitung*, 29th October, 1927
17. The wording of the committee's decision is as follows:
 "The committee has thus arrived unanimously at the following conclusions:
 1) The project which, in its opinion, satisfied most of the requirements of a practical and aesthetic order, is Number 387, the authors of which are MM.H.-P.Nénot and J.Flegenheimer.
 2) Nevertheless, the committee has indicated the inconveniences which are presented by the projects in question and it has made suggestions for

remedying them.

A new project must be developed by the authors of project no. 387, in collaboration with the authors of projects no. 117 (MM.Broggi, Vaccaro, and Franzi), 143 (M.Lefèvre) and 431, (M.Vago) and with the Secretariat of the League of Nations."

[resume of the conclusions of the Special Committee, 27th December 1927, League archives.]

18. Note from Lloyd, Secretariat, 3rd April, 1928.
19. He told the story as *L'Europe Nouvelle* [17th September, 1927] had reported it.
20. *Schweizerische Bauzeitung* : the official journal of the Association of Swiss Engineers and Architects.
21. See *Requête*, p211, *Une Maison Un Palais*.
22. The wording of the clause dealing with the new budget is identical to the wording in the competition programme, see documents appended.
23. See *Une Maison*, Appendice p212: *Requête*, section 11:
C'était le caractère même du projet Le Corbusier. Le projet dont les auteurs ont été choisis méconnaissait de la façon la plus complète, cette donnée essentielle du programme: c'est donc un projet nouveau qu'on leur demande.
24. From the *Requête* -my translation.
25. SDN 32/59298/28594. Quoted in *Le Corbusier à Genève*, p45
26. Letter from Under-Secretary General S.Paulucis de Talbol Jarve to André Prudhomme. Reproduced in *Une Maison Un Palais*, p215; also in League Archive, box 1544
...Ainsi qu'il ne vous échappera pas, il n'appartient pas à des particuliers de saisir le Conseil de la Société des Nations. D'autre part, je suis, en principe, sans compétence pour déférer à cet organe des communications de source non officielle.

Concluding Remarks:

Un Architecte a exploité ses Réserves

..... Auguste Perret, developer, builds docks at Casablanca in reinforced concrete, vast naves, warehouses for merchandise. Limitations pursue him; there are conditions of the strictest economy: reinforced concrete supplies him with the slender posts and the smooth "eggshell" vaults which are like lightly curved steel sheet: in place of enormous girders carrying a flat ceiling, a shell seven centimetres thick which will overcome its lateral pressures through a concrete ring. Some years later, Auguste Perret, architect, draws on his architectural resources from Casablanca, and erects the nave of the church at Raincy. Nothing has changed in principle. But a categorical intention to elevate the work above utilitarian ends causes the close examination of the proportions of elements: here the shed for merchandise is a shed for priests, and a feeling of calm and jubilation reigns. No need for props indicating "religious style" supplied by tradition. An architect has drawn on his resources.

Une Maison - Un Palais, p44.

The idea for this study arose out of an interest in Le Corbusier's 'Purist' houses of the 1920s, and the underlying rule system which gives those houses such visual strength. The power of his system, summarised by Le Corbusier in 'The Five Points of a New Architecture', is derived from its dialectical nature: each of the 'Five Points' refers in a reactive way to a corresponding element of the classical parti. Additionally, the Corbusian response is shaped by modern structural means: the reinforced concrete frame confronts traditional loadbearing masonry and the architectural dialogue thus implied extends from the practical to the ideal.

My original purpose was to discover how Le Corbusier's rule system might be applied to a larger, public building. From *Une Maison - Un Palais*, indeed, from the very title, it seems that Le Corbusier asked himself a similar question. He did test the rule system of the Purist house here: all its Corbusian components are to be found. But things are not as clear as in the Purist house; the rules are not so rigid because of the greater complexity of the programme. Le Corbusier had new problems to wrestle with: problems of scale and formality, and, perhaps most pertinent, new technical challenges: how might he express his idealistic vision of the League of Nation given the technological limitations of 1927, and the very modest budget available? As regards the structure, he had to compromise and

employed a hybrid system, mixing concrete and steel. For the rest, *he drew on his resources*. The use of geometric ratios to locate compositional elements is found throughout his work, and the Palace of Nations is no exception: an underlying geometry - which may or may not be available to the observer - locates the buildings with respect to each other, and designates a place for man in the landscape. As with the house of the 1920s, so with the palace: his work always refers to Western European architectural traditions, and often specifically to French traditions: remembrances of the plan of Versailles inform the Corbusian plans for the Parc Perle du Lac, recollections of the grand public spaces of French cultural life shimmer in the great entrance hall of the Assembly Building. He remembers the lessons of both L'Eplattenier *and* of Perret; he does not forget Behrens or Schinkel. He is a sponge: learning from nature, from antiquity, from local events, and from his contemporaries. The machine imagery of modern times: the car - its tracks so often present in his drawings - the plane, the liner - all these feed into his work as well.

He adapts and he invents. Old elements are transformed, new elements are constantly introduced into his work: at Geneva, a double-decker bridge - toplit, ovoid tubes on a single massive foot; multiple variations on the basic Purist piloti - the beginnings of a tendency towards weight-bearing expressivity; glass side-screens to the Assembly hall with their integral lighting, and the curved *Pavillon du Président*, forerunner of all those late, sculptural structures at Ronchamp, at Marseilles, at Chandigarh. In each of these inventions, there is a fusion of the technical and the poetic; a rich mixture of implications and reinterpretations, a multitude of exploratory possibilities.

Une Maison - Un Palais makes explicit the Corbusian view of the transformable *type*: the primitive hut may be transformed into temple or palace, but this is not a matter of simple geometrical manipulation, but of the insight of the individual architect/genius, who draws on his understanding of his time and the historical accumulations of his culture. Transformation is a referential process, and as we have seen, the house-palace is a two-way construct. The transformed object incorporates its multiple origins alongside contemporary metaphors. From this typological approach comes that persistent ability to evoke the fundamental structures of civilisation and the magic objects of our time, which gives the Corbusian building such resonance. A continuity of thought runs through his work, each project enriches those that follow; as the diagram shows, the Palace of Nations

is located in a matrix of concerns and interests, rather than just fitting into a simple, linear sequence of projects. Here all Le Corbusier's concerns of the 1920s are gathered up: the lessons learned in Geneva inform all his future work, town planning as well as architecture [fig. 36]. As with Auguste Perret, so with Le Corbusier. The architect *draws on his resources*, and the house becomes a palace.

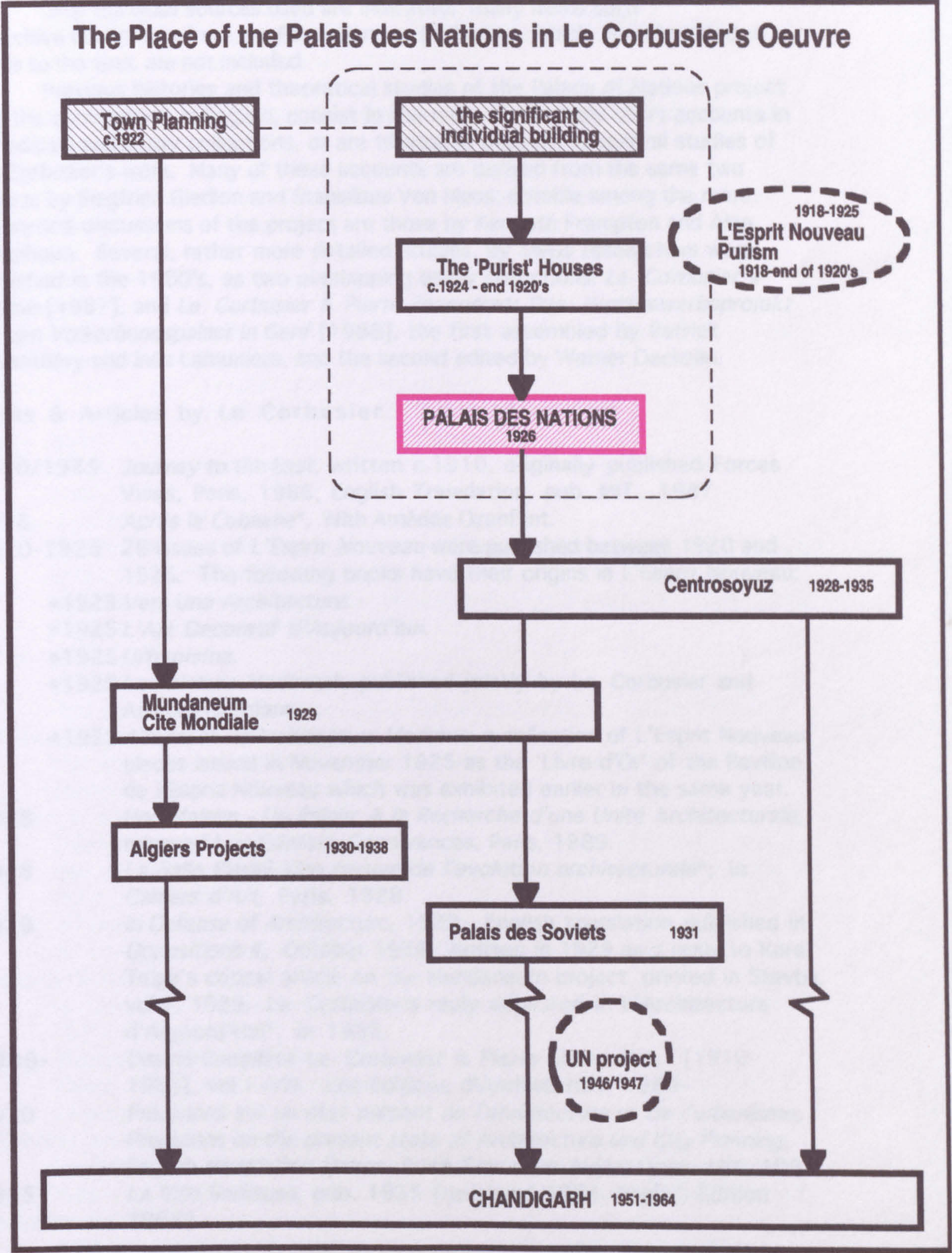


figure 36

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