

BUILDING TO POWER:
ARCHITECTURE OF TEHRAN 1921-1941

by

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ABSTRACT

Between 1921 and 1941, Reza Shah Pahlavi orchestrated the transformation of Tehran from a traditional Iranian Islamic city into a modern capital. The urban grid, public spaces, state institutions and housing typologies introduced during his reign permanently altered the character of Tehran.

Through the use of 19th and 20th century maps and records, newly discovered building plans, and original architectural surveys, this dissertation investigates the nature of the urban change. An analysis of the structural elements of the traditional city-- wall and gates, royal citadel, religious buildings, and residential neighborhoods-- serves as a reference point for evaluating the modernization of the Reza Shah period.

Reza Shah initiated a rapid and irrevocable process of change that began in the public domain at the city scale and filtered into the private domain of the house. A grid of wide boulevards, traffic circles, and planned public spaces were superimposed on the traditional city. Foreign and native architects designed new state institutions including ministries, banks, museums, universities and schools. They introduced modern materials and a variety of forms incorporating both historical and modern influences. On public buildings and monuments, pre-Islamic imagery particularly from the Achaemenid period symbolized the new central state's reawakening of past grandeur.

This study examines not only key elements of urban and architectural change in Tehran but also the process and effects of change itself. The public building program enabled a first generation of Iranian architects to define a modern profession and, ultimately, to expand beyond the symbolic, monumental requirements of state architecture. In Tehran's private architecture both Iranian and foreign architects found their most creative expression. Original surveys of traditional Iranian courtyard houses and mid-twentieth century row houses, apartments and villas demonstrate the many ways in which architects integrated traditional and modern features into new housing forms.

Characterizing for the first time the nature, scope and effects of Reza Shah's modernization process this dissertation attempts to elucidate aspects of the relationship between tradition and innovation in a rapidly changing culture and to demonstrate how urban and architectural changes initiated during the Reza Shah period introduced complexities and contradictions that still exist in present day Tehran.

Thesis Supervisor: Stanford Anderson
Title: Professor of History and Architecture
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Dedicated to

Vassimeh Kolbadi Marefat
mother, scholar, and human being like no other

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ENGLISH TRANSLITERATION SYSTEM

Notes on the transcription system used:

This dissertation uses a transcription versus transliteration system, composed by Professor Wheeler Thackston at Harvard University and used in his Persian Grammar. The following chart shows the concordance. It is based on present day pronunciation of Persian, as prevalent in Tehran. The final eh pronounced e is written as a. There are a few exceptions:

1. Words conventionally written in Arabic transcription are used in their familiar spelling ie. Muharram.
2. Contemporary personal names, place names are spelled the way they have been spelled conventionally such as Foroughi, Nasser Khosrow, Oudlajan.
3. Bibliographic entries use the Library of Congress transliteration system.

ا	'	ش	sh	ه	h	ای	ay (sayr)
ب	b	ص	s	ی	y	او	aw (dawrân)
پ	p	ض	z				
ت	t	ط	t			یا	iâ (miân, Irâniân)
ث	s	ظ	z	Vowels:			
ج	j	چ ²	'	ا	a (dar)	ا	a (nâme)
ح	ch	خ	gh	ا	e (gel)	ا	a -ye (nâme-ye _)
خ	h	ف	f	ا	o (por)		
د	kh	ق	q	ا	a (bâr)		
د	d	ک	k				
ذ	z	گ	g				
ر	r	ل	l				
ز	z	م	m	ی	i (pir)		
ژ	zh	ن	n				
س	s	و	v	و	u (dur)		

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PREFACE

In my childhood during the 1960's, Tehran was a bustling city with all the attributes associated with the term "modern": broad avenues and expansive traffic circles, neatly subdivided grids in residential neighborhoods, monumental civic buildings, shop windows proudly displaying Western apparel and goods.

Unlike Shiraz and Isfahan, it was not a palpably ancient city which had simply made room for the 20th century alongside the previous ten. Frozen in modern time, Tehran seemed almost without a past. There were few apparent clues that hinted at what might have existed before.

A look at Tehran's architecture and its urban form reveals few layers of evolutionary change through its 200-year history as the Iranian capital. There are elements --mosques and bazaars-- which seem lifted out of time, untouched. Yet around them is a city built only yesterday. On the surface, it seems that much of Tehran simply discarded old garments for new.

Like a living organism, every city is constantly evolving and changing in ways partly predictable and partly unpredictable. Still, it is not in the nature of cities to erase their pasts. Vestiges always remain. Where were Tehran's?

I chose Tehran as the object of my study, both for its familiar mystery and for its status as the laboratory for architectural modernism in Iran.

As the capital, Tehran continues to have the fastest growth rate of any city in Iran. It is the economic nerve center, attracting migrants from every realm of society and remaining the focus of both experiments in modernism and resurgence of tradition. It is a laboratory for the determination and promulgation of cultural values, always in flux.

The city today presents an architectural image totally lacking in harmony. Codes, regulations and practices have been unable to produce accord among its jumbled mix of buildings. Not quite traditional and not quite modern, recent buildings convey a feeling that architects are searching for an appropriate idiom. The magnitude and continuing nature of Tehran's difficulties seem to foster only piecemeal solutions with no time to look back upon the origins of its present condition.

As an architect living and working in Tehran, I began with the proposition that the process of thinking about solutions for present urban problems begins with an understanding of the origins and history of the modern city. I discovered that I had no precedents for the study of the urban growth patterns and architectural history of this century.

My subsequent exploration of Tehran has been an adventure on many levels --a trip through a city which has presented many faces to many eyes, a sojourn in time as well as space, and a journey from captivating particulars to revealing generalities. It was a trip taken without a travel guide and its result is both a first step toward understanding and an invitation to other students of urban history who will go many steps further.

INTRODUCTION

Until the early 20th century, the urban fabric of Tehran, like that of many Muslim societies, was closely linked to an Islamic tradition. During two decades, 1921-1941, selected features of Western culture were introduced to Iran by Reza Shah. Tehran was the conduit.

My purpose, to find out if the differences between an existing culture and an imposed culture were directly reflected in the physical fabric of the city, gave rise to the questions that guided my exploration:

1. What was the nature of the change?
2. How did the change manifest itself publicly in the physical environment?
3. How did the change affect the traditions and conventions of private architecture?

I began looking for answers with the certainty that Tehran itself would provide physical evidence to the persistent observer. I took a structural approach to urban design and architecture, selecting constituent elements of the city landscape, charting their transformations over time, looking at how they related to make a

whole. The approach was also comparative and it gave rise to a recurrent theme of duality, manifested on many levels: modern versus traditional, secular versus religious, public versus private, continuity versus discontinuity.

Although my initial fascination was sparked by modern Tehran, I soon realized that an original study of the modern city would be limited in value if confined to the surface that meets our eyes today. Twentieth century Tehran can certainly be documented. But how can it be interpreted? Without an awareness of history, particularly late 19th century history, meaning is elusive and analysis becomes impossible.

That is why this dissertation begins with a look backward. Chapter I is a condensed summary of Tehran as it existed in the mid to late Qajar Dynasty (1779-1924), after 1840. This brief chapter serves as a background against which the changes of the 20th century can be described and evaluated.

The main body of the thesis is divided into two parts, one focusing on the macrocosm of the urban setting, the other on the microcosm of the private house. Chapter II charts the metamorphosis of the public city under Reza Shah, between 1921 and 1941. It also traces the effects his building program had on the process of making architec-

ture and the emergence of a modern, independent architectural profession in Iran. In Chapter III, we turn to the private sphere of the house to examine the ways in which the large-scale urban transformation and the rise of a new generation of European-trained Iranian architects affected the traditions of private building in the mid 20th century.

METHODOLOGY

For the historian of Middle Eastern cities, there is often no descriptive pool from which to develop an interpretive and analytic debate. The lack of compiled information sends the student on a search for the most preliminary and basic data.

Thus, a major part of my effort over the past years has been to begin to compile and substantiate a descriptive urban history of Tehran from the mid-19th century to World War II. This initial descriptive history is the foundation on which I have built interpretations to be refuted or reinforced by other students of urban history.

In 1976, I initiated an in-depth survey of housing in Tehran in collaboration with another architect, my husband and colleague, Vahid Khalili. During an intense period of reading and consultation with Iranian his-

torians, we identified five general periods in the history of Tehran as a capital, each corresponding to a political, social or economic turning point. These periods were:

1. EARLY QAJAR 1798-1848; 2. LATE QAJAR 1848-1921
3. REZA SHAH 1921-1941; 4. POST-WAR 1941-1960;
5. White Revolution 1960-1979

Further research enabled us to identify residential quarters exemplary of each time period and, in the case of earlier periods, quarters sufficiently intact to contain surviving examples of housing.¹

Initially, we confined our efforts to finding four or five dwellings from each time period. But as we proceeded, more and more houses commanded our attention.² The scope of our inquiry expanded as why and how questions arose out of observation and comparison. The connection between private housing and public architecture became an intriguing question as did the influences that had led to dramatic changes in domestic design.

Assembling the necessary information for an inter-

¹ Shortly after we began our research, we were awarded a two-year grant from the Iranian Ministry of Education.

² As we surveyed houses in a neighborhood, word traveled. Nearby residents came to tell us about the historic importance of their homes and invited us to look for ourselves. When we did, these dwellings often proved to be worth our attention.

pretive study of modern housing led to a broader examination of the city's history and development. In the face of a scant corpus of scholarly work about both modern and historic Tehran, I pursued a program of primary research which included the development of three sources of information which need to be documented as they contribute to this paper.

Archival Research

Preliminary research into the history of Tehran began in 1976 with an exploration of Iranian archives. Among them were the Sazeman-e Naqshebardari [Cartographic Society], Sazeman-e Hefazat-e Asar-e Bastani [Society for the Preservation of Historic Monuments], Bank-e Melli [National Bank], Shahr-dari [City Hall], the National Library, and the Manuscript Division of the Majles [Constituent Assembly] Library.³

This research led to the identification of two problems which limit the study of urban form in late 19th century Tehran. One is the dearth of indigenous literature. The other is the bias of Western accounts.

The first bias came from Western expectations. As

³ In 1984, a generous grant from the Social Science Research Council enabled me to return to Iran to reexamine these archives.

capital of so ancient a country as Iran, the city of Tehran was relatively modern. It was only in 1786 that Agha Mohammad Khan, the first Qajar monarch, made this relatively remote village the capital and seat of his kingdom.⁴

The city was somewhat disappointing to the Western traveler. Tehran neither matched preconceived expectations about "Oriental" cities nor compared favorably with older Persian cities. Despite local pride in the capital, foreigners found in Tehran few sites worthy of attention. Describing the monuments of Tehran in 1888, E.G. Browne

⁴ The idea of making Tehran the capital can be traced to Karim Khan Zand (r.1750-1779) who, in 1759, gave orders to build a seat of government at Tehran. The Safavids had earlier built an Arg surrounded by a wall. Karim Khan Zand commissioned the architect Ostad Ghollam Reza Tabrizi to rebuild the walls and erect an audience chamber, administrative buildings and private quarters. Karim Khan subsequently abandoned the idea in favor of Shiraz. Agha Mohammad Khan made Tehran his capital a year after capturing it in 1785. Tehran then became the maqgar saltanat, the Dar-ol-Saltana [Imperial Seat], and later the Dar-ol-Khelafa [Seat of the Caliphate]. On Karim Khan Zand's foundations, Agha Mohammad Khan established a full-scale palace which was to become the palace of Fath Ali Shah and his successors. For historical accounts of Tehran during this period, see Abdol Aziz Javaherkalam, Tarikh-i Tihran (Tehran, 1946), 83-84. Vladimir Minorsky's article, "Tehran," in Encyclopedia of Islam, Vol. 4, (1934): 713-719, gives a list of early oriental sources on pre- and early Qajar Tehran, as well as the writings of early European travelers.

drew a typical conclusion:

These are very few and, for the most part, of little interest. Tehran is an essentially modern town, and as such lacks the charm which invests Isfahan, Shiraz, Yezd, and other Persian cities of more respectable antiquity. In the eyes of its own inhabitants, however, it appears the ne plus ultra of splendor.⁵

Another Western limitation was imposed by Islamic culture itself, which often prevented Westerners' access to certain areas of the city. The mosques, madrastas [schools], takyas [open space theaters], mahallas [residential districts], and the andarun [private quarters of the house] were, for the most part, forbidden.⁶ The city permitted to the Western traveler was limited in geographic area, much of it specifically designated for his accommodation. In the case of Tehran in the latter part

⁵ Edward Granville Browne, A Year Amongst the Persians (Cambridge: The University Press, 1926), 100.

⁶ There seem to have been fewer sanctions earlier in the century, when fewer Westerners traveled to Iran. James Morier provides a detailed description of a ta'zia in his Second Journey through Persia, Armenia and Asia Minor (London: Longman, 1818). As late as the 1840's, Pascal Coste and Eugene Flandin drew the Masjid Shah courtyard. Eugene Flandin and Pascal Coste, Voyage en Perse: Perse moderne (Paris: Gide et Baudry, 1851-54). As the Qajar Dynasty continued toward the turn of the century, religious institutions ceased to welcome non-Muslims. Restrictions were less severe for women, some of whom were able to see andaruns and mosques.

of the 19th century, this was the Mahalla Dawlat.⁷

In Iran, the European community remained impermanent, always separate, and never overtly dominant.⁸ Many travel journals from the time are cursory glances from observers more interested in the exotic than in accurate description. There were, of course, those whose knowledge of Iran set them apart and whose writings provide insightful descriptions of both the city and its people. Among the reliable guides are those of Sir Robert Ker Porter, James Morier, Edward Granville Browne, and Henry d'Allemande.

Many of these journals were illustrated with drawings and/or photographs. Even here, however, the views of Tehran are not as abundant or varied as those of older Iranian cities. Some of the early visual records of the city come from the albums of Pascal Coste and Eugene Flandin, and Jules Laurens' drawings, which provide views of the city, the Arg [citadel] and the city outskirts.

⁷ Although this term today may be translated as "State Neighborhood," its 19th century meaning was more akin to "Royal Neighborhood."

⁸ Browne, A Year Amongst the Persians, 93. Mr. Browne informs us that in 1886 the European community consisted of the corps diplomatique--representing major European nations and the United States-- the staff of the Indo-European Telegraph office, American missionaries, several merchants and businessmen and a few Europeans employed in Persian service.

It is mainly through Iranian texts that one is able to get a glimpse of the private inner city that lived within the familiar public city.⁹

Two Persian visual documents of the time are the paintings of Mirza Mahmud Khan court painter to Naserod-din Shah, inaccessible since the 1979 closing of the Golestan Museum¹⁰; and photographs by Sevruguin¹¹, a court photographer to the Shah in the late 19th century, whose collection is held at the Freer Gallery.¹²

The most important sources of information for the

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- ⁹ Novels and literary sources, especially the works of Sadeq Hedayat and Bozorg Alavi, give insight into traditional patterns of Persian life.
- ¹⁰ Emineh Pakravan has published a number of views by Mirza Mahmud Khan in Tehran de Jadis (Genève: Edition Nagel, 1971).
- ¹¹ In "Some remarks on the early history of photography in Iran," an article in Qajar Iran: Political, Social and Cultural Change 1800-1925 ed. E.C. Bosworth and Carole Hillenbrand (Edinburgh: Edinburgh University Press, 1983), 261-290, Iradj Afshar mentions Sevruguin.
- ¹² I initially saw these photographs in the Myron Bemont Smith Collection at the Freer Gallery archives in 1983. As of 1984, these photographs (along with the Herzfeld Collection) were closed to scholars. Only since March 1, 1988 have they been available for review but not yet for reproduction.

Qajar period are the writings of E'temad-os-Saltana¹³ and Abdollah Mostowfi's Sharh-i Zindigani-yi Man Ya Tarikh-i Ijtima'i va Idari-yi Dawre-yi Qajariyah. In recent years, there has been a resurgence of interest in the Qajar period. The most informative work in Persian is Jafar Shahri's Tihran-i Qadim. In 1985, Nasser Najmi also published a new edition of his book Tihran-i Ahd-i Naseri, which incorporates information from many earlier sources.

Four 19th century documents in particular allow us to scratch the surface and view the significant structures of a changing city. They are a census and three maps containing details about the physical components of Tehran.¹⁴ They are also useful social documents, offering

13 E'temad-os-Saltana (Mohammad Hassan Khan), 1840-1896, studied at the Dar-ol-Fonun, served in the army from 1852-63 and also at the embassy in Paris under Hassan Ali Khan Garusi in 1863. He returned to Iran and was appointed court translator in 1867. He was also editor of the government gazette, a member of dar-ol-showra-ye kobra by 1882, and Persian minister of press in 1883. He was given the title E'temad-os-Saltana in 1887. Shaoul Bakhsh, Iran: Monarchy and Bureaucracy (London: Middle East Center, 1978), 378.

14 Since they were not considered accurate in terms of cartography, scholars have tended to ignore these maps and they have rarely been studied. The earliest two remained accessible only in their first editions for almost a century. In 1977, a facsimile limited edition of the Krziz map of 1857 was reproduced in

insight into the processes and rates of urbanization before the 20th century. Since these documents have been used only rarely and never published together, a few words about their provenance and contents are in order.

The Berezin Map of 1842. The first known 19th century map of Tehran was made by a Russian named Ilias N. Berezin, whose published guidebook of 1852 contained a map, possibly made a decade earlier. There are two versions of Berezin's map, one in Persian (1.5) and one in Russian. (1.6)

The Persian version identifies the draftsman as "the humble servant Ilias Berezin."¹⁵ The title identifies the map as "Dar-ol-Khelafa Tehran, Paytakht-e Shahanshah Naseroddin Shah ebn-e Mohammad" [Tehran, Seat of the Caliphate, Capital of Naseroddin Shah, son of Mohammad]. Although the inscription dates the map to the reign of Naseroddin Shah, after 1848, it is more likely

Austria as Plan von Tehran by Helmut Slaby.

15 The original map is held in the Imperial Manuscript Collection, Ketabkhana Saltanati, in Iran. Its dimensions are 66 x 53 cm. The inscriptions are in gold letters on a blue background. It is signed by Berezin in Persian.

that it was made in 1842, as Minorsky has suggested.¹⁶ In the Russian version, the main components of the city have been identified by a legend and by alphabetical and numerical designations.

The Krziz Map of 1858. (1.7) This map was made by an Austrian officer of Polish descent, August Krziz, who came to Iran with a team of military advisors to teach at the Dar-ol-Fonun Polytechnic College.¹⁷ This map was

¹⁶ Minorsky, "Tehran," in Encyclopedia of Islam, Vol. 4, (1934), 715 and 719. Minorsky estimates an 1842 date for Berezin's map, even though it was apparently not published until 1852 in Puteshestviye po Severnoi Persii [Travels in Northern Persia] (Kazan, 1852). An acknowledgment to Mohammad Shah in the title inscription supports Minorsky's date. As important, the next known map, made in 1858, shows considerable growth of the urban area which is more likely to have taken place over 15 rather than five years.

¹⁷ Iran avoided British and Russian influence by appointing six Austrians as the first teachers at the Polytechnic College. Major August Krziz (1814-1886) was an artillery officer in Iran from 1851-59. In addition to teaching, he established a new gun depot, erected the first telegraph line connecting the palace with the summer gardens, and determined the altitude of Damavand and other Iranian mountains. For the mapping of Tehran, he won promotion to sartip [General] and the Austrian government awarded him a medal. In Plan von Tehran, 4, Slaby discusses Krziz. Jacob Polak, in Persien, das Land und seine Behwohner, 2 vols. (Leipzig:1865), and Fereydoun Adamiyat in Amir Kabir va Iran ya Varaqi az Tarikh-i Siyasi-i Iran (Tehran:-Peyman 1923/1944), also discuss Austrians in Iran.

completed in 1858, shortly before the expansion of the city under Naseroddin Shah.

The inscription at the top of the map gives credit to Aliqoli Mirza E'tezad-os-Saltana as the map's patron and names two Dar-ol-Fonun students, Zolfeghar Beg and Mohammad Taqi Khan, as assistants to Major Krziz. The rest of the paragraph offers climatological information, ending with the date of the map as 1858.

The North arrow and the direction of the qibla [direction of Mecca, the orientation of prayer] are indicated. A key to the map, graphically coded on the left- and right-hand sides of the map, identifies major land uses.¹⁸

A much more detailed map than Berezin's, the Krziz map identifies the names of important structures by use as well as residences. Krziz named the mahallas [neigh-

18 This list includes the following major components of the city: 1. royal buildings and those of the nobility and court; 2. streets; 3. bazaars and shops; 4. boundaries of the mahallas [neighborhoods]; 5. unused land and pits; 6. public gardens; 7. open lands and ruins; 8. hammams [baths], excluding those attached to houses; 9. masjids [mosques], built and incomplete; 10. imamzadas [shrines]; 11. madrasas [schools]; 12. takyas [open-air theatres]; 13. maydans [public squares]; 14. garrisons; 15. caravanserais; 16. cemeteries; 17. yakhchals [icehouses].

borhoods] and indicated their boundaries.¹⁹

The Abdol Ghaffar Map of 1891. (1.9) The last and most elaborate map made in the 19th century was drafted by Soleyman Khan Sartip²⁰ in 1891, under the supervision of Abdol Ghaffar Najm-ol-Molk, professor of mathematics and geometry at the Dar-ol-Fonun.

A very large map with a scale of 1:4000 meters, the map of 1891 is more detailed than the two earlier maps of the city. The text inscribed on both sides, at the top of the map, documents information about the map's patrons and the participants in its production, most of whom were students and graduates of Dar-ol-Fonun who worked on the map in successive groups. This text also records how long it took to produce the map (21 years) and technical information about the elevation of the city, its climate and climatology.

The text at the bottom of the map refers to the Krziz map (noting that its dimensions were determined by foot and were inaccurate) and states that the Abdol

19 There is no documentation of how mahalla boundaries were determined. As discussed later in this paper, there is reason to believe that boundaries are linked to the areas served by ganats, the underground water channels that served Tehran.

20 Soleyman Khan was a Christian student at Dar-ol-Fonun, and later taught there.

Ghaffar map records all changes in the old city to the date of 1891.²¹

A detailed land use plan, this map records the city as it had expanded under Naseroddin Shah. It is not unlike the Nolli plan of Rome²², in that most important public and private buildings are delineated with the names of their owners and patrons. Unlike the Nolli plan, however, it does not clearly distinguish between publicly- and privately-owned buildings. Buildings owned by the state, the royal family, and the nobility are marked in the same manner. The map equates state property with royal property, which was, at that time, generally viewed as private property.

Another difficulty is the designation of mahalla borders. The same symbol indicates telegraph lines. One can only assume that the symbol is used when the two

21 Another inscription at the left bottom of the page provides auxiliary information about other maps of surrounding areas and towns, made by the same people. It mentions topographical surveys Abdol Ghaffar made of roads and their surrounding towns and villages. This is followed by a list of publications, in print or forthcoming, by the author and dealing with topics from mathematics to road, bridge and fort construction, physics and statistics.

22 Gianbattista Nolli's 1748 map of Rome became a genre type much emulated. Perhaps the cartographers of Tehran were familiar with the map, although research needs to support this.

coincide.²³

The Census of 1868. Another long-neglected source of information is the first census of Tehran, which dates to 1868.²⁴ The census coincided with the beginning of Naseroddin's 1868-1874 reconstruction of the city. It records valuable demographic and socio-cultural information about the population of Tehran just before its expansion.

In 1868, Naseroddin Shah ordered a census of the city to be conducted by Abdol Ghaffar Najm-ol-molk. The

23 Sub-mahallas (smaller sections of mahallas) are only identified by a smaller script, with no attempt to show borders.

24 The census was shelved away shortly after its completion, not to be discovered until a century later. Nasser Pakdaman published an article on the census in 1973. See Abdol Ghaffar Najm-ol-Molk, Tashkhis Nufus Dar-ol-Khilafa, ed. Nasser Pakdaman (Tehran, 1353/1974), hereafter referred to as Abdol Ghaffar, Tashkhis. In "Tehran, Do Yaddasht dar Bara-yi Tahavvol Jam'iyat va Taharrok Ijtima'i," Kitab-i Agah: Masa'il-i Iran va Khavar-i Miyane, Vol. I (Tehran: Mo'assese-yi Intisharat-i Agah, 1360/1982), 37-57, Ali Tabrizi has compared the census with population estimates made by Western travelers of the time. He suggests that the number of houses reported in the census was too low in comparison to Tehran's population. He may be quite correct but, in the present paper, it is not the accuracy of the figures which is pertinent but rather the light the census sheds on urban culture.

process lasted 55 days.²⁵ Abdol Ghaffar chose eight of his Dar-ol-Fonun students and sent them in pairs to each of the four large mahallas of Tehran.²⁶ They questioned the senior man or senior woman of the household.

Abdol Ghaffar commented that people young and old were terrified by the survey and tended not to tell the truth.²⁷ By asking redundant questions, the surveyors built in a mechanism for checking the veracity of respondents.²⁸ Before or after surveying each household,

25 The survey was conducted between 16 Ramadan 1284/12 January 1868 and 12 Zighada 1284/7 March 1868. See Abdol Ghaffar, Tashkhis.

26 Each pair was accompanied by a dehbashian [deputy] of the neighborhood, a farrash [attendant] from the Royal College, and two soldiers. Abdol Ghaffar accompanied each group during the first few days.

27 Abdol Ghaffar, Tashkhis, 27. Abdol Ghaffar recognized that it was not unusual for an urban population to be suspicious. He therefore spent 15 minutes at the beginning of each interview assuring inhabitants "by every possible means, including swearing that there was no ulterior motive in the survey." Most assumed the purpose was to levy taxes or recruit soldiers. Many assumed the motive was to obtain money for a sarfa khandaqi [moat tax]. Others were afraid the government was seeking to banish strangers and miscellaneous people.

28 Then the following questions were asked:

1. How many men sleep in the house, including the master and all servants?
2. How many women in the household?

surveyors also talked to the dehbashi [deputy] of the mahalla, who could generally provide accurate information. After completing the survey of households within the city, surveyors continued outside the city walls where a large number of people were living.²⁹

Documents from the Reza Shah period are not abundant. There are few detailed maps documenting the city and few diaries, travel journals and chronicles. Official records are particularly scarce. Reza Shah was a man of action. He wanted --and often got-- immediate results and much urbanization was done quickly and with little documentation.

There are several maps, not as informative as the 19th century Persian maps of the city. The first, from

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3. How many children in the household from infants to five years of age?
 4. The number of youths in the household from five to fifteen years?
 5. How many male servants, khajas, gholam siah?
 6. How many female servants?
 7. How many nannies and nurses, daya, gisou sefid?
 8. What is the total number of people sleeping in the house?
 9. How many of the people came from Qajar tribe and Qajar families?
 10. How many came from Tehran, from Isfahan, from Azarbaijan?

²⁹ Abdol Ghaffar noted an increase in property values just outside the city walls, which were on the verge of demolition, Tashkhis, 28.

1930, was made when the city walls were still in place but building activity inside the city had already begun. A map entitled "The Planification of Tehran"³⁰ documenting streets, some already in place and others proposed, is the only evidence of planning the urban network from this period. A tourist map made in the early 1930's³¹ is also of particular interest.

One professional journal, the Architecte, publishing only six issues in two short years of life just after World War II (August 1946-July 1948), provided the most succinct summaries of the work of Iranian architects during the Reza Shah period.

The national archives of France, Britain and the United States were particularly valuable sources of both correspondence, and translations of important laws and regulations passed during the Reza Shah period. The Bibliothèque Nationale and L'École des Beaux Arts in Paris provided contemporary visual documents. In the United States, the Freer Gallery holds the Herzfeld collection; and the Widener Library at Harvard and the Library of

30 A copy of this map is available at Sazman-e Naqshebardari Koll Keshvar [Cartographic Institute of Iran] in Tehran.

31 This fold-out map, part of an article in the Persian magazine Itila'at-i Mahana, is held in the Widener Library at Harvard University.

Congress both have rich Persian collections. This archival research enabled me to trace the urban pattern of Tehran during various phases of growth corresponding to the political and social periods I had identified.

FIELDWORK

While studying the maps of each period, my husband and I began a field survey of existing areas of Tehran. Mapping existing conditions on plan, we noted the locations of important public elements (e.g., mahallas [residential districts], religious structures, squares, bazaars) in modern Tehran and examined them against the 19th century maps.

This enabled us to identify the likely locations of Qajar-period houses which had been referred to in records and literature. Other houses were selected through first-hand observation during tours of the mahallas. In total, our survey recorded more than 150 dwellings built from the Early Qajar period into the 1960's.³²

³² Subsequent political upheaval in Iran led to the loss of some surveys. On returning to Tehran in 1983-84, I was able to retrieve only 80 of the surveys I had placed in storage.

Frequent visits and conversations with local merchants and residents helped us gain entry into many private dwellings. With the permission of inhabitants,³³ we measured and recorded the plan of each house. We then drew measured plans, sections, and elevations, supplemented by our photographs. In total, we surveyed 80 houses of the Qajar period.

The field survey of the Reza Shah period involved a large number of dwellings. Over time, consistency of styles, materials, locations, and names of architects helped us to identify homes from this period. In 1976-78, we photographed and drew plans for 40 houses. When I returned to Iran in 1984, conditions limited additional surveys to 3 homes whose owners I knew personally.

Throughout the survey, we also documented pertinent data about the physical environment of Tehran. We were able to survey some mosques, madrasas [religious schools] and schools. We also completed photographic surveys and found plans for a number of 19th century and modern buildings reviewed in this paper-- Shams-ol-'Emara, Bank-e Melli, Tehran University, Muze-ye Iran Bastan and Kakh

33 We often had to assure people that we were not tax assessors, government agents or people with plans for demolishing the neighborhood. Once convinced of our purposes, residents were not only cooperative but generous with time, information, and even refreshments.

Marmar.³⁴

Upon my return to Iran in 1983-84, surveys of public buildings were almost impossible to conduct.³⁵ I was able to continue research at public archives, however, both the Golestan Museum and the Iran Bastan Museum were then closed.

INTERVIEWS

In addition to documenting the physical features of Tehran and reviewing historical accounts, we conducted formal and informal interviews with inhabitants, builders, architects, policy makers, historians and scholars.

As we measured dwellings, we talked informally with residents.³⁶ We asked about the history of the house,

34 Lack of archival resources made the location of existing plans a challenge. Sazman Hefazat Asar Bastani and the Melli University marammat [preservation] department yielded a number of survey plans. A few original drawings were found either at the site itself (as in the case of Bank Melli) or in published contemporary articles.

35 Taking photographs of public monuments was prohibited, not by decree but by a populace which surrounded and harassed anyone taking pictures and threatened confiscation of the camera.

36 It was through one such interview that we located an original copy of Krziz's 1858 map of Tehran.

their recollections of Tehran in the past, their current nomenclature and use of space, and their associations with the neighborhood.

From the beginning of the study until now, I have made every attempt to locate people (both in Iran and abroad) who have specific knowledge about Tehran before World War II.³⁷

We had the privilege of interviewing architects in Tehran: Mohsen Foroughi, Leon Tatavousian, Houshang Seyhoun, Nasser Badie, and Houshang Sanei (whose father was a well-known 19th century architect). Their personal archives and recollections have added immeasurably to my understanding of the political and cultural context of the built environment and the architectural profession under Reza Shah. Between 1976-1978 we met frequently with the eminent art historians, Mr. Mohammad Taqi Mostafavi, Mr. Karim Pirnia and Dr. Parviz Varjavand with whom we discussed our surveys and research at length, and whose insight into the architectural culture of Iran was invaluable to us. In 1984, I was able to spend several

37 In September 1985 I was able to find National Geographic photographer Stephen Nyman who was in Iran during the late thirties. He had just then donated his extensive photographic collection to the Aga Khan Documentation Center at Harvard University.

hours with Jafar Shahri whose 1980 book, Tihran-i Qadim, is an excellent social document of pre-World War II Tehran.

More recently, Keyghobad Zafar, Mme. M. Siroux in Paris, Leon Barton in New York, and Alexei Marcoff in London have also provided information about architectural activity during Reza Shah's reign.

A STEP TOWARD TEHRAN

This dissertation is about urban space and architecture as the products of a rich and contingent relationship between individual imaginations and social, political and cultural events. The emphasis is on those elements of form which, in Tehran, were shaped by and, in turn, gave shape to social and cultural values.

During the Reza Shah period, large-scale and fundamental changes to the urban environment took place. They were guided by a socio-political agenda of modernization. I have taken the urban scheme as the starting point for my study because, through it, we can identify the dominant social and political themes which informed urban planning and architectural forms under Reza Shah.

Because modernization is a process, this dissertation focuses on process. The questions it addresses are fundamental ones: What happened? How did it happen? Who made it happen? My purpose is to characterize the process of urban change in Tehran in order to provide a context for evaluation. Accordingly, my analyses of public and private buildings as architectural forms, while based on many samples, are confined to examples in which significant developments of the Reza Shah period are most clearly illustrated. Reserving judgment on the

architecture itself, I have selected buildings which best represent the socio-cultural trends of the time.

Throughout this work, my purpose is to describe and interpret a change, not to justify or condemn it. In portraying how Tehran became, not a better or worse, but a different city, I have tried to add to what we know about how dimensions of culture are made eloquent in urban space.

I speak of architecture as a social artifact but I do so as an architect, without pretensions to being either a social or political scientist. Questions of why Reza Shah was able to amass enough power to reshape a city, judgments about the efficacy or enduring value of his agenda, and assessments of the long-term implications of his regime are outside the scope of this paper. And I have left for economists and historians an analysis of the social and economic forces that made the population of Tehran susceptible to so massive a change in their ways of living and working.

Even as an architectural historian, I trust that I have said only the first word on the transformation of Tehran and a few new ones on the physical environments that enable us to discern a change from traditional to modern.

I have described many things, but not everything,

for the first time. I have identified and studied many, but not all, key elements of the city's vocabulary. There is still a great deal of room for scholarship focusing on the architectural development of religious and educational institutions, the effects of migration on the uses of urban space, and the bazaar as an enduring feature of Eastern cities, both traditional and modern.

My work also touches upon matters of interest to Islamic scholars. Although I characterize 19th century Tehran as an "Islamic" city, I do not take that term for granted and I use it without any connotations of a "Holy City." Indeed, "Islamic" has been rightly criticized as a term too all-encompassing to describe the diverse range of phenomena that characterize Muslim societies.³⁸

³⁸ Most recently Janet Abu-Lughod has convincingly objected to broad use of the term Islamic city in "The Islamic City--Historic Myth, Islamic Essence and Contemporary Relevance," International Journal of Middle East Studies 19 (1978-):155-176. There is a general tendency to attribute to Islam most, if not all, the features of law, ideology, government, social organization and art in Muslim societies. I share the view that simply labeling traditional cities in Muslim countries "Islamic" is an oversimplification tantamount to labeling Western cities of the Medieval period "Christian." It closes a subject before the evidence is in.

CHAPTER I**DAR-OL-KHELAFAT TEHRAN: THE QAJAR LEGACY**

"We are in a city which was born and nurtured in the East but is beginning to clothe itself at a West-End tailor's."³⁹

Lord Curzon's comment, published in 1892, expresses a view of Tehran's Westernization which took root, grew, and is still with us today. That view places Iran's acceptance of European culture firmly in the 19th century.

If one is to rely strictly on the journals of late 19th century Western travelers, Tehran was indeed a city beset by Western influences. But any view depends on the window through which one looks. How clear was Western vision? How pervasive was Western influence in pre-20th century Tehran?

Did Tehran, as Western observers often assumed, gradually take on European ways as it urbanized? Or did the patterns of its growth support the continuity of Islamic traditions?

This thesis proposes that it was Reza Shah's program

39 Lord Curzon, Persia and the Persian Question (London: Longmans Green & Co, 1892), 303. Curzon was influential in British politics. Viceroy of India for a number of years, he was later instrumental in determining British policy in Iran as the Charge d'Affaires.

to modernize Tehran that produced a fundamental and sweeping reorientation of what had been a traditional Islamic capital. The Tehran of Reza Shah, when seen in its historical context, represents a departure from the past, not a continuation of it. It is the light from the past which illuminates the scope of the Shah's changes.

To understand the intent and impact of Reza Shah, it is essential to look closely at Tehran in the last half of the 19th century, during the period when Lord Curzon and other Western observers believed they saw a city already clothing itself in Western garb. (1.1-1.3)

This was the time of the Qajar Dynasty (1785-1925). The Qajars needed to legitimize their own political power as they faced Western encroachments into Iran's internal affairs. Although never formally colonized, Iran was a pawn in the British and Russian struggle for supremacy in the Middle East.⁴⁰

For the Qajars, internal cohesion was important. Thus, they had a vested interest in maintaining the values that bound Persian to Persian: the values of

⁴⁰ See George Lenczowski, Russia and the West in Iran, 1918-1948 (Ithaca, N.Y.: Cornell University Press 1949); and "Foreign Powers' Intervention in Iran during World War I," Qajar Iran, eds. Bosworth and Hillenbrand (Edinburgh: Edinburgh University Press, 1983), 76-92; and Morgan Shuster, The Strangling of Persia (facsimile reprint, Washington, D.C.: Mage Publishers, 1987).

Shi'ite Islam. Shi'ite Islam remained a cohesive essence that gave people --and their cities-- a sense of unity.

The Qajars did not create an Islamic architectural language. They inherited it. In the same way that the Persians and Romans had stamped their images on cities, the founders of the Islamic empire had sought to create a unified image through architecture.⁴¹ Modifying and restructuring Persian and Byzantine town planning, the new state established something of an "International Islamic architecture" which, accommodating regional differences, made its way from India to Spain.⁴²

In Tehran, the Qajars made the most of established tradition. The Safavid dynasty (1501-1722) had set an Islamic tone when, in 1553, Shah Tahmasp I (r. 1524-1576) surrounded the small village with a moat and a wall (1.4) bearing 114 towers, corresponding to the number of suras [chapters] in the Koran. A Koranic sura is said to have

41 Oleg Grabar, The Formation of Islamic Art (New Haven:Yale University Press, 1973).

42 The roots of this "Islamic" architecture can be traced back to pre-Islamic times. The arg [citadel], the walls and gateways, the worship place and the bazaar were elements found in ancient Iranian cities. How Muslim leaders and town planners modified and made symbolic use of these elements is a subject for continued study, and one to which this chapter can, perhaps, contribute.

been buried under each tower.⁴³ Like the Safavids, the Qajars sought to continue a traditional alliance between religion and politics.

Primary sources from the time portray a Tehran in which three fundamental features are discernible:

1) A proliferation of traditional Islamic values in architecture and urban space. 2) Minimal Westernization, which was both geographically confined and superficial in nature. 3) A Tehran undergoing changes organic in nature, Iranian in kind, and often Islamic in inspiration.

This chapter examines these characteristics, as expressed in urban space and revealed in records of the time. These records allow an examination of four of the key structural elements⁴⁴ which gave Tehran much of its character as an Islamic city:

1) Wall and Gates

43 This distinctive symbolic feature, apparently unique to Tehran, is discussed without comment by both early and later historians. I have pursued with no luck as yet the question of whether there were other similarly towered cities in Iran or elsewhere in the Islamic world.

44 Although the bazaar is an extremely important structural element of the city, I have chosen not to include it in this discussion. It was, and remains, a bulwark of tradition, little affected by the reconstruction of Reza Shah. The durability of the bazaar and the power of merchants deserve a great deal more study than they have received from urban scholars.

- 2) The Royal Citadel, the Arg
- 3) Religious Structures
- 4) Residential quarters, the mahalla

WALL AND GATES

In Berezin's 1842 map (1.5 and 1.6), the city is contained within a walled fortification and moat. The wall, built by Shah Tahmasp⁴⁵ was reconstructed by Karim Khan Zand. In 1759, Karim Khan commissioned the architect Ostad Gholam Reza Tabrizi to rebuild the 16th century walls of the town. He also built an audience chamber, administration building and private quarters in the Arg.

As in many pre- and early-Islamic cities, there were initially four main gateways corresponding to the cardinal points of the compass. Darvaza Qazvin, to the West, led to the main route to Qazvin, the nearest large city and the 16th century Safavid capital; Qazvin was also on the main trade route. Darvaza Shah Abdolazim, to the south, led to the shrine city of Azim, which held the tomb of Shaykh Hamza, great ancestor of the Safavids. It also led to medieval Rayy where the remains of pre-Islamic

⁴⁵ Shah Tahmasp I (r. 1524-1576) was the first monarch to show interest in Tehran during his frequent trips to Shah Abdolazim.

Raghes once stood. Darvaza Dulab led east to the region of Dulab. Darvaza Shemiran, to the North, led to the Shemiran summer resort region in the foothills of the Alborz mountains.

A fifth gateway, Darvaza Asadollah, also led to the North. It provided a direct exit from the Arg and was attributed to the Afghans who occupied the city for a number of years.⁴⁶

By 1858, (1.7) the northern gate was no longer called Darvaza Asadollah, but Darvaza Dawlat. A sixth gate, the Darvaza Mohammadiya, was added on the western section of the south wall. By this time, most open lands along the eastern and northeastern walls were developed.⁴⁷

The population growth suggested by land use changes between 1842 and 1858 is supported by the 1868 census. By the time of the survey, Tehran had a large immigrant population. Fewer than one-third of its total population

46 According to E'temad-os-Saltana, Mur'at al Buldan, 1234-97/1886/89, the Darvaza Arg was from this time period, as the Afghans were careful to secure a direct way of retreat if necessary.

47 Analysis of the Krziz map shows the changes in land use and the pattern of development of streets and neighborhoods. The only large parcel of garden land remaining is a property just southwest of the Darvaza Shemiran, owned by the Vazir Mokhtar Rous, the Russian Charge d'affaires.

had been born in Tehran.

Prior to the then-recent demolition of the city wall, 15 percent of the inhabitants lived outside the old city walls (1.8) and, therefore, outside the jurisdiction of the sheriff and police. More than ten percent of housing units were located beyond the city limits.⁴⁸

Just before the census, Naseroddin Shah had ordered a new boundary set for the city. Mirza Yusef Mostowfi al-Mamalek, the Prime Minister, and Mirza Isa Vazir, Mayor of the Dar-ol-Khelafa, were appointed to the task. They called forth all architects and engineers to determine the limits of the new city, the location of its gateways, and the depth and width of the moat.⁴⁹ The architect Abdollah Khan Me'marbashi under the guidance of a French engineer named Buhler, designed a new octagonal wall supposedly inspired by Vauban's designs for the fortification for Paris.⁵⁰

On December 8, 1867, [Sunday 11 Shaban 1284], nobility, officials, foreign and domestic dignitaries,

48 Three-quarters of those living outside the city walls were not native to Tehran. The Mahalla Sangelaj was also largely an immigrant district, see Abdol Ghaffer, Tashkhis, 34-35.

49 E'temad-os-Saltana, al-Ma'athir wa'l-athar (Tehran: Sanai, n.d.), 60, hereafter referred to as al-Ma'athir wa'l-athar.

50 Buhler was one of the teachers of Dar-ol-Fonun. Ibid., 60-61.

and citizens gathered in tents on the outskirts of the city to see the Shah break ground.⁵¹

From that date, the city of Tehran bore the name Dar-ol-Khelafa Naseri [Naseroddin Shah's seat of the Caliphate of Islam] in public affirmation of its symbolic role as the seat of the Caliphate of Islam.⁵²

The 114-tower wall of Berezin's map came down, to be replaced by the octagonal wall⁵³ and ramparts recorded by Abdol Ghaffar in 1891 (1.9). Now 12 gateways (1.10-1.13, 1.15) (three in each long wall) provided access to the city.⁵⁴

51 Ibid., 73.

52 It has been said that the rivalry with the Ottomans was the impetus for the use of this title for the city. However, it clearly has internal political-religious significance in view of traditional Islamic identity between political and religious power in the institution of the Caliphate.

53 The octagon is almost regular except for the diagonal walls in the southern part of the city, which are smaller and include more land in this section. Most of this land was owned by the vazir [minister] who was instrumental in construction of the new wall. Since the value of this land was considerably more when included inside the city, there may be evidence for land speculation. It is not clear, however, when the vazir purchased the land.

54 To the north, Yusefabad, Dawlat, and Shemiran to the east, Dushan Tapeh, Dulab, and Meshad to the south, Hazrat Abdolazim, Qar, and Khaniabad to the west, Gomrok, Qazvin, and Bagh-e Shah.

Access to and from the city was possible only at the gates and it was strictly confined to specified hours of opening. At others times, travelers had to wait or to convince the gatekeepers with a handsome bribe. The gates served as taxation as well as control points. Custom duties were levied here on both people and goods.⁵⁵

Besides serving practical needs, the walls and gates stood as symbols of Islamic belief. The changes between the Berezin and Abdol Ghaffar maps are both practical and symbolic. On one hand, Naseroddin Shah's octagonal wall of 1868 is a response to the organic growth of the city. On the other, its design and aesthetics suggest a more direct and conscious link between religious and political aims.

⁵⁵ Jafar Shahri, Tihran-i Qadim (Tehran: Amir Kabir, 1979), 7. The gates were leased to private tax assessors in exchange for stipulated sums of money. They were then subleased, individually or in groups. Each gateway was under the jurisdiction of a sublessee who set regulations and stipulated fees and customs duties, adjusting them seasonally or at whim regardless of requirements initially set by the government. These subcontractors could enforce their will even up to confiscation of goods. In time, the gateways became a source of social resentment. Over the years, the gateways came to symbolize unjust taxation by a bankrupt and beleaguered government restrictive of personal freedom and travel. The result was that people sought alternative routes through gaps and broken areas in the walls. By the end of the Qajar period, deterioration and neglect opened many such gaps in the walls.

The octagonal wall and gates formed a cohesive entity, presenting a unified image. Their architectural features trace the evolution of a Qajar formal vocabulary with little Western association. The gates, each uniquely designed and all far more elaborate than those of the earlier wall, bore colorful ceramic tile decoration, minarets, towers and even domes.⁵⁶

What is apparent is that the gates use an imagery often associated with holy and pious edifices (1.14). Visually, their minarets, floral and geometric tile designs and brick patterns were similar to the portals of mosques and madrasas (schools) of the Safavid and Qajar period.⁵⁷ The religious symbolism of gate and walls signified an intentional and public reawakening of a religious and political identity.

THE ROYAL CITADEL: THE ARG

Within the 19th century city, the dominating element was the Royal Citadel, the Arg-e Saltanati, the fortified

56 There were many other gateways built inside the city (1.16). Six gateways adorned the Maydan-e Tupkhana, the central square and open space within the city.

57 Curzon, Persia and the Persian Question, 306-307. Curzon, like many other European travelers was disdainful of the aesthetic quality of Qajar craftsmanship in comparison to the Safavid and did not hesitate to criticize "its vulgar patterns."

citadel and royal quarters. Like a city within a city (1.17), the Arg contained many of the same urban elements: walls, gateways, mosques, madrasas, bazaar, and residential quarters. It was at once imperial seat of power, administrative headquarters and military base.

It was here that many of the city's significant public buildings stood, including the Dar-ol-Fonun and the Takya Dawlat. It was where new architectural tastes were tried on, as in the Shams-ol-'Emara [Sun of Buildings], and new institutions, such as the Muze-ye Mobaraka, introduced.

Like the city itself, the Arg evolved over the course of the century (1.17-1.19), with new buildings and changing uses.⁵⁸ Its physical fabric reflected both Qajar religious commitments and first use of "European" styled buildings. It was the cultural, aesthetic and political heart of the city and remained so through the reign of Reza Shah, who took it as the focus of his reconstruction program.

58 Each new monarch built new buildings and in that process demolished many existing ones. Yahya Zuka has given a detailed description of the Arg and its various buildings in Arg-i Saltanati, Tarikhcha-yi Sakhtemanha-yi Arg-i Saltanati-i Tihran (Tehran: Chapkhana Vezarat Farhang va Honar 1349/1970). See, also, Jennifer Scarce, "The Royal Palaces of the Qajar Dynasty, a Survey," in Qajar Iran, 329-351.

There are numerous verbal and visual descriptions of the citadel. Every traveler offered his version-- often a repetition of previous writings-- sometimes with sketches and photographs.⁵⁹ Only one long-term visitor, Dr. Feuvrier, French physician to Naseroddin Shah's court, provided a map.⁶⁰ (1.20)

In 1842, the Arg housed the royal residential quarters (1.21), the garrison, the arsenal, the main stables, and the only large open square in the city, the Maydan-e Shah.⁶¹ The main entrance to the citadel was-- and remained-- from the Darvaza Naghara Khana into the Maydan-e Shah, at the center of which was the famous

59 Berezin's 1842 map is contemporaneous to the voyage of Eugene Flandin and Pascal Coste, whose Monuments Modernes de la Perse (Paris: A. Morel, 1867) recorded structures within the Arg prior to later changes.

60 The three 19th century maps, with Dr. Feuvrier's Trois ans a la Cours de la Perse, (Paris: Juven, 1899) and the descriptions of travelers provide a good physical description of the Arg. Yahya Zoka's Tarikh-i Arg-i Sal-tanati is still the most complete history; and Emineh Pakravan's Tehran de Jadis (Genève: Editions Nagel, 1971) compiles visual documents, including the paintings of the royal court painter Mirza Mahmud Khan Malek ol-Shu'ara whose works remain closed to public view since the Iranian revolution of 1979.

61 A much smaller maydan at the entry to the Arg, very close to the bazaar, was known as the Sabza Maydan [vegetable or herb market].

Pearl Canon, (Tup Morvarid).⁶² (1.22)

Like the city itself the Arg changed and grew. By the time of Krziz, the garrison was identified as grain storage. The area just south of the Arg was indicated as belonging to the court. The Dar-ol-Fonun and a number of other buildings had been added.

Many of these buildings are replaced in the Abdol Ghaffar and Feuvrier maps (1.19-1.20). Structurally, the Arg changed little since Berezin's 1842 record; it simply developed around its major elements. Its continuous construction makes visible the expansion of the Qajar architectural vocabulary, particularly in two representative buildings: Talar-e Takht-e Marmar and Shams-ol-'Emara.⁶³

62 Conflicting accounts exist about the Tup Morvarid's origins. Some authors claim it was brought by Nader Shah from Delhi with a string of pearls around its muzzle. Others say it was made by Karim Khan Zand in Shiraz and stored in a holy shrine, whence came its mystical powers. Still others insist it was captured from the Portuguese at Hormuz in 1622. Whatever its true origin, it was so venerated that it was a bast [sanctuary] and a place of pilgrimage for barren women who sought cure by passing under its muzzle. Sadeq Hedayat's novel Tup Morvari is a fictional account of the lure and symbolism of the canon.

63 Talar-e Takht-e Marmar is the oldest building in the Arg and one of the most significant in its historic association with the traditions of kingship. Shams-ol-'Emara is one of the later Qajar buildings that started a new trend in architectural taste.

TALAR-E TAKHT-E MARMAR (Chamber or Pavilion of the Marble Throne) (1.23) was the main royal audience hall: the Divankhana.⁶⁴ This palace was an early structure within the Arg, built in the style of the palatial dwellings of Shiraz by Agha Mohammad Khan, founder of the Qajar dynasty. Because of its symbolic significance, not only was it not torn down, almost all the Qajar patrons of architecture added to it. Fath Ali Shah completed the structure, decorated its interior with wallpaintings, carved stone figures, mirror inlay and wood inlay (1.24). He built upon it the marble throne in its ayvan (1.25-1.26). The large scale paintings of the Qajar monarch and his court were added later by Naseroddin Shah.⁶⁵ Despite the many renovations, the building remained representative of an earlier architectural tradition.

64 It is one of only two buildings surviving today of the Fath Ali Shah (1798-1834) period. The other building is the Emarat-e Badgir (Building of the Windtower) on the south side of the palace.

65 See Mostafavi Athar-i Tarikhi Tihran, 83-84, who records the name of the painters and dates inscribed upon the walls of the palace. In an ambitious reconstruction effort that began in 1867, Naseroddin Shah tore down many earlier buildings in the Arg of the Fath Ali Shah period.

Its tripartite division was an example of traditional Persian architecture. A centrally located, double-story ayvan [loggia or porch or portico] was flanked by dalans [corridors] and smaller chambers on either side, called gushvars [earrings]. The ayvan (1.24) on the first floor was raised above ground to make a platform which had two fluted stone columns, purportedly brought from Shiraz by Agha Mohammad Khan (although some claimed they came from Persepolis).⁶⁶

Here every monarch of the Qajar dynasty had been crowned and held his audience on the first day of the Persian New Year and here the ceremony of bearing gifts to the king of kings was observed year after year in symbolic reference perhaps to the audiences of the ancient Persian empire as portrayed in the reliefs at Persepolis.

In 1925 Reza Shah, too, was crowned in the Talar-e Takht-e Marmar (1.27) and in this way continued the tradition of kingship and royal audience.⁶⁷ Even his son, Mohammad Reza Shah (r. 1941-1973) held his splen-

66 This was perhaps a means of seeking to legitimize their reign by associations to symbols of former Iranian dynasties. Henry Rene d'Allemagne, Du Khorassan au pays des Backhtiaris. Vol. III (Paris: Hachette, 1911), 220.

67 The symbolism of Takht-e Marmar has been discussed by A.D. Tushingam, "The Takht-i-Marmar (Marble Throne) in Tehran," in Iranian Civilization and Culture, ed. Charles T. Adams (Montreal, 1972), 120-127.

diferous 1967 coronation ceremonies in the Talar-e Takht-e Marmar (1967).⁶⁸

Shams-ol-'Emara [Sun of Buildings] (1.28-1.29), constructed by Naseroddin Shah, was an official building where foreign ambassadors were entertained. It defined a Qajar approach to "European" architecture and was the first five-story structure in Tehran built using traditional structural techniques.⁶⁹ For years, it remained the tallest building in the city. Like the Ali Qapu of Isfahan this was a very tall structure open on two sides, facing the garden of the Arg and the reflecting pool, and with a balcony overlooking the public street and square.

Shams-ol-'Emara was built by an architect and nobleman, Dust Ali Khan Mo'ayer-ol-Mamalek.⁷⁰ Considered European, (farangi) in style, it was reportedly

68 The building had been earlier restored in 1957, Mostafavi, Athar-i Tarikhi Tihran, 84.

69 In 1978, the building was under renovation and we were not allowed to survey and make measurements. The building housed the Imperial Manuscript Collection. I was able to obtain plans of Shams-ol-'Emara from Anjoman-e Hefazat-e Asar Bastani, but I was not allowed to see it as the Golestan Palace complex was closed to the public since 1979.

70 Nasser Najmi, Tihran-i Ahd-i Naseri (Tehran: Entesharat Attar, 1364/1985), 364, indicates that the structure was financed by Mo'ayer-ol-Mamalek himself.

inspired by European postcards. The plan (1.30), despite claims to the contrary, owes a great deal to Qajar architecture. It still had the tripartite division of the raised main salon, (talar) and ayvan in doublestory height flanked by smaller chambers. Even the dalans, [corridors] giving access from either side, are similar to traditional plans. The tall towers (turrets) are familiar forms applied to minarets and portals of mosques. It is a prime example of Western borrowing adapted to a Persian client. The main facade overlooking the reflecting pool was elaborately decorated in polychromatic enamel tile depicting the favorite Qajar theme, the lion and sun emblem (1.31), garlands and floral motifs and a large scale procession of soldiers.

Shams-ol-'Emara was the first of a series of European inspired buildings (1.32) constructed by Naseroddin Shah within the Arg. He demolished a number of palaces built by Fath Ali Shah to reconstruct new ones. The most important new construction was the Golestan Palace (1.33-1.35) which, like the Shams-ol-'Emara, had elaborate colored tilework.

The ornate use of mirror inlay which was used abundantly in this period in these buildings, I believe, was not the influence of contemporary European fashion as is claimed. It is much more a continuation of the earlier

Persian tradition of elaborate surface decoration.

Despite the fact that the building had clear Persian roots, it came to symbolize the new European architecture. The Shams-ol-'Emara became the first of a series of European styled palaces built by the Qajar monarchs and their courtiers.

The khahgah [sleeping quarter] (1.36) which was a replica of classical European style buildings-- two-story structures-- with a continuous balustrade along the roof. The Kakh-e Abyad [Winter Palace] of 1891 was also very European. It was these later buildings that set the trend for many of the private palaces constructed by the nobility and wealthy classes in their gardens in the northern region of Dawlat.⁷¹

Just outside the Arg were the bazaar and the Masjid Shah [Royal Mosque]. (1.37-1.40) These three components --Arg, bazaar and Masjid Shah-- represented the three sources of authority: Imperial, bazaari [merchants] and ulama signifying the power structure in the Qajar period.

RELIGIOUS STRUCTURES

A religious presence was felt throughout 19th century Tehran. In fact, the dominant public buildings

⁷¹ Jennifer Scarce, "The Royal Palaces," Qajar Iran, 339.

of the period were religious institutions.⁷² These included the major Friday mosque (Masjid Shah), and numerous mosques in the bazaar and in residential quarters as theological schools (madradas), shrines (imamzadas) and open spaces prepared as theatres for performance of the passion play (takyas) . Some institutions functioned at the urban scale while others served smaller areas within the city, residential districts (mahallas) and their constituent neighborhoods the sub-mahallas.

The 19th century maps, from Berezin through Abdol Ghaffar, display a proliferation of religious buildings as the city grew in population. These buildings were the natural communal centers of an Islamic city, enjoying both popular and Qajar patronage.

Through the late 19th century, a mosque was a hub within the mahalla, a focal point around which a religious school, a takya and shrine tended to develop. Abdol Ghaffar's 1868 survey recorded 35 mosques in Tehran⁷³ and more were built before the turn of the century.

72 Traditionally, most business and administrative affairs were conducted in the private residences of ministers. Although the Qajar court and some offices of government were located within the Arg, state buildings were not a significant feature of the public landscape in Qajar Tehran.

73 Abdol Ghaffar, Tashkhis, 40 ; al-Ma'athir wa'l-athar, 83.

The main congregational mosque (for Friday prayer) of Tehran was the Masjid Shah, completed in 1840 just outside the citadel, arg. Pascal Coste and Eugene Flandin have left renderings (1.37) of this mosque with its four-ayvan plan, a prevalent mosque design of the period.

Many mosques were built by private funds and maintained through private endowments as a charitable act. The largest and most splendid mosque of Tehran was the privately endowed Masjid Sepahsalar (1.41), whose minarets and dome made it the most prominent landmark in the city. Begun in 1878 by Mirza Hosayn Khan Sepahsalar (prime minister under Naseroddin Shah), in the southern part of his private garden (1.42), it was completed in 1890 only after his death by his brother Mirza Yahya Khan Moshir-od-Dawla. It was a very large building with a central courtyard (1.43) and a large winter salon. Its single shelled dome and eight minarets (1.44) were covered in polychrome enamel tile (kashikari). It was inspired by earlier Safavid buildings, particularly Masjid Shah and Madrasa Chahar Bagh in Isfahan, not only in its tile decoration but also in plan.⁷⁴

74 Mostafavi claims it was also inspired by the Hagia Sophia in Istanbul Athar-i Tarikhi Tihran, 96. Although there is little to substantiate this claim, it is the numerous minarets that may have given rise to this comparison. Like the buildings in Isfahan, it has a prominent portal forming a semi-octagonal space (hashti)

In contrast to the large mosques, smaller local mosques were located throughout the city in every neighborhood. An example is Masjid Hajj Rajabali located in the Gozar of Darkhongah (1.45), one of the well-known gozars [passages] of Sangelaj. It was built on a triangular lot in 1844/45. It has a central courtyard, four ayvans (1.46-1.48), and a spacious vaulted hall.

Closely related to mosques, physically as well as architecturally, were the madrasas. An example is the Madrasa Sepahsalar Qadim, near the Madrasa Marvi (1.49), east of the Arg in the Oudlajan neighborhood (1.50). Built in 1860, it is a typical building of the Naseroddin Shah period with a courtyard and winter hall, as well as a portal and two flanking minarets. Inside the main hall are inscriptions on the edge of the tiled wainscoting dating the building.⁷⁵

Shrines within Tehran's earliest wall enclosure (1.51), as well as those constructed during the expan-

marking its grand entrance. There is a women's entrance, not as grand, on the east side. The ceiling of its corridor has an intricate cross vaulting known as haft kassa muqarnas all covered in colored tile. The date on the tile of the entry hashti is 1880/81, that on the west ayvan is 1883/84 and on the main portal is 1884/85. The names of the tile craftsmen, (kashisaz) are inscribed as Mehdi and Mohammad Sadeq Kashani. Mostafavi, 97-99.

⁷⁵ Mostafavi, Athar-i Tarikhi Tihran.

sions of the 19th century, constitute a major part of the public monuments in the city. They include a variety of sacred places: imamzadas [mausoleums dedicated to family of the Shi'ite Imams], boq'as [shrines], and even sanctified trees such as the Chenar Nazarkarda [the Enlightened Plane Tree], or the sanctified canon, the Tup Morvarid.

These places were much like mosques and other public religious monuments in that they had both local and urban significance. Symbolically important, some were also places of sanctuary (bast), offering protection to anyone, even beyond the reach of the law. They were nodes within districts, points of orientation for inhabitants and visitors, and hubs for clusters of civic and commercial activities that developed around them. Within the first wall enclosure alone, 19 religious structures were recorded.⁷⁶

Imamzadas in particular, continued to be popular (1.52-1.55) in the 19th century. Many of the earlier, modest imamzadas were rebuilt and new ones were constructed during Naseroddin Shah's reign.⁷⁷ They became

76 I identified these on Berezin's map. Abdol Ghaffar in his census does not give a numeric count of the shrines.

77 Initially there were four main imamzadas-- Seyd Nasreddin, Seyd Ismail, Yahya, and Zayd-- all recorded on Berezin's map. Many more were added in the course of the 19th century.

important nodes which people visited both for special occasions and on a daily basis.⁷⁸

Sar-e Qabr Aqa (1.56-1.59), with its very prominent turquoise colored tile dome and its elaborate ayvan and portal, its interior of tile work (kashikari) its rich mirror inlay (1.60) walls and muqarnas ceilings, is an example of a shrine of the early Naseroddin Shah period (circa 1850). It was the mausoleum of Aqa Seyd Abolqassem, the Imam-Jom'a of Tehran in the reign of Mohammad Shah, and early Naseroddin Shah. It was a family cemetery, where members of the extended family of the Imam-Jom'a were buried, later it became a public cemetery.

The proliferation of religious institutions included an increase in the number of open spaces that functioned as theaters (takya or hosayniya) (1.61). Perhaps a unique Persian feature and certainly characteristic of the 19th century, these outdoor theaters staged the ta'zia, [religious passion plays]. Reenacting the martyrdom of Imam Husayn, these passionate displays

⁷⁸ The most important shrine of the capital was not inside the city but several miles away. Shah Abdolazim (1.55) was a popular pilgrimage for the whole city, including the Qajar court and the Shah. When the first Iranian railway was built in 1888-93, it connected Tehran to Shah Abdolazim five miles away. See Jafar Shahri, Tihran-i Qadim, 168.

of grief came to be performed several times a year with processions that traversed the city (1.62). Preparations for the ta'zia mobilized the entire community. Neighborhoods rivaled one another in glorious displays of ceremony.

According to the census of 1868, Tehran had 34 takyas . Located at the intersections of two or more kuchas [alley or narrow street], they became gathering spaces for religious, social and, later, political activities.

The ta'zia was so favored by the Shah and his court that Naseroddin Shah built the city's first large urban theater, the Takya Dawlat (1.63-1.64), in the south east corner of the Arg in 1873, thereby officially sanctioning this activity.⁷⁹

RESIDENTIAL QUARTERS: THE MAHALLA

Mahalla has often been translated as neighborhood, quarter, ward or district. Its meaning, however, escapes these translations. Mahall in Persian and Arabic refers to "the place" and mahalla incorporates in its definition a "sense of place" with which inhabitants can easily identify.

⁷⁹ E'temad-os- Saltana, al-Ma'athir wa'l-athar, 58. It was built by Mo'ayyer-ol-Mamalek, architect of Shams-ol-'Emara.

Belonging to a mahalla carried a social significance that can still be found today. The traditional mahalla not only provided a sense of cultural identity to its residents, but also the physical spaces to foster both spontaneous and planned social interaction.

Historical accounts of life in the mahallas are scarce. Arab and Persian geographers who traveled between the 9th and 14th centuries commented on the number of mahallas and their houses. Their descriptions do not go beyond a physical count of services or houses. How inhabitants lived was seldom, if ever, dealt with by the Eastern traveler.

European travelers, unable to penetrate the privacy of people's lives, have at best made cursory generalizations about the mahalla. It is a subject that even the more knowledgeable traveler seems to have omitted.⁸⁰

80 Faced with these poor resources, I have based descriptions of the mahallas on a careful scrutiny of the physical fabric that exists today, supplemented by analysis of the existing maps and Abdol Ghaffar's Sarshomari. The Mahalla Bazaar is perhaps one of the few existing neighborhoods in Tehran that maintains to this day a sense of traditional identity. Mahalla Oudlajan, once the most famous of the city's neighborhoods, has deteriorated dramatically but much of it was extant until the late 1970's. During this period, the architect and activist Keyvan Khosravani led a movement to save Oudlajan from planned demolition. Students of architecture had always been interested in this mahalla and

Berezin's 1842 map (1.5) shows Tehran's residential areas en masse, cut by thoroughfares in a seemingly irregular manner. Berezin indicates neither the names nor the boundaries of the mahallas. The east and west peripheries of the city within the wall appear as open space.

Krziz's map reveals the organic pattern of development of thoroughfares and houses, as semi-private residential streets became public thoroughfares dotted with bazaars and caravanserais. By 1858, what used to be open land (in the Berezin map) became a new residential quarter, Mahalla Bajmanlouha, traversed by two thoroughfares, Kucha Shaypurchibashi and Kucha Aqa Mohammad Hassan (1.65-1.66).

Tehran originally had four large mahallas: Oudlajan, Chal-e Maydan, Bazaar and Sangelaj (1.67). Like a city within a city, each functioned as a distinct community with its own bazarcha, mosques, public bath-houses (ham-mams), public water fountains (saqa-khanas), takyas and social services. Although most amenities were provided for the mahalla at large. The smaller neighborhoods within each district, which I have called sub-mahallas

a serious study of it was initiated just before the revolution of 1979.

tended to duplicate institutions and services for the smaller community.

Patogs [gathering spaces] and gozars [passages] further subdivided mahallas, some serving the entire mahalla, some for the use of a smaller community

Unlike the hara of Cairo, or the medieval neighborhoods of Isfahan, the mahallas of Tehran had no walls around them.⁸¹ Except in the case of the Arg (also considered a mahalla since it contained a large residential neighborhood), where the boundaries coincide with the walls, there are no apparent physical patterns or features that characterize mahalla boundaries.

Neither Krziz nor Abdol Ghaffar offer any rationale for the basis of the boundaries they indicate on their maps. Sometimes boundaries followed main access routes for short distances. Sometimes they bisected a main channel of a bazaar. Most often, boundaries seem randomly cut through residential areas, simply turning 90-degree angles around residential lots in order to avoid houses.

Inhabitants know the boundaries, but are they primarily social conventions or do they correspond to physical demarcations? One hypothesis is that mahalla

⁸¹ Nasir-i Khusraw in his Safar-nama, ed. Nader Vazirpur (Tehran: 1362/1984), 92, of 1052 A.D. mentions that all the bazaars, streets and quarters of Isfahan had bars and gates.

boundaries may have originally been determined by, and followed, ganats [underground water channels] painstakingly built to conduct water from the mountain foothills into the urban area. Most cities, if not located next to a body of water, were served by ganats.⁸² The 19th century maps of Tehran do not indicate the location of the ganats within the dense neighborhoods. Further research is necessary to verify the relationship of the ganats to neighborhood boundaries.

The physical pattern of the mahalla consisted of a hierarchy of streets and alleys which developed as houses were erected. This incremental growth can be seen by a comparison of the Berezin and Krziz maps. Areas peripheral to the city walls which used to be gardens, orchards, fields or open space in the earlier map gradually became residential areas by the time of Krziz' map. Although the pattern of development was organic, it followed a hierarchial principle of organization, ranging from the totally public to the almost exclusively private street.

There were three general levels of streets: ma'aber [artery], kucha [alley] and bombast [cul de sac]. The

82 For a discussion of the ganats of Tehran see Braun, Tehran, Marrakisch und Madrid (Bonn: Ferd. Dummele, 1974), 29-57.

physical dimensions and nomenclature correspond to the intended use of the street.

MA'ABER, (1.68) generally refers to a public thoroughfare, an urban collector. It was by definition a through street, with a width corresponding to the number of people using it. The ma'abers of Tehran were oriented North-South, corresponding to the slope of the land. They were often avenues with distinct origins and destinations, leading from one facility to another, from a city gate to a bazaar. They were neither straight nor of uniform width, and were seldom wider than six meters across.

In nodes along ma'abers or at intersections, public services, amenities, and religious institutions were located. Often recognizable only by the density of pedestrians and facilities, the ma'bar is apt to be called khiaban, gozar, patoq or kucha depending on its width and its use.

The intersection of two ma'aber or a ma'bar and a kucha was a favorable location for a commercial node or gozar [passage] which might contain a bazarcha of one or more shops, a hammam [bathhouse], takyas, and saqa-khanas or ab-ambars [cisterns]. Each mahalla contained a number of gozars, often in direct correspondence to the number of sub-mahallas. Physically, gozars provided identifiab-

le nodes for the mahalla and contributed to its sense of place⁸³.

KUCHAS (1.69) had the character of pedestrian thoroughfares. While the term is used as a prefix for a variety of streets and alleys --from ma'bar to bombast [dead-end]-- most kuchas fall into a semi-public category of pedestrian passages that branch off more public thoroughfares.

Although the width of kuchas varies, they were generally narrow, allowing for the passage of a laden mule.

BOMBAST, (1.70)) the most private street was a cul de sac, a narrow passage leading to the entry of one or more houses.(1.71-1.72) Often perceived as an extension of the dwelling, a bombast might signal its private nature by a door, a doorframe or just its narrowness. The length of a bombast depended on the number of houses

83 In its function as a focal point for the community, a gozar often became a significant patoq [meeting place] for identified groups of people. Patoqs were socio-cultural, rather than purely physical, descriptions of places designated by the people who frequented them. There was a fellowship between frequenters of a patoq that ranged from membership in a shared community to affiliation with a specific association or fraternity. See Arasteh, Man and Society in Iran (Leiden:E.J. Brill, 1970), 26-29, for the informal administration of the mahalla.

it served, often two to five.⁸⁴

The cooperative and voluntary nature of mahalla associations is apparent in the traditional administration of public services, which proceeded without need of official delegation of responsibility.⁸⁵

In the 19th century, local associations of luti [de facto leaders of the community] voluntarily assumed protection of their mahallas by patrolling the streets at night.⁸⁶ They also undertook the preservation of public

84 It is likely that a number of houses in a bombast were at one time occupied by members of extended families. It was common for three families to live in a house or series of houses accessible through the same bombast. The extended family unit which had existed in Iran prior to the Islamic conquest, was reinforced in subsequent centuries.

85 Tehran had a governor, the hakim, who was usually one of the Shah's favored sons. The city also had a vazir who functioned as a more direct administrator. There was a host of administrative officials:
Kadkhuda - head of the ward
Kalantar - sheriff
Mohtaseb - keeper of morals
darugha - police officer (settlement of disputes in the bazaar)
farrash - subordinate of the darugha (deputies)
pâkars - (day) patrolmen
sargazma - (night) patrol, paraded bazaars and streets in daytime and night
mir-asas - head night watchmen

86 The luti had guild associations to which only persons of good character were admitted after passing a series of trials. The leaders of the association who had gained recognition on the

morality, the education of poor and orphaned children, and collection of donations from the rich of the mahalla to distribute to the poor.⁸⁷ They were trusted natural leaders, protecting the mahalla and sustaining the social fabric.⁸⁸

The public facilities of the mahallas provided self-sufficiency while gozars and patoqs drew inhabitants into communal gatherings. The informal lutis became natural networks for self-policing and protection.

These physical, spatial and social characteristics

basis of achievements and personal traits were known as sarjomban, pishdash, lutibashi, or patoqdar. Each of these hard earned titles implied leadership roles, the last of which would indicate that the luti was the protector and head of a patoq.

87 For a discussion of the role of the luti, see Willem Floor, "The Political Role of the Luti's in Iran," in M. Bonine and N. Keddie, eds, Modern Iran: the Dialectics of Continuity and Change (Albany: SUNY Press, 1981), 83-95. When there was a ta'zia or a sofra [preparation of food for the poor], the lutis often volunteered.

88 By the end of the 19th century, however, the effectiveness of the lutis had diminished. Arasteh, Man and Society, 29, observes that by the 20th century, certain elements of government began to use well-informed lutis to direct and control the public. As a result, rival luti factions developed and mahallas were pitted against each other. There were instances of combat between lutis who supported rival leaders. This led to the creation of a new group, the chaqu kesh-ha [knife-drawers], who deviated from the traditional luti movement.

of the mahallas of Tehran are important, both because they have been inadequately described and because they were to change dramatically by the mid-20th century.

Although Tehran's mahallas continued to evolve by largely organic processes, the late decades of the 19th century brought some visible departures from tradition. One of them, the creation of Mahalla Dawlat, is considered an experiment in Europeanization.

Mahalla Dawlat For much of the 19th century, Mahalla Oudlajan was Tehran's most prestigious neighborhood (1.73). Its main arteries, on a North-South orientation, corresponded to the slope of the land and the direction of the gravitational flow of water. As the northernmost mahalla, closest to the water source,⁸⁹ Oudlajan attracted wealthy inhabitants.

By the 1870's Mahalla Oudlajan's primacy in water gave way to the newly created Mahalla Dawlat [Royal Neighborhood] (1.74). Built during Naseroddin Shah's expansion of the city, Mahalla Dawlat was located directly

89 The names of Mahalla Oudlajan's northern sub-mahallas --Sarcheshma [source of the spring], and Sarcheshma Pa'in [lower source]-- are clues to the probability that this area was at one time the source of underground qanats. Its prestige and ability to attract wealthy inhabitants was a direct result of proximity to water.

north of the Arg. It contained foreign legations, villas of the wealthy, and, along the city's Champs-Elysées, Khiaban Lalezar [Tulip Row], the first European-style hotel and shops in Tehran. The straight streets and tree-lined avenues (1.75-1.78) of Mahalla Dawlat may have looked familiar to European visitors who spent most of their sojourns in this quarter.

Mahalla Dawlat was certainly a nod to the tastes of Europeans. But was it a Qajar commitment to Europeanization? Probably not. No other area of Naseroddin Shah's enlarged city pursued a European course; expanded mahallas east, west and south of the city were extensions of existing patterns with the same labyrinthine complexity of streets and alleys.

Even taken on its own, Mahalla Dawlat offers evidence against an authentic commitment to Europeanization. Close to the Arg, it was a logical location for legations and accommodations for foreigners. Its development, however, pursued a noticeably Persian direction, though not the traditional urban one.

North of the city and closest to the foothills of the Alborz Mountains, Mahalla Dawlat became the first recipient of water from the qanats. It was a natural attraction for wealthy residents who sought locations for gardens indispensable in the summer months, when heat

forced most of Tehran's population to seek cooler quarters. Here, the well-to-do built summer residences, pavilions, - kushks in the suburban tradition, (1.79-1.81) which bore little resemblance to the inward-oriented houses of the city.⁹⁰

At these summer homes, gardens were focal points. Traditional Persian gardens were planned on strict geometric principles (1.82). The most usual pattern was chahar-bagh [four part garden], a quadripartite design in which the two principle axes subdivided the space into four parts (usually equal). These sections, in turn, were further subdivided. The main paths were tree-lined and carried water channels from the ganats. In the case of Tehran, the gravitational water flow was North-South and that axis was emphasized by the broadest paths within the garden's subdivisions.

These garden paths, not European urban design formed the framework of the street pattern in Mahalla

⁹⁰ Kushks were already prevalent in the 17th century, as the Safavids had built magnificent garden pavilions. Before them, the Timurids too had built such detached garden structures. Ruy Gonzalez Clavijo, Embassy to Tamerlane, 1403-1406, trans. Guy Le Strange (New York: Harper and Brothers, 1928). The Qajars naturally followed suit. Architecturally, kushks had a design concept similar to European villas. They were detached structures with elaborately designed facades and formal floor plans.

Dawlat.⁹¹ In time, Dawlat came to replace Oudlajan as the prime residential quarter and it continued to develop according to the dictates of the garden path.

Thus, Dawlat seems to owe more to Persian garden design than it does to European urban design, and as much to traditional land use habits as it does to European city planning.

THE TRADITIONAL CITY

Through the 19th century and into the 20th, Qajar Tehran expanded many times over but continued to display the traditional features of an Iranian Islamic city. The changes between 1842 and 1891 support the continuity of traditional forms.

Maps of Qajar Tehran present a self-contained city. Throughout its expansion, the capital adhered to the longstanding Persian conventions of a walled city with a fortified citadel, an urban landscape composed of self-supporting neighborhoods developing according to their own needs, mazelike routes of access based on common use,

⁹¹ Lalezar, for instance, was the principle path of a royal garden that later became a public park.

and homes which closed off private life from public view.

Wall, gates and Arg, reconstructed and expanded, remained through the Qajar period, as Tehran grew along traditional lines of social and spatial organization. The network of buildings and streets grew more complex but did not undergo fundamental or planned changes in structure.

Throughout the late Qajar period, the mahalla remained what it had always been: the basic unit of urban administration, a self-sustaining community with its own cultural, mercantile and religious centers, its own patterns of access, and its own hierarchy of natural leadership and protection.

The smallest unit of social organization, the house, also continued a centuries-old tradition. As the city was enclosed by walls and the mahallas oriented themselves around their own centers, the traditional house turned a blank face to the street and focused private life around an internal courtyard. Like the neighborhoods, these traditional homes were self-sufficient units providing for most basic needs.

The European veneer that appeared in and around the Arg in the latter part of the 19th century was, at best, a superficial adaptation of Western features, confined to Mahalla Dawlat and the area around Shams-ol-'Emara where

the European presence was also confined. It is apparent that European outlooks and goals were never embraced at the level of policy and urban planning. All around the few islands of European influence, Qajar Tehran continued to grow along traditional lines of social and spatial organization.

This was the city Reza Shah inherited in 1921. Its traditions of urban structure and architecture serve as a reference point for the changes the Shah was to bring about. The next two chapters of this dissertation examine the process of modernization pursued by Reza Shah as it affected the urban scheme and some of its major architectural elements.

Chapter II focuses specifically on the public sphere, where the Shah initiated and directed a program of urban planning and architectural statement. The public building program was a conscious process of cultural intervention. It represented an attempt to change values and ways of living. We will examine the underlying themes of the process, the nature of the urban changes it brought about, and the new forms and functions to which it gave rise.

Chapter III turns to the private sphere of the house, where large-scale cultural changes affected and were interpreted by architects, developers and citizens.

In this realm of private building, the Shah's program of cultural intervention set a context for but did not determine the individual visions of architects and their clients. It is here that we can see how citizens, largely independent of public purposes, came to terms with changing cultural values in the architecture of their private lives.

CHAPTER II

PUBLIC ARCHITECTURE: ARCHITECTURE OF THE STATE

Conquering Tehran on February 22, 1921 in a bloodless coup d'etat, Reza Khan (2.1) marched into the political arena of Iran as commander-in-chief of the army. Within four years, he ascended the throne as Shahanshah [King of Kings] by election of the Majles [constituent assembly].¹

By the second decade of the 20th century, the Qajars no longer presented a powerful image. The ineptitude of the last three Qajar rulers had resulted in a power vacuum² into which Reza Shah made his timely entrance.

The particular political strategies of Reza Shah are beyond the scope of this paper. It is worth noting, however, that the initial motive of both Reza Khan and

¹ Hossein Makki, Tarikh-i Bist Sale-Yi Iran, Vol.III [Twenty Year History of Iran] (Tehran: 1945), 488-586, records the debate proceeding the election on Dec. 12, 1925 when the assembly voted 257 to 3 to vest the monarchy in the person of Reza Shah Pahlavi.

² Naseroddin Shah was the last Qajar monarch who offered royal patronage to the city of Tehran. From the turn of the century onwards, Tehran entered a period of neglect and decay. With the weakening of Qajar leadership and an influx of political ideologies from the West, the Mashruta [Constitutional Movement] found support among various classes of the urban population. A long and bitter struggle over the issue further weakened the political position of the Qajars. For a discussion of the constitutional movement see, Ahmad Kasravi, Tarikh-i Mashruta-i Iran, vol. I (Tehran: Taban Press, 1940).

the Majles was the establishment of a republic, a notion met with fervent opposition by religious leaders.³

Trained as a soldier in the Russian-modeled Cossack Brigade⁴, Reza Shah (fig. 2.1) viewed the running of government as he viewed the running of an army. Proper discipline and training, he felt, would assure success for the new state.

The first few years of Reza Shah's rule were concentrated on the creation of a strong central government and its prerequisites, a strong army and police force. He broke a long tradition of local autonomy by transferring to Tehran jurisdiction over the internal affairs of provinces. To administer a centralized government, he built a modern bureaucracy to replace the few, loosely organized ministries and informal channels of the past.

³ Religious leaders associated a republic with the kind of secularization that had come to Turkey with Ataturk. They supported a monarchy on the basis of its traditional alliance with religion. They anticipated correctly, that Reza Shah's policy would produce a schism in the long tradition of religious participation in affairs of the state.

⁴ The Cossack Brigade was founded shortly after Naseroddin Shah had visited Russia in 1878, as the principal military unit of the state; its top officers were Russian. Alvin Cottrel, "Iran's Armed Forces under the Pahlavi Dynasty," Iran Under the Pahlavis, ed. George Lenczowski (Stanford, CA, Hoover Inst. Press, 1978), 390.

Centralization and bureaucratization were accompanied by a third policy that was to have sweeping implications for urban culture and urban form. This was secularization. Religion represented to Reza Shah a force that prevented progress. Equating religion with backwardness⁵, he actively sought to undermine religion and replace it with a secular nationalism. Anti-clerical policies permeated every sphere of urban life during the two decades of his rule.⁶

This chapter traces the rise of a State architecture as Reza Shah used his power to set in motion the wheels of change. His goal was modernization. One of its important elements was an urban structure able to support the activities of a 20th century economy. Another was a public architecture whose forms could accommodate the new

⁵ Reza Shah was not alone in this attitude. There was a general tendency among reformists and modernists "to blame Islam and Islamic outlook for the stagnation of Iranian life during preceding centuries." Elwell Sutton, "Reza Shah the, Great Founder of the Pahlavi Dynasty," in Iran Under the Pahlavis.

⁶ Reza Shah was to take away two important functions that for centuries were under clerical jurisdiction, namely education and judicial responsibilities. For a discussion of Reza Shah's secularization policies see: Amin Banani, Modernization of Iran 1921-1941 (Stanford, CA: Stanford Univ. Press, 1971), 61-105; Roger Savory, "Social Development in Iran during the Pahlavi Era," Iran Under the Pahlavi's, 90-94; W.S. Haas, Iran (New York: Columbia Univ. Press, 1946).

functions of a modern state. To accomplish his aims, he personally initiated and directed a public building program designed both to bring Tehran out of its medieval shell and to initiate its inhabitants into a new way of life and a new set of values.

This building program was part of a conscious process of cultural intervention which will be examined in detail in the following pages. The process itself is the focus of discussion. Accordingly, analysis emphasizes the ideological values of Reza Shah's modernization strategy, the nature of the changes he instituted and the total effect his program had on the fabric of Tehran.

On one hand, the building program responded to new functions of city and state. On the other hand, the program itself gave rise to new functions, not the least of which was the creation of a modern profession of architecture in Iran. The second part of this chapter is devoted to architects who made important contributions and the processes which enabled them to define an independent profession.

ERN TEHRAN: SYMBOL OF THE STATE

Reza Shah engaged in grand-scale urban reconstructions at a level of detail that included choice of architects, style of construction and personal supervision. It would be a mistake to assume that Reza Shah was either repeating what was occurring in Europe and Turkey⁷ or accelerating a process of change already underway in Iran. He was driven by the same forces as other leaders, and similar nationalistic visions. He created completely new institutions and new forms, without precedent in Persian tradition.

The metamorphosis of Tehran into a "modern" city was a conscious planning decision, an example for the rest of the country to emulate. For Reza Shah, it would also be the paradigm by which foreigners would judge his capital and his country.

⁷ Although Reza Shah has been often compared to Ataturk, George Lenczowski's "From Assertion of Independence to the White Revolution," in Iran under the Pahlavis, xvi, points out some equally important differences between the two leaders' approaches to urbanization. They shared strong nationalistic outlooks, a determination to modernize, and a dislike of religious intrusion into public life. But while Ataturk was willing to sever important ties with the past, Reza Shah not only maintained the institution of monarchy but also, in symbolic architecture, revived consciousness of ancient Achaemenid glory.

Western judgments of Iran were significant factors in Reza Shah's reconstruction policies. He was keenly aware of the attitude of the West, even as he resented the image of Iran as a backward nation without a future. He set out to prove the falsity of this view.

Some aspects of his building program, as well, represented attempts to encourage and control tourism so that Westerners would experience the progressive virtues of his new, modern state.⁸ Tehran thus became a representative city, to his own country and to the world. It was to bear the mark of Reza Shah. It was to embody his beliefs and his principles.

PREPARATION FOR MODERNIZATION

A spirit of modernization gave rise to the demolition of much that had given Tehran its traditional appearance. The gateways, wall and moat of the city were certainly in conflict with the image Reza Shah had in mind and with the need to allow the city to expand naturally beyond its limits.(2.2-2.3) These structures were also in extreme disrepair and still symbolized points of control where

⁸ For a good discussion of the Shah's attitude toward the West, see Iran under the Pahlavis, Elwell Sutton's "Reza Shah, the Great Founder of the Pahlavi Dynasty," 42-43.

the old regime had exercised its power over citizens. And like their medieval counterparts in Paris or Vienna, the walls came down to allow for growth.

Under the mayorship of Colonel Karim Aqa Khan Buzarjomehri, the wall and all 12 gateways were gradually demolished between 1932 and 1937.

The Arg

Reza Shah superimposed his new administrative center upon the Arg. It is said that he selected the Arg for its proximity to the bazaar⁹, whose businessmen and merchants would be primary clients of the new ministries. This seems an incomplete explanation, since the ministries of the new centralized government were to handle affairs throughout Iran.

As likely a motivation was the suitability of the Arg itself. It had always been the seat of government. By the time of Reza Shah's accession, many of its buildings were in ruins and could easily be sacrificed to make way for new construction.

By tearing down the walls of the Arg and building

⁹ See H. Bahrambeygui, Tehran: An Urban Analysis (Tehran: Sahab Books, 1977), 40.

ministries meant to be accessible to all, Reza Shah enacted a "democratization" of bureaucracy. Approximately two-thirds of the old structures were razed-- some to be replaced by new buildings, others to remain vacant spaces. A comparison of Dr. Feuvrier's map with one from the late Reza Shah period reveals the extent of the demolition of Qajar ruins.(2.4-2.6) A large part of what was demolished consisted of residential quarters and services to the royal palaces. The large area designated as the andarun at the center of the citadel(2.4) which housed the private residence of the Qajar monarch and his harem was replaced with the large complex of structures for the Ministry of Finance. The palace of the Na'eb-os-Saltana, and the residential blocks just east of this area became the site of the new Ministry of Justice. The "Caserne des Grande" and the "Ecurie Royal", the main barracks and royal stables became the site of the ministry of Industry and Economics. The southeastern corner of the citadel which was part of a large open square was the location of the new Ministry of Information. While most of the individual palaces such as the "Muze", (also known as the Talar-e Almas, later the Golestan Palace) and the Orangerie, the Palais du Trone, Talar-e Takht-e Marmar, and the Shams-ol-'Emara were preserved, the secondary structures were destroyed to clear the area around the palaces and to make way for

new structures, the administrative palaces of the state. The exception to this is the Takya Dawlat, the royal theater for the performance of the religious passion plays popularized in the last half of the 19th century.

Takya Dawlat had special significance as a monument to retrograde religion. Officially, it was destroyed to make room for the Bank-e Melli of Bazaar. A close look at the maps reveals that the takya was not in the way and could easily have remained. Reza Shah demolished the Takya Dawlat and banned the performance of ta'zia¹⁰ with all its processional ceremonies.

Mahalla Sangelaj

The drive for "urban clearance" incompletely explains the virtual destruction of one of Tehran's oldest mahallas. Some writers have made a credible case for a political motivation to Sangelaj's destruction.¹¹ This mahalla was

¹⁰ Although Reza Shah pursued a program of secularization that included many anticlerical actions, this was unlikely to have been one of them. The clergy had traditionally opposed the performance of ta'zia. With the abdication of Reza Shah, the performance of religious ceremonies once again resumed.

¹¹ Morteza Sayfi Fami Tafreshi in Nazm va Nazmiya dar Dawra-i Qajar (Tehran: 1984), and Nasser Najmi in Tihran-i Ahd-i Naseri (Tehran: 1985),

historically associated with political, anti-establishment movements. From it, a number of popular uprisings had been mounted in the 19th century¹².

Here, too, were visible remains of the labyrinthine quarters judged with disdain by foreign visitors.¹³ (2.6) With few grand mansions and many poor dwellings, it was an eyesore contrasting sharply with the new administrative center nearby and its surrounding avenues and museums.¹⁴ Its less-than-influential population may have made it a particularly easy target.

Officially, Mahalla Sangelaj came down to make way for a proposed bourse¹⁵ (2.7-2.8) which was never

attribute the destruction to the political uprisings once held in Mahalla Sangelaj and its potential as a place of dissent.

- 12 E'temad-os-Saltana, al-Ma'athir wa'l-athar, 58.
- 13 Descriptions of the mahalla had been accompanied by judgment of its narrow winding paths and unsanitary conditions.
- 14 Unlike Oudlajan or Bazaar, Mahalla Sangelaj had never been the home of the rich and influential. It had always been a modest neighborhood (not, perhaps, as squalid as Chal-e Maydan) largely populated by a population not native to Tehran. It had further declined after the expansion of Naseroddin Shah.
- 15 The bourse project had magnitude. An international competition was held for the creation of a design. The winning entrant, Leon Barton, was American. International Directory of American Institute of Architects (Washington, D.C.: AIA, 1981), 20-21.

constructed.¹⁶ Sangelaj, vacant for years, was turned into the Bagh-e Melli [National Garden], known as Park-e Shahr [City Park].¹⁷ (2.9) It became Tehran's largest planned open space landscaped with pools, trees and paths on the model of a European urban park.

16 Although Reza Shah's abdication in 1941 put an end to many projects, it is unlikely that this was one because the competition was held in 1935. Already by 1938, it was clear that the Stock Exchange would not be built. Barton then returned to the U.S. and dissolved his partnership formed for this purpose in 1939. This is based on interviews with Leon Barton, Nov. 1984, and biographical information in Who is Who in America, 37th edition.

17 Architecte, in Vol.4 (July 1947): 154, printed an open letter to the mayor emphasizing the need for a city park in Tehran on the vacant land of Sangelaj.

THE NEW URBAN IMAGE: STREET, SQUARE, MONUMENT

"The street is no longer a track for cattle, but a machine for traffic, an apparatus for its circulation, a new organ, a construction in itself and of the utmost importance, a sort of extended workshop."¹⁸

During the first decade of Reza Shah's reign, his government launched a vigorous building program, creating in a few years the foundation for a civic infrastructure - ports, railroads, factories, telegraph and telephone lines, administrative and educational facilities, and roads.¹⁹

¹⁸ Le Corbusier, City of Tomorrow, 1924, 123

¹⁹ The outstanding achievement of the Reza Shah period was the creation of the 1394-kilometer Trans-Iranian railroad, begun in 1927 and opened in 1938. It linked Bandar Shah on the Caspian Sea to Bandar Shahpur on the Persian Gulf. Built by a multinational consortium at a cost of \$150 million it was financed totally by Iranian funds, namely taxation on the consumption of tea and sugar. Charles Issawi, "The Iranian Economy 1925-1975: Fifty Years of Economic Development," in Iran Under the Pahlavis, ed. Lenczowki, 131. In solving one of Iran's major problems -- accessibility of its vast territory - it reinforced centralization and became a symbol of achievement in which the Shah took immense pride.

Tehran's traditional patterns of mazelike growth were interrupted when Reza Shah introduced a new organ to the city: the modern street. (2.10) Intent on making his capital accessible by modern transportation, Reza Shah chose design methods reminiscent of Baron Haussmann.²⁰

KHIABAN

An orthogonal grid of streets was superimposed upon the existing dense, irregular pattern of the city.²¹ (2.11) Wide, paved boulevards were made with separate lanes for pedestrian and vehicular traffic. Many existing streets were broadened. These wide, long avenues and

20 How consciously did Reza Shah employ Baron Haussmann's methods? In all likelihood Reza Shah was aware of the reconstruction of Paris some sixty years earlier. Many of his ministers and key architects foreign and Iranian had been educated in France. Furthermore, Paris was considered a paradigm of urban design throughout the world.

21 The 1937 "Planification Map of Tehran" (2.11) is the chief guide to the urban scheme of streets that was to be implemented in Tehran. The original of this map can be seen in Sazeman-e Naqshebardari of Tehran. Another interesting map of the early 1930's was published in Itila'at-i Mahana as a tourist map. It shows the walls and gates still in place while new streets and structures have been built within the city.

subsidiary branches created a regularized grid system.²²

The street pattern and garden grid of the Dawlat district formed the basis of Reza Shah's new urban network. (2.12-2.13) The continuation of these routes north beyond the city limits presented few obstacles since most of the land was undeveloped. Four major new streets replaced the old walls around the perimeter of the city: Khiaban Shahreza to the north; Khiaban Simetri to the west; Khiaban Shoush to the south; and Khiaban Shahbaz to the east.²³ (2.15) Two of Tehran's streets -- Shahreza and Pahlavi -- significantly changed the character of the city around.

KHIABAN SHAHREZA, replacing the moat and wall on the northern limits of the city, was a broad avenue with wide sidewalks and a central median.²⁴ (2.16-2.17) Once the

22 Only in the Bazaar, the very heart of the old city, were some proposed streets never implemented. This may have been the result of pressure from merchants of the Bazaar. Despite the creation of vibrant commercial area along new avenues, the commercial center of the city remained the old Bazaar.

23 The city proper was contained within these four streets. Except for the immediate borders, the area outside these streets was not developed until after World War II. The principal streets within the city are shown on the map (2.14) made in the early 1940's.

24 "The Planification Map of Tehran" reveals that Shahreza was initially to have coincided with the old city wall and turned southeast instead

abode of the poor (like all fringes near the old city walls), the land along Shahreza became the fashionable section of town. The large gardens, orchards and open spaces around it were subdivided into rectangular lots in a grid of rectilinear streets. The large gardens and small garden pavilions of the Qajar period (2.18) gave way to large villas and small gardens all along Shahreza and adjoining streets.(2.19) According to several merchants along the avenue, anyone who would fill the 15-meter deep moat and prepare the ground could become the owner of land along Shahreza.²⁵

Many new institutions --including Tehran University (2.20) and a number of major secondary schools-- were built along Shahreza. As the value of property along the street increased, apartments and multi-story buildings were erected. Mixed-use buildings appeared. They had three or four stories with retail shops on the ground floor, offices on the second, and residential apartments on the upper levels. Two- and three-story "Western"-style apartments were also constructed in a variety of

of continuing on a straight line. The proposed diagonal street was never built. The East-West street was later extended in both directions.

25 The author interviewed in February and March 1978 some of the older retail merchants who had shops on Shahreza. This observation was confirmed also by Jafar Shahri in a 1984 interview. See also his book, Tihran-i Qadim, 4.

styles.²⁶ (2.21-2.22)

KHIABAN PAHLAVI, named after the monarch, traversed the entire length of the city, (2.23) from the old Dawlat district to a new railway station in the south. (2.24-2.25) This street, like Shahreza, featured tree-lined pedestrian paths with water from the ganats [water channels] running in jubs [open irrigation ditches] along its entire length.

Many villas and some walk-up apartments developed along Pahlavi, especially its northern part, making it one of the fashionable and prestigious residential districts. At major intersections, commercial nodes with luxury shops and cafes also appeared. The lower part of the street, still called Amiriya, was already developed. The avenue culminated in a wide maydan [square] dominated by the new monumental railway station built by German architects and engineers. (2.26-2.27)

Construction along both Pahlavi and Shahreza conformed to strict regulations requiring all buildings on major streets to be at least two stories high. Violators were

²⁶ Other than a requirement that forbade buildings lower than two stories, no restrictions were imposed by the city. Although the municipality and architects were trying hard to promote the use of architectural plans, there was no way of enforcing the practice. A building plan was still the prerogative of the owner.

severely punished, often to the point of losing their property.²⁷

As part of the new role of government, the municipality now replaced private endowments with public funds for the maintenance of roads. The creation of new streets, of course, was accompanied by asphalt paving, an important improvement for streets which had been muddy in winter and dusty in summer.

The urban planning outlook of Reza Shah described the city street as more than a functional route.(2.28) It was also to be an aesthetically pleasant space where people would come to walk. Accordingly, the streets were lined with plane trees²⁸, a rarity in the past.²⁹ Reza Shah

27 Reza Shah personally inspected these streets, so owners attended to the letter of the law. It was not uncommon, however, for owners to construct a free-standing false second story facade for a single-level building (see fig. 3.61). This was confirmed by merchants interviewed as well as by Jahangir Banayan, an architect practicing in that period, in an interview in March 1980.

28 The plane tree was a favored tree of the Safavids. In the 16th century, Shah Abbas had planted his famous Chahar Bagh in Isfahan with plane trees, and did the same in Tehran on the site that was to become the Arg. Some of these trees survived to the 20th century and were known as chenar Abbasi.

29 Water shortage and controversy had prevented regular planting. The municipality created controversy by declaring public the trees private individuals had planted and then failing to care for them. The new municipality partially solved the water problem by creating a new channel to divert water from the Karaj River

himself took an interest in the landscaping, which had a European flavor despite the characteristically Persian open irrigation system of jubs [irrigation ditches] that lined the avenues. Shahreza's median was planted with flowers and even grass -- a new, very European landscaping technique uncommon in Iran. (2.17, 2.29)

The new avenues, particularly Shahreza and Pahlavi, became commercial hubs for the city. They drew a residential population and a flow of people to and from institutions located on them. (2.30) Commercial activity on a city-scale followed. Commercial clusters arose around planned buildings on Shahreza. On the south side, near the University, the shops catered to academic tastes for books and paper goods. Maydan Ferdowsi near the British consulate became a center for rug and antiques dealers. (2.31) Lalezar and Lalezar Naw, once the heart of the Mahalla Dawlat, became a haven for luxuries, from jewelry and fabrics to theaters and cafes. The first department stores in European style were located in this area.

MAYDAN

The word maydan [square or public plaza] has pre-Islamic roots in mai-ta-ni [hippodrome].³⁰ The public

west of Tehran.

³⁰ Ernst Herzfeld, Iran in the Ancient East (New York: Oxford Univ. Press, 1941), 190.

plaza has played an enduring role in Iranian urban areas.³¹ Most cities had at least one maydan that functioned as marketplace and public gathering place for special occasions. (2.32-2.33, 2.36)

At the accession of Reza Shah, Tehran's landscape was dotted with a number of important maydans.³² (2.34)

MAYDAN-E TUPKHANA had replaced Maydan-e Shah as the center of the city in the last decade of the 19th century. It was a vast central opening into which six major thoroughfares converged. At the entrance to each of these streets was a gateway adorned with elaborate tile revetment.³³ Around Maydan-e Tupkhana important buildings had always been clustered-- the arsenal, and the Imperial Bank of Persia, and later, the Baladiya [municipality].

31 See the discussion of 19th century maydans in Chapter I. The famous Maydan Shah built by Shah Abbas Safavi in the 17th century served a variety of functions, including polo ground, marketplace and processional field. Even public executions were held in maydans. In Isfahan, the Ali Qapu Palace offered the Shah and his entourage a view of the entire Maydan Shah, which is considered an outstanding example of urban design.

32 This was not confined to Tehran, every city and town was to have wide major streets superimposed on the existing fabric converging in one or more centrally located maydans. (2.35)

33 The most famous of these portals was the entrance to the Arg, the Bab Homayun [Royal Gateway], where, at daylight and dusk, musicians played to announce the royal presence.

Reza Shah left the maydan and convergent streets intact. The gateways were torn down and the maydan itself renamed Maydan-e Sepah in honor of the Sardar Sepah, Reza Shah's title as commander-in-chief of the army. (2.36-2.39)

SABZA MAYDAN located at the entrance to the Bazaar, was originally used as a produce marketplace. (2.40) E'temad-os-Saltana mentions that during the Zand period, this maydan was a wide square planted each spring with herbs. It later held a gallows for the hanging of criminals. In the 19th century, it became a leisure park and, for a short time, an exhibition grounds for merchant goods during Ramadan.³⁴

The 1937 Planification Map of Tehran(2.11) shows a proposed street from Sabza Maydan through the Bazaar district to create an open area around the Masjid Shah. This street never materialized and Sabza Maydan remained much as it had been, leading to the main entrance into the Bazaar.

MAYDAN-E MASHQ, directly northwest of the Arg, was Tehran's traditional Champs de Mars.(2.41) Under Fath Ali Shah, it was an equestrian park with a grandstand. Later, Mirza Mohammad Khan Qajar Sepahsalar surrounded

³⁴ E'temad-os-Saltana, al-Ma'athir wa'l-athar, 63.

the field with a wall.³⁵ It became a large open field for military exercises and special occasions including, in the early 1920's, the landing of the first airplane in Iran. (2.42) By this time, however, Maydan-e Mashq was rarely used and had the character of a deserted field. (2.43-2.44)

At Maydan-e Mashq, Reza Shah built the modern city's only public gateway, replacing the earlier structure with a larger one depicting in tile scenes of soldiers and cannons. (2.45-2.47) An iron grille in the central arch bore a silhouette of Reza Shah. (2.48) Maydan-e Mashq itself became an administrative center filled with newly constructed state buildings.³⁶ (2.49-2.50)

Traditionally, maydans served multi-purpose functions. They were activity zones for all kinds events, from public executions to daily markets and festival celebrations. (2.51-2.52) Smaller city squares and open spaces, such as takyas, were often used for religious activities, particularly during the month of Muharram. Most of these small, neighborhood-based squares remained

35 Ibid., 68.

36 Among the structures constructed in Maydan-e Mashq were the Ministry of Foreign Affairs and the Ministry of War, Tehran's police headquarters, a military barracks complex and an officers' club, and the post and telegraph office.

intact during Reza Shah's reign unless they happened to fall in the path of urban construction.

Reza Shah did not confine his maydans to those he inherited. His vast urban network was to boast many maydans, most of them bearing little resemblance to their earlier counterparts. The new maydans Reza Shah proposed were neither the naturally-evolved spaces of tradition nor primarily open-ended centers of activity for people. They were symbols of axial planning in the Western sense, visual nodes and keys to the city's image. (2.38) Within the urban grid, they formed expansive traffic circles and became Le Corbusier's "apparatus for circulation". (2.54-2.56)

These large and symmetrical public squares and circles were planned for the intersections of streets and were intended as grand, monumental focal points of the city.³⁷ They featured carefully planned and landscaped squares and circles designed less for activity than as settings for fountains and statues attesting to the

³⁷ Reza Shah's direct involvement in the creation of maydans was recounted by Leon Tatavousian in a March 1978 interview. He was the monarch's architect responsible for the construction of the Palace on Kakh Avenue. In the initial proposal, there seem to have been five maydans planned for Shahreza Avenue between Simetri and Shahbaz. Reza Shah complained that this would mean too many maydans, too close together. Two maydans (one at Pahlavi Avenue and one at Saadi Avenue) were eliminated.

grandeur of the State. They were places for observation and, perhaps, edification, rather than active participation.(2.57-2.59)

Earlier maydans were more like medieval open spaces, evolving and changing over time and encompassing a variety of activities. They evolved as urban needs and urban people defined them. By contrast, Reza Shah's new maydans were timeless, almost static places dedicated to symbolism rather than action.

In effect, Reza Shah attempted to retain (at least the shadow of) an important feature of Iranian urban life while changing its symbolic content. His choice of locations for proposed maydans is instructive in this regard. The Planification Map of 1937 shows a number of maydans, some of which were constructed, some modified, and some never built.³⁸ (2.60) Just as the four new avenues encircling the city replaced the old city walls, there is a coincidence of proposed new maydans with the locations of old city gateways. A comparative study of

38 At least 7 maydans fall into the last category:
 Maydan Dawlat at Saadi and Shahreza Avenues.
 Maydan Darvaza Shemiran on Darvaza Shemiran.
 Maydan Yusefabad at Hafez and Shahreza
 A circle at Shah and Shahpur.
 Three maydans in the vicinity of the Bazaar.

maps from 1891, 1937 and 1947 supports this conclusion.³⁹

There were, of course, numerous maydans, built or proposed, that did not correspond to gateways. That so many did, however, has both practical and symbolic significance. The gateways had been landmarks and natural access points to existing thoroughfares. New maydans were able to capitalize on these familiar locations.

At the same time, it is clear that the gates were not in conflict with the creation of maydans. Almost all the gateways could have been focal points within the maydans, had there been an impetus to save them⁴⁰. There

³⁹ Maps from Reza Shah's reign show 11 proposed maydans that physically correspond to old gateways:
 Jaleh (originally Dushan Tapeh) at Darvaza
 Dushan Tapeh
 Khorassan at Darvaza Mashad
 Shush (originally Shah Abdolazim) at Darvaza
 Shah Abdolazim
 Rah-Ahan at Darvaza Rah-Ahan (not built)
 Khaniabad at Darvaza Khaniabad (not built)
 Qazvin at Darvaza Qazvin
 Gomrok at Darvaza Gomrok
 Shah at Darvaza Bagh Shah
 Shemiran (built as Mazandaran as seen in 1947 map) at Darvaza Shemiran
 Dawlat at Darvaza Dawlat
 Yusefabad at Darvaza Yusefabad
 Even within the city, some proposed maydans corresponded to the city gates in the oldest wall. These included:
 Mohammadiya at old Darvaza Shah Abdolazim
 Sirius at old Darvaza Mohammadiya
 Sepah at old Darvaza Dawlat (Asadollah)

⁴⁰ By this time, many gateways were in dilapidated condition for lack of maintenance.

was not. Their demolition was part of ridding the modern city of imagery charged with associations of Qajar Dar-ol-Khelafa Tehran.

Maydan Iconography

An architectural feature of each new maydan was a central element-- usually a statue or fountain, a piece of the new State iconography. Statues, many of the monarch himself or of national figures such as the poet Ferdowsi, were commissioned and made in Europe by famous contemporary sculptors, then shipped to Iran.

Whether it was a statue of the monarch or of an acclaimed hero there was one goal: edification of the public through heightened awareness of the national heritage of Iran.

The existence of public figurative statues themselves was a significant departure from the past. Adhering to Islam's disapproval of public representation of figures, the Qajar had violated its spirit by confining their self-celebrating statuary to their private palaces. (2.61-2.62) For the first time, Reza Shah extended the use of such statues into the focal public places in the city.

Traditional maydans, like courtyard houses and mosques, were oriented around a central pool which was both an aesthetic center and a practical feature, a water

source for people using the maydan. Thus, when Reza Shah erected his statues, he broke not only with religious ideas but also with age-old convention.

In planning a new city structure, Reza Shah turned away from an organic development of space --use growing out of the city's public life and ceremonies. Instead, between 1933 and 1939, he used public space to define and focus a new life for the city and its people. His grid set new boundaries and imposed new patterns of movement.(2.63)

Major thoroughfares, more than simply passages to destinations, became destinations in themselves, new centers of urban activity. New maydans moved away from the old communal connotations which had made them gathering places for festivals, religious celebrations and public events. They became symbolic spaces.

THE NEW URBAN STYLE: ARCHITECTURE AND ARCHAEOLOGY

During 145 years of Qajar rule, the royal court and entourage were the arbiters of taste. In a conservative regime with an eye on the preservation of tradition, architectural and stylistic changes were both slow and superficial. During two decades under Reza Shah, the

State became the setter of style. Government became the major architectural client. The changes were fundamental, the pace rapid.

As Reza Shah consolidated his power and centralized his administration, the impact of the State upon architectural form became direct.⁴¹ New buildings were needed to house new institutions, most of which had no precedent.⁴²

This practical need merged with a political vision. The religious symbols of the 19th century were deliberately replaced with imagery that conjured the authority

⁴¹ A number of memoirs published in Ebrahim Safaie, Riza Shah Kabir Dar Aina-i Khatirat ba inzimam-i Zindiginama (Los Angeles: 1365/1986), and my own interviews with architects indicate that almost all building activity during the 20's and 30's was personally endorsed by Reza Shah. He approved projects at weekly joint meetings of ministers. He presided at opening ceremonies for all important building projects. Plans were reviewed in detail by ministers and boards specifically appointed for this purpose.

⁴² Ministries did exist in Qajar Tehran. Many lived in name only, since individuals were able to purchase titles from the Shah and some were able to afford numerous posts. Many ministries functioned through informal channels or from offices in the homes of ministers. Some 19th century offices of government were located within the Arg. Other institutions such as the Ehtesabiya [city administration], the post and telegraph and the British owned Bank Shahi [Imperial Bank] were set up toward the end of the century. A house for the Majles [Constituent Assembly] was eventually established in a converted private residence. (2.64, 3.23)

of a State with a message: nationalism and secularism. The imagery chosen was pre-Islamic.⁴³ Its purpose was to recall the grandeur and the power of the ancient Persian empire.

THE ACHAEMENID REFERENCE: PAST AS PRESENT

In 19th century Iran, there was an awareness of the historic past. Its application to structures was subtle, using the principles rather than applying the motifs. One example is a stone relief at Cheshma Ali, (2.65) depicting Fath Ali Shah Qajar in a hunting scene, constructed in the manner of stone reliefs at Naqsh Rostam and Naqsh Bahram. How consciously the Qajar monarch employed pre-Islamic methods is unclear. Another important example is Qasr-e Qajar, (2.66) the splendid "hanging garden" summer palace also built by Fath Ali-Shah. Its terraces and layered gardens resemble the concept of the "Apadana" [raised throne room] at Persepolis.

43 In the early years of Reza Shah's reign, the search for a new Persian style to represent the new era did result in some interpretations of traditional Islamic elements -- pointed arches, ayvans and tile decoration. Two of the best examples of the neo-Islamic style, however, are not Persian but foreign-controlled projects. One is the Imperial Bank of Persia, a British institution which controlled most of the banking industry until Reza Shah nationalized it. The other is the American College of Tehran which, under Reza Shah, became Alborz College. (2.121-2.122)

The modernization of Iran brought architecture and archaeology into a symbiotic relationship for the first time. Architecture became a convenient instrument for state propaganda and archaeology provided its vocabulary of power.⁴⁴ The new State architecture of Iran used pre-Islamic imagery supplied by archaeological excavations sanctioned by Reza Shah. Thus, during the Twenties and Thirties, this new architecture, which I have called the Neo-Achaemenid style, put to use for the first time the newly discovered archaeological finds of Persepolis and Susa.⁴⁵

It is not accidental that two of Iran's first foreign architects --André Godard and Maxime Siroux-- were among its prominent archaeologists. Ernst Herzfeld, and Erich Schmidt, two German archaeologist involved in

44 The two decades between the World Wars also coincided with the heyday of Persian archaeology. Museums in Europe and American displayed objects, entire stone relief facades and monumental portals. After sponsoring the first scientific expeditions at Persepolis in 1931, the Oriental Institute in Chicago became the richest treasury of Achaemenid remains outside Iran. In the same year, London staged an International Persian Art Show at the Royal Academy of Arts. In 1935, Leningrad hosted an international congress on Persian art and archaeology.

45 In 1895, the rights to excavate in Iran were granted indefinitely to the French. In 1927, these rights were repealed and the French monopoly was confined to Susa.

the Persepolis excavations of the Oriental Institute of the University of Chicago, made major archaeological discoveries which attracted worldwide attention. Herzfeld who was trained as an architect, also wrote about Persian archaeology and kept meticulous records of his work.⁴⁶

The American art historian, Arthur Upham Pope made two lasting contributions, one was his classic survey of Persian art, published in 1938. The other was his role in mounting several major international exhibitions and congresses on Persian art and archaeology.⁴⁷

The popularization of Iranian art and archaeological history gave Reza Shah the material for a new symbolic direction in State architecture. Through the use of

⁴⁶ Herzfeld's records are now in the Freer Gallery archives. Among other things, they reveal that Herzfeld himself designed the emblem for Iran's National Monuments Society and suggest that Friedrich Krefter, an architect on his archaeological team, may have been involved in contemporary architectural projects also. (2.68-2.69) Krefter later published: Persepolis Rekonstruktionen (Berlin: Gebr. Mann Verlag, 1971). It is possible that Herzfeld's involvement with and influence on architectural style was much more direct than heretofore assumed.

⁴⁷ Pope founded the American Institute of Persian Art and Archaeology in 1921. He was instrumental in organizing exhibitions and congresses both at the 1926 Sesquicentennial Exposition in Philadelphia and London's Royal Academy in 1931. From 1921, he was Director of the American Institute of Persian Art and Archaeology. He was also an honorary advisor to the Persian government, 1921-36, and honorary professor of art history at Tehran University from 1936.

didactic sculpture and architecture, the Iranian public was educated about its ancient heritage.⁴⁸ Cast in stone on the facades of newly constructed civic monuments were the ancient warrior and king, the eagle of Ahura Mazda, the winged lion, the bull-headed capitals. (2.70)

In legitimizing the new through historic association Reza Shah's method was to combine a deliberate secularization program with nationalistic zeal to undermine the power of religion generally, and the clergy in specific. His political policies are beyond the scope of this work but his architectural statements were unmistakable.

They were also not confined to a drive toward the past. If one aspect of Reza Shah's program was pre-Islamic, the other aspect might be called "post-Islamic." In the 20th century, another suitable vocabulary was available to him. It was international, rational, functional and secular. He used it. By the fifth decade of the 20th century, Reza Shah had made the demarcation between the "modern" and the "traditional" clear in his buildings and public monuments.

⁴⁸ Even the choice of Pahlavi as the new monarch's family name had the significance of historic association. Its meaning refers to the ancient language of Persia.

INSTITUTIONS OF THE NEW STATE

While not all buildings were targeted for the Neo-Achaemenid style, many important ones were. Bank Melli-e Iran, the first national bank which broke the British monopoly, was one of the earliest buildings to use this imagery. Shahrebani Koll Keshvar [National Police Headquarters], constructed on the Maydan-e Mashq replicated the facades of Persepolis palaces. (2.73-2.74) Anoushiravan Dadgar, the first Zoroastrian school⁴⁹ in the country, took its iconography from Persepolis.⁵⁰ (2.75-2.77) Other significant structures --Muze-ye Iran Bastan and Tehran University-- broke out of the Neo-Achaemenid mold with references to other times and broader influences.

Three of these buildings are good representative

49 One of the earliest buildings to use historic imagery combining both pre-Islamic and Islamic motifs was the American college (later Alborz school) built by Nikolai Marcoff. It set a new trend and new architectural standards for schools. Although built for a small Zoroastrian minority, the school's program was by no means religious. This school, and others to follow, were part of a newly secularized national school system built to replace the madrasas and break the clerical domination of education.

50 Reza Shah himself first saw Persepolis while Minister of War in 1922, at a time when the ruins were in poor condition. Mostafavi records the Reza Khan's reaction in Risala-i Anjuman-i Athar-i Melli, 1(Tehran: 1925), 1.

examples of architectural statements and trends of the Reza Shah period.

Bank-e Melli Iran

The National Bank of Iran was built about 1928 on Ferdowsi Street by the technical (architectural) office of the Bank. (2.78-2.81) It was a collaboration between a number of architects, including Nikolai Marcoff, Mohsen Foroughi, and Keyghobad Zafar. Architectural drawings⁵¹ document plans and elevations very close to the constructed building. (2.82-2.85)

The plan is very rational and "Beaux Arts" in its symmetry. The elevation facing Ferdowsi Avenue is emphasized by monumental stairs leading to the main level. Above the central pediment is a sculptured eagle of Ahura Mazda, (2.70) the emblem of Zoroastrianism and the symbol used in rock tombs at Naqsh Rostam.(2.86) The roof is crenelated in the tradition of palatial structures.

⁵¹ It is possible that A. Heinrich, a German architect practicing in Iran about whom we know very little, also worked on this project. This is supported by the fact that many of the drawings were inscribed in German. Also, a name written in Farsi appears to be the name of Heinrich (no first name is offered). The illegibility of some parts of the drawings, held in the Bank-e Melli archives, however, prevent exact attribution of the work to specific architects and dates.

The central part of the building is a tall ayvan flanked by two pairs of fluted columns with bull's head capitals replicating columns founds in Persepolis. (2.87) On either side of these columns, two sculpted stone reliefs are replicas of Achaemenid soldiers. (2.88)

It is not without significance that Bank-e Melli was the first building to employ Achaemenid motifs. Like Persepolis, the bank was a national treasury. It was also a symbol of Iran's new identity and its financial independence after years of subservience to the British owned Imperial Bank of Persia. Bank-e Melli set the tone for many subsequent state structures, from the literal neo-Achaemenid rendering of the Shahrebani Koll Keshvar [police headquarters] to the Ministry of Justice, (2.89-90) where reliefs were applied to a rationalist, "Beaux Arts" styled building, to the eclectic use of motifs from Persepolis on a modern building in the Bank-e Shahi (Royal Bank) on Ferdowsi Avenue. (2.91)

Muze-ye Iran Bastan

In negotiating the repeal of a French monopoly on archaeological excavation of Persian sites, Iran agreed to construct a museum and library for historic objects

and papers. By agreement, the first director of these institutions would be French.⁵²

He was André Godard, an architect who had worked as an archaeologist in Syria and Afghanistan, then come to Iran in 1929. He became both Director of the new national museum and its architect.

Completed in 1936⁵³ on a site southeast of the Bank-e Melli, and corner of the old Maydan-e Mashq, it is situated on a north-south axis on 13,176 square meters of land on Sepah Avenue.⁵⁴ (2.92-2.93) Its architectural inspiration was one of the few Sassanian remains, the Palace known as Taq Kisra at Ctesiphon, the largest extant brick arch in the world. (2.94)

52 The French government had the right to propose the appointee, whose contract was to be renewed for at least three consecutive five-year terms. Declassified information and details of the correspondence surrounding this agreement are available at the Ministère des Affaires Étrangères in Paris.

53 This is the date inscribed on one of the Museum doors. According to the proposed plan of Andre Godard, building was to have begun in the latter part of 1933 under the supervision of Marcoff and Jowdat.

54 The total built area of the museum was 3438.5 square meters. Details of these areas are provided by Mostafavi in the Gozarshat I. 1936, p.4, a publication of the Anjoman Asar Melli.

It is likely that Godard had seen the original structure, and was familiar with it.⁵⁵ He chose to work in brick, the material in which Persian builders had historically excelled. There is a striking similarity between the main facade (particularly the main entry) of the Muze and its predecessor. (2.95-2.96) The arch itself and the engaged round columns and arched windows of the Taq Kisra were extensively employed in the Muze. The facades are very similar in proportion and tripartite division, though in Godard's museum the vertical divisions are emphasized with the tall monumental engaged columns spanning the full height of the building. (2.97-2.98)

The interior of the museum, however, makes some references to Islamic architectural traditions. Godard was knowledgeable in Persian architecture⁵⁶. He makes use of an old environmental principle of Islamic architecture. The way in which the main ayvan faces south provides the best use of natural light in summer and

55 The published portfolios of Flandin and Coste contained a 19th century drawing of the structure and reconstructed facade of it in Voyage en Perse (Paris: Gide et Baudery, 1854). More importantly Godard had himself worked as an archaeologist in Baghdad, Iraq.

56 Godard's restoration work in Isfahan, as well as his research published in Athar-e Iran make a good case for his knowledge of Islamic architecture.

winter.⁵⁷ It forms the entry foyer which gives access to the main museum as well as to the library and the conference room, each with a small transition space. (2.100) This space forms a hashti--a semi-octagonal vestibule. The exhibition spaces on each floor get natural light from the two enclosed courtyards as well as from the east and west walls. (2.99)

The museum is part of a small cultural park where Ketabkhana Melli, the National Library for Precious Manuscripts, was later erected. Built in 1936 by Maxime Siroux in collaboration with Godard, the library was also in brick and stylistically similar to the Muze but without the spectacular arch. A modest building in size and style, it did not compete with the Muze; it sat behind and set back from the main street.

Within two levels, each 550 square meters, were housed large bookshelf spaces, storage areas and vaults. There was also a hall for reference catalogues, a main reading room, director and librarian's offices, and both private and public dressing rooms.

Annexes to the museum and the library and other related buildings were later added for the registration

⁵⁷ While Godard knew Persian building traditions, he was perhaps less familiar with the construction of museums. The excessive natural light has not proved ideal for the preservation of historic objects.

of historic monuments, the ancient collection, and historical research.⁵⁸

Tehran University

Begun in 1934, Tehran University was the first Iranian institution of higher education created totally on a Western model.⁵⁹ It bore little resemblance to the traditional madrassa.

The University was constructed in the northwestern corner of Shahreza on a large property known as Jalaliya.⁶⁰ Built by a team of French and French-educated Iranian architects, the campus consists of a series of independent structures, each with its own courtyard and all centered

- 58 A number of these buildings were complete by 1936. All, we are told in a report by Mostafavi in Gozareshat, I, 3-5, were built with the best materials and systems-- doors, windows, iron railing, lighting, electricity, telephone, central heat and air conditioning.
- 59 The Dar-ol-Fonun of 1851 had been inspired by European academies. It had continued the madrassa tradition, however, in both architecture and curriculum.
- 60 According to Gozareshat, I, 1936, Ebrahim Safaie, Riza Shah Kabir and Dar Aina-i Khatirat, 1986, the Jalaliya property was 202,204 square meters, purchased for 4.10 rials per square meter. For years, the area north of the University was vacant except for a few dormitories. Much of this area became the Park-e Farah; some of the land was sold to private individuals.

around a large open plaza.⁶¹ (2.101)

All the original buildings are concrete. They share a singular architectural vocabulary, even when designed by different architects. (2.102-2.106) The undecorated facades are embellished by simple columns bearing arcades or entry porches. The look is neither traditional nor eclectic, despite the fact that all the participating architects were well-versed in traditional Persian architecture.⁶²

The rational style suited the intent behind the University. It was to be a modern institution on the European model, a secular monument to exemplify higher education throughout the country. There was no precedent for it in Iran. So while contemporary campuses in Europe and American were dipping into medieval, Gothic and Georgian styles, Tehran University broke with the past entirely. It was modern, rationalist, monumental, simple and functional.

61 André Godard is credited with the general site plan. Maxime Siroux was the architect of the medical school complex. Later, Roland Dubrulle and Mohsen Foroughi collaborated with Godard and Siroux on the School of Fine Arts and other buildings. Gozareshat, I, 1936, 10-15.

62 Godard was building the Muze-ye Iran Bastan. Foroughi's thesis project at the Beaux Arts had been a traditional Persian villa. Maxime Siroux was to design some of the most successful traditionally styled buildings in Iran.

Tehran University had a major significance in Reza Shah's program for Iran. It made possible the training of Iranian experts at home. As a free university, it opened higher education to all sectors of society, including women. And, with the new secondary school system, it brought the end of the educational monopoly of the ulama.⁶³

It is interesting to note that the neo-Achaemenid influence even extended to temporary structures used for state occasions. Monumental triumphal arches, such as those built for Reza Shah's coronation and the weddings of the Crown Prince and Princess Fawzia, quite literally used the architectural vocabulary of Achaemenid Iran. Nikolai Marcoff's triumphal arch is an excellent example, especially since Marcoff was involved in the construction of the Bank-e Melli. (2.109-2.112)

63 In light of Reza Shah's anti-clerical stance, it may not have been accidental that the anatomy building was the first constructed, despite religious leaders' strenuous disapproval of the dissection of the human body. Many new schools both elementary and secondary were constructed throughout Iran. This was part of a widespread human service effort that included the building of hospitals, clinics and fire departments etc. Architecturally the schools developed very distinctive styles combining modern idiom with Persian vocabulary, usually in the form of decorative tile. Many of these schools were named after secular national heroes. Madrasa Ferdowsi is a prime example. (2.108)

Like urban planning, architecture became one of many didactic weapons in Reza Shah's arsenal. As the city grid was laid down to teach people how to live in a modern world, public architectural spaces were designed to point them in two directions --both secular: toward a glorious national past recreated, and toward a rational future stripped of parochial associations.

But while using his architectural instrument for public edification, the Shah also invested the practice of architecture with a range and richness of opportunity that transformed it completely.

THE NEW ARCHITECT: FROM STATECRAFT TO PROFESSION

The Architecte... is purely a technological and aesthetic publication, which cannot and does not wish to have the slightest involvement with the world of politics."⁶⁴

That this statement could be made in the wake of two decades of state-sponsored architecture indicates how dramatically the practice of architecture had changed. Under Reza Shah, a new city emerged from its traditional shell. So, too, a redefined professional architect emerged from the age-old role of usta-me'mar [master-builder].

The me'mar [architect] of the 19th century was a builder, his role little changed for centuries. Rising from apprenticeship with the ostad [master], the me'mar acquired his craft by experience. Once he had established a reputation, he became a member of a guild of builders, gaining recognition for his expertise and coordinating all the crafts subservient to architecture. By the time he became an usta-me'mar, he was versed in the traditional arts and techniques, with advanced knowledge in building, mathematics, astronomy, geometry, and trigonometry.

64 Iradj Moshiri, ed., Architecte, Vol.1, August/September 1946, (Tehran: Taban):1. This statement appeared in the inaugural issue of Architecte, the first Iranian professional journal for architects. The journal is one of the few sources of information about architects active in the promotion of modern architecture in Iran.

The royal court attracted to itself the most famous of these master-builders. When there was a project, the court called forth architects throughout the nation.⁶⁵ There was also a position at the court for a me'marbashi [court architect], an official whose role was overseeing the construction of most buildings built through court patronage through the Edara-ye Bannai-ye Divan-e Ali [Office for Construction of the Royal Audience]. Other members of this office also had titles but it is not clear that they were all me'mars.

Closely affiliated with the construction office of the court was a landscaping office, known as Baghat-e Mobaraka-ye Dawlati [Office of the Royal State Gardens]. Some builders belonged to both offices.

There are limited sources of information about key architects of the 19th century and earlier.⁶⁶ Court

65 The tradition of calling forth architects dated back to pre-Islamic times. It is recorded on the tablets of Darius at Persepolis. Little is known about how the message was transmitted, although there is evidence that architects were members of guilds and had informal patoqs [gathering places], which might have created an excellent word-of-mouth network.

66 An important source may be the waqfnamas [endowment charters] of religious buildings, which often also included endowed gardens and commercial enterprises. Access to these documents is quite difficult under present circumstances. E'temad-os-Saltana has made references to a number of architects though not in any detail; sometimes the names of architects were inscribed

chronicles record much building activity but many of them emphasize the patron, not the architect. As a result, we know little about the builders or influences upon their work.

In the 19th century, few, if any, had traveled abroad. Those whose buildings had a "European" cast did not necessarily have direct knowledge of European architecture. Pictures, postcards and descriptions were often responsible for their impressions of European buildings. Cliches in the form of small vignettes were used in the midst of the polychrome tilework on buildings.⁶⁷ (2.113) With the mid-19th century influx of Europeans -- some of whose buildings displayed a "farangi" [foreign; more specifically, Western or European] style-- there was some interest in "looking European" and me'mars tried to satisfy the tastes of their clients.⁶⁸ Taste was set by

in the building.

67 R. Hillenbrand, "The Role of Tradition in Religious Architecture," in Qajar Iran, ed. Bosworth, 356-357, comments about "the sentimental pseudo Alpine landscape panoramas executed in a garishly oleographic style better suited to a chocolate box than to a wall", and offers an interesting comparison with collateral Islamic sources, the pictures of holy places such as the Kaaba, and the Prophet's mosque in Medina. The use of figures or busts set against a landscaped background was also quite prevalent.

68 Among the best known architects of the Qajar period was Dust Ali Khan Mo'ayyer-ol- Mamalek whose Shams-ol-'Emara and Takya Dawlat were

Shah and court, the nobility and wealthy classes followed suit. (2.114-2.115)

Although most structural principles remained traditional, there were stylistic changes, often European-inspired.⁶⁹ It was the patron, not the architect, who was usually credited with these stylistic references.

The first two decades of the 20th century were not conducive to building activity. The court was weak and World War I created materials shortages. Few new ostads emerged during this time.

When Reza Shah was ready to launch his massive reconstruction program, very few Iranians had the training and knowledge he needed. Foreign architects became his primary partners.

European inspired.

⁶⁹ Pointed arches gave way to round. Columns began to be styled with Corinthian capitals. Decorative patterns inspired by the West were applied to building facades. The pishani [forehead], a freestanding projection of the facade above and beyond the roof embellished with decorative reliefs, became popular.

THE FOREIGN ARCHITECTS

The stone cutters who wrought the stone, these were Ionians and those who wrought the wood, those were Sardians and Egyptians. The men who wrought the baked brick, those were Babylonians. The men who adorned the wall, those were Medes and Egyptians. Saith Darius the King: at Susa a very excellent work was ordered and brought to completion.⁷⁰

As the State launched its reconstruction program, foreign architects were needed to build new administrative offices, ministries, schools, universities, banks and museums. The traditional Iranian master-builders were unfamiliar with the functions of these buildings. Nor, perhaps, could they readily discard long-held images and create new ones.

Many Westerners were involved in massive architectural and engineering projects.⁷¹ They were German, Swiss, Scandinavian, Italian⁷², American, French and

70 Roman Ghirshman, Iran (London: 1954), 165, published the transcription of this ancient text of Darius, the Achaemenid king of Iran.

71 In addition to buildings, the Trans-Iranian Railroad, bridges, and roads were built by foreign specialists.

72 Italians succeeded in winning five of eight contracts for the construction of the Trans-Iranian Railroad. Although Iranian restrictions prevented them from hiring an all-Italian crew, more than 1800 italians were employed on this project between 1934 and 1936, according to a propagandistic Mussolini publication, Italia

Austrian, working independently, through companies, and sometimes in multi-national consortia.⁷³ (2.116)

Many had participated in archaeological excavations in Iran and were aware of and able to draw upon Persian architectural history and traditions.

We know very little about this first generation of foreign architects in Iran. Some are known by name or nationality only. Others are linked to buildings but their histories and involvements remain uncertain.⁷⁴

Imperiale numero speciale della Revista Illustrate del Popolo d'Italia, published in Milan in 1937.

73 A Scandinavian consortium called SENTAB and a multinational corporation, SKODA, were instrumental in the construction of many urban projects. There is no evidence of British architects, perhaps because of their long history of intervention in Iran's internal affairs. Reza Shah himself showed little interest in promoting British presence. It is possible, however, that the British might have been credited for some public buildings, including the educational buildings built by Samuel Said, an Indian British subject, under the jurisdiction of the Ministry of Education, according to Gozareshat, I, 1936, 21. No biographical information, however, is available on him.

74 Among this group are Leon Barton and Friederich Krefter. Krefter, an architect on the Herzfeld archaeological team, may have worked on the Bank Melli and other buildings for which some of the drawings are notated in German. Leon Barton was the American architect who won the 1935 international competition to build a bourse in Tehran. The bourse was never built but Barton worked in Iran from 1935 to 1938 as a consultant to the Iranian government. In interviews, Barton has been unable to recall

There are, however, three key foreign architects who were instrumental in shaping the city of Tehran. Each had a lasting impact on the development of the profession of architecture in modern Iran.

Nikolai Lvovitch Marcoff 1882-1957

As a fellow officer in the Cossack Brigade, Nikolai Marcoff had the advantage of intimate acquaintance with Reza Shah. (2.117) In 1921, he decided to stay in Iran where he was to participate extensively in the reconstruction of Tehran.

Born in Tiflis, Georgia in 1882, he attended the architectural section of the Academie Imperial des Beaux Arts in St. Petersburg, graduating as a painter-architect in 1910. After military service, he enrolled in the Persian section of the Academy of Oriental Languages in St. Petersburg, graduating in 1914. He served in the Caucasus during World War I and, in 1917, became adjutant to the Commander of the Cossack Brigade, the special

details of his experience and has, as yet, provided no documents about his work. He does recall working in Iran with Samuel Said and two other foreign architects whom he remembers by last name, Heinrich and Elgal. Barton left Iran at a time when diplomatic relations with the United States were strained as a result of a traffic violation involving the Persian Ambassador to the United States.

military corps established by Naseroddin Shah and always commanded by a Russian.

When he left the Cossacks, Marcoff set up practice as one of the first foreign architects in Iran. According to his son, Alexei Marcoff (also an architect, practicing in England)⁷⁵, Nikolai Marcoff had a particular fascination with Persia.⁷⁶ He admired Islamic architecture and traditional Persian building methods and favored the use of local materials-- brick, stone, tiles and plaster. In fact, the 20 cm. by 20 cm. brick he used and encouraged became known as "ajor-e Markovi" [Marcoff's bricks]. The blend of these tastes with a classical architectural education resulted in a style quite unique to him and not identical to but meant to be harmonious with traditional Persian architecture. His knowledge of things Persian enabled him to create a Persian style based on the nature of the materials and on the culture.

75 Alexei Marcoff himself is the source of most of the information in this section about his father. He generously provided Nikolai Marcoff's biography, curriculum vitae, a list of architectural projects and a Journal de Tehran news clip from March 1946, honoring his father's 25th year of practice in Iran.

76 His interest in Iran was sparked, perhaps, by an ancestor's service as ambassador of Czar Ivan III to the court of Shah Uzun Hasan. As an architecture student, Marcoff visited Iran, where his older brother was engaged in the building of the Tabriz Julfa railway and a house for the director of a Russian bank. (2.118)

The image of Tehran in the 1920's and '30's is full of Marcoff's style, at once modern and eclectic, Western and Persian. He built ministries, municipal buildings, factories, palaces and prisons, stadiums and schools, churches and mosques, office buildings, shops, and a host of residences.

Among his most harmoniously Persian eclectic structures are the Old Municipality Building, (2.119) Alborz College, (2.121-2.122) Jeanne d'Arc School, and the Veramin and Karaj sugar refineries. (2.120) But he also worked in European Classical style when the occasion demanded. (2.123) He designed the Italian Embassy and the Singer Building (2.124) on Saadi Avenue, which introduced large plate glass windows to Iranian buildings. The classical style is also apparent in a number of residences, including the Gharagozloo house in Tehran and the Navabi house at Pol-e Rumi in Elahia, north of Tehran.

The availability of steel joists and steel reinforcement enabled him to expand into modern designs. He used a modern style for a number of houses, including the Villa Alexis and Villa Jouvel, both in the northern suburb of Mahmoudiya. (2.125)

Marcoff built a number of churches in Tehran (2.126-2.127) and had the unusual distinction of building a mosque -- the Amin-od-Dawla on Fakhrabad Avenue. It

indicates both Iranian respect for his understanding of Persian-Islamic style and the loosening of past restrictions on non-Muslim involvement with religious institutions.

André Godard 1881-1965

A graduate of L'École des Beaux Arts, Godard was sent to Iran by the French government after Reza Shah repealed the French excavation monopoly and agreed to establish a department and a museum for antiquities under the direction of a French appointee. Godard was that appointee.

As the only foreign architect ever to hold an Iranian government position (Director of Antiquities), André Godard set policies for archaeological excavation and historic restoration.⁷⁷ As the first Dean of the School of Fine Arts at Tehran University, for more than 30 years he also influenced the education of Iranian architects.

He also had a limited but important involvement in architectural design and construction as the guiding light behind Muze-ye Iran Bastan and the campus plan for Tehran University. (2.92-2.101)

More influential than his own work, however, was

⁷⁷ Godard had been an archaeologist since 1910, working in Baghdad, Egypt and then Afghanistan.

Godard's impact on the training of Iranian architects and the creation of a dialogue on architecture.⁷⁸

Godard modeled the curriculum of Tehran University's school of architecture after the French Beaux Arts system. His knowledge of Iranian art history was reflected in both the school curriculum and his own publications, including Athar-e-Iran [Annals of the Archaeological Institute of Iran], published between 1936-1949, and L'Art de L'Iran, 1962.⁷⁹

Maxime Siroux 1907-1975

Maxime Siroux was the most prolific practicing foreign architect in Iran for more than three decades. He came as an archaeologist in the early 1930's,⁸⁰ but

78 Godard was himself the subject of some rather controversial dialogues in the architectural community. Some believed his main motivation was the advancement of French interests in Iran and expansion of the Louvre collections. Jealousy about the ease with which he obtained projects even resulted in an article in Architecte, Vol. 3, Feb./March 1946: 114, protesting his appointment to design the mausoleum of Abu Ali Sina, a project which Iranian architects thought should have been awarded competitively.

79 Much of his work was coauthored with his wife, Yedda Godard, who continued to publish after his death.

80 Siroux attended L'École des Arts Décoratives and L'École Spéciale d'Architecture and became a licensed architect in 1934. This information was provided by the architect's wife.

soon became immersed in the reconstruction efforts.

He was architect or chief architect in several important ministries -- Education, Industry and Mines, Agriculture, Interior, and Finance⁸¹-- and a professor at Tehran University. His key buildings in Iran included the medical school complex and many faculties of Tehran University; the National Library and annexes to the Muze-ye Iran Bastan; memorials, hospitals, schools, stadiums, factories and hotels. (2.102-2.106)

Like Godard, he was involved in a number of restoration projects, including the mosques at Qom and Yazd. He also designed a hotel and casino for Kalardasht in the Alborz Mountains but the project was never completed after it was interrupted by Reza Shah's abdication. He was also an architect of villas for many well-known ministers and officials.

Some of his most revealing projects were the elemen-

81 It was standard practice for each ministry to have a daftar-e fanni [technical or architectural office] whose architects designed and constructed ministry projects. An architect might join the office for one project or remain for an extended time. It was not unusual for an architect to move from one ministry to another as he worked on projects. Siroux's career, like that of most of his contemporaries, reflects this mode of operation.

tary and secondary schools he designed for the provinces.⁸² These schools were designed with a great deal of sensitivity to regional, climatic, and cultural requirements. Few, even today, suspect that they were made by a foreigner.

Another achievement was the Memorial to Hafez at Shiraz, constructed in 1939. (2.128) Built in a traditional style, it replaced a modest structure without detracting from the serene garden that surrounded the tomb. (2.129) Only someone familiar with the traditions of Shiraz would have designed so transparent a structure as Siroux's pavilion in the midst of a lush garden.⁸³

Siroux also collaborated with the Iranian architect Mohsen Foroughi, in the construction phase of Foroughi's buildings for Tehran University and again as technical and construction manager of the Ministry of Finance, which Foroughi designed. (2.147-2.148)

These projects --and, indeed, Siroux's entire Iranian career-- shed light on the direction the practice of architecture took under Reza Shah, whose centraliza-

82 Siroux built major schools in Qom, Yezd, Boroujerd, Sanandadj, Amol, Tabriz, Gorgan. He built elementary schools in Kazerun, Izada, Kharg, Mahalla, Nawkhanda and designed prototypes for schools throughout the country.

83 Siroux's knowledge of Persian architecture came from his travels and studies. He was very sympathetic to the architectural traditions of Iran and many of his works were modern interpretations of traditional architecture.

tion policy eliminated an old tradition of local autonomy. In Tehran were made the architectural designs for even the most remote small towns.

Siroux was able to move from traditional mausoleum to mosque restoration, to modern hospital, school or stadium with an unusual freedom, simply by association with the ministries of Reza Shah's centralized government.⁸⁴ This way of doing things was to benefit the careers of many architects, both foreign and Iranian.

Like Godard, Siroux made significant scholarly contributions. He wrote numerous articles on pre-Islamic and Islamic monuments for journals including Athar-e-Iran, Syria, and Mélange Islam. In addition to his excellent study of extant caravanserais, Caravansérais d'Iran et petites constructions routières, he published another book, Anciennes voies et monuments routiers de la région d'Ispahan. He was also a professor of construction during the first years of the School of Architecture at Tehran University (1940-45).

Marcoff, Godard and Siroux remained active and influential through the 1950's. As partners in Reza Shah's

84 An adjunct practice was Reza Shah's habit of transferring ministers from one ministry to another. The daftar-e fanni [technical office] or some of its architects could follow the minister.

modernization program, they established an educational system, developed a professional mode of operation, and left to their Iranian heirs a body of written and built work that intimated possibilities for a new domestic architecture.

IRANIAN ARCHITECTS: THE FIRST GENERATION

The first issue of Architecte in 1946 simultaneously declared the establishment of an Iranian Society of Architects.⁸⁵ The journal and the society signified the maturation of a first generation of native architects schooled in the European tradition. This generation left a lasting impression on the city of Tehran and went on to create both a modern Iranian architecture and a professional dialogue.

⁸⁵ Architecte, Vol.4: 36, gave the names of Iran's 'diplome' architects. The list includes Mohsen Foroughi, Keyghobad Zafar, Ali Sadegh, Manouchehr Khorsand, Abbas Ajdari, Iradj Moshiri, Vartan Avnessian, Nasser Badei, Kianouri, Nasser Zanganeh, Javad, Soheil, Paul Abkar, Boudaghian, Afshartous, Soleiman Mohamadzadeh, Aslan Saidkhanian, Arsalan Afqami, Gholamreza Khajavi, Khosrow Khosravi, Reza Kiani, Abbas Moinpour, Houshang Seyhoun, Houshang Sanei, Houshiar Ashraf, Azad Monfared, Mohammad Ali Kariman, Farahbaksh Sheydani, Hassan Baheri, Mehdi Jafarian, Banai, Kohang, Nasser Jamei, Reza Sayadi, and Massoud Modaber. In a conversation with the author, Houshang Seyhoun added these names to active architects of the time: Jahangir Banayan, Arsalan Kavousi, Sadre Hashemi, Khatiblou, Nakhai, Kobari, and Leon Tatavousian.

We know as much about them as we know about foreign architects-- very little. My research has enabled me to identify six key figures whose work and contributions to the development of a new Iranian architectural profession can be documented.⁸⁶

Gabriel Guevrekian 1900-1970

Although his career in Iran lasted only four years, Gabriel Guevrekian⁸⁷ left a considerable impression on Iranian architecture. A graduate of the School of Architecture in Vienna's Academy of Fine arts, an expatriate, and an avid modernist, he is a linking figure between foreign and Iranian architects of the first generation. Returning to Iran in 1933, he constructed numerous buildings in a remarkably short time.

86 Information about these architects was compiled from personal interviews, Architecte and other periodicals, including Honar va Me'mari (Art & Architecture), Tehran, Architecture d'Aujourd'hui, Ministry archives and surveys of their buildings.

87 Visual sources for the work of Gabriel Guevrekian were available at the University of Illinois at Urbana/Champagne. They included: Architecture d'Aujourd'hui, January 1938 and Art et Décoration, No. 3, 1946. The University also kindly provided reproductions from their own Guevrekian Collection. Elizabeth Vitou, Dominique Des Houliers, and Hubert Janneau, in Gabriel Guevrekian 1900-1970, Une autre architecture moderne (Paris: Conivences, 1987) give a broad biographical background of the architect and his career in Europe and America.

He had studied under Oskar Strnad, a Joseph Hoffmen disciple, worked briefly for Henri Sauvage after completing the Academy in 1921, then for Mallet Stevens where he became chef du chantier. Guevrekian was a member of the Union of Modern Architects, collaborated on the publication of L'Habitation, and was among the founding contributors to L'Architecture d'Aujourd'hui.

By the time he returned to Iran, he had participated in numerous European exhibitions, became associated with some of the best known names in the field of modern international architecture, and served as General Secretary of the first congress of CIAM in 1928.⁸⁸

In Iran, he became chief architect for the municipality of Tehran, then for the Society of Construction in the Ministry of Finance. During four short years --the most productive of his career-- he built or designed the Tehran Officers Club, the Tehran Theatre on Ferdowsi Avenue, and the Ministries of Foreign Affairs, Justice, and Industry. He also built no fewer than seven villas for well-placed officials and business people of Tehran.

88 Guevrekian was one of 50 participants in the Vienna Werkbund Exhibition of 1931, where he built two houses. (2.130-2.131) Among his earlier projects, one that epitomizes his work is a garden for a villa at Hyères, where Guevrekian reinterpreted the concept of the Persian garden with delightful results. (2.132-2.134)

His early exposure to the milieu of modern architecture was to have a lasting, but not always limiting, impact on his work. His design for the Ministry of Foreign Affairs is almost neoclassical in its symmetry and axial plan. It is only in its volumetric composition that the influence of modernism is visible. The Ministry of Justice is also a modern, symmetrical stripped neoclassic building with several small courtyards formed by its wings. It follows a tripartite division with emphasis on the central wing and, surprisingly, the facade as Neo-Achaemenid motifs.

Although some of his buildings might be called academic, his drawings often reveal more inventive modern explorations. The design for the Ministry of Industry (2.135-2.137) employs an idiom that has much in come with the piloti, canopy and simple rectangular cube of Le Corbusier's pavilion at the Cité Universitaire in Paris. The simplicity of an alternative design for the same building is reminiscent of Mies van der Rohe.

It is in residential design that Guevrekian seems to have been able to exercise a higher degree of freedom, although he does not completely leave behind his tendencies toward symmetry and monumentality in such projects as the Villa Panahy (2.138) and the Villa Malek Aslani (2.139) In designs for Villa Firouz (2.140) and Villa Khosravani,

(2.141) however, the influences of Mallet Stevens and Adolf Loos can readily be seen.

Although most of Guevrekian's villas were built for an elite clientele, they clearly influenced the development of Iranian housing styles. His Villa Siassy, (2.142) with its semi-circular balcony, (2.143) was precursor to a style later developed in the work of Iranian architects, particularly Boudaghian and Sadegh.

As an international figure, Guevrekian is an important link between the European modern movement and the development of modern architecture in Iran. His first-hand association with European architectural leaders and his own positions in Iran made him influential for many young Iranian professionals.

After he left Iran in 1937, he spent almost a decade in Europe (in England and then France) before settling in the United States in 1948.

Mohsen Foroughi 1907-1982

The best-known Iranian architect of his generation, Mohsen Foroughi was one of the first modern Iranian architects (the first to actually participate in the Shah's building program) and a central figure in both architectural education and the foundation of a recognized architectural profession.

Born in 1907, the son of a prominent politician, Foroughi graduated from L'École des Beaux Arts in Paris in 1934. His Diploma project was a palatial Persian residence (2.144-2.146) using a vocabulary associated with the Islamic Middle East: pointed arches, slender tall columns, an arcaded passage, and a courtyard with central pool of water. Its use of slope and terraced courts are reminiscent of the Qasr-e Qajar royal palace near Tehran.⁸⁹ (1.82)

Within a short time after his 1936 return to Iran, Foroughi rose to prominence as an educator and an architect. He joined the faculty of Tehran University⁹⁰ and became the architect of public and private buildings as both an official architect⁹¹ and an independent practitioner.

Unlike many architects of his generation, he main-

⁸⁹ The Qasr-e Qajar, one of the most successful Qajar projects, was presented in Pascal Coste's Monuments Modernes de la Perse which was then (and still is) available in the Beaux Arts library. As was customary at the time, Foroughi's education probably included a broad historical base. It is likely that he was expected to be familiar with the traditions of his own culture.

⁹⁰ According to Architecte, Vol. 6, 1948: 213, Foroughi initially taught in the School of Literature and later in the School of Technology and the Fine Arts Institute before the School of Architecture was established.

⁹¹ Foroughi was associated with the technical office of the Ministries of Education and Finance and the Bank-e Melli.

tained strong academic ties throughout his career. Instrumental in establishing Tehran University's School of Architecture --and well connected with both Godard and Siroux-- he eventually succeeded Godard to become its first Iranian Dean.

Foroughi's key buildings include the School of Law at Tehran University⁹², (2.147-2.148) the Ministry of Finance, the Ta'avon va Masraf (a government-sponsored co-op), and hospitals of Bank-e Melli (2.149) as well as important bank offices in Shiraz, Isfahan, Tabriz, and Tehran's Bazaar.

Although his approach to building design was fundamentally modern, Foroughi's work paid subtle homage to the Islamic past. The Bank-e Melli-ye Bazaar is perhaps the public building that best embodies his style.

Bank-e Melli-ye Bazaar. Located just north of the Bazaar and Sabza Maydan in the old southwest corner of the Arg not far from the site of the demolished Takya Dawlat, this important branch (2.150) turns away from the pre-Islamic imagery of the main Bank-e Melli building.

This building, constructed on a grade, has two

92 Foroughi was the first Iranian architect to participate in construction of the largest complex of academic buildings ever built in Iran. Maxime Siroux, who had already designed the Medical School complex, helped supervise the building of the Law School, the plan of which was later duplicated in mirror image for the School of Literature.

stories and two basement levels, showing three stories in front and two in the rear⁹³ (2.151). The lowest basement (2.152) contains treasury and vault, storage, archives, and mechanical equipment. The next level holds a dining hall, kitchen, laundry facilities, private vaults and telephone and electric equipment.

On the ground floor (2.153) are the main lobby and hall for financial transactions. Above them are the offices and a health service area.

Bank-e Melli-ye Bazaar was built in reinforced concrete with brick and cement mortar. Modern in interior plan and elevation (2.164), its kashikari [faience revetment] decorative panels recalls Islamic buildings. Along the southern length of the building, Foroughi placed a linear [covered porch] with a colonnade of 24 columns.⁹⁴

Bank-e Melli-ye Bazaar is quite representative of Foroughi's rational modern approach to public buildings. He had an intimate knowledge of traditional architecture but used it on state buildings sparingly, mainly in the use

93 The building plans show a site of 13,000 square meters with 4110 square meters of building area. The length of the main facade was 129 meters. The bank's volume was 80,000 cubic meters. Construction began in 1945 and was scheduled for completion in 1950.

94 Architecte, Vol. 6: 215-218, describes Bank-e Melli-ye Bazaar in detail with a careful analysis of all technical components, materials and specifications.

of passive solar energy in shade-giving devices and ayvans and the judicious application of kashikari to emphasize facades and main entries.

Foroughi's buildings had influence but it may be as a proponent of architectural professionalism that he made his greatest contribution. Instrumental in the creation of the first school of Architecture, the Society of Iranian Architects, (Anjoman-e Arshitektha-ye Diplome), and the founding of Architecte, he became a key instigator and shaper of the modern movement in Iran.

Vartan Avnessian 1896-1982

Known professionally by his given name, Vartan, this Armenian from Tabriz was perhaps the most prolific architect of the Reza Shah period. Like his colleague Guevrekian⁹⁵, an outspoken champion of modern architecture, Vartan left a distinctive mark on the public and private buildings of Tehran, on palaces for the Shah and apartments for the middle class.

Despite modest means, Vartan determined in his

95 There is some evidence that both Vartan and Guevrekian worked in Paris for Henri Sauvage after World War I and probably at the same time. See also R. Behrouz Pakdaman, Yadnama-i Vartan Avnessian (Tehran: Jami'a Moshaviran Iran, 1362/1983), most of which is based on articles in the Architecte and on Vartan's architectural journal, Mi'mari-i Nawin. The author also had occasion to interview Vartan shortly before his death.

youth to study in Europe. He did so, after working as a designer for a Tabriz carpet factory and teaching school in Tehran. He attended the École Spéciale d'Architecture in Paris, studying both architecture and urbanism. Immediately upon graduation, he began work in the office of Henri Sauvage⁹⁶ during the reconstruction after World War I and then opened his own Paris firm.

Perhaps seeking work away from depression-ridden Europe, Vartan returned to Iran in 1935. His winning entry in a competition for Tehran's School for Orphans (2.155) on Sevom Esfand Street launched an Iranian career that lasted almost a half century.

Among his recorded buildings were the Tehran Officer's Club, a major hotel at Darband (2.156) and Reza Shah's palace at Sa'dabad⁹⁷, (2.157) a number of apartment complexes, and two cinemas, the Metropol on Lalezar Street and the Diana on Shahreza. (2.158-2.159)

96 The influence of Sauvage may have been significant in shaping what was to become a distinctive modern style touched with a feeling of late Art Nouveau.

97 Initially, the officers club was designed by Guevrekian and when he left, Vartan completed it. I was able to find no record of how Reza Shah selected architects for his personal projects, although most those of record were Iranian. It is known that the Shah was familiar with most important projects and is likely to have been familiar with the work of many builders including Vartan, whose Darband Hotel was near the site chosen for this palace.

Praised effusively in the pages of Architecte⁹⁸, Vartan is credited with both stylistic and structural innovations. From the cantilevered floors of his Darband palace (which attracted international attention) to his distinctive use of clear horizontal and vertical lines, he created an unmistakable architectural vocabulary.

Architecte published many examples of his work and clearly identified him as a pioneer of a new movement in Iran which successfully brought together essential modern elements with Iranian tradition. The Architecte monograph introducing Vartan summarized the formal elements of his work⁹⁹:

1. Horizontal windows and corner windows
2. Vertical windows encompassing stairways
3. Concrete projections from the facade in the form of bands in different colors
4. Cantilevered stairs
5. Concrete bands above windows
6. A horizontal band at the roof level, known among Tehran's construction workers as chefta vartani [Vartan-style edge]

98 In no other case was Architecte so laudatory of an architect or so concise in identifying the principles of his work. Although it is quite likely that Vartan himself provided much of the information, the praise has a genuine ring.

99 Architecte, Vol.1, Aug. 1945: 32-37.

7. Use of a special treated wood for doors.

The same article proclaimed that these changes alone were sufficient to transform the architecture of Iran and commends Vartan as a role model to young professionals. Indeed, Vartan did acquire a large following among both architects and builders who began to borrow his vocabulary as a sign of modernity.

It is not an exaggeration to say that Vartan was a pioneer and a remarkably influential architect. (2.160-2.165) The characteristics of Vartan's style were asymmetry, bold volumetric and spatial interplay of forms, rationality and functionality. His style was not "Beaux Arts" and even his designs for government buildings do not reflect an academic style. He has much greater affinities to the modern movement and the Bauhaus. The simplicity of his approach is reminiscent of Adolf Loos and Auguste Perret. The volumetric forms show the influence of Sauvage.

An adamant critic of both historicism and eclecticism, he protested the use of "lions and cows"¹⁰⁰ to turn Tehran into a zoo. He opposed mimicry of traditional forms but was well aware of the need to adapt

¹⁰⁰ He protested the use of such ornaments on buildings in Tehran and elsewhere in his article "Masa'il-i Marbut ba-mi'mari dar Iran," [Problems of Architecture in Iran], Architecte, Vol. 1:4-9.

modern architecture to the cultural and climatic needs of Iran. He incorporated into his designs principles of shade control and spatial layout which conformed to the experience of Persians.

Although he was never involved with Tehran University's School of Architecture, he was involved in the formation of the Society of Architects and his designs-- particularly for houses and apartments-- had tremendous influence on the development and acceptance of modern architecture, particularly his use of concrete for both public buildings and residences. For a brief period in the 1960's, he also published a magazine, Mi'mari-i Nawin, [New Architecture] producing five issues in 1961-62 and two more in 1965.

Keyghobad Zafar

Born in Iran's Bakhtiari region in 1910, Keyghobad Zafar went to England in 1926 to attend the Royal College of Art and the Architectural Association. Ten years later, he returned to Iran, served in the army and then, like his colleagues, embarked on public¹⁰¹ and private practice.

101 In an interview, Dec. 1985, Zafar mentioned that initially he had a hard time finding a job in a government office because he was an "Ilkhan", a high ranking tribesman, member of the Bakhtiari clan that was not popular during the latter part of Reza Shah's reign. He was able to win

The second issue of Architecte introduced Zafar and his work, and published his plan and model for the Ministry of Transportation.(2.166-2.167) Like most of the ministries built under Reza Shah, this one was monumental and symmetric. It was also modern in appearance, with little surface decoration except for colonnades and horizontal strip bands above the windows. The tripartite building is "Beaux Arts" inspired, with a central structure projecting forward from two wings. The building forms two small colonnaded courts in front and a large courtyard at the rear.

An emphasis on simplicity and geometric volume and form distinguishes Zafar's work and in this regard, two of his buildings are most representative of his architectural style.

Bank-e Melli in Gorgan.(2.168-2.169) The round windows and free-standing colonnade that define the upper level terrace of this building became a Zafar signature, a device he used in both public and residential buildings. The white travertine marble building is slightly curved to emphasize its location on a large city circle. The

his first project by his own merit, and then joined the Sherkat-e Sakhteman-e Koll Keshvar [National Office of Construction], and he later joined the architectural office of Bank-e Melli Iran.

main entrance projects beyond the rest of the structure.

Windows form two strips on either side of the entrance, whose expansive surface is exaggerated by the three small round windows of the upper level.

Hotel Thermal. (2.170-2.171) Recognizing the potential for tourism around Laridjan on the eastern slopes of Damavand Mountain, Reza Shah held a competition for the design of a hotel. Zafar's design was selected from ten submissions. It was an L-shaped concrete building with a circular appendage. Its common spaces and guest rooms took advantage of a spectacular view, while auxiliary rooms and baths were located in a wing at the back.¹⁰² Unlike his symmetrical and stripped neoclassical designs for state buildings, the Hotel Thermal has the intricate asymmetry and volumetric juxtaposition characteristic of modernist design.

As a modernist, he had a great deal in common with Vartan and, like Vartan, he was emulated by both architects and builders but his strongest influence was on residential architecture. His use of small round windows

¹⁰² Architecte published the Hotel Thermal site plan. Built at a height on 2220 meters, the hotel was 700 to 800 meters from a natural hot spring and about 250 meters above the Hezar Jarib River. Soft, unstable soil required a new foundation design. Building began in 1940 but the events of Reza Shah's abdication, September 1941, put a stop to construction after the basement and first floor were completed.

and clusters of casement windows with horizontal edging and shades became a recognizable stylistic signature, (2.172-2.173) much imitated in middle class villas, as was his use of pigmented concrete in checkered subdivisions.

Other Iranian Architects

Among the first generation of Iranian architects are two others whose work deserves attention.

ALI SADEGH was educated in Brussels at Can University and the Academy of Fine Arts. Returning to Iran in 1937, he immediately set up private practice but did not undertake government work until some years later.

While Sadegh's architectural style was, perhaps, less distinctive and influential than some of his contemporaries, he made significant contributions to the architectural environment of his time. He was actively involved in the formation of the society of Iranian Architects (which he served as vice president and then president) and the founding of Tehran University. He also contributed to Architecte at least one art historical study of an Islamic monument.¹⁰³

Perhaps his most influential contribution was the

¹⁰³ Ali Sadegh, "Masjid Shah of Isfahan," Architecte, Vol. 1:13-15. Volume 4 of Architecte also featured a profile of Sadegh, 149-51.

promotion of low-cost housing in Tehran as vice-president of the board of Bank-e Rahni. His design for the 400-unit Chaharsad Dastgah was a pioneering low-cost planned unit development and the first to actually see completion.

Previous attempts at low-cost housing had failed for either financial or political reasons.¹⁰⁴ Chaharsad Dastgah was not actually constructed until 1946 when Bank-e Melli and Bank-e Rahni extended a loan for its construction and a commission was formed to select the site. Nevertheless, Sadegh's design, made just after World War II, became a prototypical plan for the design and selection of materials for this type of housing. (2.174)

The features he incorporated into Chaharsad Dastgah suggested the possibilities for numerous projects in the following two decades. Using reinforced concrete, brick and stone, steel for roofs, and insulation, he was able to keep costs down without sacrificing structural quality. His site plan was sensitive to environment in the orientation of houses, wide streets planted with trees, and common greens.

The Chaharsad Dastgah community presented four building types. (2.175-2.176) Some residences were

104 Manouchehr Khorsand, "Sakhtiman-i Khana-ha-yi Arzan dar Iran," [Construction of Low Cost Housing in Iran] Architecte, Vol. 4, 1947: 125-133.

single-story, three-room row houses with ayvan and courtyard, kitchen and storage on sites 80 square meters. Others were two stories, with a basement and main level, with five rooms and a kitchen courtyard and stairs to the rooftop terrace. Common facilities included a mosque, post office, hospital, school, municipal office, police station, telegraph and telephone office, and laundry. The community center was a central maydan surrounded by commercial buildings and shops.

Sadegh is also known to have designed the memorial to Reza Shah, (2.177-2.178) a joint project with Foroughi and Zafar, the Bank-e Rahni and the Museum of Tabriz.

IRADJ MOSHIRI, the founder and editor of Architecte, made a unique contribution to the professionalization of architecture. While his architectural work, much of it residential, was not particularly distinguished, he excelled as a theoretician who cogently outlined the issues of his time. Through his journal, he created not only a forum for architects, but also a dialogue between architects and bureaucrats, politicians and the general public.

Although Architecte was obviously a collaborative effort, it was Moshiri who set its direction and determined the scope of issues the magazine addressed. Architecte, like Western journals, published current trends

in architecture. But it also came to grips with the particular aesthetic, ideological and practical concerns which faced architects, builders and decision-makers in an urbanizing Iran.

By the time of Reza Shah's 1941 abdication, these leading architects had begun to outline a distinctly Iranian modern architectural idiom. Although some of them began by sitting second chair to foreign architects and almost all took part in the production of monumental state architecture, they confidently established independent architectural identities. Their own work brought them out from under the shadows of Europe and Shah and into the limelight as the initiators of a new indigenous and professional practice.

THE PROFESSION RECAST

Despite all inherent problems, including the fact that Reza Shah dealt ruthlessly with the Ilkhans, and I am Ilkhan, the Reza Shah period was the golden age of opportunity for architects in Iran.¹⁰⁵

The reconstruction program of Reza Shah presented architects with opportunities rarely matched in Iran or elsewhere until that time. The very volume, range and pace of public building activity, the limited number of available (and acceptable) foreign architects, and the Shah's own nationalism combined to make the 1930's and 40's a fruitful period for Iranian architects.

While it is difficult to trace an exact pattern of development, personal recollections, building records and periodicals of the time offer a few insights into how the inter-war generation engaged in the process of professionalizing architecture.

Collaboration

Most Iranian architects of the first generation, educated abroad, were immediately absorbed into the

¹⁰⁵ Keyghobad Zafar in an interview with the author, Dec. 1985, New York. Mr. Zafar's mention of Ilkhans [tribal leaders] refers to the curbing of the power of the nomadic tribes under the centralizing authority of Reza Shah.

various ministries and, like Siroux, were able to move from ministry to ministry as projects arose.

Many large-scale state projects required the participation of several architects. The result was a series of collaborations which eventually brought most prominent architects, both Iranian and foreign, into working relationships. Godard, Foroughi, and Siroux collaborated on the building of Tehran University. Siroux, Godard, and Marcoff worked together on the Muze-ye Iran Bastan. Foroughi, Zafar, and Sadegh served together in the architectural office of Bank-e Melli, collaborating on several projects, and then went on to jointly propose a winning design for the memorial to Reza Shah.

While collaborative effort certainly had occurred when me'mars were called to work on royal projects, the sheer variety and scope of architectural work during Reza Shah's reign, combined with the search for a new architectural vocabulary and the use of non-traditional materials, made for an unusually rich collaborative environment.

Association

Although Iranian architects did not fully institutionalize their professional status until after Reza Shah's 1941 abdication, the salient issues and the leading

professional voices emerged during his reign. Late 1946 saw the establishment of a Society of Iranian Architects and a professional journal, Architecte. Both sought to advance the profession of architecture and represent the interests and capabilities of its practitioners.

What the Society of Iranian Architects was able to accomplish in its first years is unclear.¹⁰⁶ Its purposes, however, were set forth in the first issue of Architecte by Manouchehr Khorsand. The Society was to promote public and official awareness of the need for urban planning, modern approaches to sanitation, and technical improvements. It took a stance against the urban chaos resulting from an unregulated building environment and called for reforms, the chief of which was the establishment of a centralized control entity staffed by urban planning specialists.¹⁰⁷

The third issue of Architecte reviewed the status of the Society. By 1947, it had set up a charter, elected officers, and acquired both member architects and a list of patrons including many of Iran's most prominent citizens

¹⁰⁶ Research yielded no documentation of the accomplishments of the Society. Even a 1983 personal interview with its then president, A. M. Monaghah, in Rosslyn, Va. provided little history other than the Society's initial formation as a group dedicated to establishing itself as a recognized association and to promoting recognition of the profession of architecture

¹⁰⁷ Architecte, Vol.1, Aug/Sept. 1946: 3.

and officials. The Society had also set up a small library, mounted an exhibition of the work of British architects, presented British films about building construction and urbanization, and established ties to foreign cultural institutions and counterpart organizations.¹⁰⁸

During discussions with the municipality of Tehran, Society representatives had proposed --apparently with no result-- the use of international regulations for construction to impose some order on urban development.

Established concurrently with the Society, the first professional journal, Architecte, had a shorter life but a broader scope. In six issues published between August 1946 and July 1948, Architecte presented a microcosm of the architectural interests and issues sparked by urbanization. It published articles about well-known historic structures, both pre-Islamic and Islamic. It reviewed the reconstruction efforts of other countries.

Housing concerns were regularly featured; in fact, the fourth issue of the magazine was dedicated to the subject, with an emphasis on Ali Sadegh's Chaharsad Dastgah. Every issue presented several prototypical residential plans, from villas and resort homes to modest structures for the middle class. (2.179-2.182)

¹⁰⁸ Architecte, Vol.3, 1947: 39.

The work of a number of architects was presented, including that of Akbarifard, Boudaghian,¹⁰⁹ and Architecte's editor, Iradj Moshiri. Residential designs and constructed buildings of Vartan, Foroughi, Zafar, and Sadegh were also published.

Many of these plans were intended as practical guides for non-architects with the purpose of promoting new aesthetic standards and showing developers and potential clients the variety of modern residential options available to them. In addition, Architecte provided technical information about materials and structural methods. Articles focusing on ways to determine the strength of materials provided charts and examples. Features on construction in every issue detailed the properties of materials and cost guidelines for both materials and labor.

Architecte also sought to establish an authoritative voice for the concerns of the Iranian architectural community through regular articles about the issues of development and urban expansion. An open letter to the Mayor of Tehran proposed the transformation of Mahalla Sangelaj into a public park. Another to the Iranian

¹⁰⁹ Akbarifard designed prototypical villas and resort houses in almost every issue of the magazine published. Boudaghian was an Armenian architect whose villas, furnished interiors, and furniture designs reflected the fashionable tastes of the new bourgeoisie.

vazir called for reforms in the planning of and budgeting for the urban infrastructure, sanitation systems and housing. These reforms were to be placed in the hands of specialists-- architects and urban planners

Education

The third key feature of the professionalization of architecture was the establishment of a school for professional education.¹¹⁰ Originally, Mohsen Foroughi, the sculptor Abolhassan Sadighi, and the Beaux Arts trained Parisian architect, Roland Dubrulle jointly researched and developed a program for a school of fine arts in Tehran, to include studies in architecture, drawing, and sculpture.

When the sculpture curriculum failed to attract a sufficient number of students,¹¹¹ the institution was opened as the School of Architecture in 1938. Housed in

110 The information in this section is based on a 1946 article, "Tarikhcha-i Daneshkada-i Honarha-yi Ziba," [History of the School of Fine Arts] written by Gholam Reza Khajavi for Architecte, Vol.1, 1946. Khajavi was one of the first School of Fine Arts students. Additional information is from several personal interviews with Mr. Houshang Seyhoun, one of the first graduates and later Mohsen Foroughi's successor as Dean of the School of Fine Arts.

111 By contrast, many more architectural students applied than the founders originally expected. Enrollment in 1940-41 was 65 and grew to 76 by 1943-44, then tapered off to 50 students in 1945-46.

the Madrasa Marvi, an old school in Mahalla Oudlajan, it began as a part of the Fine Arts and Archeology Institute under the aegis of the Ministry of Vocation and Arts. Two years later, the school moved to Tehran University and became the School of Fine Arts, housed in the basement level of the School of Technology.

Entry into the four-year program for a Masters diplome required the completion of high school and a passing score on an entrance exam which included mathematics, history, and drawing. The architectural section was divided into three ateliers under Mohsen Foroughi, Roland Dubrulle, and Maxime Siroux.¹¹² When Dubrulle left after the outbreak of World War II, his atelier joined Foroughi's. Aftandilians also replaced Siroux at this time.

With classes scheduled for four morning and four afternoon hours, the architecture curriculum began as a direct replica of the Beaux Arts model. Many of the

¹¹² At the School's founding, the faculty included: Mohsen Foroughi, Roland Dubrulle, and Taherzadeh Behzad, instructors in architecture; Mr. Sepahi, Dr. Rahemi, and Dr. Parsa, instructors in theory; and Hossein Taherzadeh, instructor in drawing. By the second year, the faculty had expanded to include Ali Sadegh, Manouchehr Khorsand and Iradj Moshiri in architecture; Mr. Azimi, Mr. Vaziri, and Dr. Ghafari in theory. Later, Aftandilian took over Siroux's atelier and Alexander Moser joined the faculty as an instructor in structure of materials and statistics.

programs for student projects were translated directly from the French by the novelist, Sadeq Hedayat. From the beginning, student work was prominently displayed, especially for the benefit of foreign visitors and dignitaries. Most diplomé graduates during the early years were quickly absorbed into the architectural departments of state ministries or the municipality of Tehran.

THE MODERN STATE AND MODERN ARCHITECTS

Although the professionalization of architecture was by no means completed during the inter-War period, it is fair to say that Reza Shah's modernization program introduced all the necessary elements.

His building projects very quickly employed numerous architects, chosen specifically for their training and skills and thus set apart from the traditional me'mars. His support of education and his nationalistic proclivities provided a ready logic for the founding of a School of Fine Arts at Tehran University and the beginning of a system of professional credentialing. His bureaucracy of mobile ministries created opportunities for collaboration and cross-fertilization.

The very nature of architectural activity in Reza Shah's Iran --fast-paced, large-scale, varied-- raised issues around which a professional community naturally

coalesced. New patterns of urban development, new building typologies, new materials, and the search for new styles raised critical questions and prompted architects to engage in an active definition of the contributions they could make to a changing society.

In establishing an identity for itself, the architectural profession became part of and ultimately benefited from a new social trend brought about by the bureaucratization of Tehran: a growing middle and upper-middle class.¹¹³

As Reza Shah reshaped the khiabans and maydans of his capital on Western models, he also redefined their surrounding structures. The modernization began in monumental ministries¹¹⁴ and filtered through Tehran in the form of new mixed-use buildings and multi-tenant apartment

113 For informative observations on the growing professional and industrial middle classes during the Reza Shah period, see James Bill, The Politics of Iran (Columbus, Ohio: Charles E. Merrill, 1972), 53-54.

114 Lack of administrative documentation and the constant state of flux as ministries were formed, reformed, renamed, and realigned makes it difficult to quantify the growth of the bureaucracy under Reza Shah. In addition to ministries of Education, Justice, National Economy, Foreign Affairs, War, and Transportation (each with numerous internal departments), Reza Shah created new administrative structures in schools, universities, banks, and state-run factories.

complexes¹¹⁵ in which a new mobile class worked and lived, in new cinemas and department stores where they spent their time and money.

In this ferment of building, one can see architects emerging as symbol-makers of a secular urban landscape composed of monuments to both state and private enterprise. Their buildings were seen, their messages read. Their names were known, not least by private citizens who welcomed a new order into their own homes.

The next chapter examines the effects of Reza Shah's modernization program on the traditions of private architecture. The creation of a growing middle class, the professionalization of architecture and the Westernization of the city landscape were to contribute to a revision of housing types, materials and plans which directly engaged Iranian architects, developers and their clients in the process of interpreting traditional and modern values.

115 There was as yet little state control exercised on a large urban scale. The private sector was responsible for much of the residential development. Land speculators were amassing fortunes as they seized the opportunity to subdivide land and construct buildings or simply sold each lot for a large profit.

CHAPTER III

PRIVATE ARCHITECTURE: THE CONSTRUCTION OF VALUES

The problem of the house is a problem of the epoch. The equilibrium of society today depends upon it. Architecture has for its first duty in this period of renewal that of bringing about a revision of values, a revision of the constituent elements of the house.¹

During the course of the two decades between 1921 and 1941 the State was the most active patron of architecture. Its ambitious reconstruction projects engaged a new generation of professionally trained architects, both foreign and Iranian, to redefine the urban space. The transformation of the house, architecturally and spatially, was as dramatic as the transformation of the city itself.

To portray a change in housing as a simple -- or inevitable-- result of public initiatives, however, would be misleading. Housing expresses the values, concerns and expectations of human beings in their private ways of life. Its forms cannot be easily dictated by political powers. The impact of urban-scale change is only the first of many factors affecting the private domain of the house.

This chapter examines four aspects of change in domestic architecture:

1 Le Corbusier, Towards a New Architecture (London: The Architectural Press, 1927), 210.

- . Impact of the new urban pattern
- . Use of new materials and technologies
- . Transformation of internal space
- . Development of new housing typologies

The first two aspects have a direct link to the facilitating role of the state in stimulating public building activity. The last two are rooted as strongly in the more individual visions of architects and their clients.

In the landscape of domestic architecture, it is the modern architect who stands as a central figure. Influenced by Western traditions and the Persian past, liberated by Reza Shah to practice widely, state architects quickly moved into the private sector, linking the public symbols of the new state to the personal aspirations of citizens.

Many architects who built government institutions also built housing, especially for the growing urban middle class, civil servants, who were among the first to adopt the new way of life. Their numbers and their needs demanded solutions. New housing types arose: row-houses, apartment buildings, townhouses. New technologies, new materials, and structural innovations replaced time-honored conventions. Fundamental principles of design, prevalent for centuries, were altered and sometimes

replaced by drastically different spatial layouts. The very nature of building activity shifted with the growth of a speculative housing market.

On a superficial level, one can see the blind adoption of Western housing models. Beneath that veneer, a more subtle transformation took place. It can be discerned with a careful look at the principles of both traditional and modern houses.

Since architectural plans and building permits were not required until decades after Reza Shah's abdication, there are no Iranian archival sources for residential plans. Relying on the few published houses designed by well-known architects would limit both generalization and accuracy.

Therefore, the comparative foundation for evaluating the change from traditional to modern in Tehran's domestic architecture is the physical documentation and analysis of homes through field surveys carried out in 1976-78 and 1983-84.²

While the descriptions, generalizations and conclusions that follow are based on surveys of numerous houses, I have selected only one or two paradigm structures from each period or type to describe in some detail.

² These original surveys, completed by myself and Vahid Khalili, are discussed in detail in the Introduction.

TURNING INWARD: THE COURTYARD HOUSE

The earliest references imply the existence of underground or troglodyte houses in Tehran.³ Houses of the early Qajar period, of which very few have survived, had much in common with houses of Shiraz in the later part of the 18th century. Their dominant physical features, however, had changed very little since the medieval period.⁴

³ Among the early geographers who remarked on troglodyte houses in Tehran were Yaqut and Qazvini. The latter in 1275 compares the dwelling houses in Tehran to the holes of Yabus, Athar al-Bilad, 228. All later writers note the subterranean dwellings but only Ker Porter, Vol. I 312, says in this connection that 200-300 yards from the Qazvin gate he saw inside the town, an open space full of wide and deep excavations or rather pits which served as shelters for the poor and stables for the beasts of burden. When these houses went out of date is un-known. Troglodyte life in the vicinity of Tehran see: Eastwich, Vol. I:294 Crawshay-Williams, "Rockdwellings at Rainah," Journal of the Royal Asiatic Society, 1904: 551 and 1906: 217. Perhaps the troglodyte dwellings of Tehran were similar to the troglodyte dwellings of Dezful & Shushtar. See : Farangis Rahimiye & Mostafa Robubi. Shinakht-i Shahr va Maskan-i Bumi dar Iran: Iqlim-i Garm va Nime-martub-i Dezful va Shushtar (Tehran: Anjoman Daneshjuyan Tehran, 1353/1974), 161-171.

⁴ The excavations at Siraf have added to our knowledge of medieval domestic architecture-- for a summary of the documentary formation see: Iran, VI (1968): 1-22; Iran, VII (1969): 36-62; Iran, VIII (1970): 1-18; Iran, IX (1971): 1-17; Iran, X (1972): 63-87; Iran, XI (1973): 1-30.

Most of the 50 surveyed houses⁵ from the Qajar period are in the mahallas of Oudlajan and Bazaar. Many no longer function as single-family dwellings. Larger ones are often rooming houses and others in Mahalla Bazaar serve as auxiliary storage spaces for the bazaar. But the fact that they are extant provides a rich body of evidence for discussion of the conventions of the Qajar house and the values it embodied.

The Islamic concern for privacy as a determinant of built form has been used to explain the internal orientation of traditional Muslim houses. Without underestimating the importance of privacy, it is worth noting that the inward oriented courtyard house dates back to the 20th century B.C. The houses of Ur have floorplans strikingly similar to the "Islamic" courtyard houses of medieval Siraf.⁶ (3.1)

⁵ These houses are located, in the following mahallas: Mahalla Sarcheshma; Mahalla Sadat; Mahalla Arabha; Mahalla Sar-e Takht; Mahalla Yahudiha in Oudlajan neighborhood; Mahalla Kucha Ghariban; Mahalla Kucha Aramana; Gozar-e Luti Sala; Gozar-e Hammam-e Chal; Kucha Shambayatiha; Mahalla Shah Gholaman; Mahalla Darvaza Shemiran; and Mahalla Shahabad in Mahalla Dawlat-e Qadim were among the sub-mahallas surveyed during the period between November 1976 and September 1978. In 1984 a subsequent visit was made to many of the above.

⁶ Archeological investigations of Leonard Woolley (1922-1934) were published in Antiquarians Journal IV- XI, 1924-1931. According to Woolley, the buildings often had two stories and "both

That climate played a significant role in the shaping of houses is also beyond doubt.⁷ I believe, however, that socio-cultural values also have been significant determinants of both the internal layout of houses and the relationship of the private dwelling to the public street.

THE 19TH CENTURY TRADITION

During the Qajar period, a house was part of a larger neighborhood, an integral part of the mahalla in which it was set and a microcosm of social order and value systems. It was like a self-sufficient cell, providing for itself, on a smaller scale, some basic needs provided by the city. Most houses supplied their own vegetables, stored up to a year's supply of grain and dried foods, held water in cisterns, and had ovens for baking their own bread. The better off the inhabitants, the more self-sufficient the house.

Important economic determinants shaped the houses of the 19th century. The economy was agricultural.

ground floor and elevation of the house of a well-to-do citizen of Ur was almost a counterpart of that of a well-to-do citizen of modern Basra or Baghdad." AJ, VII: 387-388.

⁷ For a thorough discussion see Mahmoud Tavasoli.- Mi'mari-i Iqlim-i Garm va Khushk and also see Mostafa Robubi, Dezful va Shushtar.

Cities had agricultural fields in surrounding areas. The same self-sufficiency observed in rural dwellings was to a great extent also seen in urban dwellings. On the whole, houses of this period-- both those of the well-to-do and the less fortunate-- had a marked degree of self-sufficiency.

As a result, most traditional houses provided abundant storage spaces. Among them were storage for grains, rice, dried fruits, oils and preserves; for wood and coal; storage for construction materials, since most houses needed regular repair; and storage for raw materials. The residential complex sometimes included carpentry shops and workshops for the production of carpets, fabrics and yarns.

While large-scale agriculture and animal husbandry were reserved for areas outside the city, it was common for houses to contain herb gardens and vegetable patches to meet daily consumption needs. Many households kept chickens and some raised a few goats or sheep.⁸

At the same time, houses were seldom independent structures. Related families usually lived near each other, their houses accessible to one another and sharing some common facilities. This in turn provided a greater degree of self-sufficiency.

⁸ This custom is still prevalent in provincial cities and towns.

The structure and layout of the 19th century courtyard house continued this atmosphere of self-containment.(3.2) The outward expression of the house was simple and almost closed as layers of walls and streets separated it from busy public thoroughfares. Windows and doors did not open onto neighbors' courtyards and visual privacy was strictly adhered to even at very high densities, regardless of the size of the house.

Most houses were attached. At the roof level, one could easily traverse from house to house.⁹ The opulence of the inhabitants was seldom suspected from outward appearance. Mudbrick and a mortar of clay mixed with straw called kahgel was the standard construction materials for rich and poor alike. This is still apparent in houses of Kashan and Yazd.

Courtyard

The traditional Persian house was structured around an internally oriented courtyard (hayat).(3.3) It was often a cluster of courtyards, accommodating an average of 15-16 people or two to three families.¹⁰ Separated

⁹ This is still possible in Yazd and Kashan where neighborhoods of traditional houses are still extant

¹⁰ Abdol Ghaffar in the Tashkhis of 1868, 30 indicates 16 people in each household.

from the street, with high walls and very few penetrations, it was accessible from the bombast, the cul-de-sac that was the most private of the street hierarchy.

The hayat was landscaped as a small chahar-bagh with trees and flowers and brick paving in geometric patterns around a small, central pool of water. Sleeping outdoors in the hayat or on the roof was customary in the warmer seasons when the courtyard was sprinkled with water in the evening for use as an outdoor room. Low wooden beds covered with carpets and cushions provided seats and beds.

Central to the courtyard was the hawz [water tank or pool], the main source for the daily household supply of water. Even if the house were large enough to have a cistern, water was channeled to the pool in the courtyard for daily consumption, for ablution, for cleaning, and sometimes for children's bathing.¹¹

The hayat was both a private family center and a place for entertaining visitors. It was a multi-purpose space and, in fact, the definitive multi-purpose space of the household, used for relaxation, gardening, eating, sleeping, as source of water and yard for animals.

¹¹ A minimum tank dimension was strictly adhered to make sure the water was kurr [pure, not stagnant]. This is an Islamic requirement mentioned in most books on Islamic principles of jurisprudence.

Andarun and Birun

Spatially, the house was divided into two distinct sections. One was biruni [public, literally external or exposed], the other andaruni [private or internal]. This partitioning into andaruni-biruni, internal-external, private-public, hidden-manifest was standard to most traditional houses, be they large or small. Large houses had separate courtyards for each section, while smaller houses had separate quarters around the same courtyard. Though the terms andaruni and biruni probably go back to pre-Islamic times, the spatial evolution of the house in this bipartite manner was closely linked to and reinforced by Islam.

Access to the andarun was reserved for the inhabitants. Seldom were visitors ever allowed to go into this part of the house. The andarun was the harim, by definition a place where women were secluded from the public.

Physically, the andarun was simple, consisting of one large room and several gushvars [literally, earrings], small multi-purpose rooms for wives and children. One wing contained separate facilities for the kitchen, the bath (if provided), toilet and servant areas. Each nuclear family generally maintained its own sleeping

quarters in the andarun.¹² This is where women remained, cooking, cleaning, and taking care of their children without having to wear the chador [veil]. When leaving this part of the house, or when there were visitors, the women were obliged to be fully garbed with the chador revealing only a small fraction of their faces.

The biruni or "public" part of the house was the place of formal entertainment to which visitors were admitted. Usually accessible from the courtyard, its major feature was the talar [reception room], the ceremonial room of the house, where the head of the household entertained his guests and greeted his visitors. This was the largest room of the house, elaborately decorated and usually overlooking a traditional ayvan [semi-enclosed loggia or porch], another feature that dates back to pre-Islamic times.

The talar (3.4) was a spacious two-story hall flanked symmetrically by the dalan [corridor] and gushvars that functioned as waiting rooms to the talar or as private quarters and offices for members of the household.

In one section of the talar, overlooking the ayvan, was the slightly raised platform known as the shahneshin

12 According to shari'a men are allowed four legal wives. When a man had more than one wife, he often tried to provide separate sleeping quarters for each wife.

[king's throne]. It was, perhaps, an almost direct translation into space of the belief that every man is king of his house. As the undisputed head of the household, the father had considerable authority over his wife, children, and grandchildren. Thus the central and most public structure of the house reflected the patriarchal structure of Islamic society.

Ancillary rooms were often accessible directly from the hayat and constructed slightly below grade. In homes of the well-to-do the kitchen and pantry may have had a separate courtyard with its own herb garden. Here, too, were the servants quarters and storage rooms for grain and other food products. The location of the lavatory outside the main house, forced the user to walk at least seven steps outdoors to abide by religious instructions. The lavatory itself was never located to face the qibla.

Functional Areas

Though most houses had only one entrance, door knockers provided inhabitants with information about the person at the door. By Islamic custom, there were usually two door knockers, one for men, the other for women.¹³

¹³ The sound of the knocker gave the clue. If a woman was at the door, ladies would not necessarily have to wear the chador when answering, but if a man were at the door, then the ladies

It was also quite common for inhabitants to install over the door a plaque inscribed with a verse from the Koran.

Traditional homes were sparsely furnished. The principal necessity was the carpet, without which the Persian home was not considered livable. The removal of shoes before entry ensured the cleanliness of the carpet, an important factor not only because the bedding would be laid out on the carpet each night but also because prayer was performed in most rooms.

The threshold of a room was slightly raised, perhaps signalling the removal of shoes. Adjacent to the door was a small inset in the wall usually set with tile to form a shelf within which shoes could be stored. Doors to rooms were sometimes shorter than the height of an average person. This forced people entering or leaving to bow their heads.¹⁴

Rooms of the house were designated by physical attributes of size, shape or location. There were, for example, sedari [three-door rooms] and panjdari [five-door rooms], so called for their size and number of openings onto the hayat. The hashti [eight-sided space]

would wear the veil when responding to the knock.

14 I have not found a convincing explanation for this, as yet. In an interview in September 1977, Mr. Karim Pirnia suggested that this was to create a pause and signal to enter the space with a sense of caution and respect.

referred to the niched, octagonal vestibule that functioned as entry and foyer. Functional segregation in its present form did not apply (except, perhaps, to the talar, kitchens and toilet).

Most rooms served a variety of purposes and were simply described by their physical attributes. Cushions and mattresses were the primary furnishings. They were lined against the walls of the room or stored in a sandukhana, a small storage room that functioned as a walk-in closet.¹⁵ In the winter, the source of heat was red hot coal set beneath a korsi, a low wooden table covered with a heavy quilt.(3.5)

The versatility with which household furnishings could be moved and rearranged made it possible to accommodate a large number of people in relatively simple quarters.

This flexibility was important because, like the city, the house supported Islamic religious rituals. One of particular popularity in the 19th century was the

¹⁵ These closets served a variety of functions, the most important of which was storage of chests, clothing and accessories. In some houses, bedding was kept in these rooms. It was not unusual, however, simply to fold and stack the bedding, cover it with a cloth (known as the chador-shab), and use it to lean against when sitting on the floor during the day.

periodic rawzakhani , a gathering of people to commemorate a religious event.¹⁶

For centuries, these spatial characteristics dominated the form of the Persian house. They are evident in three dwellings built during the 19th century.

Qavam-od-Dawla House

One of the oldest surviving houses of Tehran was built in 1833 in Mahalla Oudlajan.¹⁷ (3.6) Although only one section of the house survives, it is an excellent example of early Qajar residential architecture.

Its original owner, Qavam-od-Dawla, was vazir [minister] of Azarbaijan in the reign of Mohammad Shah Qajar (1834-1848). It is likely that the architect was from Shiraz, since the general style resembles houses of

16 Held in the homes of prominent citizens, these ceremonies were often occasions of nazr [almsgiving], when a wish was granted by God. A mollah who was a professional rawzakhan brought his audience to tears by chanting the tragic events of Karbela marking the martyrdom of the venerated Imam Husayn, son of Ali. After this service, food was served.

17 This house was surveyed by the author and Vahid Khalili in December, 1976. Its present location is in Sarcheshma at Khiaban Amir Kabir, Kucha Mirza Mahmoud Vazir. The year 1253/1833 is inscribed into the western wall of the shahneshin in the main talár.

early 19th century Shiraz.¹⁸

Like most houses of this period, Qavam-od-Dawla presents a simple, undistinguished facade to the street. (3.8a) Looking up from the narrow street, one can hardly discern the sloping roof or the windcatchers that dominate its silhouette.

The main facade of the house is oriented to the interior hayats. It is planar rather than volumetric, with few projections beyond the flat surface. Instead, certain parts appear carved out to accommodate ayvans. Symmetry and a tripartite division are its most prominent features. In material it is typical, built from baked brick with some ayvan walls whitewashed. Courtyard walls are made with sundried brick piers with kahgel panels.

At the time of the survey, two original courtyards still existed. One was biruni, for entertainment. The other served private activities of the andarun. Each hayat has a separate entrance. It is quite likely that

18 There is also a striking similarity between Qavam-od-Dawla house and Jules Laurens' rendering of a house in Tehran for the illustrated travel journal of Hommaire de Hell, published in 1859.(3.7) A meticulous draftsman, Laurens has shown details of this typical Qajar house which was then the accommodation of the French Charge d'Affair. Had this building not also been identified in the map of Berezin, one would think it was a drawing of the Qavam-od-Dawla house. It is also interesting to note that the facade of this house is similar to the Talar-e Takht-e Marmar, the main audience hall of the Arg.

these courtyards, like most at that time, once served a number of buildings in addition to the main house.

The surrounding walls are about 2.5 meters high, divided horizontally into 3.5 meter panels with a platform at sitting level. Both hayats surround a central hawz [pool]. The hawz in the biruni courtyard is considerably larger.¹⁹ Trees adorn the courtyard whose surface is covered with a cobblestone and brick paving in a geometric pattern.

A series of auxiliary spaces once located parallel to the street were razed when the street was widened. Here, the stables and corridors connecting the two courtyards may have existed.

Like the elevation, the plan of Qavam-od- Dawla 's house (3.9) was essentially symmetrical and tripartite. The main talar [reception room] is at the center. This talar is elaborately painted and the name of the painter is inscribed on the wall of the shahneshin [king's seat]. Set one meter above courtyard level and facing into it, the talar is almost a cube, measuring 6 x 6.5 x 6 meters high.(3.10-3.11) It was once the domain of the head of the household, the patriarch who used it as a business office.

¹⁹ If these pools were still the original size, it might be that the larger pool was of an ornamental nature, like a reflecting pool.

Within the talar, the shahneshin overlooks the ayvan [loggia] to the north. Large , double-hung wooden orosi windows provide ample light on both sides of the room. (3.12b) On the east and west walls, arranged at various heights, are a number of built-in shelves which were both functional and decorative elements.

Two doors provide access to the talar from dalans [corridors] on either side. It is very likely that one door was used by guests while the other was used by servants. The talar is usable in all seasons since the orientation allows the sun to penetrate in winter, supplemented by built-in wood burning stoves. In the summer the ayvan to the north is cool and protected from the heat.

Typically located on the south facing elevation of traditional houses, most ayvans provided a sun screen and served as usable semi-outdoor rooms. Similar to the ayvans of Shiraz and Isfahan, these spaces were especially useful in warm dry climates. In the Qavam-od-Dawla house, however, ayvans face north, suggesting primary use as outdoor rooms.²⁰(3.12a)

20 Typically, ayvans were designed to have visual privacy from one another. Coste's 19th century drawings of Talar-e Takht-e Marmar provide evidence that the ayvan was covered with a long curtain.(1.23)

Flanking rooms on either side of the talar are located on both north and south sides. Each floor has four such rooms, each 2.5 x 3.3 meters and only 2.5 meters high. They serve a variety of functions such as sleeping, sitting, eating. Each gushvar has two doors, one from the dalan [corridor] and the other to the sandughkhana [walk-in closet] located between each pair of gushvars. Windows to the ayvan provide access to the outdoor.(3.8c)

The gushvar walls have built-in shelves and cabinets, some located quite low for the convenience of residents who customarily sat on the floor.

Along the east wall of the andaruni courtyard are kitchen, toilet and servants room.(3.13) The windows in this wing are quite high, allowing for light and air but no view. It has storage spaces for large pots and pans and for wood to fuel a large built-in stove which stands on a platform.

The kitchen also has a separate chah ab-chelo, a well for water disposal. By religious tradition, water used in food preparation was separated from other waste water. The Qavam-od-Dawla house was also typical of 19th century homes, in which the toilet was placed at a distance from the house and its well.

Sandukhana translates literally as "home of chests" and these closet rooms were constructed with built-in shelves and a platform below which chests could be stored. In the Qavam-od-Dawla residence, these closets measure 3 x 1.5 meters x 2.5 meters high.

As in many houses of the time, the zirzamin [basement] of Qavam-od-Dawla's house probably served as a summer living room. Located directly below the main talar, it has windows covered by colored enamel-tile decorative grilles which serve to provide indirect light and create a draft of air. The windcatchers, (3.11) which cool talar and gushvars, also circulate air to the basement level to be further cooled by passing a small indoor pool and fountain located at the basement level. Zirzamin walls are lined with shelves and cabinets. Also on this level are rooms for the storage of foods requiring cool temperatures.

The Qavam-od-Dawla house has four parallel dalans, varying in width from one to three meters, providing access to rooms and stairways. These apparently redundant corridors make sense in light of common practice. One set of dalans, designated dalan-e avamm, were once for household use, while the dalan-e khavass were for guest use. Shelves line the length of the dalan walls.

Minimum standards for both aesthetics and function seemed to apply to vertical access in the early Qajar period. The Qavam-od-Dawla house is no exception. Carved into the walls, stairs are narrow, steep and uncomfortable. Connecting the ground and second floor dalans, they continue onto the roof. This access to the roof was both for seasonal sleeping and for maintenance and repair, which was frequently necessary on roofs.

Outside, even the double-paned wooden door of the Qavam-od-Dawla house is devoid of decoration except for the traditional pair of knockers. The only exterior decoration is a verse of the Koran on the traditional small plaque above the door.(3.8b)

There is considerable decoration inside the house, much of it accentuating doors, windows and soffit of ayvans. The decorative themes on brick and tile revetments are characteristic Safavid patterns which remained in use in the 19th century.(3.14) Muqarnas, honeycomb plaster decoration, is used on doorways, dalans, balconies, and ayvan ceilings.

Windows are emphasized by elaborate wood carving and colored glass. They employ familiar geometric motifs especially in the decoration of orosi windows. Decorative and functional aspects are combined to emphasize visually the levels at which the windows can be extended.

Imam-Jom'a House

This house, dating to 1847, was built in Mahalla Oudlajan as one of many holdings of Mirza Aqa Khan²¹, (3.15) Sadr-e A'zam [prime minister] and successor of Amir Kabir under Naseroddin Shah. Later occupied by the Imam-Jom'a of Tehran, the house bears his name to the present day.

Architecturally, the Imam-Jom'a house is after a Zandiya tradition known as the double-column style.²²

(3.16) The interest of this house is provided by a unique contrast of elevation and plan. The elevation is symmetrical and monumental in proportion, elaborately decorated. Its round columns have decorative capitals imitative of Corinthian columns.

A distinctive feature is the freestanding pishani [forehead] (3.16-3.17) which hides the sloping roof

21 Located in Mahalla Oudlajan in Kucha Imam-Jom'a off of Nasser Khosrow Street. It was surveyed in March 1977. Mirza Aqa Khan was a wealthy man whose numerous houses east of the Arg were marked in the 1858 map of Krziz. Only this one has survived. It has been owned by Anjoman-e Hefazat-e Bastani since 1978.

22 This was Mr. Mostafavi's suggestion. In 1979 in his book Athar-i Tarikhi-i Tehran, he also refers to this style as it dates back to the late 18th century and early 19th century. Its salient feature is a large centrally located ayvan with two slender columns.

behind it. This element and the reference to Corinthian capitals makes me suspect that the house was altered, possibly in the latter part of the 19th century when such motifs were fashionable.

The plan of the house is ingeniously resolved on a very tight triangular lot.(3.18) It maintains the symmetrical appearance of the elevation despite an asymmetrical site and it creates the illusion of a much larger house.

The plan is tripartite with a central ayvan along the winter talar. Behind it is the two-storied main talar with shahneshin set quite monumentally at one end. The main talar is flanked by two corridors²³ on either side, each with large, asymmetrical gushvars once used as waiting rooms. The whole is raised more than a meter above ground. Throughout the house are built-in shelves and cabinets. Storage rooms are fewer than usual, perhaps because of space constraints.

The zirzamin, though hardly below grade, was of importance in this house. Below the winter talar there is a hawzkhana, a room with a small pool, used in the warmer seasons. The zirzamin plan is similar to the level above, except for a double column in the shahneshin, which seems to mimic the double columns of the ayvan.

23 These corridors were known as the gholam gardesh, in reference to the slaves who were part of the serving staff.

The Imam-Jom'a house also has a series of transitional spaces between rooms. They might be related to the original use of this building as a biruni and office for a prominent official who had numerous visitors each day.

The Imam-Jom'a house was part of a series of houses one of which is still extant.(3.19) Its main ayvan with four columns and large, arched windows with colored glass and decorative panels provide clues to a date later than the main house. Like the Imam-Jom'a house its columns feature Corinthian capitals. This structure functions as a storage space in a rather dilapidated condition.

A Qajar Middle Class House

Constructed in 1895 in Mahalla Oudlajan,²⁴ this late Qajar house is one of the few surviving examples of modest size, possibly middle class houses.(3.20)

The main facade is tripartite with a larger central portion, consisting of a three-door talar with a high ceiling and a pishani that is obviously decorative since it does not conceal a sloped roof. Flanking either side of the talar are the two small spaces that provide access to the interior rooms.

24 Located in the Oudlajan neighborhood, in the Mahalla Hayat-e Shahi, this house was surveyed March 1977.

The main plan consists of two parts -- the front courtyard is larger and is the biruni, while the smaller courtyard, with five flanking rooms is the andaruni. A second level provides a few more rooms. Most of these are modest in size with one or two windows. Despite the rather small size of the lot, the typical andaruni-biruni division has been maintained.

Its entry from the main kucha is a niched archway that provides access to two smaller rooms and to the courtyard. The courtyards each have the centrally located pool. Even though the house is very traditional in plan, its decoration is inspired by European formal elements, prevalent in the more well-to-do houses such as the rounded pishani and basket arch. The roof terraces formed by the small rooms on either side of the courtyard are used for outdoor sleeping in the summer. The study of the section reveals traditional planning.(3.21)

An Equilibrium of Values

The 19th century Qajar house continued traditions established for centuries. The house had come to be not only a practical response to climate and available materials, but also a kind of personal theatre designed for the daily acting out of social and religious values.

In surviving examples, we can see the tensions between different spheres of living: private and public, self-sufficient and dependent, male and female.

Separation from the street, arrangement around the hayat, division into andaruni and biruni, designation of dalans for household or guest use, all bespeak established distinctions between self, family and others. At the same time, connected houses, shared facilities and multi-purpose rooms recognize the reality of mutual dependence and the flexibility it requires.

The comparative ostentation of the birun, particularly the talar, seems at once to compensate for the exclusion of outsiders from the private world of andarun and to publicly display symbols of its hidden riches.

The traditional house is the basic cell of a macrocosm of concentric circles. Self-sufficient, it belongs to a sub-mahalla, a mahalla, and a city, each of which fills fundamental needs on its own scale. Like its larger counterparts, the house provides spaces for domesticity, business, and religion and, in the central talar, reaffirms the patriarchal society.

The traditional courtyard house, like the city itself, encompassed an Islamic way of life. Islamic practice and belief plays a clearly crucial but difficult to define role in the structure of traditional houses. Though many

spatial characteristics can be traced to pre-Islamic periods, their association with Islamic tenets was perhaps a further reason for their continuity.

The door with two knockers, the segregation of toilet and waste water, the designation of the andarun as protected female space seem to be spatial markers of specific Islamic significance. The Koranic plaque above the front door, the use of many rooms for prayer, and communal religious gatherings in the large rooms of the birun suggest that religion pervaded the household. These are all reflections of an Islamic way of life brought to mind by, but never limited to, specific household spatial features.

Despite exaggerated accounts of the spread of European styles, this traditional courtyard house remained the dwelling place of most of the population of Tehran through the first quarter of the 20th century.

THE ELITE AND THE WEST

By the last decade of the 19th century, an influx of Western ideas had touched a very select elite who had traveled abroad or had direct contact with Westerners. The wealthy nobility began to show an interest in Western

styles. A few constructed the first European style houses, palatial villas set in large lush gardens.²⁵

The fact that some of these houses still remain has created the illusion that Iranian society was well on its way to becoming Westernized.²⁶ In fact, the majority of Tehran's inhabitants continued to live in courtyard houses. Early houses after the Western style were confined to the very rich and regarded as status symbols.²⁷

There is evidence that it did become somewhat more fashionable among the wealthy and middle classes to own

25 It is likely that at first these dwellings were summer residences which eventually became permanent homes.

26 This was further reinforced by the descriptions of foreigners. These first European houses were located in or near the Mahalla Dawlat, where foreign visitors themselves resided. The illusion that European styles were spreading was promoted not just by travelers but also by some well-placed Iranians. Even the meticulous reporter, E'temad-os-Saltana, is guilty of exaggeration. He was educated in Europe and had observed and continued to observe the progress in Europe as he read to the Shah the daily news of these countries. It was in his vested interest to emphasize the qualities admired in those countries.

27 The palaces and summer residences of the Qajar monarchs as well as palatial dwellings of courtiers and royal entourage, such as Zell-ol-Soltan palace in Dawlat quarter (3.22), the Moshir-od-Dawla residence that later became the Majles, constituent assembly building (3.23), the house of Amir Bahador in Amiriya area, all are representative of the new European fashions.

furniture, even when furniture clashed with prevailing lifestyles.²⁸

Nevertheless, despite exaggerations about the spread of European style houses, despite the very few of them in comparison to the total number of houses in Tehran, the significance of these houses cannot be denied. As first experiments with non-indigenous styles, they may be seen as transitional buildings, interpretive blends of Western and Persian conventions.

These houses were outward oriented with elaborate surface decoration. In fact, one factory of the time specialized in constructing prefabricated, bevelled brick panels. The plans were Palladian with large monumental stairways and functionally distributed spaces-- living room and dining-room on the first floor, bedrooms on the second. New elements, such as balcony and terrace, replaced the ayvan. Indoor bathrooms and kitchens were integrated into the plan, no longer segregated from the rest of the house.

Two representative examples are the Sardar Asad Bakhtiari house and the Qavam-os-Saltana house.

28 E'temad-os-Saltana, al-Ma'athir wa'l-athar, 113, touches upon the fashionable use of furniture and the increasing desire of the wealthy classes for acquiring pretentious household objects.

Sardar Asad Bakhtiari House

The house of Sardar Asad Bakhtiari, a [prominent leader of the nomadic Bakhtiari tribe (3.24)], was constructed in Mahalla Dawlat²⁹ in 1905.(3.25) This house was built in a large garden setting of Dawlat quarter, off Amin-os-Soltan Street (today Ferdowsi Avenue).

Inspired by European villas, it was a freestanding, detached structure(2.114), two stories in height with a sloping metal roof. The only projection beyond the cube was the front and rear balconies forming both a portico with the loggia on the upper level.(3.26-3.27) The main entrance accessible from the colonnaded canopy was accentuated by the unusual undulating transom above the door.(3.28)

Two spade-shaped windows flanked the main entrance. The central foyer was a large room with a fireplace providing access to the upper level with a monumental stairway (3.28) that was built at an angle to create the illusion of exaggerated perspective, enhancing its grandeur.

On the first floor (3.29) were the waiting room, the office, kitchen, and two private rooms. The upper level contained a main salon living room and a large

²⁹ On Bank-e Melli property off of Ferdowsi Street it was surveyed in September 1977. This building is owned by Bank-e Melli.

dining room. Three smaller rooms were also on this level. Service stairways provided direct access from the kitchen to the upper dining area. A large balcony with four columns was at the back of the house, while a larger front loggia was accessible from both the main salon and the dining room.

Speculating about the functional use of this house it shows, on the one hand, the functional designation of space with corresponding furniture. On the other hand, this whole structure was possibly used as a biruni while other structures within proximity were utilized for more private uses (andaruni). None of the subsidiary structures exist today.

The architect of this house was Sani'-od-Divan,³⁰ whose building along the Maydan Tupkhana indicates that he was well received in the Qajar court. The specially fabricated bevelled-edged brick with decorative panels accentuating the pishani windows (3.31) doors and engaged columns at the corners, were produced by a new factory specializing in fired brick.

The columns all have octagonal bases and Corinthian capitals. (3.33) The main balcony and loggia have coffered

30 He is the father of Houshang Sanei, from whom I was able to obtain a photograph of the building under construction. (3.30)

ceilings. The balustrade employs decorative cast iron railings.(3.33)

On the interior of the house numerous fireplaces provide heat. The ostentatious facade and ornamental windows, as well as the prefabricated brick panels, were inspired by European models. It must be noted, however, that this house was set in a large, private estate with auxiliary buildings and structures for private use of the family. It is possible that the whole building may simply have functioned as a biruni.

Qavam-os-Saltana House

Another home in Mahalla Dawlat³¹ (3.34) was built between 1910 and 1915 as a residence for Qavam-os-Saltana. The Qavam-os-Saltana house summarizes the major departures from the traditional courtyard houses. A detached structure, it was set in a landscaped park north of the old Maydan-e Mashq, on Kucha Borj-e Nush, later Sevom Esfand Street. Set back at a distance, the house faces the street even though this is not the optimum orientation. Most houses had a southern exposure. Both in terms of

31 Located on Sevom Esfand Street this house was used as the Embassy of Egypt until 1977 when it was purchased by the government and renovated by Hans Hollein in 1978 to house the new Museum of Decorative Arts. This house was surveyed in October 1977.

the interior plan and the exterior elevations this house contains new elements and approaches. The significant departure from traditional houses is the ostentatious treatment of the exterior. A symmetric, two-story structure with a basement, the corners of the building are emphasized by two projecting bays.(3.35)

The windows are emphasized by segmental window heads and richly embellished pediments, some windows are arched while others are rectangular.(3.36) The large balconied entry portico is located at the center of the facade and adorned with fluted columns. The main entrance,(3.37) like the Sardar Asad house has a tripartite transom.

The material used is brick prefabricated and molded in different shapes and sizes. The brick used had a bevelled edge and larger decorative panels used above and on the side of windows (3.38) and on the dado that wraps around the structure. These bricks were produced in a local factory in Tehran.

The roof of this building is flat with a wide cornice of decorative brick. The main gateway along the street was an elaborate cast iron door through which the park and the main facade of the house were visible.(3.38)

The focal point of the plan (3.39) was the central stairway, a grand straight run that formed a circular

stair at the landing. On the first floor a large dining hall (sofrakhana), was on one side while a small waiting room, an office and an entertaining room (pazirai) were on the other. A narrow service stair provided access to the kitchen and auxiliary spaces in the basement and to the upper level.

There were five rooms on the second floor, three of which were bedrooms and two were sitting rooms. There were also two baths. The floor plan of the second floor shows a more private use. It is possible that the andaruni-biruni division corresponded to each level, with the lower level being the biruni, the upper level the andaruni.

This house was part of a number of related structures. Two other edifices in close proximity appear to have housed more private functions. As the main building it may have had a similar function to the Sardar Asad house, such that the whole building functioned as the biruni. Like the latter, this house was a symbol of status of the wealthy elite who followed the European fashions.

While houses such as Sardar Asad and Qavam-os- Saltana represent a small class of exceptions to traditional domestic building patterns, they also foreshadow things to come. Built by me'mars, they suggest the traditional craftsman's ability to incorporate foreign influences with some success. Although the me'mars were to give way

to Reza Shah's modern architects in the planning of a new urban grid and the design of monumental government buildings, they found a significant role in domestic construction through the 1930's.

FACING OUT: THE NEW URBAN PATTERN

As Reza Shah laid down the urban grid in the 1930's, he began a reorientation of Tehran which flowed from the level of broad city structure to permeate the residential tissue and, finally, the house.

Some sections of the city --Mahalla Oudlajan³² and Mahalla Bazaar-- remained largely untouched.(3.40) Elsewhere, old organic street patterns were broken here and there by new Western khiabans and the buildings that rose at their curbs. Some new urban thoroughfares, like Shahreza, extended the city and produced entirely new urban neighborhoods. Wherever the grid went, it led directly to a new relationship between buildings and streets and, indirectly, to revised definitions of the buildings themselves.

The orthogonal grid redefined the relationship of the house to the urban thoroughfare, replacing the

32 Just east of the old Arg, where the wall was replaced with Nasser Khosrow Street, is an extant area that corresponds to the Oudlajan neighborhood. Here, despite two major north-south arteries, Khiaban Pamenar and Khiaban Sirius, the labyrinthine maze of streets and the hierarchy of through streets to the bombast is the norm.

hierarchy of privacy ending at the bombast, cul-de-sac to the private residence.

The effect of the new layer of regular streets was the creation of blocks or islands, some of which encompassed in a neat rectangle an old organic street pattern abruptly cut by the new streets.(3.41) In new neighborhoods to the north³³, without pre-existing structures, a regularized grid of streets and rectangular lots formed new subdivisions.³⁴ (3.42)

The subdivision pattern became an important determinant of house type. Sometimes sold individually, the lots were often built by a developer and then sold. These areas were characterized by a rational, geometric system of rectangular lots of the same size on which were erected non-traditional townhouses, apartments and villas with direct street frontage. The density of built area to open space, whether in the form of street or courtyard, is much lower in these new neighborhoods.

33 With better access to water, the north and north-western sections of the city developed most rapidly and attracted an affluent populace. Existing large gardens and tracts of land were subdivided into smaller lots, usually of equal size.

34 In a few areas, blocks did follow a traditional pattern and contained courtyard houses. Some traditional neighborhood nodes even developed, with shops and hammams and occasionally a mosque, but this was not the rule.

The area just south of Tehran University and Shahreza Avenue was a typical new development.(3.43) With a series of north-south arteries intersecting Shahreza at ninety degrees, the blocks were generally longer along the east-west axes. These arteries, narrower in width than Shahreza, provided direct access to most of the houses.³⁵

The major response to the Western grid was a re-orientation of the house to face directly onto the street, thus breaking an age-old distinction between public and private. The acceptance of this new orientation ultimately led to a new description of the house itself.

THE EVOLVING HOUSE

Although many changes were gradual, by the end of two decades the Persian house was significantly transformed. It is important to note, however, that the transformations in Iran paralleled an international movement spearheaded by the Committee Internationale d'Architecture Moderne (CIAM). Prominent modern architects including Le Corbusier and Gropius published manifestos, many of them specifically about housing. The international debate had rami-

³⁵ An example of this is Khiaban Moshtaq, one block south of Shahreza and parallel to it, where I have surveyed a series of houses built in the 1930's.

fications that were perhaps indirect but nevertheless quite important to developments in the field of housing in Iran.³⁶

The European-trained architects promoted new housing as a major improvement to existing conditions. They were quite explicit in expressing their commitment to better urban health and sanitation.³⁷ While these architects were diverse in their styles and influences, the outlooks and approaches they shared help to define major changes in the Iranian private house.

Spatial changes

No longer the focal point of the house, the hayat of modern villas, row houses and townhouses is smaller and only rarely located at the center. Like their Western models, houses are oriented to the street and the courtyard

36 That Iranian architects were aware of these international debates is certain. Gabriel Guevrekian, who worked in Iran during the active building period 1933-1937, was the first secretary of CIAM and contributed to the well-publicized international housing, the exhibition sponsored by the Austrian Werkbund, in Vienna in 1931.(2.130-2.131) Ali Sadegh had studied in Belgium, was exposed to the Dutch experimentation in large-scale housing projects, and later spearheaded low-cost housing in Tehran with the Chaharsad Dastgah project for the Bank-e Rahni. (2.174-2.176)

37 Architects presented their views both in contemporaneous articles published in Architecte and later in personal interviews.

relates to the house in much the same way as a back yard. Although the courtyard remains a private place surrounded by a wall, (3.44) its centrality gives way to a new emphasis on indoor spaces. Kitchen, bathroom and storage facilities, once accessible only from the courtyard, are now integral features of the interior.

Other outdoor and semi-enclosed spaces --balcony and terrace-- also replace some of the functions of the courtyard. The baharkhab [spring sleep terrace] appears in many villas as a replacement of the traditional ayvan and hayat.(3.45)

The hayat's central hawz, no longer the multipurpose water source is more an ornamental feature than a functional structure.(3.46) In some villas, in fact, the hawz is replaced by a swimming pool. The functional fruit trees, and herb and vegetable gardens give way to landscaped flowers and shrubs.

Architects also largely eliminated the hashti, the octagonal vestibule and transition foyer leading from the main entry of the house directly into the hayat. In most modern houses, courtyard access is through the house although some spacious villas and row houses have doors from the courtyard to the street.

Social change during Reza Shah's reign undermined the andaruni-biruni division as a determinant of spatial layout. The creation of a large new urban middle class

and the encouragement of women to participate in activities outside the house were instrumental in bringing about changes in lifestyle that had direct spatial implications. Reza Shah's lifting of the veil eliminated the primary reason for the division into andaruni-biruni.³⁸

Nevertheless, the public-private partition stays on in modified form. What was designed as living room and dining room becomes, in many houses and apartments, the pazirai [guest entertainment salon], the largest and best area of the house. Furnished with European style furniture, (3.47) these rooms were often locked and used only for the entertainment of guests.

The use of furniture became more prevalent in this period, especially among the new middle class. This was a gradual process. Many families still continued the traditional customs, using the main living room as a formal salon, a modified version of the biruni. Families began to use either a smaller salon or a hall as the informal family living room.

Like the European two-story house type, many modern houses have the most "public" spaces on the main level,

38 Having more than one wife was no longer socially condoned, but if a man did have more than one wife it was likely that he provided a house for each since modern houses did not allow for the convenient separation of quarters for each wife.

with more private rooms located above and below. Kitchen and baths are often in the basement.

Many homes have a central hall (3.48) providing access to most zones of the house-- entrance, stairs, kitchen, bathroom, and living areas. With common usage, this hall came to replace many of the functions of the courtyard in traditional houses. It became an indoor version of the courtyard, with one of its most important features: privacy.

As nuclear families became the occupants of new houses, the periodic large gatherings of people for special occasions gave way to more frequent but smaller gatherings. We see halls growing larger and providing easier access to outdoor or semi-outdoor space. In many villas, the hall has direct sunlight or a patio from which daylight penetrates. In many smaller row houses and apartments, however, the hall remains a space with very little daylight.

The traditional use of the basement is often retained in modern houses. The zirzamins of most villas and, for that matter even of modest income dwellings, were designed not simply as auxiliary and utility space but as summer living quarters. Sometimes a small indoor water tank and fountain embellishes the space.(3.49) Tile revetment in the wainscotting of these rooms is also prevalent. The zirzamin was a cool and pleasant alternative for the 3-4

hot summer months. Air conditioning, though used in large government buildings, is uncommon in residential homes at this time.

Extreme changes of temperature at night made it comfortable to sleep outdoors, either on roof terraces or in courtyards. Mosquito net was part of the bedding. Many houses have a small room at the very top of the house, near the roof, to store bedding during the day and between seasons. It is also not unusual to find servants quarters at the roof level if no other place had been specified for this use.

Unlike the traditional courtyard house with its descriptive nomenclature based on spatial attributes, modern houses have functionally designated rooms in the Western tradition --living room, dining room, bedroom.

The multi-functional space of the past is gone, replaced by a larger number of spaces designed for specific uses, each appropriately furnished. For the first time, children's rooms become prevalent. The floor is now meant as a platform for beds, not a sleeping area. Dining tables and chairs are where they belong, even if the family sometimes ate in the traditional manner, spreading the sofra [cloth] on the floor.

In practice, the gradual acceptance of furniture occurred among the upper and middle classes. Less wealthy

families continued a traditional lifestyle of sparse furnishings and multipurpose rooms.

Auxiliary spaces also diminish in importance. Modern conveniences eliminate much of the space once set aside for storage of grain and food. Stables disappear to make way for garages to house new automobiles. Servants' rooms, once accessible from the courtyard, are not as easily accommodated in modern houses.³⁹

Interest in hygiene, efficiency and convenience, promoted by architects prompted significant changes in household necessities. Villas, townhouses and apartments were designed with full indoor bathrooms in the interest of both convenience and health. Architects introduced mechanical heating, particularly the kerosene-burning unit heater. It meant that summer and winter quarters were no longer essential and made more space amenable to winter use. In the kitchen, kerosene stoves replaced old wood-burning and coal-burning stoves.

At the same time, the use of electricity became prevalent, with such simple ramifications as the replacement of door knockers with doorbells. Villas continued to have individual sewage wells, since there was no city-

³⁹ While some villas and spacious rowhouses still provided servants rooms, albeit in quarters, apartments and smaller rowhouses had no spaces designated for live-in servants. Many families found domestic help on a daily basis.

wide system. Drinking water, however, was often delivered daily by private water bearers.

It would be rash to say that all of these changes were realized completely in every house or apartment built during Reza Shah's reign. They were not. Some --street orientation, the modification of the hayat, and removal of the andaruni-biruni duality-- quickly entered and became part of a common modern architectural language. Others, such as full indoor baths, depended on practical factors of site and budget as well as client preferences. Still others --rooms classified and designed for specific functions, Western-style entry halls-- were modified by usage into cousins of traditional Persian spaces for family and guest gatherings.

Thus, the domestic world did not change overnight and it did not change in every detail. But it did undergo a dramatic revision in the lifestyles it could support, the values it expressed and even the materials of which it was composed.

NEW MATERIALS

One of the side-effects of Reza Shah's program of state architecture was a dramatic expansion in the variety of building materials readily available and accepted in

Iran. The use of reinforced concrete, steel and brick in government projects had widespread impact on the housing industry.⁴⁰

Up to 1910 most construction was done without architectural plans and determinations were made on site for foundations, stairs and walls. Materials consisted of brick and stone and to a much greater degree, mud brick and clay mixed with straw (kahgel). This was true even in the larger houses. The exterior of houses were whitewashed with gach. Wiring and plumbing were not prevalent. Walls were thick and ceilings were made with wooden beams and straw mats (hasir). In a summary radio broadcast in December 1947, published in Architecte, Mr. Abu Talib Goharian discussed the techniques and materials predominant in the period before 1920. The article continues with a lengthy discussion of the deterioration of traditional houses and problems of maintenance and upkeep and the danger of destruction due to rain or

40 The use of concrete and steel in the construction of roads, bridges, and railroad buildings had an impact on its widespread acceptance in Iran. Large multinational corporations used concrete in the construction of bridges. Kampsax built the first prefabricated reinforced concrete bridge in northern Iran in 1933. The Veresk bridge built by a German engineer employed reinforced concrete construction. In 1933 the sugar factory in Shahi built by SKODA was one of the first to employ reinforced concrete and brick. The stations and bridges for the railroad were all constructed in reinforced concrete.

flood. It points out the numerous advantages of the modern buildings, listing the techniques and construction methods that developed in the two preceding decades.⁴¹

By the end of the Qajar period brick and factory produced molded and fired brick was used in the construction of villas and buildings of the well-to-do. Ornamental prefabricated brick panels inspired by European designs particularly Russian neoclassical and baroque motifs were used in modified form as symbols of status.

During the period following the construction of state buildings, many of which were initially built in brick, factories for mass producing bricks were established in the southern part of Tehran. This increased availability of fired brick had a direct impact on residential architecture.

The familiarity of builders with brick soon led to innovative uses and formal experimentation. Many villas, row houses and even apartments were constructed with brick reinforced with steel beams.(3.50-3.52) Circular forms, cantilevered balconies and projecting bays soon created a recognizable vocabulary for the residential brick architecture.(3.53) "White" brick and different shades of red

⁴¹ Mr. Goharian recommends a list of materials for use in residential architecture in "Sakhteman ba Uslub-i Jadid va Taragghi-i An dar Iran," Architecte, Vol. 4, July 1947: 174-175.

brick and patterned brick appeared in standard sizes in the new building market.⁴²

The most dramatic change was the use of concrete. Its acceptance by modern architects, especially for apartments, broke down old perceptions of concrete as a material for "public" buildings and opened unprecedented structural and aesthetic possibilities.⁴³

Writing about contemporary architecture, Vartan explicitly described reinforced concrete as instrumental in the spread of the "new" architecture.⁴⁴ He gave a history of cement and listed its important qualities, including flexibility, low price, fire and earthquake resistance, making concrete the "best" available material. He named some great architects he thought had made their realizations using concrete: Le Corbusier, Tony Garnier, Van de Velde, and Dudok.⁴⁵

42 The prices of many of these types of bricks are listed in the various issues of Architecte.

43 The use of concrete became increasingly widespread not only because it allowed for structural and aesthetic possibilities hitherto unprecedented but also because of the creation of a cement factory in Tehran. Built in 1934 in Rayy, this factory produced portland cement that greatly facilitated the use of concrete.

44 Vartan Avenessian, "Masa'il-i Marbut ba Mi'mari dar Iran," (Problems of Architecture in Iran) Architecte, Vol.1, 1325/August 1946: 4-9.

45 The work of these four architects was known to Vartan and his compatriots both through their European education and training and through

It was in the use of concrete that the new generation of Iranian architects partook in the international debate of modernism.(3.54) Vartan, Foroughi, Zafar, and others took advantage of the new possibilities offered by concrete in building apartments and houses. Circular forms, wide spans, cantilevers, and open plans were ways in which concrete had immediate impact on private construction, particularly housing.(3.55) Using colored pigments and geometric divisions, a new style of architecture developed that was formally innovative and modern: me'mari simani.

Many villas in Tehran (3.56) and the northern suburb of Shemiran were built using concrete.(3.57) In each case bold volumetric forms and harmonious asymmetry marks these buildings. The use of concrete in housing was initiated by architects and remained in their domain as the technical knowledge of the material was not yet readily available to the traditional me'mars.⁴⁶

professional European publications. L'Architecture Vivante had published the work of all four architects between 1926 and 1933 with special issues dedicated to the work of Garnier and Le Corbusier.

46 In every issue of the Architecte, the last few pages were dedicated to discussion of the cost of materials and the cost of labor. The technical information was also printed in charts and calculations were offered, and solutions provided for typical problems.

Many other materials were employed in residential architecture including steel and glass. Large glass panels were used for windows lined in strips replacing the orosi windows and small square panels of glass. Ceramic tile called muzaik became prevalent in paving terraces, courtyards and interiors of houses.

Built in wood and glass cabinets replaced the traditional niches (taqcha and rof). Decorative wood and plaster moldings and mantels were used in living rooms creating the illusion of a fireplace.

Throughout the Reza Shah period, the use of new materials made possible both the structural and aesthetic differentiation of new housing types.

NEW HOUSING TYPOLOGIES

Row houses, apartments and villas replaced the courtyard house. These new housing types -- particularly rowhouses and apartments-- owe their existence to more than the urban grid. Two other factors must be considered: migration to Tehran and the growth of a middle class of civil servants whose fortunes were closely tied to the success of the new order. Solutions which had served the West seemed perfectly suited to fill new housing needs and to do so efficiently.

Row houses and Townhouses

Row houses and townhouses became the most common housing type in Tehran from the late 1930's. The rise of the "professional" class who provided their services to the government in the daytime and practiced privately in the evening was the initial impetus for the creation of new houses of modest price. A nuclear family had arisen to replace the patriarchal and extended family network. Doctors, engineers, teachers, clerks and office workers were the new clients.

Me'mars, not architects, were the primary builders and their rather unique blend of traditional Persian and modern features distinguishes row houses and townhouses from other domestic buildings of the time.

Row houses and townhouses are most often brick, a material in which me'mars were highly qualified craftsmen. Early row houses, in particular, have affinities to government buildings of the Reza Shah period. The use of crenelated roof-lines, faience revetments, and ornamental brickwork (3.58-3.60) echo some of the first brick government structures of the period, such as the municipal post office.

The use of neo-Achaemenid motifs, however, was not as prevalent as early Islamic revivals, perhaps inspired by the Bank Shahi and Alborz College.(3.61) A certain harmony of architectural treatment, repetitive motifs,

building heights and widths gave these early row houses a harmonious and cohesive definition. The abundance of lots and of homes created a healthy competition, so developers often provided extra amenities to attract customers.

The land parcels for row houses were subdivided in large groups. Instead of the gradual development over an extended period, there was rapid development as many lots were subdivided simultaneously by the same developer. Sometimes groups of row houses were built at the same time.(3.62)

The large tracts were subdivided into smaller rectangular lots, usually 10-15 meters wide and 20-25 meters deep. In Tehran, the principal thoroughfares are usually east-west and the lots are therefore on a north-south axis.(3.63) This was an environmental principal that dominated the city fabric for years. Lots located on the south side of the street were considered more desirable since they allowed more privacy for a main courtyard.

The early row houses made a variation on the theme of the courtyard house. A main structure was located to the north of the lot with a subsidiary structure to the south, both surrounding a central courtyard. In time, only the north side of the lot was built upon and a wall defined the southern edge of the courtyard.

Although the housing type is Western in inspiration, the Persian adaptation includes walls that totally block views into the front and back yards. But even its Persian elements were reinterpreted. Instead of a square lot with buildings on all sides, the courtyard was defined by walls on three sides and the house on one. Most early row houses were two stories with an upper level smaller in area than the lower level.

A few examples serve to illustrate the range of interpretation builders brought to the major themes of row houses and townhouses during the Reza Shah period.

100 Moshtaq Street

This large and lavish townhouse in an area off Shahreza⁴⁷ (3.64) is not quite a villa but much more than the modest row houses typically promoted by speculators and developers. It was an upper middle class professional's family home.

Unlike most townhouses, it is concrete, suggesting that it was not built by a me'mar but by a European-trained professional architect.

The plan, (3.65-3.66) like many of the time, replaces the traditional stable with a garage incorporated into

⁴⁷ Located on 100 Moshtaq Street near intersection of Daneshgah Street, one block south of Shahreza, this building was surveyed in July 1978. There are numerous other row houses of this period along this street.

the house structure. The garage (3.67) is below grade on the slight slope which allows for the architectural focal point of the townhouse: a split-level design for the main floor.(3.69)

The entrance, centrally located on the main floor is raised five feet above grade. A sarsara [foyer] and hall provide access to all the main rooms.

There are two sets of living/dining rooms.(3.65) One is a double suite facing south onto a main balcony and courtyard. The second is a triple suite, with one room facing south and another overlooking the street to the north.

In this northern room is the transition to the split level via a monumental stairway built on a slight angle to create an illusion of depth and perspective. It is likely that this room was the formal guest area, the pazirai [entertainment room] while the other suite was the daily living area. This part of the plan makes a compromise between the Western model and the andaruni-biruni of traditional houses.

The main floor also houses an office facing north and a lavatory and toilet partitioned into two spaces, with a narrow window facing the courtyard to provide natural ventilation. The courtyard, accessible from the house and by a narrow passage from the street, is typical of the time. It is closed on two sides by walls separating

it from neighboring courtyards. Its central feature is a rectangular pool large enough to be a small swimming pool.

This townhouse has a service wing (3.70) reminiscent of traditional homes. Servants quarters are at the edge of the courtyard along with a group of small rooms perhaps once used for storage. The upper level of this section forms an outdoor sleep terrace for the servants.

On the second floor, a double suite master bedroom faces south. It opens onto a large baharkhab [sleep terrace] (3.45) wrapping around the east side of the house on two different levels.(3.67, 3.68, 3.71) A bath and toilet are also located on this floor.

The basement, accessible from house and garage, has the kitchen and pantry, a cistern, a second bathroom, a bath, storage facilities and summer living quarters. The rooms on this level have direct outdoor access. Four doors, each with stairs, lead from the rooms to the courtyard. One small room, accessible from the courtyard only, was either a garden shed or fuel storage, most likely the latter.

The house was designed to use coal as the main fuel and kerosene for heating and cooking. Gas heating did not come until several decades later. Like most houses of the period, the Moshtaq townhouse has water distribution

pipes and a cistern. The city infrastructure was not yet in place at the time of its construction.

Modern and simple, devoid of exterior decorative features, the Moshtaq Street townhouse has an asymmetry emphasized by balconies and terraces defined by columns and wall apertures. The garden facade, also asymmetrical, has two pairs of double columns at the south sleeping terrace. A main porch on this garden side is more like a deck with no roof or wall to provide the shelter associated with traditional ayvans.

This house also has the decorative false fireplaces and mantels which were a common aesthetic element of modern houses of the time. The tall mantels often had an Art Deco flavor and were painted in bright colors with faux marbling. Pastel tones of pink, green and blue were favored colors.

Although this house is fundamentally Western in functional plan, materials and architectural features, it does not make a complete break from Persian traditions. The plan allows a comfortable division into public and private. Its courtyard has much in common with the traditional hayat and its typical outbuildings for services and storage. Its zirzamin summer quarters also reflect traditional usage.

Mahmoudi House

The row house at Nahid Street⁴⁸ (3.72) is an excellent example of a modest house built by a developer using traditional me'mar craftsmen. Located on a lot size 9x26 meters in three stories, this house was purchased for 20,000 tomans in 1316. It is one of the early examples of speculative housing in Tehran.

Two separate structures, the main one in three stories is accessible from Nahid Street, while a subsidiary one story structure is located beyond the courtyard. (3.76) The latter was either for use in the summer or servants' quarters.

A square courtyard is located between the two structures. (3.73) The architect, well versed in traditional building style, was seeking a way of adapting the old with the new. Certain elements of traditional houses have been modified to accommodate both privacy and the multi-functional aspect of the rooms. At the same time many modern amenities are provided such as garage and indoor plumbing.

The main entrance to the house is from a small forecourt that is separated from the street with a cast iron gate. On one side of the entrance is the garage which has direct access to the house. This forecourt is

⁴⁸ Located at Fakhr-e Razi Street and Nahid Street, the building was constructed in 1937.

a small transition space, a modified hashti between the public street and the private dwelling.

Inside the house the stairways have somewhat the functions of the dalan, where one is leading downstairs to the informal living area and courtyard and the other upstairs to the more formal pazirai and dining room. Each floor has an average of four rooms where every two room is separated by a partition or curtain providing the possibility of a larger space when needed. Ample light is provided for each room while airflow has also been a factor in the design.

The ground floor (3.73) which is a half level below the street contains the kitchen, bath and storage room and two large spaces each with two rooms. These were for use as informal spaces that served a variety of functions including sitting, eating and sleeping. It was especially pleasant during the summer.

The second level consisted of two large spaces, one serving as formal living room, the other a formal dining room. The third level set back with two small outdoor terraces had a small balcony overlooking the courtyard and contained bedrooms.

By locating the bathrooms, kitchen and water storage in one vertical section and at split level with the main floors, the plan provided both the convenience of these

amenities, while at the same time adequate separation from the main living spaces.

With the increasing importance of the street the facade of the house (3.74) became important and the main elevation of the house received extra attention by both architects and builders.

Use of decorative brick pattern and tile decoration became prevalent at about 1930. The Mahmoudi house is a typical example both in the use of brick pattern, and tile decoration. The central part of the facade is emphasized by a pishani and raised corners. The pointed arches large hexagonal window at the center are bordered with tile revetment. The geometry of the facade is reminiscent of traditional patterns used in Persian architecture, while some of the formal elements are inspired by the public buildings of the period, especially, the American College and the main post office.

The garden facade (3.75) is much simpler with a symmetric tripartite division of double windows and doors; a small balcony is located on the third level. The courtyard has a large central pool with flower beds on either side following a quadripartite division. The paving is of brick and stone.

Like many row houses of this period, the building is constructed in brick with bearing walls and a metal roof. Steel is used in the construction of the floors.

Apartments

The most visually conspicuous of the new housing types, apartments were a novel concept in Iran. Usually mixed-use structures, they accommodated commercial, office, and residential spaces. These apartment houses were located invariably on primary streets. Shahreza was the most popular, though by no means the only, site. Many streets in the northern section of town --Ferdowsi, Saadi, Shah, and Takht-e Jamshid--also attracted apartment construction.(3.77-3.79 & 3.50)

The early apartments are usually located on large corner lots accessible from two streets. Typically, the buildings are 3 to 5 stories in height, with ground level retail shops, second floor offices and residential floors above. Separate commercial and residential entrances are maintained.

The floor plans follow the functional requirements of each floor. The residential units, designed with special attention to prevalent social customs, often incorporate some features of traditional houses. The concept of andaruni-biruni was employed in modified form and a degree of privacy designed into parts of the apartment. For top level apartments, roof-gardens or roof courtyards take the place of hayats as a household center.

The orientation of buildings is such that most living units have south exposure. Most also have balconies

and large terraces, allowing ample sunlight and views to the city in the south and the mountains in the north. For this reason, the most desirable and expensive locations are on the north sides of major streets and on east-west arteries.

Among the architects who built apartment buildings in Tehran, perhaps the most prolific and influential was Vartan. His apartments have features that make them successful, both aesthetically and functionally.

Vartan's designs also have certain similarities to the apartment complexes of Henri Sauvage.⁴⁹ In addition to sharing Sauvage's interest in typology of housing units and technological experiment, there are similarities from an aesthetic and formal point of view. Like Sauvage, Vartan employed circular forms, bow-windows, bow shaped balconies, triangular projecting windows. A comparison of the Sauvage building at 126 rue de Provence, (3.80) Paris (1913) or the Samaritaine department store (1926) in its details of window treatment (3.81) with the apartments on Shahreza by Vartan point to the influence Sauvage may have had on his pupil. The influence of Art Nouveau is much more subtle and modernized but Sauvage himself

49 Sauvage was among the most active architects in research and experimentation with different house types, in series and in prefabricated elements. He was involved in maison a gradin projects and in technological research.

oscillated between Art Nouveau and modern rationalist design with a tendency towards the latter when he had a choice.(3.82) Vartan was definitely a modernist with a faint touch of Art Nouveau.

Vartan's apartment designs like many others built in this period respond carefully to the site. If it is located on a corner lot the building curves around the corner. If it is located on a maydan, it undulates around the space to correspond to its shape, as in his buildings at Maydan Ferdowsi.

Saadi Street Apartments

The fifth issue of Architecte published the plan of this five-story apartment designed by Vartan.⁵⁰ Located on a corner lot, its plan is typical of mixed-use apartment buildings of the period.(3.83-3.84)

Called large store on the plan, the first floor is designed for commercial purposes.⁵¹(3.85) Large square columns support the upper levels at 6.15 meter and 3.35

50 Architecte, Vol.5, Dec. 1947:167-168. This article indicates that the building was constructed two years earlier and that certain structural defects had necessitated modifications by architects Vartan and Boris.

51 The photograph accompanying the Architecte article indicates that this area was originally an automobile showroom. (3.86)

meter bays. The ceiling has recessed lighting in a surface decorated with an Art Deco feeling. Large, four-paneled doors provide access from either street.

An apartment suite accessible from both the main entrance lobby and the commercial space may have been office space for the main floor store or the store owner's own dwelling. This unit has five rooms plus a bathroom and kitchenette, both of which receive natural ventilation from the small courtyard they face. These small courtyards or light-wells became a standard feature of large spaces.

Two separate stairways lead to the upper levels. Behind one stair is an elevator, an amenity not typical of this period. A long narrow courtyard provides light to the back part of the building.

Here the plan shows three sets of apartments. They are designed with the flexibility to use the rooms independently, as three individual apartment suites or even to combine two suites to form one large conglomerate of offices. The plan also allows residential units to be combined into large or smaller apartments.

On the three-apartment plan, each apartment has five rooms. Two are connected living and dining rooms and three are bedrooms. There is also a half-bath⁵² and

52 It was not unusual for many residential apartments not to have a bath since public baths were still very widespread.

a small kitchen. The flat roof is a large outdoor terrace accentuated with a post and beam. This balustrade adds height to the structure and emphasizes the functional nature of the terrace.

The Saadi apartment building circles around the corner to form a curved face for the main floor store and upper level balconies.

Shahreza at Vessal-e Shirazi Street

This large, five-story mixed-use building on the north side of Shahreza⁵³ (3.87) succeeds in accommodating both modern apartments and an imaginative version of a courtyard house.

This building (3.88) has a ground floor of large retail stores and a second level for office space. Internal subdivisions on this floor allow rooms to be used as individual offices or as suites. Each section has eight rooms, two of which can be combined into a larger space with the opening of sliding pocket doors.

The upper level is divided into two sections, each with its own stairway. One section has a second set of stairs used for private access to apartments at the top levels.

53 Located one block east of Tehran University at the intersection of Vessal-e Shirazi and Shahreza, this building was constructed in the late 1930's and was surveyed in June of 1978.

Each upper floor is composed of two large residential units, (very typical Western-style apartments of the time).(3.89-3.90) The very top level, however, is a unique plan for two courtyard units. One is a two bedroom apartment with a large L-shaped courtyard. The other is a three bedroom unit with a square courtyard (3.91). This apartment is most reminiscent of a traditional house, since the courtyard gives access to the rooms, which are interconnected.

The apartment at Vessal-e Shirazi Street is concrete pigmented to a pink-peach tone. Vartan's design is characterized by very angular features, both at the corners and in the form of triangular projecting bay windows. Throughout, he makes a formal juxtaposition of vertical and horizontal elements. The internal vertical element, the stairway, is emphasized by long strip windows with narrow shading devices colored to contrast with the building.

Shahreza at Abu Reyhan Street (3.92)

This three-story apartment (3.93) follows the typical plan for a commercial ground floor, second level offices and third-floor residential units.(3.94) In this case, the two residences are of particular interest.

Both residences are quite large with modern conveniences, including full baths. One unit has three

bedrooms and a large living-dining area with a square projecting bay window. A corner bow window distinguishes the living room of the second unit.

Each apartment has a wet core concentrated in a central location, where a small foyer gives access to the bath, kitchen and storage room. Both units also have decorative mantels and built-in shelves.

Like the apartments at Vessal-e Shirazi, this building is pigmented pastel concrete with long strip windows shaded in a contrasting color. The roof is once again augmented with the post-and-beam typical of Vartan's style. A large circular balcony wraps around the building at the corner.(3.95) But in the design for Abu Reyhan, Vartan uses vertical fins to emphasize the corner bow windows and form a sort of brise-soleil. A large circular balcony wraps around the corner of the building. He creates a harmony between symmetrical and asymmetrical elements at the corner. The facade is symmetrical on the main street until it turns the corner and then its asymmetrical features dominate.⁵⁴

Many other apartments, similar in style to Vartan's, were built throughout the city. Despite wide admiration

54 Unfortunately, architectural harmony has been diminished by the addition of window unit air-conditioners and unsightly steel ducts that protrude from the windows of this and many other buildings of the period.

for and emulation of his aesthetic, each can be distinguished by unique stylistic features. Vartan employed bay windows and circular balconies again in an apartment on Takht-e Jamshid Street.(3.96 & 3.77) Another building on the same street set itself apart with white mortar joints forming a large grid on the concrete.(3.97) A three story apartment on the broad Maydan Ferdowsi,(3.98) designed by an unknown architect, has vertical stairs projecting above the building in contrast to long horizontal balconies accenting the corners.

Villas

A detached, single family house located in a large garden and surrounded by a wall, the villa had its roots in the garden kushks [pavilions] which had begun to evolve into Western style houses in the late 19th century.

This house type remained, for the most part, what it had always been: a preference of the well-to-do. Its trends were set by the court and high ranking government officials-- but this time with the participation of modern architects who began a revision of the courtyard house.

Villa Afshar

Built on a large corner lot near Shahreza at Vessal-e Shirazi Street,⁵⁵ (3.99) the Villa Afshar is just north of the University of Tehran. It is a single-family, detached dwelling occupying the northwestern part of a site accessible through either a garden or two doors onto Vessal-e Shirazi Street.(3.99)

The existence of three entryways is a break from a past in which one entrance was the norm, even for houses of the well-to-do. The garden entry was perhaps used only on special occasions and for entertainment. while the service entry to the north was for servants.

The main entry of the house opens into a central sarsara [entrance lobby] providing access to first floor rooms and a balcony. Its main monumental stairway leads to upper and lower levels.(3.100) The kitchen and pantry are at grade, a half level below the main floor, which stands about 5'6" above grade.

The design of this villa neatly solves a problem of orientation. The main street, Vessal-e Shirazi, traverses its west side, the least desirable orientation in Tehran's climate. While the main facade faces the primary street, the house is generally oriented to the south and the east. (3.101)

⁵⁵ Located one block north of Shahreza Avenue, this house was surveyed in May 1978.

Three large living spaces face south and southeast. These rooms are accessible to one another. One forms a quarter-circle looking onto a balcony of the same shape. It is this circular balcony and its paired columns which suggest Vartan as the architect. This balcony, covered and symmetrically accessible from two stairs, is a main feature of this villa and many detached houses of the period. In fact, for a time such balconies were referred to as ayvans.

One small square room facing north was most likely planned as the home-office. Most villas had such a room close to an entrance and somewhat detached from the main living spaces. The bathroom is divided into lavatory and separate toilet compartment with a window for natural ventilation, a common convention. On this floor, only the toilet and pantry have windows to the west.

The upper level, which is set back slightly, contains the bedrooms. At the top level is a broad terrace for summer outdoor sleeping. The post and beams that define this terrace are an architectural feature of many villas. Zafar, Vartan, Foroughi and others all employed this element. I believe its inspiration came from the housing schemes of Tony Garnier.⁵⁶(3.103)

56 The residential designs of Tony Garnier were appropriate models for the modern houses of Tehran in more ways than one. The use of flat roofs, concrete, and shade giving devices made

The lower level, partially below grade, has summer living quarters with a living space larger than the main living area. It comes all the way to the edge of the balcony and window, which provide ample light.

The servants room is located north of the kitchen. It is accessible from the service entry and from the courtyard at the northeast end of the house.

The hayat of Villa Afshar is no longer a central feature but one element of visual and formal design. Nevertheless, it is not a complete break with tradition. Both the main courtyard and a small service courtyard have a hawz [pool].(3.104) While the tank in the service courtyard is quite traditional looking and symmetrical, the main courtyard hawz is asymmetrical and unusually shaped with triangular and bulbous projections and undulations.

The service courtyard, with its one-story facade formed by the kitchen and servants room, is quite suggestive of the courtyard houses of the past and could

Garnier's designs very appealing to the young Western-trained Iranian architects. This is supported not only by Vartan's admiration for Garnier, as published in his article in Architecte, but also by a Zafar drawing of housing which is reminiscent, in representation method, of Garnier's published housing schemes. (3.102) Architecte, Vol. 4, July 1947: 140. Garnier's contemporaneous work was published in Architecture Vivante (Spring & Summer 1932): 24, which was available to those educated in France and to the editor of Architecte.

easily have been the andaruni, the private quarters service court.

The main courtyard, on the other hand, is landscaped asymmetrically and bears slim resemblance to the geometric style of tradition chahar-bagh gardens. Planted with magnolias, ornamental trees and flowers, this garden has a great deal of paving and reflects the increasing popularity of stone, marble, gravel and other hard surfaces. Like traditional houses, however, the villa and courtyard are surrounded by a high brick wall for privacy and closure from the public street.

A Shemiran Villa

Though constantly involved with education and public building, Mohsen Foroughi found time for domestic architecture. His design for a "villa in Shemiran"⁵⁷ (and another in Tehran) is an exercise in the domestic application of some of the principles that shaped his public buildings. But here one notices a significant departure from the symmetrical order and monumental scale of his public buildings.

57 The houses of Shemiran were not easily accessible for surveys, the inhabitants were much less willing to allow their homes to be surveyed. The source of the original plan is Architecte, Vol. 6, June-July 1948: 218.

The villa in Shemiran presents itself as a fairly modest row house on a typical north-south lot. The plan (3.105) is asymmetrical and sympathetic to functional relationships.

The major living spaces face a deck and courtyard to the south. A large L-shaped living/dining room allows both spaces to have southern exposure while taking advantage of the north-south breeze.

There is almost a conscious attempt to create the feeling of an indoor courtyard in the main entry hall, which faces south. The glazed entry contains a small central pool of water and gives access to living and service spaces much the same way a traditional outdoor courtyard would. Stairs to the upper level and lower level are also accessible from this interior court.

Though not designated on the plan, the main floor spaces are identifiable as living room, dining room, small salon (family room) and office.

Bedrooms and bath, toilet and outdoor sleeping terrace are upstairs. The lower level contains a full summer salon and mechanical space for central heating.

Even in a limited space, Foroughi successfully adapts aspects of the traditional house into a very modern design. In the villa in Shemiran, both the andaruni-biruni tradition and the central hayat are comfortably placed in the modern home. The biruni is confined to the

main floor, where the large salon and office are located. The andaruni surrounds it upstairs and down.

At the same time the plan is functional and modern. The villa has access from both north and south. The kitchen and pantry are convenient to the dining area and the combined living/dining space provides a spacious, related, and yet separate area for each activity. Every room has a fireplace as a central focal point that gives axiality and symmetry to the rooms. Although the overall design is asymmetrical, there is a trace of Beaux Arts formality within individual rooms.

The building structure is reinforced concrete and steel faced with white brick. The southern elevation is generously glazed with full length, sun-shaded casement windows that open up to the open deck. The roof is a terrace, a word that came to signify its covered surface, part large square mosaic tiles and the rest shirvani or metal.

In this villa, Foroughi applies several concepts that became standard features of houses of Tehran for many years to come: division of public and private space on a vertical plane, biruni on the main level and andaruni below; kitchen and bathroom incorporated into the main floor (possibly a clue that the lady of the house would be spending time in the kitchen). There is, throughout,

a respect for and inclination toward adapting a modern plan to a traditional lifestyle.

A Villa in Tehran

At about the same time as the Villa in Shemiran,⁵⁸ Foroughi designed a larger and grander three-story villa in a garden estate of one of the newly subdivided areas to the northwest of the city not far from the university campus. (3.106)

On the main floor (3.107) are large salon, small salon, dining room, office, greenhouse, a bar and a bath. An entry hall ayvan in the style of a covered porch houses the front stairway, and a secondary stairway in the back gives direct access to service areas.

On the second floor are bedrooms, bath, covered porch and terrace. The basement level contains summer living space, services, kitchen, and storage.

The total square footage of the Tehran villa is 330 square meters. Built of reinforced concrete and brick,

58 I have been unable to date this building precisely, even after speaking to Foroughi himself. It was likely built between 1936 and 1940, the client's name was Mr. Bina, The Dean of Tehran University, School of Literature. Since 1967 this building is occupied by Iranzamin International School.

it is faced with cement. Though asymmetric, this plan is quite formal. The raised porch, as built, is ringed with a semicircular ziggurat stairway leading to a semicircular colonnaded porch.(3.108) These stairs and a two-tiered semicircular colonnade at the south facade give the villa an almost italianate, "baroque" formality that sets up a sharp contrast to the simple east facade and main entrance. At the entrance, there is a deliberate attempt to simplify. The flat symmetry of the facade is extended only by solid, cement handrails and stairs. Its flatness is offset by the slight protrusion of the greenhouse.

Counterbalancing the greenhouse on the main level is the covered columnar open porch at the top, which provides a shaded outdoor living/sleeping area. The semicircular porches give a streamlined quality to the building, a formal juxtaposition of geometric forms-- the square and the circle-- which echoes through the villa.

The circular bar with its carved niches is reminiscent of a traditional domed mosque or mausoleum. This formal geometry is carried through the main stairway which circles to the upper floor. The entry hall is once again like a courtyard, two stories high and sculpted by the stairway. This time, Foroughi uses a transition space found in traditional Persian houses-- the hashti, which gives the choice of going into the office, the bar salon or the interior hall/court.

Although this house was obviously designed for a very wealthy family who required a large living room/entertaining space, Foroughi subdivided his areas without losing the spacious character. He creates smaller spaces for intimate gatherings without closing the possibility of entertaining numerous people. The fireplaces in the office and in the dining room again provide axial symmetry to rooms in an otherwise asymmetrical plan.

Thus, although considerable freedom from Beaux Arts formality characterizes domestic design between the World Wars, Foroughi consciously introduces a formal vocabulary and a geometric harmony to counterbalance his asymmetrical forms. He addresses the needs of his client and acknowledges changing values while maintaining certain traditional principles.

At first glance this villa seems to have little in common with the traditional courtyard house, the plan nevertheless allows for the basic principles of andaruni-biruni on a vertical plane, with the central hall acting as interior courtyard. Partially protected outdoor spaces encourage the semi-outdoor lifestyle of courtyard houses. Climatic control and use of passive solar control devices are cleverly mixed with the formal vocabulary of

the house.⁵⁹

THE HOUSE RECONCEIVED

Once the street had been an organic connection between self-sufficient cells --house, mahalla, city. The Persian house had been the basic unit of society, a microcosm of the whole, complete unto itself.

When Reza Shah imposed the city grid of modern thoroughfares, he made the public street the defining element of Tehran and Iran's new, powerful state. In changing the orientation of the home from inward to outward, from private to public, Reza Shah's modernization program had its most direct impact on domestic architecture. The change of focus was a powerful message: look to the state.

Indeed, windows in the street-facing facade became an important architectural element of the modern house. But they also upset the traditional equilibrium of the self-contained home. Reza Shah could bring about a new outward orientation but it was left for architects, builders, developers, and their clients to reinterpret the elements of the private house.

⁵⁹ Both Foroughi's work and his comments in oral interviews demonstrate how conscious he was of passive solar energy. Proper orientation and use to maximize the effects of natural conditions is a hallmark of many of his designs for both residential and public buildings.

What finally occurred was neither blind imitation of the West nor blind adherence to the past. In row house, apartment and villa, the internal space of daily living underwent a reexamination.

In keeping with the values of the new order, the redundancy of the distinct partitioning into andaruni-biruni went by the wayside, the centrality of the old, patriarchal talar and the internal hayat were downplayed, modern convenience and hygiene replaced old customs, and the house began to look more like a place for a nuclear family to live rather than a self-enclosed complex for domesticity, production and business.

Yet all these things were not a complete transformation. More accurately, they were the beginnings of a new evolutionary direction in what had been a static institution. What began at this time, I believe, is a new dialogue between the private citizen and the builder, between tradition and modernity. To the dialogue, clients brought a deep appreciation of the relationships traditional houses embodied and their aspirations for a new and better life. Architects responded with a respect for both the vision of Europe and the realities of Iran.

Both realized, perhaps, that tradition cannot be imported. Some of its elements can be transplanted to grow as they will in new soil. The result, in Iran's

domestic architecture, is a meeting of East and West which changes both.

The courtyard, first moved to "back yard" status, arises again in the Western main entry hall. The ceremony of biruni and talar are transferred to the formal living room. The ritual of the seasons is retained in zirzamin summer quarters and sleeping terraces. The language of functional designation is introduced but common usage cannot be dictated.

By World War II, Iranian domestic architecture had taken a new direction. But it was not from Persian to Western and it was not from looking backward to looking forward but, through both at once, to an exploration of the values that might be expressed by a new indigenous architecture.

CONCLUSION

Some years ago, an anthropologist described the bodily decoration of the women of a South American Indian culture:

If my analysis is correct, in the last resort the graphic art of the Caduveo women is to be interpreted, and its mysterious appeal and seemingly gratuitous complexity to be explained, as the phantasm of a society ardently and insatiably seeking a means of expressing the institutions it might have, if its interests and superstitions did not stand in the way.... their patterns are hieroglyphics describing an inaccessible golden age, which they extol in their ornamentation, since they have no code in which to express it....¹

Architecture, like all the arts, has the power to symbolize. It can --and does-- express not only what exists but also what might be. Thus, when it changes dramatically, architecture forces us to a question: Does this change follow the shape of a culture or does it give shape to cultural dreams?

This question is particularly pertinent to modern Tehran and to all rapidly urbanizing towns. It is clear that Tehran's urban space and architecture changed dramati-

¹ Claude Levi-Strauss. Tristes Tropiques (New York: Atheneum, 1978): 197.

cally between the end of the Qajar dynasty in 1921 and the abdication of Reza Shah twenty years later. It became a visibly different city. The walls came down, the city gates disappeared. The huddled landscape topped by domed mosques opened into a grid dominated by monumental government buildings, neat row houses and modern apartments.

In making the argument that the Westernization of Tehran did not begin until the advent of Reza Shah, this dissertation questions the conclusions we have drawn about the Qajar period and the way we use the term Westernization.

By the mid-nineteenth century, the characteristics of Tehran were similar to the abstracted model of the princely Islamic city. The components of the city were the walls and gates, the Arg, the religious structures, the bazaar and the mahalla, each component with its own function and social significance. Tehran in the Qajar period was primarily a private city; it was inward and protected. Most of its spaces, its buildings and indeed, most of the forces that shaped it were private.

The residential quarter-- the mahalla-- formed the inner fabric of the city. Each mahalla was like a self-sufficient unit, a town in a town, offering social services sufficient for the daily needs of its inhabitants and containing a series of smaller neighborhoods-- the sub-

mahallas. Its physical fabric consisted of a series of streets and alleys ranging from public to private. The hierarchical distribution of streets provided a logical solution to concerns for security and privacy and thereby nurtured a self-policing mechanism. The social cohesiveness of each mahalla was reflected in its communal spaces, and pious structures most of which were supported by private citizens.

The generic house type was the courtyard house, accessible from the most private of streets. It consisted of two separate sections, biruni, the external or exposed, and andaruni, the internal or private quarters. The former contained spaces for reception of guests or the "public", the latter was reserved for family or "private" use. The spatial organization reflected a patriarchal lifestyle, a belief in the sanctity of the family as a social unit, and the seclusion of women. Thus, the traditional city at the urban scale, in the mahalla and in the individual home, mirrored the public and private distinctions of its inhabitants.

We have seen that major, urban-scale projects of the latter 19th century, from Naseroddin's wall and gates to the construction of the Takya Dawlat, followed traditional Persian and Islamic themes. Even with the city expansion, the basic fabric of Tehran remained much the same.

Shams-ol-'Emara and Mahalla Dawlat with its European-styled pavilions certainly express the Western fascinations of a privileged minority. The Western influence near the Arg is unmistakable. To call it anything more than influence, however, is a misapprehension. The term "Westernization" implies a process that continues. There is scant evidence that the late Qajar period had any of the features we would expect to see in such a process.

There is no gradual spread of the influence into a broader base of participation. There is not even a fitful evolution, no sign that one Western element led to another or that any of them were even slightly integrated into the texture of the city. No new, "hybrid" elements arose as old traditions disappeared or transformed in the meeting of cultural traditions. There is only a traditional Persian city surrounding a few anomalous, if interesting, transplanted forms which did not take root and grow.

The contrast with Reza Shah's Tehran is inescapable. Reza Shah accomplished a physical transformation of the city. Asserting the primacy of the public street, the public space and public buildings, Reza Shah transformed the private city into a public one. It was part of a conscious process of cultural intervention which had specific intentions and significant effects. He drew

citizens into participation with a new state, as civil servants and officials in its bureaucracy, and he made architects the bureaucrats responsible for its construction.

The process that Reza Shah set in motion became self-perpetuating. The city grid invited new housing types and changed the relationship of the public thoroughfare to the private house. At this level, the level of individual living, new forms began to emerge as architects, builders and their clients experienced the meeting of Persian and Western ideas about the nature of domestic life.

Reza Shah did not continue and accelerate what the Qajar had begun. Like the Qajars and many before them, he recognized and used architecture to serve ideology. But where others had sometimes used the language of space to legitimize their status power, Reza Shah used it also to promote a sense of national identity. The nature, the scale, the scope, and the depth of the change Reza Shah brought about represent a dramatic departure from the past and the beginning of Iran's first involvement with a process that can rightfully be called Westernization.

Reza Shah turned his people to face the state. He erected buildings to emphasize the centrality of the state and to symbolize a new relationship between citizen and state. The state became employer, teacher, and

source of a new identity. Its imposing structures brought back the image of a golden age before Islam and intimated a rational future ahead.

Wherever Reza Shah built, the self-contained, concentric circles of house, mahalla and city were broken. Under Reza Shah, the principles of the modern state gave rise to a new urban vocabulary with a number of salient terms:

- . New street and processional routes
- . Large public spaces
- . Sculpture as a medium for planned state iconography
- . New national institutions housing monumental public buildings.
- . Resurgence of the grandeur and power of the distant past under the aegis of the new regime.

Unquestionably, the most direct and lasting impact of Reza Shah's urban program was the reorientation of the city to the public street. This was a significant change in the symbolism of space. The old hierarchy of access and privacy, expressed from khiaban to bombast, was replaced by the avenue as conduit to a destination. Rectilinear boulevards with wide separate pedestrian and vehicular lanes took the place of city walls. Commercial

development, in the form of modern buildings, was encouraged along major arteries. New regulations enforced a height of at least two stories even if it meant a free-standing wall on the second story.

The network of broad avenues and thoroughfares converged in wide maydans. Public squares and traffic circles were superimposed upon the entire city. Reza Shah invested public iconography with new didactic purpose, and maydans became visual hubs for statues erected to teach citizens about national heroes. Traditional and Islamic celebrations were modified to become ceremonies of the state, complete with temporary pavilions reawakening the glorious days of empire. Thus the Shah undertook the education of his people in the values of a modern, nationalist state.

The citadel was transformed into a new administrative center with palatial ministries replacing royal residences. New civic institutions replaced or drastically altered existing ones, redefining the very nature of the city. These included administrative offices and ministries, municipal institutions such as banks, museums, city hall, police and fire departments, secular educational institutions, hospitals and theaters. The secular character of most of these institutions was in sharp contrast to some of their traditional counterparts. Most of these new institutions demanded building types that had no historic

precedent to draw upon. Borrowing from the West became an obvious solution.

This new state architecture rested on an ideological base which fostered functionalism, monumentality, rationalism and the historic imagery of pre-Islamic Iran. The revival of Achaemenid imagery derived from contemporary archaeological excavations in Iran gave rise to a state style: the neo-Achaemenid. As history became available and known it became part of the architecture, part of the background created by the state.

Foreign architects were employed, soon to be accompanied by architects trained at the Beaux Arts institutions of Europe. By the late thirties, a school of architecture was created at Tehran University to train professional architects. Thus, coinciding with the rise of modern architecture in this period, is the birth of the architectural profession as we know it today.

The old center of everything, the basic unit, the self-supporting house, turned outward to view the new basic unit-- the state. Many of the same architects employed by the state were actively involved in building houses, especially for the rising urban middle class, civil servants who were the first to adopt the new Western way of life. Reza Shah encouraged the growth of a middle class with access to education and participation in the

workings of government and economy. As a result of the city's emerging administrative functions, its population rapidly increased, giving rise to wide-scale housing developments. The effect of the orthogonal grid was the creation of blocks and houses oriented toward the street. The exterior of residences became important as the street became the major determinant of orientation.

New housing typologies radically different from the traditional courtyard house were introduced, including apartments, row houses and urban villas. New technologies and new materials were employed in their construction. The internal layout of these new houses was significantly different. Functionally designated rooms took the place of multipurpose spaces, services such as kitchen and lavatory once outside the house were planned as part of its interior. Modern amenities and comforts became part of the new lifestyle.

All this is what Reza Shah consciously set out to do. He intended to shape a new culture. One of his powerful instruments was an architecture that could transmit a new message. The "image" of the city became increasingly important, epitomizing, as it were, Reza Shah's concern for the country as a whole. Architecture became the symbolic expression of the state.

Architecture was by no means the only vehicle of change. There were many: programs to revise and secularize the educational system, lift women's veils, subsidize the purchase of European clothing, lower the profile of the clergy, sponsor human services, modernize production and transportation. The new state could --and did-- enumerate daily the advantages its citizens might anticipate.

When Reza Shah abdicated under pressure from the Allies, he feared that, without his guiding vision, his dream would crumble. What he could not see, perhaps, was that the dream was already changing under the hands of people whom he had made participants in it.

As an interventionist, Reza Shah was able to plan and execute a change in the symbolism of public space. But no more than anyone else could he predict or control the many meanings people would see in that space or condition their private adaptations to it and of it. Even as he built, his imposed ideology became a point of departure for ventures into new realms.

Reza Shah did not plan, but did facilitate, three self-propelling cascade of processes which, I believe, continue to this day.

First, he made possible the development of the architectural profession in Iran. It began in service to

the state, which gave architects incomparable opportunities to create and build. The resulting architectural dialogue became an independent process with more natural affinities to the international discussion between architects than to the nationalistic concerns of Reza Shah's state.

The state gave architects their license to practice but they came to grips with the real issues of continuity and change, East and West, in the design of apartments, row houses, and villas. The public side of the experience was displayed in Western facades and windows on the street. The private side, however, was the scene of a much more subtle investigation of spatial harmony as architects explored the values of tradition and modernity in the private rooms of Tehran's citizens.

Reza Shah facilitated a second process. His people could "see" and "read" a new ideology in the didactic landscape. What they experienced was the reality of change. The change from self-sufficient, complete homes into houses that were dependent satellites of the city. The search for a new household center in an array of special-purpose rooms. The experience of traveling unfamiliar streets to new destinations inside monumental state buildings.

New architecture made new ideology concrete. New urban spaces and new buildings did not simply represent

new ideas and beliefs. They changed the experience of daily living. And they changed it permanently. What Reza Shah built in Tehran has remained ever since. The khiabans and maydans of his urban grid remain, as do his state buildings. Only the statues and tomb celebrating his reign have not survived.

When Reza Shah replaced mudbrick buildings and dusty streets with concrete structures and paved avenues, he gave enduring form to a process that is difficult to reverse. His buildings, like his bureaucracy, have never been dismantled. They have become a permanent part of the landscape of Tehran and Iran.

Through his modernization program, Reza Shah facilitated a third development: a new set of expectations for a better world for more people. When his ideas became concrete through architectural statements, new practices, new patterns of living, he set up a tension for people to resolve.

An agenda for modernization throws into sharp relief the tension between old and new, between continuity and change which already exists to some degree in any culture. Reza Shah's program, forcefully and quickly pursued, certainly enhance this tension. His urban change actually took less than 15 years, making the shift from Qajar Tehran as sudden as it was dramatic.

It is tempting to look at the broad avenues and imposing buildings of modern Tehran and conclude that Reza Shah succeeded in shaping a new city. Such a conclusion overlooks the tension between old and new. It is equally tempting to point to the sometimes dissonant array of modern buildings and the structure of old mahallas disrupted by new boulevards and conclude that his changes irrevocably damaged the fabric of the city. This judgement recognizes the tension between old traditions and the search for something new but condemns it as a bad thing. Both conclusions take cultural interventions as a limited action, bounded in time and predictable in its outcomes.

It is more productive to approach Reza Shah's modernization program as the beginning of a continuing process of change, a departure in a new evolutionary direction. Tension and unpredictability are natural features of such a process. When the new arises, must the old be discarded? When new forms and old forms stand side by side, can they find an accommodation, a way to fit together intelligibly? In the 15 years of his modernization, Reza Shah's actions posed these questions of change. It is premature to expect that the first stage of an evolutionary change in itself will answer the very questions to which it gives rise.

Unresolved tension is part of the very nature of the Reza Shah period. On one hand, without bloodshed or revolution, he ushered his country into the life of the twentieth century. In a remarkably short period of time, he brought about enduring changes to the structure of Iranian society and the structure of its capital. The durability of his new state buildings and modern housing typologies reflect the permanence of the change he effected. Through his state building program and his educational agenda, he opened the door for a modern architectural profession which moved on to independently explore its creativity in private building and to open Iranian architecture to a wealth of indigenous and international inspiration. The new architectural dialogue involved architects, developers, and residents in exploring a realm of expansive, exciting possibilities.

On the other hand, his new buildings and boulevards cut through the traditional fabric of Tehran without weaving the old and the new into a cogent whole. His state buildings, tied as they were to a personal vision of nationalism and progress, full of didacticism, did not arise out of the natural workings of the culture as it was but imposed on it a rather static image of what it was supposed to be. At the same time, the modernization program was incomplete in its approach to infrastructure

planning, codes, regulations and other controls that prepare the way for coherent development. The conflict between the existing culture and the imported or imposed culture was directly reflected within the physical structure of the city permeating every aspect. The disparity between the physical environment of the old and new city was all the more pronounced. Duality is manifested at every level in the friction between tradition and modernity, religious and secular, private and public forces. The net result was a city poised somewhere between tradition and modernity, no longer able to rely on the past but uncertain as to its future direction.

Upon his abdication, Reza Shah left a city suspended between past and future. He gave a first shape and substance to new aspirations by introducing novel forms, novel modes of living. In opening new possibilities, he also fractured traditions, shedding an unfamiliar light on what was customary and on its relationship to the new. His legacy was the tension of a story just begun.

It was nothing more or less than the tension between what we aspire and what we experience. The golden age, glimpsed only dimly as a vision of all that is new and better than what we live and feel now, takes shape and its shape is foreign. No history or custom make it

intelligible or soften its unfamiliar contours. History and custom themselves are ruptured and incomplete. No precursors show us what to do, how to live in an alien space. That is what we must find for ourselves.

And so it may be that when Reza Shah's modern Tehran was constructed, it stood not for a reality but for an aspiration, a "New World", perhaps attainable, for which the people of Iran are still searching.

GLOSSARY

ab kurr:	running water, water that is not stagnant
ainakari:	mirror inlay work, decorative geometric mirror mosaic very popular in Qajar architecture
ayvan:	loggia or porch or portico usually in the form of a vaulted hall open on oneside facing a courtyard or entrance portal
ambar:	storage or storage space
andarun, andaruni:	private quarters of residents and residential areas
apadana:	freestanding column hall that used to serve as a throne room which had a portico and was often square in plan and raised on a platform
aqayan:	gentlemen
aramgah:	"resting place", mausoleum or tomb
arg:	citadel or palace
arg-e saltanati:	royal citadel
baharkhab:	terrace or wide balcony used for outdoor summer sleeping quarters
baladiya:	municipality, later replaced with the term shahrdari
bast:	sanctuary, a holy place that provides sanctuary to those pursued by law
bazarcha:	small bazaar
biruni:	literally means external or exposed, this is used to define the more public areas of a residence or residential complex in juxtaposition to andaruni

bombast:	dead end alley
boq'a:	edifice housing a shrine or convent
boyutat:	housing units used in the 19th century census as a term corresponding to household
chador:	veil used by women to cover themselves
chahar-bagh:	enclosed garden divided into four sections
chaharsu:	a market place, crossroads of two spines of the bazaar
dalan:	corridor, hall, covered passage way
dalan-e avamm:	corridor for the household use
dalan-e khavass:	corridor for guests
dar-ol-hokumat:	royal residence or capital
dar-ol-khelafa:	royal residence or capital literally seat of the Caliphate
darugha:	prefect of a town, or district, superintendent, or police
dar:	door
dargah:	portal or lower threshold
darvaza:	gateway or gateway of a city
dash:	companion or leader of a local group in a mahalla
dawlat:	state, in the 19th century this term often meant royal
dehbashi:	deputy usually of a mahalla
edara:	office, bureau, agency
emarat:	building, structure
farangi:	European

farangi ma'ab:	European looking, Western
farrash:	attendant
gawd:	pit, or depressed area
ghariba:	stranger
gholam gardesh:	a narrow corridor used by servants giving access to the talar
gushvar:	small multipurpose rooms flanking main salon
gozar:	passageway, way
hajji:	title given to a person who has made a pilgrimage to the Kaaba in Mecca
hakem:	governor
hammam:	bath, bath-house
haram:	holy place
harim:	women's quarters
hashti:	octagonal vestibule that forms an entry foyer to a residential unit or complex
hawz:	watertank or pool
hayat:	courtyard
hawzkhana:	a room in the house containing a pool, often below grade, cool and used in the summer
hosayniya:	place for the performance of religious rituals having to do with the martyrdom of Hossein the third Shi'ite imam
imamzada:	mausoleum or shrine to which pilgrimage is made
jub:	open ditches for distributing water and for collecting water run-off

kalantar:	sheriff
kasaba:	artisans, tradesmen, plural of kaseb
khalvat:	private, private apartment
khalvat-e shahi:	royal private quarters
khan:	title of a tribal nobility
khandaq:	moat, ravine, gully, canyon
kharaba:	ruins
kharej-e shahr:	outside the city
kharposhta:	the structural component forming a pitched roof
khiaban:	avenue, boulevard
khabgah:	a bedroom, bed chamber, dormitory
kucha:	narrow street, lane, row, passage
kulah farangi:	literally means European hat, this term is used to designate a garden pavilion or kiosk
kura-pazi:	brick kilns
kushk:	pavilion or palace, generally central in plan with most of the interior spaces open to the outside
lashkarkhana:	garrison
luti:	defacto leaders of the neighborhood who functioned by consensus of the residents
ma'aber:	arteries, routes
madrasa:	school, often a religious school, before the 1930's it had religious affiliations, later the dabestan, elementary school and dabirestan, secondary school were coined to replace the term madrasa though it continued to be used

mahal:	a building, place of abode, dwelling or palace
mahalla:	neighborhood, residential district
mahram:	person allowed into private quarters of a house
majles:	assembly, gathering, room in which public gatherings take place
mashruta:	constitution, movement in Iran (1906)
masjid:	mosque
maydan:	square, circle or public plaza
me'mar:	architect
mihmankhana:	guest living room, salon
mirza:	title of nobility given to men of literary ability
mobaraka:	belonging to the court, royal
nazarkarda:	holy
nazr:	almsgiving
obur:	to pass
orosi:	large two storey wooden double hung window
ostad, usta':	teacher, master, maestro, a title of respect
panjdari:	five door room, designating by number of doors the approximate size of the room
patoq:	hang-out or gathering place; also a smaller division within a mahala
pazirai:	guest salon used for entertainment of guests, usually the best room in the house

pishani:	designates the raised freestanding portion of the facade usually at the center of the building, that conceals a pitched roof
poshti:	bolster
qabr:	grave, tomb, sepulchre, mausoleum, monument in honor of the dead
qanat:	subterraneous water channel that conducts water from the mountains to more distant locations, in the past it formed the main source of water in many areas of Iran
qibla:	direction of prayer oriented towards the Kaaba in Mecca
qishlaq:	winter quarters of a region, a warm place for passing the winter usually used in contrast to yeylaq and originating from Turkish
rawza:	paradise, tomb; a funeral speech in the Muharram celebration
rof:	built-in shelf
sabza maydan:	herb market, a square or open plaza where herbs are sold
sadr-e a'zam:	prime minister, Grand Vizier, Chief of Finance
sandukkhana:	small storage room, almost like a walk-in closet
saqakhana:	public building for dispensing water a
saray:	house, palace grand edifice, seraglio
saray homayun:	royal residential quarters
sarcheshma:	a fountainhead, spring

sarsara:	corridor, hall or foyer at the main entrance from which stairs give access to other floors
sarshomari:	census
sartip:	general, military officer
sedari:	three door room
shahanshah:	king of kings
shahneshin:	literally kings seat, but it refers to raised platform in a main space of the house overlooking the courtyard and ayvan
sofra:	cloth or table cloth usually laid on the floor for meals
suq:	a bazaar, market, public square, forum
takht:	throne, sofa, seat, a bed, any place raised above the ground for sleeping, sitting, or reclining
takya:	open space theaters [for passion plays]
talar:	a reception room, a large salon
tanzimat:	reforms, program of reforms taking place in Turkey (1836-1910)
taqcha:	a niche, a little window
ta'zia:	passion play
timcha:	a small caravanserai in a bazaar
tupkhana:	armory, arsenal
tushak:	futon
usta me'mar:	master-builder
vazir:	minister
waqf:	pious endowment

yakhchal:	an ice-house; any place or vessel in which ice is kept
yaylaq:	summer residence, related to the concept of nomadic seasonal change of residence
zirzamin:	basement, often used as a living space in the summer

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PLATES



Fig. 1.1 Late 19th century view of Tehran towards Darvaza Dawlat

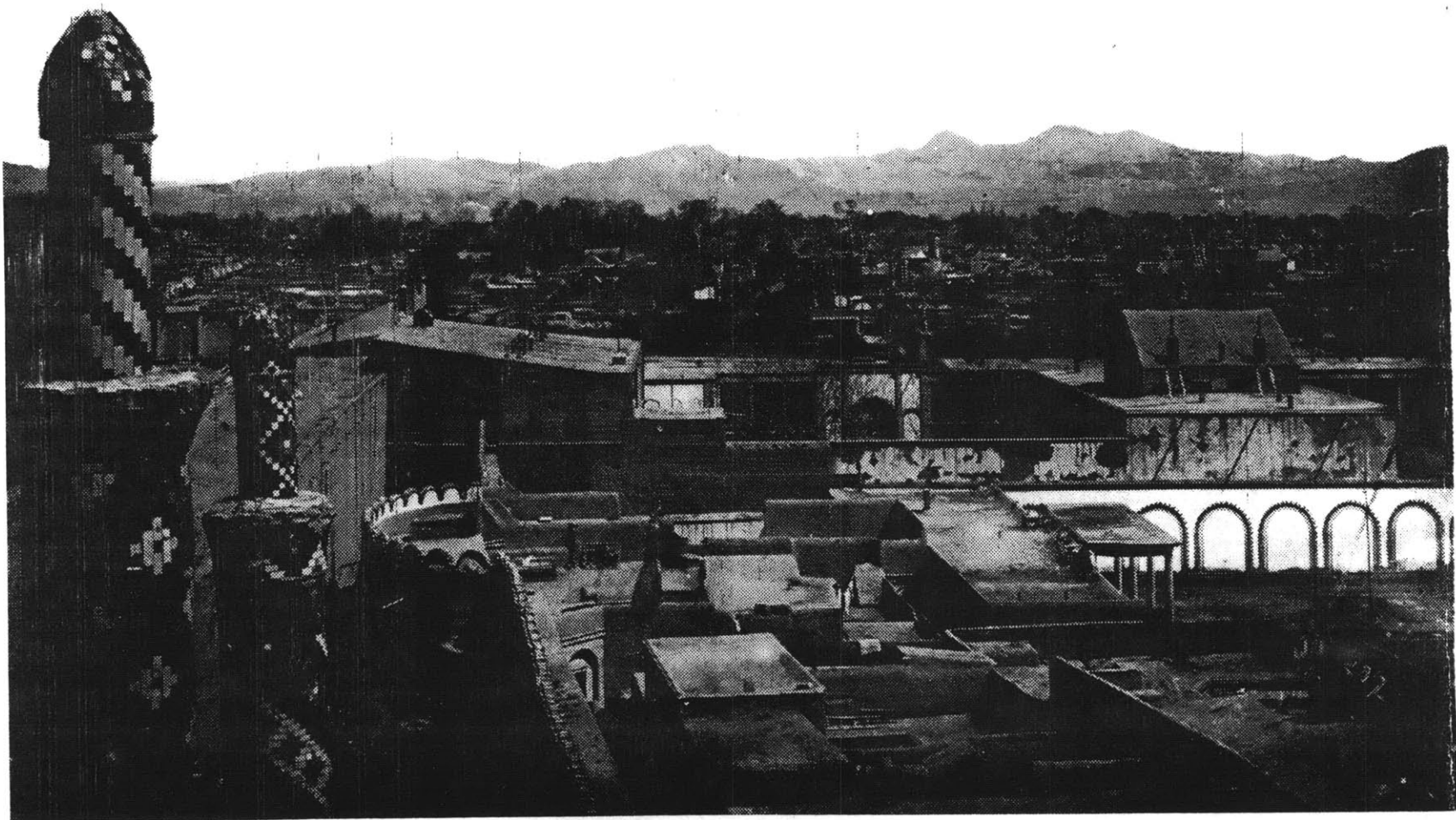


Fig. 1.2 Panoramic view of Tehran from Darvaza Dawlat



Fig. 1.3 View of Tehran from the minaret of Sepahsalar mosque



Fig. 1.4 Sir Robert Ker Porter's distant panorama of Tehran ca. 1820

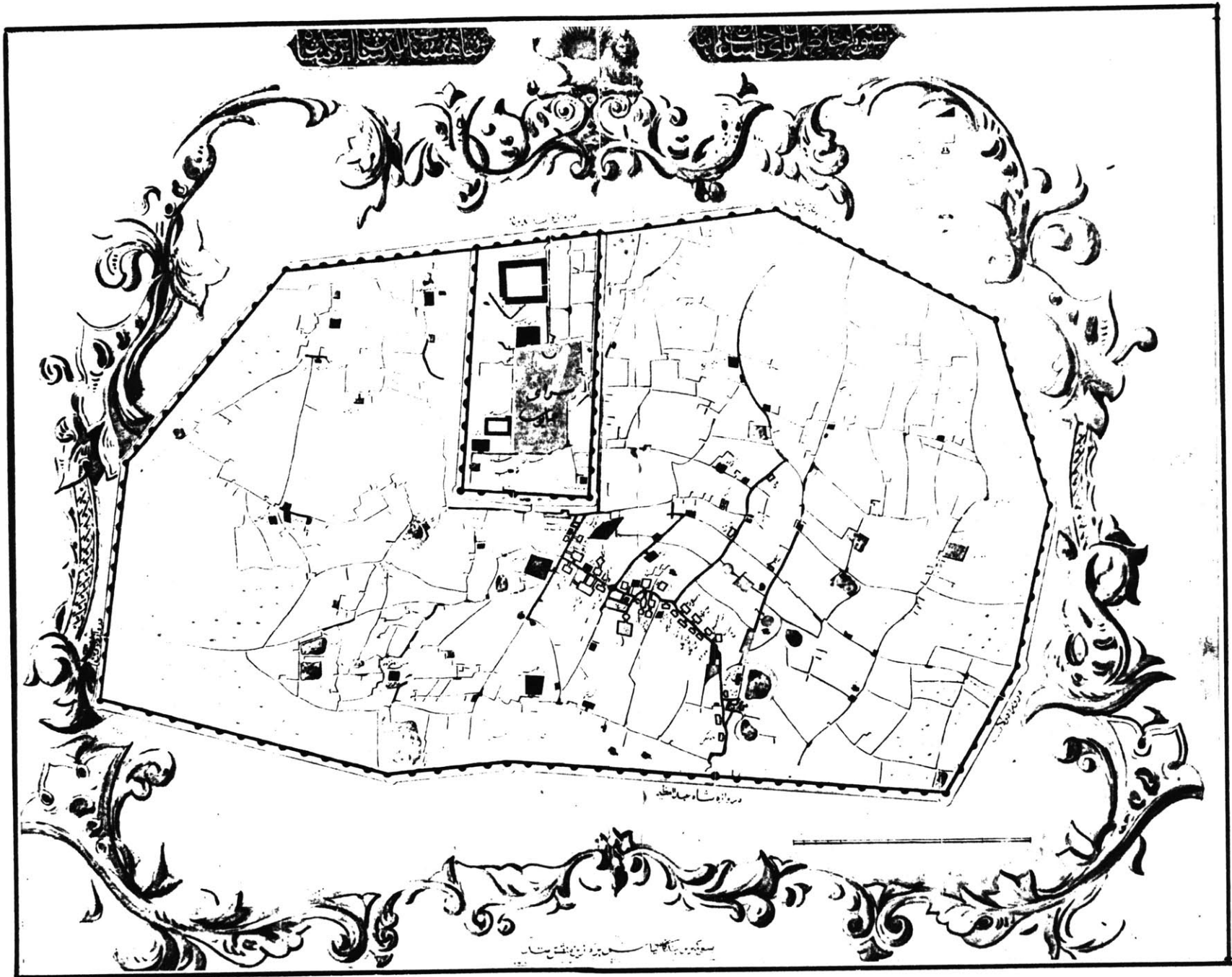


Fig. 1.5 1842 map of Tehran by Ilias N. Berezin (Persian version)

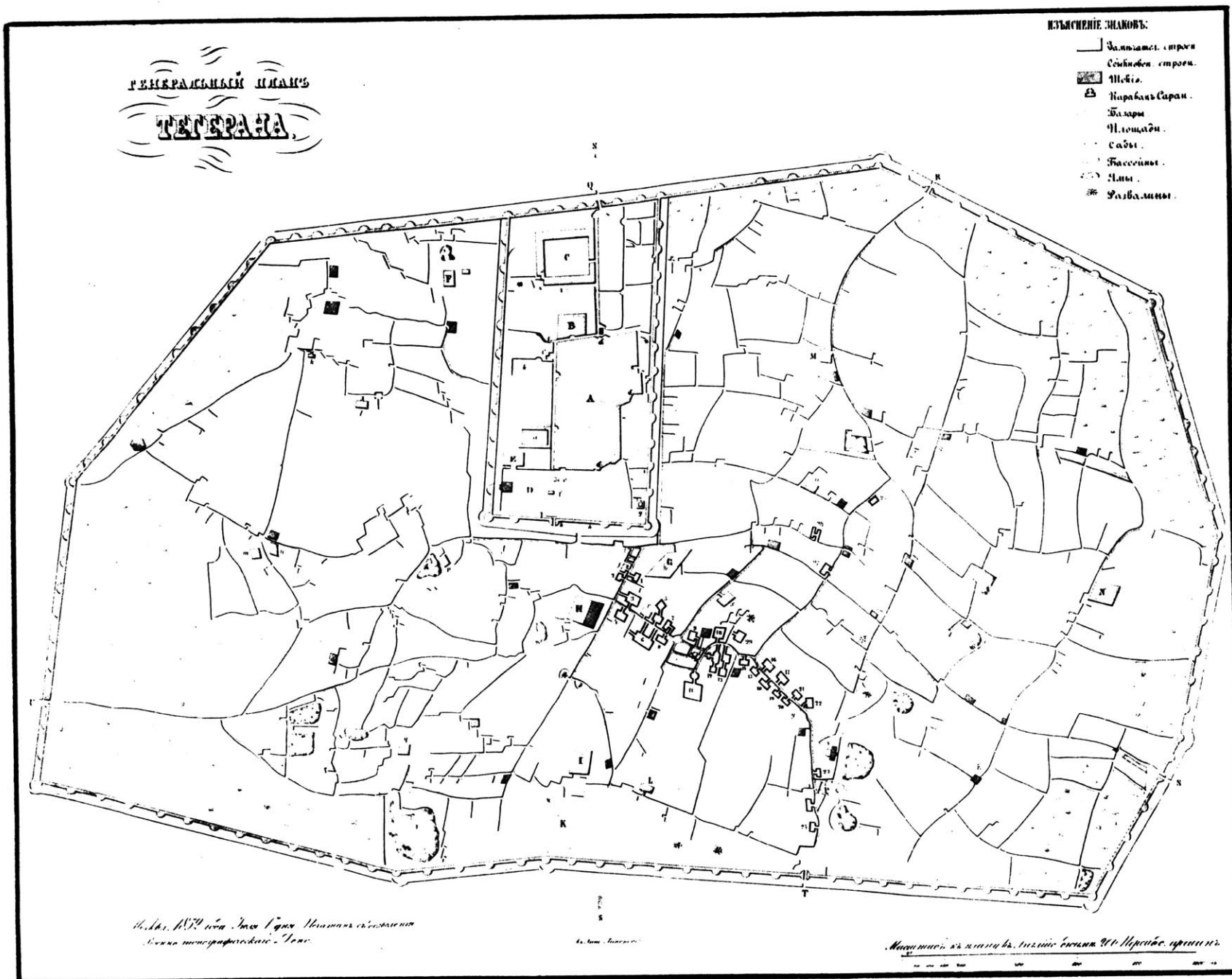


Fig. 1.6 1842 map of Tehran by Ilias N. Berezin (Russian version)

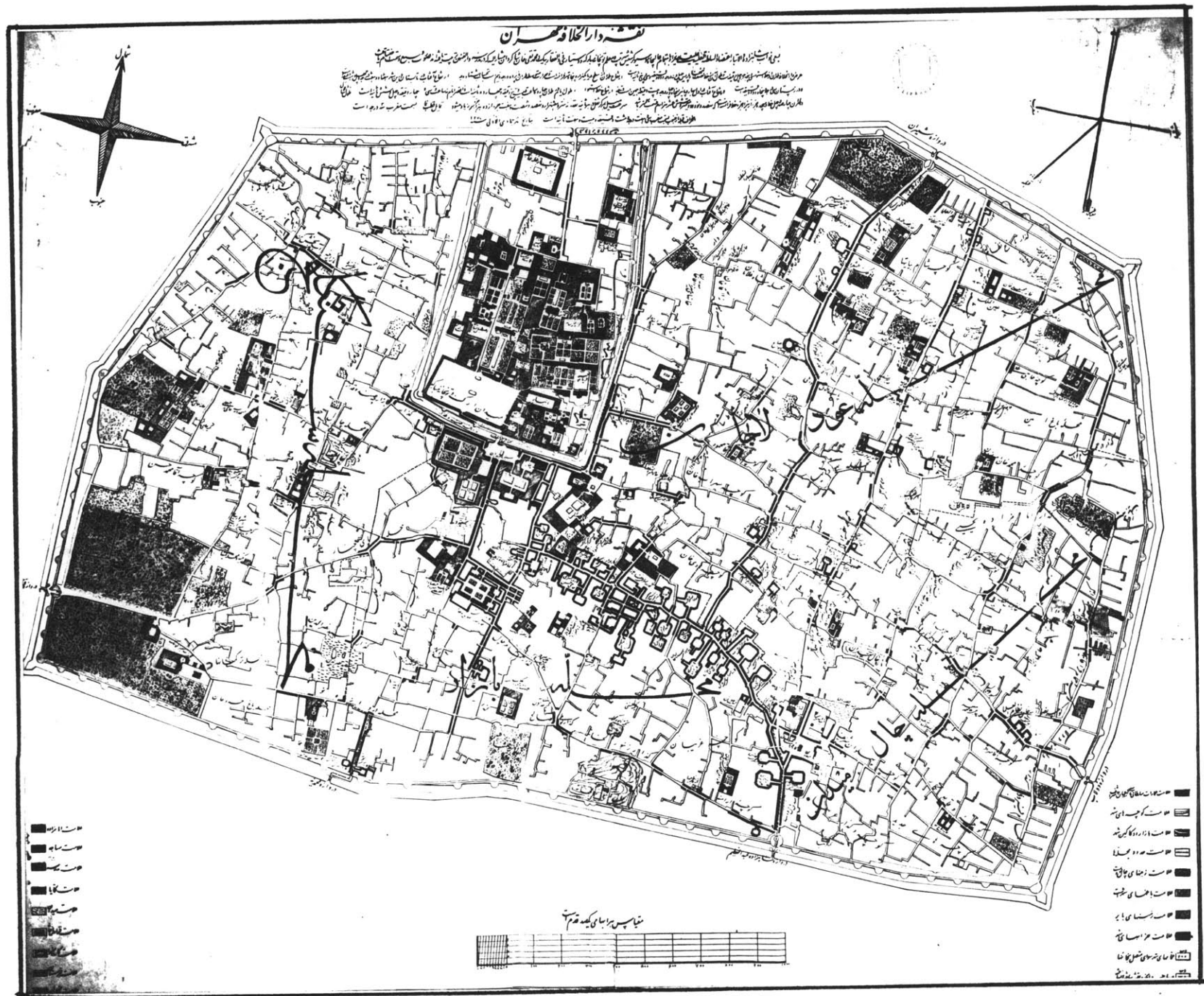


Fig. 1.7 1858 map of Tehran by Major August Krziz and his students

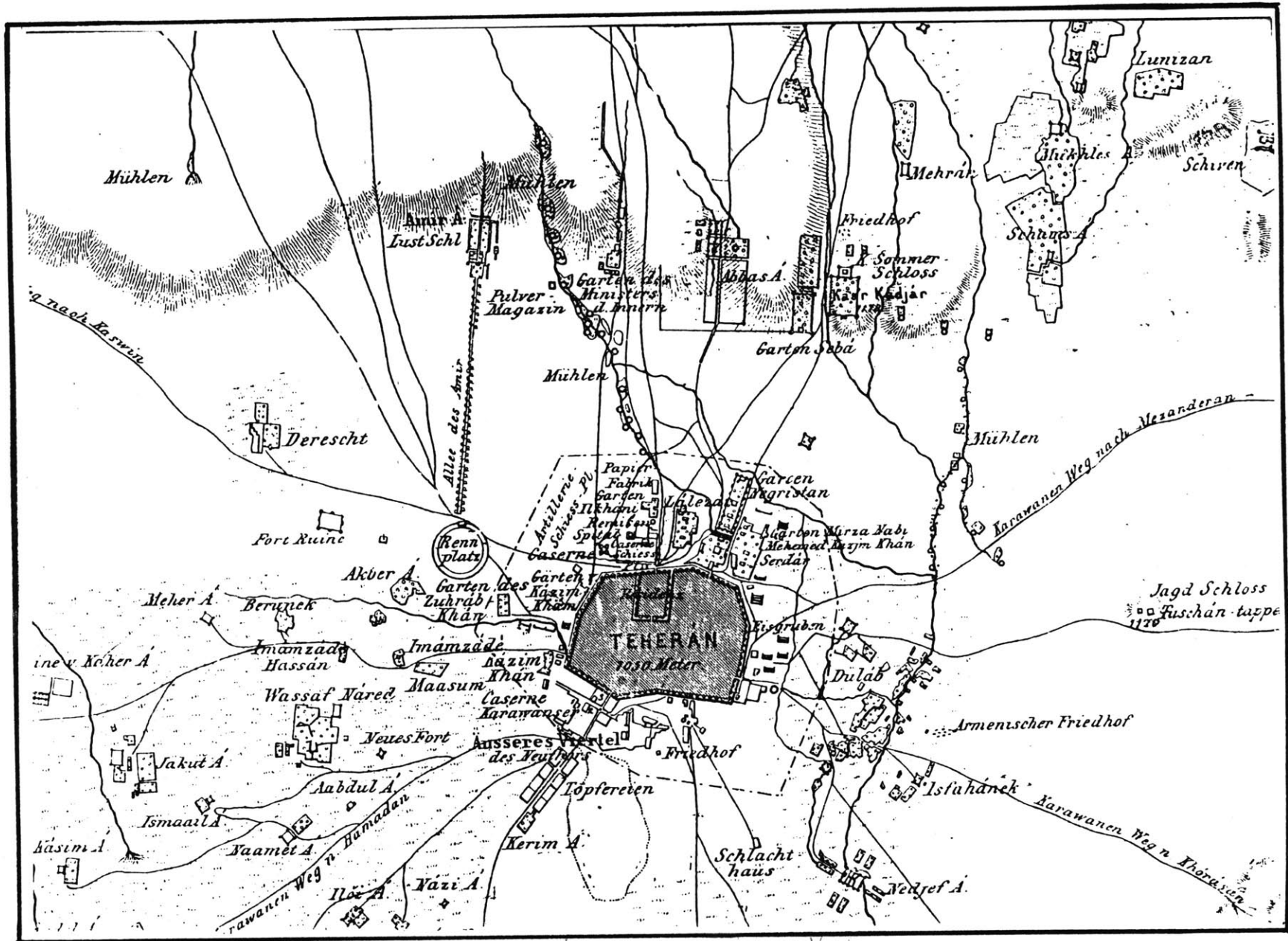


Fig. 1.8 Regional map of Tehran ca. 1860 before expansion of 1868



Fig. 1.9 1891 map of Tehran by Abdol Ghaffar Najm-ol-Molk, Soleyman Khan and students from the Dar-ol-Fonun

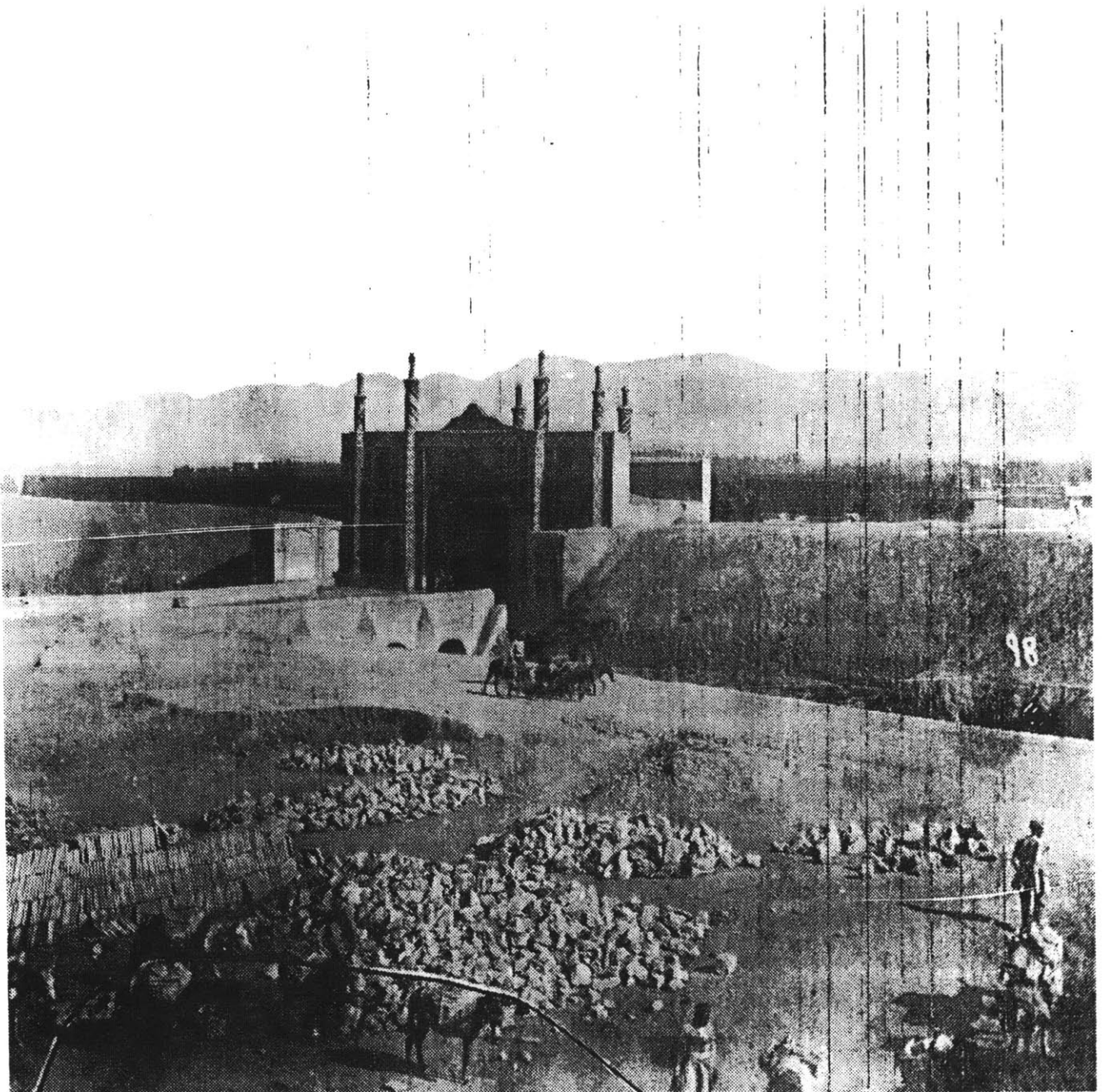


Fig. 1.10 View of gateway and bridge over moat

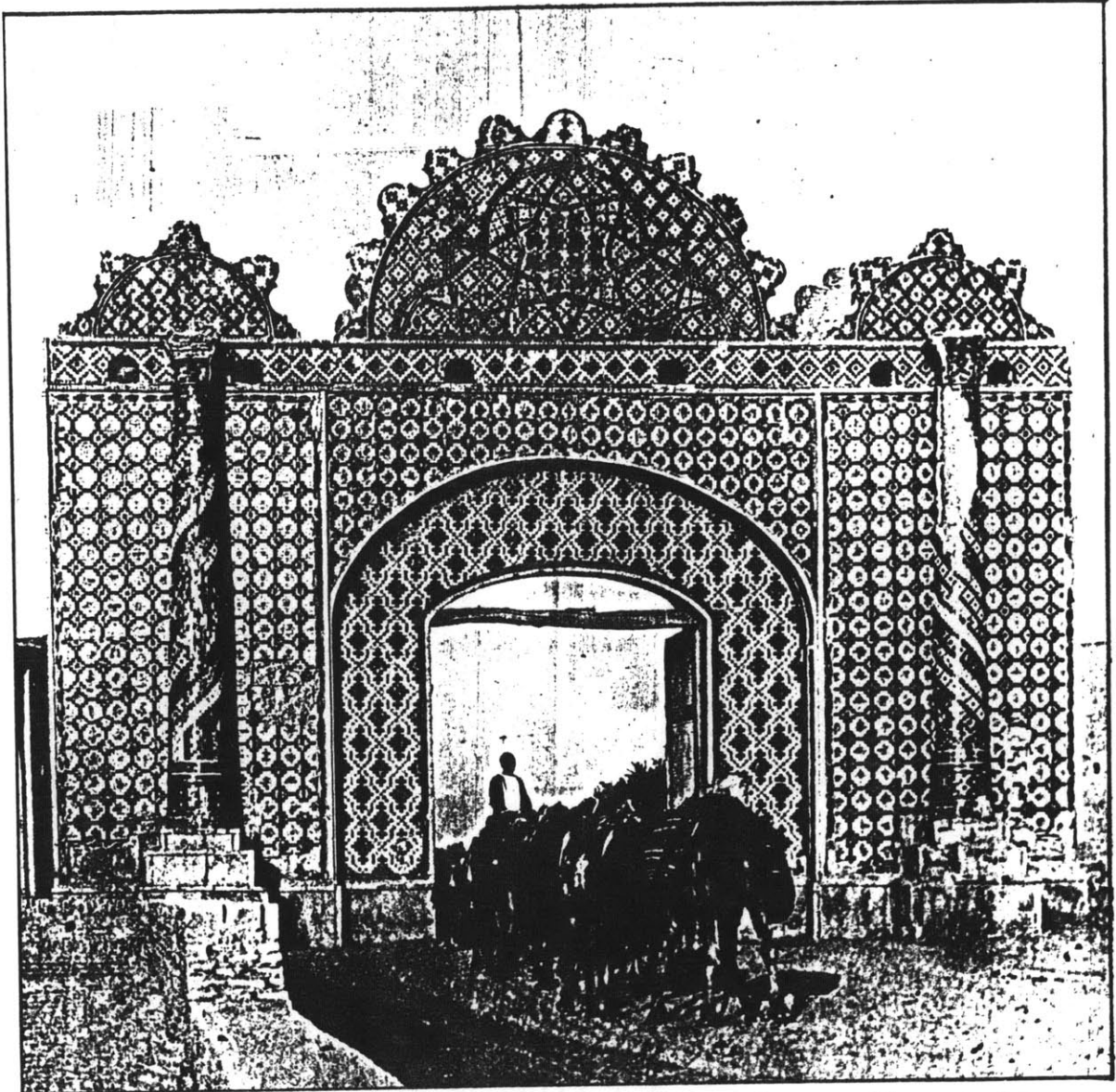


Fig. 1.11 Darvaza Gomrok (customs) on the southwestern corner of Tehran

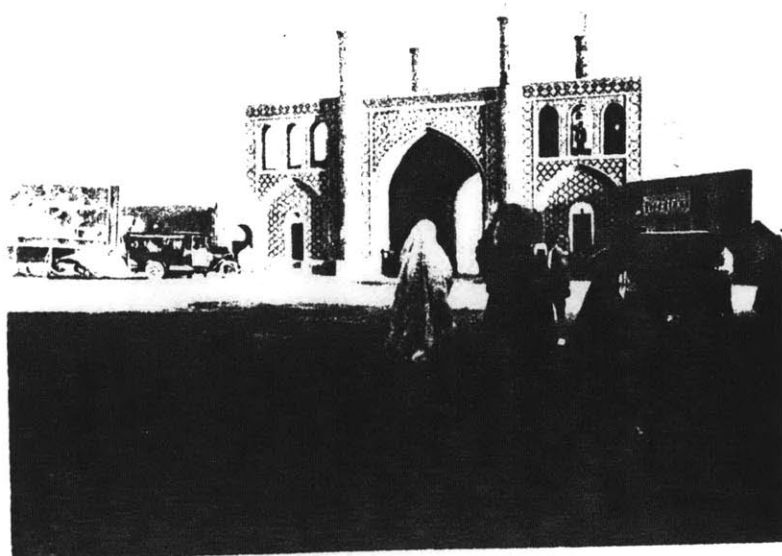
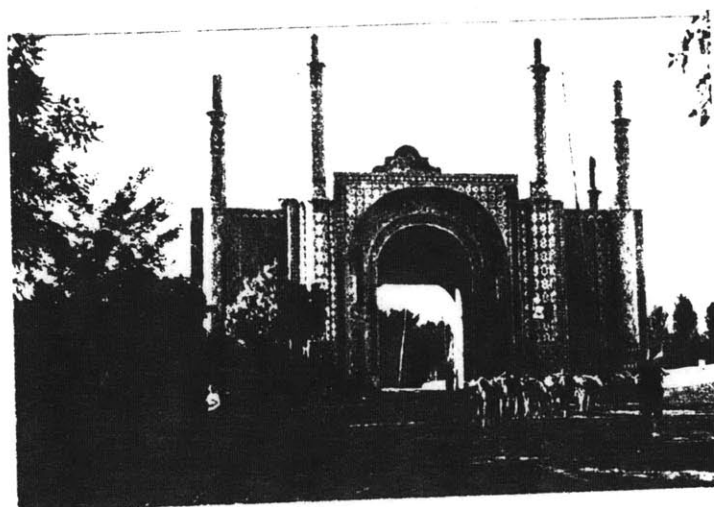
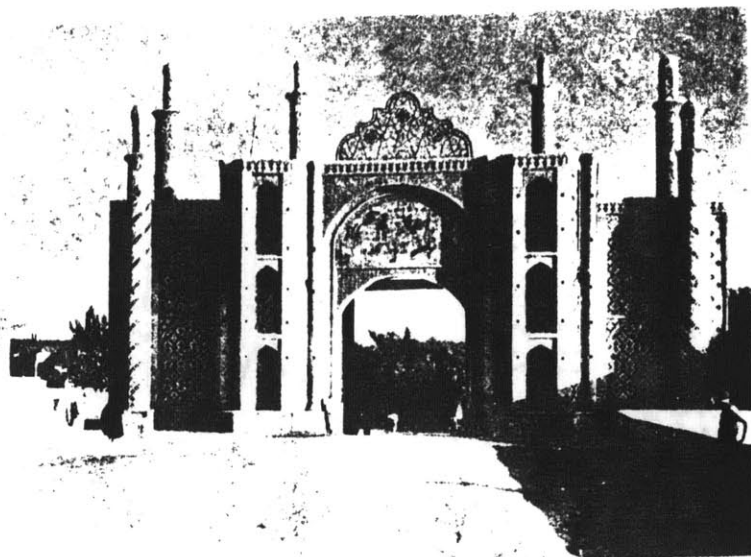


Fig. 1.12 Gateways of Tehran

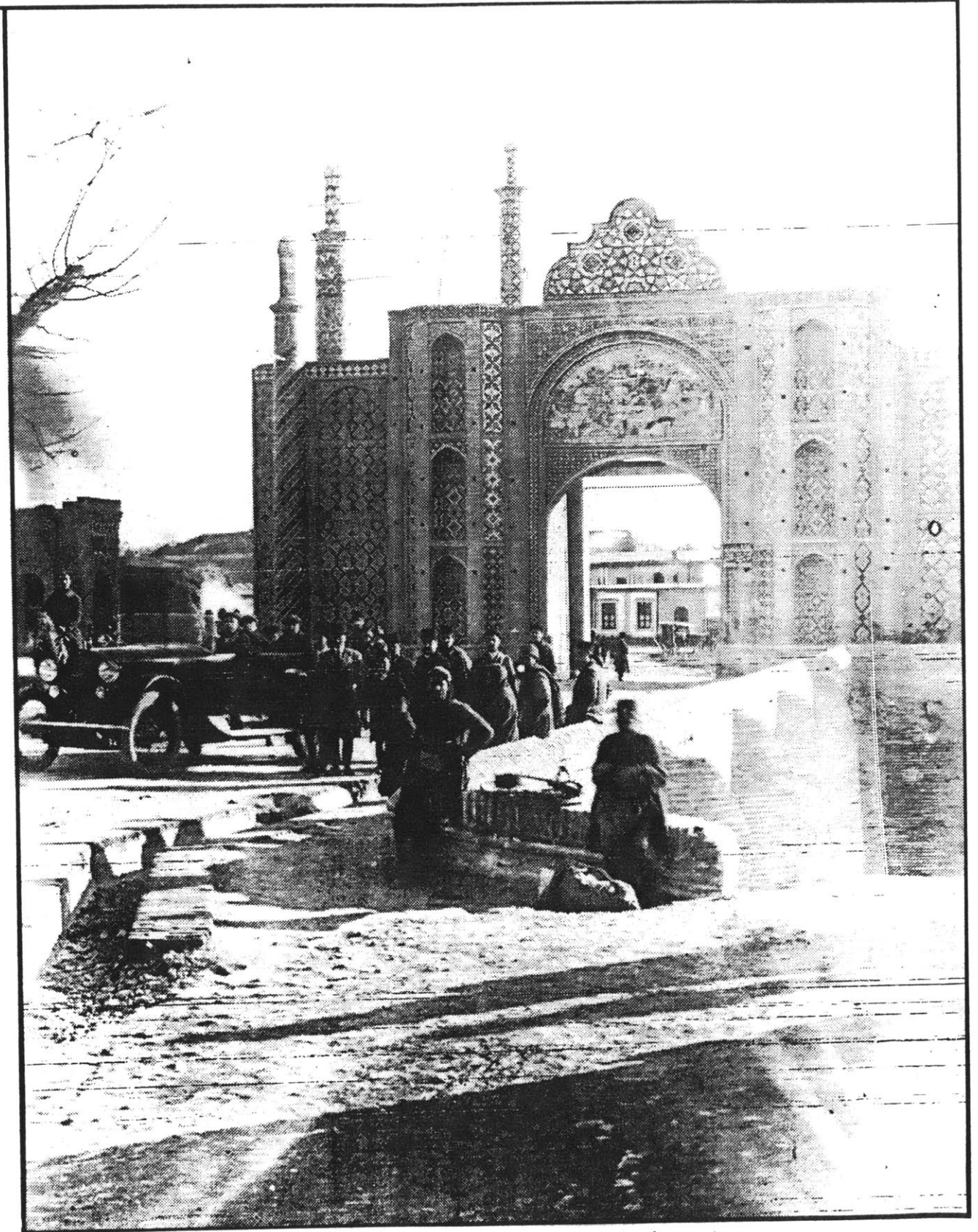


Fig. 1.13 Darvaza Dawlat at the early part of twentieth century



Fig. 1.14 Mosque of Shah Sultan Hosayn in Qazvin whose portals are similar to portals of the city

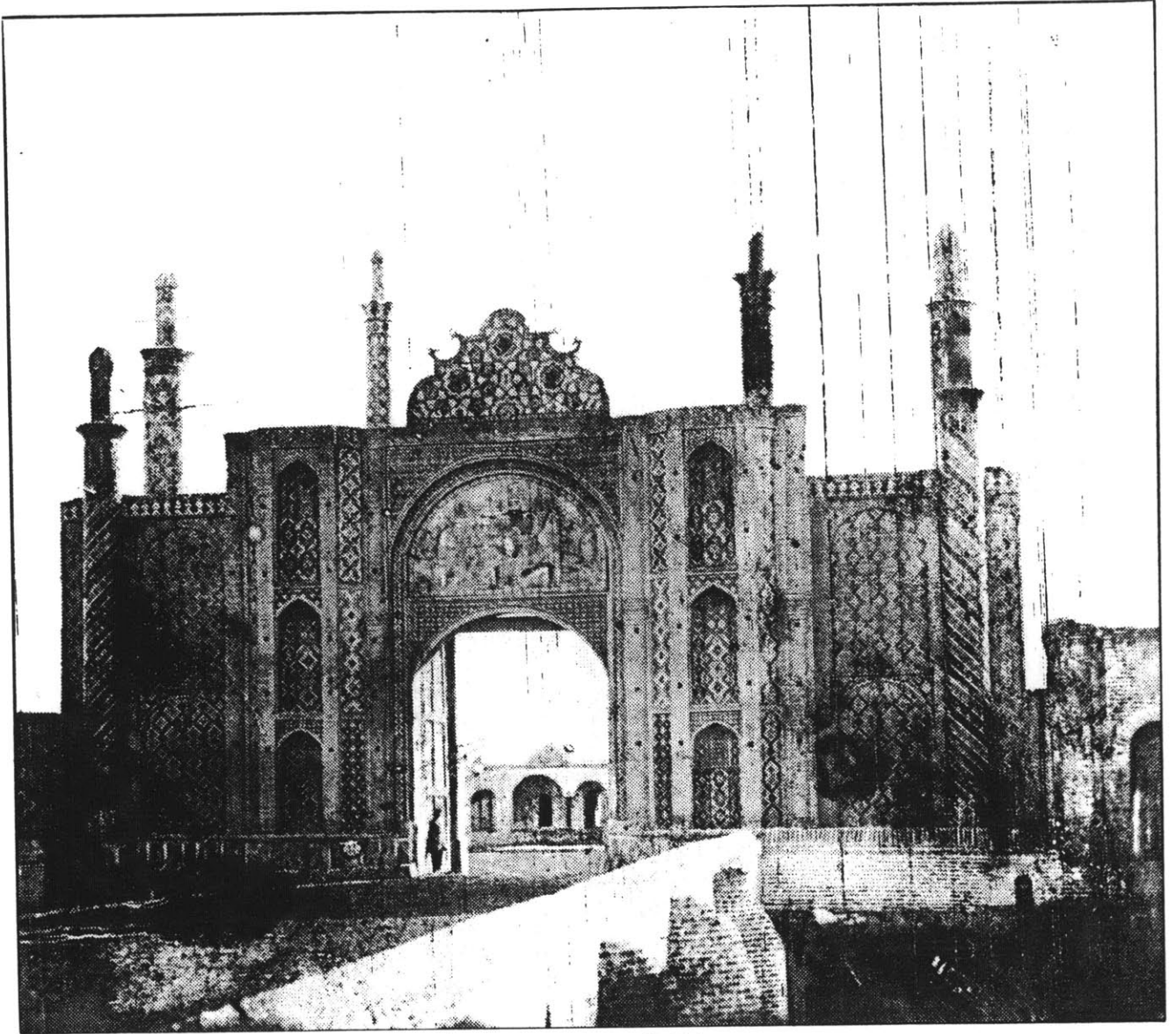


Fig. 1.15 Darvaza Dawlat, northern gateway of Tehran

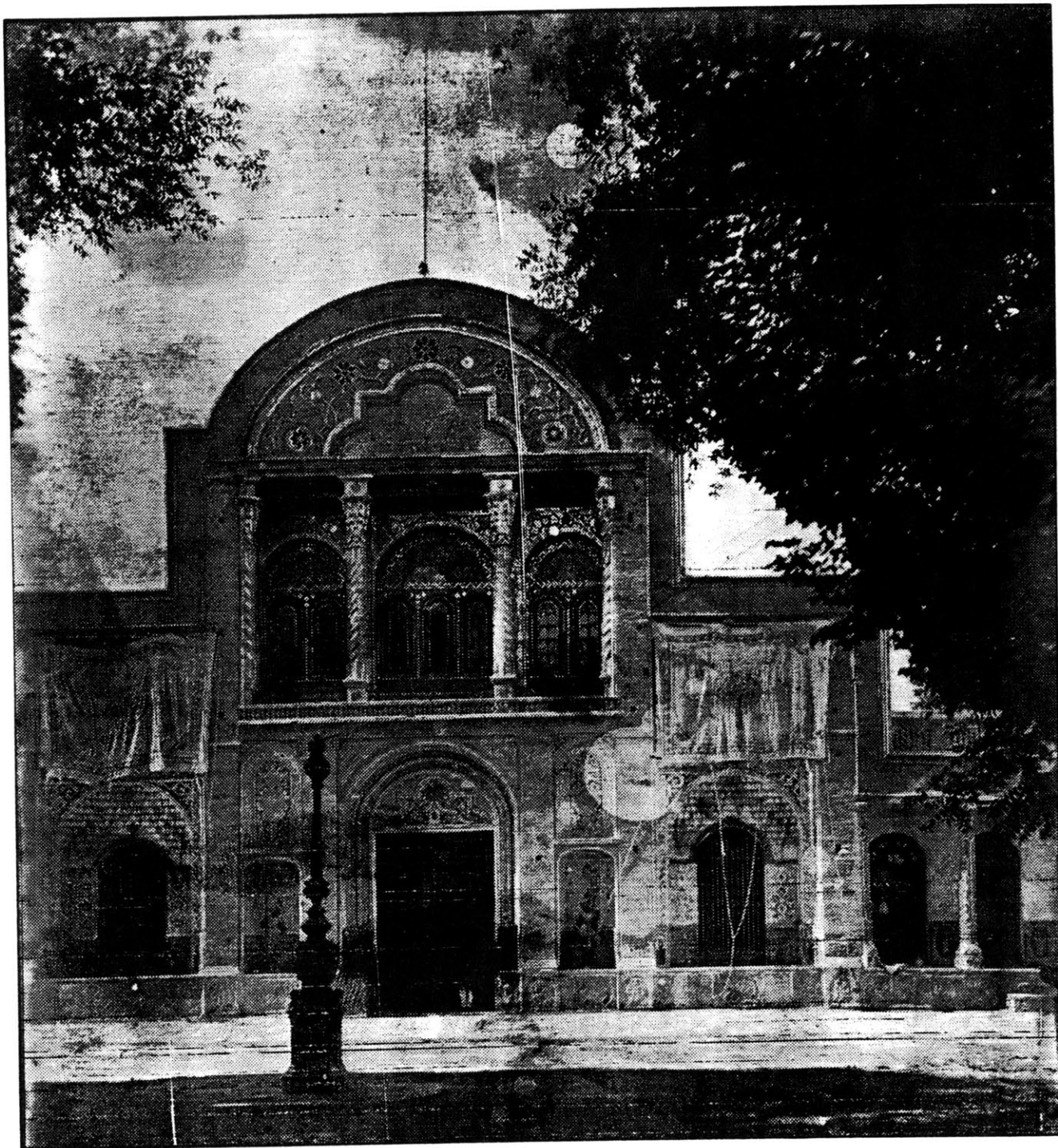


Fig. 1.16 Internal gateway in Tehran -- Darvaza Almasia

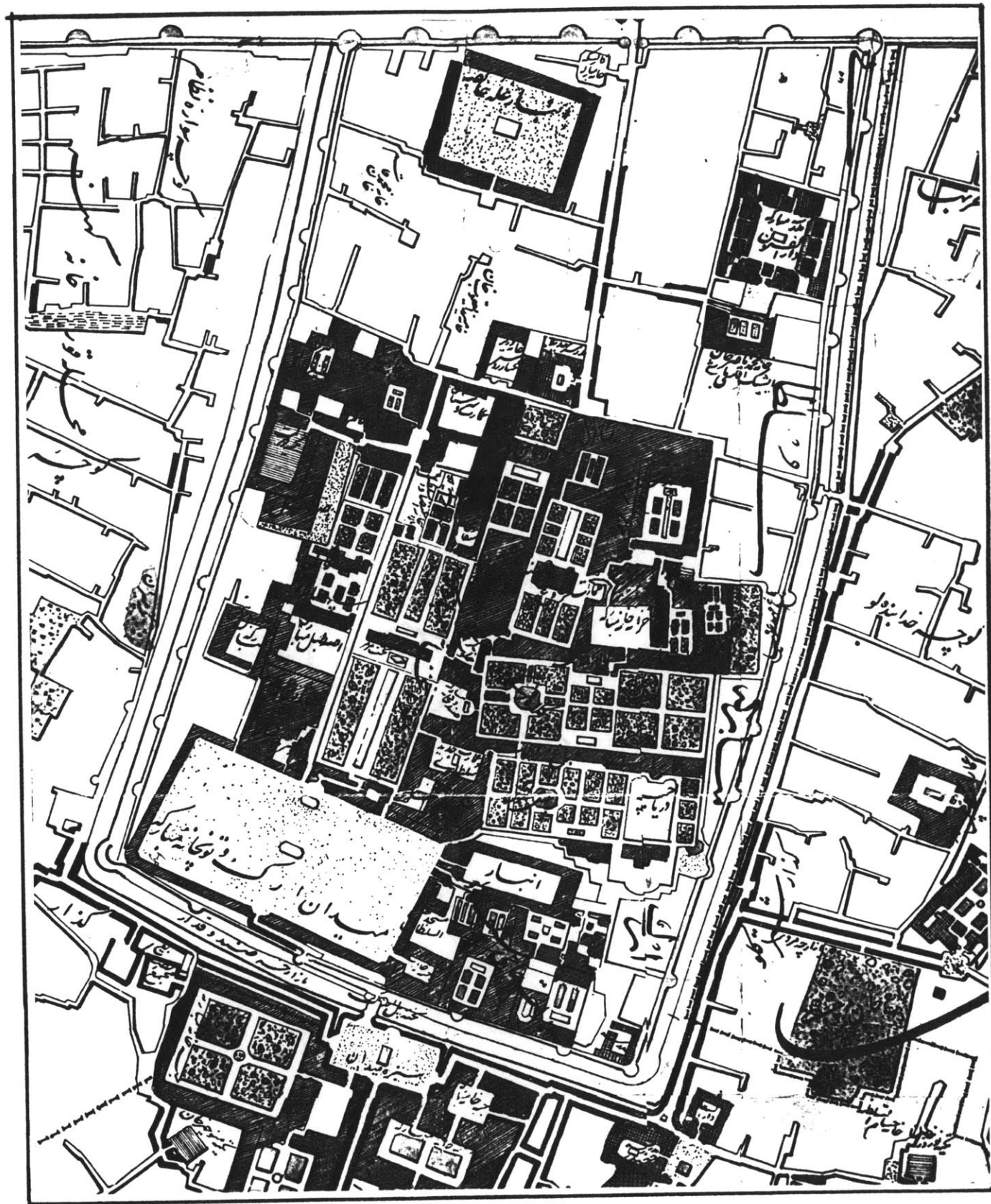


Fig. 1.17 Map of the Arg in 1858 (Krziz map)

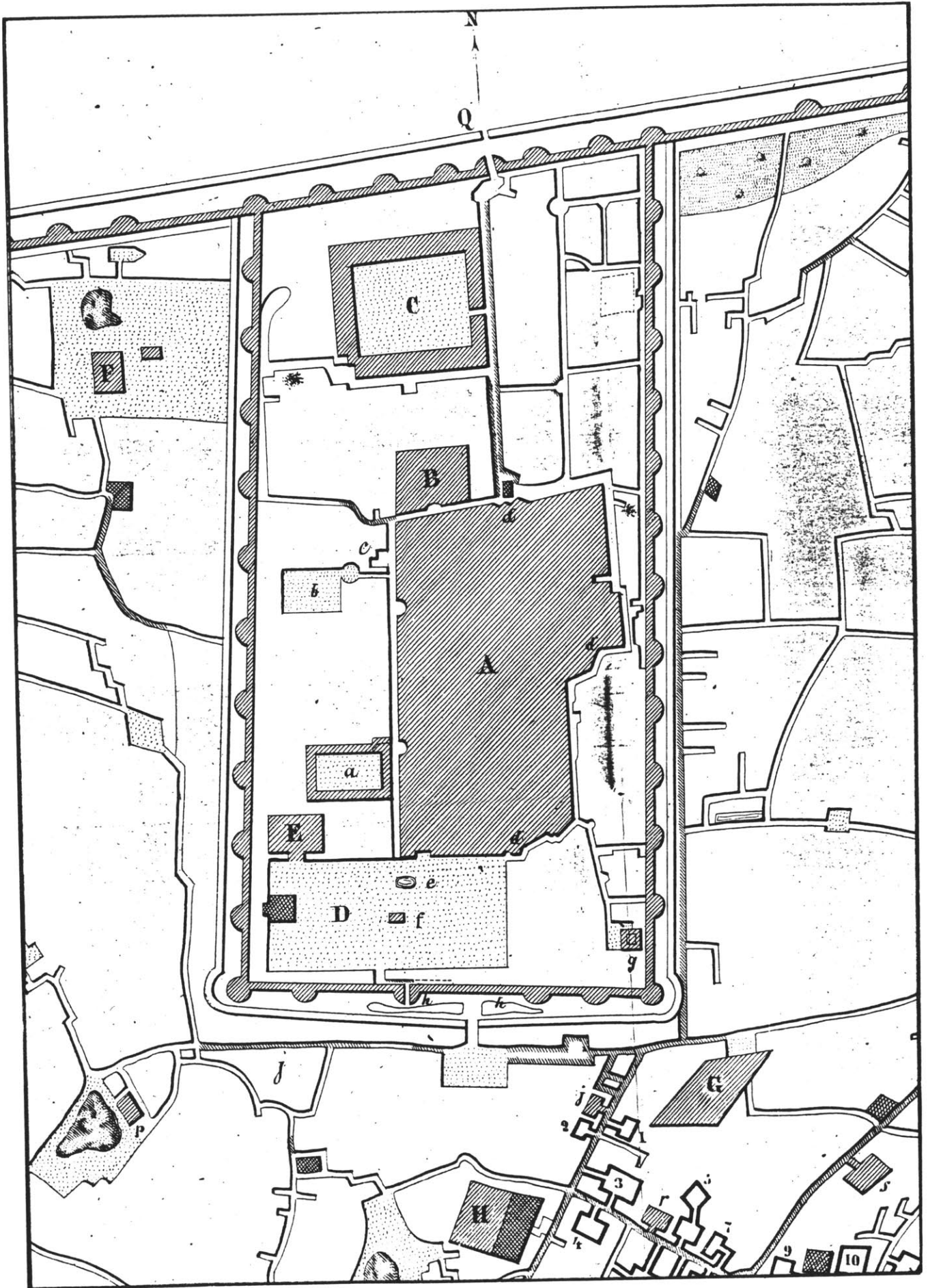


Fig. 1.18 Map of the Arg in 1842 (Berezin map)

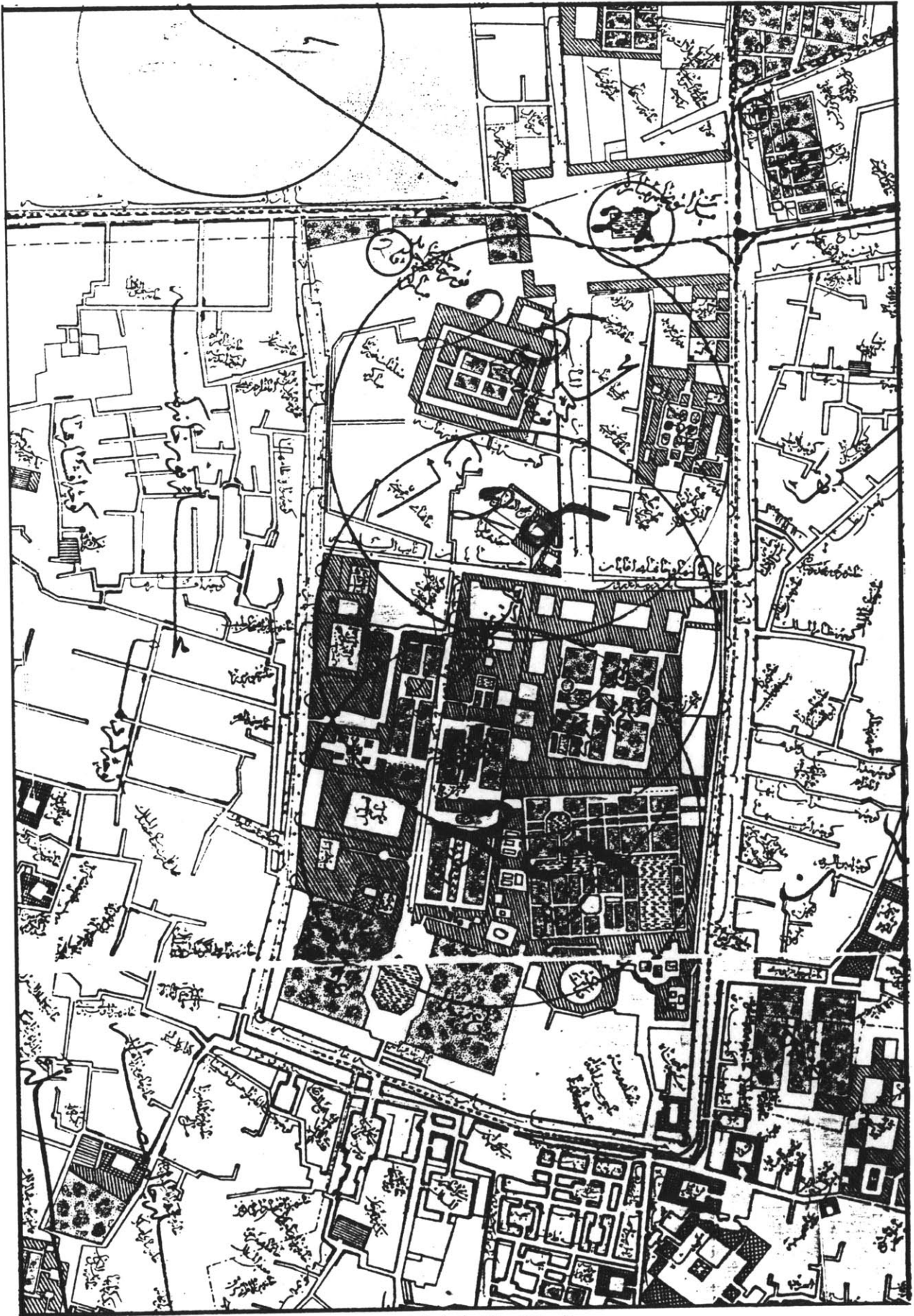


Fig. 1.19 Map of the Arg in 1891 (Abdol Ghaffar)

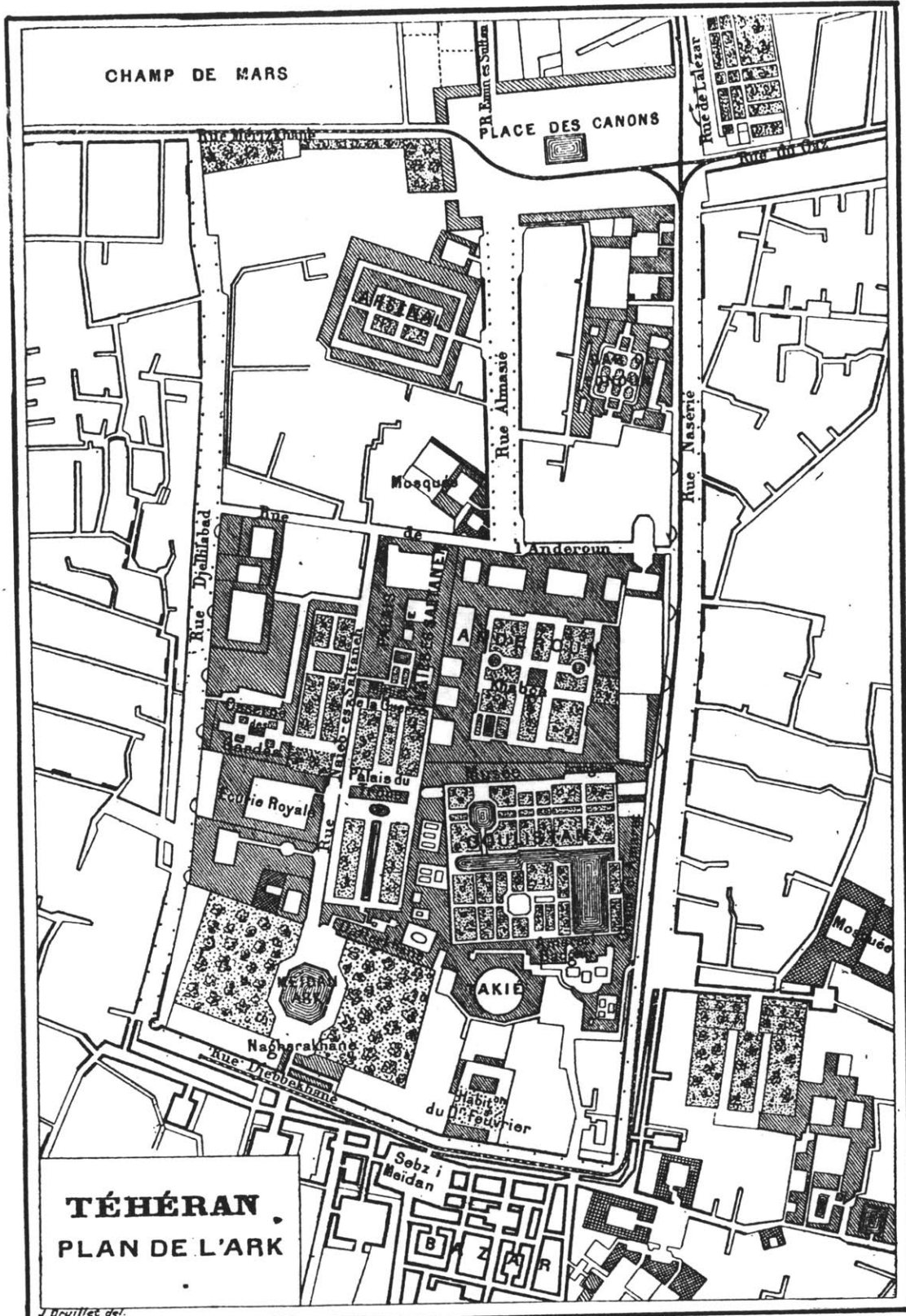


Fig. 1.20 Dr. Fevrier's 1892 map of the Arg

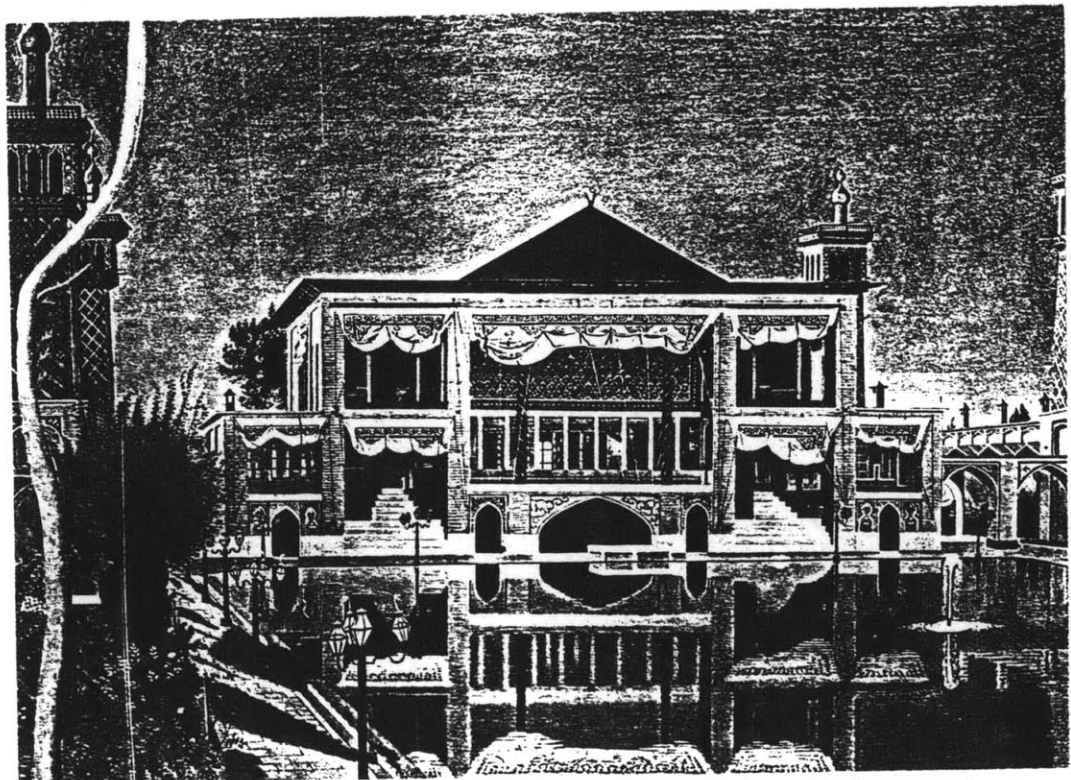
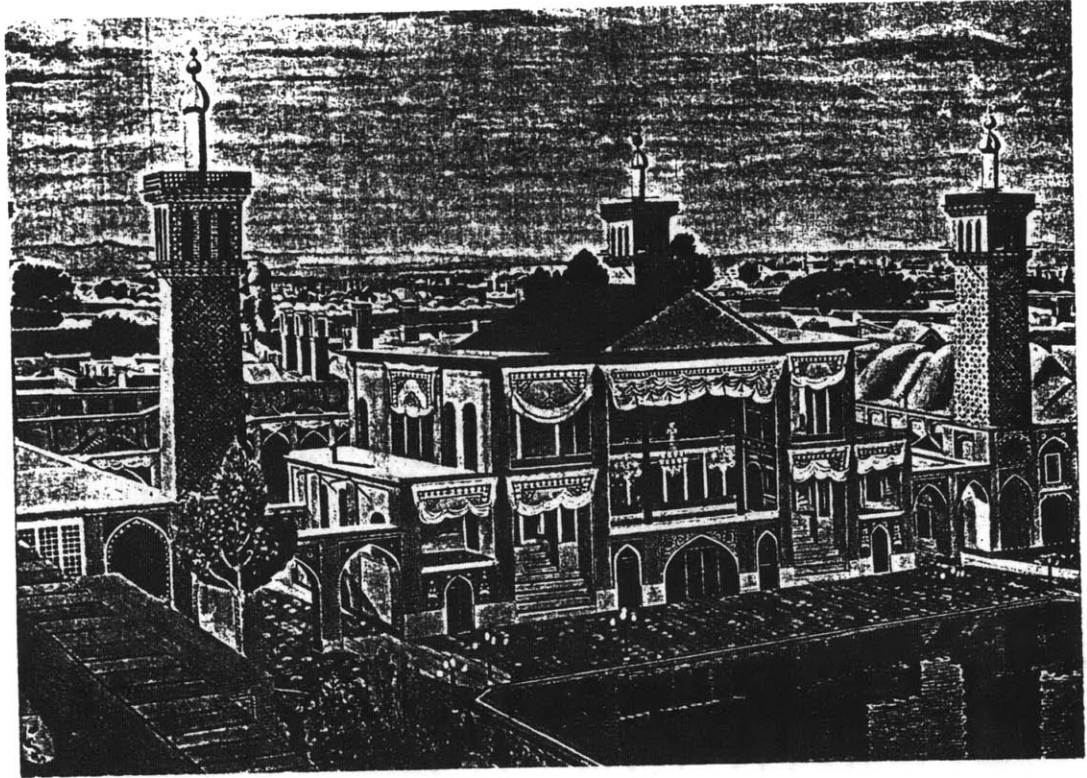


Fig. 1.21 Kakh-e Badgir, Royal residential quarters built by Fath Ali Shah

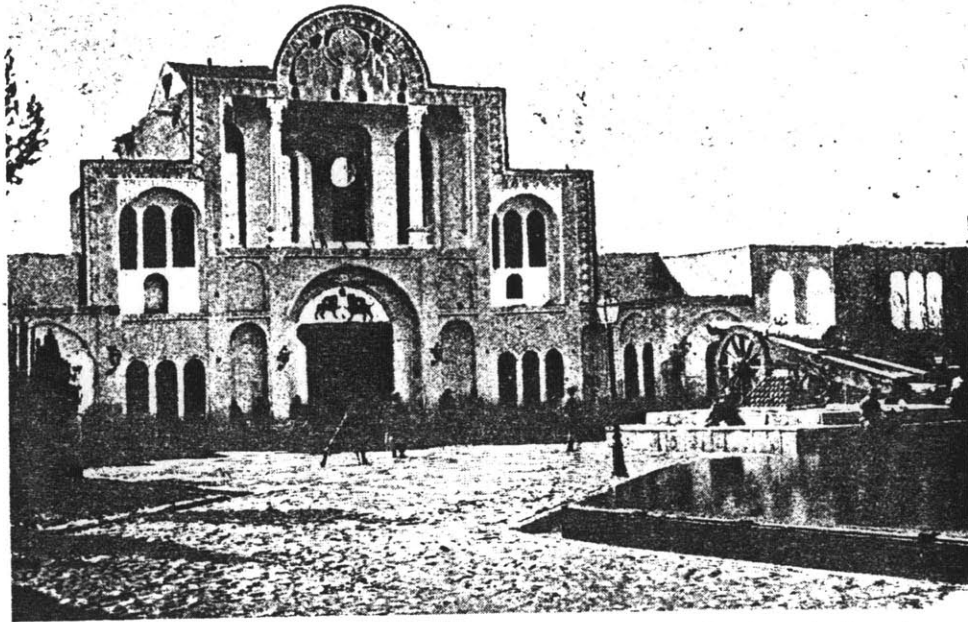


Fig. 1.22 Tup Morvarid at Maydan Shah with the Nagharakhana gateway

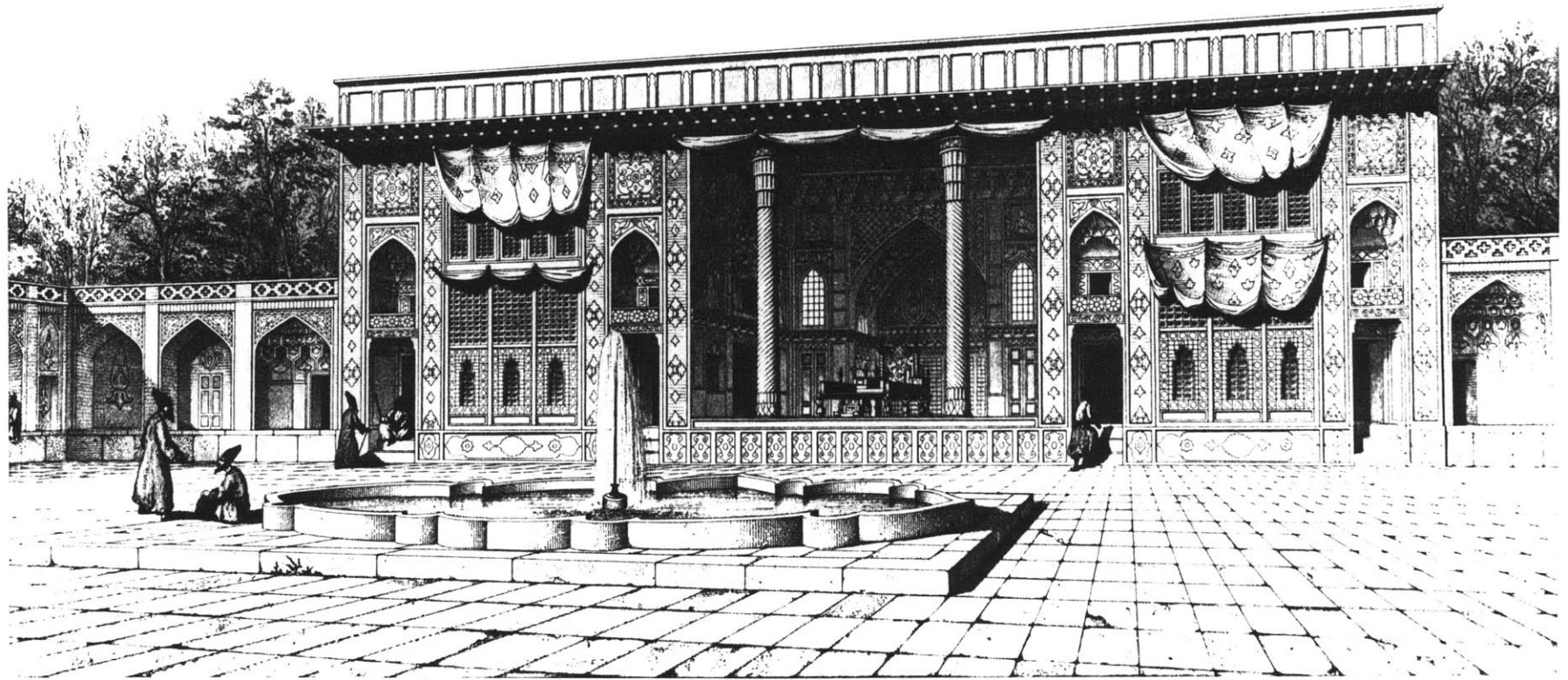


Fig. 1.23 Talar-e Takht-e Marmar, rendering by Pascal Coste ca.1840

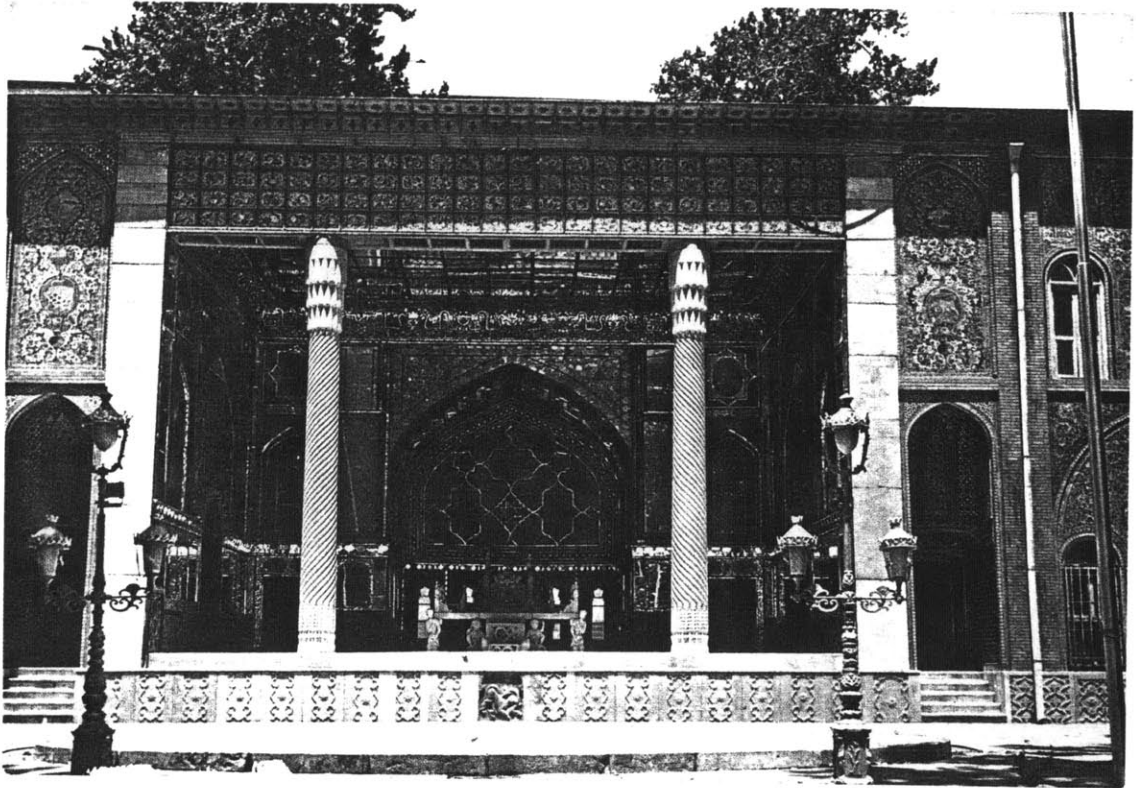


Fig. 1.24 Talar-e Takht-e Marmar, main ayvan

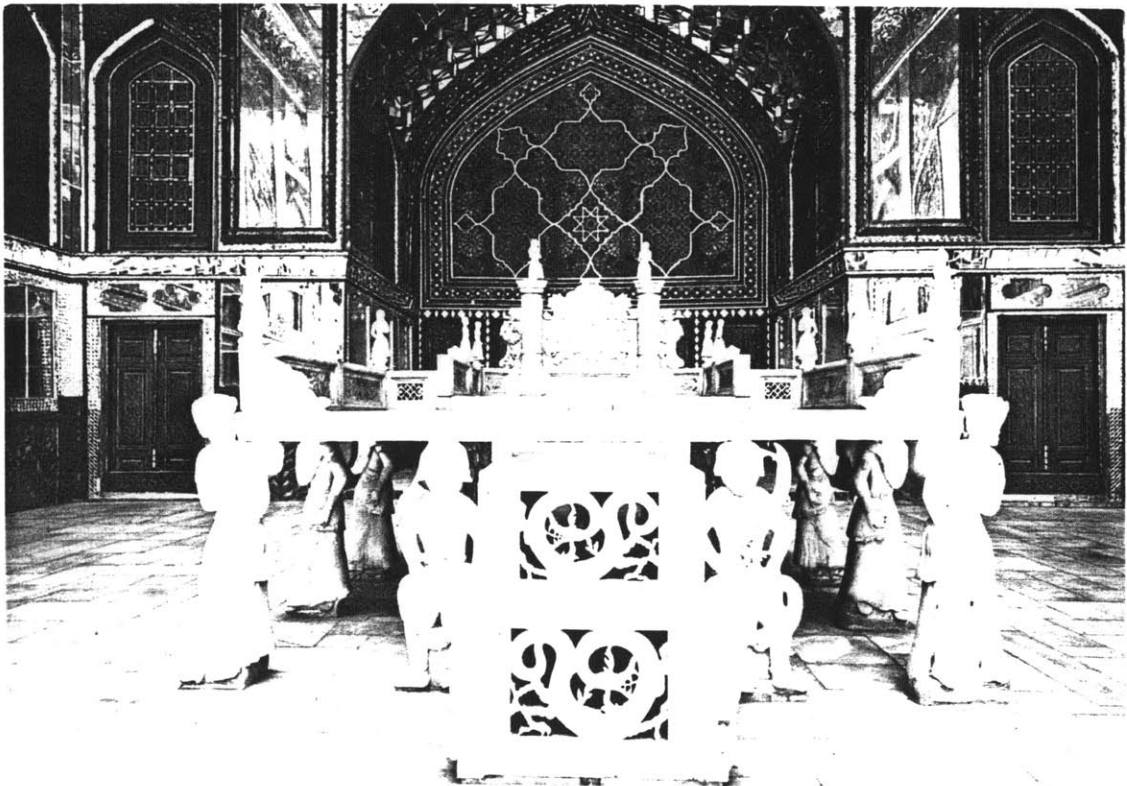


Fig. 1.25 Takht-e Marmar

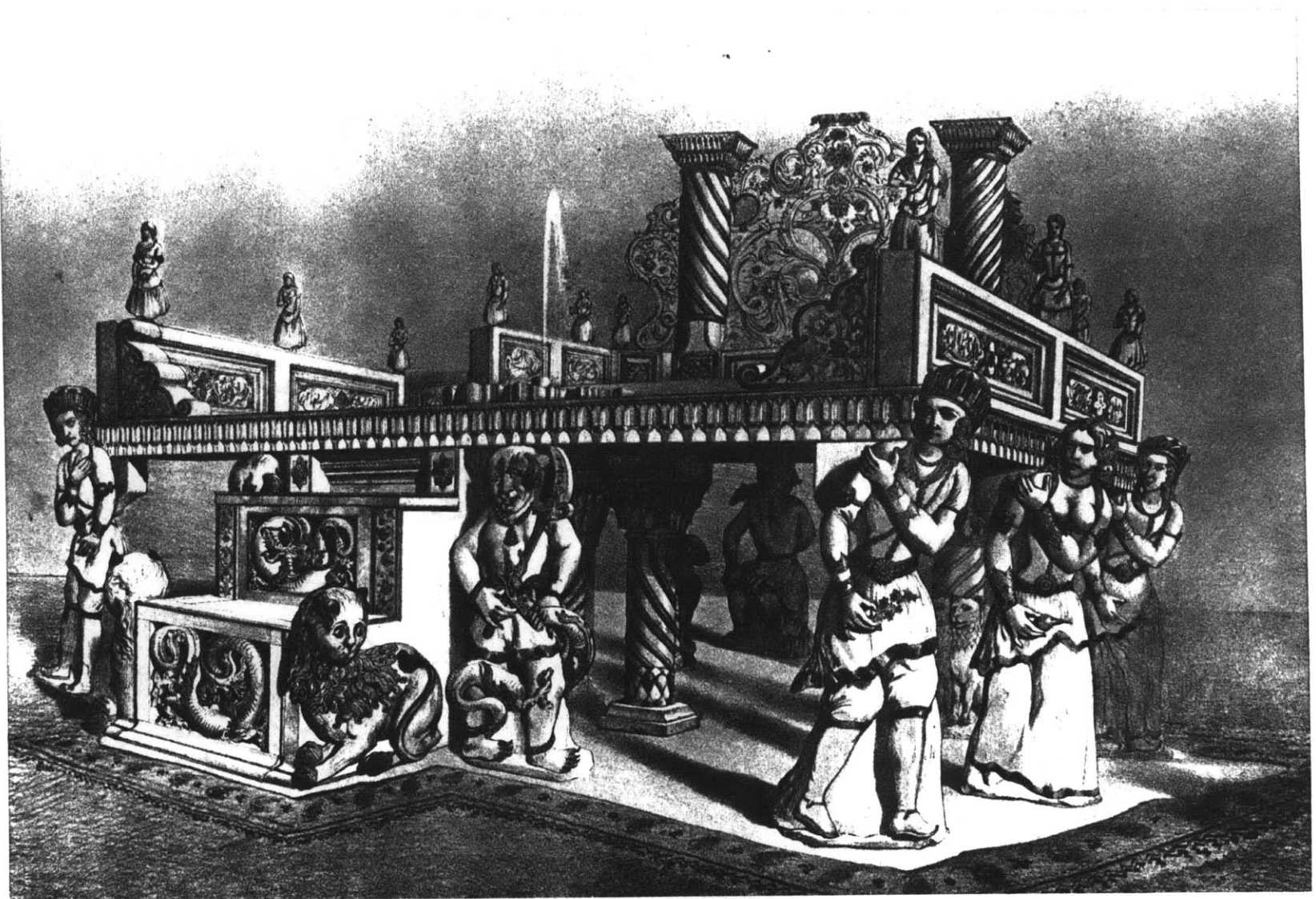


Fig. 1.26 Takht-e Marmar, rendering by Jules Laurens in 1848



Fig. 1.27 Coronation ceremonies of Reza Shah at Takht-e Marmar in 1925

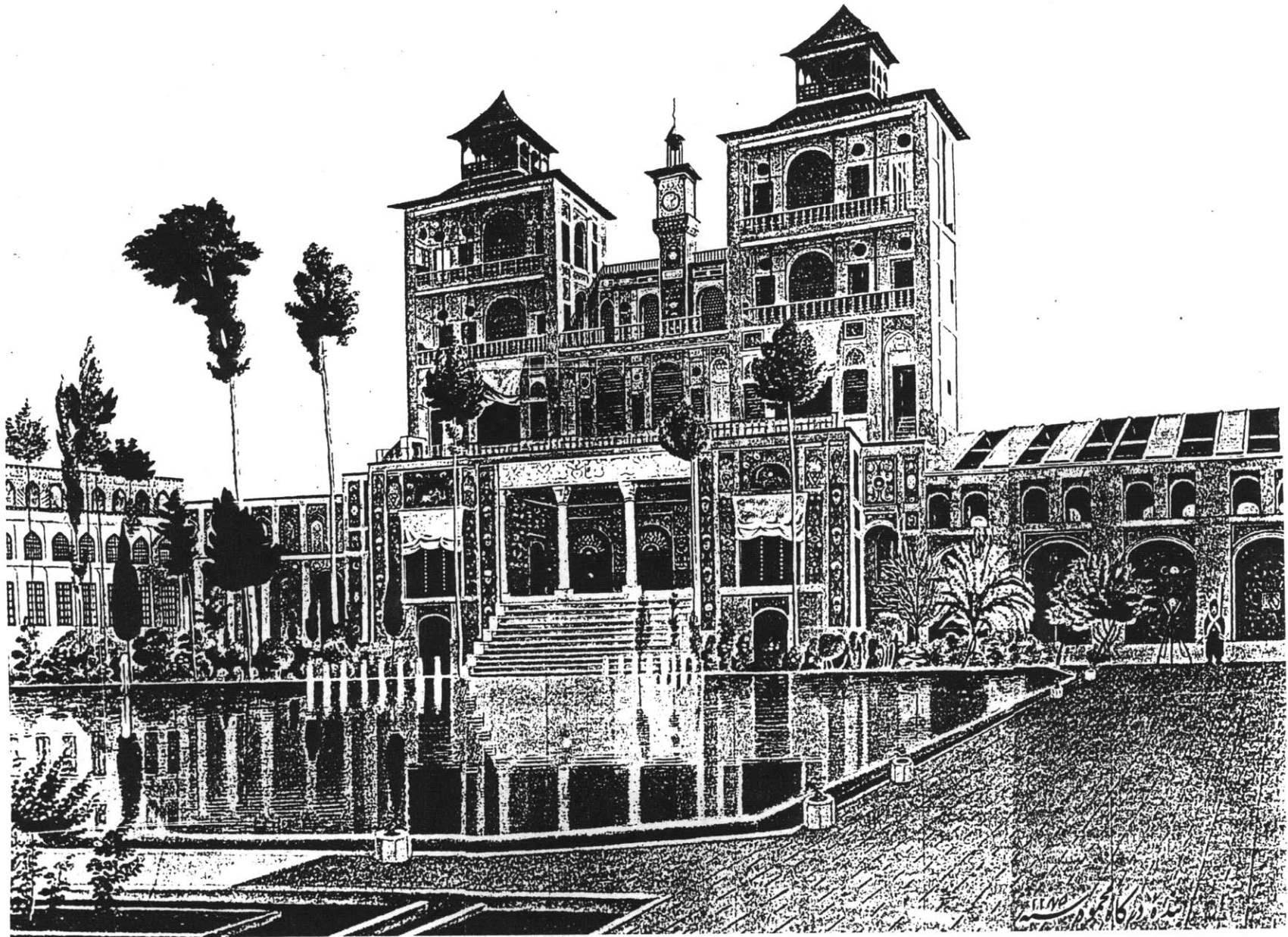


Fig. 1.28 Shams-ol-'Emara Palace as depicted by Mirza Mahmud Khan,
Malek ol-Shu'ara, 1285/1869

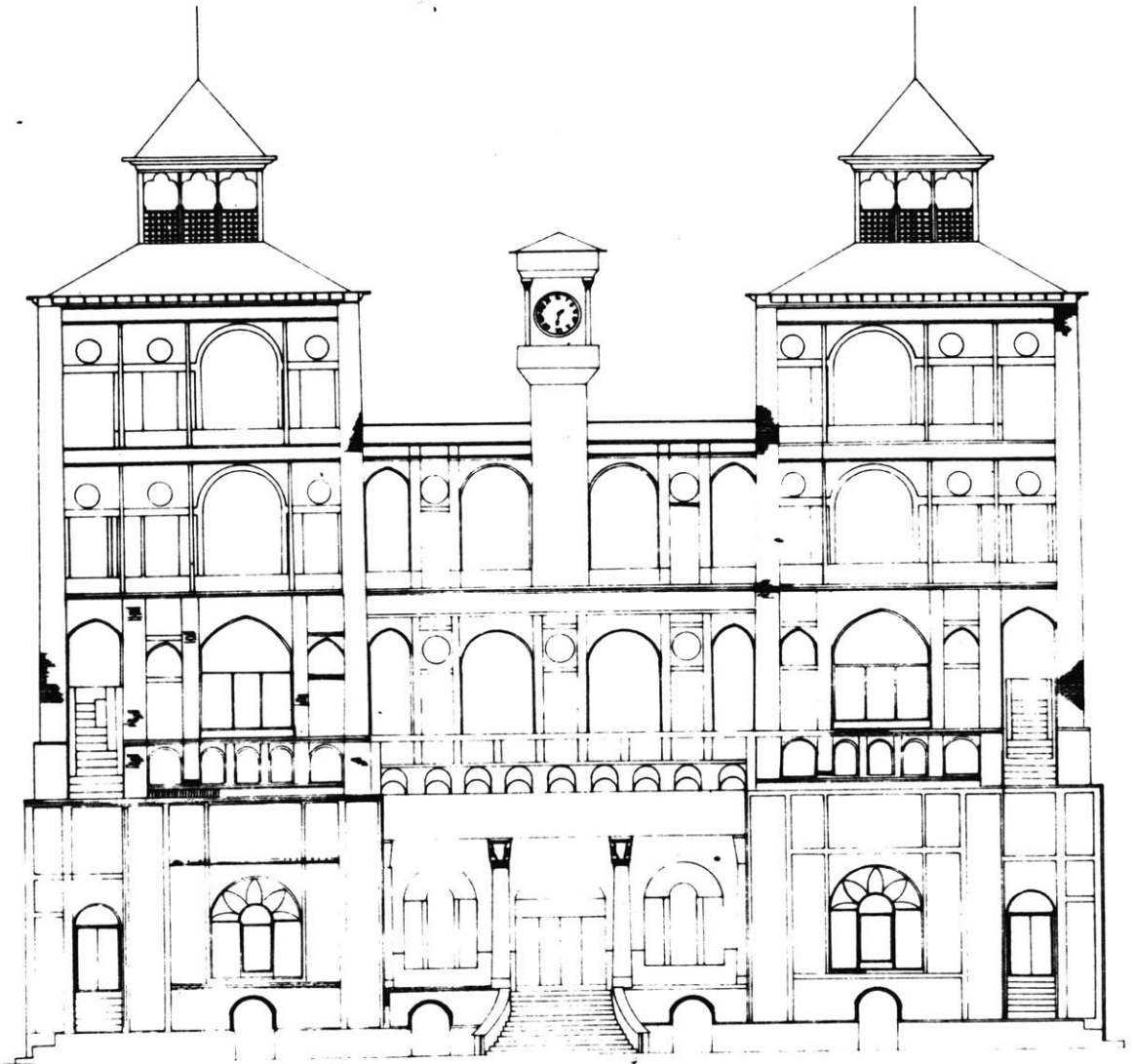


Fig. 1.29 Main Elevation of Shams-ol-'Emara

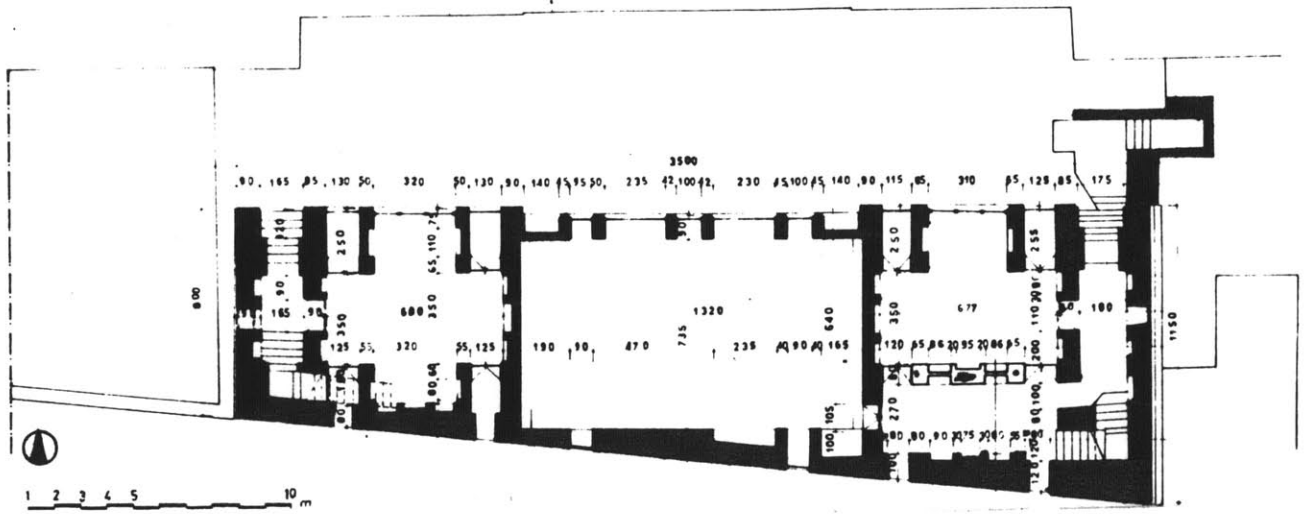
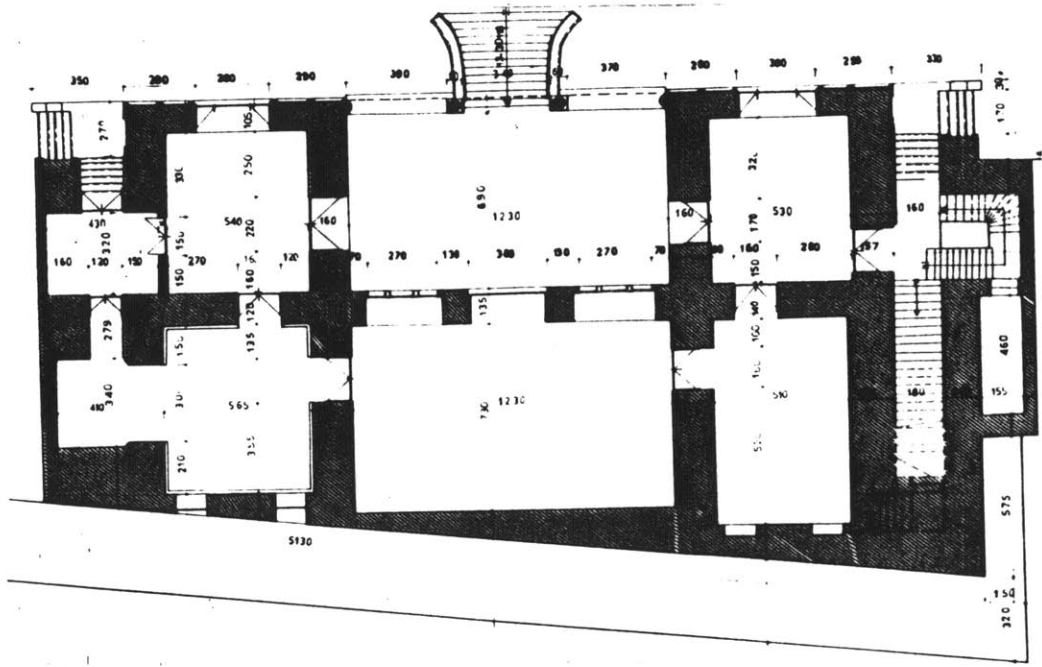


Fig. 1.30 Plan of Shams-ol-'Emara, first and second floors

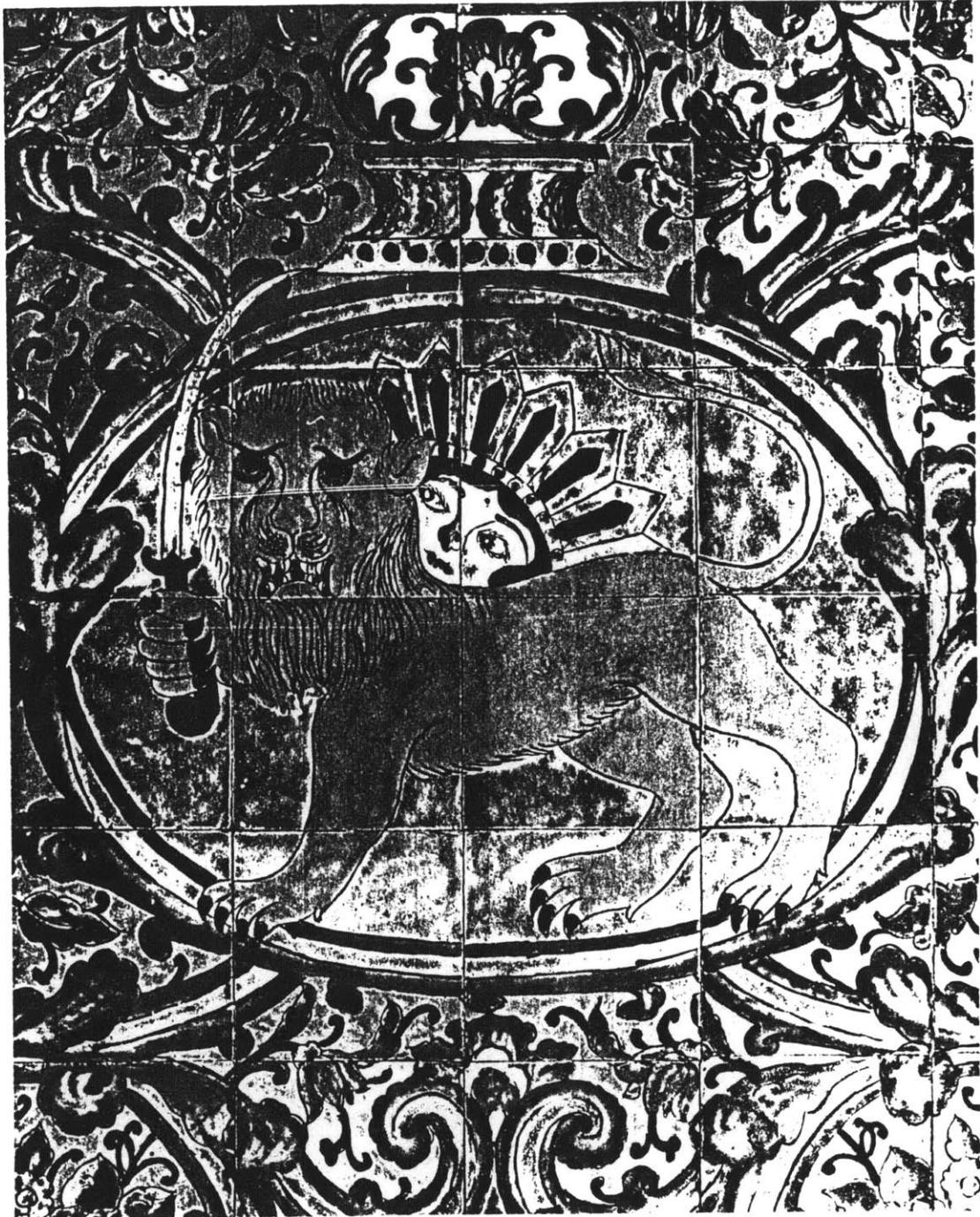


Fig. 1.31 Detail of the lion and sun emblem in tile.



Fig. 1.32 Street of the Andarun by Mirza Mahmud Khan, Malek ol-Shu'ara

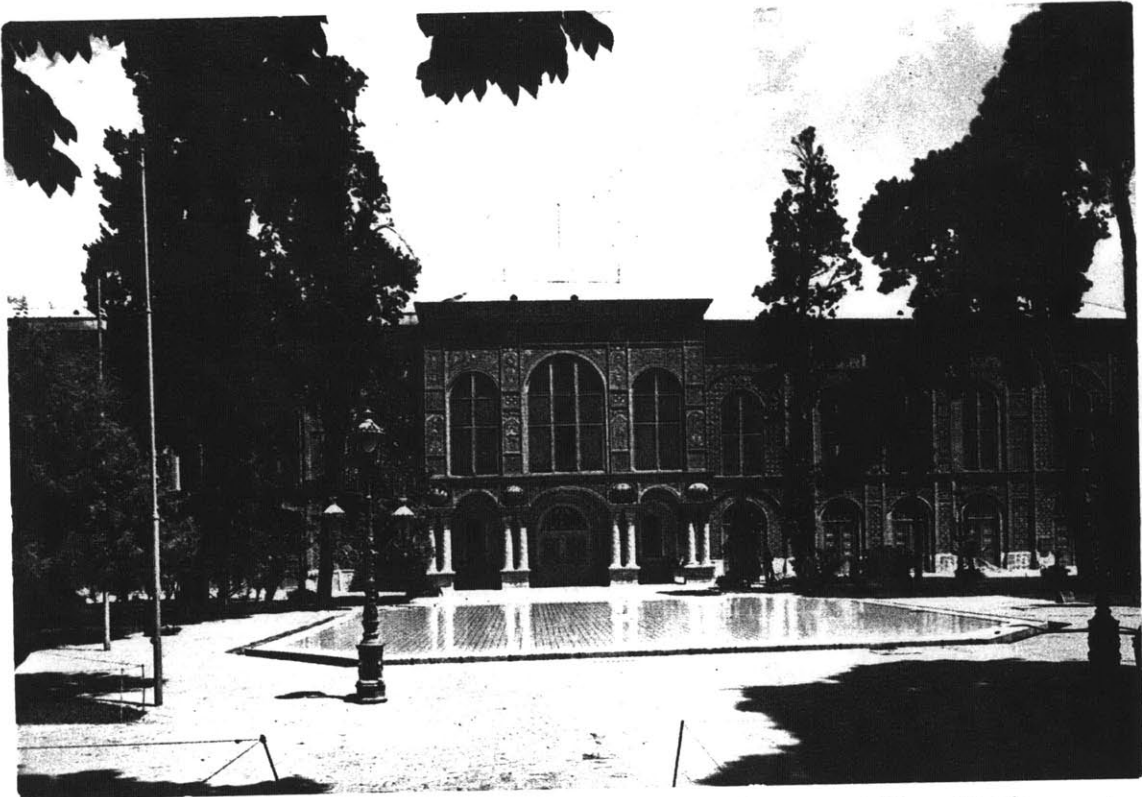


Fig. 1.33 Golestan Palace built by Naseroddin Shah

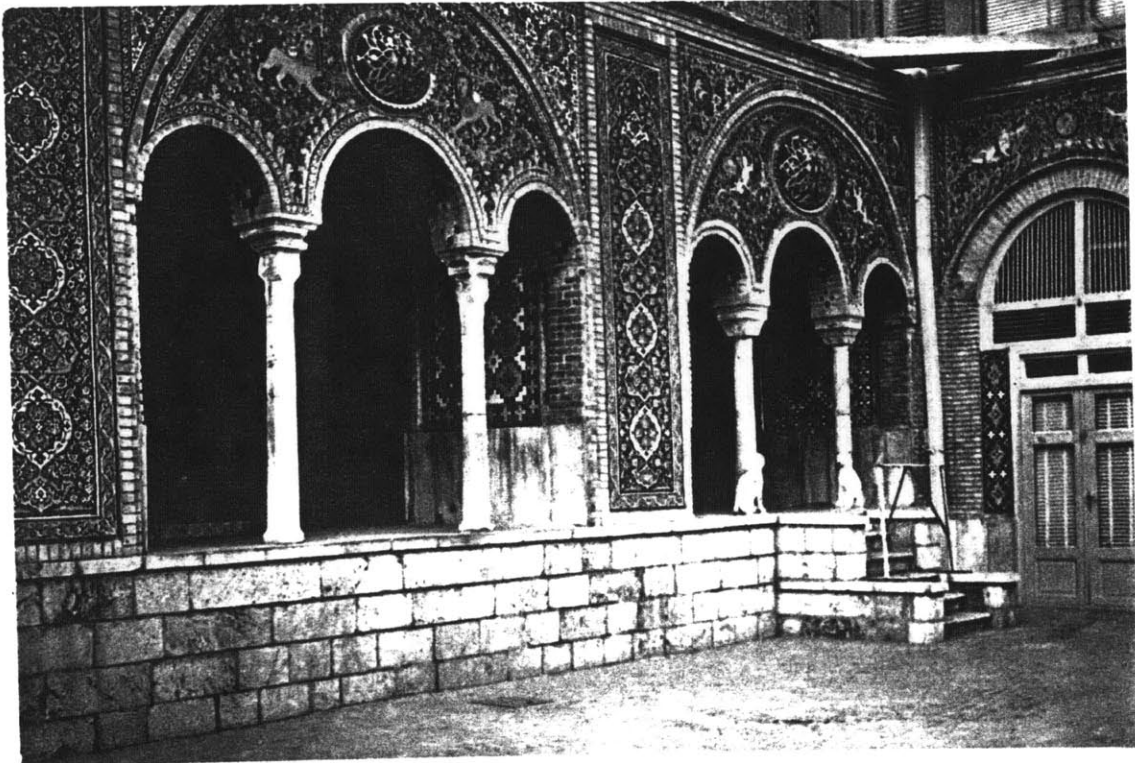


Fig. 1.34 Golestan Palace



Fig. 1.35 Golestan Palace, interior of main salon

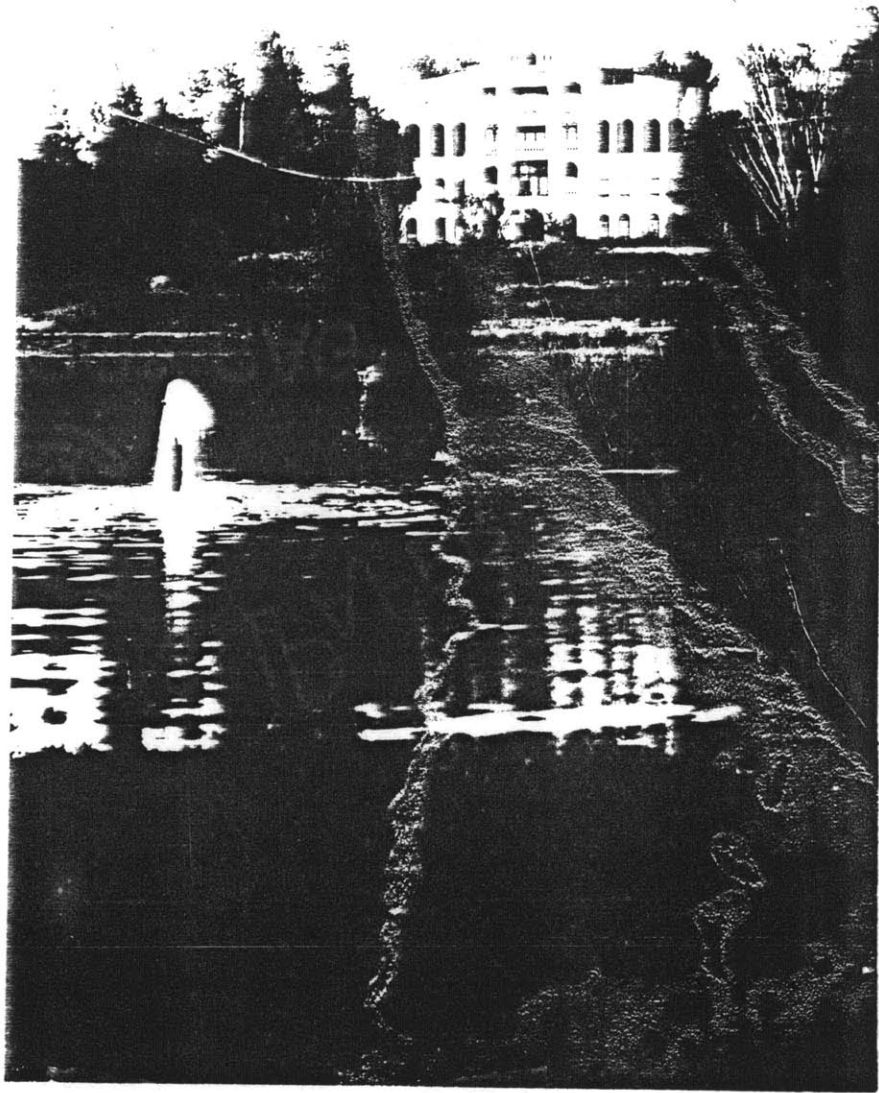


Fig. 1.36 . Palace

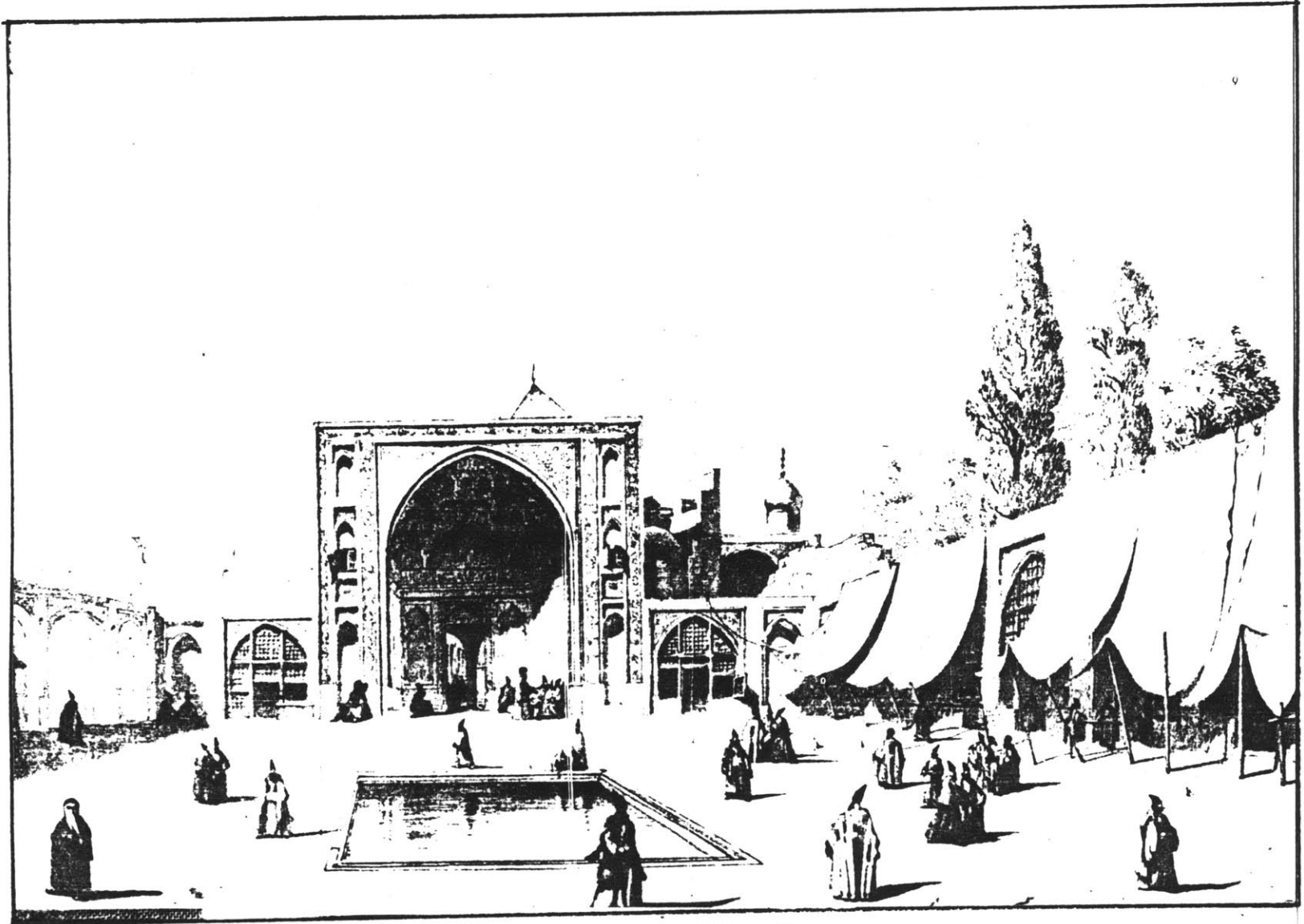


Fig. 1.37 Masjid Shah, rendering by Eugene Flandin

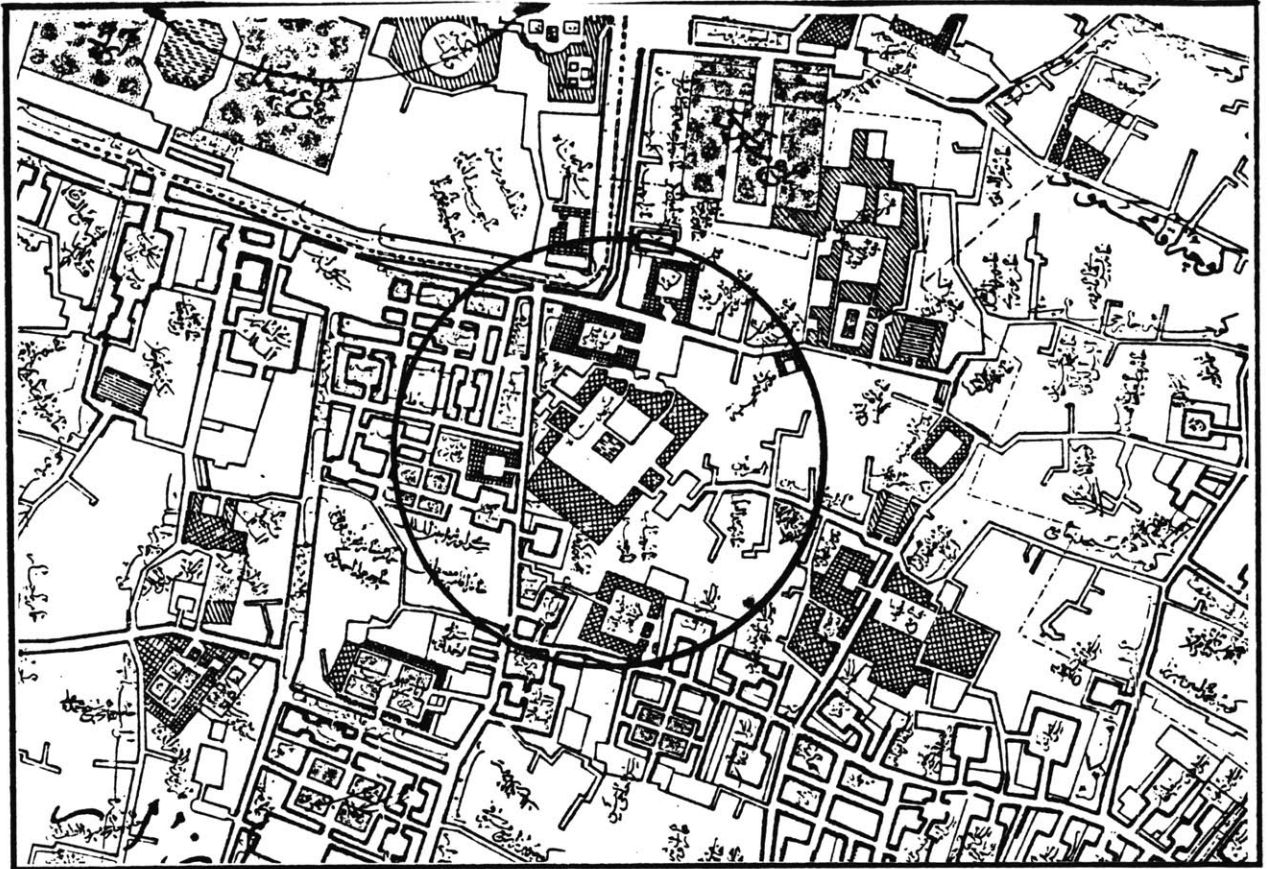


Fig. 1.38 Masjid Shah, site plan in 1891 Map

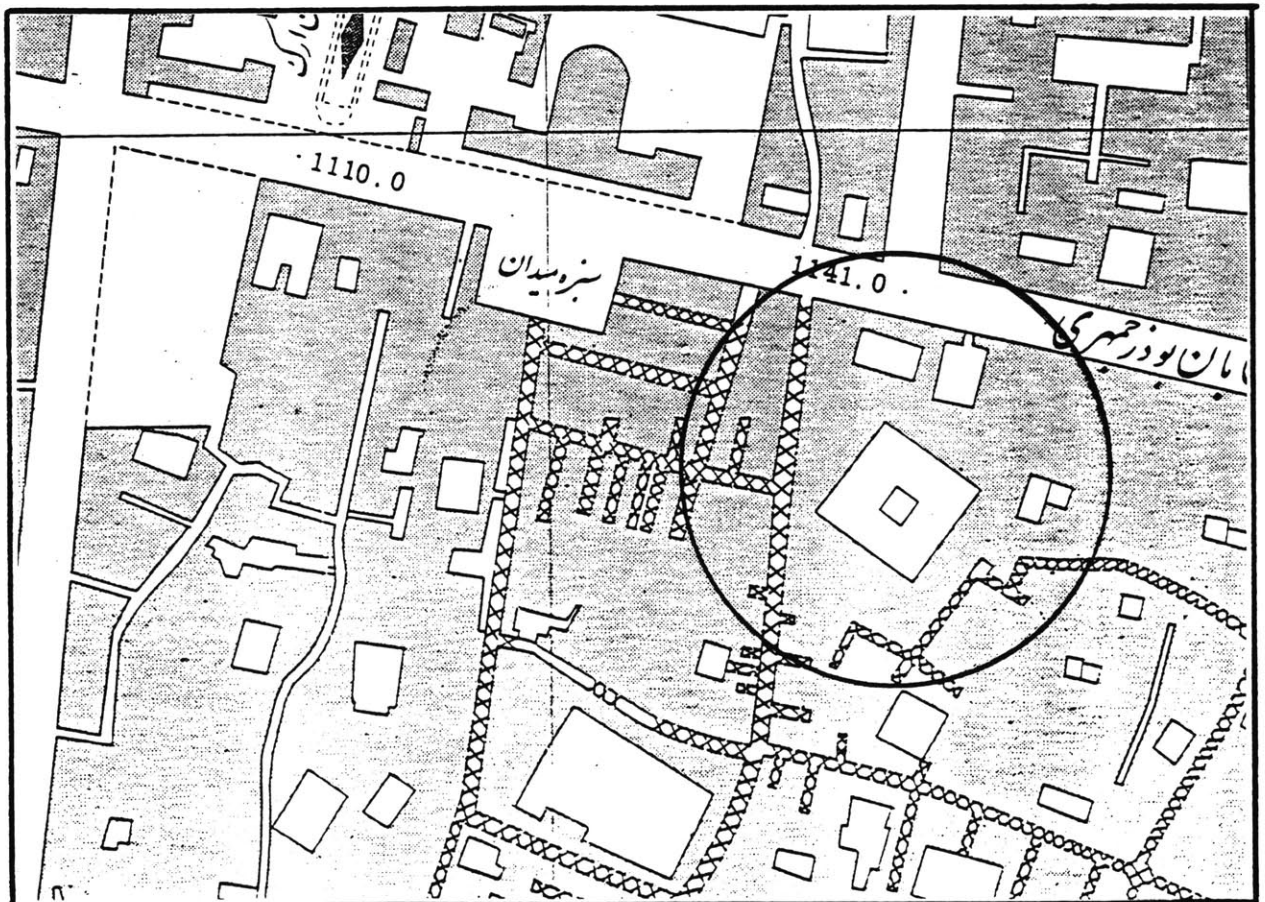


Fig. 1.39 Masjid Shah, site plan in 1970 Map

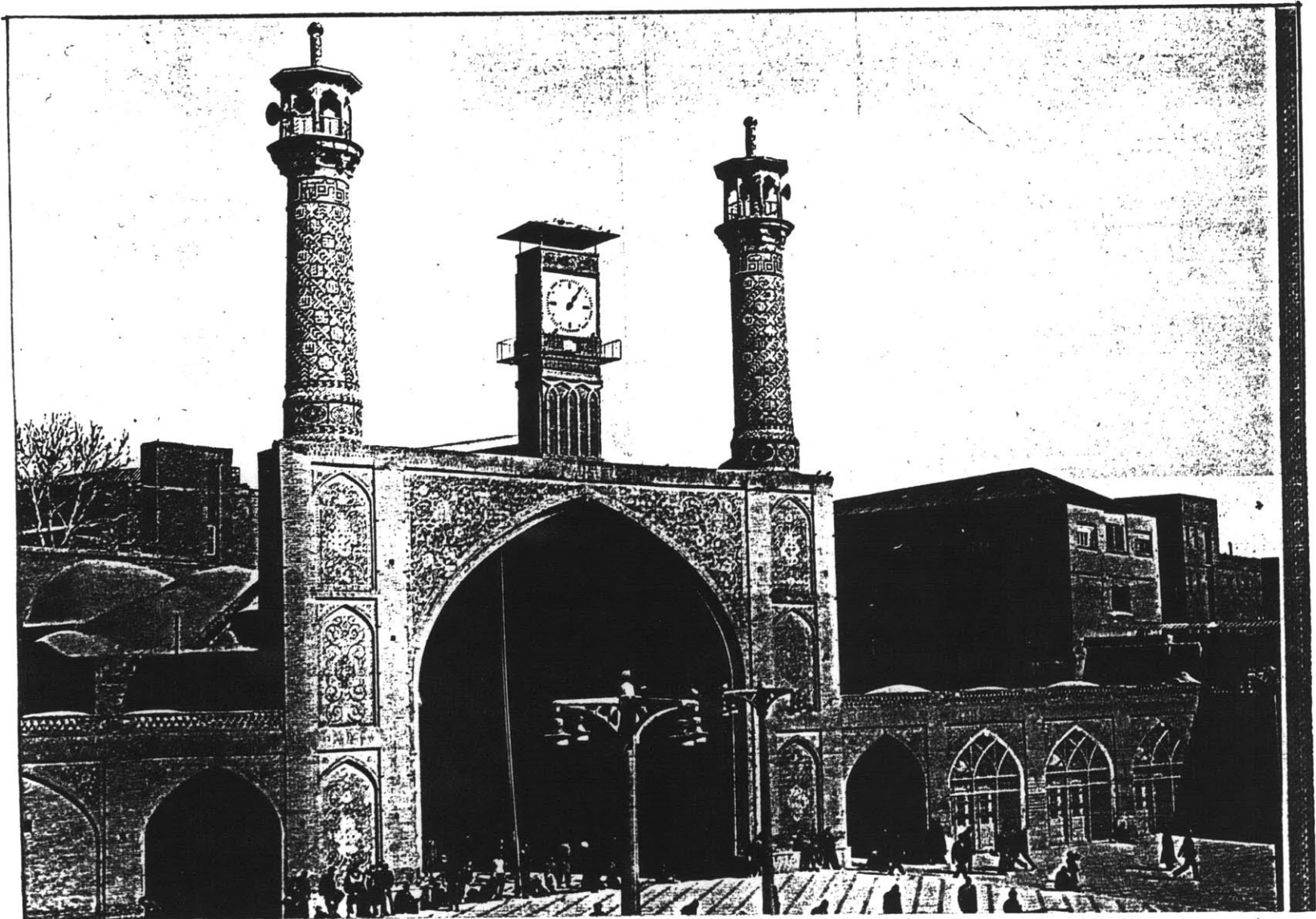


Fig. 1.40 Masjed Shah showing addition of minarets and clocktower
in late 19th century

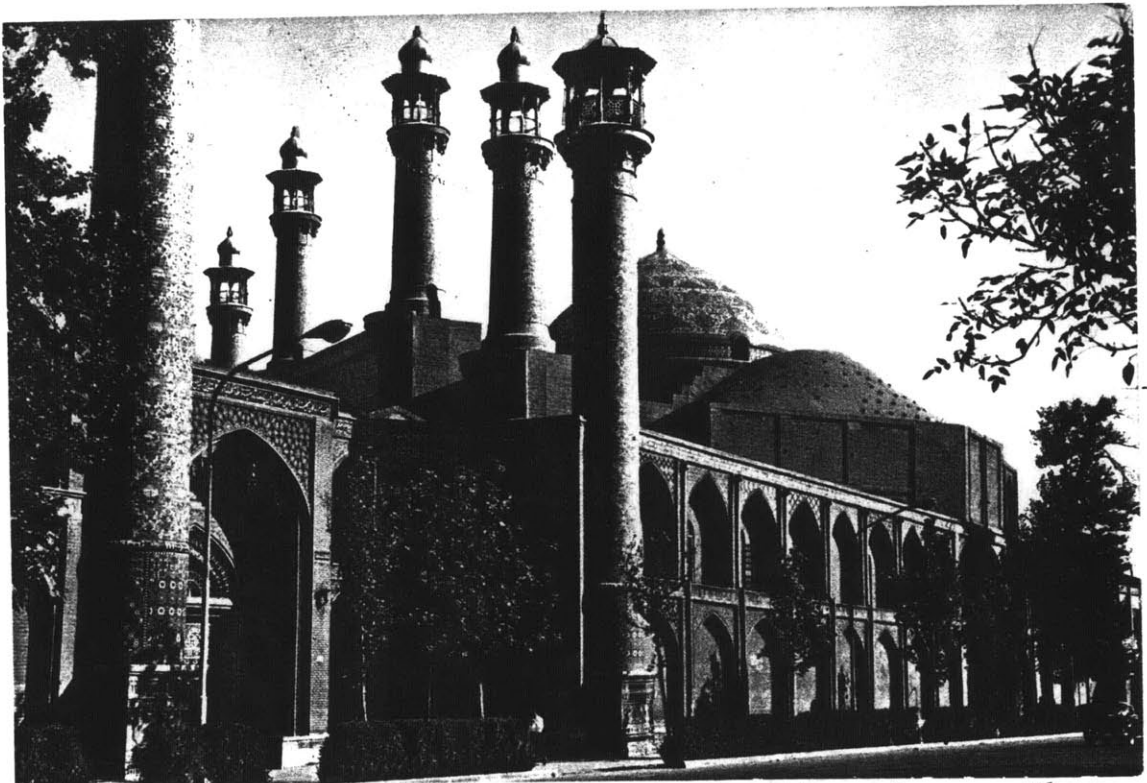


Fig. 1.41 Masjid Sepahsalar built by Mirza Hosayn Khan Sepahsalar (1878-1890)

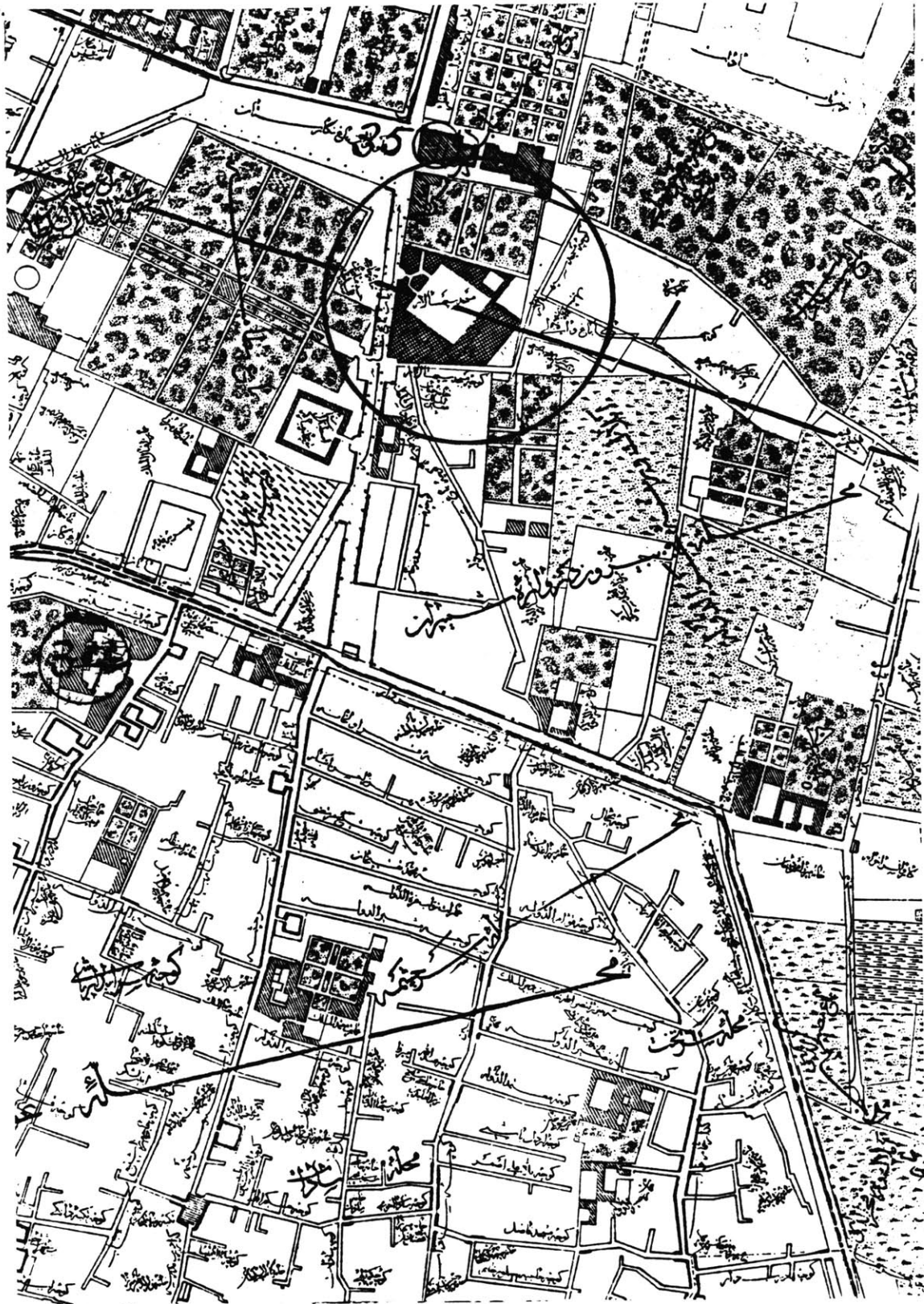


Fig. 1.42 Masjid Sepahsalar, site plan in Abdol Ghaffar map of 1891

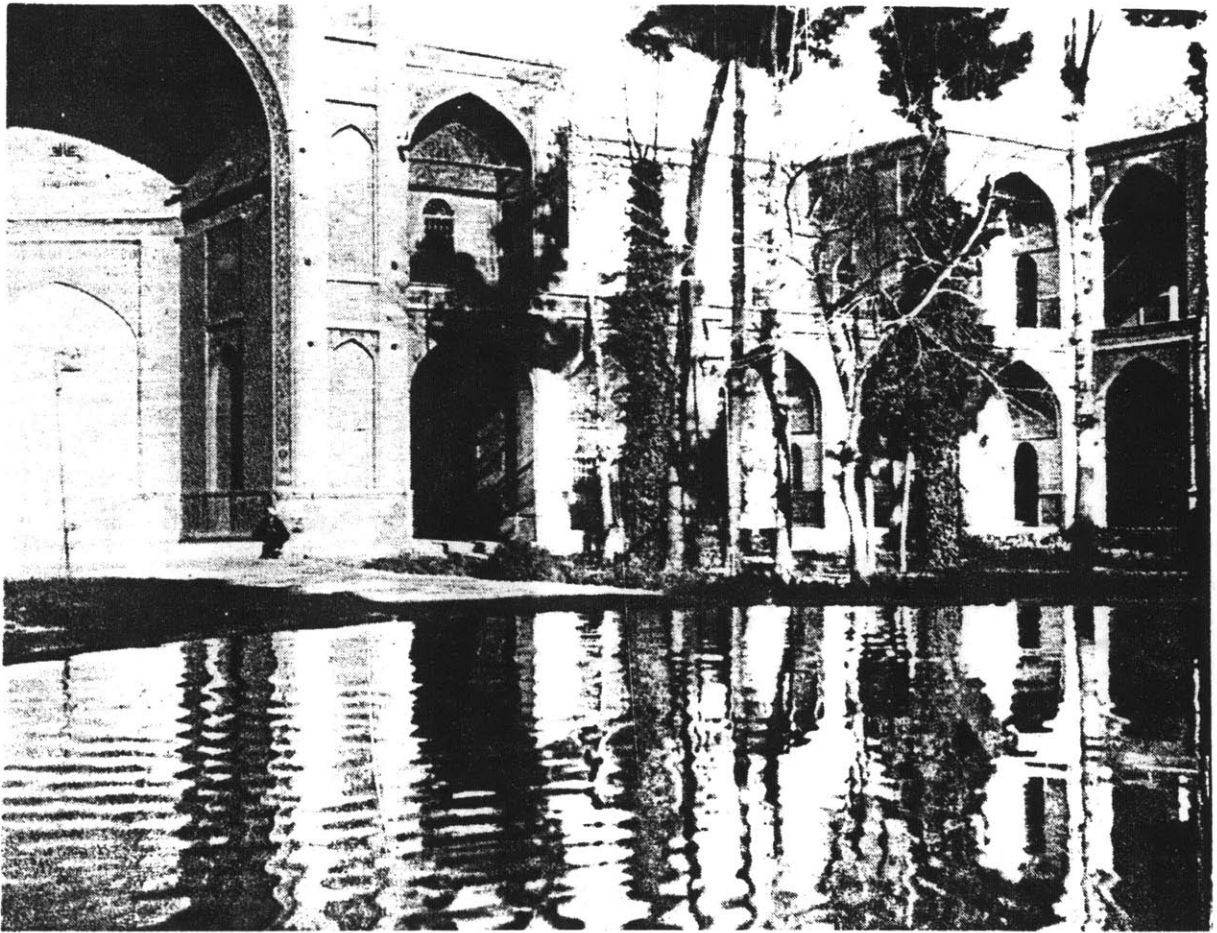


Fig. 1.43 Interior courtyard, of Masjid Sepahsalar



Fig. 1.44 Main entry portal, minarets and dome of Masjid Sepahsalar

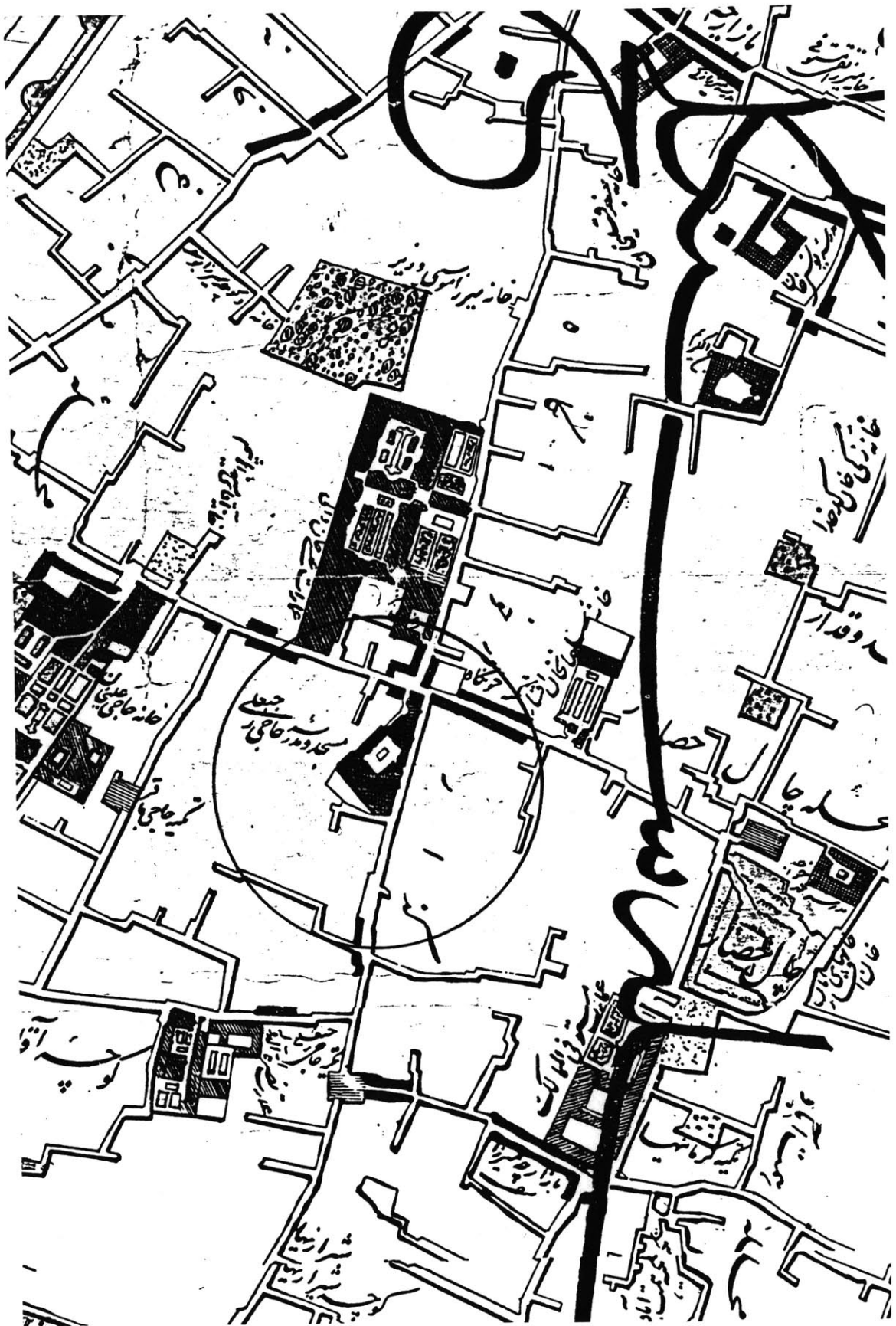


Fig. 1.45 Site plan of the Masjid Hajj Rajabali in Mahalla Sangelaj



Fig. 1.46 Plan, of Masjid Haj Rajabali



Fig. 1.47 Courtyard view of main ayvan

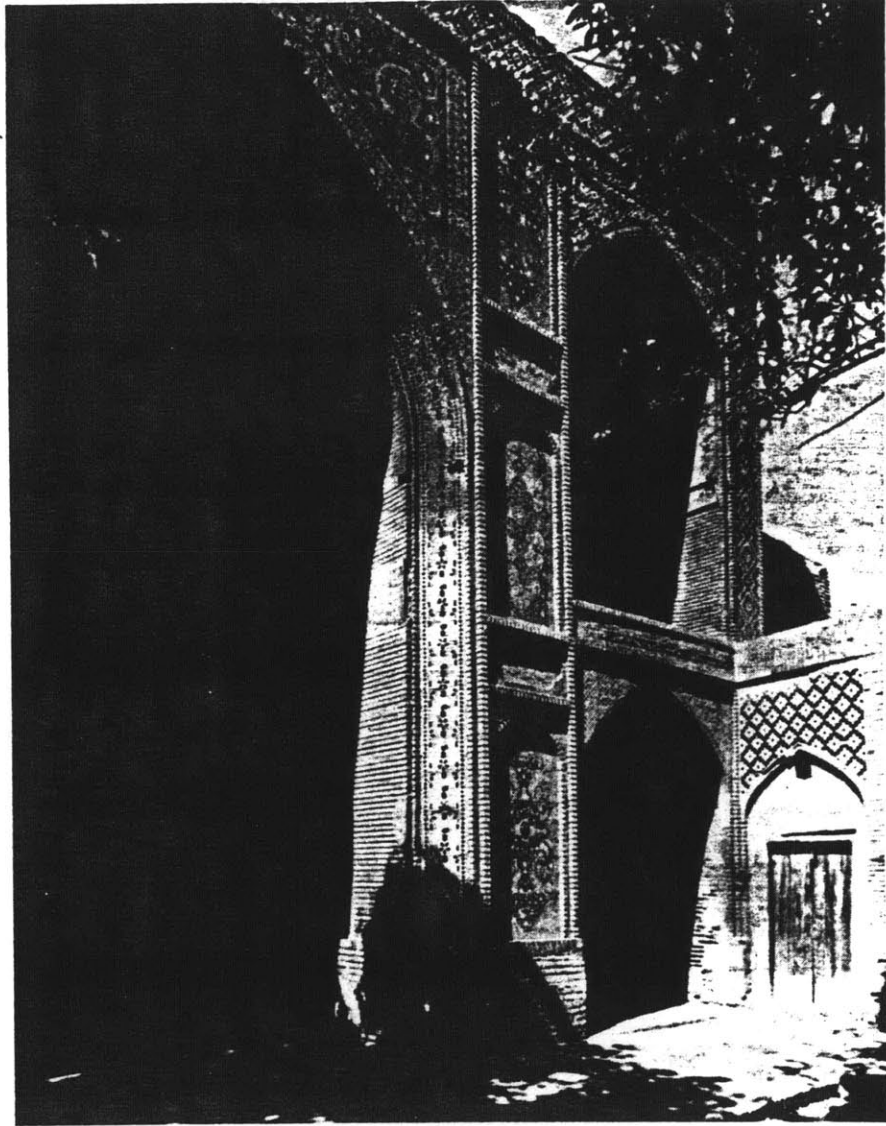


Fig. 1.48 Side view of ayvan and niches

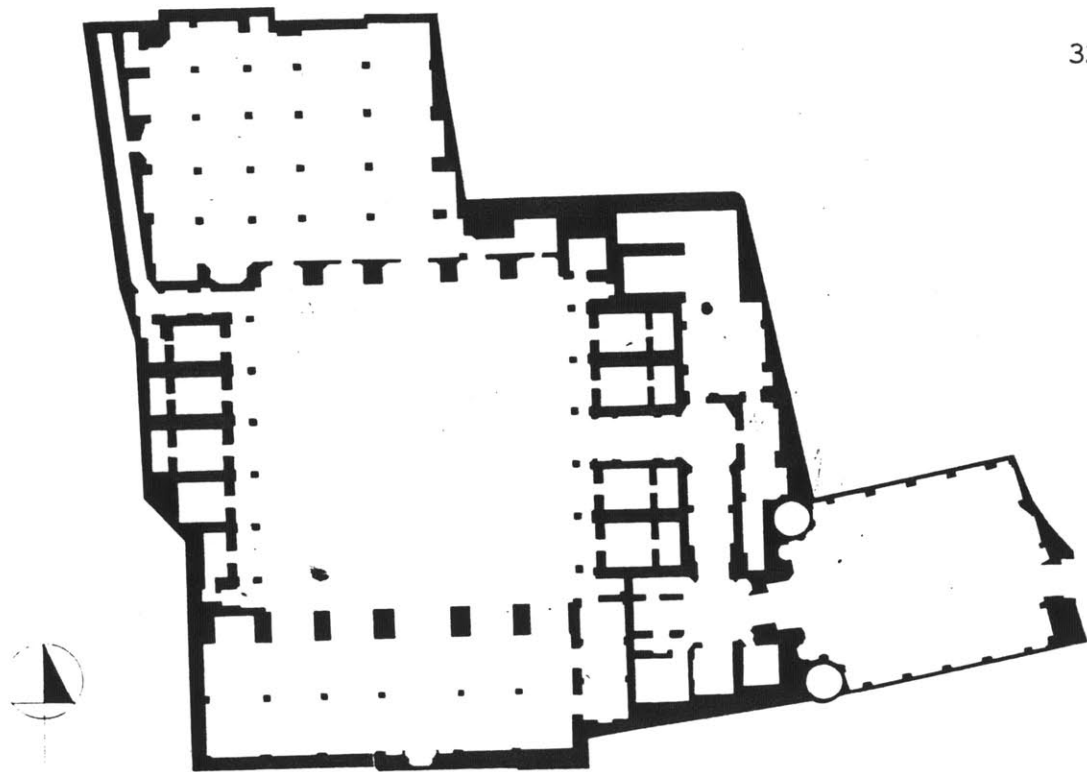


Fig. 1.49 Plan of Madrasa Sepahsalar Qadim

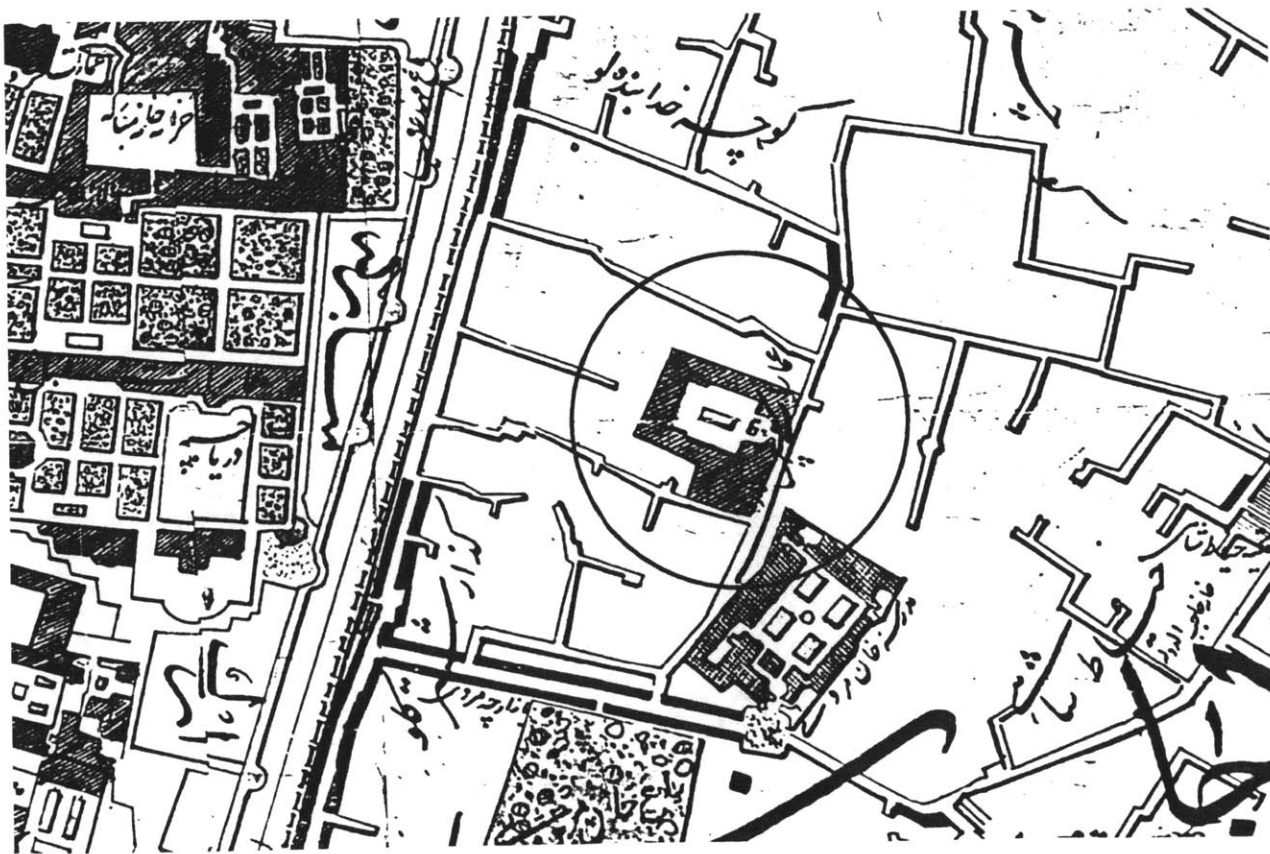


Fig. 1.50 Site plan of Madrasa Sepahsalar Qadim in Mahalla Oudlajan

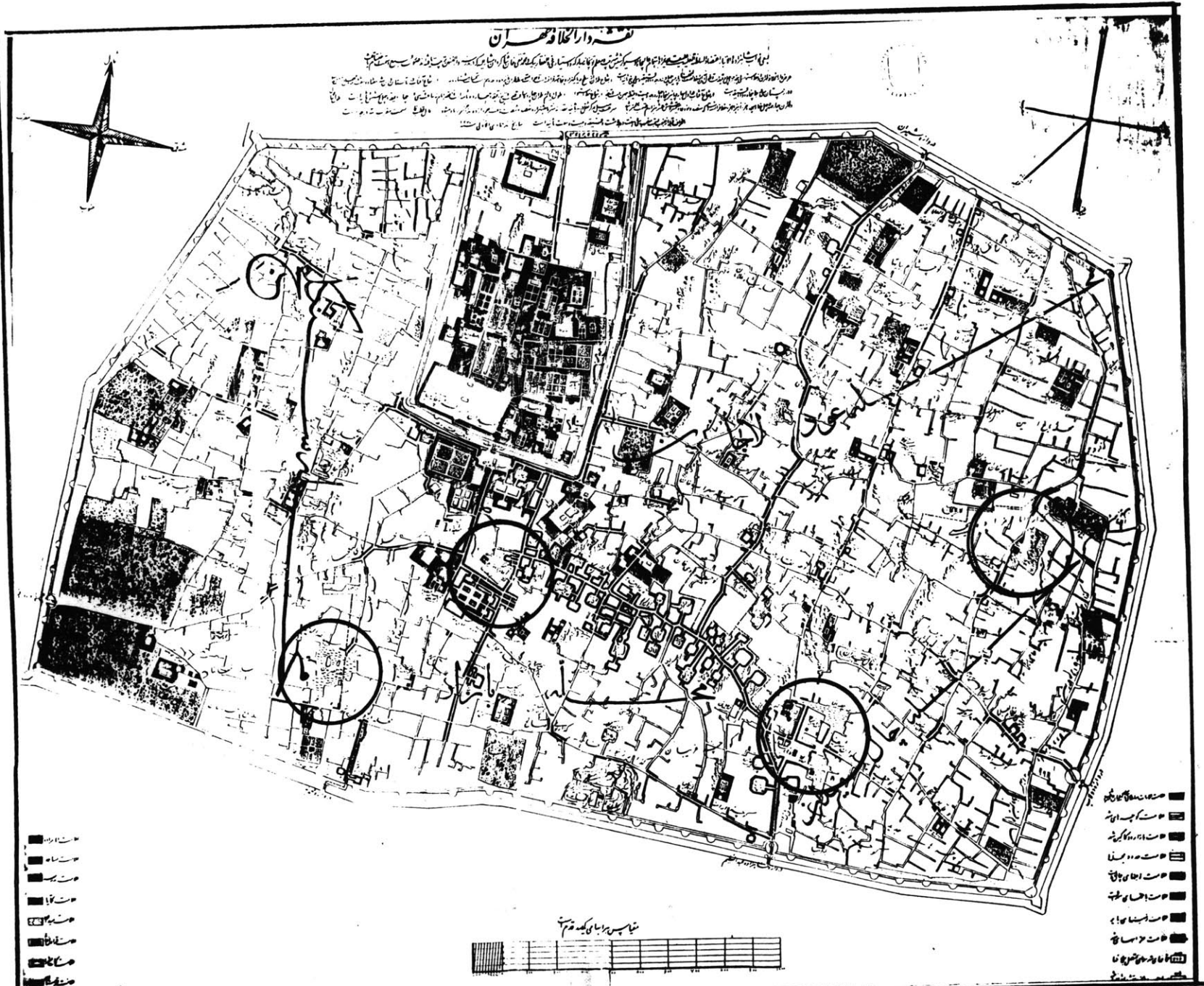


Fig. 1.51 Map of Tehran showing four main shrines

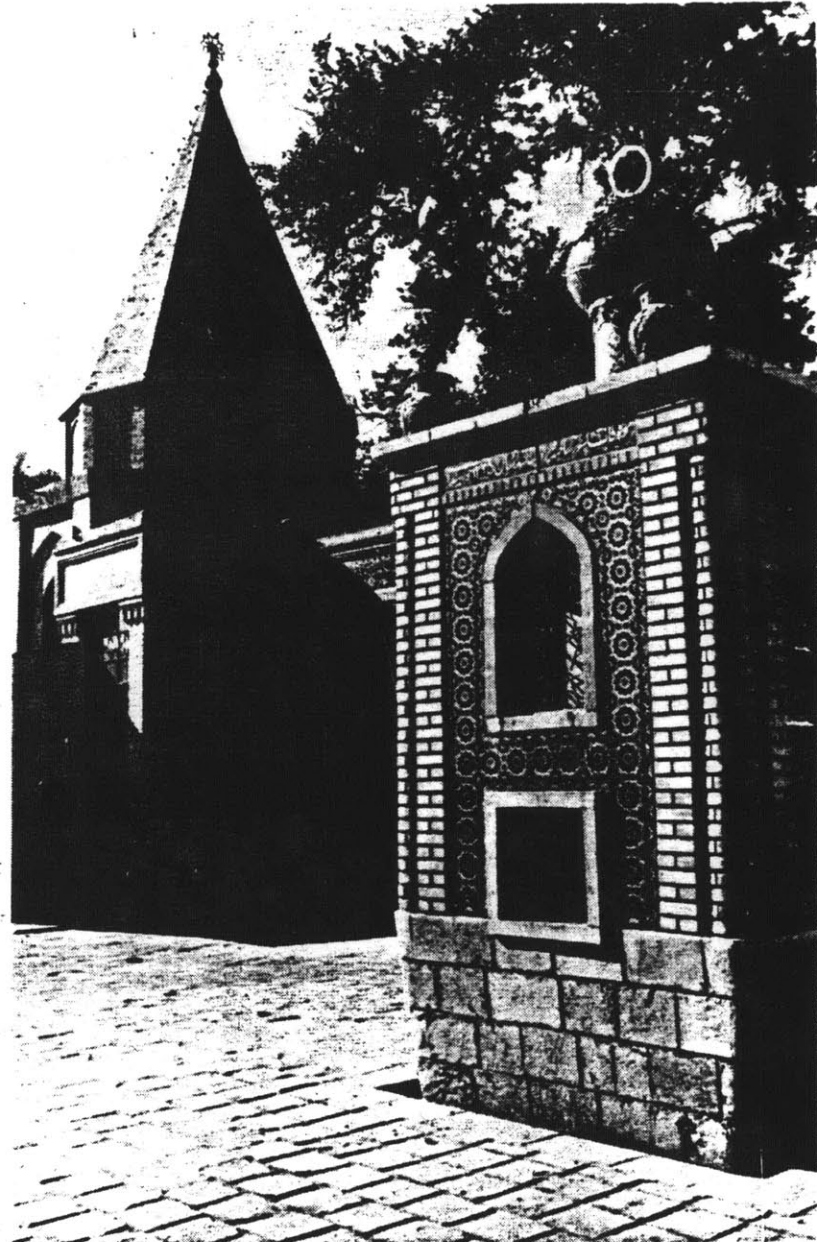


Fig. 1.52 Imamzada Yahya

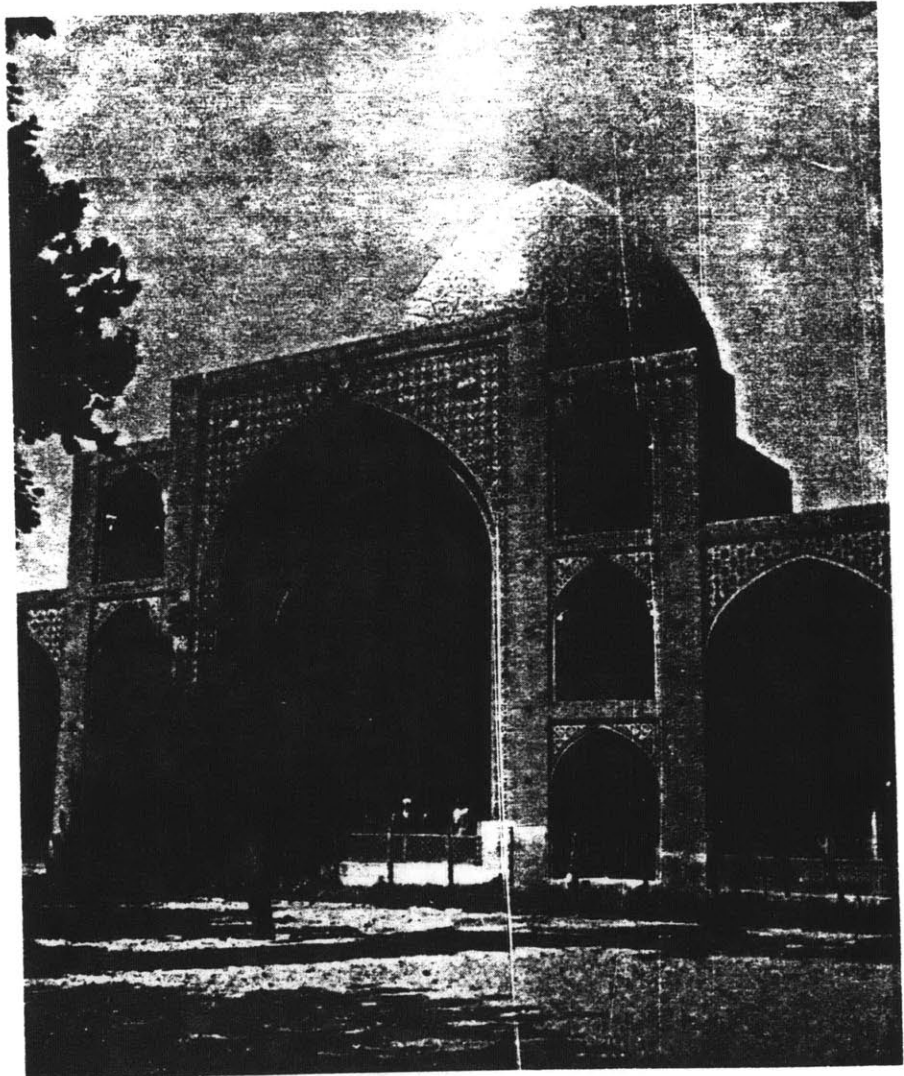


Fig. 1.53 Imamzade Zayd

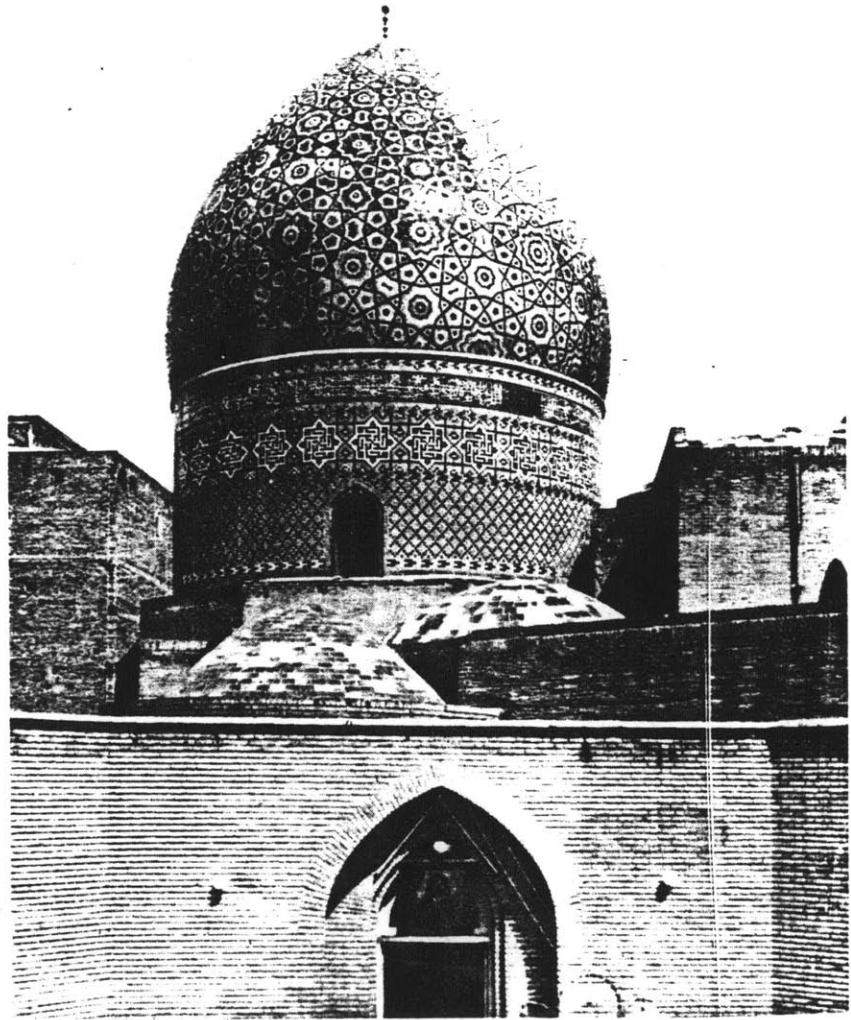


Fig. 1.54 Imamzada Zayd

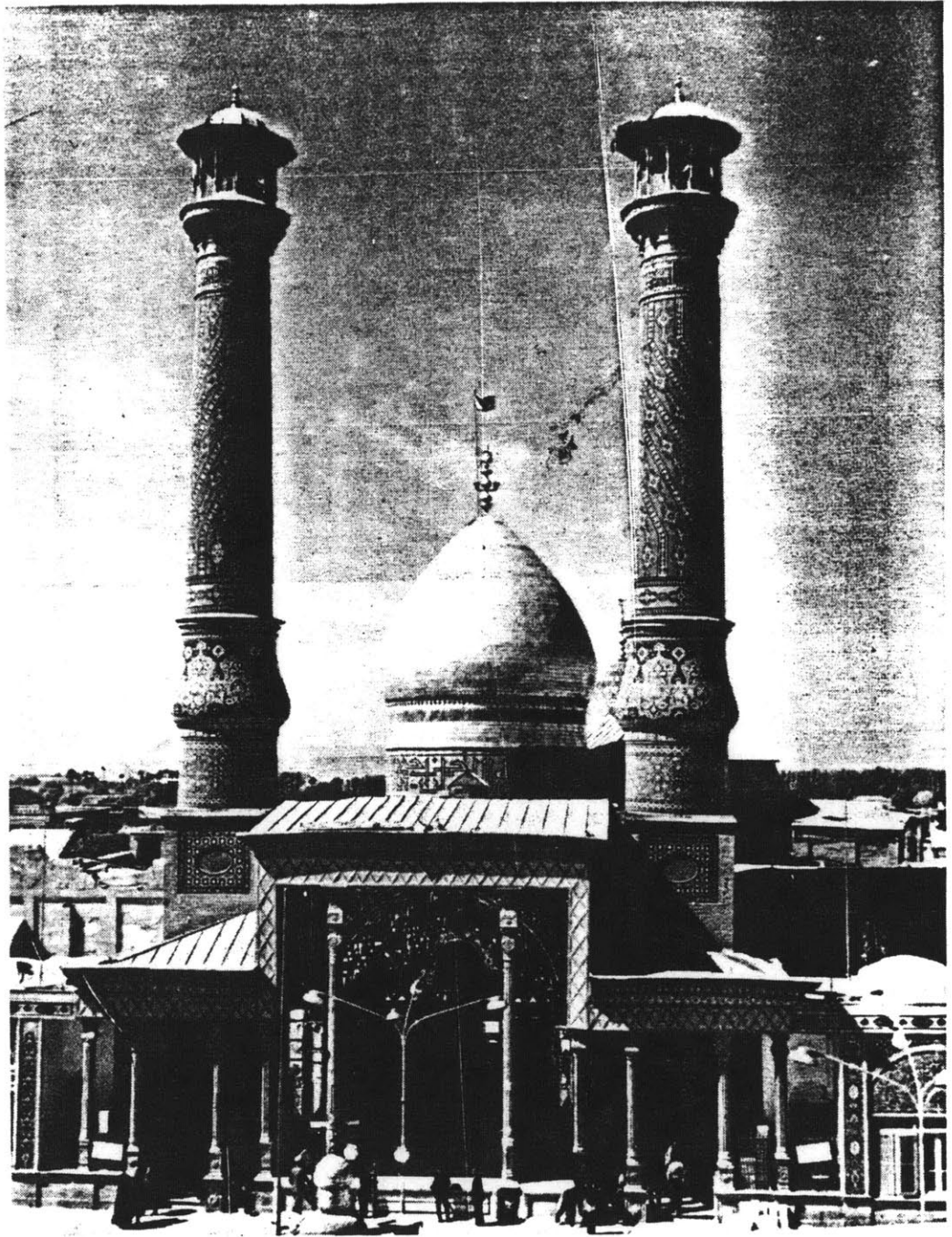


Fig. 1.55 Shah Abdolazim

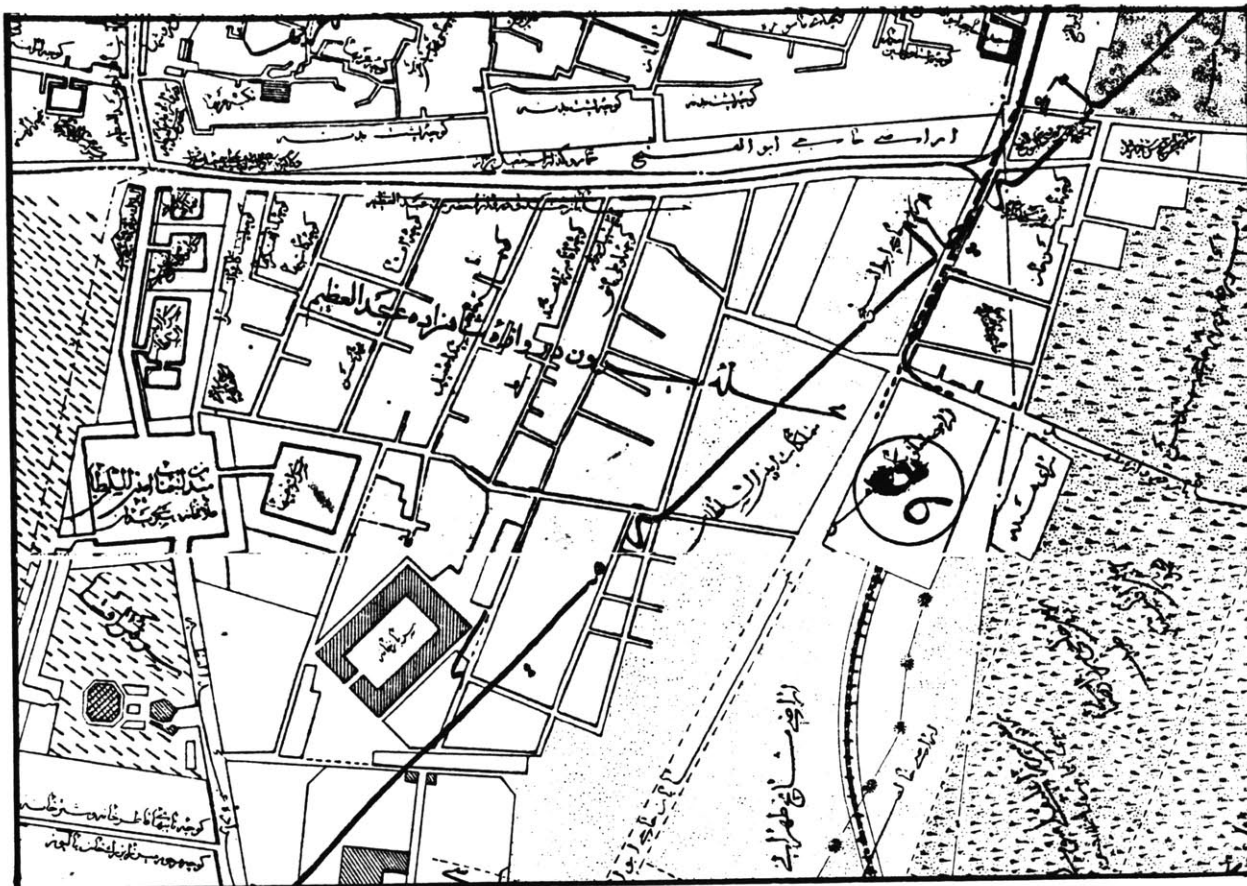


Fig. 1.56 Sar-e Qabr Aqa, site plan in 1891 map

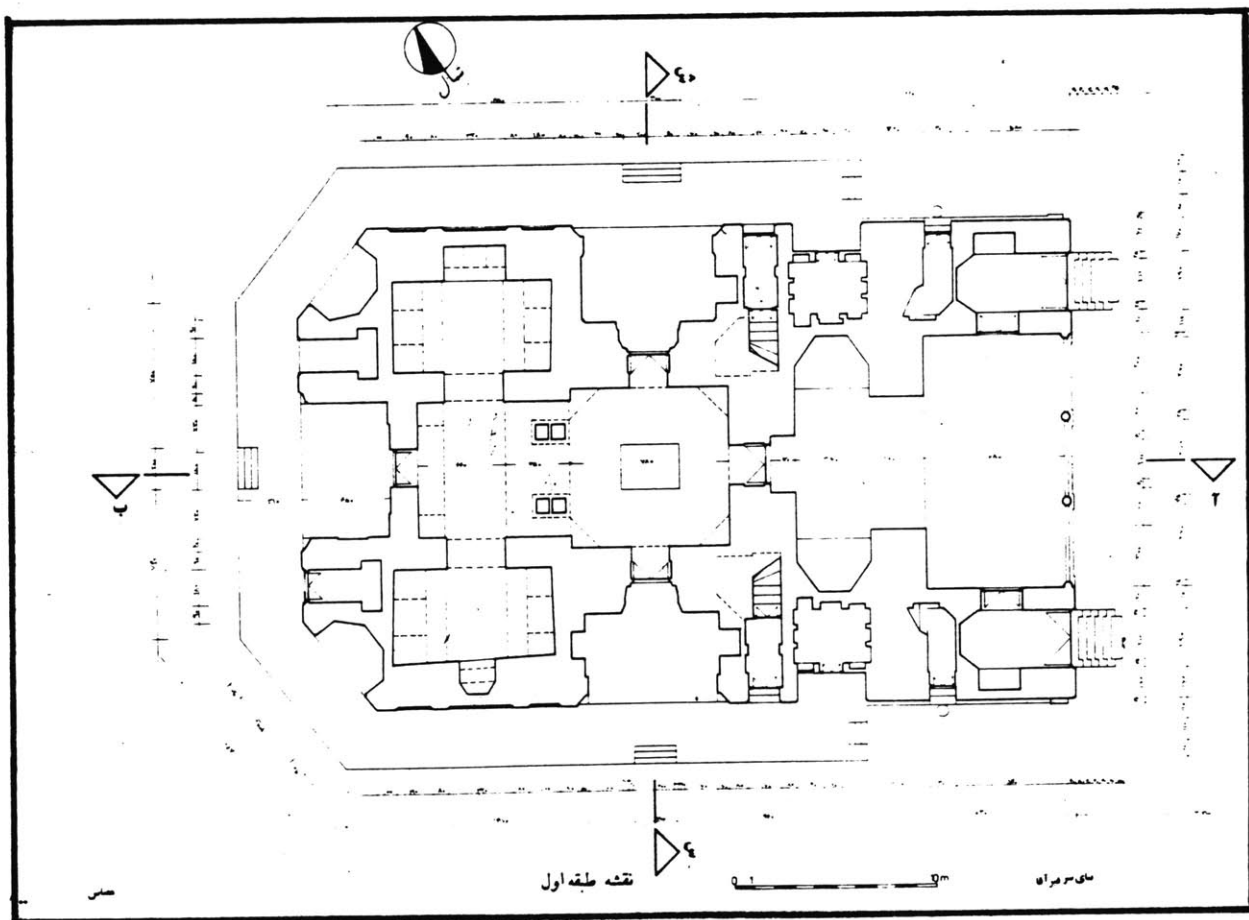


Fig. 1.57 Sar-e Qabr Aqa, plan

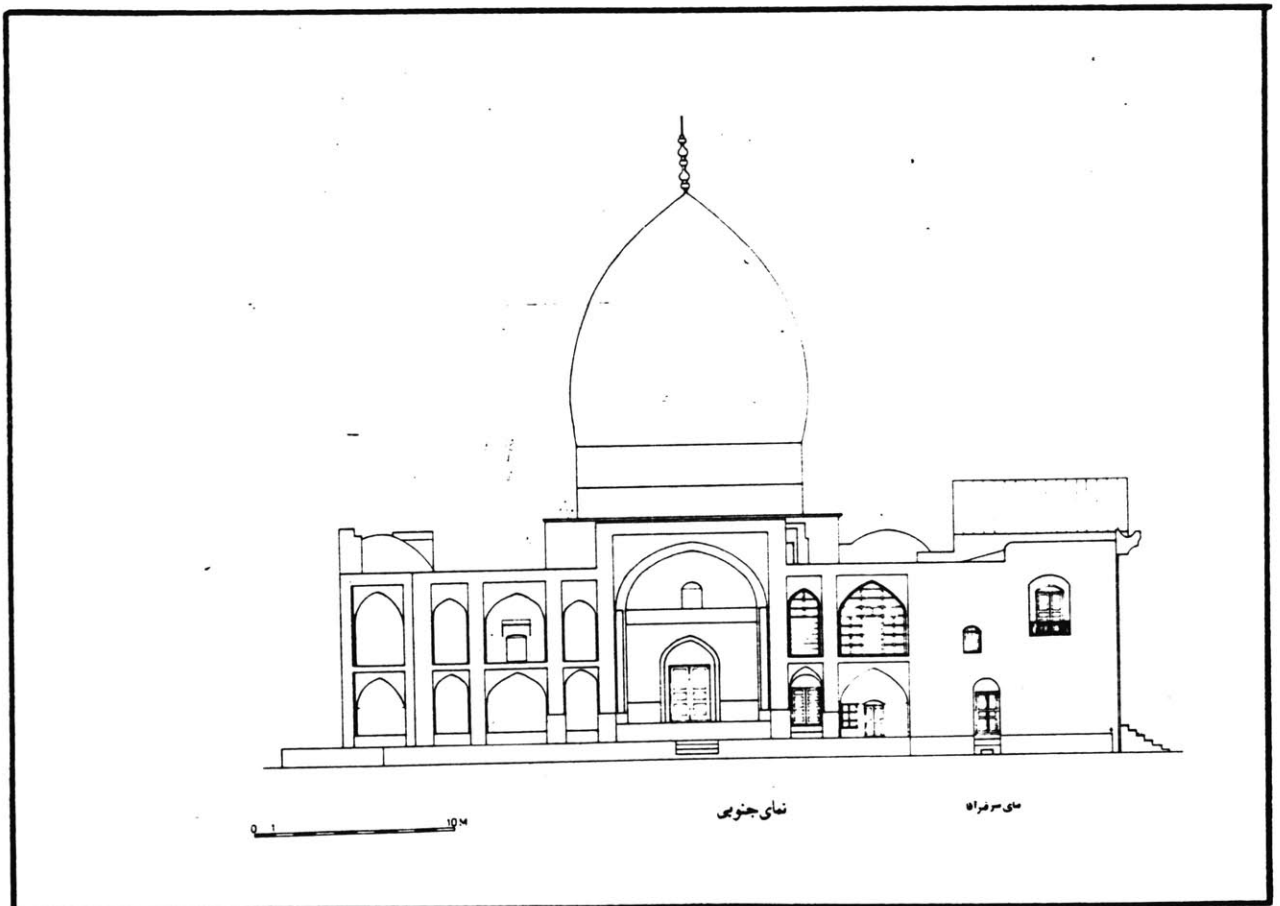
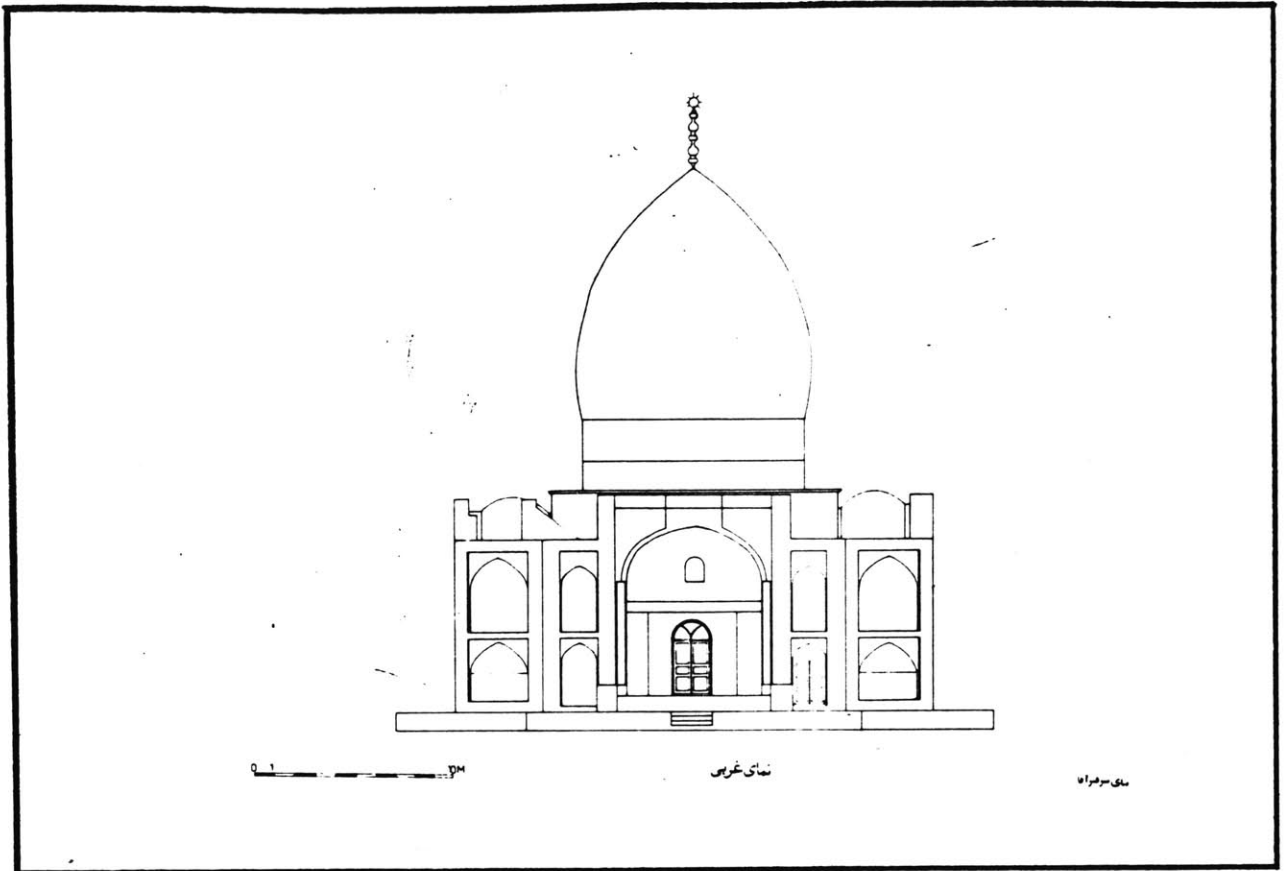


Fig. 1.58 Sar-e Qabr Aqa, west and south elevations

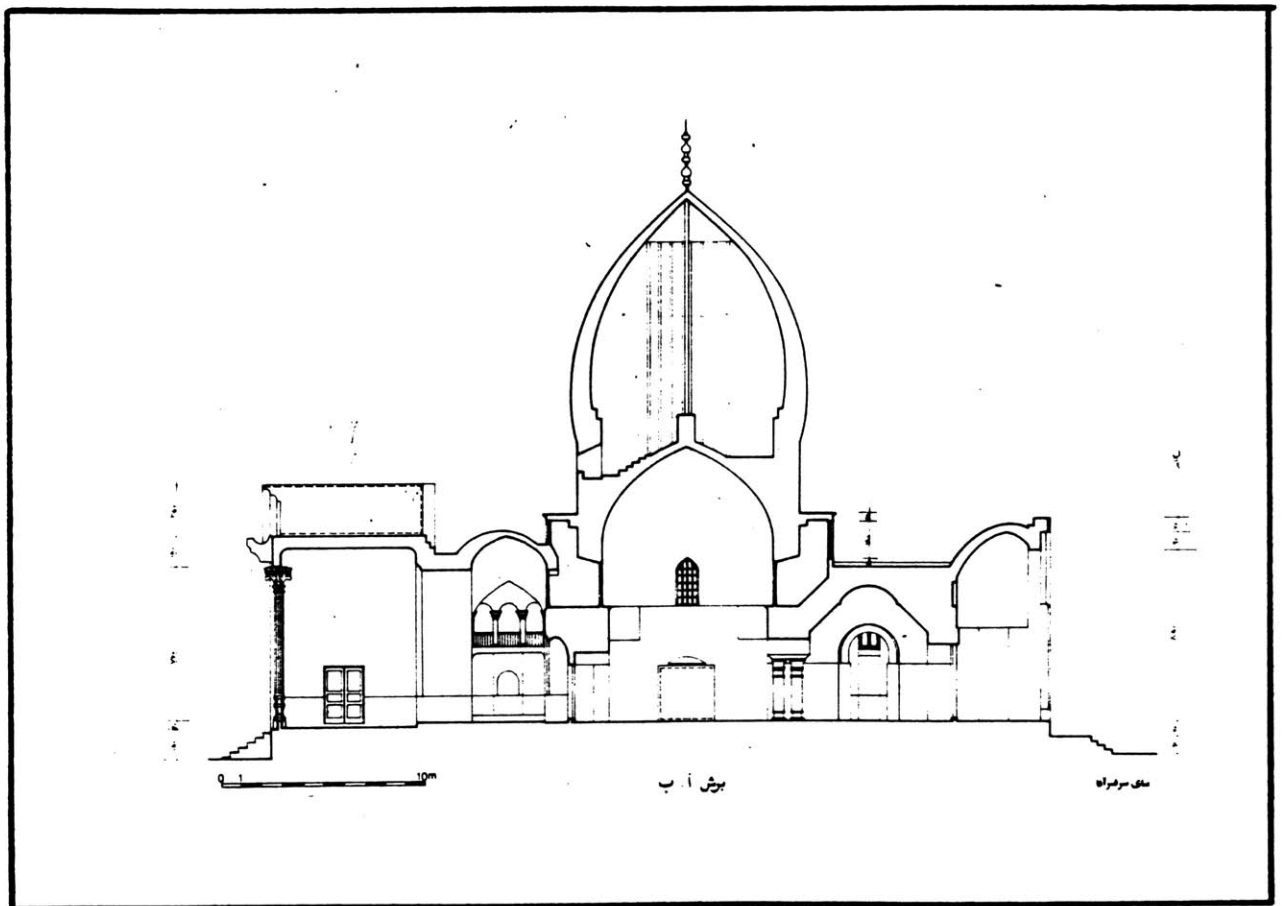
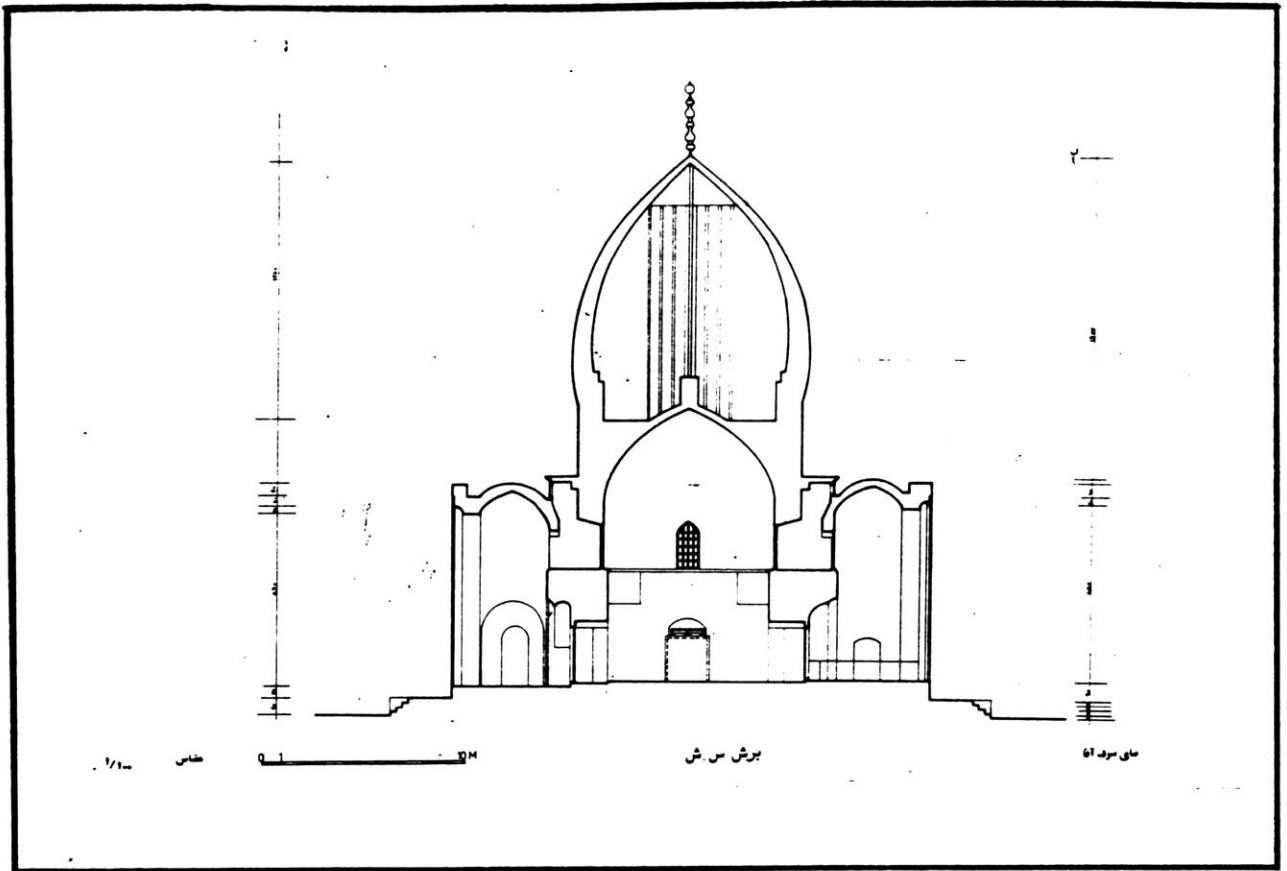


Fig. 1.59 Sar-e Qabr Aqa, sections

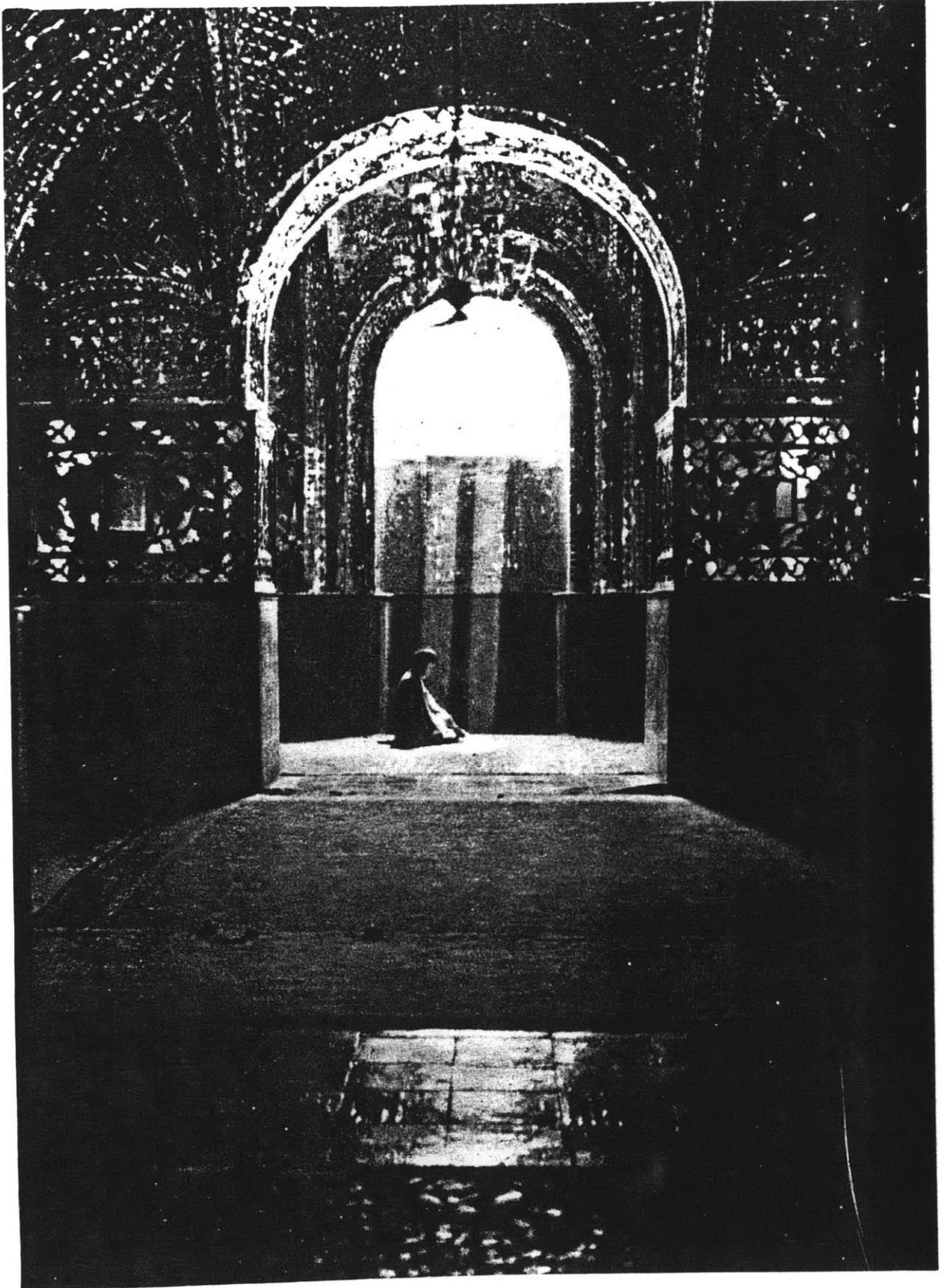


Fig. 1.60 Sar-e Qabr Aqa, view of interior

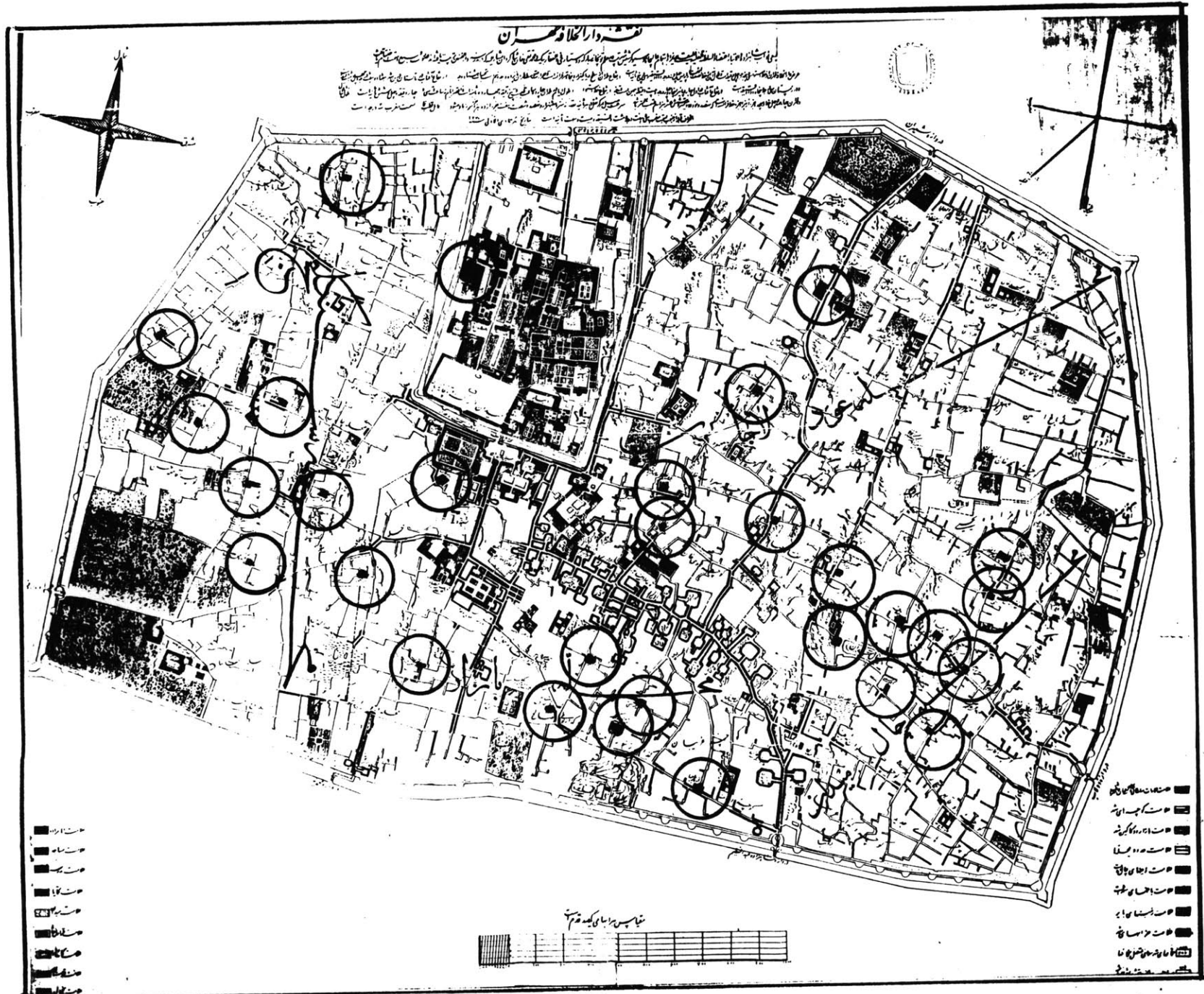


Fig. 1.61 Plan of Tehran showing takayas



Fig. 1.62 Ta'zia procession on the streets of Tehran

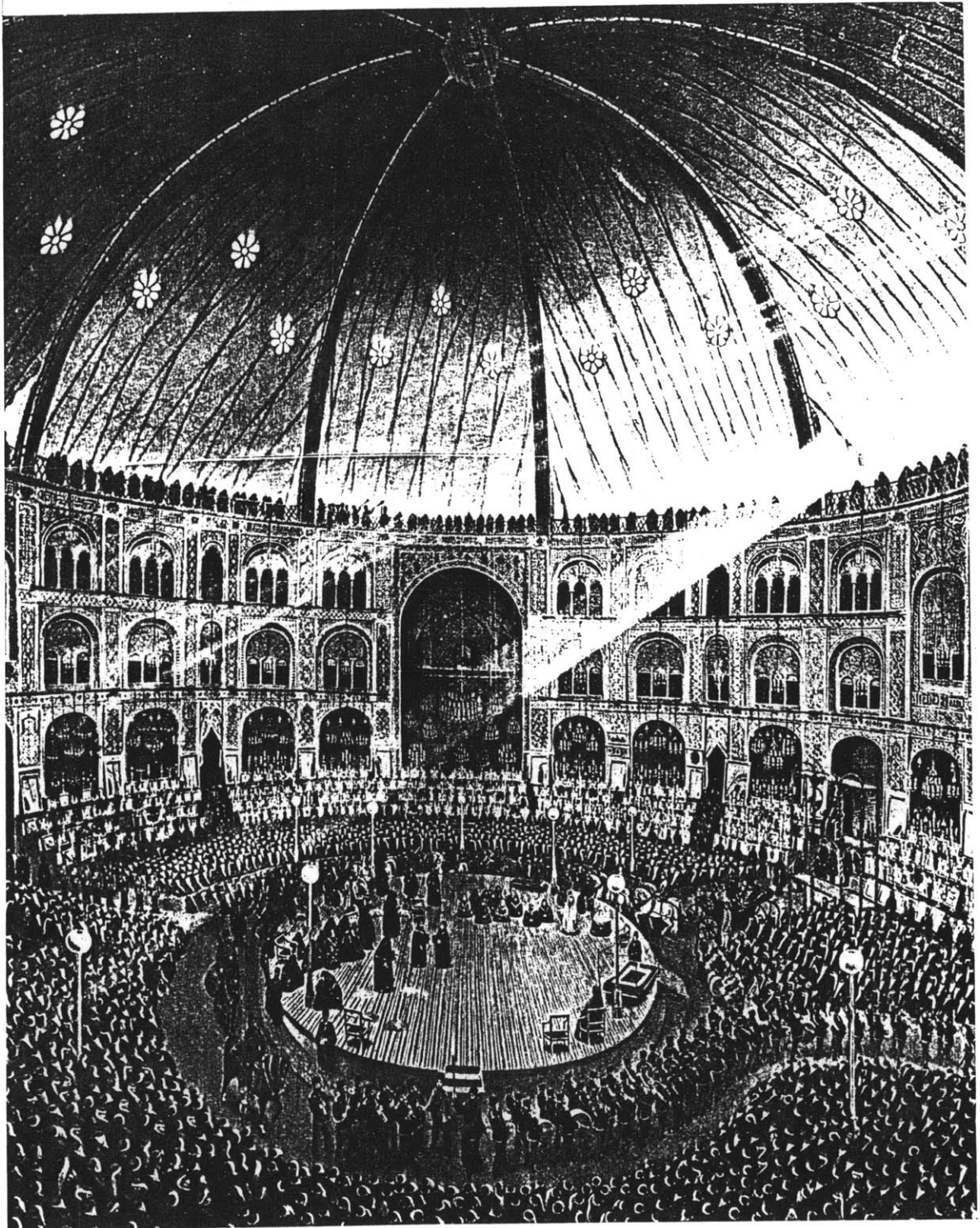


Fig. 1.63 Interior of Takya Dawlat

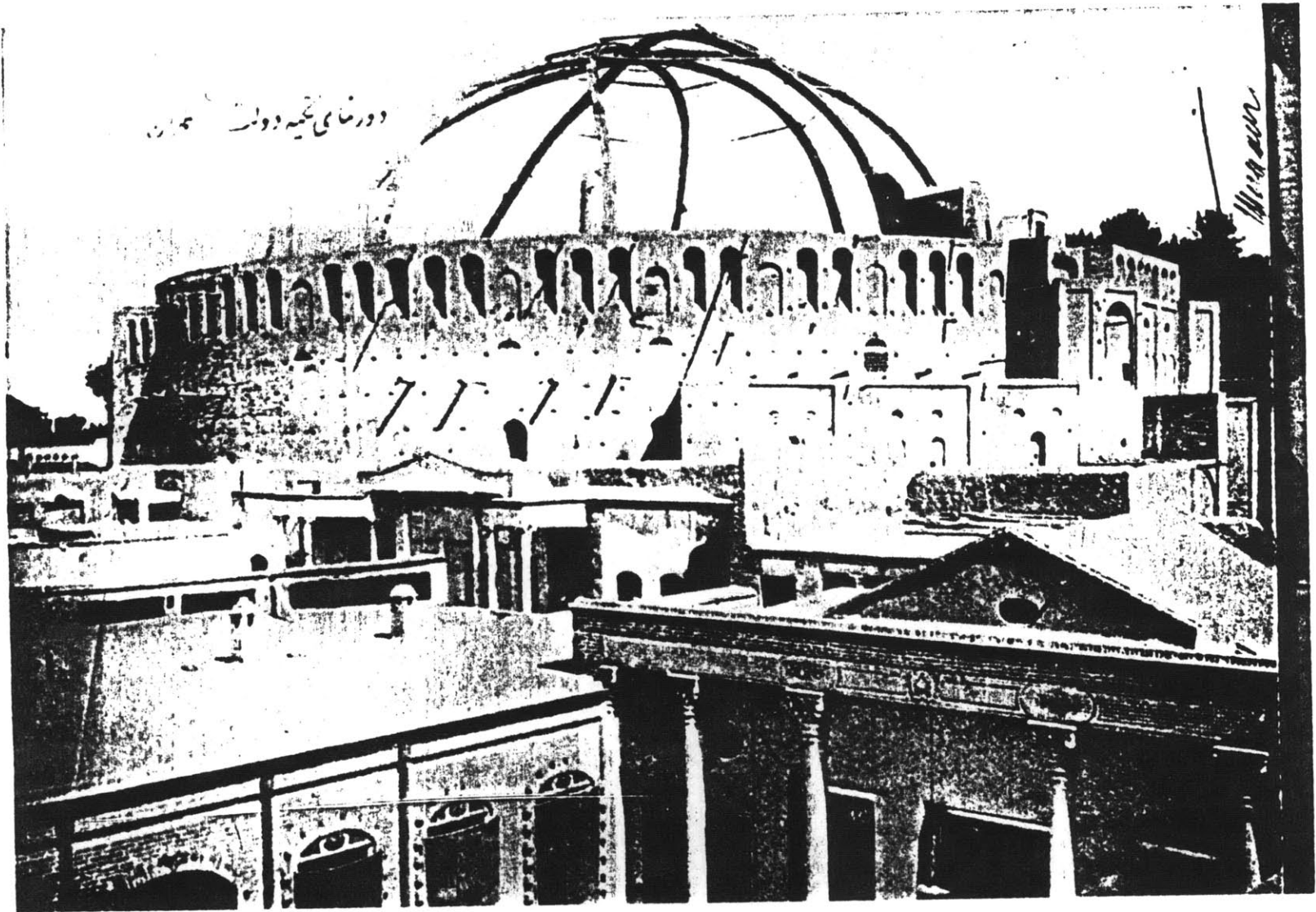


Fig. 1.64 Exterior view of Takya Dawlat

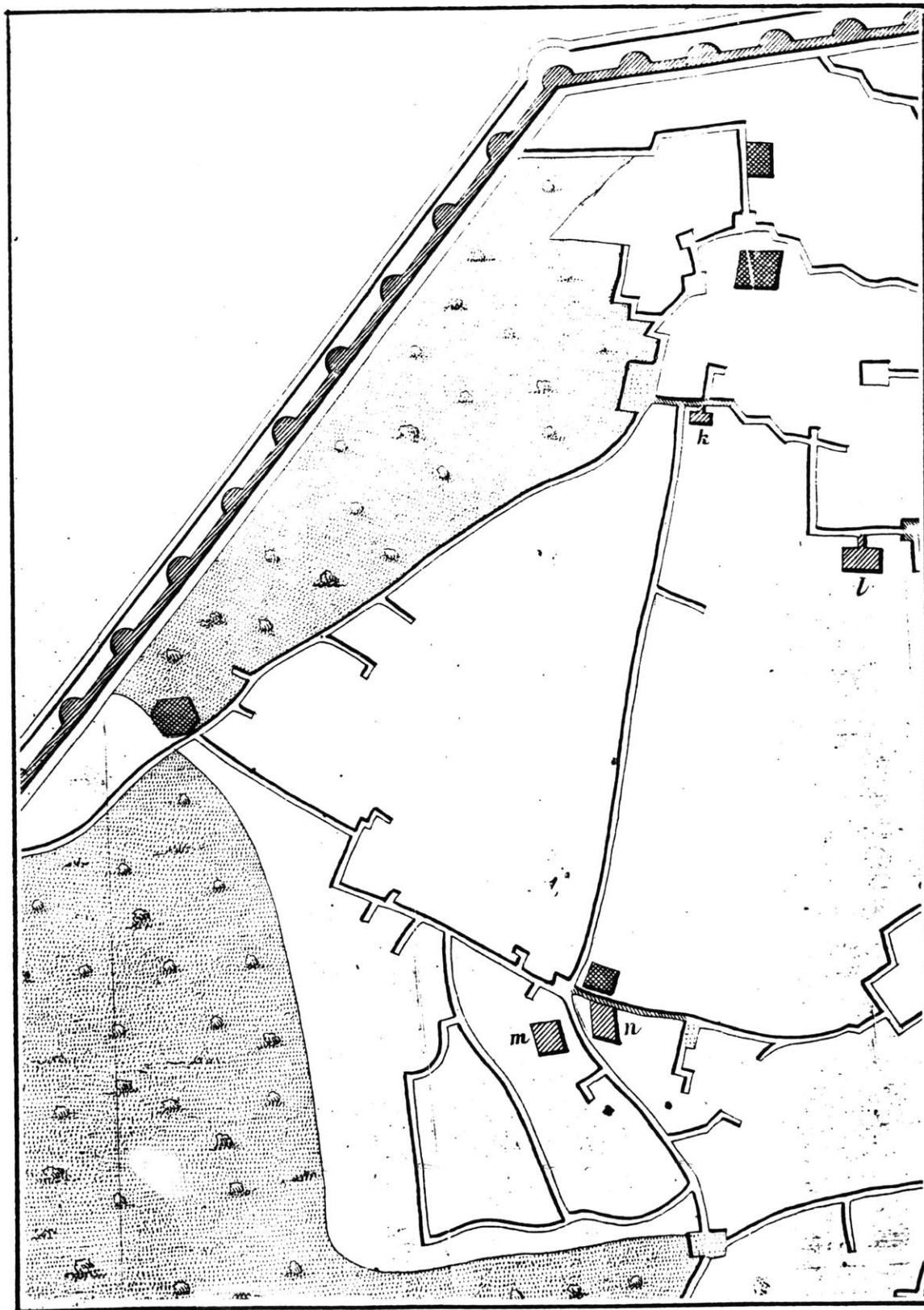


Fig. 1.65 Berezin map of 1842

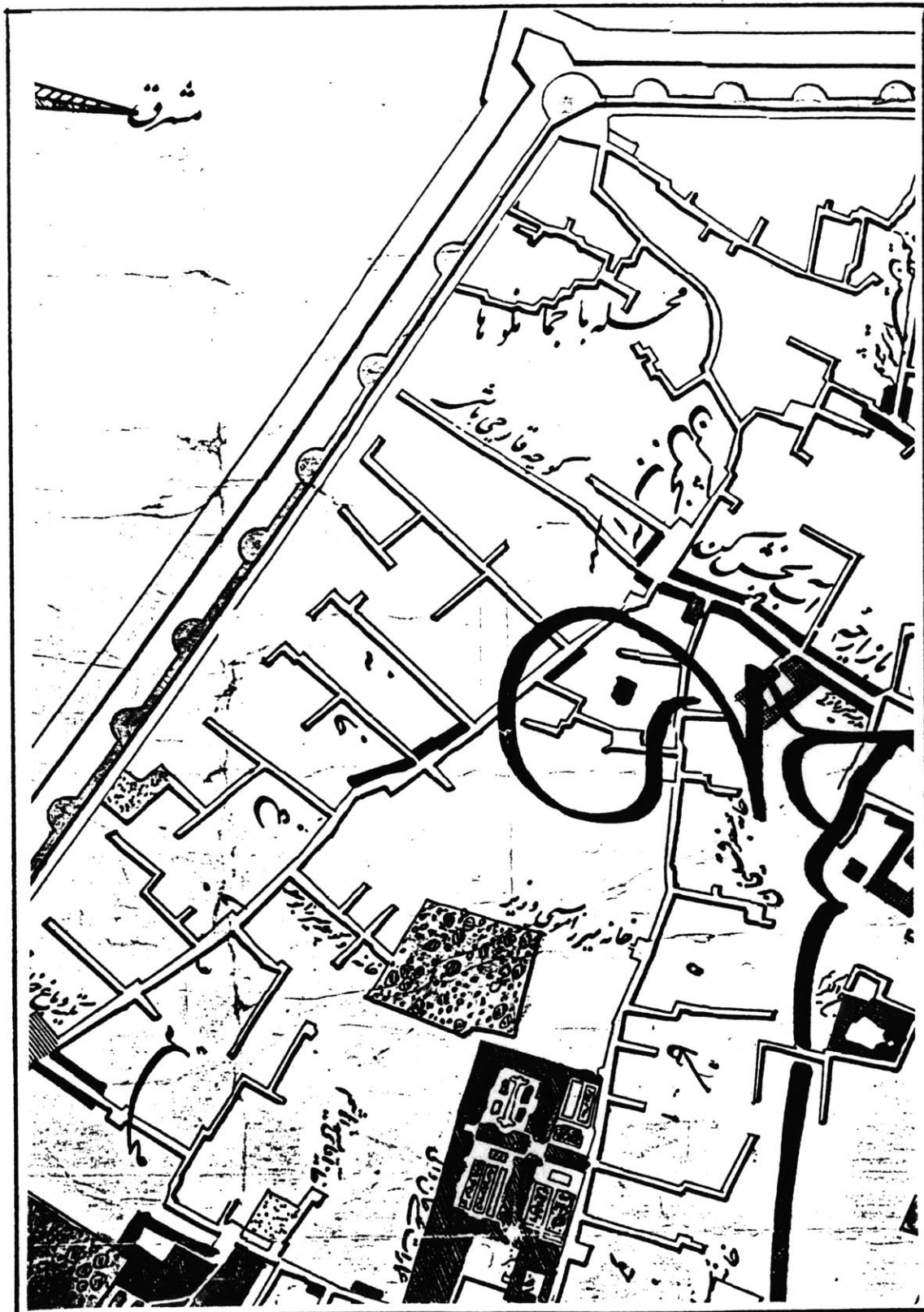


Fig. 1.66 Krziz map of 1858

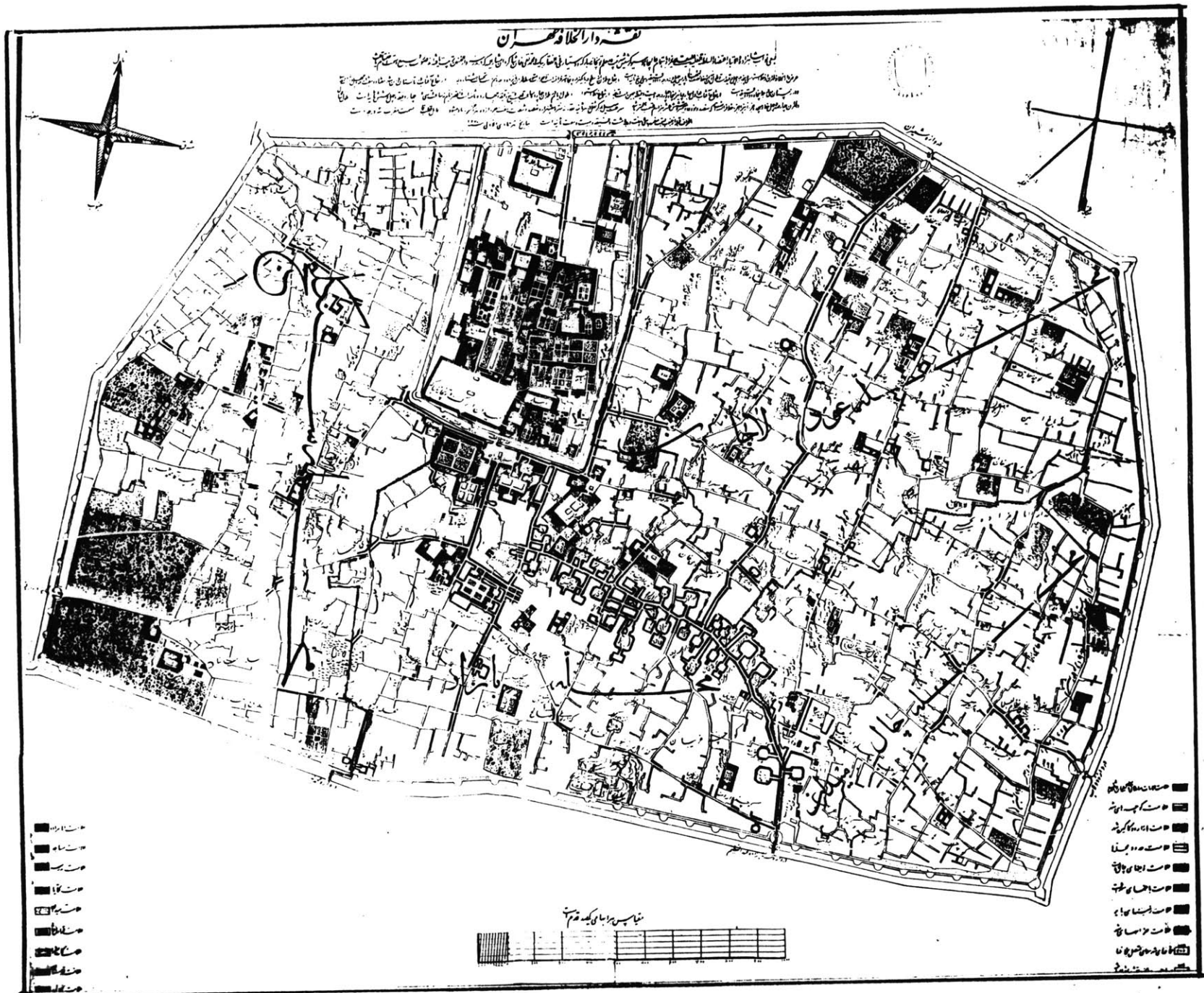


Fig. 1.67 Map of Berezin showing mahalla boundaries



Fig. 1.68 Ma'aber of Tehran



Fig. 1.69 Kuchas of Tehran

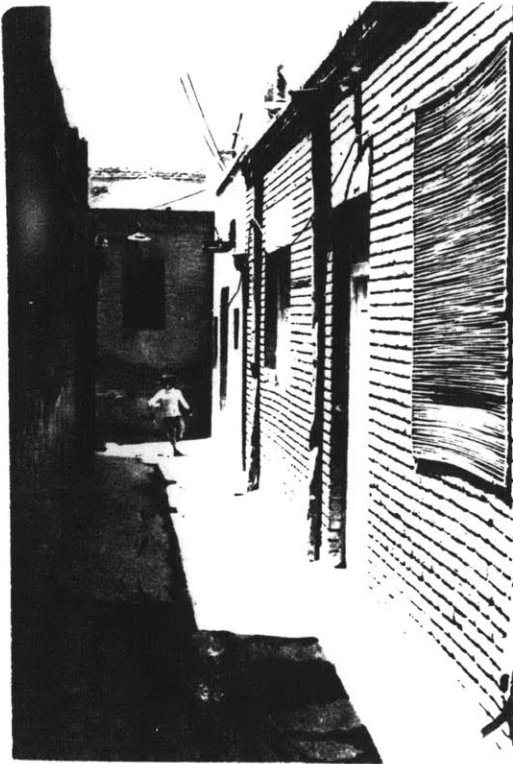


Fig. 1.70 Bombasts of Tehran



Fig. 1.71 Entryways

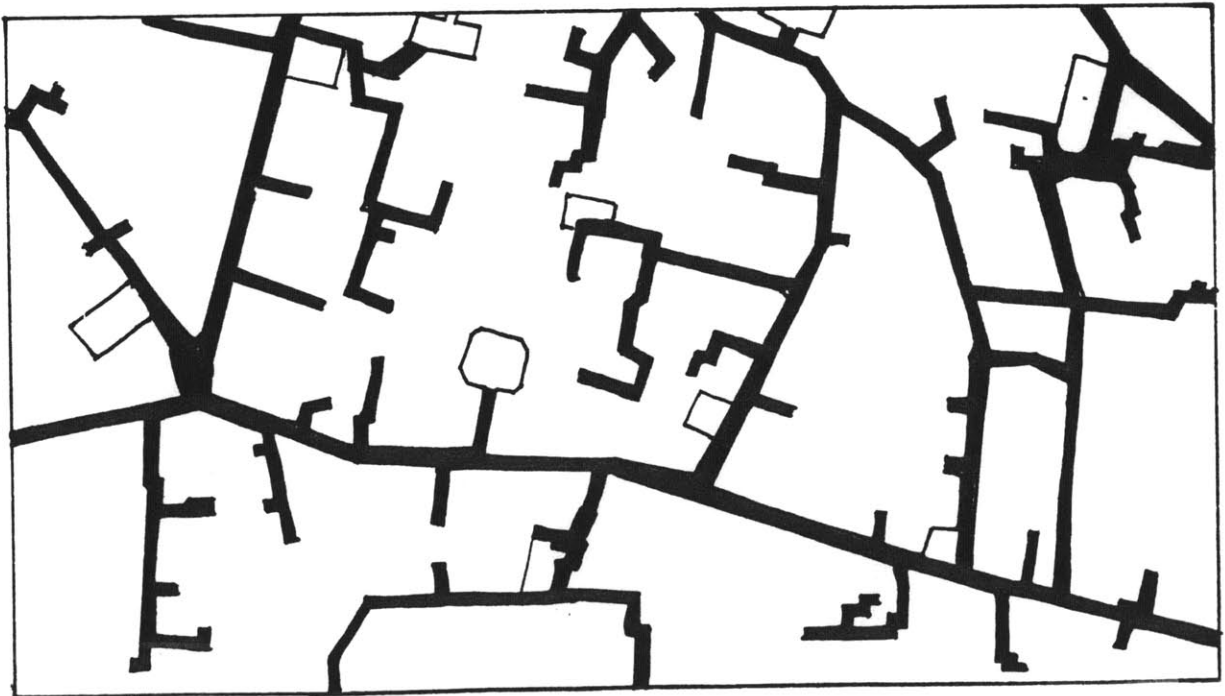
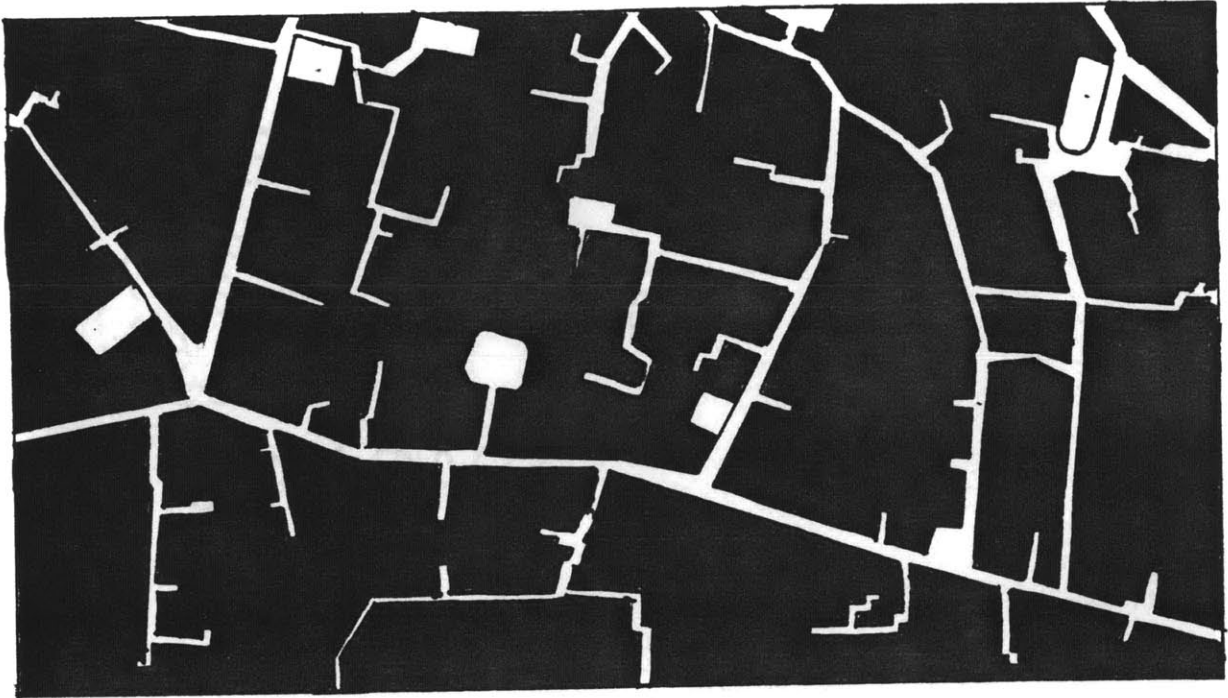


Fig. 1.72 Residential fabric of the Mahalla Bazaar

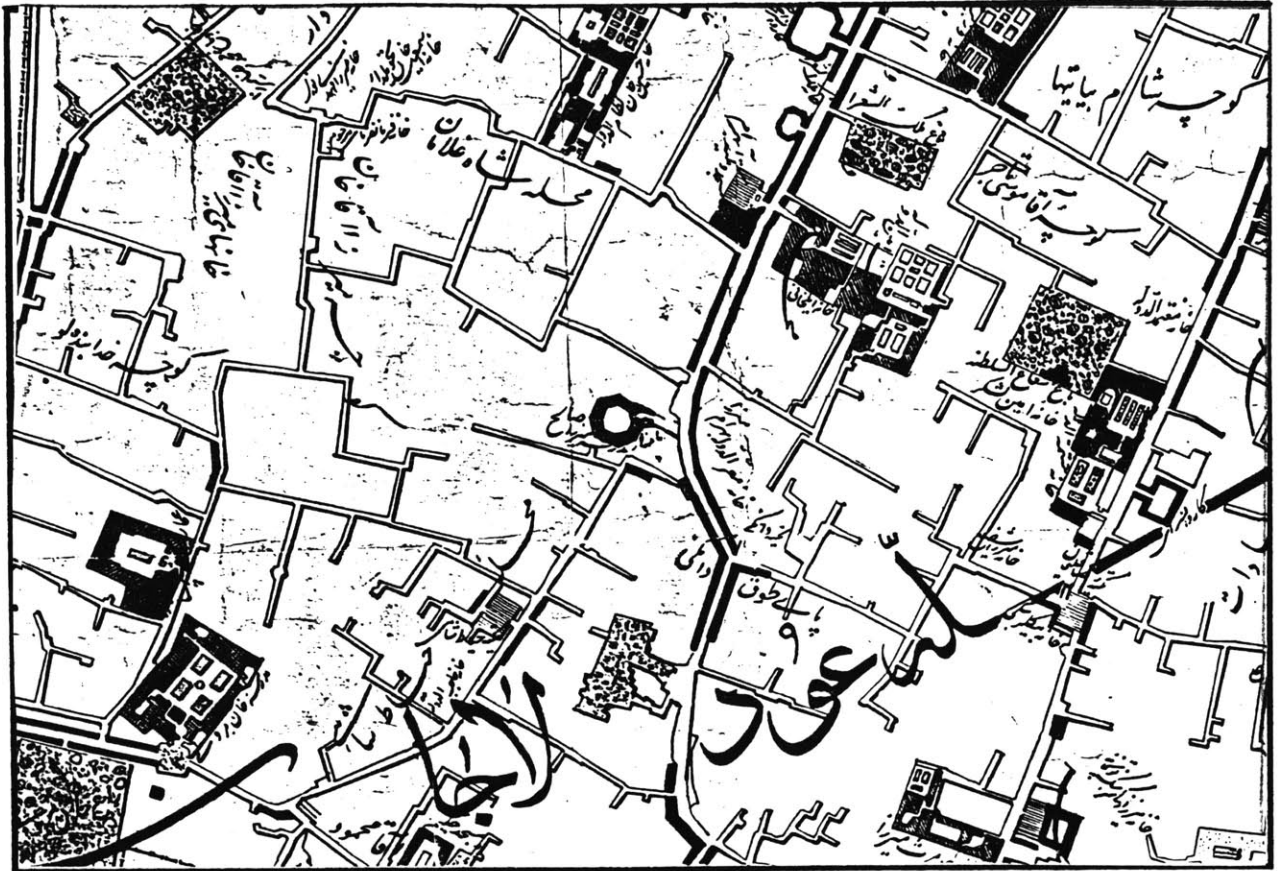


Fig. 1.73 Mahalla Oudlajan



Fig. 1.74 Mahalla Dawlat

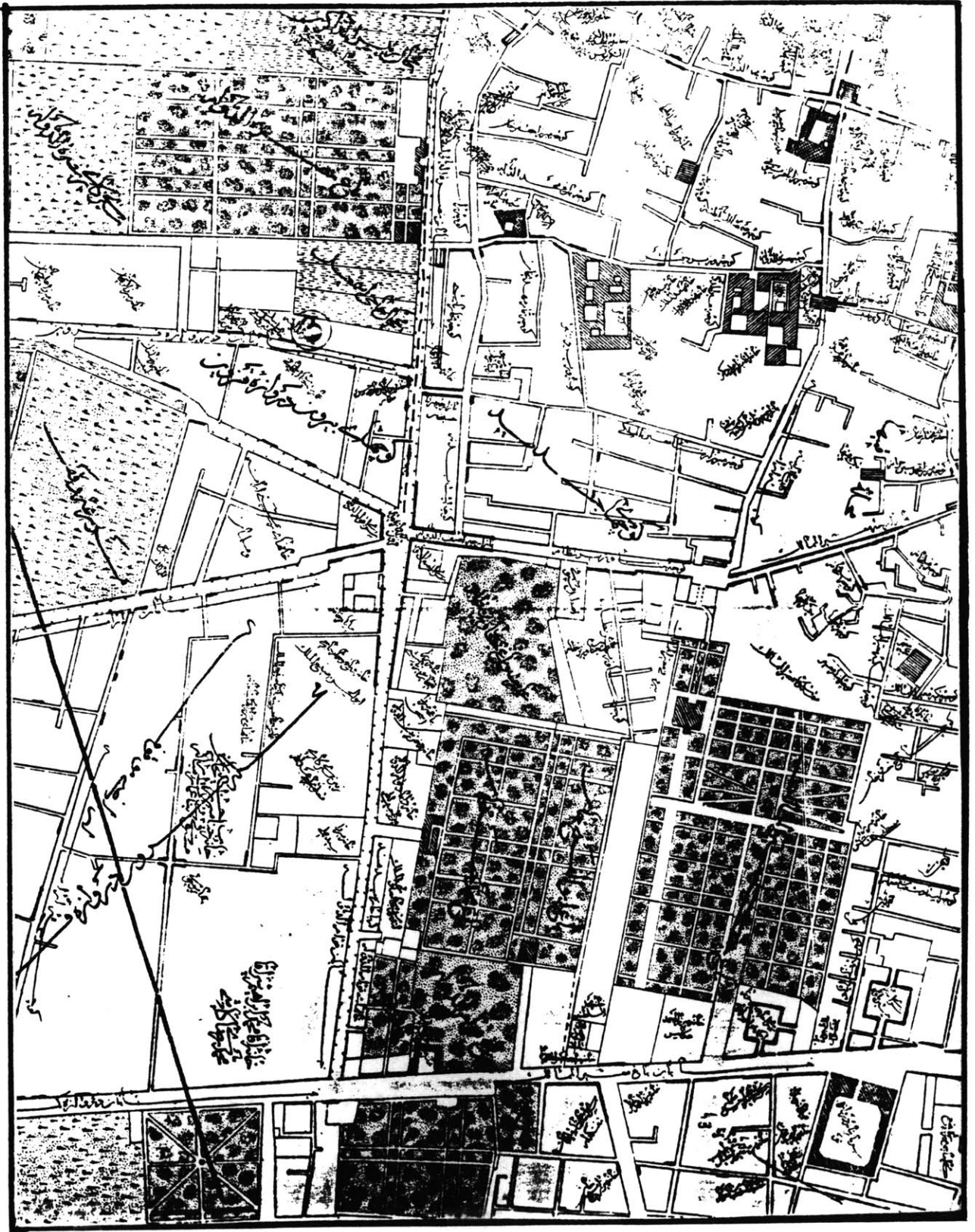


Fig. 1.75 Mahalla Dawlat



Fig. 1.76 Khiaban Alaoddawla, "Boulevard des Ambassadeur" in Mahalla Dawlat



Fig. 1.77 Street in Mahalla Dawlat

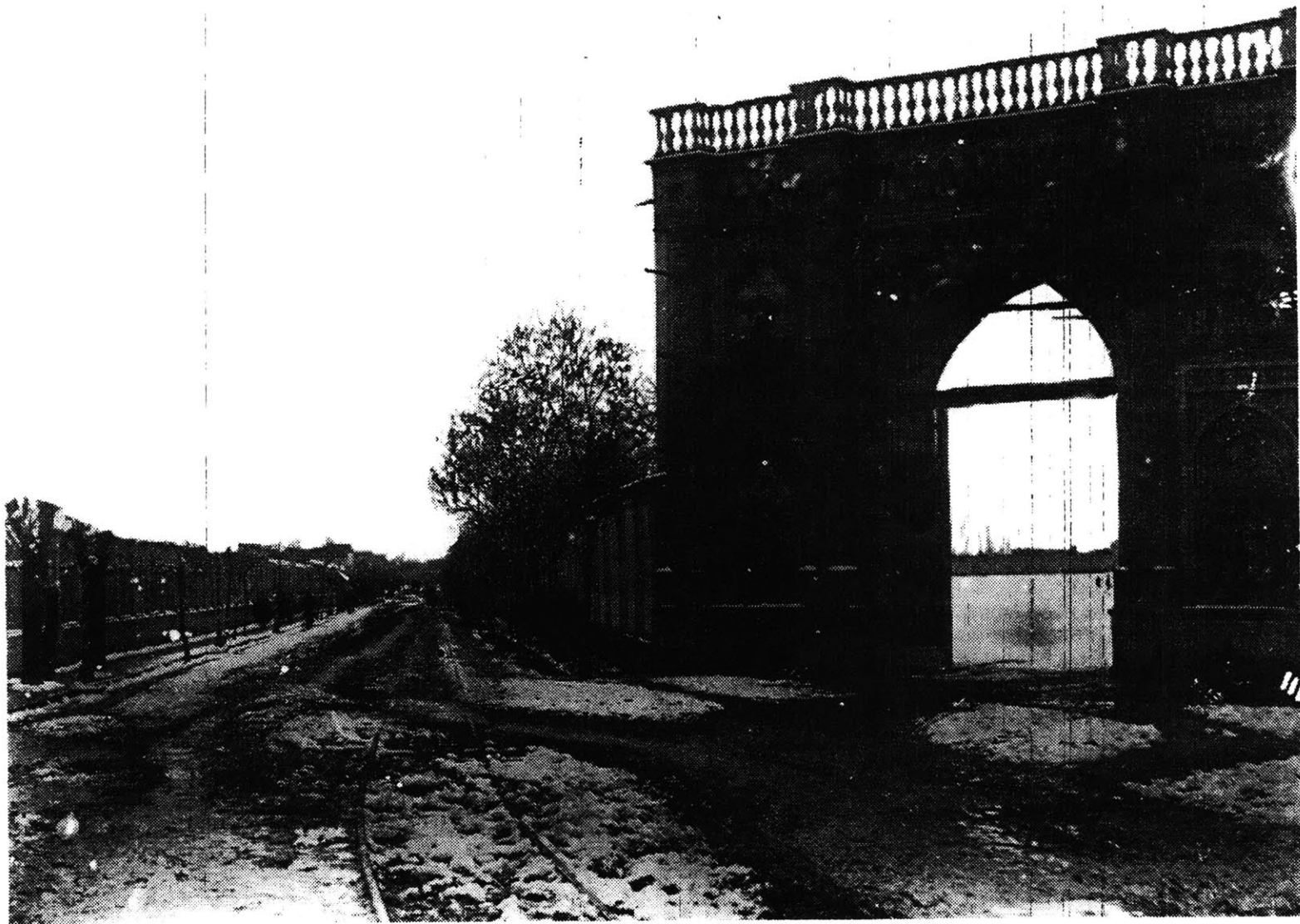


Fig. 1.78 Street in Mahalla Dawlat

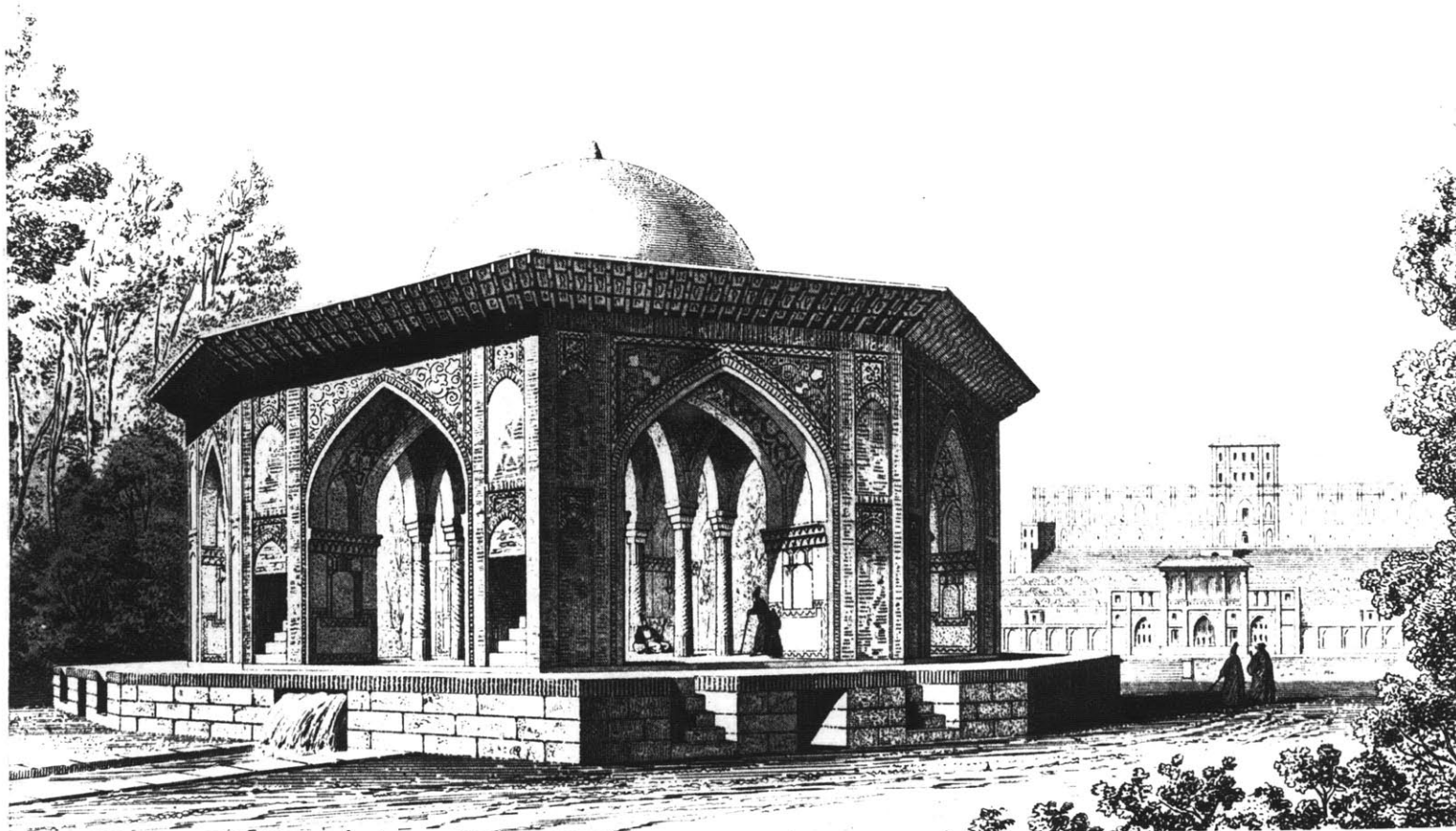


Fig. 1.79 Garden kushk in Qasr-e Qajar built by Fath Ali Shah,
rendering by Pascal Coste

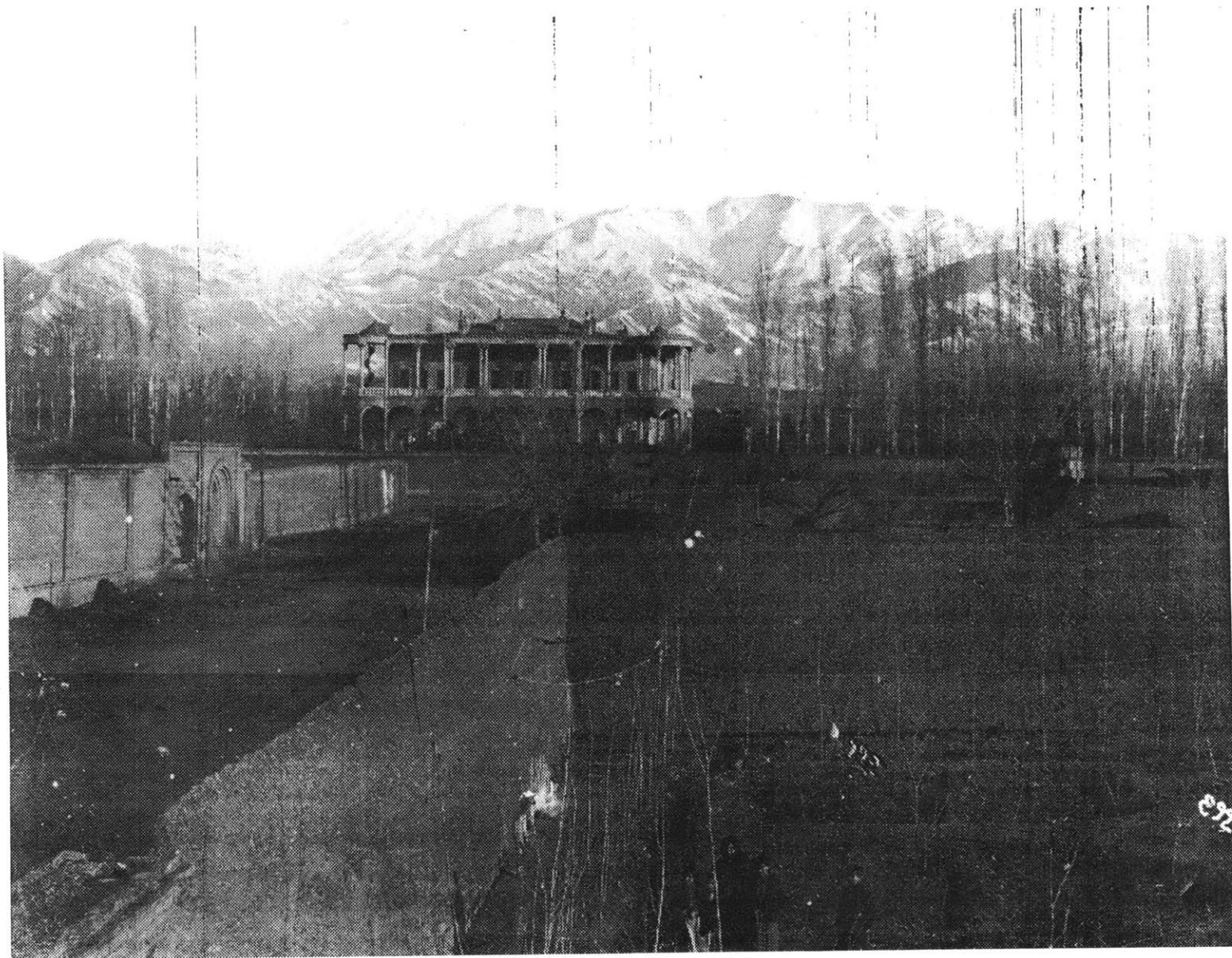


Fig. 1.80 Summer palace of Naseroddin Shah

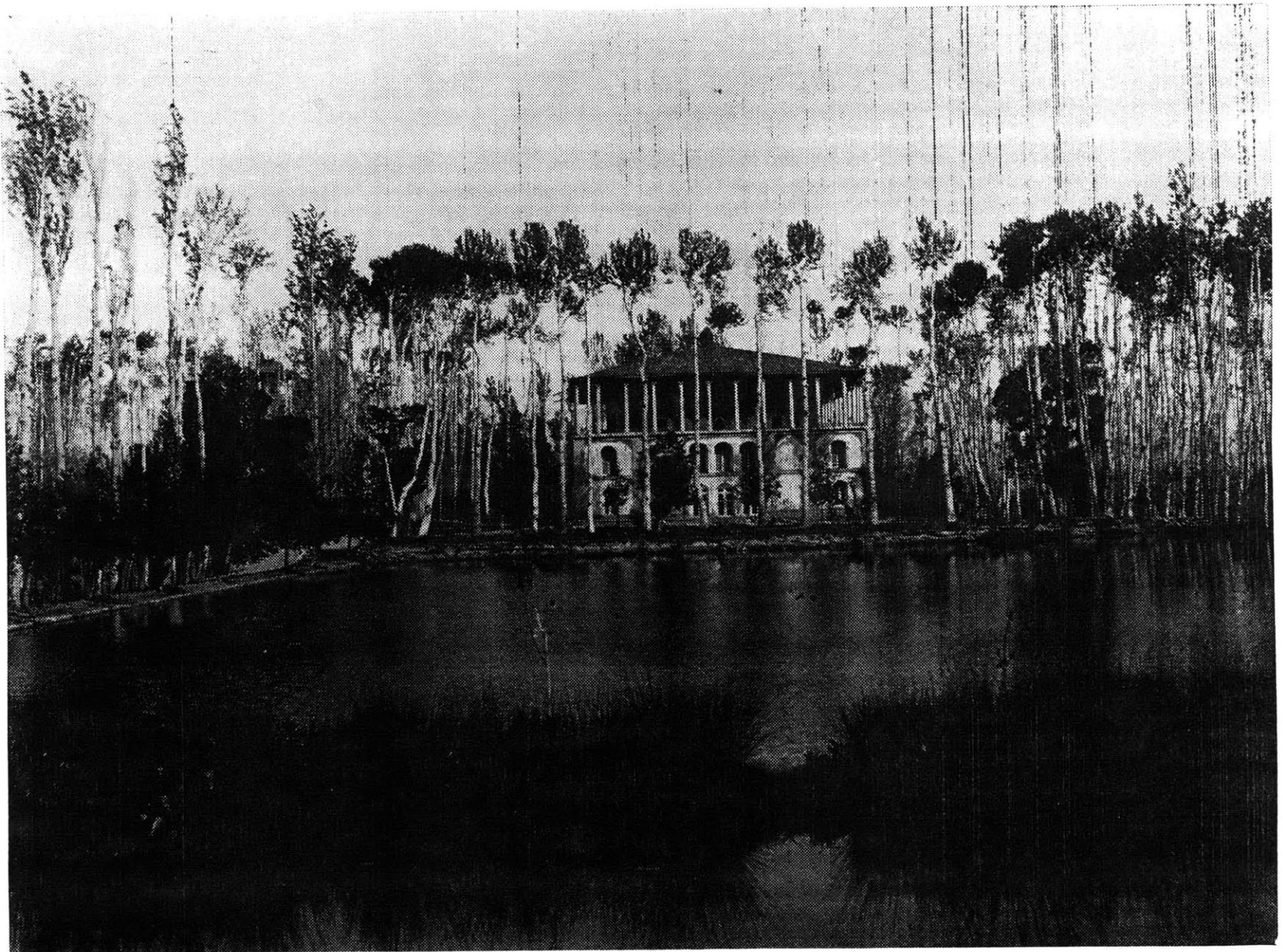


Fig. 1.81 Garden kushk and summer royal summer residence

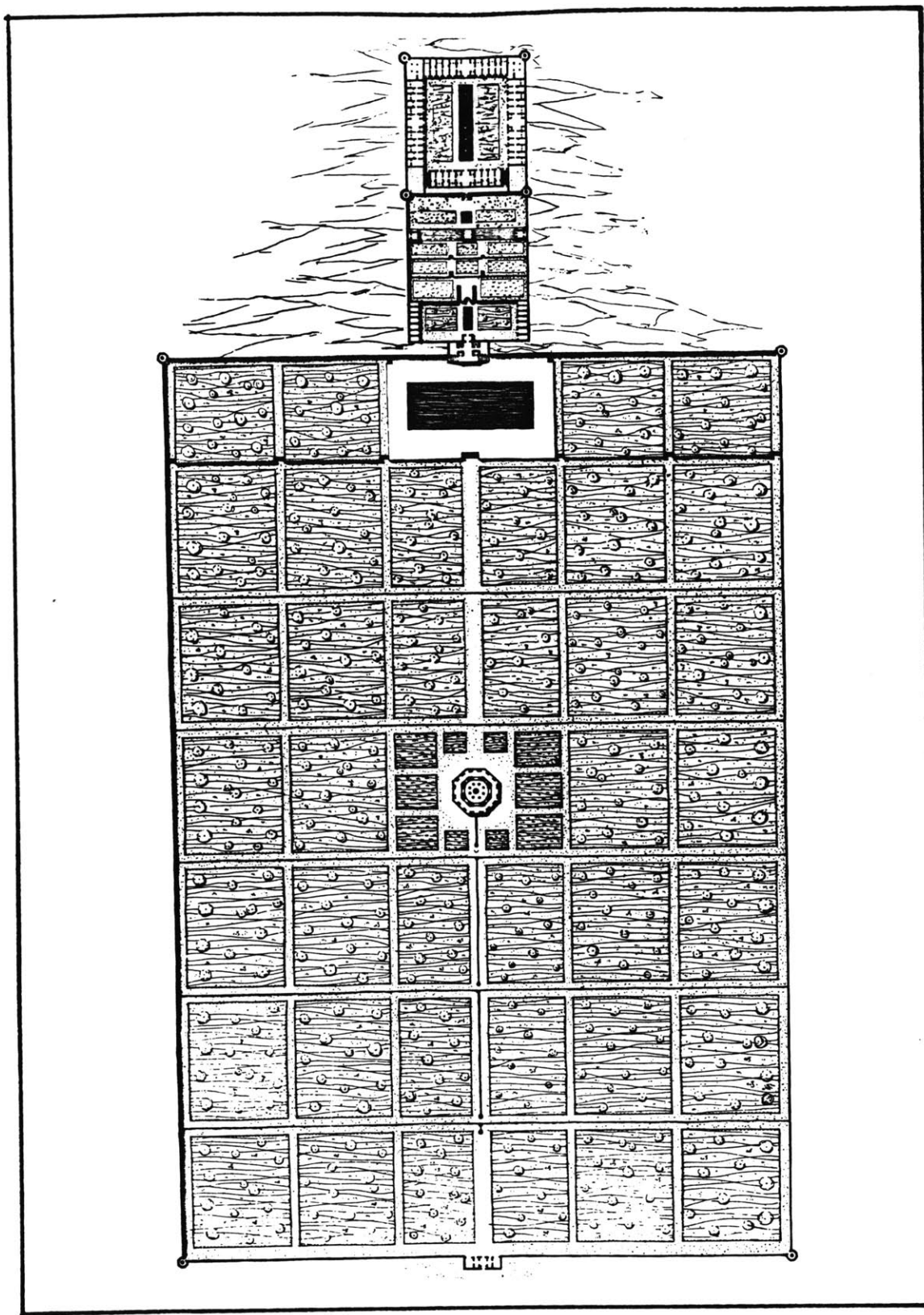


Fig. 1.82 Site plan of Qasr-e Qajar, based on chahar-bagh pattern



Fig. 2.1 Reza Shah Pahlavi



Fig. 2.2 Panorama of Qajar Tehran



Fig. 2.3 Panorama of Tehran during Reza Shah period

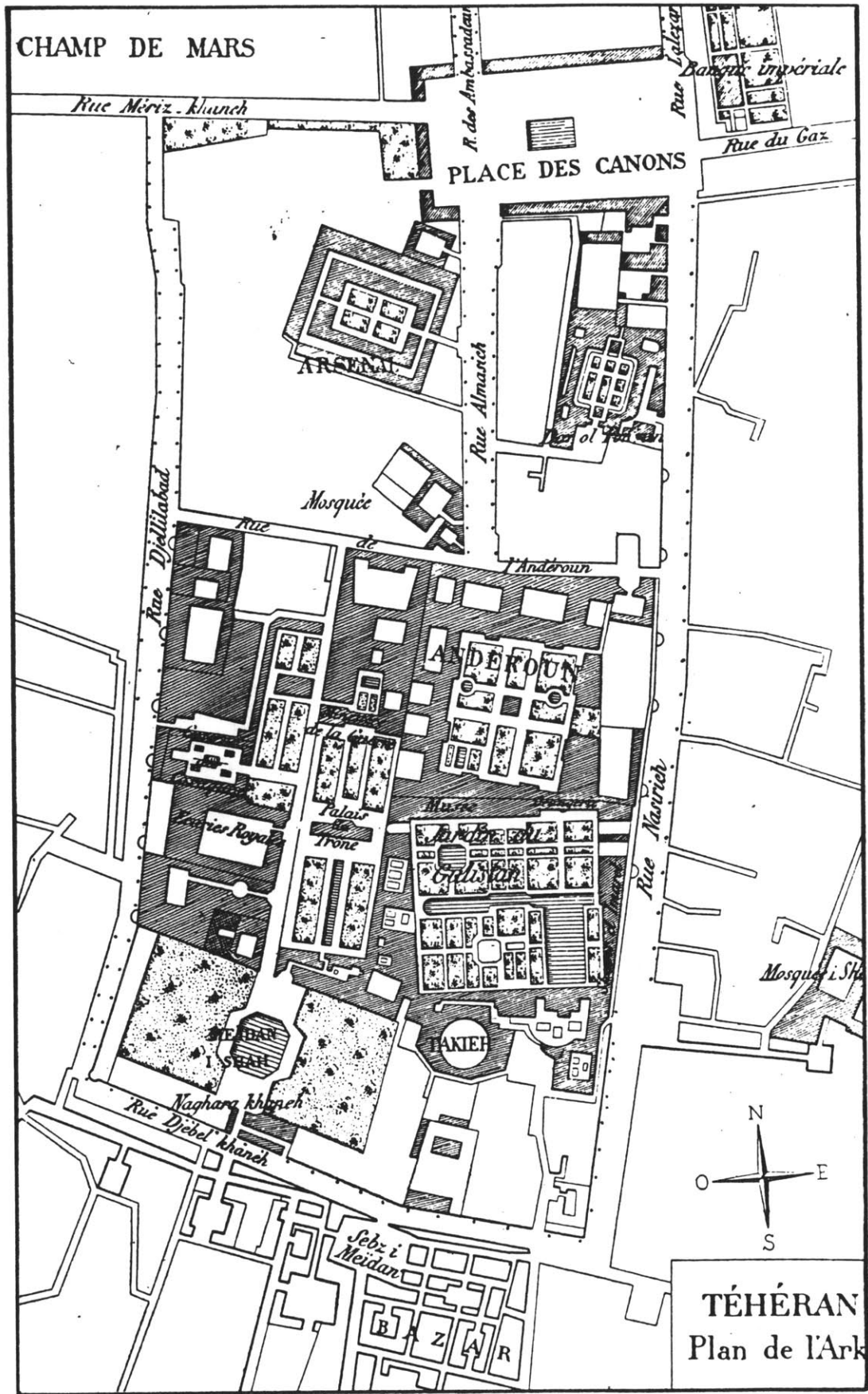


Fig. 2.4 Dr. Feuvrier's map of the Arg

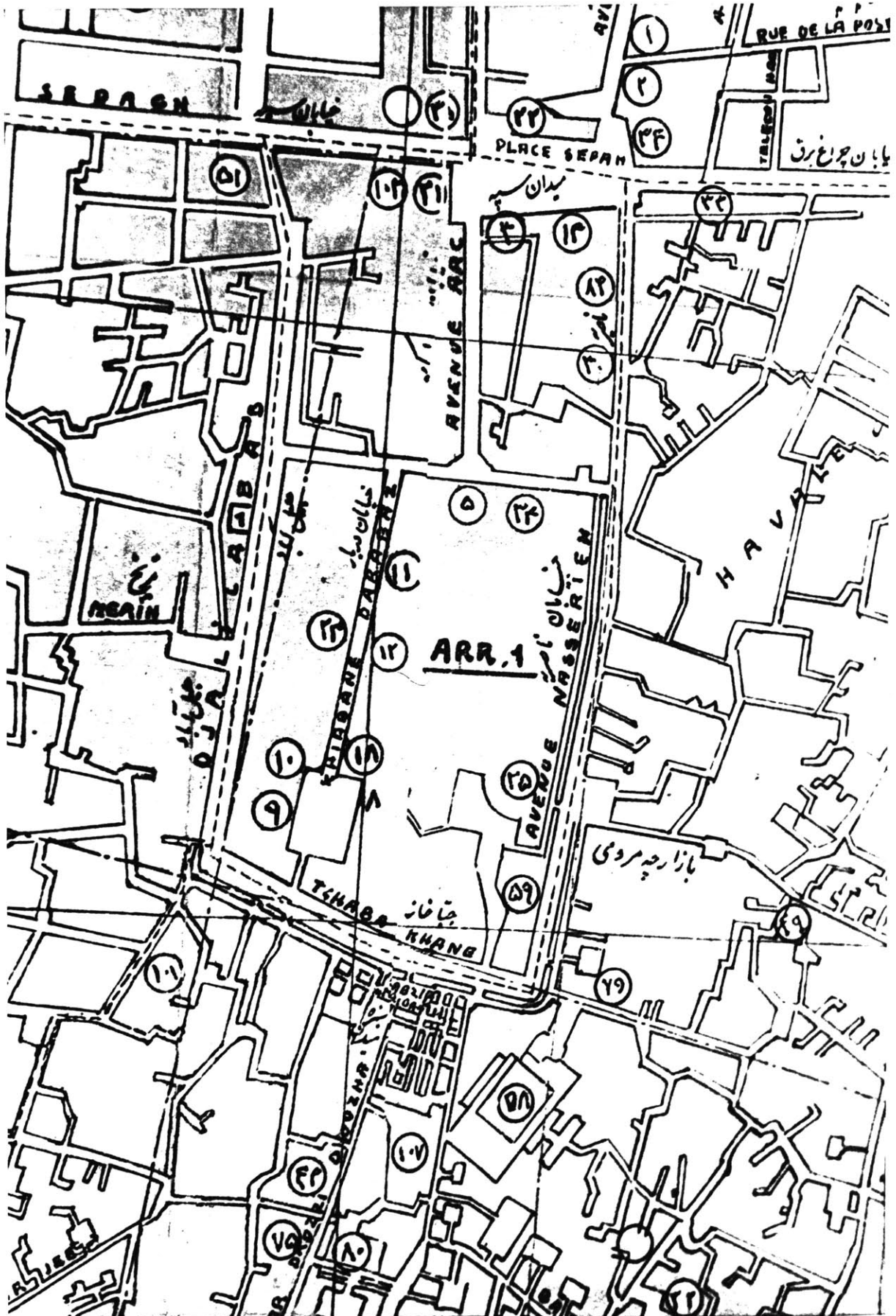


Fig. 2.5 Map of the Arg under Reza Shah

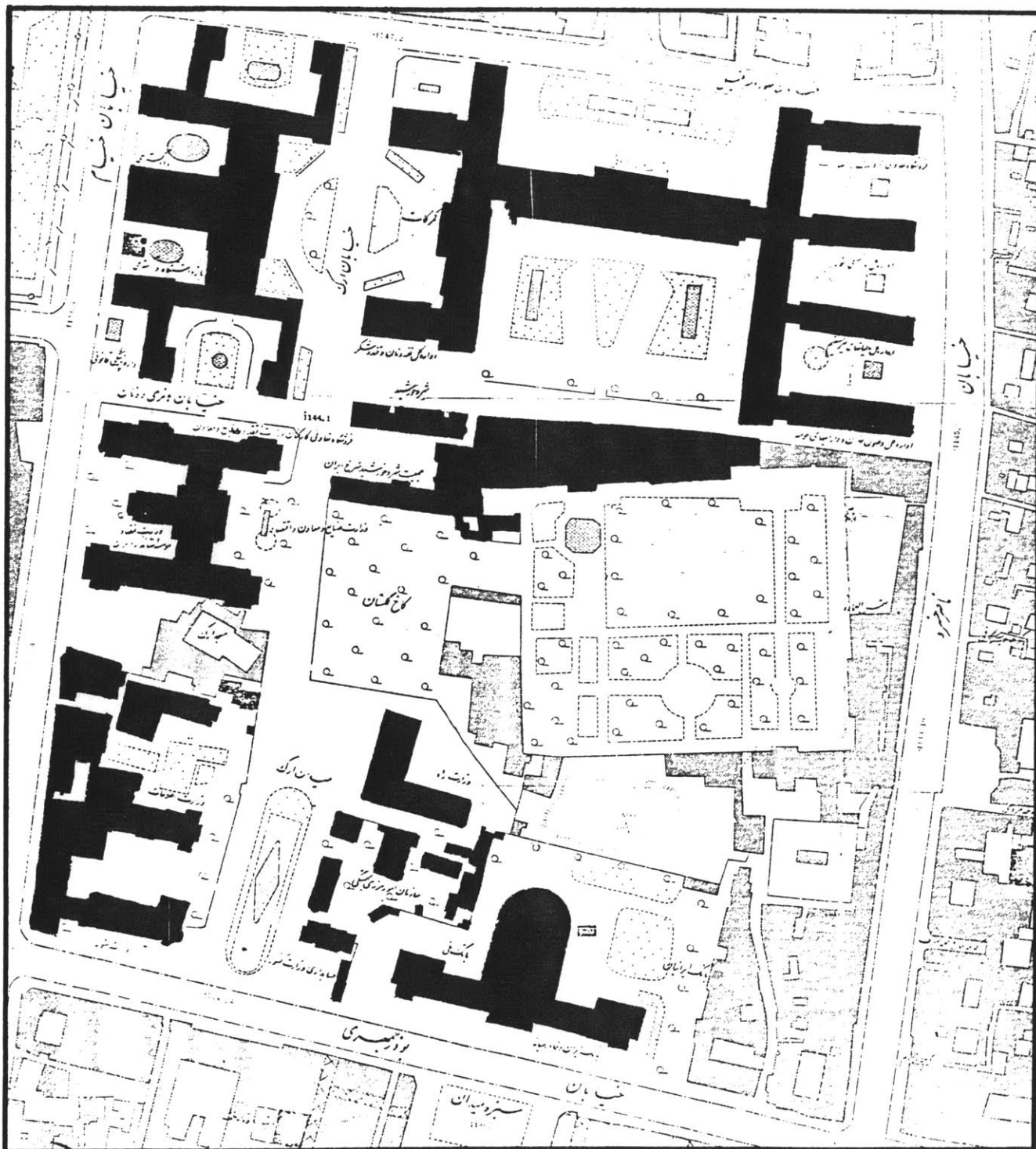


Fig. 2.6 Map of the Arg after construction of buildings

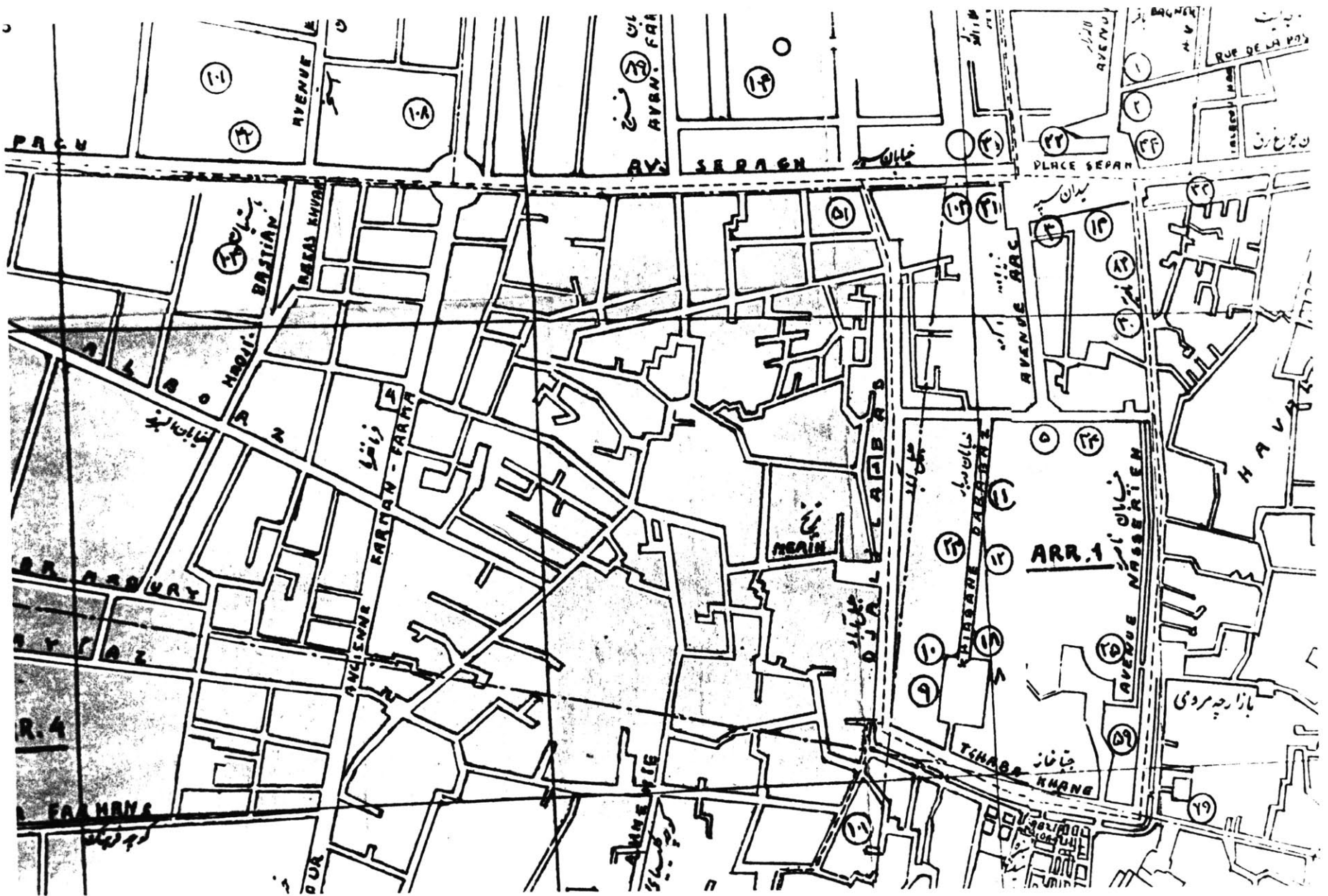


Fig. 2.7 Map of Sangelaj area before demolition

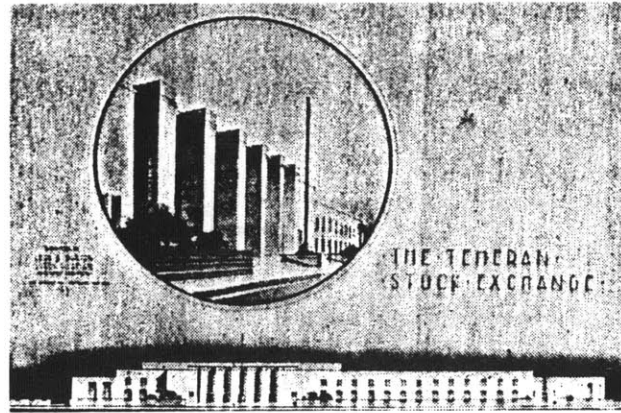


Fig. 2.8 Bourse design by Barton for Sangelaj



Fig. 2.9 Sangelaj as park



Fig. 2.10 Aerial view of Tehran

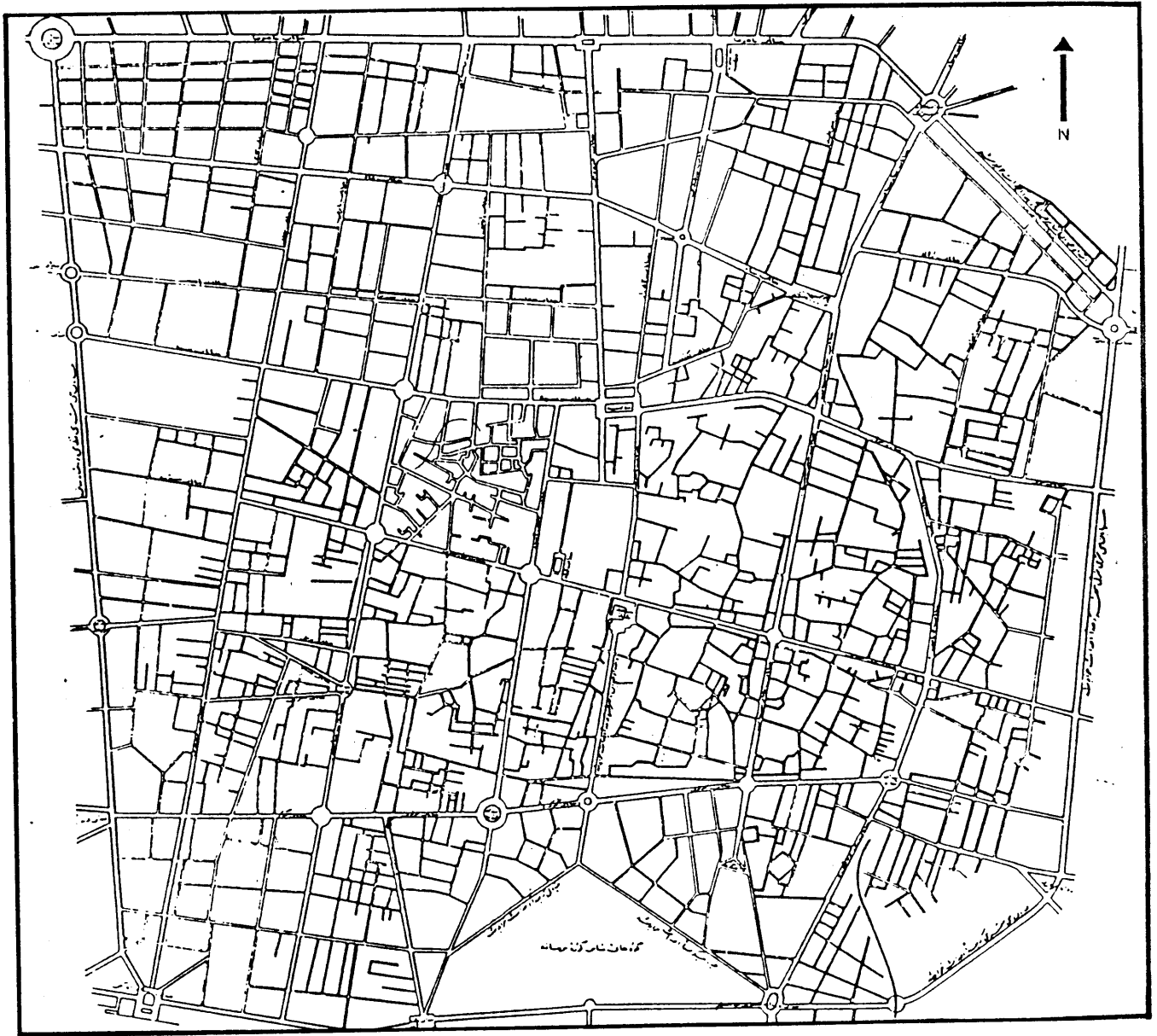


Fig. 2.11 Planification map of 1937



Fig. 2.12 Pattern of Dawlat streets

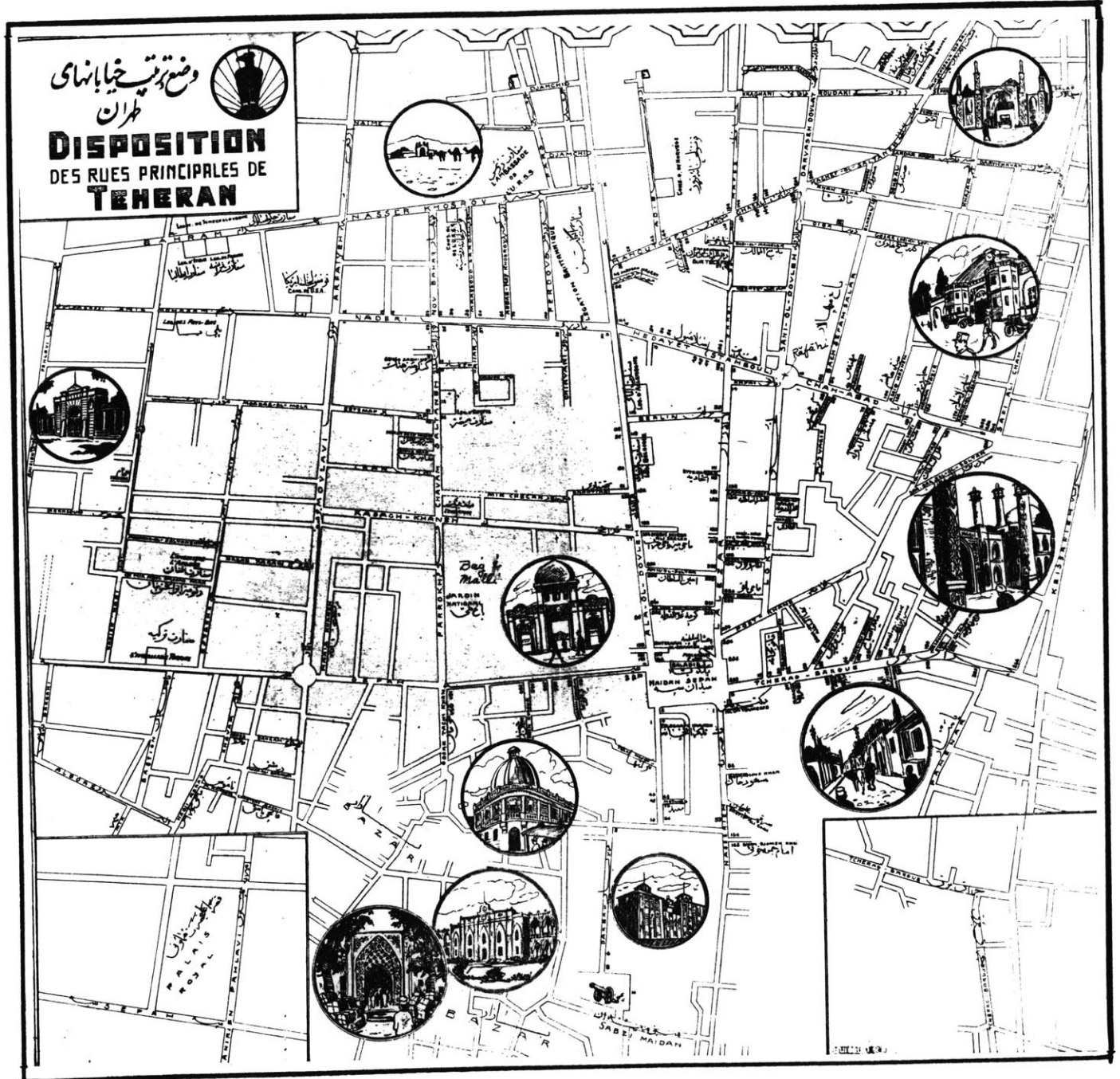


Fig. 2.13 Tourist map of Tehran ca. 1930

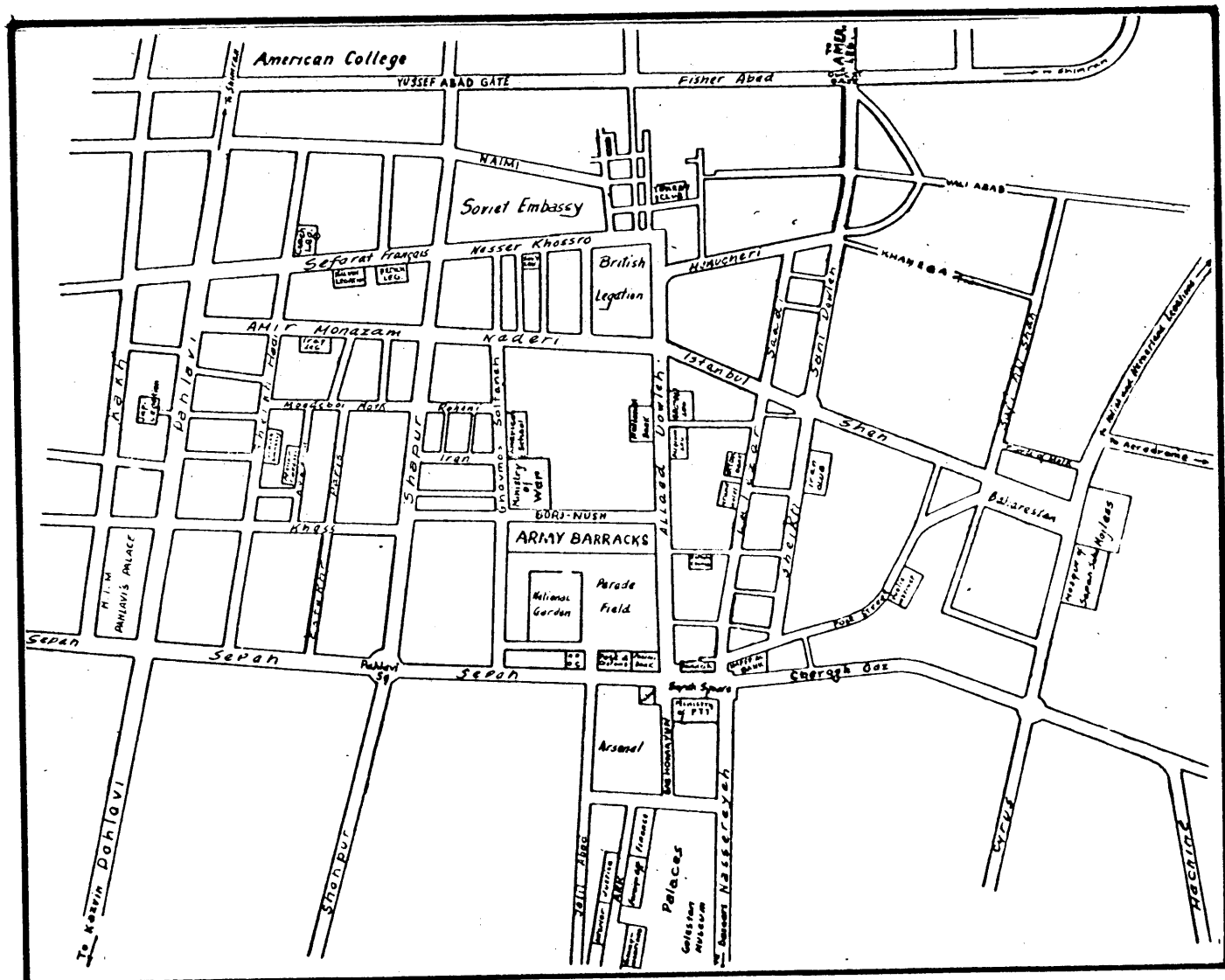


Fig. 2.14 Map of main streets (CIA Map Library)



Fig. 2.15 Four main streets of Tehran

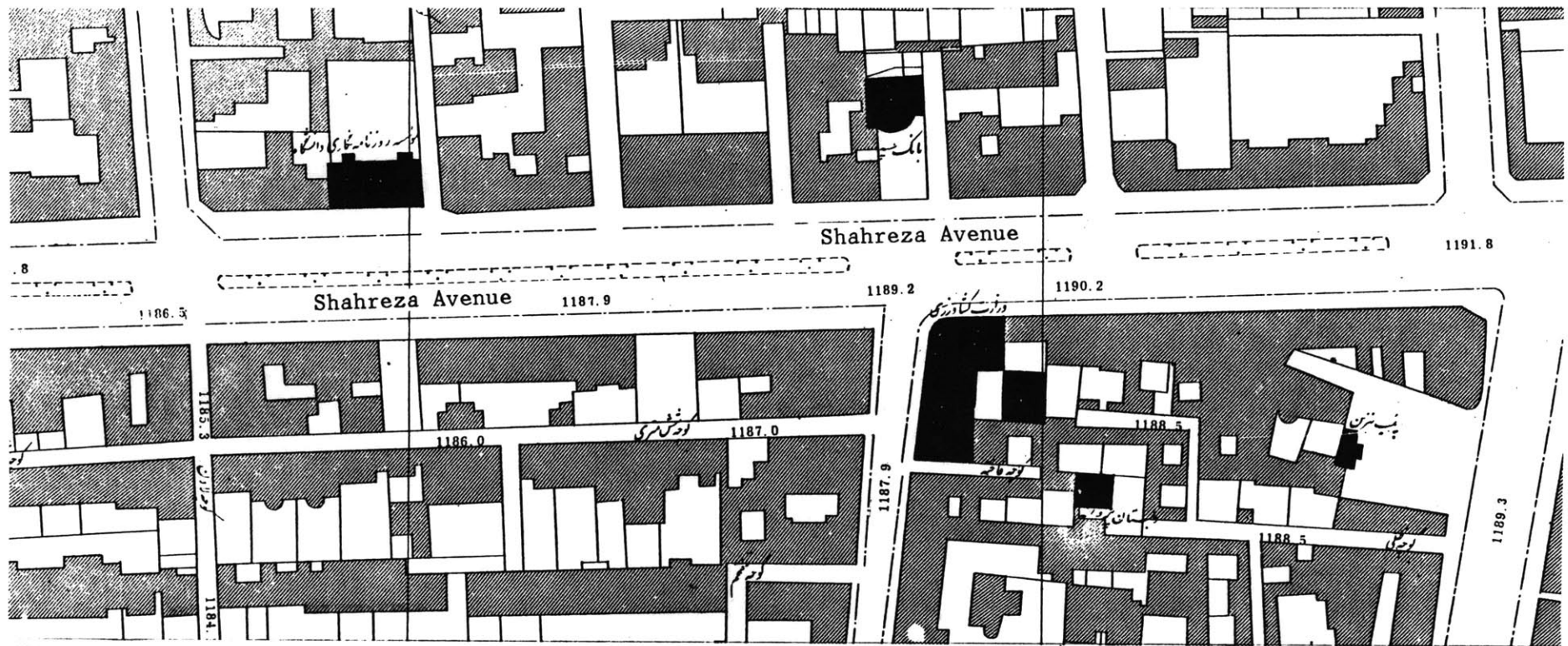


Fig. 2.16 Shahreza Avenue



Fig. 2.17 Shahreza Avenue

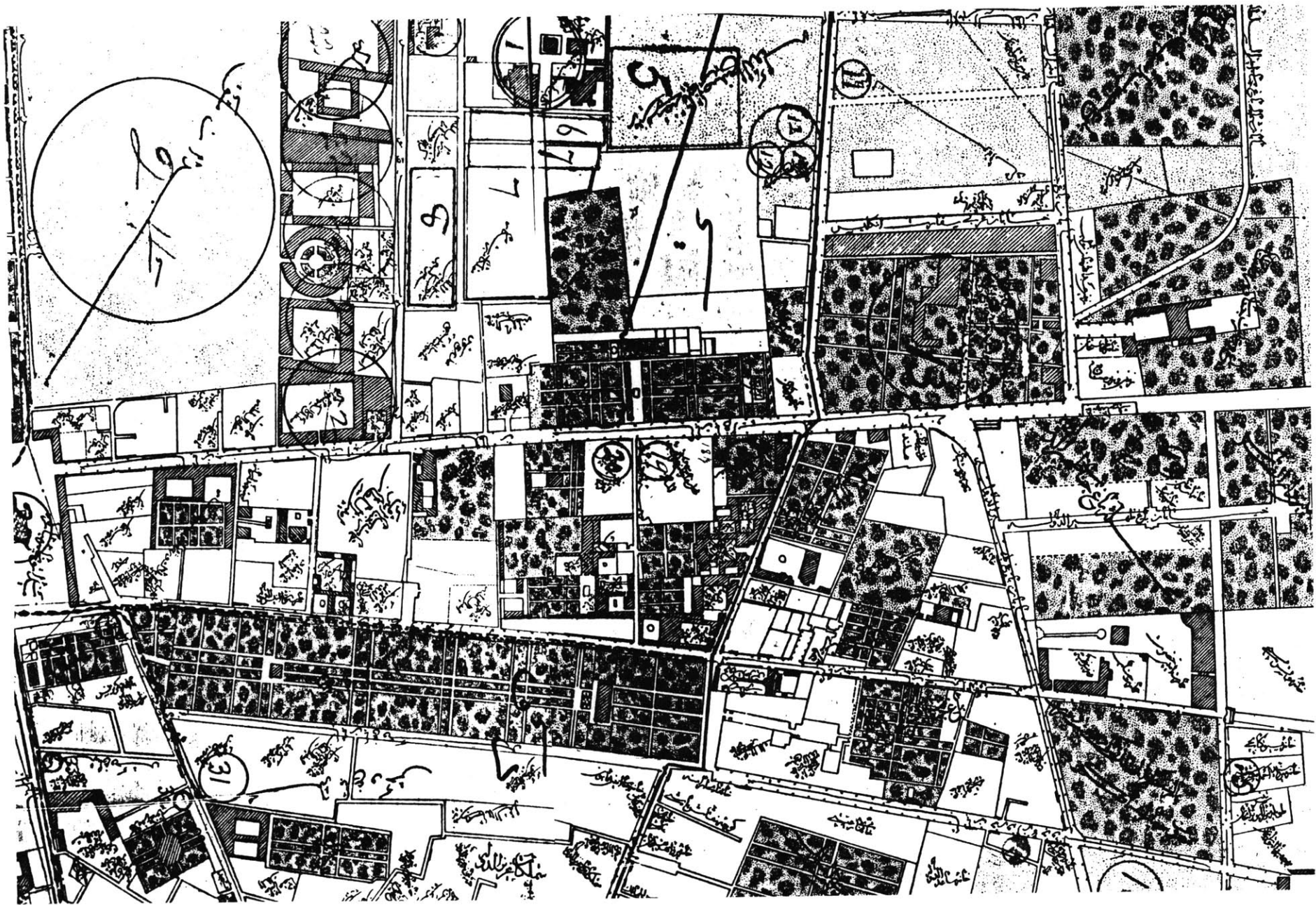


Fig. 2.18 Dawlat quarter

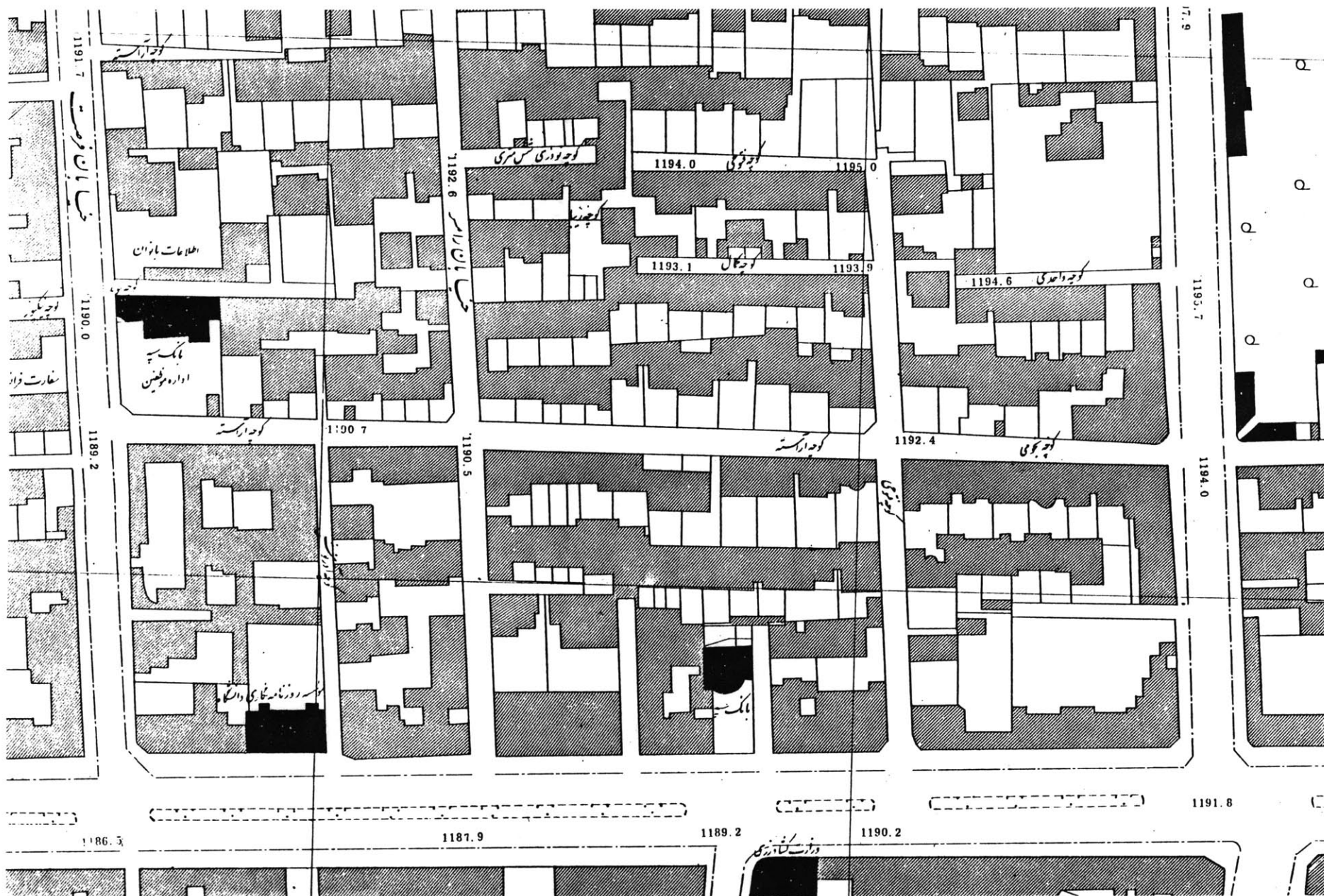


Fig. 2.19 Shahreza quarter

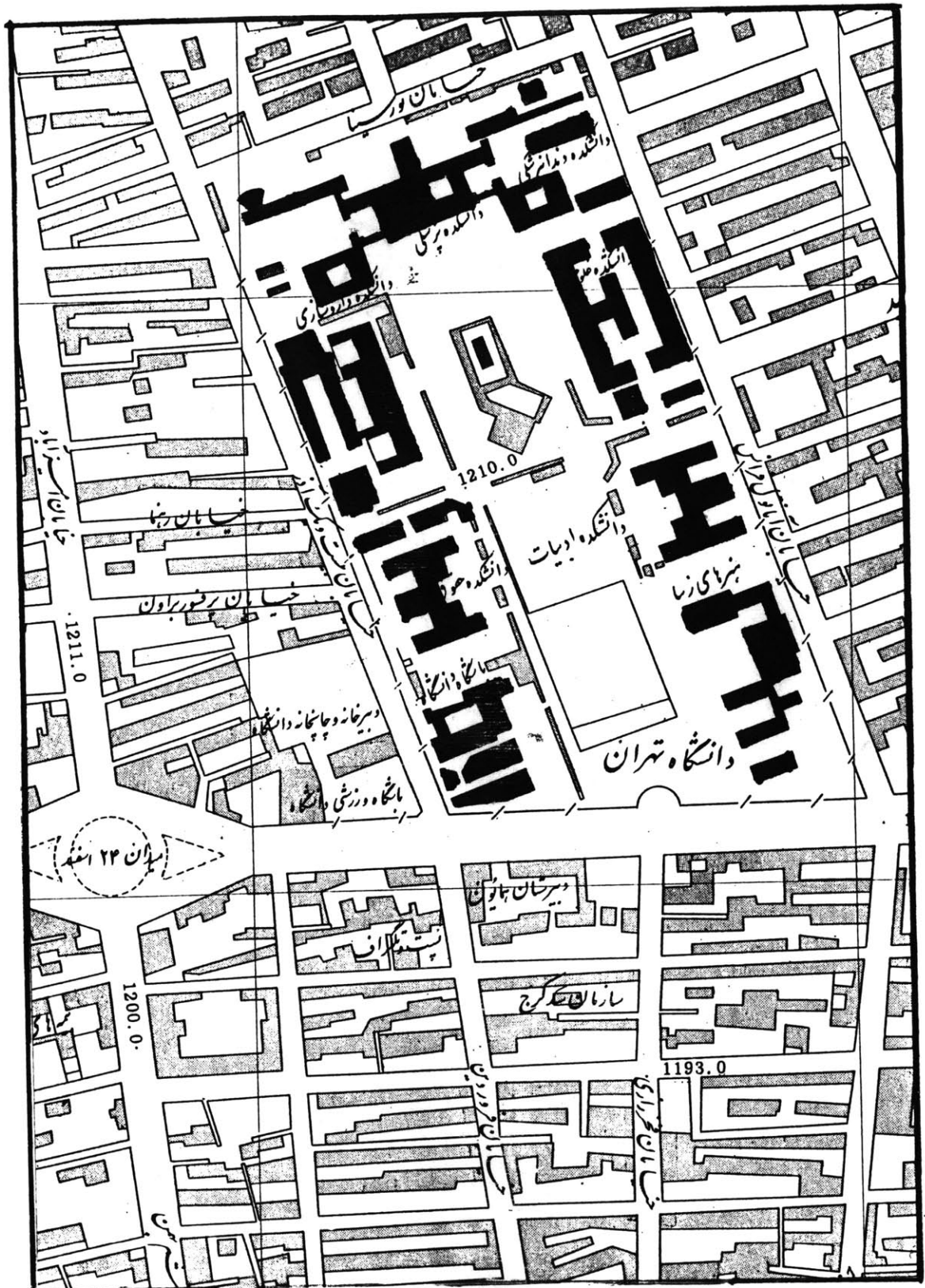


Fig. 2.20 Map of Shahreza area with Tehran University



Fig. 2.21 Apartment building on Shahreza Avenue



Fig. 2.22 Apartment building on Shahreza Avenue



Fig. 2.23 Pahlavi Avenue



Fig. 2.24 Map showing Pahlavi Avenue

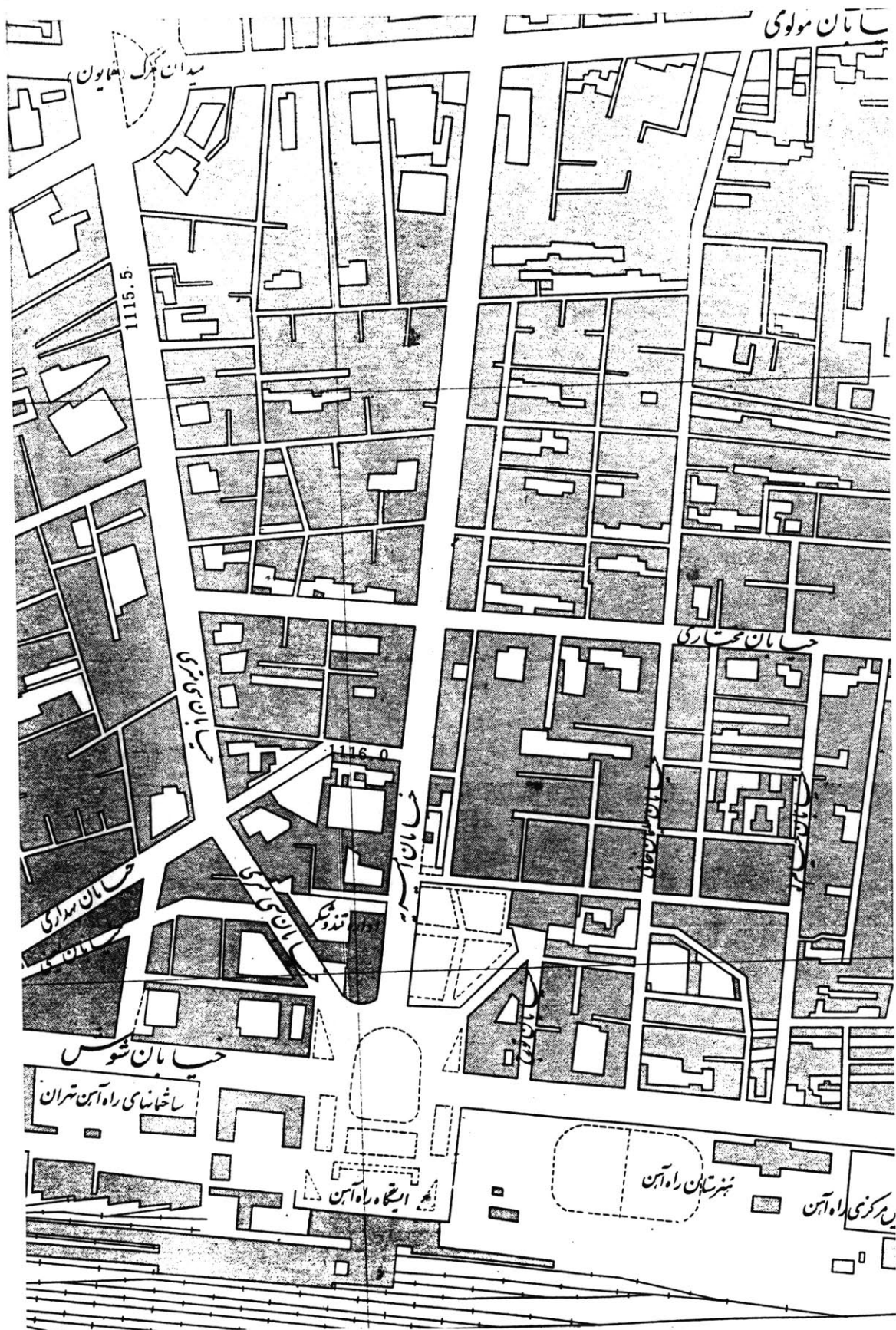


Fig. 2.25 Map showing railroad station

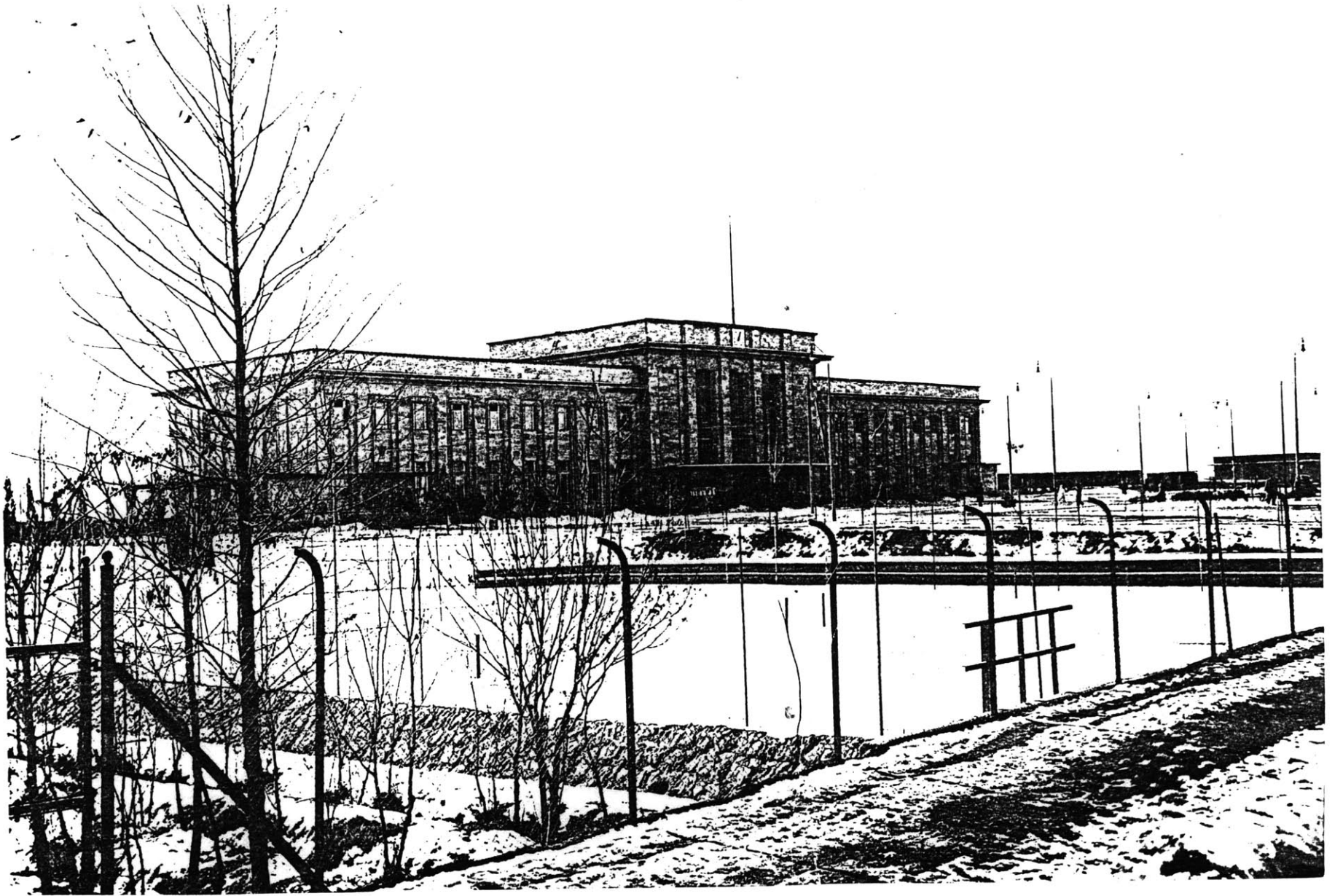


Fig. 2.26 Railroad station



Fig. 2.27 Railroad station



Fig. 2.28 Streets of Tehran



Fig. 2.29 Streets of Tehran



Fig. 2.30 Streets of Tehran (early 1940)



Fig. 2.31 Maydan-e Ferdowsi

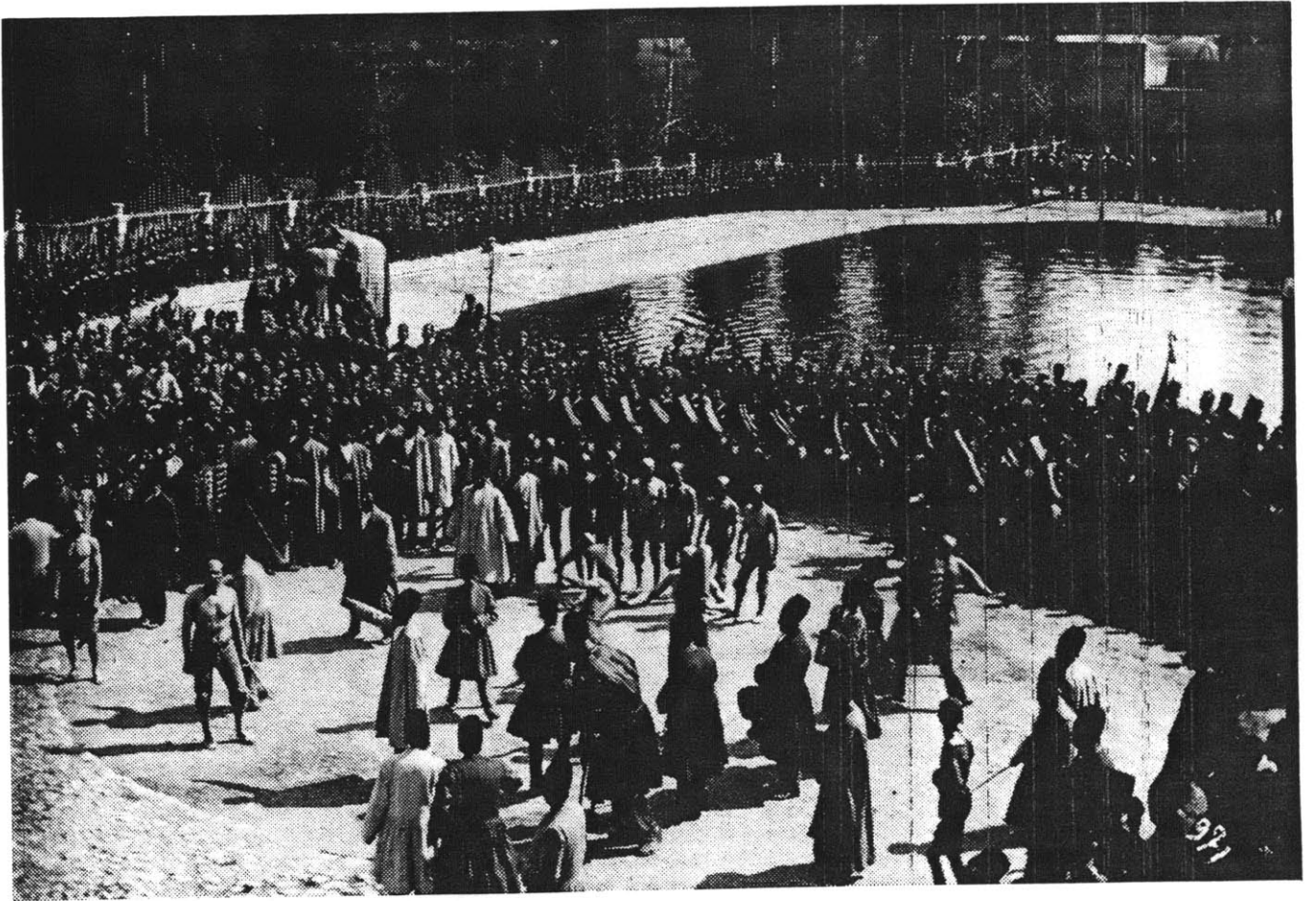


Fig. 2.32 Maydan-e Shah



Fig. 2.33 Public execution in Maydan-e Tupkhana

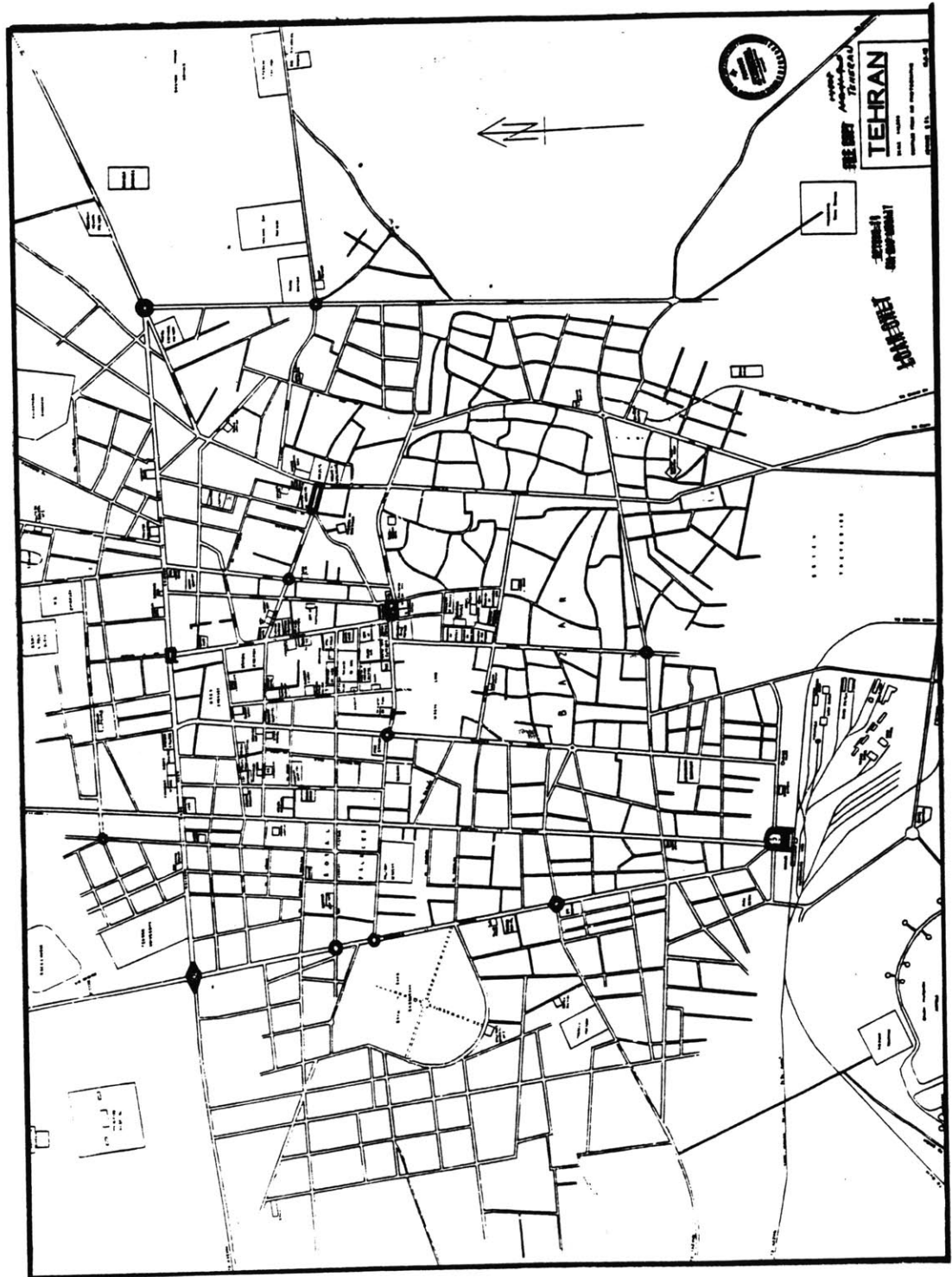


Fig. 2.34 Map showing maydans in Tehran

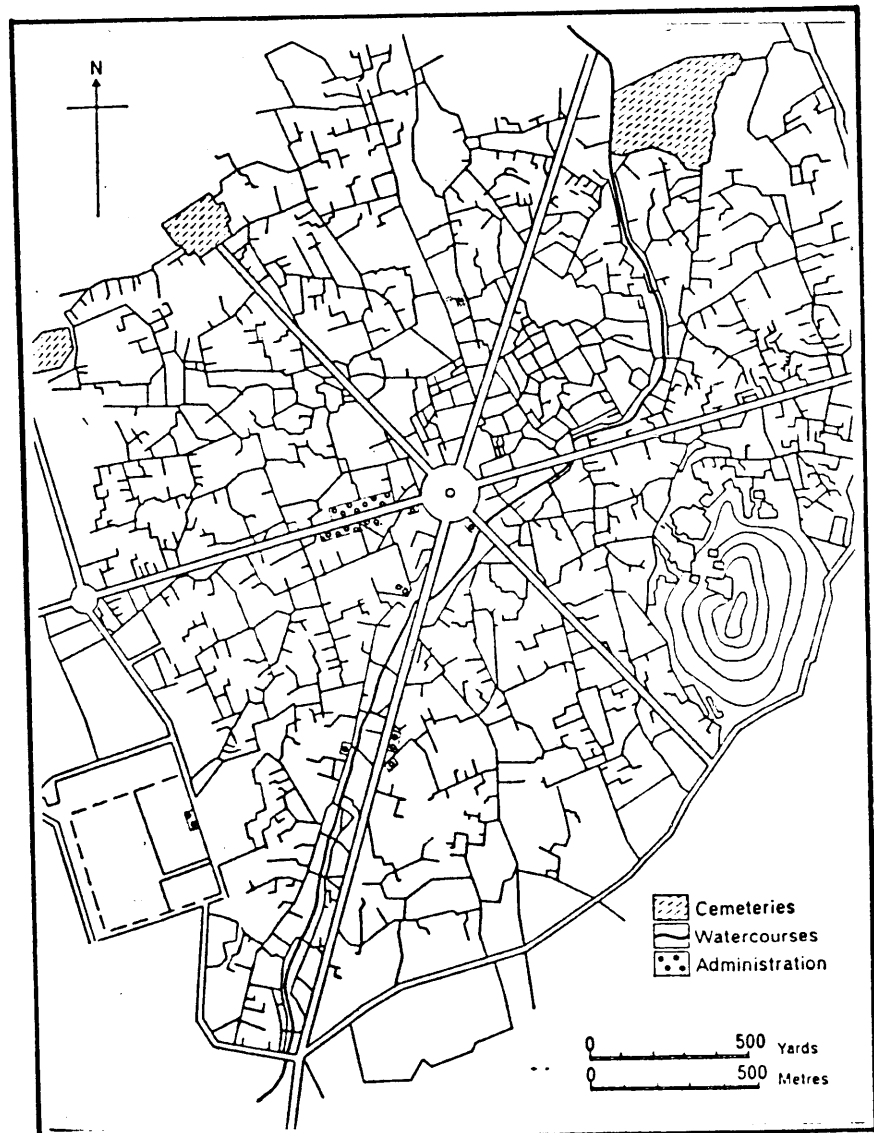
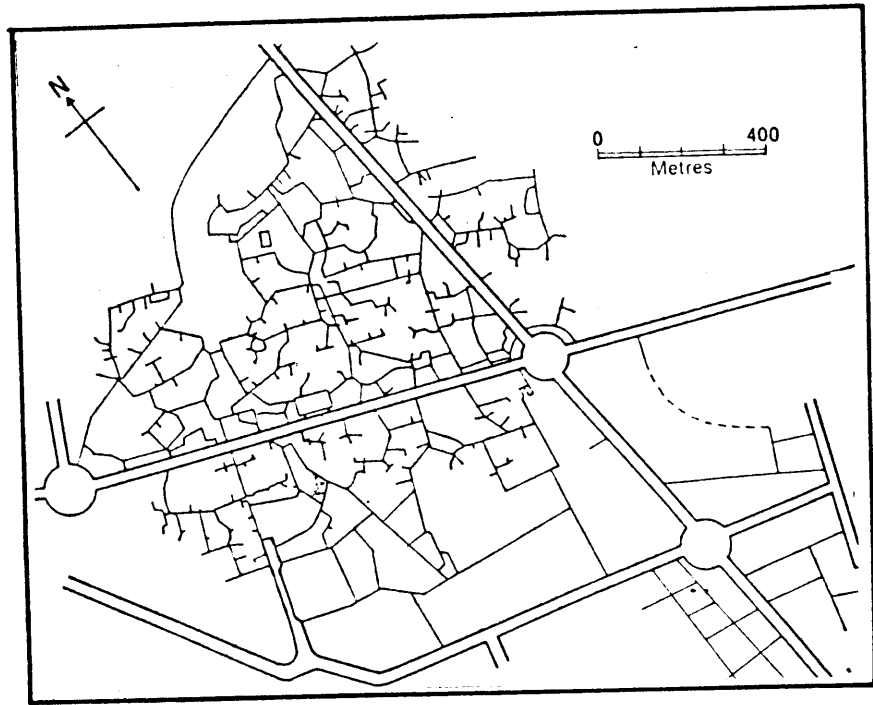


Fig. 2.35 Map showing maydans in Gorgan (above) and Hamadan (below)

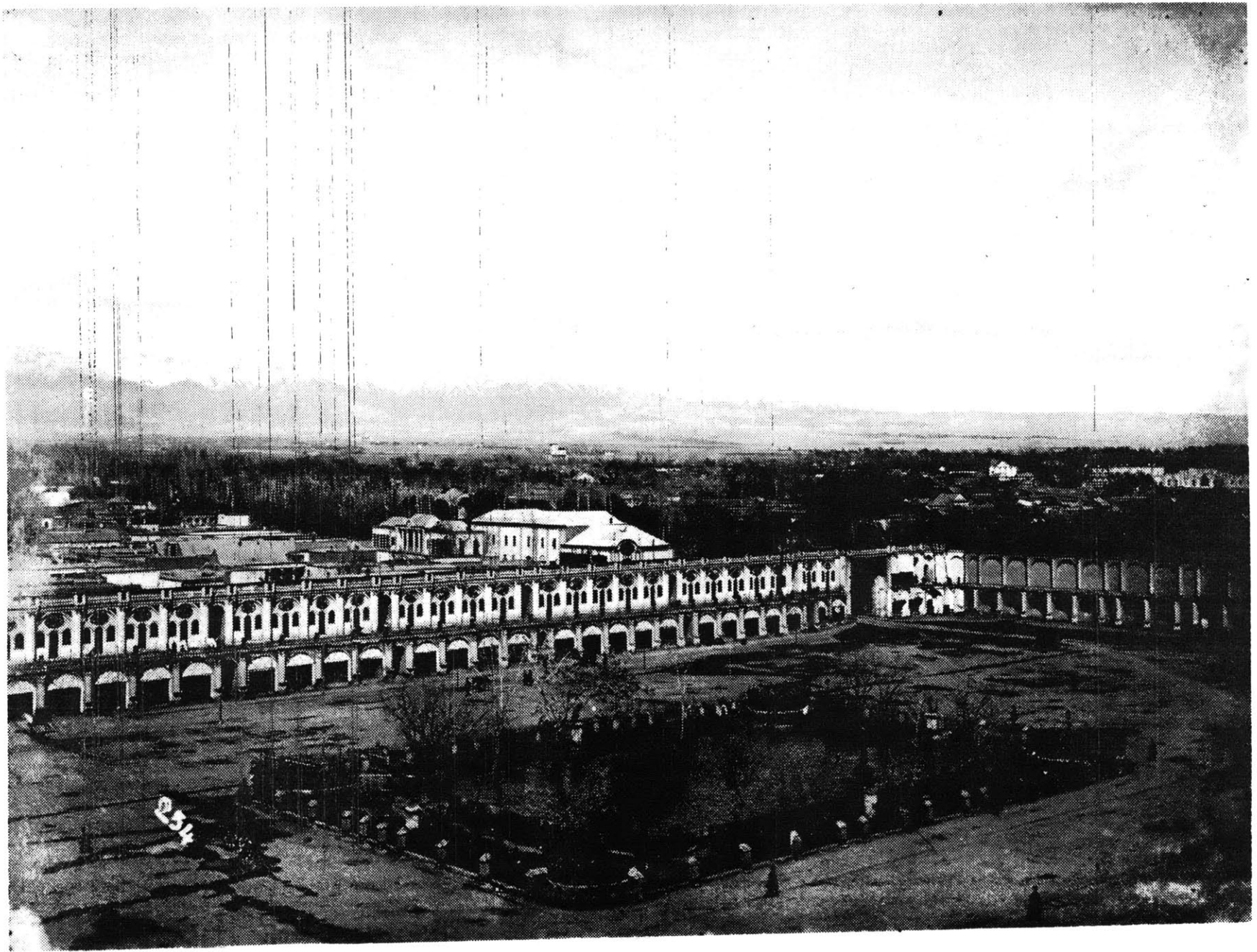


Fig. 2.36 Maydan-e Tupkhana



Fig. 2.37 Maydan-e Sepah (Tupkhana) in 1939



Fig. 2.38 Maydan-e Sepah



Fig. 2.39 Maydan-e Sepah
centrally located equestrian
statue of Reza Shah

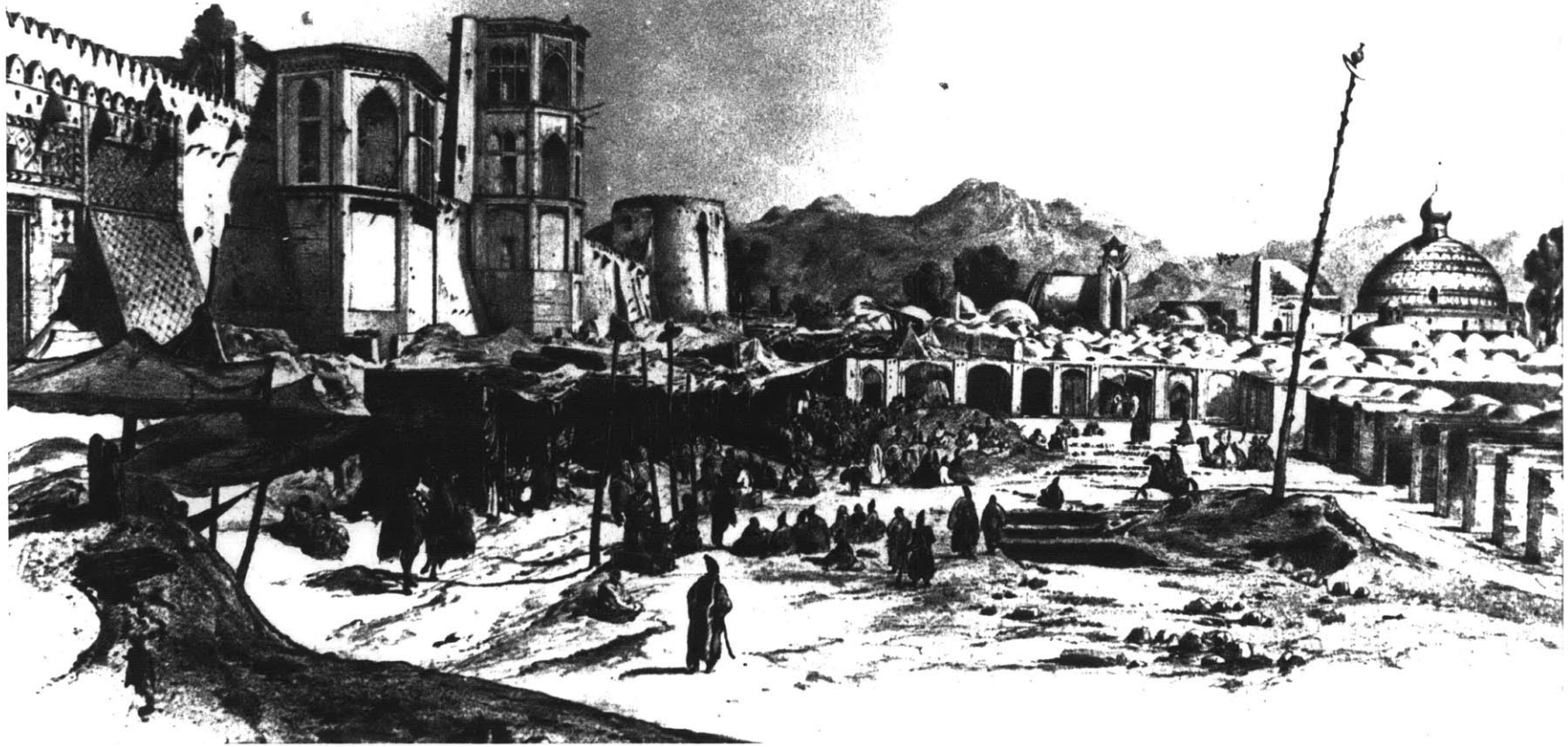


Fig. 2.40 Sabza Maydan (1840's Jules Laurens drawing)

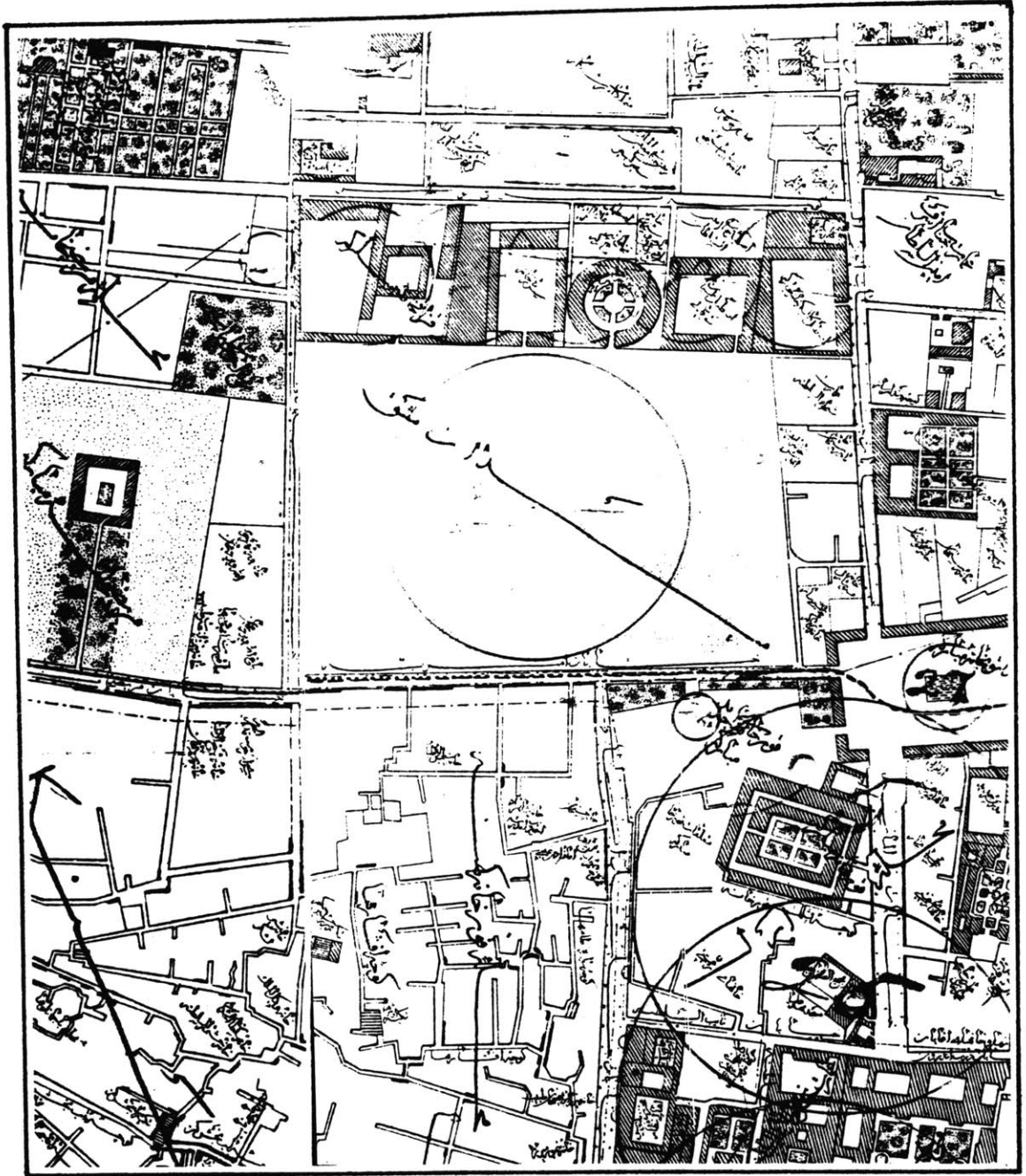


Fig. 2.41 Maydan-e Mashq



Fig. 2.42 Maydan-e Mashq-- First airplane landing Reza Shah as minister of war ca. 1923



Fig. 2.43 Maydan-e Mashq

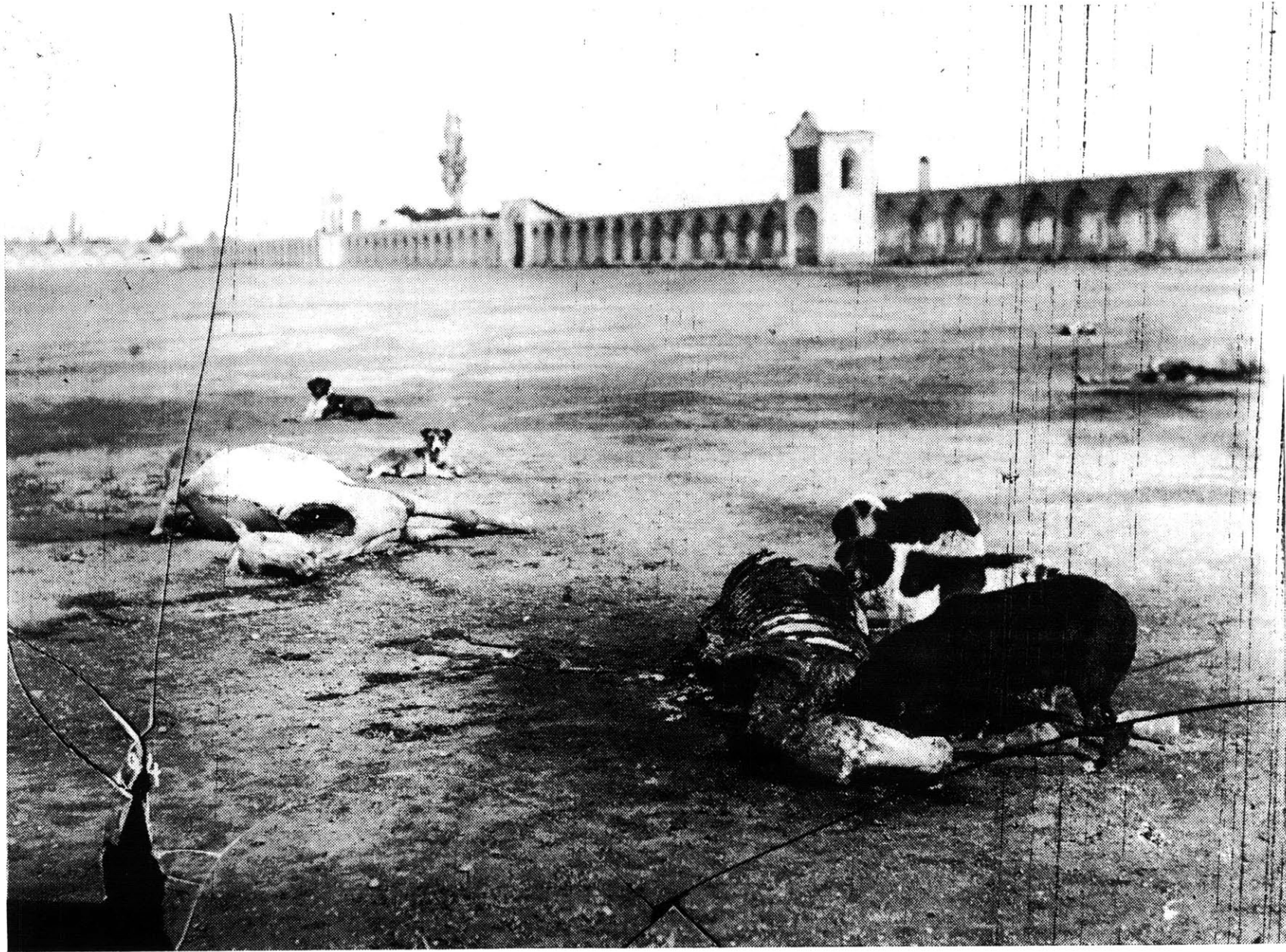


Fig. 2.44 Maydan-e Mashq as deserted field ca. 1920

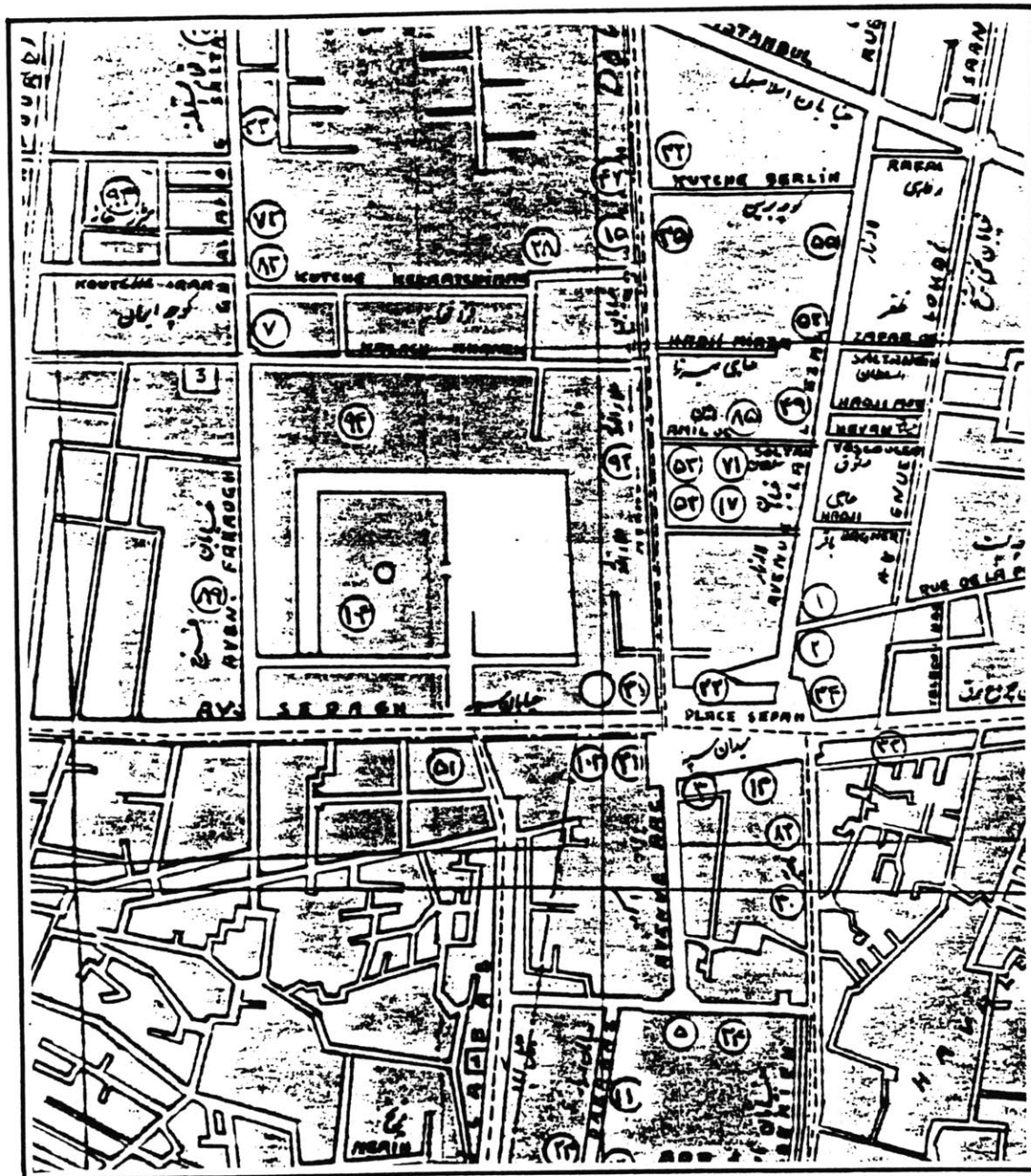


Fig. 2.45 Maydan-e Mashq in the Reza Shah period



Fig. 2.46 New gateway built by Reza Shah at entrance to Maydan-e Mashq

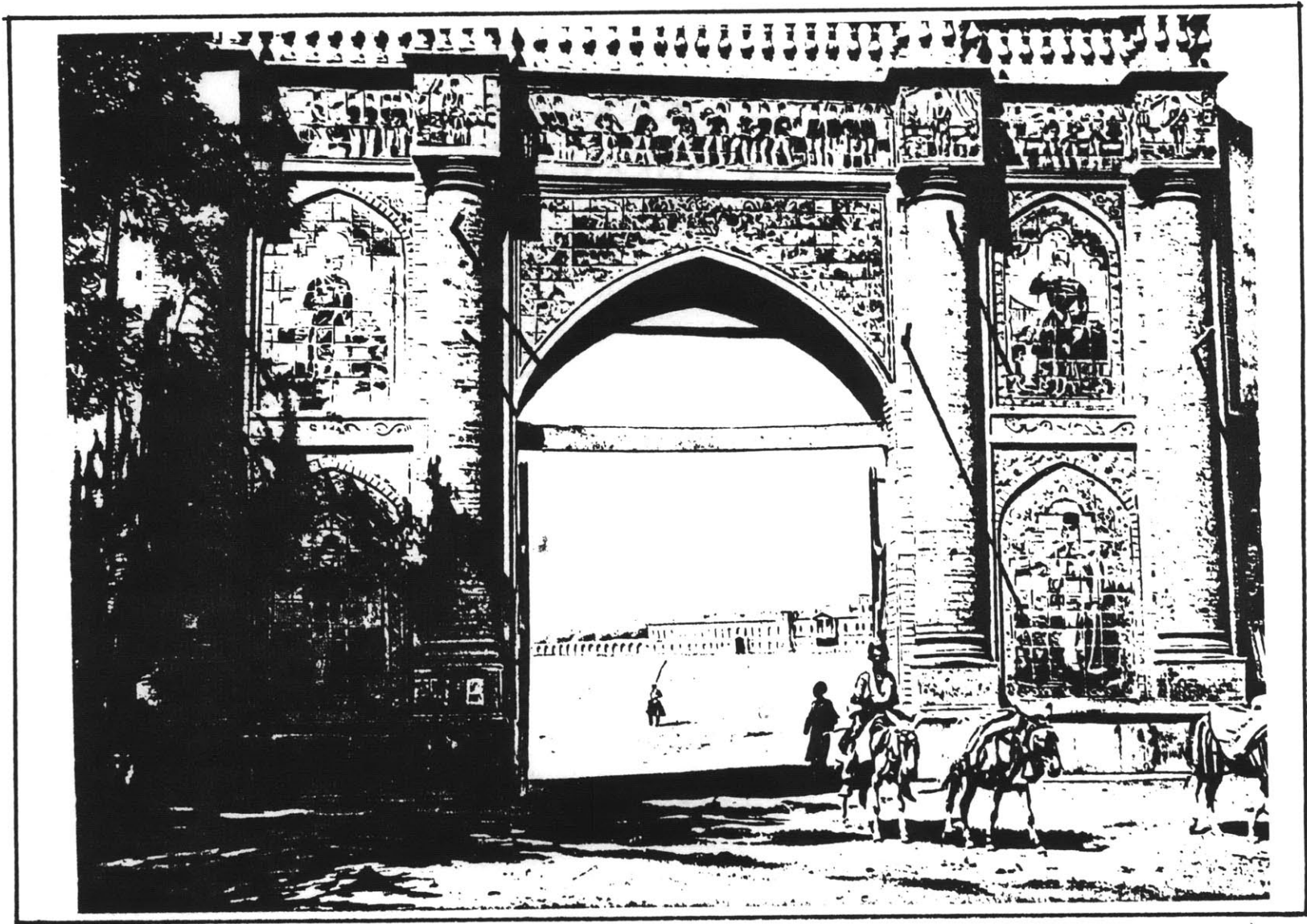


Fig. 2.47 Old gateway to Maydan-e Mashq



Fig. 2.48 Gateway at Maydan-e Mashq

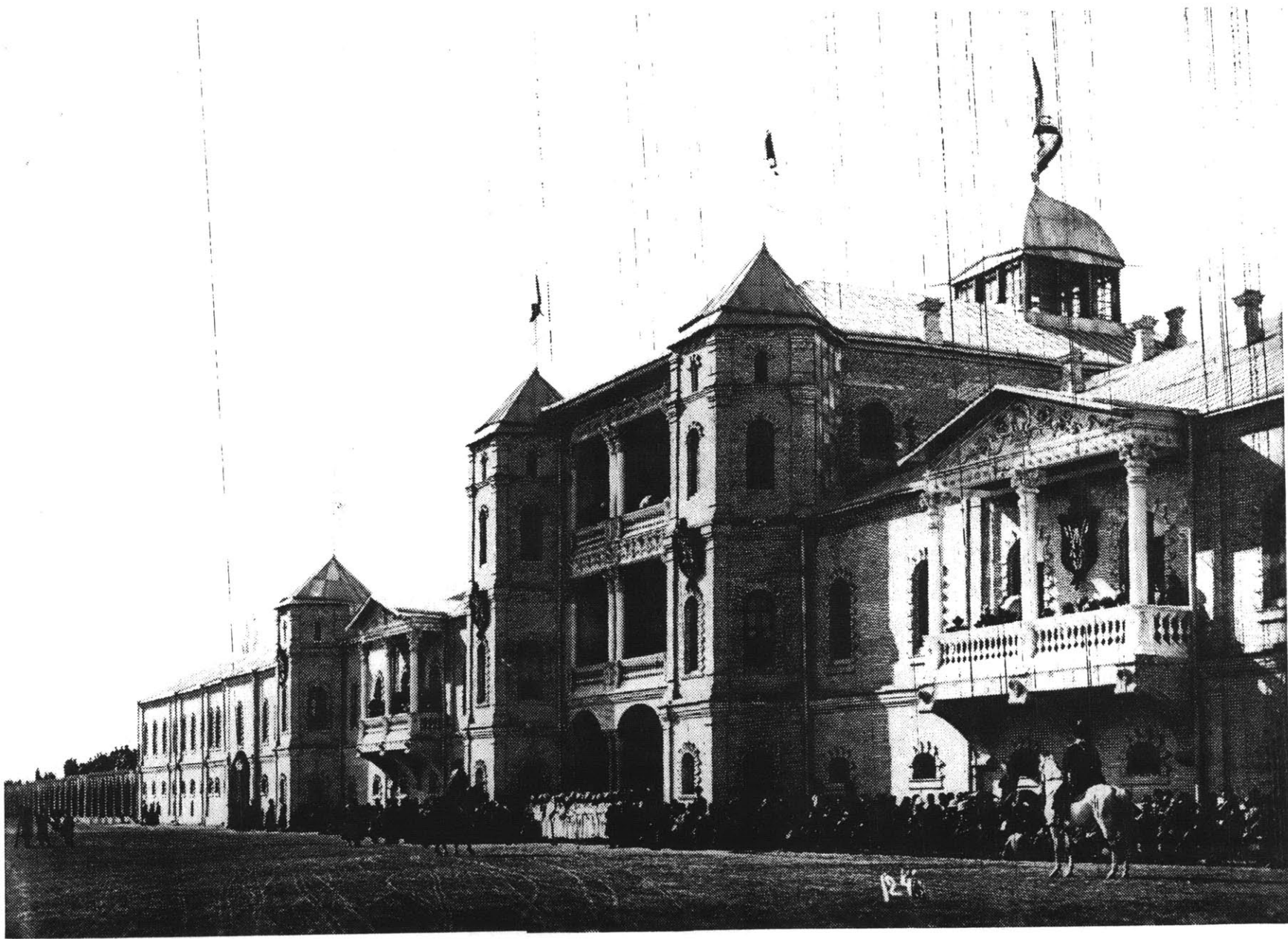


Fig. 2.49 Ministry of War in Maydan-e Mashq

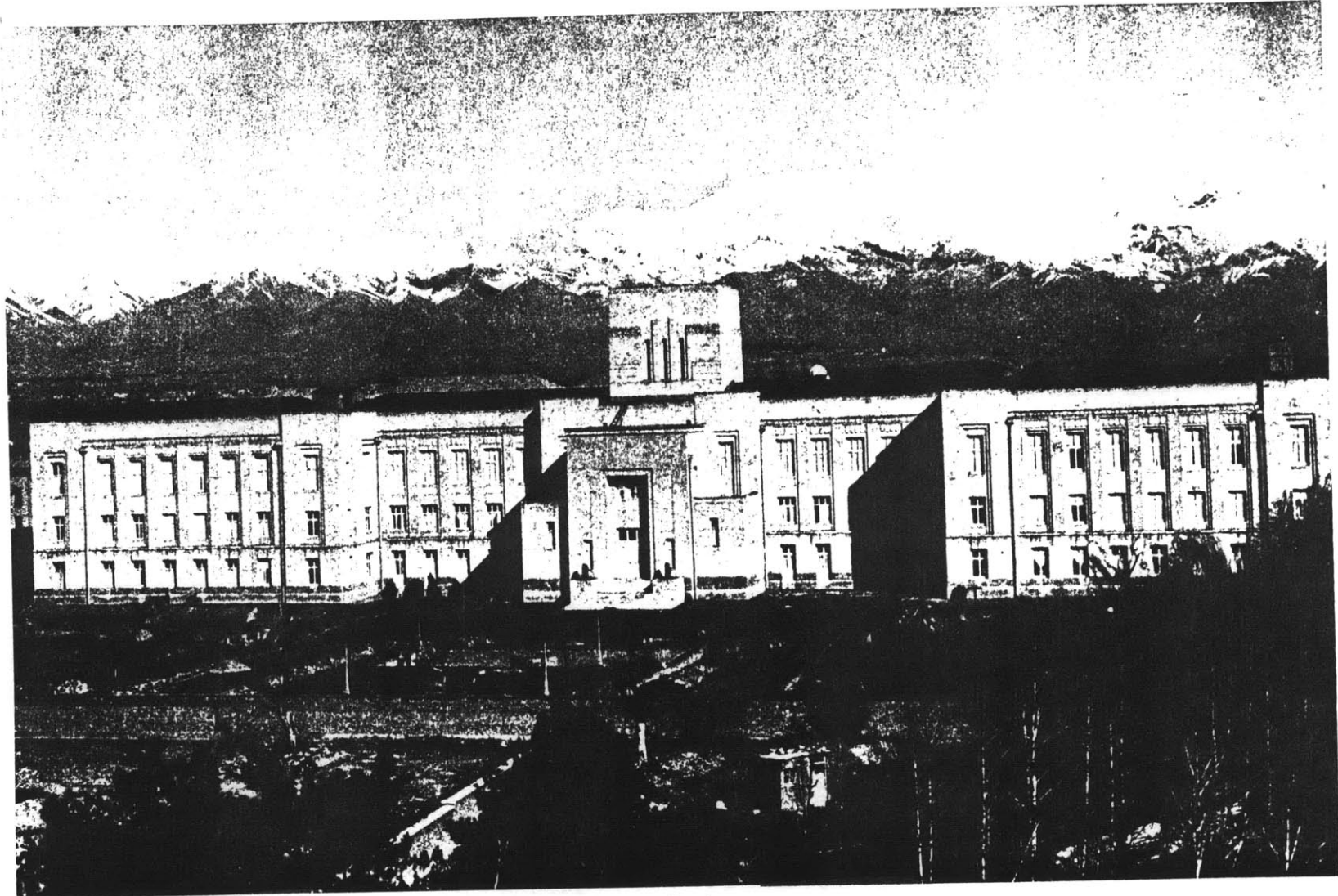


Fig. 2.50 Ministry of Foreign Affairs in Maydan-e Mashq



Fig. 2.51 Maydan in Tehran ca. 1848 --festivity of camel slaying



Fig. 2.52 Activity in maydan

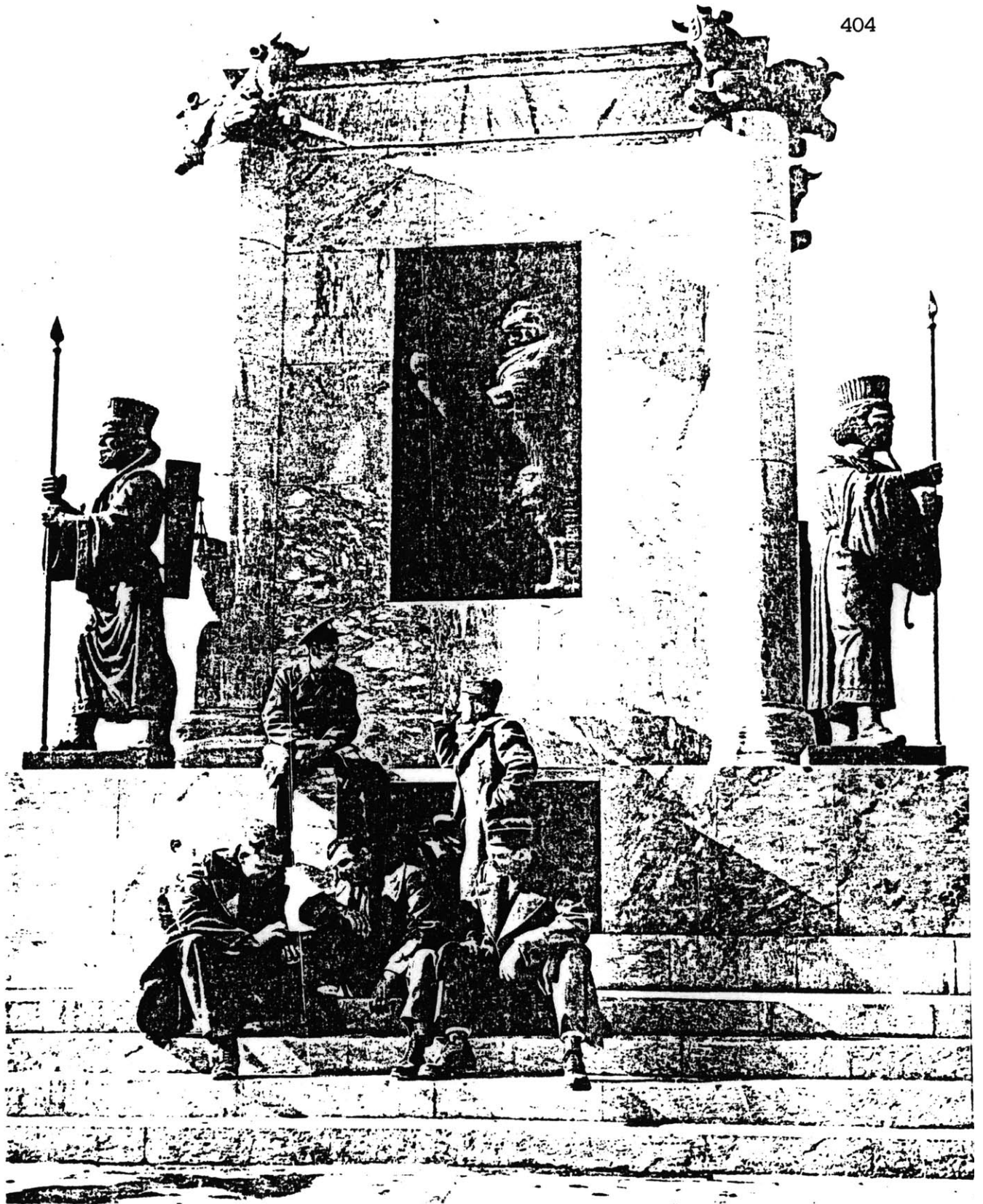


Fig. 2.53 Maydan-e Baharestan

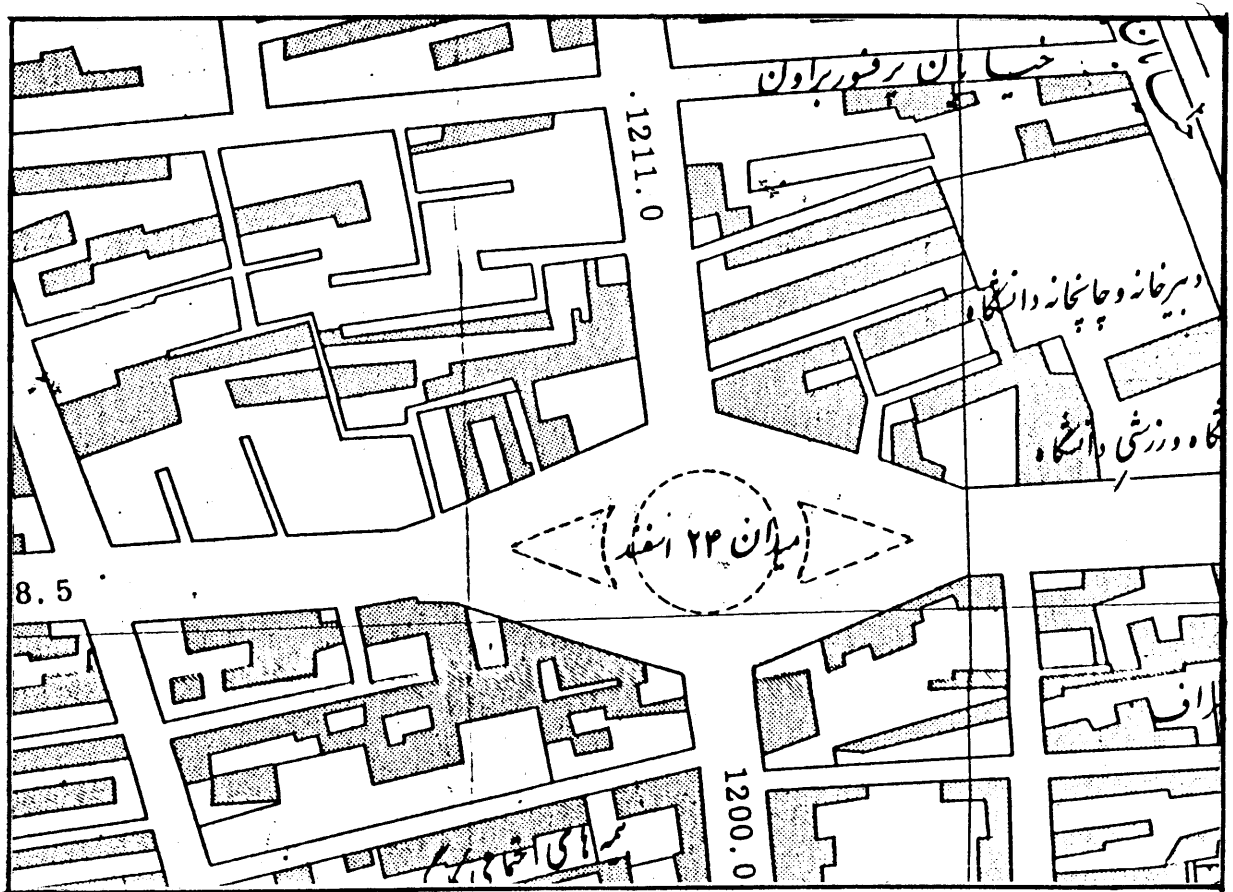


Fig. 2.54 Plan of maydan in map

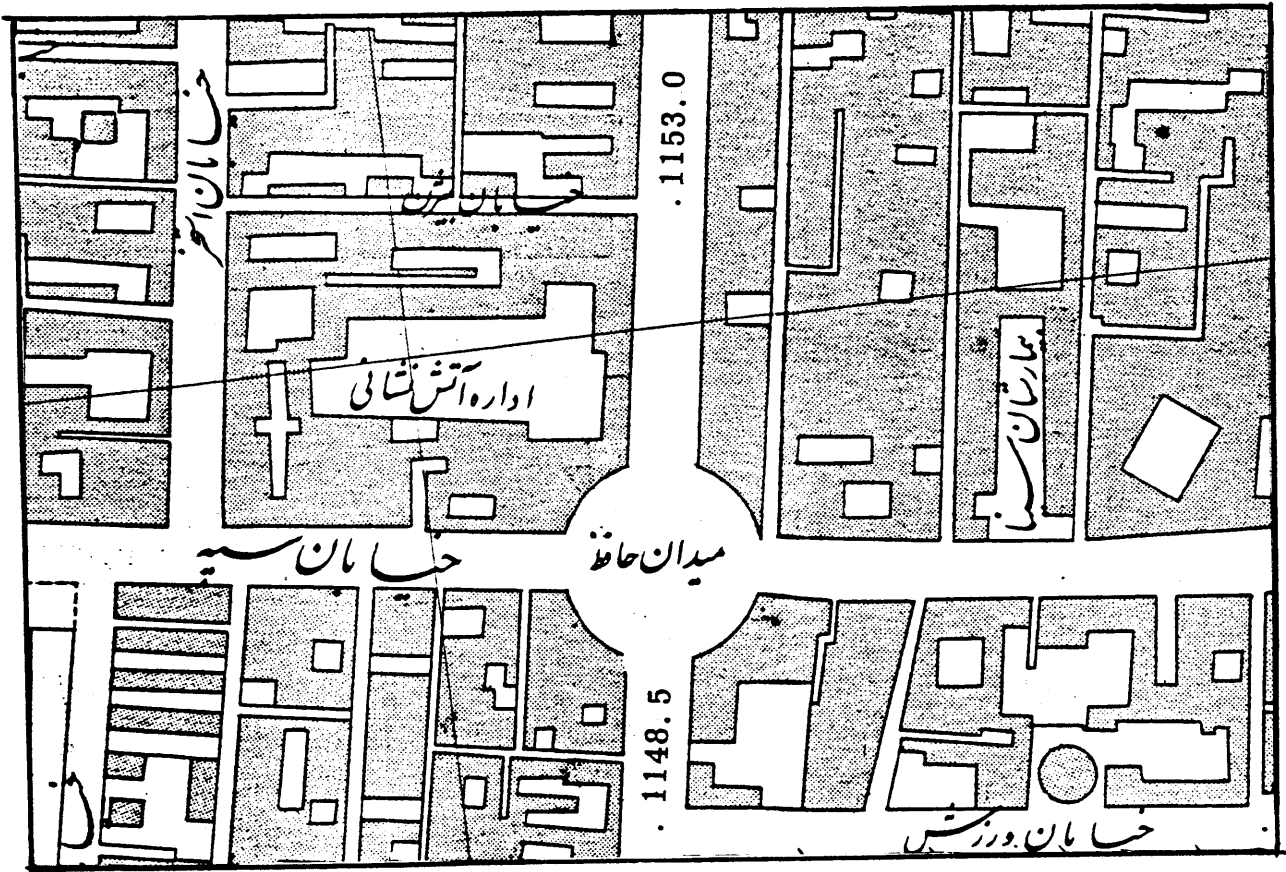


Fig. 2.56 Maydan in Tehran



Fig. 2.57 Maydan-e Baharestan at night

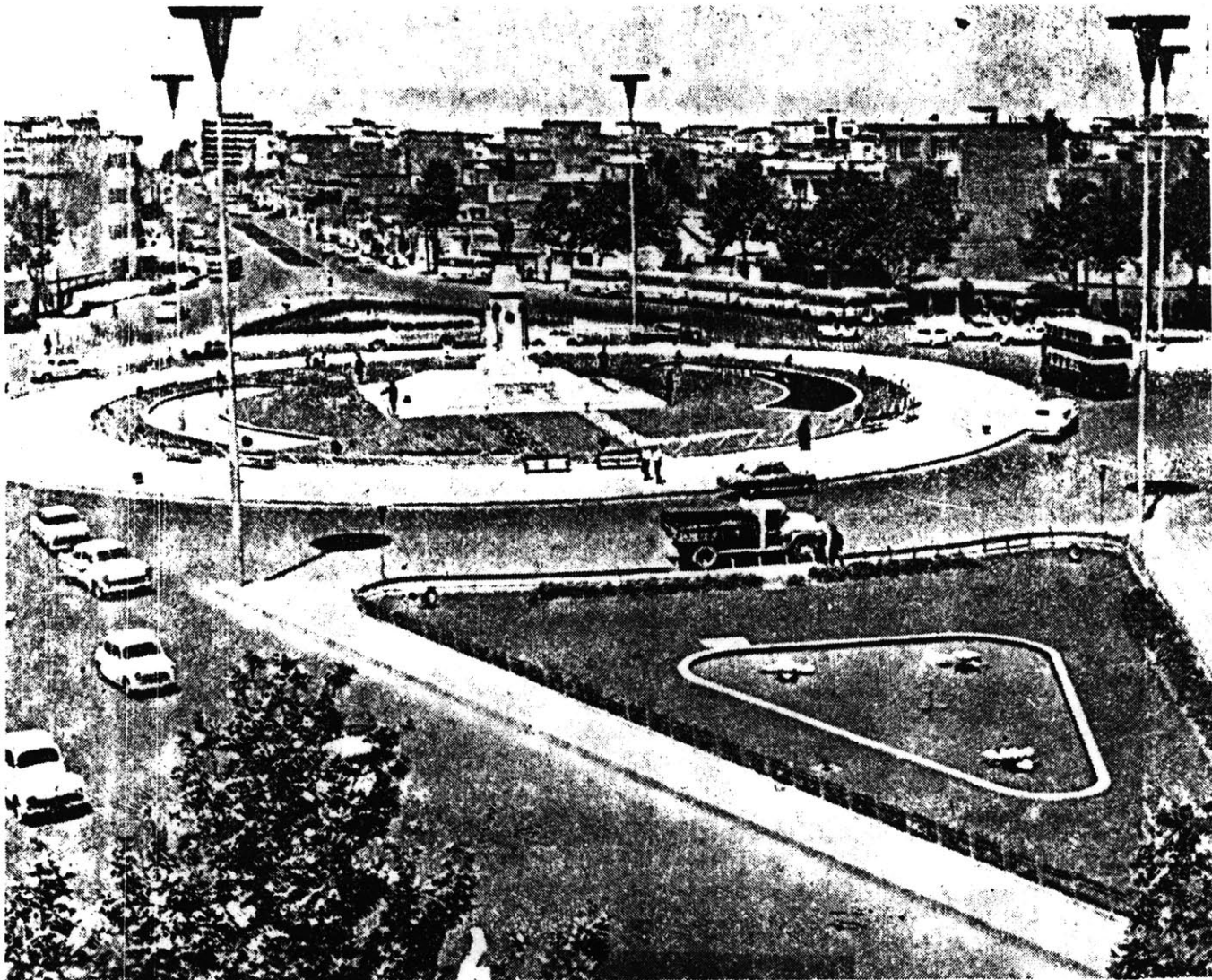


Fig. 2.58 Maydan-e Bisto-chahar Esfand



Fig. 2.59 Maydan

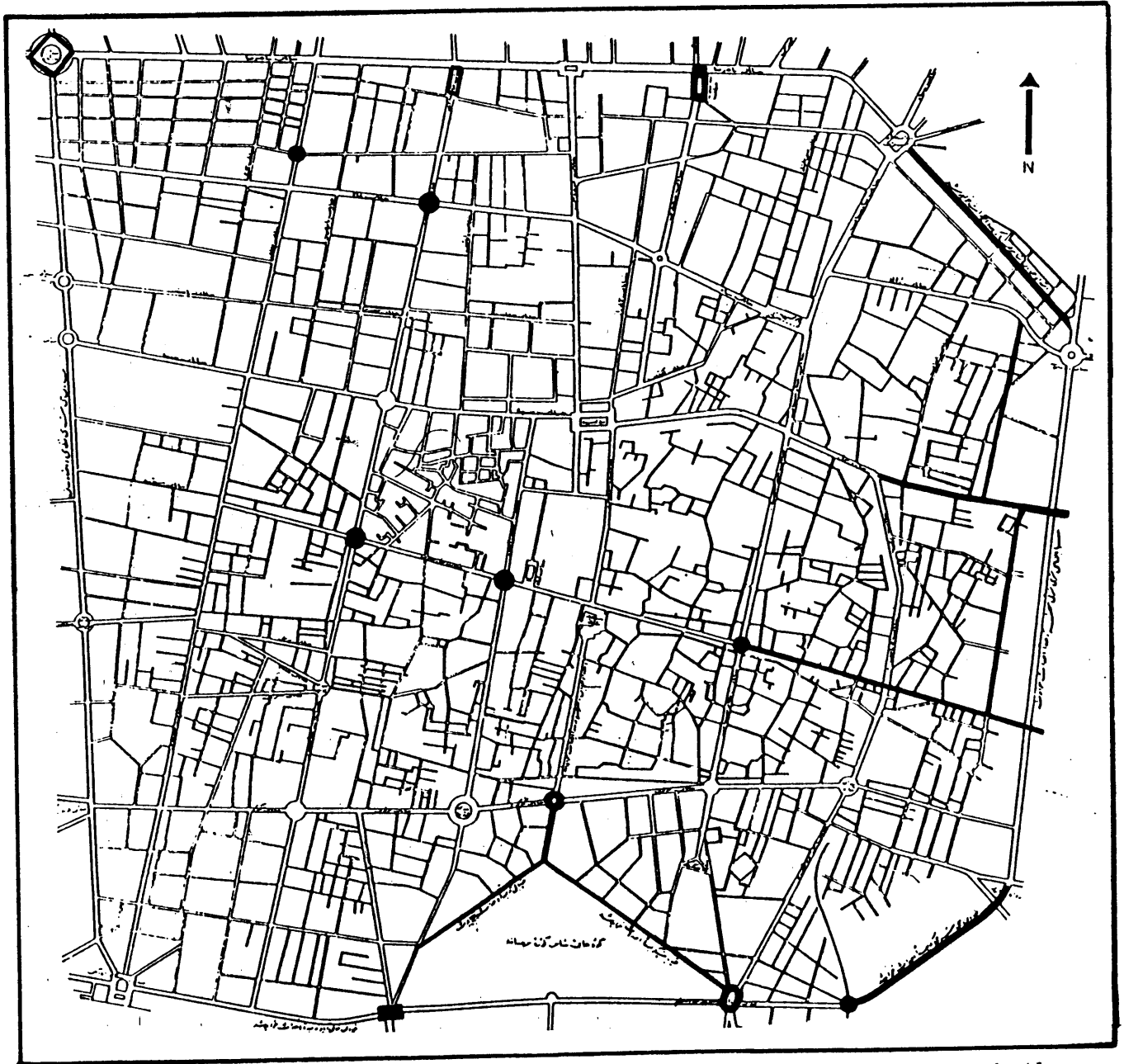


Fig. 2.60 1937 Planification map showing proposed streets and maydans not built

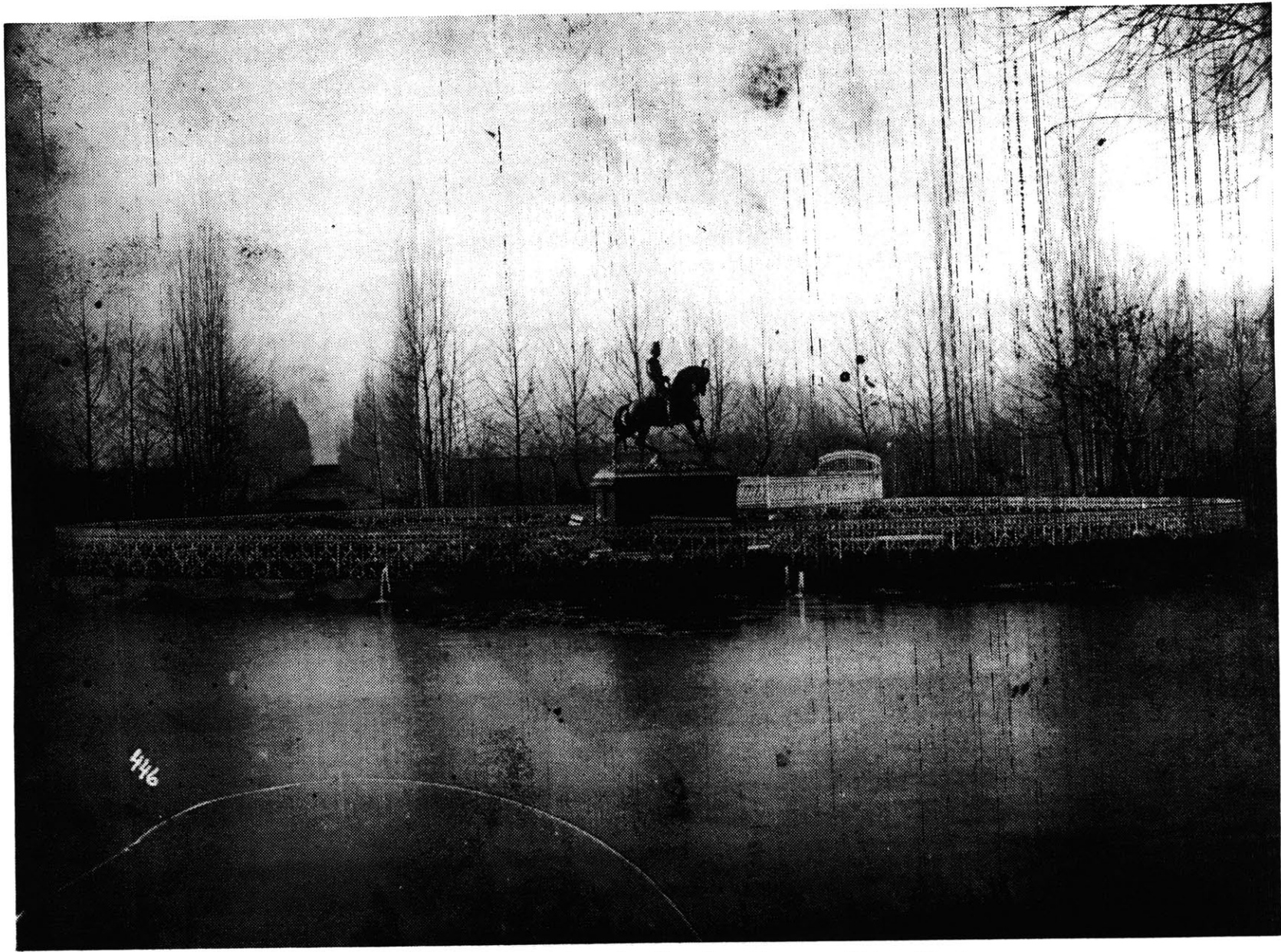


Fig. 2.61 Bagh-e Shah --private garden built by Naseroddin Shah
with his equestrian statue at the center of the
maydan



Fig. 2.62 Equestrian statue of Naseroddin Shah

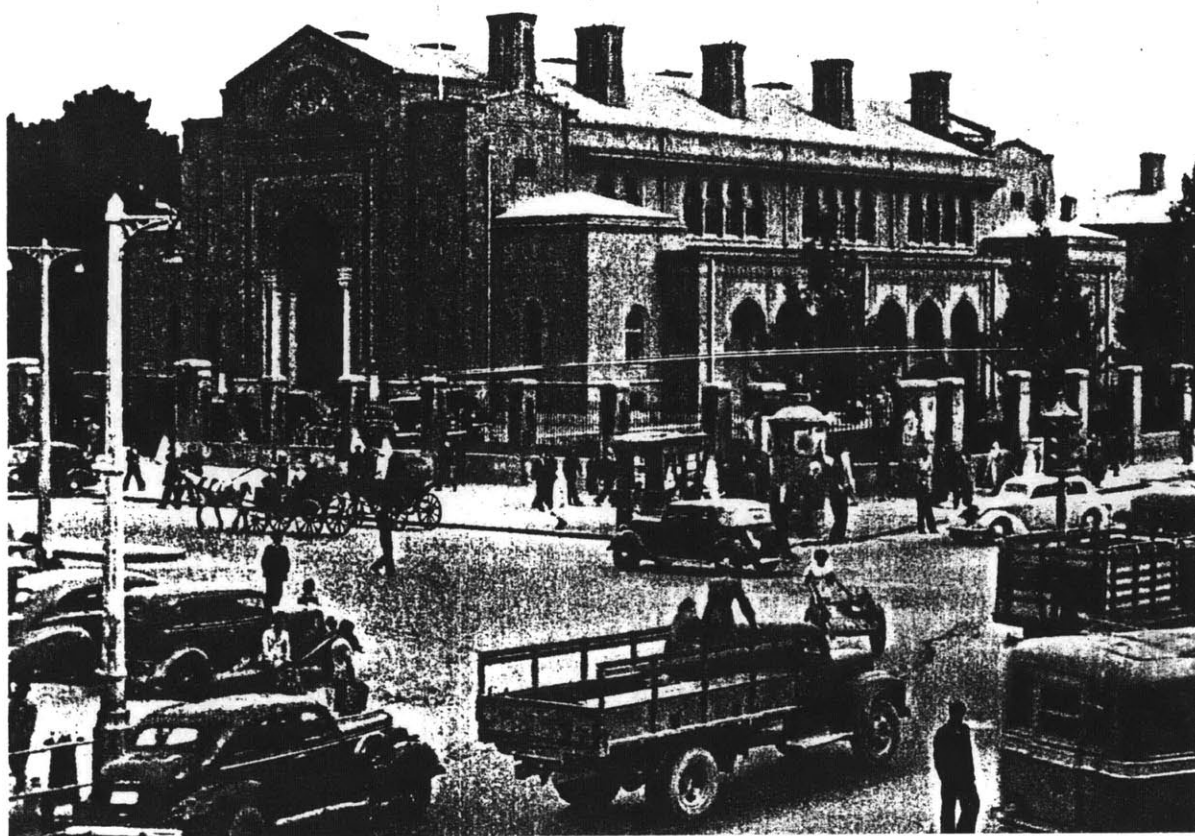


Fig. 2.63 British controlled Imperial Bank of Persia-- Maydan-e Tupkhana



Fig. 2.64 Moshir-od-Dawla residence later Constituent Assembly

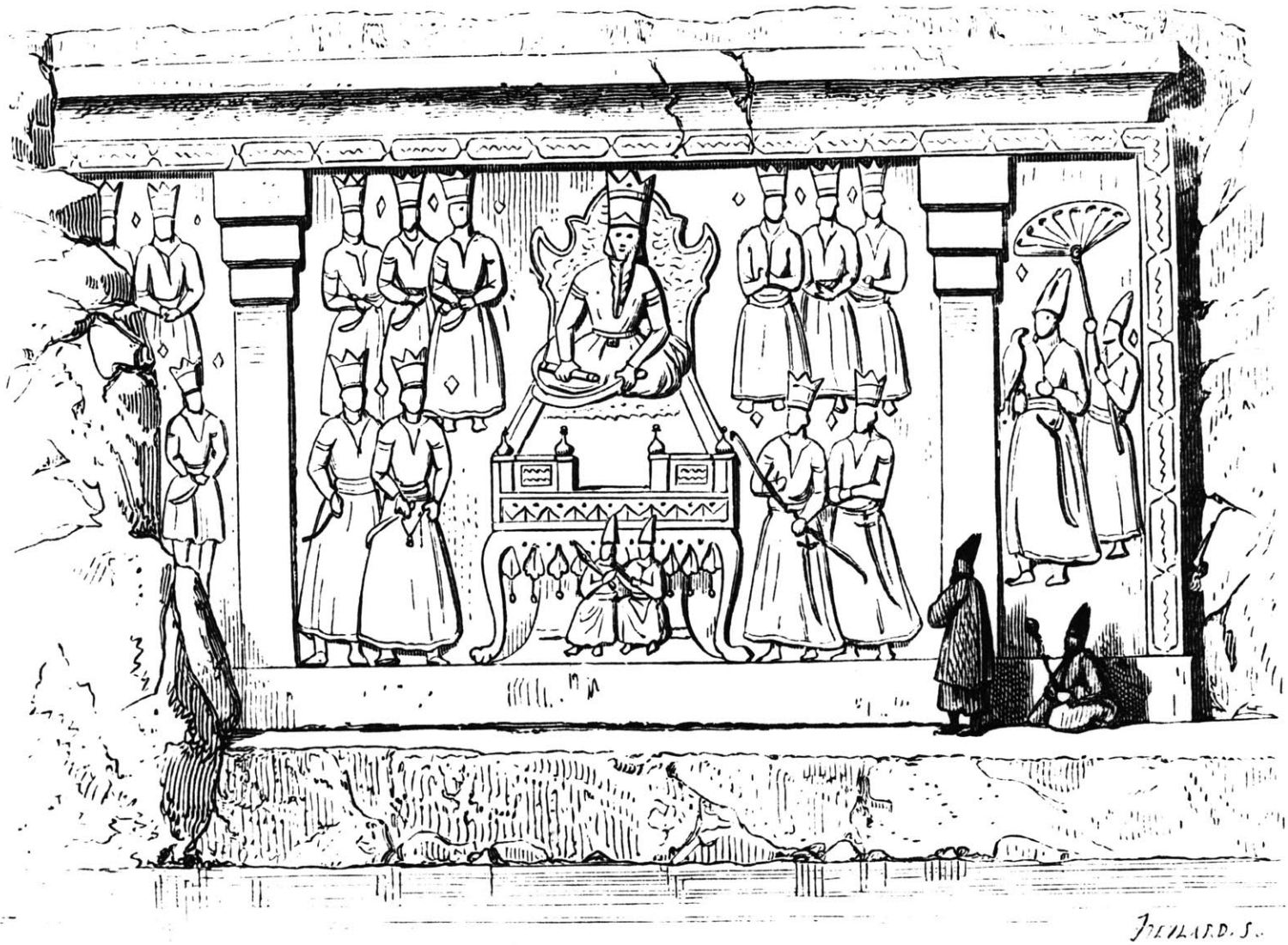


Fig. 2.65 Cheshma Ali, drawing by Coste

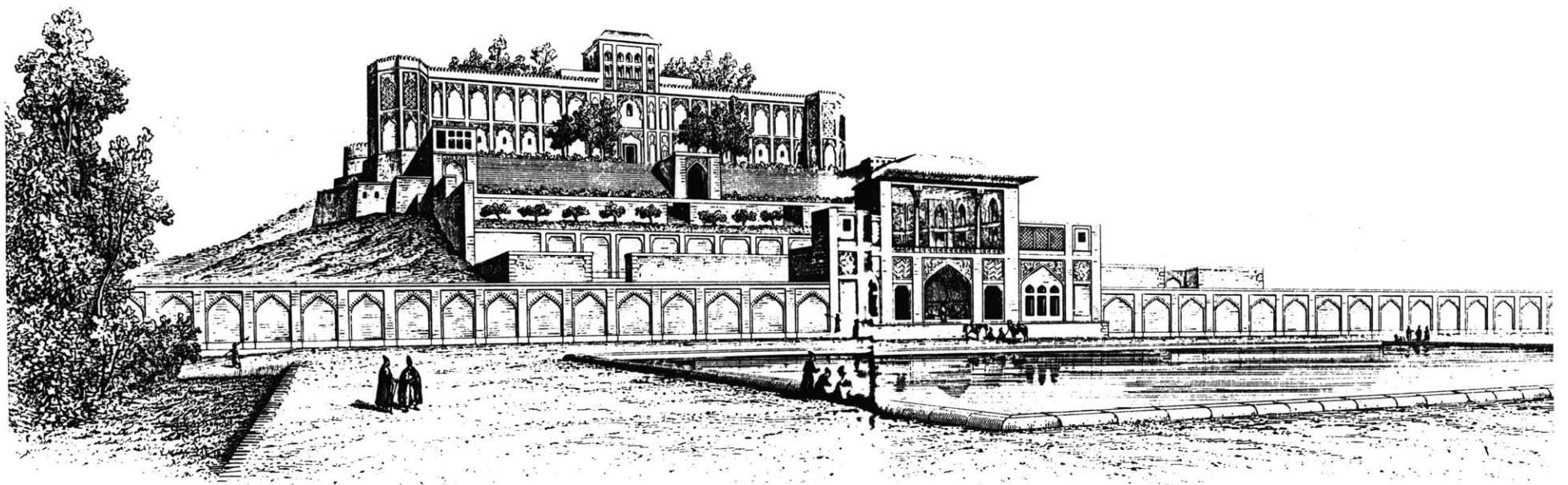


Fig. 2.66 Qasr-e Qajar

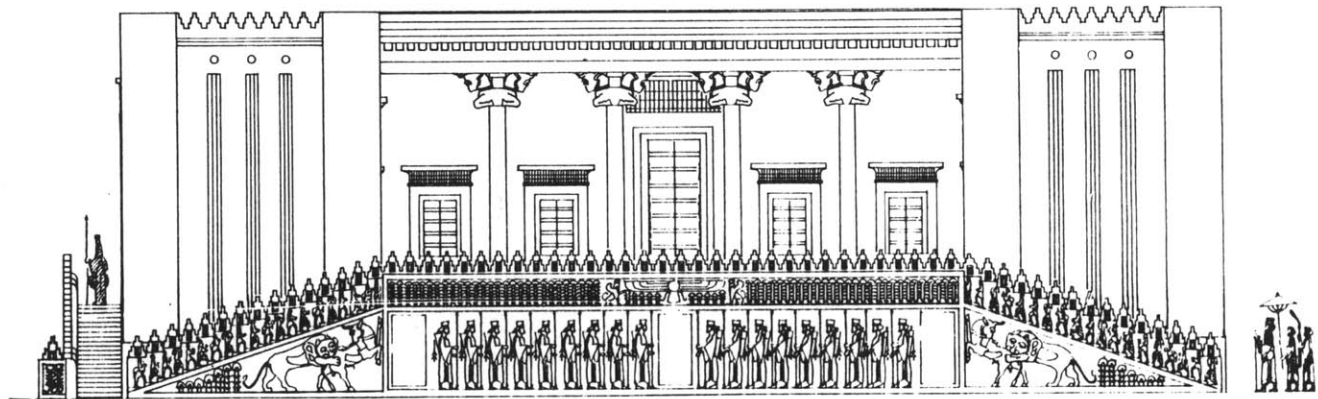
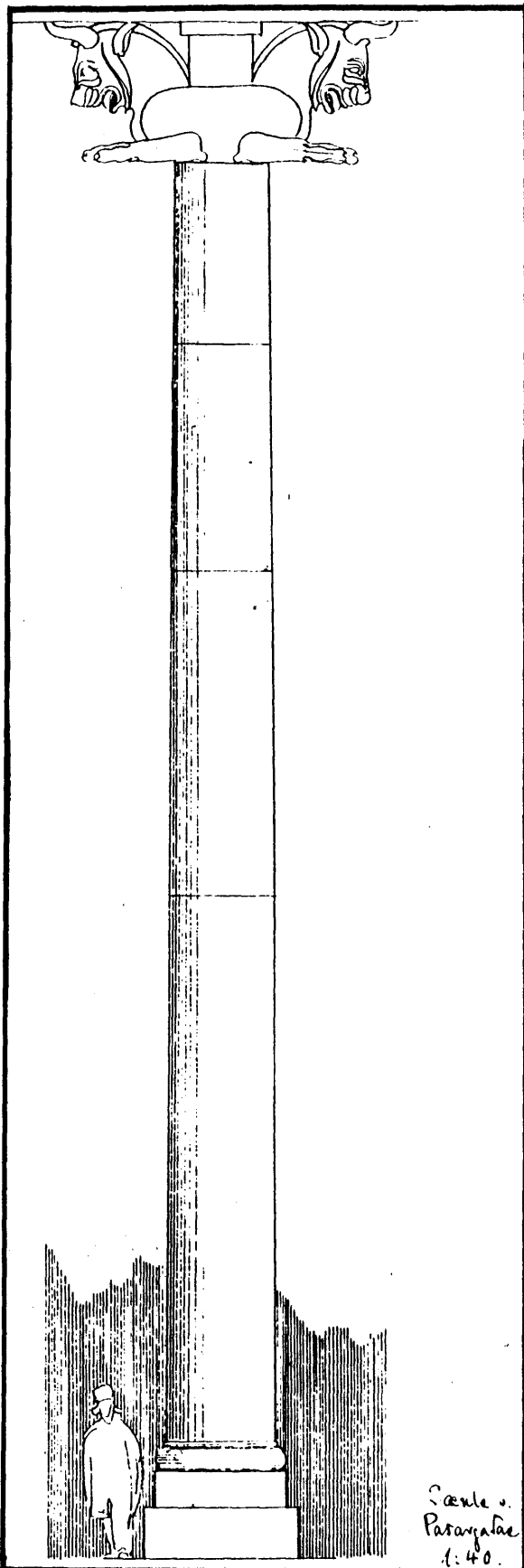
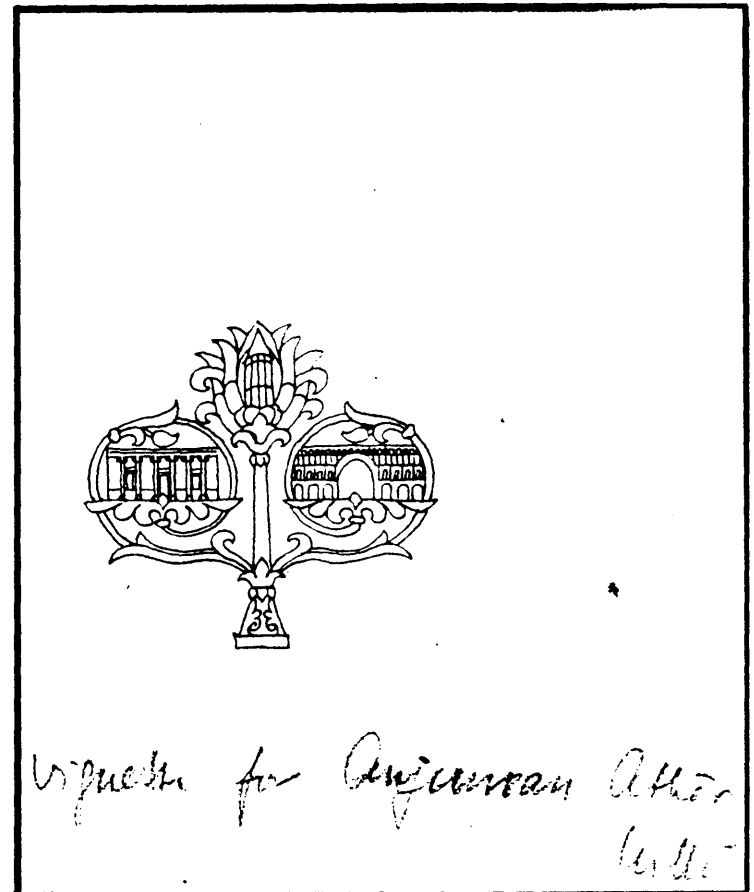
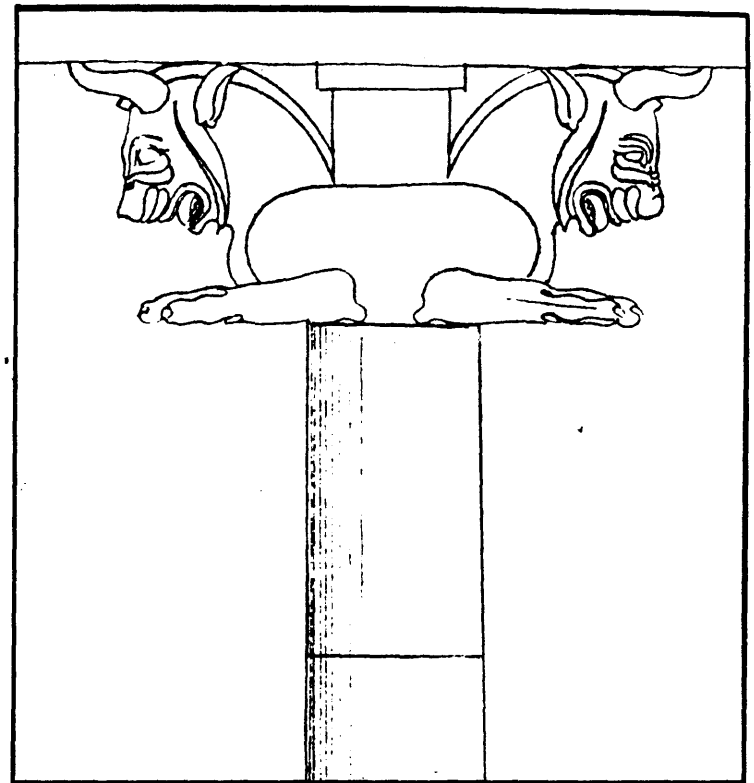


Fig. 2.67 Persepolis



Scene v.
Pasargadae
1:40.



Vignette for Anjoman-e Assar-e Melli
Herzfeld

Fig. 2.68 Herzfeld's sketch for emblem of Anjoman-e Assar-e Melli

Fig. 2.69 Herzfeld's sketch of bullheaded capital at Persepolis

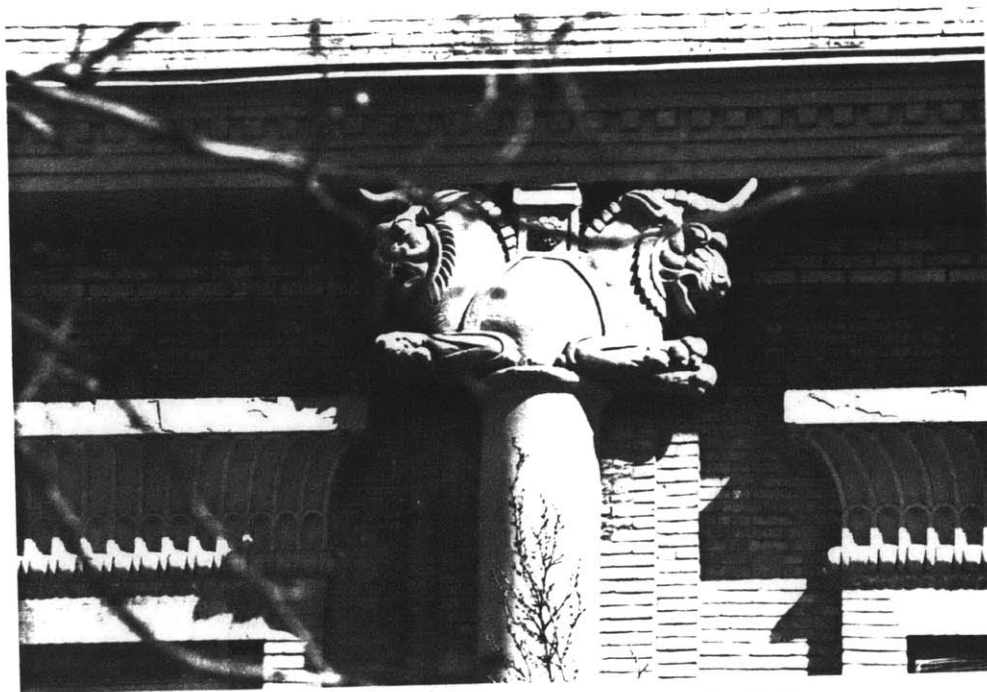
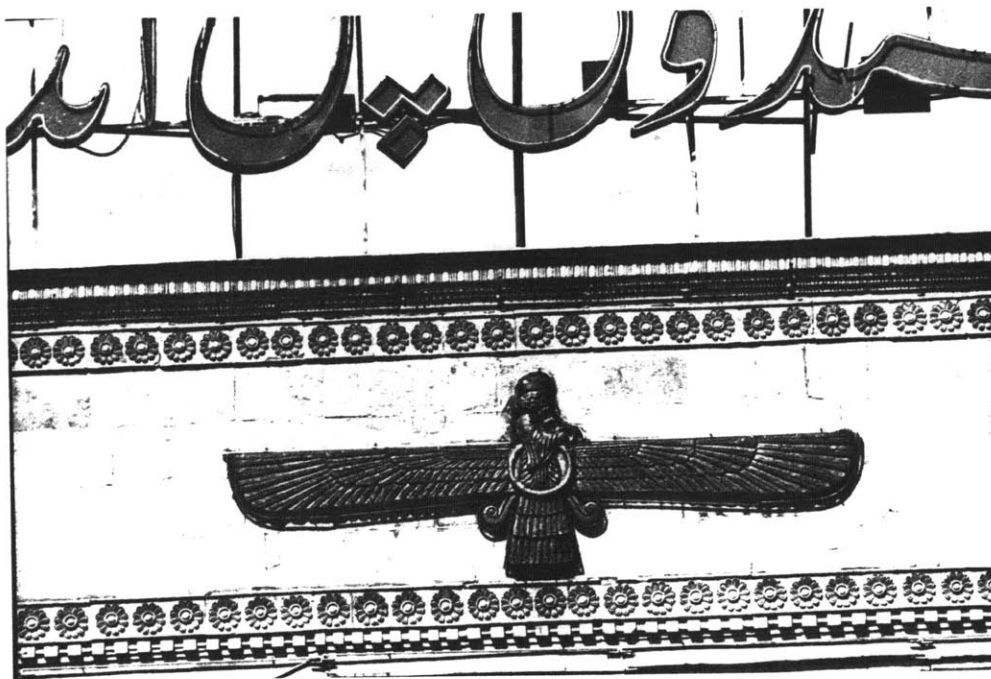


Fig. 2.70 Eagle of Ahura Mazda, Bank Melli building;
Fig. 2.71 bullheaded capitals

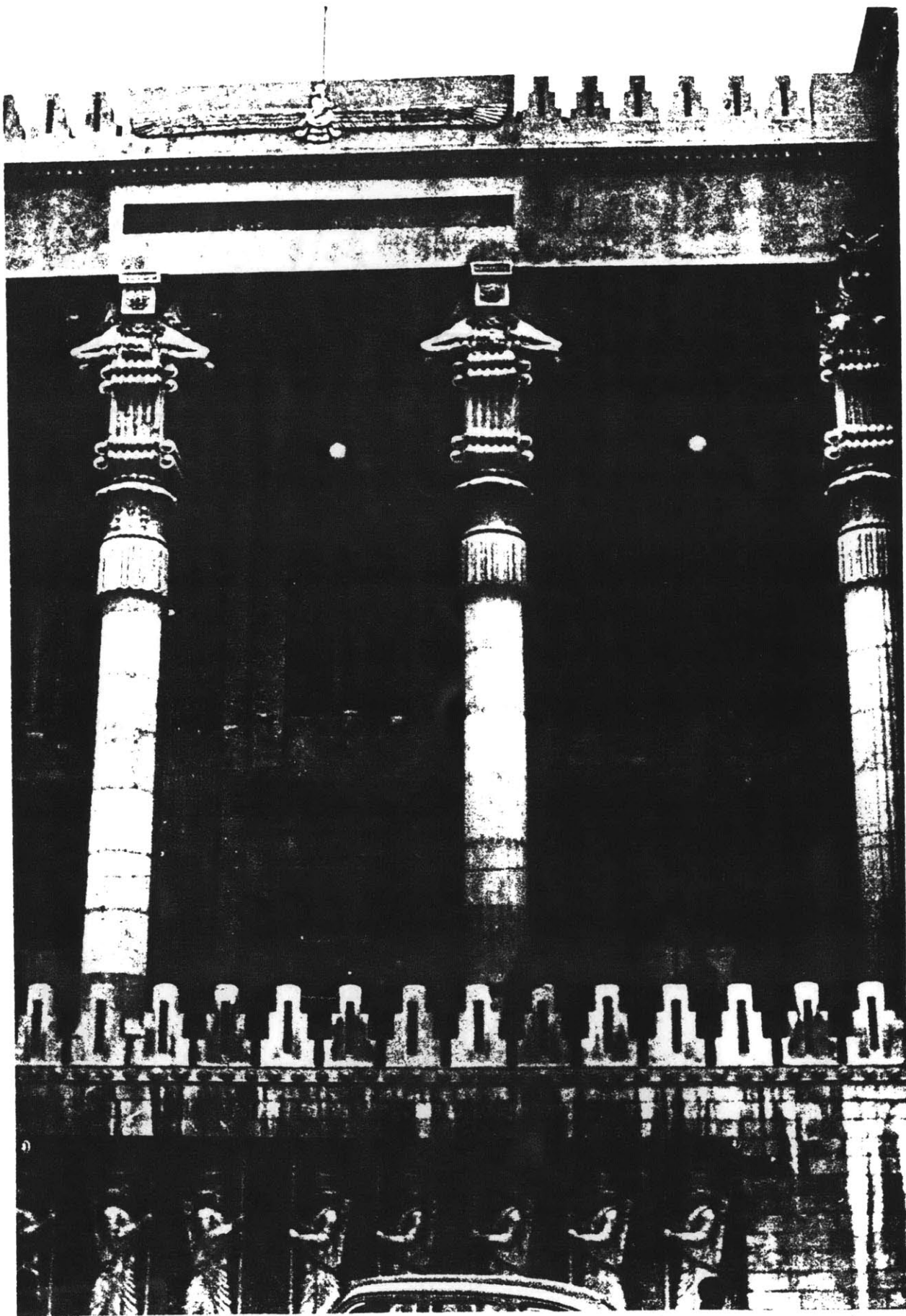


Fig. 2.72 Shahr bani-ye Kol-e Keshvar, Police headquarters

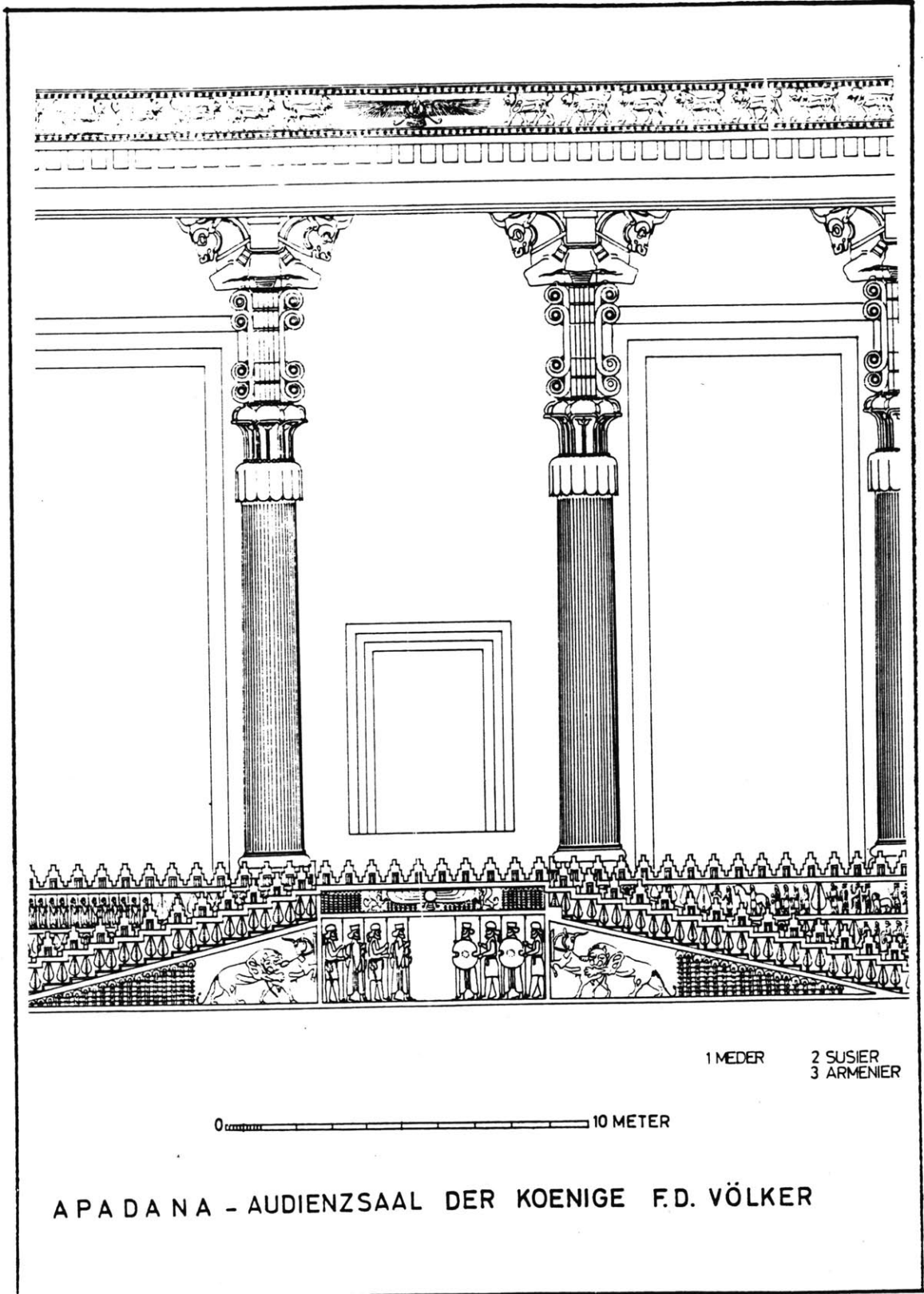
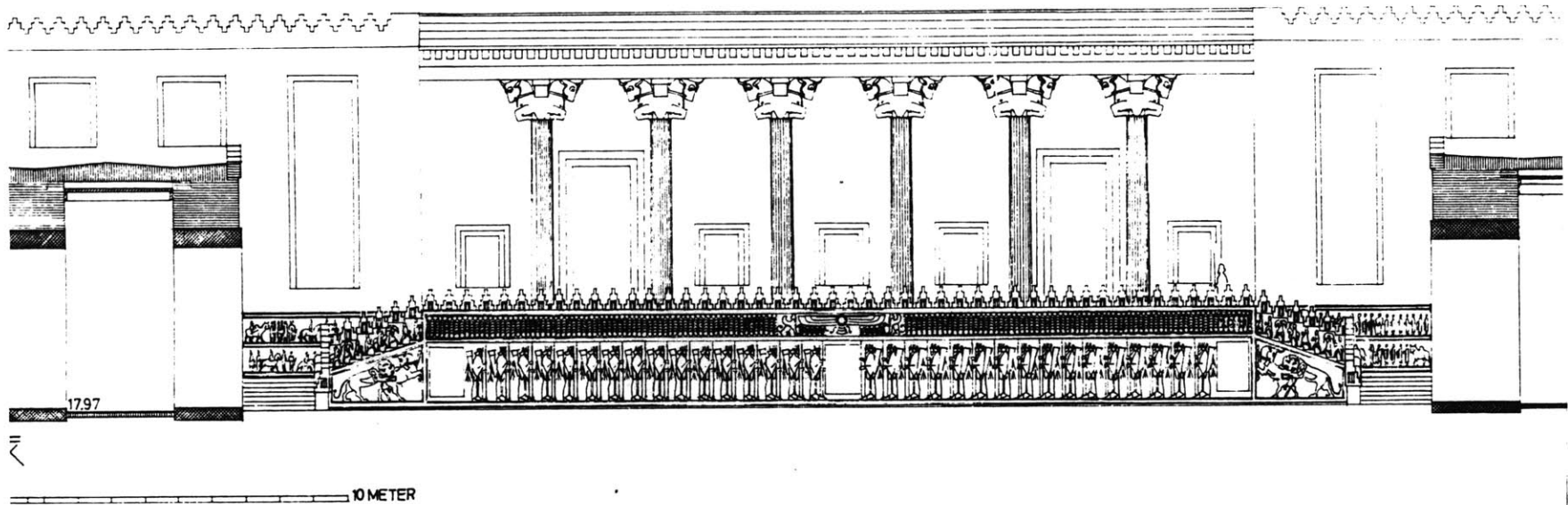
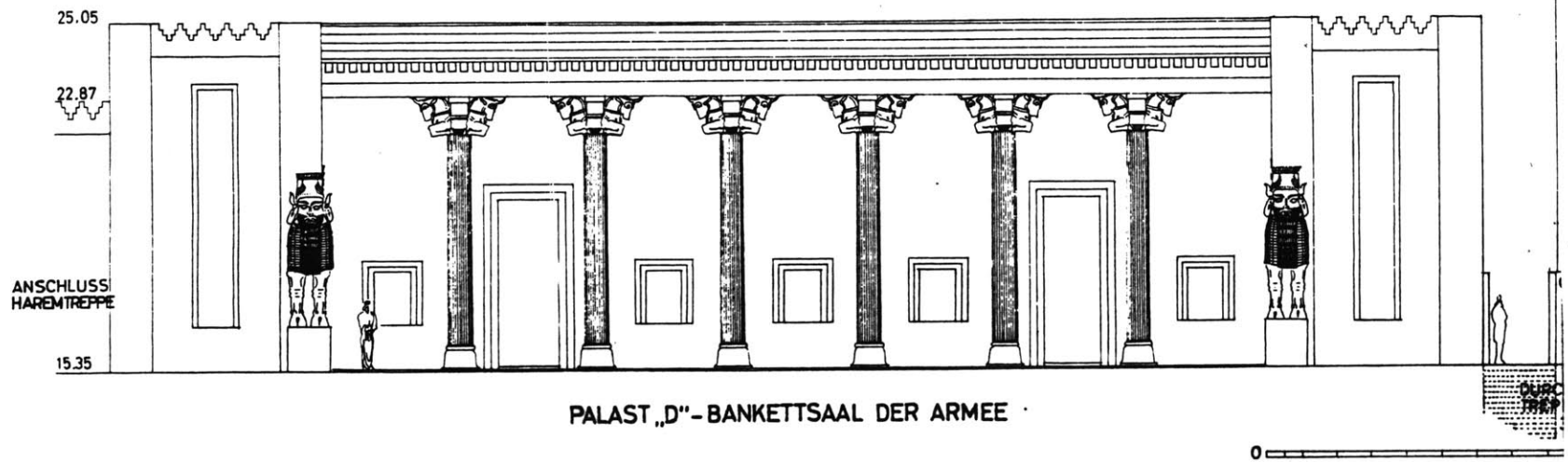


Fig. 2.73 Persepolis



PALAST „G“ - BANKETTSAAL DER VÖLKER



PALAST „D“ - BANKETTSAAL DER ARMEE

Fig. 2.74 Persepolis



Fig. 2.75 Madrasa Anoushiravan Dadgar, first Zoroastrian girl's school in Tehran

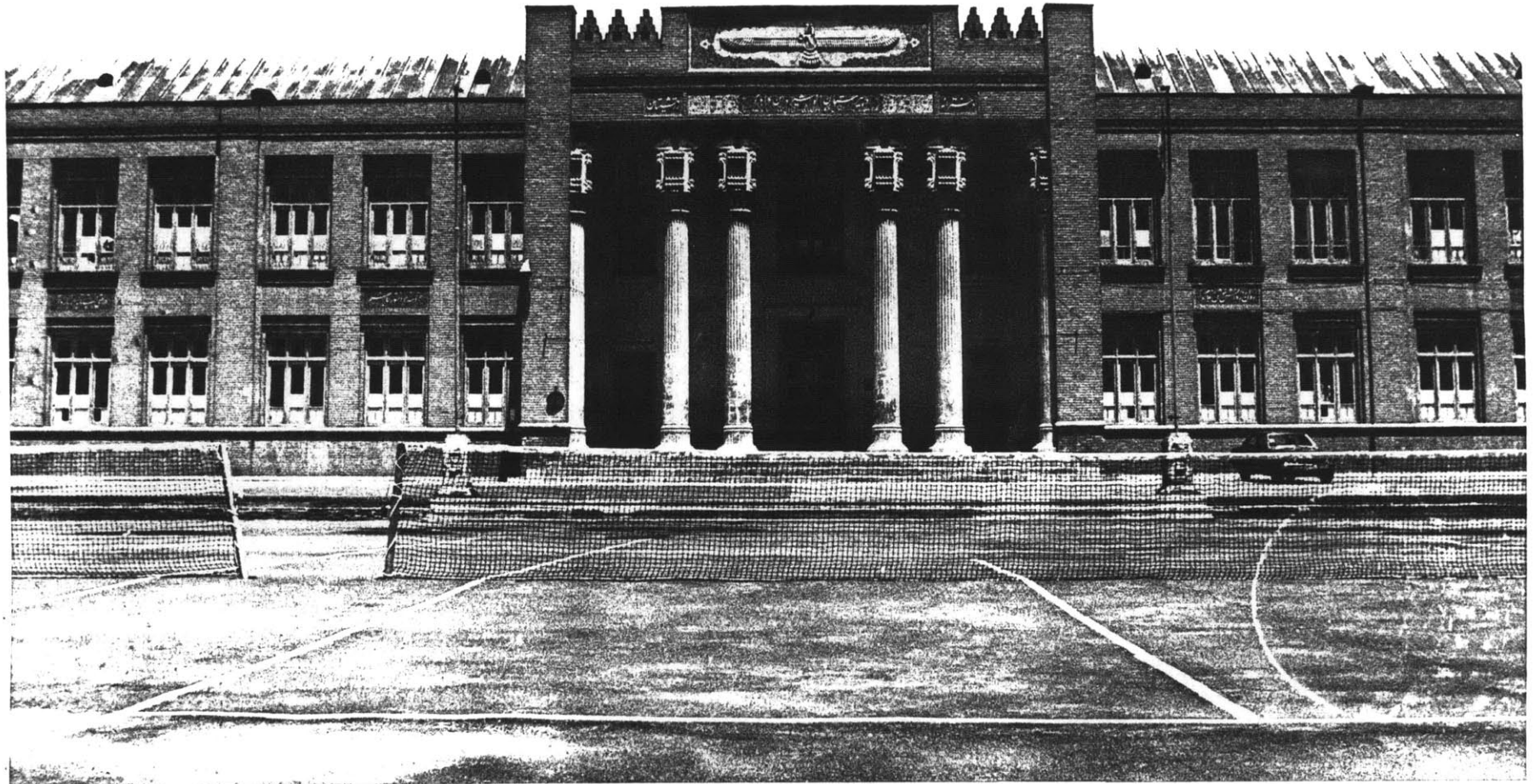


Fig. 2.76 Madrasa Anoushiravan Dadgar, first Zoroastrian girl's school in Tehran

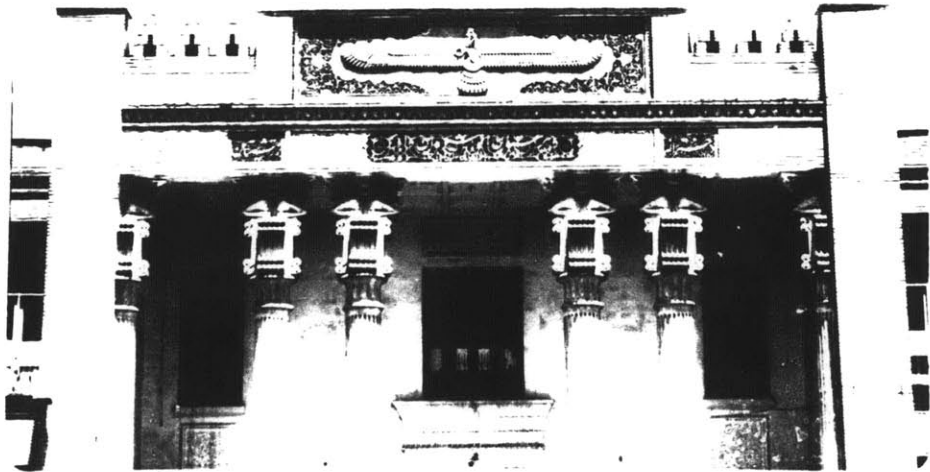


Fig. 2.77 Madrasa Anoushiravan Dadgar



Fig. 2.78 Bank-e Melli on
Ferdowsi Avenue

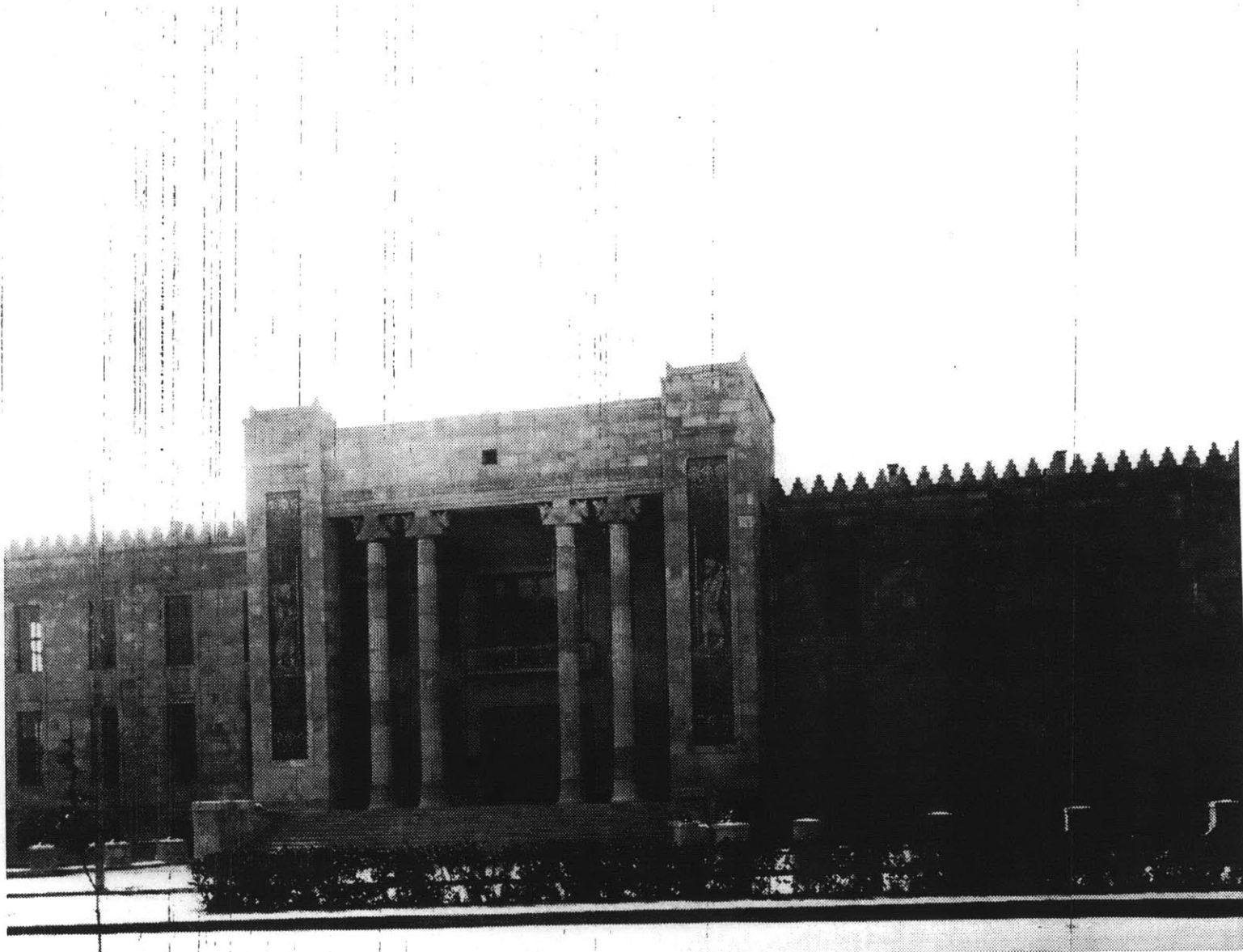


Fig. 2.79 Bank-e Melli just after construction

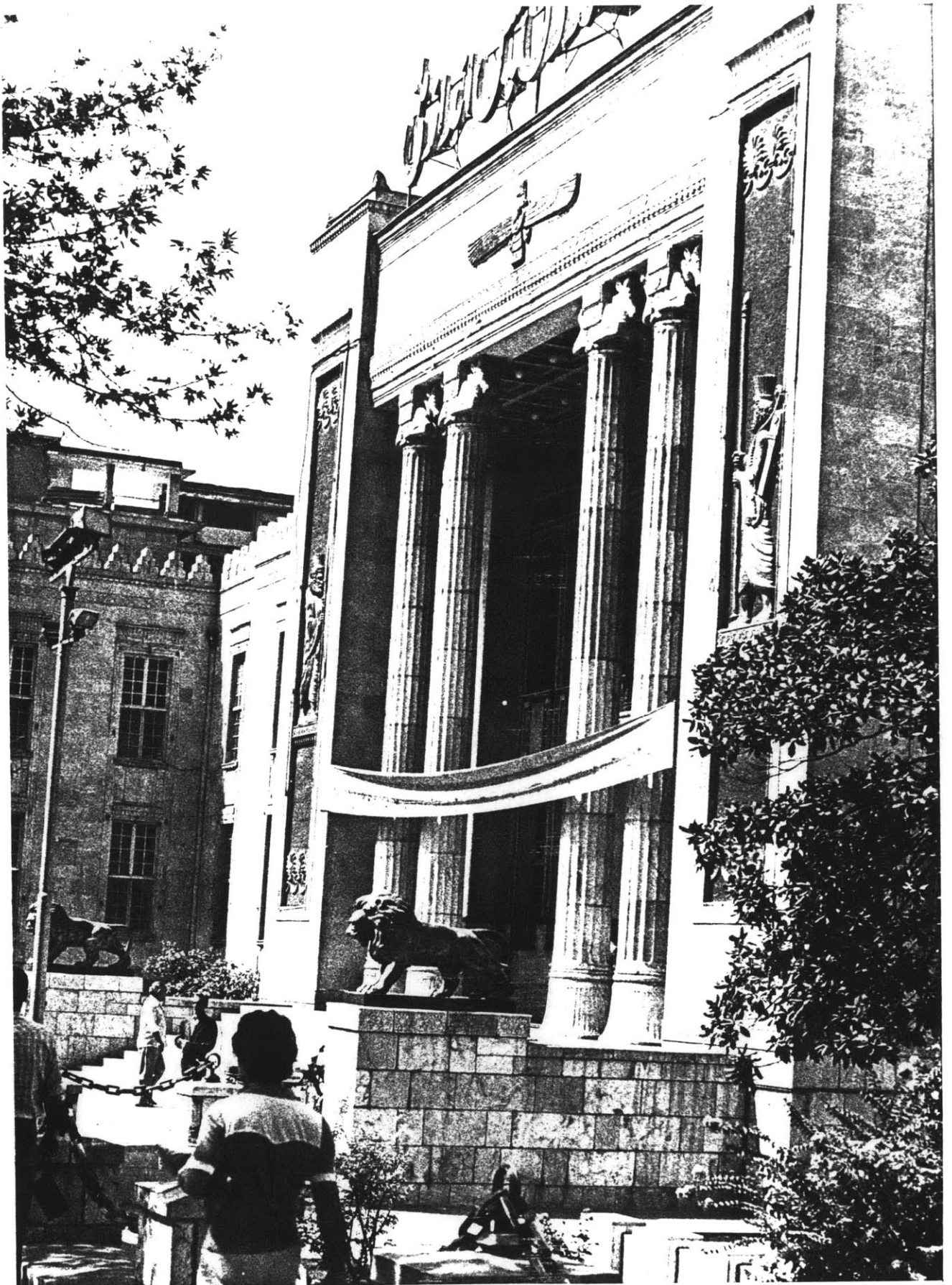


Fig. 2.80 Bank-e Melli, main ayvan

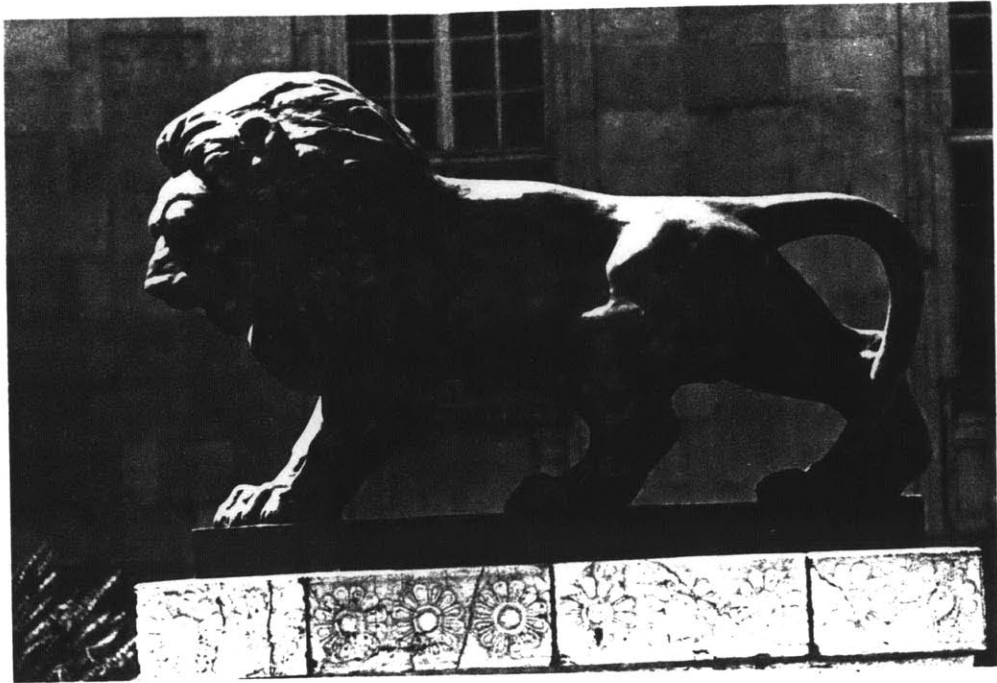


Fig. 2.81 Bank-e Melli, lions

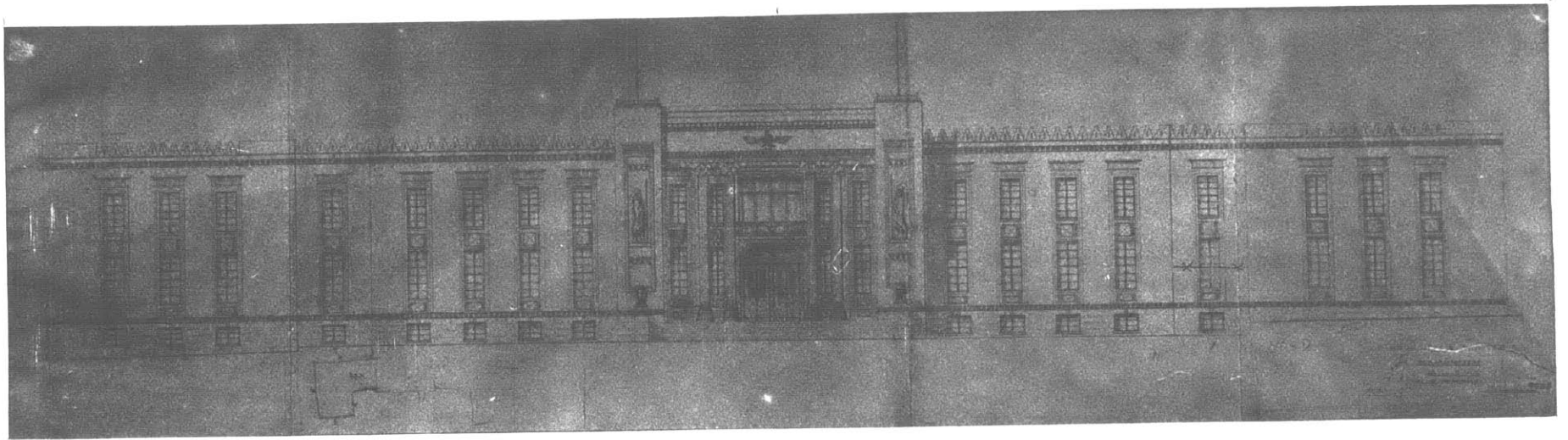


Fig. 2.82 Bank-e Melli, elevation

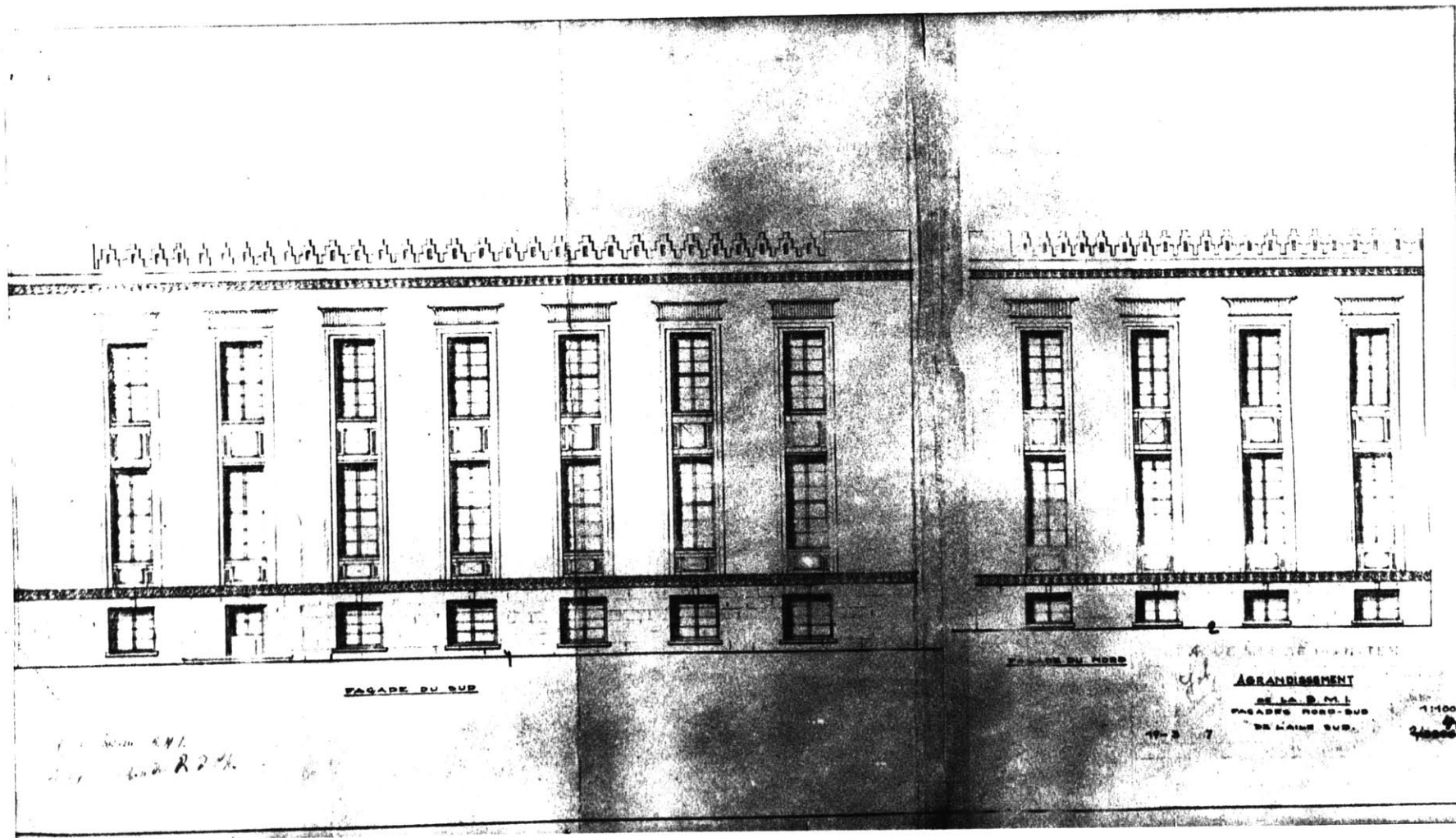


Fig. 2.83 Bank-e Melli, elevation

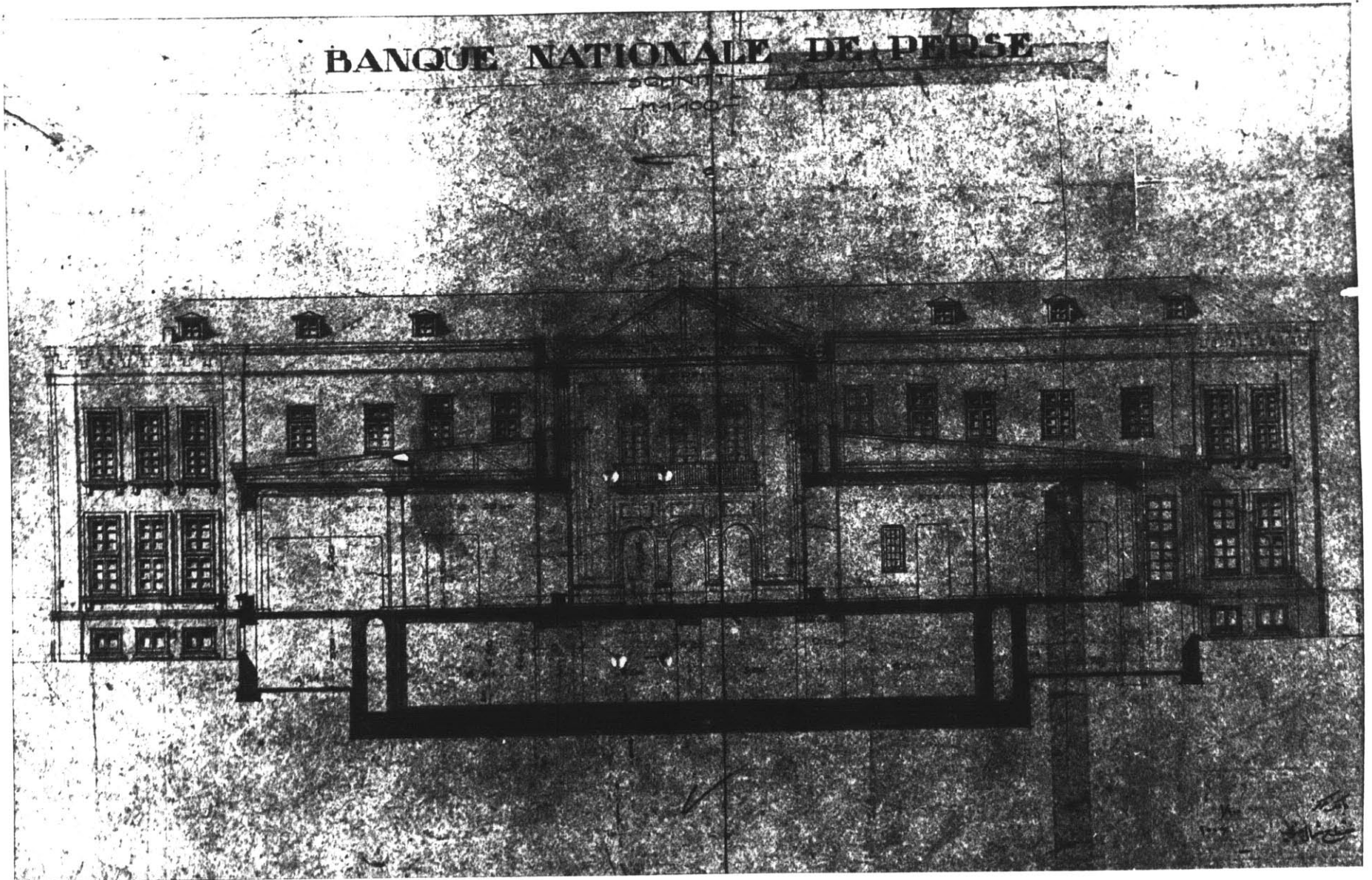


Fig. 2.84 Bank-e Melli, section

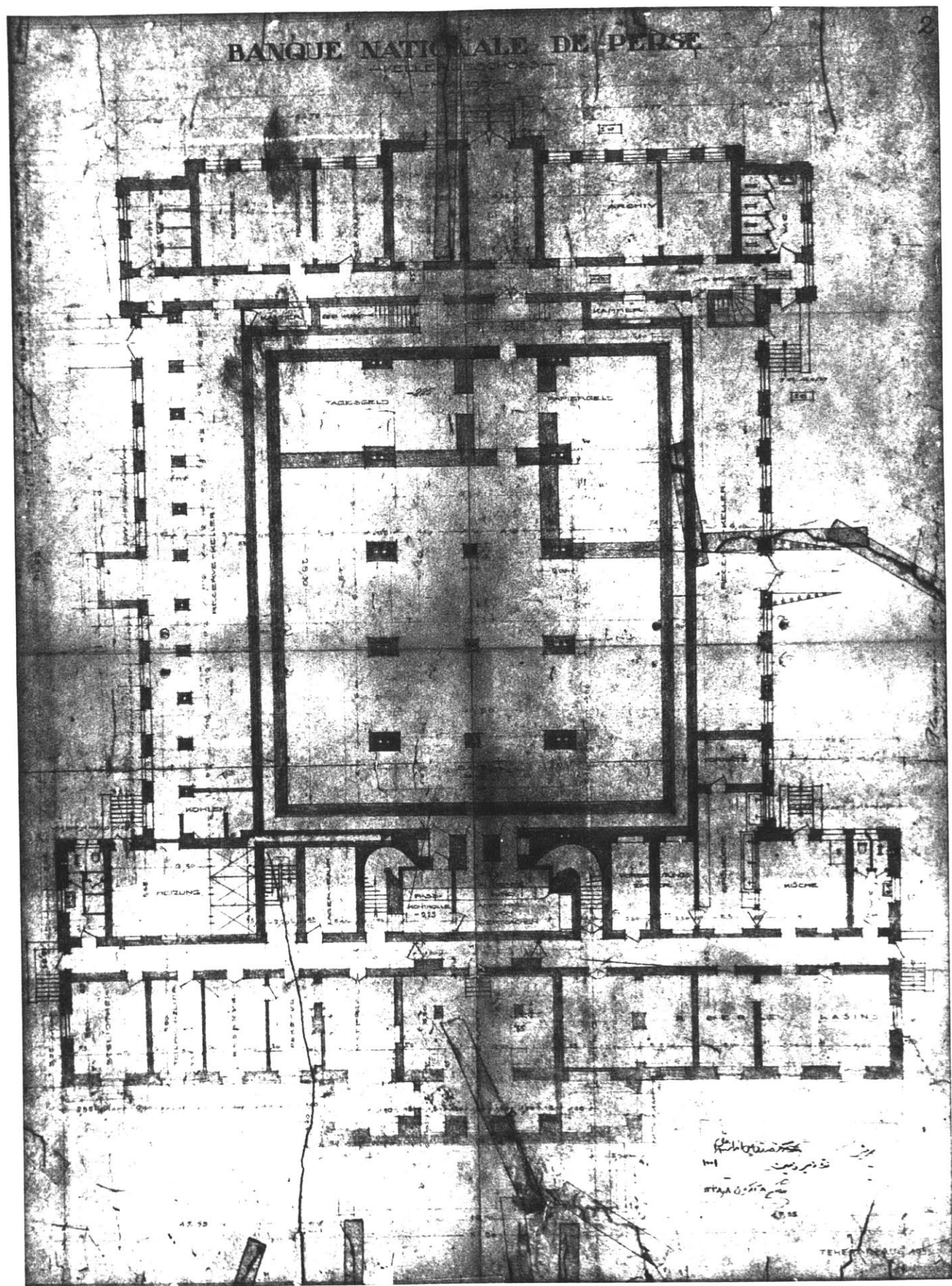


Fig. 2.85 Bank-e Melli, plan



Fig. 2.86 Naqsh Rostam



Fig. 2.87 Bull headed capitals



Fig. 2.88 Achaemenid Soldiers



Fig. 2.89 Ministry of Justice, main facade



Fig. 2.90 Ministry of Justice, side elevation



Fig. 2.91 Bank-e Shahi on Ferdowsi Avenue, now Sherkat Farsh

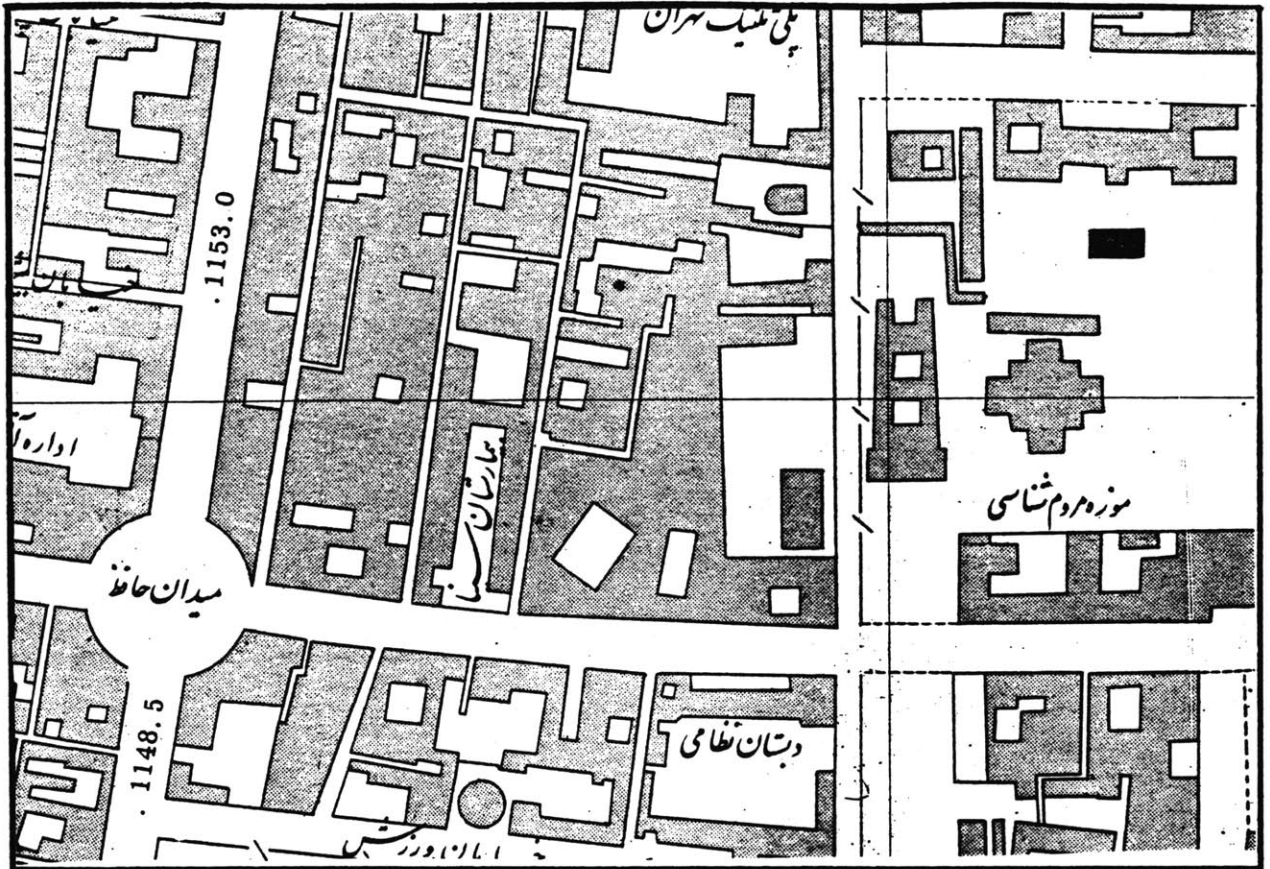


Fig. 2.92 Map of Tehran showing museum complex

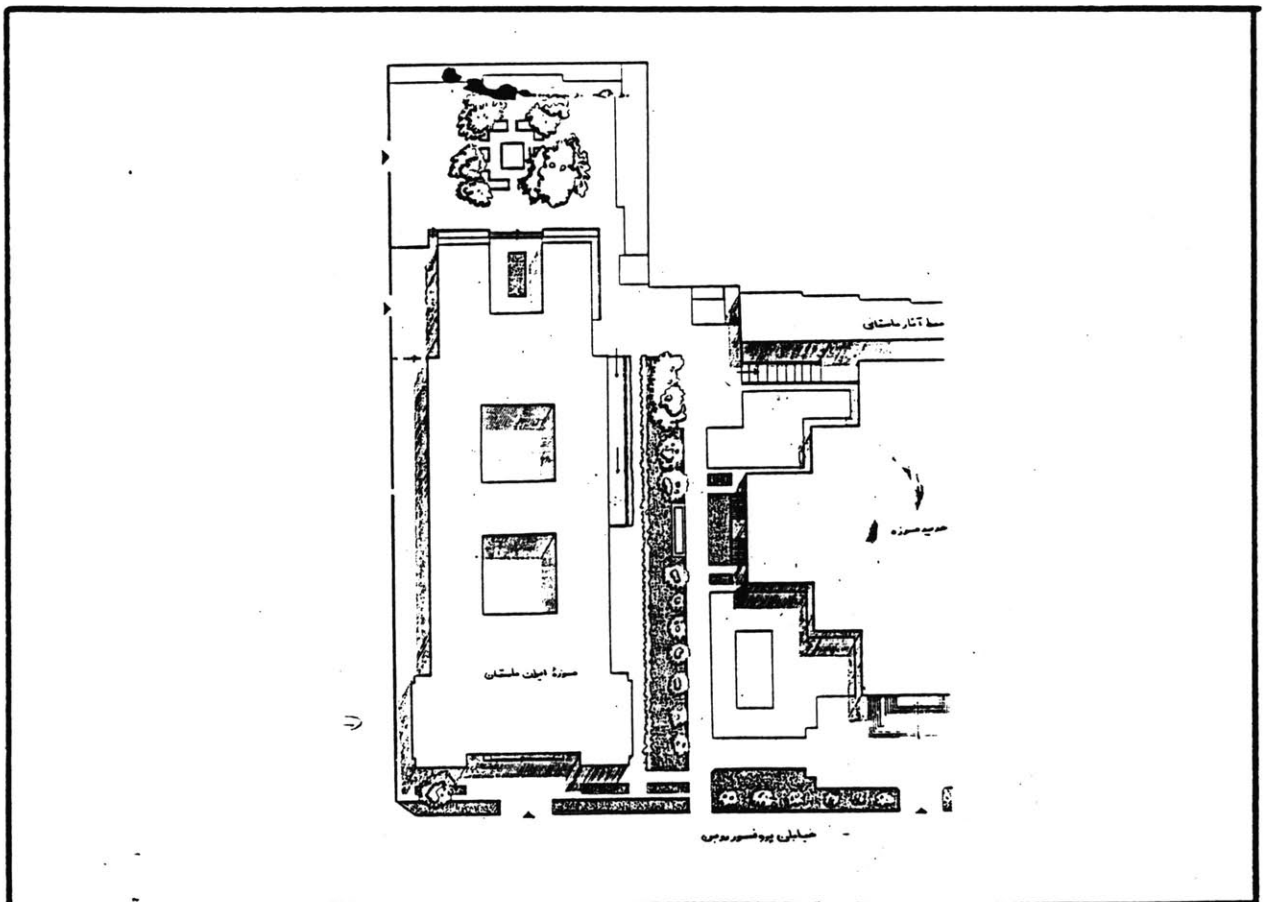


Fig. 2.93 Site plan of Museum Iran Bastan



Fig. 2.94 Taq Kisra, Ctesiphon - drawing by Coste



Fig. 2.95 Museum of Iran Bastan



Fig. 2.96 Ayvan of Museum of Iran Bastan

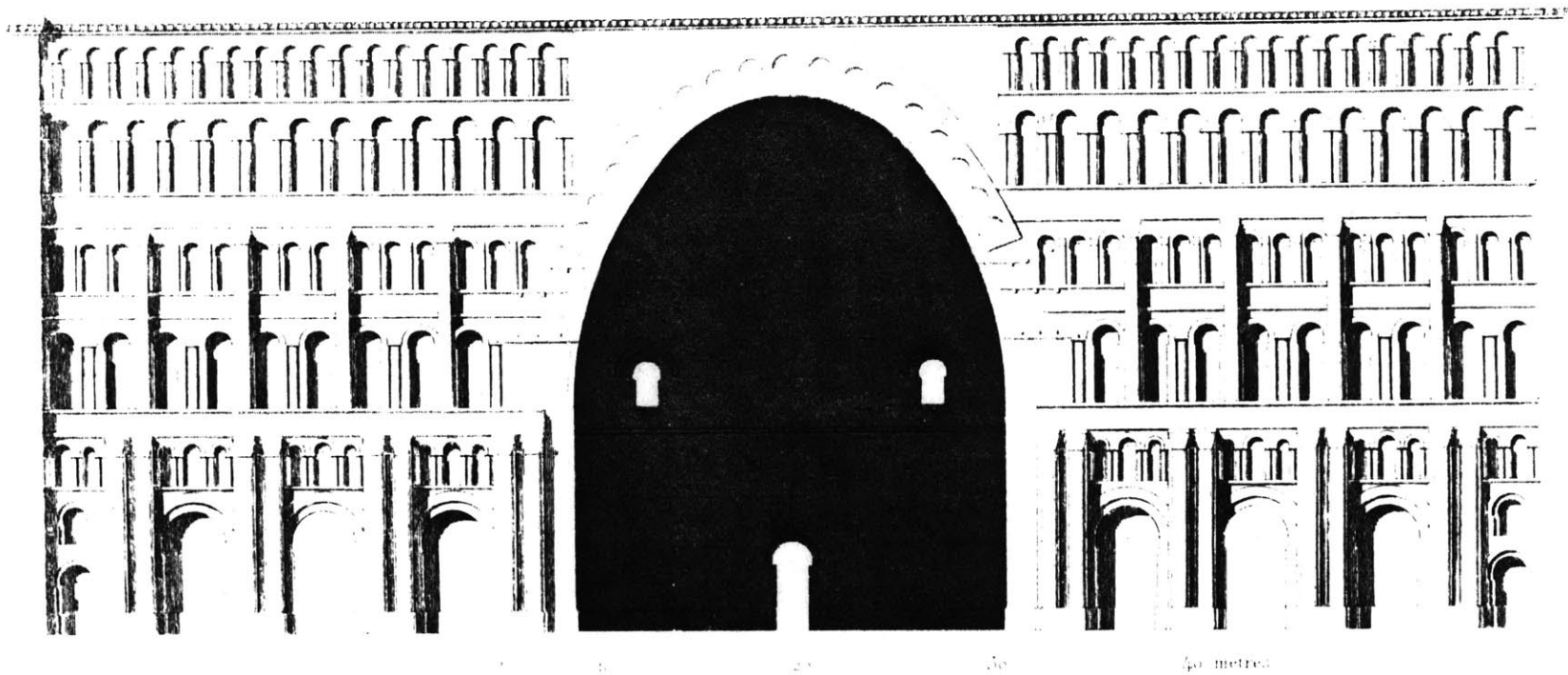


Fig. 2.97 Elevation of Taq Kisra in Ctesiphon

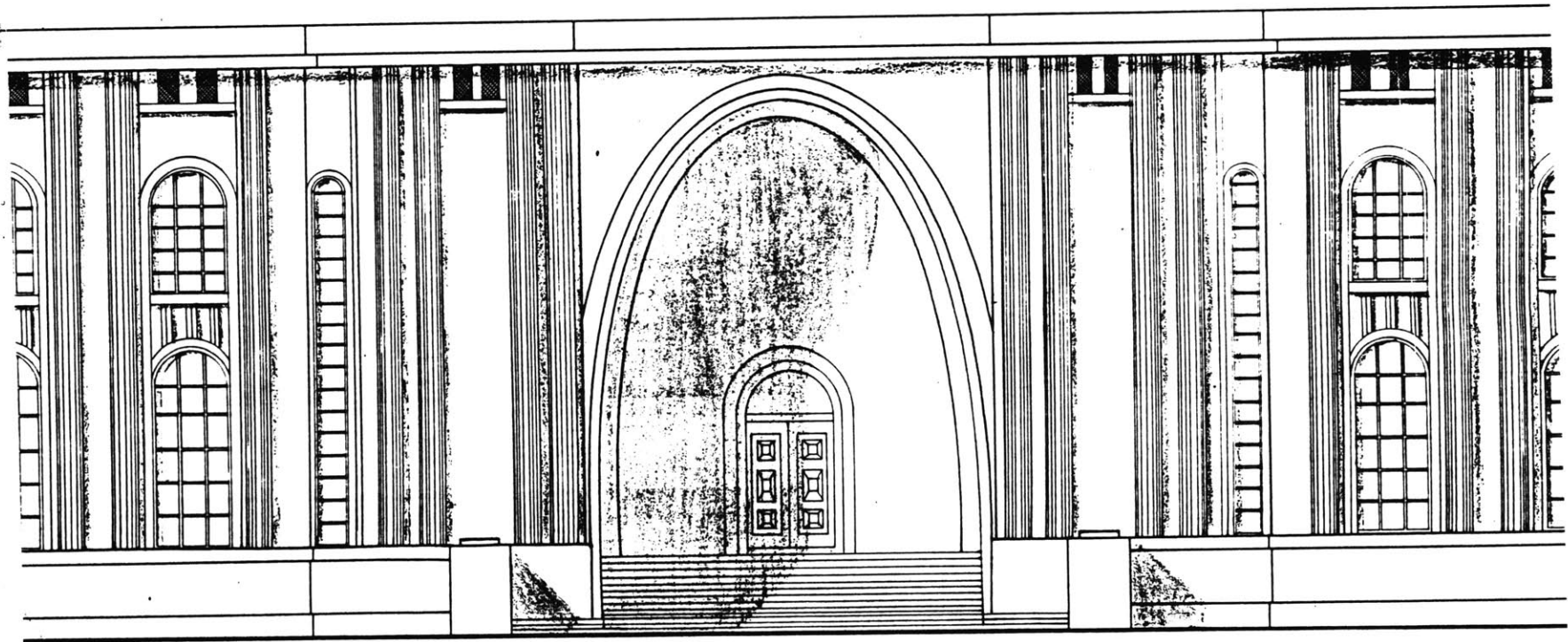


Fig. 2.98 Elevation of Museum of Iran Bastan

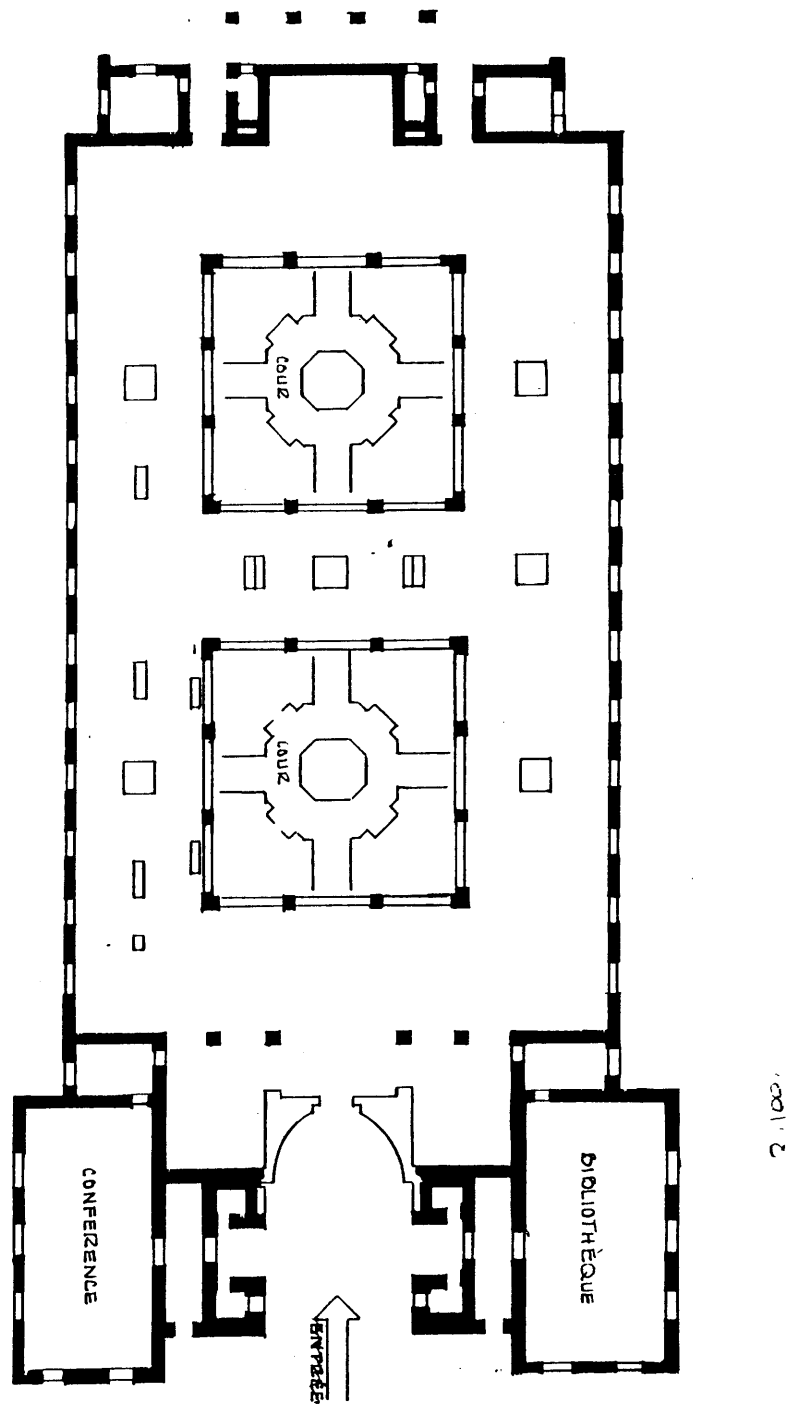


Fig. 2.99 Plan of Museum of Iran Bastan

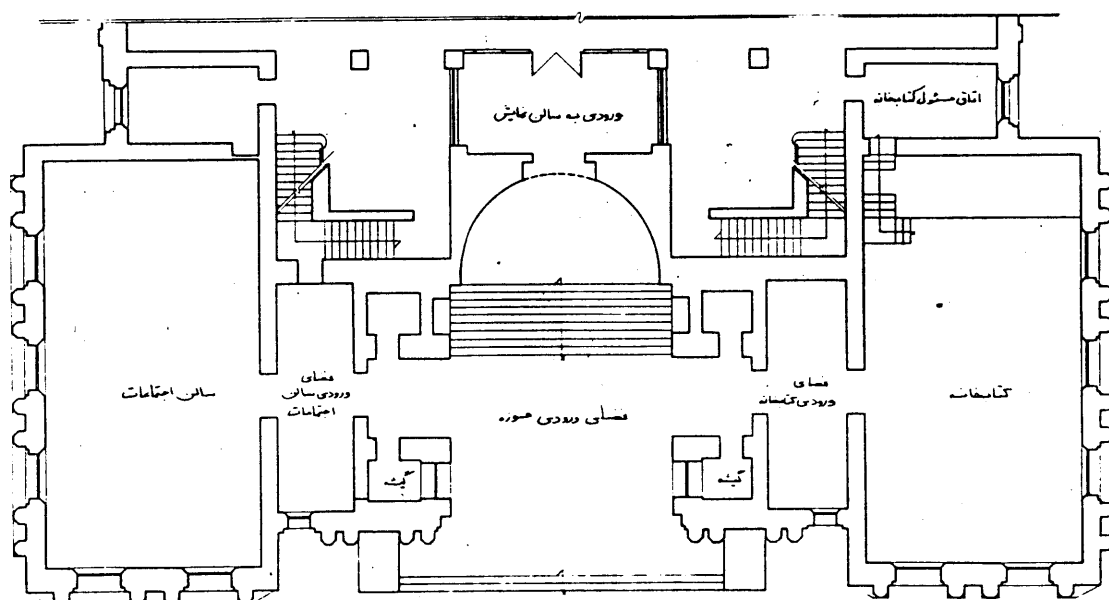


Fig. 2.100 Partial plan of Museum of Iran Bastan

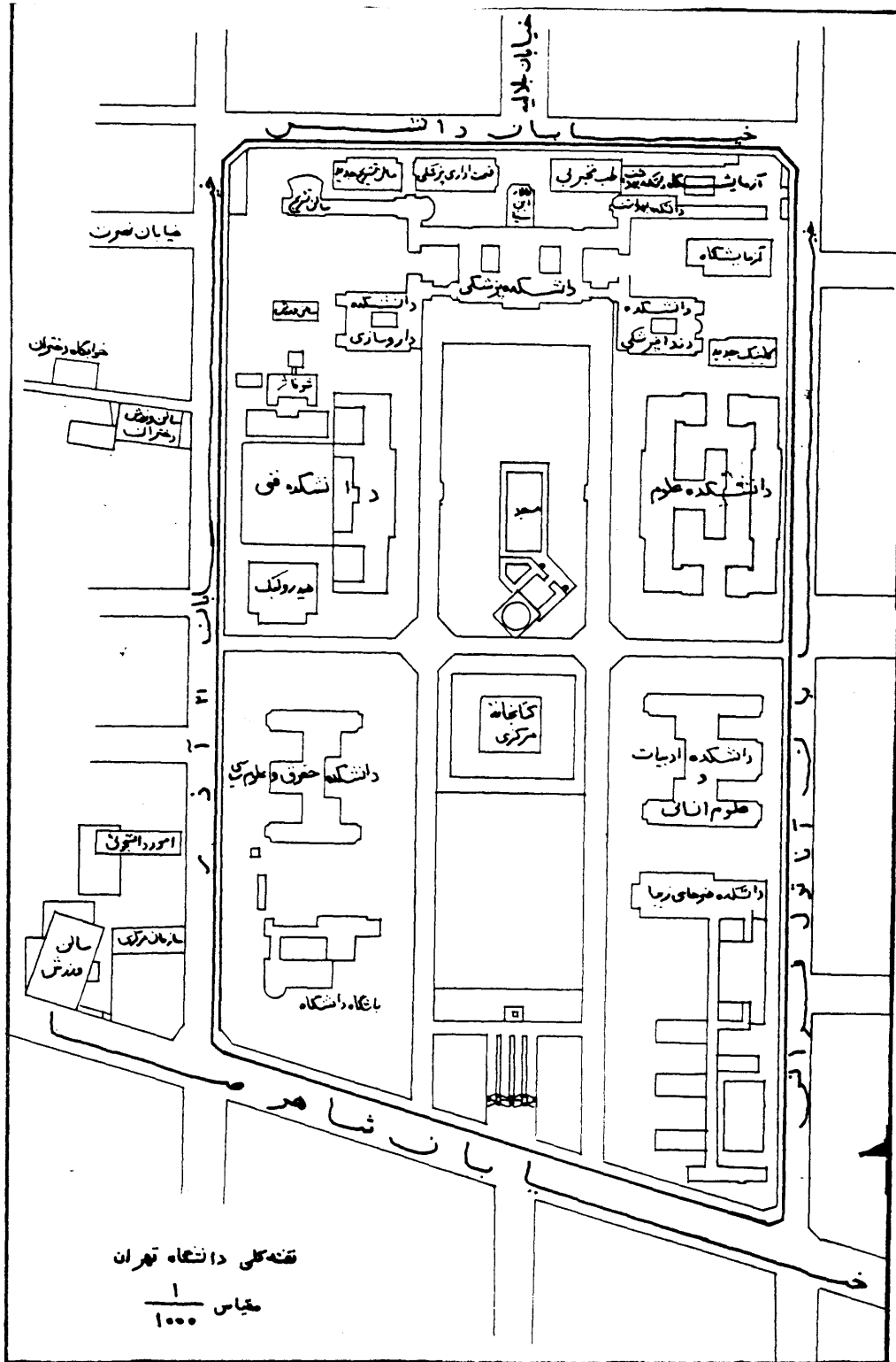


Fig. 2.101 Campus plan of Tehran University

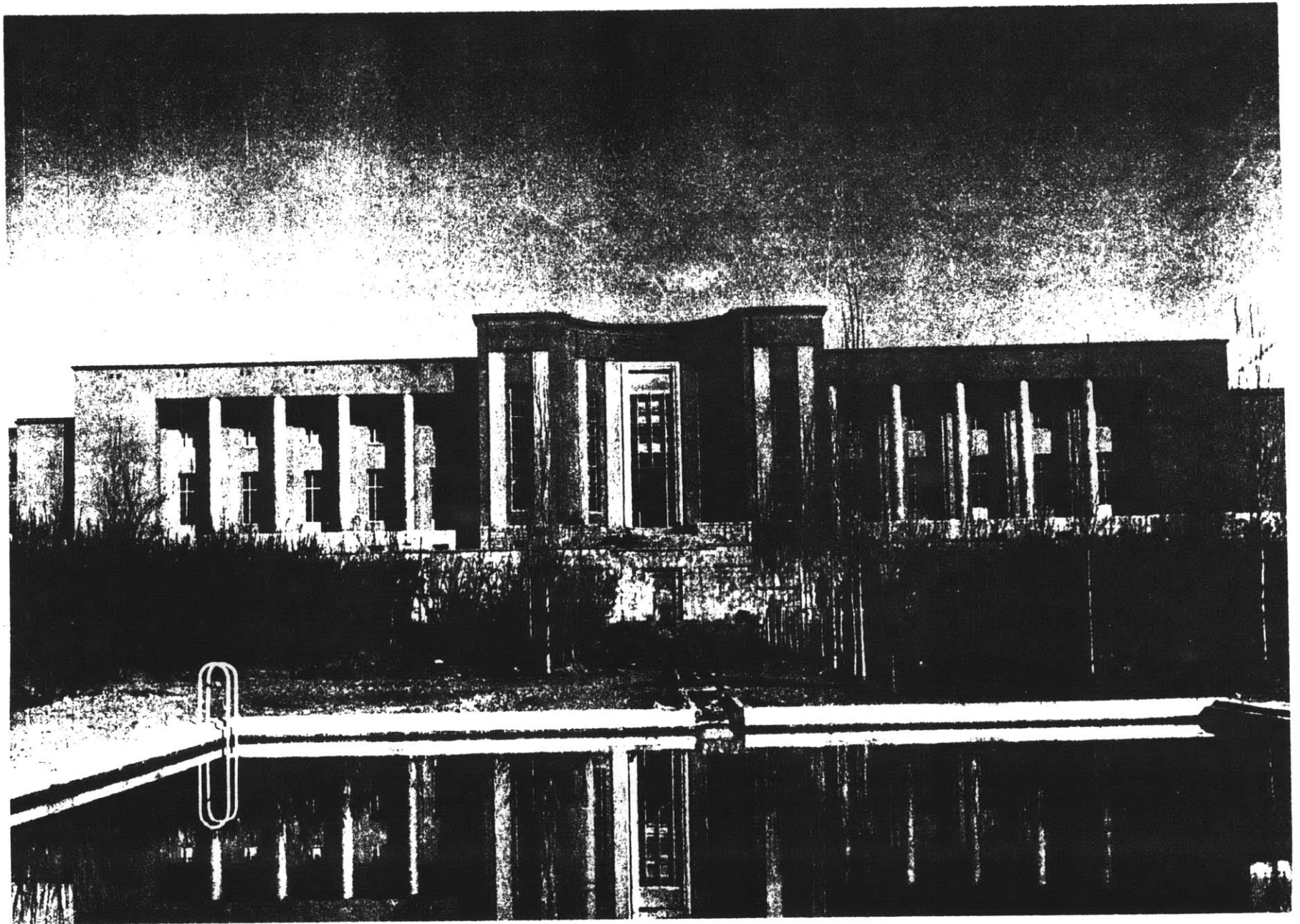


Fig. 2.102 Tehran University Medical School just after construction



Fig. 2.103 Tehran University Medical School

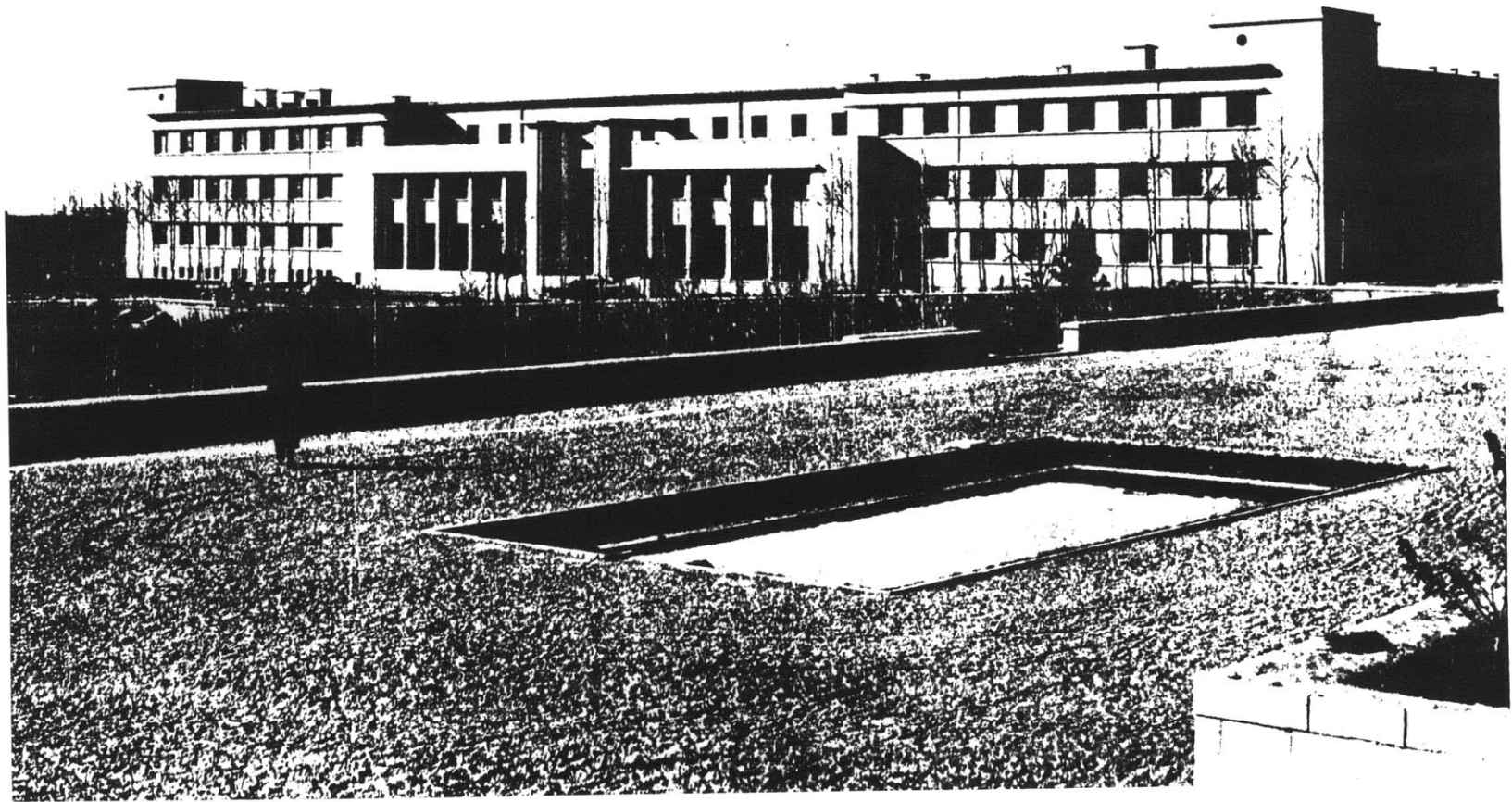


Fig. 2.104 Tehran University

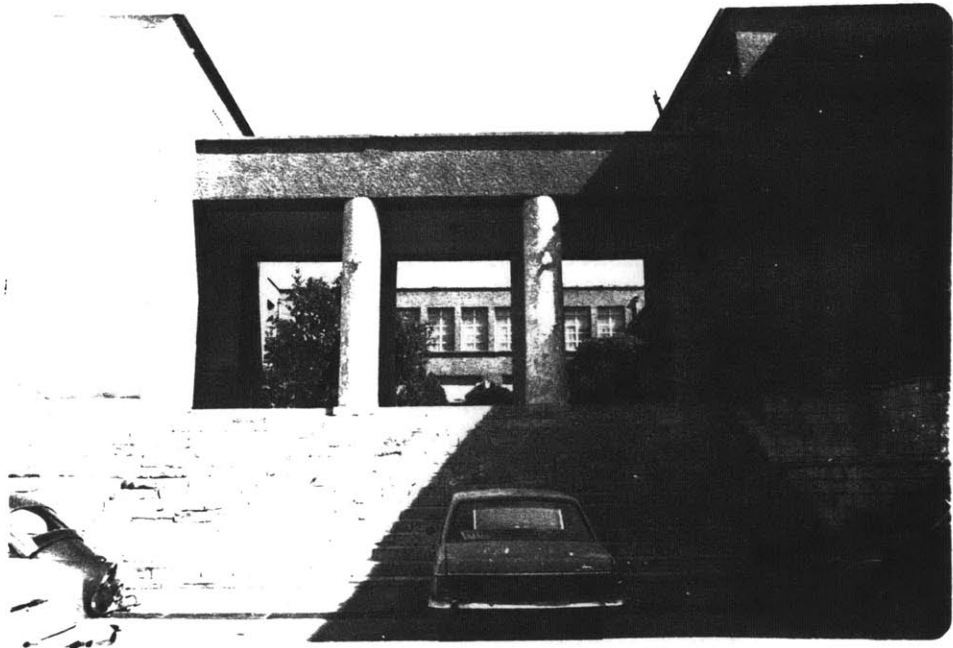


Fig. 2.105 Tehran University



Fig. 2.106 Detail of University entrance of Medical School

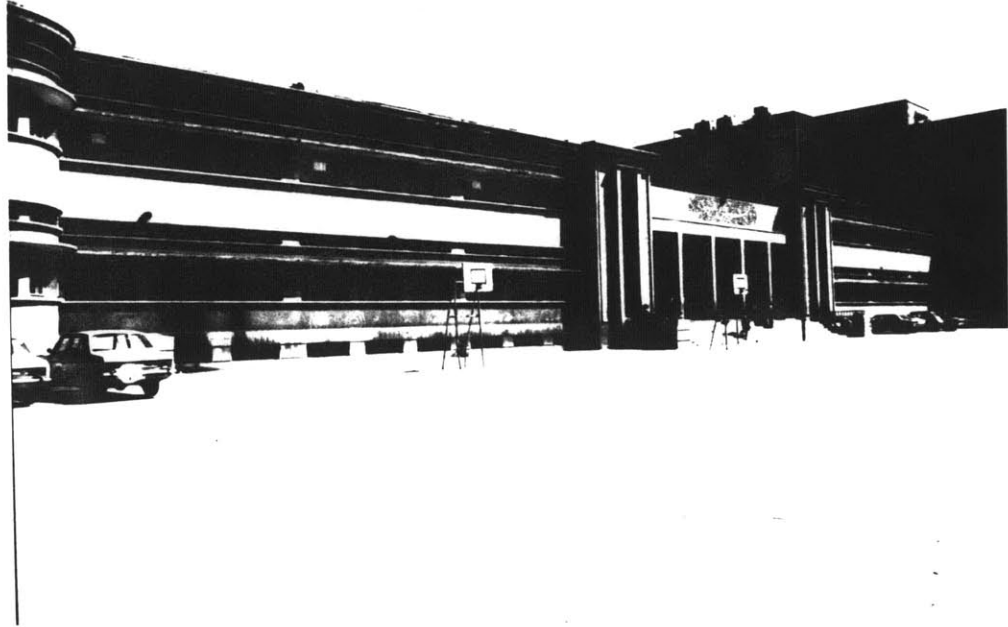


Fig. 2.107 Madrasa Ferdowsi



Fig. 2.108 Madrasa Ferdowsi, entry ayvan

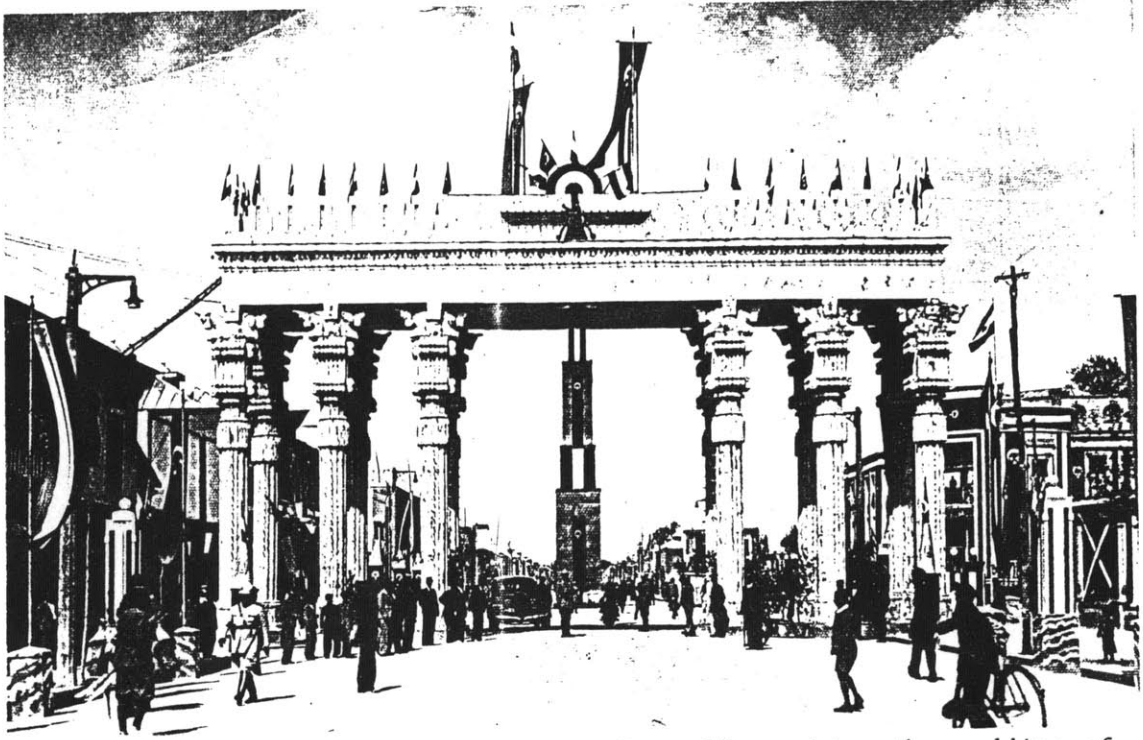


Fig. 2.109 Triumphal arch by Nikolai Marcoff, marking the wedding of crown prince

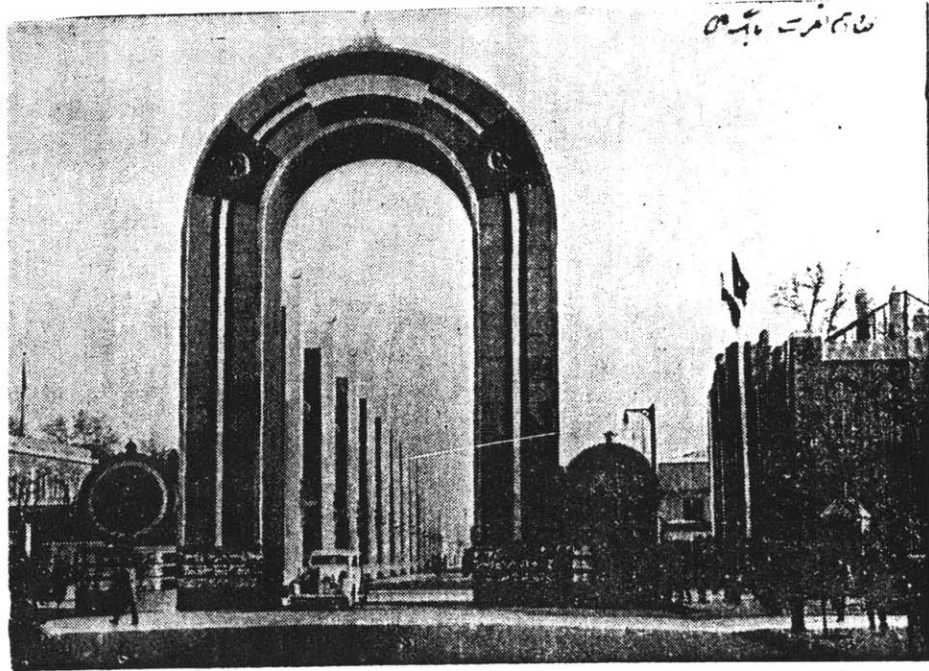


Fig. 2.110 Triumphal arch by Zafar, marking the wedding of the crown prince



Fig. 2.111 Triumphal arch in celebration of Reza Shah's coronation

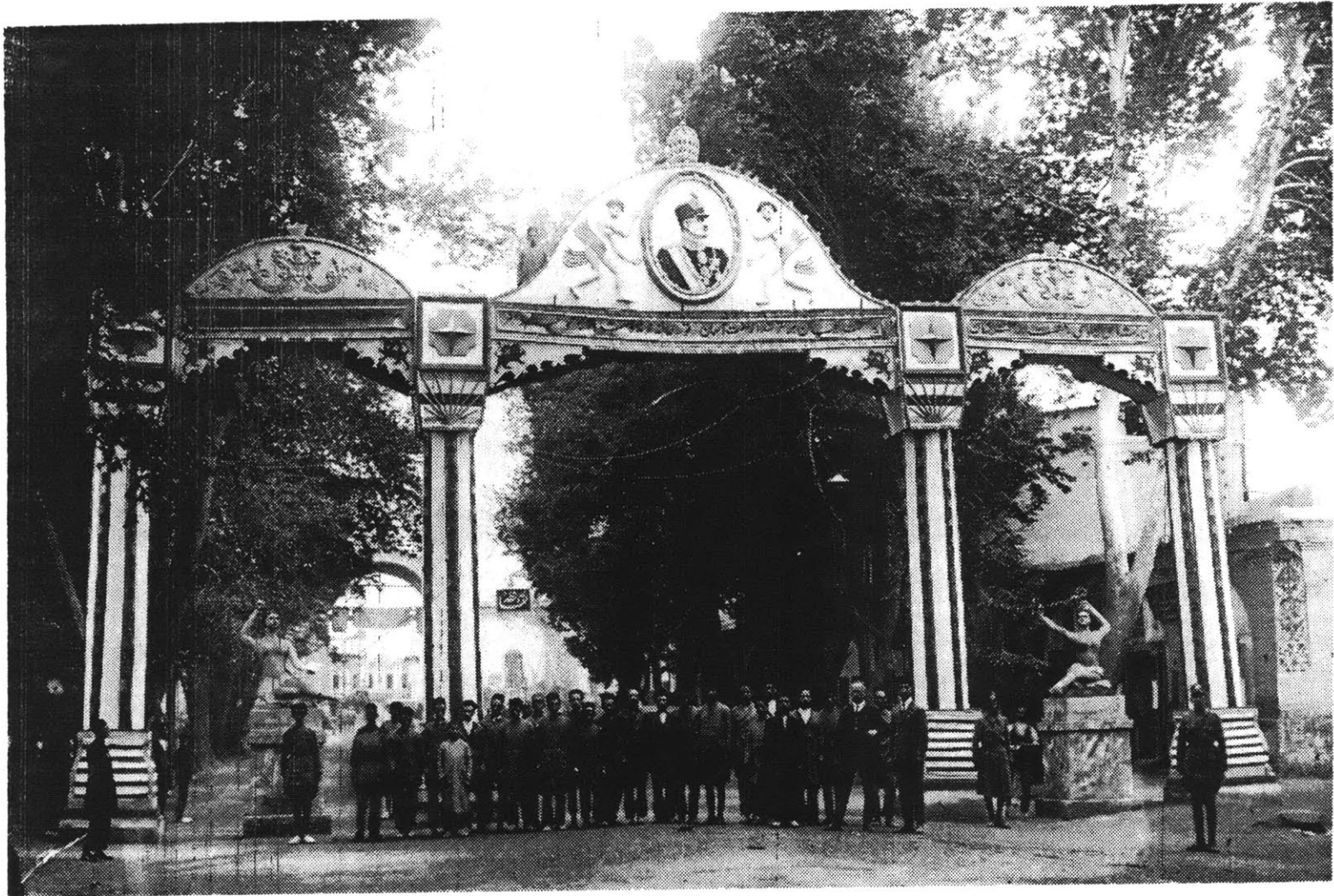


Fig. 2.112 Triumphal arch in celebration of Reza Shah's coronation

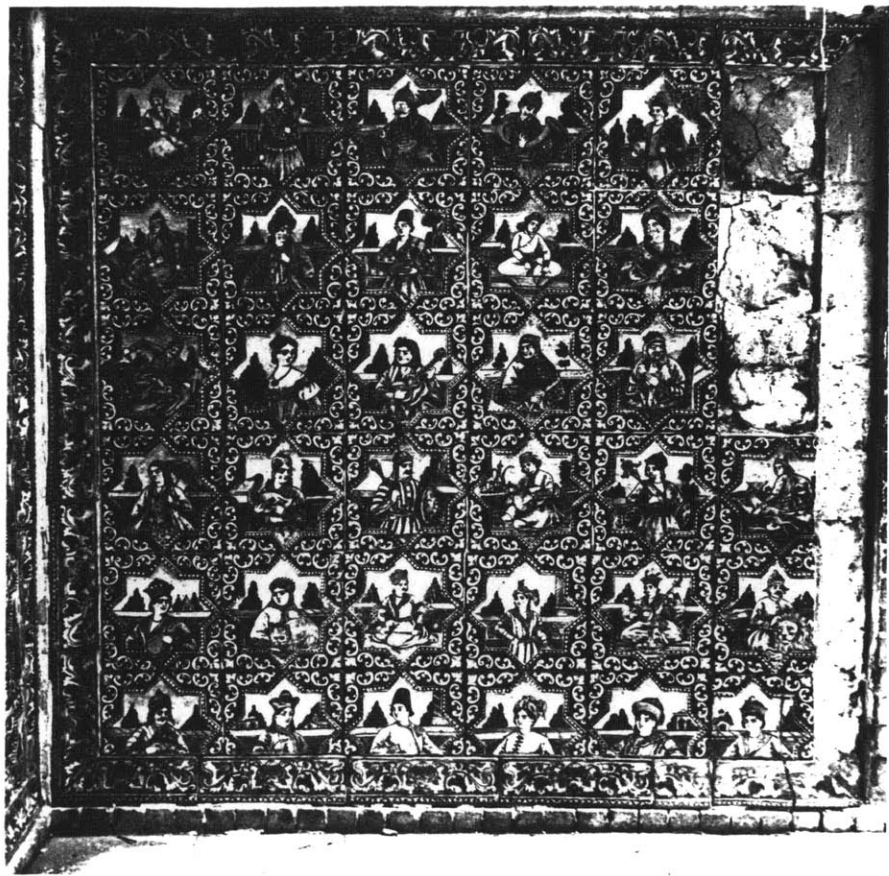


Fig. 2.113 Polychrome tilework

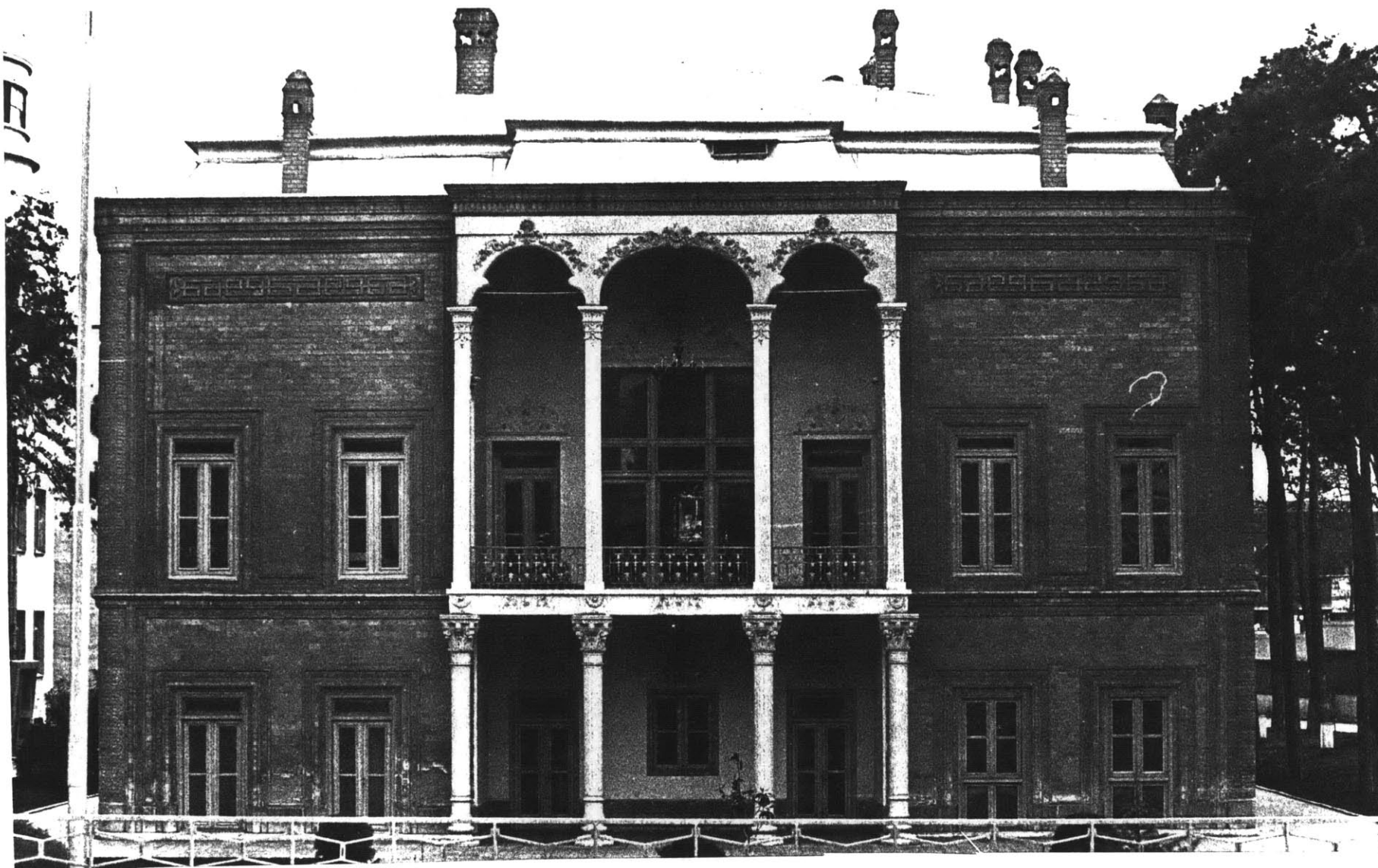


Fig. 2.114 European style villa



Fig. 2.115 Spread of European architectural influence

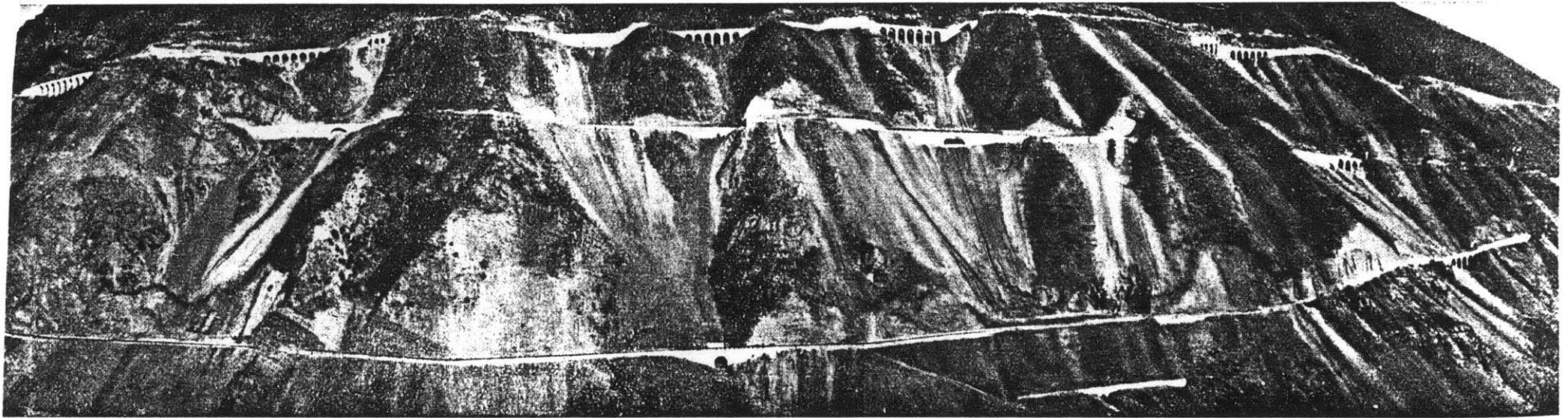


Fig. 2.116 Bridge and road construction by Italian engineers



Fig. 2.117 Offices of the Cossack Brigade - Marcoff and Reza Shah
are seated in the middle row at center

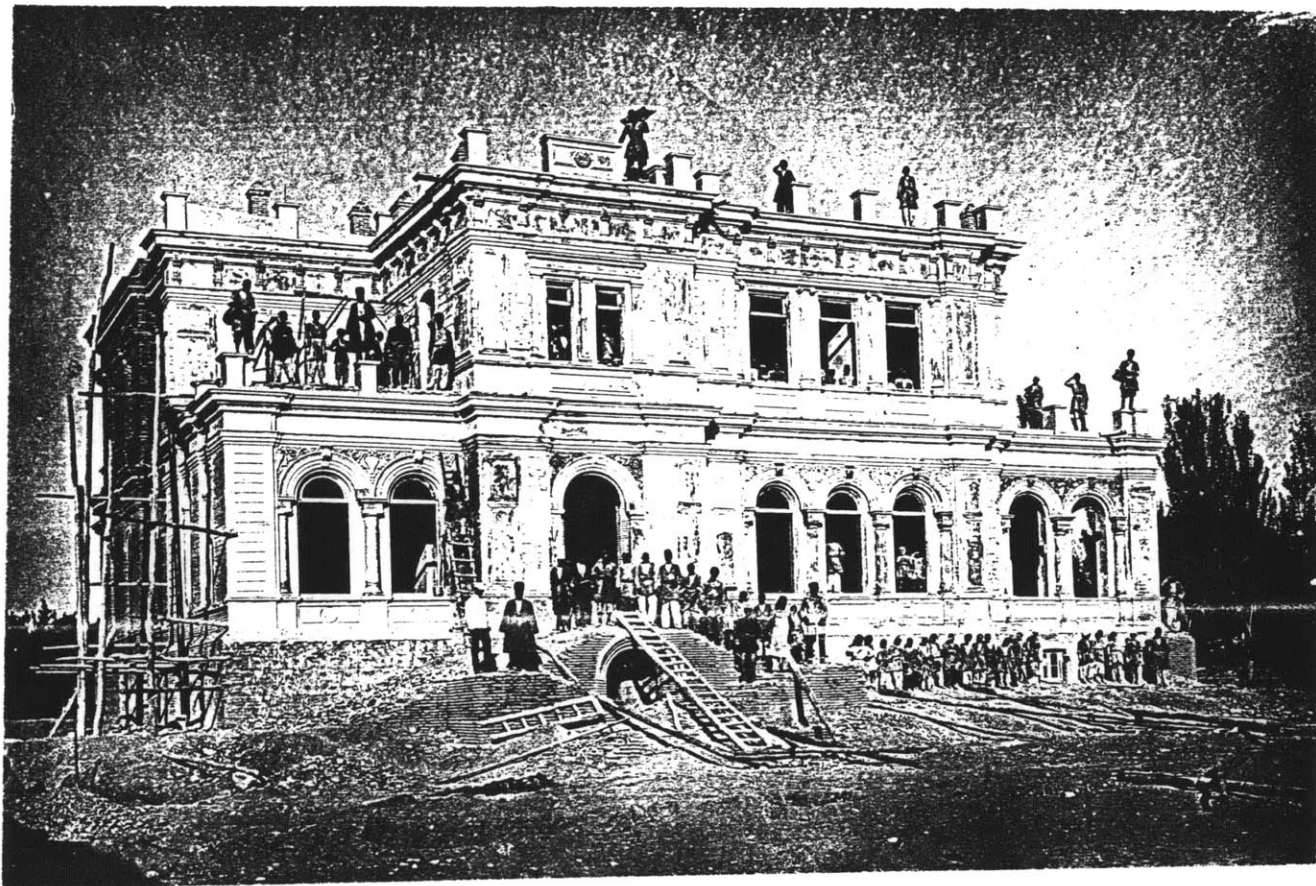


Fig. 2.118 House for directors of a Russian bank by A. Marcoff, ca. 1916

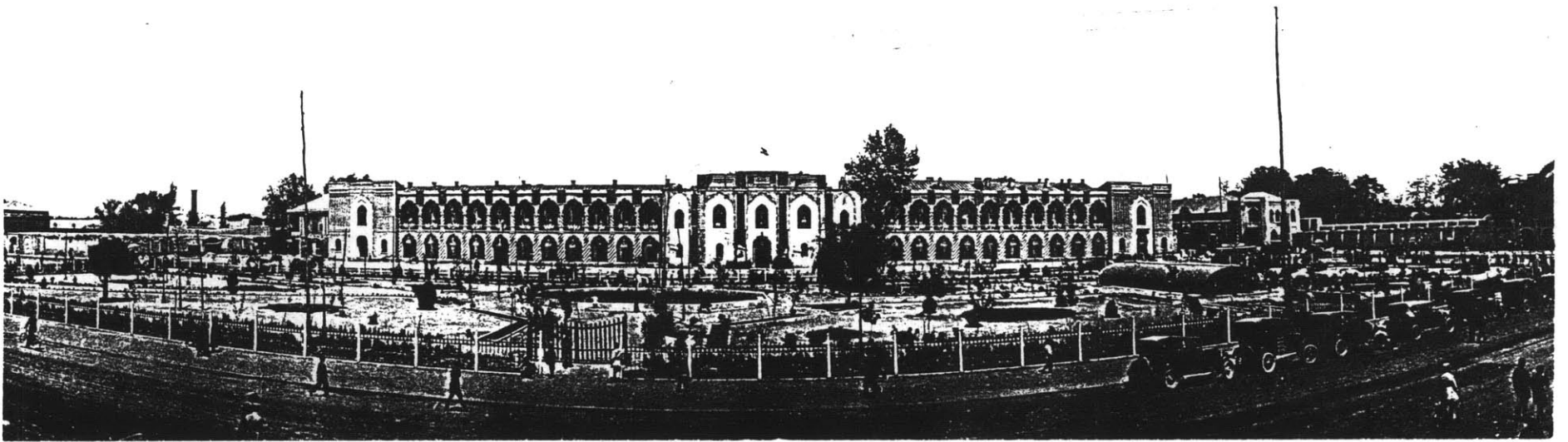


Fig. 2.119 The municipality building in Maydan-e Sepah

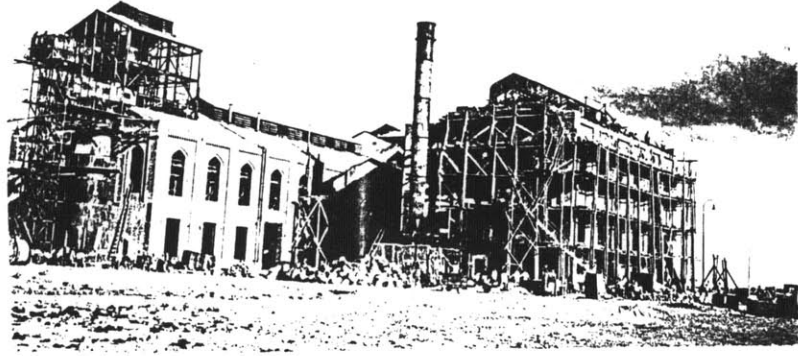


Fig. 2.120 Karaj sugar refinery, 1933-34



Fig. 2.121 American College

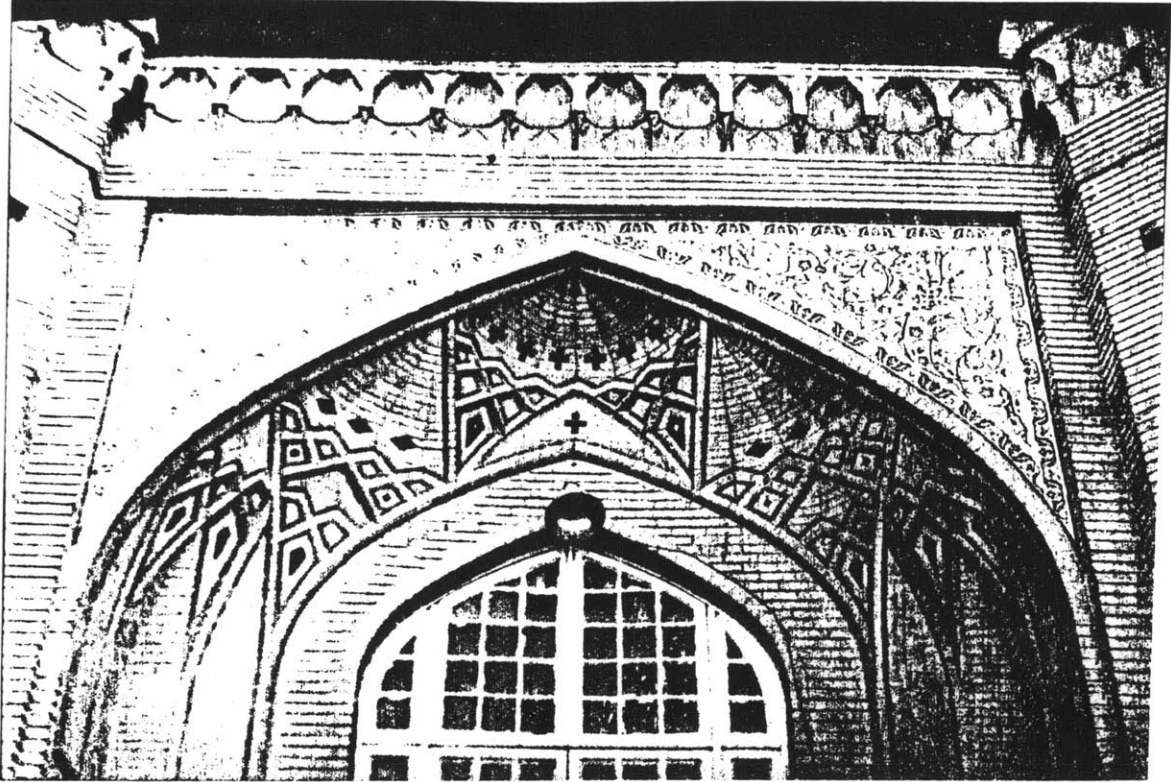


Fig. 2.122 American College, details

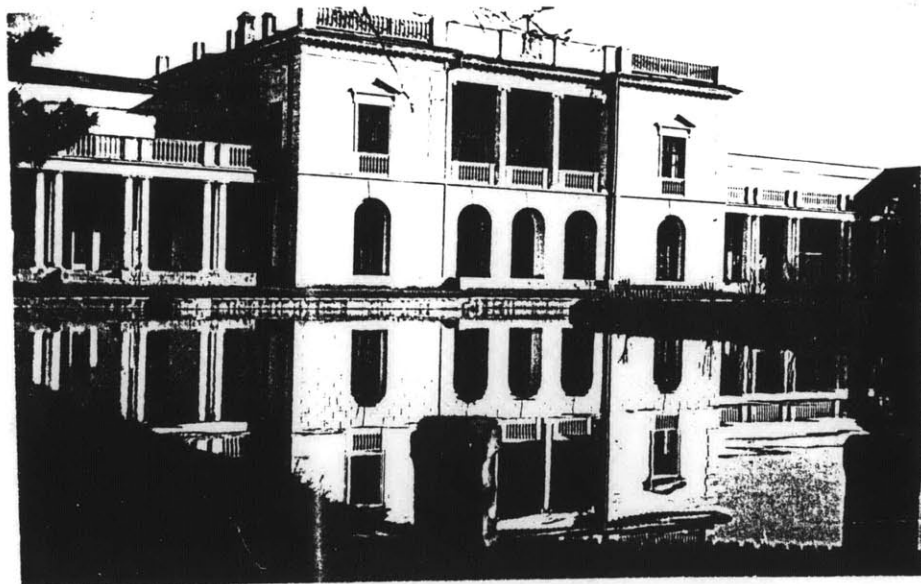
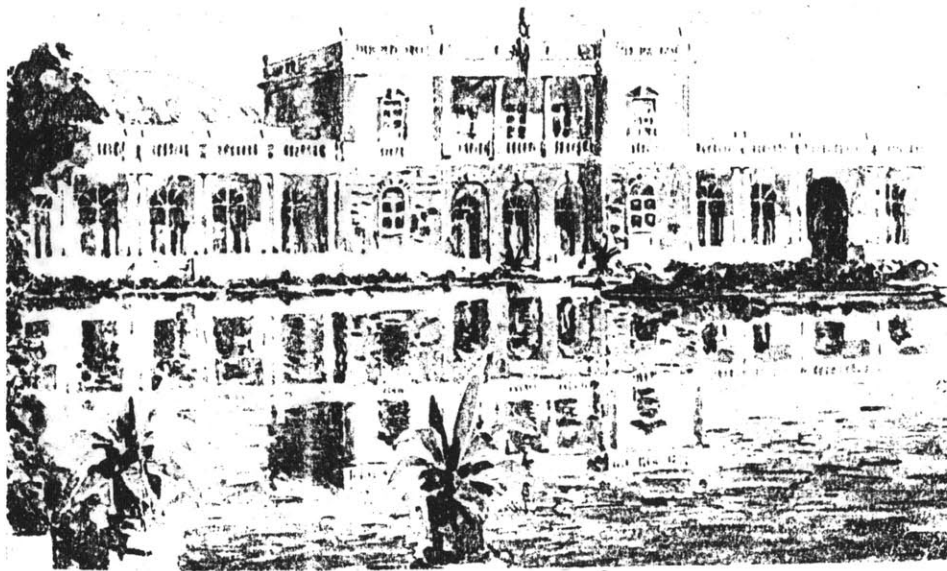


Fig. 2.123 Italian Embassy in Tehran by Marcoff



Fig. 2.124 Singer building on Ferdowsi Avenue

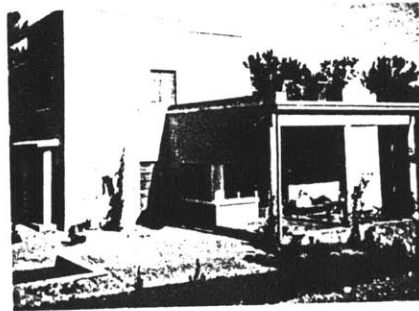
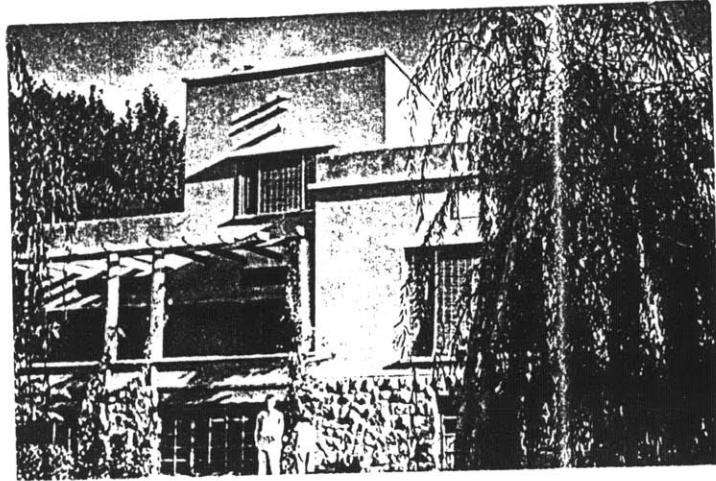


Fig. 2.125 Villa Alexis by Marcoff

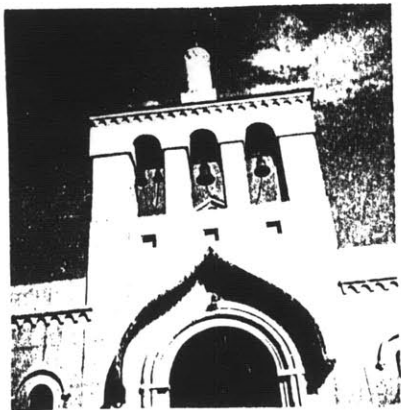


Fig. 2.126 Russian Orthodox Church on Roosevelt Avenue (1945)

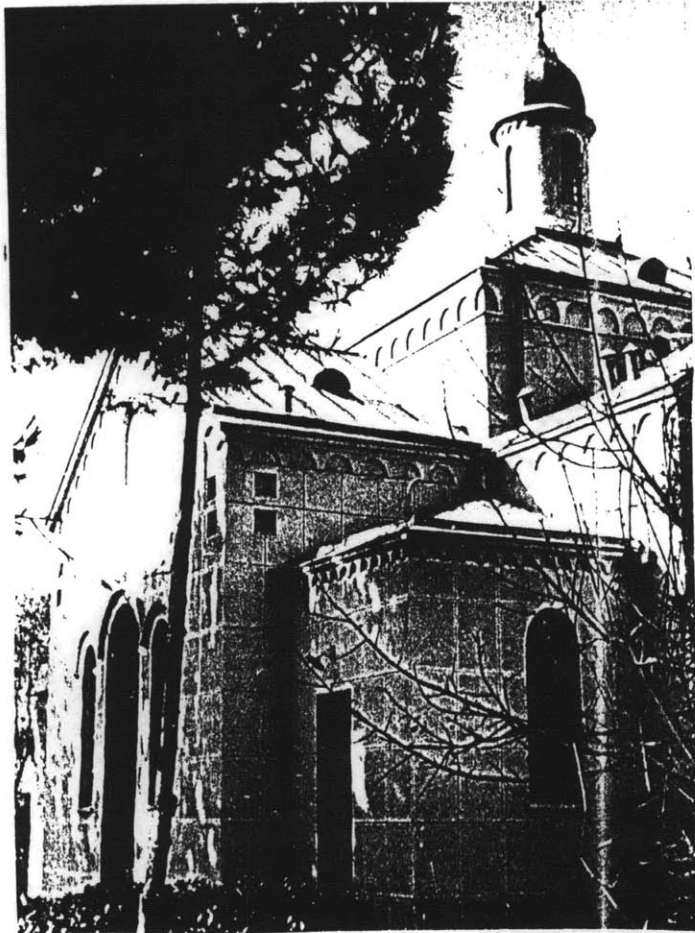


Fig. 2.127 Russian Orthodox Church by Marcoff



Fig. 2.128 Monument of Hafez in Shiraz

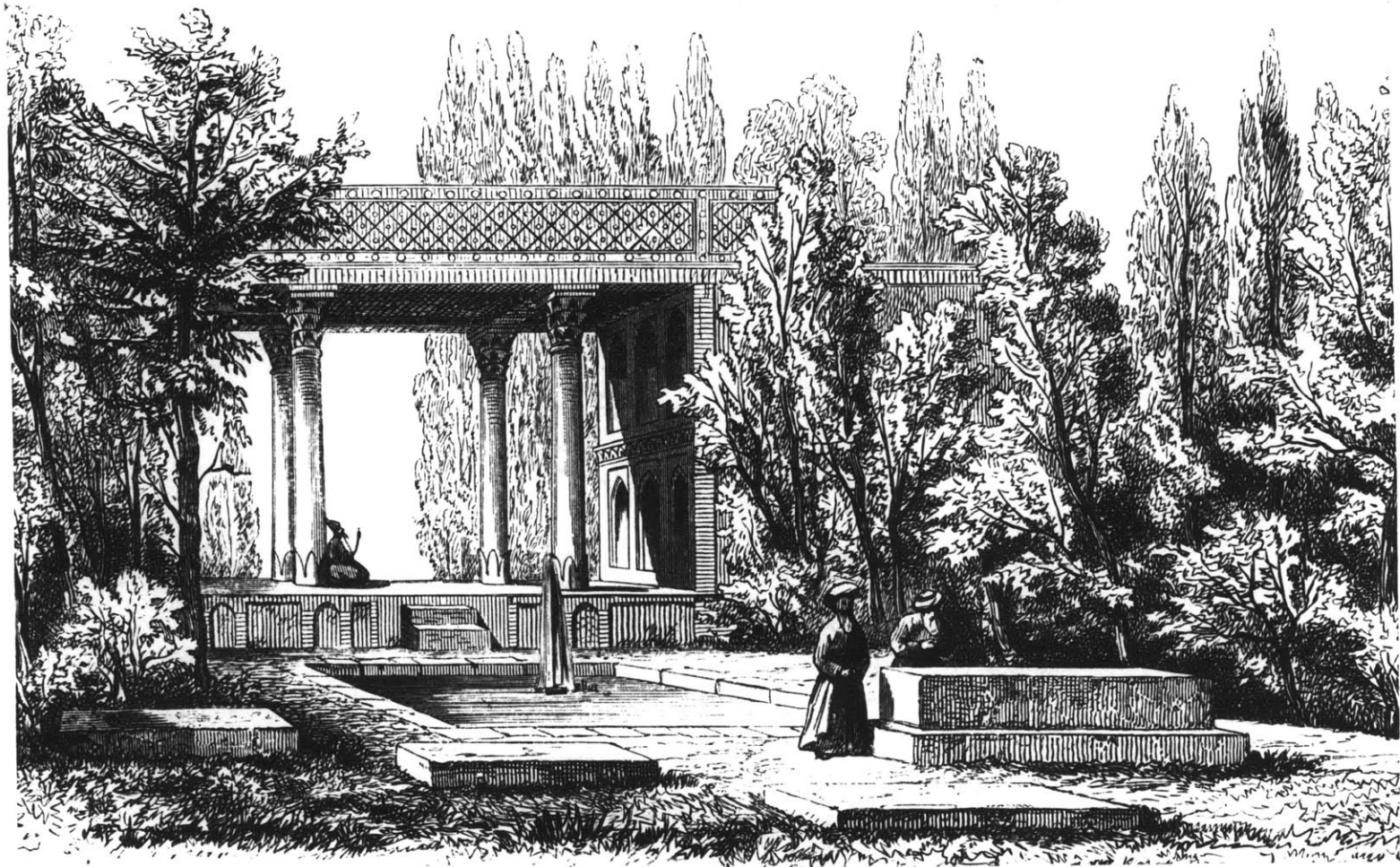


Fig. 2.129 Old Hafez monument in Shiraz drawn by Coste

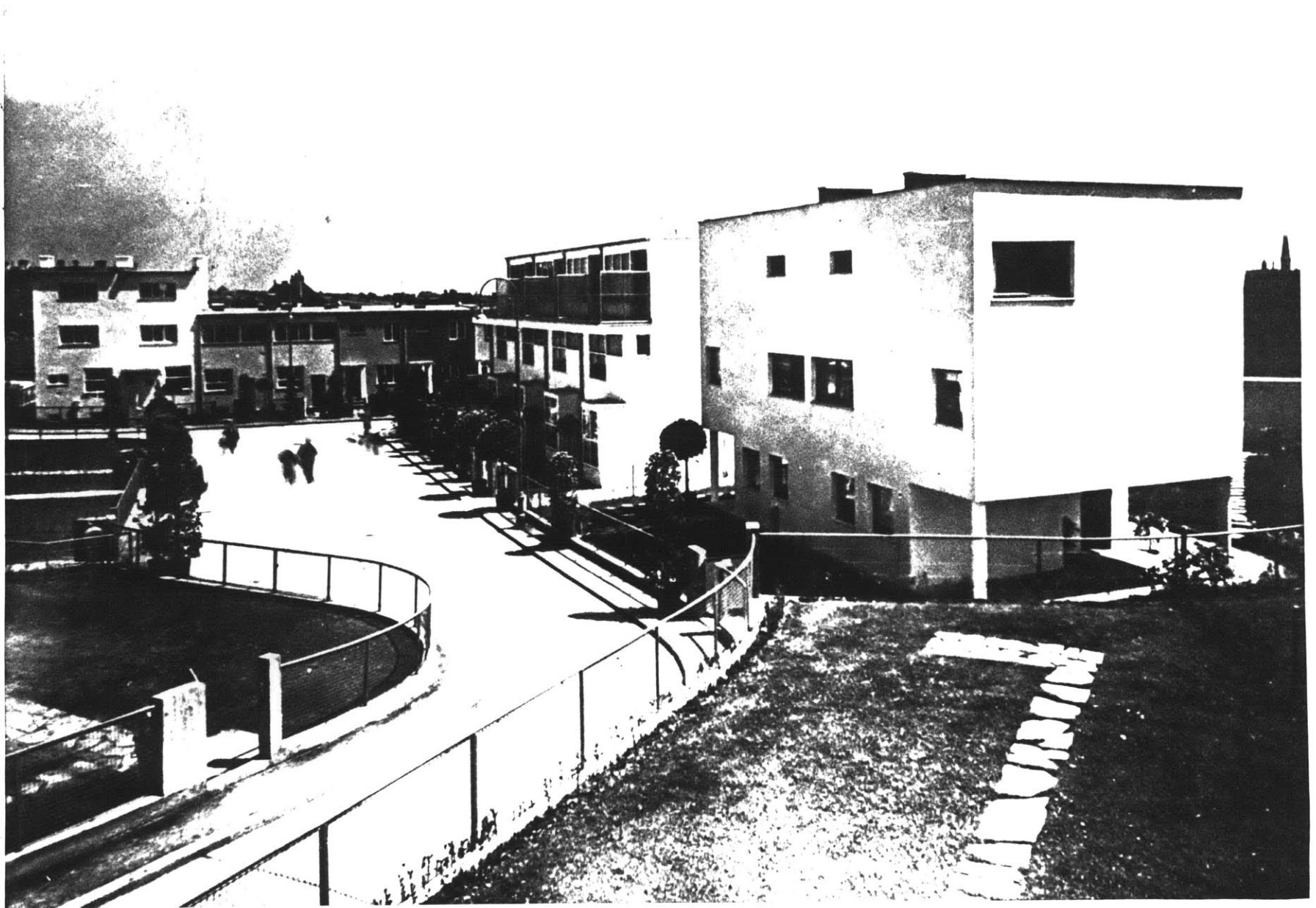
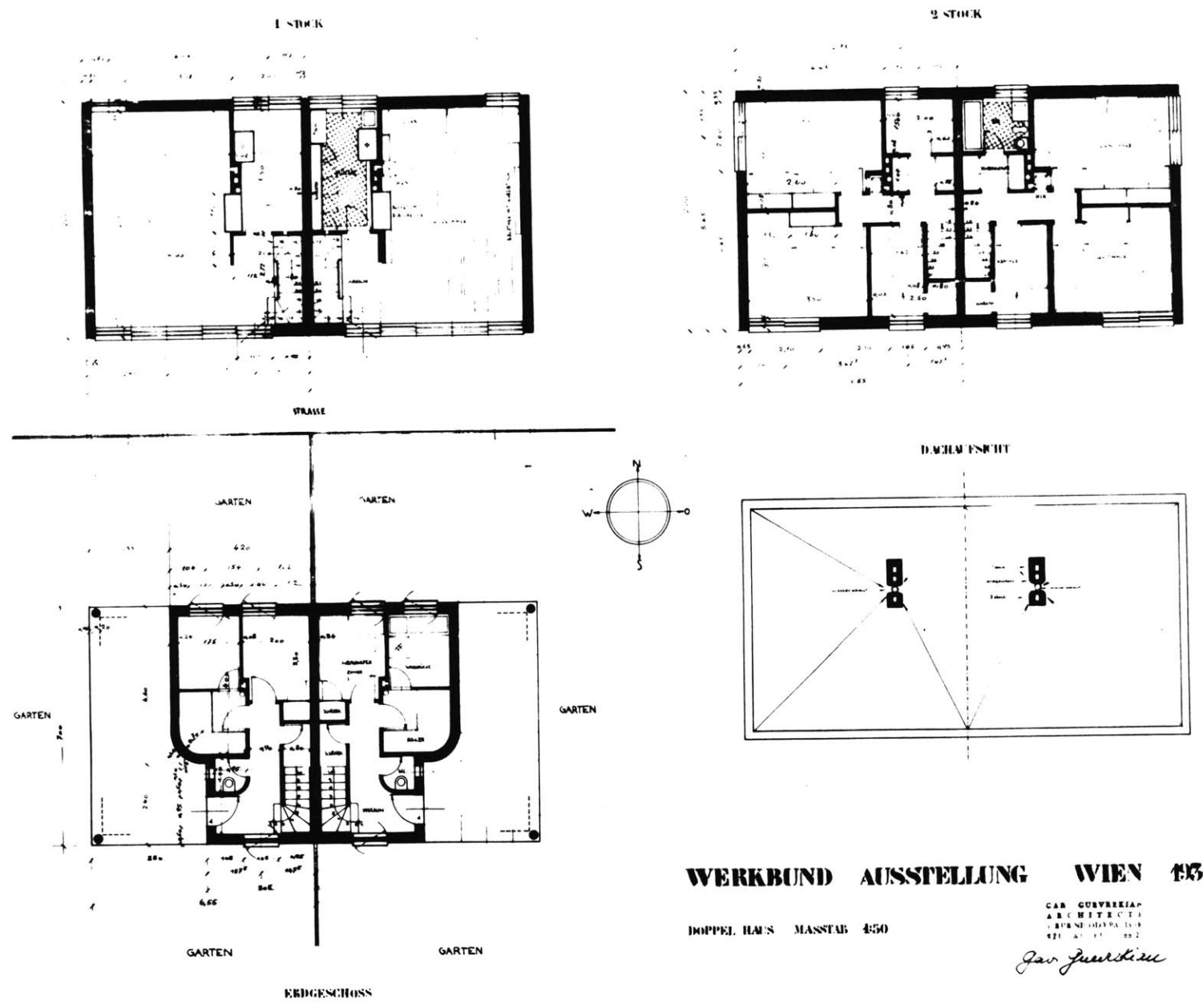


Fig. 2.130 Gabriel Geuvrekian's project for the Werkbund Exhibition in Vienna,



WERKBUND AUSSTELLUNG WIEN 1934

DOPPEL HAUS MASSTAB 4:50

CAR GUYREKIAN
 ARCHITECT
 BUNENHOFSTRASSE 12
 1010 WIEN
Jan Jurek

Fig. 2.131 Plans for the houses built at the Werkbund Exhibition

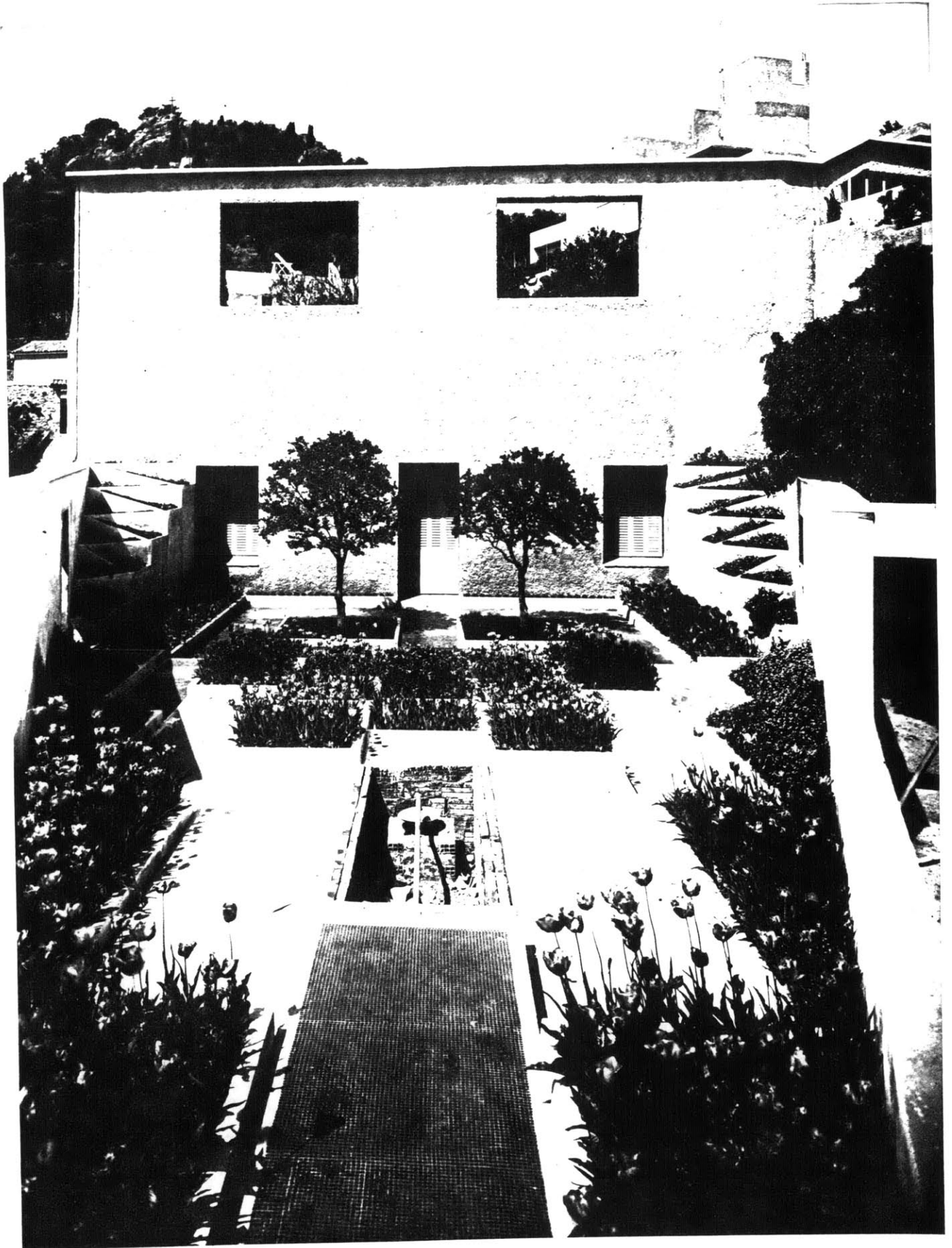


Fig. 2.132 Garden of the Villa de Noilles at Hyères, 1927-28

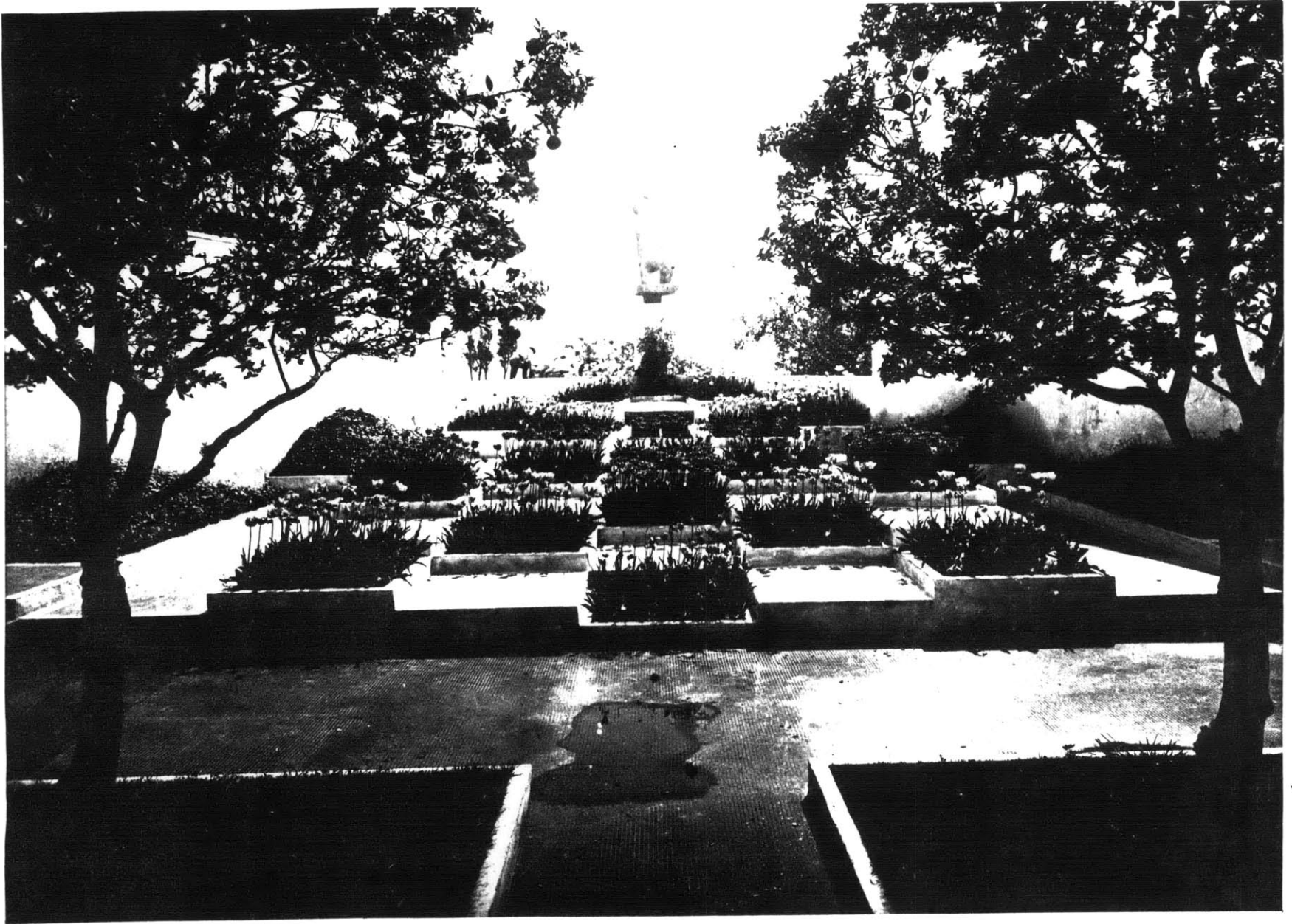


Fig. 2.133 Garden at Hyères



Fig. 2.134 Garden at Hyères



Fig. 2.135 Ministry of Industry and Mines in Tehran, 1936

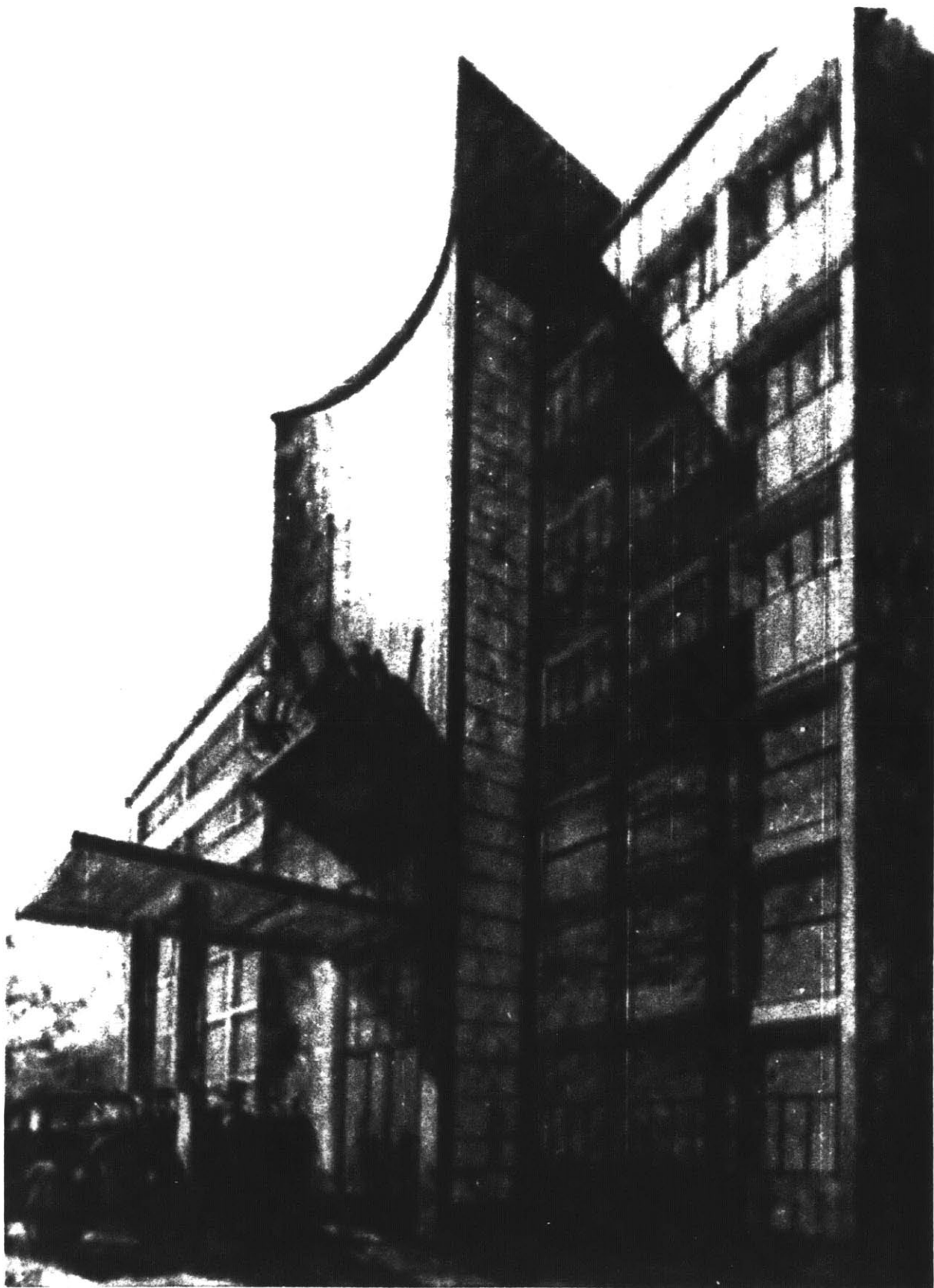


Fig. 2.136 Ministry of Industry and Mines, alternative project



Fig. 2.137 Ministry of Industry and Mines, piloti



Fig. 2.138 Villa Panahy in Tehran, 1934



Fig. 2.139 Villa Malek Aslani, 1935

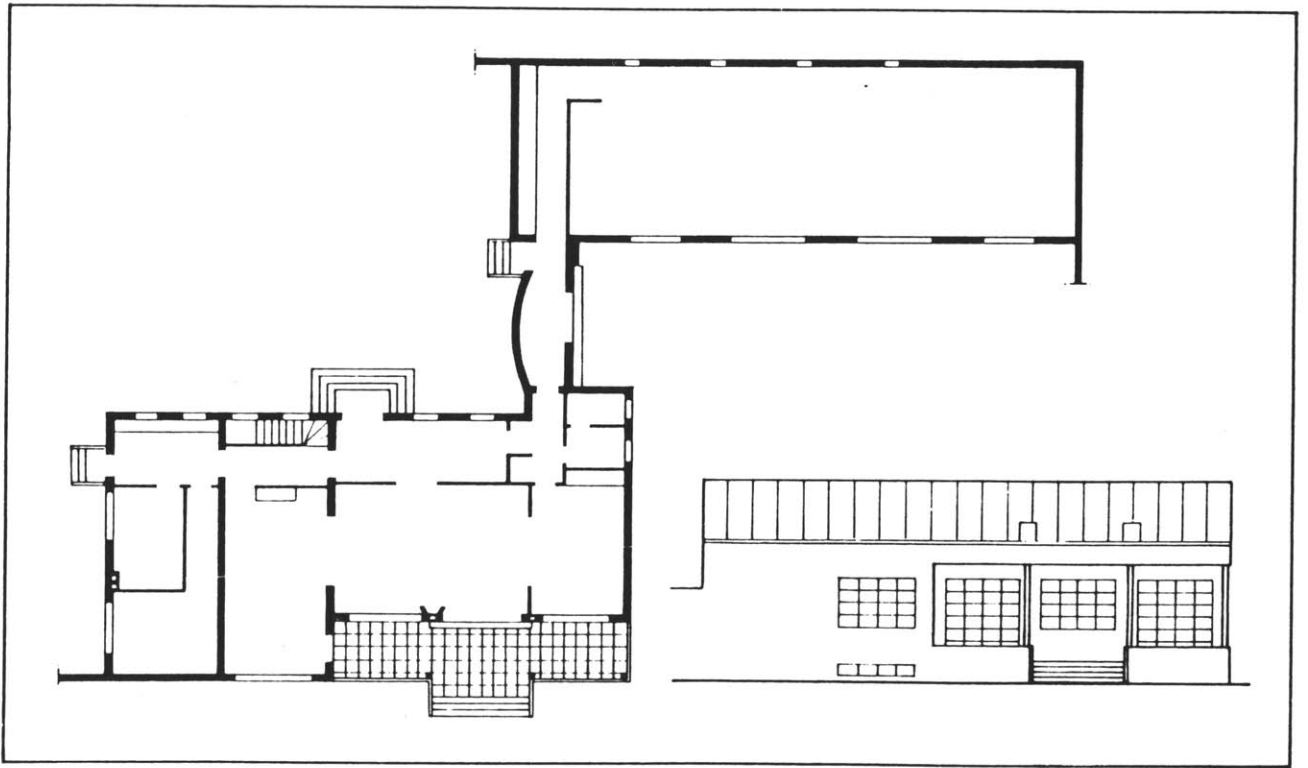
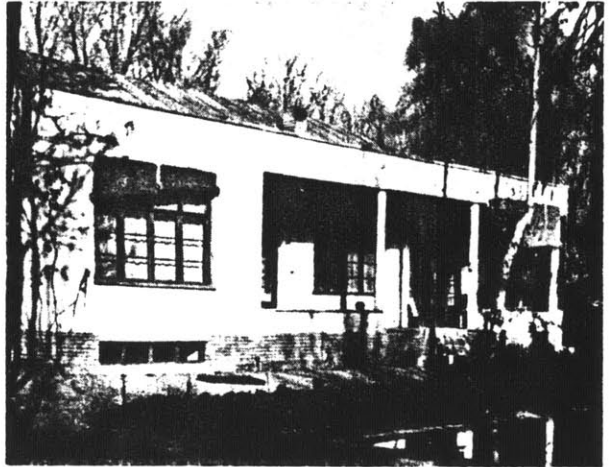


Fig. 2.140 Villa Firouz, 1937

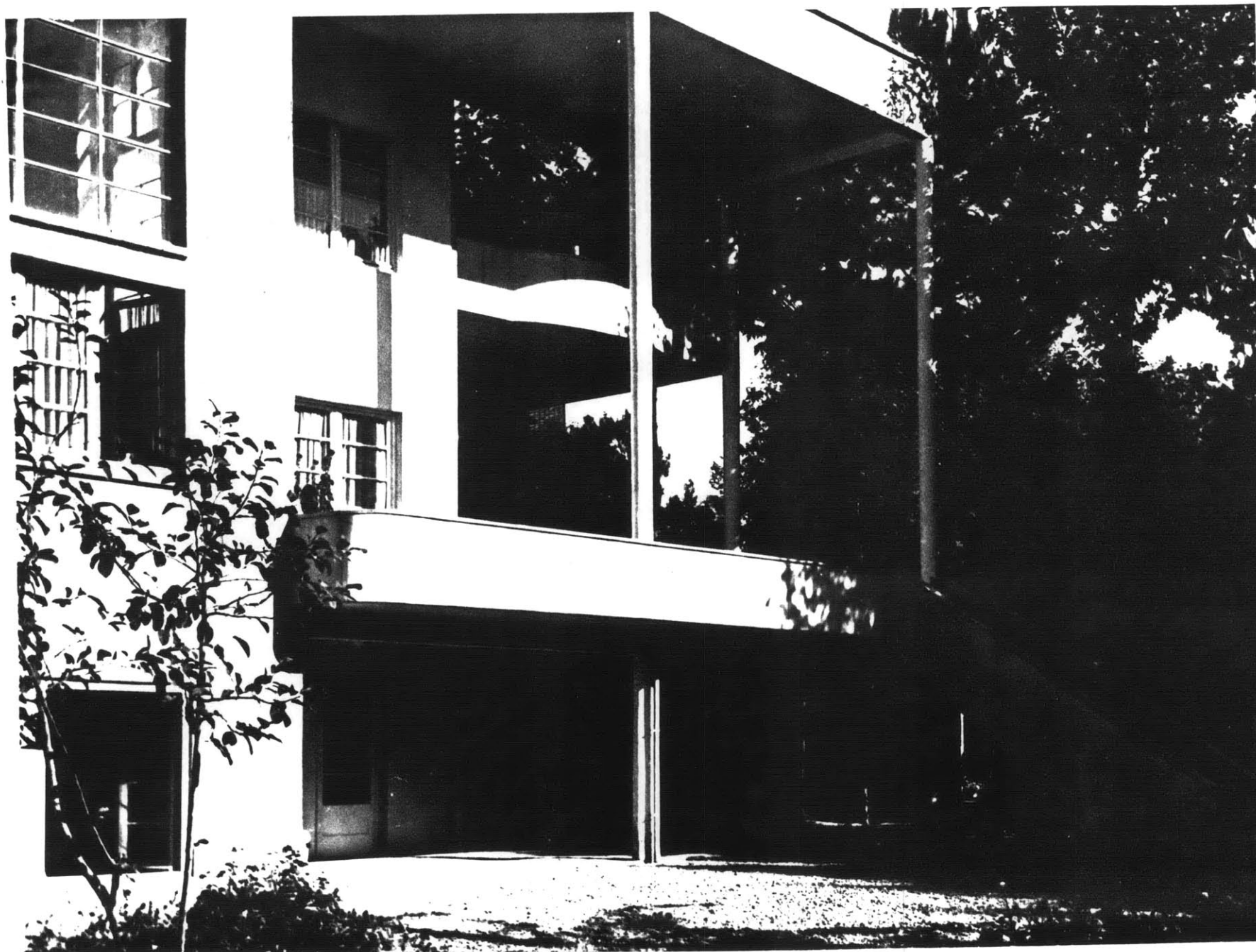


Fig. 2.141 Villa Khosravani, 1936

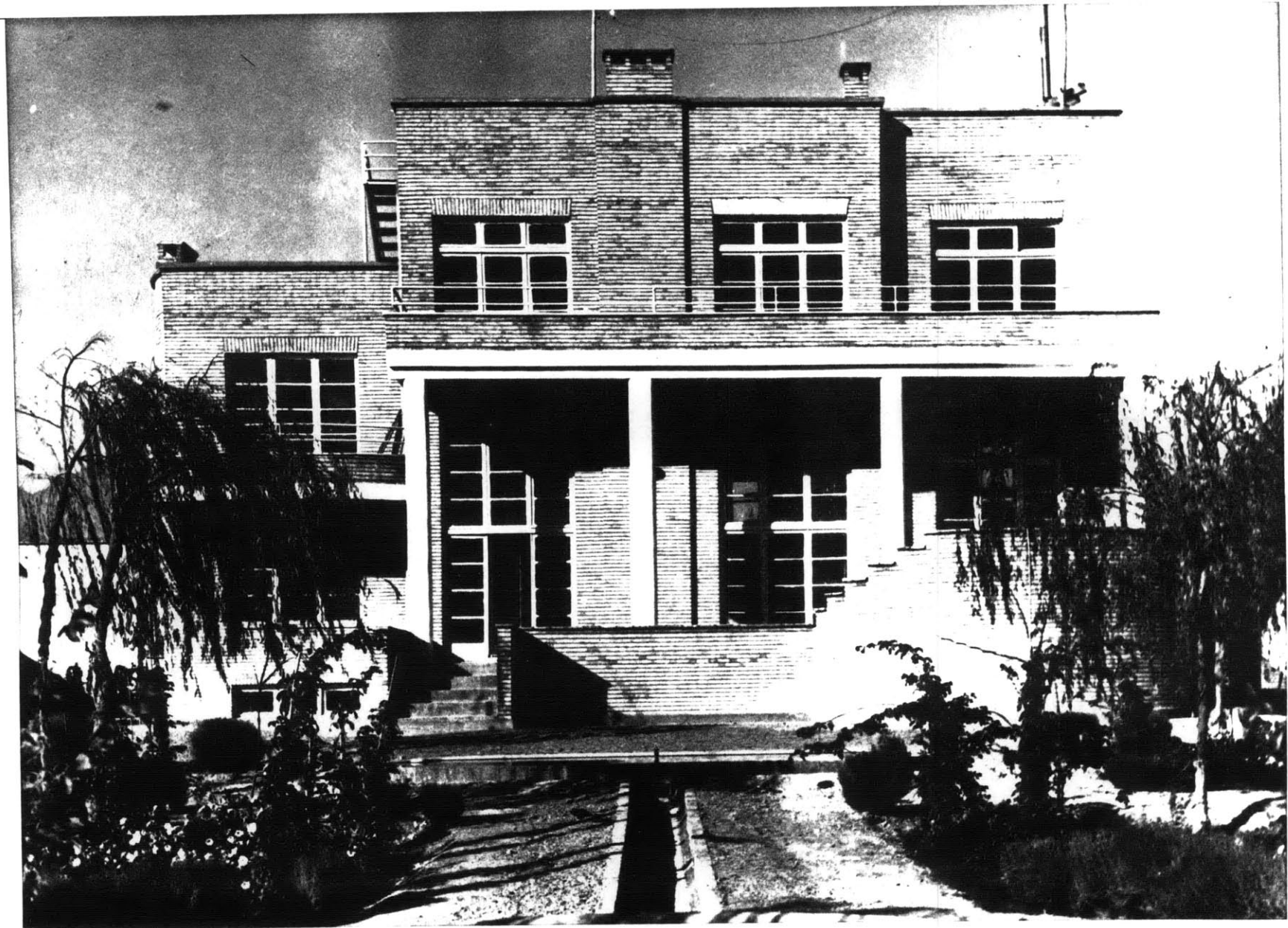


Fig. 2.142 Villa Siassy, 1935

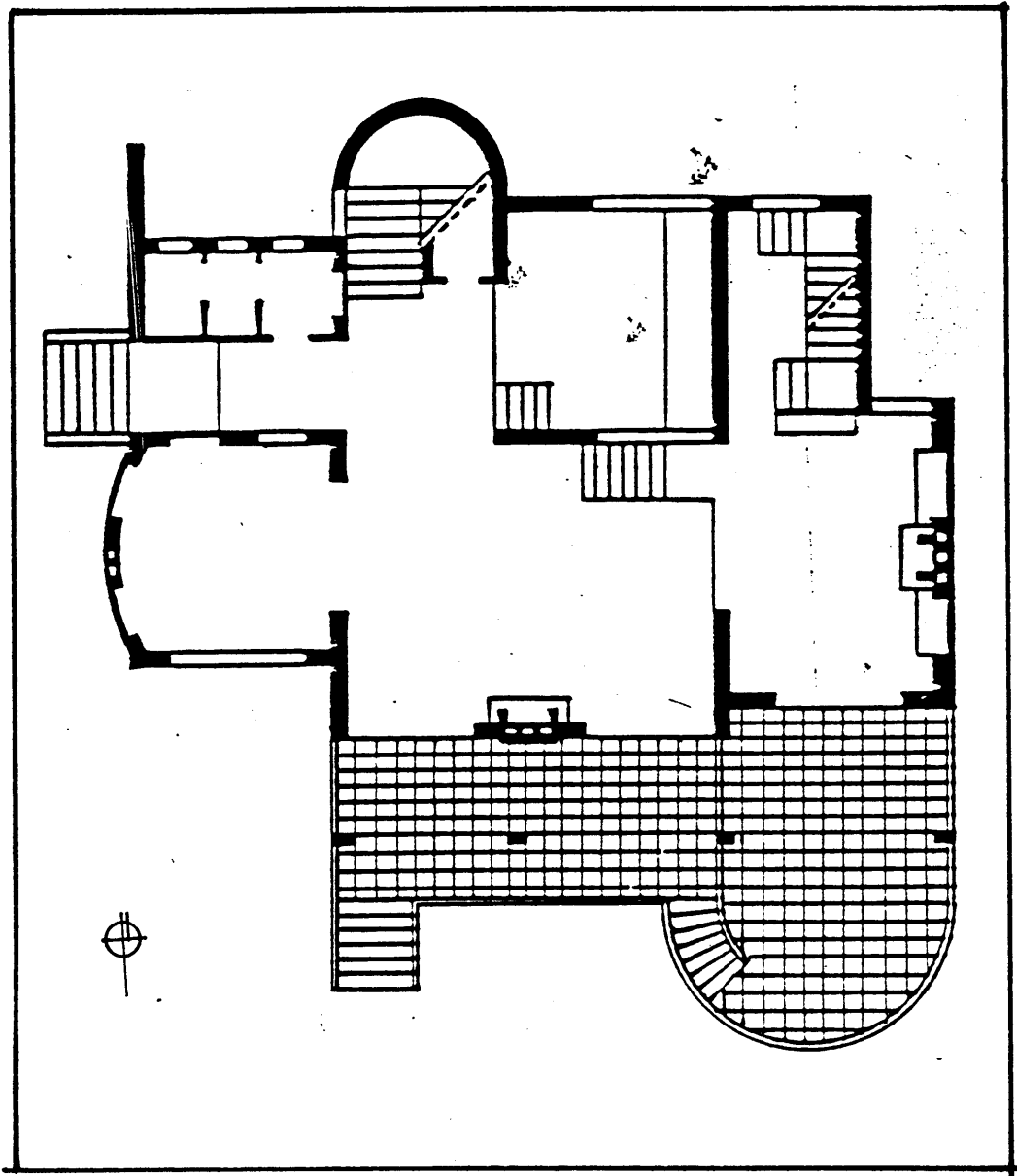


Fig. 2.143 Villa Siassy, plan

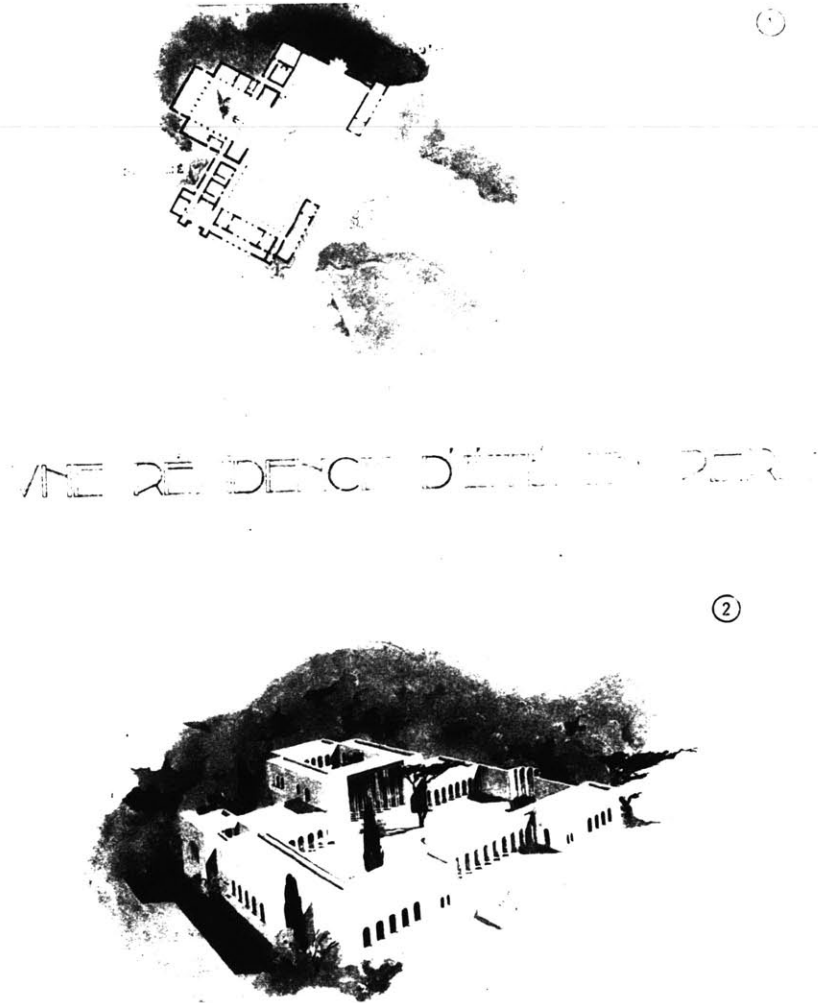


Fig. 2.144 Foroughi's Diploma project at the École des Beaux Arts

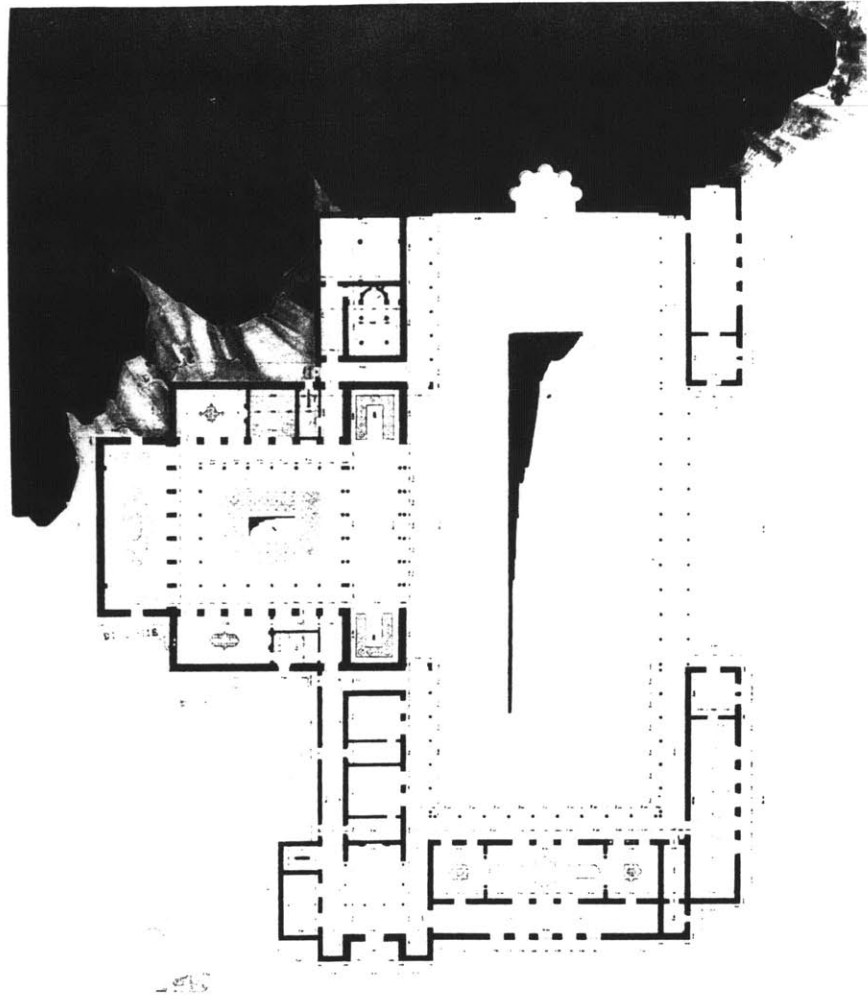
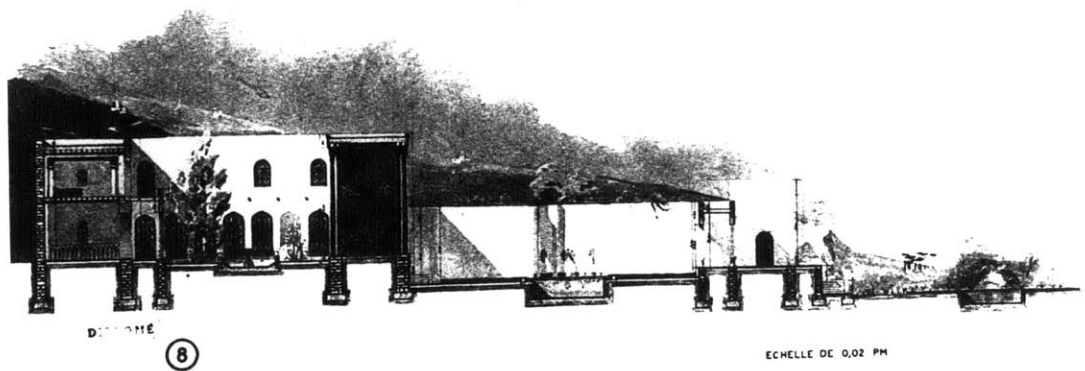
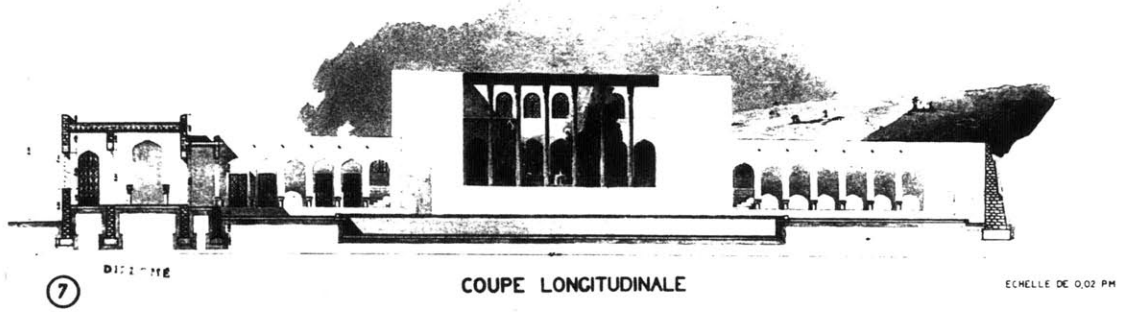
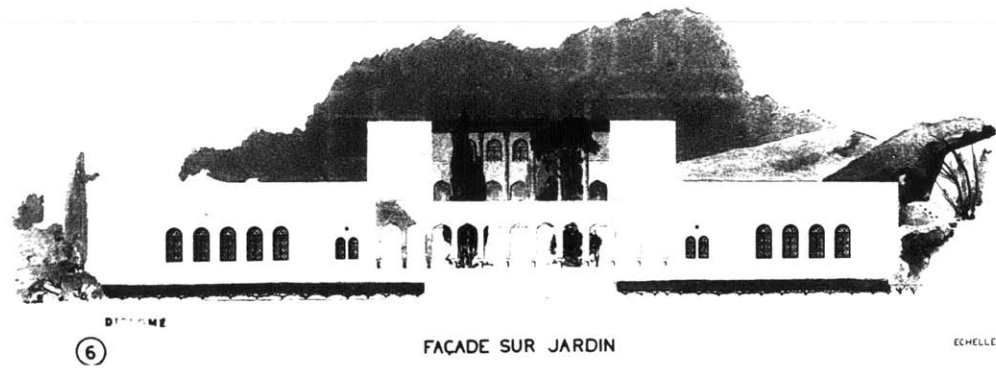
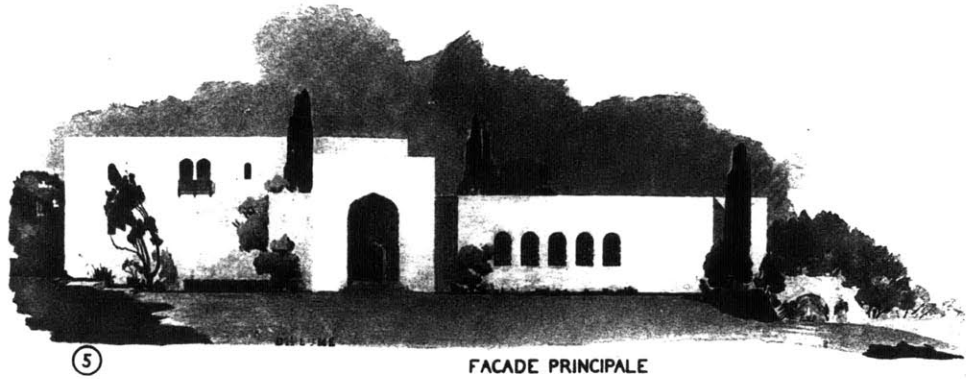


Fig. 2.145 Foroughi's Diploma project at the École des Beaux Arts



Vincent, Freal et Cie. Paris

Fig. 2.146 Diploma project at the Écoles des Beaux Arts

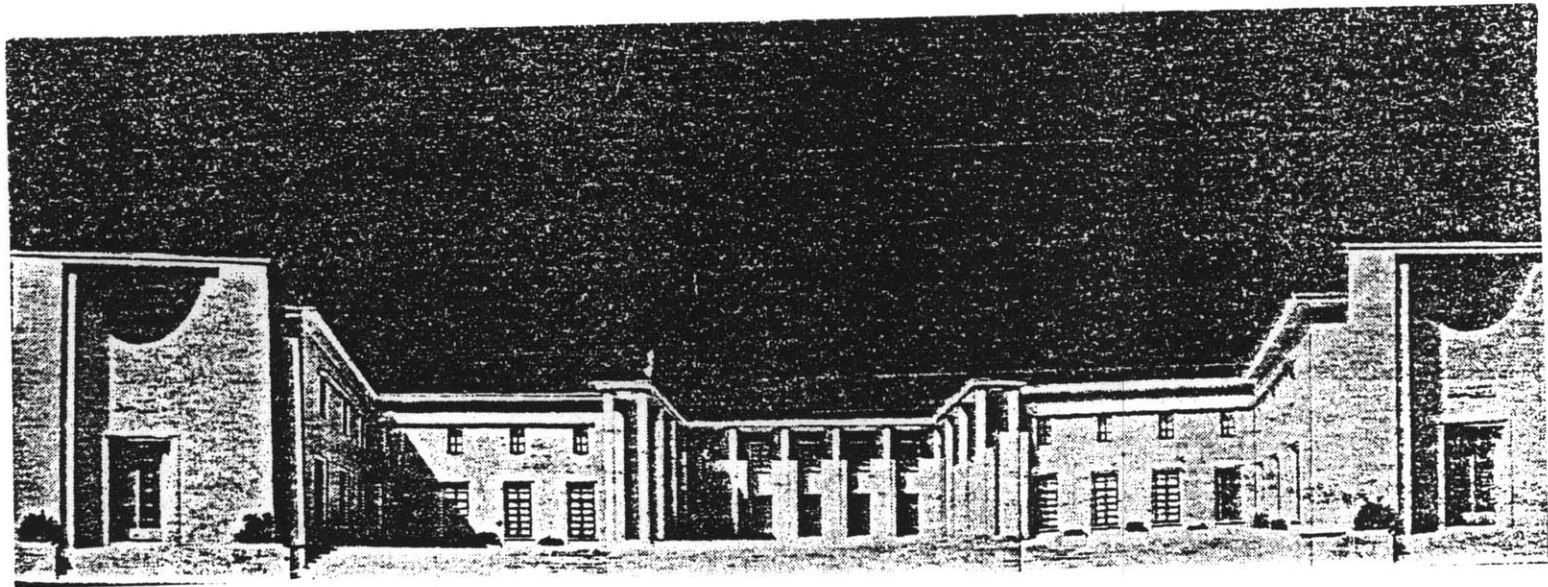


Fig. 2.147 Tehran University, School of Law by Mohsen Foroughi

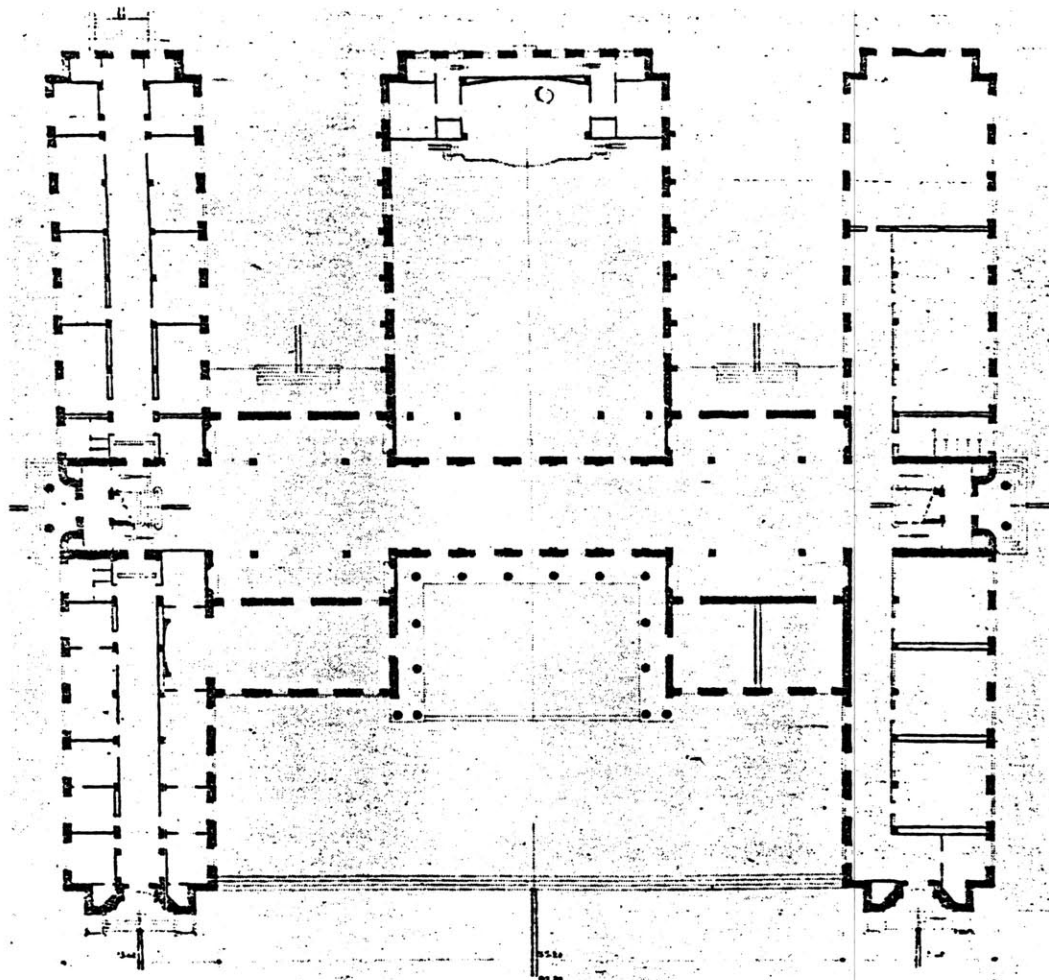


Fig. 2.148 School of Law, plan



Fig. 2.149 Bank-e Melli, Hospital
by Foroughi

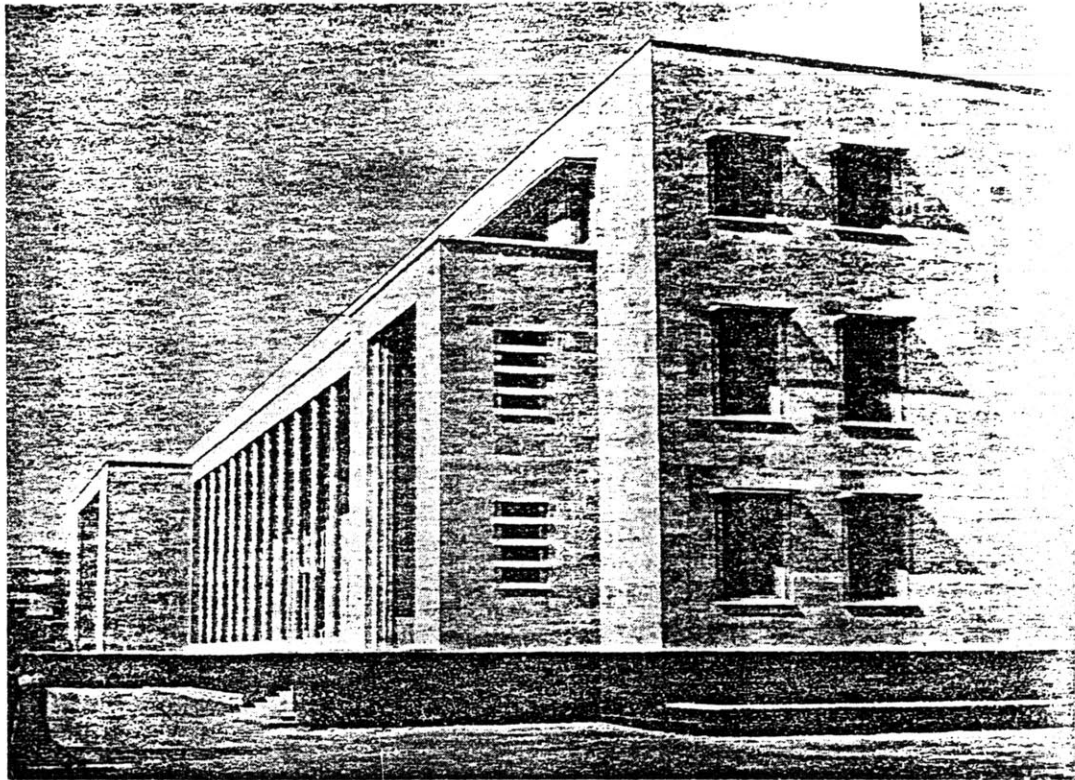


Fig. 2.150 Bank-e Melli, Bazaar Branch in Tehran

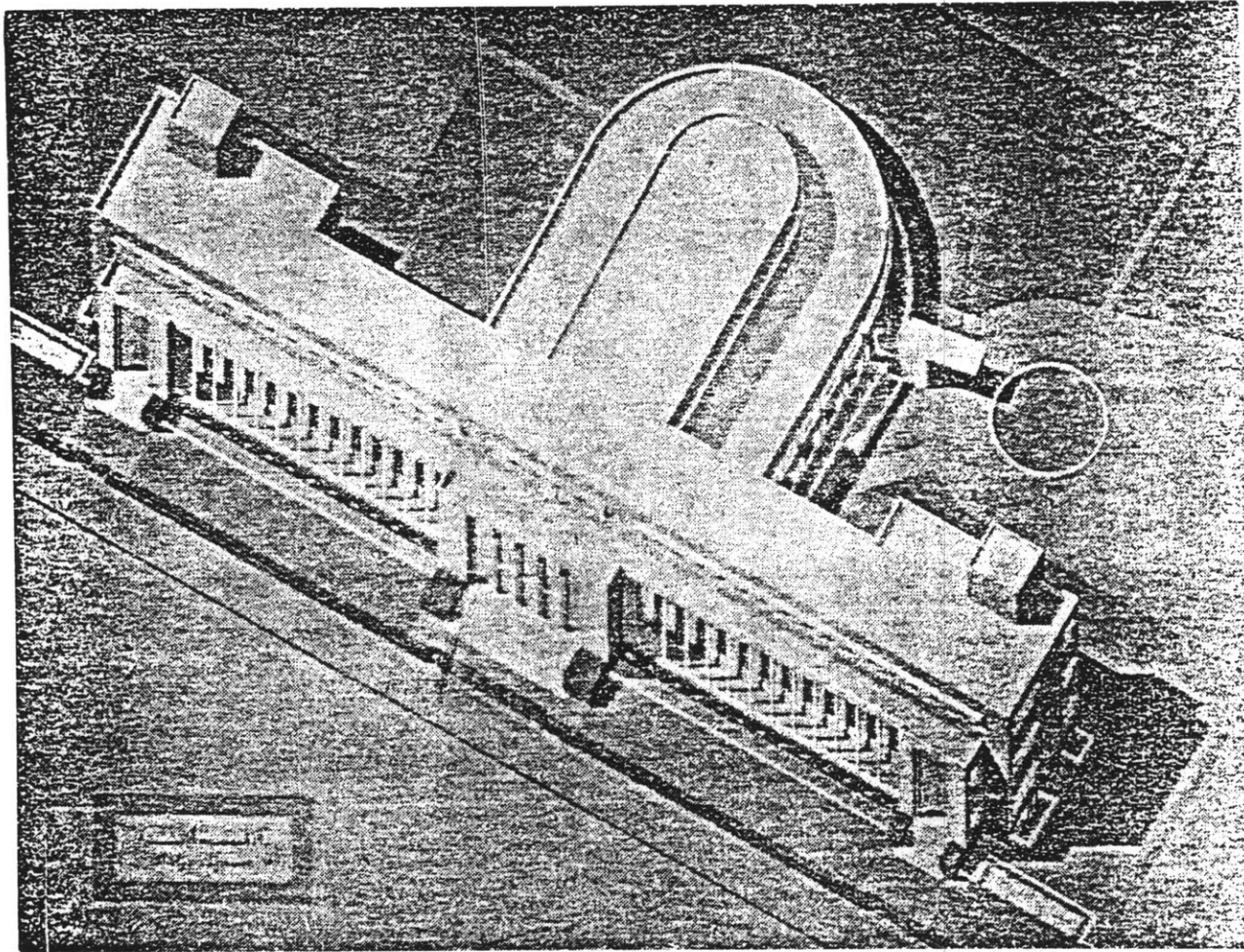


Fig. 2.151 Bank Melli Bazaar, model

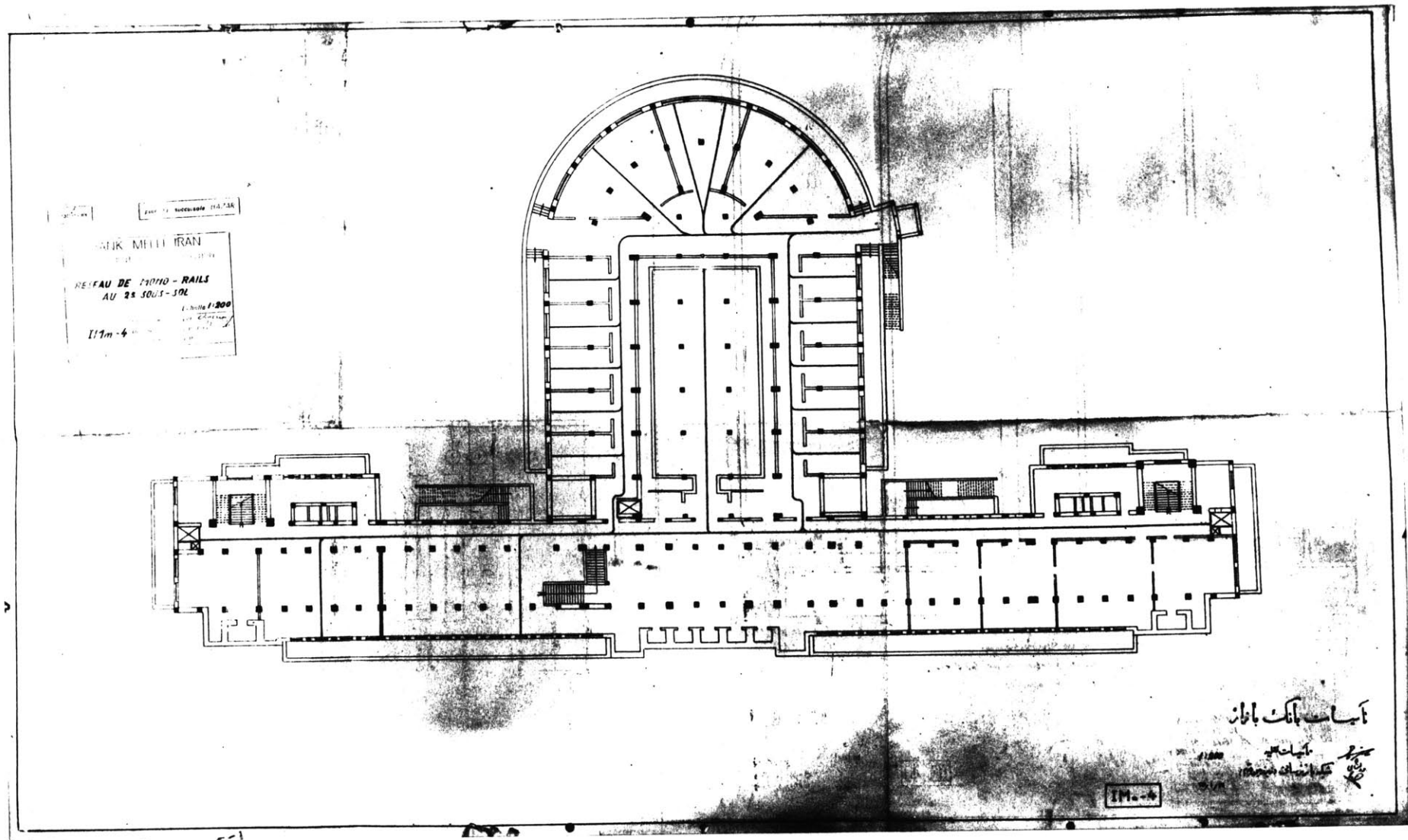


Fig. 2.152 Floor plan of the Bank Melli Bazaar

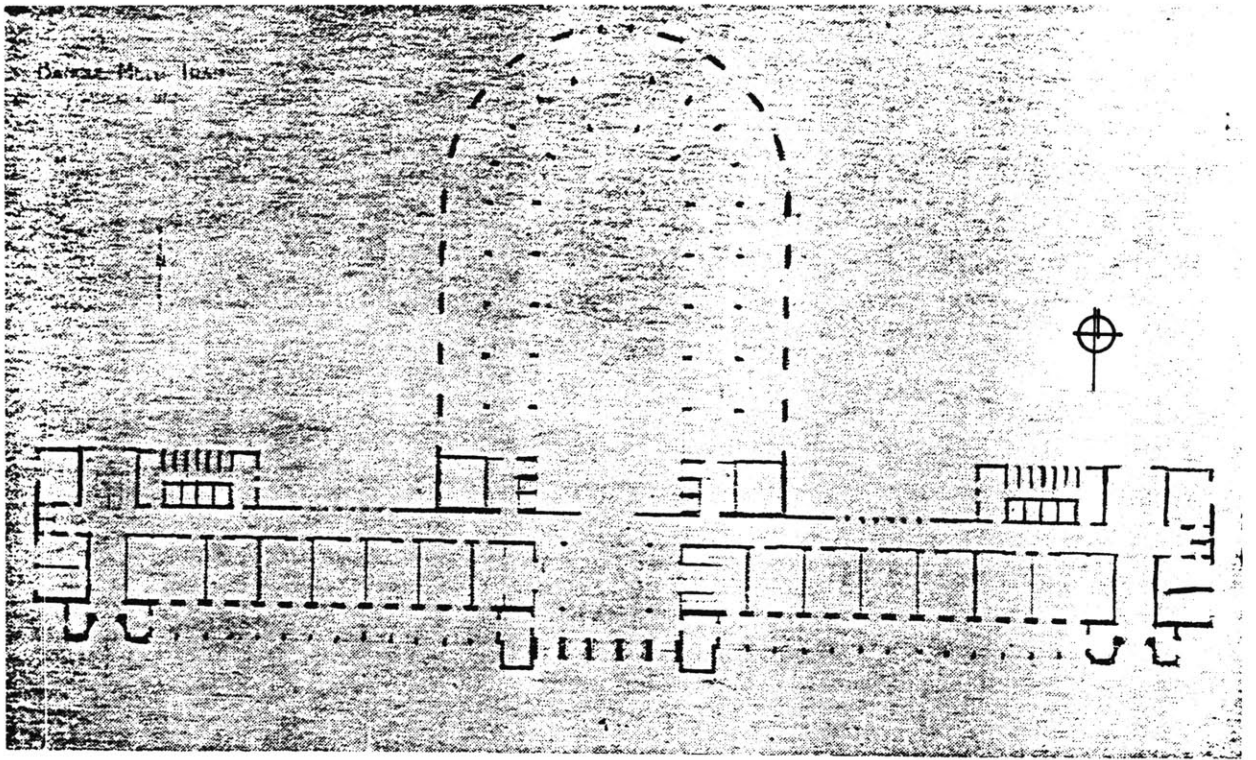


Fig. 2.153 Bank-e Melli-ye Bazaar

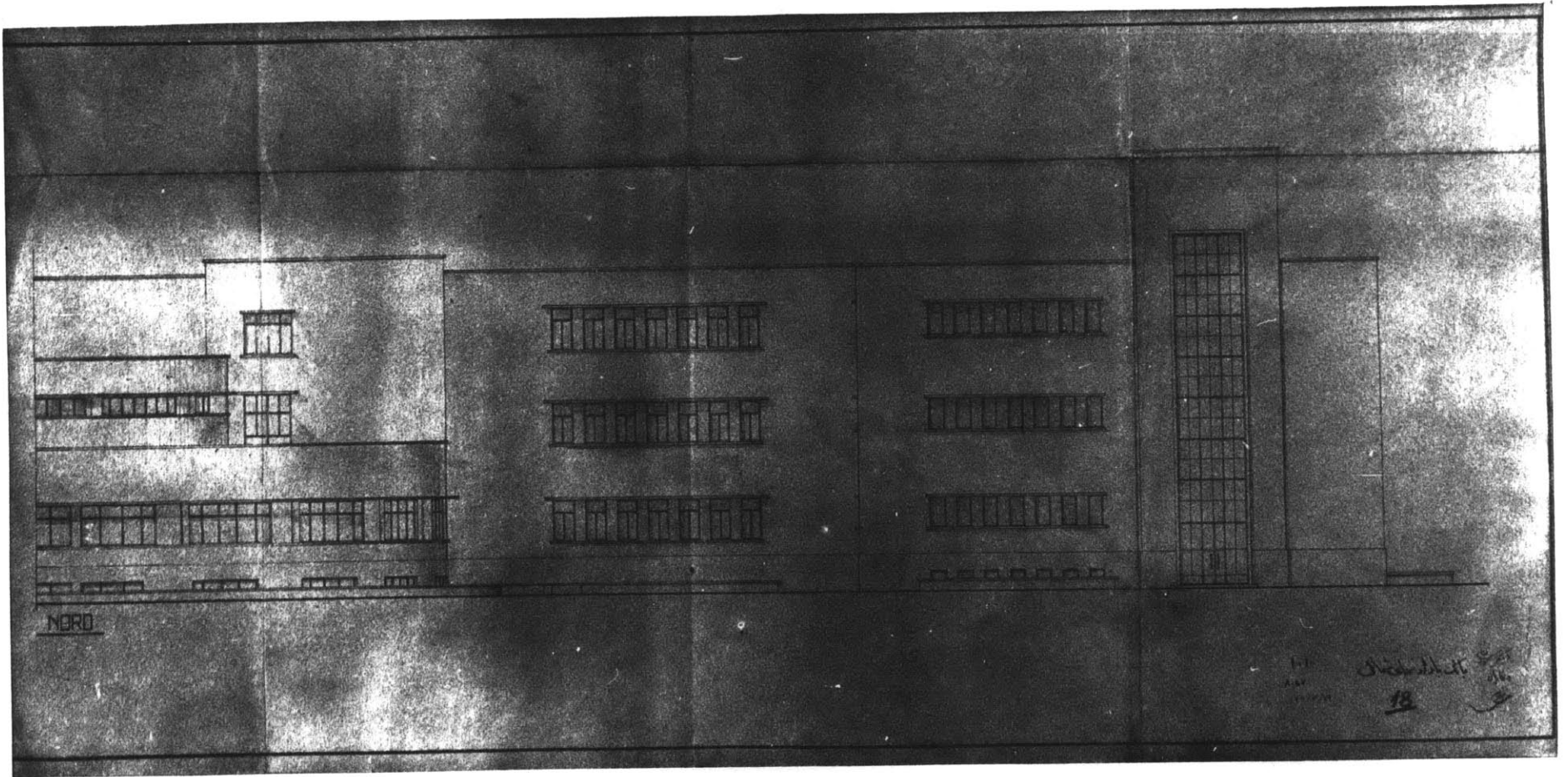


Fig. 2.154 Bank Melli Bazaar

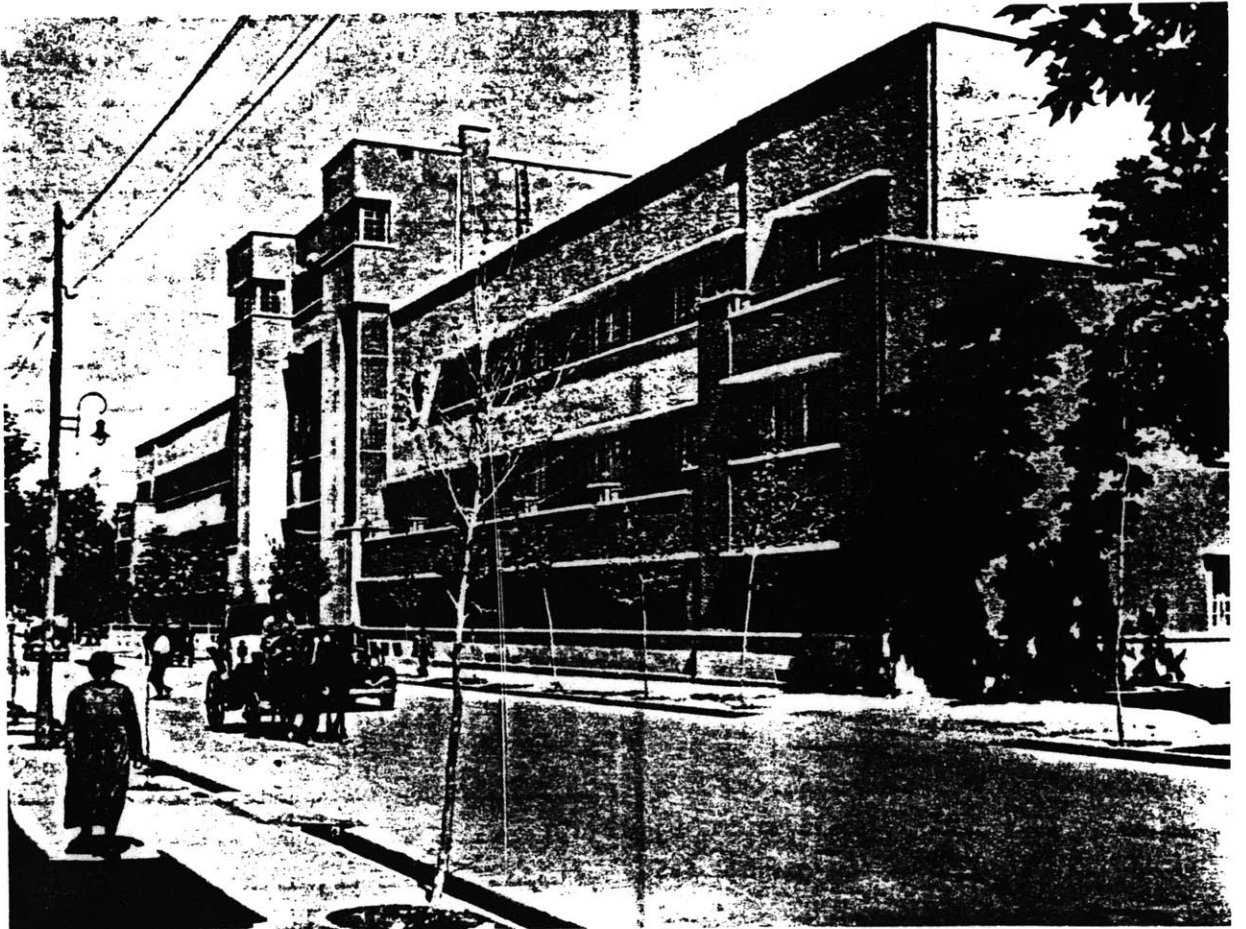


Fig. 2.155 School for Orphans on Sevom Esfand Street by Vartan

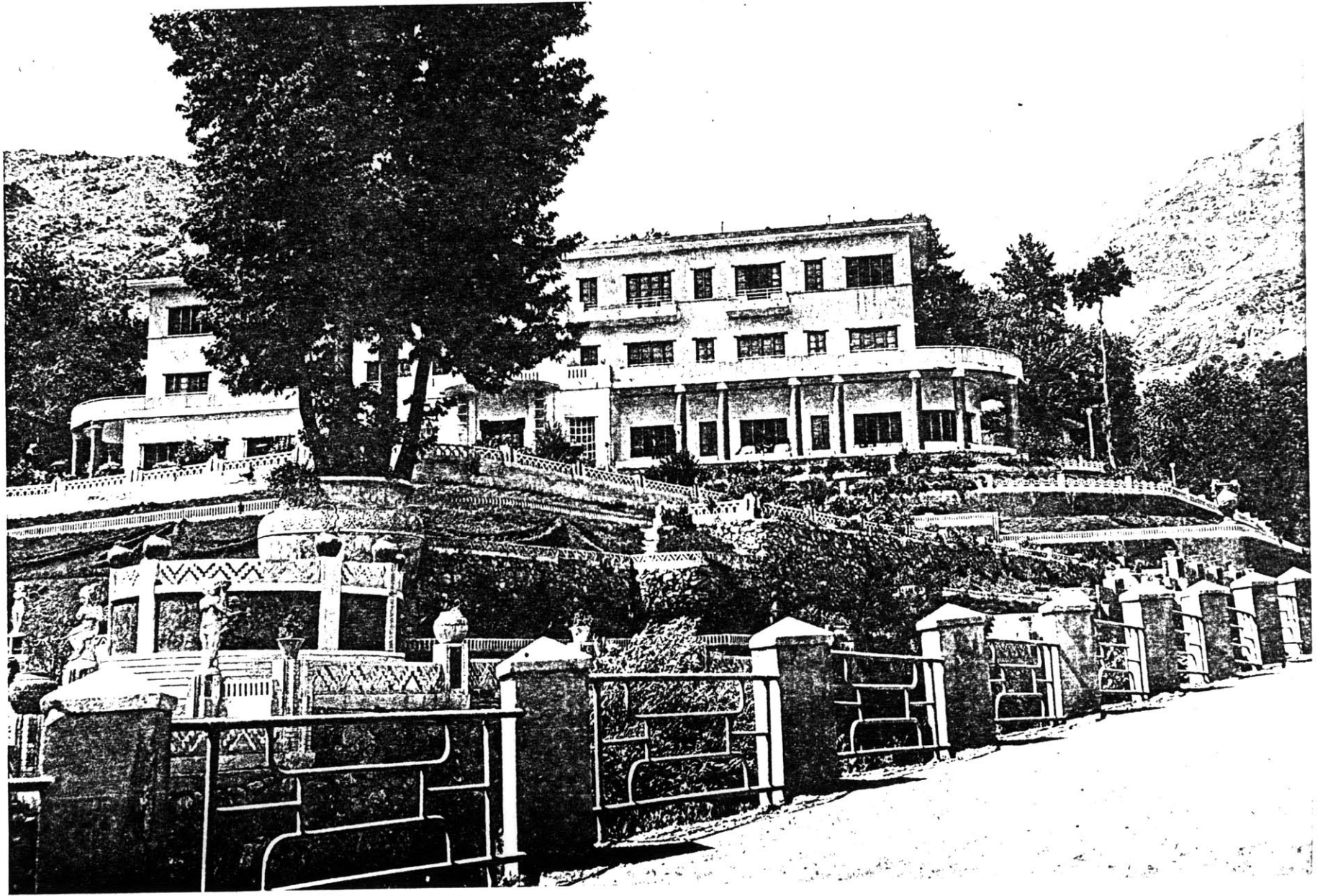


Fig. 2.156 Hotel at Darband

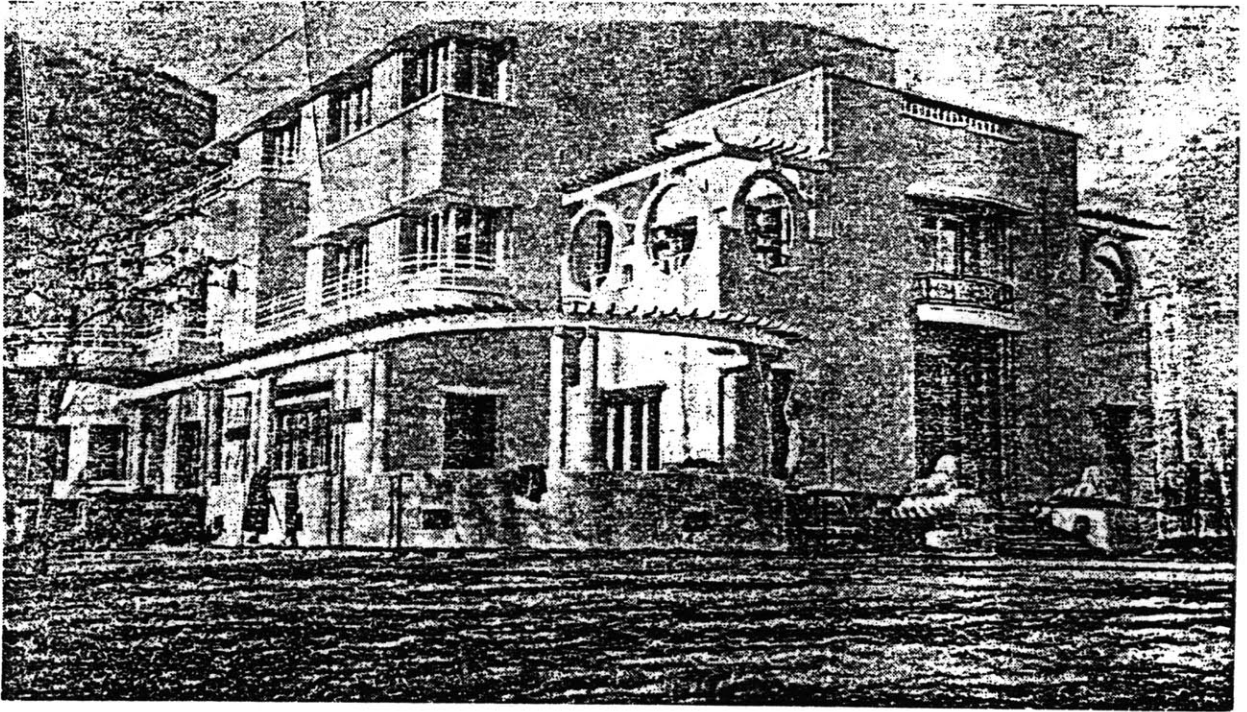


Fig. 2.157 Palace for Reza Shah at Saadabad

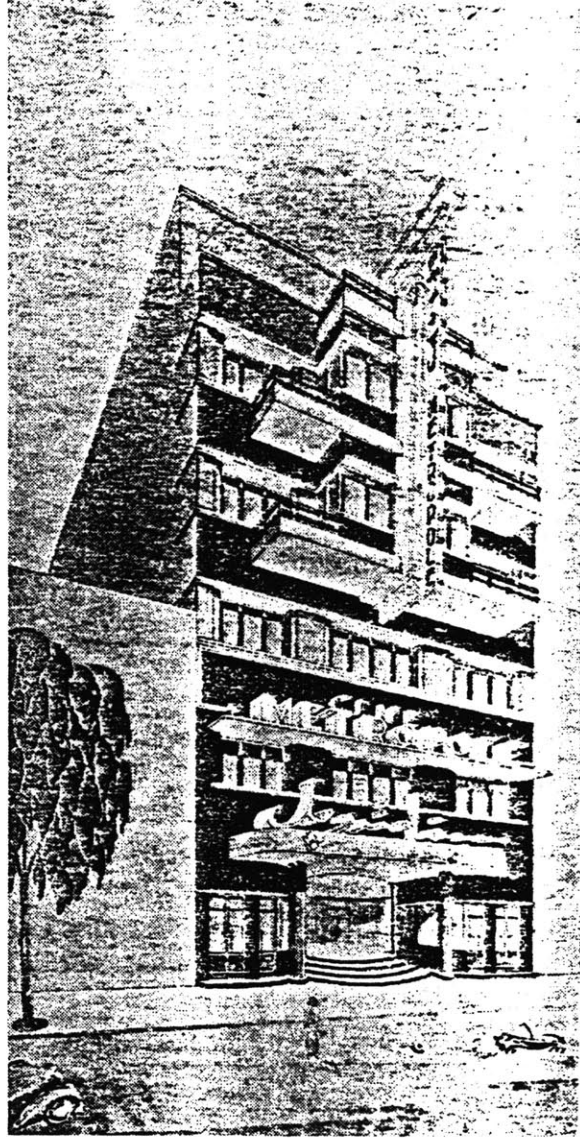


Fig. 2.158 Cinema Metropol on Lalehzar Street



Fig. 2.159 Cinema Diana on Shahreza Avenue

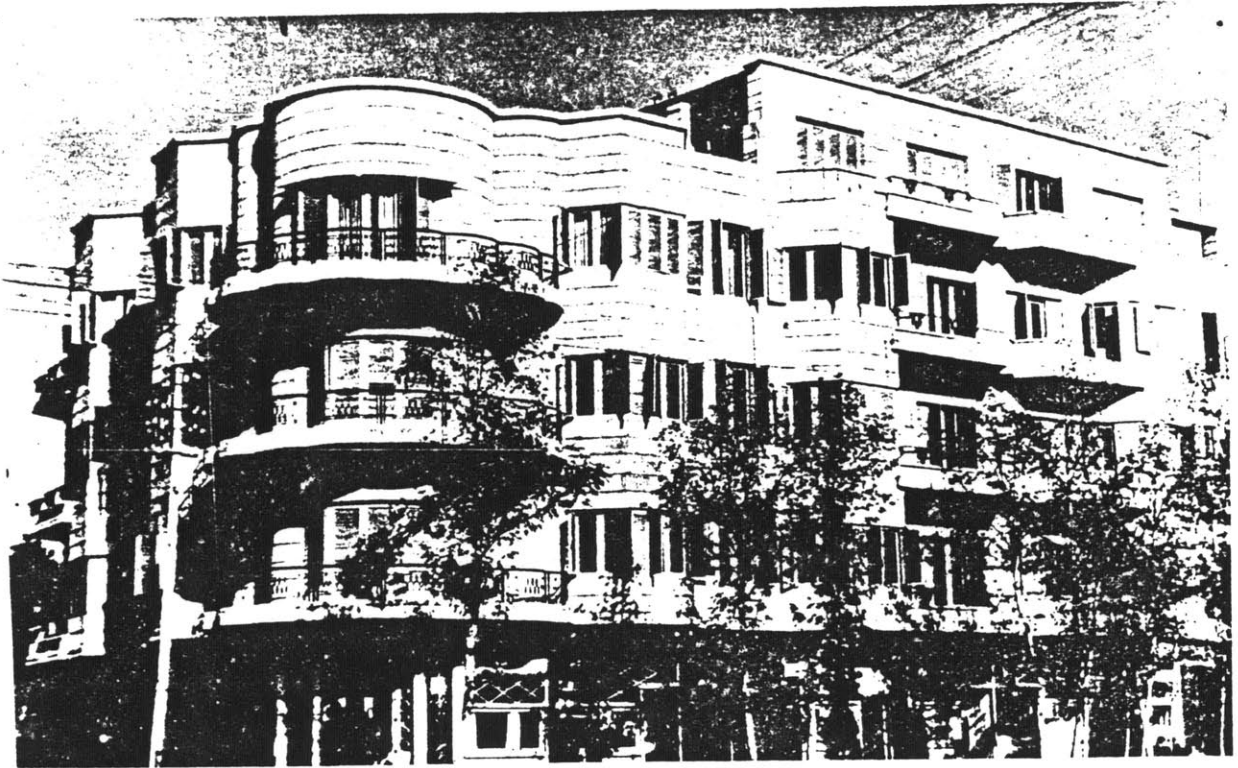


Fig. 2.160 Mixed use commercial and residential building on Shahreza



Fig. 2.161 Mixed use building on Saadi Avenue

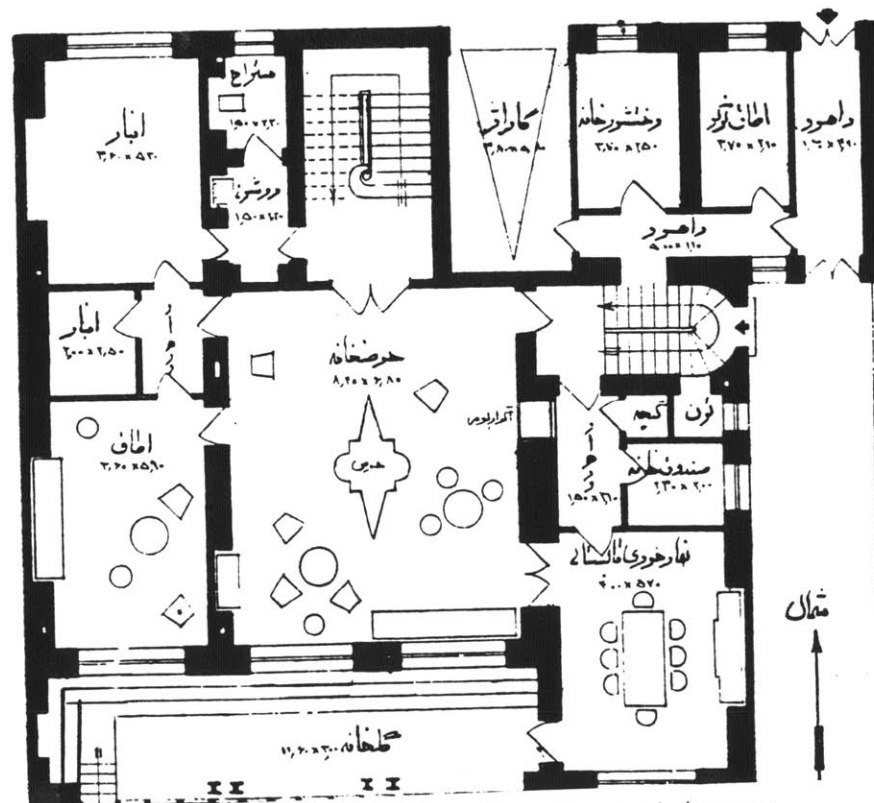
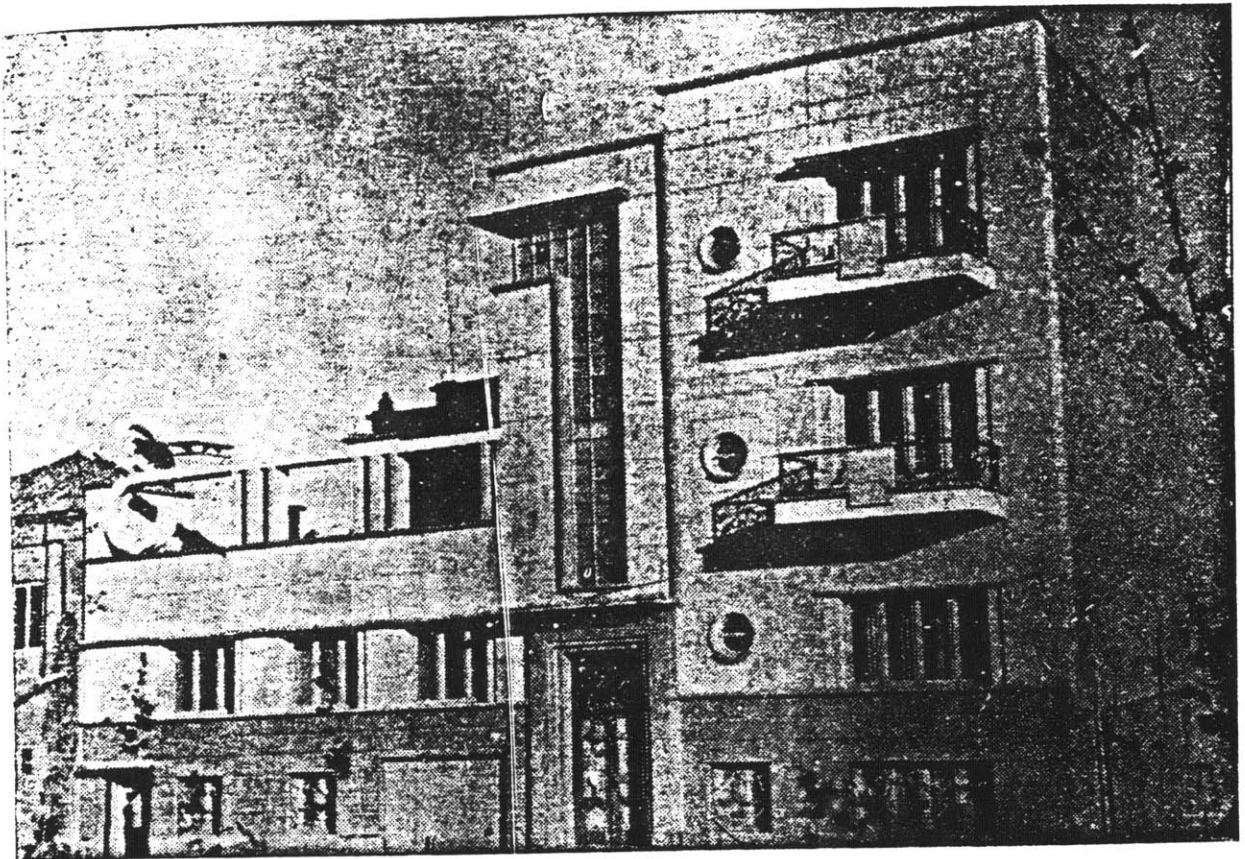


Fig. 2.162 House on Takhte Jamshid Avenue

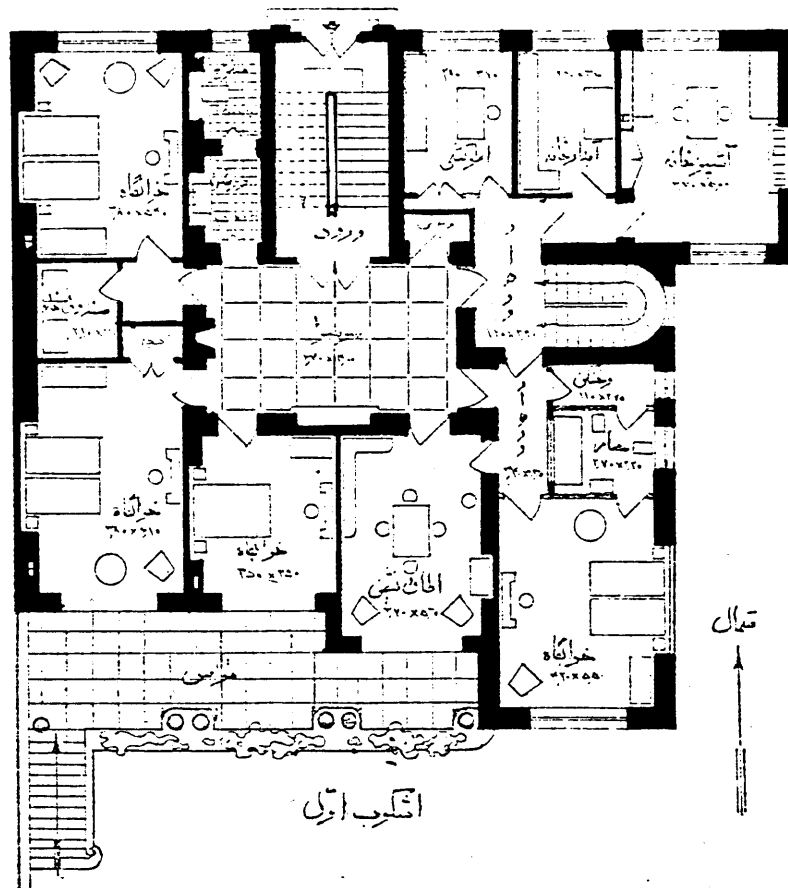
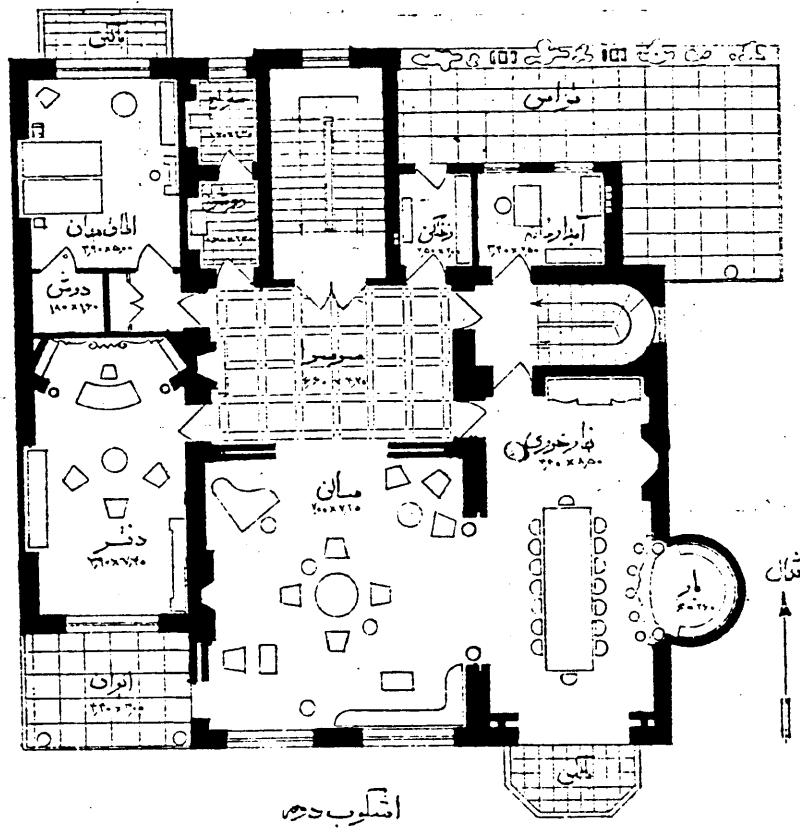


Fig. 2.163 House on Takhte Jamshid Avenue

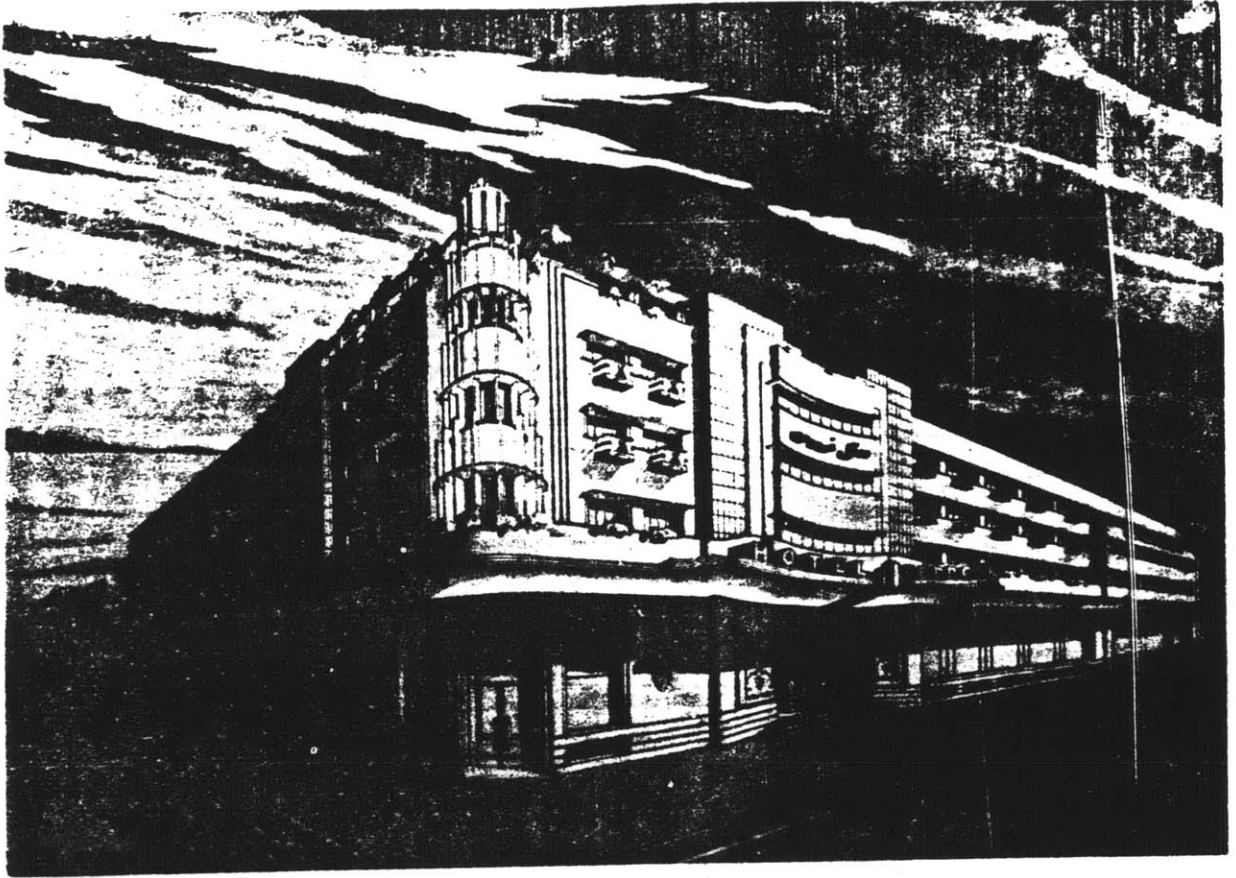


Fig. 2.164 Hotel Ferdowsi on Ferdowsi Avenue

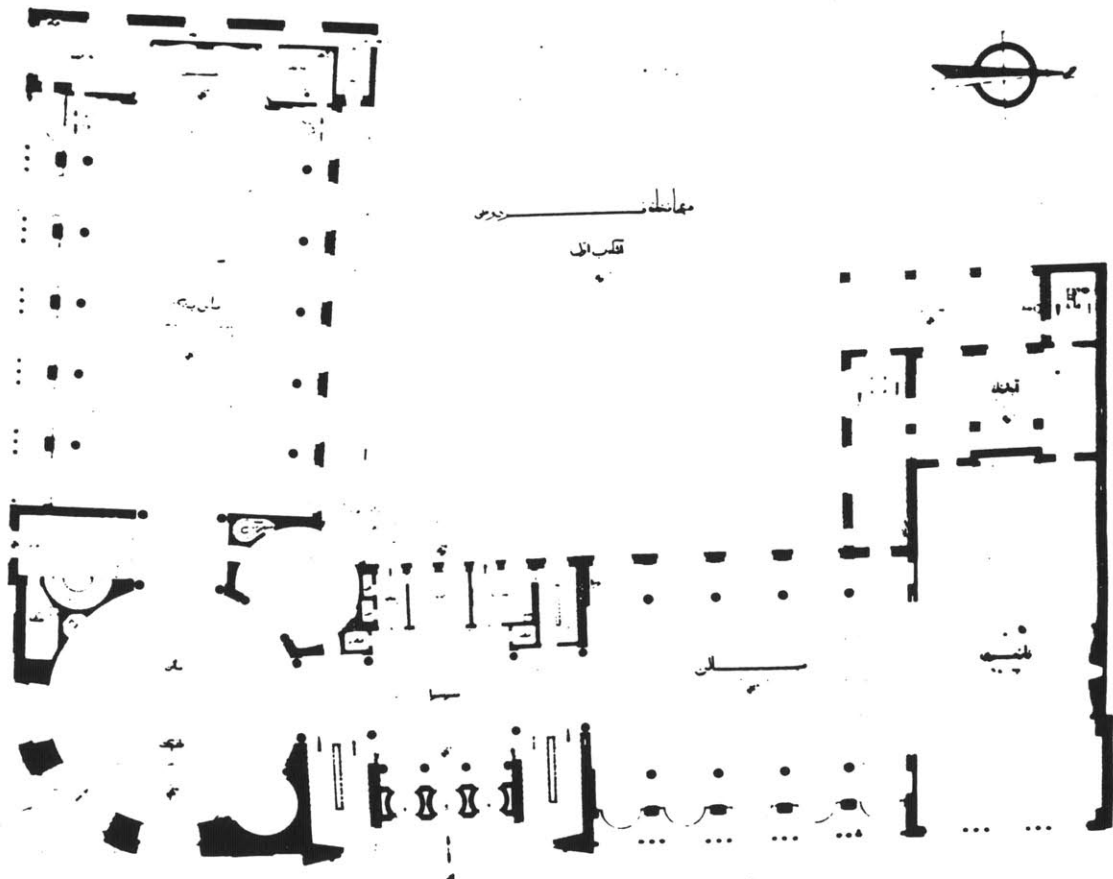


Fig. 2.165 Hotel Ferdowsi, plan

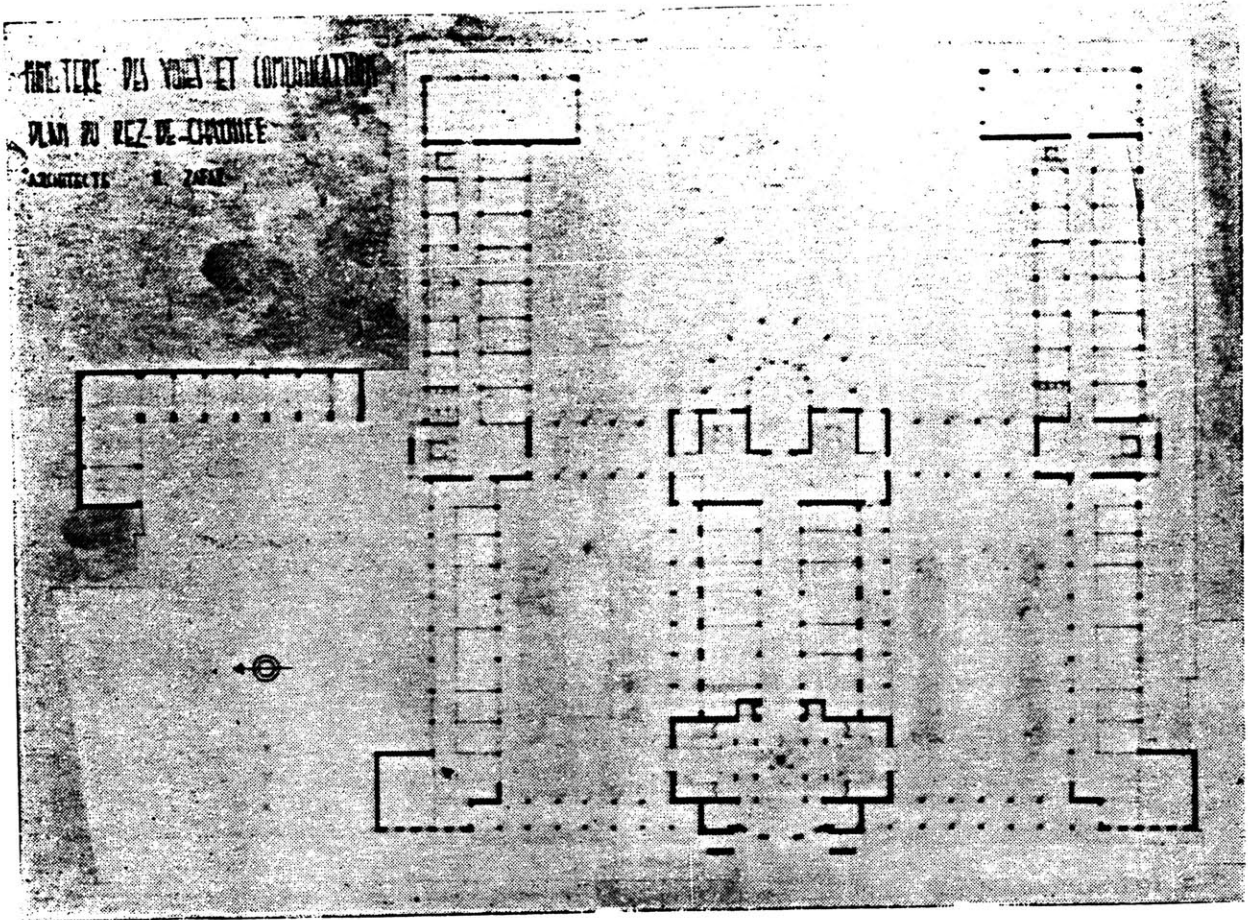


Fig. 2.166 Ministry of Transportation

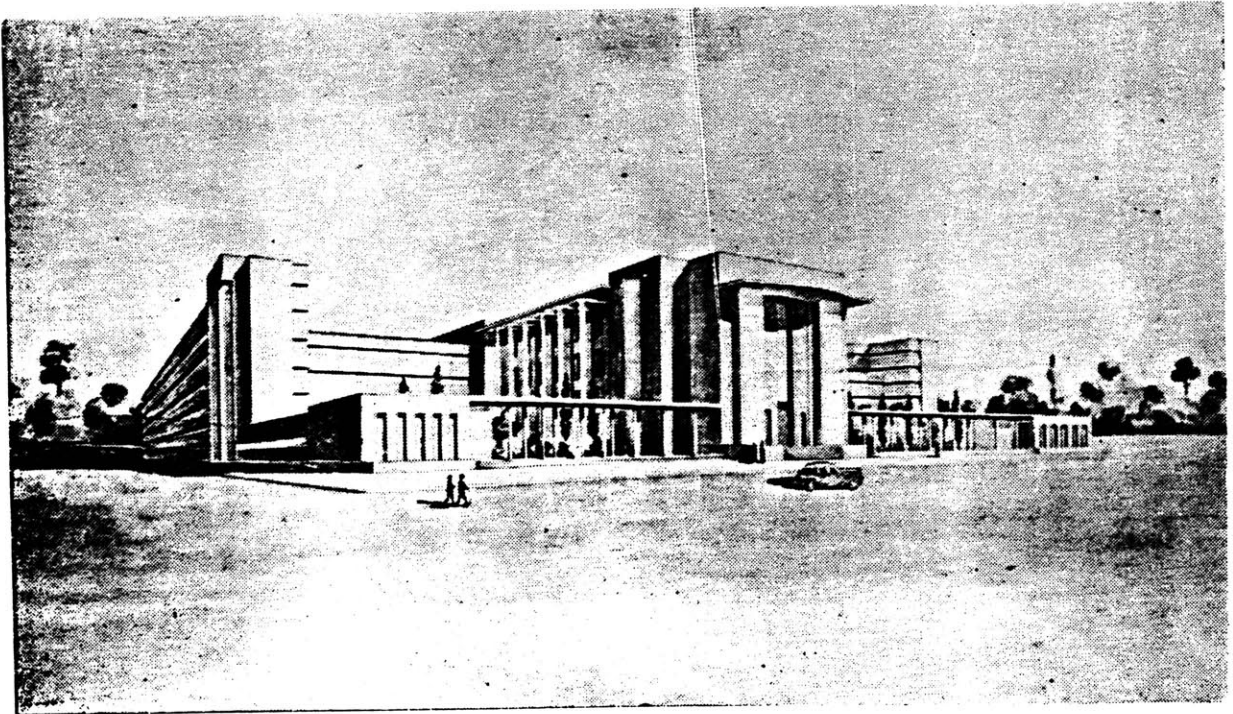


Fig. 2.167 Ministry of Transportation

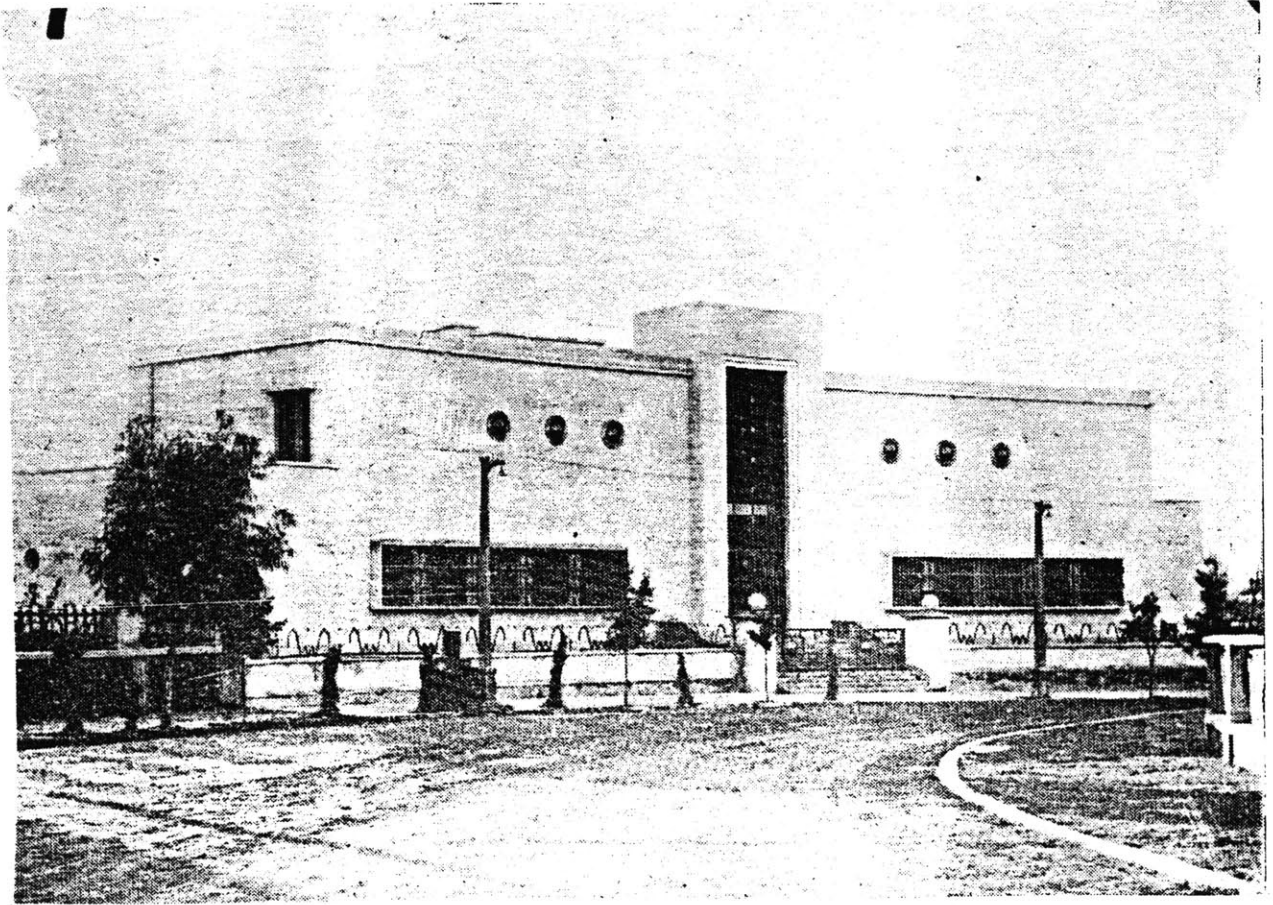


Fig. 2.168 Bank Melli in Gorgan

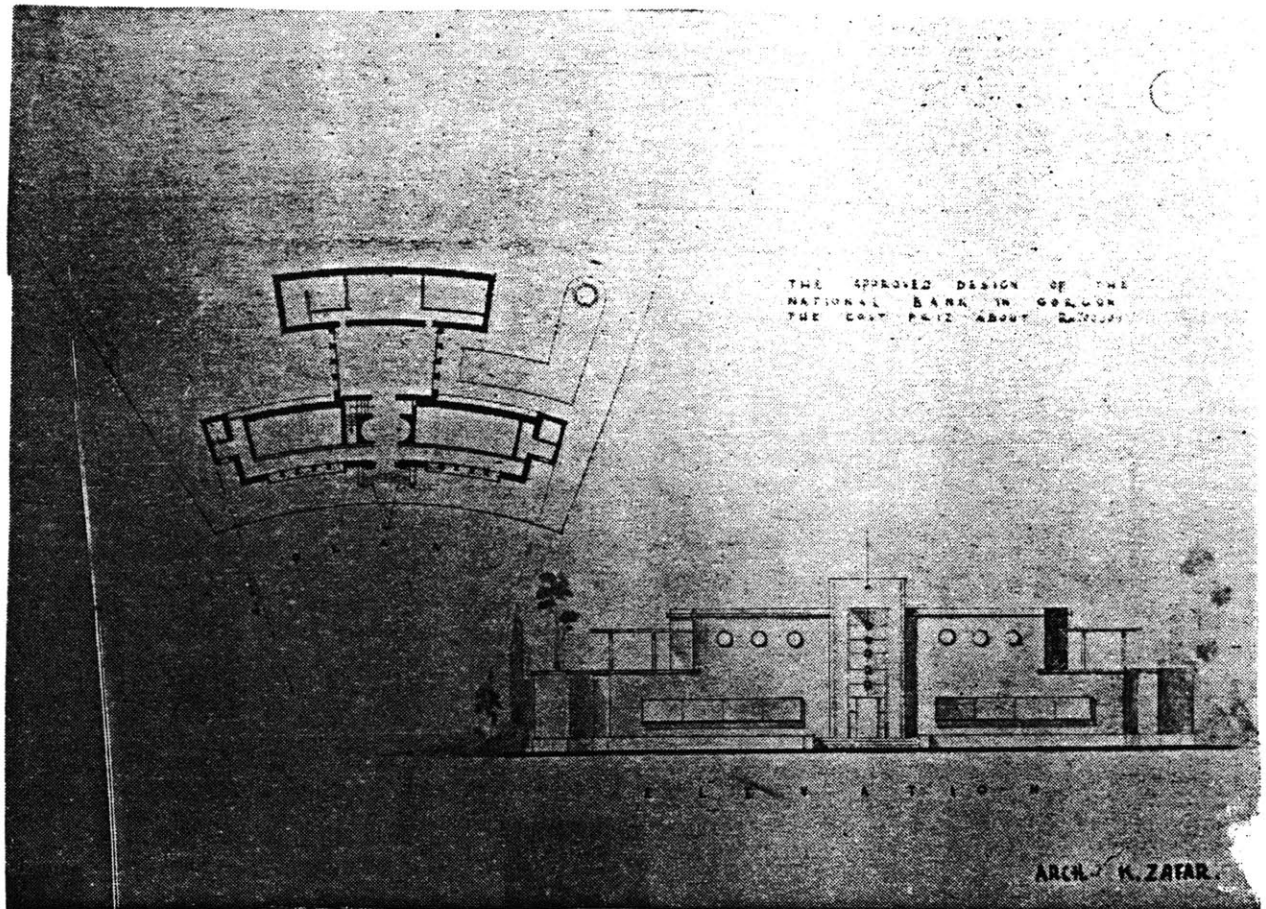


Fig. 2.169 Bank Melli in Gorgan

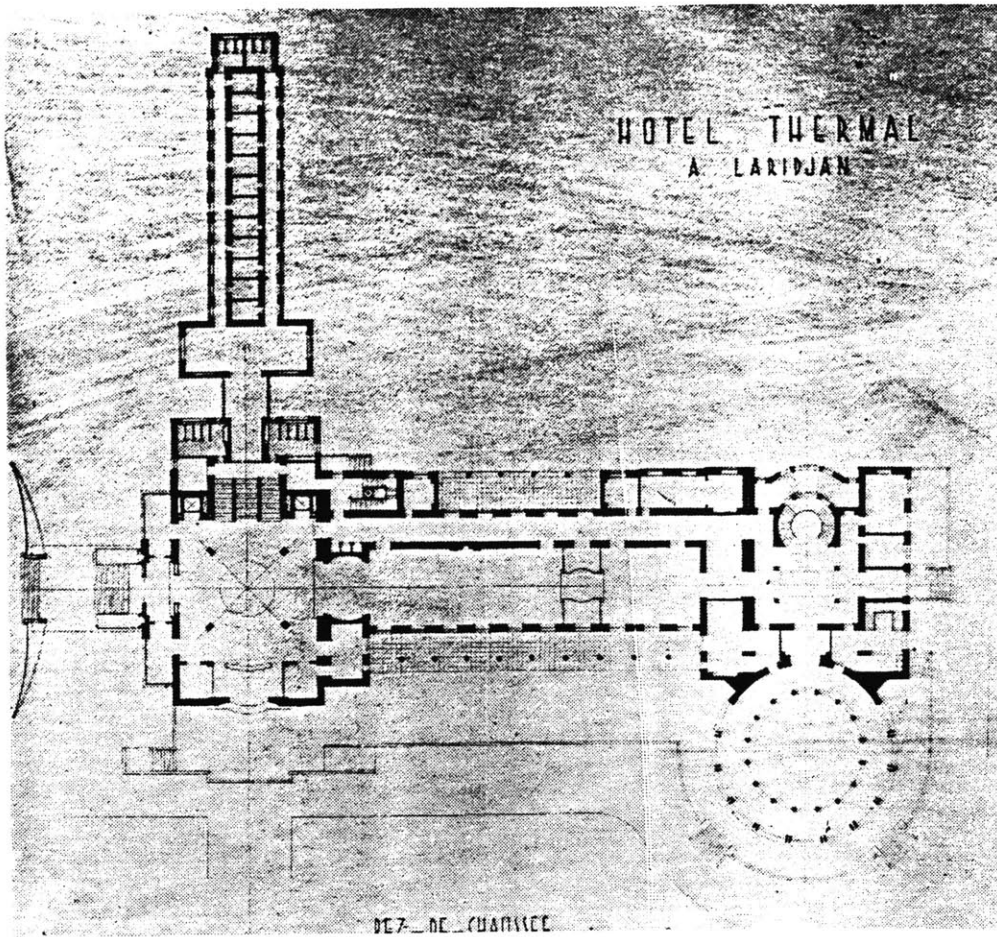


Fig. 2.170 Hotel Thermal in Laridjan

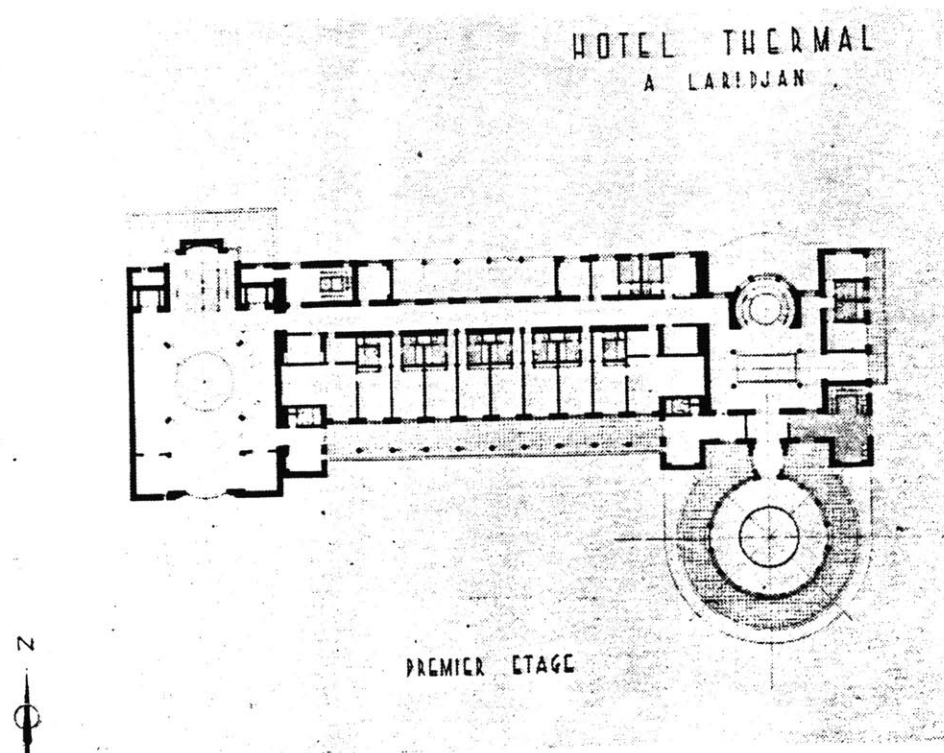


Fig. 2.171 Hotel Thermal

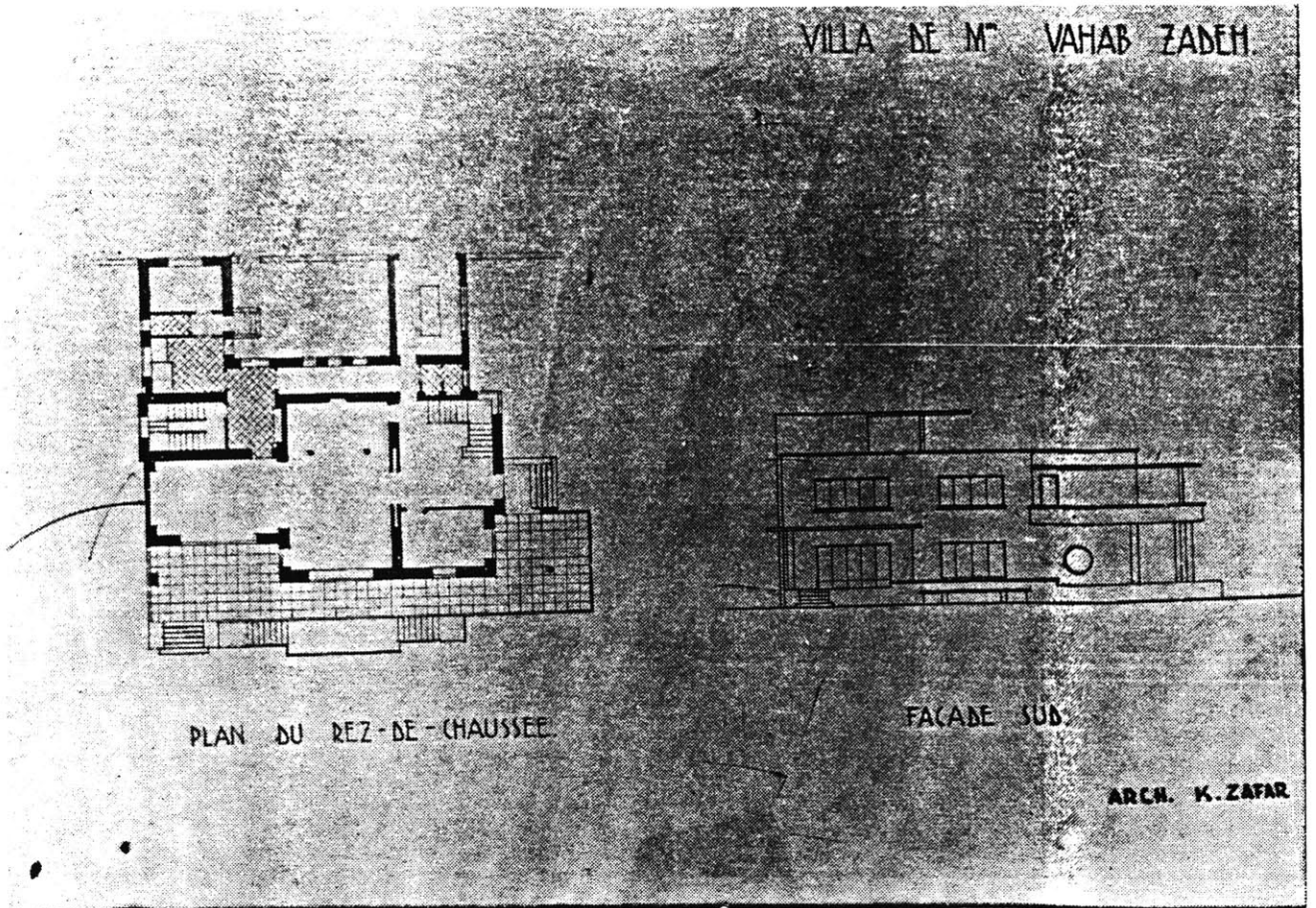


Fig. 2.172 Villa at Fisherabad, Tehran

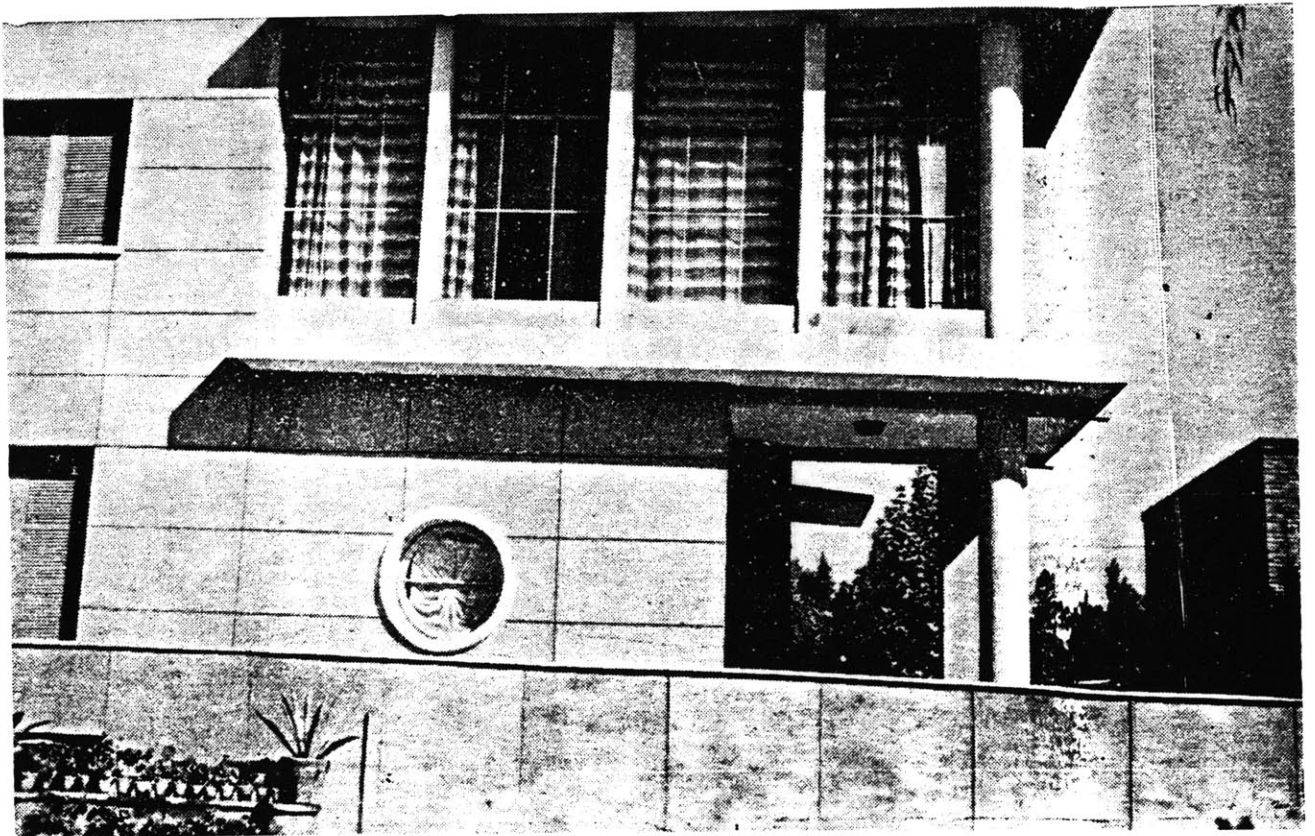


Fig. 2.173 Villa at Fisherabad, Tehran

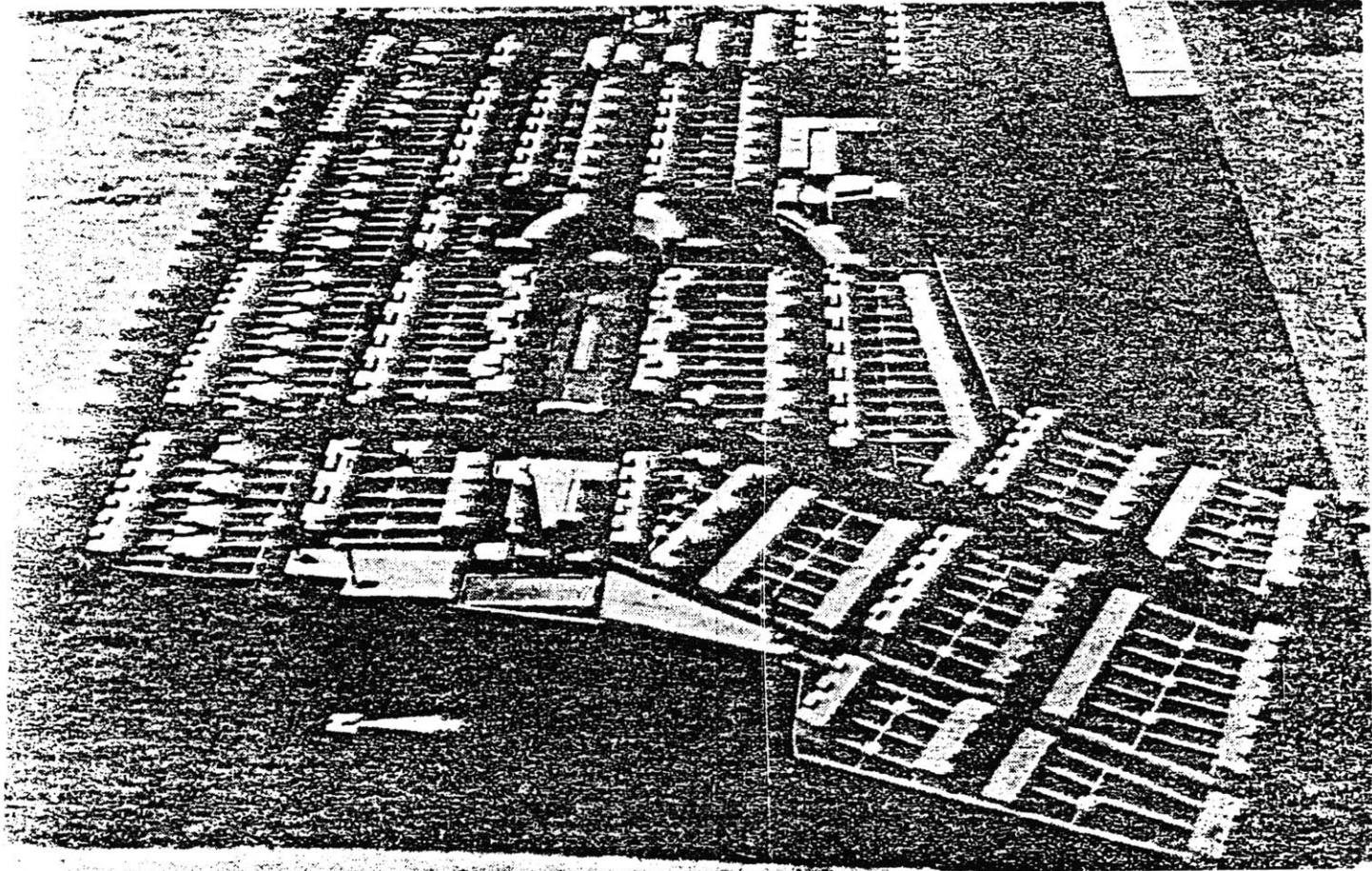


Fig. 2.174 Chaharsad Dastgah in Tehran

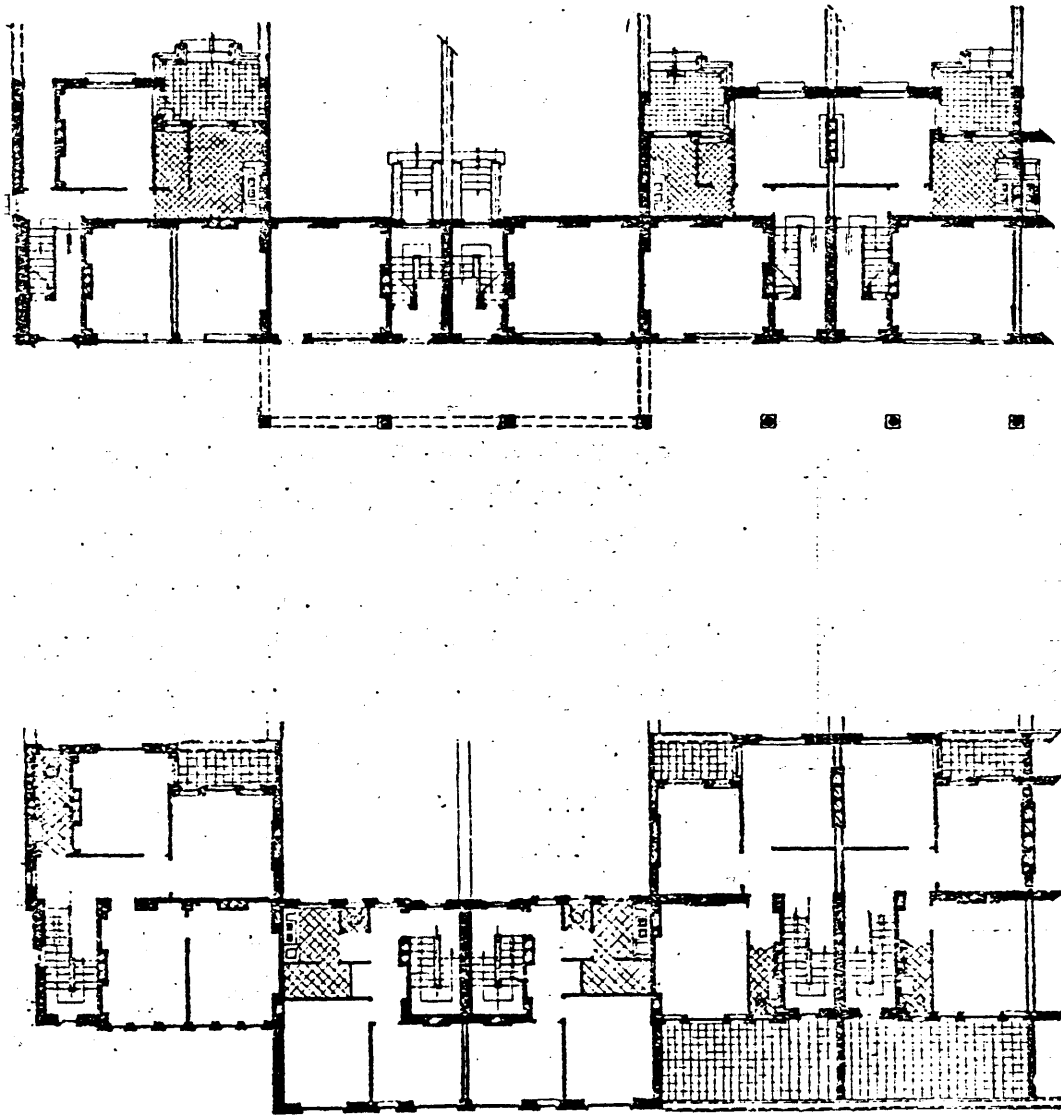


Fig. 2.175 Prototypical plans of housing units

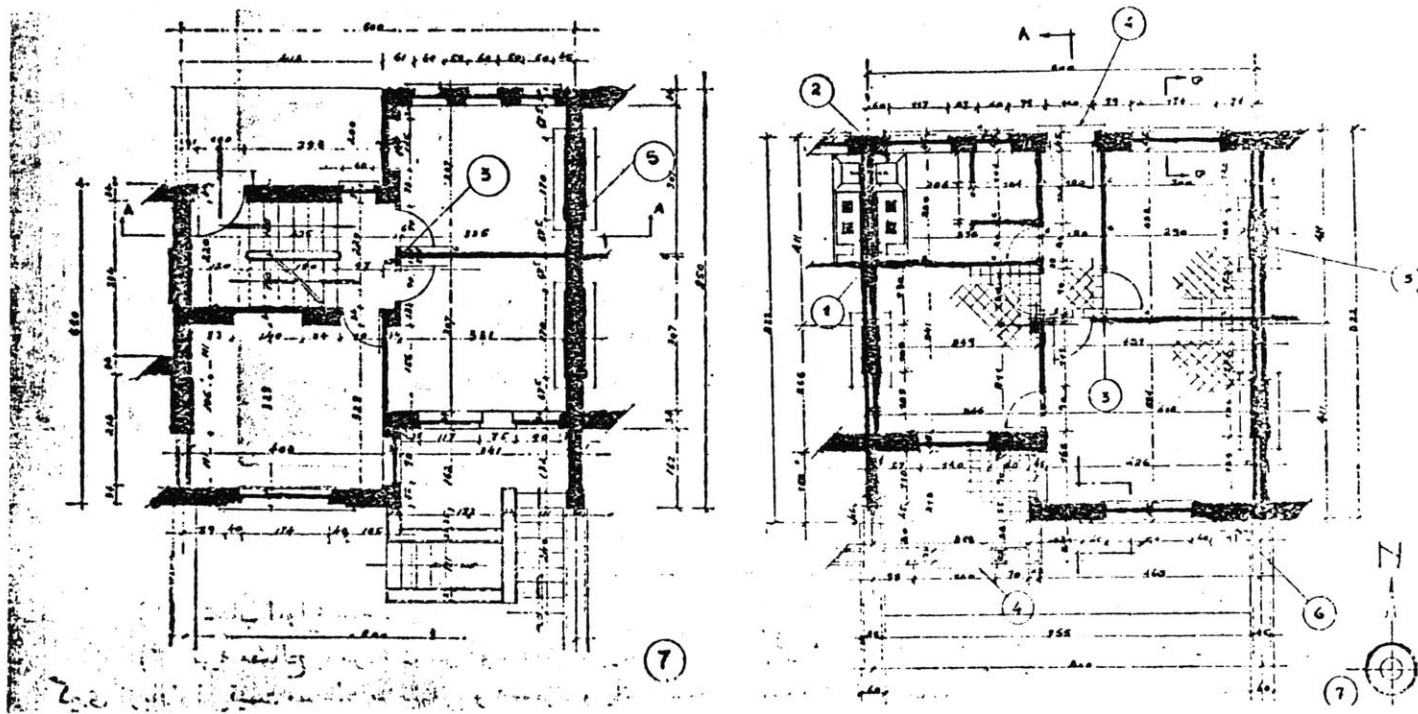


Fig. 2.176 Prototypical plans of housing units

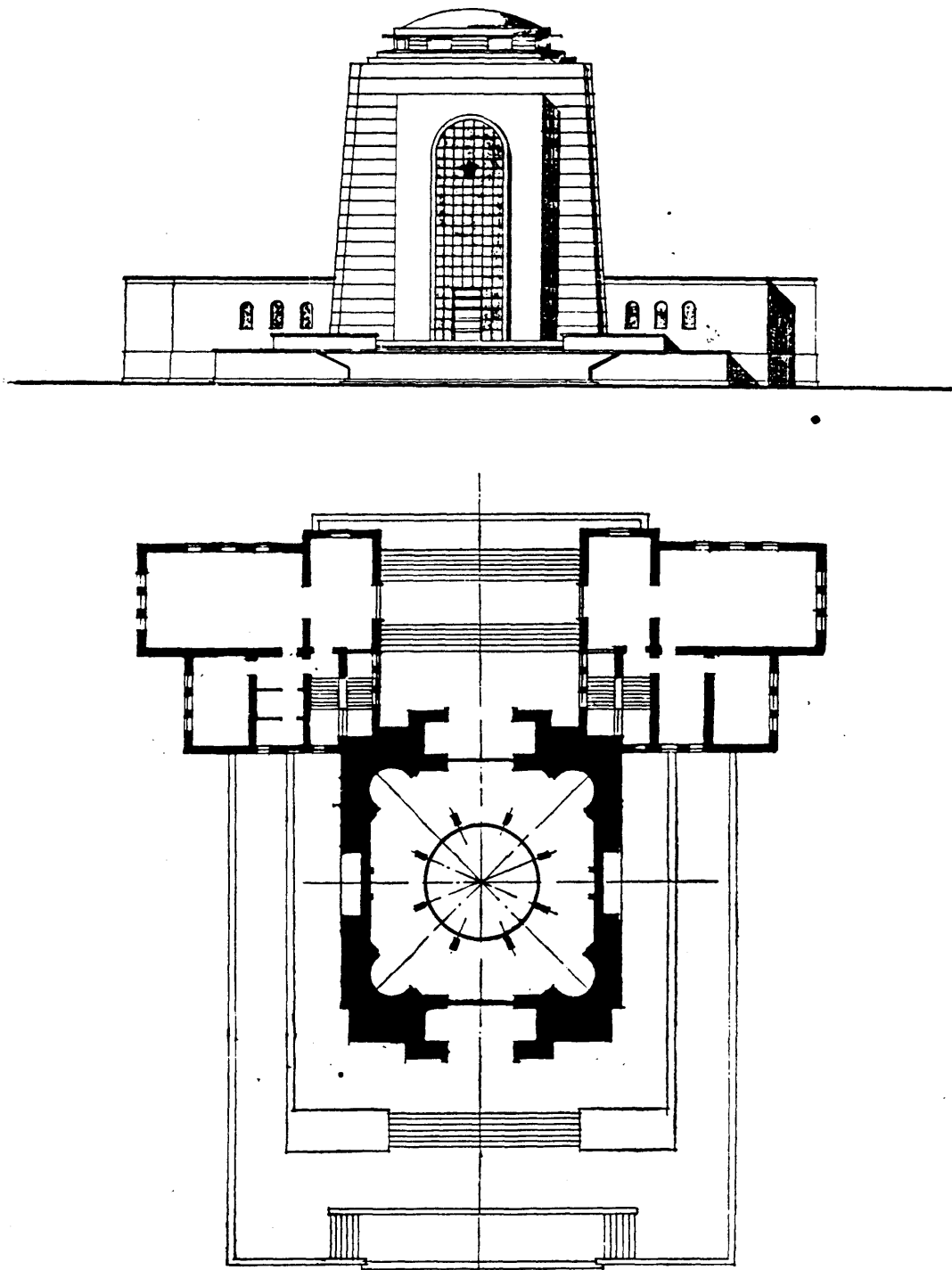


Fig. 2.177-Memorial to Reza Shah, project by Sadegh, Foroughi, and Zafar

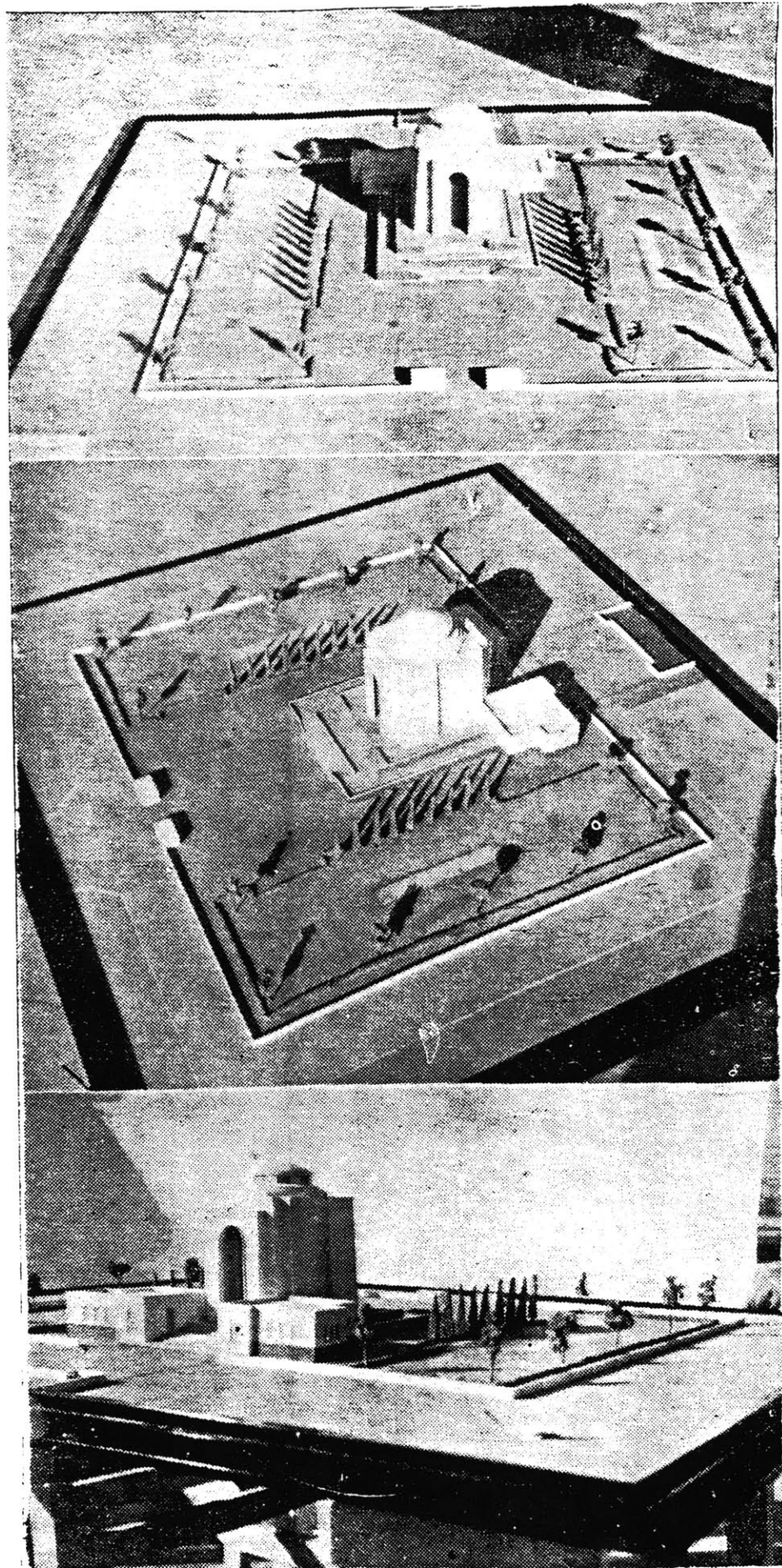


Fig. 2.178 Memorial to Reza Shah, model

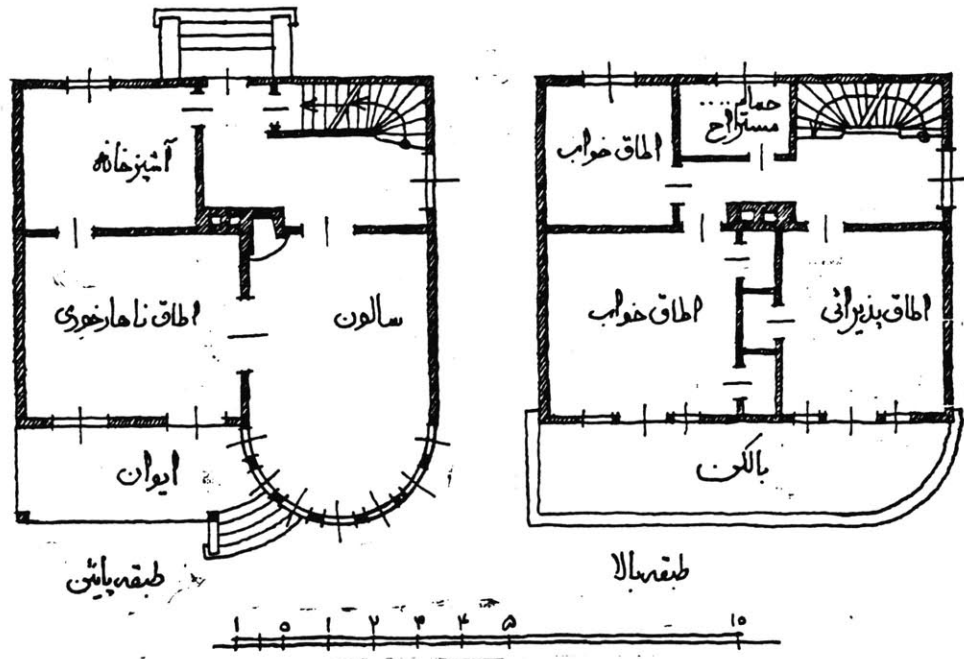
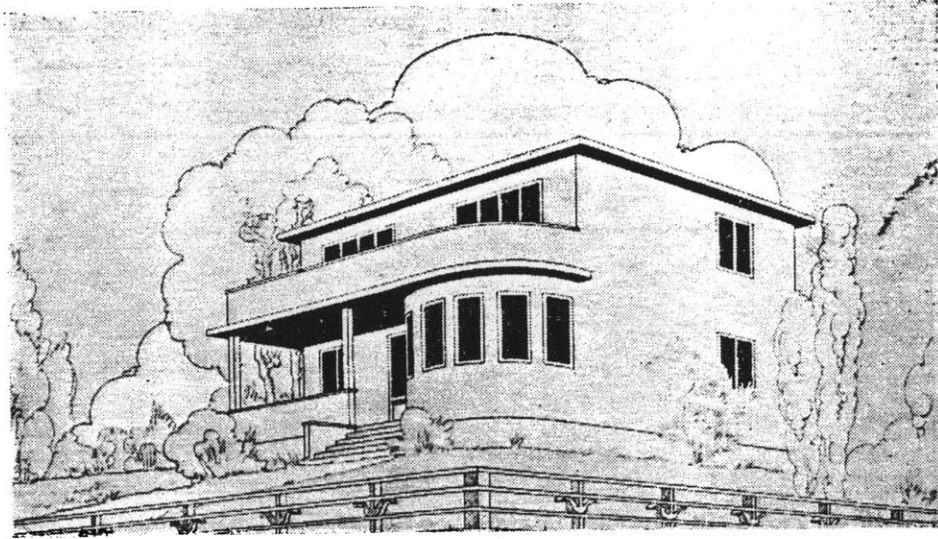


Fig. 2.179 Residential plan for villa by Akbari Fard, Architecte 2

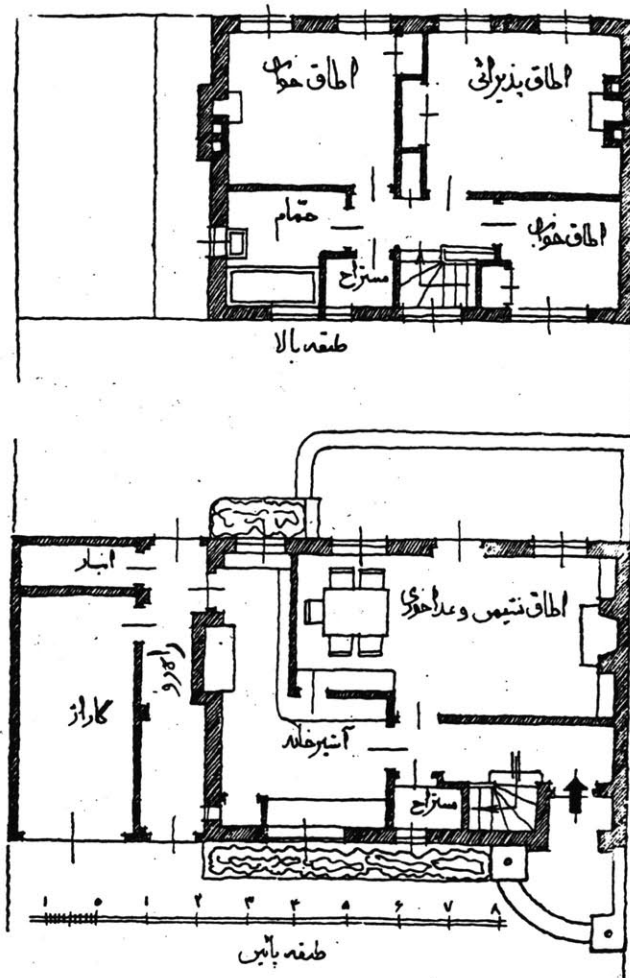
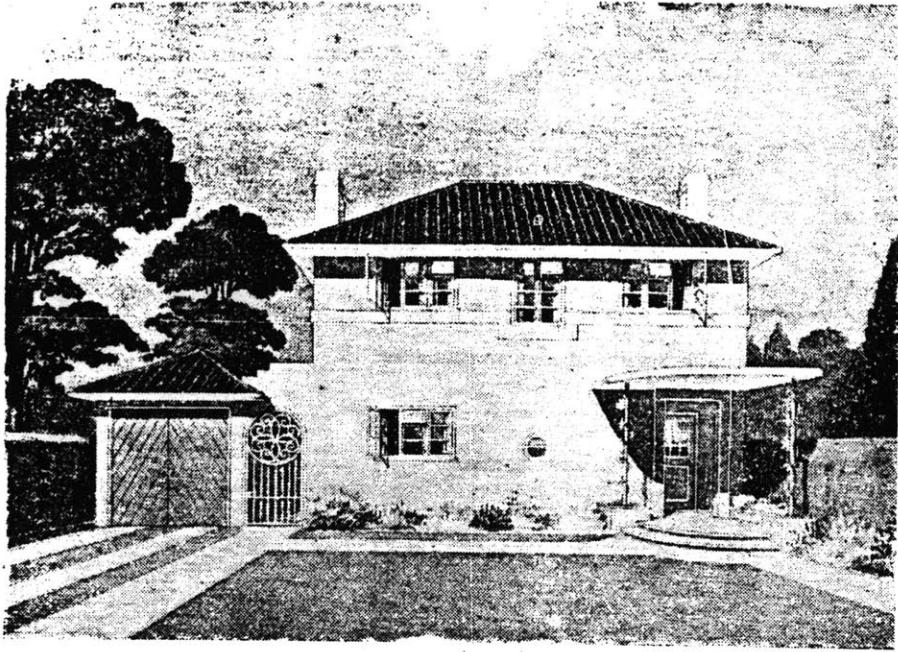


Fig. 2.180 Residential plan for villa by Akbari Fard Architecte 2

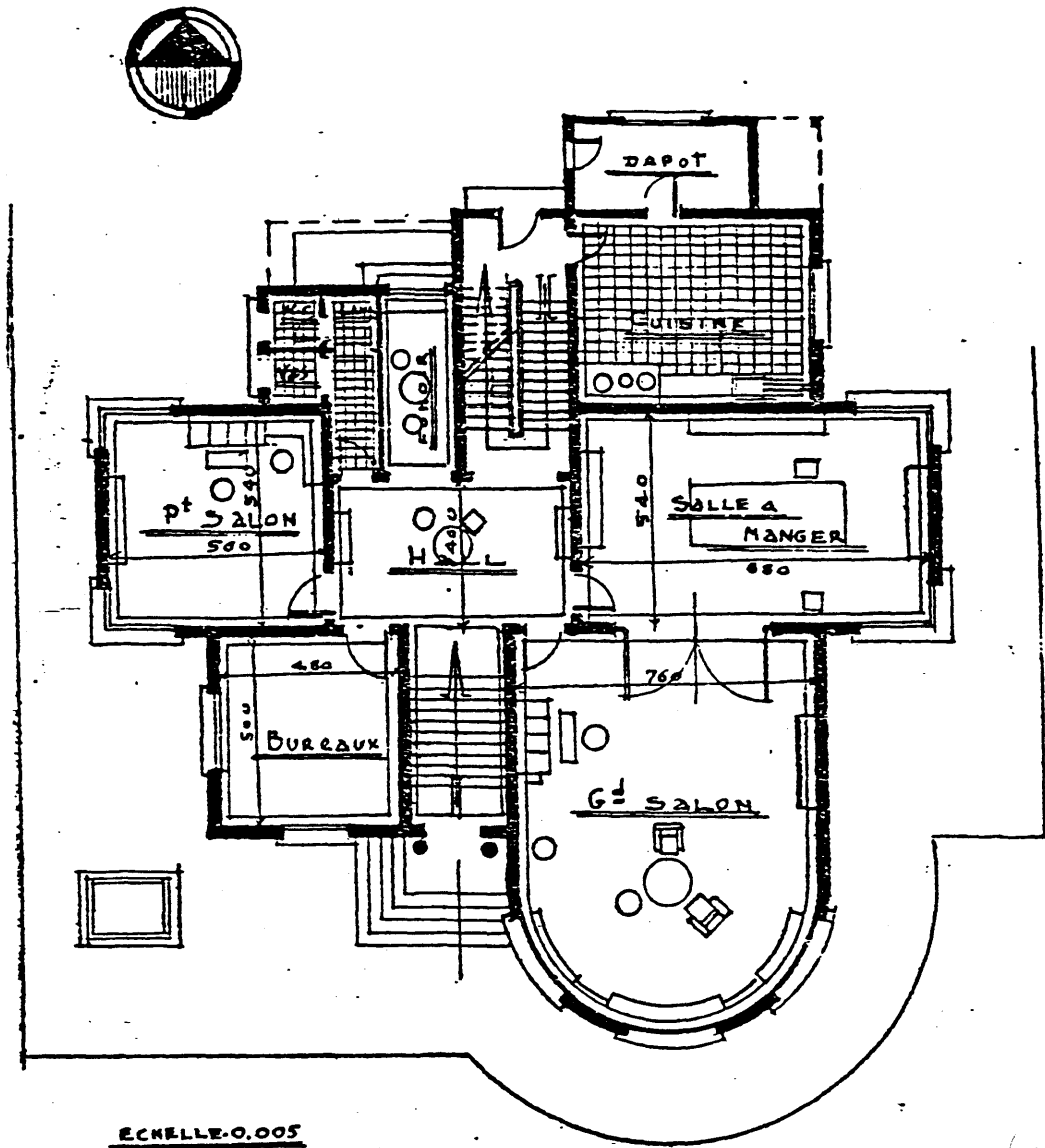


Fig. 2.181 Residential plan for villa by Boudaghian Architecte 3

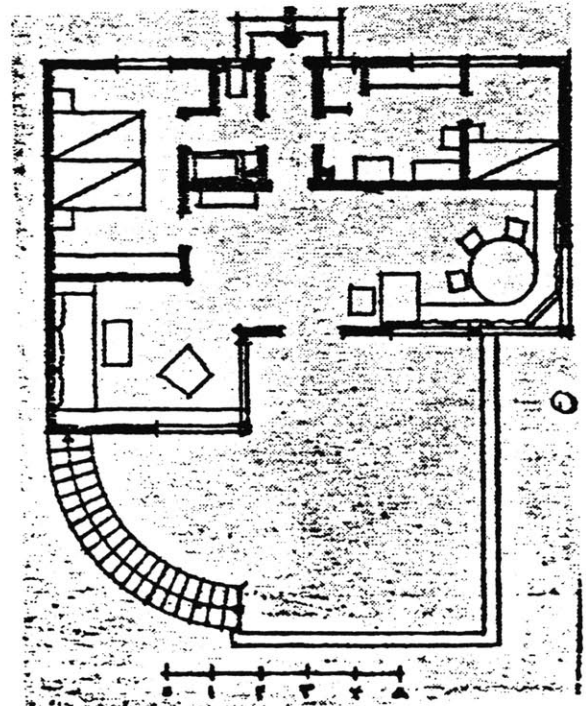
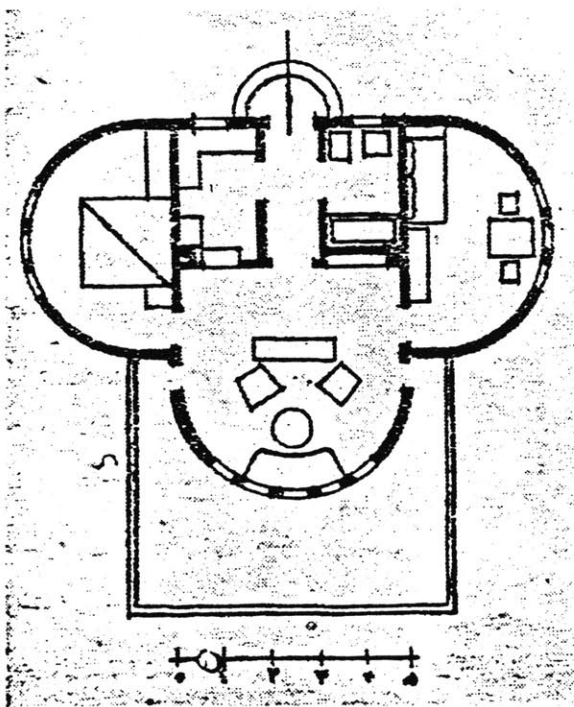
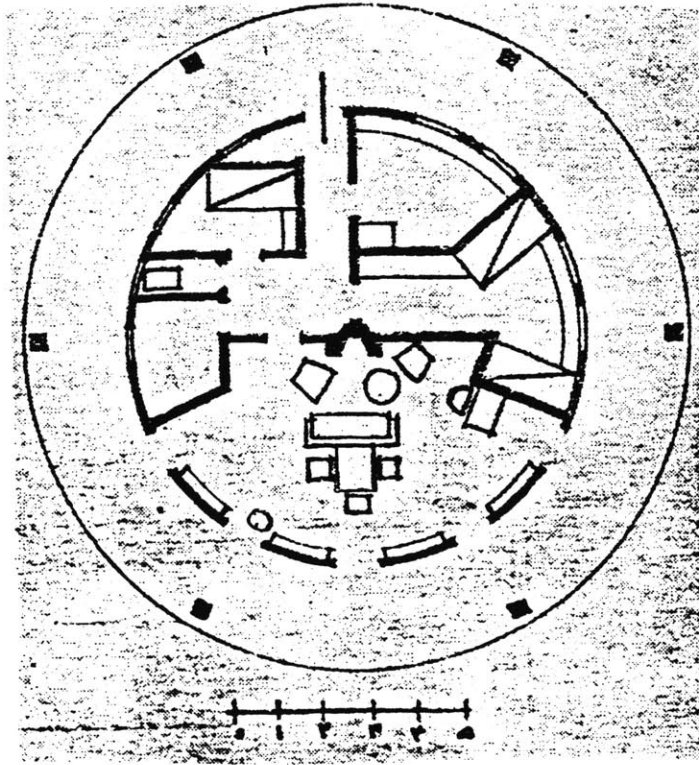


Fig. 2.182 Residential plans for prototypical villas, Architecte

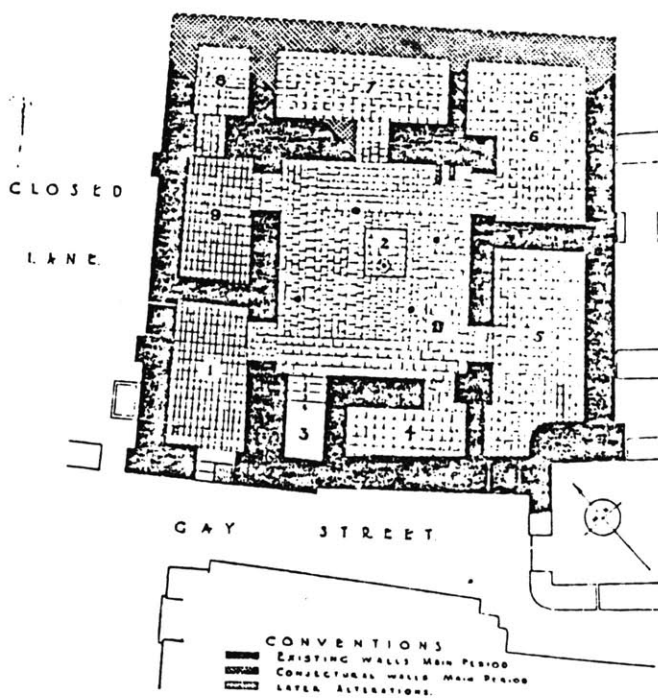
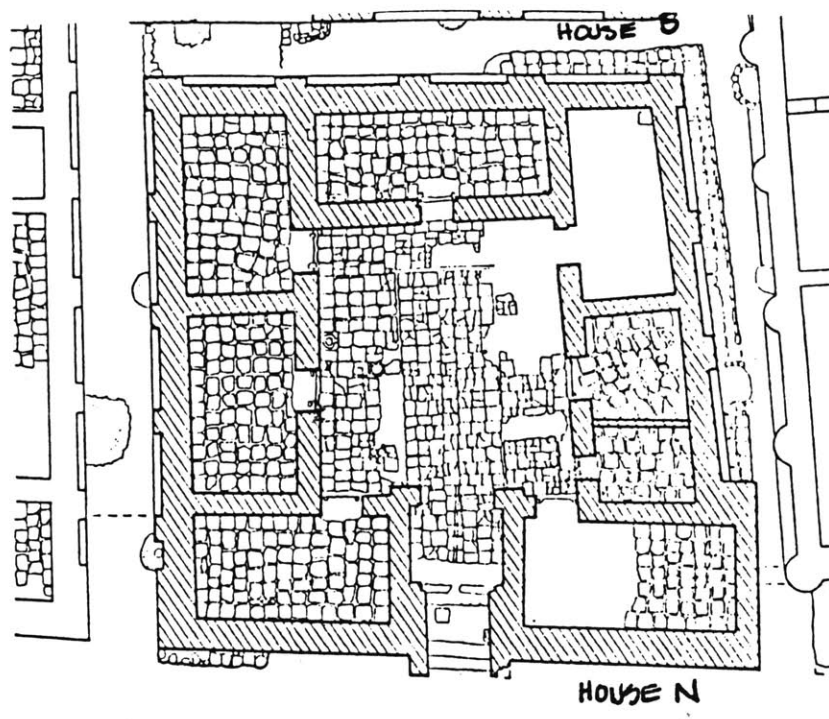


Fig. 3.1 Comparison of courtyard houses of Siraf (above) and Ur (below)



Fig. 3.2 Aerial view of the courtyard houses of Mahalla Bazaar & Oudlajan

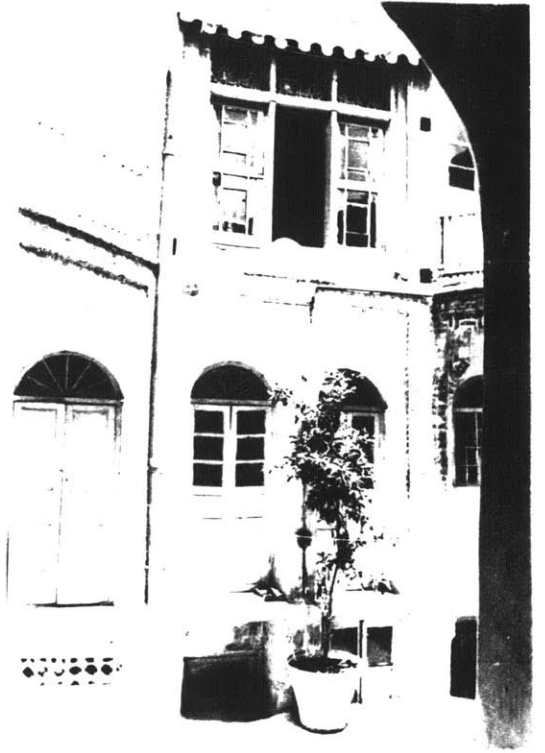
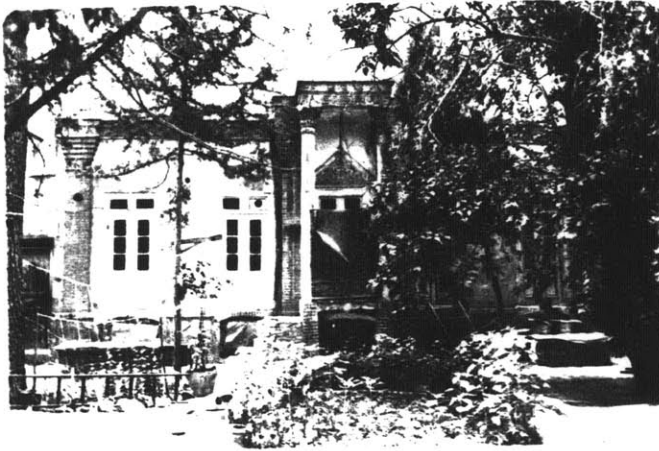
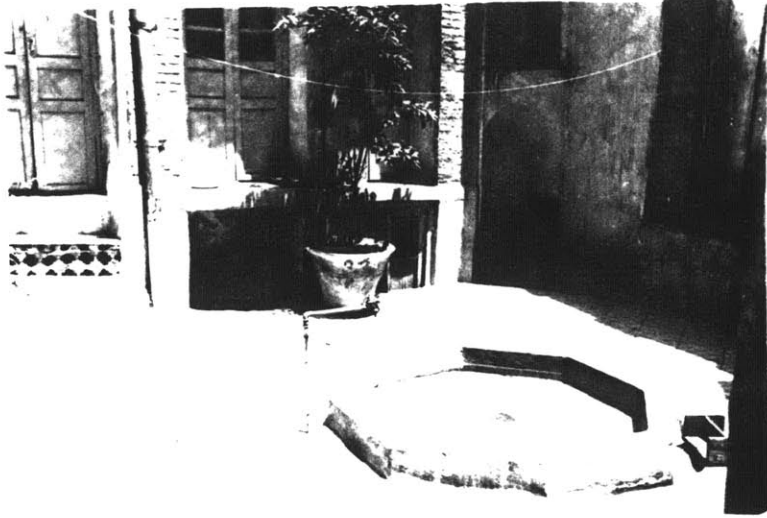


Fig. 3.3 Examples of courtyards in 19th century houses of Tehran

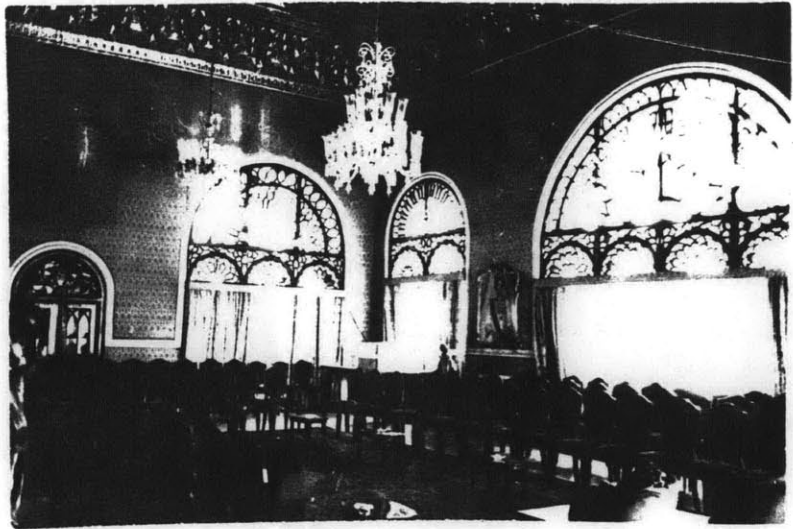


Fig. 3.4 Talar



Fig. 3.5 Typical furnishings of a 19th century house including cushions and korsi

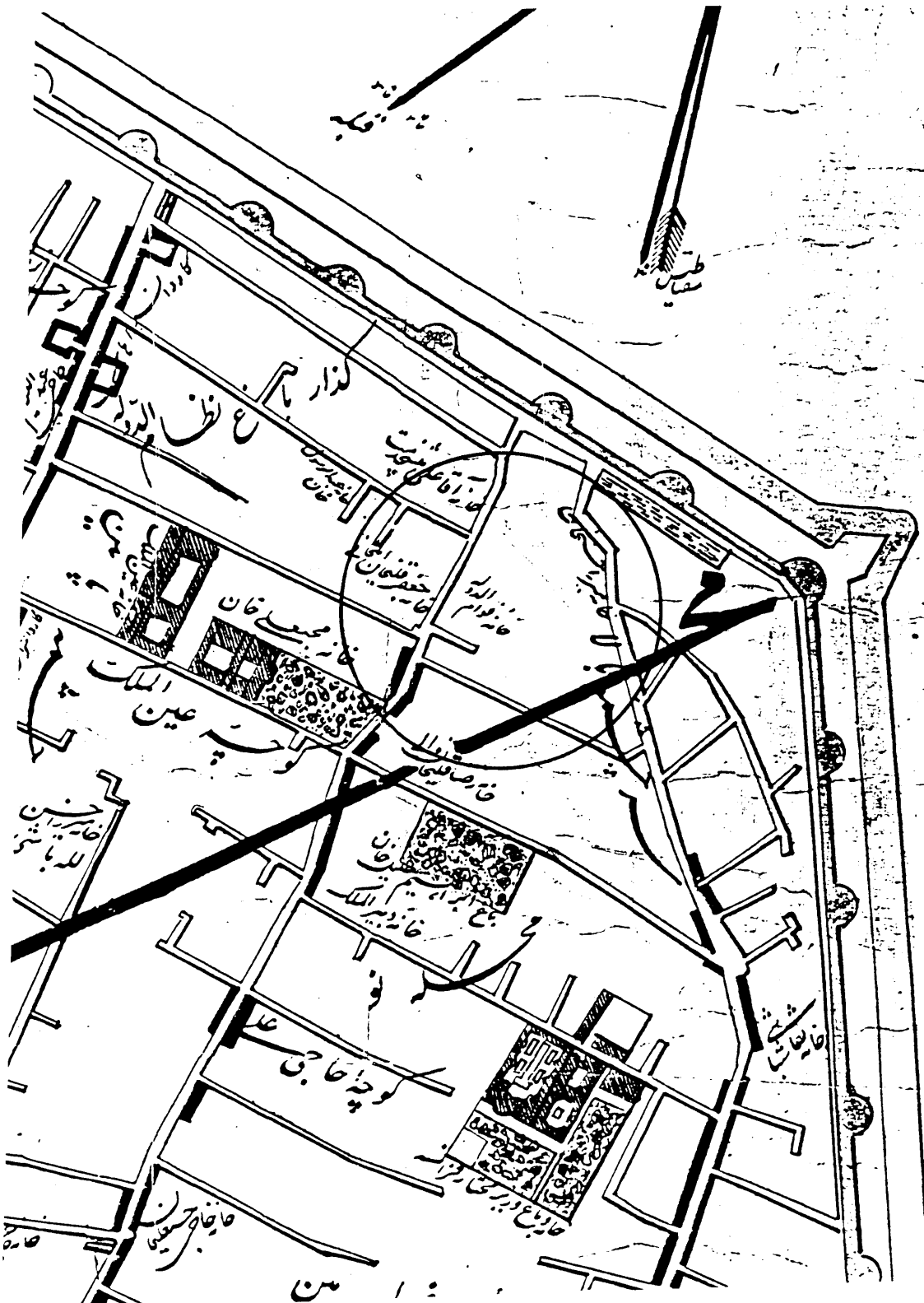


Fig. 3.6 Map of Oudlajan neighborhood showing Qavam-od-Dawla house

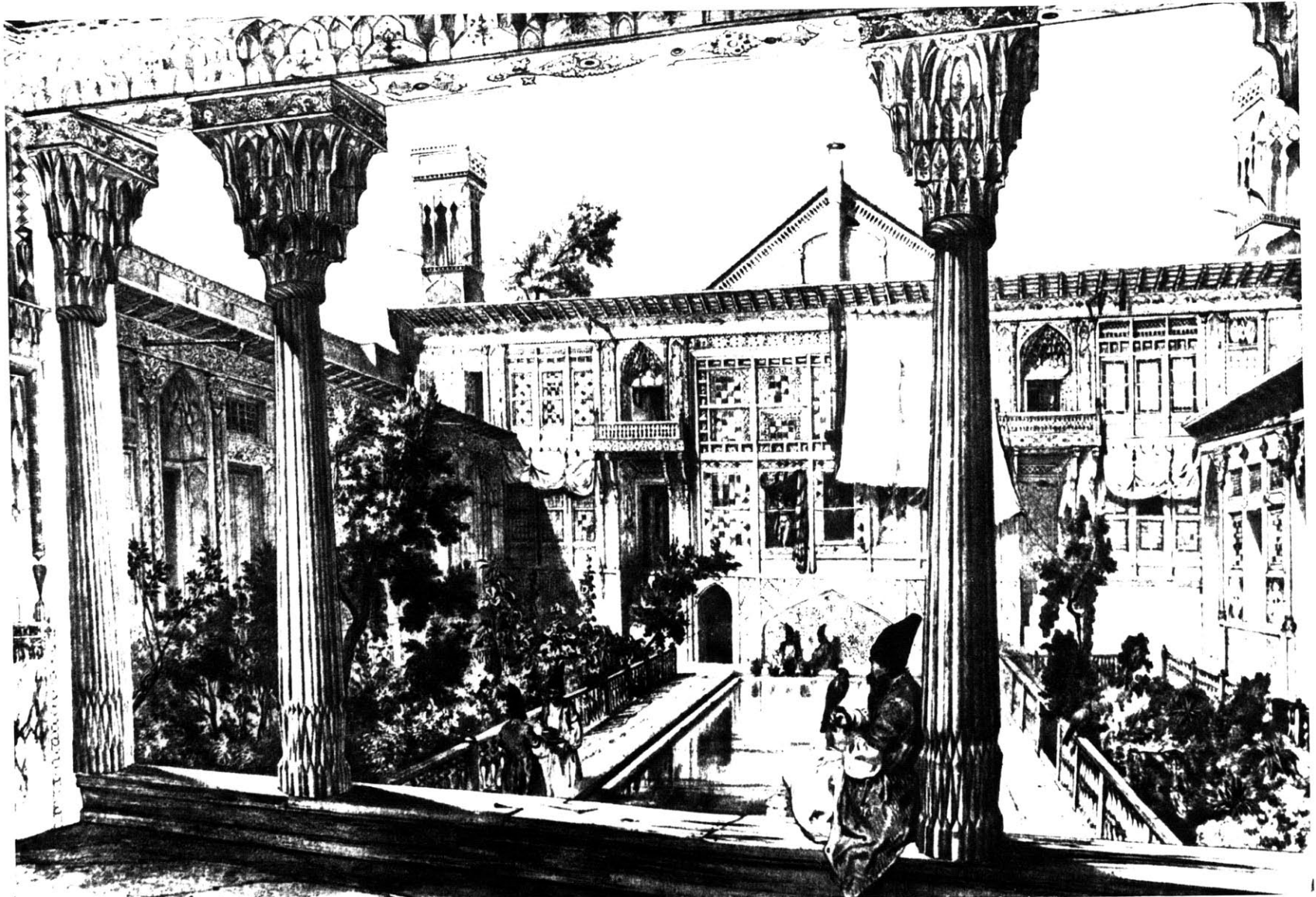


Fig. 3.7 House of French Charge d'Affaire in Tehran drawn by Jules Laurens



Fig. 3.8a Street facade of Qavam-od-Dawla house

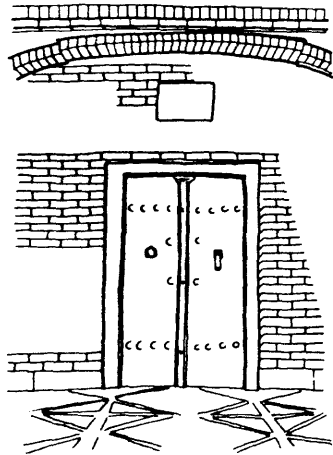


Fig. 3.8b Front entrance

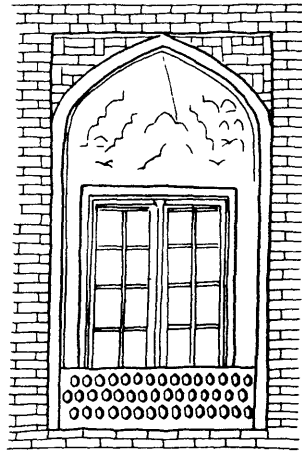


Fig. 3.8c Windows overlooking courtyard

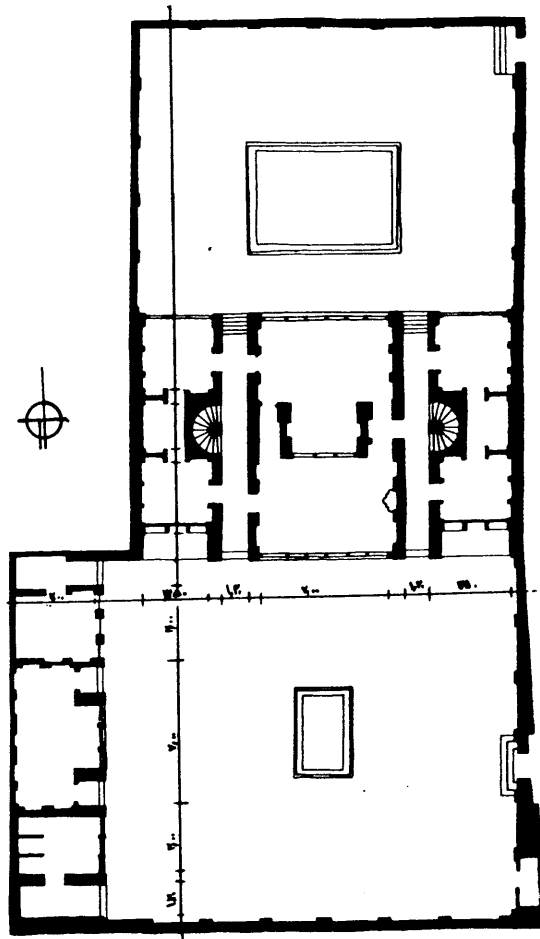


Fig. 3.9 Plan of Qavam-od-Dawla house

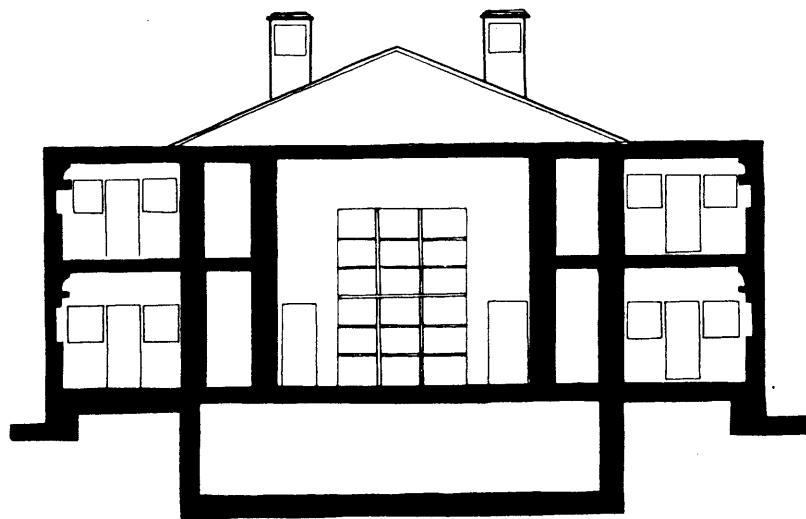


Fig. 3.10 Section of Qavam-od-Dawla house

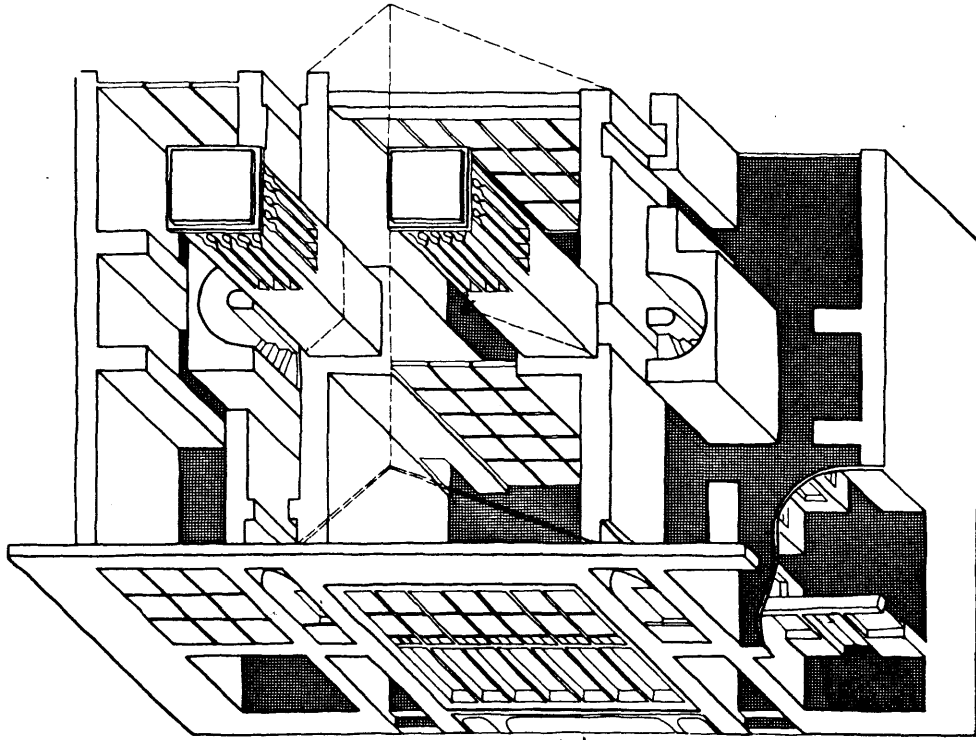


Fig. 3.11 Axonometric of Qavam-od-Dawla house



Fig. 3.12a Ayvan of Qavam-od-Dawla house

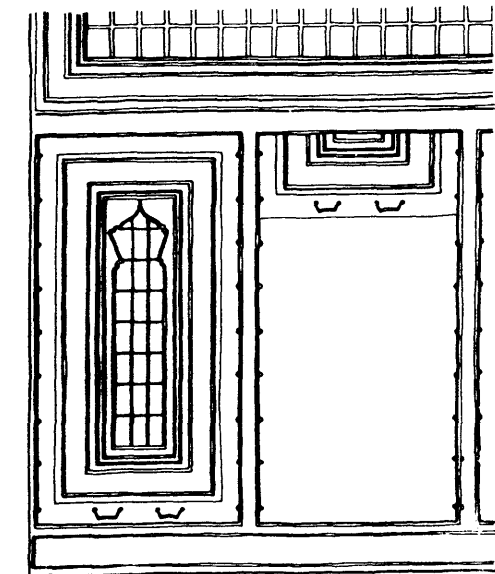


Fig. 3.12b Orosi windows of Qavam-od-Dawla house



Fig. 3.13 Kitchen of Qavam-od-Dawla house

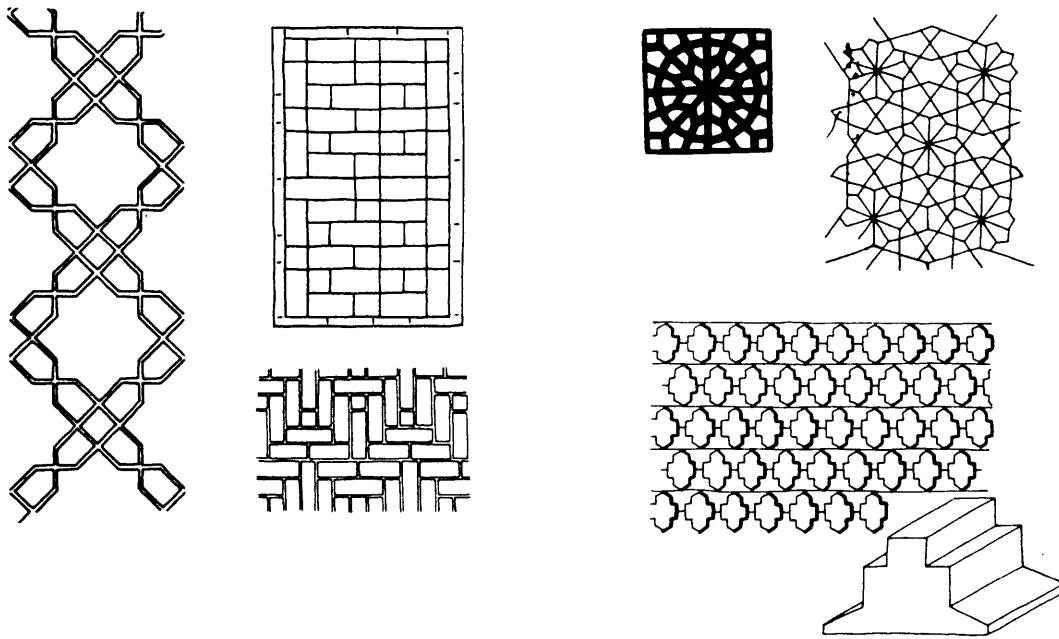


Fig. 3.14 Brick pattern and decorative panels

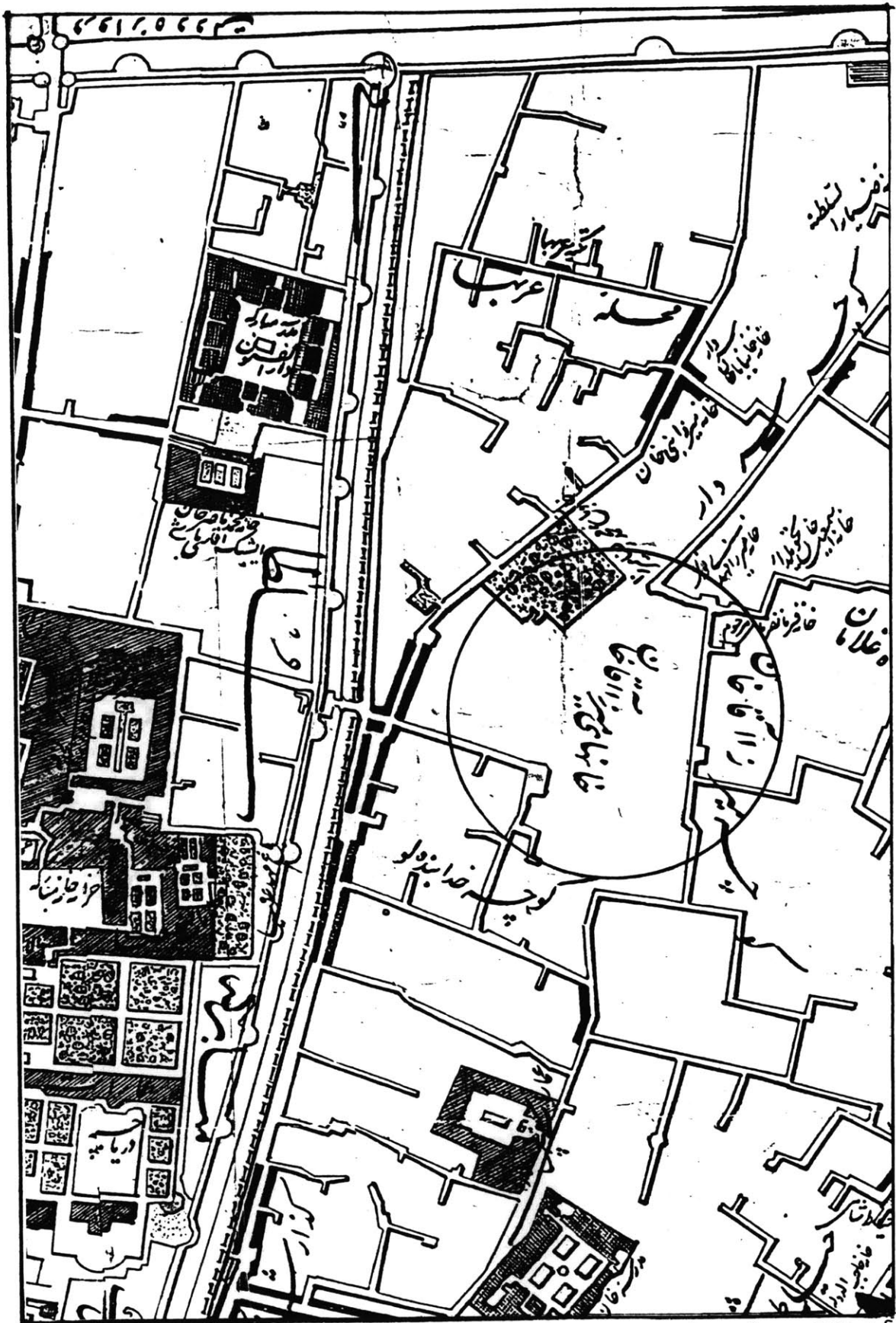


Fig. 3.15 Location of Imam-Jom'a house previously part of Mirza Aqa Khan complex on 1858 map of Tehran



Fig. 3.16 Elevation of Imam-Jom'a house

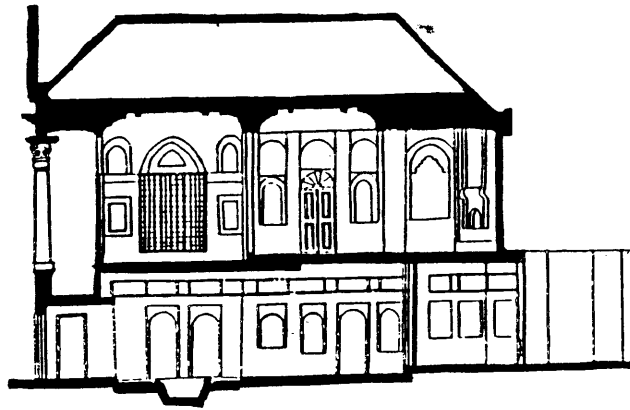


Fig. 3.17 Section of Imam-Jom'a house

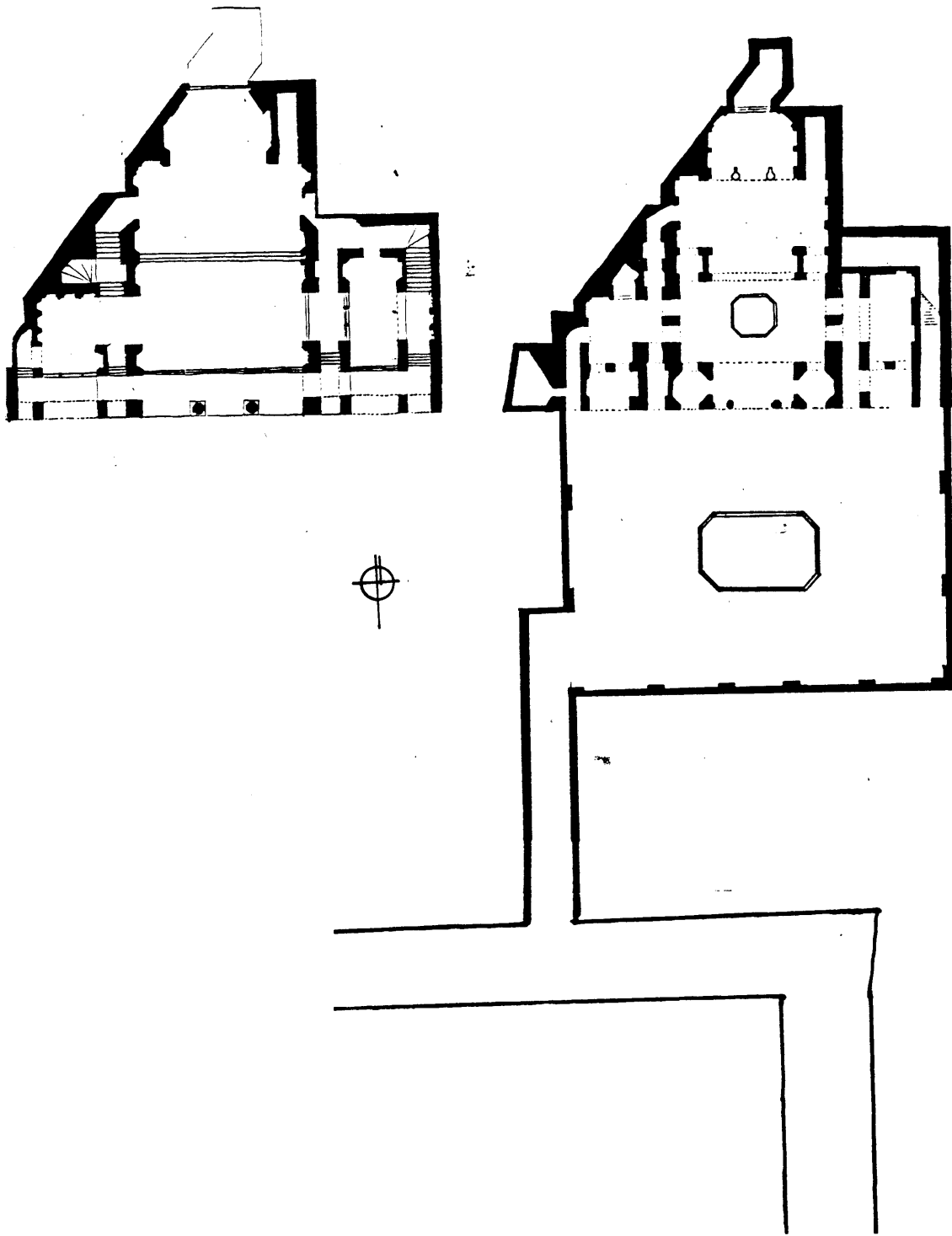


Fig. 3.18 Plan of Imam-Jom'a house

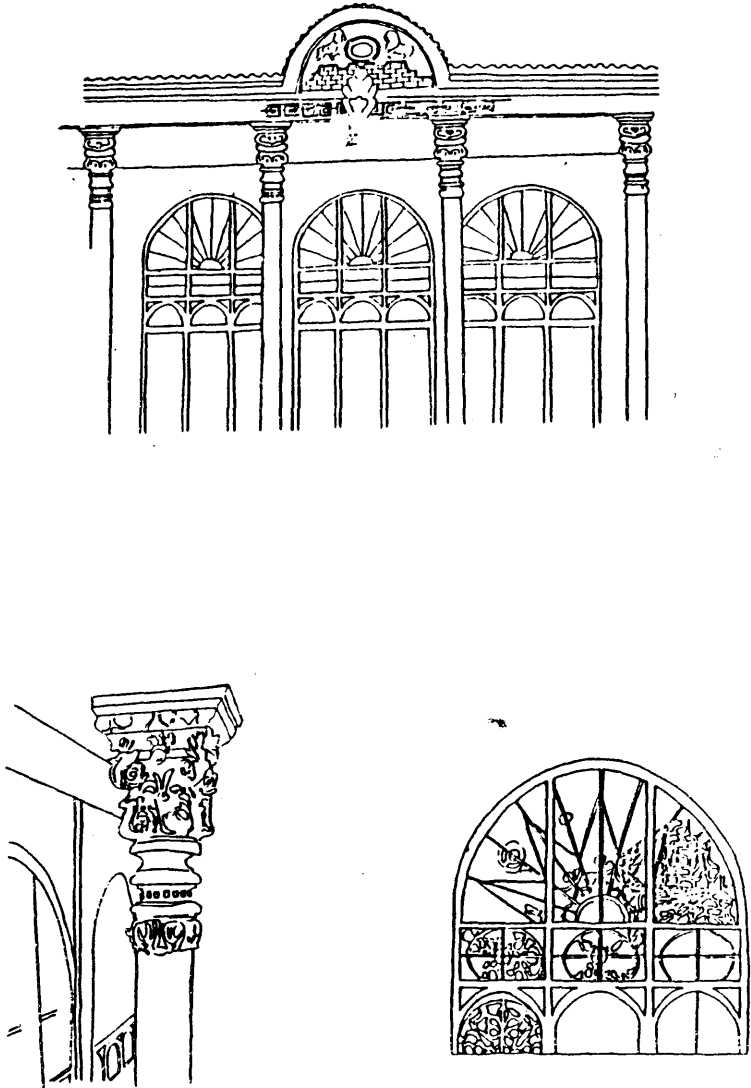


Fig. 3.19 One of the series of houses related to Imam-Jom'a house

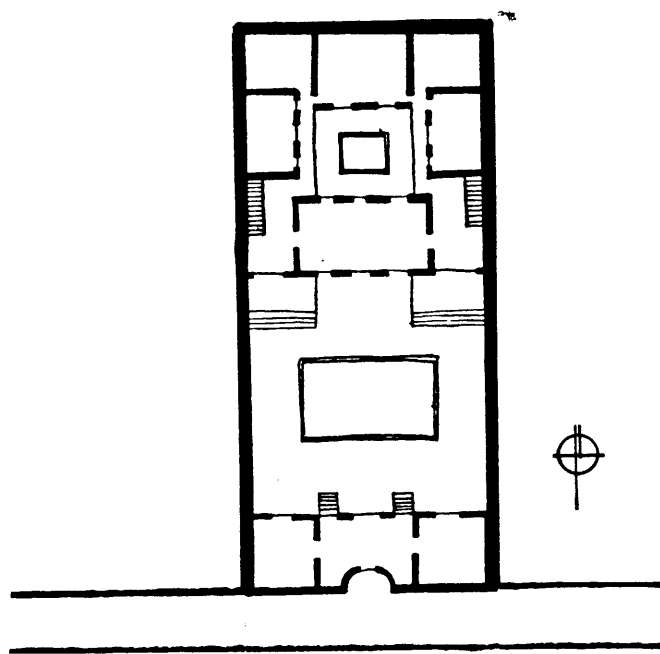


Fig. 3.20 Late Qajar middle class residence

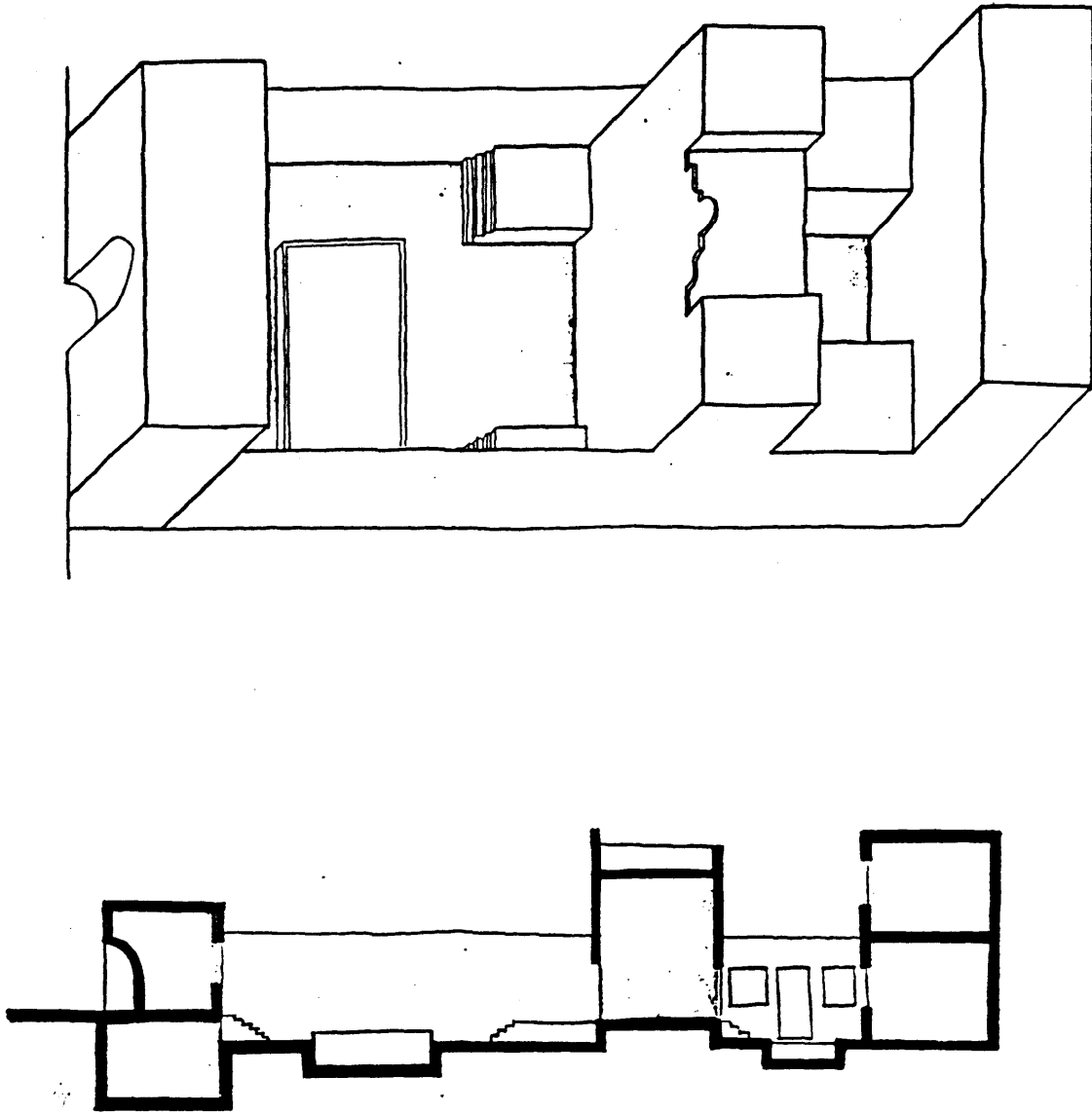


Fig. 3.21 Section and axonometric of middle class residence

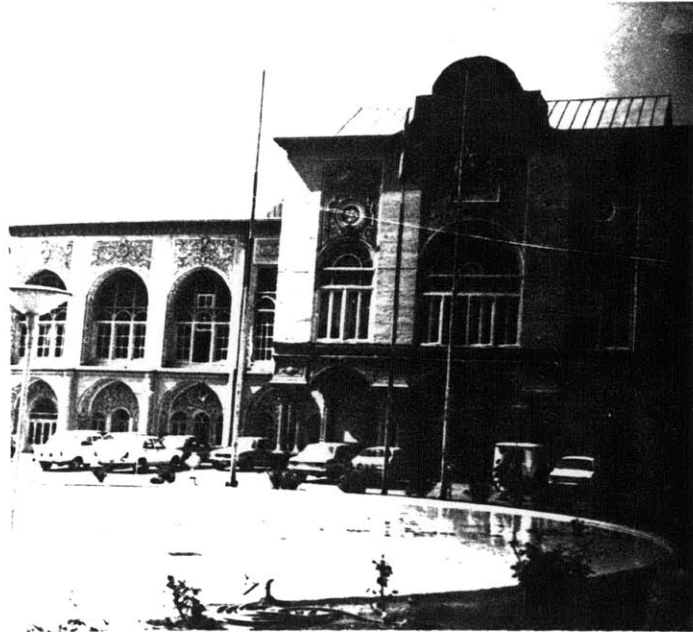
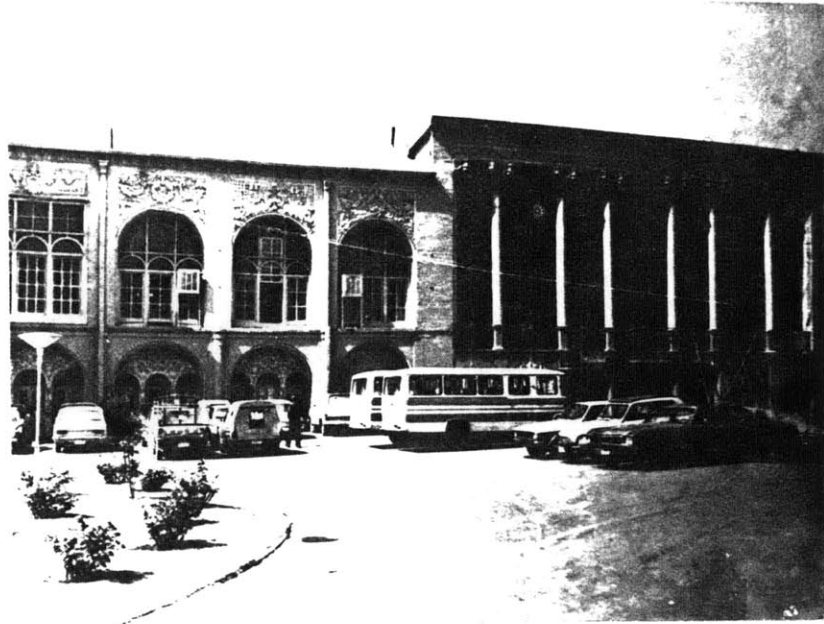


Fig. 3.22 Zell-ol-Sultan residence

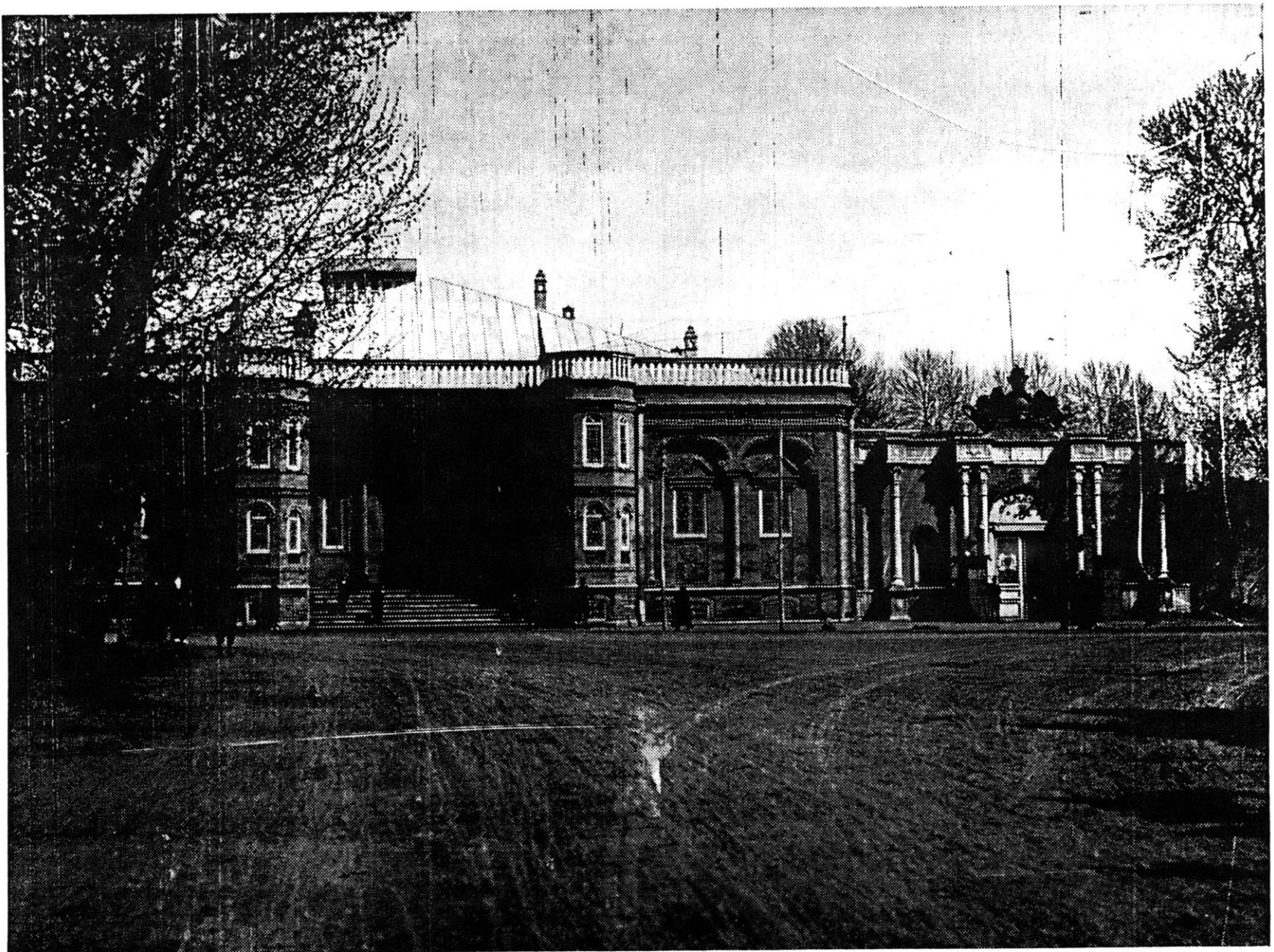


Fig. 3.23 Moshir-od-Dawla residence later Constituent Assembly



Fig. 3.24 Photo of Sardar Asad Bakhtiari and some of his tribesmen ca. 1920

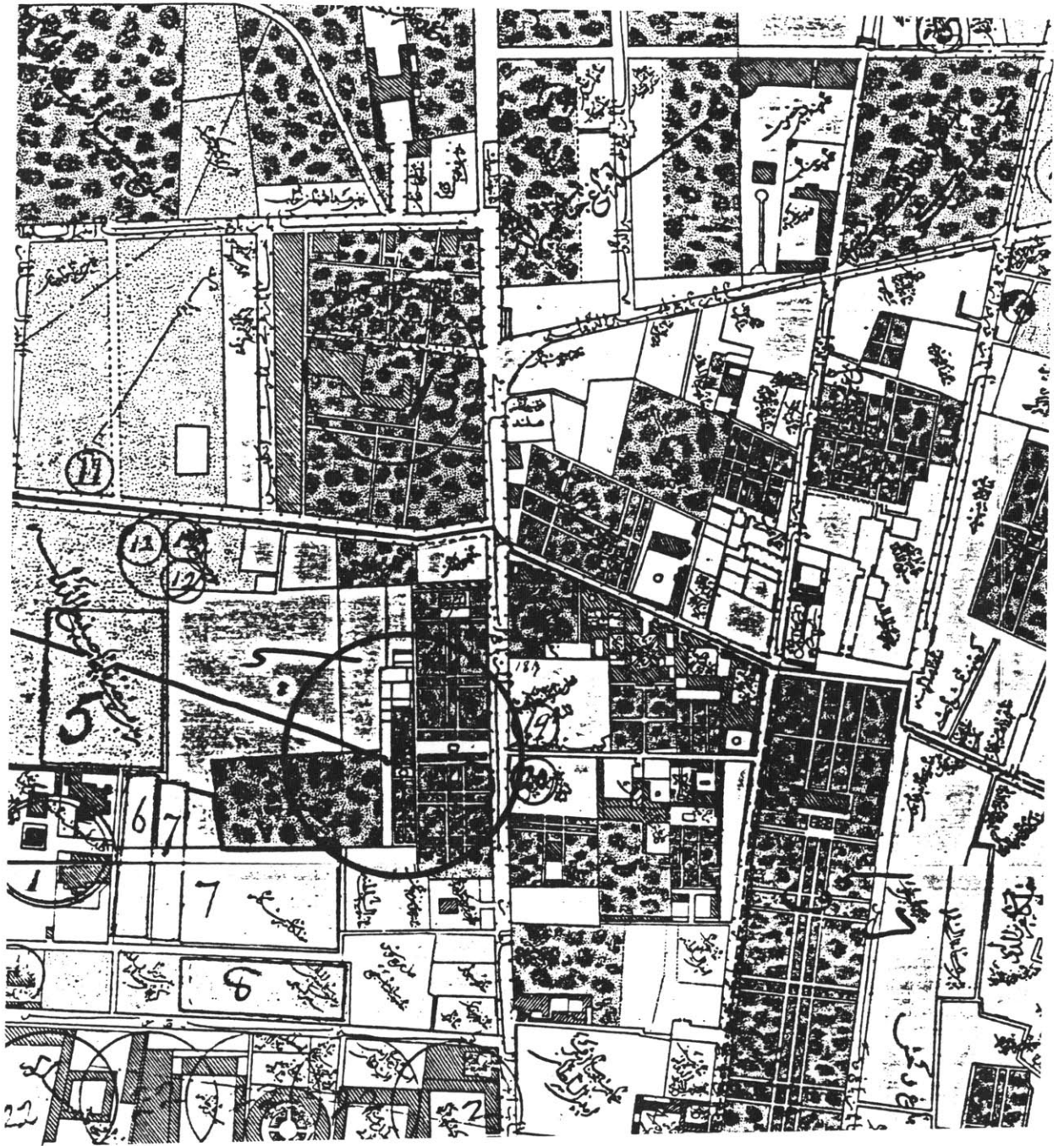


Fig. 3.25 Site plan of Sardar Asad Bakhtiari house



Fig. 3.26 Front and back elevation of Sardar Asad house



Fig. 3.27 Front facade and entry portico of
Sardar Asad house



Fig. 3.28 Interior showing main entry and main stairway of Sardar Asad house

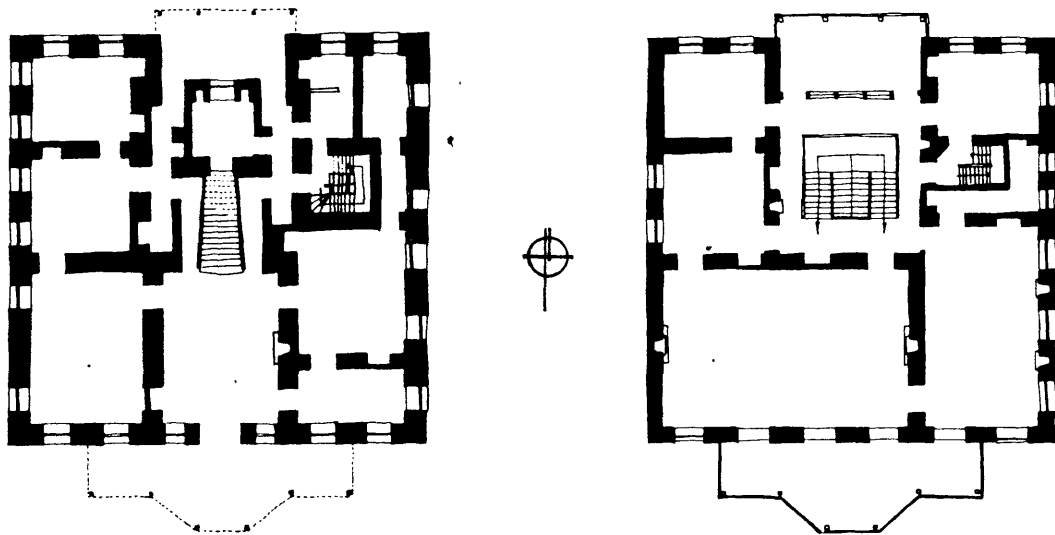


Fig. 3.29 First and second floor plans of Sardar Asad house

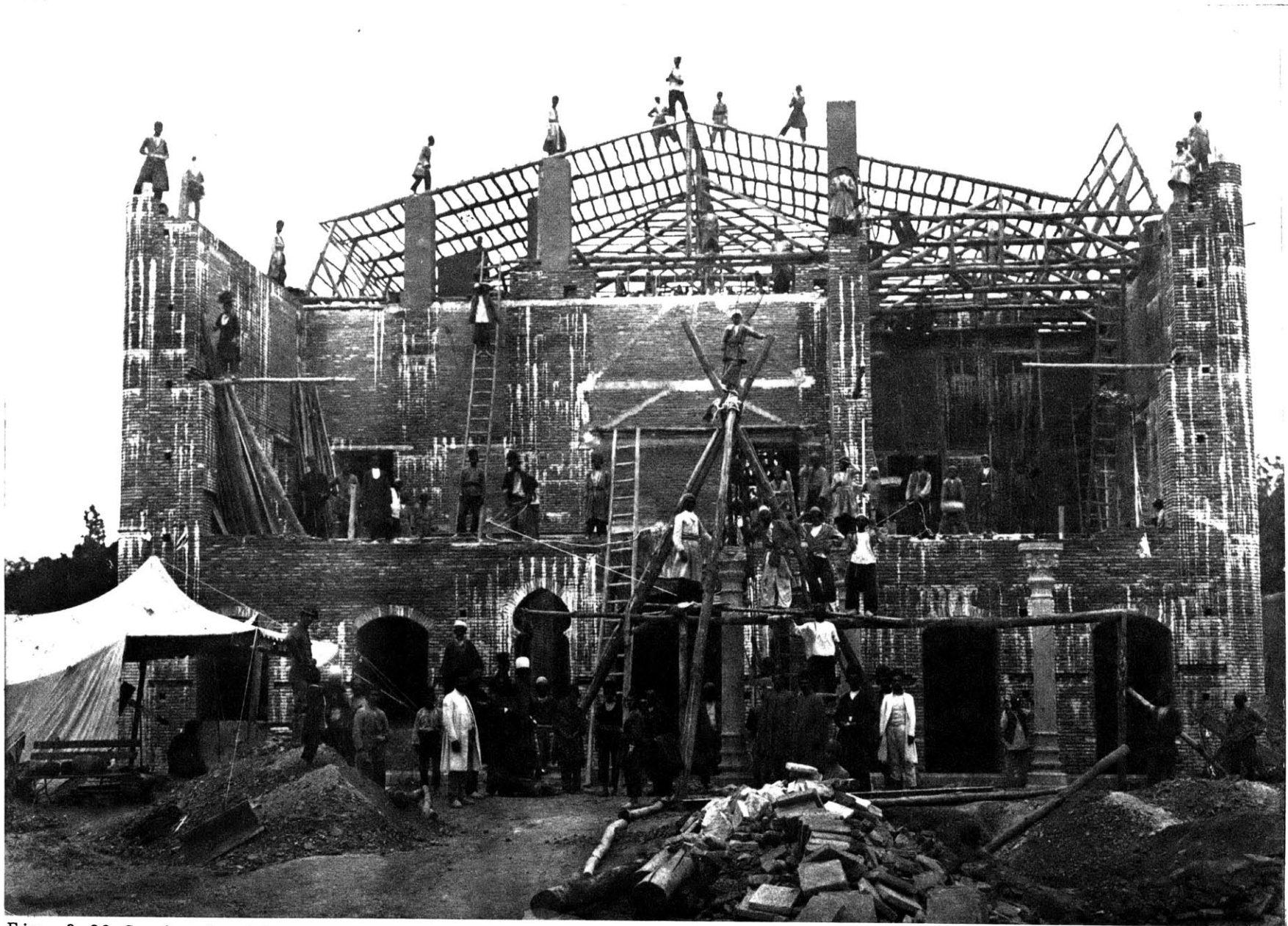


Fig. 3.30 Sardar Asad house under construction

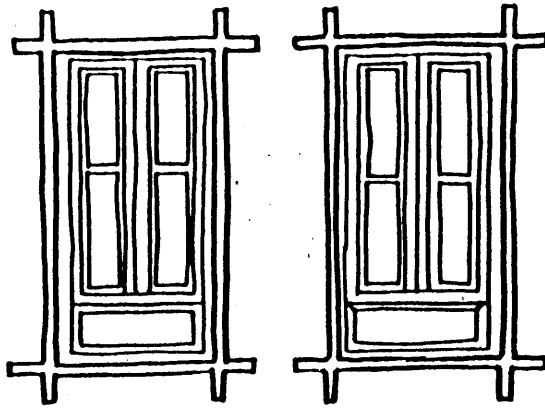
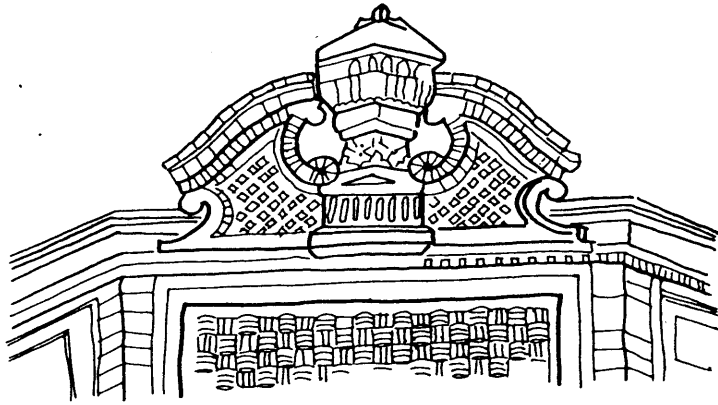


Fig. 3.31 Pishani and window details

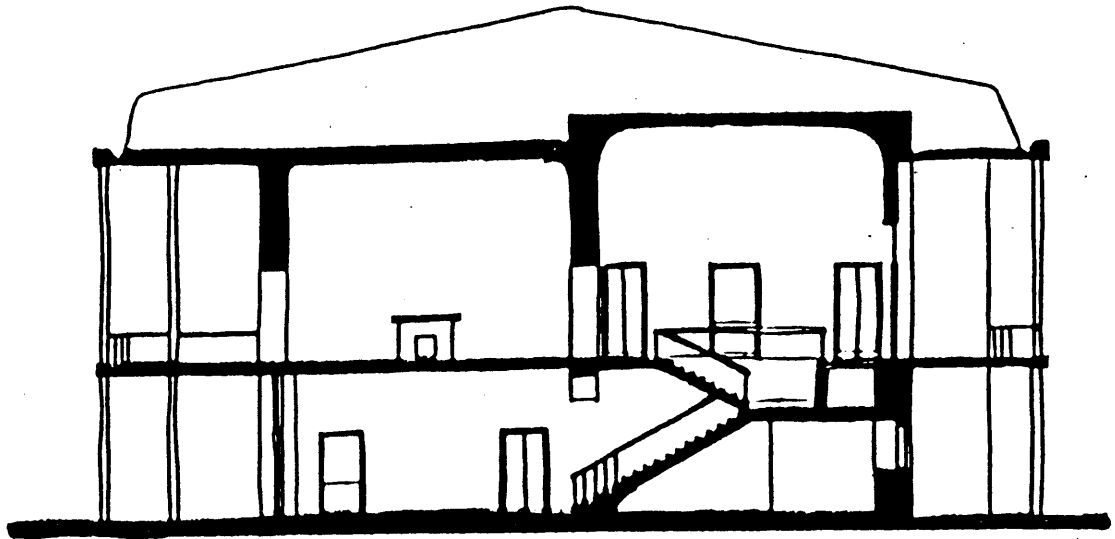


Fig. 3.32 Section of Sardar Asad house

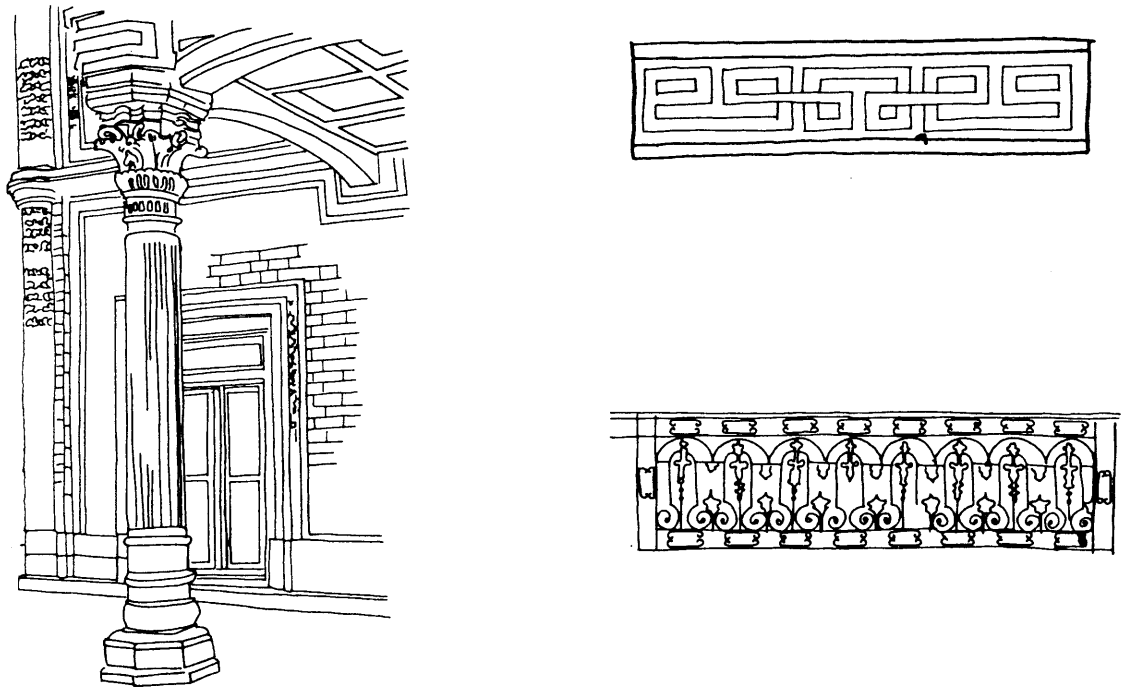


Fig. 3.33 Column of entry portico and decorative details

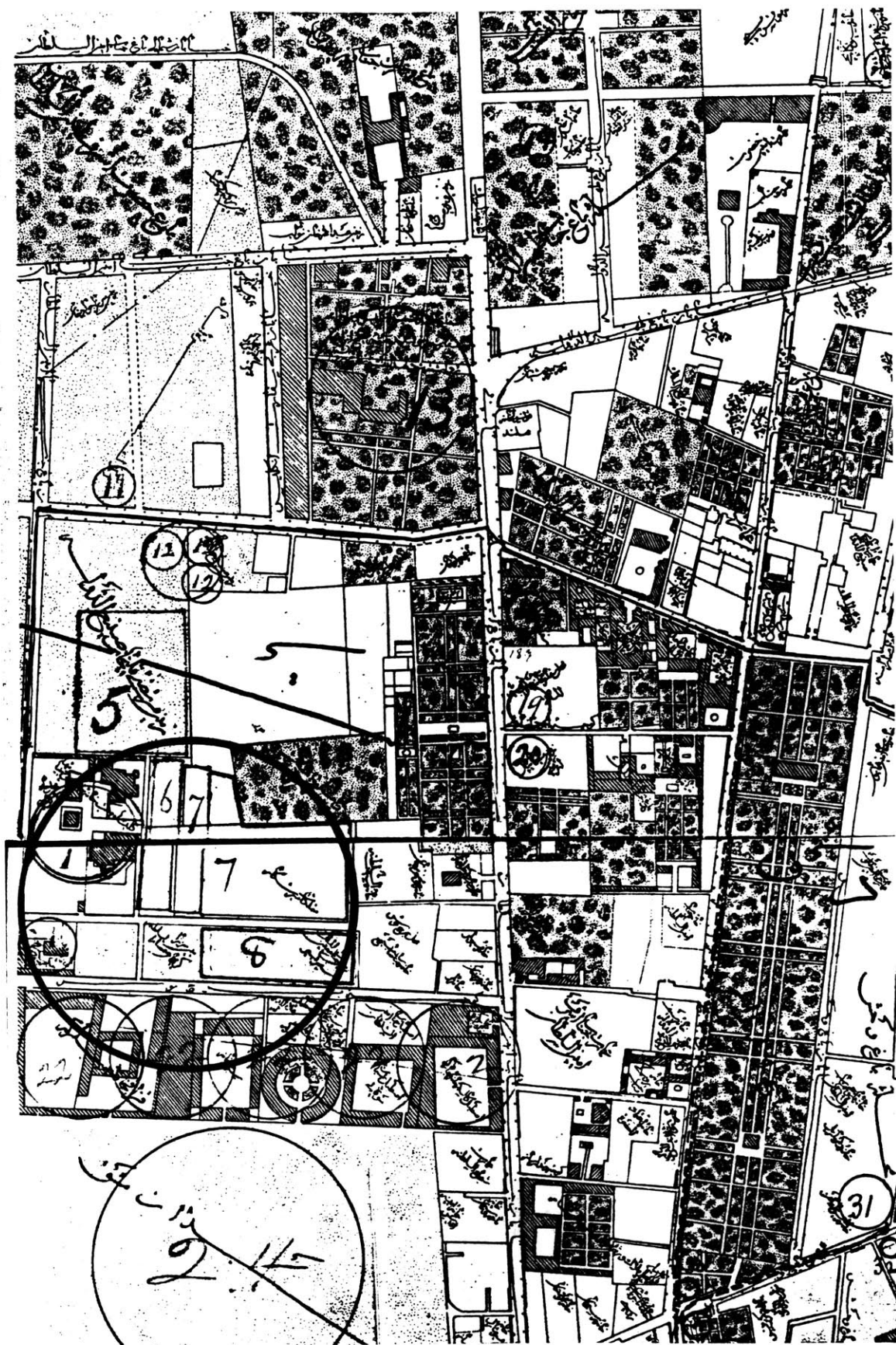


Fig. 3.34 Plan of Mahalla Dawlat showing
Qavam-os-Saltana house



Fig. 3.35 Facade of Qavam-os-Saltana house

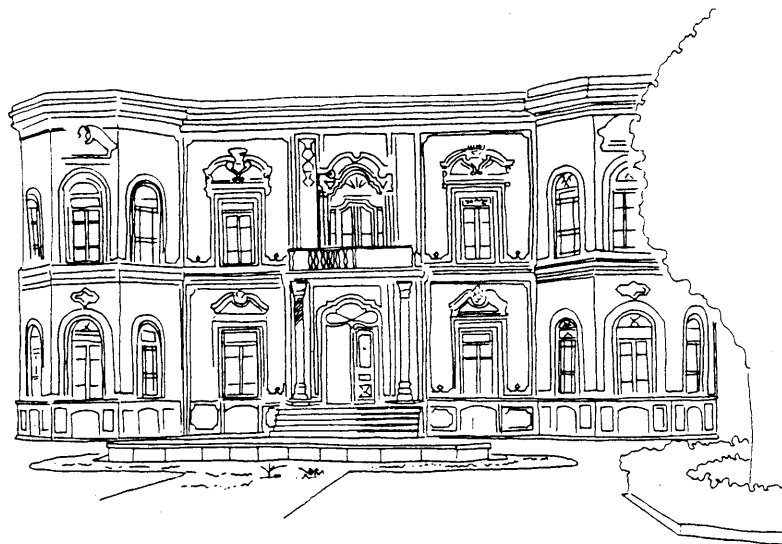


Fig. 3.36 Elevation of Qavam-os-Saltana house

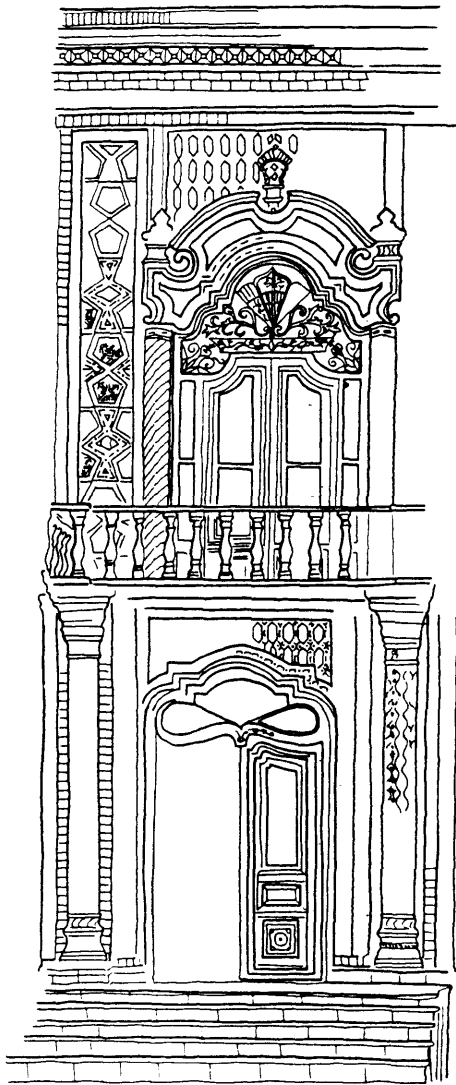


Fig. 3.37 Front portal of
Qavam-os-Saltana house

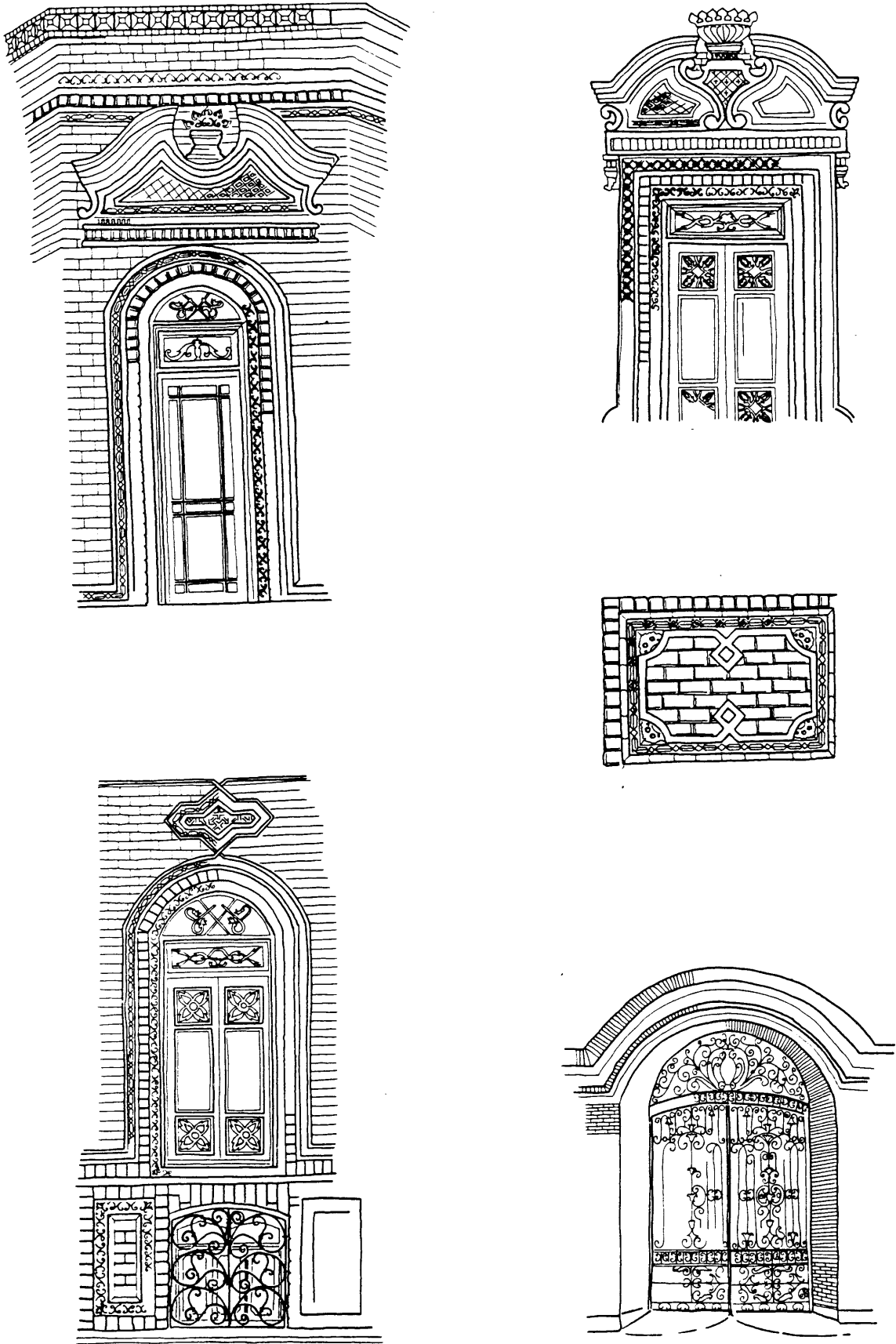


Fig. 3.38 Window details, and ornamental brick panels and gateway

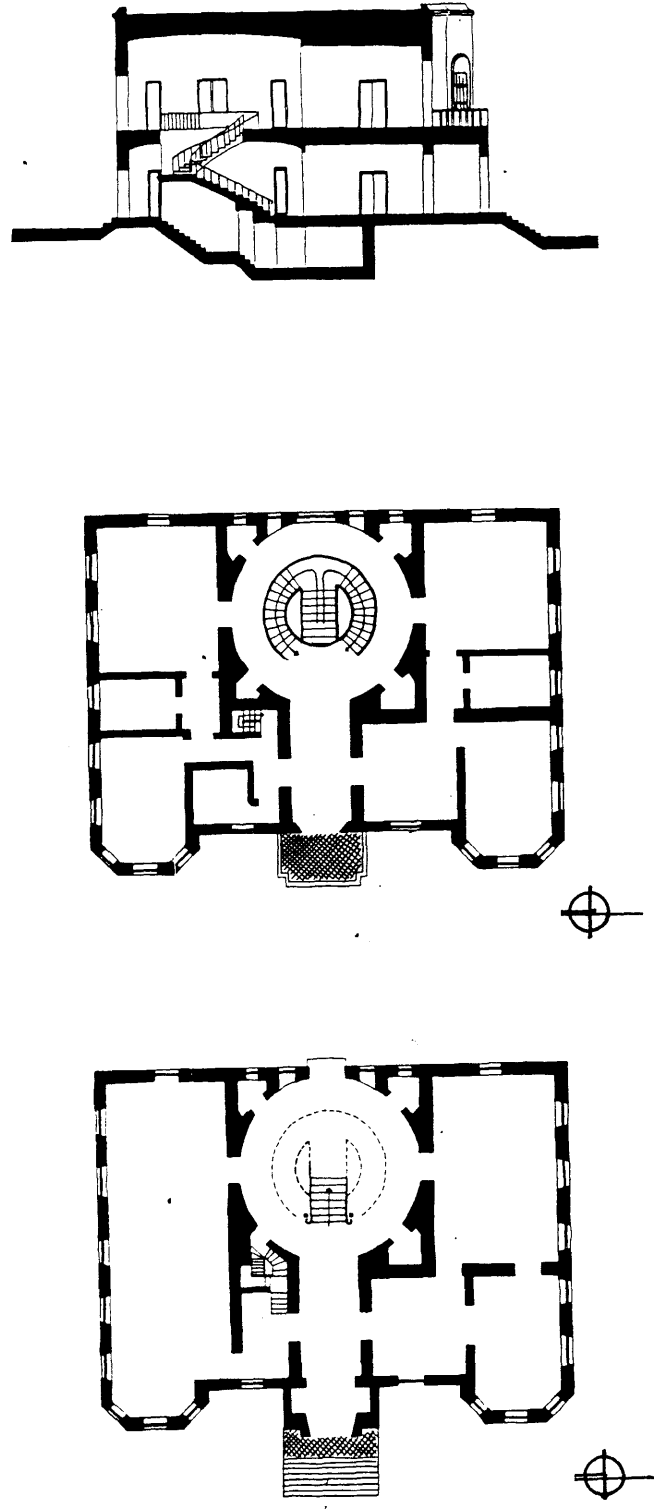


Fig. 3.39 Floor plans and section of Qavam-os-Saltana



Fig. 3.40 Map of Tehran showing Oudlajan and Bazaar neighborhoods



Fig.3.41 Organic street pattern



Fig. 3.42 Regularized grid



Fig. 3.43 Map of Shahreza neighborhood



Fig. 3.44 Wall surrounding houses

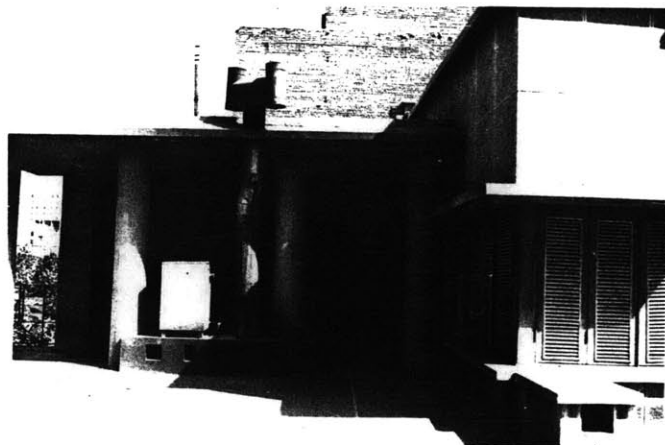


Fig. 3.45 Baharkhab (Moshtaq residence)

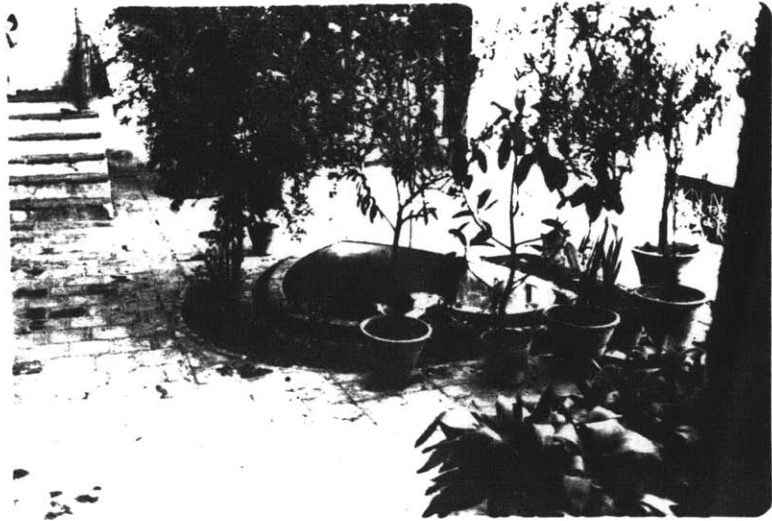


Fig. 3.46 Hawz as ornamental feature of the courtyard

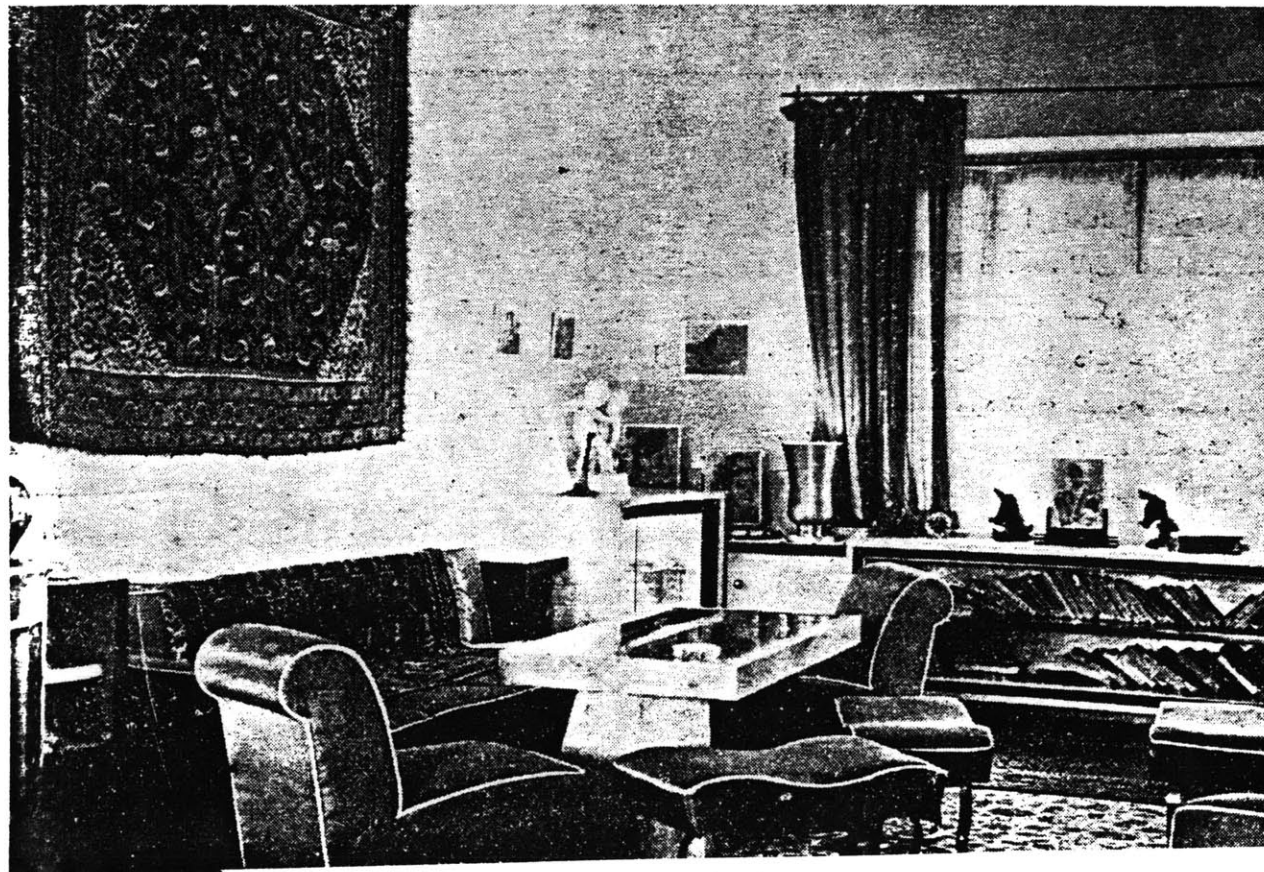
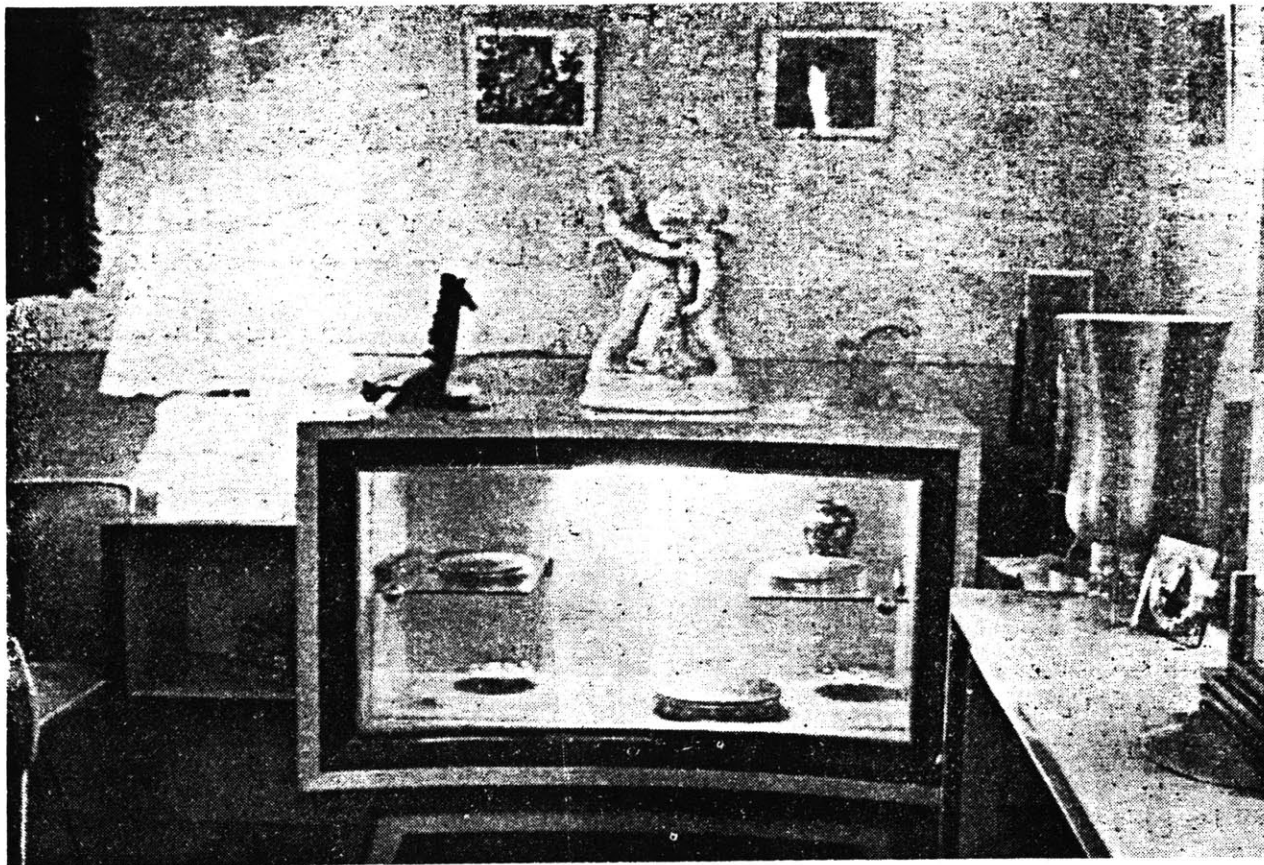


Fig. 3.47 Architect Boudaghian's furniture design

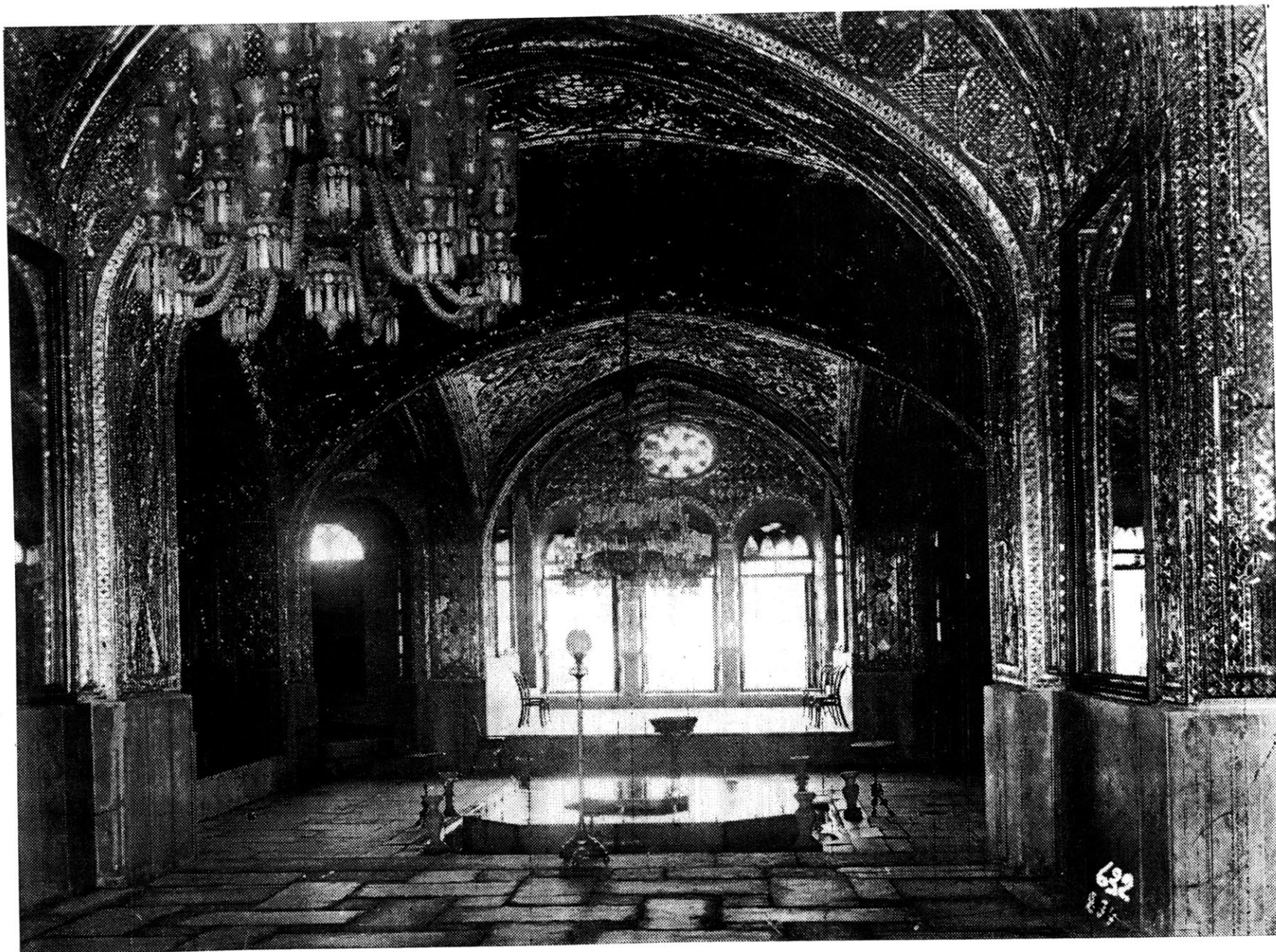


Fig. 3.48 Zirzamin--living room of a palatial residence



Fig. 3.49 Zirzamin-- hawzkhana



Fig. 3.50 Brick villa in Tehran

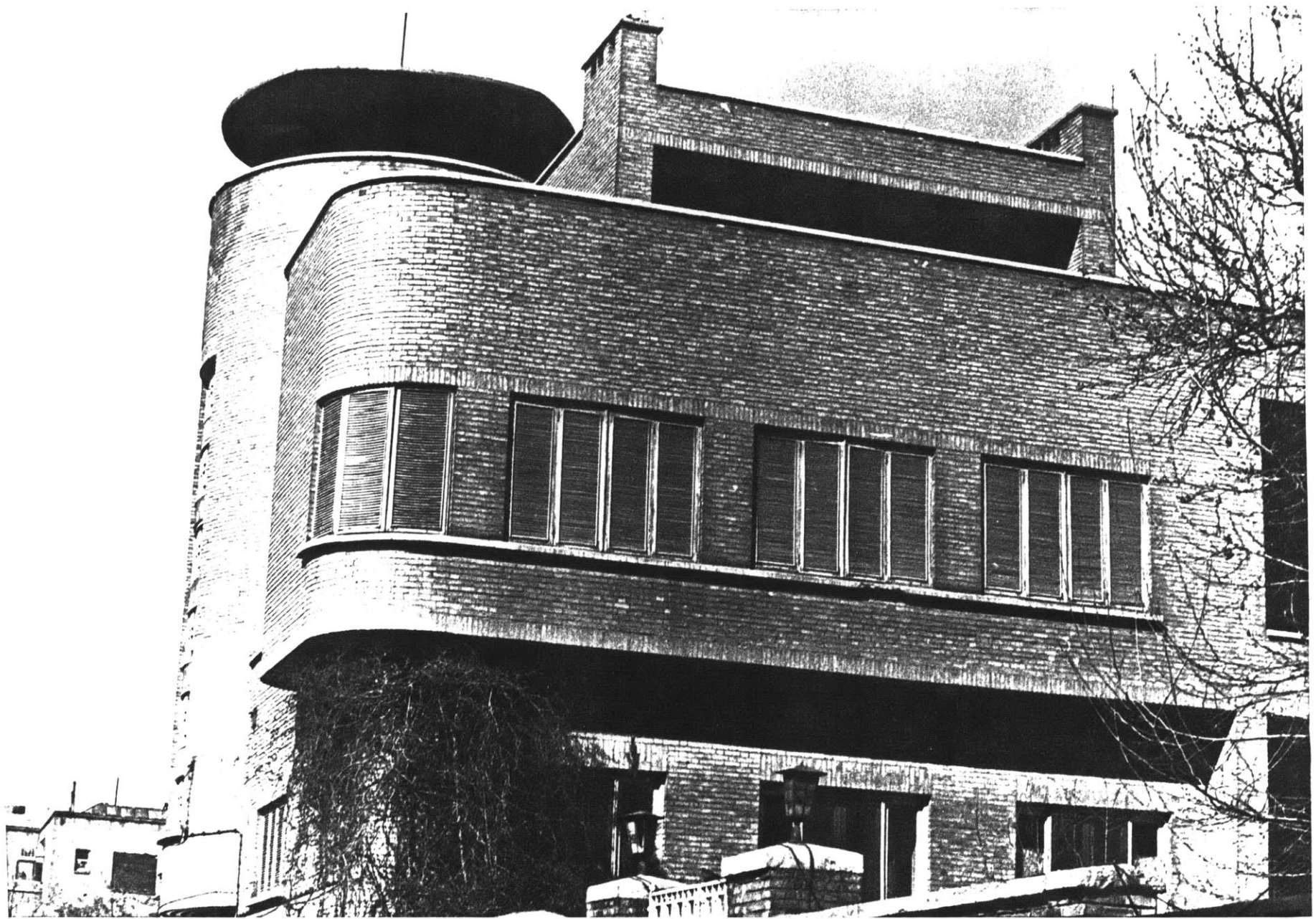


Fig. 3.51 Brick house on Shahreza near Maydan Ferdowsi



Fig. 3.52 Use of brick in residential architecture

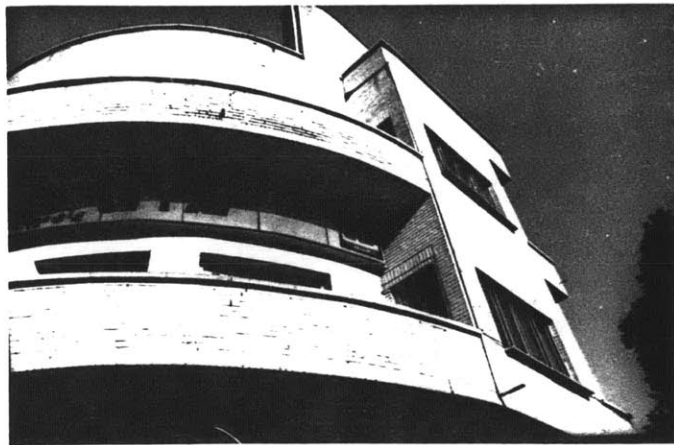


Fig. 3.53 Use of brick in residential architecture

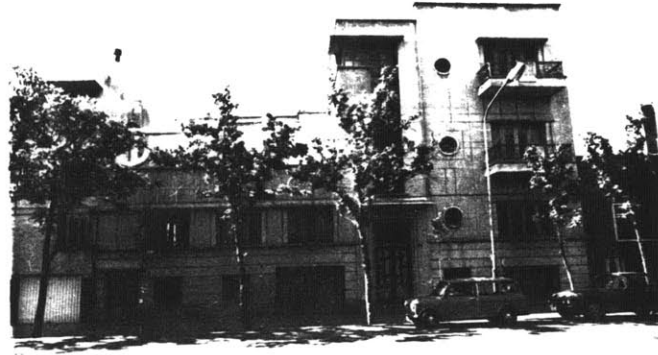


Fig. 3.54 Concrete apartments and houses in Tehran

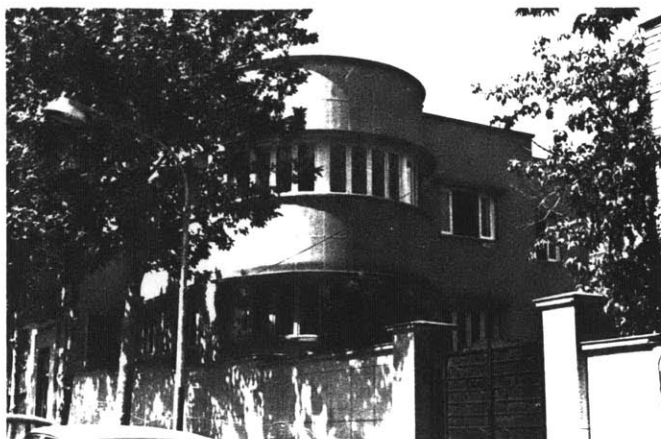


Fig. 3.55 Concrete houses in Tehran

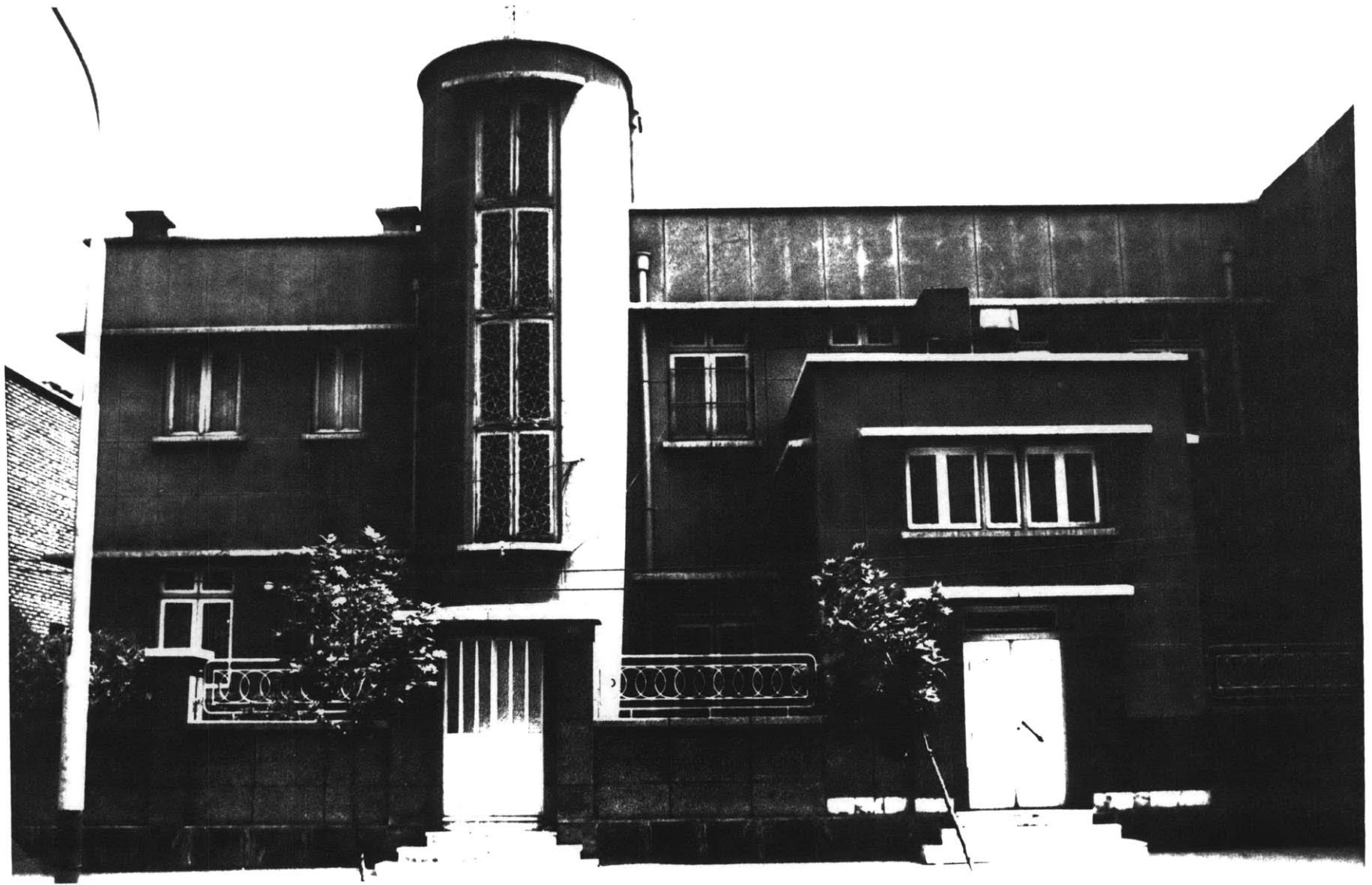


Fig. 3.56 Concrete villa in Tehran



Fig. 3.57 Concrete villa in Shemiran



Fig. 3.58 Rowhouses and shops along Ferdowsi Street

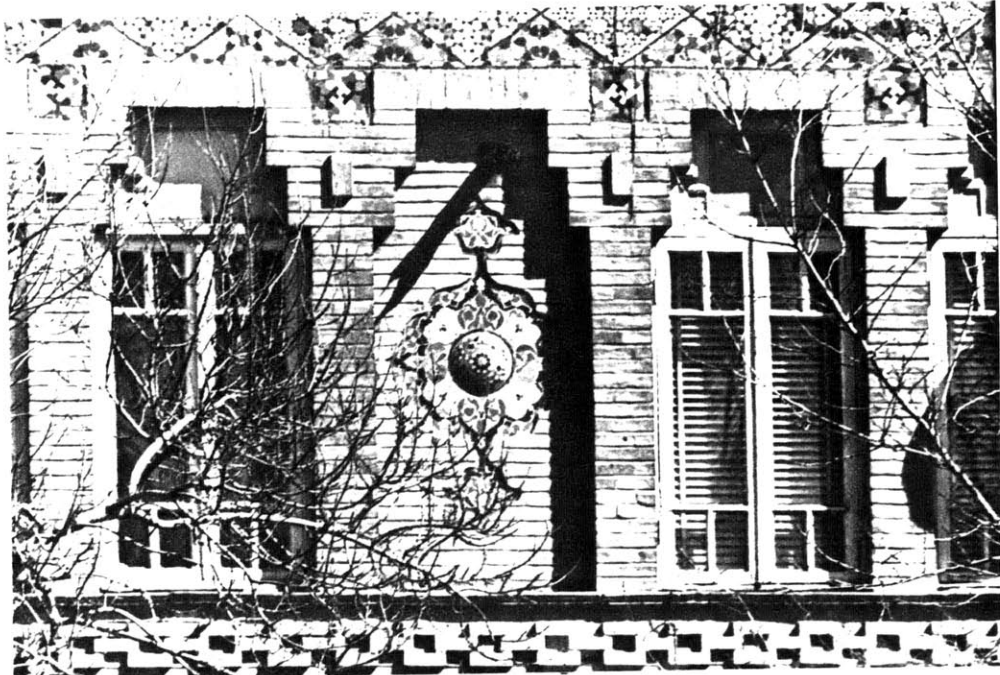


Fig. 3.59 Details of rowhouses along Ferdowsi Street

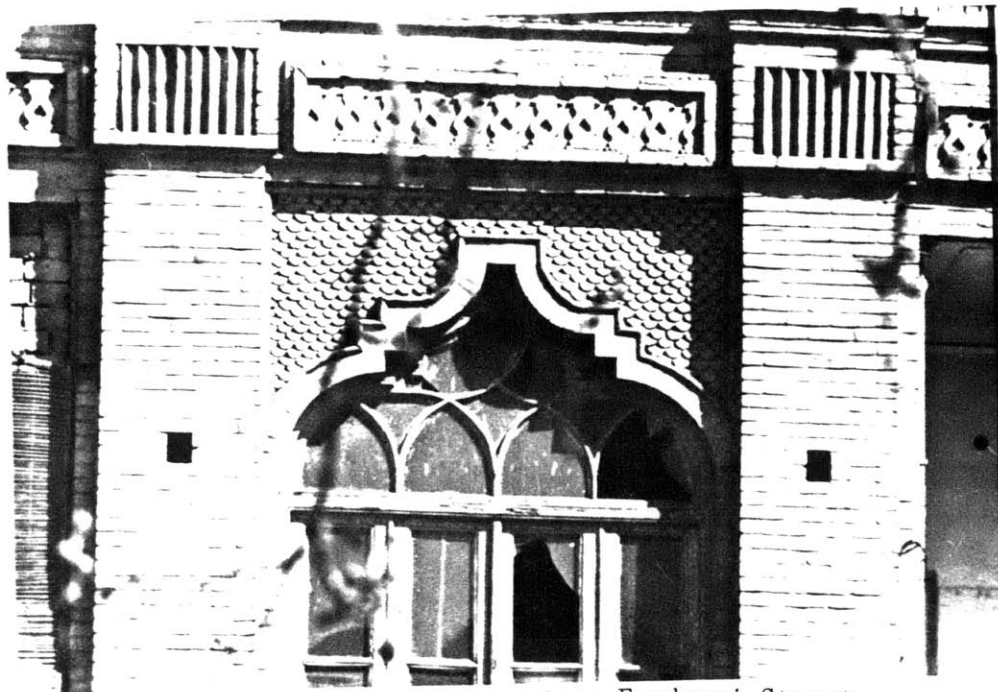


Fig. 3.60 Details of rowhouses along Ferdowsi Street



Fig. 3.61 Window details of rowhouses along Shahabad Street
Note false facade

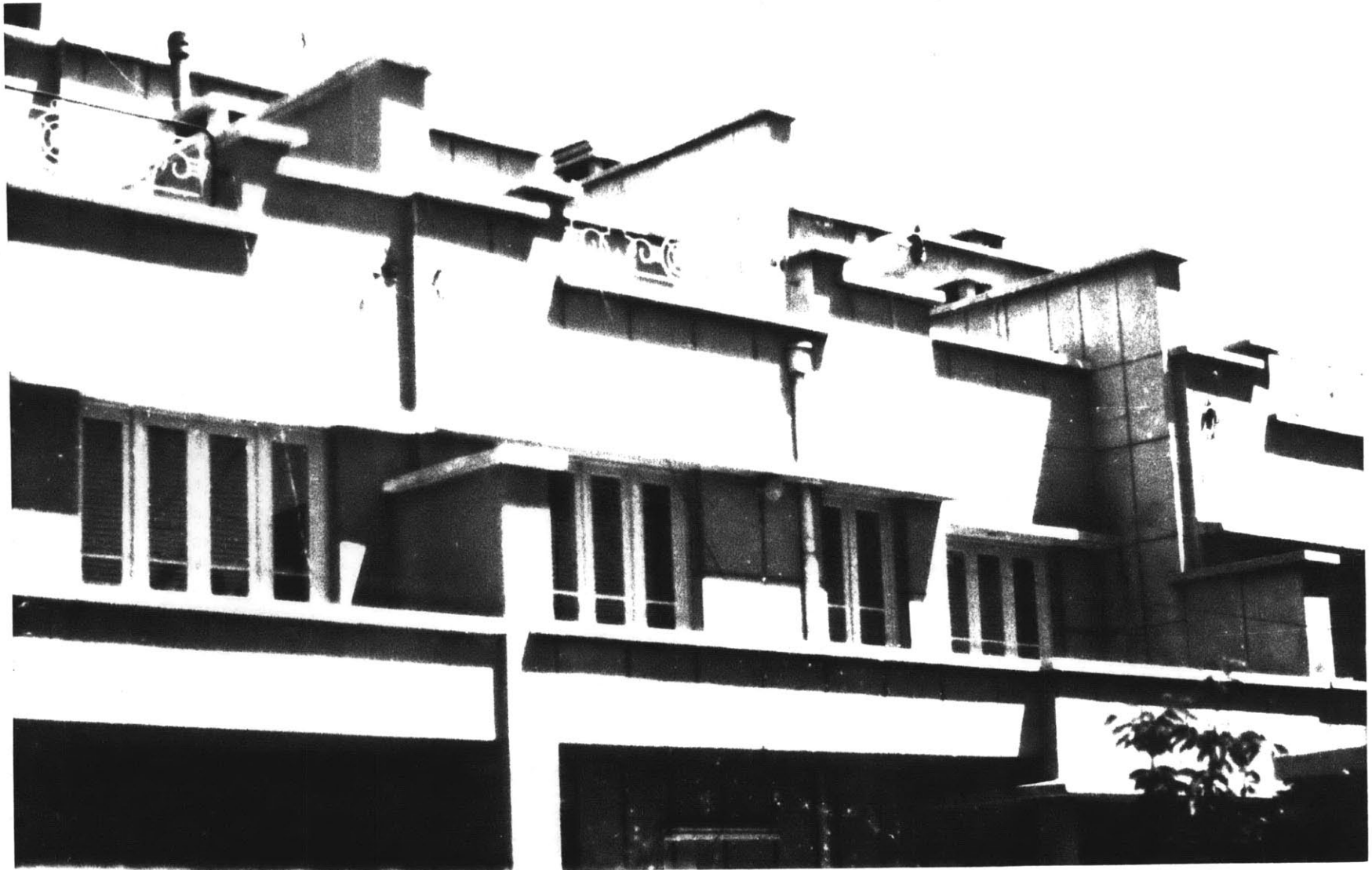


Fig. 3.62 Concrete rowhouses south of Shahreza Avenue



Fig. 3.63 Three story rowhouses along Shahreza Avenue

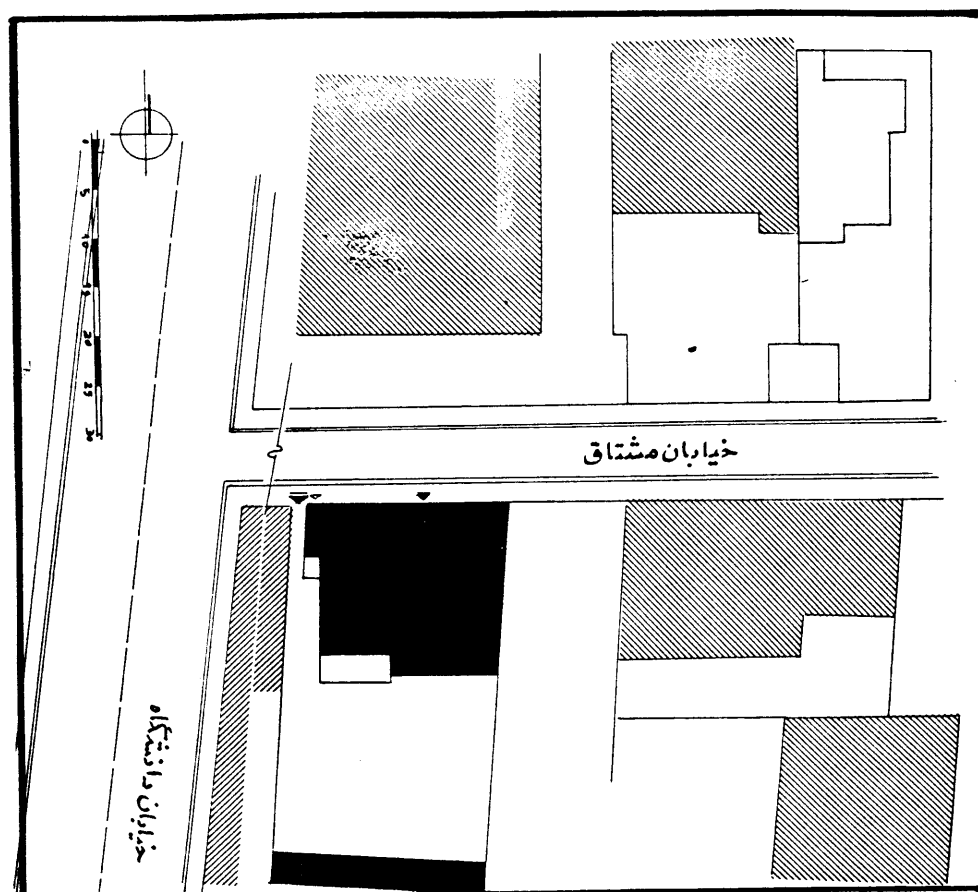


Fig. 3.64 Site plan of rowhouse at 100 Moshtaq Street

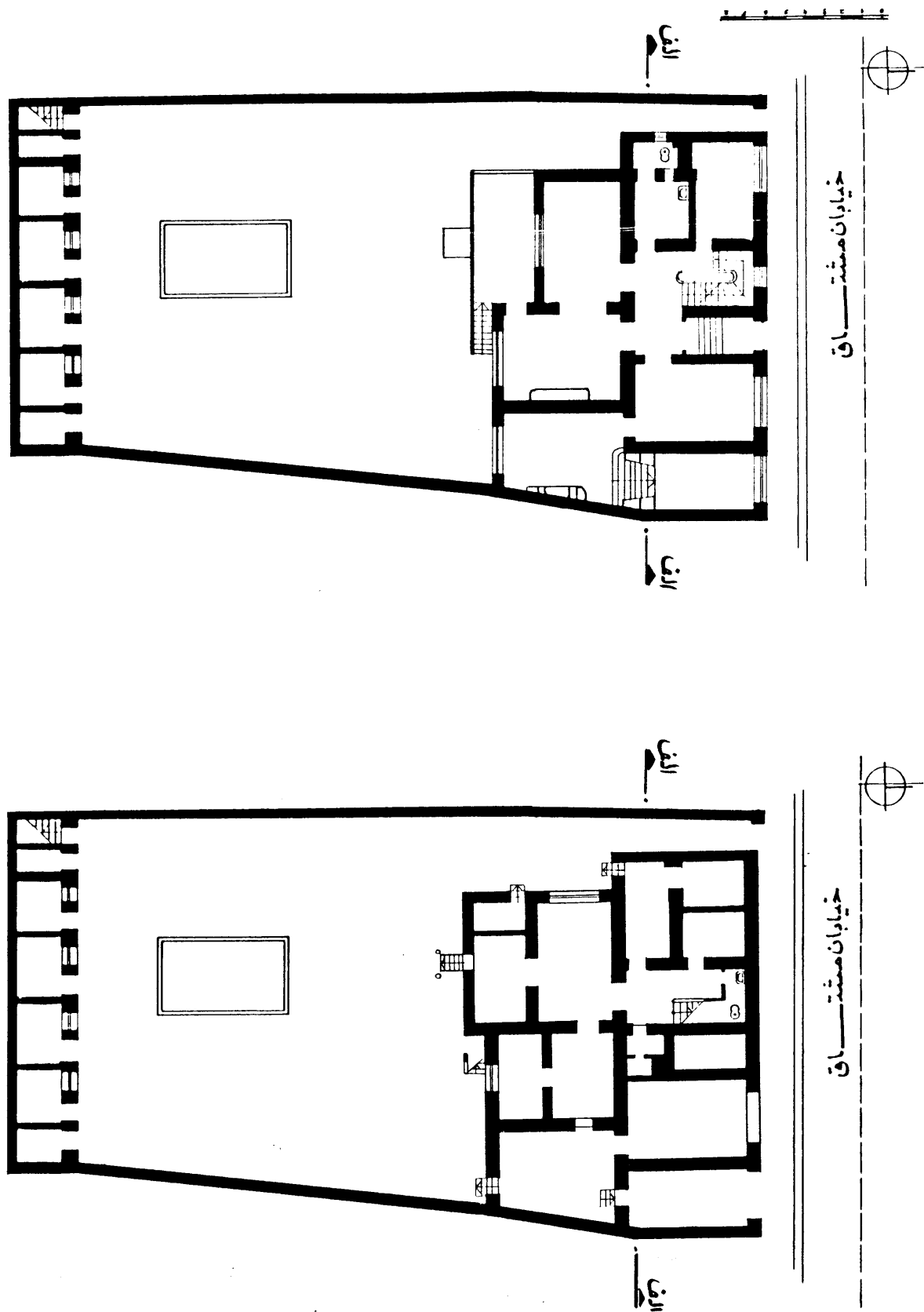


Fig. 3.65 Plans of rowhouse at 100 Moshtaq Street

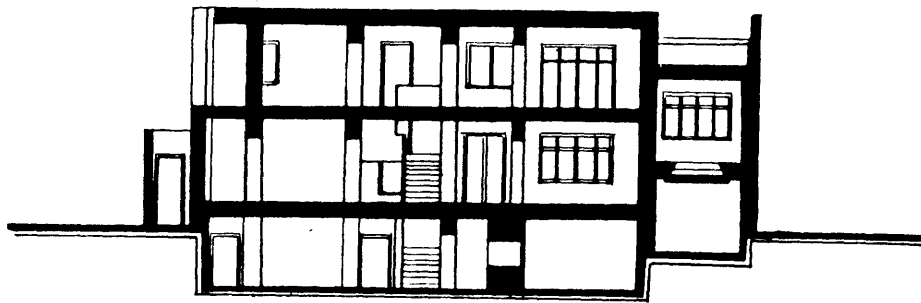
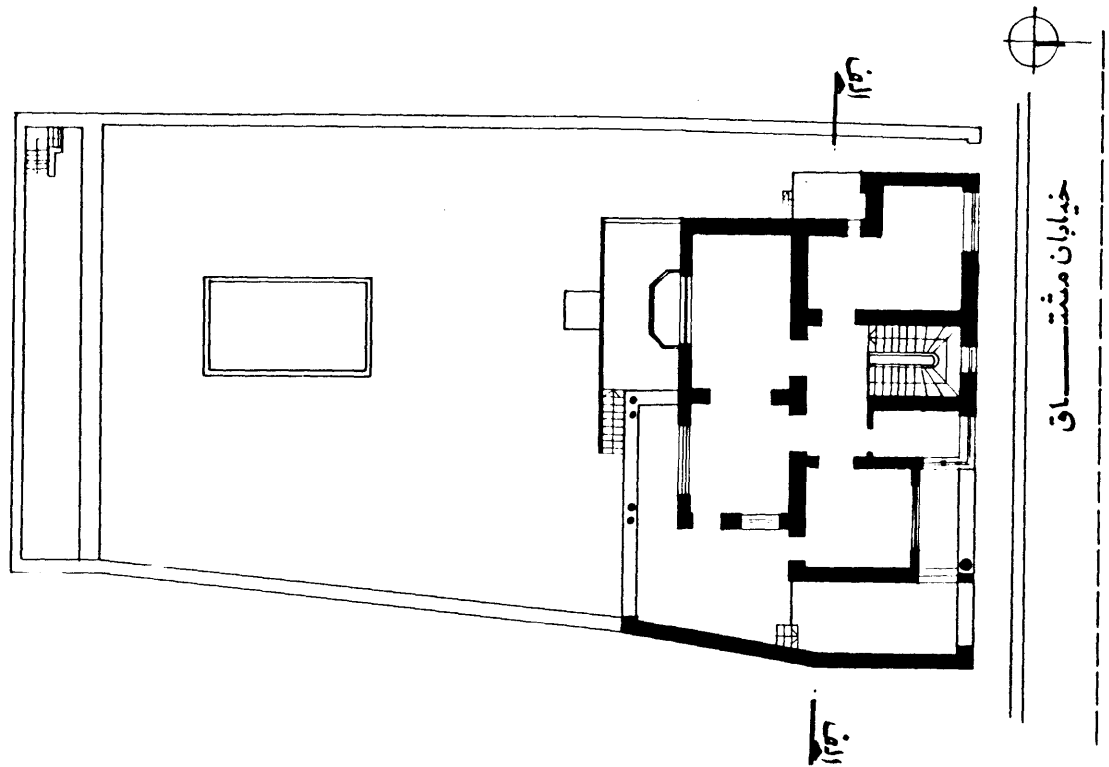


Fig. 3.66 Plan and section of rowhouse at 100 Moshtaq Street



Fig. 3.67 Street elevation of rowhouse at 100 Moshtaq Street

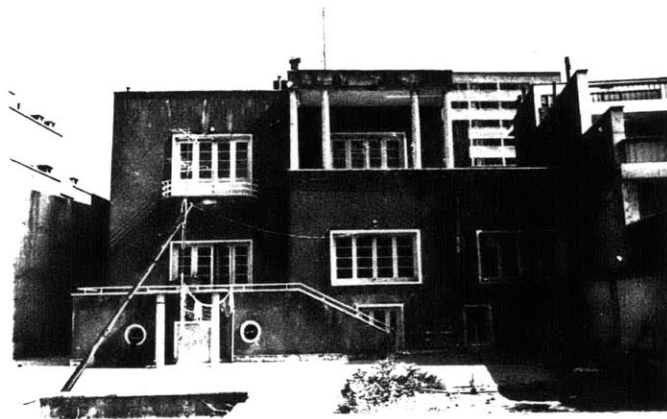


Fig. 3.68 Courtyard elevation of rowhouse at 100 Moshtaq Street

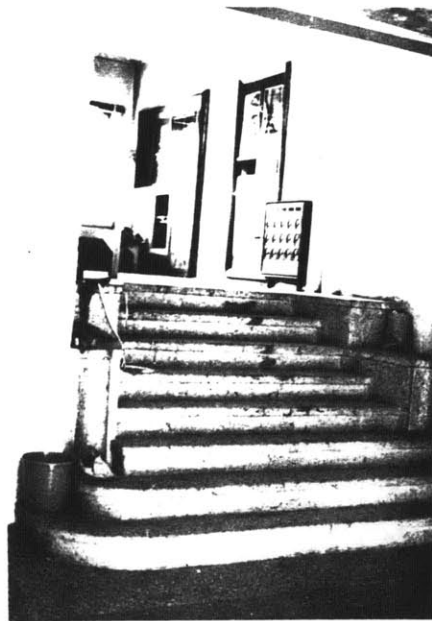


Fig. 3.69 Interior view of split level stairs and living room



Fig. 3.70 Elevation of service area



Fig. 3.71 Baharkhab and courtyard elevation showing terrace

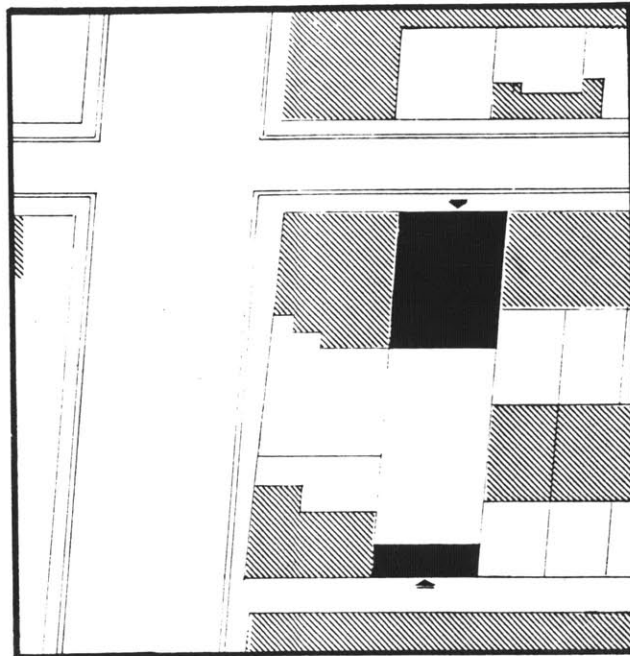
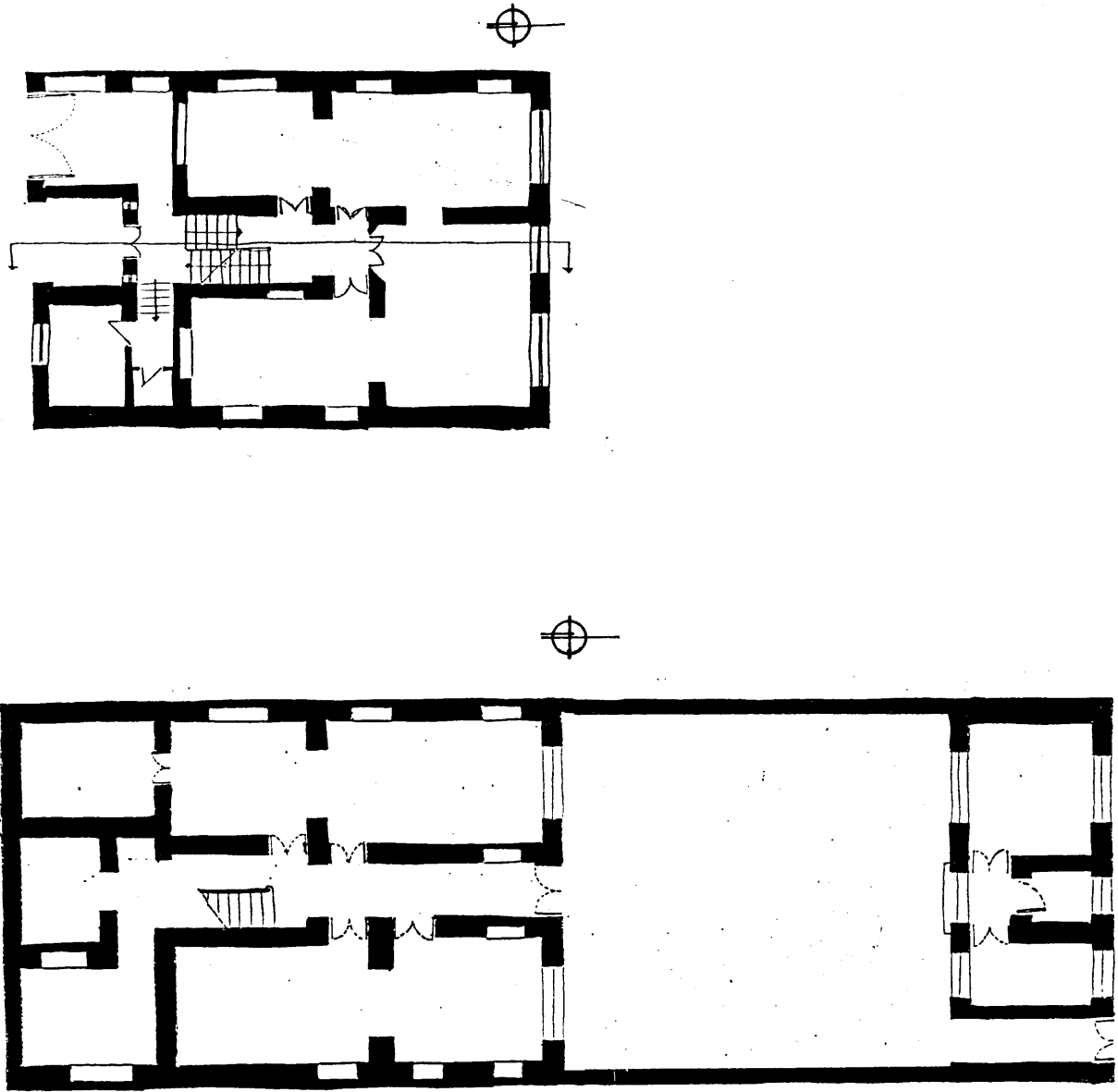


Fig. 3.72 Site plan of Mahmoudi rowhouse





پلان طبقه همکف مقیاس
Fig. 3.73 Ground and first floor plans of Mahmoudi rowhouse



Fig. 3.74 Main elevation of Mahmoudi rowhouse

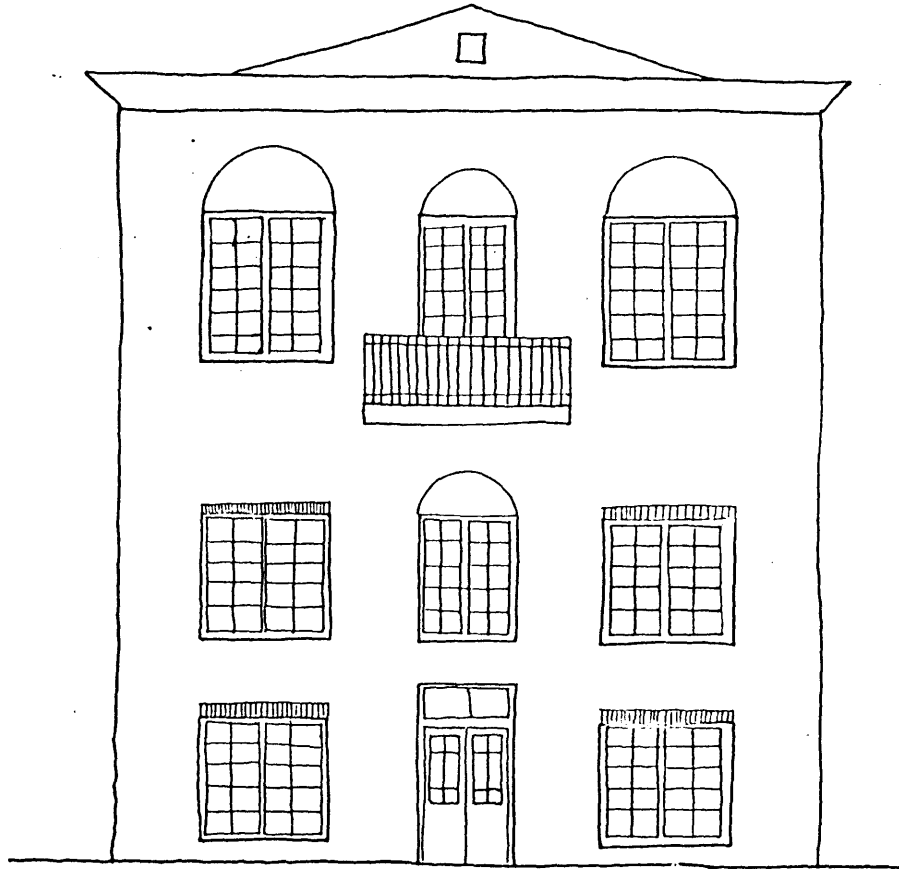


Fig. 3.75 Courtyard elevation of Mahmoudi rowhouse

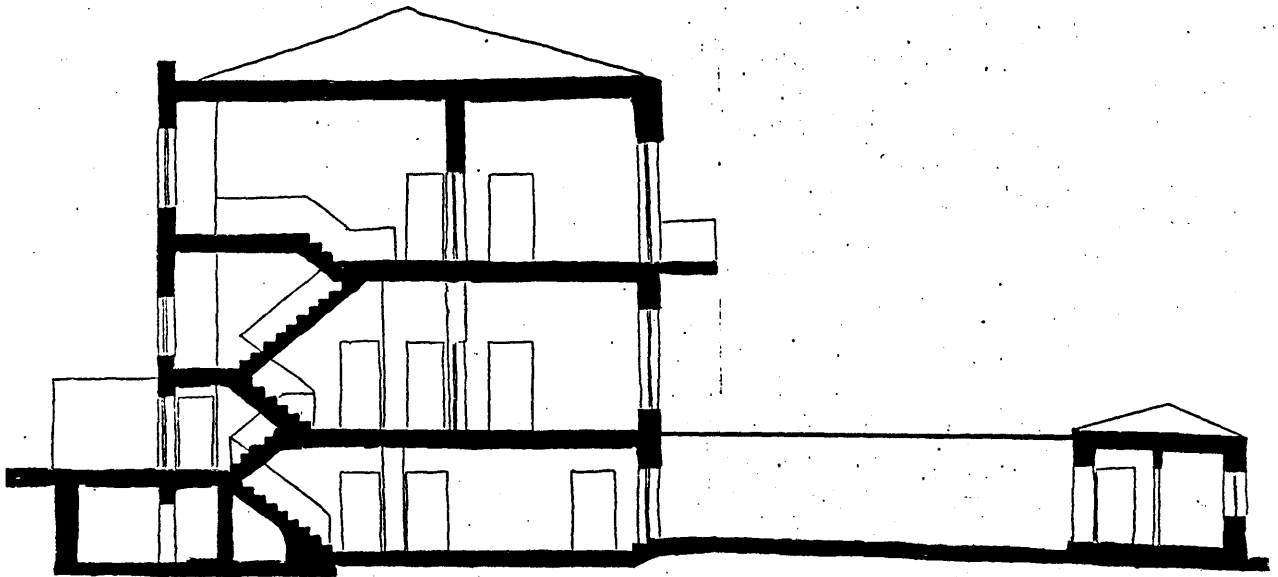


Fig. 3.76 Section of Mahmoudi rowhouse



Fig. 3.77 Apartment on Takht-e Jamshid Avenue



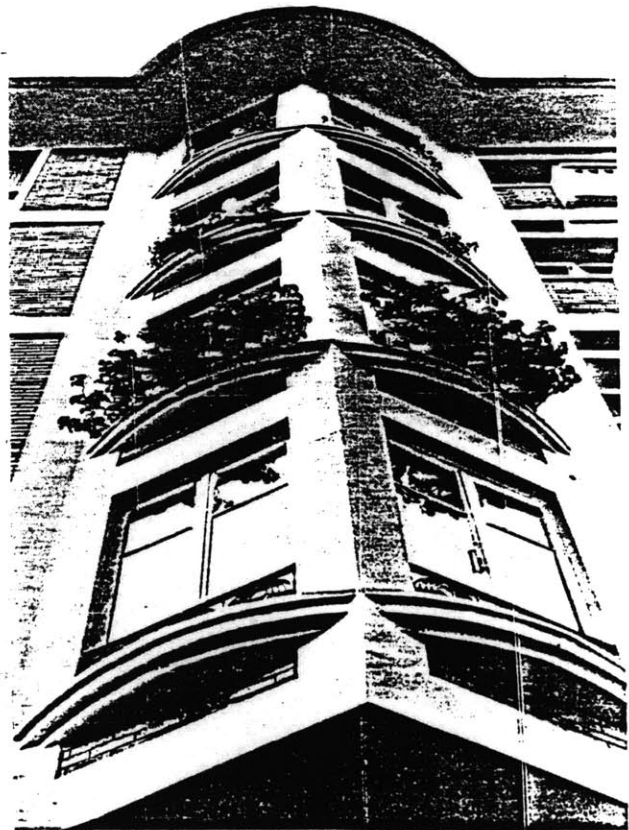
Fig. 3.78 Apartment on Takht-e Jamshid Avenue



Fig. 3.79 Apartment on Shahreza Avenue



Fig. 3.80 Apartment 126 rue de Provence in Paris



Habitation Hyg nique   Bon March , 7 rue Tr taigne, Paris.
1903.
Bow-window.



Fig. 3.81 Samaritaine department store in Paris, window detail

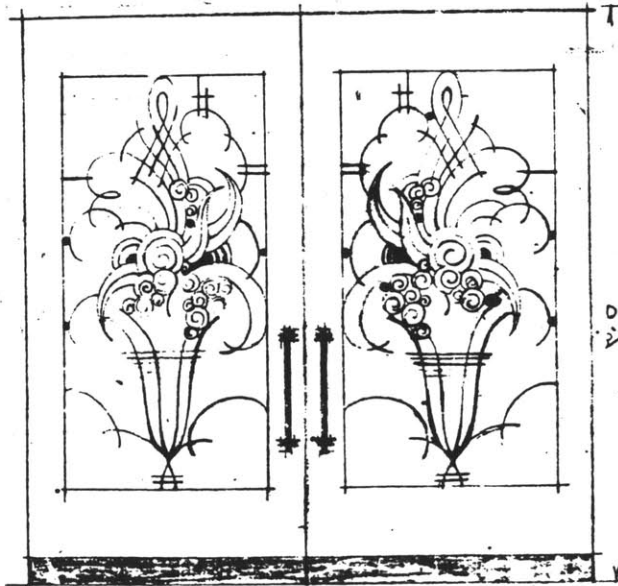
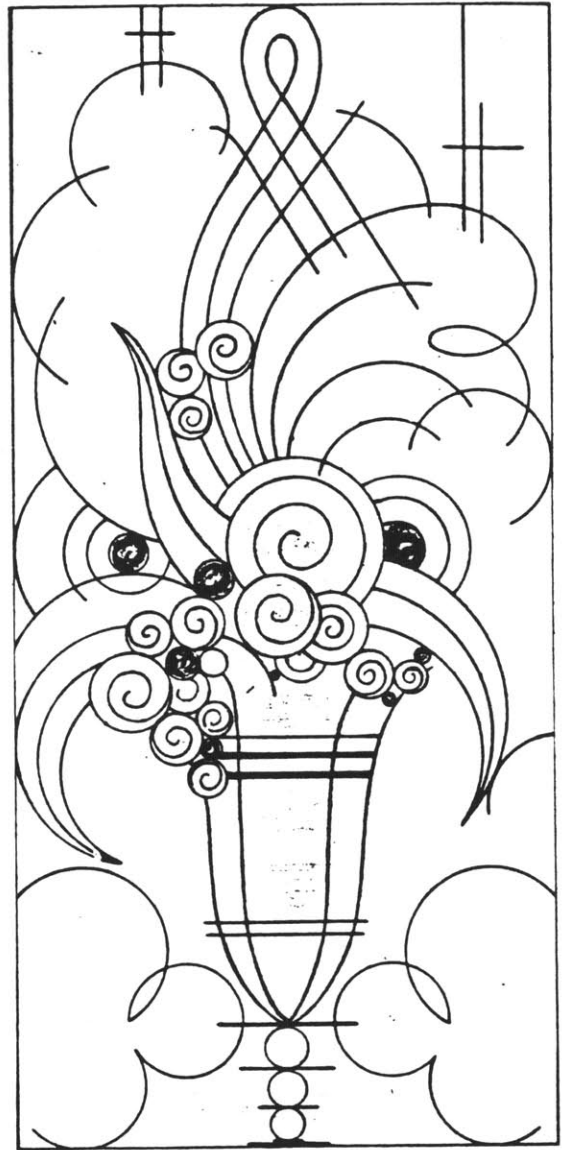
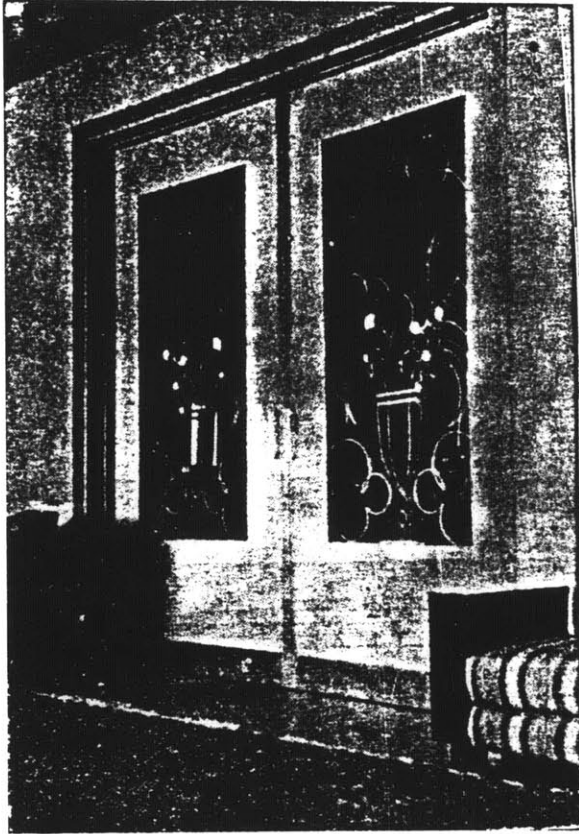


Fig. 3.82 Vartan interiors, influence of Art Nouveau



Fig. 3.83 Saadi apartment- exterior corner elevation

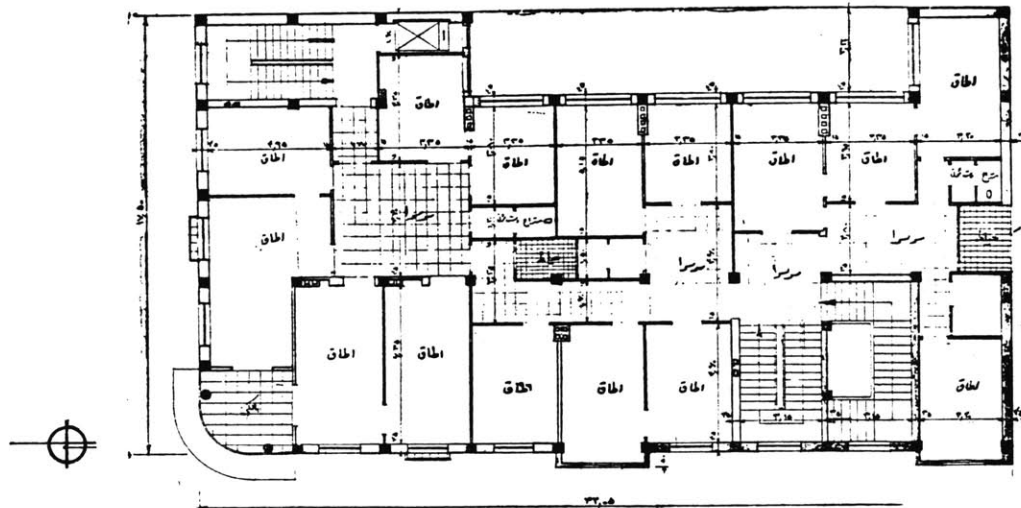


Fig. 3.84 Second floor plan of Saadi apartment

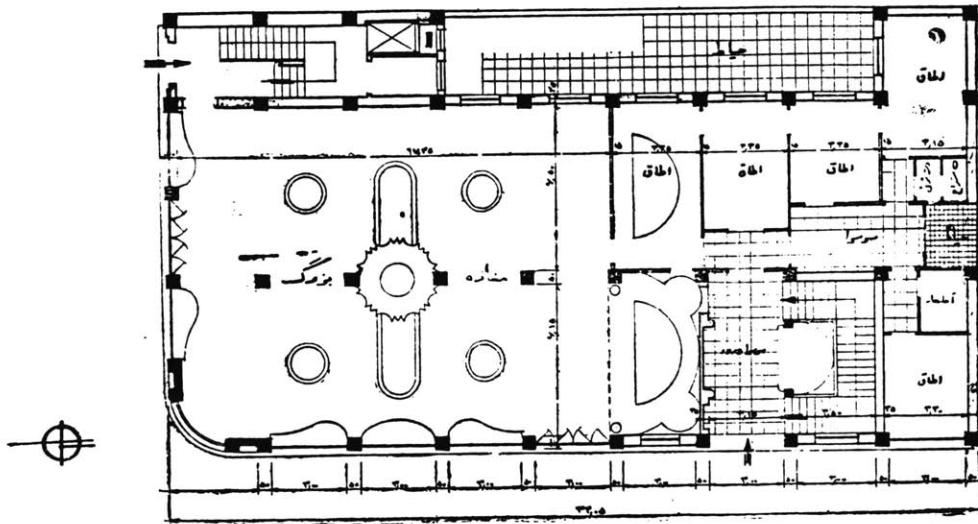


Fig. 3.85 First floor plan of Saadi apartment

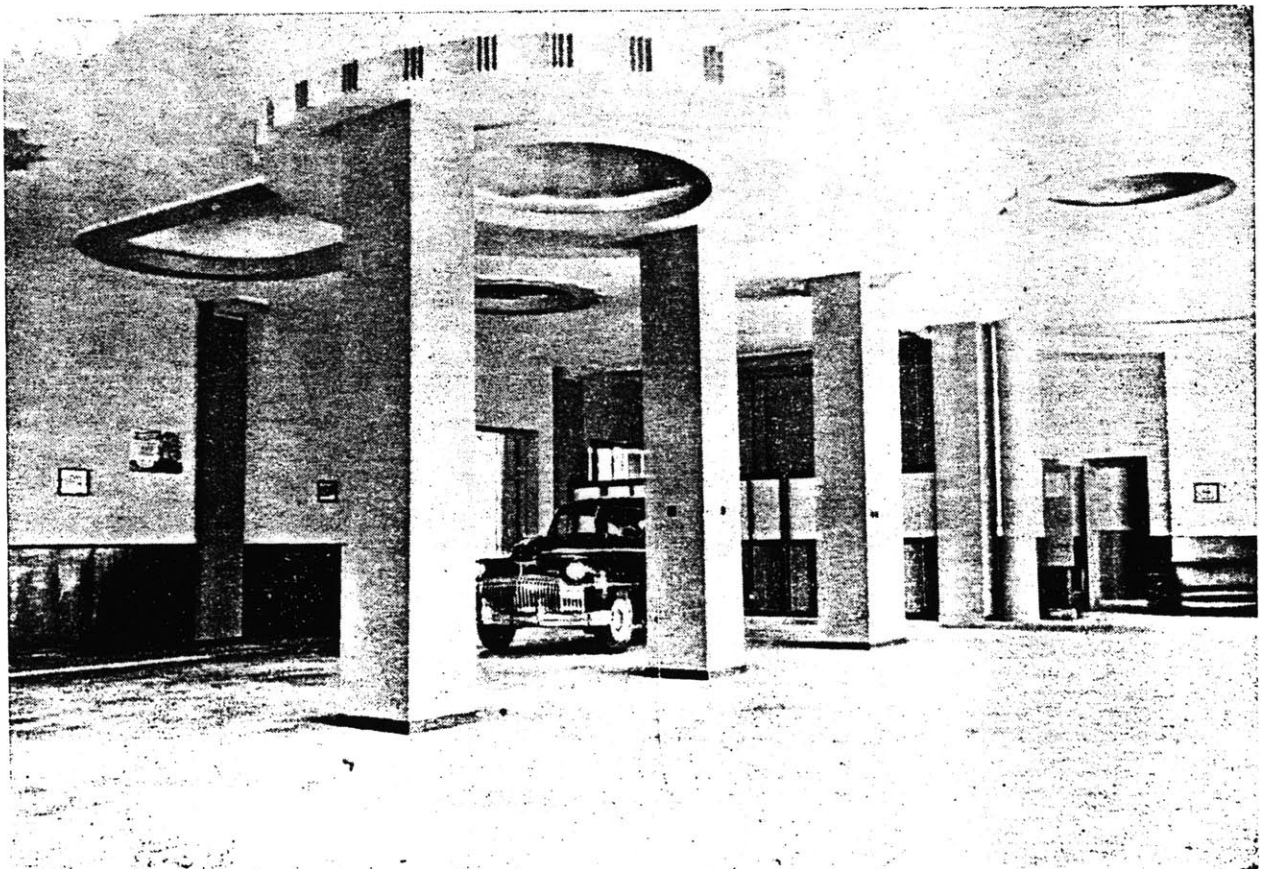


Fig. 3.86 Interior of large store in Saadi apartment

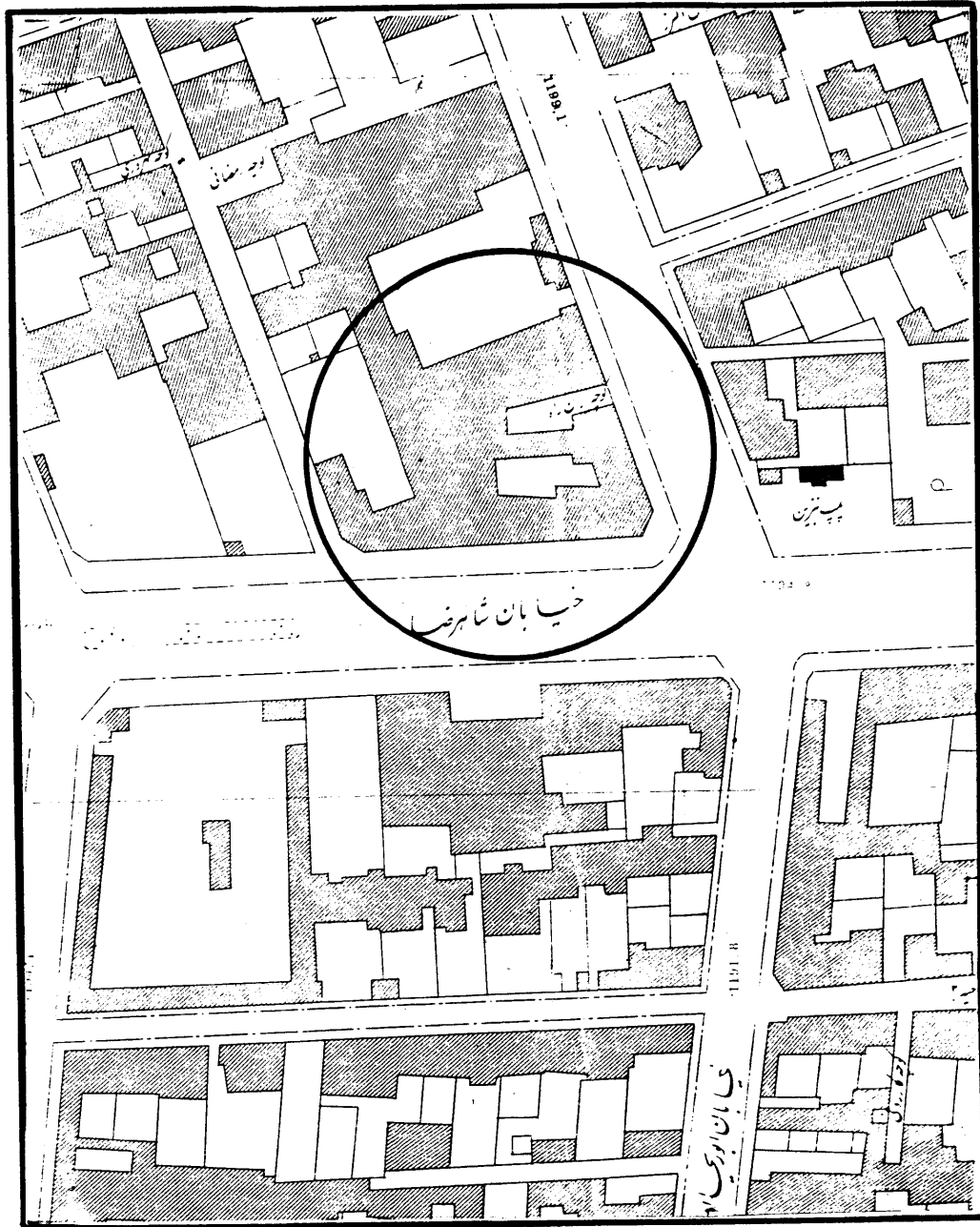
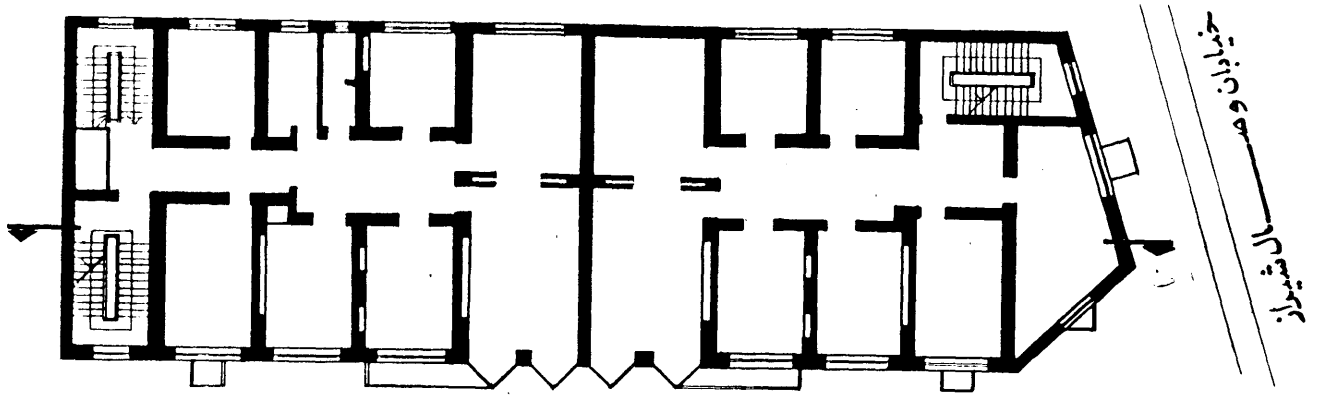


Fig. 3.87 Site plan of apartment at the corner of Vessal-e Shirazi Street and Shahreza Avenue



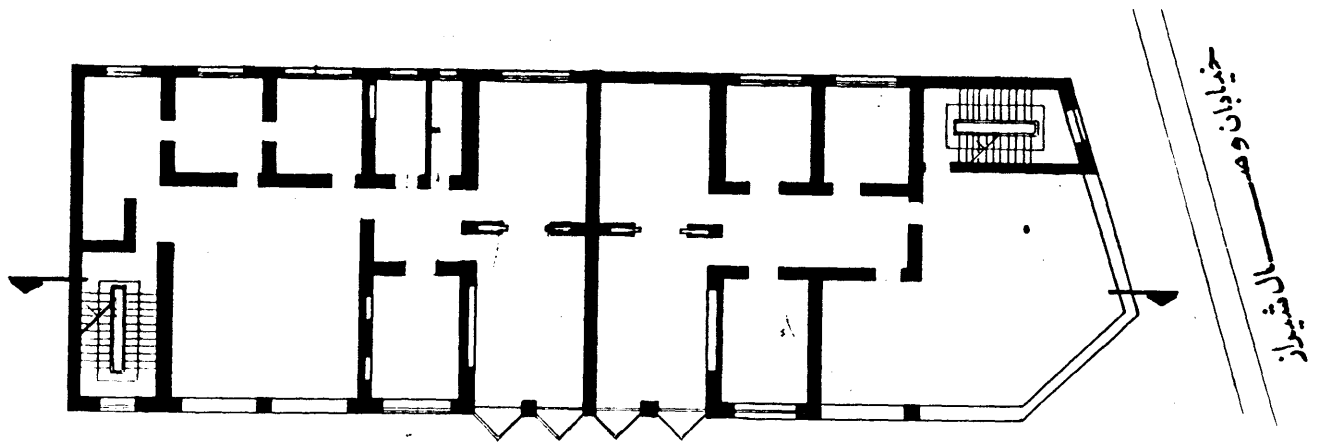
Fig. 3.88 Street elevation of apartment at the corner of Vessal-e Shirazi Street and Shahreza Avenue



پلان طبقه اول



خیابان مشاهرضا



پلان طبقه دوم



خیابان مشاهرضا

Fig. 3.89 Plans of apartment

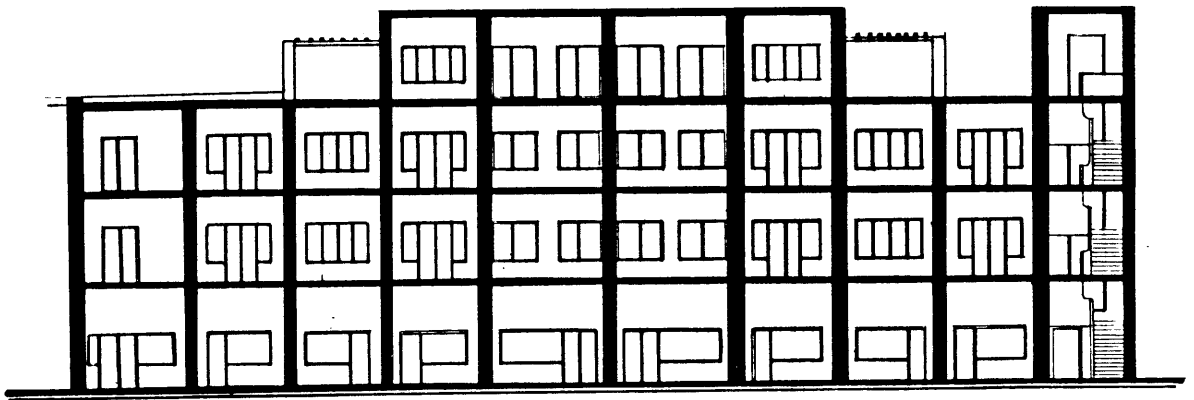


Fig. 3.90 Section of apartment

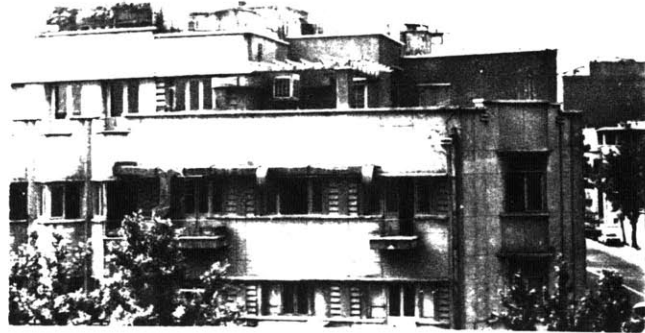


Fig. 3.91 Apartment at the corner of Vessal-e Shirazi Street and Shahreza Avenue showing upper level courtyard

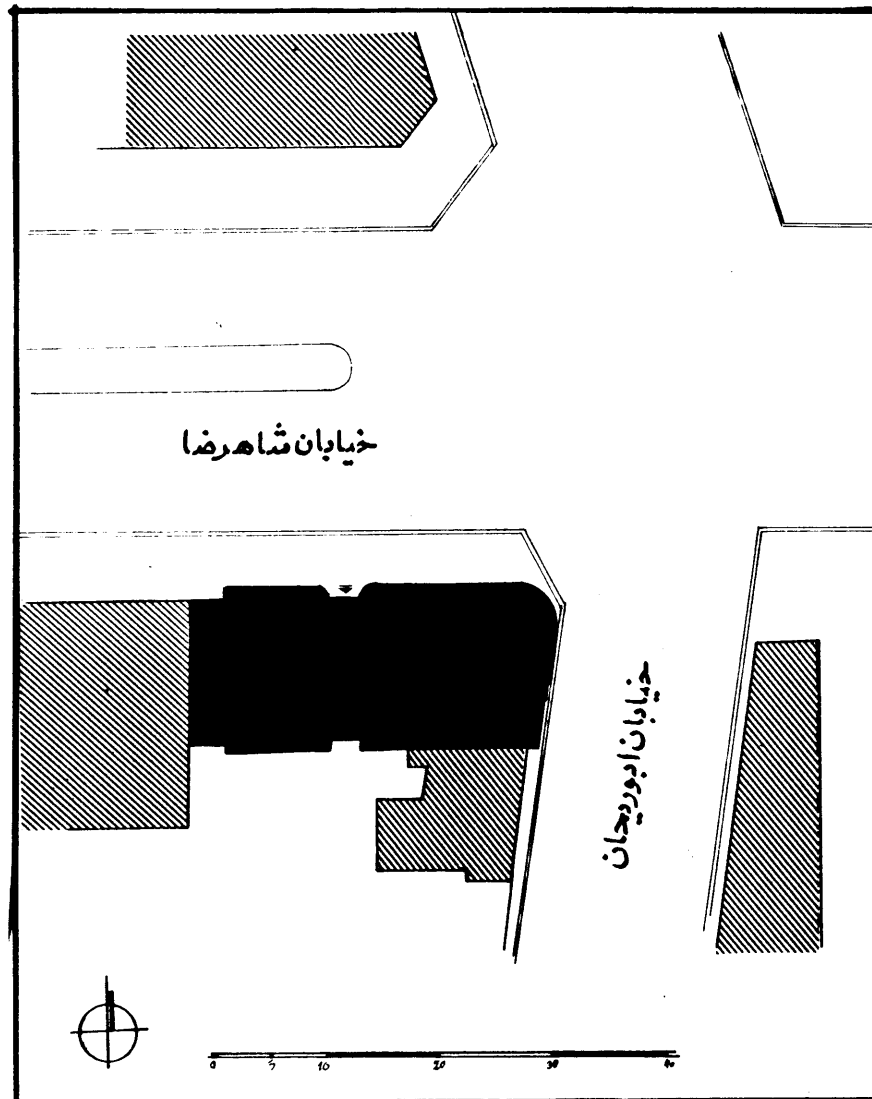


Fig. 3.92 Site plan of apartment at the corner of Shahreza Avenue and Abu Reyhan Street



Fig. 3.93 Main elevation of apartment on Shahreza Avenue and Abu Reyhan Street

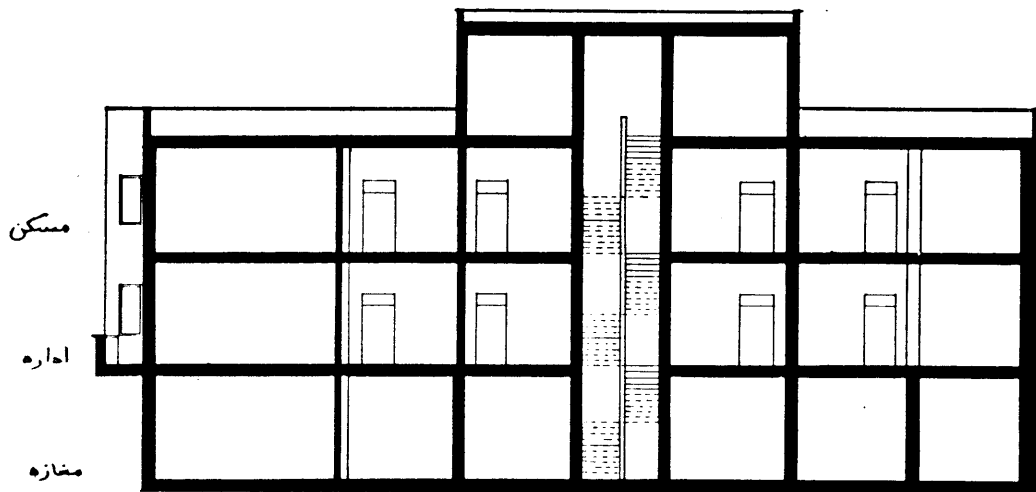
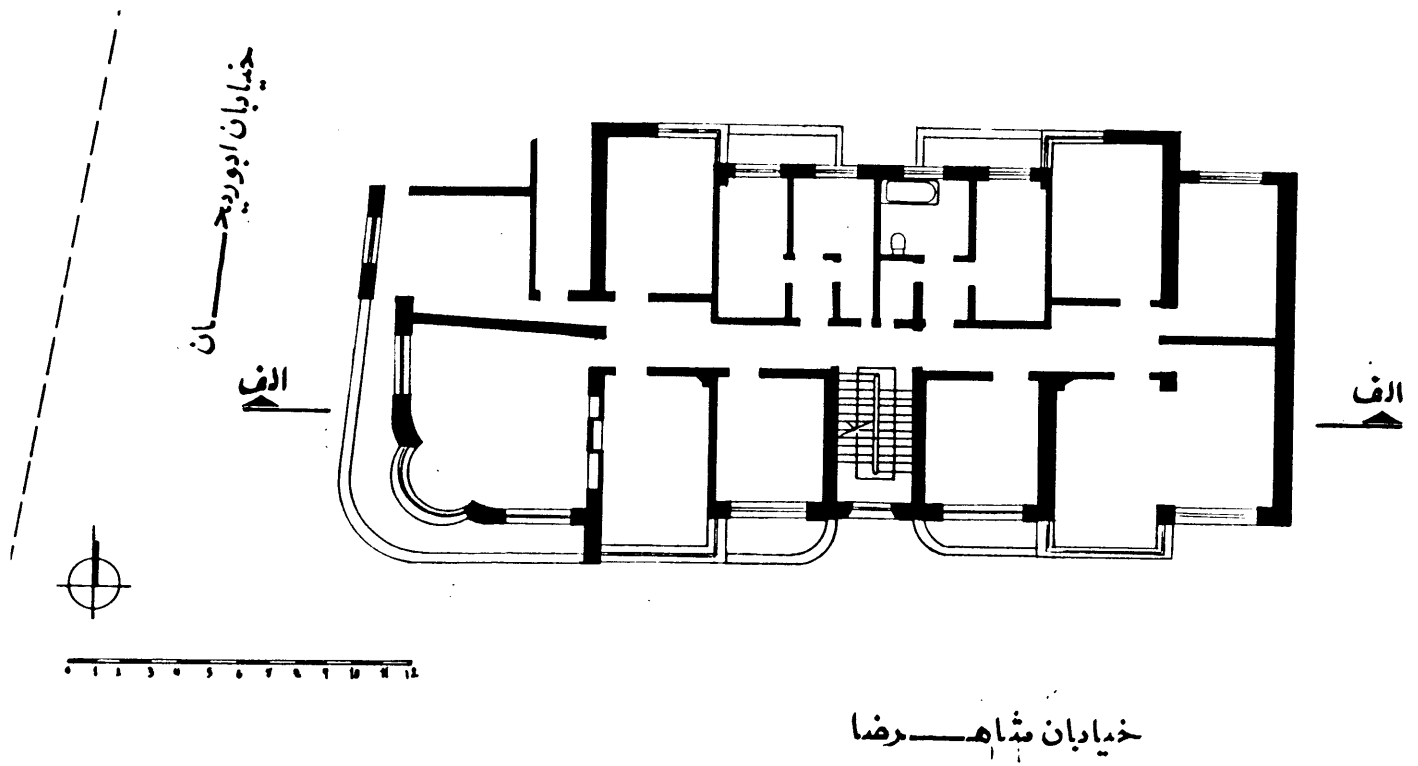


Fig. 3.94 Plan and section of apartment on Shahreza Avenue and Abu Reyhan Street



Fig. 3.95 Corner elevation of apartment on Shahreza Avenue and Abu Reyhan Street

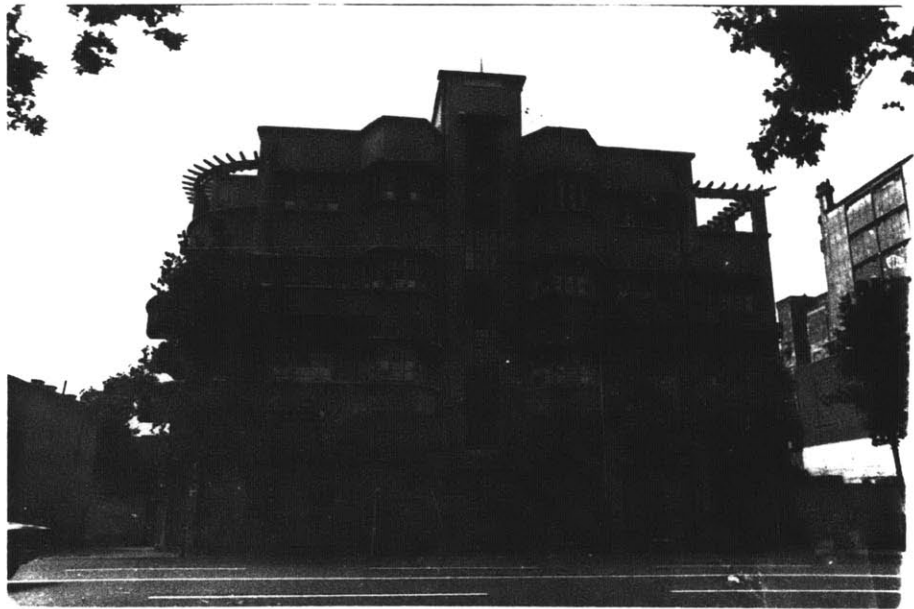


Fig. 3.96 Vartan apartment on Takht-e Jamshid Avenue



Fig. 3.97 Apartment on Takht-e Jamshid



Fig. 3.98 Apartment on Maydan Ferdowsi

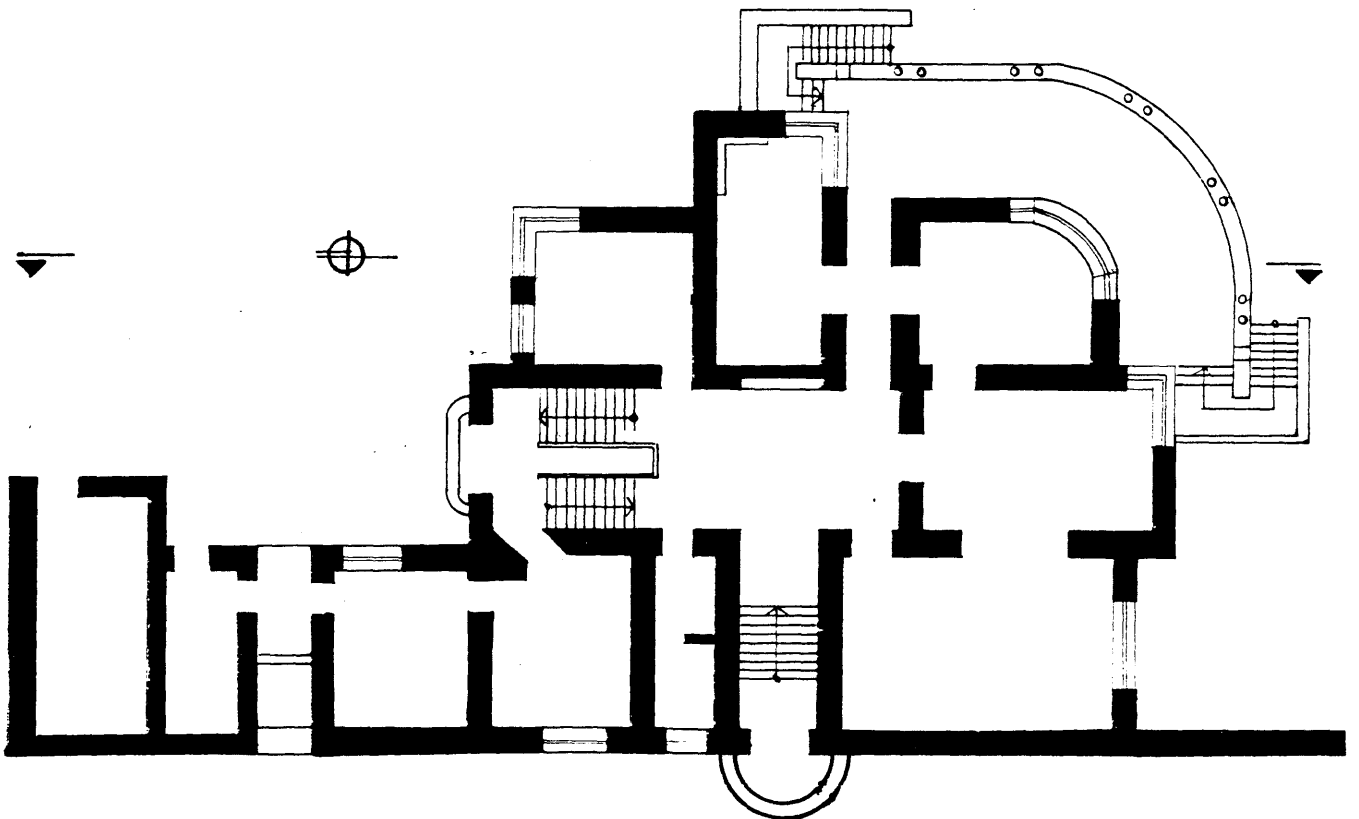
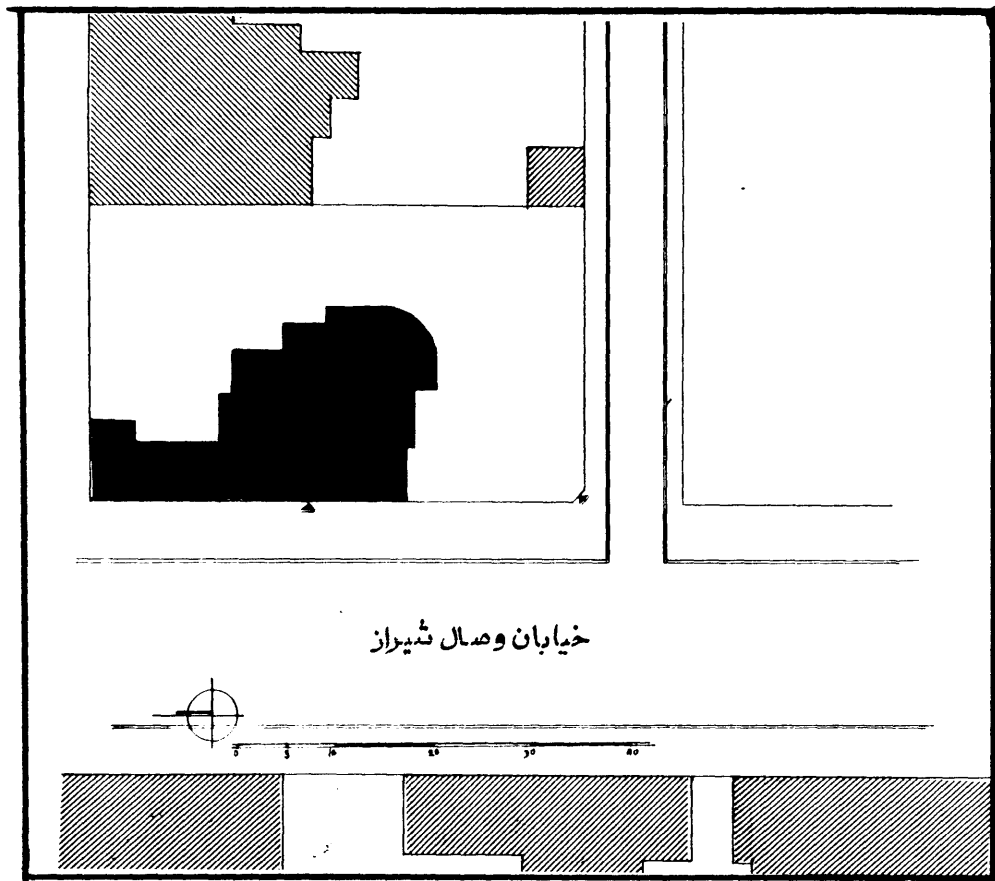


Fig. 3.99 Site plan and plan of Villa Afshar

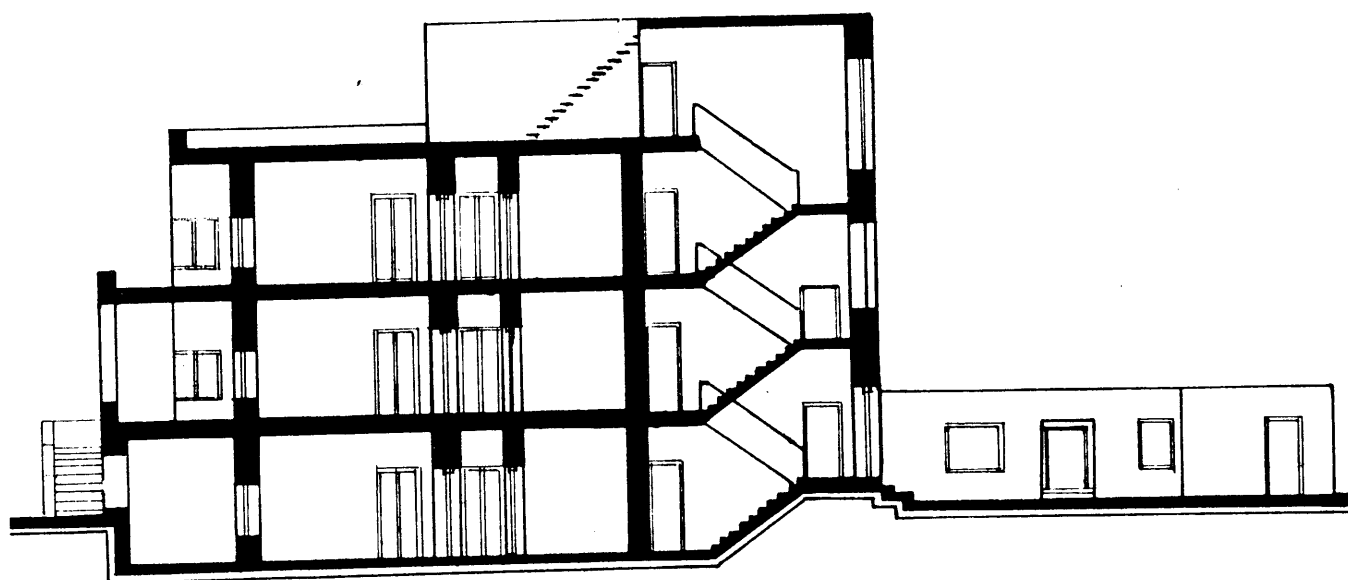
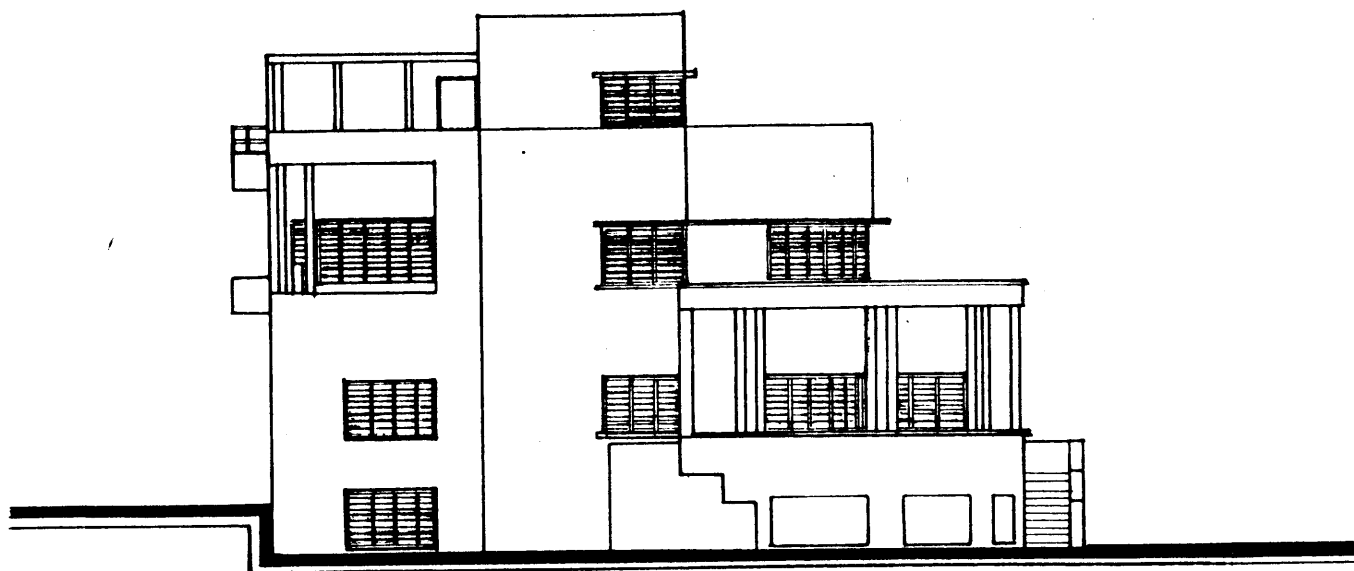


Fig. 3.100 Elevation and section of Villa Afshar

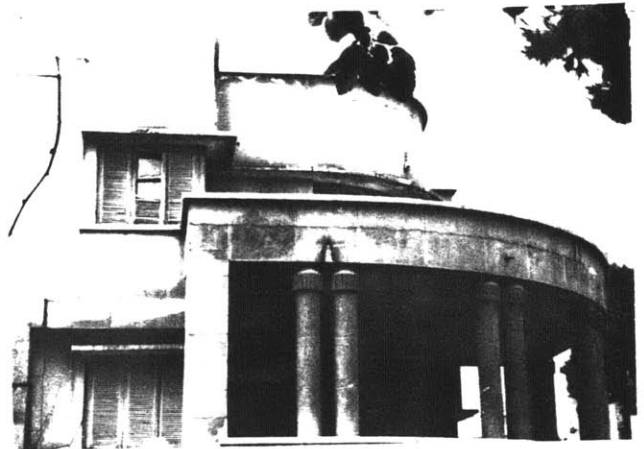
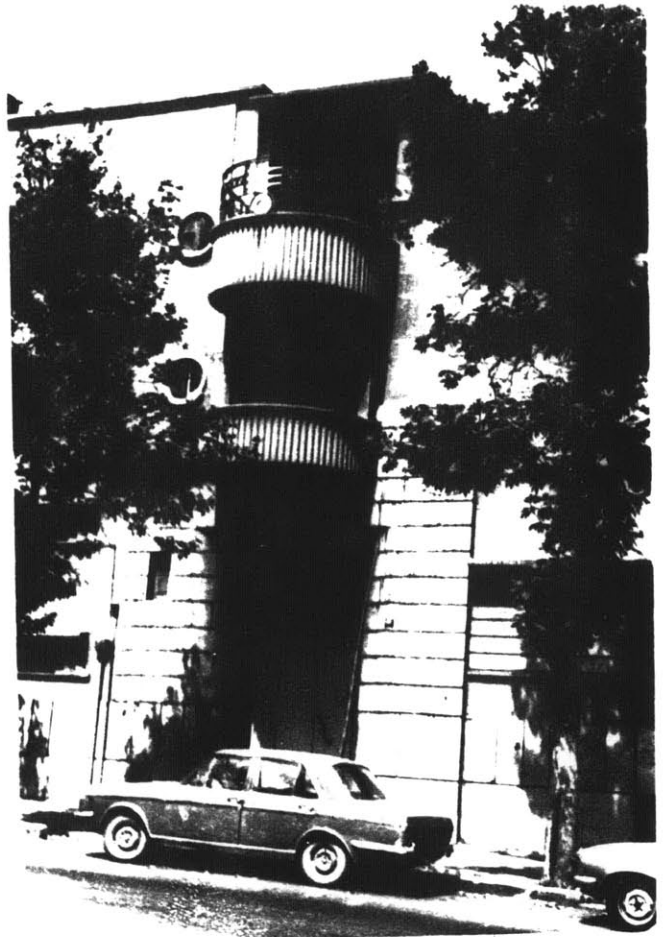


Fig. 3.101 Details of Villa Afshar

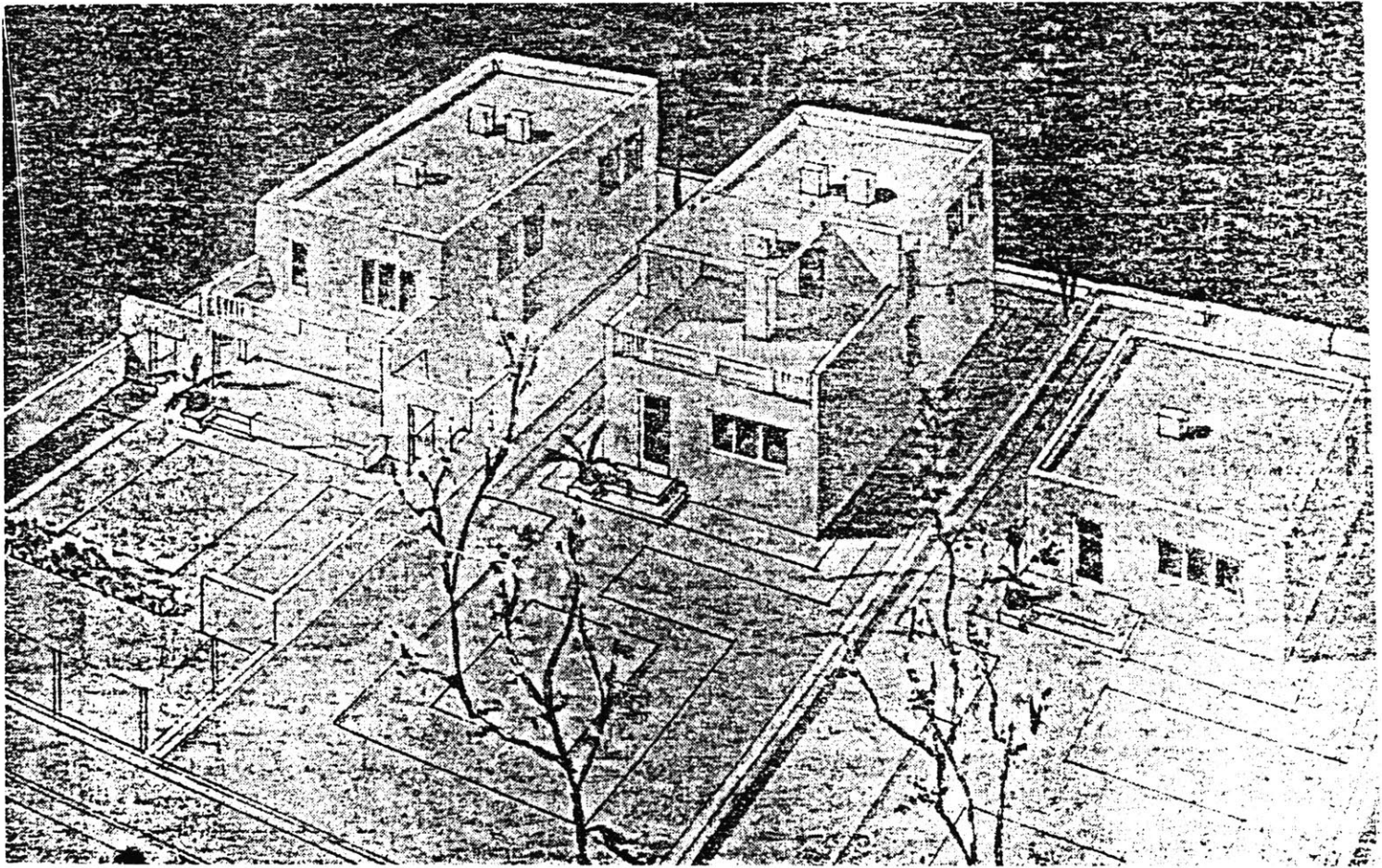


Fig. 3.102 Zafar drawings of housing typologies

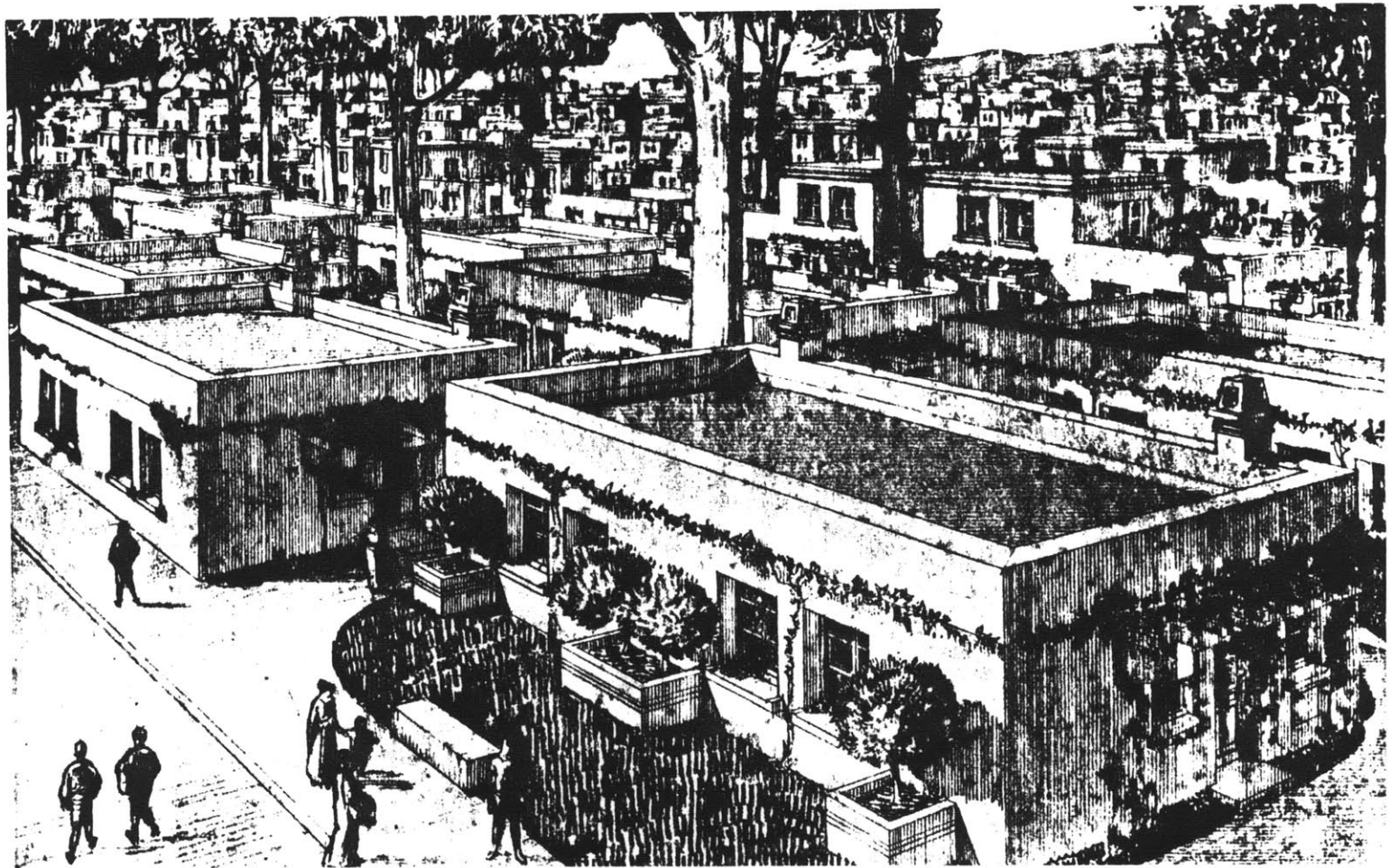


Fig. 3.103 Tony Garnier drawing of housing typologies

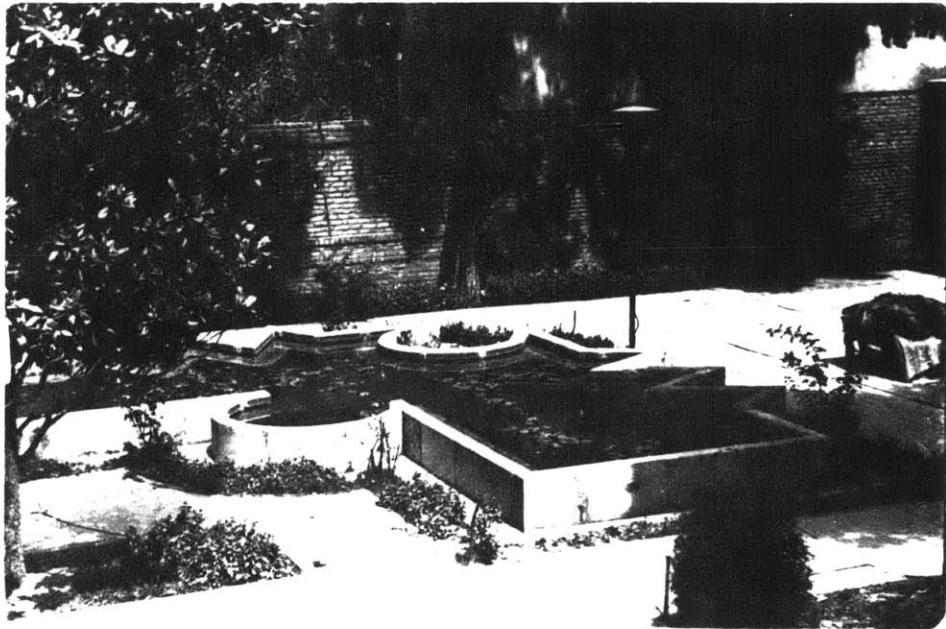


Fig. 3.104 Hawz of the main courtyard and the service courtyard of Villa Afshar

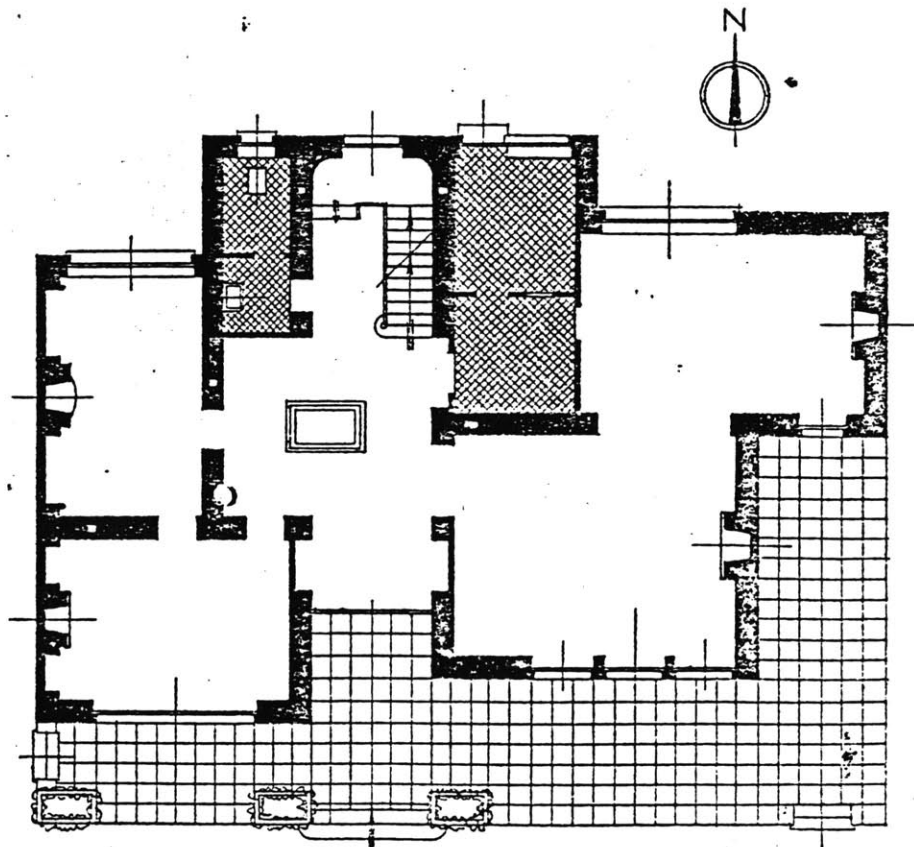
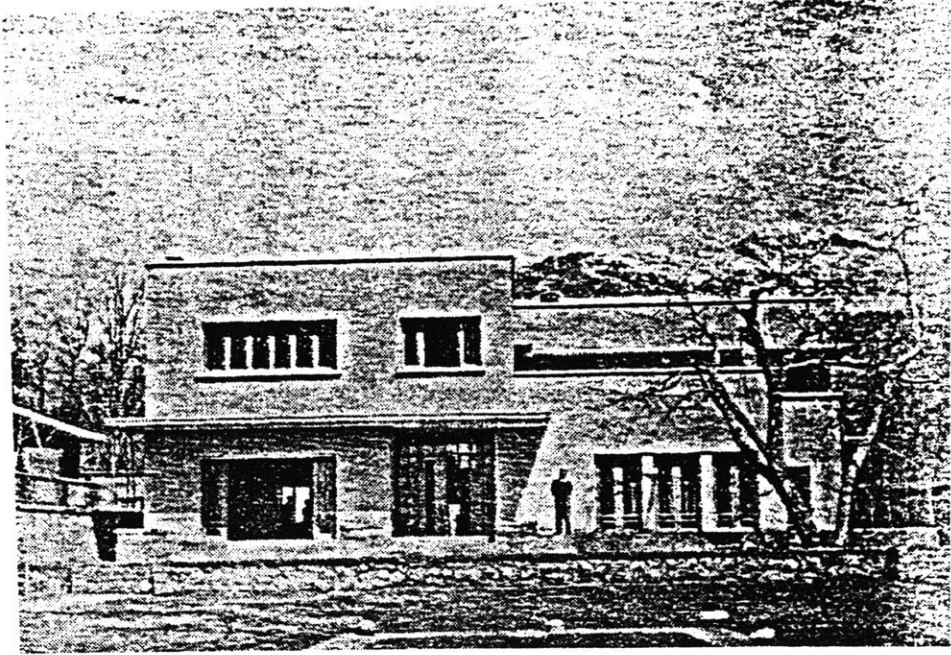


Fig. 3.105 Elevation and plan of a villa in Shemiran

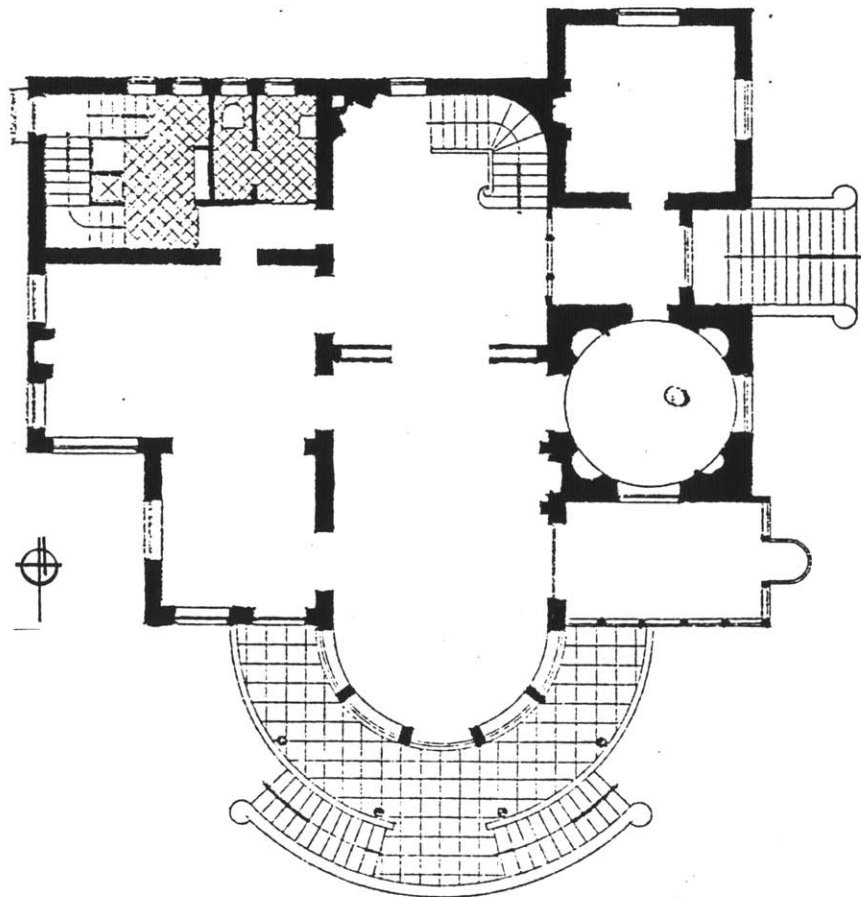
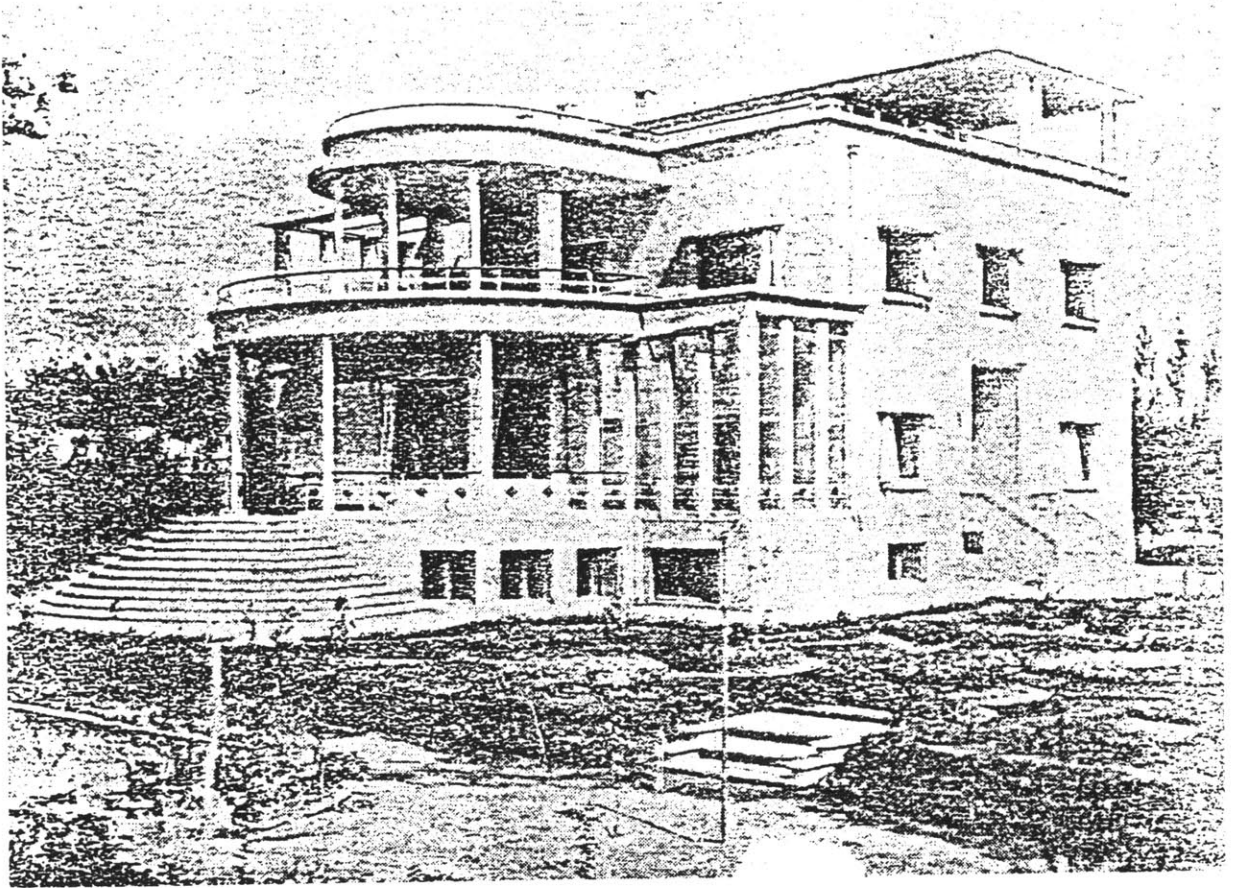


Fig. 3.107 Elevation and plan of Foroughi's villa in Tehran



Fig. 3.108 Central elevation of Foroughi's villa in Tehran

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