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THE PALACE OF SALAH BEY IN THE MEDINĀ OF CONSTANTINE
CONSERVATION AND RESTORATION

BY

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(State Architect)

THESIS SUBMITTED IN FULFILMENT OF
THE DEGREE OF MASTER IN CONSERVATION STUDIES
AT THE MACKINTOSH SCHOOL OF ARCHITECTURE

UNIVERSITY OF GLASGOW

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INTRODUCTION

Nowadays, there are many views and arguments on the theory and practice of conservation. One view regards old buildings as historical and cultural entities, valid in their own right, which deserve to be restored exactly as they were. Another view considers that account must be taken of new materials of artistic, technological and architectural value in the process of conservation. And then there is the view that only the outer, visible shell is important so that a street frontage can be preserved regardless of what stands behind it.

The architectural heritage is an expression of history and helps us to understand the relevance of the past in contemporary life. Thus, to pull down a street building leaving only its frontage standing, while fixing a new structure behind it, may be justified in terms of townscape. However, as far as the building itself is concerned, this is the opposite of conservation because it has effectively ceased to exist.

Nevertheless, in Europe today old buildings and historic centres are being integrated and involved within the new cities as valuable buildings, monuments, or ordinary

residential quarters typical of their period. Now these conserved areas and buildings provide attractive and healthy environments which attract people to previously undesirable and neglected neighbourhoods. In Constantine, despite its architectural value and its incorporation of a traditional lifestyle, the courtyard house is in serious danger. The problems are numerous. Essentially they are the practical problem of overcrowding and the difficult problems associated with being old and therefore unfashionable.

The political, social and economic changes after independence resulted in a considerable building boom. In some cases there were areas of complete rebuilding but the changes in the physical form of the town were scarcely noticeable. In the early stage of decay wealthy people moved out to the suburbs or the surrounding countryside and their old houses were divided into apartments to maximise rents without providing necessary services. The majority of them are suffering from lack of maintenance and in extreme cases from deliberate destruction in a misguided effort to improve the tenants' chances of being reaccommodated in new housing schemes in the suburbs. Absentee landlords, low rents and the lack of loans has stopped any improvement and repairs. At this point the decay has often gone so far as

to make the houses hardly serviceable; small isolated dwellings retain their character in individual buildings but the quality of an area has been so destroyed by the process of decay that no isolated building can resist the overall deterioration. Only a determined conservation policy can reverse this depressing pattern. Such a policy needs determination and substantial funds to put it into effect.

As the rate of decay increases, the pressure to maintain the continuity with the past increases, and today a new consciousness realizes that old buildings are an integral part of the cultural and historical identity of the town, and that if they are cared for and integrated within the contemporary way of life they can help to effect positive changes and thus stimulate new life in decayed buildings. In this context a practical approach is needed to save and protect our traditional buildings from total destruction. Imagination is needed in finding new uses which can save these buildings. If it can be done in many countries why should it not be done in Constantine?

This thesis is undertaken in the hope of contributing to the preservation of the historical and architectural heritage of Constantine. Even if it does not cover the

whole medina, it may at least draw attention to the architectural and historical values that hold these buildings and also show that there are ways of saving a building rather than allowing it to fall into ruin.

To this end an eighteenth-century palace has been chosen as a case study for conservation and conversion to new use.

The thesis is divided into four sections: The opening section is largely concerned with the history and urban development of the medina from earlier times till the present. The second section investigates the characteristics and functions of each space in the traditional domestic architecture and the materials and techniques of construction. The following sections deal with one particular building, the Palace of Salah Bey (1772). The final section proposes the conversion of the palace to a new use as a workshop where traditional craft objects are made and sold.

CONSTANTINE

I Description

Constantine, the third largest town in Algeria, is situated about 437km to the east of Algiers and 86km south-east of Skikda, the nearest port on the Mediterranean coast (see fig 1).

According to census, the population of Constantine was 52,247 in 1906, 235,000 in 1965 and 438,000 in 1987. The town is divided into two districts, the old town and, surrounding it on all sides, the modern city. (fig 2).

The old town, founded on a rocky plateau, is a perfect example of an ancient gala, or citadel. Within the distance of one kilometre, the plateau slopes from a height of 644m above sea level at the gasba (1) in the north to 534m at Sidi Rachid in the south-east (fig 3). It is bounded on three sides by the gorge of the River Rhumel, which flows between escarpments rising from 35m in depth at the south end of the plateau to 200m at the north-end. There were three city gates, the Bab Jabia (cistern gate),

1. Name of a quarter which means literally "barracks"

the Bab al-Wadi (ravine gate) and the Bab al-Jedid (new gate). These gates no longer exist though they have given their names to the adjoining quarters of the town.

On the west side of the town a narrow neck of rock forms a natural causeway connecting the rocky plateau with the surrounding area.

The old town is also connected to the modern city by four bridges: the Sidi M'sid bridge and the Bab al-qantara bridge to the north east, the Perregaux foot bridge to the east, and the Sidi Rachid bridge to the south-east (fig 3).

The old town has undergone few changes except for remodelling of some main streets in the central part and along the north-western boundary to create boulevards on Haussmannian principles. These are characterized by regular blocks, wide straight roads and opened facades in European fashion (pl 1). The remaining parts of the old town are compact, characterized by a network of narrow, twisting streets and dead-end alleys.

There are two main types of public space: Rahbat or souks, which are general public spaces for commerce and small industry, and shopping streets which are usually less

crowded than the market places (pl 2).

The mosques are to be found near the souks or on the shopping streets; such a position allows a large number of people to pray together near their place of work. Close to the mosque there usually stands a Rammam (2) or public bath, a funduq (3) or caravanserai, and often a zawiya, a holy place dedicated to a Muslim saint where religious instruction is given (fig 4).

There are also semi-public spaces, which are often the entrances to narrower dead-end alleys, wide at the beginning and narrow and dark at the end. These lead to private spaces, which are in fact the houses themselves (fig 5).

The exterior walls of the dwellings are almost blank with the exception of some small, grilled openings. Most dwellings are three storeys high, laid out around a central courtyard open to the sky and provided with facilities such as a well for use of all the inhabitants, latrines and

-
2. Turkish bath, used daily and with the requirement of ritual purity for the performance for the Friday prayer.
 3. Inn with open courtyard where foreign merchants lodge and exhibit their goods for sale

staircases.

The quality of space is heightened by the effects of light, colour and shade. One can feel the difference on progressing from public through semi-public to private space by psychological barriers from one space to another, such as arches, sabats (rooms spanning the street) and, ultimately, the presence of women in a house.

II The origin of Constantine

1. Prehistoric till Byzantine period

From prehistoric times till the Byzantine period, the site of Constantine was occupied by several civilisations. The important discoveries in 1849 of dolmens by H. Fournel (4) and in 1955 of stone tools by a team of French archaeologists in the region of Constantine shows that the site was settled in very early times. However, the existence of a stronghold in the third century B.C. greatly influenced by Carthaginian civilisation, is mentioned by classical texts (5) At this time the name of "Cirta" seems

4. R. Bourouiba, Constantine (Alger collection Art et culture Ministere de L'information et de la culture 1978) p 15

5. Classical texts from Greek and Roman historians.

to have been given to this place by the Numidians, who were natives.

Following the fall of Carthage to the Romans in 147 B.C. (6) the city was elevated to the status of a colony under the reign of Julius Caesar to recompense the partisans of Publius Sittius Nucerinus, who had rendered him important services, and was called Cirta Julia. However, the town fell after an unsuccessful revolt against Maxcentius, and was razed to the ground in A.D. 311, subsequently to be rebuilt by the Emperor Constantine the Great in A.D. 313, after whom it was called Constantine, the name it retains to this day.

The Vandal invasion of A.D. 430 (7) led to the occupation of the city by the barbarians, who were natives. After the destruction of the western Roman empire Constantine remained independent until the Byzantine invasion of North Africa, when the city was overrun in A.D. 533 and remained part of the Byzantine Empire until the Arab conquest.

6. G. Yver, Encyclopaedia of Islam (Leiden and London 1913-1938 and 1960 to date) p 530

7. Julien, Ch-A, History of North Africa, Tunisie, Algerie, Maroc (Payot, Paris 1956), p99

2. From the Arab conquest to the French occupation

In the seventh century began a period of Islamic influence. In this period, Constantine was among the provinces of Ifriqiya (8) governed successively by the rulers of Qayrawan, the Fatimids in the early tenth century, and the Zirids at the end of the tenth century. (9)

In the eleventh century the city was controlled by the Hammadids then the Almohads from the middle of the twelfth century to the middle of the thirteenth century, before coming within the sphere of influence of the Hafsids of Tunis between the middle of the thirteenth century and the middle of the sixteenth century. Very few architectural remains survive from this period.

In 1535 the city began two hundred years of Ottoman Turkish domination. At this time Constantine became the capital of Eastern Algeria, occupying a key position on the major trade routes linking Algiers to the west with Tunis to the east, and Batna to the south with Skikda and Annaba to the

8. The arabised version of the Roman province of Tunisia and the eastern part of Algeria.

9. T. Clifford Edmund Basworth, The Islamic Dynasties (Edinburgh 1972).

north.

Following a century marked by troubles and rebellion against the Turks between 1535 and 1637, Constantine enjoyed complete tranquility for fifty years under the governorship of Bey (10) Farhat. (11)

In the eighteenth century the city was governed by men of energy and intellect, such as Kaliyan Hasan, called Bu-Kamia (1713-1736), Hasan Bu-Husain called Bu-Hanak (1736-1754), Ahmed al-Qulli (1756-1771) and above all Salah Bey (1771-1792). All these beys were responsible for many public works of general interest. This period of stability did not last, however, and between 1792 and 1826 (12) Constantine entered a period of anarchy and disorder. Seventeen beys ruled the city, some of them only for a few months or even a few days.

After the French occupation of Algiers in 1830, Ahmed, the last bey of Constantine, created an independent principality in the east and resisted for almost seven

10. Turkish term which means governor of a province.

11. E. Vaysettes, Histoire de Constantine sous la domination Turque (recueil de la societe archeologique (1867-1869).

12. E. Vaysettes, op cit.

years against the French troops till 13 October 1837 (13) when the town was taken after fierce fighting. Constantine then became the base of French operations in the eastern province.

III Urban development of the old town

Because of its natural defences, the thirty hectare site of the Medina of Constantine has been important throughout history. Each civilisation has overlaid its own buildings on the vestiges of its predecessors. As a result the town has preserved very few remains of its pre-Turkish past above ground.

In modern times, parts of an aqueduct and the Al-Qantara Bridge are the only physical remains from the Roman period. The bridge was described by Al-Bakri, the Arab geographer of the eleventh century, who wrote: "This bridge is a remarkable structure, its height above the level of the water being about 100 cubits. It is composed of five upper and lower arches, which span the valley. Three of these, namely those of the west, have two storeys, they are intended for the passage of water, while the upper ones form a communication between the two sides of the ravine" (fig 6). From the period after the Arab conquest, all that survives is the Great Mosque, which, though altered and disfigured, still possesses a mihrab (14) dating from 1063. (15) Therefore it seems reasonable to suppose that the

14. A niche in a mosque or in any religious building, which indicates the direction of Mecca and thus of prayer

15. Derek Hill, Lucien Golvin, Islamic Architecture in North Africa (London 1976).

mosque was built by the Hammadids (see pl 3). The Medina of Constantine, therefore, is essentially a relic of the Turkish period, most of its early constructions date from the eighteenth century. In that century, Kaliyan Hassan, known as Bu-Kamia, built the mosque of suq al-Ghazl (1730), Hassan Bu-Hussain, known as Bu-Hanak built the mosque of Sidi Lakhdar (1743) and laid out new streets, and Ahmed al-Qulli ordered the restoration of the ruined mosque of "Sidi Abdelmoumene" (1769).

In 1771, Constantine came under the governorship of a Bey of power and intellect called Salah Bey, who was one of the most influential figures in the Turkish administration.

Salah Bey was born in 1725 (16) at Smyrna (modern Izmir) in Turkey. At the age of sixteen he was already a soldier distinguished by his courage. He was promoted to the rank "qaaïd" and later, upon the death of his father-in-law Ahmed al-Qolli he became bey of Constantine.

During his reign, Salah Bey carried out one of the largest programmes of building works ever seen in the history of Constantine before the arrival of the French. He enhanced

16. R. Bourouiba, op cit.

the old town by building the quarter of Sidi al-Kattani to the north-east, where he built his own palace in 1772 (17) and the madrasa and mosque of Sidi al-Kattani in 1775 and 1776. (18)

In 1776, he reorganised the system of pious endowments hubus (19), neglected during the governorships of the preceding beys, by appointing Qadis (20), Muftis (21) and administrators to list the buildings of religious or public interest which depended on such endowments for their maintenance and upkeep.

During the period 1776-1792, he rebuilt a large market square named Suq al-Acer, a hammam (bath-house) and a group of shops and funduqs (caravanserais) outside the Bab al-Jadid. In 1792 he brought Don Bartolomeo, an architect from Port Mahon in the Balearic Islands, to rebuild the upper part, two arches and three piers of the Roman

17. E. Mercier, Histoire de Constantine (Constantine J. Marle et F. Biron 1903).

18. E. Vaysettes: Histoire de Constantine sous la domination Turque (Constantine 1867-1869).

19. Endowments for religious purposes.

20. Arabic word which means judge.

21. Specialists on law who can give an authoritative opinion.

Al-Qantara Bridge and its aqueduct.

After the death of Salah Bey, Constantine knew a period of disorder which continued until the governorship of Ahmed (1827-1837), the last bey of the Ottoman dynasty. Under his governorship a luxurious palace, the palace of Ahmed Bey (1835), was built with numerous groups of buildings organised around three open courtyards decorated with tiles and fountains.

Mercier (22) describes the town as it was in 1837, immediately following the French conquest:

Constantine was circled by a high irregular wall. Access to the city was by four gates, three to the south-west called Bab al-Jadid, Bab al-Wadi and Bab al-Jabia, and one to the east called Bab al-Qantara, which is approached by a Roman bridge. Within the town itself are an estimated 1660 houses, 500 shops, seven madrasas and several mosques. These are essential to the practice of urban Islamic life and are distributed throughout four principal quarters (hara), the Qasbah to the north, Tabiya al-Kabira (23) and

22. E. Mercier: Constantine avant la conquete Francaise (Receuil de la societe archeologique de Constantine XIX 1878).

23. Arabic term which means big hill.

Tabiya-Barrani (24) to the west and al-Qantara to the east with various sub-quarters and districts within the town. Mercier also identified four main roads within the town. The first started at Bab al-Jadid and ran towards the Qasba, the second ran beside the mosque and Suq al-Ghazl up towards the Suq al-Acer, the third, in which was to be found the greatest concentration of craftsmen and traders, extended from Bab al-Wadi towards Rahbat al-Suf, and the fourth ran from Bab Jabia to Bab al-Qantara (fig 7).

Following the French occupation in 1837, the advent of change was rapid. By 1840 five hectares of the Qasba were cleared to build barracks for the military garrison. The ordinance of 9 June 1844 decreed that the town be divided into two parts, the southern part to be reserved exclusively for the indigenous population while Europeans and Jews were restricted to the northern part.

Thus began a new process of change in the physical form and character of the medina. The town was adapted to the European style by introducing four wide roads, three in the central part. Rue Imperial (now Larbi Ben M'hidi), Rue de France (19 June) and Rue Damrement (Abdullah Bey) and one

24. Arabic term which means the Hill of Foreigners.

along the western boundary, The Boulevard (Zighoud-Youcef) (fig 8).

Along these roads a new Prefecture (town hall), banks, a newspaper office and apartment blocks were erected (fig 9). The main administrative centre was located to the south-west, outside the old town, and as a result the markets of the medina lost their importance and the seat of political and administrative authority moved from the palace of the bey to the rapidly growing new town.

From 1852 to 1937 the built-up area of Constantine grew from thirty hectares to two hundred and thirty-nine hectares (fig 10), and the total population from 4462 Europeans and 31393 Muslims to 54409 Europeans and 59364 Muslims.

Three new bridges, the Sidi M'sid Bridge (1912), the Rhumel footbridge (1919-1925) and the Sidi Rachid bridge (1912) connected the old town to the surrounding new town (fig 11).

The Post-independence Period

After independence was achieved in 1962 the population of

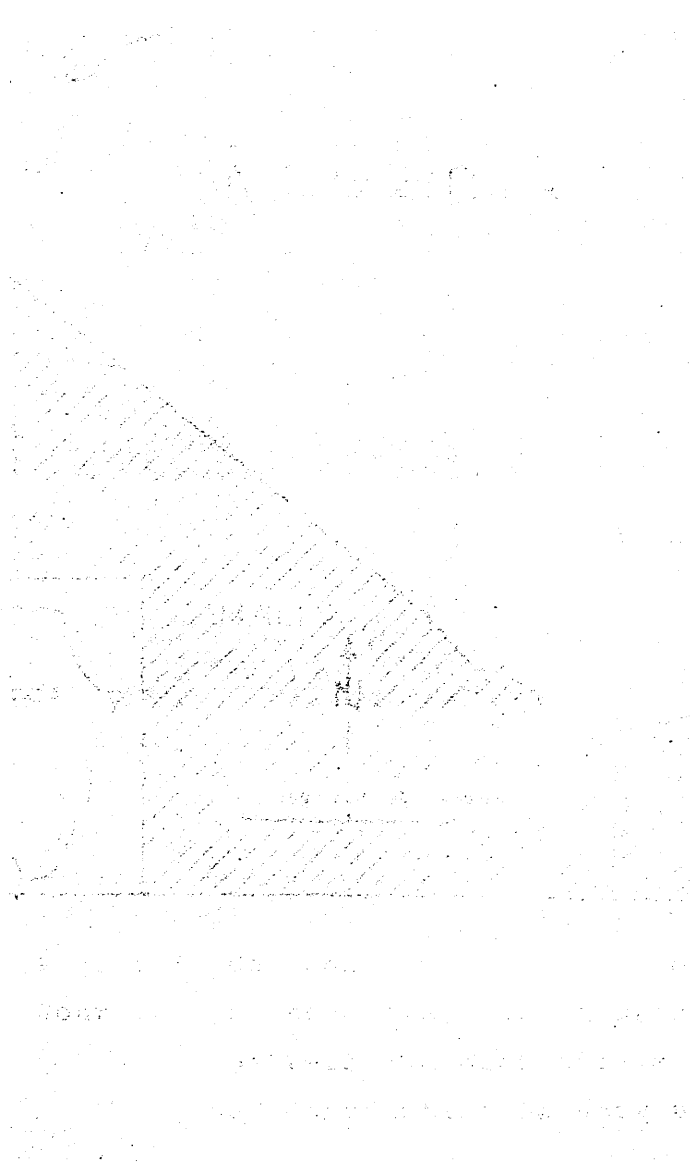
Constantine grew very quickly (235,000 in 1965) (25) National development plans were concentrated on the cities and attracted thousands of migrants from the countryside. The existing housing stock was inadequate to meet the increasing demands and so an urgent programme of new housing was implemented. The new housing schemes thus created were built hurriedly using prefabricated components from abroad, with little thought for the traditional values and life-style of the people who were to live in them.

In recent years there has been a general reaction against this characterless and inappropriate form of construction. People want to return to their old values. A national restoration bureau was founded in 1986 and in Constantine a voluntary conservation action group, "Association pour la Sauvegarde de la vieille ville" was set up in 1987. This group, composed of sociologists, historians, architects and urban planners, intends to assess the historical value and original form of the buildings to enable a restoration team to have a scientific basis for their proposals.

The conservation and restoration of the palace of Salah Bey has become a matter of priority following the severe

25. G. Yver, *op cit*, p530.

deterioration of the fabric caused by its division into seven individual dwellings occupied in the main by poor tenants without the means to maintain it.



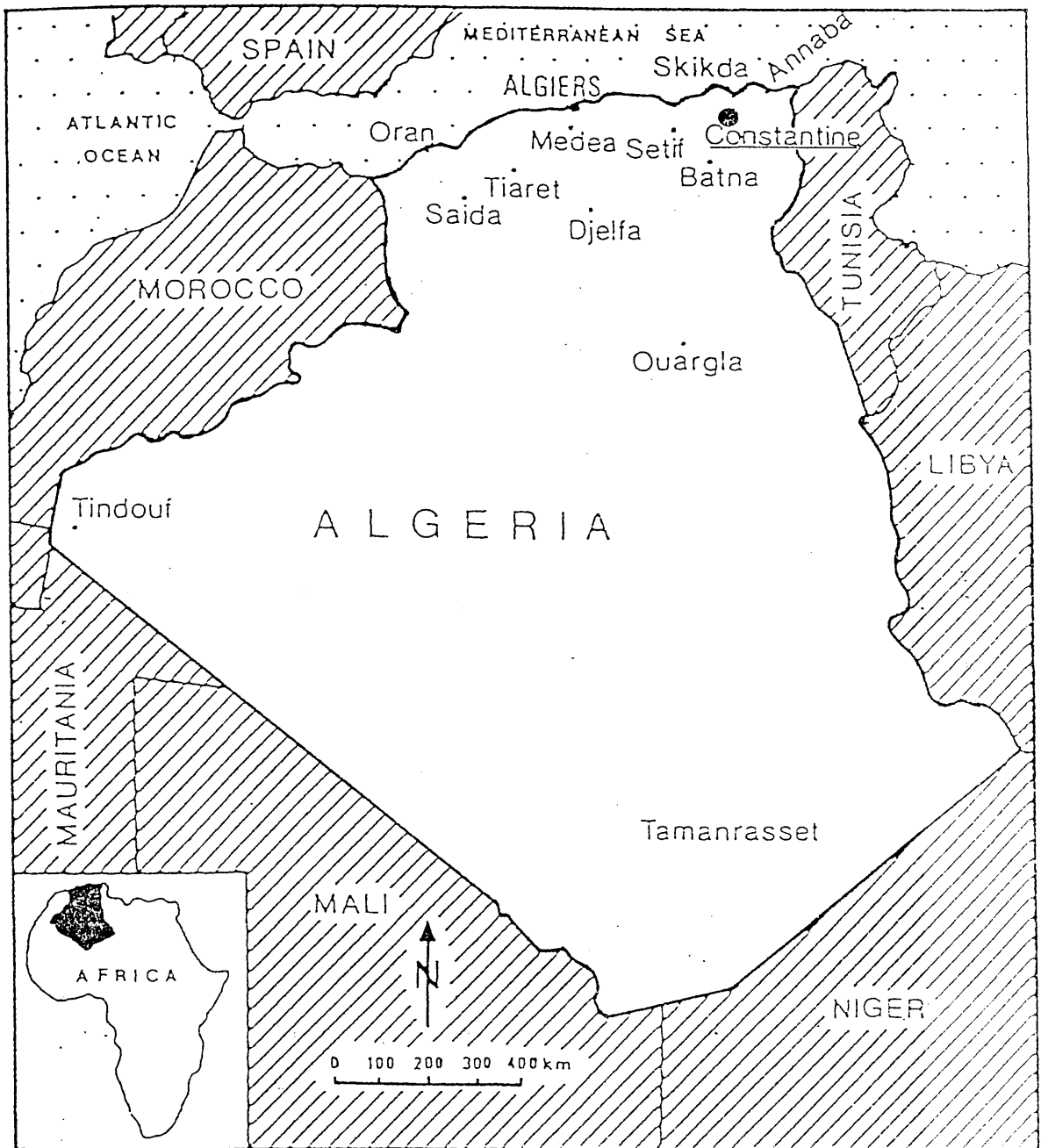


Figure I Geo-political location of Algeria

Source Boukhemis, A. Recent urban growth pattern and migration: a case study of Constantine (Glasgow university 1983).



(a) Sidi M'cid suspension bridge



(b) Sidi Rached bridge

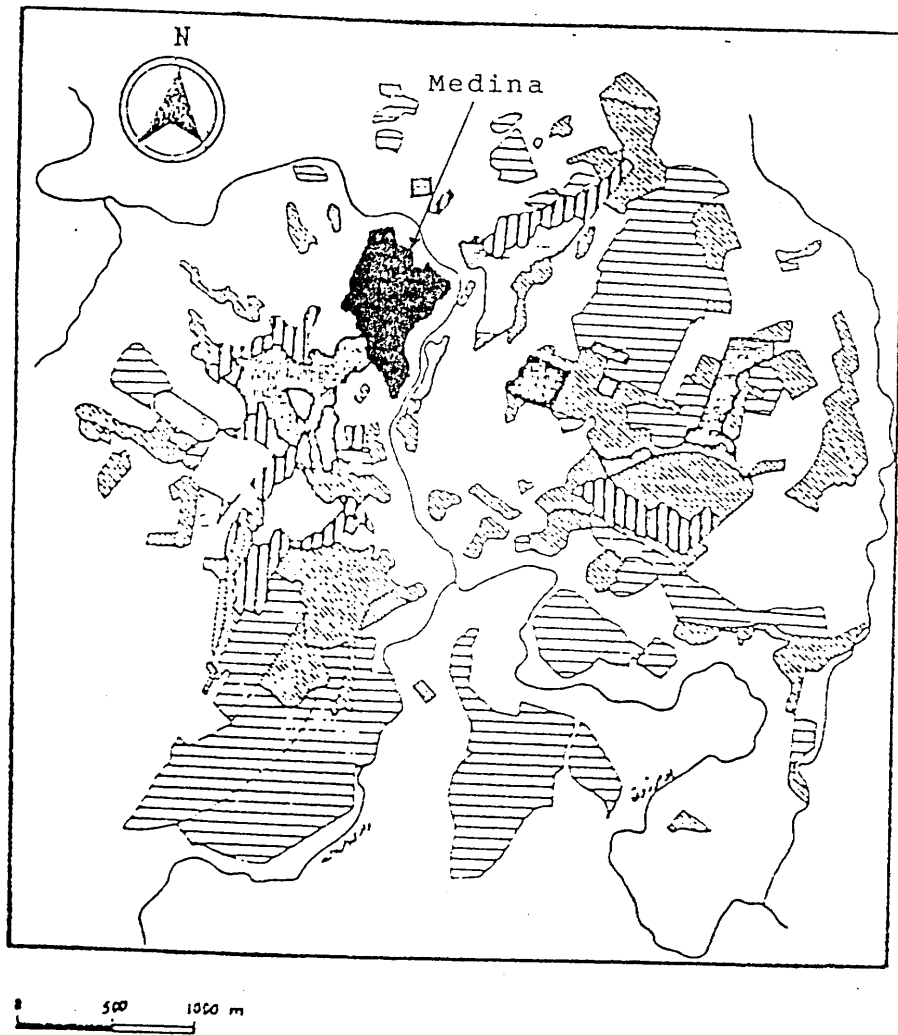


Figure 2- The old town and surrounding new city.

Source: Larouk M.El-Hadi(1984).

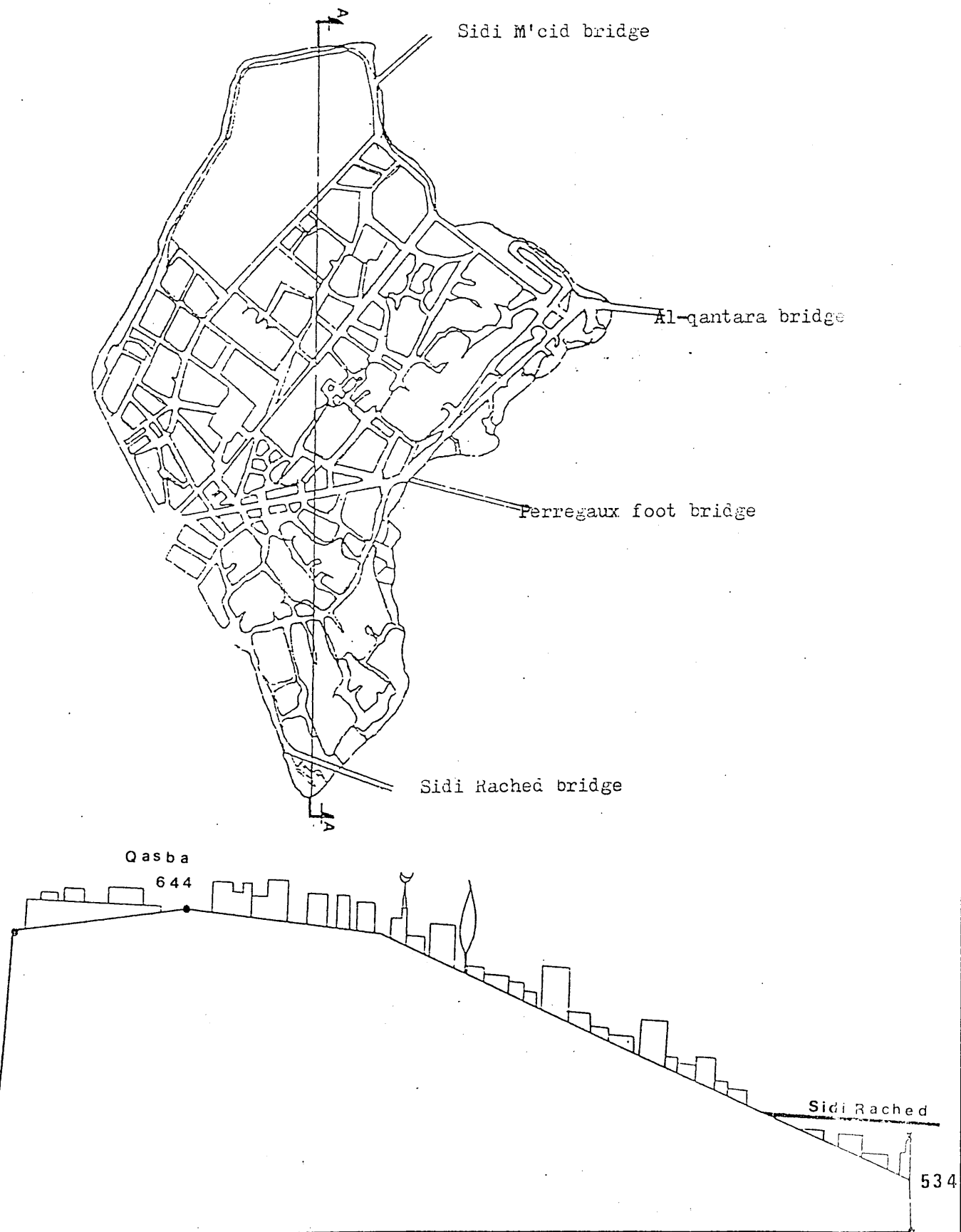


Figure 3-Diagram showing the topography of the medina.



CONSTANTINE — Rue Daurémont — La Poste.

plate 1b A typical French thoroughfare (Abdellah Bey street).

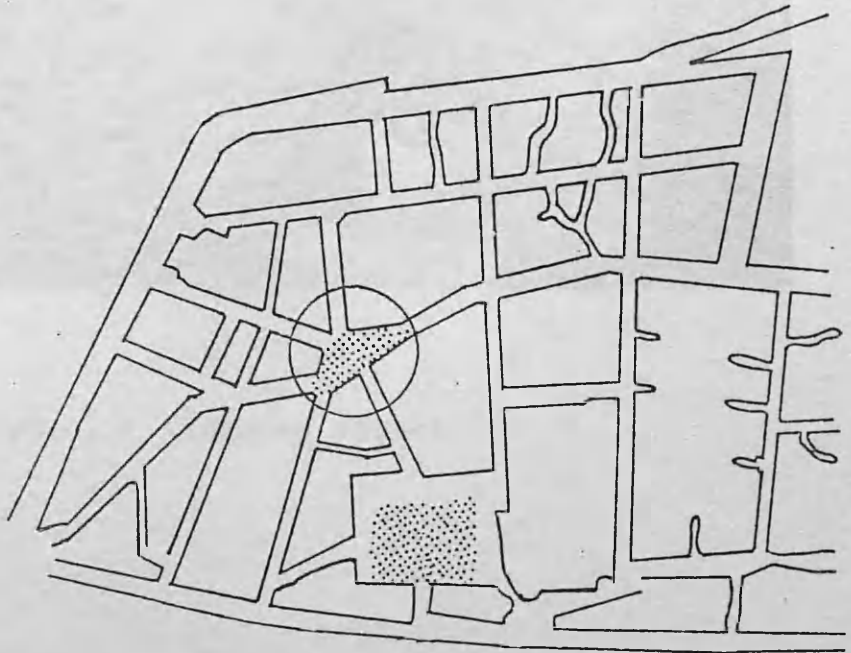
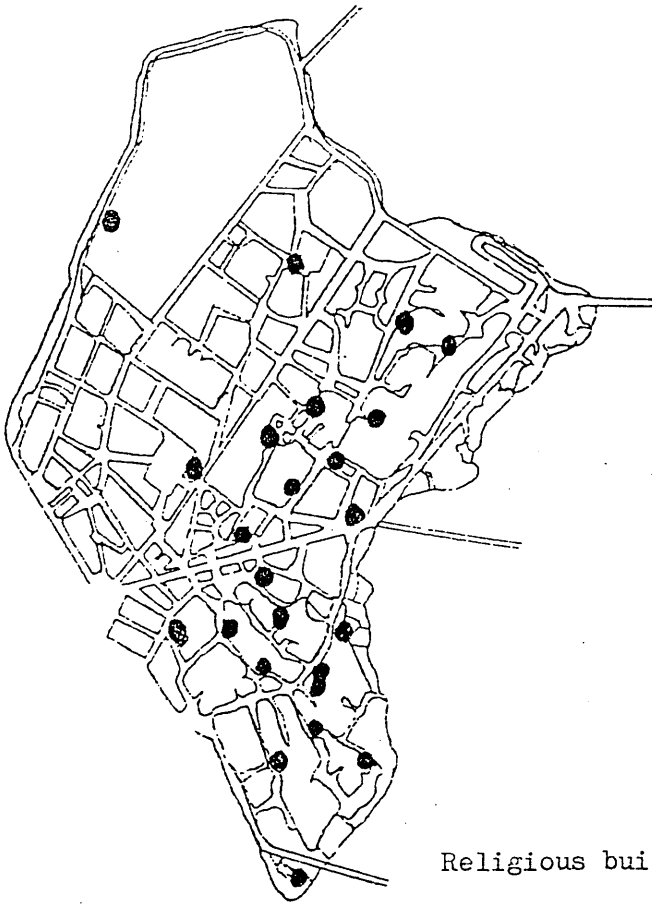
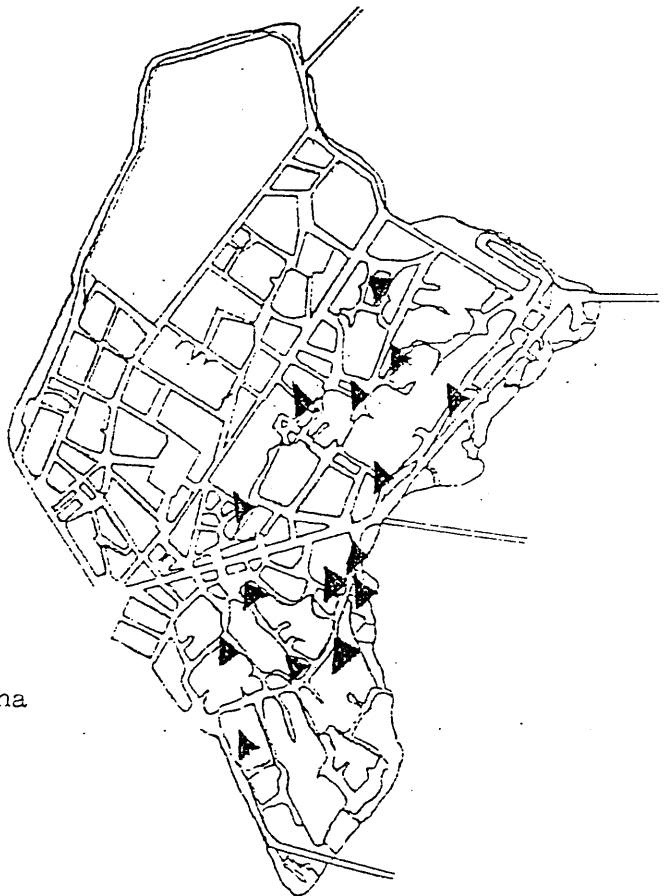




Plate 2 - Shopping street.



Religious buildings in the medina



Hammams in the medina

Figure 4 Traditional public building in the medina.

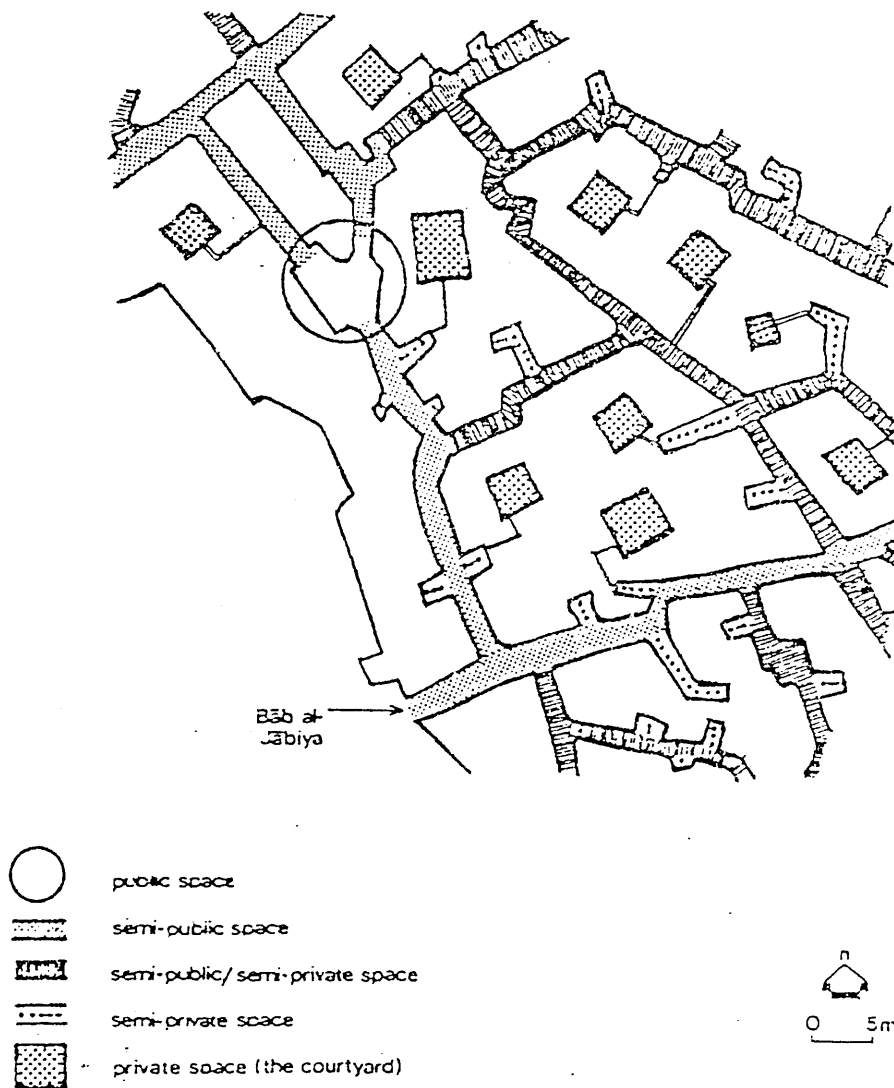


Figure 5- The spatial division of part of Bāb al-jābiya quarter.

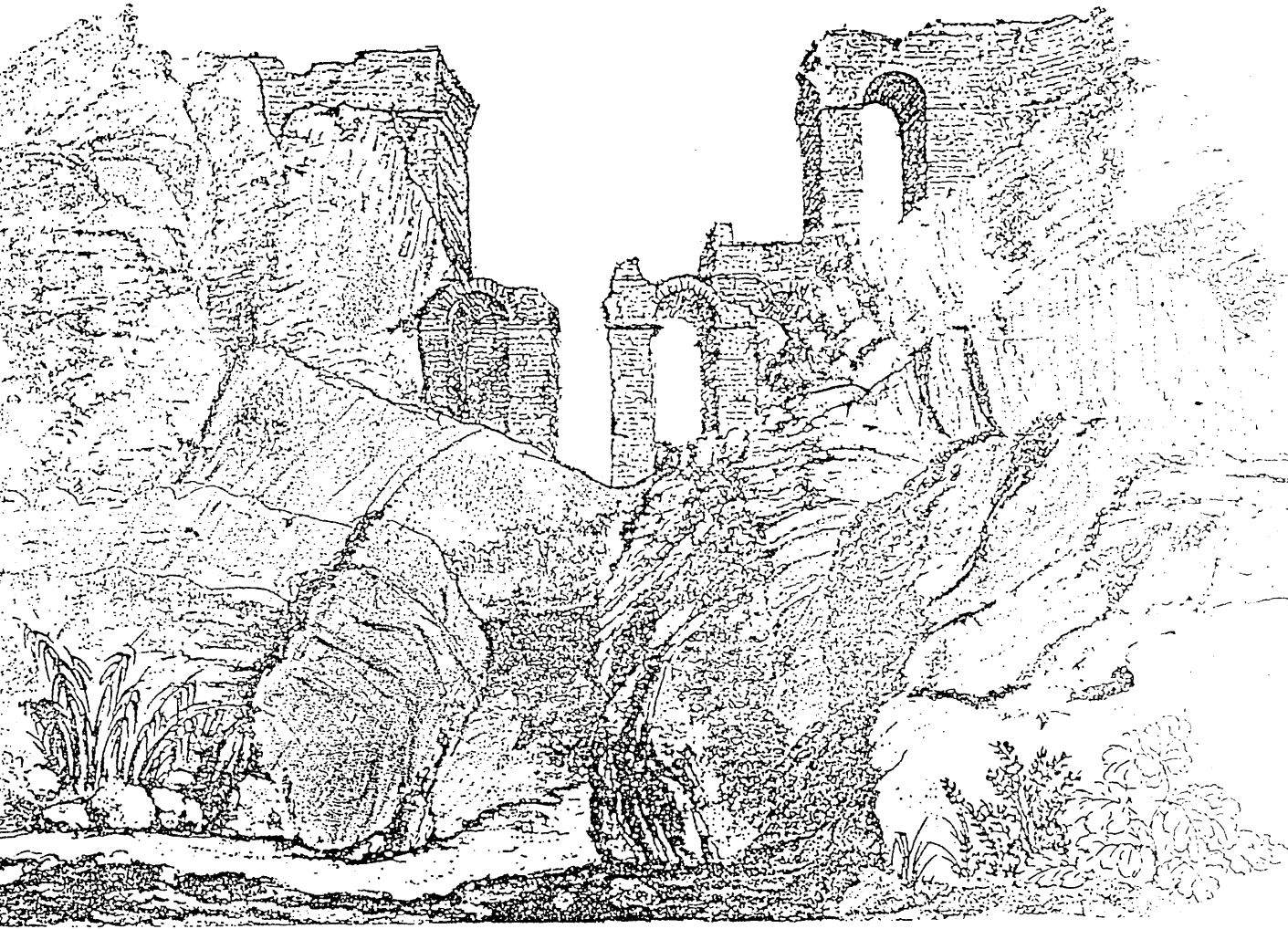


Figure 6- The Roman Al-Qantara bridge before its reconstruction by Salah bey in 1792

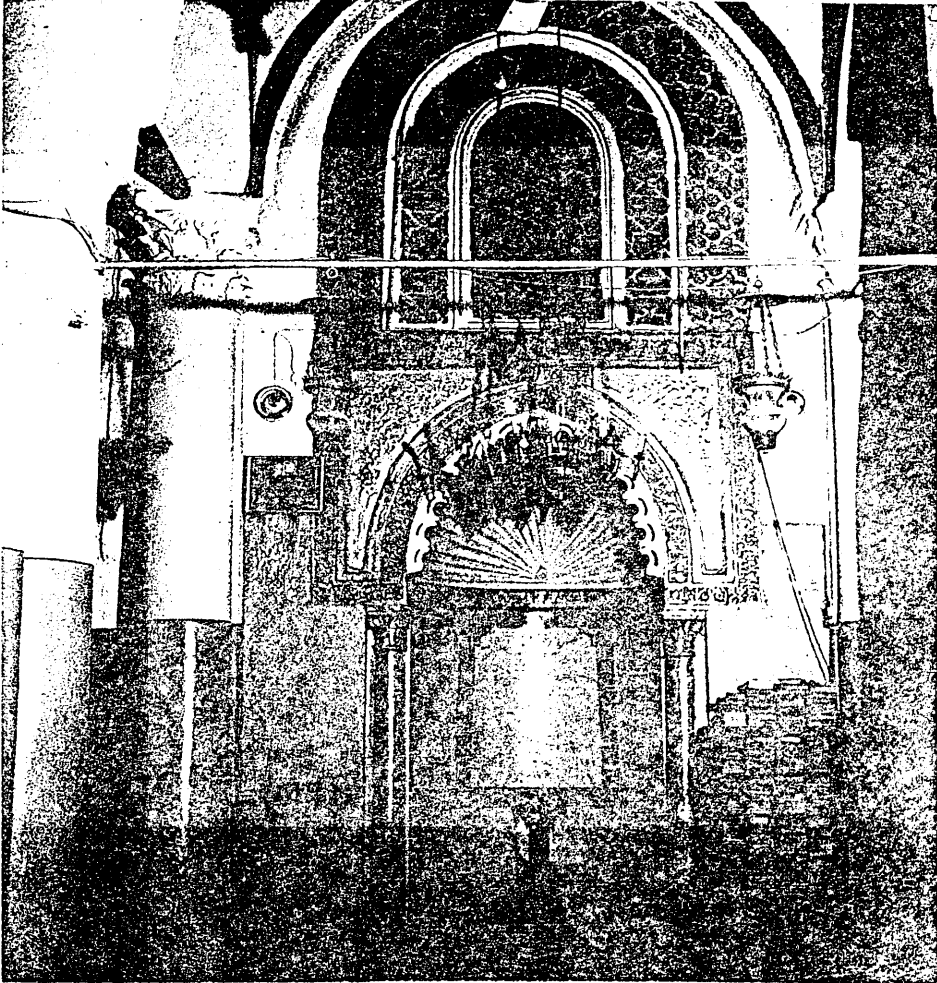


Plate 3-The great mosque: View of the original mihrab.

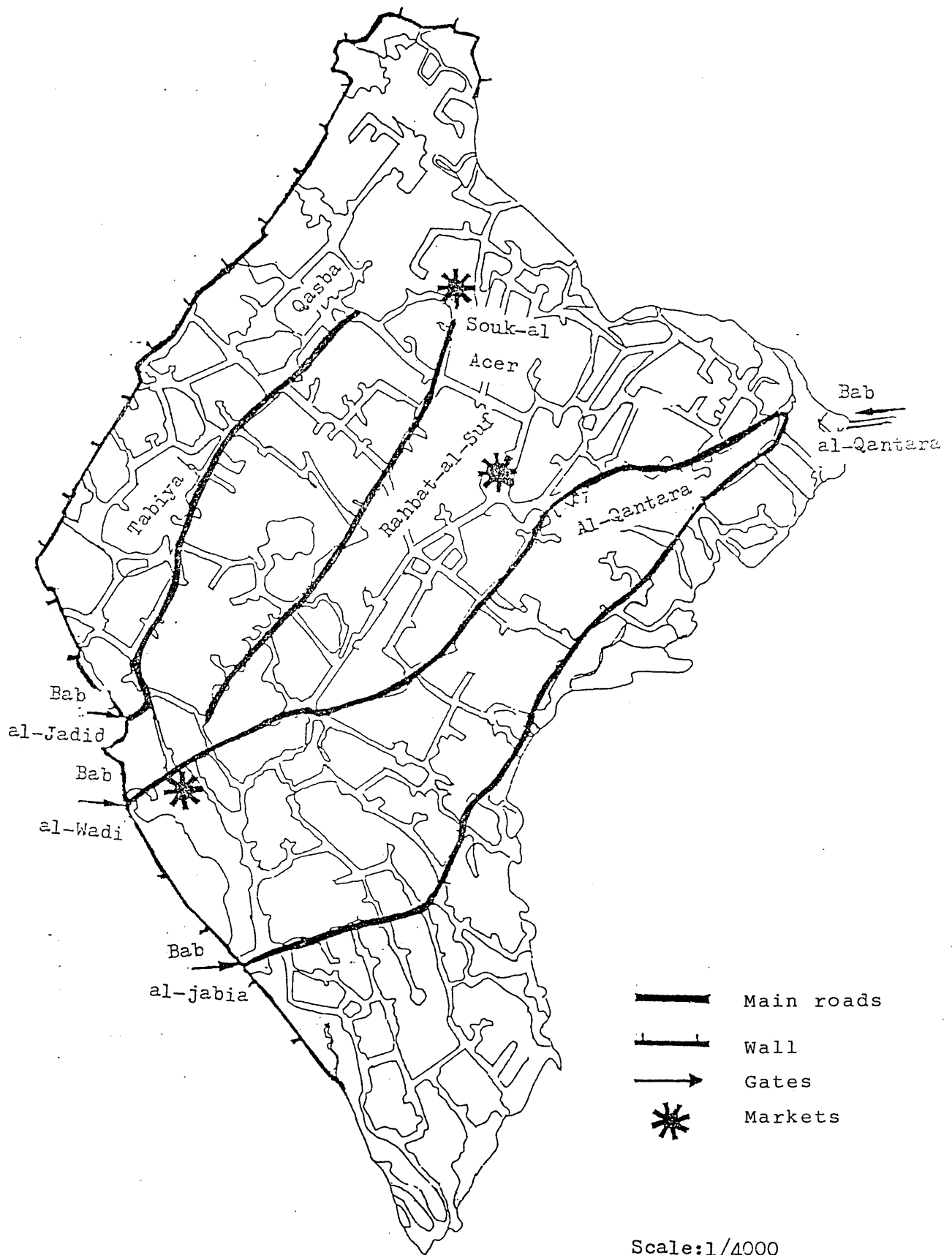


Figure 7- The pre-colonial Medina.

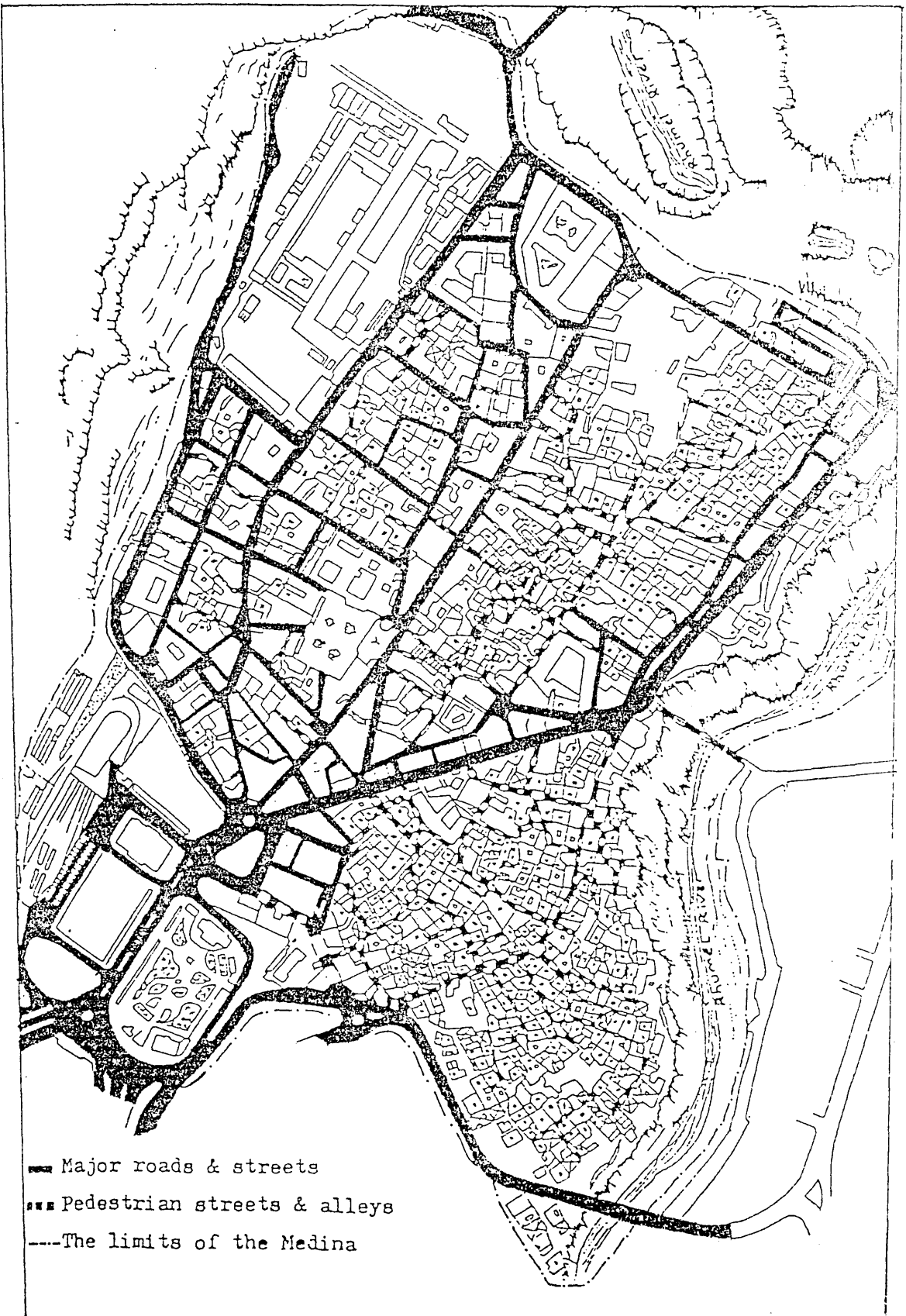
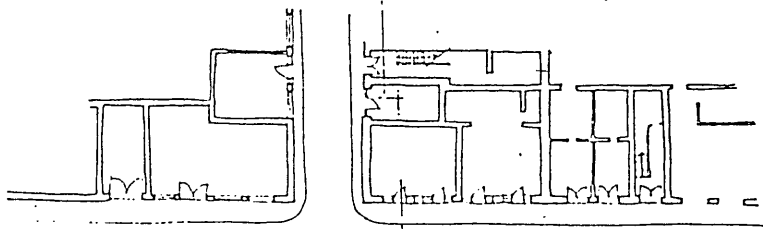
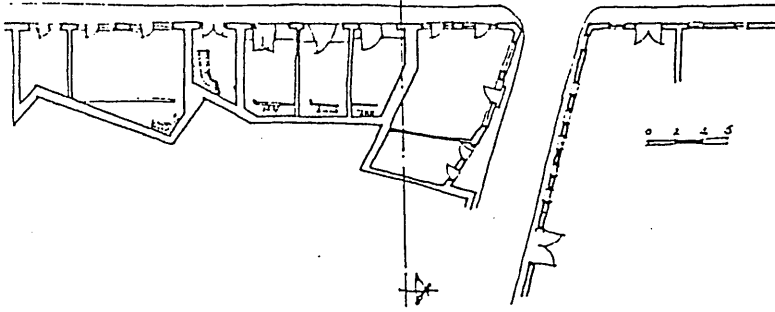


Figure 8- Urban intervention during the French period.

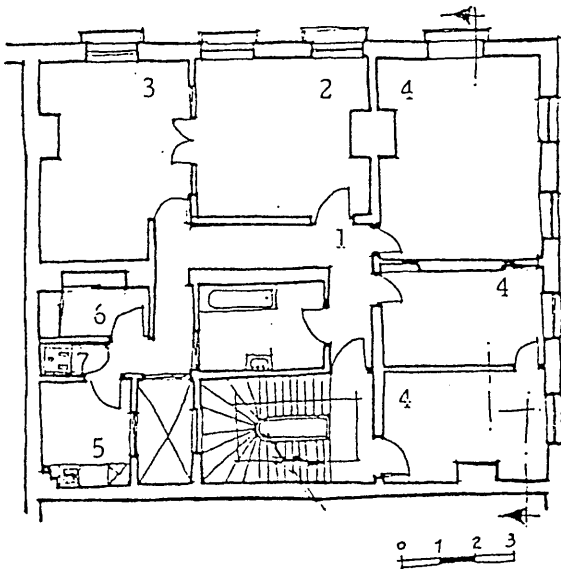
Source : URBACO (1984) .



Rue Larbi Ben M'Hidi



Ground floor shops.



Typical floor unit (2nd).

- 1 - Corridor
- 2 - Living
- 3 - Dining
- 4 - Bedroom
- 5 - Kitchen
- 6 - Bathroom
- 7 - W.C.

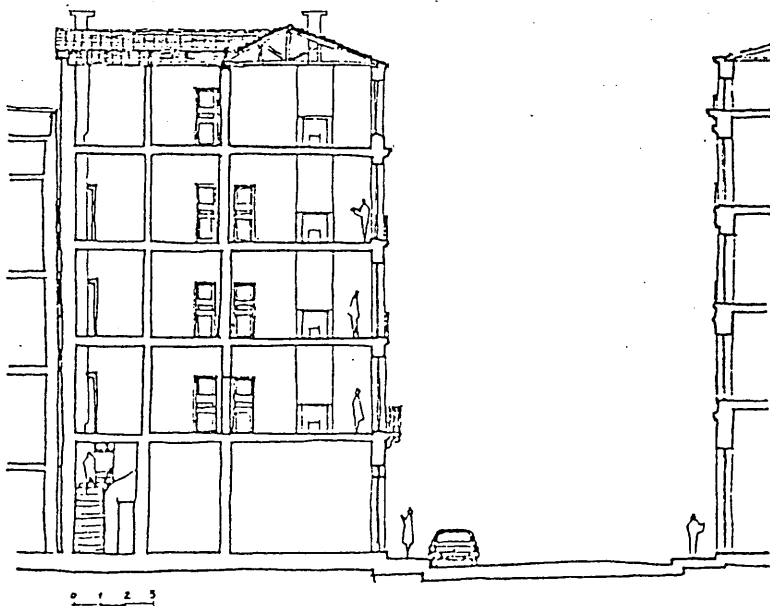


Figure 9-Typical colonial apartment blocks.

Section.

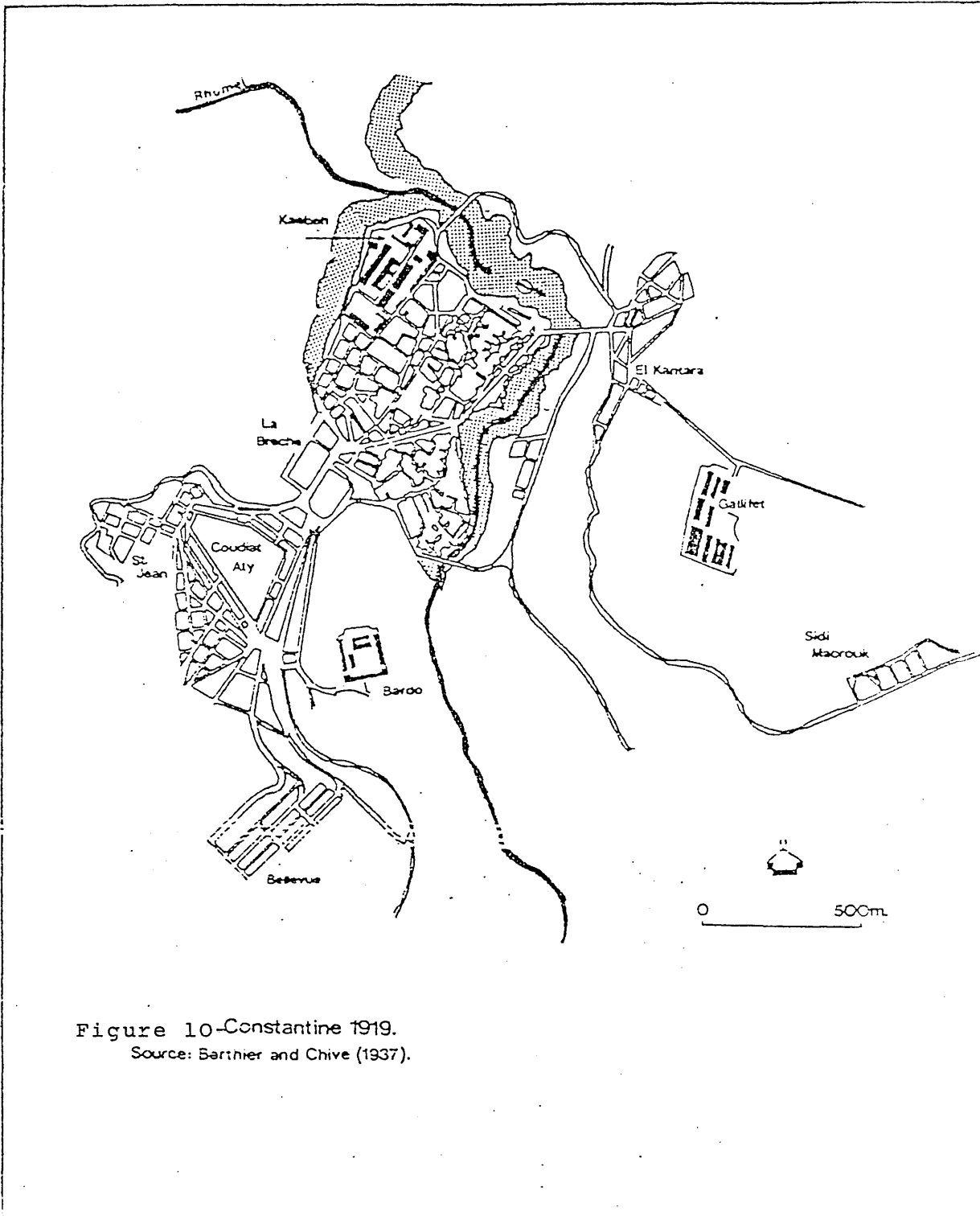
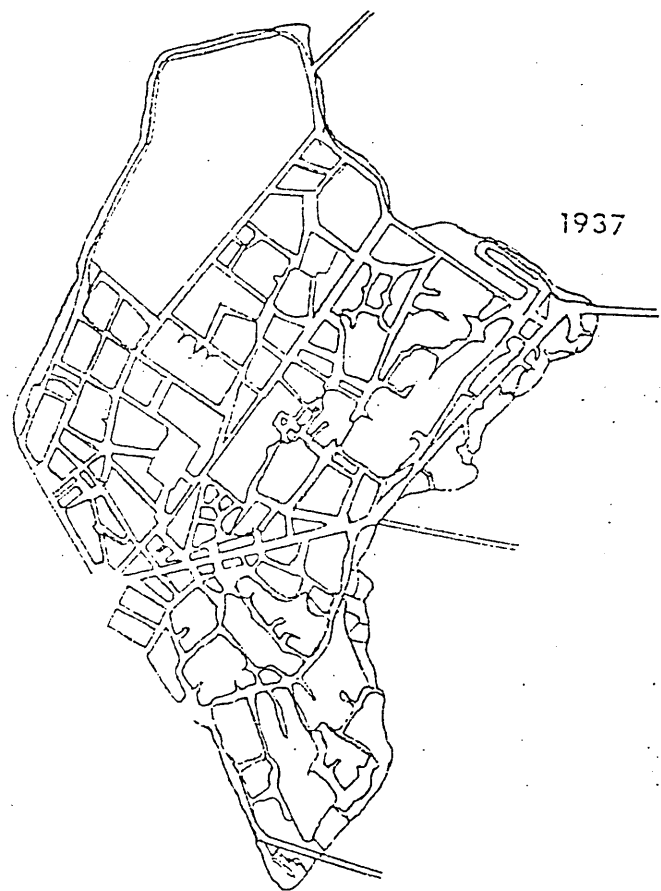
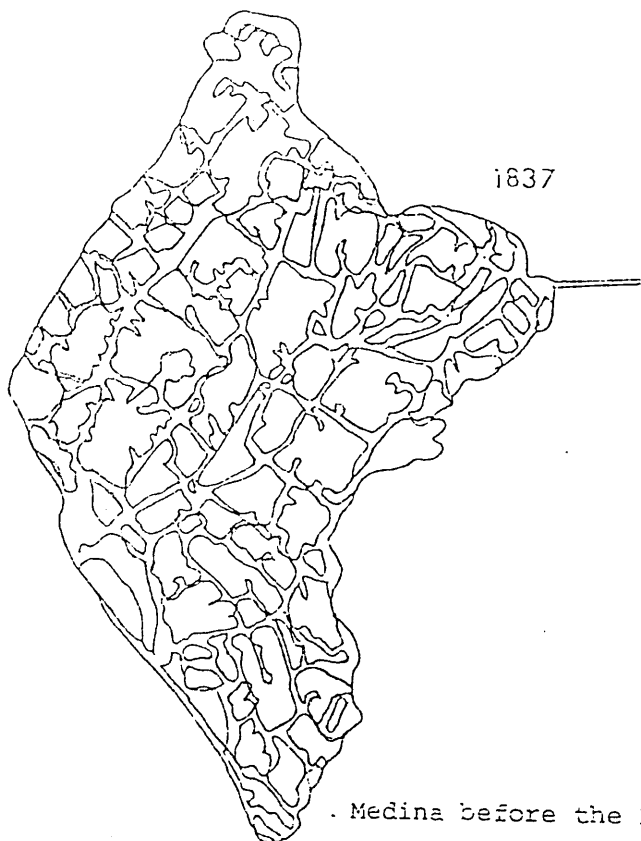


Figure 11—Urban development of the medina.



0 80 160 240m

CHAPTER II

The traditional house in the medina of Constantine

I House form and design

II Elements of the house

- 1 - Entrance
- 2 - Courtyard
- 3 - Gallery
- 4 - Staircase
- 5 - Rooms
- 6 - Kitchens
- 7 - Storerooms
- 8 - Latrines
- 9 - Bathrooms

III Materials and Techniques of Construction

- 1 - Walls
- 2 - Suspended Floors
- 3 - Columns and arches
 - a - columns
 - b - arches

4 - Ceilings and Roofs**a - ceilings****b - roofs****5 - Woodwork****a - doors****b - windows****c - balustrades**

The traditional house in the Medina of Constantine

Traditional houses in the Muslim countries of North Africa and the Middle East have one fundamental characteristic : they are planned around a central open courtyard. Privacy, security and the harsh extremes of climate were common factors influencing the design of houses. In the traditional life of Muslims there was a clear division between public and private spaces, and between men's and women's spaces. This division was reflected in physical terms by the division of the house into two distinct sections: one for men and their male guests, generally on the ground floor, and the other, haram, reserved for women and their female guests.

The interior of the house was always more important than the exterior. This preoccupation with privacy resulted in a conscious neglect of external elevation elaboration, especially at street level, and a concentration of architectural decoration on the courtyard elevations and interiors.

The medina of Constantine, like other historic Arab medinas is composed of dense dwellings built compactly one against the other with shared party walls. Although there is

continuous degradation of these dwellings (pl 4), the medina still contains some houses that are of historical and architectural value and worthy of saving and conserving rather than being allowed to fall into ruin.

I House Form and Design

In its simplest form the house is rectangular or square, rising generally from one to three storeys in height with an open courtyard in the centre. The size of the courtyard depends on the size of the house, which is proportional to the owner's wealth.

The entrance door generally is provided with a dog-leg passage, "chicane", designed to prevent passers-by from looking into the heart of the house. All storeys give on the courtyard by way of galleries reduced to colonnades on the ground floor. The rooms are generally multi-functional and are always placed alongside the courtyard, while the corners of the house are reserved for such rooms as stores, latrines, entrance halls, and staircases.

The house is inward-looking with few windows in the external walls. Where such windows exist, they are generally small and at upper floor levels. Windows at

ground level are protected by iron grilles to ensure security.

The roofs are pitched, covered with "Roman" clay tiles (pl 5). This is the chief difference between the medina of Constantine and other medinas in the Islamic world which are characterized by flat roofs. Finally, although the houses for the rich and the poor share the same design concept and building materials, the size of the living area and the sophistication of applied decoration distinguish one from the other.

II Elements of the House

"The heavy entrance door open, we come inside the traditional house, the miracle. Silence, the noisy street does not exist any more. The rooms open on the patio with its light columns. People inside live in a completely quiet atmosphere and enjoy their privacy without being disturbed". (Le Corbusier in his description of a traditional house in Algiers Casbah.)

The architectural elements that constitute the traditional house are the entrance, the courtyard, the rooms, staircase and galleries.

1. ENTRANCE

The entrance comprises three components, the doorway, the vestibule and the dog-leg passage, chicane (fig 13). The doorway is the only important opening in the street frontage. The doors themselves are of heavy wood and have few decorations. However, in rich houses the entrances are marked by marble-arched doorways with elaborate doors decorated with rows of broad-headed nails of brass or copper (pl 6a). Usually the door has a small square or rectangular grilled window, known locally as dawwaya, above it (pl 6b). The sill, atba, is of cut stone and marks the strict limit between outside and the inside of the house. Generally the door leads to a dark vaulted vestibule, square or rectangular in plan, called the skiffa, which is lit by the dawwaya. In rich houses the vestibule is finely decorated with panels of tiles and has benches on both side walls. The vestibule communicates with the courtyard through a dog-leg passage. This sequence of entrance spaces, developed to enhance privacy and security and decorated with tiles and benches, constitutes one of the main features of traditional Islamic houses in the medina of Constantine (pl 7).

2. COURTYARD

Open to the sky, the courtyard is the heart of the house wast al-dar. The focal point of the house, it is also a centre of circulation. Despite variations in form, dimensions and height, courtyards are usually trapezoidal, nearly square or rectangular in plan surrounded by open arcades supported on stone or marble columns.

The courtyard is generally paved with marble or stone flags (pl 8) and contains the sole source of water (cistern or well) and vegetation, which plays an important role in moderating the interior climate.

3. GALLERY

Located on the upper floors and surrounding the courtyards the galleries are generally surmounted by pointed arches on columns and protected by elaborate wooden balustrades (pl 9). Depending on the size of the house the gallery can occupy one to four sides of the courtyard. In addition to its main role as a circulation space, the gallery constitutes an extension to the rooms and protects the inhabitants from direct exposure to the weather.

4. STAIRCASE

Staircases, usually located in one corner of the courtyard almost always turn to the right about a central newel.

From two or three landings small doors lead to small storerooms. The space under the stairs usually houses a storeroom, called dugana , or a latrine. The steps themselves are usually of stone and sometimes of rubble concrete fill, reinforced with timber and faced with lime mortar. Only in richer houses will the width of the staircases exceed one metre (pl 10).

5. ROOMS

The most common type of room is long and narrow, rarely exceeding 3 metres wide, based on the concept of one all-purpose room where beds are spread on the floor at night and kept in a recess or cupboard in the wall by day. All rooms open on the courtyard by a central doorway and two flanking windows, which provide light and ventilation.

In modest houses these rooms are either majlises or living rooms and may contain a shallow arched recess called kbu with two cupboards symmetrically located on either side

(fig 12). But in rich or middle class houses most rooms, located either on ground or upper floors, are more elaborate. Usually these rooms are divided into sections with a central wide arched recess kbu facing the doorway, and a main room majlis forming a "T" shape in plan (fig 12). Two small rooms placed symmetrically on either side of the kbu are called maqsuras. The width of the maqsuras is proportional to the width of the kbu and therefore their function differs from one house to another. In wide kbus the maqsuras are used as bedrooms, and in shallow kbus, the maqsuras are used as stores. In contrast, in modest houses rooms with wide recesses usually have elaborate wall and ceiling decorations and are used as the primary guest area where relatives or friends are received.

6. KITCHENS

In the medina, the traditional kitchen need be very small, and its position changes according to need, special events and climate. As cooking facilities such as the coal fire were not fixed, cooking could be carried out either in the rooms, in one corner of the gallery or in the courtyard when the weather permitted.

In summer, cooking takes place outside often in the gallery

or in the courtyard in order to keep heat away from the living areas. In winter heat is desirable and cooking is done indoors. In this case the kitchen might be no more than a place for a clay oven.

Chimneys or special ventilation for the kitchen were rare in modest houses. Fumes and smoke were dispersed through door openings to the galleries or courtyard. Nevertheless, occasionally in grand houses, as in the Salah Bey palace, a whole floor such as the mezzanine was provided for the kitchen together with quarters for cooks and servants.

7. STOREROOMS

As mentioned above, many rooms in traditional houses are multifunctional and some of the furniture for daily use in the rooms is stored during the night when the rooms serve as bedrooms. For this purpose, the houses are largely provided with wall cupboards, niches and small rooms, dugana , fitted with doors. Apart from furniture, bedding, clothes and food reserves were stored there.

Every one of these spaces has its specific function. Niches were provided in large numbers and could be found everywhere in the house: the oil lamp niche in living

rooms, the soap niche in the bathroom and the match niche in cooking places. Embedded cupboards, magsuras , are generally used for the storage of furniture and bedding (stools, tables, mattresses, blankets) either for the cold or hot seasons and also for displaying valuables such as ceramics and copper plates (See pl 11).

Food reserves of wheat, oil, lard, and dried fruits are kept in small storerooms on the ground floor, in special rooms on one of the landings of a staircase or in one corner of the gallery. The existence of such cupboards, niches and small store rooms has left the living rooms uncluttered.

8. LATRINES

The most common type of latrine in traditional houses is the Turkish type. It consists of a squatting platform, occasionally provided with a mechanical flushing system. This type of latrine is very suitable for compulsory ablution before Muslim prayer. The latrine is considered private and so it is always isolated from the rest of the house and usually situated in one corner of the courtyard. This location allows odours to disperse. The ventilation of the latrine is assured either through the courtyard or

frequently through small (30x30cms) high-level windows if the latrine is located beside the street frontage.

9. BATHROOMS

Bathrooms were rare in traditional houses, though in grand houses there was a small room called the "soaproom" on bayt al-sabun. It is located on the ground floor for the use of all the inhabitants. The bathroom is a simple chamber which has in one side an elevated platform on which one can sit while washing. Water is heated out in the kitchen and handed to the soap room in a container. Often a coal or gas heater is taken into the bathroom to keep it warm and to heat as much water as is needed for bathing. Because of the lack of sufficient numbers of private bathrooms, most people make use of the numerous public baths of the medina which are considered to be a place of relaxation and social interchange.

III MATERIALS AND TECHNIQUES OF CONSTRUCTION

All the materials used in traditional house construction in the medina of Constantine until the beginning of the nineteenth century were indigenous. These materials are still available for future works of restoration. Most

houses, including the palace of Salah Bey, are built of dressed stone, field stones, baked bricks and lime mortar.

1. Walls

For the most part we find that walls, from the foundations up to a height of two metres, are constructed of dressed stone, above which are one, two or three courses of baked bricks alternating with courses of field stones up to the eaves (see pl 12). In general, the principal supporting walls inside the buildings are of the same materials as the external walls at the same level. The thickness of both walls at ground floor level may reach 0.4 metres for one storey houses and frequently exceeds 0.7 metres for two or three story houses. The internal walls are always rendered with plaster or mortar and whitewashed. In rich houses the internal walls, including those of the courtyard, are usually lined with polychrome glazed tiles to a height of about 1.5m (pl 13).

2. Suspended floors

Since Constantine is not blessed with forests, long wooden beams to support the ceilings are rare. Therefore, the width of the rooms cannot be very great. The beams,

obtained primarily from juniper trees which grow in the nearby mountains, are laid at approximately one metre centres. Often, when these beams are not long enough to fit the width of the room, composite beams are bound together to make a long beam. Above these structural beams, smaller secondary timbers are laid at right angles and bound to the main beams with cords. These secondary timbers are covered with a layer of interwoven juniper branches. Over this layer a mixture of hard mortar and baked bricks is laid. The floors are finished with tiles, mortar or sometimes marble flagstones. The thickness of suspended floors is generally between 20 and 30 centimetres but in some places exceeds thirty centimetres excluding the beams (fig 14).

3. Columns and Arches

a. Columns

The column, is largely used as a support for arcades in different building types, combining structural and aesthetic functions. Generally stone, brick and wood are the most common materials used for columns in modest houses. In rich houses, as in Salah Bey palace, the columns are of marble. The shape of the columns and their capitals varies from one house to another but the most dominant columns are circular, octagonal and square shaped. There is

no precise typology for the capitals: although there are many variants (pls 14a, 14b), no analytical typology has yet been constructed.

b. Arches:

Arches are generally built of bricks. Where an important opening merits special attention, as the entrance to the Salah Bey palace for example, marble is often used. For internal decorative openings, such as entrances to kbus, archways are built entirely of plasterwork and frequently have scalloped or fretted profiles.

4. Ceilings and Roofs

a. Ceilings:

Ceilings are generally plastered. The construction of those under floors is described above on page . Those under roofs are made of juniper beams laid across the walls at 35-40cm centres. The undersides of the beams are covered first with a layer of interwoven reeds which is fixed to the beams by cords and normally plastered, whitewashed and occasionally painted (see pl 15a). More elaborate and expensive ceilings made from sawn wood can only be found in rich houses such as the Salah Bey palace. These ceilings are generally adorned with a complexity of carved geometry

which incorporates star motifs painted either in red or green (see pl 15b).

b. Roofs

The traditional roof construction consists of two or three brick pillars carrying a juniper ridge beam and supported either by arches or by partition walls. The juniper ridge beam is flanked on either side by similar beams at centres of about 70-100 centimetres spanning between gables. These beams are covered first with a layer of interwoven branches or reeds and over this layer occasionally a layer of straw. This layer is then covered with about 2-3 centimetres of specially prepared lime mortar, which keeps the roof reasonably waterproof. The roof is finished with "Roman" clay tiles (see pl 16).

5. Woodwork

a. Doors:

Wooden furnishings that survive in most dwellings include doors, balustrades and, in rich houses, ceilings. The surviving doors have either one or two leaves. Their most interesting feature is the panelling, which incorporates various ornamental devices.

There are two distinct types of panelling. The first, which is highly decorative, is represented by one of the doors of Salah Bey palace (pl 28a). Here the door leaf is divided into a geometric pattern of equal rectangular panels with smaller square panels between them. The rectangular panels are filled with foliate motifs and the square panels with rosettes. The second type of door, with less emphasis on ornament, comprises two leaves set in wooden archway carved with a fretted profile. The two leaves of these doors are generally divided into three rectangular panels each filled with a different geometrical shape (pl 17).

b. Windows

Of different sizes and shapes, rectangular or square, with a flat timber lintel, windows are generally simply framed, lacking decoration and protected by iron grilles. In a few houses, however, the external frame is ornamented by a carved fretwork arch and often screened by shutters of turned wood called mashrabiyya (pl 18).

c. Balustrades

Wooden balustrades are the most common means of protecting the galleries on the upper floors of the dwelling. In houses with a mezzanine, the height of the balustrade around the mezzanine is generally half that of the upper

floor balustrade.

A design frequently employed in the balustrades makes use of one or two rows of carved lobed arches set one above the other, turned balusters and a mashrabiyya (26) (pl 19).

26. Highly ornamented turned wooden lattice screens to admit subdued light and fresh air without destroying privacy.

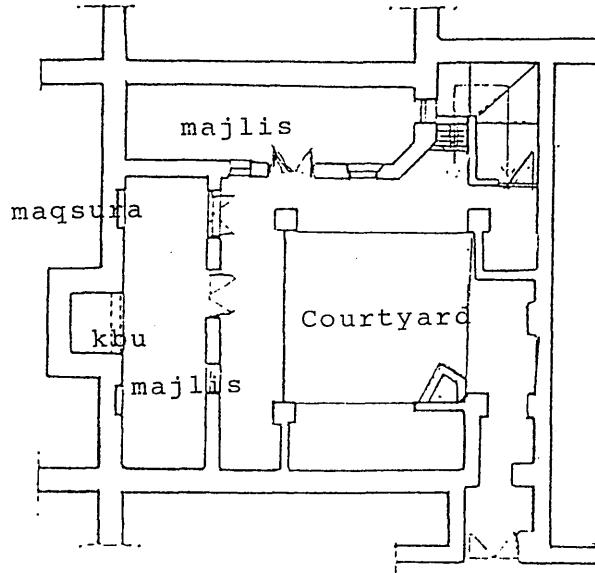


Plate 4- view of part
of the medina
showing the
degradation
of the dwellings.

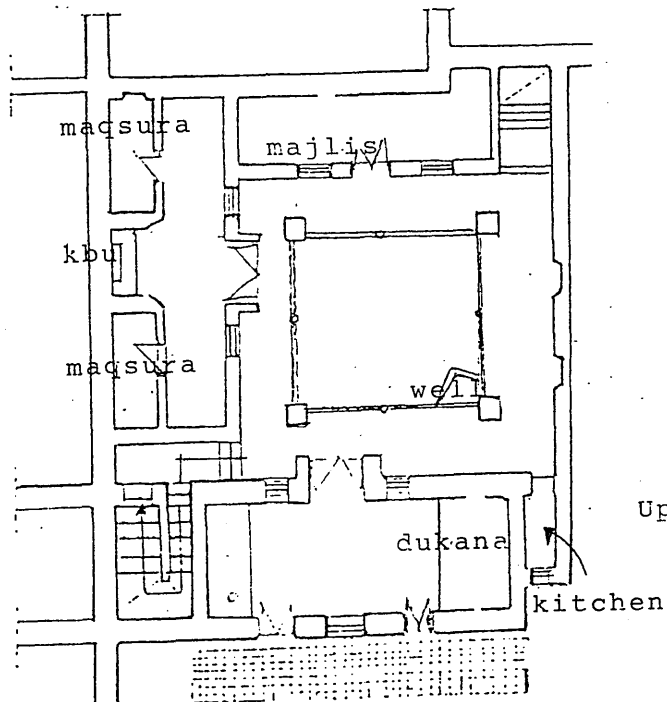




Plate 5 -The courtyard house is a feature
of the medina.



Ground floor plan



Upper floor plan.

Figure 12- Typical layout of a traditional house.

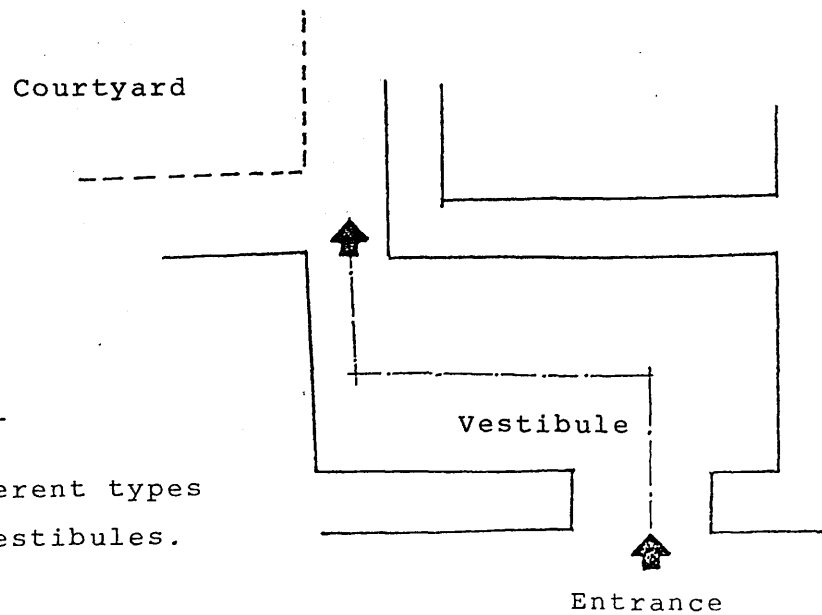
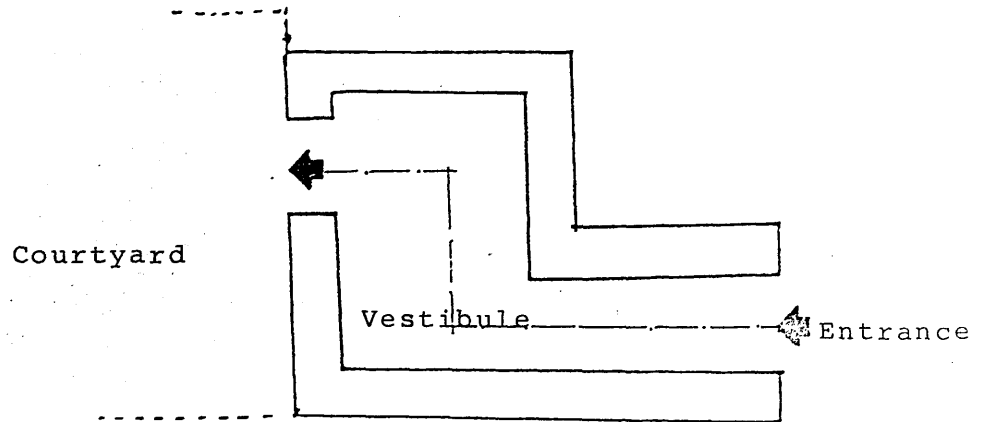
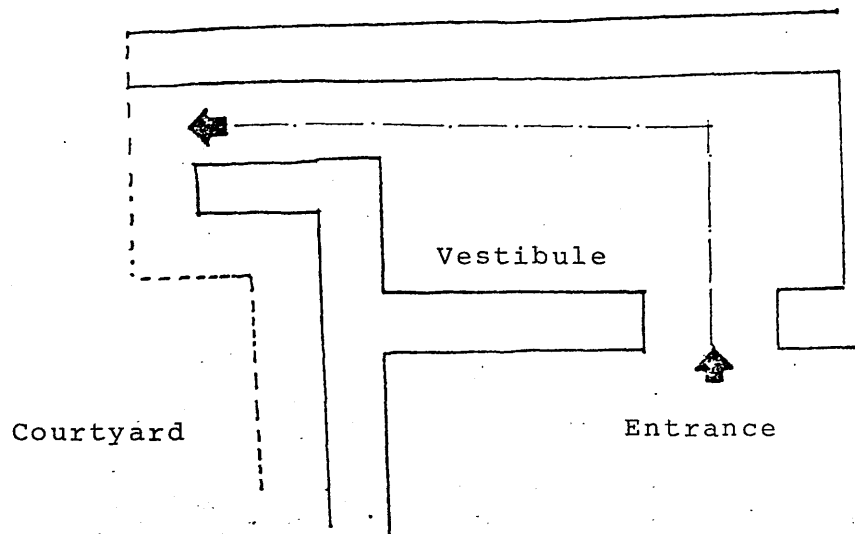
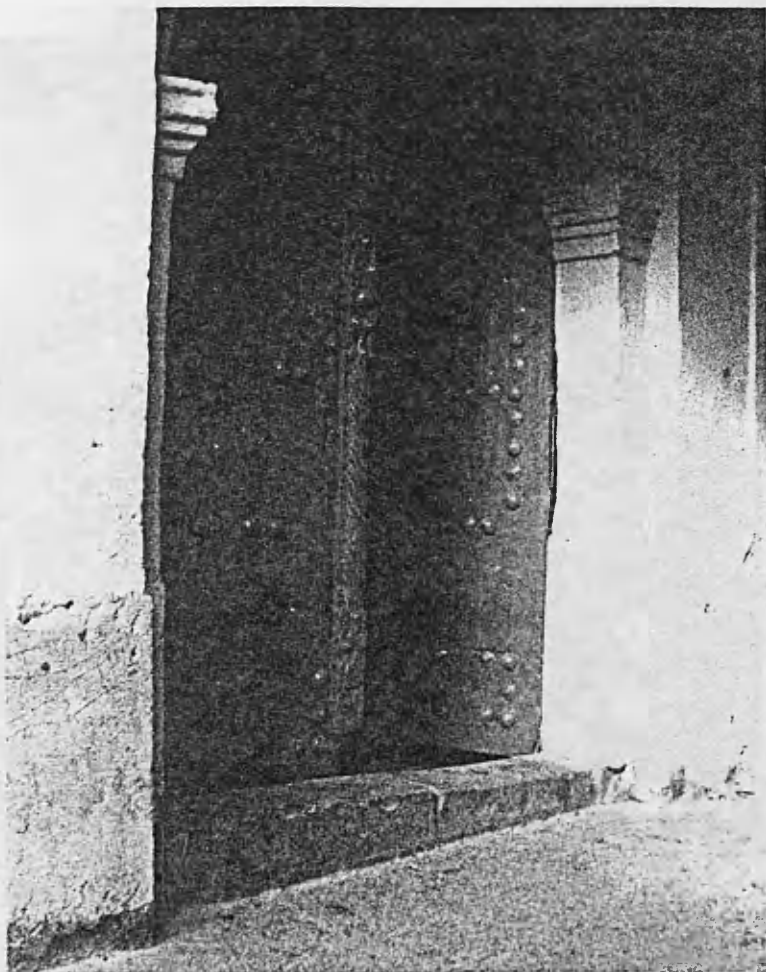


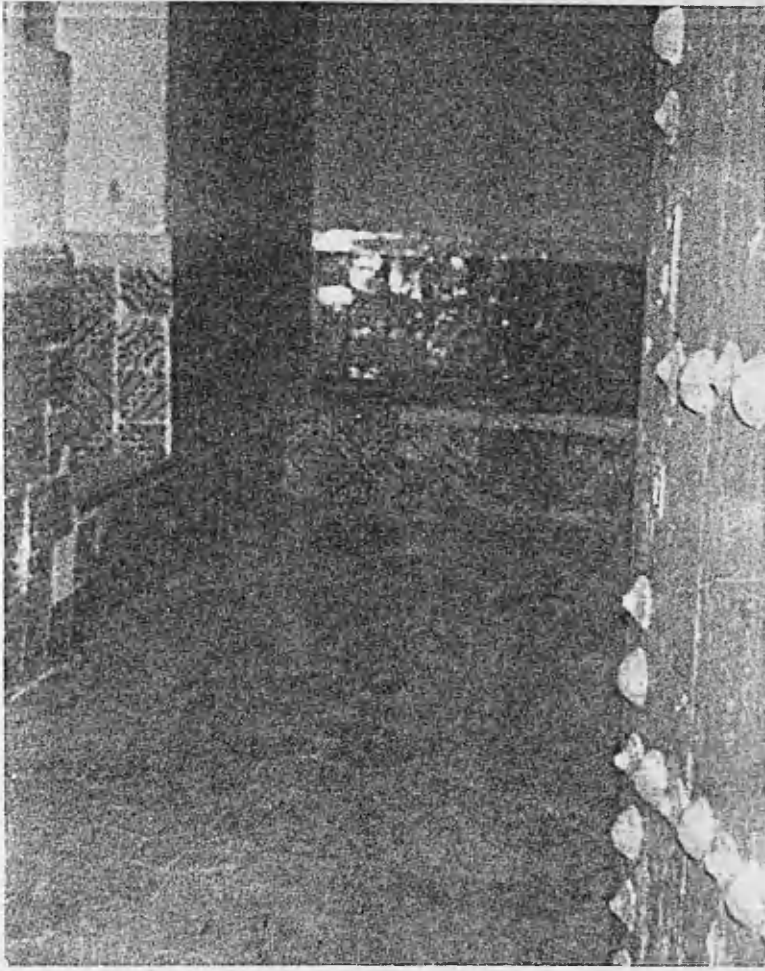
Figure 13 -
Different types
of vestibules.



(a) Exemple of an entrance doorway. Note the cut stone sill and the heavy door nailed with decorative brass knobs.

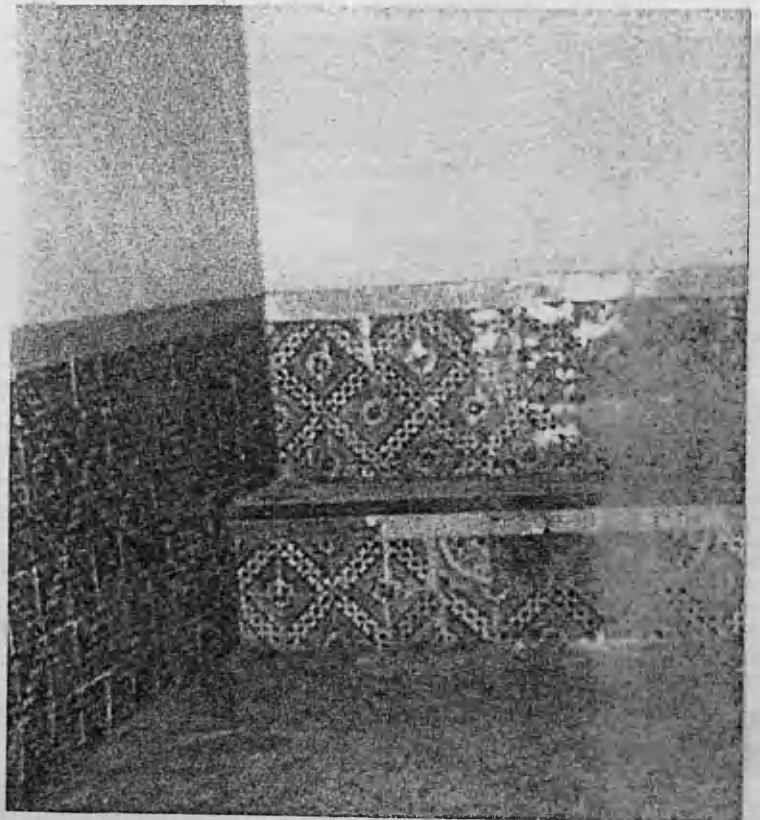
(b) Typical fanlight occupying the tympanum of the arch





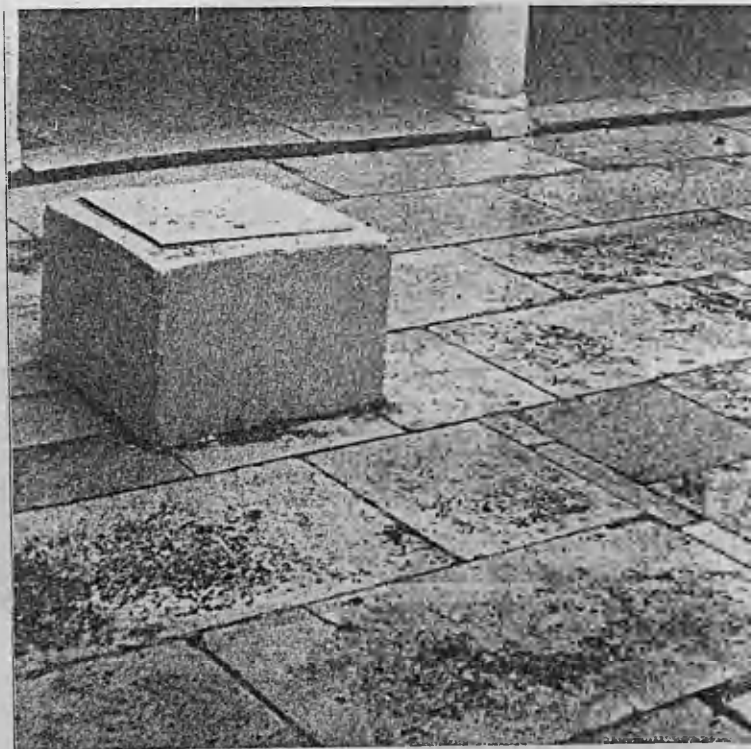
View of a typical vestibule
provided with benches and
polychrome tiles .

Plate 7 -

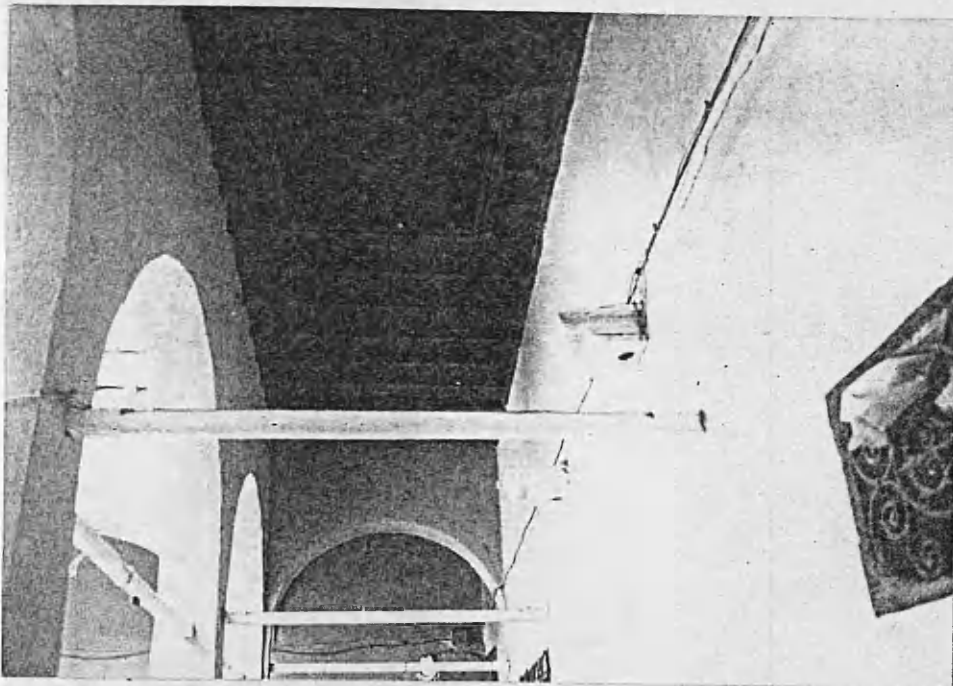




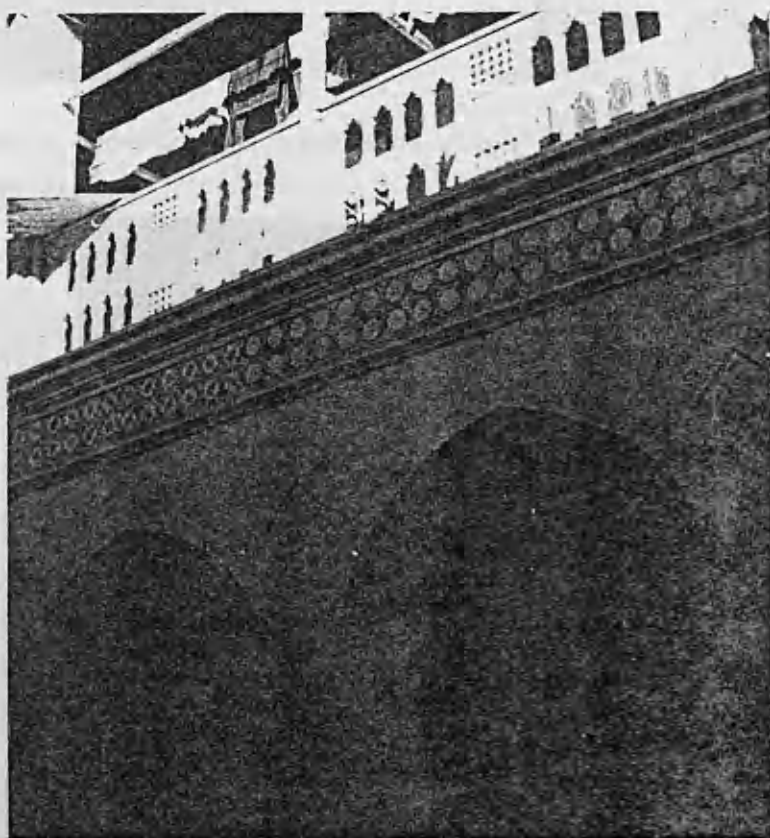
(a) Example of a courtyard floor paved with stone flags.



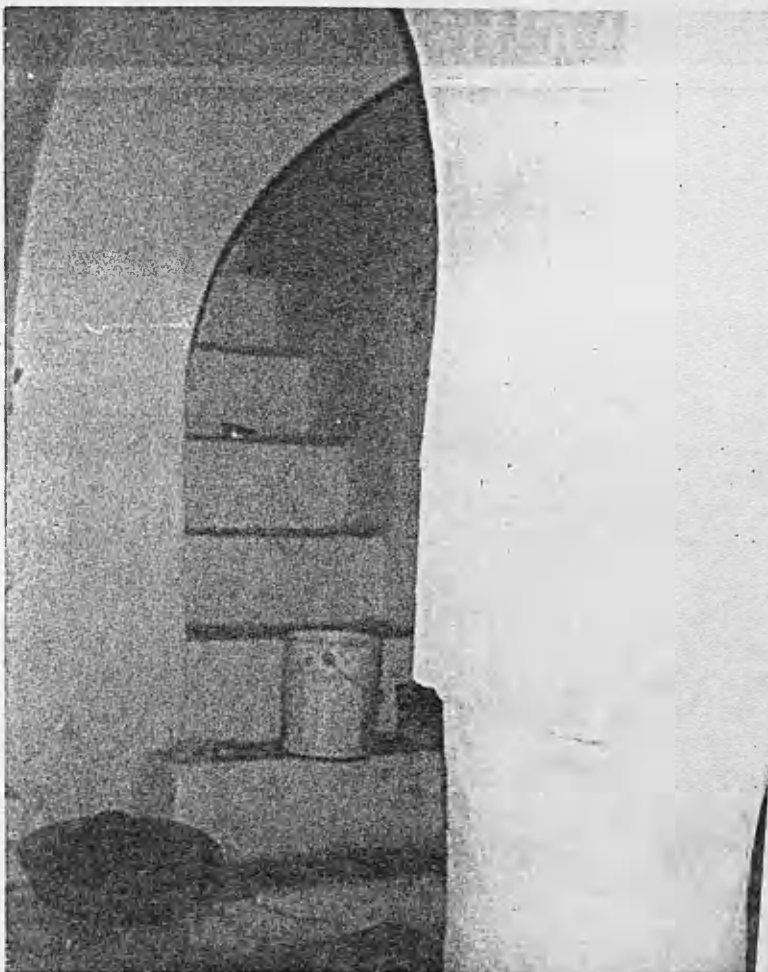
(b) Example of a courtyard paved with marble slabs and containing a well.



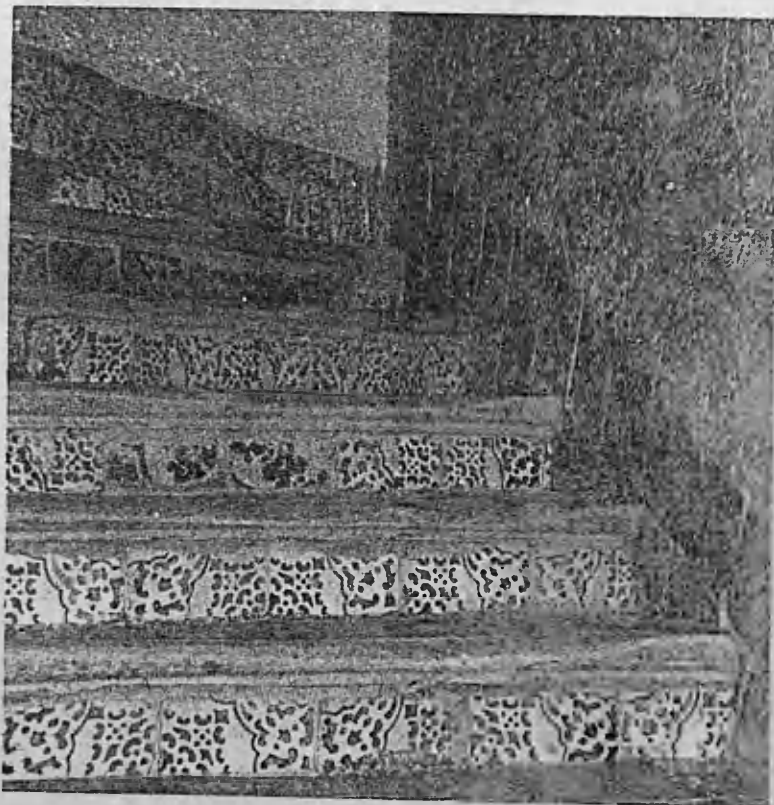
(a) View of an upper floor gallery



(b) Interior view
of a courtyard
showing elements
of decoration or-
namenting the
courtyard arcades



(a) A staircase in modest house with high steps and a hiding arch.



(b) Example of a large staircase with polychrome tiles decorating the steps.

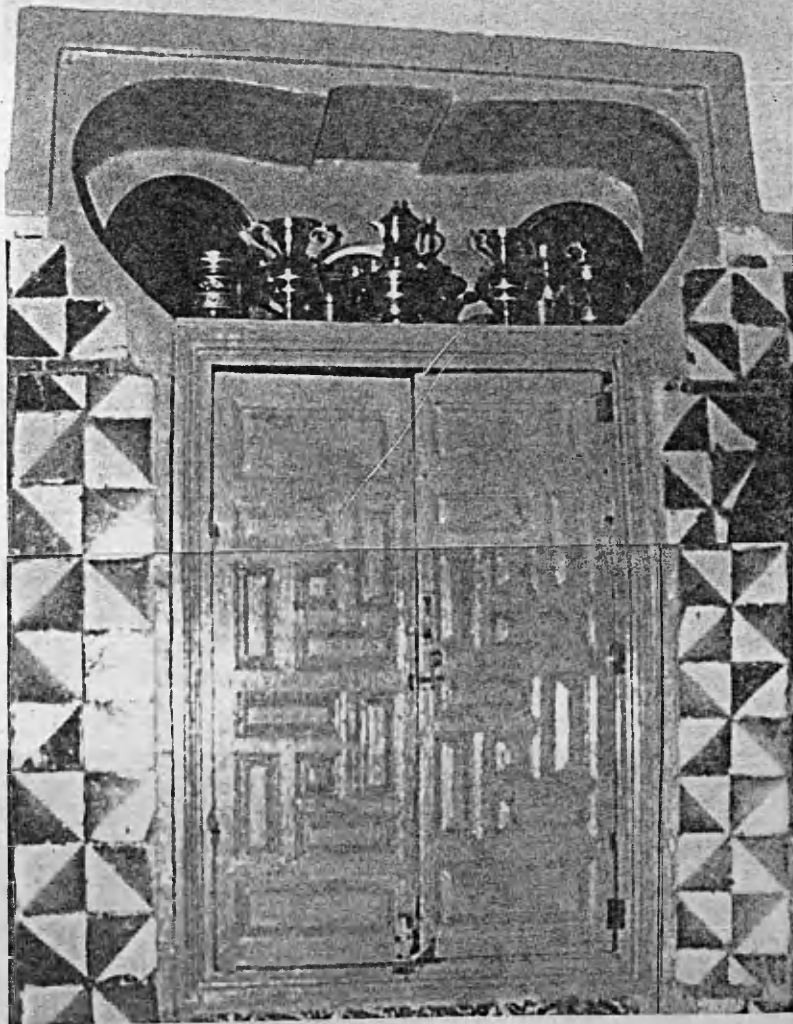


Plate 11 -Typical embedded cupboard.



Plate 12 - Details of typical wall construction (above) lower part laid with dressed stones above which courses of baked bricks alternating with courses of field stones.

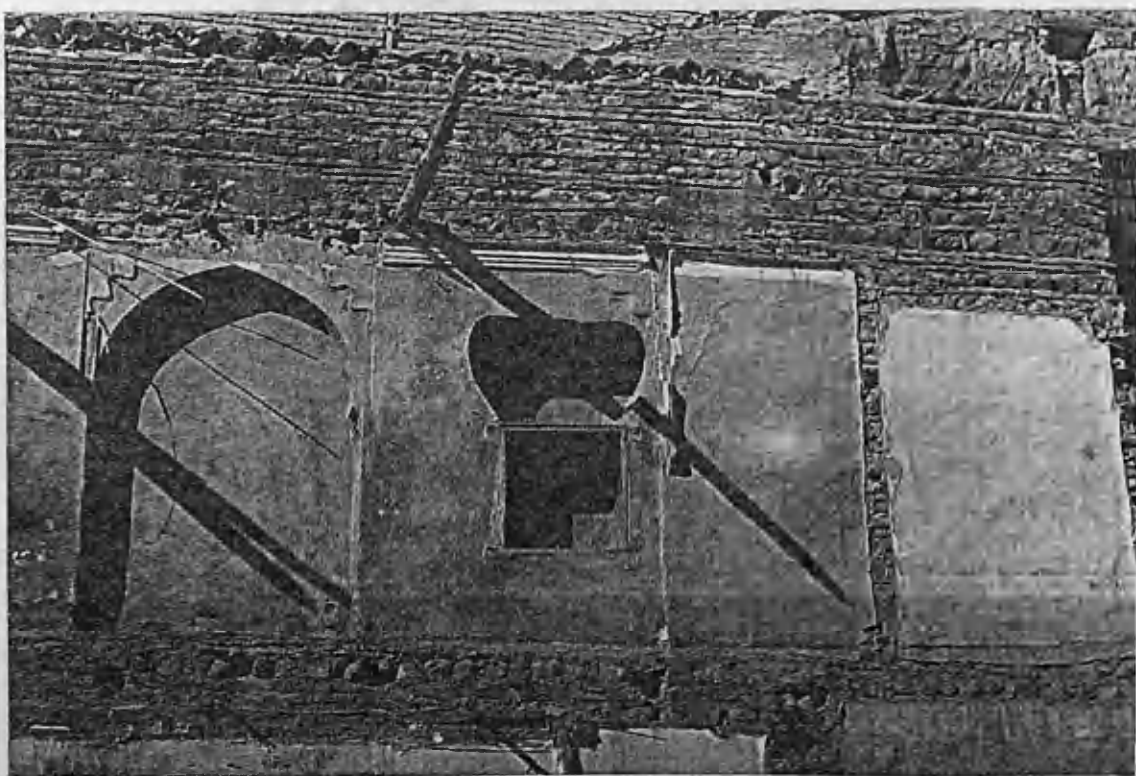
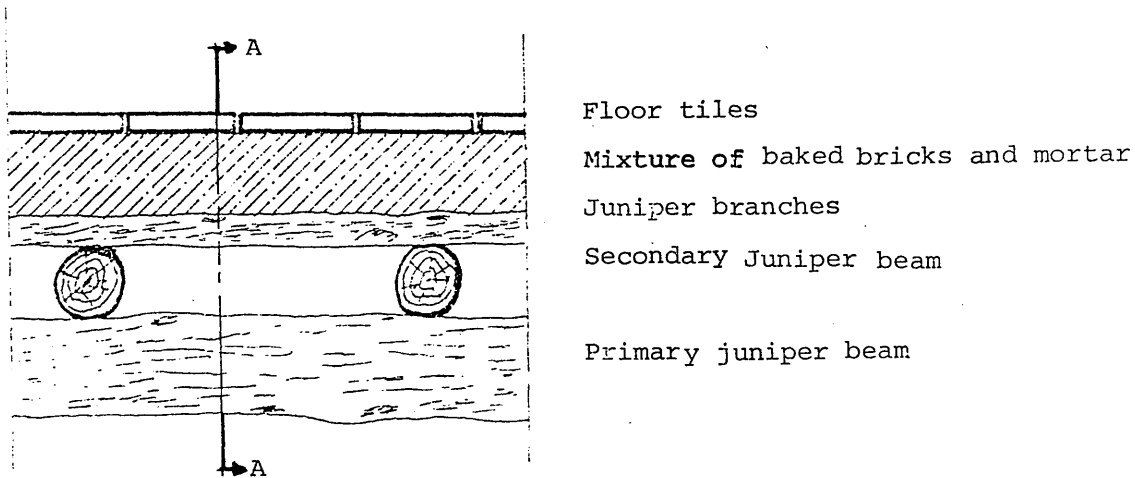


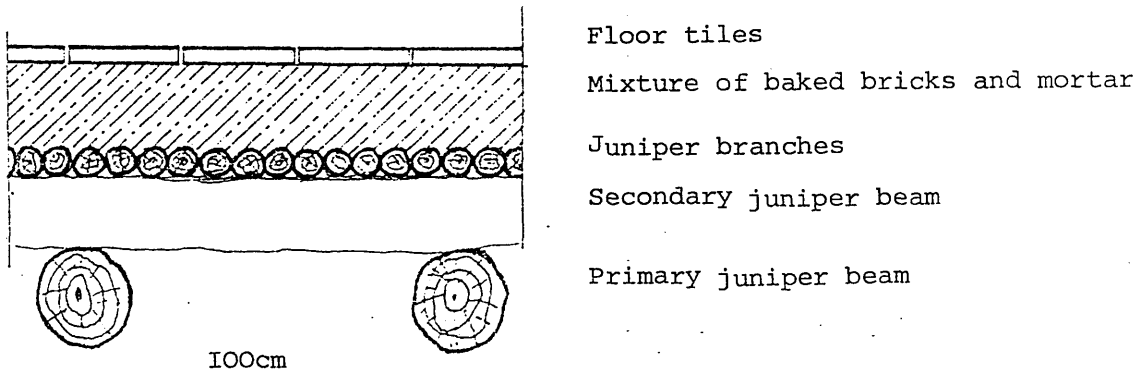


Plate 13 - Polychrome tiles decorating the courtyard galleries
their irregularity is among their most endearing and
characteristic aspects.





Section through suspended floor



Section AA

Figure 14- Typical suspended floor in the medina

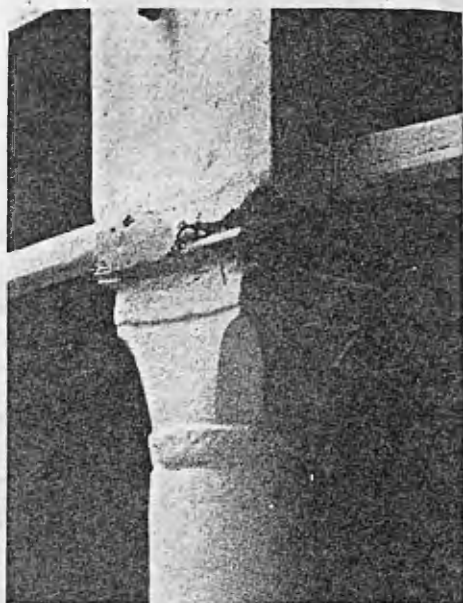


Plate 14 a - Detail of capitals on circular columns recorded in three houses.



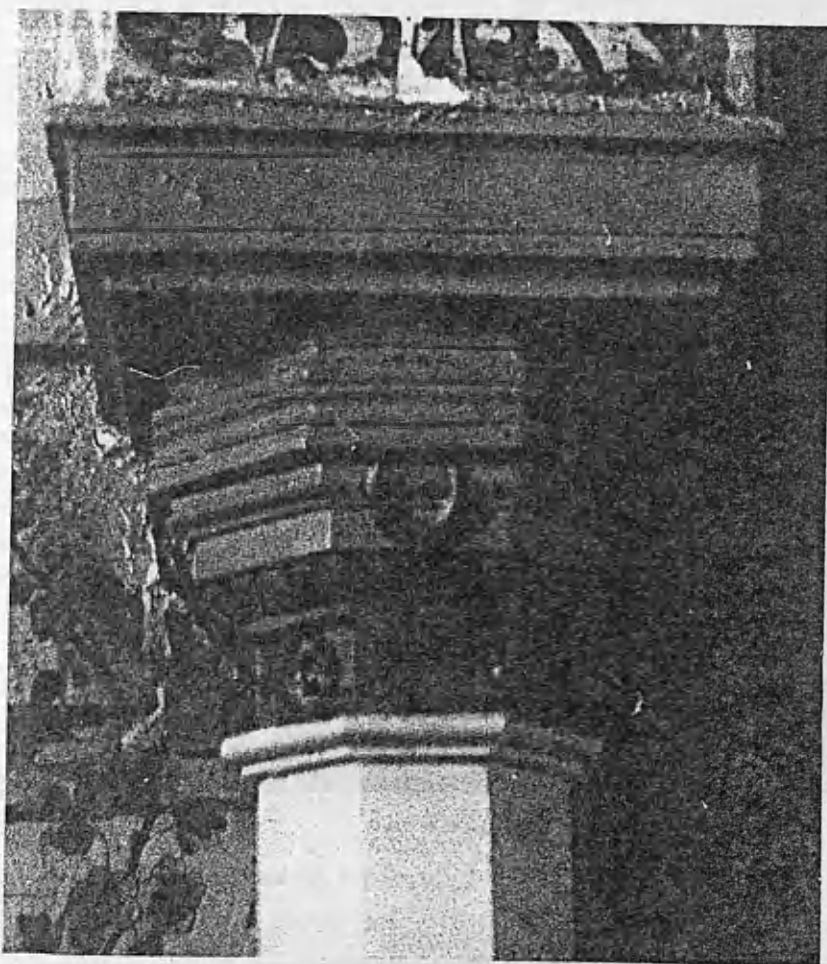
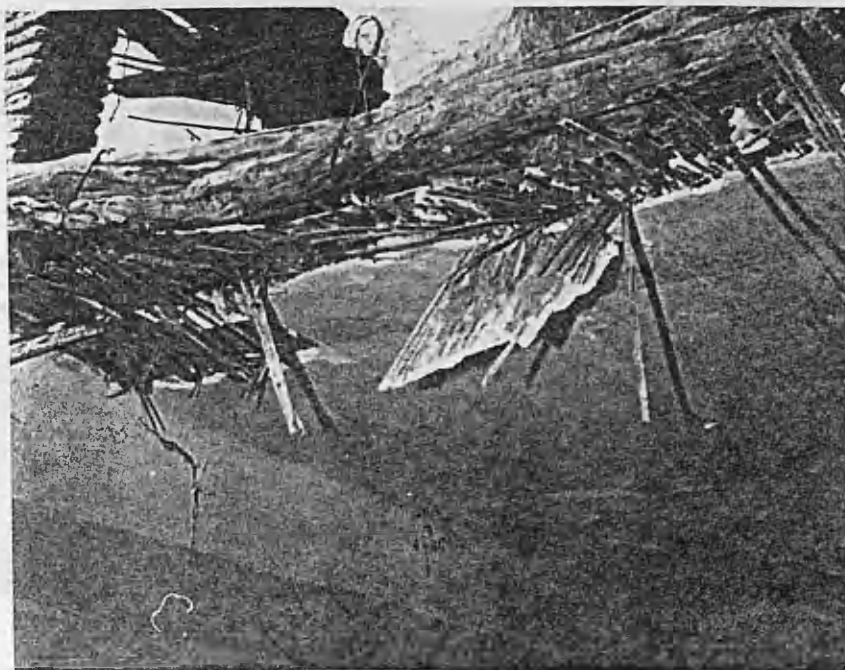


Plate 14 b-Another type of capitals on marble and wooden columns.

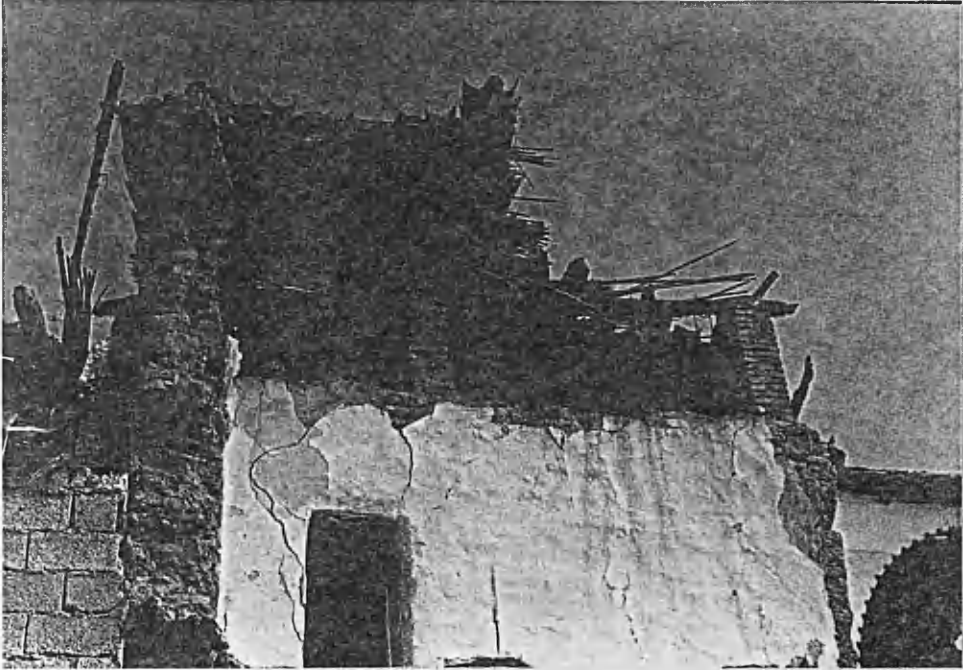




(a) Typical plastered ceiling in modest houses.



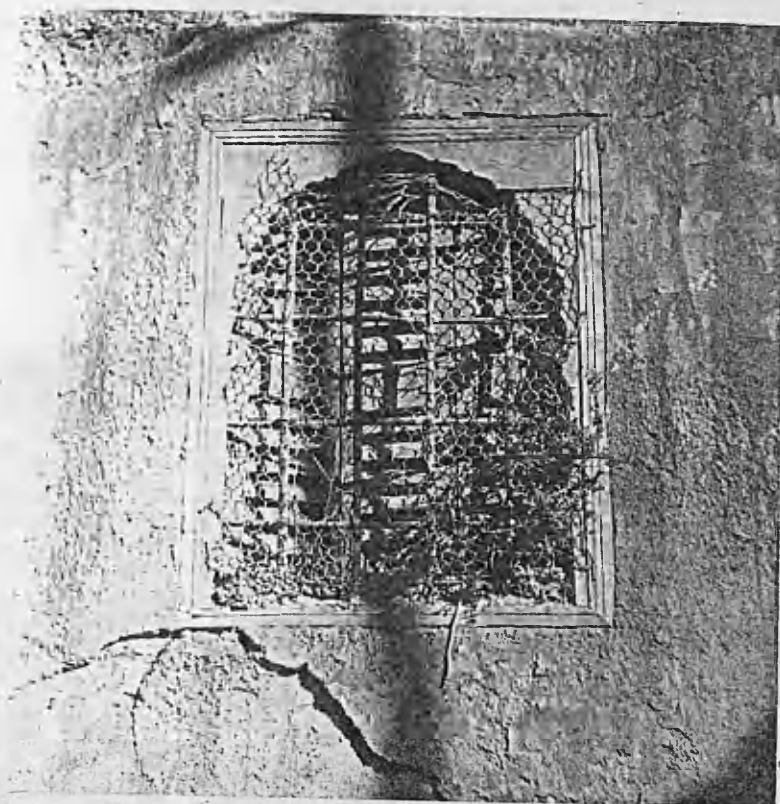
(b) Example of a carved wooden ceiling ornamented with complexity of geometrical motifs.



(a) View of a typical roof, showing the principle of construction
Note brick pillars spanned by juniper ridge beam



(b) "Roman" clay tiles, a traditional roof covering.

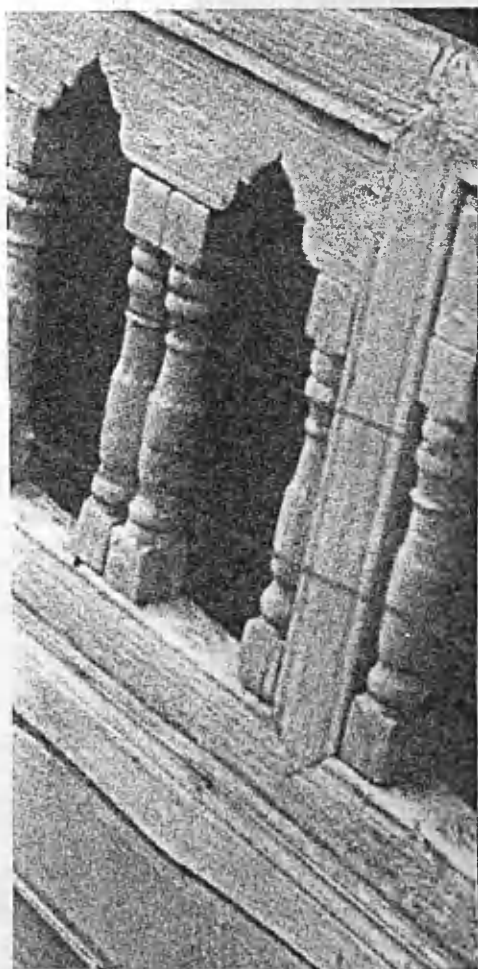
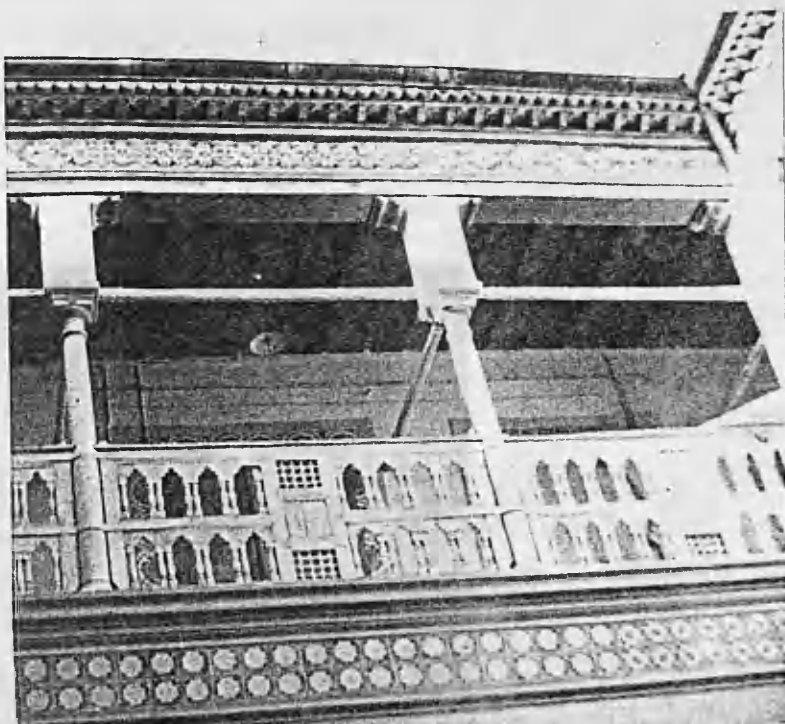


(a) Example of ground floor window with fretted profile frame protected by iron grilles.

(b) Upper floor window.



Upper floor



Detail



Mezzanine level.

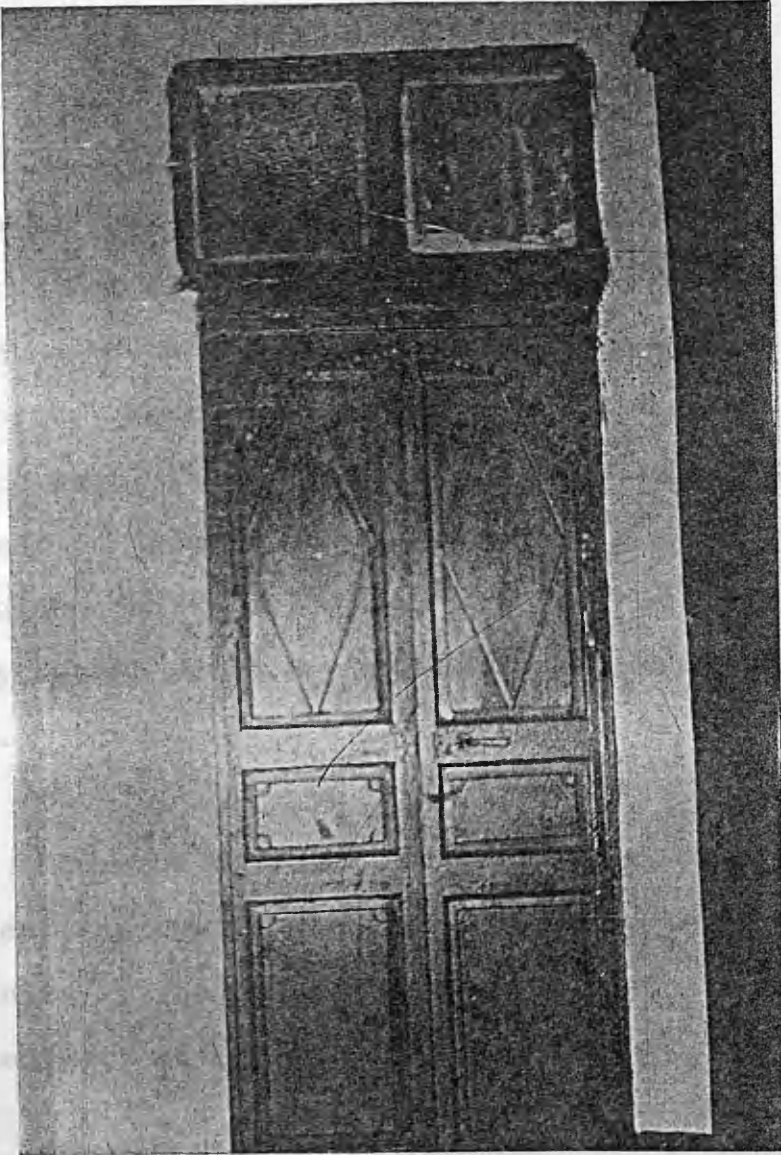


Plate 17 View of a door in modest house.

CHAPTER III

THE PALACE OF SALAH BEY

The Salah Bey palace is located in the former Jewish quarter (Suq al-Acer) in the north-west part of the medina, between al-Mouafek Street to the north-west, Suq al-Acer to the north, Mentouri Street to the east, and Piquet Street to the west (see fig 15). Though the exact date of construction could not be told by its owner, Bendjaloul, the palace was built towards the end of the eighteenth century when Salah Bey built his mosque (1776) and madrasa (1775).

Since then, the building has been successively inhabited by different occupants and has undergone many alterations. As a result it has suffered considerable damage which has affected many of its original features.

The building has not previously been surveyed and the aim of this project is to provide an accurate record of the building, to outline its architectural and historical development as revealed by documentary sources and by the architectural survey itself, and to produce proposals for its conservation and restoration and conversion to a new

use.

The survey is presented in two sections. The first deals with the history of the building and the second is a description of the building as it stands.

HISTORY

For nearly twenty years the palace was the home of Salah Bey. Despite its architectural and historical importance, very little has been written about this palace. Most of the relevant works go no further than a brief description of its situation and original purpose. This lack of historical data is one of the reasons why there is confusion over the precise date of its construction. For example, in Cherbonneau's (27) publication of 1856-57 he states that Salah Bey built successively the madrasa in 1775, the mosque of Sidi al-Kettani in the following year and then the palace. In 1868 Vaysettes (28) repeated the same information. However, an inscription published in 1867 by

27. A.C. Cherbonneau, Inscriptions arabes de la province de Constantine (Annuaire de la societe Archeologique de Constantine 1856-1857), p 112.

28. E. Vaysettes, Histoire de Constantine sous la dominance Turque (Receuil de la societe archeologique 1867-1869), p355.

Feraud (29), which was carved on a decorated wooden door found in the Ahmed Bey palace (1835), dates from 1772 and was undoubtedly taken from the Salah Bey palace by Ahmed Bey to embellish his own palace.

After the death of Salah Bey in 1792, the palace was inherited by his descendants, the Bendjalouls, who lived in it until the occupation of the town by the French in 1837. After the French occupation the palace was converted to a civil hospital and then to a Christian institution. In 1857 Cherbonneau stated that at that time the palace was rented by the municipality to an institution run by Christian nuns. In 1868 Vaysettes confirmed that the building was occupied by Christian nuns, adding that previously it had been used as a hospital. By 1891 according to Mercier (30) the palace was occupied by the Brigadier General of the French army.

Little is known of its subsequent history until about thirty-five years ago when it fell into decline and was

29. L. Feraud, Monographie du palais de Ahmed bey de Constantine (Receuil de notices et memoires de la Societe Archeologique de Constantine 1867), p34.

30. E. Mercier, Histoire de l'Afrique Septentrionale (Paris, Ernest Leroux 1891), p424.

divided into various apartments occupied by local Muslims and Jews.

DESCRIPTION

The palace is roughly square in plan, with an annex projecting from the north-east corner (see fig A) and a group of rooms at upper floor level on the west side spanning the street (Piquet Street). There are two main floors with a mezzanine between them arranged around a central open courtyard. The external walls, rendered with stucco, are plain and largely unadorned. The pitched roof is covered with terra-cotta pantiles, customary in Constantine.

Two doors give access to the palace. The main entrance in the west frontage is an impressive doorway, which leads through a vestibule to the central courtyard. A second door in the east frontage leads to an open yard south-east of the palace where a garden and stables were originally located (31). From this yard another door opens north to a staircase leading up to the mezzanine.

31. E. Mercier, Histoire de Constantine (Constantine 1903), p293.

A series of small shops, now extended to the market square, opens in the north and west street frontages. Five other small shops on the ground floor of the annex open in the north and east frontages. Since the mezzanine (32) extends over these shops, and an original doorway in room C17 on the upper floor opens on a terrace on the roof of the annex, it is reasonable to assume that this annex is part of the original foundation.

The principal rooms of the palace give on the central courtyard by way of porticoes with pointed arches at ground floor level, which rise above the mezzanine floor level, and galleries of semicircular arches at the upper floor level. The rooms on the ground floor include the men's quarters and reception rooms. On the mezzanine are the servants' quarters and kitchens, and on the upper floor are the main living quarters where the bey and his family will have resided.

STREET FRONTAGES

The palace presents three frontages to the street, the east

32. Unfortunately we were unable to obtain access to survey fully that part of the mezzanine which extends over the shops in the north-east corner.

frontage on Mentouri Street, the north frontage on the market square (Suq al-Acer) and the west frontage on Piquet Street. Since it abuts on adjoining buildings to the south, no external wall is visible on this side. Apart from the west frontage, which contains the main entrance, the street frontages are quite plain.

The east frontage comprises two parts. The main part faces east to the stable yard and continues northwards to include the east wall of the annex. The main part of this frontage is pierced by six identical tall windows, three at ground floor level and, directly above these, three at upper floor level. Those at the upper floor level are now fitted with raised sills, 50cms high. The annex frontage has a shop opening on Mentouri Street at ground floor level and a doorway at upper floor level which opens on the terrace on the roof of the annex. This terrace is protected by a modern tubular steel balustrade supported by rectangular brick pillars 1.28m high, with stepped copes (see pl 20a). A cornice of "Roman" terra-cotta pantiles under the gable extends across the frontage on the terrace and continues under the eaves onto the north frontage. Two small windows in the gable (see pl 20b) ventilate the roof void.

The north frontage also comprises two parts, one belonging

to the annex and the other to the palace proper. The annex frontage at mezzanine level has been considerably altered by the insertion of a modern wall, containing three windows with reinforced concrete sills. At the upper level the window and door of a latrine open on the terrace. A piece of mashrabiyya screen, similar to those in most traditional houses in the town, was discovered on the terrace; it may belong to the original foundation (see pl 20b). The main part of the north frontage has shops opening at ground level and, above these, two tiers of windows. Those at mezzanine level, four in number, are set well into the thickness of the wall making it difficult for passers-by to look into the rooms beyond. The seven huge upper floor windows, similar to the ones in the east frontage, are protected by external timber shutters. All but two of these windows have modern raised sills, 50cms high. Above the level of the windows are four locating anchors for steel tie rods inserted to consolidate the structure. These anchors are in the form of the letters "S" and "Y" in the order S.Y.Y.S. Under the eaves a row of terra-cotta pantiles forms a sort of cornice.

The west frontage on Piquet Street lies under the vault supporting the upper floor rooms spanning the street. The vault is interrupted over the entrance doorway by a flat

ceiling carried on timber beams. Four transverse arches carry the left hand (north) vault; another transverse arch and two consoles carry the right hand (south) vault. The lower part of the frontage to the left (north) of the entrance is of large stone ashlar, four courses high. The remainder of the frontage is rendered with stucco. Besides the entrance doorway (described below, page 82) there are two modern doors into storerooms at either end of the frontage, two windows (now blocked) which originally lit a latrine and storeroom to the left of the entrance, and two upper-level grilled windows at the right-hand (south) end.

ENTRANCE

Situated under a vault across the narrow Piquet Street, the entrance in the west frontage is a marble pointed-arched doorway flanked on both sides by marble columns. A small window, lighting the vestibule, occupies the tympanum of the arch (see fig 16). The entrance door is ornamented, on the outside only, with fluted brass knobs arranged in rows. It has only one locking bolt, on its inner side, which consists simply of an iron bar sliding horizontally in three slots, two located on the door and the third on the frame. The door also has a knocker located unusually at the top left-hand side above the doorleaf. It consists of a

ring fastened by a movable joint to a domed brass escutcheon. Such knockers are usually found in the centre of the door.

Two steps lead up into an angled vestibule 3.3m long and 1.9m wide. Unfortunately the vestibule no longer presents the characteristic features of the traditional skiffa, tiles, benches and dog-leg passage, described above (page 42), although the side walls are skewed to make it more difficult for passers-by to look directly into the courtyard. The vestibule ends with a second pointed-arched doorway, similar to the entrance described above, where one step leads up to the central courtyard (see pl 21).

The courtyard, 7.0m by 6.9m, is paved with fine marble slabs 50cm square (see pl 22). Originally the rooms on the ground floor were reached by way of an arcade of octagonal marble columns and pointed arches around the courtyard, but the arcade has now been largely blocked by thin partition walls (see plan A).

The rooms (A1, A2-6, A14) on the west and north sides of the courtyard have been converted into shops and storerooms, except for a small room (A3) in the north-west corner which now houses a latrine.

The rooms on the east (A12-17) and south (A12-13) sides remain largely unaltered.

The south side consists of a rectangular room (A18), 3.0m by 7.4m, entered through a richly carved door (see fig 17). The door is flanked on each side by a rectangular window with a very low sill called kharjia. The room is paved with fine marble slabs like those in the courtyard, 50cm square. Towards the east end is a rectangular hole, the purpose of which is not known, now covered with cement but which, according to the present tenants, used to be covered with wooden floor boards. The edges of the slabs around the hole are damaged, suggesting that the whole is a later insertion.

The east side of the courtyard is occupied by the majlis, a large reception room 11.5m long and 2.9m wide, with a wide arched recess, kbu, in the middle of its east wall forming a "T" shape in plan (fig A). This room has been divided by later partitions to provide a storeroom (A17), a sitting room (A15), and a kitchen (A13). Originally the west wall of the majlis contained a central door flanked by rectangular windows. The windows have been converted into doors for rooms A17 and A13, undoubtedly when the majlis

was partitioned. The majlis is also paved with marble slabs like those in the courtyard. In the north-east corner of the room (A13) sits an elevated brick structure 61cm high (see pl 23a), which appears to be a later insertion whose purpose is not known. The present occupants claim that it covers the opening to a secret passage leading to the mosque of Sidi al-Kettani built by Salah Bey (see above, p. 75). The majlis and the kbu are decorated with a dado of polychrome tiles of the same pattern (pl 23b). The tiles on the north wall of the majlis are now missing and on the west wall some of these have been rearranged in a confused pattern. The line of an arch is discernible above the north wall of the kbu, suggesting that this wall may originally have been open. However, since the tile dado running around the south and east walls continues on the north wall, it is reasonable to assume that this wall is original. In that case it is difficult to explain the presence of the arch. Unfortunately, detailed inspection of the conjunction between the north and east walls was prevented by the presence of a tall, heavy wardrobe in this corner of the kbu. Light in the kbu is provided by a large rectangular window in its east wall. The most distinctive feature of the majlis and the kbu is a carved wooden ceiling, which has no obvious parallel among others in the medina of Constantine (pl 24a). To north and south of the kbu are the

customary rectangular side rooms, maqsuras. The one to the north is now used as a bedroom and the one to the south as a storeroom. These maqsuras are entered from the majlis through low doorways, the storeroom retaining its original finely decorated double door leaves (pl 24b).

UPPER FLOORS

The galleries around the courtyard leading to the rooms at the upper floor levels were originally reached by two staircases. One in the south-east corner of the courtyard leads into the south and west parts of the mezzanine and continues to the upper floor, another in the north-east corner of the palace complex (see fig B) leads to the mezzanine only. A modern staircase has been built into the south-west corner of room A1 to provide access to a storeroom (B3) above it.

MEZZANINE (Arabic : salamat)

The first flight of the south-east staircase, at a height 3m above ground level, leads into a low gallery, 2m high, protected by its original wooden balustrade (see pl 25a).

The two rooms on the west side of the gallery have been converted into storerooms (B3, B4); rooms on the north (B5, B13) and south (B1, B2) sides remain mostly original.

On the south side is a rectangular room directly above room A12 on the ground floor (see fig B). This room is divided by a later partition wall to provide a sitting room to the east (B1) and a bedroom to the west (B2). The entrance to the room is through two doorways, one situated in the middle of the north wall, and another in the north-east corner of the room. The floor and walls are covered with hard mortar which appears to be original.

To the north of the gallery lie two parallel long, low halls, 2.64m high. The northern hall is lit by windows in the outside wall, while the southern hall is lit like other rooms at this level by windows and doors opening on the courtyard gallery. Both halls are divided by later partition walls into a series of eight rooms, four in the northern hall now used as bedrooms (B8, B10, B11, B14) and four in the southern hall used as a sitting room (B7), kitchen (B9), bathroom (B6) and latrine (B5).

The area to the east of the gallery is inaccessible at this level, being the upper part of the vaults of the majlis and

its dependencies (A12, A17) on the ground floor.

According to the present occupants of the palace, the mezzanine originally housed a kitchen on the north side, and servants' quarters on the south and west sides. A chimney at the west end of room B5 rises from a height of about 3 m above ground level, corresponding to the level of the mezzanine floor (see pl 25b), which seems to confirm that these northern rooms contained the palace kitchen. This identification must, however, remain tentative in the absence of corroborating evidence.

UPPER FLOOR

The upper floor gallery over that of the mezzanine is reached, as mentioned above, by the south-east staircase. According to the present occupant the gallery was originally paved with marble slabs similar to those in courtyards, decorated with a dado of polychrome tiles (pl.26a), and protected by an elaborate wooden balustrade, 1.05m high, similar to the one at mezzanine level (pl 26b).

The openings on the gallery at this level display a dominant symmetry. The regular arrangement of five openings in the facade on the west side of the gallery is maintained

on the other three sides. Blind recesses simulate openings at the west end of the south facade, at the south end of the east facade and at the west end of the north facade. A window to the right of the central door in the north facade has been blocked up, as have the central door in the east facade and the western door in the north facade, while the central doorways in the south, west and north facades have been reduced in size.

The rooms at this level include the women's quarters (33) (harem), comprising a group of reception rooms to the east, south and west, and two big rooms to the north connected by an archway in the northern half of their common wall. These last two rooms may have been the master's sitting room and bedroom.

According to the present occupant, these rooms were paved with marble slabs similar to those in the courtyard and uniformly decorated with dados of polychrome tiles. The wooden ceilings are adorned with elaborate geometrical designs based on star patterns, except in the sitting room and bedroom, where a new plaster ceiling has been inserted. All the rooms at this level are now divided by thin

33. According to E. Mercier, Salah Bey at his death left three widows.

partition walls, except those in the south-west corner which seem to retain their original layout.

The rooms on the north side of the gallery have been considerably altered, perhaps more than one occasion, by the insertion of partition walls and plastered ceilings. These alterations have made its original layout difficult to interpret. This and the absence of architectural similarities to the rooms on the east, south and west sides of the gallery make it impossible to determine the original purpose of these northern rooms.

The remaining features, pavement, tiles, arches, windows, (see fig C) indicate that this part was dominated by a large rectangular room, (C16 + 17), 9.85m long and 5.80m wide, paved with marble slabs 50cm square and spanned by three arches decorated with tiles and supported by marble columns (see pl 27). One arch is now missing, presumably removed when room C17 was partitioned off.

The entrance to the original large room (C16 + 17) was through a beautiful carved wooden door set in a marble arched doorway in its south-west corner (see pl 28), now blocked up and replaced by a new door in the middle of the south wall. According to the present occupants, this change

occurred during the conversion of the north and east side rooms (C15-21) into a self-contained flat about ten years ago. The north wall of the large room (C16 + 17) is pierced by three tall windows, 2.80m high, now reduced to 2.19m in height by raised sills.

Later partition walls divide the room to accommodate a bedroom (C17) and a corridor to the east which leads to a recent bathroom. The floor of the bedroom (C17) and corridor have retained their original marble slabs, the only converted part at this level to do so. A marble column on the west wall of the bedroom and the arch it once supported are now missing. According to the present occupants, the column was replaced by a wooden pillar during the insertion of the new partition wall. As a result, the middle column of room C16 leans about 7cm northwards from its original position (see pl 29a). In the north wall stands an impressive fireplace, now retained simply as a decorative feature (pl 29a). A dado of polychrome tiles runs around the north, west and south walls (see pl 29b), but the east wall (a late insertion) is covered with plaster.

A door in the north-east corner of the bedroom leads up one step to the large terrace, 9.9m long and 7.2m wide, which

overlooks the market square to the north and Mentouri Street to the east. This terrace is paved with modern tiles and protected by the modern tubular steel balustrade (pl 20a).

The trace of an archway in the north-west corner of room C16, now blocked save for a wooden door (see pl 29c), leads through a passageway to a second large room originally forming a G-shape in plan. This room has been divided by a later partition wall to provide a living room (C14) to the west and a bedroom (C15) to the east (see fig C). The principal entrance to this room is from the gallery through an arched doorway, now reduced in width, which is flanked by two rectangular windows, now converted into cupboards. Two other windows, in the north wall, are similar in shape and height to those in rooms C16 and C17. The floor is paved with modern square tiles. The north, west and south walls were decorated with a dados of polychrome tiles now painted over. The tiles in the east wall are missing. This was caused by the insertion of a cupboard about ten years ago. A decorated plaster ceiling, which occurs only in this room, has a circular panel in the middle and a moulded cornice running along three sides north, west and south (the east side is now missing). This kind of ceiling is very popular in colonial buildings, suggesting that it is a

French insertion (pl 30).

The south side of the gallery originally was occupied by a large rectangular room, 10m long and 5.30 wide, with a shallow-arched recess, kbu, positioned in the south wall slightly off the central axis and flanked by two cupboards. The room has been divided by later partition walls to accommodate a living room (C2) to the west and a kitchen (C1) to the east. The room is entered through an arched doorway, now partly blocked with a timber partition, flanked by two windows opening on the gallery (see pl 31).

The floor is paved with hexagonal red tiles which were introduced during the French period. In the west wall sits an impressive fireplace in baroque style, no longer used as a fireplace but retained as a decorative feature (see pl 32a). A dado of polychrome tiles runs around the four walls. Two tile panels, in the south wall on either side of the kbu, contain intricate representations of a vase of flowers (see pl 32b). The wooden ceiling is decorated by two carved panels, one in the middle of the west part and one in the middle of the east part (see pl 33).

The rooms on the east side of the gallery are now much altered by the removal of main partition walls and the

insertion of new partitions. Originally the rooms formed a majlis with an arched recess, kbu, and adjoining maqsuras, similar in layout to the majlis on the ground floor. The rooms on the south (C22, C23) and north (C18, C19) sides of the kbu have been converted into a bedroom, kitchen and storeroom. The majlis was entered through a central arched doorway (now blocked up) in the west wall, flanked by a large window on either side. The square tiles paving the floor are a later insertion. An impressive fireplace in baroque style, similar to the one described above, against the north wall of the kbu, now unused, is also retained as a decorative feature (see pl 34a). The majlis and the kbu are decorated with a dado of polychrome tiles representing plants and flowers (see pl 34b), and a carved wooden ceiling with elaborate geometrical designs forming star patterns (see pl 33).

In contrast, the rooms on the west side of the gallery have largely conserved their original layout. These rooms include a large rectangular room ,majlis, with an arched recess kbu, in the middle of its east wall and two maqsuras (C5, C10) to the north and south of the kbu. The majlis has been divided by two later partition walls to provide a kitchen (C9) to the north and a bedroom (C6) to the south (see fig C). Like other rooms at this level, the majlis is

entered by means of a central arched doorway, now partly blocked, flanked by windows. Although the floor of the kbu has conserved its original marble slabs, the majlis is now paved with hexagonal red tiles in its southern part (C6) and square granolithic tiles to the north (C7, C9).

The kbu may possibly have contained a fireplace like those found in rooms C2 and C16. This hypothesis is supported by the existence of a chimney in the middle of its west wall, similar in shape, dimensions and materials to the chimneys of rooms C2 and C16. The majlis and the kbu were decorated with a dado of polychrome tiles, now painted over, similar to those in rooms (C20 and C23) on the east side of the gallery. The tiles in the north-east corner of the majlis are now missing, caused, according to the present occupant, by the later installation of a sink.

The decorated wooden ceiling is heavily altered in the north-west corner of the kbu due to rainwater penetration through cracked roof tiles in the valley where the roof spanning Piquet Street crosses the main roof (see pl 35).

The south-west and north-west corners of the upper gallery are occupied by small ancillary rooms, now converted into two self-contained flats. Those in the south-west corner

comprise two small living rooms (C3, C4) connected by a low corridor and entered from the gallery by a marble arched doorway. The livingroom on the south side (C3) is rectangular in plan, spanned by a beam towards the middle of the room. Ventilation and light are provided by two windows, one in the north wall opening on the corridor and the other in the west wall overlooking Piquet Street.

The floor and the walls are now much altered. Paving of hexagonal red tiles, itself not original, has in many places been replaced by cement. A dado of polychrome tiles survives only on either side of the west window. The room is covered with a timber ceiling with no decoration. At the west end of the connecting corridor a small square room (C4) has been converted into a bedroom. There are two small windows in its south wall, the left hand side of which has been reduced in width by a later timber partition. Two small recess in the north wall, are now used as cupboards. The room is paved with modern square tiles and the walls are covered with plaster.

The north-west corner of the gallery contains a further two ancillary rooms, converted by later partition walls to accommodate a kitchen to the east (C12), a sitting room to the west (C11) and a bedroom to the north (C13). These

rooms are entered by means of an impressive marble arched doorway in the north-west corner of the gallery, which leads through a small transitional space to a secondary arched doorway in its north wall. The sittingroom (C11) and the bedroom (C13) are lit by tall windows overlooking the market square. The floors are modern, cement in rooms C12 and C13, and square tiles in the kitchen (C11). The walls are plastered and there is no sign of earlier tiles. The flat ceiling is covered with plaster, presumably replacing an earlier timber ceiling.

ROOF

The galleries and rooms around all four sides of the courtyard are covered by a shallow pitched roof of timber trusses and rafters carrying terra-cotta pantiles. Access to the roof is by way of a narrow wooden spiral staircase rising from the upper floor landing of the main staircase in the south-east corner of the building.

The present roof is relatively modern, though the exact date of construction is not known. The structure and the pantiles are generally in sound condition except on the west side where some tiles are damaged, especially in the valleys where the roof spanning Piquet Street meets the

main roof. The roof trusses each comprise a pair of inclined timbers, principals, supported by a central king post, 2.04 metres high, rising from a tie beam, 7.8 metres long. The principals are strengthened by two diagonal braces. The trusses are connected together by a ridge beam and a pair of longitudinal beams on either side. Over these beams are the rafters, 4.5 metres long, carrying battens (5cm.sq.) on which the terracotta tiles are hung (see section). Inspection has revealed the existence of several square brick pillars, about 1.40 metres high, under the ridge on each side of the courtyard. These presumably once supported the ridge beam of the original roof. This traditional manner of carrying the roof has been recorded in many ruined traditional houses in Constantine (see pl 16a). A row of terracotta tiles forming a sort of cornice under the rainwater gutter on the north frontage, 30 cm below the eaves, may also belong to the original roof.

RAINWATER SYSTEM

Rainwater from the roof is discharged inside and outside the palace by way of zinc gutters and downpipes. The gutters and downpipes are in sound condition except for the gutter on the north side which is partly missing (see pl 36).

Gutters around all four sides of the courtyard feed four downpipes, one in each corner. These downpipes carry the water to the pavement of the courtyard, which slopes down to the north-west corner where there is a drain. This drain may supply a cistern under the courtyard but we were unable to confirm this. A wellhead in the north-east corner of the portico (see fig A) is now blocked and water is supplied to the building from the public main. On the sides of the roof sloping towards the outside of the building rainwater is carried in gutters on the east, north and west sides and discharged through downpipes to open channel gutters in Piquet Street to the west and the market square to the north. To the east, rainwater is discharged through a downpipe in the north-west corner of the stable yard to an underground connection, presumably to the city's main drainage system though the possibility of a cistern under the stable yard cannot be ruled out. To the south rainwater is discharged onto the roofs of the adjoining buildings.

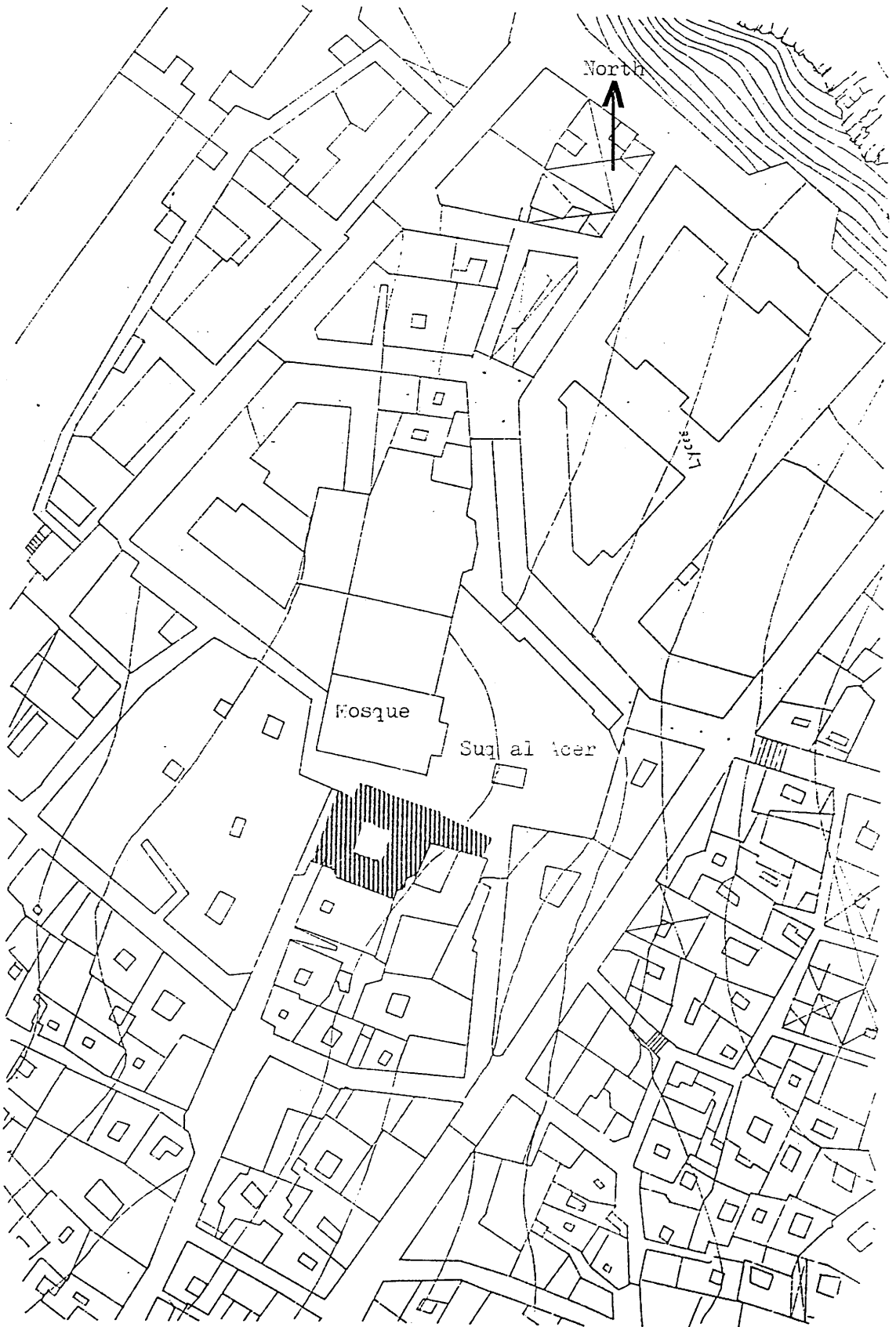
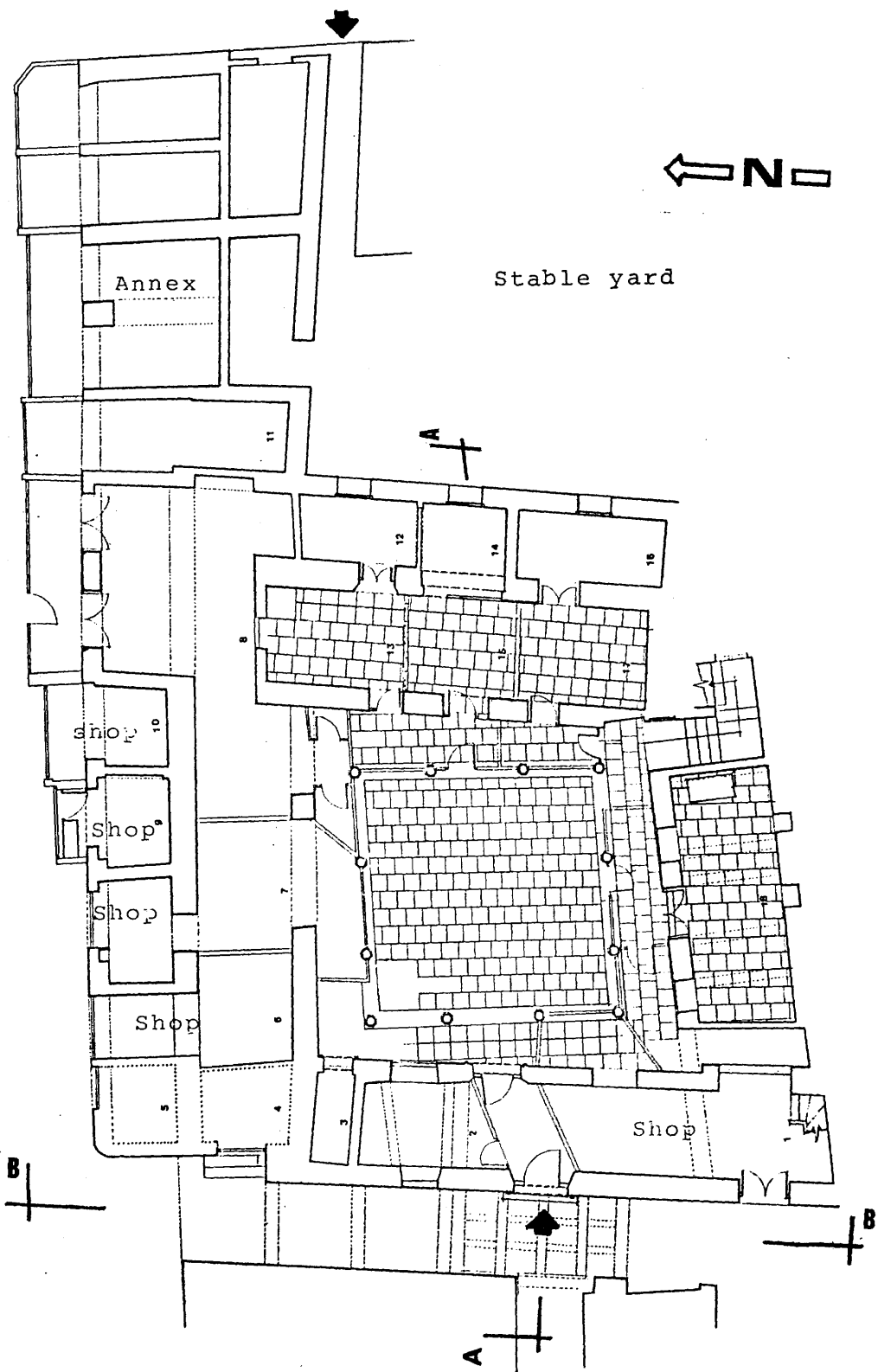
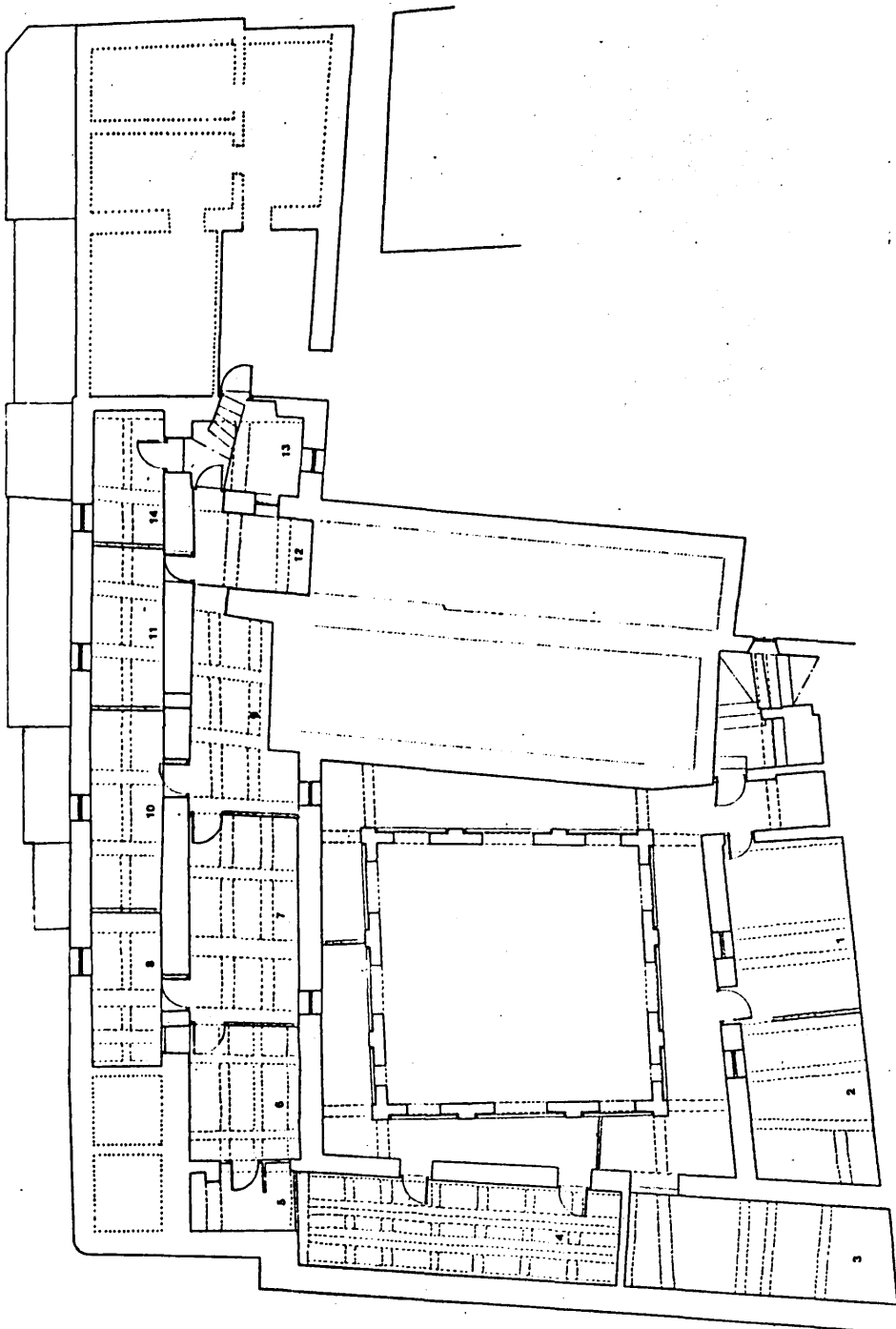


Figure 15 Salah Bey palace:location plan

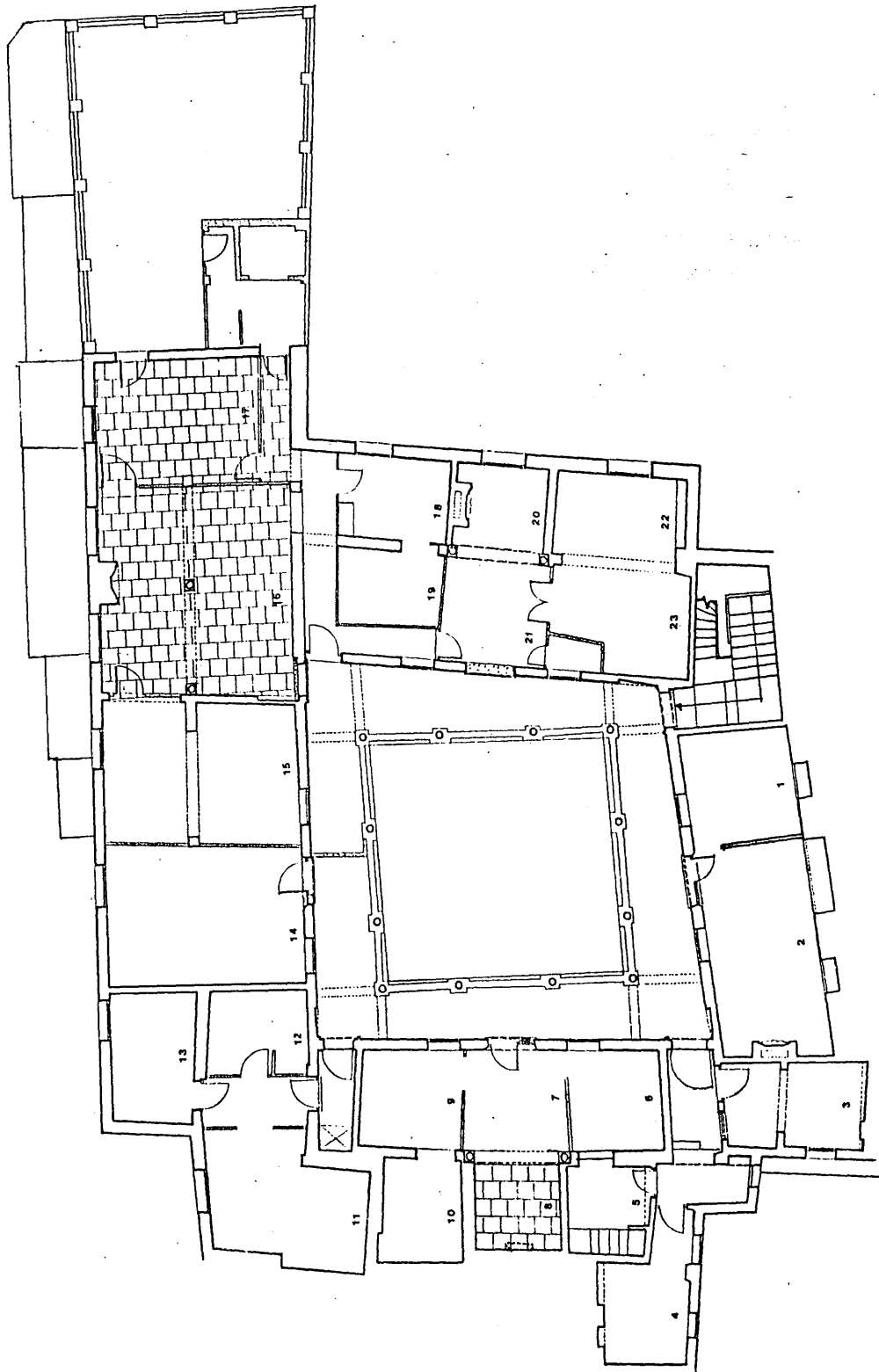


A - Ground floor plan

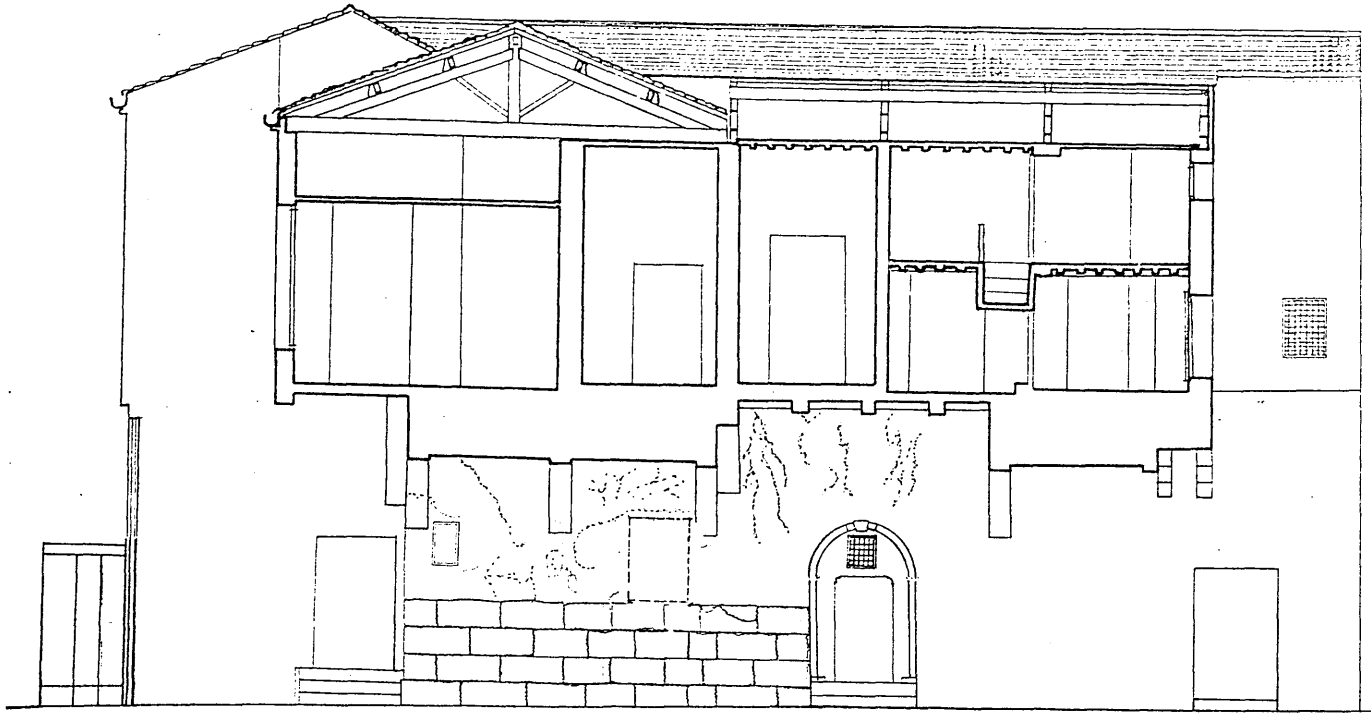
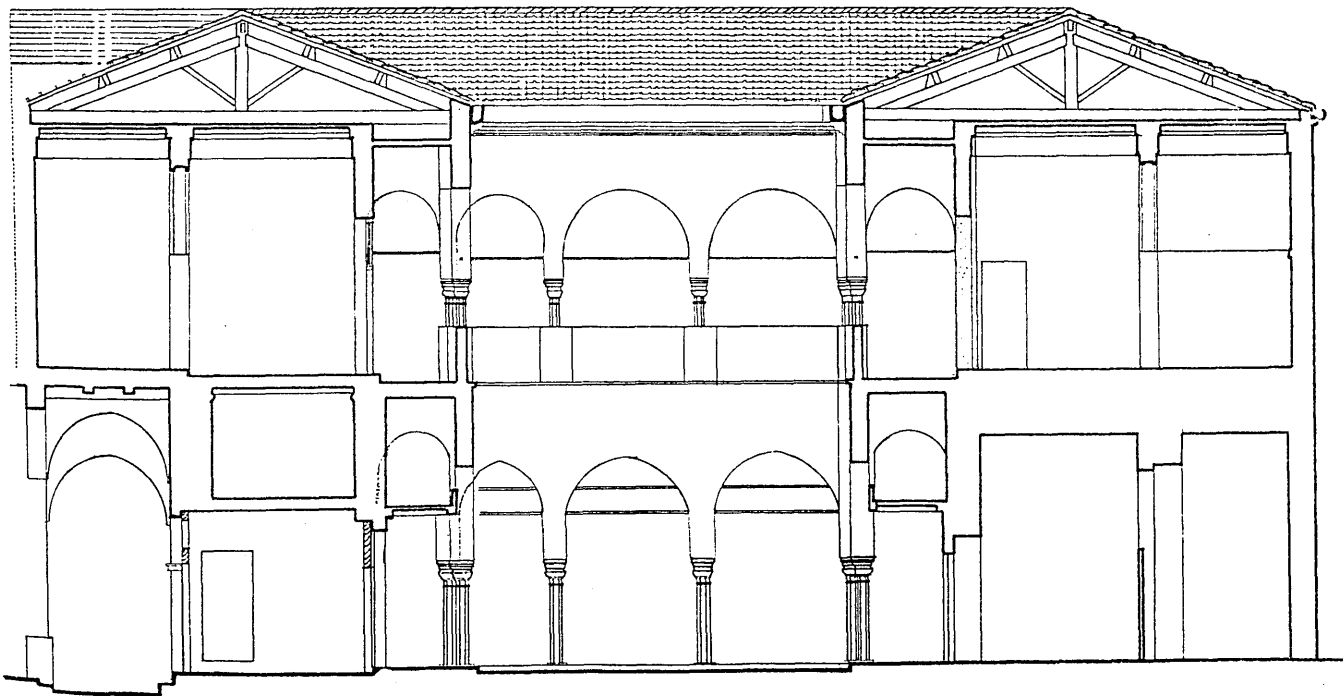


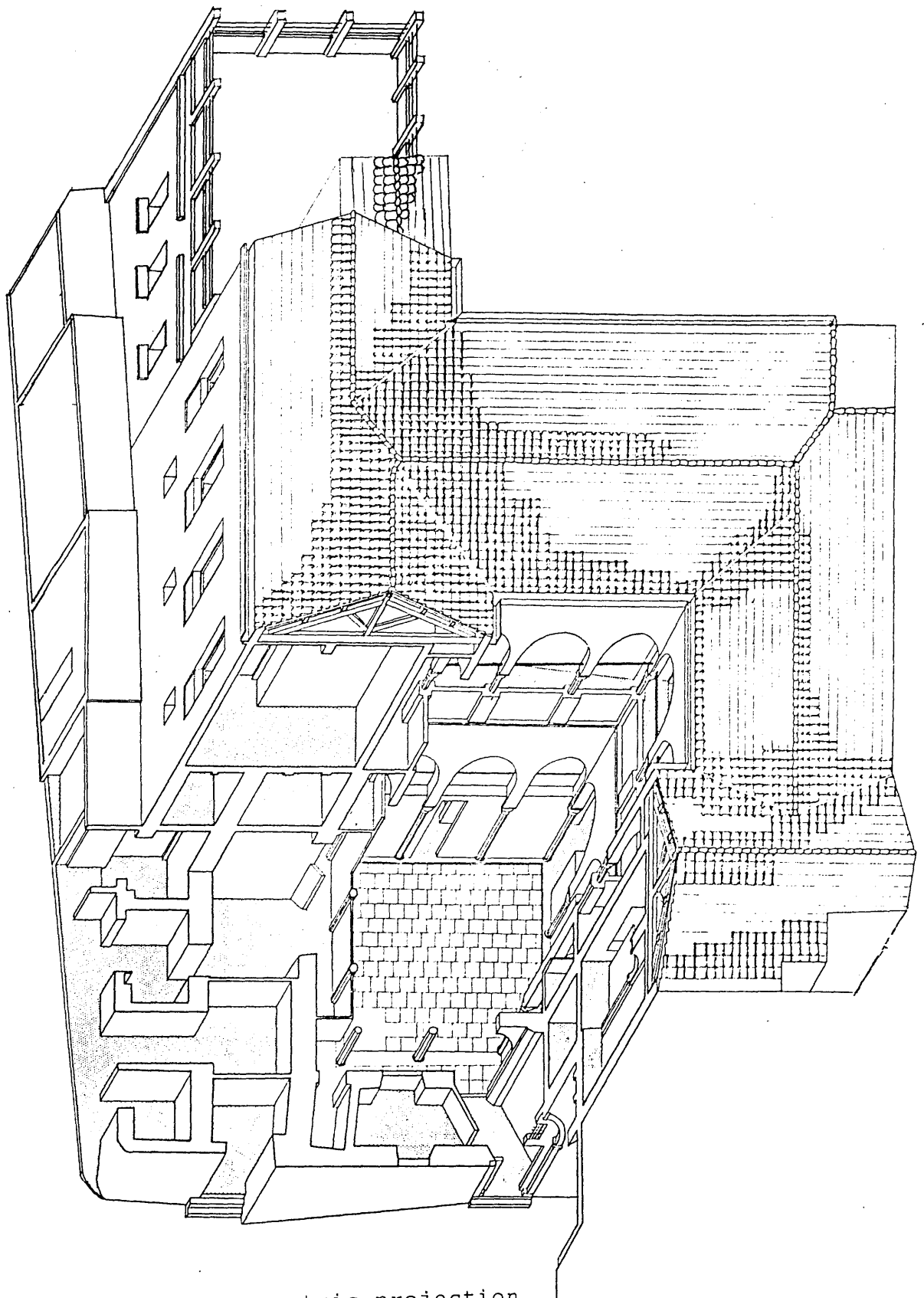
B - Mezzanine floor plan



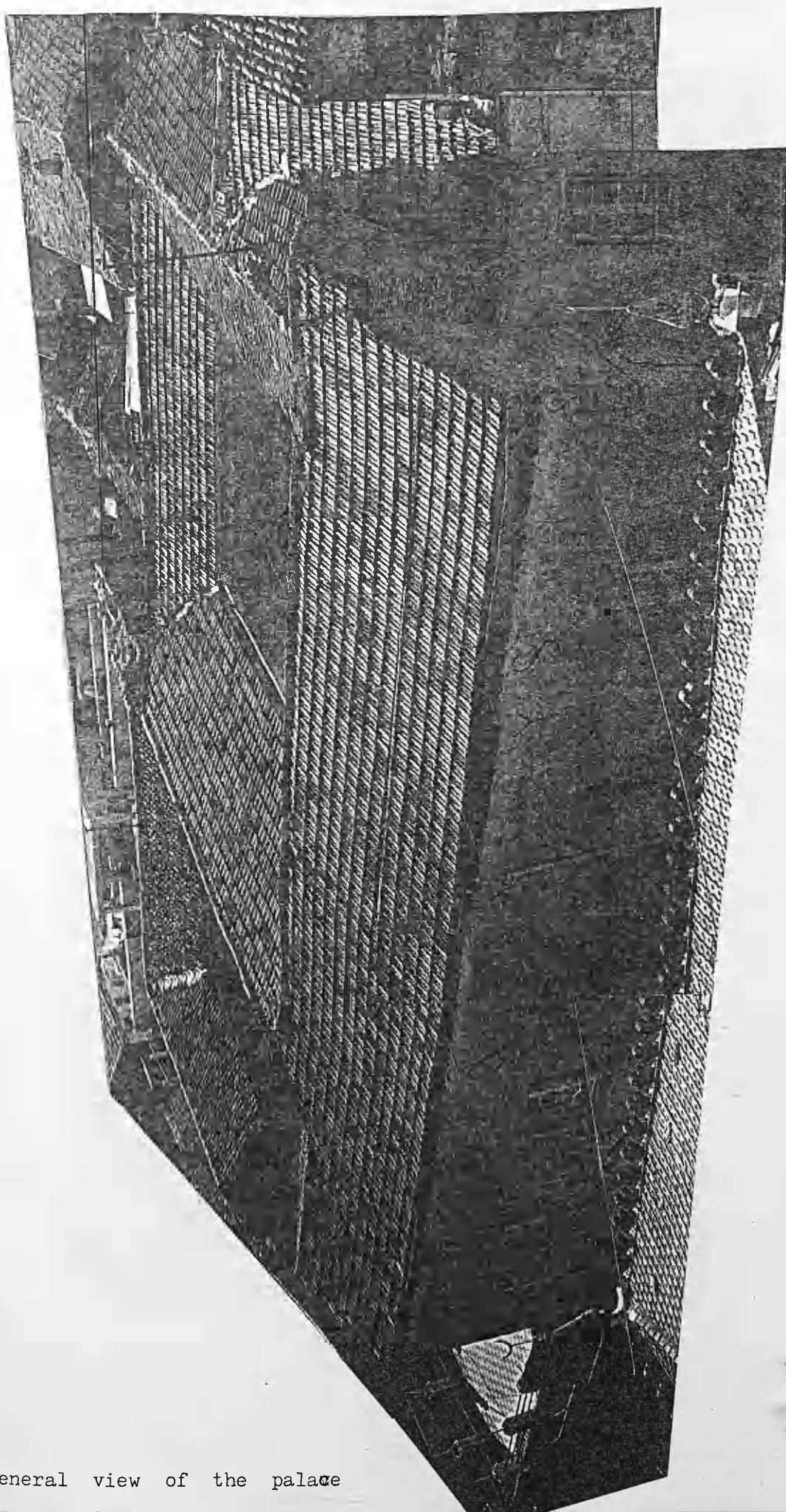


C - First floor plan.

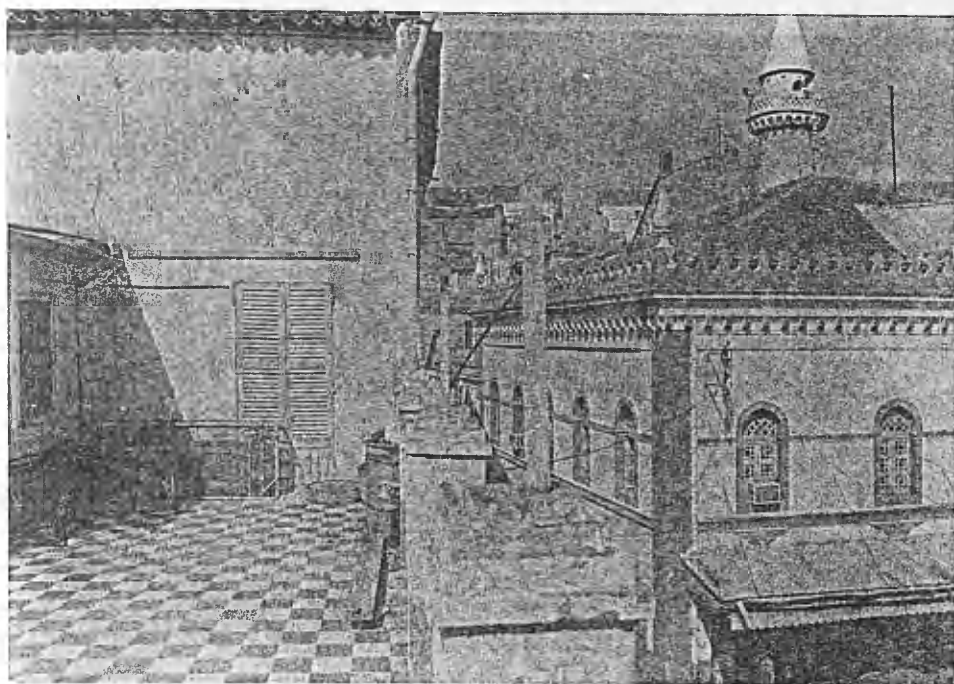
**SECTION BB****SECTION AA**



E - Axonometric projection



General view of the palace



Plates (20a, 20b)

Part of the palace terrace overlooking the market square (right).

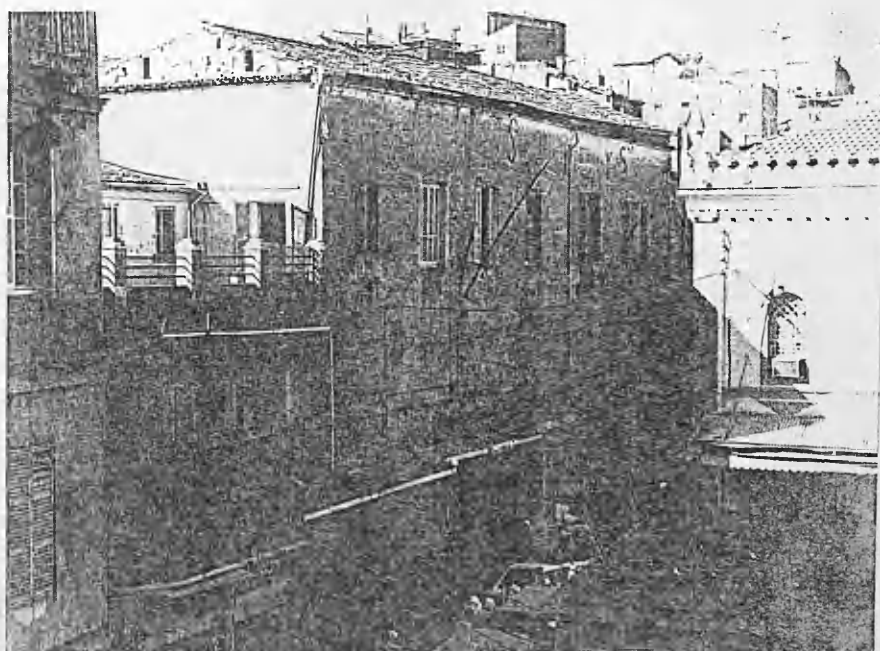
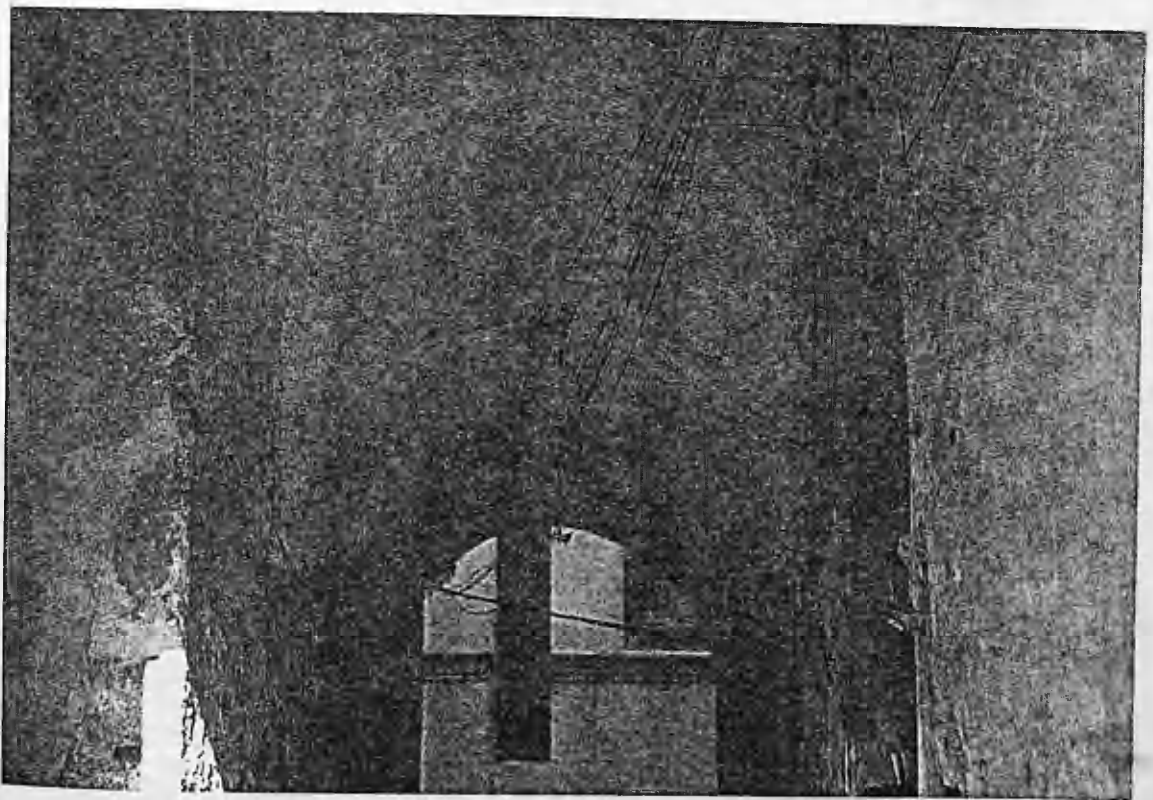
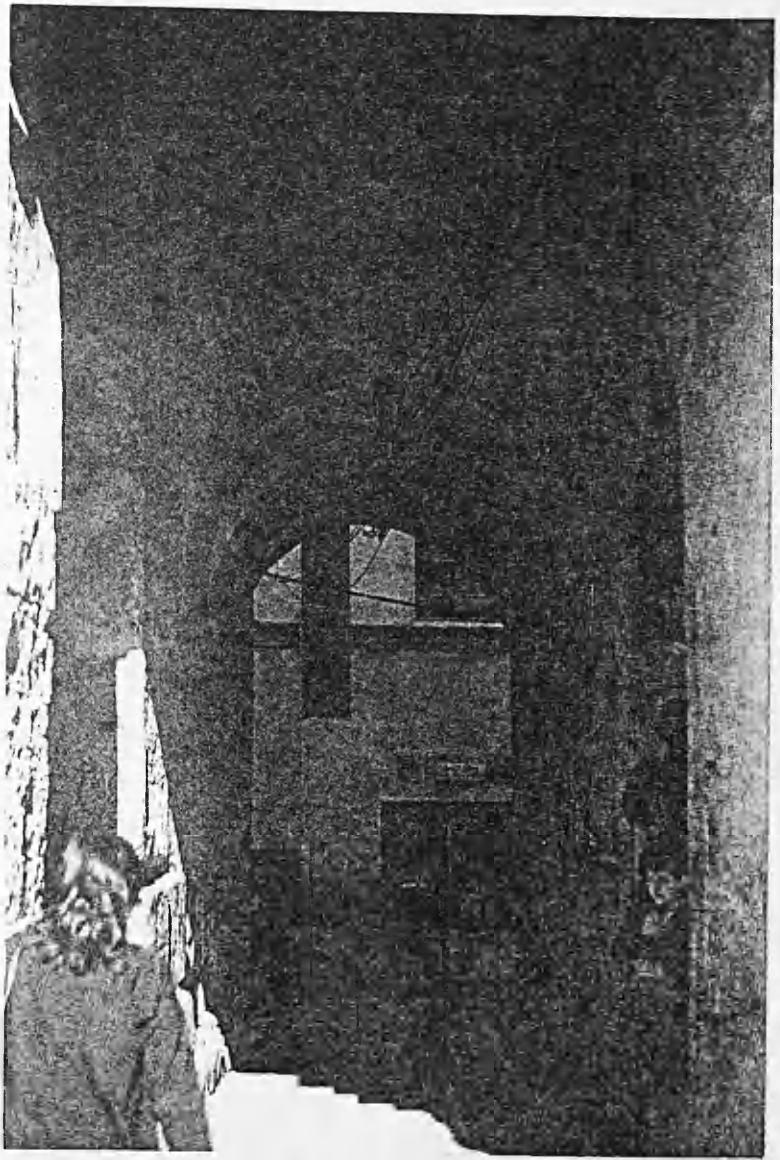


Plate 20c West frontage:
entrance doorway to
the right



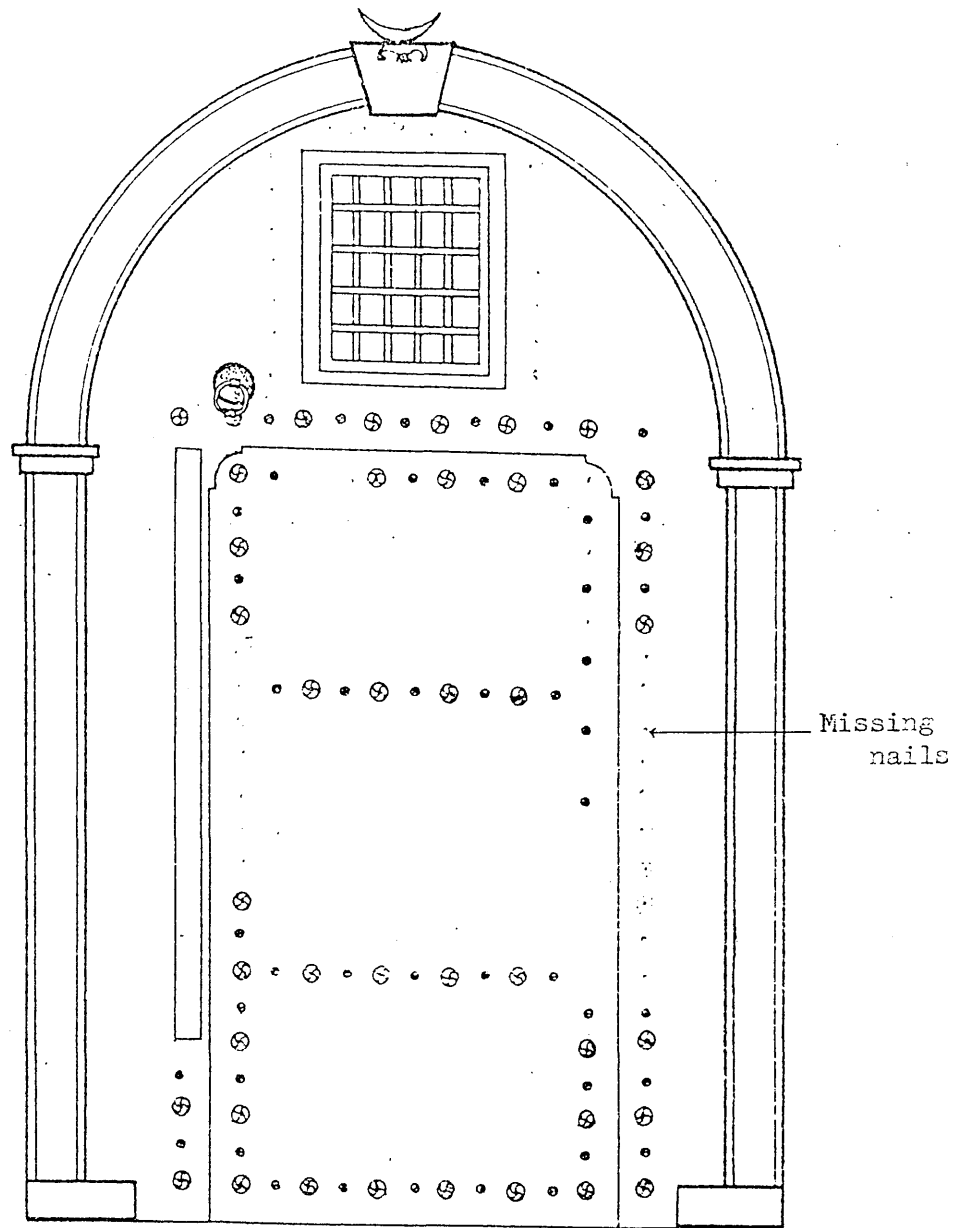


Figure 16 - Entrance doorway.

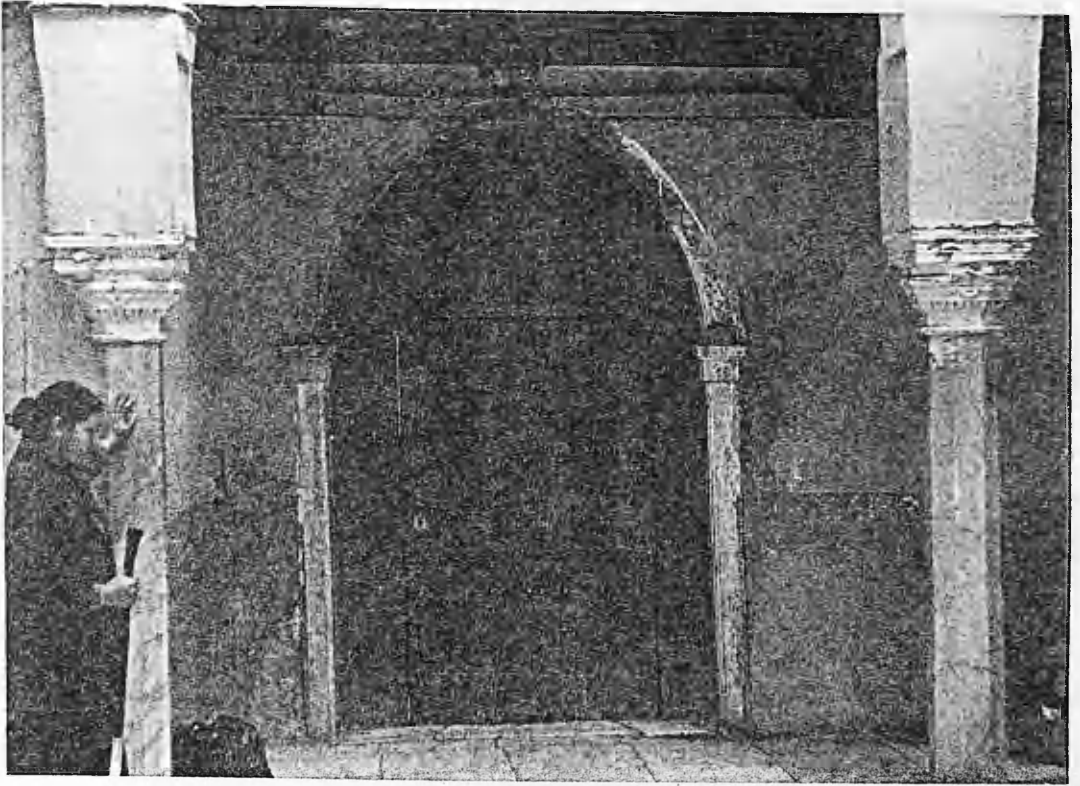
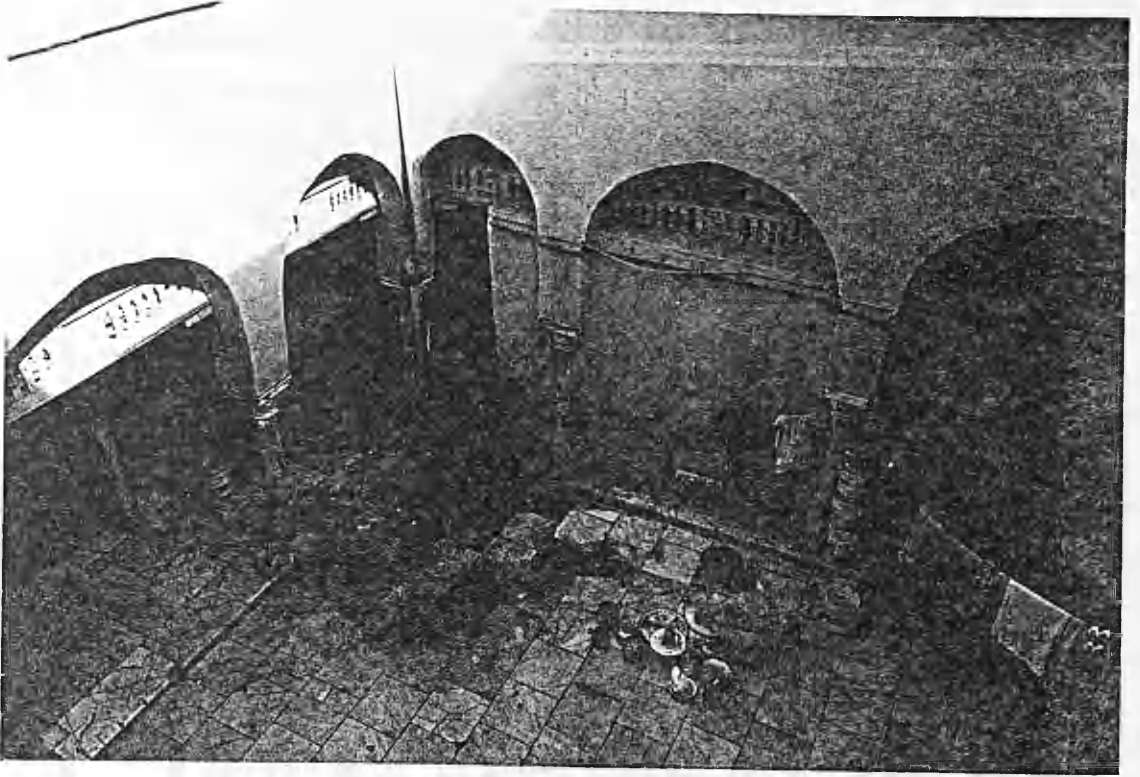


Plate 21—Vestibule doorway.



View of the courtyard: Note missing marble slabs and blocked arcades.



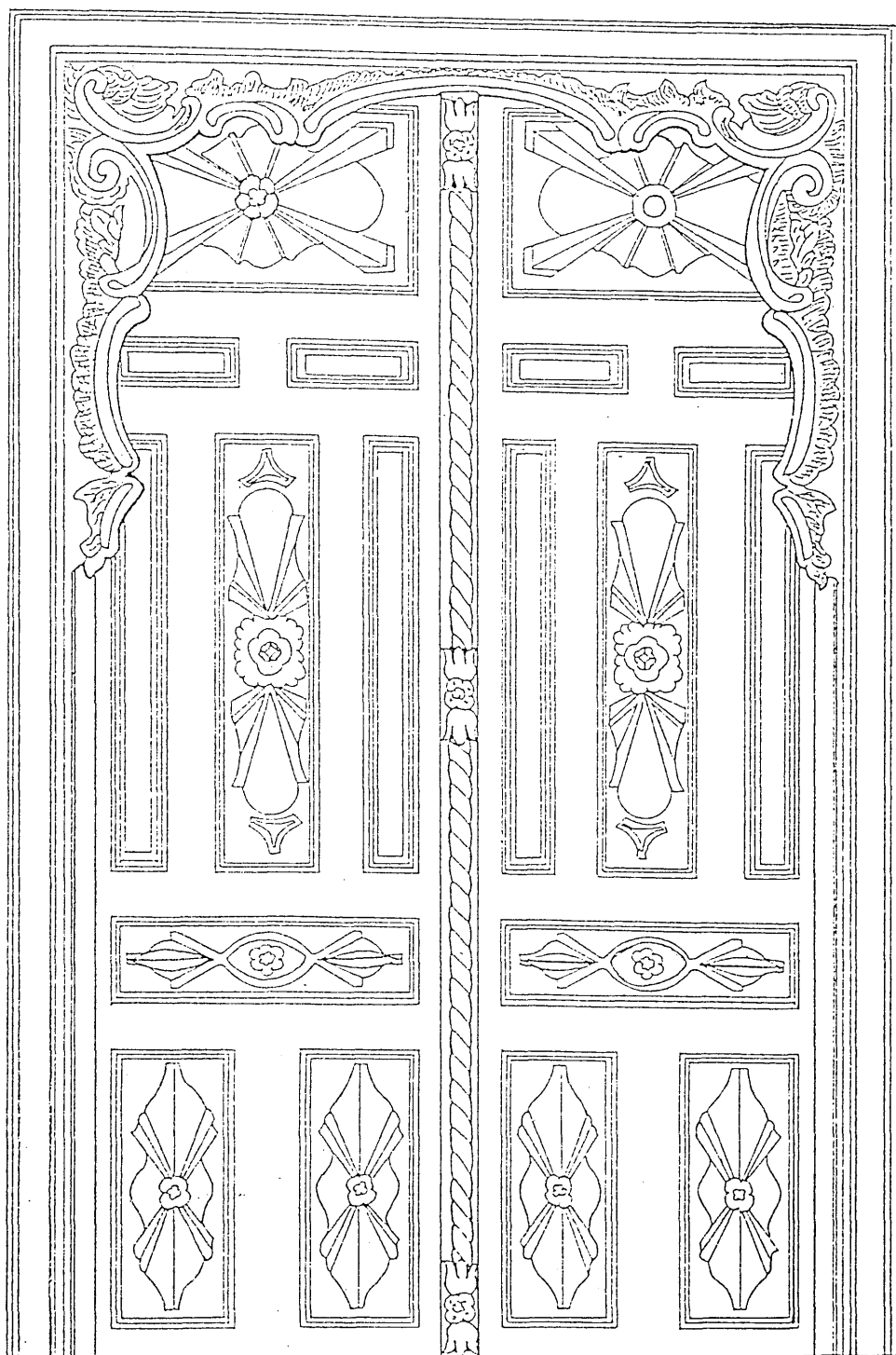
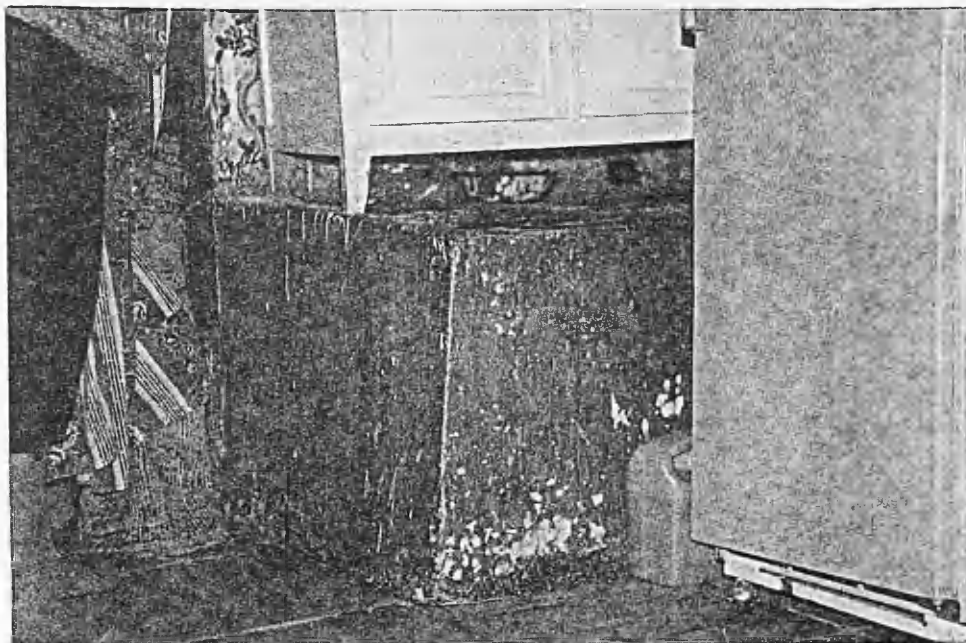
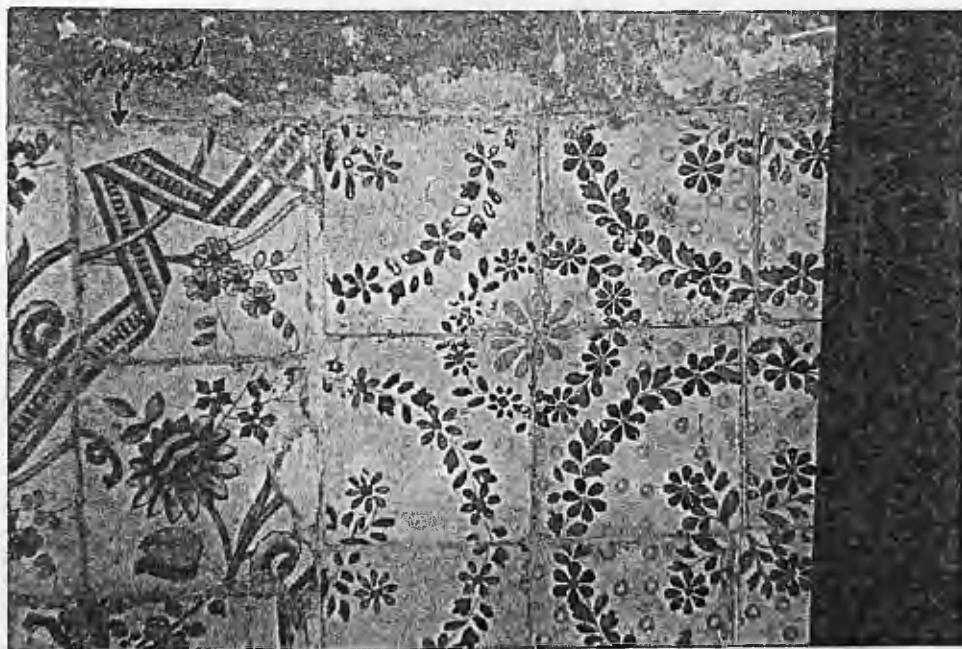
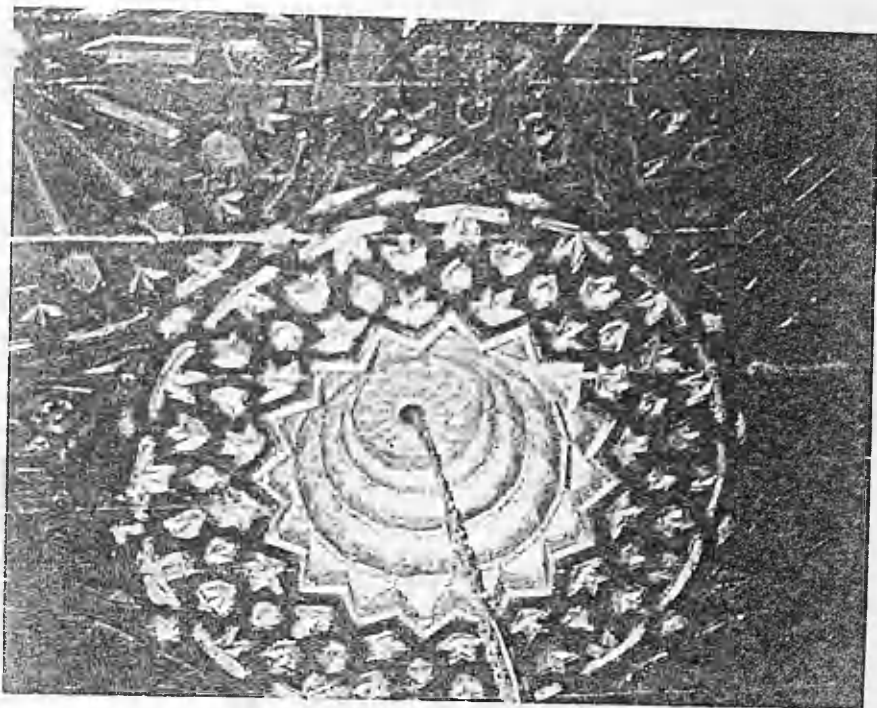


Figure17 - Door in room A18



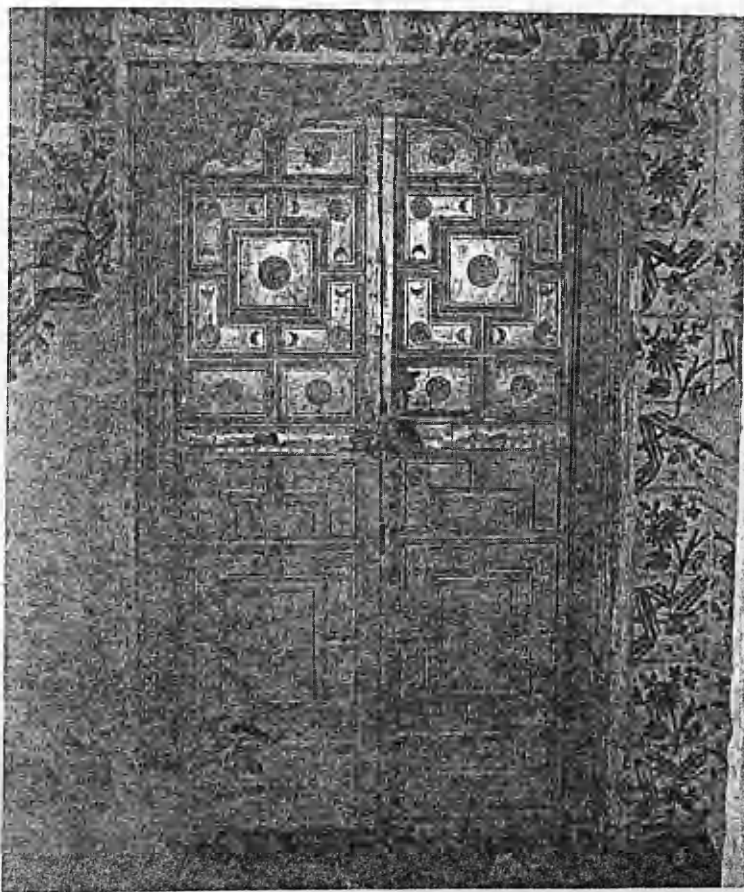
- (a) North-east corner of the majlis. View of the elevated brick structure.
- (b) West wall of the majlis. Original missing tiles have been replaced by new ones (left).





. (a) Detail of the carved wooden ceiling the majlis and kbu

(b) Interior of majlis, original door of the south maqsura.





(a) View of the original wooden balustrade protecting the mezzanine.

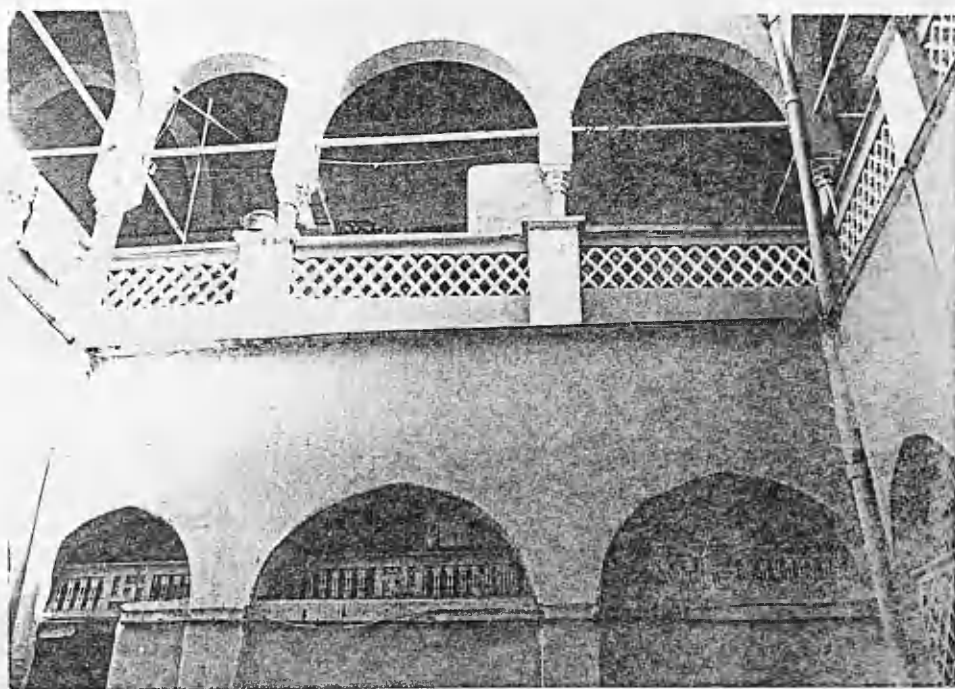


(b) West-end: view of the chimney.



Upper floor gallery. (Above) walls used to be covered with this type of tiles.

(Below) original wooden balustrade has been replaced by a concrete one.



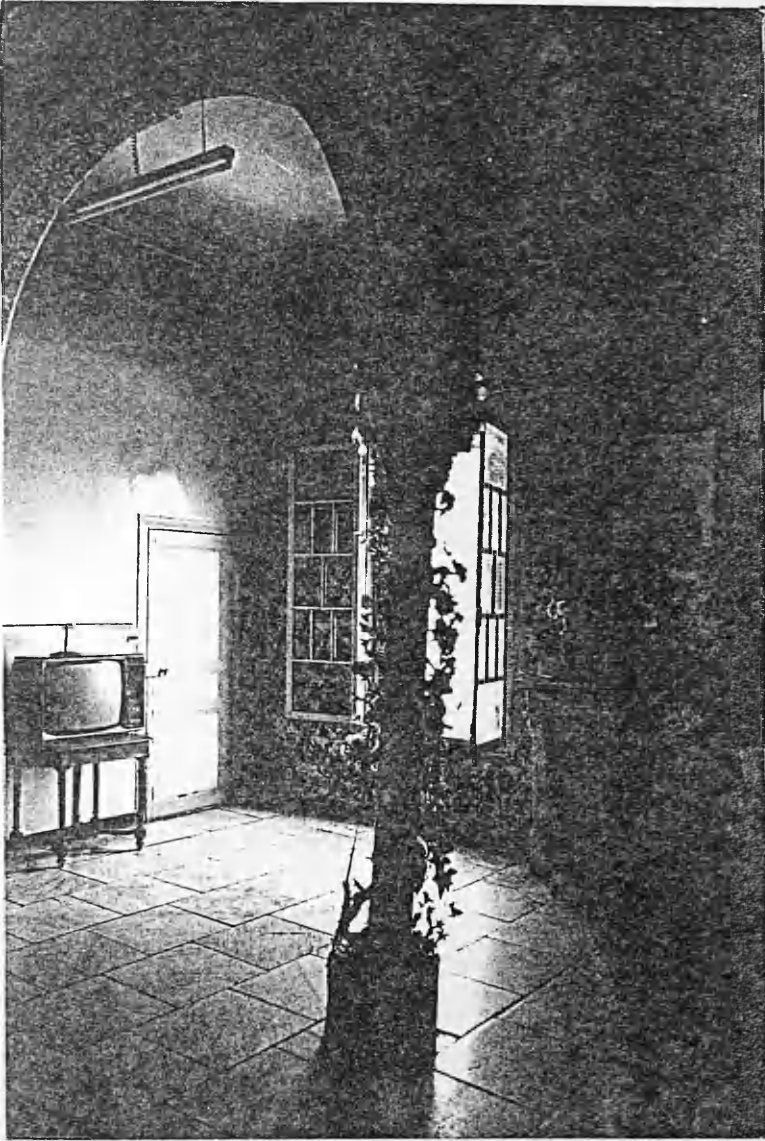
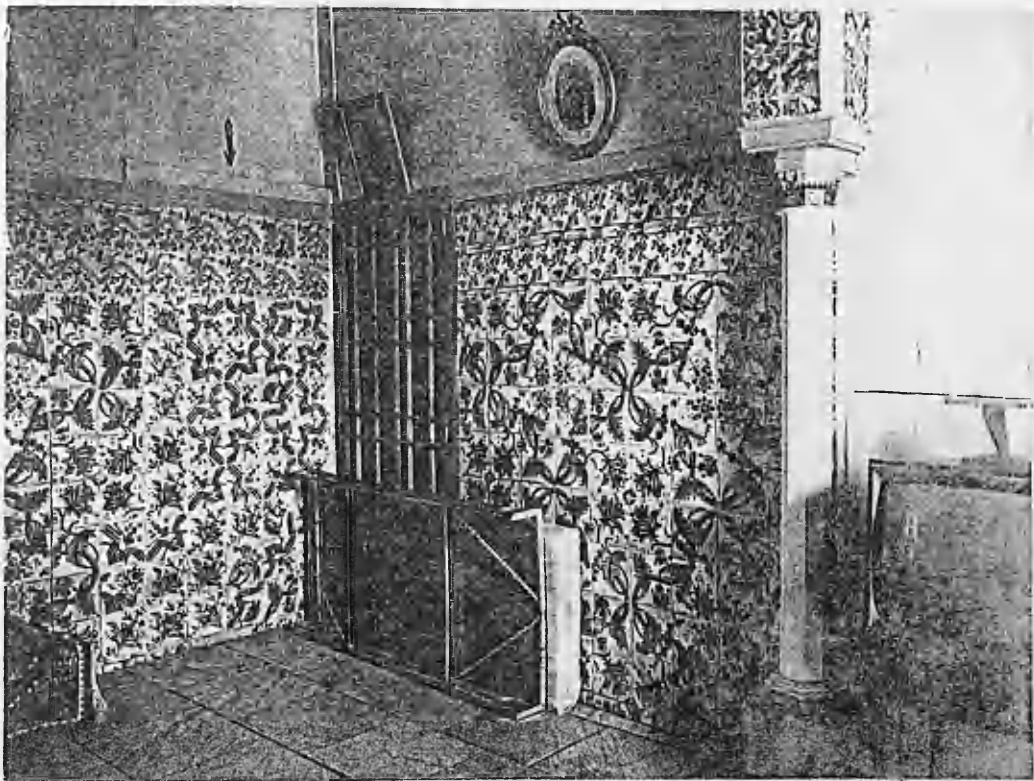


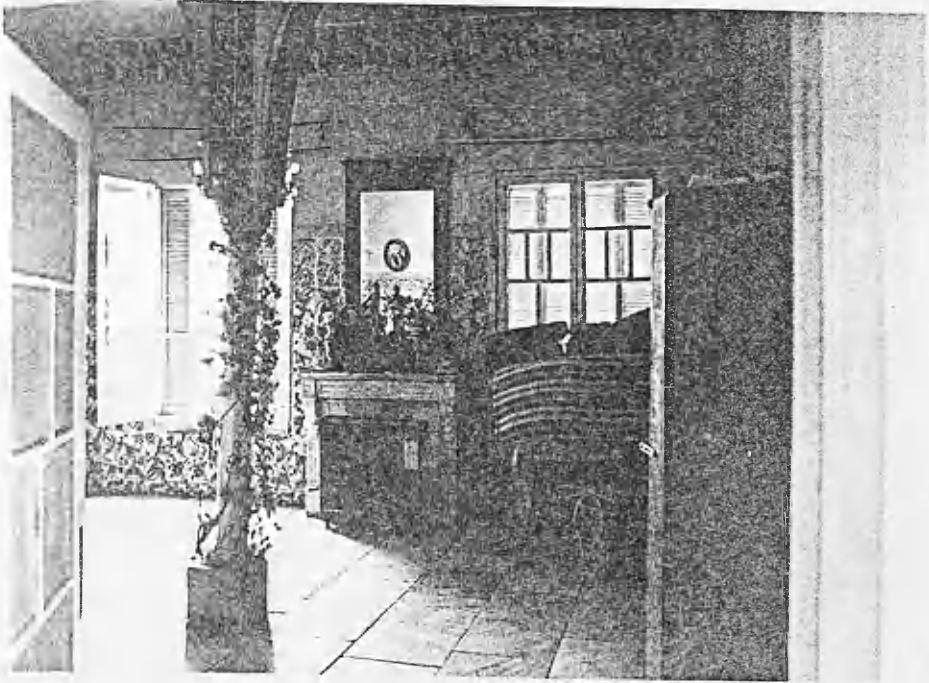
Plate27-Interior of room C16, decorated arches supported
by marble columns.

(a) View of the doorway
leading originally to
rooms (c₁₆, 17).



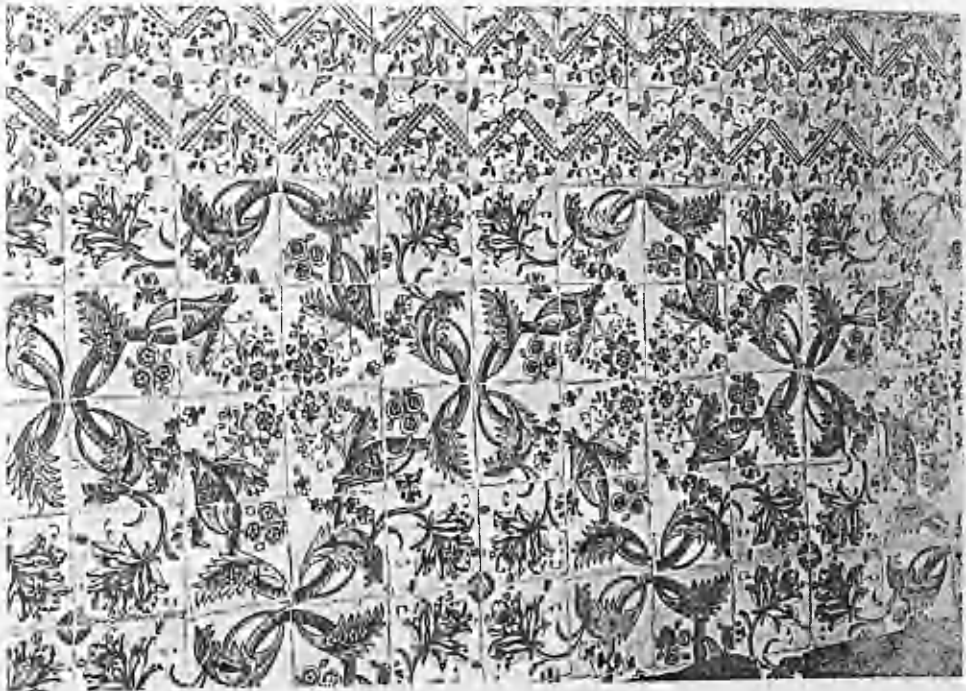
(b) Traces of the blocked door.





(a) Interior view of room C16, showing in background a marble fireplace.

(b) Polychrome tiles decorating room C16



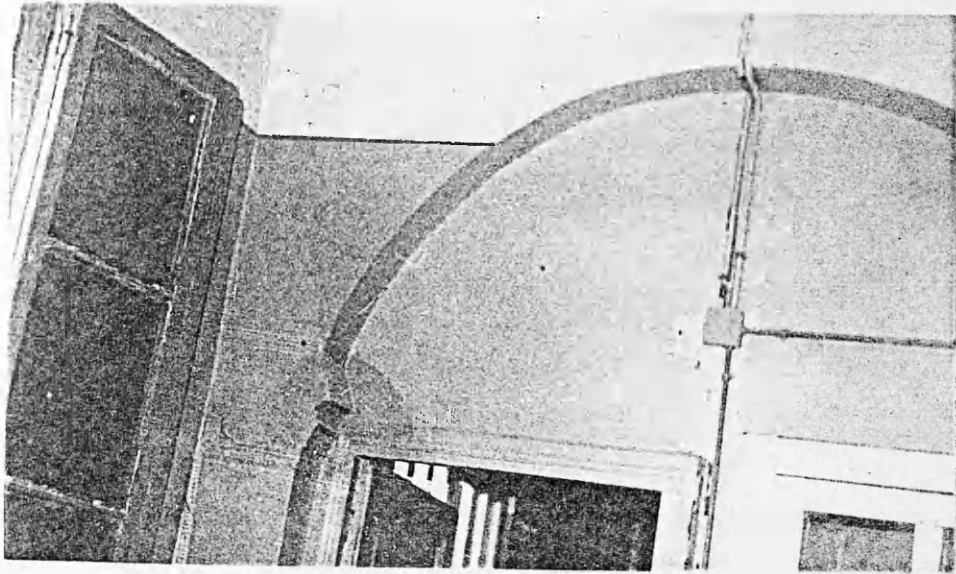
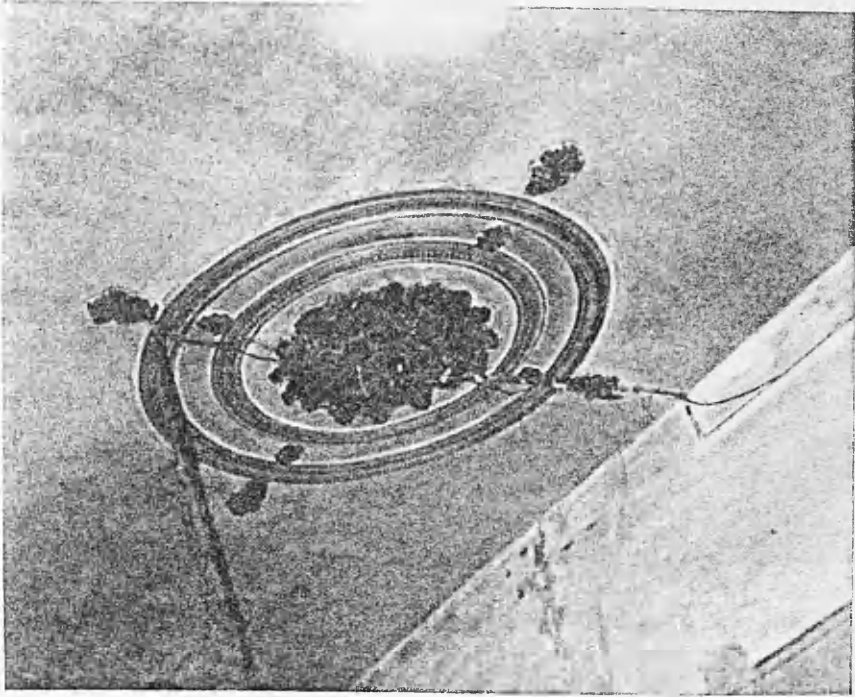
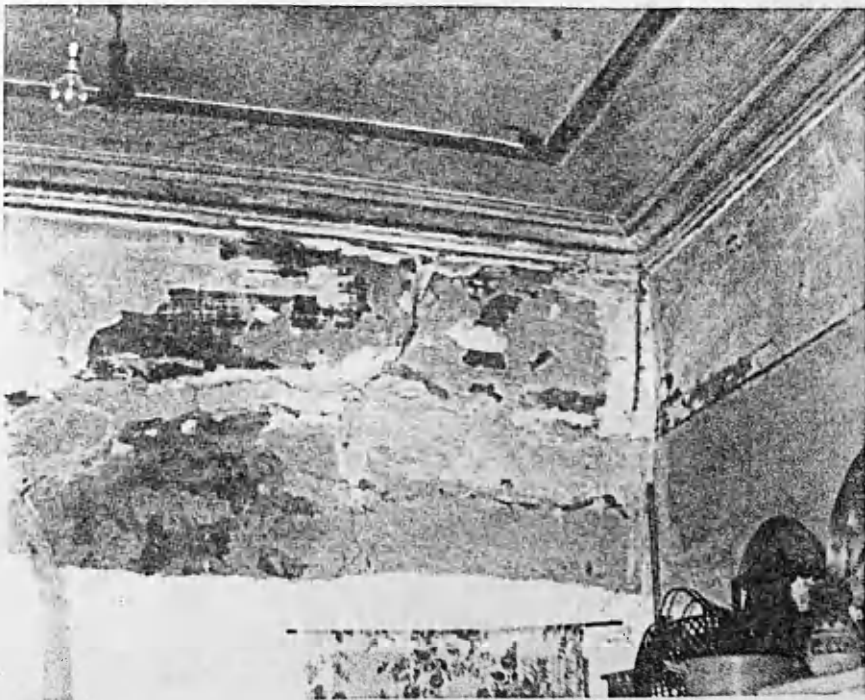


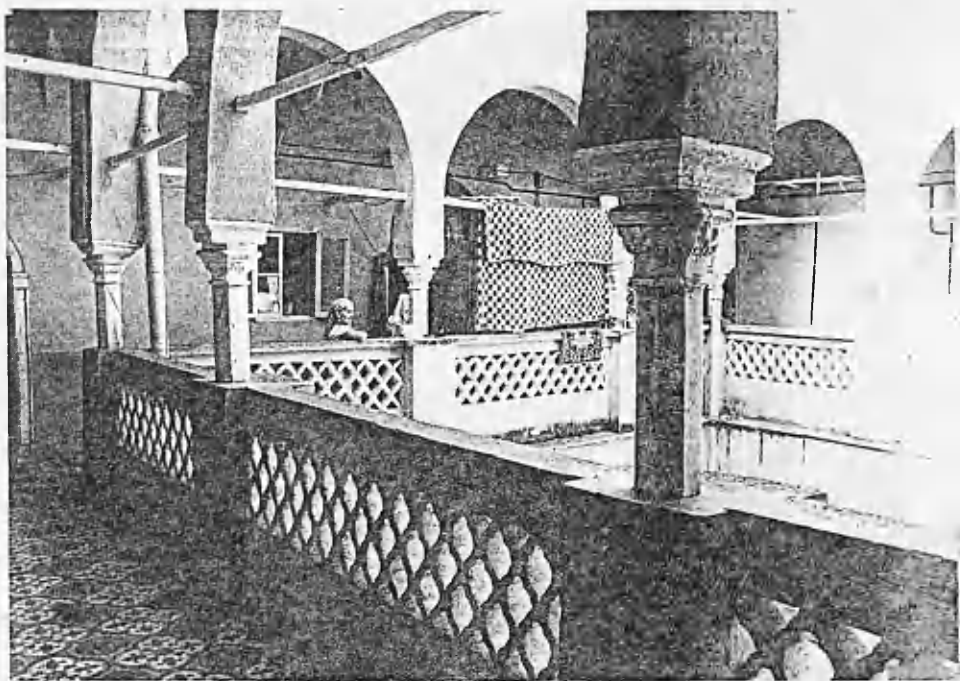
Plate 29c : North-west corner of room cl6:blocked archway.



(a) Interior view of room C14, showing the circular plaster panel.

(b) View of south wall of room C14, showing alterations and part of a blocked window (below)



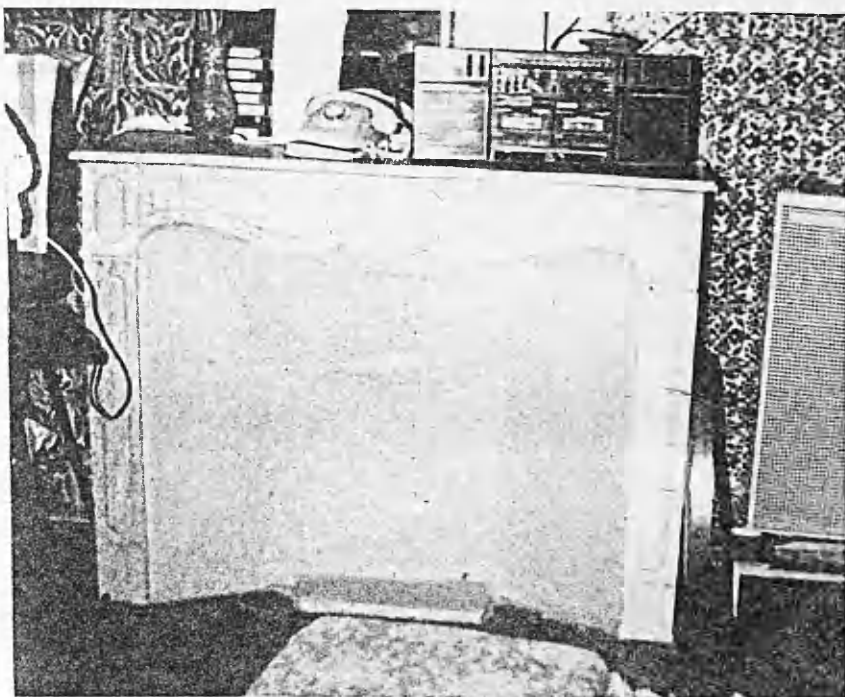


(a) Upper floor gallery, (background) new window and partly blocked door.

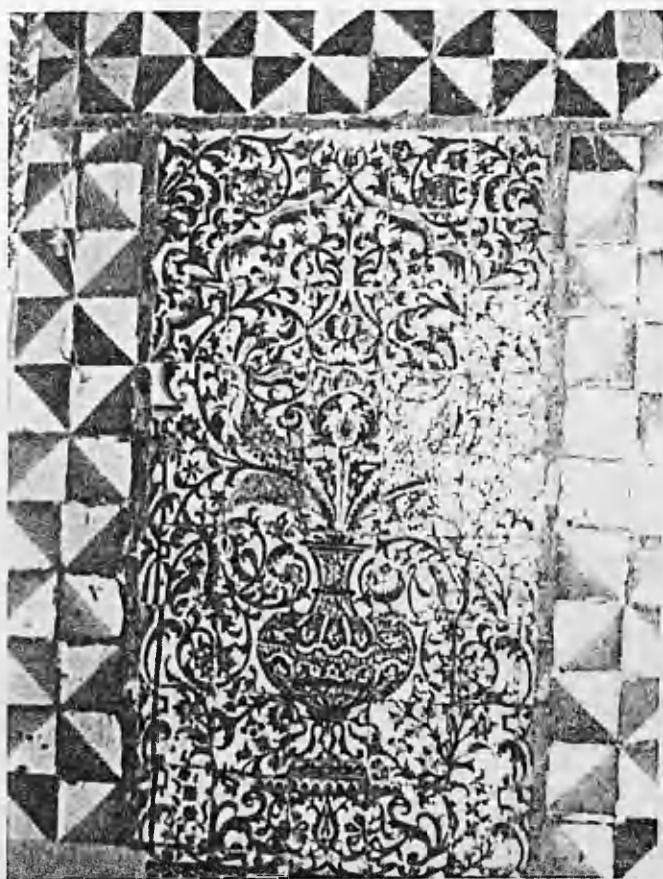
(b) Upper floor gallery, note the doorway leading to the south-west staircase, the concrete balustrade and the floor tiles.



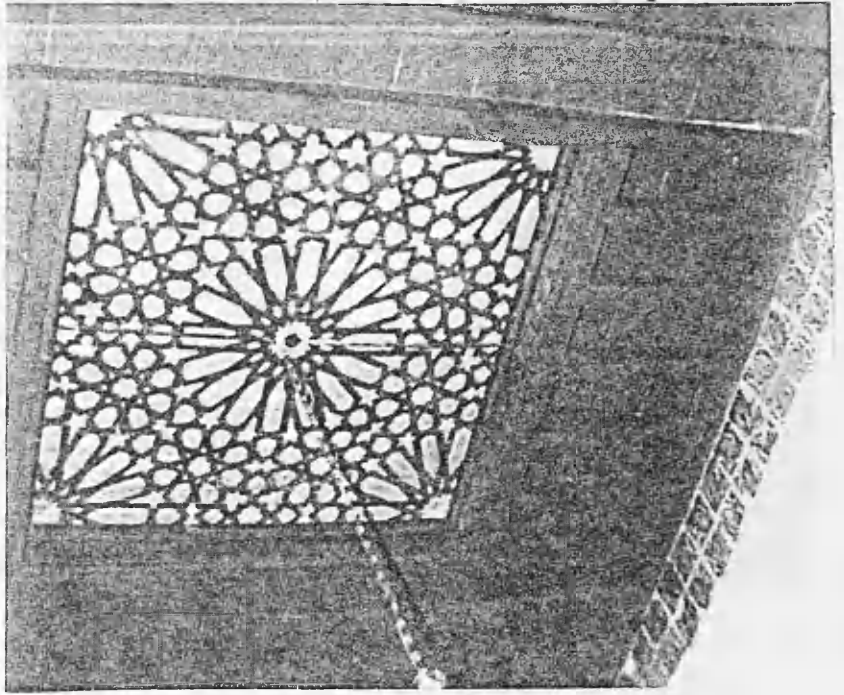
Plate 31



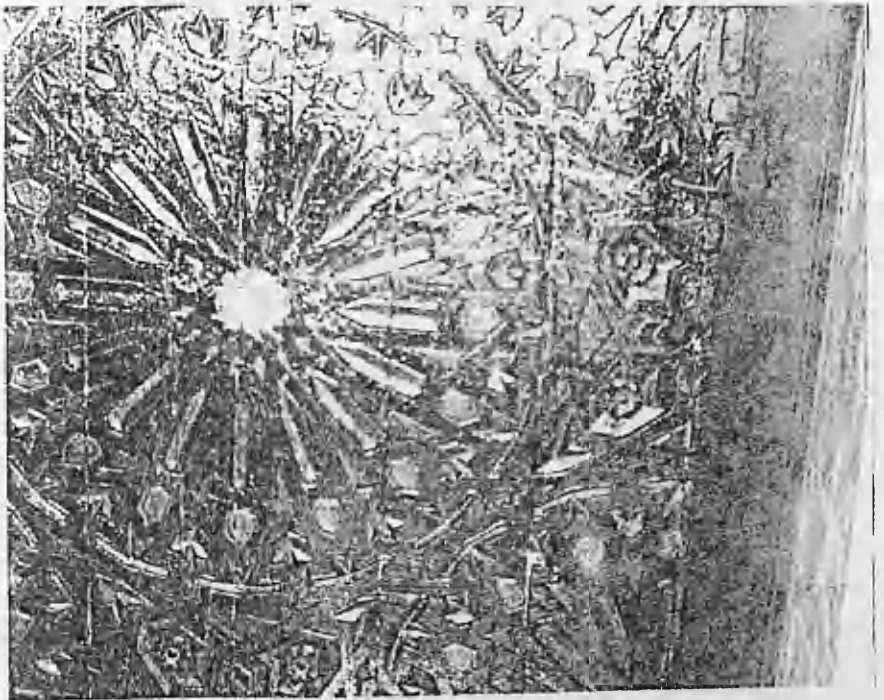
(a) Fireplace in baroque style has been blocked up.

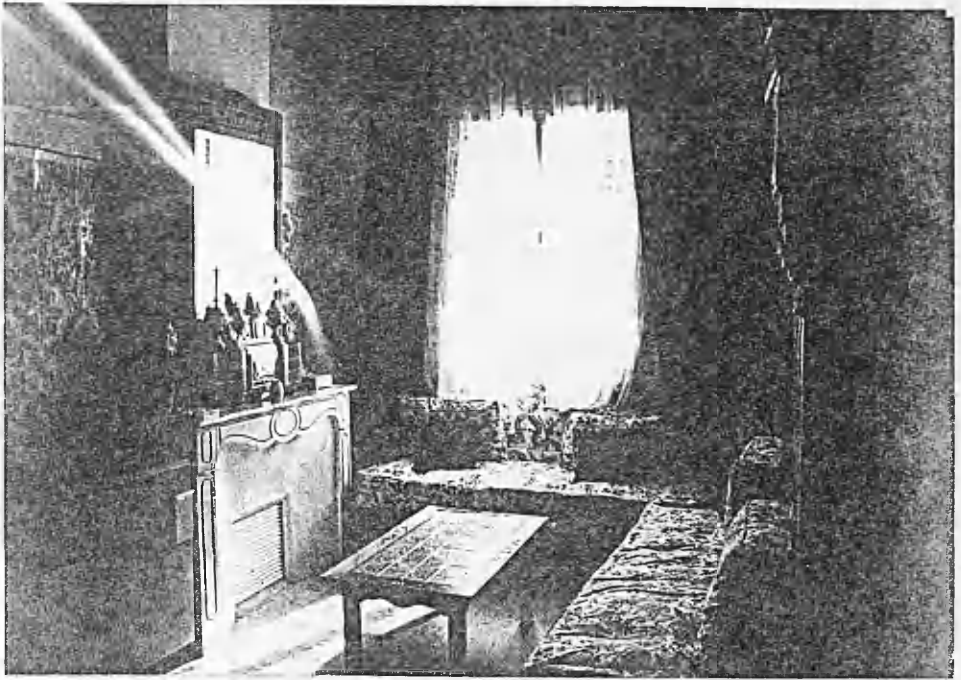


(b) Detail of the
right hand side
tile panel.

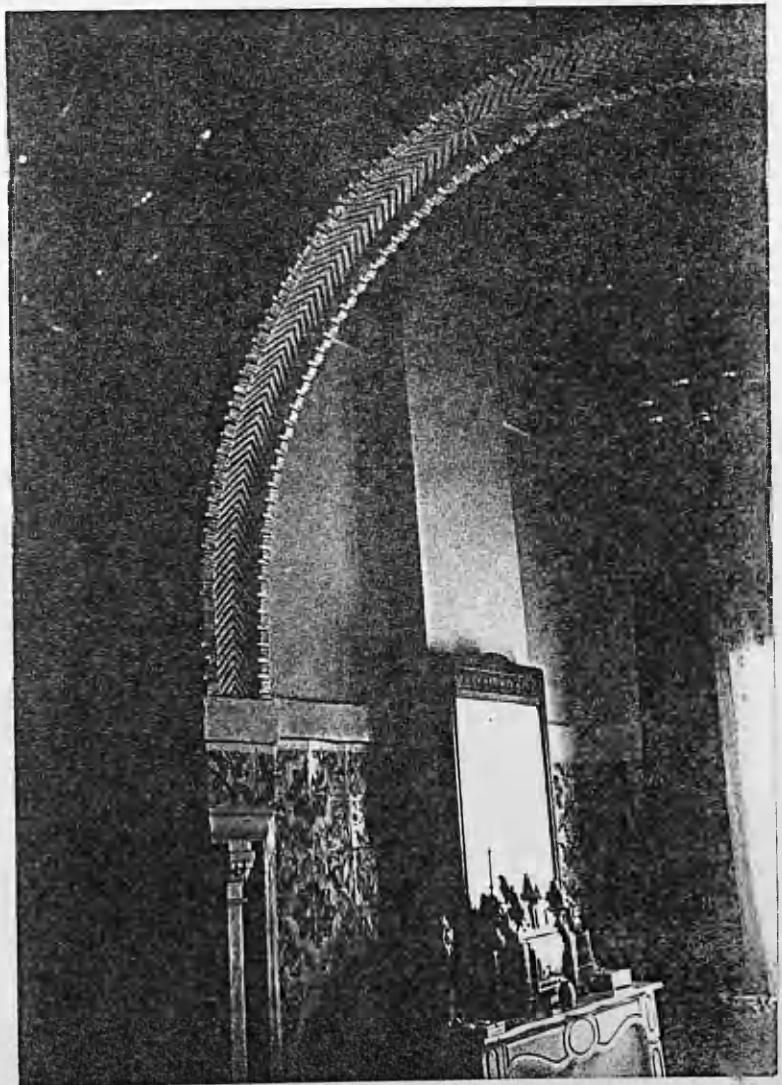


Detail of carved wooden ceilings of the rooms, above, at south and (below) east sides of the upper floor gallery.





North wall of the kbu. (Above) view of the fireplace and polychrome tiles. (Below) detail of the fretted profile arch.



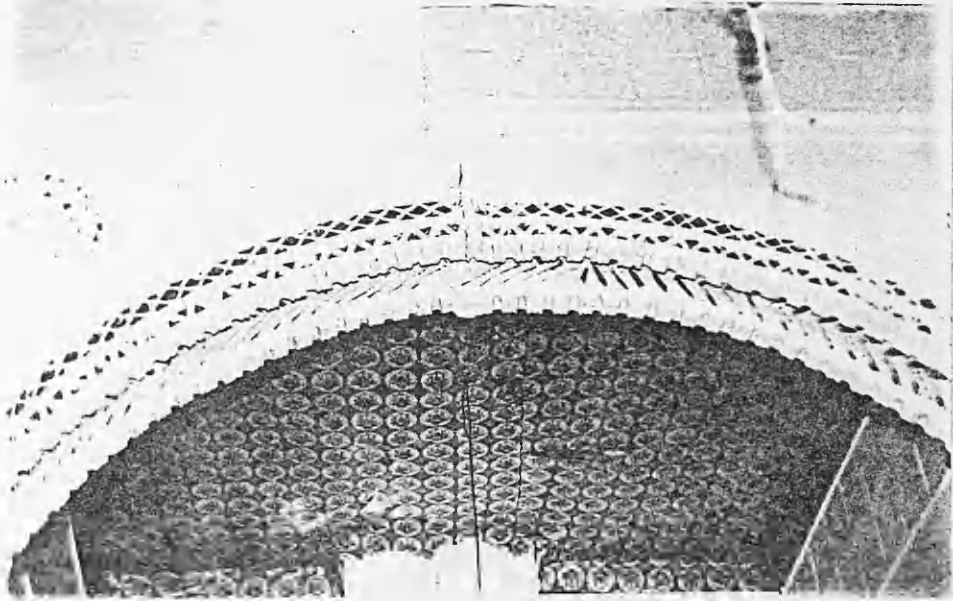


Plate35 View of the Kbu, showing part of the chimney (below)
and a plastic sheet covering the original carved
wooden ceiling above.



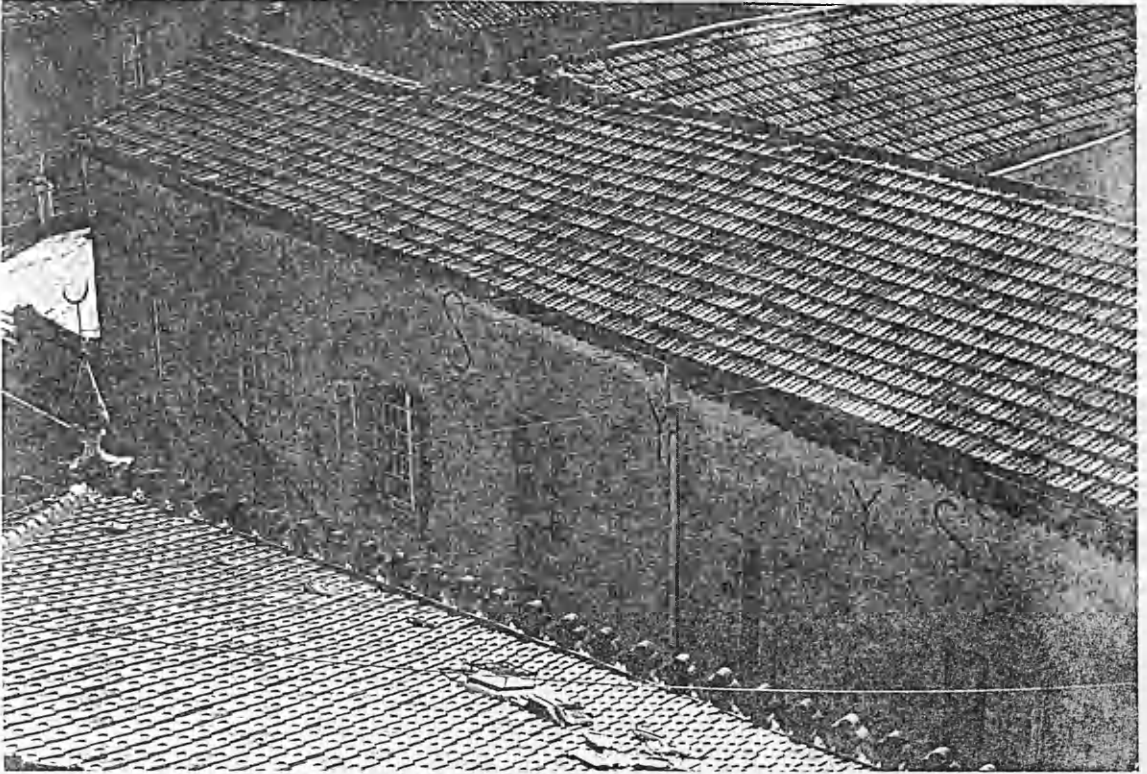


Plate 36 North frontage: Missing rain gutter.

Chapter 4

Restoration and conservation of the palace.

Introduction

1. Sugestion for repair

1. External walls

2. Internal walls

3. Floor paving

3.1 Ground floor

3.2 Mezzanine

3.3 First floor

4. Doors

4.1 Entrancedoor

4.2 Other doors

5. Windows

6. Balustrades

7. Wall tiles

8. Fireplaces

9. Roof and rainwater system

10. Ceiling

11. Services

12. Recommendation for future maintenance

II. Suggestion for conversion

Conversion work

CHAPTER FOUR

Restoration and Conversion

Over the years, the palace of Salah Bey has been adapted to suit new modes of living without respect for its traditional function. The subdivision of rooms by heavy partitions and cupboards, coupled with vandalism and a lack of maintenance is causing the building to deteriorate rapidly, and if left neglected it will inevitably deteriorate further. Thus the aim of the restoration is to stabilize the condition of the building and to put it into good order by economic repair and conservation of the existing fabric to recapture the original beauty of the architecture. The decision to restore the building as far as possible to its original state is made on the basis that the palace is of historical interest and possesses special architectural qualities in terms of layout, volumes and authentic materials of construction. Also the public now has very little opportunity indeed to enjoy an eighteenth-century palace.

The proposed scheme of conversion of the palace involves its preservation as well as its adaptation to a new use as traditional craft workshops. This new activity would not

only give a new life to the building, but also might help to increase public awareness and ensure that the costs of immediate repairs and future maintenance can be met.

The palace has a great advantage in being located near the food market (Suq al- Acer) and near the most attractive part of the medina close to spectacular views of the surrounding gorge which annually attracts a considerable number of tourists. If seen in relation to the tourist possibilities of a large city like Constantine, it is the medina which differentiates Constantine from other cities in Algeria, and it is the craftsmen who give the medina part of its distinctive quality.

In this context, according to Noushi (34), between 1840 and 1841, just after the arrival of the French, 652 craftsmen were working in Constantine and only 118 in Algiers. In 1954, a century after the arrival of the French, this number had fallen sharply to 132, but the medina remained largely dominant compared to Algiers, with 82 craftsmen. Although the number of craftsmen has considerably increased in the city of Constantine since 1954, to 806, nowadays

34. A. NOUSHI, Constantine a la veille de la conquete francaise (Tunis, cahier de Tunis 1955).

fewer and fewer work in the medina itself (see fig below). This is mainly due to the migration of these craftsmen to the suburbs where larger spaces, especially for selling, are available.

Crafts	Total Craftsmen in City of Constantine	Craftsmen in	
		suburbs	medina
Leatherwork	9	7	2
Weaving	10	8	2
Tailoring	407	234	173
Embroidery	15	3	12
Knitting/ woollens	11	9	2
Copper/Brass work	300	292	8
Goldwork	16	4	12
Woodwork	30	27	3
Pottery	8	7	1
TOTAL	806	589	217

The table shows that 27% of the craftsmen work in the medina. This percentage is far from the ones which used to apply: 100% before the French, and almost 80% ten years ago.

If this process is not stopped the medina will become a kind of empty historic shell, devoid of life and purpose. And if it has not a function in the life of the community, the medina will lose its distinct character and the

economic benefits it once conveyed.

Therefore the aim of converting the palace is primarily to put it to a useful purpose which generates income for its future maintenance, and to show the feasibility of giving the craftsman back his former position in the changing conditions of contemporary Constantine. The proposed restoration will also involve traditional building craftsmen skilled in such work - brickmasons, carpenters, woodcarvers, painters, plasterers and the rest, who can still be found dotted about Constantine.

As has been suggested, the work of restoration must be accomplished by specially trained building craftsmen. They are as much a part of the team which will make an authentic restoration possible as is the historian, archaeologist and architect.

Manual skills are learned by practical instruction from already skilled craftsmen. Students and young people interested in achieving a quality of workmanship similar to that of times gone by, of whom there are many in Constantine, should be urgently encouraged by providing an apprenticeship system, including studies in the work of earlier periods, and led by old craftsmen, whose skilled

fingers were self-taught, before their skills are lost. The suitable place in this case is a building which is intended to be restored, the palace for example. This means that much of the work will be assisted and executed by apprentices. Some of their work at first may well not be of a sufficiently high quality and therefore will need to be redone, perhaps more than once, before it will be acceptable. This process is expensive and adds to the cost of restoration work. Nevertheless, it will provide a supply of young craftsmen, who will maintain traditional crafts on which future works of restoration in Constantine will depend.

Finally, the palace will provide workshops where a number of craftsmen can make, display and sell their products to the local population and to foreign visitors.

SUGGESTIONS FOR RESTORATION AND REPAIR

In the proposals for restoration I have endeavoured to use the same designs, materials and techniques of construction as were used in the original building. The proposed new doors, for example, incorporate patterns of design based on the existing doors in the palace. The same is true for other features such as windows, balustrades, tiles, ceilings and so on. Where no original example of a particular feature survives in the palace, the design of the new one is based on examples found in other contemporary buildings in Constantine or, failing that, elsewhere in Algeria.

1. EXTERNAL WALLS

In addition to the general survey, the condition of the external appearance of the building may be judged from the presence of several hairy cracks in the west frontage, which appear to be of long standing. Lack of maintenance has accelerated decay in the ashlar joints to the left of the main entrance in the same frontage.

Repairs

(a) Cracks to be carefully cleaned, wetted and pointed with lime mortar to match existing. Lime mortar to be composed of one part cement, three parts lime and twelve parts sharp sand.

(b) Ashlar joints to be checked and only where necessary to be raked out to a depth of at least 25mm in wider joints and 3mm in narrower joints, thoroughly cleaned and wetted. Joints to be filled with lime mortar to match existing; the pointing to be slightly recessed and finally brushed with a dry medium soft brush to match existing texture (fig 18).

(c) Modern shops projecting from the north frontage to be demolished and their traces to be cleaned and patched with lime mortar to match existing rendering. Original shops to be retained.

2. INTERNAL WALLS

Later partition walls (see plans A, B, C: orange colour) to be removed, the floors underneath to be cleaned and reinstated to match existing floors. Damaged wall rendering at the west side of the arcade at ground floor level to be

repointed with lime mortar. South wall of room C14 to be plastered to match existing.

3. FLOOR PAVING

Marble slabs from the original courtyard pavement and the floors of some rooms, which have been collected and stored by the present owner, to be cleaned with water and replaced in their original position. Any missing marble slabs to be replaced to match the originals. The hexagonal red tiles found in rooms A12, 16 and C1, 2, 3, 4, 5, 6 are worth preserving although they may not in fact be original. These should be cleaned and repaired, new tiles to match existing being used where necessary.

3.1 Ground Floor

Courtyard

Missing floor slabs at the north and west side and in the south-west corner of the courtyard to be replaced. Any damaged slabs to be removed, repaired, or if necessary replaced by new slabs to match the existing. Defective paving joints to be repointed with lime mortar.

Rooms

(a) The modern elevated brick structure in the north-east corner of room A7 to be removed, the floor underneath to be cleaned and paved with marble slabs to match existing. Missing slabs in the recess (kbu) to be replaced (see plan A).

(b) Damaged hexagonal red tiles in rooms A12 and A16 to be removed, the floors cleaned and the tiles bedded on lime mortar to match existing.

3.2 Mezzanine

The mortar floor of the mezzanine to be carefully rechecked. The composition of the flooring mortar to be analysed, and any damaged areas to be cleaned and made good with matching mortar. The gallery floorboards to be protected by a traditional natural varnish. While the original materials used to varnish woodwork in the palace are not known, Revault has recorded traditional materials used in Tunisia and in Cairo, which may serve as a guide to traditional practice in Constantine.

3.3 First Floor

Modern granolithic floor tiles in rooms C19, C20, C21 and C23, on the east side of the gallery to be removed, the floors cleaned and new marble slabs, 500x500mm, bedded on lime mortar to match the existing. Missing marble slabs in rooms C6, C7 and C9 to be replaced to match those of the (Kbu) (C8). Missing hexagonal red tiles in rooms C18 and C22 on the east side and missing tiles in rooms C3, C5 and C10 on the west side of the gallery to be replaced to match the existing. Floors at the south and north sides to be retained.

4. DOORS

Doors are a major feature of the palace, not only in their proportions, but also in the details and mouldings which vary from one door to another. Some original doors have been replaced relatively recently but most of the remaining doors are generally in sound condition and with careful maintenance will remain so. A few doors are in poor condition and should be carefully removed, cleaned and replaced. In most cases the main defect is the blurring of detail by several superimposed layers of oil-based paint.

4.1 Entrance Door

The entrance door has been subjected to alterations caused mainly by neglect and vandalism.

Traces of original nail holes reveal that sixty-six fluted brass knobs, thirty-six 50mm in diameter and thirty 25mm in diameter, were located on either side of the door, on the door frame, and around the fanlight. Some of the missing fluted brass knobs have been replaced by a new wooded plate on the left-hand side frame. The fluted brass knobs are shown on the original design drawing (fig 19).

The original door knocker has been moved to the top left-hand corner of the door (see fig 20) and should be replaced in its original position (see fig 21).

Repairs

The door to be removed from its frame, the furniture and ironmongery removed and cleaned by stripping off the paint with a suitable paint stripper, care being taken to ensure that any original paint or varnish is recorded and where possible preserved. The timber should be treated with a suitable preservative and protected with paint or varnish

to match the original finish. The new wooden plate on the left-hand side of the door frame to be removed and missing fluted brass knobs to be restored to match the existing ones (see fig 19). Door furniture to be replaced in its original positions (see fig 21).

4.2 Other Doors

Since the remaining original doors have somewhat complicated mouldings, especially D3, D4 and D5 (see pl 28a), it is recommended that these be carefully stripped using a suitable solvent, damage made good with timber to match the existing and protected with paint or varnish to match the original finish.

The fine multicolour wooden door which is stored in the south east staircase (see pl 37) is to be cleaned and restored to its original location. If further preservation and restoration were deemed necessary in future, expert advice should be sought.

Doors in the middle of the north wall of room A13 and in the east corner of room A1 at ground floor level to be reopened and the floors underneath reinstated. Partly blocked doors at first floor level to be reopened and the blocked doorway in the middle of the west wall of room C21 to be reopened and fitted with a new door to match the existing doors (see fig 22).

5. WINDOWS

The windows in the west wall of rooms A13 and A17 at ground floor level to be reinstated by raising their sills 600 mm and fitting "W2" windows (see fig 23). Blocked windows in storeroom A2 to be reopened and fitted with type "W2" windows.

Raised window sills in the north frontage at first floor level to be lowered 500mm, their traces cleaned and new windows (W2) fitted to match existing. Blocked windows in the ancillary room (C4) and in the north side of the first floor gallery to be reopened and fitted with "W1" windows (see fig 24). All windows to be varnished.

6. BALUSTRADE

Timber balustrades are a form of architectural decoration found particularly around upper floor galleries in the traditional buildings of the medina of Constantine. This feature has been replaced by a concrete balustrade on the first floor of the palace, probably because of lack of maintenance and direct exposure to the harsh climate. Fortunately, at mezzanine level the balustrade has survived (see fig 25) but the baluster and mushrabiyya details have been obscured by several layers of paint.

Repairs

The balustrade at mezzanine level to be removed and cleaned with a suitable paint cleaner. The timber to be protected by a suitable preservative then varnished to match its natural colour. Concrete balustrade and casing around original marble columns in the first floor gallery to be removed. Missing wooden balustrade to be restored to match the existing one at mezzanine level. New balusters to be fixed to handrails at centres not exceeding 100mm (see fig 26). Balustrade to be fixed to columns from handrail and baserail by brass moulded ties. Brass ties to be shaped to fit the form of the columns and fixed to the balustrade by

brass screws (see fig 27). The security of fixings is a matter of particular concern in balustrades because of the narrow section of the balusters. Regular maintenance of balustrades will ensure that they are as tight as possible and so avoid water penetration and loose fixings.

7. WALL TILES

Decorative wall tiling is one of the most attractive features of the building and worthy of careful preservation. The tiles are an essential part of the architectural interior, without which it would lose half its meaning. The tiles are generally square, 210 x 210mm, fitted together in groups of four or more to form large panels bearing an adornment of flowers in various colours. The tile body is usually a white porous clay paste, the designs done in brown, blue, yellow, brick red and a dominant green. The designs were painted on the tiles and covered by transparent glaze which appears to have been applied before the painting, and fired at a temperature of about 1000°C.

The reproduction and treatment of this kind of tile is an extremely delicate task, which should be entrusted to experts.

Repairs

Tiles on the west wall of room A13 to be rearranged to their original pattern to match existing. Missing ones on the north wall to be replaced (see fig 28). Oil paint over tiles in the north, west and south walls of room C14, and the majlis and kbu to the west of the upper floor gallery to be carefully stripped using a suitable paint solvent. Any damaged joints to be grouted with plaster to match the existing. Missing tiles in room C3 to be replaced by Type 2 (see fig 29), and in the north-east corner of room C9 with Type 3 (see fig 30) to match existing. The base of the tile panel on the south wall of the room C2 to be reinstated by rearranging the base of the flower vase (see fig 31).

8. FIREPLACES

The fireplaces will have been inserted in the nineteenth century during the installation of the French army commander in the palace. Their artistic merit (see fig 32a, b) means that they should be unblocked and retained; they are after all part of the history of the palace.

9. ROOF AND RAINWATER SYSTEM

Apart from a few pantiles which have become dislodged and are now lying across the west side valley gutter causing damage to the timber ceiling of the room underneath (C8), the roof is in reasonably good condition. The gutter on the north frontage is partly missing.

Repairs

The west side of the roof, inaccessible to us, should be inspected carefully, particularly the beam under valley gutters. Dislodged pantiles should be replaced. Defective zinc valley gutters to be replaced. Any defects in the beam under the valley to be cut away at least 50cms beyond the point where structurally sound timber is reached, allowing a diagonal cut to be made, with a length approximately three times the depth of the beam. The new timber ends to be cut to match the existing. The beam may be strengthened by plating the joints with stainless steel bolted through the beam (see fig 33). The size and design of bolted connections should be calculated by a structural engineer.

The rain water system on the north frontage should be checked. The missing gutter to be repaired as soon as

possible since continued flooding on the frontage will cause serious damage.

10. CEILING

The carved wooden ceilings appear to be in sound condition, except for an area on the west side of the room C8, mentioned above, where rainwater penetration has damaged the timber. The plastered ceiling in the north-east corner of room C14 at first floor level is becoming detached. In most wooden ceilings the original colours of the carved decorations have been lost under layers of new oil paint.

Repairs

The ceiling on the west side of room C8 to be repaired by cutting away defective timber, replacing with new timbers and painting with a colourless protective varnish. The continuous joint lines between boards to be preserved.

The detached plaster ceiling in the north-east corner of room C14 to be repaired to match the existing.

As mentioned above (page 138), if signs of concealed paintwork are discovered expert advice should be sought at

once before any of the ceilings is touched again.

11. SERVICES

Originally the palace would have been provided with very basic services; candles or oil for artificial lighting and cold water supplied by a well in north-east corner of the courtyard. The standard of services has been generally improved. Gas, electricity, oil and mains water are now available. Their bad installation, fixed visibly on the walls, however, has destroyed in many ways the character of the building.

Repairs

All necessary services should comply with the standards of safety and health and should not interfere with the character of the building. All visible or readily accessible electrical wiring to be made safe. All visible redundant gas piping should be removed and replaced by copper or plastic pipes which comply with the regulations. All water supply pipes should be carefully examined for leaks. The sink and its waste pipes in the north-east corner of room C9 on the first floor, and the bathroom in the south-west corner of the terrace to be removed, the

floors cleaned and reinstated to match the existing. The latrine at the north-west corner of the courtyard to be naturally ventilated by reopening its original window. The well to be cleaned and retained, the cistern underneath to be checked.

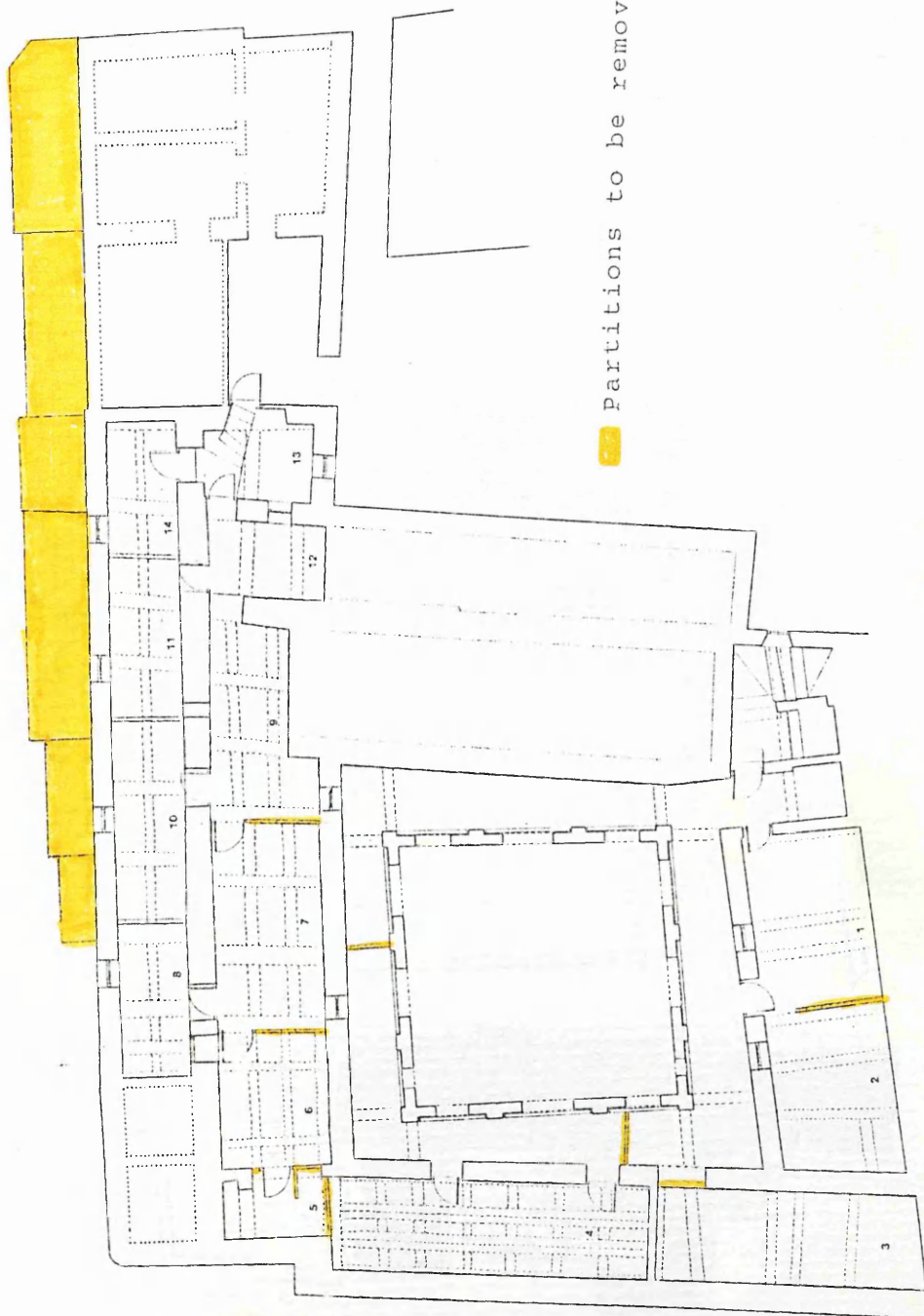
12 RECOMMENDATION FOR FUTURE MAINTENANCE

The building to be inspected annually. Access to the west side of the roof to be provided. Pointing of ridge tiles and flashings especially on the roof to be checked and any deterioration noted and damaged areas repointed as necessary.



GROUND FLOOR PLAN

SHOWING CONDITION AND
REPAIRS.



Partitions to be removed.

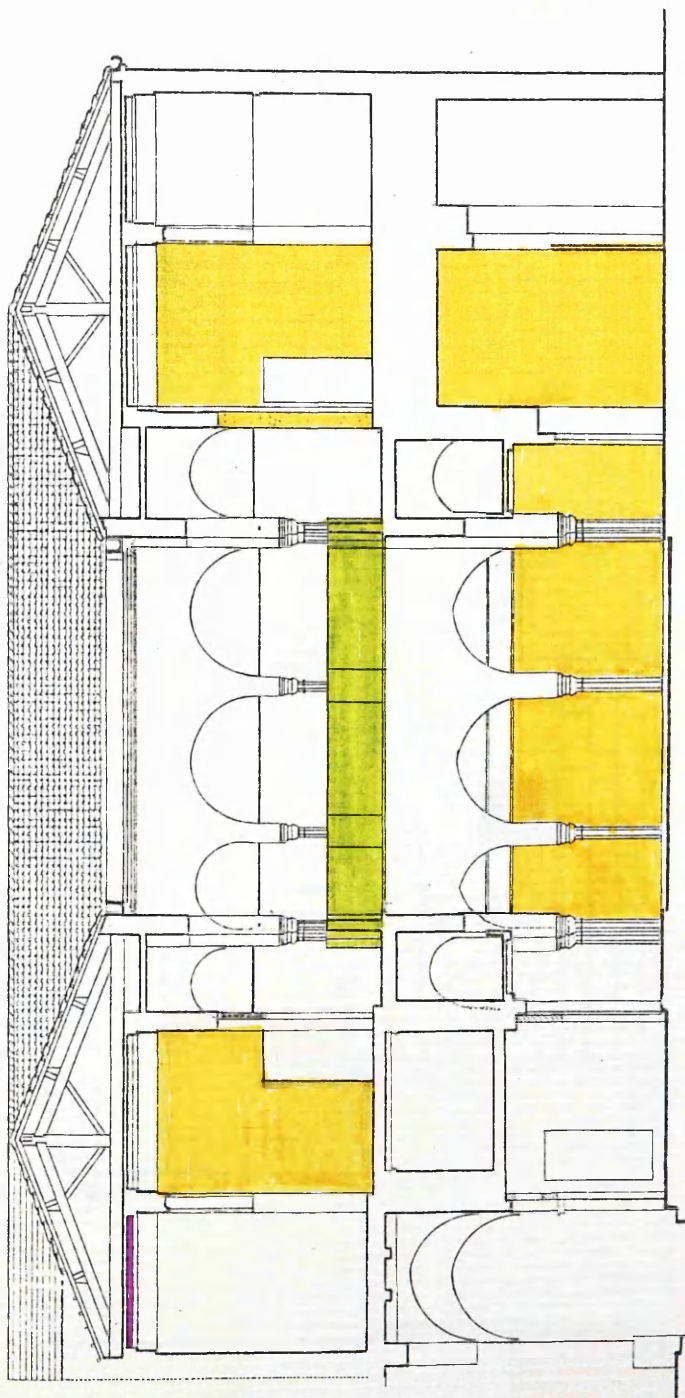
Mezzanine plan

showing conditions and repairs.



FIRST FLOOR PLAN

SHOWING CONDITION AND
REPAIRS.



Concrete balustrade to be removed and replaced with wooden one (see fig 28).

Concrete coating around original marble columns to be removed.

Broken and missing tiles to be replaced.
Zinc valley gutter to be repaired.

Plastic sheet covering timber ceiling to be removed and the ceiling repaired.

Partitions to be removed.

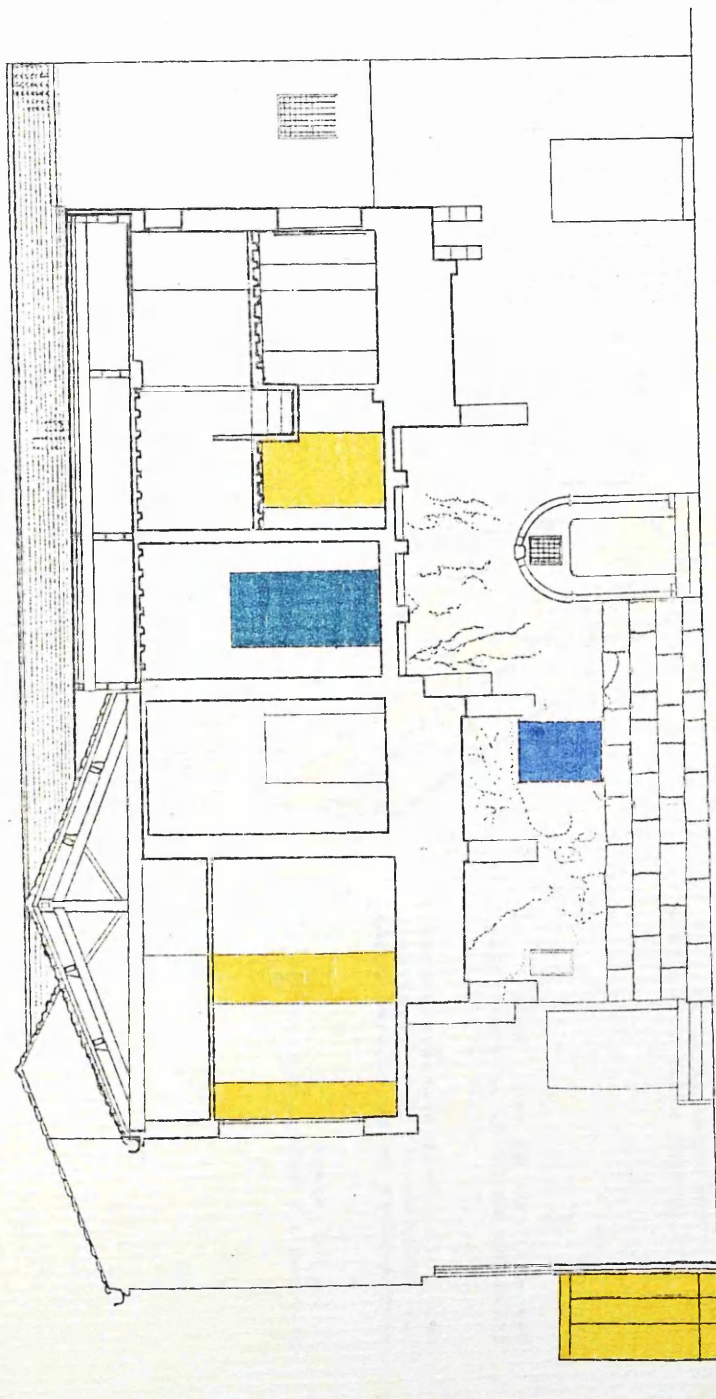
Cracks in rendering to be pointed.

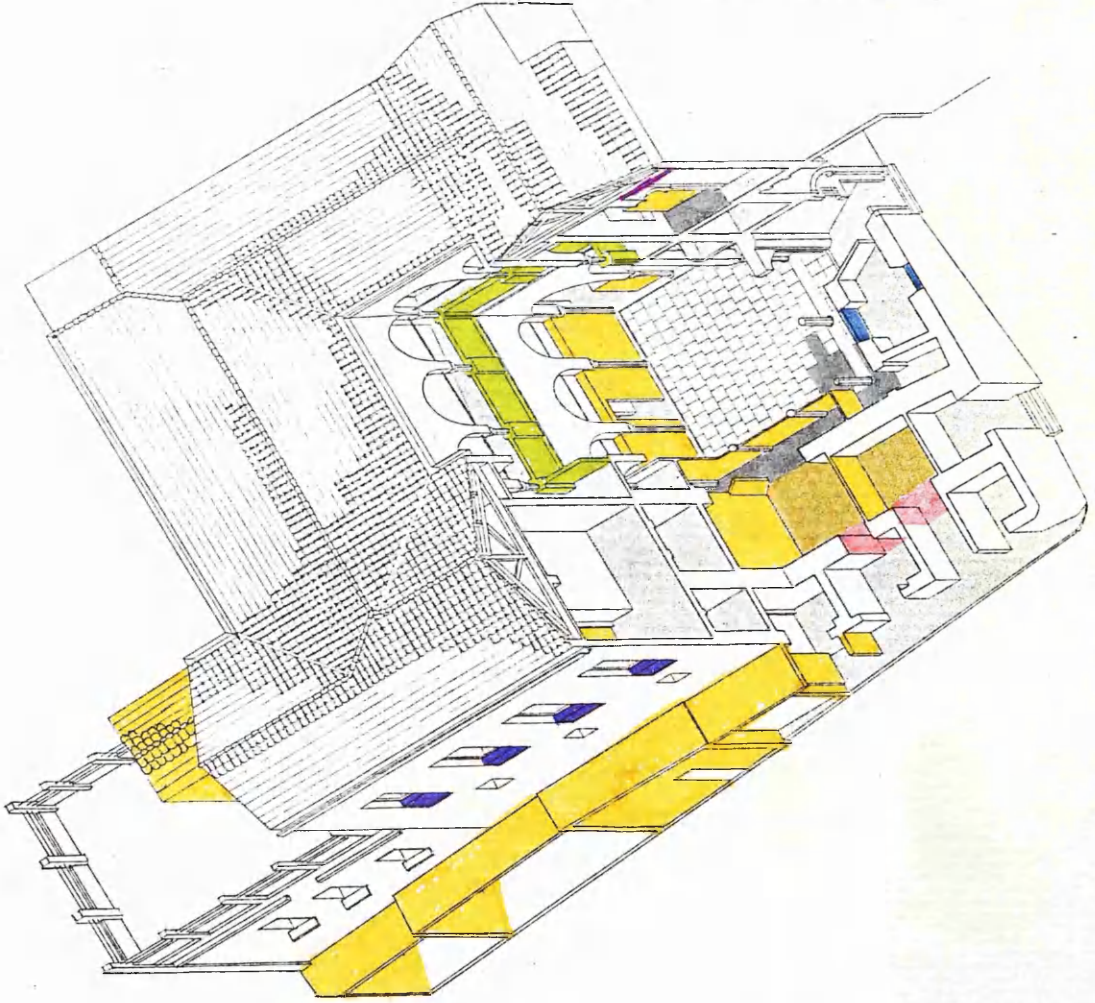
Existing door to be stripped with suitable paint solvent. Missing fluted brass knobs to be restored(see fig 19).

New door to be fitted.

Window W1 to be reopened and windows (types W1, W2) to be fixed to match existing (see fig 23).

Extended shops to be demolished and wall to be made good.





AXONOMETRIC PROJECTION
SHOWING CONDITION AND
REPAIRS.

Zinc gutter partly missing
to be replaced.

Window sills to be lowered 500mm
(to level of original openings)
and new windows fitted (see fig 23)

Extended shops to be demolished
and wall to be made good.

Marble slabs to be laid
to match existing

Window W1 to be reopened and
windows (types W1, W2) to be
fixed to match existing
(see fig 24).

Partitions to be removed.

Missing or damaged hexagonal
red floor tiles to be laid to
match existing

Partition to be added.

Concrete balustrade to be removed
and replaced with wooden one
(see fig 26a).

Concrete coating around
original marble columns
to be removed.

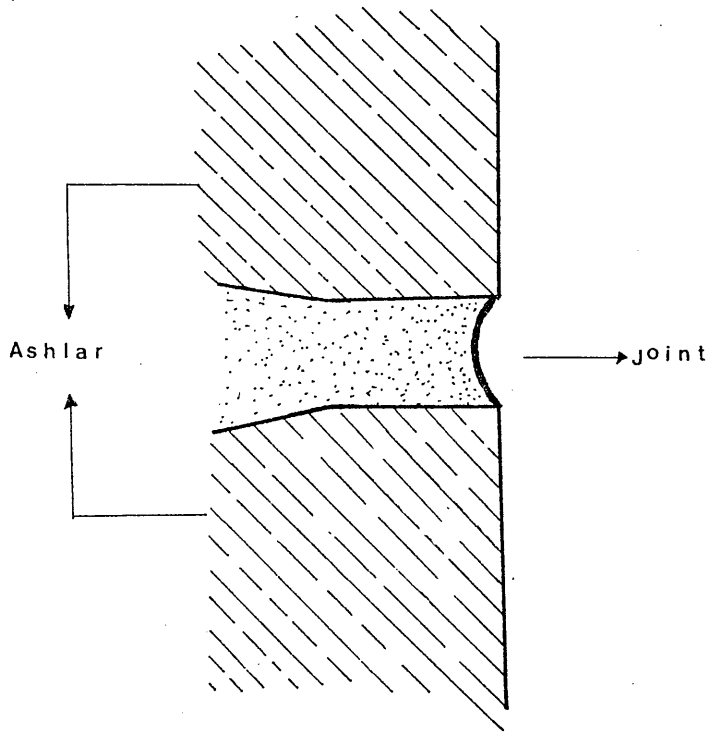
Broken and missing tiles
to be replaced.
Zinc valley gutter to be
repaired.

Plastic sheet covering timber
ceiling to be removed and the
ceiling repaired.

Cracks in rendering to be
pointed.

Existing door to be stripped
with suitable paint solvent.
Missing fluted brass knobs
to be restored (see fig 19).

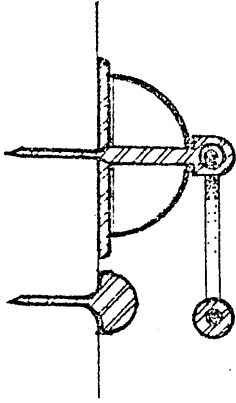
New door to be fitted.



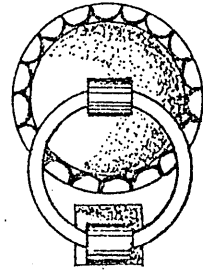
Pointing should be slightly Recessed
and in harmony with the existing one.

Figure 18

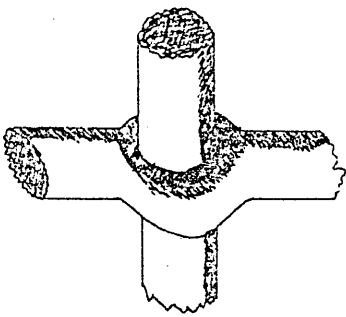
DOOR FURNITURE



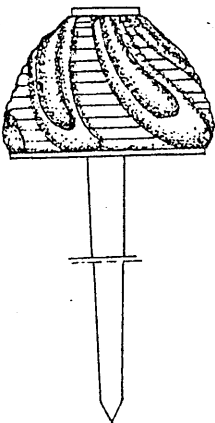
Door Knocker



Scale 1:5



Window Grille



Brass Nail



Scale 1:1

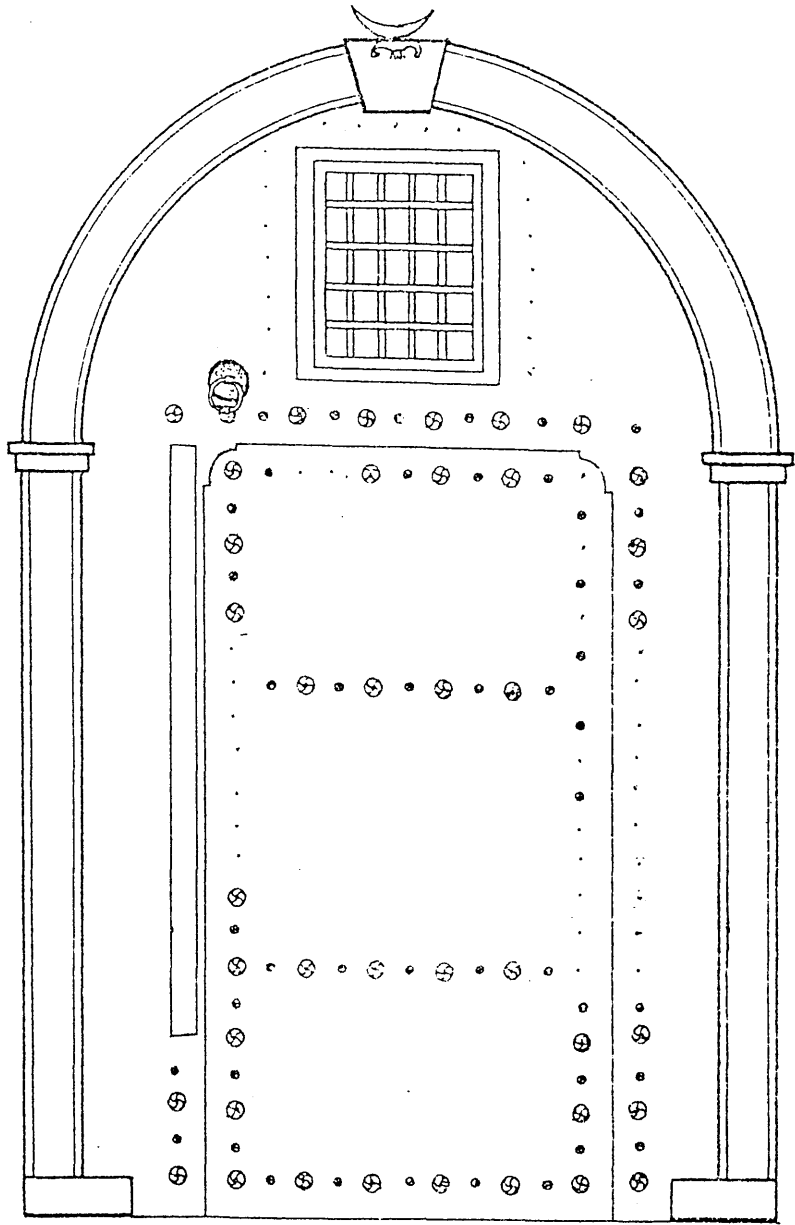


Figure 20 - Entrance doorway.

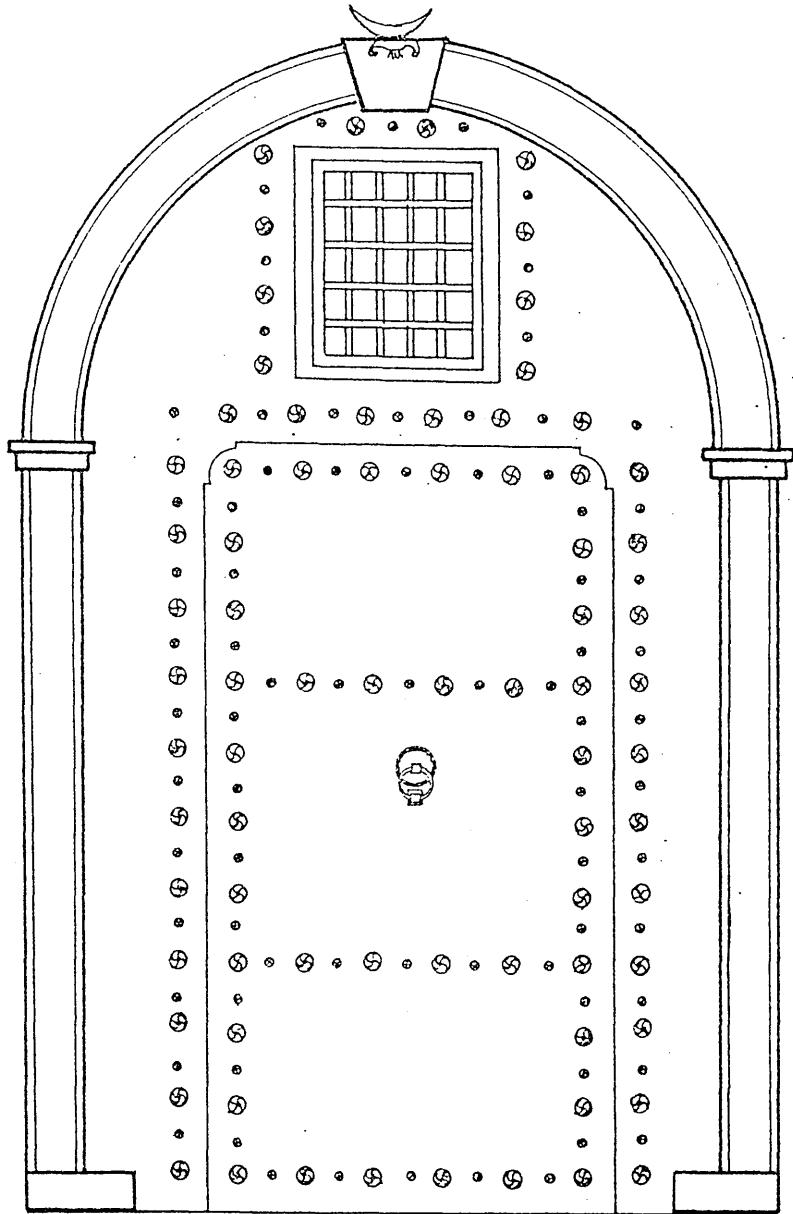


Figure 21 – Proposed Restoration Of the Entrance Door

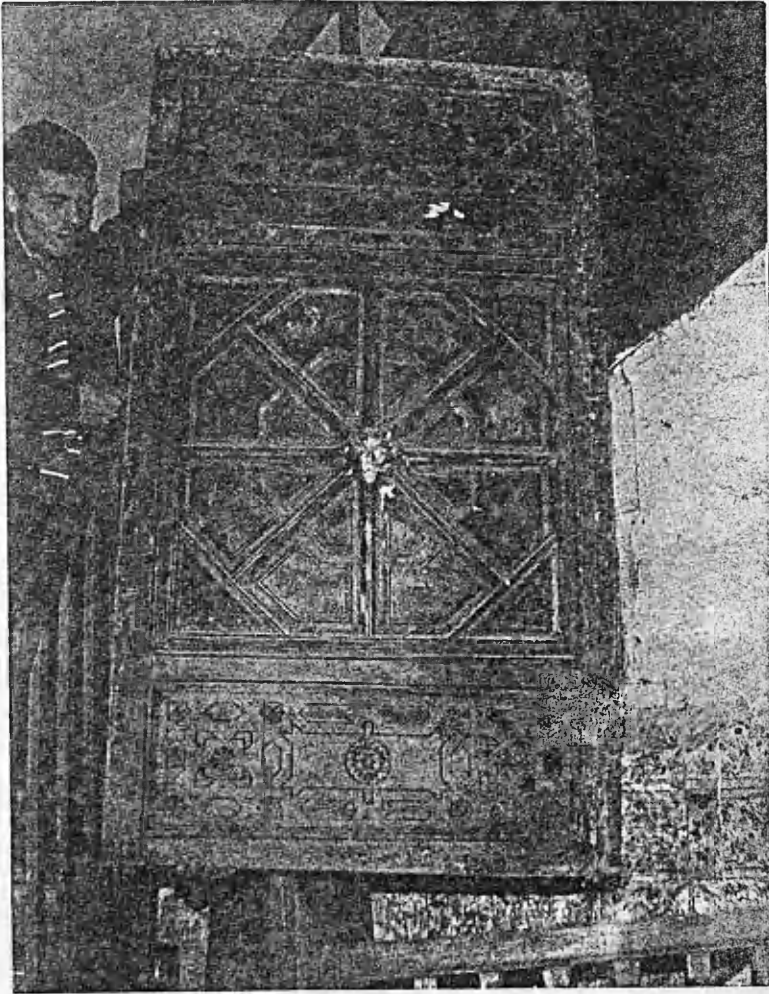
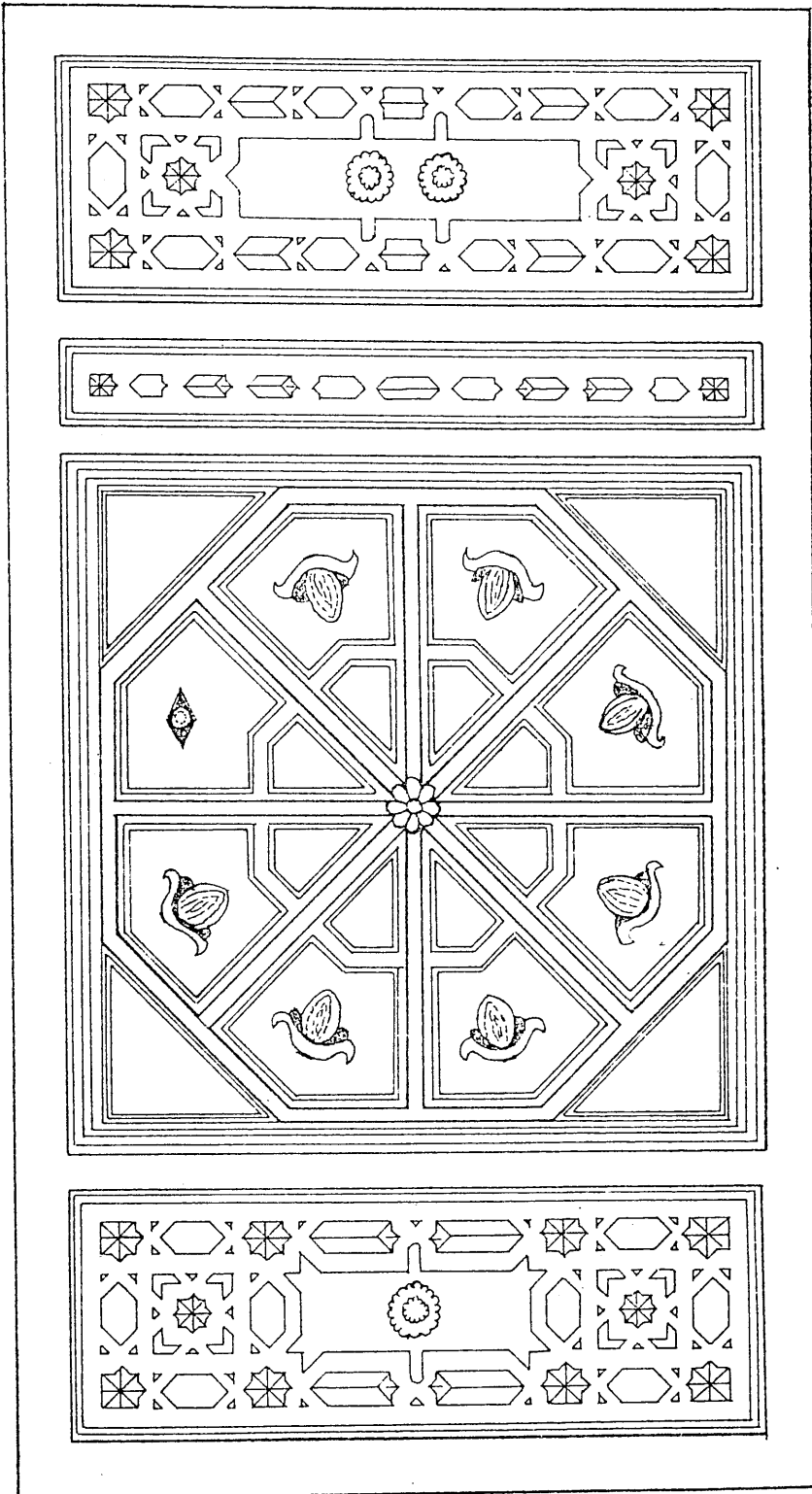


Plate 37 :carved door stored in the south-east staircase.



Structural lines would help in understanding
of the construction.

PROPOSED DOOR

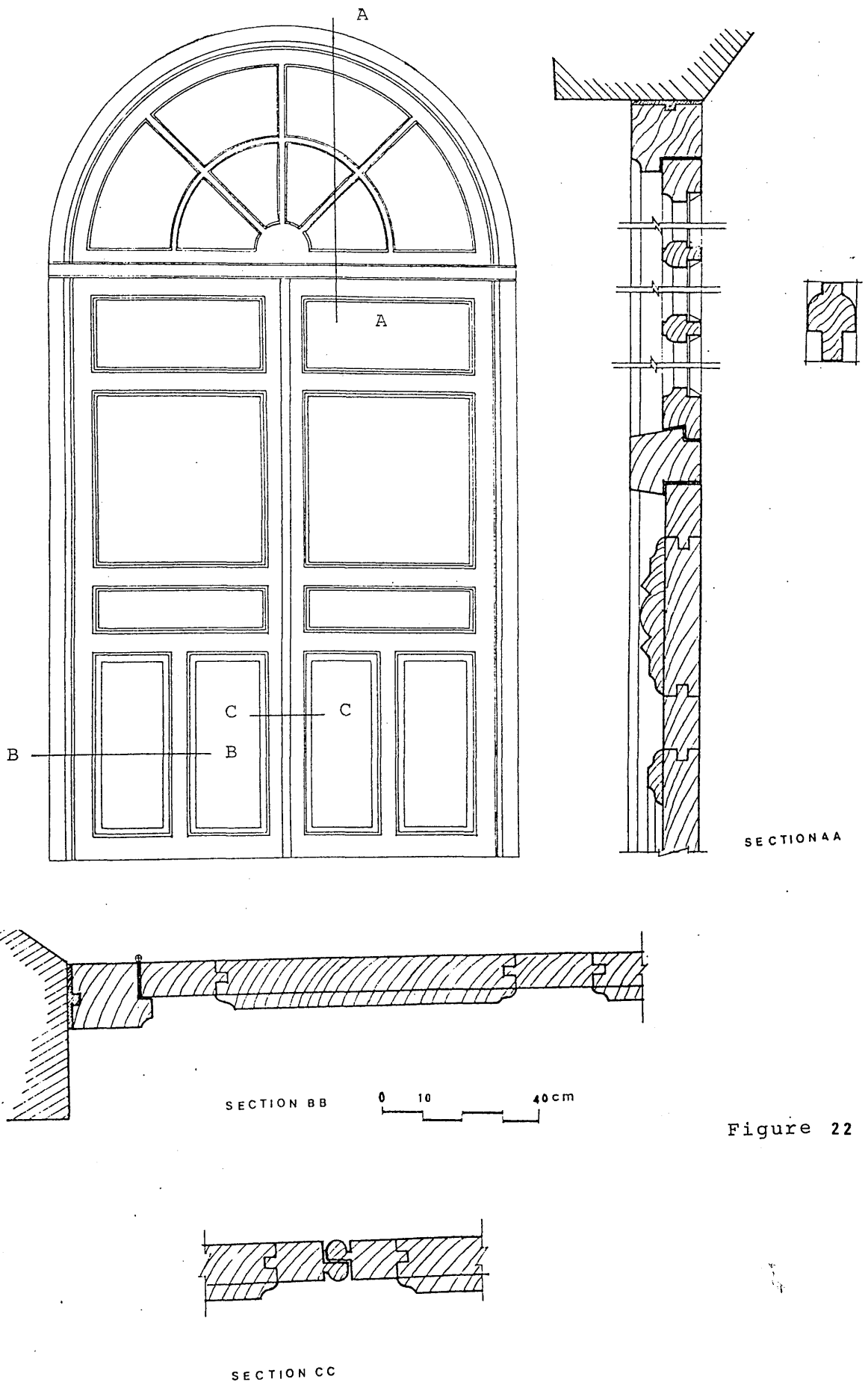


Figure 22

PROPOSED WINDOW (TYPE 2)

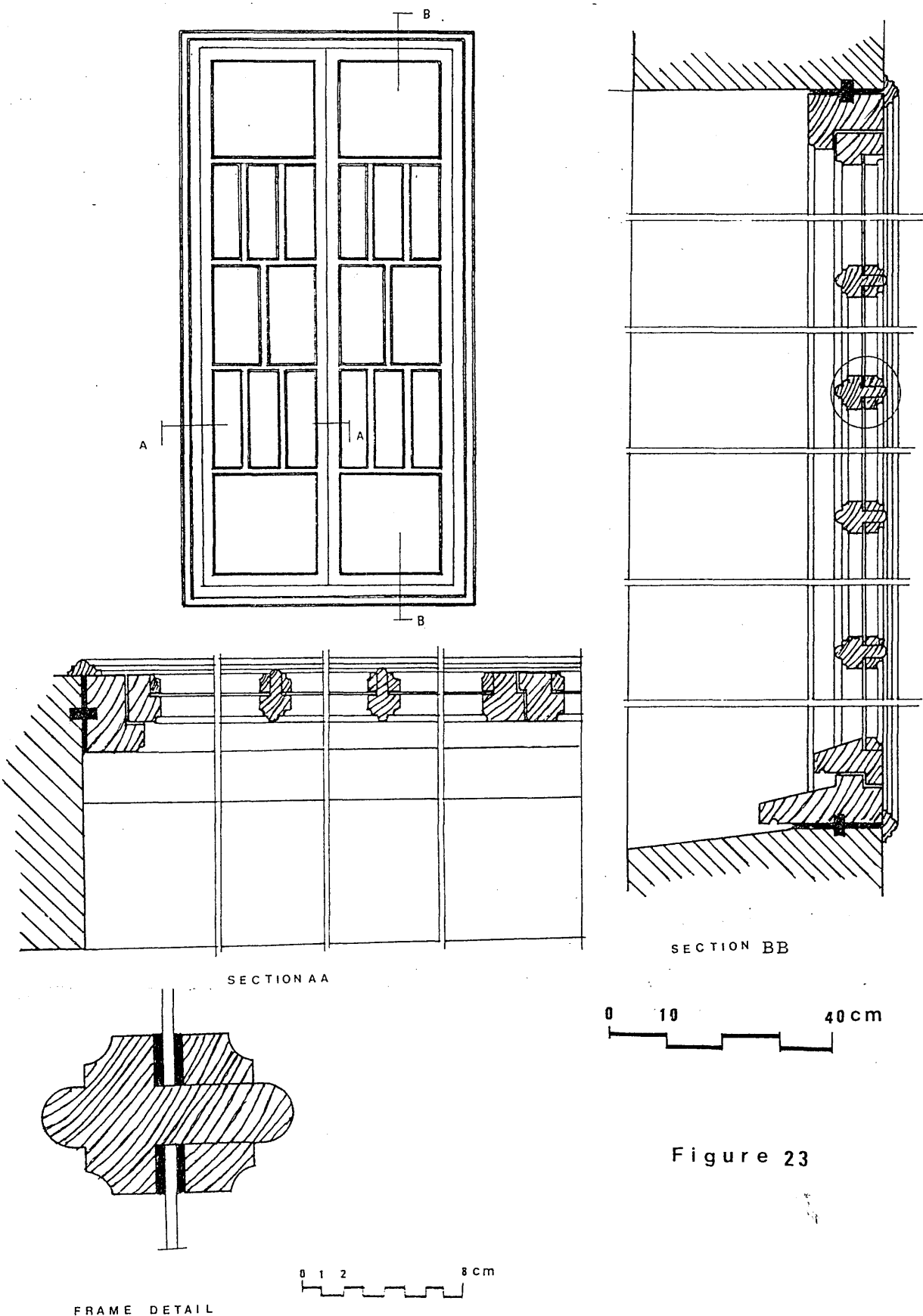


Figure 23

PROPOSED WINDOW W1

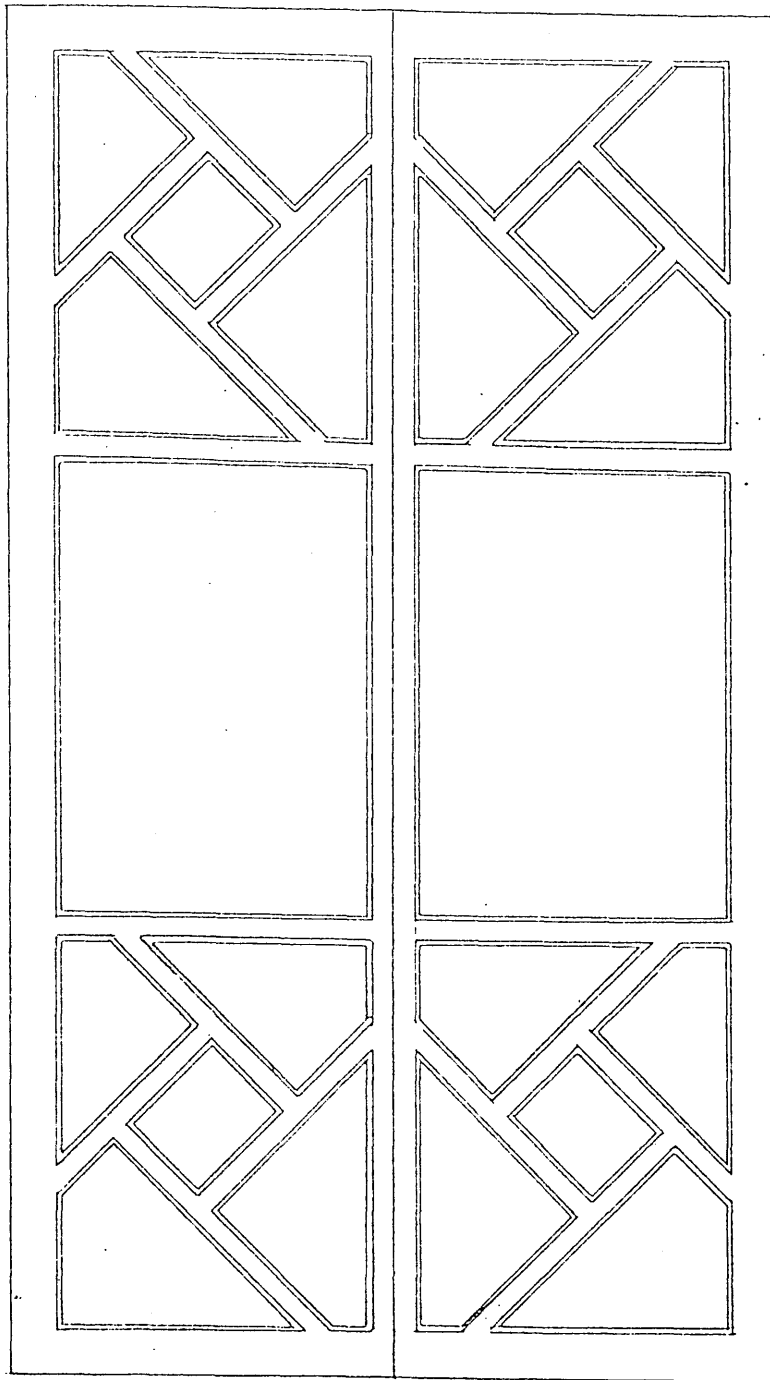


Figure 24

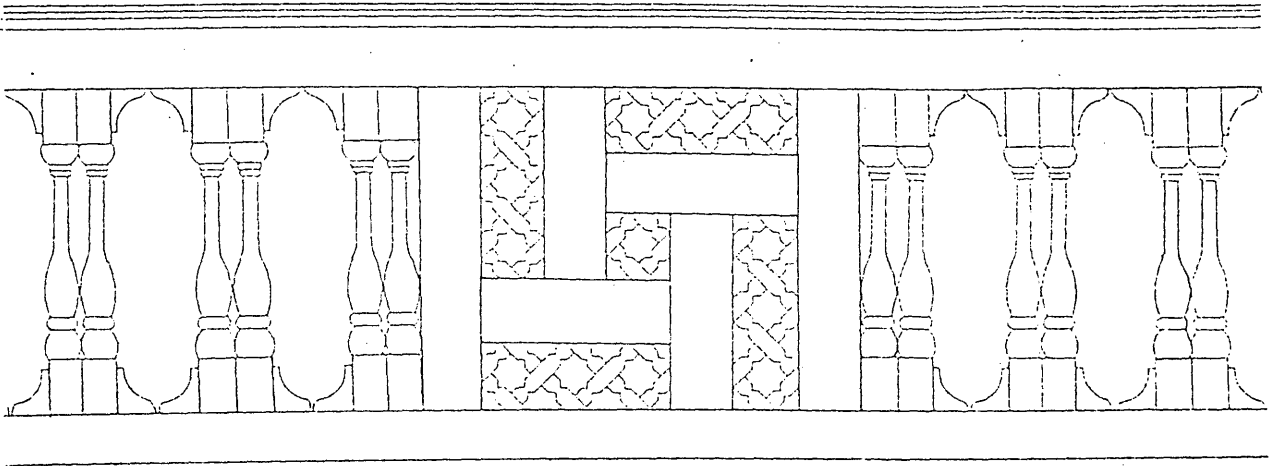


Figure 25 - Original balustrade recorded at mezzanine level.

PROPOSED BALUSTRADE

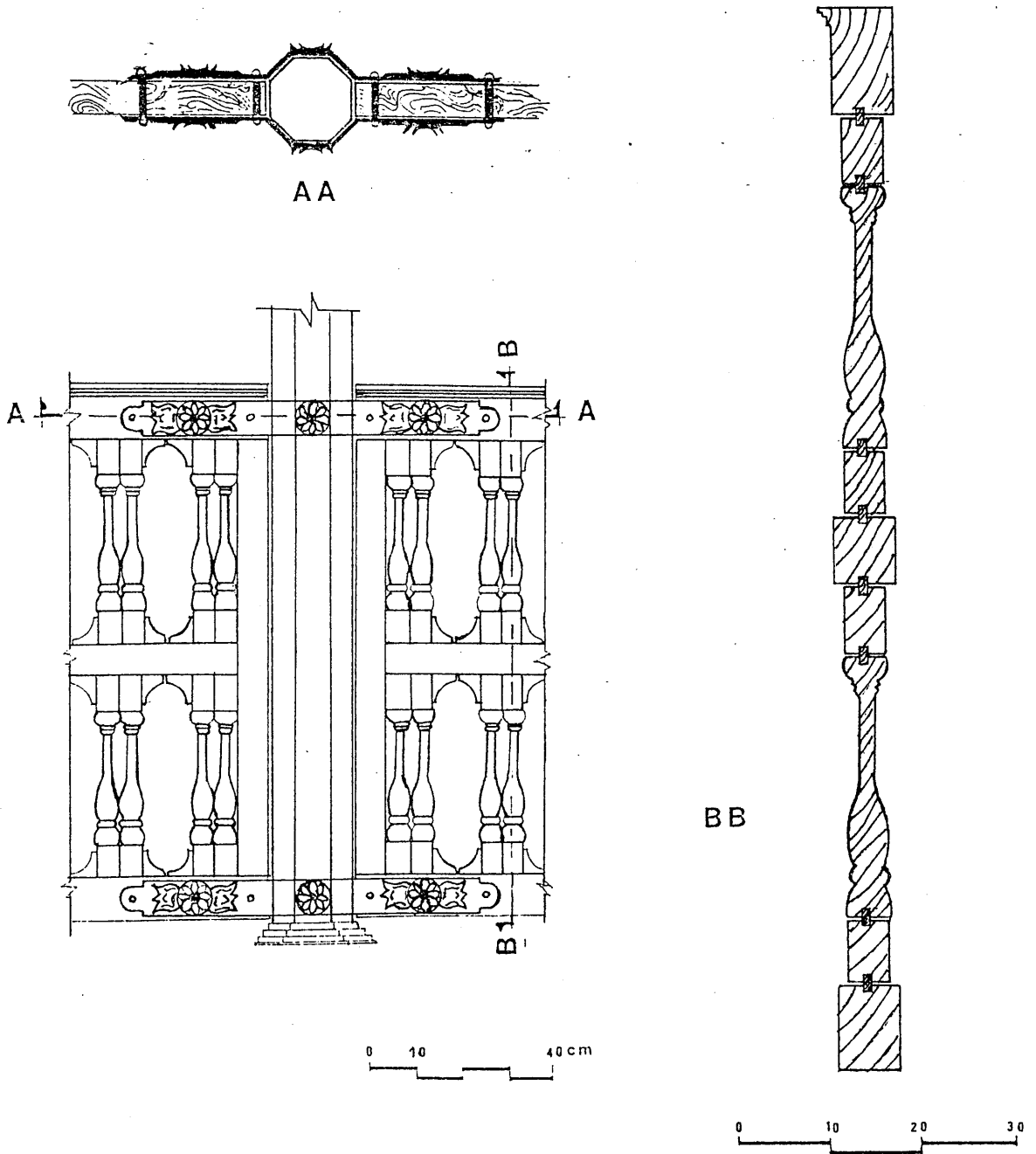
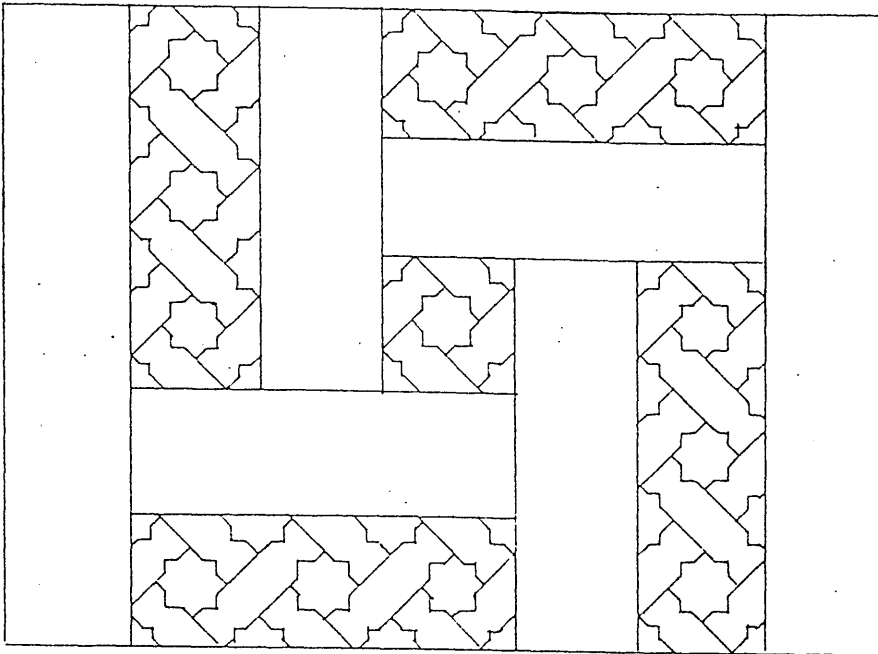
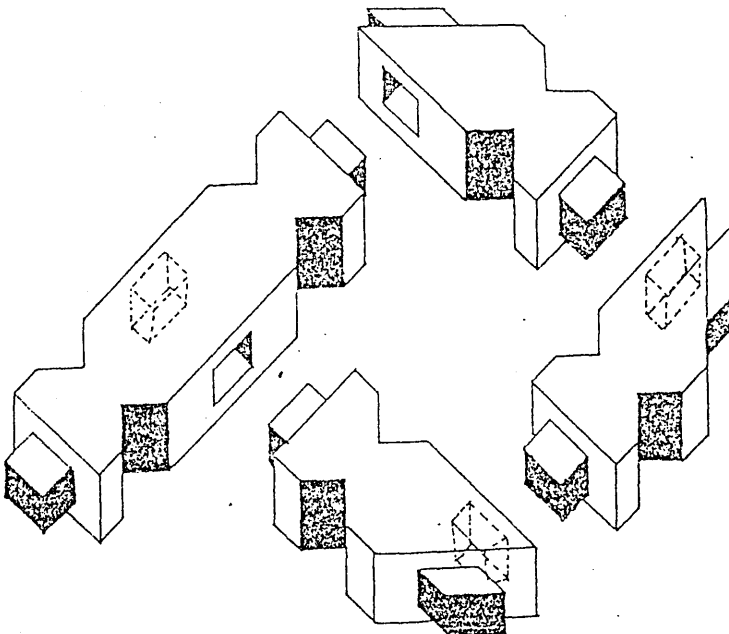


Figure 26a

Proposed balustrade mashrabiyya



Mashrabiyya



Mashrabiyya component

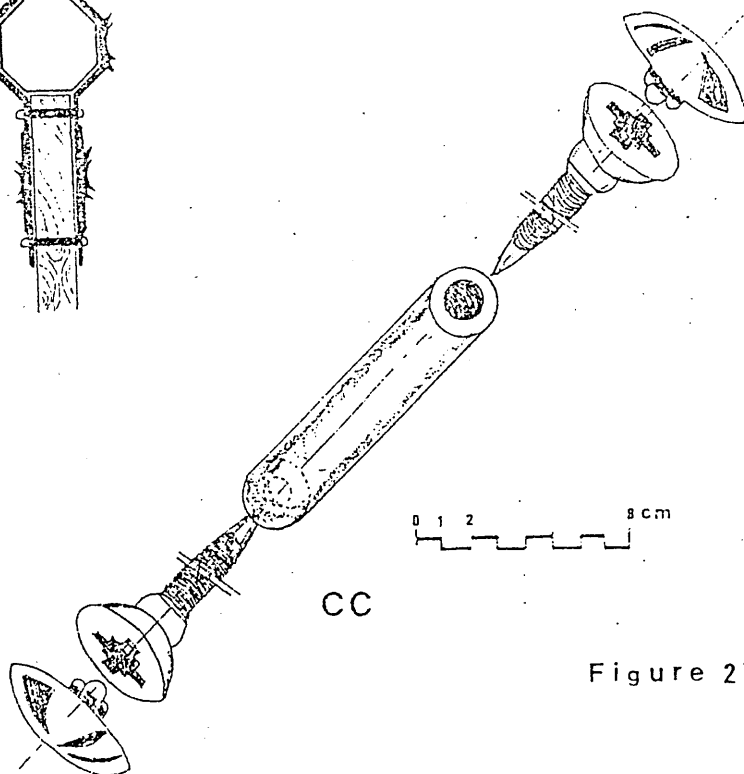
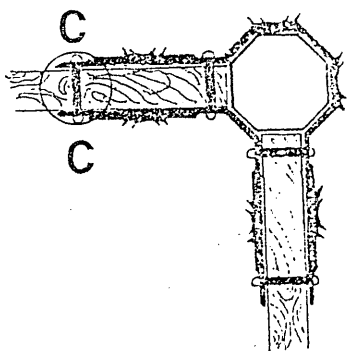
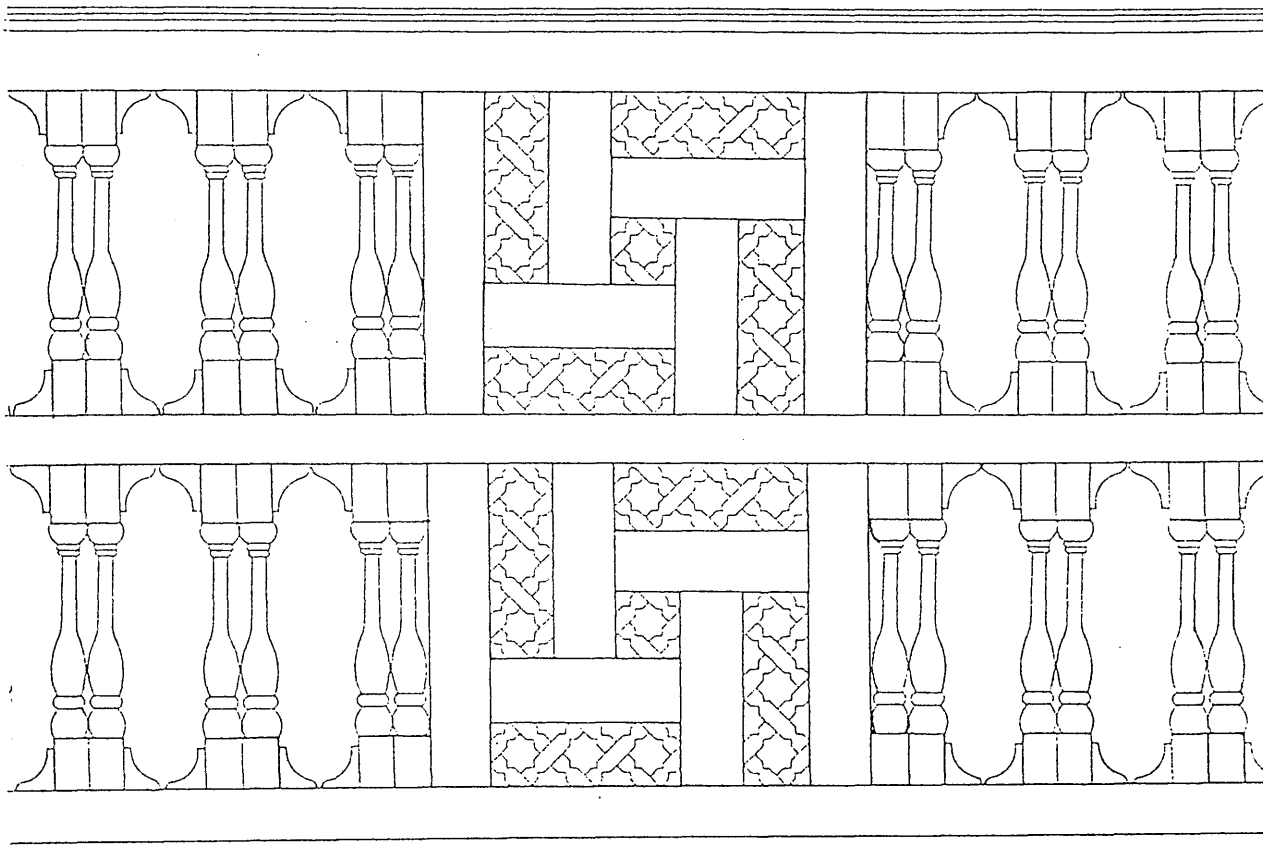


Figure 27

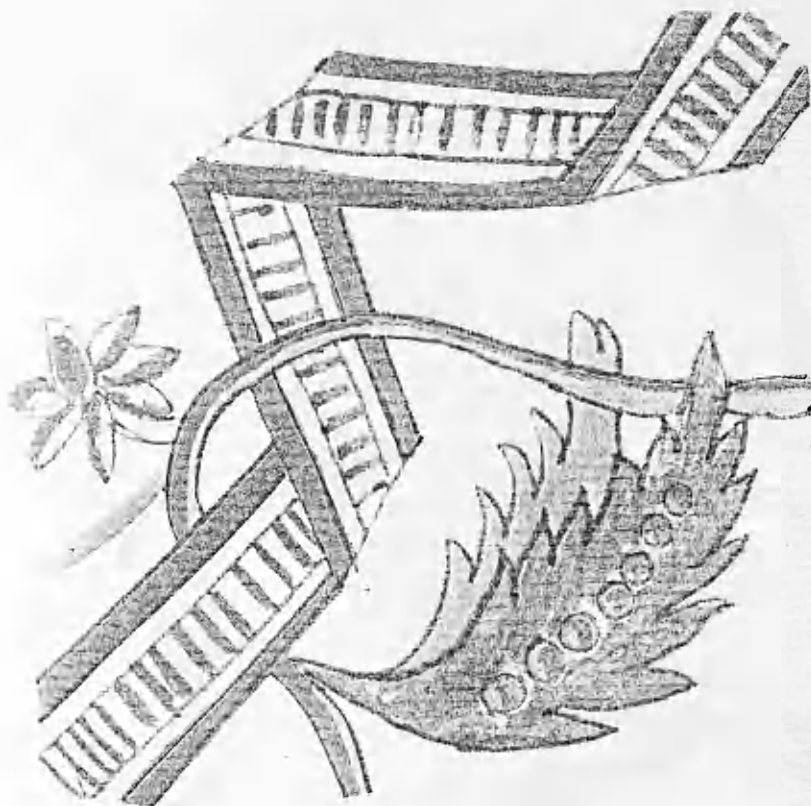
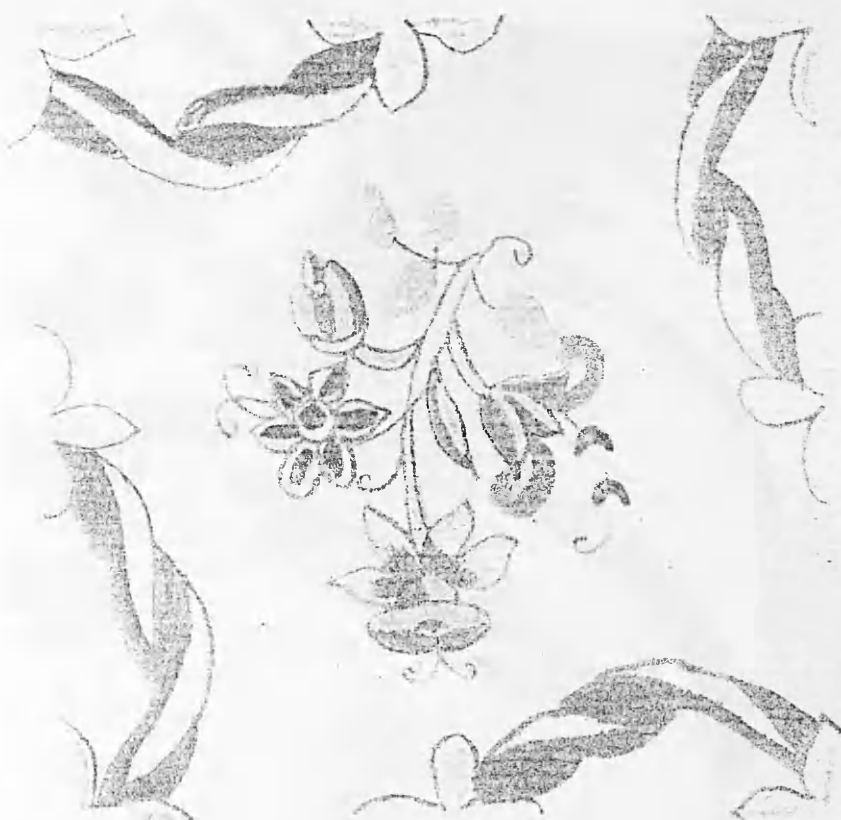


Figure 28_a:missing tiles on the north wall of room A13

Figure 30:tiles type three recorded in east and west rooms at
upper floor

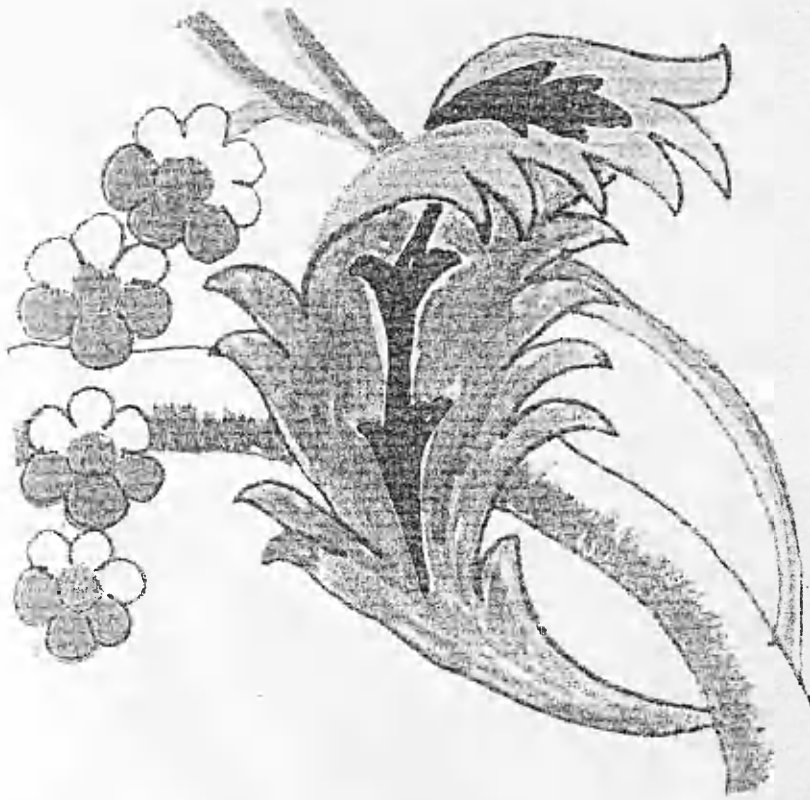




Missing tiles at the upper floor gallery.



Tiles recorded in room Cl6.



Files in room Clb

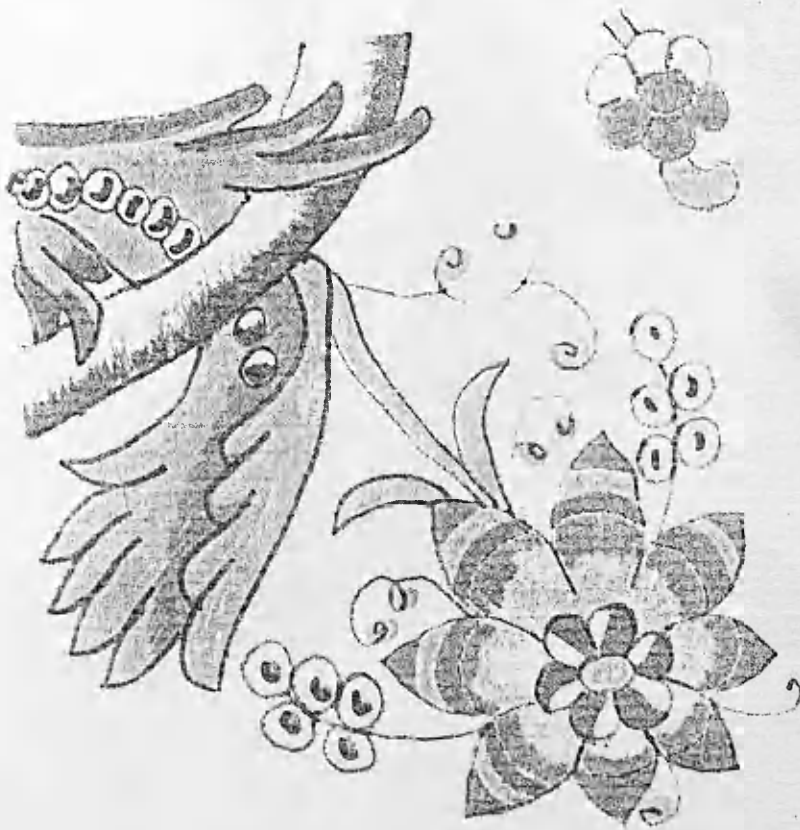
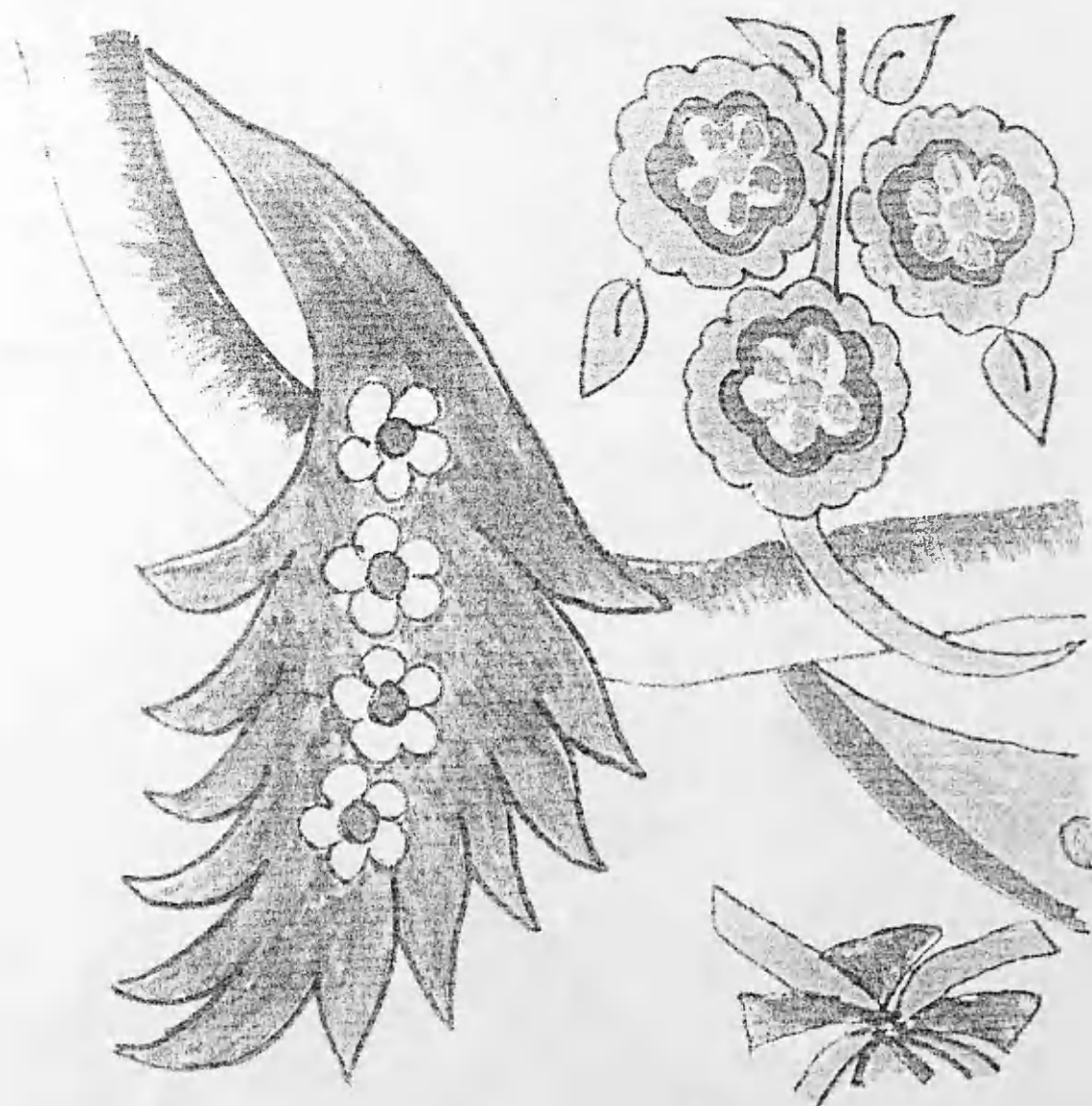


Figure 28c



Tiles recorded in room C16.

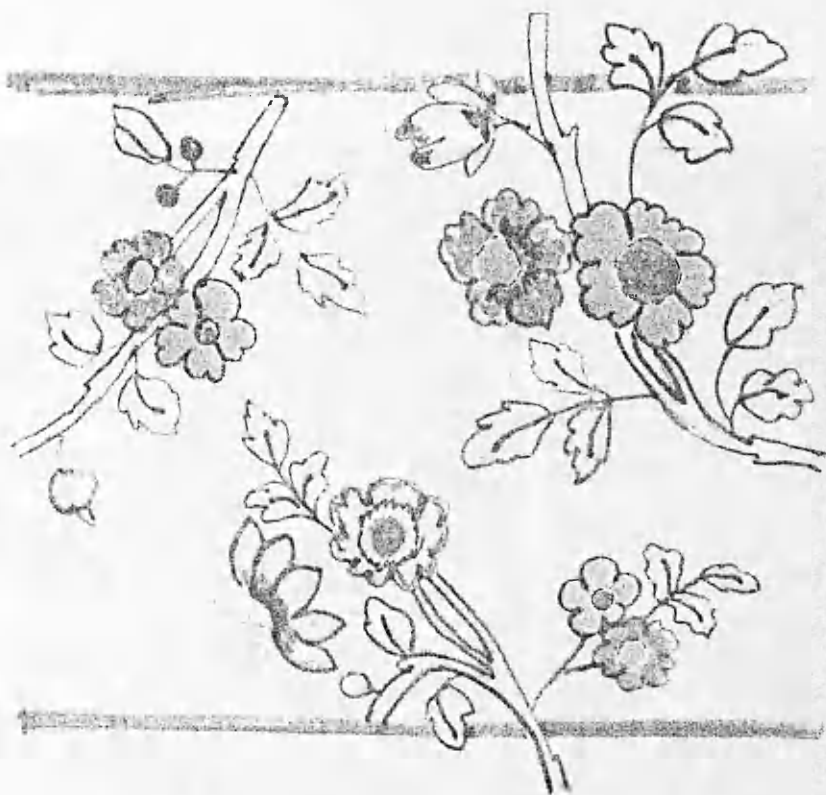
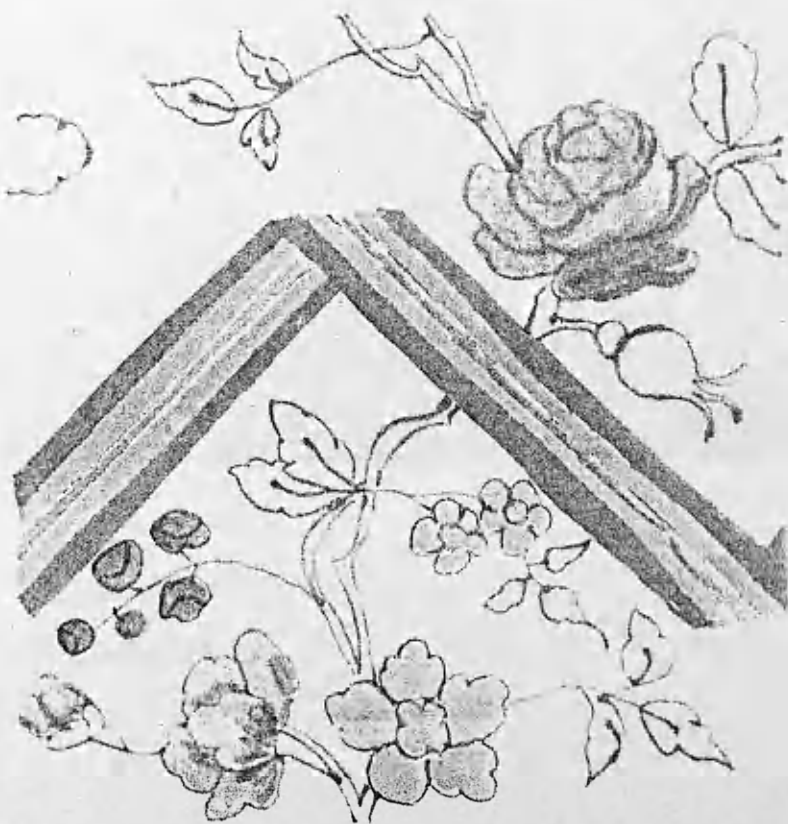
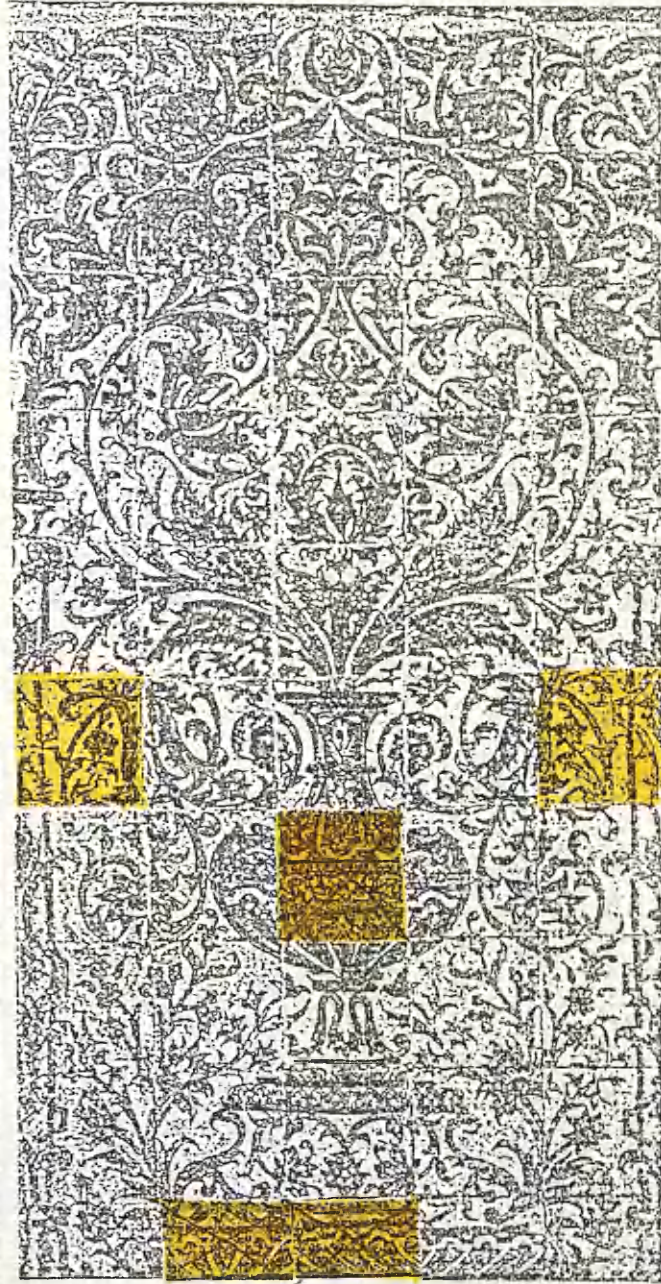


Figure 29 :tiles type two recorded in rooms C 3 and C16





Proposed Restoration Of
The Flower Vase



Tiles To be Rearranged To
Their Original Location

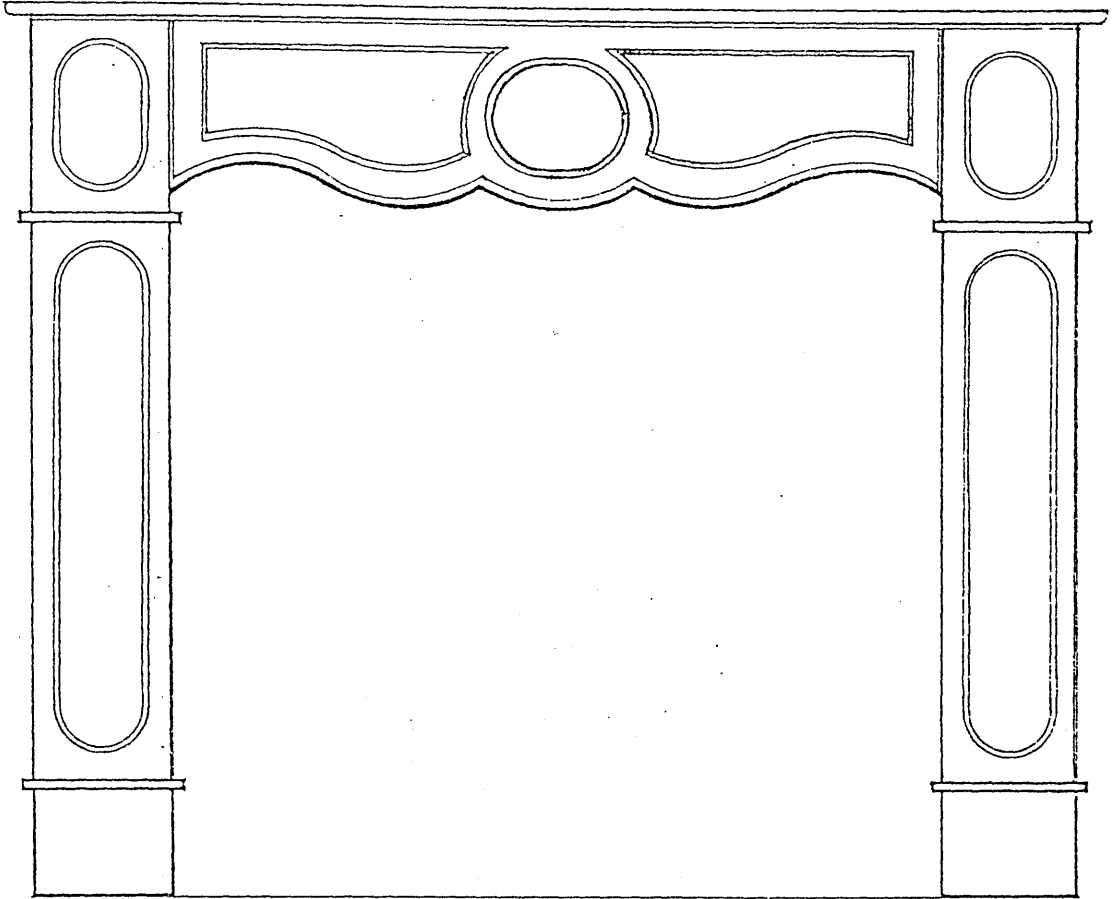


Figure 32 a :Fireplace recorded in rooms c20,c8,c2.

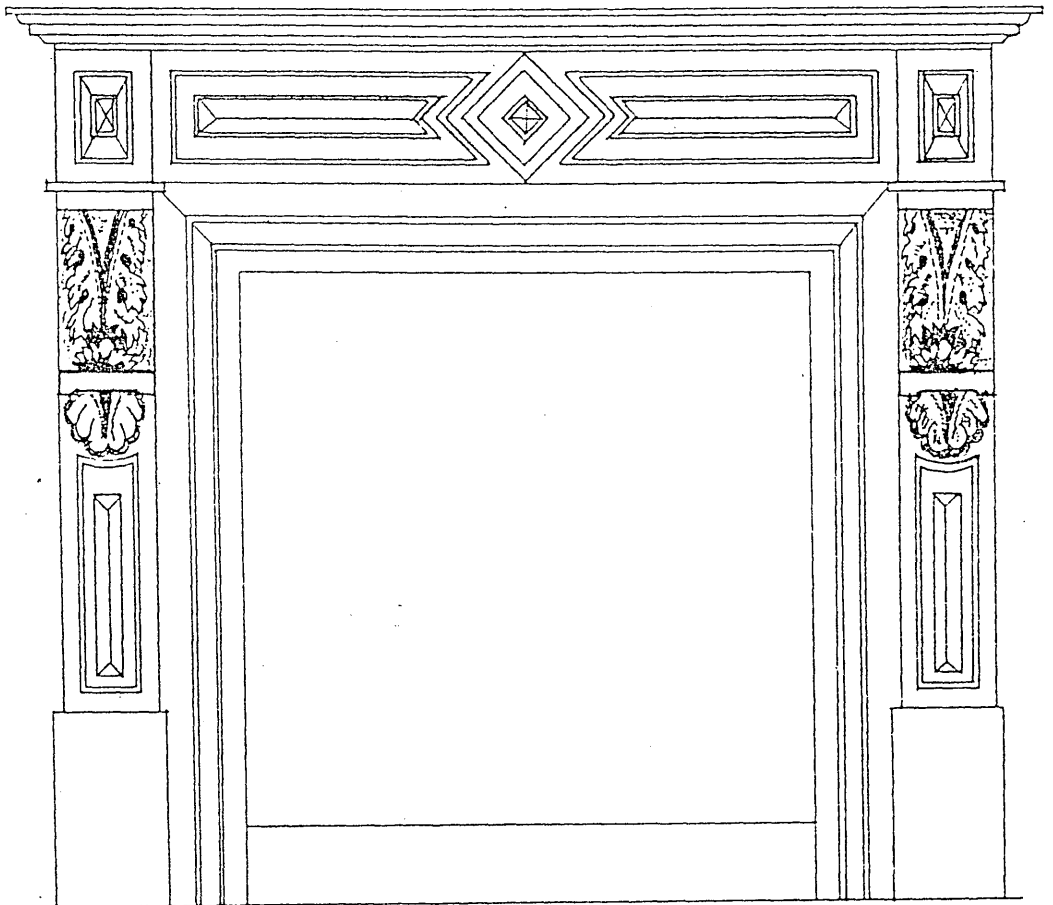
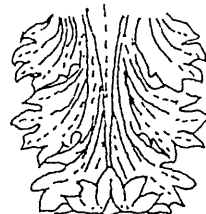
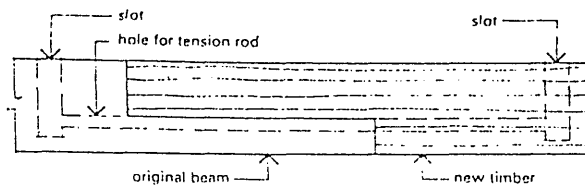
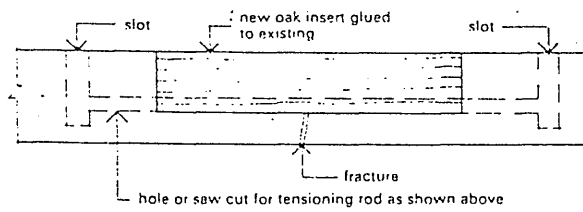
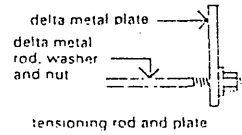


Figure 32 b :fireplace recorded in room cl6

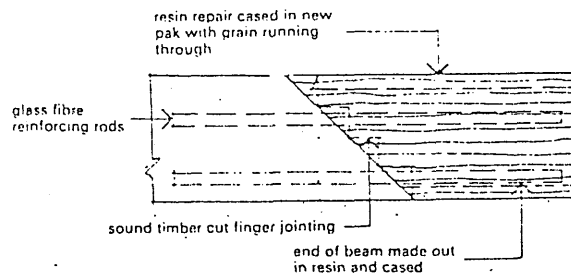




Repair technique of end of beam affected by wet rot



Repair technique for beam failure under tension



Repair technique to rotten beam end using fibreglass rod reinforcement and polyester resin

Fig.3.3 Repair techniques for beams.

CONVERSION WORK

The craft workshops can operate within the framework of the existing palace with its majlises, kbus, maqsuras, etc. The conversion involves only minor modifications to the original structure and does not interfere with the main features.

Seven large craft workshops can be provided on the mezzanine and first floors. The flexibility of the layout allows the shops to be divided if necessary into 17 smaller craft workshops. Those on the mezzanine include rug-weaving and pottery crafts on the north side, with storerooms on the west and south sides. Those on the first floor include embroidery on the east side, leather and a traditional cafe with small kitchen on the north side, copper on the south side and woodwork on the west side, with cosmetics and souvenirs in the south-west ancillary room.

Two fitting rooms are provided, one for the embroidery shop and one for the leather shop. The terrace overlooking Mentouri Street to the east and the market square(Sug al-Acer)to the north has been provided with a seating area for the traditional cafe. The storerooms for these shops are, as mentioned above, on the west and south sides of the

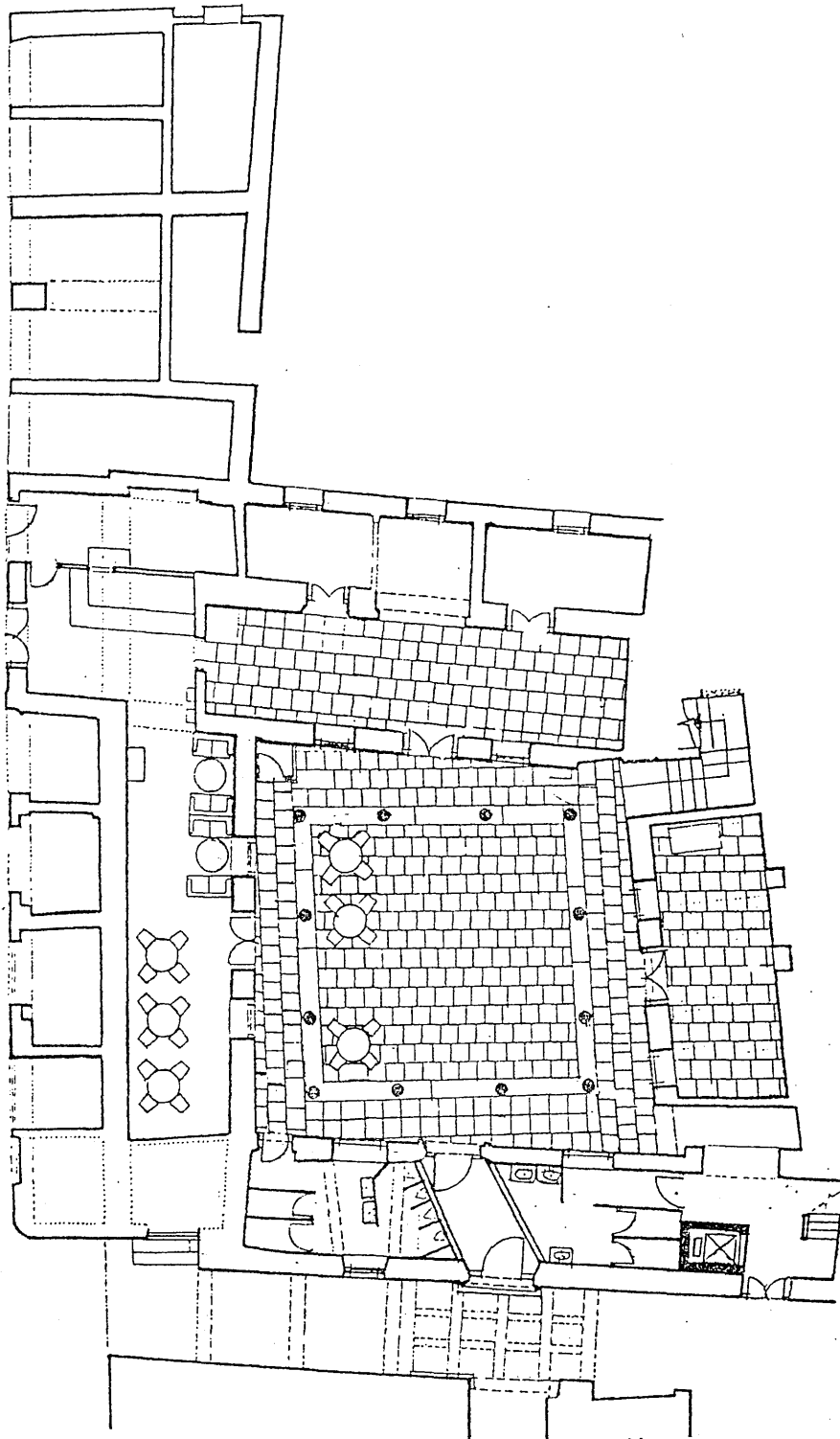
mezzanine near the lift.

In addition to the craft workshops, a modern cafe with seating areas, a tourist information office and an area for exhibitions related to the historical period of Salah Bey, are provided in the north, south and east sides of the ground floor.

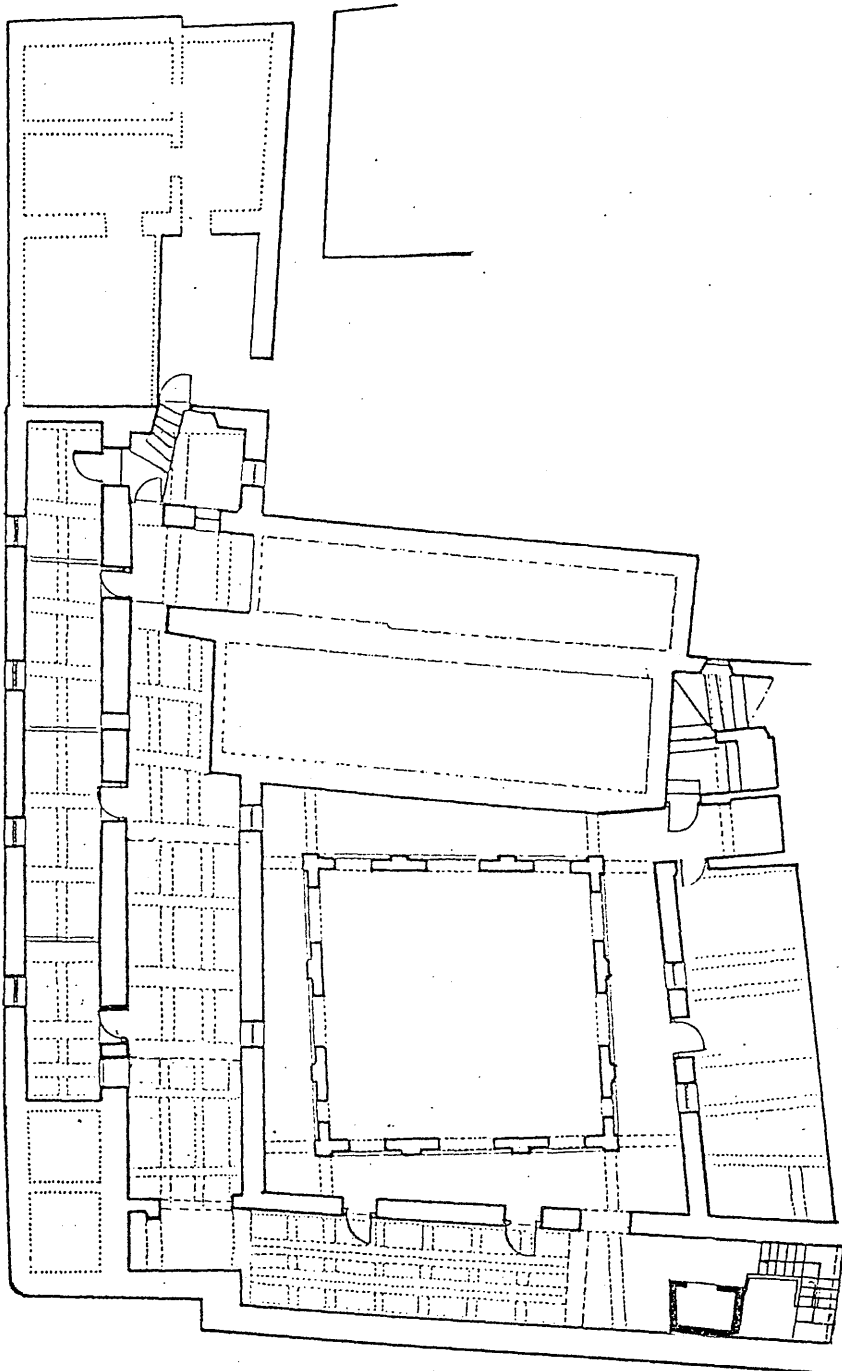
In order to comply with the building and fire regulations, certain internal and external works are necessary. New balustrades, a door and windows were designed to match the existing ones. On the ground floor fire escape doors are provided, one at the west end of room A1 and two to the north of rooms A13 and the cafe, A7,8. At first floor level the problem of fire escape has been overcome by providing a staircase to the south of room C3 (see fig C). Access for supplies is from Piquet Street to the west, where a lift is provided to service the various workshops.

Facilities include male and female public toilets on the ground floor (see fig A), a staff toilet on the first floor and four public telephones, two on the ground floor to the south of the cafe and two on the first floor at the north end of the gallery.

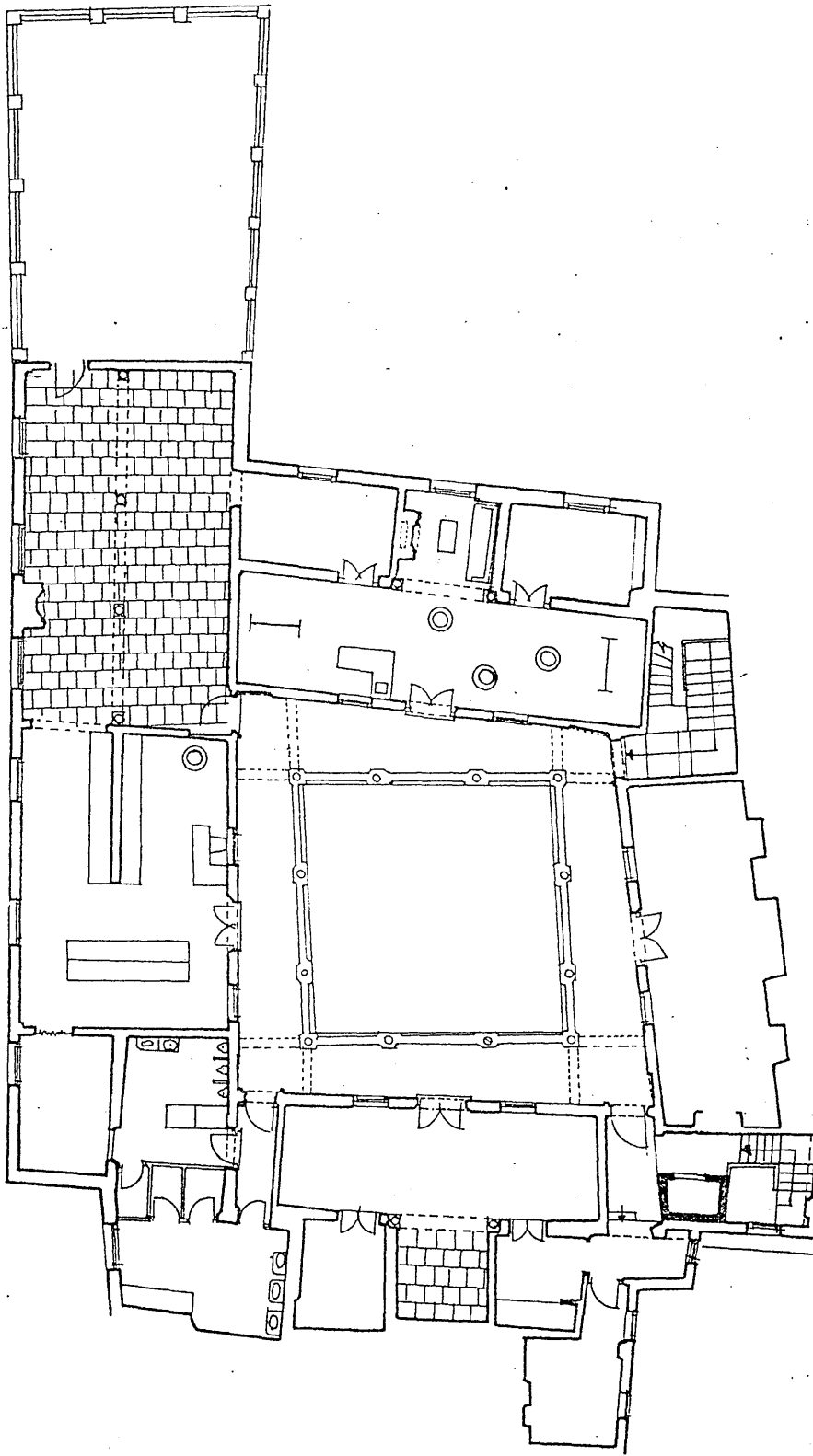
Finally, while the proposed conversion respects original spaces, volumes and authentic materials, new furnishings such as chairs and tables are to be in modern style.



Proposed conversion of the ground floor plan.



Proposed conversion of the mezzanine level.



Proposed conversion of the upper floor plan.

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Historic building listed to the date 27 December 1969

ANNEXE - I.

Légende relative au classement des monuments historiques
(Epoque et civilisation)

MG : Mégalithique
PH : Préhistorique
AN : Antique
IS : Musulmane
MD : Divers

LISTE DES SITES ET MONUMENTS HISTORIQUES
CLASSES A LA DATE DU 20 DECEMBRE 1967
CONFORMEMENT A L'ARTICLE 23 DE L'ORDONNANCE
N° 67-281 DU 20 DECEMBRE 1967.

DEPARTEMENT D'ALGER

COMMUNES	Arrondissements		DESIGNATION	DATE du classement
Ain Benian (ex Guyotville)	Alger-Sahel Chéraga	MG	Tombeaux mégalithiques sur le plateau de Beni Messous.	Liste 1900
Alger	Alger	MG. 1	Dolmens, Bologuine Ibnou Zirî (ex-Saint E. gène).	Liste 1900
		AN. 2	Inscription romaine gravée sur une pierre encastrée dans la façade d'un immeuble situé rue Bab Azzouar à l'angle de la rue Caftan.	23 août 1900
		AN. 3	Vestiges des fortifications dites du « Bastion XI ».	9 sept. 1930
		IS. 4	Mosquée Ketchaoua (ex-cathédrale).	26 mars 1908
		IS. 5	Mosquée Ali Ritschin (ex-église N.D. des Victoires).	29 avril 1949
		IS. 6	Grande Mosquée « Djamaâ El Kébir ».	30 mars 1837
		IS. 7	Mosquée « Djamaâ-El-Djedid (Pêcherie).	30 mars 1837
		IS. 8	Mosquée Abderrahmane El Taâlibi.	30 mars 1837
		IS. 9	Mosquée Sidi Ramdan.	26 fév. 1904
		IS. 10	Mosquée Djamaâ Safir.	13 mai 1905
		IS. 11	Mosquée Mohamed Chérif.	13 mai 1905
		IS. 12	Mosquée et marabouts dit « de Sidi Medjoub ».	17 Déc. 1951
		IS. 13	Marabout du jardin « Marengo », connu sous le nom de tombeau de la reine.	13 mai 1905
		IS. 14	Marabout à coupole Hassen Pacha dit « Ben Ali » situé rue du même nom.	13 mai 1905
		IS. 15	Groupe de maisons mauresques (bastion 23) ex-rue du 14 juin.	30 oct. 1909
		IS. 16	Dar El Souf (ex cour d'assises).	12 fév. 1887
		IS. 17	Maison du Khaznadji (ex archevêché).	12 fév. 1887
		IS. 18	Dar Mustapha Pacha (ex-bibliothèque nationale).	
		IS. 19	Kasbah (forteresse).	30 mars 1837
		IS. 20	Porte turque de l'arsenal.	Liste 1900
		IS. 21	Porte de Penon.	17 fév. 1905
		IS. 22	Fontaine de la cale aux vins.	13 mai 1905
		IS. 23	Fontaine de l'amirauté.	13 mai 1905
		IS. 24	Fontaine arabe et marabout au Hamma, Mer dit « les platanes » au jardin d'Essal.	20 fév. 1911
		IS. 25	Citadelle du fort l'Empereur. (El Biar).	24 nov. 1930
		IS. 26	Villa Abdel Tif.	29 sept 1922
		IS. 27	Villa des arcades	31 juill. 1945
		IS. 28	Villa Mahieddine.	26 avril 1927
		IS. 29	Bordj Ponnac (Bouzaréa).	4 oct. 1948
	Dar El Belda	IS.	Fort turc (du Cap Matifou).	Liste 1900
	Bouda	AN.	Mausolée royal dit « Tombeau de la Chrétienne ».	Liste 1900

DEPARTEMENT D'ALGER (suite)

COMMUNES	Arrondissements		DESIGNATION
Siaouelli	Alger-Sahel	AN.	Extrémité Nord-Ouest de la presqu'île de Sidi Frej (a. militaire) contenant des ruines romaines.
Tipasa	Bilda	AN. 1	Château d'eau.
		AN. 2	Remparts romain et cimetière punique.
		AN. 3	Restes du théâtre
		AN. 4	Restes d'une basilique et cimetière.
		AN. 5	Ruines d'un prétoire.
		AN. 6	Sacrophages et fragments antiques.

DEPARTEMENT D'ANNABA (Ex Bône)

Annaba	Annaba	AN. 1	Citerne d'hippone.
		AN. 2	Ruines d'hippone.
Cheria	Tebessa	PH. 1	Stations-abris de Bir Sedet.
			Garet Retba.
		PH. 2	Chabet az Siboun
		PH. 3	Chabet Retba.
		PH. 4	Damou Kernaïa.
		PH. 5	Fadje Relilal Mer. art.
		PH. 6	Foum-Relilal Mer. uebba.
		PH. 7	Merget Sem El Charbi.
		PH. 8	Oued Ratem.
		PH. 9	Relilal (Tidjen).
El Kala (Ex El Calle)	El Kala	MD. 1	Eglise de El Kala.
		MD. 2	Ruine du Bastion de France entre El Kala et Annaba.
Guelma	Guelma	AN.	Restes de théâtre et thermes.
Hanenchas	Souk Ahras	AN.	Restes de citadelles, enceinte byzantine de Tifetch, (T. de Numidie).
Héliopolis	Guelma	AN.	Piscine romaine Hammam Barda.
M'Daourouche (Ex Montesquieu)	El Aouinet (Ex Fontaine)	AN. 1	Ruines du palais byzantin.
		AN. 2	Mausolée romain.
Morsott	El Aouinet	AN.	Ruines antiques.
Sedrata	El Aouinet	AN.	Territoires et monuments de l'antique Thubursicum Numidicum (Khamisa).
Bellaoua Announa	Guelma	AN.	Ruines de la ville Thibilis.
Taoura (Ex Gambetta)	Souk Ahras	AN.	Mausolée romain situé sur un terrain domanial dans le des Ouled Souk Ahras (Kiar El Annar).
Tebessa	Tebessa	AN. 1	Temple romain de Tébéssa-Khalia.
		AN. 2	Tour du Djebel Mustiri.
		AN. 3	Territoires et monuments de l'antique Thévaste.

DEPARTEMENT DE L'AURES (Ex-Batna)

COMMUNES	Arrondissements		DESIGNATION	DATE du Classement
Ain Djasser	Merouana (Ex Cornaille)	AN.	Territoires et monuments de l'antique Dina Veteranorum (Zana).	Liste 1900
Ain Yagout	Batna	AN.	Mausolée des rois numides dit « le Medracen ».	Liste 1900
Barika	Barika	AN.	Ruines de la ville antique de Tobna.	21 nov. 1950
Biskra	Biskra	AN. 1	Restes de thermes à Biskra.	Liste 1900
		AN. 2	Ruines de Gémelae.	18 juil. 1953
		IS. 3	Porte en bois à la mosquée de Sidi Okba.	Liste 1900
El Kantara	Biskra	AN. 1	Milliaire de Seba-Mgata.	28 sept 1933
		AN. 2	Pont romain.	Liste 1900
		AN. 3	Inscription encastree à la porte du caravanerail (El Outaya).	Liste 1900
		AN. 4	Ruines de l'amphithéâtre (El Outaya).	Liste 1900
Tazoult (Ex-Lambese)	Batna	AN. 1	Arce de triomphe de Markouna.	Liste 1900
		AN. 2	Territoires et monuments de l'antique Lambesis.	Liste 1900
Timgad	Batna	AN. 1	Territoires et monuments de l'antique Thamugadi.	Liste 1900

DEPARTEMENT DE CONSTANTINE (I)

Constantine	Constantine	MG. 1	Dolmen de Salluste, situé auprès de l'emplacement des anciens jardins de Constantine, à peu de distance de Constantine.	27 sept. 1911
		AN. 2	Aqueduc romain.	Liste 1900
		AN. 3	Fragments antiques et inscription dans le square.	Liste 1900
		AN. 4	Inscriptions des martyrs Saint Jacques et Saint Marien.	Liste 1900
		AN. 5	Mosaïque de Penthesilée découvert aux oueds Agla et actuellement déposée à la préfecture.	18 mars 1954
		AN. 6	Pont romain d'Antonin.	25 juil. 1950
		AN. 7	Tombeau de Præcollus.	Liste 1900
		IS. 8	Mosquée Souk El Ghezal (ex-cathédrale).	27 avril 1903
		IS. 9	Mosquée de Sidi Lakhdar.	5 janv. 1905
		IS. 10	Partie de l'ancienne médersa qui renferme les tombeaux de Salah-Bey et de sa famille.	17 juil. 1913
		IS. 11	Palais Ahmed Bey (ex-Palais de la division).	31 mars 1934
Diemilla	Milla	AN.	Territoires et monuments de l'antique cul...	Liste 1900
El Khroub	Constantine	MG. 1	Dolmen et Cromlechs à 35 km du Sud de Constantine, Ras El Aïn, Bou Merzoug, Ouled Rahmoun.	Liste 1900
		MG. 2	Dolmens et cromlechs au lieu dit « Djebel Ksaïbi » à 32 km de Constantine, Ouled Rahmoun.	Liste 1900
		MG. 3	Dolmens et cromlechs au lieu dit « Djebel Kazaia » à 16 km d'El Khroub Ouled Rahmoun.	Liste 1900
		MG. 4	Mausolée greco-punique appelé « Souma ».	Liste 1900
Milla	Milla	AN.	Ruines de Millev.	23 avril 1910
d Athménia	Constantine	AN.	Bains de Pompéianus.	Liste 1900
Roknia	Skikda	MG.	Dolmens et grottes funéraires à 12 kms au nord de Hammam Meskhoutine.	Liste 1900
Sigus	Aïn M'Lila	MG.	Dolmens et cromlechs au Sud de Constantine.	Liste 1900
Skikda (Philippeville)	Skikda	AN.	Théâtre romain et fragments d'architecture qu'il renferme.	Liste 1900

DEPARTEMENT D'EL ASNAM (Ex-Orléansville)

COMMUNES	Arrondissements		DESIGNATION	
Cherchell	Cherchell	AN. 1	Aqueduc à 5 km de Cherchell.	1
		AN. 2	Citerne sous la caserne.	1
		AN. 3	Restes des thermes Ouest et Est.	1
		AN. 4	Restes de l'amphithéâtre.	1
		AN. 5	Restes du théâtre romain.	3
		IS. 6	Chaire construite en l'an 981 de l'hégire dans la mosquée.	1
El Asnam	El Asnam	AN.	Mosaïque de l'église dite de « St Réparatus ».	1
Sidi Amar (Ex Zurich)	Ténès	AN.	Aqueduc antique.	1
Ténès	Ténès	AN. 1	Ruines romaines de la Kalaa des Ouled Abdallah.	3
		IS. 2	Mosquée du vieux-Ténès	2

DEPARTEMENT DE MEDEA

Djelfa	Djelfa	MG. 1	Dolmens du Moulin de Djelfa.	1
		MG. 2	Dolmens à droite de la route d'Alger. (Oued Djelfa) à Lachouat.	1
Djouab	Sour El Ghoulane (Ex-Aumale)	AN. 1	Monuments funéraires émergeant du sol de l'ancienne nécropole.	1
		AN. 2	Restes de maison, l'enceinte, de porte à Rapidum.	1
		AN. 3	Territoires et monuments de l'antique Rapidum.	1
Tietat Ed Douair (Ex Arthur)	Ksar El Boukhari (Ex Boghari)	AN.	Site de Benia constituant l'emplacement de l'ancienne d'Yachir à 4 kms au Sud-Ouest de Tietat ed Douair.	20

DEPARTEMENT DE MOSTAGANEM

Bou Hanifia El Hamamat	Mascara	AN. 1	Ruines de l'antique Aquae Sirenses.	1
		IS. 2	Mosquée Djamaâ-E-Kébir.	25
		IS. 3	Mosquée Aïn Belde	25
		IS. 4	Mosquée au douar d'el Guelna.	29
Oued Rhlou (Ex-Inkermann)	Oued Rhlou	AN.	Ruines de Kaoua	14
Sidi Kada (Ex-Cacherou)	Tighennif	IS. 1	Ruines de la Zaouia de « Sidi Mahléddine ».	29
		IS. 2	Bains dits « l'Emir Abdelkader ».	29
		IS. 3	Remparts en terre avec ses créneaux, ruines concernent l'Emir Abdelkader.	29
Tighennif (ex-Pallkao)	Tighennif	PH.	Gisement préhistorique de Ternifine.	23

DEPARTEMENT D'ORAN (I)

Bettlous (Ex-Saint Leu)	Oran	AN. 1	Restes d'une villa romaine.	1
Oran	Oran	PH. 1	Abri Alain (Oran)	16
		PH. 2	Grotte d'El Cuare	23
		PH. 3	Mosaïque provenant de Bettlous (ex-Saint-Leu) déposée au Musée Demaeghe.	1
		IS. 4	Mosquée Mohamed El Kebir.	24
		IS. 5	Mosquée Mohamed El Gaouri.	24
		IS. 6	Mosquée du Pacha.	4
		IS. 7	Minaret du campement.	24
		IS. 8	Minaret de la mosquée du Pacha.	24

ALAN (suite)

rondissements		DESIGNATION	DATE du classement
Oran	IS. 9	Hôtel de la division.	23 juill. 1952
	IS. 10	Caravansérail.	19 janv. 1952
	IS. 11	Pavillon de la favorite.	23 juill. 1952
	IS. 12	Maison du Bey.	22 fév. 1954
	IS. 13	Porte espagnole du château dite « porte d'Espagne ».	29 déc. 1906
	IS. 14	Porte de la manutention militaire.	26 nov. 1907
	MD. 15	Ecusson espagnol sculpté sur l'extérieur du mur d'enceinte du château neuf.	23 juill. 1952
	MD. 16	Tambour de San José.	2 janv. 1952
	MD. 17	Eglise Saint Louis.	2 janv. 1952
	MD. 18	Fontaine de la place Emerat.	2 janv. 1952
	MD. 19	Porte du Santon.	6 août 1953
	MD. 20	Porte de Canastel.	2 janv. 1952
	MD. 21	Porte d'entrée du château neuf.	23 juill. 1952
	MD. 22	Fosada espagnole.	23 fév. 1954
	MD. 23	Chapelle de Santa-Cruz.	8 oct. 1950
	MD. 24	Inscription de la rue du Vieux Château.	21 oct. 1952
	MD. 25	Echauguette d'angle du mur d'enceinte du château Neuf.	23 juill. 1952

OASIS, DE LA SAHOURA ET DE SAIDA :

Aïn Sefra	PH.	Nécropole de Djorf-Tortba.	17 déc. 1951
Ghardaïa	IS.	Rempart de Béni Isguen.	10 juill. 1953
Ouargla	IS.	Ruines de Sédrata.	24 sept. 1954

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Bejaïa	MD. 1	Restes de l'enceinte fortifiée de la porte Fouka.	17 nov. 1903
	MD. 2	Fort Moussa dit Fort Barral.	17 nov. 1903
	MD. 3	Fort de la Kasbah.	17 nov. 1903
	IS. 4	Porte dorée ou porte de la mer.	Liste 1900
Bou Arreridj	AN.	Ruines de l'ancienne cité de Tihamamine situées sur le territoire des Ouled Khellouf.	29 nov. 1906
M'Sila	IS.	Kalaâ des Beni Hammad.	14 janv. 1952

TARET

Aflou	PH.	Dessins rupestres d'El Ghicha.	8 mars 1913
Frenda	MG.	Djeddars.	23 juin 1913
Tiaret	PH. 1	Station de Columnata.	17 déc. 1951
	PH. 2	Station de Columnata.	18 nov. 1961
Tiaret	MG.	Dolmens.	Liste 1900

OUZOU

Azazga	AN.	Ruines romaines dites « El Haba el Ksour » formant le lot domanial n° 243 du sommaire de consistance d'Azazga.	24 avril 1903
El Ouzou	AN.	Mausolée romain de Teksebt.	13 avril 1902
El Ouzou	AN.	Ruines romaines, temples, basiliques.	Liste 1900

DEPARTEMENT DE TLEMCEEN :

COMMUNES	Arrondissements		DESIGNATION
Beni Senous	Sebdou	IS.	Mosquées des Beni Senous, villages Tafessara, Tleta et Sul
Khemis	Maghnia	IS	Mosquée de Khemis.
Nedroma	Ghazaouet (ex-Nemours)	IS. 1	Remparts de la Citadelle
		IS. 2	Bain Maure.
		IS. 3	Mosquée des Gueuxarine.
		IS. 4	Mosquée de Sidi Mendil.
		IS. 5	Grande Mosquée.
		IS. 6	Marabout de Sidi Ibrahim.
		IS. 7	Mausolée de Sidi Bouali.
Remouchi (ex-Magnac)	Beni Saf	PH.	Glissement du lac Barar.
Tlemcen	Tlemcen	IS. 1	Mosquée de Sidi Bou Médienne et dépendances : méderssa, kobba, latrines publiques, bains, maison de l'oukll et des pèlerins.
		IS. 2	Mosquée de Sidi Bou Isbaq El Tayar, ruines et minaret, cimetière de Sidi Senouci à El Obbad.
		IS. 3	Grande mosquée et dépendances.
		IS. 4	Minaret de la mosquée de Sidi Bel Hassen et Rachidi village du même nom.
		IS. 5	Minaret d'Agadir.
		IS. 6	Minaret de la mosquée Sidi Hacène.
		IS. 7	Mosquée de Sidi Bel Hassen.
		IS. 8	Mosquée de Lalla Royat, rue des Almohades.
		IS. 9	Mosquée de Sidi Benoussi, rue de Mascara.
		IS. 10	Mosquée du Méchouar.
		IS. 11	Mosquée Bab Zir et deux marabouts du cimetière d'El Obbad et Saffil.
		IS. 12	Mosquée des Oulad El Imam.
		IS. 13	Ancienne mosquée de Sidi El Ghaly, rue Lamoricière.
		IS. 14	Marabout de Sidi Ibrahim.
		IS. 15	Marabout de Sidi F. Wahhab.
		IS. 16	Kobba dite du Khalifat, cimetière de Sidi Yacoub.
		IS. 17	Kobba de Sidi ed Daoudi.
		IS. 18	Kobbas de Sidi Ali Allah ben Mançour et de Sidi Ben Ali Aïn El Hout.
		IS. 19	Mosquée et minaret de Mansoura et dépendances.
		IS. 20	Mosquée Sidi El Hout et dépendances.
		IS. 21	Tombeaux dits « de la Sultane » et Kobba dite « de Khalifa » cimetière de Sidi Yacoub.
		IS. 22	Petit Palais des Sultans à El Obbad el Fouqui.
		IS. 23	Magasin et agence des monuments historiques.
		IS. 24	Enceinte en pisé de Mansoura et ruines de la Meçalla.
		IS. 25	Porte de Mansoura.
		IS. 26	Fragments divers de l'époque arabe au musée de la mairie.
		IS. 27	Colonnes provenant de la mosquée de Mansoura.
		IS. 28	Tours et ruines de la porte de Sidi ed Daoudi, sur le front Est.
		IS. 29	Porte dite « Bab el Kermadine » sur le front Nord Ouest improprement appelée « Bab el Toi ».
		IS. 30	Porte dite « Bab el Khemis » entre Tlemcen et Mansoura.
		IS. 31	Reste de l'enceinte arabe.
		IS. 32	Restes de fortification ; (Tlemcen Mansoura).
		IS. 33	Bordjs et autres ouvrages dépendant des fronts Sud et Ouest.

ANNEXE - II -

LISTE DES OBJETS MOBILIERS CLASSES
A LA DATE DU 20 DECEMBRE 1967 CONFORMEMENT
A L'ARTICLE 62 DE L'ORDONNANCE N° 67-231
DU 20 DECEMBRE 1967.
OBJET

DÉPARTEMENTS	COMMUNES	DESIGNATION
ALGER	Alger	Bible d'autel dans le temple protestant de la rue Chartres. Divers objets de culte dans les synagogues de l'impasse Boutin, n° 2 et la rue Médée. Rouleaux de la loi et divers objets de culte en argent, appartenant à la synagogue de la place Randon au 2ème et 3ème étages de l'immeuble du consistoire, 1, rue Volland. Parchemins dits sérapiques et garnitures de la synagogue de la rue Scipion. Mosaïque de la mosquée de Tadjina à Tlemcen, déposée au musée Stéphane Gsell, appartenant à l'Etat.
	Souk Ahras	Statues et fragments antiques déposés au jardin de la commune.
	El Kantara	Collections lapidaires déposées à El-Kantara au musée Vulpières appartenant à l'Etat.
	Constantine	Mosaïque de Penthésilée découverte aux Ouled Agla et déposée à la préfecture de Constantine.
	Constantine	Objets antiques déposés au musée de Constantine, appartenant à l'Etat.
	Skikda	Objets antiques déposés au musée de Skikda, appartenant à l'Etat.
	Skikda	Toile représentant l'ensevelissement du Christ attribué à Van Dyck.
	Cherchell	Objets antiques déposés au musée de Cherchell, appartenant à l'Etat.
	El Asnam	Mosaïque de l'église dite de St-Reparatus.
	Sour El Ghozlane (ex-Aumale)	Inscriptions et fragments antiques déposés à Sour El Ghozlane sur l'esplanade (appartenant à l'Etat).
	Oran	1 - Collections préhistoriques déposées au musée d'Oran, appartenant à l'Etat. 2 - Objets antiques déposés au musée d'Oran appartenant à l'Etat. 3 - Mosaïque provenant d'une maison romaine de Bettlous (St-Leu), déposée au musée d'Oran, appartenant à l'Etat.
	Tlemcen	Fragments divers de l'époque arabe, déposés au musée de Tlemcen, appartenant à l'Etat.

ANNEXE - III -

LISTE DES SITES ET MONUMENTS NATURELS
CLASSES A LA DATE DU 20 DECEMBRE 1967
CONFORMEMENT A L'ARTICLE 82 DE L'ORDONNANCE
N° 67-231 DU 20 DECEMBRE 1967.

ALGER

Arrondissements		DESIGNATION	DATE du Classement
Dar el Beïda		Fort turc de « Lapérouse » Bordj el Bahri (ex-Cap Matifou)	10 déc. 1952
Alger	1	Forêt domaniale du télégraphe dite « bois de Boulogne » Birmandreïs.	28 fév. 1925
	2	Bois entourant le Fort l'Empereur à El Biar.	24 nov. 1930
	3	Jardin d'Essai du Hamma.	24 oct. 1947

DEPARTEMENT D'ALGER (suite)

COMMUNES	Arrondissements		DESIGNATION
Alger	Alger	4	Jardin Marengo.
		5	Parc de la Liberté (ex Galland).
		6	Partie Nord de la falaise Saint-Raphaël, comprenant les parcelles ou parties des parcelles n° 1225, 1296, 1300, 1309, 1313, 1315 à El Biar.
		7	Place publique de la Bouzaréa.
		8	Abords de la villa des arcades.
		9	Abords de la villa Tahleddine.
		10	Abords de la villa Louvet à Hussein Dey.
		11	Abords du Bordj Ponnac à la Bouzaréa.
		12	Villa « Second-Winter » et le bois de pins qui l'entoure sur l'éperon de la falaise Saint-Raphaël à El Biar.
		13	Cimetière de Sidi Medjoubia à Bouzaréa.
		14	Belvédère du chemin des Crêtes.
Bldda	Bldda		Chemin Abel de Caréa.
Bou Ismail	Bldda		Cascade de Bérra.
Bouzaréa	Alger		
Bologuine Ibnou Ziri (ex-St Eugène)	et Alger Sahel		Forêt de Baïnem.
Cheraga			
Ain Benian			
Staouéli	Alger Sahel Cheraga		Forêt de Sidi Fred.
Tipasa	Bldda	1	Littoral de Tipasa comprenant les parcelles.
		2	Parcelles de terrain comprises entre la route du phare et mer.
		3	Place publique de Tipasa.

DEPARTEMENT D'ANNABA

Hammamet	Tébessa	1	Village de Youkou.
Région de Morsott	Tébessa	1	Gorges de Bou-Akous.
		2	Grotte de Bou-Akous.
Région de Oued Charef	Guelma	1	Grottes du Djebel Taya.

DEPARTEMENT DE L'AURES

Bouhmama	Khenchela		Village de Tizigartine.
Bouzina	Arris	1	Village de Bouzina.
		2	Village de Tagous.
Chechar	Khenchela	1	Village de Djellal.
		2	Village de Tabardine.
El Kantara	Biskra		Gorges d'El Kantara.
Khangat Sidi Nadjl	Khenchela	1	Village de Khenga Sidi Nadjl.
		2	Gorges de Khangat Sidi Nadjl.
M'Chounèche	Arris	1	Gorges et villages de Djemina.
		2	Gorges de M'Chounèche.
		3	Gorges de Sidi Masmoudi.
		4	Village de Kebach.

T DE L'AUBES (suite)

Arrondissements		DESIGNATION	DATE du Classement
Arris	1	Village d'Amentane.	30 janv. 1928
	2	Village de Menaa.	30 janv. 1928
	3	Gorges de Tighanimine.	30 janv. 1928
Barika	1	Gorges de Tilatou.	30 janv. 1928
Batna		Gorges de Foum Ksentina.	30 janv. 1928
Arris		Canon de Rhouffl.	30 janv. 1928
Khenchela	1	Vallée Oued Béni Barbar.	30 juin 1928
	2	Gorges de l'Oued El Arab.	30 janv. 1928
	3	Grotte de Fringal.	30 janv. 1928
	4	Gorges de Chabet Akra.	30 janv. 1928

T DE CONSTANTINE

Constantine		Gorges du Rhummel.	30 janv. 1928
Djldjelli		Grotte merveilleuse.	12 avril 1948

T D'EL ASNAM

Teniet El Had		Parcs nationaux d'Aïn N'Sour et Teniet El Had	18 avril 1948
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T DE MOSTAGANEM

Tighennif		Bois d'oliviers près des ruines se rapportant à la tradition de l'Emir Abdelkader.	14 mars 1948
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T D'ORAN

Oran		Ville punique des andalouses.	2 oct. 1956
Oran	1	Cimetière dit « des cholériques » situé au ravin de Ras El Ain	23 juil. 1942
	2	Promenade de Létang.	23 juil. 1942
	3	Site du Murdjado.	6 oct. 1956

T DE SAIDA

Aïn Seфра		Traces de la jument de Sidi Cheikh.	7 sept. 1956
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T DE SAIDA (SUITE) DES OASIS ET DE LA SAOURA

Adrar		Ex-Place Laperrine.	1 ^{er} juin 1954
Laghouat		Rocher Fromentin.	27 nov. 1950
Timimoun		Ex-Place Laperrine.	15 oct. 1954

T DE SETIF

Bejala	1	Corniche de Bejala à Djidjelli.	12 mai 1948 3 fév. 1954
Bougaa (ex-Lafayette)		Village de Tldget, Guergour.	30 janv. 1928
		Gorges de Chabet Akra.	30 janv. 1928

T DE TIARET

Frenda		Bled Touta Lakania et grottes se rapportant à la tradition de l'historien Ibn Khaldoun.	4 mars 1948
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T DE TIZI OUZOU

Bouira		Forêt des Azarou canons Tassalit et Tizja (Grotte du Ras- Tigoumatine).	11 juil. 1954
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