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Form and Ornament of the Cairene Baḥrī Minbar [avec 6 planches].

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# FORM AND ORNAMENT OF THE CAIRENE BAHRĪ MINBAR (1)

Gloria S. KARNOUK

Technical analyses relies less upon the literary sources, almost none of which describes the details of carpentry or minbar construction, than upon inspection of the minbars themselves. The construction of modern woodwork, which is apparently perpetuated by conservatism, and the current terminology gives every reason to believe that the present forms and techniques reflect those of the Mamluk period.

Cairene Baḥrī Mamluk wooden and marble minbars (see tables) (2) are similar to one another in composition, differing primarily in technique of work and ornamentation. Both types (Pl. I, 1 and IV, 3) are small edifices consisting of a staircases which is entered through folding doors fitted into an entrance portal. They are enclosed by high triangular sides supporting a balustrade and terminating in a throne surmounted by a domed canopy. The wooden minbars are architectural elements not attached to the walls, whereas marble minbars are anchored to the qibla wall, thereby becoming an integral part of the architecture. In this way, the qibla wall must be decorated specifically to accommodate the presence of the minbar. Minbars, however, tend to intrude upon the overall architectural perspective of the mosque interior and this is likely the reason why, in North Africa, they were stored in cupboards while not in use (3). But habit, and the fact

(I) This article is based on my theses « Cairene Baḥrī Mamlūk Minbars with a Provisional Typology and a Catalogue », Diss. American University in Cairo: 1977.

(2) The Tables at the end of the text will include a list of the extant Baḥrī minbars, their dates, situ and Index nos., their material, types, and present conditions.

(3) K.A.C. Creswell, Short Account of Early Islamic Architecture (Harmondsworth 1958), pp. 71-2. H. Terrasse, l'Art Hispano-Mauresque des origines au XIII° Siècle (Paris 1932), p. 384. G. Marçais, «La Chaire de la Grande Mosquée d'Alger», Hesperides, tome 1, pp. 359-85.

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that minbars can be seen as being aesthetically pleasing in and of themselves, has made such an intrusion acceptable in other regions.

Although they are partly the products of the local artistic tradition, the relatively few extant contemporary Syrian and Anatolian minbars provide important comparative material for the study of Baḥrī examples. North African, Iraqi, and Persian minbars did not evolve in the same manner, having neither portals with folding doors nor domed canopies. As the structural development of Baḥrī minbars evolved differently from contemporary minbars in other countries, a detailed examination of their particular features is necessary. But when considering structural forms, one must bear in mind that some restorations, including those of the «Comité de Conservation des Monuments Islamiques», which can often be traced through its reports and photographs, may on some occasions have radically altered certain aspects of the original design of the minbar.

#### **PORTALS**

Portals and domed canopies are architecturally inspired elements which were later developments in the form of the minbar, probably explaining why they share certain features such as crenellations. The arches of Baḥrī minbars may appear to be similar on portals and canopies but, in fact, they are not identical. However, on the relatively late minbar of Ṭaṭar al-Ḥiǧāziyya (761/1360; fig. 2), which in many ways represents a transition between the Baḥrī and Circassian styles, the arches (fig. 2 and Pl. I, 2) are identical (1) and the stalactite cornices are of the same type, thus foreshadowing Circassian minbars.

The standard Baḥrī portal follows the form of that of the Fatimid minbar of Qūṣ (550/1155) (2) and is likewise held together by jambs with square cross sections, between which is inserted a panel containing the usual constructional or Quranic

de Conservation des Monuments de l'Art Arabe, 1900, p. 110, pl. III-IV. M. van Berchem, Matériaux pour un Corpus Inscriptionum Arabicorum, 1<sup>re</sup> partie, Egypte (Le Caire 1894-1903), pp. 716-18, pl. XLIII, 2.

<sup>(1)</sup> Only the arched screens of the canopy are extant, but the portal arch design is preserved in J. Bourgoin, *Précis de l'Art Arabe* (Paris, 1892), (Menuiserie), pl. 79,2.

<sup>(2)</sup> E. Pauty « Minbar de Qūṣ », Mélanges Maspero III, 1940, pl. I-III, pp. 41-48. Comité

inscriptions <sup>(1)</sup>. The upper cornices, formed by the transverse plank above the portal, terminates in a moulded projection at each end and is usually surmounted by a row of crenellations. The portal is attached below by a plinth and the doors are set behind moulded screens (Pl. I, 3; IV, 1-2 and 3).

The flaring cornice on the portal of Lāgīn minbar, like the similar one on its canopy (Pl. I, 3), is, therefore, uncharacteristic of the typical Bahrī minbar; it is, however, similar to Circassian and mid-fourteenth century marble portals (see tables). The latter, though boldly headed with three tiers of stalactites, do not have such cornices repeated on their canopies (Pl. I, 1). Such duplication of cornices on the canopies is not seen prior to the minbar of Tatar al-Higāziyya. The four tiers of pointed stalactites on the portal and canopy of Lagin minbar emerge as even more problematic when compared to the rounded stalactites on the wooden domes in front of the mihrāb which was also built by Lāğīn (Pl. I, 4) (2); these cornices were present when the Comité was about to restore the minbar. There is no evidence of any fifteenth century restoration of this portal, although the canopy, with an identical stalactite cornice, has an angular vertical chamfer on the back corner of the throne which suggests the earlier presence of a column of the type supporting the canopy of al-Māridānī minbar (Pl. II, 1). This may indicate that some sort of alterations might have been carried out at an indeterminate date, particularly in that the usual arches of the canopy are absent.

The portals of marble minbars with their stalactite heads seem to reflect mosque porches. This impression is reinforced by the four engaged columns, with stalactite capitals, at the corners of the door jambs of the minbar of Sulṭān Ḥasan (Pl. II, 2), as they are of the same type as those found on the façade of that mosque. Previous

(1) On the minbar of  $Q\bar{u}\bar{s}$ , the foundation inscription is flanked by two small rectangular carved panels missing on the Baḥrī minbars where the inscription panels fill up the whole area as on the Fatimid minbars of Hébron and Mt. Sinai.

(2) The angular type of statalactites was used exclusively in pre-Mamluk Egypt, and

that is probably why it is known locally as the «baladī» type whereas the rounded stalactites were introduced during the Mamluk Period and were known as the «halabī» type since it came to Egypt through Aleppo. The Mamluks adopted both types and often together but, in harmonious arrangements as for eg. on alternate niches (see note 1, p. 116).

Islamic columns in Egypt had bell-shaped capitals; stalactite capitals of the typical Islamic variety are used perhaps for the first time in Egypt on the columns of the minbar, porch, and porch side niches of the Mosque of Sulṭān Ḥasan. There is only one slightly earlier extant example on the  $t\bar{a}b\bar{u}t$  of Ṣarġatmiš (757/1356; Index n° 218, Pl. II, 3). Other similarities between this  $t\bar{a}b\bar{u}t$  and the minbar of Sulṭān Ḥasan suggest the work of a single master or atelier, as both have similar stalactite cornices, mouldings, and stalactite capitals on their engaged corner columns <sup>(1)</sup>.

Crenellations are features derived from architectural models and were mentioned by Ibn Ğubair (c. 1187) in his description of the *miḥrāb* and minbar of the Great Mosque of Aleppo <sup>(2)</sup>. In Baḥrī Mamluk minbars the crenellations are of the *fleur-de-lys* type ranging from simple to more complex forms such as those on the minbars of al-Māridānī and Sitt Miska (Pl. IV, 3 et 1). Profiles of such forms had already been seen in joggled voussoirs as on the central window of the mausoleum of Sālih Niğm al-Dīn Ayyub (647-8/1249-50). Complex forms later

(1) The stalactites, however, are alternate i.e., the pointed ones on the cornice of the cenotaph are reproduced on the columns of the minbar, whereas the pointed stalactites on the *tabūt* capitals of columns are repeated on the cornice of the minbar. The cenotaph is not an ordinary one, it has this particularity of having highly carved decoration on its flat lid in addition to the decoration of the sides and the beautiful epigraphical frieze all showing special care in execution.

(2) This minbar made by order of Nūr al-Dīn is unique in the sense that it formed with the minbar one unit of precious woodwork, a peculiarity which warranted a full description by Ibn Ğubair. This important monument is a first class document in the history of Islamic woodwork for its technique as well as its date and precise origin asserted by the signature of a team of artisans.

Four years after its erection, the minbar was transferred by Şalāḥ al-Dīn to the Aqsā Mosque at Jerusalem where it was recently destroyed by a fire (1967). Ibn Ğubair, The Travels of, Trans. by R.J.C. Broadhurst (London 1952), pp. 262-3. Ibn Shihna, Les Perles Choisies, trad. de J. Sauvaget (Beirut 1933), p. 18. L.A. Mayer, Islamic Woodcarvers and their Works (Geneva 1952), pp. 63-4, pl. I, II. M. Van Berchem, Materiaux pour un Corpus Inscriptionum Arabicorum, 2º partie, Syrie du Sud, Jerusalem «Ville» (Le Caire 1920-1927), pl. XXIX, XXX. Ibid. Jerusalem «Haram» pp. 393 sq. E. Hertzfeld, Matériaux pour un Corpus Inscriptionum Arabicorum, 2° partie, Syrie du Nord (Le Caire, 1954-55), pp. 120-124 and pl. XLVI-XLVIII (for the mihrāb). M. Join-Lambert, Jerusalem Israélite, Chrétienne, Musulmane (Paris, 1956), pp. 110-111.

surmount façades of mosques such as the Mosque-Madrasa of Aşlam al-Silaḥḍār (1) (see tables).

The arches of Baḥrī minbar entrances and canopies are generally similar, although not identical. Such arches seemed to have evolved during the Baḥrī period. The simple stilted arch on Lāǧīn portal (Pl. I, 3), and the pointed arch on that of Baktimūr drop in straight lines. On the minbar of al-Māridānī (Pl. IV, 3) the pointed arch has a slight return, evolving to an almost semi-circular horseshoe form on, for example, the portal of Sitt Miska (Pl. IV, 1). Finally the arches took on lobing as on the marble minbars (Pl. I, 1), and then became lobed square frames on the minbar of Ṭaṭar (fig. 2 and Pl. I, 2) as well as Circassian examples (Pl. III).

Most of the (original) doors were reported missing at the time of the restoration work of the Comité. Those which they replaced were panelled in a manner different from the sides. Some of these doors contain original fragments, but there are no indications regarding the correct original locations of those fragments <sup>(2)</sup>. The doors of the minbar of Baktimūr were present at the time of restoration, but differ from the sides as well <sup>(3)</sup>, suggesting that other doors may also have markedily different in style from the sides. These differences also suggest that door-makers and inlayers worked independently within the same atelier where other parts of the minbar were produced under the supervision of a master. Such would certainly have been the case with wooden doors on marble minbars.

(1) Chahinda F. Karim, «The Mosque of Aşlam al-Silaḥdār», Diss. American University in Cairo, 1975, pp. 63-64. Crenelations being the most vulnerable part of the minbar, it is difficult to assert if these have retained their original form. However, pre-restoration photographs show that when restoration is undertaken, it usually follows the model of the remaining parts, and are not added by the Comité where they were completely missing.

(2) For example the back of the minbar doors of Lagin have the same pattern of the old shutters at the mosque of al-Marīdānī a pair of which (from the collection of A. Baudry)

is reproduced by A. Rhoné, L'Egypte à Petites Journées, Le Caire d'Autrefois, Nouvelle édition (Paris, 1910), p. 48. Other shutters of this Mosque may have been available to the Comité when doors were made for the minbar.

(3) The minbar doors, like those of the entrance of the mosque, have their front sides decorated with a star pattern decoration (though the Mosque doors are in bronze applique) while their rear sides have the old pattern of oblong panels placed horizontally and vertically in alternate rows. The similarity was probably intended.

## SIDES

To determine the sides of a minbar, two straight lines of equal length were traced at right angles, thus defining the back and base of the minbar. A diagonal line linking the end-points of these two lines formed the hypotenuse (fig. 1 and

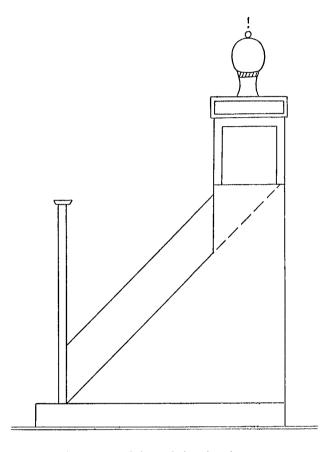


Fig. 1. — Minbar of the closed type.

Pl. I, 3; IV, 1-2 and 3). A ramp was added as well as a small triangle on the top end completing the throne sides. Sometimes, when the sides were large, the portal cuts off the lower part of the triangle (Pl. I, 3). The marble minbars differ in that the basic triangle corresponds with the staircase and balustrade only; the throne and passage below are then added (Pl. I, 1).

The sides of Baḥrī minbars are of two types: closed (Pl. I, 3; IV, 1-2 and 3; fig. 1) and with a rectangular passage through the rear, leaving only a triangular base and a small square panel over the opening to be decorated (Pl. I, 1 and fig. 2). The latter type is more characteristic of marble minbars, although two wooden minbars also have an open passage at the rear: Aṣlam al-Silaḥḍār and

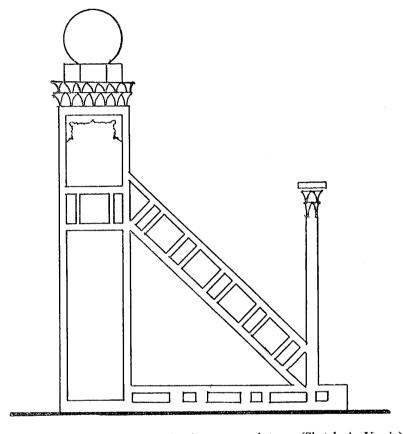


Fig. 2. — Minbar of Țațar al-Ḥiǧāziyya, opened type. (Sketch A. Yassin).

Țațar al-Ḥiǧāziyya (fig. 2). That of Aṣlam is earlier than the earliest extant complete marble Cairene minbar, although earlier minbars with such an open passage are also found outside Egypt e.g., the wooden minbar of Qarasunqūr (699-709/1299-1309) at Aleppo (1).

(1) Herzfeld, *Matériaux* ..., pl. LXVI d, and p. 168 for the dating. However it is most probable that the marble minbar of

al-Ḥatīrī which fragments are in the Islamic Museum (see tables) was similarly opened following in that other marble minbars.

Minbars with closed sides follow the type first seen at Qūş which radically differs from that at Hébron (484/1091) (1) and other early minbars such as that of Nūr al-Dīn. These were divided into a large triangle and a closed rectangle, with similar decoration. The Circassian Mamluks adopted this type of division for their minbars, but sub-divided the rectangle into a panel above and a door passage below (Pl. III).

Although the minbars of Sitt Miska (Pl. IV, 1) and Arġūn al-Ismā'ilī are of the closed type they have rear openings which cut the all-over pattern on the sides of the minbar. This awkward feature raises a problem as to whether the opening was cut at a later date. The Comité took two different approaches to this:

- 1) Three such openings, on the minbars of Baktimūr al-Ğūkanḍār, al-Māridānī (Pl. IV, 3), and Alǧāy al-Yūsufī were filled in (2).
- 2) Those of Sitt Miska, and Argun (as mentioned above) were left open (3).

The reasons provided by the Comité for closing the sides of the three minbars were that the frames of the openings were obviously later additions and that part of the missing strapwork of the minbar of Alǧāy was found in the rubbish of the mosque and restored to its proper place (4). Further evidence for the arbitrary openings can be observed on pre-restoration photographs of the minbar of Arġūn where on one side only an additional awkward opening was made above the passage (end of note 3). A fourth and more conclusive reason might be found in an analysis of the minbar of Manǧak al-Yūsufī (5) (Pl. IV, 2). This minbar, which is of the same type and design to those of Sitt Miska (Pl. IV, 1), and Arġūn, had retained its closed sides, which were identical, except for minor

- (1) Made by order of Badr al-Ğamalī for the Mašhad of Ascalon (484/1091). The minbar was transferred to Hébron by Ṣalāḥ al-Dīn 583/1187. L.H. Vincent, E.H.J. Mackay and F.M. Abel, *Hébron; Le Ḥaram al Ḥalil Sépulcre des Patriarches* (Paris, 1923), pp. 219 sq. and pl. XXVI-XXVIII.
- (2) Pre-restoration photographs are in Rhoné Le Caire, p. 430 for the minbar of Baktimūr. Comité, 1905, pl. IV for the minbar of al-
- Māridanī. *Ibid.* 1914, pl. XXIX, XXX, and p. 18 for the minbar of Alǧāy al-Yūsufī. Also in Creswell albums of photography, v. 22.
- (3) Comité 1936-40, p. 134 and pl. XII, XIII pre-restoration photographs for the minbar of Sitt Miska. Those of the minbar of Argun are in Creswell Album of photographs, v. 22.
  - (4) Comité 1905, p. 80. Ibid. 1914, p. 18.
  - (5) Ibid. 1941-45, pl. XIX, XX.

details of decoration, to the sides of the two other similar minbars, therefore suggesting that the three minbars might have originally been closed <sup>(1)</sup>. The reason for the openings is obscure since it is apparent that they were later additions. It was easy, however, to pierce a passage without diminishing the stability of the minbar since the skeletal framework includes a cross support that permits such an opening, as can be seen through some missing panels in the pre-restoration picture of Manğak's minbar (see note 5, p. 120). The openings were most probably made during the Circassian period as they were then generalized features and may have been due to the belief that in the time of the Prophet the minbar stood against the wall so that a sheep could pass through <sup>(2)</sup>.

## Socles

Low socles were added to minbars early in the Baḥrī period. The minbar of Lāǧīn has no socle, but a plinth to the portal carved in arabesques. The minbar of Baktimūr is also provided with a plinth to its portal, its decoration however, was enclosed within square and rectangular panels. In the minbar of al-Māridānī, the plinth, with alernating squares and rectangles, continues around the minbar and becomes a complete socle which protrudes in front of the portal to form a step (Pl. IV, 3). This type of decorated socle was adopted on most subsequent Baḥrī minbars and *kursī*. However, it was not, in principle, an innovation, as it appears on Fatimid and Ayyubid *tabūt*: for example, the *tabūt* of Sitt Ruqaiyya. The decoration of the panels, however, is modified; the Fatimid, Ayyubid, and early Mamluk decoration has foliated arabesques (Pl. V, 2) often combined with a pearled ribbon in geometrical designs, whereas the developed Baḥrī rectangles are geometrically subdivided into compartments (Pl. IV, 2).

## BALUSTRADES

Like Fatimid minbar balustrades, those of the Baḥrī period are formed of single oblong panels of *mašrabiyya* with a standard arrangement of decorated cubes fitted crossways into turned and moulded cylinders, the component parts of the

<sup>(1)</sup> Similarity of design, decoration, and sizes of the three minbars of Manğak, Miska and Argun suggest that ready made sides were

to be rapidly erected at demand.

<sup>(2)</sup> Buḥarī, s.v. Şalāt B. 91.

mašrabiyya varying only in their size and decoration. This pattern differs slightly from the Fatimid type of alternate oval beads and discs (1).

The one exception to the continuous ramp is the balustrade of the minbar of Țațar al-Ḥiǧāziyya (fig. 1 and Pl. I, 2) which is broken up into panels, a style which was to become popular during the Circassian period. Marble minbars also have uniform oblong panels carved either with a continuous foliated scroll frieze, as on the minbar of Āqsunqūr (Pl. I, 1), or with a central division as in the later minbar of Sulṭān Ḥasan.

## CANOPIES AND DOMES

The canopy of the Baḥrī minbar is supported by slim columns of angular shafts held together by arched screens. These are surmounted by the canopy which is formed, in the early period, by rectangular panels, often carved with inscriptions (Pl. IV, 3). On later minbars (i.e., ca. 1340), the panels are narrowed to form moulded cornices on the arched screens. These evolved in the same way as the arches of minbar portals (see p. 117). The Baḥrī canopies, including those of marble, have no stalactite cornices, the only exceptions being those of Lāǧīn (see p. 115) and of Ṭaṭar al-Ḥiǧāziyya, which seems to be first extant example of duplicate stalactite cornices on portal and canopy, a feature adopted by the Circassians (fig. 1 and Pl. III).

The bulbous dome with finial and neckline socle crowning the canopy is indeed a very important features of the Baḥrī minbars, as it appears to be the first extant example of this form. Previously the domes of Syrian (2) and Egyptian minbars had been hemispherical and sometimes fluted. Anatolian Seljuk domes appear to have been conical (3). North African minbars evidently had no domes (4), and

<sup>(1)</sup> The original mašrabiyya of the minbar of Qūş was missing. For its restoration, the Comité has probably followed the model of the minbar of Hébron and the minbar of al-Afḍal 500/1106 at Mt. Sinai. Comité 1900, pl. IV. Rabino, Le Monastère de Ste. Catherine au Mont Sinaï (Le Caire, 1938), pp. 40-41, pl. XV.

<sup>(2)</sup> Herzfeld, *Matériaux*, pl. LXV b, CXXXIX a and b.

<sup>(3)</sup> Z. Oral, «Anadolu da Sana'at Değeri Olan Ahşap Minberler Kidabeleri ve Tarihalari», *Vakiflar Dergisi*, Sayi V, 23-29, includes plates.

<sup>(4)</sup> Terrasse, l'Art, pl. LXXIV, LXXVI.

no Iraqi or Persian minbar with a domed throne is known before that of Lāǧin. Although the canopy of Lāǧin's minbar (Pl. I, 3) seems to have been a fifteenth century restoration (see p. 115), the dome is probably original for the following reasons:

- 1) It is repeated on Baktimūr's minbar (four years later) and all subsequent minbars (1).
- 2) The marble dome on the minbar of Aqsunqur (Pl. I, 1) is bulbous and faceted in clear imitation of the wooden one (i.e. sheets of wood nailed on an octogonal skeleton).
- 3) The giant bulbous domes over the  $faww\bar{a}r\bar{a}$ , and the original one which was over the qubba of the mosque of Sultan Ḥasan (2) are unlikely to have been developed without earlier experimentation on a smaller scale.

Bulbous domes therefore seem to be a Cairene development and a characteristic feature of Mamluk minbars, although they became a familiar item as caps of minarets which in previous periods had fluted stilted domes turning to an almost hemispherical form on early Baḥrī minarets such as those on the complexes of Sālār and Sanǧār (703/1303, Index n° 221), and on the *Ḥānqāh* of Baybars II (706-9/1306-9, Index n° 32).

The first occurrence of bulbous domes on minarets are those of the mosque of an-Nāṣir Muḥammad at the Citadel (718 and 735/1318 and 1335, Index no 143). These stone domes have retained the fluting characteristic of the masonry domes

(1) Herz mentions a «support de bulbe» for the minbar of Qūṣūn (which implies that the dome was bulbous). The fragments of this minbar were sent to the Islamic Museum when the mosque was pulled down to allow the piercing of the Muḥammad Alī Bld. M. Herz, Catalogue Raisonné des Monuments Exposés dans le Musée National de l'Art Arabe, 2° éd. (Le Caire, 1906), pp. 155-56.

(2) Pietro della Valle who visited Egypt in 1616 describes the dome as «unique as it

commences narrow, then swells out, and then contracts to a point like the egg of a hen ». Quotation by K.A.C. Creswell, «Brief Chronology of the Muhammadan Monuments of Egypt to AD 1517 », Bulletin de l'IFAO du Caire, tome 16, p. 109. No foreigner could have given such a good description of an unfamiliar shape without having seen it. Della Valle, Viaggi, (Rome MDCL), p. 468.

of the period, but were made re-entrant at the base <sup>(1)</sup>. Reciprocal transfers of influence between carpenters and masons is suggested by the similarity between the contemporary domes of an-Nāṣir's minarets (Pl. IV, 4) and of the al-Māridānī minbar (Pl. IV, 3). The latter is bulbous and fluted as the an-Nāṣir minarets. It is supported by columns reminiscent of the *thalos* immediately below the domes of many minarets. Moreover, the dome is built up internally with brackets and niches supporting a shallow fluted rosette. This strong resemblance probably explains why the Comité choose to place an exact copy of the minbar of al-Māridānī in the Mosque of an-Nāṣir as part of their restoration work <sup>(2)</sup>.

The question arises as to whether minaret domes <sup>(3)</sup> were inspired by those of minbars or from Persian influence, as the decoration of an-Nāṣir stone minarets suggests. In attempting to answer this question I can only advance a number of observations. Those concerning the minbar domes have been mentioned above (p. 122-123). As for the domes of the minarets, Professor Creswell rightly remarks that up to the Tīmūrid period, Persian domes were simple structures, and that no (extant) example of the bulbous dome is met before that the Gūr-i-Mīr and the Bībī Khānūm. These are double domes and only their exterior shell is bulbous. Since it did not arise from constructional necessities, Creswell thinks that the feature is a copy of constructions in wood <sup>(4)</sup>. On the other hand, Dr. Meinecke has a valid argument in giving a Tabrīzī origin to the domes of an-Nāṣir. This

(1) Bourgoin, *Précis*, p. 1. P. Casanova, *Histoire et Description de la Citadelle du Caire* (Paris 1894), pp. 620-625. The bulbous domes have a horseshoe arch outline and may have sprung from the idea that since the dome follows the arch in semi-circular and pointed outline, why not the horseshoe?

(2) Egypt, Wizārat al-Awqāf, Mosques of Egypt from 21 H. (641) to 1365 H. (1946), (Cairo 1949), v. 1, p. 52.

(3) The smooth terminal bulbs were often restored for e.g. the minaret of al-Marīdānī is rebuilt by the Comité after a model offering an analogy in form and style with the subsisting parts. *Comité*, 1905, pl. II, IV *Ibid.*, 1884, p. 9.

(4) K.A.C. Creswell, «The History and Evolution of the Dome in Persia », Journal of the Royal Asiatic Society, July 1914, pp. 694-697. However Creswell's arguments on the bulbous form of the Dome of the Great Mosque of Damascus is not convincing, especially that he based it on Ibn Ğubair description that clearly mentions a semispherical dome. The observant traveller would have certainly mentioned such a striking feature had he seen it. Creswell also discards the idea of an Indian origin to the bulbous dome in his article the «Origin of the swelling dome », the Indian Antiquary, v. LI, 1922, pp. 79-80.

argument is based on a miniature showing a model for such a dome, and the fact that both the decoration and architects were Persians <sup>(1)</sup>.

The domes of two marble minbars show a stylistic evolution. Both are carved on the exterior, but although the dome of Aqsunqūr is merely facetted and decorated with arabesques, that of Sultān Ḥasan has a more bulbous form with ribs and flutings meeting in festoon at the base. The interior dome of the former tises straight from the flat roof, while the latter has an elaborately facetted zone of transition leading up to it.

The socles of minbar domes vary in shape according to the profile of the dome. On early wooden minbars, they have slim tubelike or columned (al-Māridānī) forms, turning to bulky octagons or round shapes on later minbars. The marble socles show the same stylistic evolution as the domes; that of Aqsunqūr is a low curved octagon with the same decoration as the dome above, and that of Sulṭān Ḥasan has an elegant curved neckline form.

It is difficult to establish the initial appearance of crescent finials. They are seen on Fatimid domes: for example, on Sayyida Ruqaiyya's mašhad (527/1139, Index n° 273). However, such domes have all been restored and the present bronze finials may be part of these restoration works. But the smaller boat under a crescent on the dome of the Mausoleum of Imām al-Šāfiʿī (608/1211 Index n° 280) seems to be original since al-Būṣīrī (2) (d. 697/1295) mentioned it at an early date; although it is not exactly a crescent finial, it is related in the sense of being a terminal point to the dome.

## Interior

Little can be said of the interior structure of the minbars which follows, in width, the span of the portal and throne. The earliest minbars of Lāǧīn and Baktimūr had all the component parts of their interiors lavishly decorated, including the interior of the *mašrabiyya*, the steprisers, and the back of the portal, following the Qūṣ model. Refinement of details can be observed in that the angles of all

(2) Al-Buṣirī, quoted by 'Abd al-Wahhab, *Tārīḥ*, pp. 112-113. Maqrīzī, *al-Mawā'iz wa al-I'tibār fī Dikr al-Ḥiṭaṭ*, wa al-Āṭār, V. II (Cairo, Bulaq, n.d.), pp. 462-63.

<sup>(1)</sup> Meinecke, «Die Mamelukishen Fayence-mosaik-decorationum: eine Warkstatte aus Tabriz in Cairo (1330-1350)», *Kunst des Orients*, 11 (1976-77), pp. 85-144.

long planks were chamfered and carved. On later Baḥrī minbars, the ornamentation of the interior was either simplified or suppressed.

#### LINKS

Bronze links occur on some minbars and take various shapes. On the minbar of Lāǧin (Pl. I, 3), for example, they closely follow the angles of the corners, while along the diagonals below the balustrade they have staggered outlines curiously similar to splayed hinges.

«Links» have cusped edges and are sometimes carried out in pierced work. The only reference to «links» known to me is in  $\check{G}abarti^{(4)}$  (1202/1787) who says that wooden pieces were attached by joints (tenon and mortise), and «links» ( $\check{g}ur\bar{a}b$ ) were nailed on to reinforce the structure, which was already supported by an inner framework. The sides had an additional supporting strapwork on the rear. The «links» are therefore not essential, since many are missing or originally absent on some minbars without the collapse of the construction; simple modern nails now sometimes take their place.

« Link » bands, or blank spaces on carved wood denoting their positions, may already be seen on Fatimid and Ayyubid  $tab\bar{u}t$  and minbars; for example, on the  $t\bar{a}b\bar{u}t$  from the Mašhad al-Ḥusayn (549/1154), now in the Islamic museum (Inv. n° 15025). On the minbar of Hébron the spaces occupied by the absent links are plain areas in the carved script of the friezes, with the epigraphy being squeezed on half the space around the links (2). This shows that the carvings were made after the spaces for links were marked, and that the carver had to manage with that area which was left to him. Plain spaces therefore show the exact outline of the original links.

## TECHNIQUES AND ORNAMENTS

Although wooden and marble minbars are similarly composed, they differ completely in technique and ornament. This is largely due to the different materials, which impose varying methods of work and different artisans.

(1) al-Ğabartī, "Ağā'b al-Āṭār fī al-Tarāğim wa al-Aḥbār (Cairo, al-Šarafiyye, 1322 H.), Pt. II, pp. 171-72. Information given by

Laila Ibrahīm.

(2) Vincent, Hébron: Le Ḥaram, pl. XXV-XXVIII.

## **TECHNIQUES**

There were certain standard elements in Cairene wooden minbars. These are held together by a framework of cross pieces forming a solid base for the steps, the throne, the entrance jambs, and the sides, with the balustrade forming an additional structural reinforcement, and a link, to the throne and portal. The strapwork of the sides has further supports at the rear, which are well reproduced by Bourgoin (1). Domes and socles are formed of thin, rectangular wooden strips nailed on ribbed framework, (bulbous, octogonal or round) similar in composition to stalactites.

The closed sides of the Baḥrī minbars offer a larger area for decoration (fig. 1 and Pl. I, 3; Pl. IV, 2-3). The ornament of the sides is composed of narrow moulded frames forming a strapwork of star/polygon pattern known as darb ḥaiṭ in which are inserted small polygonal carved panels. The strapwork and panels are held together with mortise and tenon joints, « rainures et baguettes » (fig. 3). The short sticks forming the angles are fixed on a basic long stick known as umm (mother). Ibn Jubair calls the technique sina a qarbasīyya, but it is known locally as qanāt-work, deriving from qinanāt, the component parts of the strapwork (2).

Qanāt-work has advantages. It prevents warping resulting from change in temperature and humidity; the small panels are sufficiently loosely set in their frames so as to be able to expand or contract without injury to the whole. The older technique of square and rectangular paneling was technically adequate, but it did not permit the same flexibility, variety, and freedom of design and pattern. Qanāt-work, delicately carved and inlaid with fine woods and ivory, was considered a luxury since the throne (sarīr) of al-Malik an-Nāṣir Muḥammad in the palace on the Citadel was of qanāt-work with ebony and ivory inlay (3). This contrasts strikingly with the Fatimid throne, described by Nāṣir-i-Ḥusraw, which had three gilt sides representing court scenes and inscriptions. It had also a balustrade in gold openwork, and three steps in silver at the rear of the throne (h).

<sup>(1)</sup> Bourgoin, *Precis*, (Menuiserie), pl. 17, 67, 68, 77, 87.

<sup>(2)</sup> For Arabic technical terms, see glossary.

<sup>(3)</sup> Maqrīzī, *al-Mawā* iz, V. 2, p. 206.

<sup>(4)</sup> Nāṣīr-ī-Ḥusraw, Quoted by D. Sourdel et J. Sourdel, *La Civilisation et l'Islam Classique* (Paris, 1968), p. 379.

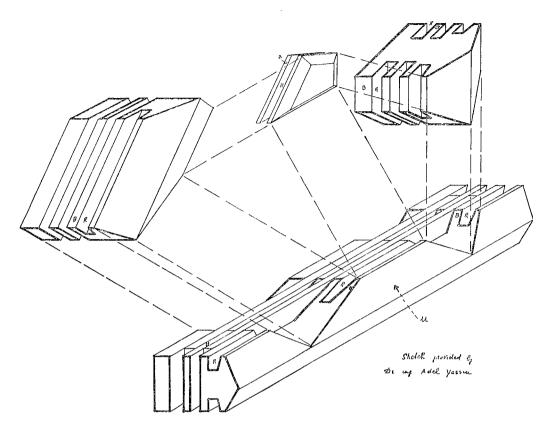


Fig. 3. —  $Qan\bar{a}t$ -work showing tenon and mortise joints (baguettes et rainures). R = Rainures (mortise). B = Baguettes (tenon dovetail). U = Umm.

An-Nāṣir Muḥammad's choice of qanāt-work for his sarīr shows that this work, beautifully executed, represented the height of Mamluk taste.

*Qanāt*-work already appears on the minbar of Badr al-Ğamalī at Hébron (note 1, p. 120). The first extant occurrences in Egypt are on the fronts of the *miḥrābs* of Sitt Nafīsa (533-43/1138-48, Islamic Museum n° 421) and the Ruqaiyya (549-46/1154-60, Islamic Museum n° 446) (1). The strapwork of the Baḥrī minbars

(1) Pauty, Les Bois Sculptés jusqu'à l'Epoque Ayyubide. Catalogue Général du Musée du Caire (Le Caire 1931), pl. LXXXI-LXXXII. In his survey of the geometrical patterns in Egypt, M. Keene has detected eight new designs

on the two *milrabs*. M. Keene «Geometrical Art in Islam: a contribution to the Work of J. Bourgoin», Diss. American University in Cairo: 1971, p. 156.

shows a considerable development on Fatimid patterns. The six-pointed star and regular or elongated hexagon compounds of the Fatimid (fig. 4) period evolved into eight, twelve, and sixteen, pointed stars in more complex compositions

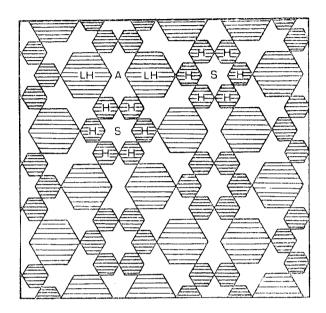


Fig. 4. — (Bourguin's pattern 25). Compound *tabaq*. S = Central Star. H = Regular Hexagons. Fillings around *tabaq*. LH = Large Hexagons alternate with: A = Double Arrowheads.

known now in Egypt as *tabaq nağmī* (fig. 5 and Pl. VI, 3). In these compositions the regular or elongated hexagon has become an irregular pointed hexagon known as *kinda*. Between the *kinda* and the central star (*nağm*) / or cogwheel (*tirs*), small lozenges (*lūza*) were inserted. *Kinda* evidently developed in the Ayyubid period from the Fatimid model where it had at first a pentagonal form turning to a pointed hexagon later. On the *miḥrāb* of Sitt Ruqaiyya as well as on the upper and lower panels of the doors of al-Ṣāliḥ Talā'i in the Islamic Museum (inv. no 1055) (1) the carved panels show the beginning of the composition

(1) Pauty, «Les Bois », pl. LXXXI, LXXXII for the *miḥrāb*, and LXXXIX for the doors. Abdel-Wahhab, *Tārīḫ*, v. II, fig. 53 and 55

for the Imām  $t\bar{a}b\bar{u}t$ , and fig. 56 for Um al-Sultan  $t\bar{a}b\bar{u}t$  (see my pl. V, 1-2).

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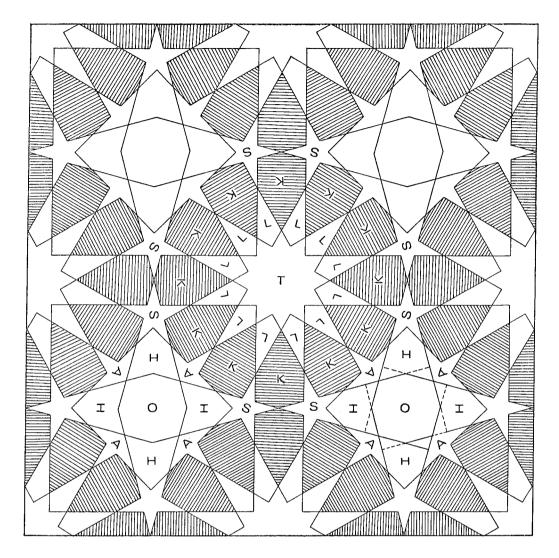


Fig. 5. — (Keene's pattern K 8). Complex tabaq-nağmī. T = Tirs (central star). K = kinda. L = Loza. Fillings around tabaq. S = Five jointed Star. Square filling between tabaq. O = Central Octagon. H = Irregular Hexagon. A = Arrowheads.

of the *tabaq nağmī*. On the *miḥrāb*, the compound center is in the Fatimid style i.e., a six pointed star surrounded by regular hexagons. An extra line doubles the points of the star, and  $l\bar{u}za$  are inserted between the teeth of this extra outline. On the doors, the regular hexagons around the star are suppressed giving, thus,

a twelve pointed *tirs* core between the teeth of which the *lūza* are inserted directly. The *kinda* in both patterns are pentagonal and distorted to fit the space. These two designs are repeated on the sides and the pyramidal top of the *tābūt* of Imām al-Šafi'ī (574/1178, ind. n° 280, Pl. V, 1) but in *qanāt*-work. It is only on the later *tābūt* of Umm al-Malik al-Kāmil (608-1211, in the Mausoleum of the Imām (Pl. V, 2)) that some of the *kinda* are hexagonal (see note 1, p. 129). The perfect compound star pattern (*tabaq*), once established, persisted. However, no twelve-pointed star appeared before the eight-pointed star, and no sixteen-pointed preceded the twelve.

On the Hébron minbar, the strapwork is formed of a large band of arabesque between two narrow frames. This strapwork is simply conceived and the overall design is obvious at a glance. On the Qūṣ minbar, such carved friezes still occur, but the frames are moulded and intersect continuously over the carved band making a pattern of lozenges and triangles difficult to trace (1). On the fronts of the wooden *miḥrābs* of Sitt Nafīssa and Ruqaiyya the arabesque band is suppressed and only the moulded frames are retained. This type of framing is simple and emphasizes the pattern and the small inserted panels. It was adopted in the subsequent works.

An important development in Baḥrī minbars is in the conformity of pattern and space. In Fatimid and even Ayyubid woodwork, the patterns were not planned for the spaces they were intended to occupy. For example, on the minbar of Hébron, the overall pattern is too large for the sides and, as at Qūṣ, the pattern is simply cut off upon reaching the frames. In the Ayyubid period, in spite of considerable decorative development, designs are still too large and the *tabaq* may be cut off above and below, as on the pyramidal top of the *tābūt* of Imām al-Šafi'ī (2) (Pl. V, 1), and on the *tābūt* of Umm al-Malik al-Kāmil (Pl. V, 2) (3). There, in addition, the *kinda* are distorted and squeezed into the restricted space. As Keene stated, the design with a separating eight-pointed star was never repeated (4). The Ayyubid patterns were evidently experimental, and the twelve-pointed star patterns,

(1) G. Wiet, «Les Inscriptions du Mausolée Šafi'ī». Extrait du *BIE* 1932-33, tome 15, p. 172; Pauty «Minbar», pp. 41-48, pl. II, V. Note that the pattern is the same in Hébron and Qūş minbars (fig. 4) only smaller on Qūş with a double line version.

- (2) 'Abd el-Wahhab, Tārīḥ, pl. 53.
- (3) *Ibid.*, v. II, pl. 56.
- (h) Keene, «Geometric», pt. A. p. 160; 163-165 and n. 99. Pt. B. pattern K. 9.

comparatively simple. The *kinda* of these patterns are somehow distorted, and the axes of their motifs do not follow the central star radius, but have horizontal axes (Pl. V, 1). It is only on the extant minbar of Lāǧīn that we see in Egypt a regular, well balanced *qanāt* design, planned so as to fill exactly the place it was to occupy and terminating neatly within a frame (Pl. I, 3 and IV, 2-3) (1).

The mašrabiyya technique, even more than qanāt-work, allows the use of the smallest pieces of wood. Moreover, it has a lacelike appearance. This is probably the reason for its great popularity during the Mamluk period. Methods still used in some ateliers demonstrate the antiquity of the technique (2), although no work dated earlier than the Hébron minbar is known. In spite of its popularity, mašrabiyya-work seems to be an Egyptian development and rarely occurs elsewhere, and when it does, it is in the decoration of small panels.

The mašrabiyya is formed of round or cylindrical bits of turned wood combined with angular pieces shaped in cubes or other polyhedral forms. The polyhedral fragments were sawn, then filed to polish the angles. Rounded pieces were fitted together by inserting the protruding ends of the turned cylinders into cavities made on the axes of the polyhedra. The whole was fixed into a frame. By varying the number, shape, or disposition of the pieces, it was possible to obtain a large variety of designs. However, only one pattern was used for the balustrades of Baḥrī minbars; the decorated cubes fitted crossways into the moulded cylinders and differing from one another only in the size of the component pieces, the decoration of the cubes, and the mouldings of the cylinders.

## CARVED PANELS AND FRIEZES

The principal carved motifs are in foliate or axial arabesques (see glossary). In the design, one must differentiate between the long friezes and the polygonal panels. In the long and narrow surfaces of the frames, the motifs formed of elongated leaves and stems are in succession following a straight or undulating

(1) Balanced patterns are seen earlier on extant doors where the design was easier to fit into a rectangle. See H. al-Batanouni «Catalogue of Mamluk Doors with Metal Revetments», Diss. American University at Cairo, 1925.

(2) A picture of a «tourneur» in A.B. de Guerville, *La Nouvelle Egypte* (Paris 1905), p. 162 (back).

line forming thus an arabesque. They may be scrolls (Pl. I, 1 balustrade), or axial arabesques in rows. On the panels, the varied shapes offer more freedom in decoration and allow the juxtaposition of motifs which are generally disposed

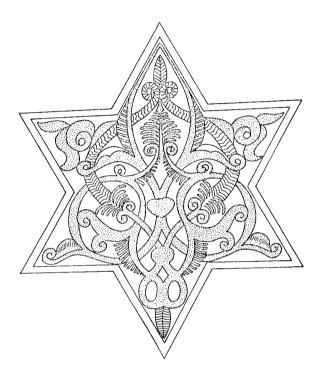


Fig. 6. — Axial arabesques.

symmetrically on both sides of a radial axis, and sometimes in free arrangements, foliate and geometrical (fig. 6-7 and Pl. VI, 1).

In the axial motifs, the arabesques are attached from time to time by medallions or pendants of various shapes to form, on the most important panels, a high relief with attached small palmettes, split palmettes, or scrolls in a lower relief (Pl. VI, 2). The curved lines of the arabesques, volutes and scrolls of the carvings deliberately contrast with the angular lines of the marquetry and strapwork.

Carving depends upon the quality of the wood used. The long friezes are of soft wood and the designs have, therefore, a thicker profile, whereas the hardwood panel carving is neatly cut, and is executed on two planes. The primary

composition of the arabesque as it appears on Lāgīn's and later minbars, is in strong relief and ornamental background executed in a less accentuated relief. This is particularly true of the two most important panels: the *tirs* and the *kinda* 



Fig. 7. — Free foliate arabesques.

where the axes of the motifs are no more horizontal but radial. The carving of the small wooden panels on the Baḥrī minbars was at its best at the beginning of the period and started to decline by the midfourteenth century, when motifs were simplified and prone to repetition. Some good wood-carving was done. but even the best work was inferior to that of the earlier period. Smaller lūza panels are generally carved on one plane, in champlevé, or else have a mosaic inlay of various materials, mainly ivory or bone. The use of ivory/bone, increased until it

replaced wood in kinda and tirs. The late Circassians preferred mosaic inlay for the decoration of these panels.

The Cairene Baḥrī wood carvers created new motifs as well as new combinations of the arabesques developed from the Fatimid and Ayyubid repertoires where the rich details, including the veined decoration of leaves, played an important role. The elongated leaves characteristic of Fatimid ornament, often placed so as to form cartouches enclosing other motifs, survived. The repertoire of palmettes and split palmettes also evolved from the Fatimid and Ayyubid models (1). The new types are gracefully undulating with two or three lobes and notched bases (sometimes in two or three rows). There are also some feathery leaves in main panels. All have carved filling details either in veined or plant decoration (Pl. VI, 1 and fig. 6).

(1) Shafi'i, Simple Calyx and Ornament in Islamic Art (a Study in Arabesque), (Paris,

1957, pl. 26 c, d, x, (and other Cairene palmettes of the period).

The evolution of fourteenth century wood carving seems to be independent of ornament in other minor arts <sup>(1)</sup>. No chinoiserie, such as lotus blossoms, appeared, although these enjoyed wide popularity from an-Nāṣir Muḥammad's third reign (710/1310) and thereafter.

#### INLAY

One must differentiate between two techniques of inlay. The first consists of carving a groove or a shallow area in the wood into which is inserted another material of the size of the groove/area. This method is used, for example, in the marquetry lines bordering the small panels of the Bahrī minbars and the mašrabiyya of Lāğin's minbar, where the cubes were inserted with small carved ebony panels. second technique relies on emptying the space to be decorated and inserting angular decorative pieces glued in that space, thereby forming a pattern. The tiny triangular spaces which are left empty are filled with a wood paste (Pl. VI, 2). It is possible to adapt this technique in order to economize on the use of expensive wood i.e., fixing narrow strips of valuable wood on the lesser wood, thereby forming frames which were filled with mosaic inlay. In this manner, the cheaper wood is concealed under the more valuable decorative materials, but this practice, as well as the simplified mosaic technique known as zarnashān (2), were used in later periods in Egypt. The Fatimid pieces in the Islamic Museum provide examples of both techniques but the mosaic samples seem to be household furniture (3). No mosaic inlay is seen on the Fatimid mihrābs or Ayyubid tābūt. A single line of marquetry appears on the doors of Qala'ūn (683-4/1284-5) in the Islamic Museum (Inv. n° 2335) and on the contemporary  $t\bar{a}b\bar{u}t$  of al-Rifa'i (d. 690/1291) <sup>(4)</sup>. This is the first time that we see marquetry used on large pieces in Egypt. But Ibn Ğubair mentions fine beautiful carvings and inlays on the *miḥrāb*-minbar of Nūr

<sup>(1)</sup> *Ibid.*, p. 16.

<sup>(2)</sup> Instead of small pieces to be individually glued in patterns, artisans assembled long strips of triangular pieces to which metal rods were added and all glued together to form a design within an octogonal outline. The tubelike pieces thus obtained was sown in ready-made patterns that were glued one next

to the other. The cavities in between were filled with wood paste. The information was given by Hāǧǧ Aḥmad Yūsuf.

<sup>(3)</sup> U.A.R. Ministry of Culture, Exhibition of Islamic Art in Egypt, 969-1517 A.D. (Cairo, April 1969), pl. 40.

<sup>(4)</sup> K.A.C. Creswell, Early Muslim Architecture (Oxford, 1932-40, II, p. 222).

al-Dīn (564/1168); this can be seen in pictures of the minbar (1). The mosaic inlays of these (lūza) are similar to those on Bahrī minbars, and may show the influence of Syrian on Egyptian woodwork of the period. On Lāgin's minbar, the marquetry is confined to double fillets of light wood bordering the panels and emphasizing their outlines. The *lūza* have a mosaic inlay of various colours and textures including ebony and ivory/bone (Pl. VI, 2). Ivory and coloured woods gradually come to play a larger role in the decoration of subsequent minbars. To the fillets were added narrow carved bands of ivory; and small ivory panels replaced the wooden ones for *lūza*, five-pointed stars, or quarter-stars (Pl. IV, 1-2 and 3). Inlay also replaced mouldings in the qinanat of Olchy/Algay al-Yusufi (774/1375). However, in the Bahrī period marquetry and mosaic inlay always remained subordinate to wood carving on minbars. The kinda on the sides of the throne of the minbar of Tatar al-Higaziyya are in ivory/bone carved like wood. This is the first extant eg. (2) and the new trend was followed by the Circassians; by that time the wooden panels had become merely shells to contain smaller panels of carved ivory/bone, eg., the minbar of Qaytbay in the Oarafa (879-1474). In the Circassian period plain ivory/bone kinda were also used in combination with inlaid mosaic of various textures which gradually took over as the main part of the decoration, in the late period.

### TECHNIQUE AND DECORATION OF MARBLE MINBARS

The two extant marble minbars and one fragment display three quite different styles. The reconstructed fragments of the al-Ḥaṭīrī (737/1336) show a pattern based on a twelve-pointed star with curved outlines. Each part is sunk in the marble and inserted with coloured stones, traces of which are still in place.

(1) Ibn Ğubair, *Travels* pp. 262-3. Also clearly seen in Join-Lambert *Jerusalem*, pp. 110-11.

(2) The sides of the Taṭar minbar are decorated differently from other Baḥrī minbars. It is not a strapwork, but alternate rectangular

and square panels (divided diagonally in two under the balustrade). Square ornaments are carved in the wood as *tabaq* and ivory/bone *kinda* are inlaid in the wood. The carvings are all in champlevé and not on two planes as on other Bahrī minbars.

The decoration of the sides of the minbar of Aqsunqūr (748/1347, Pl. I, 1) appears more characteristic of Mamluk marble mosaic as used on walls and floors. It has a geometrical star pattern design divided diagonally in two, and forming, thus, the triangular sides of the minbar.

The Sultan Ḥasan's minbar (757-64/1356-63) bears traces of painted decoration. A study of these shows them to be of two successive periods, but always set in roundels.

Other characteristic elements of the marble minbars include carvings of various types such as the mouldings, particularly the frames of the triangles; the carving of the stalactites on the portals; the flutings on the dome of Sulṭān Ḥasan's minbar and the shaping of its curved socle; the shallow arabesque carvings on the dome and canopy of Aqsunqūr's minbar and the high relief carving as on its balustrade.

## POLYCHROME PAINTING

Polychrome painted decoration occurs on both wooden and marble minbars. The exquisite carvings of the *miḥrāb* of Ruqaiyya in the Islamic Museum (n° 446) bear traces of painting on the *qanāt*-work, but Pauty believes that the painting is not original <sup>(1)</sup>. The Ayyubid *tābūt* were apparently not painted, and there are no traces of polychrome painting on the sides of the Mamluk minbars except for the minbar of Sulṭān Ḥasan, which is marble. But friezes, spandrels, domes and socles, as well as the canopies and portals, all in soft wood, were painted, as seen on the Minbar of al-Māridānī (Pl. II, 1).

As the Mamluks came to appreciate *qanāt*-work for itself, the quality and colours of various woods were enough to assure rich effects of contrast. Some panels were in two or more envelopes of different woods as in the *kinda* of the al-Māridānī minbar. Sometimes panels of alternate *ṭabaq* are of two shades of wood for contrast eg., on the minbar of Lāǧīn. Already by the time of the minbar of Nūr al-Dīn, inlay had begun to enhance the *qanāt*-work with ivory and coloured wood, while painting was used only for the decoration of other parts of the minbar.

(i) Pauty, «Les Bois», p. 67.

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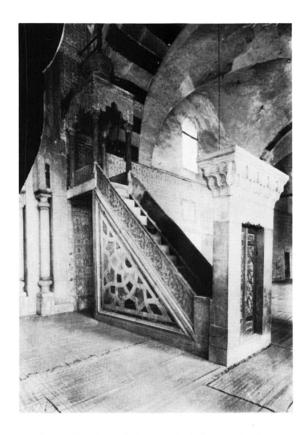
## TABLE

Name	. Date	Situ	Number	Material	Type	Present condition
Ḥusām al-Din Lāǧin	696/1296	Mosque of Ibn Tūlūn	Index N° 220	Wood	Closed sides	restored
Baktimūr al- ǧūkanḍār	699/1300	Mosque of al-Ṣāliḥ Ṭalā'i	Index N° 116	Wood	Closed sides	restored
Qüşün	729/1329-30	Islamic Museum	Inventory N° 1092	Wood	Closed sides	fragment
al-Hațiri	737/1337	Islamic Museum	Inventory N° 2983	Marble	÷	fragment
Altunbuģā al- Māridānī	740/1339	Mosque of al-Māridānī	Index N° 12	Wood	Closed sides	restored
Sitt Miska/Ḥadaq	740/1339-40	Mosque of Sitt Miska/ Ḥadaq	Index N° 252	Wood	Closed sides (rear opening kept)	restored
Aşlam al-Bahā'ī al-Silāḥdār	745-6/1344-5	Mosque of Aslam	Index N° 112	Wood	Passage under throne	restored
Arġūn al-Ismāʻīlī	748/1347	Mosque of Argūn	Index Nº 253	Wood	Closed side (rear opening kent)	restored
Aqsunqur Mənğəb əl Visanfi	748/1347	Mosque of Agsungur	Index Nº 123	Marble	Passage under throne	restored
Sultān Ḥasan	757-64 / 1356-63	iwosque or mangak Mosque-Madrasa of Sulṭān Ḥasan	Index N° 138 Index N° 133	wood Marble	Closed sides Passage under throne	restored
Țațar al-Hiğā- ziyya	761/1360	Islamic Museum	Index N° 7031	Wood	Passage under throne	restored
Alğāy/Olšay al- Yūsufī	774/1360	Mosque of Alğāy	Index Nº 131	Wood	Closed sides	restored

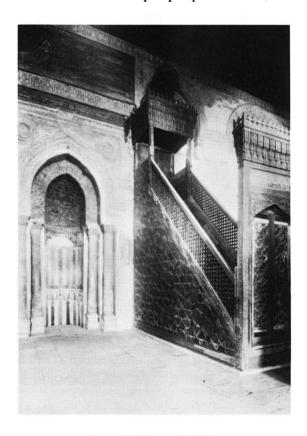
## **GLOSSARY**

- Axial Arabesque: A foliate stem composition springing from one base and forming volutes vertically symmetrical around a central axis (fig. 6 and Pl. VI, 1).
- Arrowhead: A three pointed form used to fill void spaces around the tabaq.
- Darb Ḥaīt: Arabic term for strapwork.
- Foliate Arabesque: A line, combined with palmettes and split palmettes, starting at one point and interlacing like the stem of a vine tree (fig. 7 and Pl. I, 1, balustrade).
- Kinda: A pointed hexagon and component part of a tabaq (see tabaq and fig. 5).
- Lūza (almond): Elongated lozenge and component part of a tabaq (see tabaq).
- Qinanāt: Moulded or decorated sticks of various length that form the component units of the qanāt work (see qanāt).
- Qanāt-work: A geometrical strapwork formed by decorated narrow sticks (qinanāt) assembled together by mortise and tenon joints « rainures et baguettes » the short sticks forming the angles are fixed on a basic long stick known as 'umm' (mother). The strapwork forms polygonal patterns, like frames, which are filled with decorated small panels (fig. 3).
- Qarbasiyya: Alternative term used by Ibn Ğubair as the Syrian word for qanāt work.
- *Ṭabaq-Nağmī*: The literal translation is «starred platter». This is a complex geometrical composition based on a central core known as nağm (star) or tirs (cogwheel). The latter is preferably used by technicians Between the points of the star are inserted elongated lozenges (lūza) extending the tips of the star. Pointed hexagons (kinda) are placed with points inwards as to close the composition in a regular large plate form (tabaq) (see fig. 5 and Pl. VI, 3).

Tirs (cogwheel) alternative term for nağm (see ṭabaq nağmī).



1. — Minbar of Aqsunqur (photo Comité).



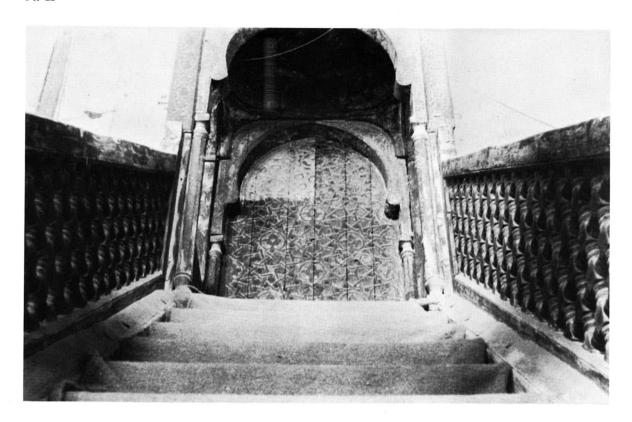
3. — Minbar of Lāǧīn.



2. — Top of the minbar of <code>Ṭaṭar</code> al-Ḥiǧāziyya.



4. — Top of Lāǧīn minbar and stalactites of the dome above (photo Creswell).



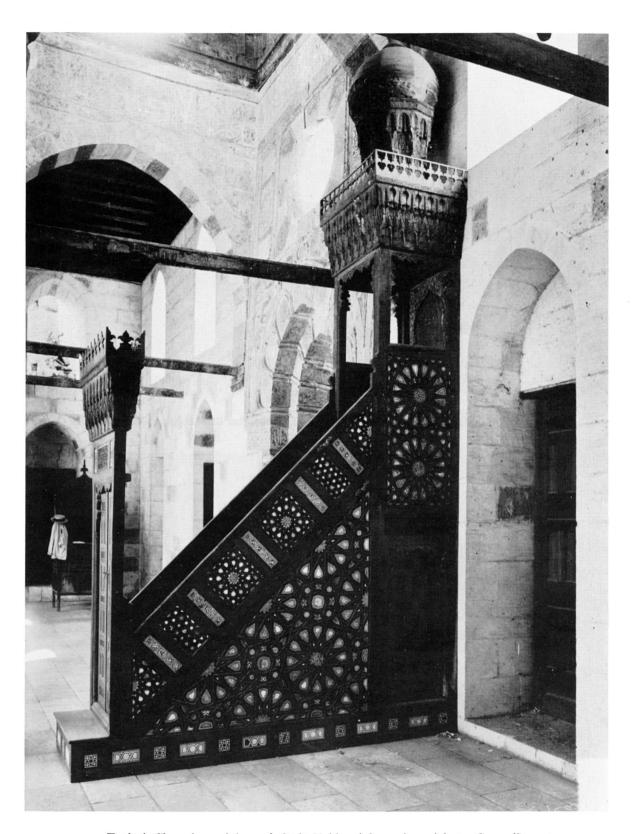
1. — Columns supporting the canopy of al-Māridānī minbar.



2. — The portal of the minbar of Sultan Ḥasan.



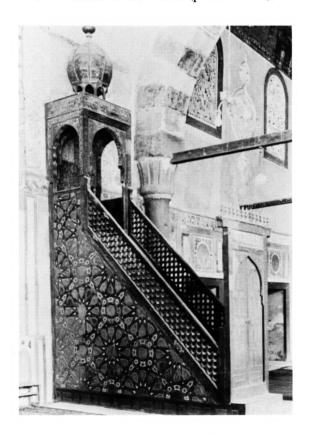
3. — Side of the tābūt of Ṣarġatmiš.



Typical Circassian minbar of Qādī Yaḥia al-Qassaniyya (photo Creswell).



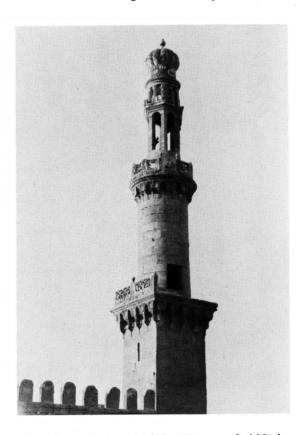
1. — Minbar of Sitt Miska (photo Comité).



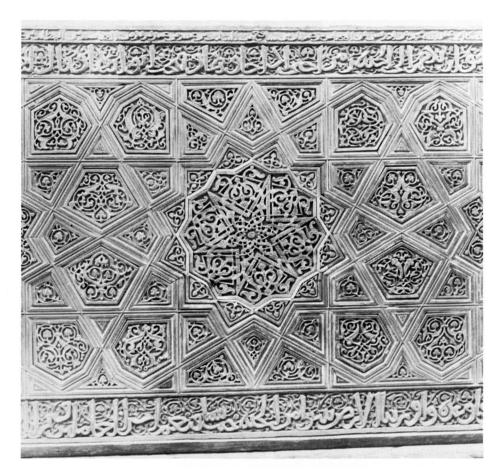
3. — Minbar of al-Māridānī.



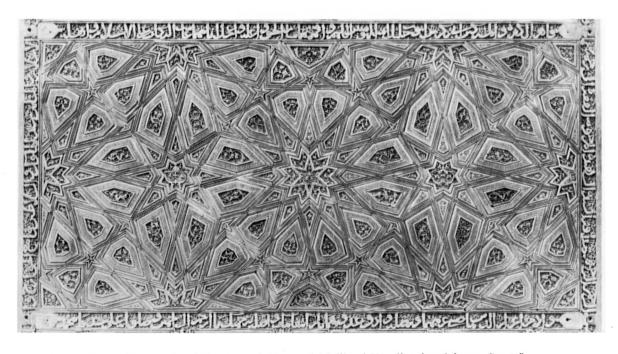
2. — Minbar of Manğak al-Yūsufī (photo Comité).



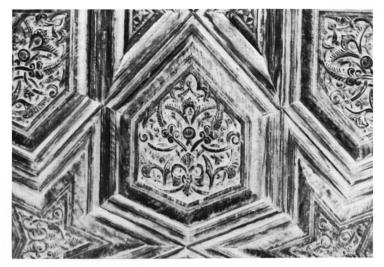
 Cap of minaret of the Mosque of al-Nāṣir Muḥammad at the Citadel (photo Creswell).



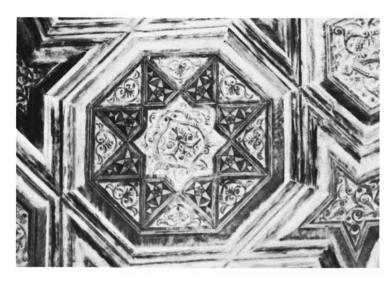
1. — Strapwork of the pyramidal top of Imām al-Šafi'ī tābūt (photo Comité).



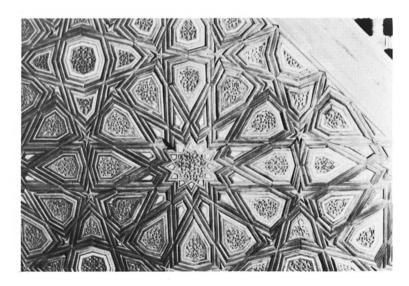
2. — Strapwork of the top of Umm al-Malik al-Kāmil tābūt (photo Comité).



1. — Carved panel from Lāğīn minbar.



2. — Inlaid panel from Lāǧīn minbar.



Qanāt work of the minbar of Manğak al-Yūsufī.