

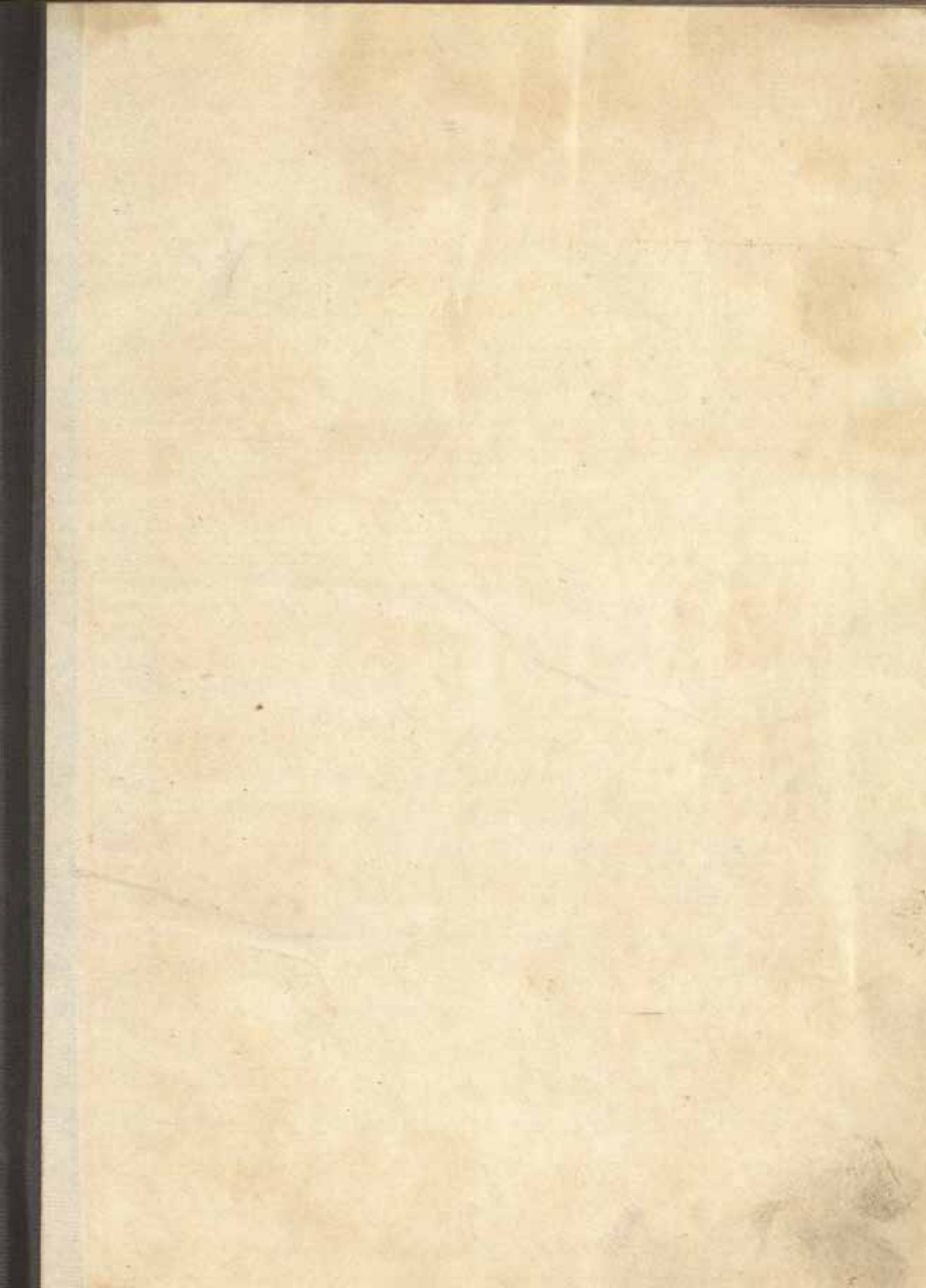
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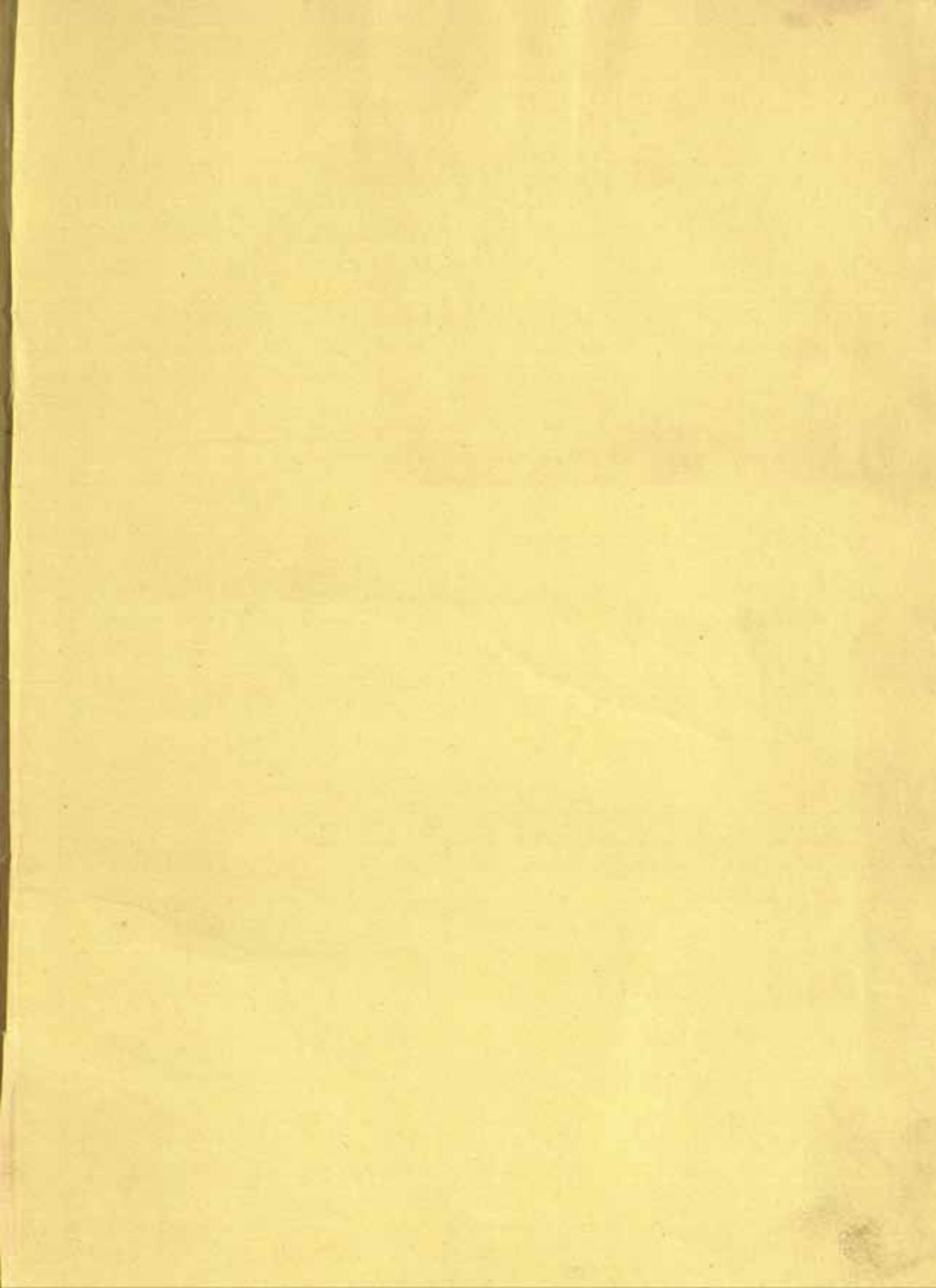
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ISLAMIC ARCHITECTURE OF THE DECCAN

by
M. S. MATE



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ISLAMIC ARCHITECTURE OF THE DECCAN

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I. INTRODUCTION

The present study covers a span of nearly three hundred years i.e. from the establishment of the Bahmani rule in the Deccan to the end of Moslem hegemony in the region. The region covered is broadly known as the Deccan. It comprises all the tract of land south of the river Narmada and north of the river Krishna, excluding the territories governed by the Faruquis of Khandesh. To the east and west, the hilly ranges and the coastal strips do not come into the picture as much as the central plateau does. Not all the architectural monuments are taken note of; only those erected by the Bahmanis and their political and cultural successors, the five Sultanates of the Deccan, have been examined. These are, naturally, concentrated largely in and around the capital cities of the various rulers.

These monuments have been surveyed and described by various students. As such the subject of the paper is not a fresh one. It does not touch an untrodden field. The Archaeological Survey of India have surveyed and recorded the architecture of Bijapur and its environs — the capital of the Adil Shahis. The results have been published by COUSENS in his monumental work '*Bijapur and its architectural remains*'. A great deal of work about medieval Moslem monuments has been done by the Archaeological Department of the former Nizam State. The *Annual Reports* of that Department record information regarding most of the structures of the period. These *Reports* attain great importance due to the fact that a large part of the Bahmani Kingdom was within the boundaries of the Hyderabad State. A very significant phase of Islamic architecture of the area, viz. the one seen at Bidar has received special attention from G. YAZDANI. Journals like '*Islamic Culture*' and the '*Journal of the Hyderabad Archaeological Society*' have taken notice of several typical monuments. These were primarily efforts at data-collec-

This monograph is the result of a survey carried out by the author with the aid of a Research Grant given by the University of Poona. The drawings and photographs included in this work are prepared by Shri H. J. Kumthekar, Architectural Draughtsman in the Deccan College.

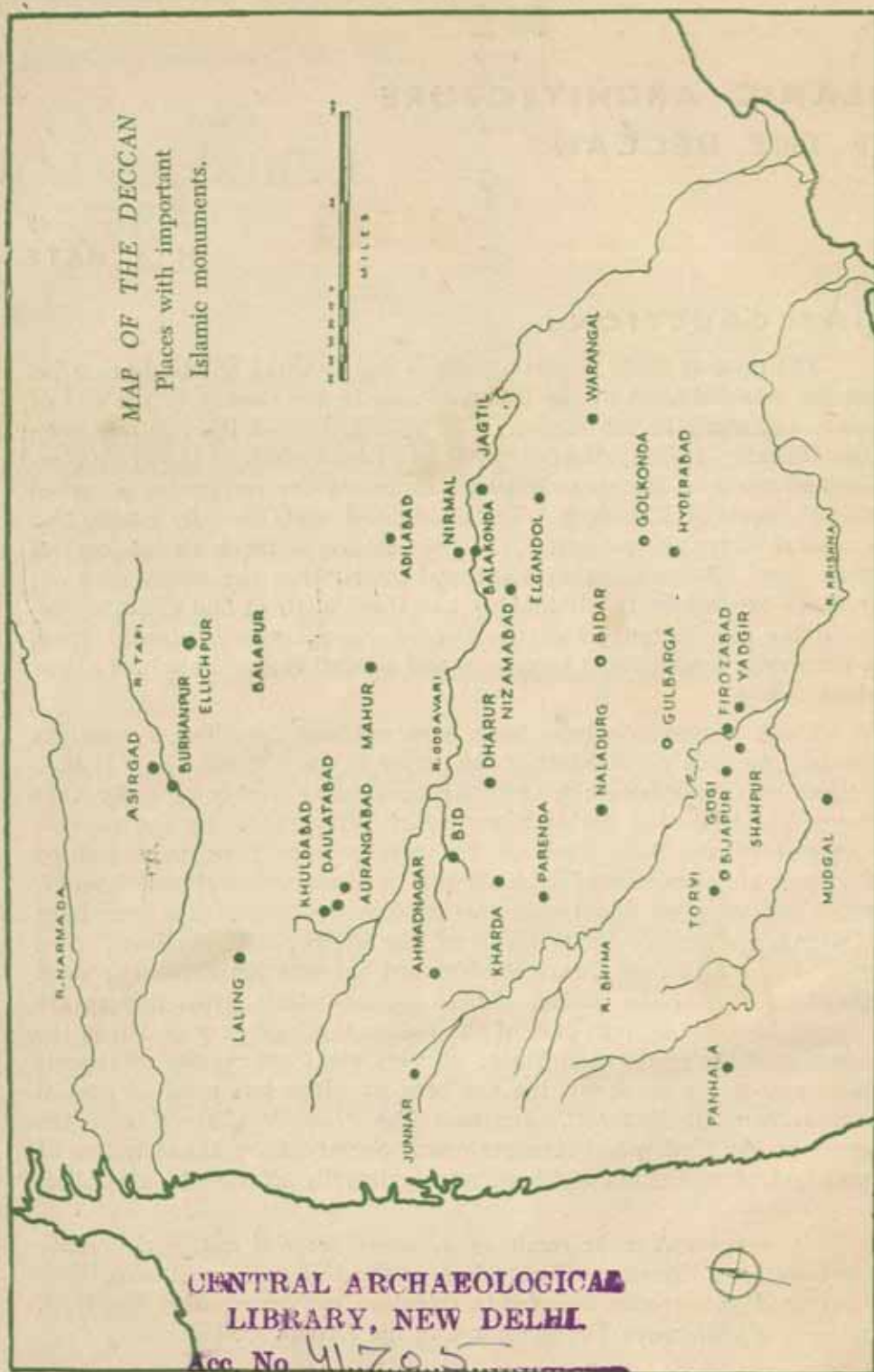


Fig. 1

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tion. All available material was carefully gathered and recorded. However, it would be idle to suppose that authorities like COUSENS, MARSHALL, YAZDANI would remain satisfied with a sort of recording operation. They have devoted equal or more attention to the interpretative aspect as well. And it is the line of argumentation emerging from the studies of these and other recognized students that is towed by later students.

The question naturally arises, whether after all the aforesaid work has been done, there was any necessity to undertake a further probe. The author had an opportunity of studying, in an entirely different context, these works and the monuments under discussion, and he came to the conclusion that something still more can be said.

In the first place, each place and each monument and structure received individual attention in most of the previous works. This was only proper since they had to be recorded as scientific data. But such a treatment unwittingly leads to a great defect. It distorts the perspective greatly. The monument, its individuality, its independent character, receive an emphasis out of all proportion. This, in its turn, results in creating an impression that the structures concerned represent an art tradition that is constantly blossoming forth into a rich flora of varying colours and shapes. A slight touch of poetic language, a reference here and there to the splendours of the courts, completes this process of distortion. There emerges, ultimately, a picture of architectural achievements forceful in expression, varied in content and informed by vivid imagination and originality. An image, no doubt dazzling, but far removed from reality. The basic unity and underlying uniformity of forms, shapes and methods is lost sight of. It is necessary to penetrate beyond these slightly deceiving appearances and reach the bare forms. Hence an investigation into the tectonic activity of the entire period taking into account its various local manifestations was a task worth undertaking.

Secondly, the generalities born of these distortions needed corrections. The course of the evolution of Deccani building art, as generally presented today falls into three main phases. The cradle of this style was the Pathan architecture of Delhi. Monuments at Gulburga illustrate this phase. The next phase shows a dominant influence of West Asian and Persian styles as seen at Bidar. The last and slightly decadent era represents greater affinity towards the local Hindu art traditions. These general conclusions could also be put to a fresh test. The enquiry would become more precise if some questions are formulated at this stage. These are :

- (a) What was the nature of the basic principles governing Islamic architectural planning ?
- (b) How far and in which direction did these principles undergo changes in the period under discussion ?

To make the solution of these problems easier some further questions may be put :

- (c) If there are any material changes, what are they ?
- (d) What are the novel elements introduced and what is their source ?

These are the problems posed and attempt is made in the following pages to find a solution to them. Design development has, therefore, received greater attention in this study. This also means lesser emphasis on going after affinities and influences. The style had, when it came to the Deccani, an individuality of its own. It had its own development. It is a generic growth not unlike the growth of natural organisms. It would be interesting and illuminating to trace the progress of this phenomenon. This is a shift in emphasis. No one denies the importance of the role of cultural contacts, of imitations and borrowing of ideas. But it should also be remembered that each form, is capable of germinating a newer, advanced one, with or without imitation of foreign models.

Following is an analysis of this process.

II. HISTORICAL NOTE

The course of Islamic rule in the Deccan is quite long and the pattern it cuts is chequered. Justice cannot be done to it in a small space of a few pages. The following lines are intended to make the reader familiar with the background of the discussion that follows regarding the tectonic activities of these rulers.

The hilly ranges of the Satpuda and the Vindhya and the very thick forests in between and around them protected for a long time, the northern frontiers of the tract of land known as the Deccan. This barrier was formidable enough to prevent the incursions of Moslem invaders for nearly three centuries i.e. nearly upto the end of the thirteenth century. At that time, on this side of the barrier no single force was visible on the political horizon that would enjoy undisputed supremacy. Several Hindu princes controlled kingdoms, large and small. Out of these, the Yadavas of Devagiri and the Kakatiyas of Warangal were the foremost. There is abundant evidence to show that the times immediately preceding the Moslem invasion witnessed a remarkable efflorescence of the culture of the people. This happened inspite of the constant struggles these princes undertook against each other. A very faint glimpse of these developments might be taken here so as to be able to understand what profound change Islamic ideas brought about. In religion, in philosophy, in literature, in art, new forces came into play.¹ New ideas found expression through novel ways. Perhaps the most significant ones were in the religious field. The Nath Panth received a fresh vigour due to the activities of Gahininath. Shri Chakradhara founded the Mahanubhav panth, while Basav established the Lingayat sect. The former is a form of Krishna worship while the latter was a militant Saivite sect. Another movement that gained vast popularity and acquired great influence in this region was the Varkari sampradaya. Based on the cult of Bhakti, with the Vitthal of Pandharpur as its centre, this movement has great hold on the masses even today. Literature concerning religion and philosophy was produced in abundance. The followers of Chakradhara were responsible for a large volume of writings. The famous commentary on Bhagvadgita by Jnaneshvara falls in the same period. In other directions too stalwarts arose. Astronomers like Bhattacharya, authorities on music like Sharangadev, the scholar-minister of the Yadavas, viz. Hemadri, all flourished in these two centuries. A distinct style of temple architec-

¹ For fuller information see : BHAVE V. K., *Musalmanpurva Maharashtra*, Vol. 1, pp. 16-17, 120-125, 276-285. MAJUMDAR R. C. and PUSALKAR A. D., *The History and Culture of Indian People*, Vol. 5, 352-357.

ture was developed under the patronage of the Yadavas and for that reason might be designated the Yadava style.² In short alround progress followed in the wake of material prosperity achieved under the Yadavas and the Kakatiyas. The Moslem rulers did not descend into a cultural vacuum, but whatever existed was certainly foreign to them — as foreign as anything can be. It is very interesting to note that the culture that the Moslem courts developed in the Deccan was and continued to be alien in its content and inspiration. The deeply rooted native character and tradition could influence it after a very long lapse of time. This is nowhere better evident than in the field of building activity.

The Deccan was rudely shaken out of its prosperity and progress by the bold invasions of a capable and ambitious general of the Delhi Sultans, Ala-ud-din Khalji, who later on ascended that throne himself. Although there was an earlier intercourse of the western coast of India with the Moslems, it was chiefly of a commercial nature. The first conquest was, as mentioned, by Ala-ud-din Khalji. Apart from visions of political supremacy, the Deccan's wealth was too tempting for such an enterprising adventurer. Ala-ud-din and Kafur, his Malik Naib or lieutenant in the Deccan, had wound up the Yadava rule and enfeebled the Kakatiyas considerably, and when Sultan Muhammad Tughluq came to power, Moslem foothold was quite firmly established in the Deccan. So firmly was it established, indeed, and so much was the Sultan impressed by the importance of these newly acquired provinces that he transferred his capital from Delhi to Daulatabad, the former Devgiri. This was, as it were, a signal that the centre of gravity of the Empire had shifted itself. As things unfolded, however, the domination of the Deccan turned out to be only an episode in the eventful history of the Delhi Sultanate.

The mass migrations that Muhammad Tughluq had ordered, from Delhi to Daulatabad, introduced a Moslem element into the population of the Deccan. In addition, numerous Moslem officers and other ranks were brought into the Deccan as the nucleus around which Delhi was to build its administrative machine. Muhammad, in one of those acts of indiscretion for which he was well-known, managed to antagonise the whole class of officials known as Centurions. He wrecked his vengeance upon the Centurions in no uncertain fashion and thus completely destroyed the very foundations of the machinery that was built up to uphold and assert the Sultan's authority in the province.

The Centurions, once successful in repelling the royal forces, set about consolidating their gains. Two leaders were chosen in quick succession. The first to be elected was Nasir-ud-din Shah, an old and ease-

² See : COUSENS H., *Mediaeval Temples of the Dakhan*, ASI — 48, Calcutta, 1931. NAIK A. V., *Archaeology of the Deccan*, Thesis accepted for the Degree of Ph.D., not yet fully published. Deccan College, 1947.

loving man, who enjoyed the confidence of his class. In 1347, that is, after nearly three years' reign, he voluntarily stepped down and a more forceful and capable man came to the fore. He ascended the throne in 1347 as Abul-Muzaffar Ala-ud-din Shah, also known as Hasan Gangu Bahmani.³ He first set his own house in order. The kingdom was divided into four provinces and an administrative machinery was brought into existence, probably as efficient as any in a medieval state. He made Gulburga his capital in preference to Daulatabad, although the latter continued to maintain its importance as the headquarters of one of the four administrative divisions. His efforts in the direction of fresh conquests were considerable. His son and successor Muhammad I was a diligent administrator and a brave soldier. His name is also associated with a good deal of activity in the cultural field and the Jammi mosque at Gulburga was his handiwork. The next ruler of note was Muhammad II, who 'was a man of peace, devoted to literature and poetry and his reign was undisturbed by foreign wars'.⁴ Another ruler in the line, Taj-ud-din Firuz Shah, is noteworthy on two counts. He prosecuted the war with Vijayanagar with great success. He caused to be built the famous pleasure resort, Firuzabad on the Bhima. Ahmed Vali or the Saint, the brother and successor to Firuz, transferred his capital from Gulburga to Bidar. Muhammad III, a prince of great energy and considerable military ability, may be considered the last king of his line. For although five of his descendants succeeded him, they were, as the *Cambridge History* puts it, "nothing more than state-prisoners in the hands of ambitious and unscrupulous ministers".⁵

Throughout their long rule amounting to more than one and three-quarters of a century, the Bahmanis entertained foreign talent with open arms. "Sultan Firoz Shah every year despatched vessels from the ports of Goa and Cheul to bring him the manufactures and curious productions of all quarters; but particularly to invite persons celebrated for their talents if any, who, he would frequently observe, should be regarded as the choicest possessions of all countries."⁶ A major part of this consisted of soldiers, administrators and ambitious adventurers. But in the field of cultural activities also the number and the influence of these foreigners was great. It was practically predominant. Poets, artists, architects, religious preachers were imported from various countries, the chief source being 'of course' Persia. This phenomenon, as the authorities on the subject would tell us, imparted a character to the Bahmani rule in the Deccan that made it stand out as against that of the other

³ Narrative based on : *Cambridge History of India*, Vol. 3, Chapters XV to XVIII and SCOTT J., *Ferishta's History of the Dekkan*, Vol. 1.

⁴ *CHI*, 3,385.

⁵ *Ibid.* 422.

⁶ SCOTT J., *op.cit.*, 73.

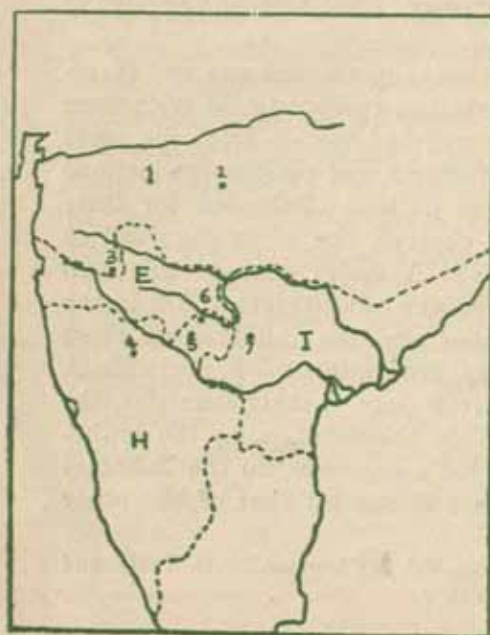


1398

1695



1525



MAP OF THE DECCAN
SHOWING THE POLITICAL
DIVISIONS

during the Fifteenth and Sixteenth
Centuries

Index

States		Cities	
A	Khandesh	1	Thalner
B	Bahmani	2	Ellichpur
C	Telingana	3	Ahmadnagar
D	Vijayanagar	4	Bijapur
E	Ahmadnagar	5	Gulburga
F	Berar	6	Bidar
G	Bidar	7	Golconda
H	Bijapur		
I	Golconda		

Fig. 2

Moslem dynasties in India. This need for a continuous import of talent seems a bit surprising, especially in the light of the splendid accomplishments of the native population, just alluded to, unless perhaps it is taken for granted that everything indigenous was inferior and worthless and everything emanating from Persia was superior *ipso facto*. Or else the simple but rather inconvenient explanation of religious bias is to be accepted. Be it as it may, the fact remains that to-date authorities elect to attribute the various qualities of the Deccani culture to sources foreign.

The Bahmani kingdom had been, for nearly fifty years, drifting towards the fate of all medieval monarchies viz. break-up due to the power of provincial governors. This process was hastened to a great degree by the constant friction between the factions of the Deccani or native noblemen and that of the foreign nobility. The year 1527 A.D. saw the end of the process of disintegration. It was then that the five independent monarchies or Shahis, as they are better known, crystalized themselves. Malik Ahmed Nizam-ul-Mulk of Ahmednagar, Yusuf Adil of Bijapur and Fathullah Imad-ul-mulk of Berar proclaimed their independence in 1490 A.D. Amir Ali Barid of Bidar was the last to do so, who by that act of his, brought to a formal close the Bahmani kingdom. This is not a place to go into any details regarding the history of these five States. A very broad outline can be traced as in the following lines. 'The history of these kingdoms is a record of almost continuous strife. The community of religion, the community of interests and frequent intermarriages were alike powerless to curb the ambition of the three great States, each of whom aspired to the hegemony of the Deccan.'¹ In addition to their mutual feuds, the five Sultanates had to face the challenge of three enemies successively. First was the Vijayanagar kingdom. No sooner were they able to get rid of this hereditary enemy, than they were called upon to stand up against the newly rising power of the Marathas. The last, and as time was to prove, the most persistent were the forces of the Delhi Emperor, who, as it were, was bent upon undoing what Ala-ud-din Bahman Shah had accomplished three and half centuries previously. 1690 saw the end of the Adil and Qutb Shahis at the hands of Aurangzeb, others had vanished before.

All the five Shahis inherited from the Bahmanis not only the political control of the regions concerned, but also the latter's taste for cultural refinements to a lesser or greater degree. All adorned their capitals with palaces and mosques, tombs and minars. The courts entertained talented artists and poets. All contributed to the development of military architecture in the area. And like their great predecessor always played host to foreign talent. Indeed, it is obvious from Ferishta's accounts that even as late as the days of Yusuf Adil Shah the kings depended more

¹ CHI, 3,433.

on foreign mercenaries than their local troops. The only difference was that they had also learnt to appreciate and respect, and often utilise local art and knowledge. Foremost among the five was the Bijapur kingdom which has not only left a rich architectural legacy but was also responsible for the development of the Deccani school of painting. Most Adil Shahs were endowed with that rare gift, a mind imaginative in itself and also receptive to novel ideas. Accompanied by material prosperity, this led to a great spurt in activities artistic. The Qutb Shahis of Golconda occupy the next place in this field. They nourished another idiom of Deccani architecture in their capital. The most pronounced tendency of this school being its extremely florid though somewhat crowded surface treatment and the tall minarets clustering the skyline of Golconda.

III. DESIGN DEVELOPMENT

The importance of artistic traditions in planning of structures cannot be over-estimated. This is true of Islamic as of all other styles of architecture practised in India. The roots of a concept or principle cannot be easily found and generally one comes across a set of ideas and principles which have received sanctity not only through constant usage but also through social and religious environments. The roots of Islamic art traditions are buried deep in the past of the land of their origin — Arabia and Mesopotamia, or to use the latest term, Western Asia. Particles of truth have been sifted from the mass of orthodox ignorance. But conditions regarding architecture in India are better. A student of Islamic art and architecture in India is on a much more secure ground. In the first place, when one encounters Islamic monuments, the methods and forms have developed to an extent where they are easily recognisable. Secondly, they form part of a relatively later period and hence enough is known about their history to enable one to trace their further growth. Now, what are these principles and traditions? Islamic construction everywhere is arcuate. All schemes and designs find expression through the medium of arches and arcades, vaults and domes. All decorative designs utilise arch and its combinations to a degree in which no other single motif is. The arcuate construction has imparted a predominantly geometric bias to all designing and planning.

Along with the arch and the dome, the minaret forms an almost inevitable part of Islamic structures. The lone towers such as Chand Minar appear as entities in themselves, but the true function of the minaret, in its Indian and more especially Deccan version, is as a member of the overall architectural scheme.

The plans of the main types of religious structures, viz. tombs and mosques, so also secular structures like the madrasas are fixed by tradition. They are determined by the function a particular building is expected to perform, and as such are constants. There are practically no departures from the universal pattern. Wherever there is such a departure, it stands in isolation, not to be copied and emulated but to be looked upon as an idiosyncrasy, whatever be its merits. In secular buildings, like palaces social customs like the seclusion of female apartments etc. have played a role in determining the plans. In a very general manner it can be said that plan is a thing with which Deccani architects have not played.

While planning a building, two aspects can be emphasized. Either

the distribution of mass or the creation of an outline. In other words, the buildings can be conceived in trigonometric i.e. three dimensional or geometric i.e. two dimensional terms. An architect can create the impression of solidity or can go in for a plain picture. As a very general principle it can be stated that Islamic architects have a predilection for the two dimensional or geometric planning. The possibility of having both the effects in a single building is not excluded, but such instances are rare in the extreme. An architect prefers to choose either of the two, for, each type envisages its own plans, elevational aspects and decorative methods. They affect both the organic and applied ingredients of a structure.

The effect of mass can be achieved by constructing a building with huge dimensions. Or, it can be brought about by a proper adjustment of the shade and light values, because, it is this element that gives the impression of mass, of three dimensions, of projection and recess. This adjustment calls for the erection of several plains in the walls of the building arranged at various angles to each other so as to reflect sunlight in differing degrees. The best example of such a structure would be the Hindu temple with a star-shaped plan. Here the shade-light pattern is skillfully utilised to create the effect of mass. Obviously, this entails a change in the plan of the building, a thing practically impossible to effect in the case of the mosque or the tomb. Secondly, the ornamentation of such a building depends upon sculpture — preferably in high relief. Human figures, animals and plants form very good subject-matter for this mode of decoration. The first is proscribed by Islam. The geometric and arabesque designs so popular in Islamic art do not go well with high relief.

In the case of buildings visualised as a picture, as an essay in two dimensions, two factors are important. First, the outline of a structure would cut against the skyline. Secondly, the decoration of vast plain surfaces. The central dome and minarets, along with parapet cretings are features that aid the creation of a well-balanced outline. The surface decoration consists of stucco designs in extremely low relief, painted designs, and patterns of glazed tiles or mosaics. In later structures where stone is used, as at Bijapur, the relief continues to be low. At the same time, however, the Deccani architect now shows a better appreciation of the three dimensional way of planning. But this goes only so far as the adoption of some stray features like the heavy bracket cornices of Hindu temples. Some features like the projecting corner minarets or turrets as those on the Gol Ghumat at Bijapur have a similar effect. But no changes in the plans are to be seen. Orthodox planning continues to govern the thinking.

It is quite common to say that the Deccani architecture was influenced by the local Hindu traditions. In support of this statement,

either some such vague terms as "the unmistakable touch of South Indian beauty",¹ are used or attention is drawn to features of Bijapur structures like those mentioned above. Talk of cultural contact and synthesis is sweet but is not always supported by facts. What the Bijapur buildings display is a newly awakened appreciation of Hindu concepts of beauty and planning, and not a change in the attitude of Islamic architects. There is very little doubt that the same principles continued to inform the planners of seventeenth century as the ones that had inspired the architects of the fourteenth century. Traditions die hard. And Islam is a conservative religion. In its main traits Islamic design continued to be two dimensional, and the various monuments attest to the natural and organic growth of this idea. From Persia new shapes and novel methods of ornamentation in the form of glazed tiles were borrowed. From the Deccan the stone carvings and the cornices and brackets were adopted. These were stray features and did not alter to any degree the basic concepts of designing. The core remained Islamic maintaining its continuity and individuality. Nothing can better illustrate the truism of this statement than the fact of the existence of large-scale colour ornamentation on the tomb of the Ibrahim Rauza. It would be readily agreed that this building is a genuine representative of all that the Bijapur style had to display. All the 'Hindu' features, heavy bracket cornices, sculpture, etc. are most profusely used here. However, it seems none has taken note of the paintings on the walls.² They are faded all right, but still they are there. The structure is in black trap and does not serve as a proper background for the paintings. It is so singularly unsuitable for the purpose. It is the very reverse of decoration. And the paintings are there for the simple reason that it happened to be a component of Islamic building traditions, which the architect was unable or unwilling to set aside.

This search for the development of design lands a student in one important difficulty. It is the chronology of known monuments. The logic of stylistic growth suggests a succession of artistic forms. Each succeeds a less artistic form and embodies a step further. When one turns to the existing monuments, it often so happens that a form which should stylistically come later precedes a less developed stage in respect of time. The form that would represent an elementary step actually comes much later, thus apparently turning things upside down. One faces a dilemma where either chronology is to be accepted as a guide or artistic growth

¹ CHI, 3,633.

² COUSENS has mentioned the existence of colour, but he has taken it to be part of the various lettering schemes. As the reproductions of the colour-work on the Ibrahim Rauza on figures 16 and 17 would show, this is not the case. They are not parts of the lettering scheme, but are paintings or colour-ornamentation in every sense of the term.

is to be taken to be the principal consideration. As just stated, their claims are often mutually contradictory. To cite an example, if one takes into consideration the facade of the tomb, the treatment consists of a number of arched niches. The primary stage is one entrance arch with the rest of the wall blank. Next comes the introduction of arched niches on either side of the entrance arch. Five or more niches would represent a further development of the idea. However, this is not borne out by the known dated structures. The first one is all right, as seen on the earliest tomb structure of the region, viz. the tomb of Ala-ud-din Bahman Shah (1358 A.D.) at Gulburga. The second stage is seen on the tomb of Chand Bibi, which is a Nizam Shahi structure, while the third one is utilised for the tomb of Firuz Shah (1422 A.D.) which antedates the Chand Bibi monument. It is likely that the elementary stages were practised on buildings which are insignificant or have disappeared in the course of time. This is just a possibility. Secondly, and this is a more plausible explanation, individual artists travelled the same logical path of the progress of design schemes, but did not give material shape to all the stages. They selected those that appealed to them most. As such it is not at all necessary that all the various stages should be seen on the extant monuments. And, therefore, chronology of known monuments can be to some extent ignored if the logic of stylistic development can be traced without any fallacy. This is no doubt a controversial aspect, but this is the only approach that would enable one to know and understand the real significance and meaning of architecture and its growth.

IDGAH

The idgah or open prayer place is common all over the Islamic world. In the Deccan numerous places have these idgahs. The Indian idgah does not seem to be far from the 'Musalla' of Western Asia. The latter is defined as "a large threshing floor or a clearing with a wall provided with a mihrab";³ there is also an elevated place for the Khatib. Here the salat is performed on certain occasions. The first musalla, like most things Islamic, is attributed to the Prophet. It is supposed that although he performed his usual salats in his mosque, he travelled to a spot on the south-western outskirts of Medina for important salats. Here on Id days all the religious rituals including the slaughtering of animals etc. were performed. Some authorities like WENSIK maintain that using a threshing ground outside the limits of a locality for prayers and sacrifices was a pre-Islamic practice. And in view of the fact that the ritual of sacrifice is itself a continuation of pre-Islamic traditions of the region, there is no reason to reject this view. Secondly, it is natural for the peasant communities of the days to use the very good clearing, used for threshing, as communal meeting ground. The main advantage of this

³ HOUTSMA, ARNOLD and others, *Encyclopedia of Islam*, Vol. 3, p. 746.

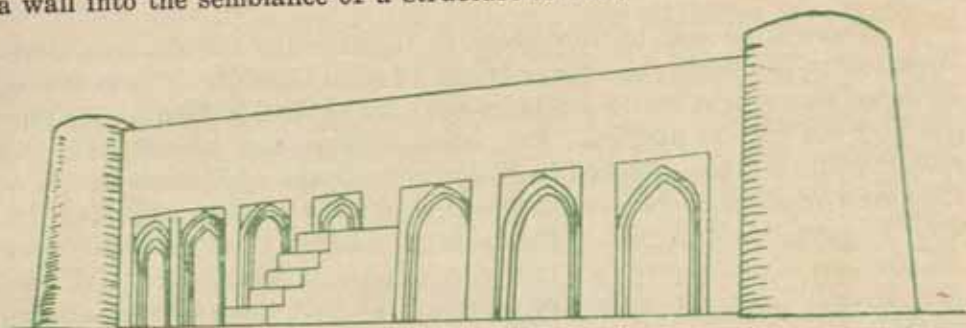
open prayer place, the musalla or the idgah, is that it can accommodate large crowds.

There is no need to think that the Idgah or the musalla were developed completely during the times of the Prophet himself. It is recorded, as stated above, that he used a large open space outside Medina for purposes of ceremonial prayers. But whether there was a wall with any religious significance attached to it, in front of the open space is doubtful. And whether there were the mihrab and the mimbar adjoining this wall is more doubtful still. The original mosque built by Muhammad did use first its northern wall (for Jerusalem) and then its southern wall (for Mecca) for the purposes of orientation. But there was no mihrab in the walls; it came later. Muhammad made use of a palm trunk to elevate himself above the masses in his front. This crude platform is probably the origin of the mimbar. And it is more than likely that the use of the wall of the mosque suggested the idea of providing the mihrab and mimbar to the wall of the musalla. The mosque i.e. the quibla wall of the mosque and the idgah developed simultaneously and just as all the components of the mosque, more especially the mihrab, were not evolved during the life-time of Muhammad, so also the musalla or idgah was only partially developed. The adoption of the mihrab to signify the direction of the prayer took place simultaneously in the mosque and the idgah.

From the point of view of architectural evolution one must visualise a plain wall with a mihrab and a mimbar attached on its side that faces the open space. This wall in this particular aspect would be a nothing for architecture. As time went on measures must have been adopted that would beautify to a certain extent the bare wall. The idgahs in the Deccan present various aspects and many of them are quite curious. Here the sequence of its design, as probability would have it, is traced.

The sheer wall would present one difficulty. It would be something loose, without any firm footing. More especially with the central portion emphasised by the mihrab and the mimbar, the ends would seem to be hanging loose. The best way to remove this deficiency is to provide the ends with something structurally solid — like the tapering bastion. These turrets would afford excellent moorings to the wall ends. A very simple but good-looking example of this elementary method is seen at Nevasa in the Ahmednagar district. The bastions have a taper upwards and there is a slight convex curve in the vertical outline (elevation) of these turrets which combine grace with strength. The idgah is presumably built during the Nizam Shahi rule. As found in some later structures, this effect is achieved, although to a comparatively lesser degree by the erection of rather heavy minarets on both the ends. However, the way in which the minarets came over here is not the same as the turrets and

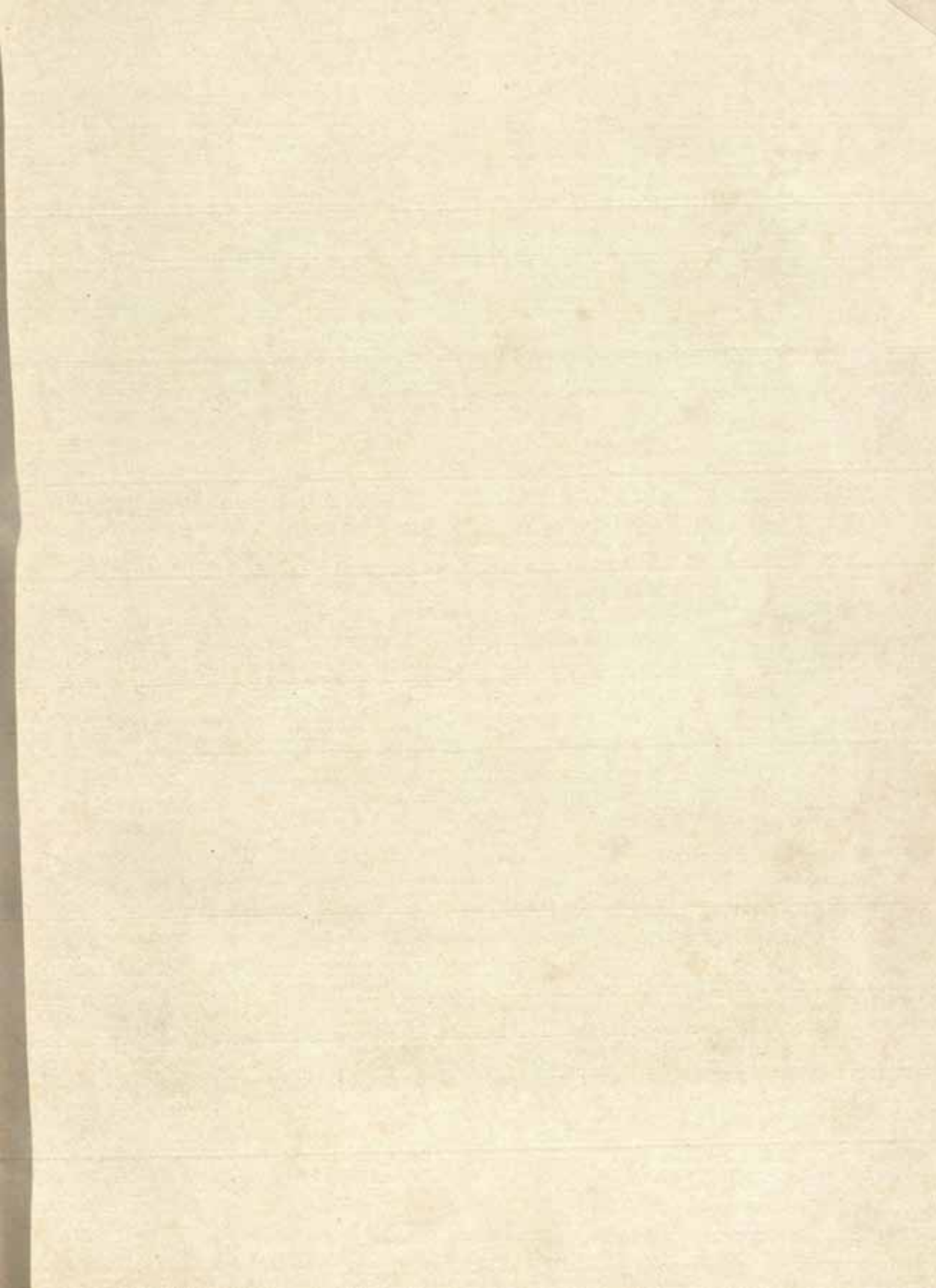
is discussed later on. For the present, the basic stage, that of converting a wall into the semblance of a structure is over.

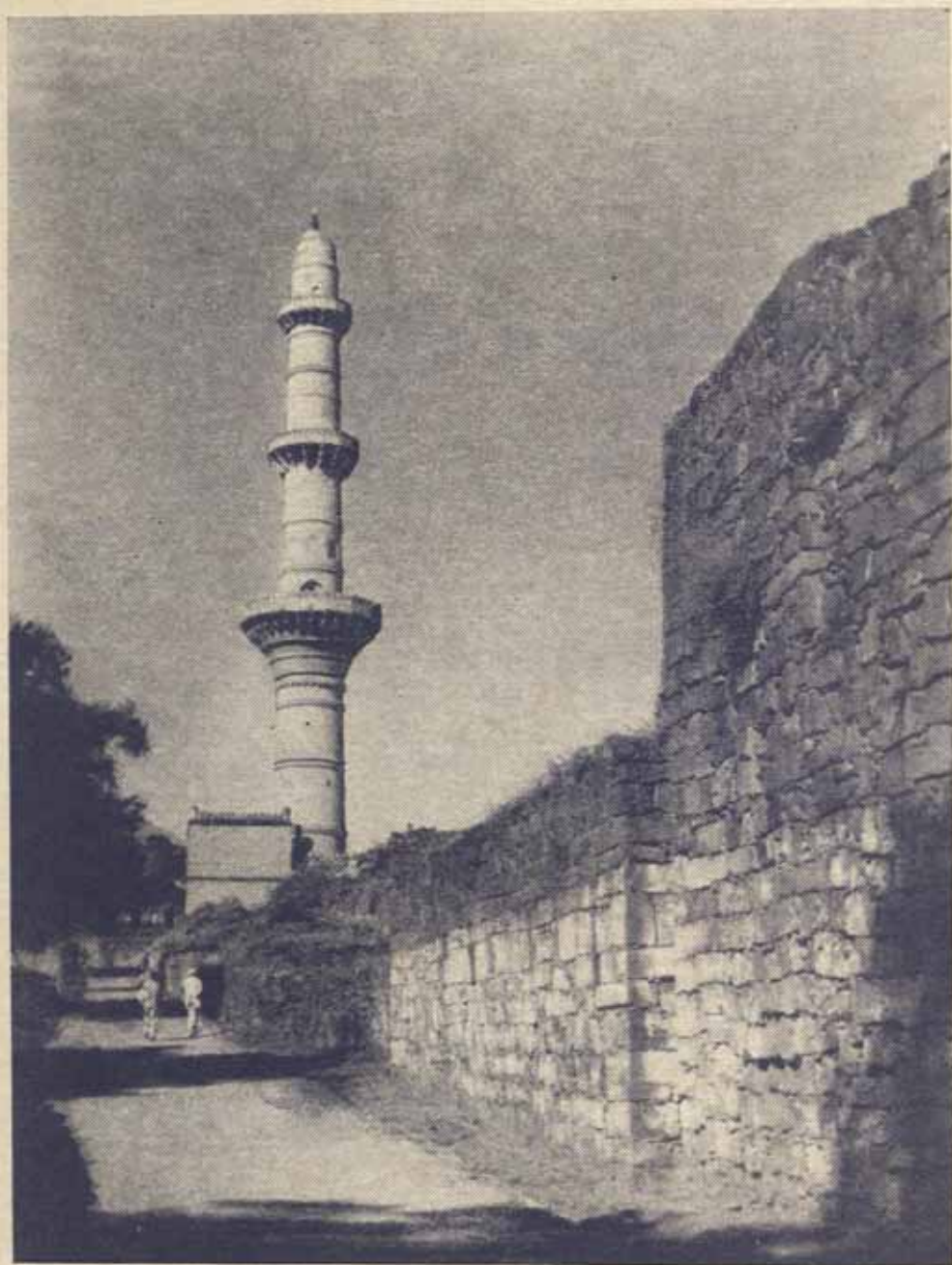


Sketch of an idgah at Nevasa

The next problem would be to decorate the surface of the wall, as also the outline it would cut against the sky. It is only one surface of the wall, one which opens out on the space meant for prayers, that is ornamented. The only kind of decoration applied seems to be arcades in relief — or arched niches. A number of these arched niches often with double or treble recesses flank the mihrab. There is very little doubt that the quibla wall of a mosque has served as the model for this wall consciously or otherwise. In the case of the mosque it is the result of the methods of construction; here it is the result of the appreciation of its artistic value. The arches of the niches are of the pointed variety. Very often the entire surface of the wall is divided into five or seven rectangular panels each containing recessed arches of the pointed or multi-foil design. Along with the development and elaboration of the general architectural trends, several novel features came to be introduced in the idgah also. Especially the extreme floridness of the late Qutb Shahi style reflects itself most faithfully in the stucco decorations of the idgah at Koilkonda — to choose one of the many examples. The decorations and designs are discussed in a separate section; just now suffice it to say that they were not far different from those used on mosques, i.e. the facade walls of the mosques. In addition to these, a feature, not decorative, but which somehow creates that effect is the 'Dakka'. This is a platform to which a stair-case leads up. This in a way is the enlargement of the mimbar and this 'dakka' is used only in the case of larger structures.

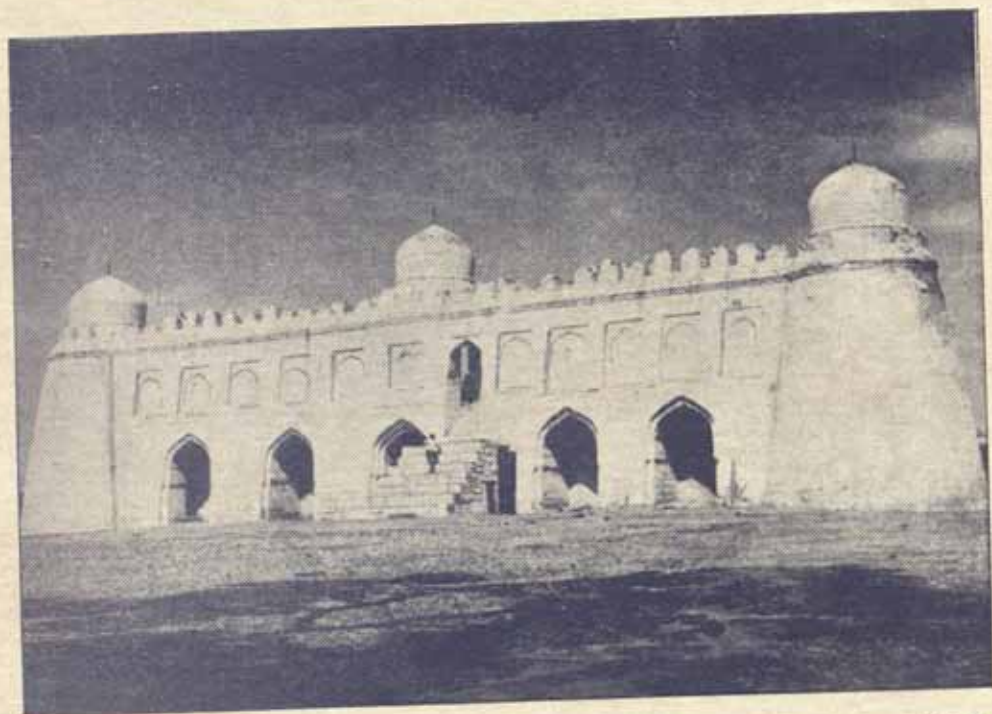
The other problem, namely, that of the outline of the wall is solved in the most orthodox Islamic tradition: slightly emphasised centre balanced by minarets or turrets on either flank, plus parapet cresting of various shapes. Several methods are utilised for this purpose. The idgah being only a wall, there was very little space, at least in the primary stage, for any central dome. This was replaced by a flying arch of the



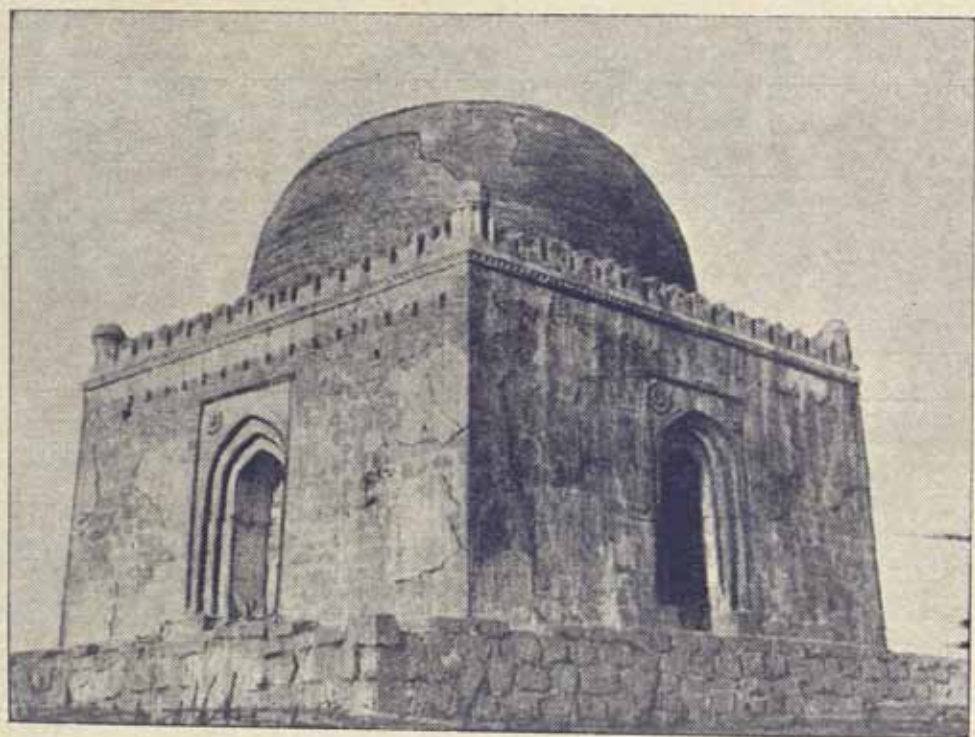


CHAND MINAR :

: DAULATABAD FORT



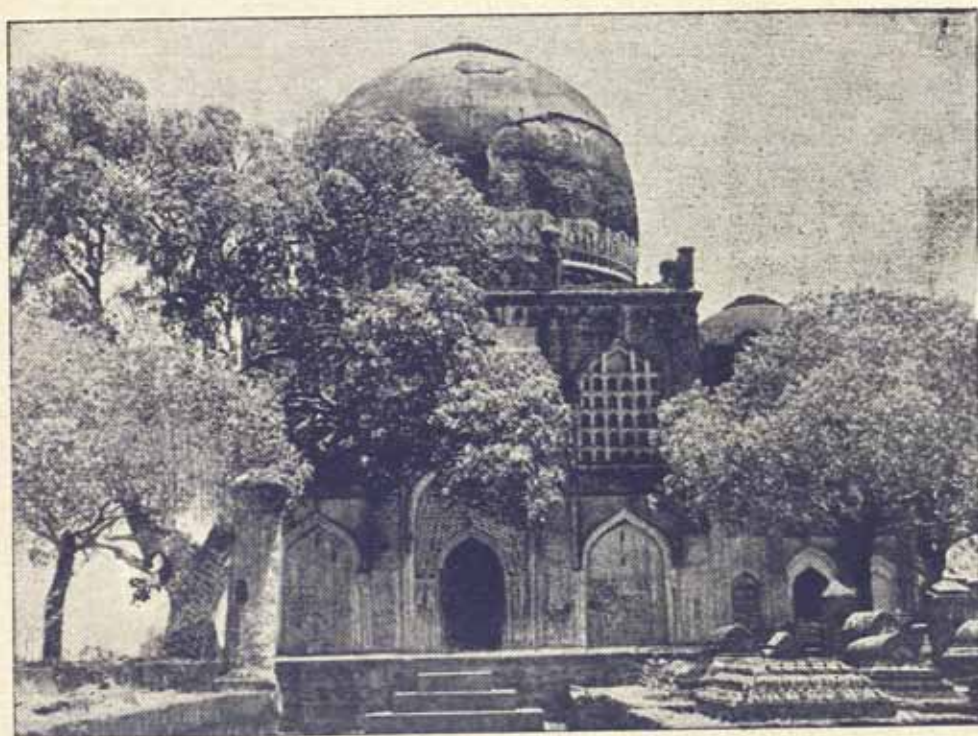
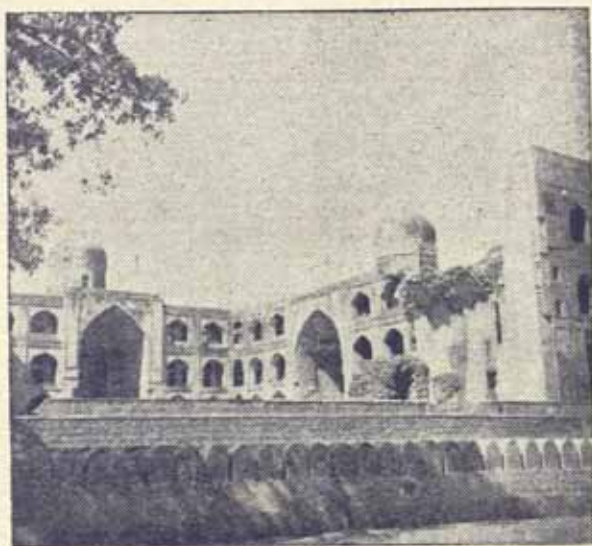
TWO LATE EXAMPLES OF THE DECCAN IDGAH. [ABOVE] THE IDGAH AT KOILKONDA. [BELOW] IDGAH AT BIJAPUR
From the bear walls of the earlier period the Idgah has now developed into a three dimensional structure.



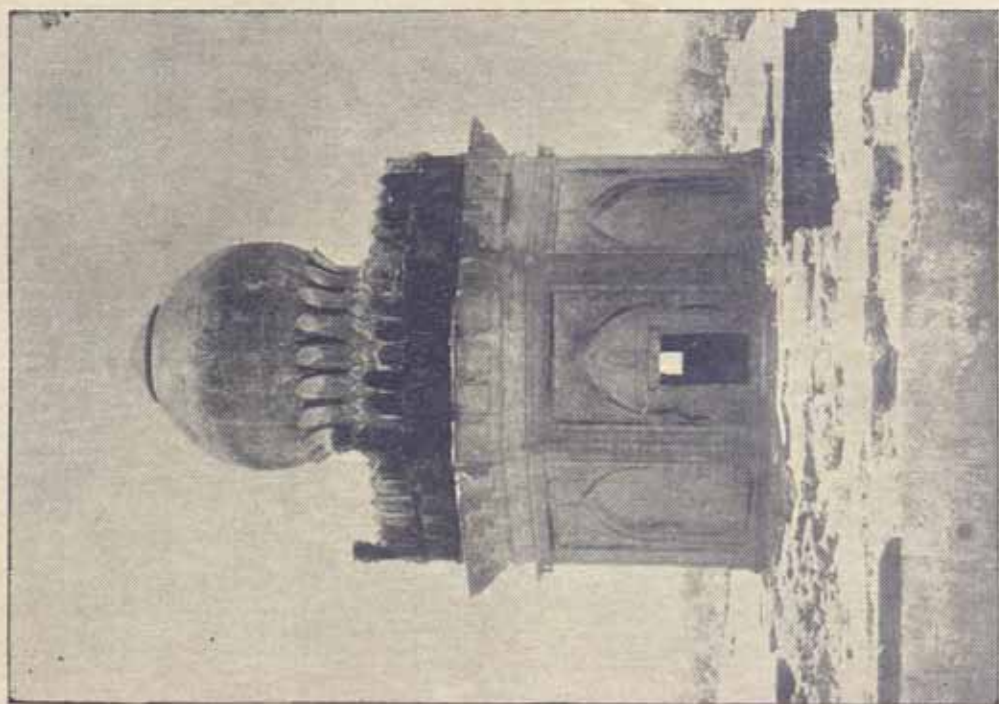
EARLIEST TOMB STRUCTURES OF THE DECCAN
GULBURGA

Upper : Tomb of Hasan Gangu Bahmani. Lower : Unknown (?)

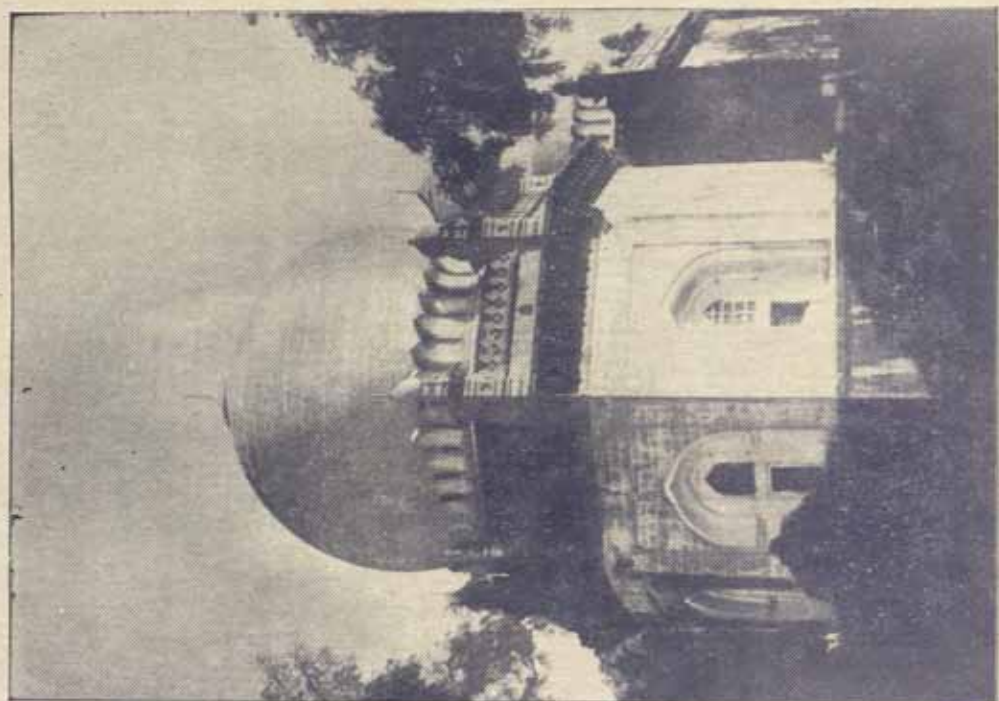
THE MADRASA OF
MAHMUD GAWAN
BIDAR



TOMB OF HAZRAT MAKHDUM QUADIRI : BIDAR



(a) Tomb near Ibrahim Rauza; Bijapur.



(b) One of the Jod Ghumats; Bijapur.

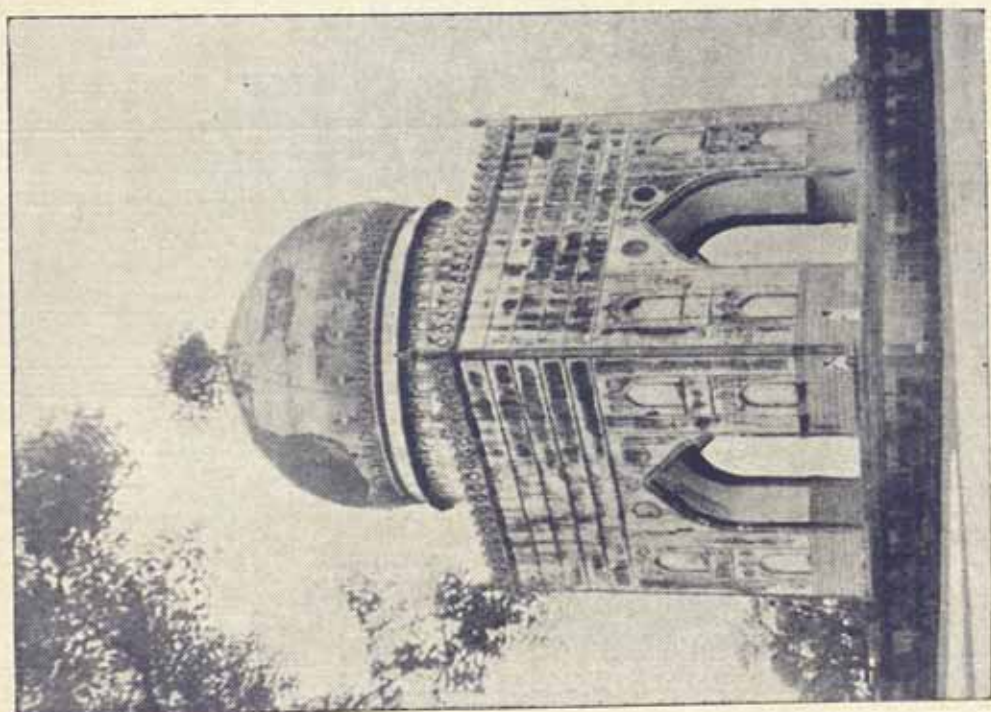
OCTAGONAL TOMBS



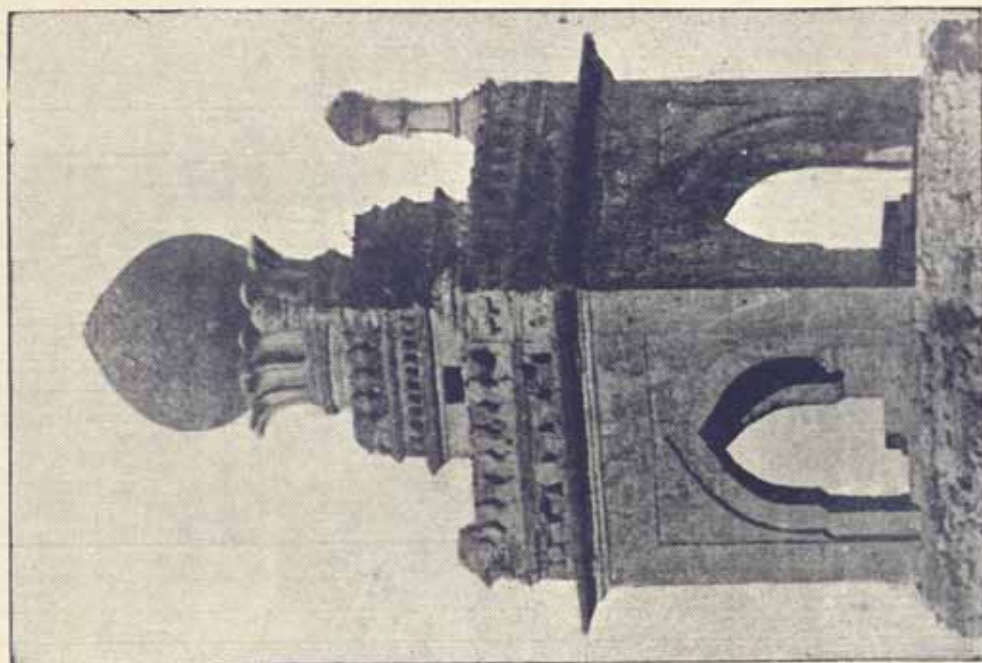
CHAUKANDI : BIDAR



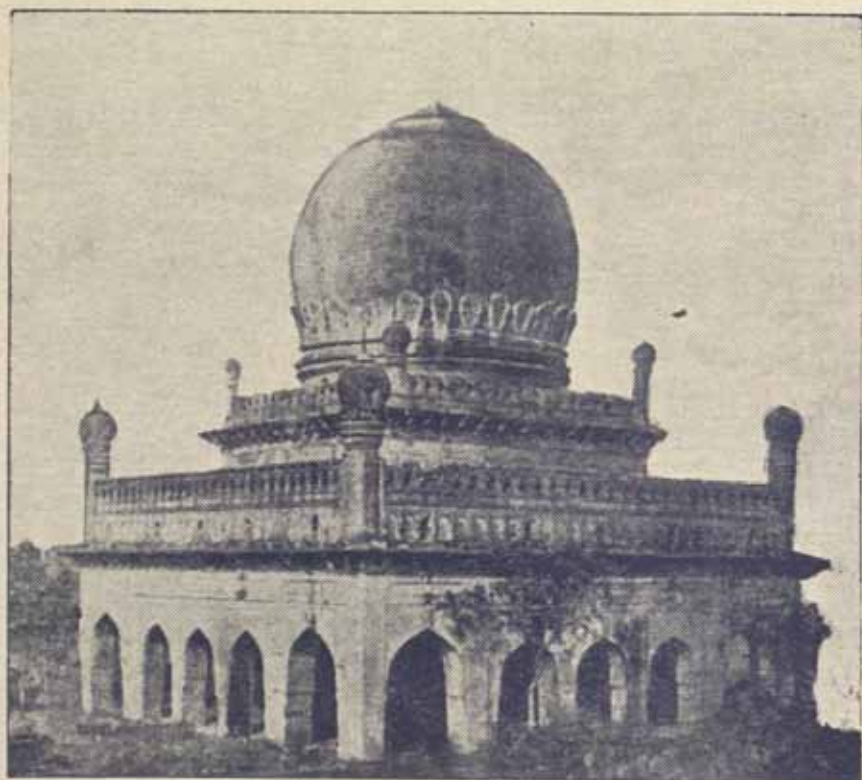
Tomb of Jamshed Quli Qutb Shah : Golconda



(a) Tomb of Sultan Ali Barid : Bidar



(b) Allah Baba's tomb : Bijapur



TWO-STOREYED TOMBS
Afzal Khan's tomb, Bijapur



TWO-STOREYED TOMBS

Tomb of Sultan Abdullah Qutb Shah, Golconda

KARIM-UD-DIN'S MOSQUE : BIJAPUR

This is one of the earlier mosques erected in the Deccan. As the pillars make it obvious, it was constructed out of materials of Hindu temples that were pulled down. And but for the plan, which adheres to the orthodox pattern, it is most unlike a mosque structure.

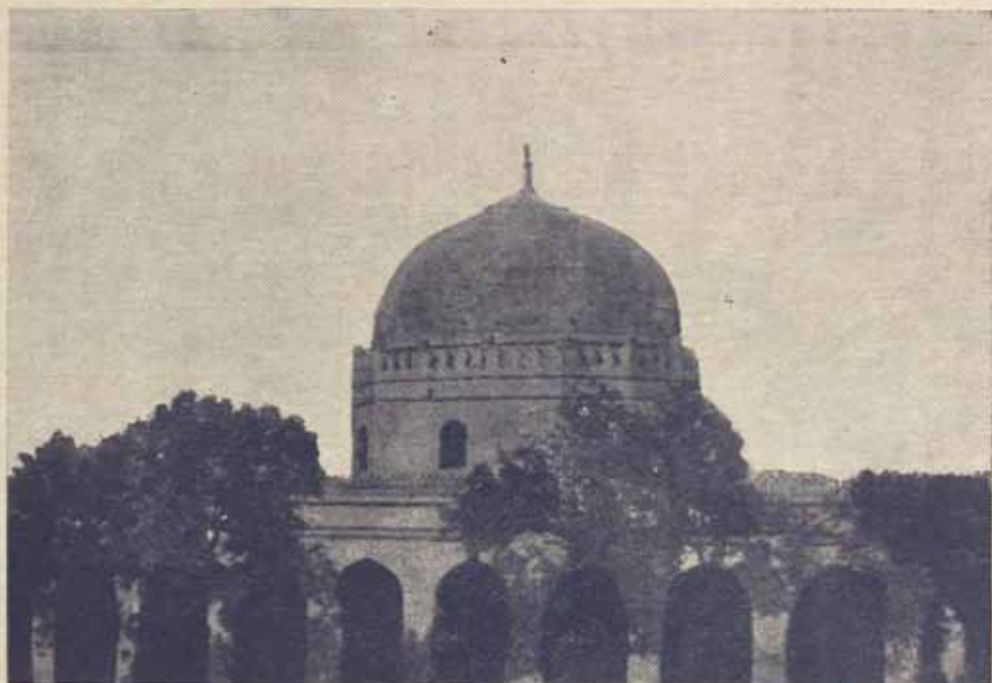
[See page 34]





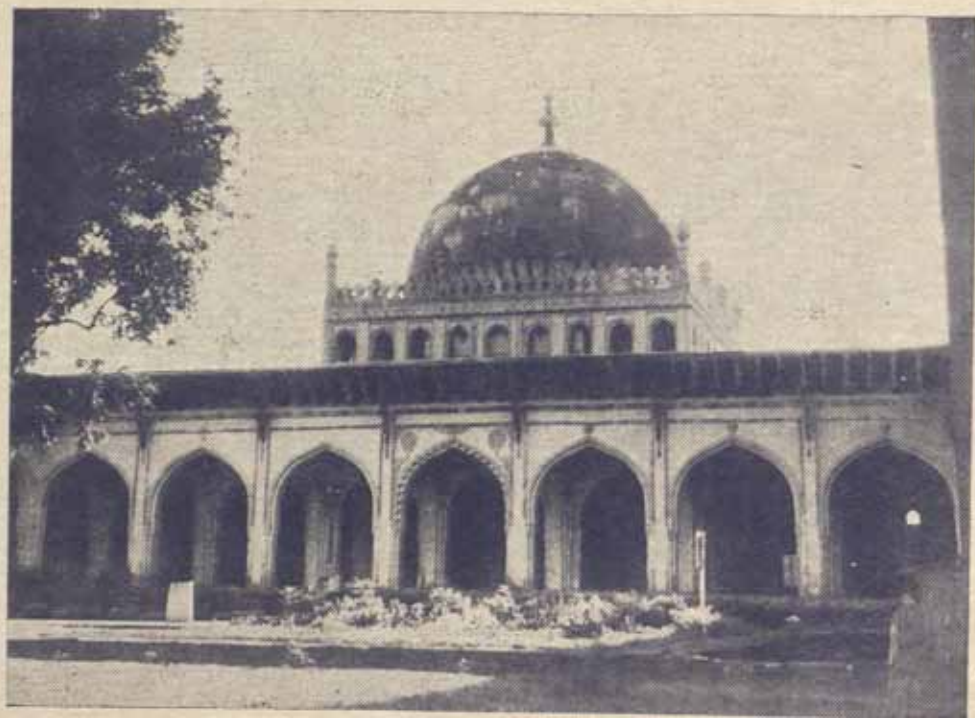
THE JAMI MOSQUE : GULBURGA

This is an unusual type of mosque. Although the essentials of a mosque structure are all there, they are transformed into a novel design by covering up the space that usually forms the open courtyard in front of the liwan. Its arches and domes have a shape uncommon to other Gulbarga buildings.



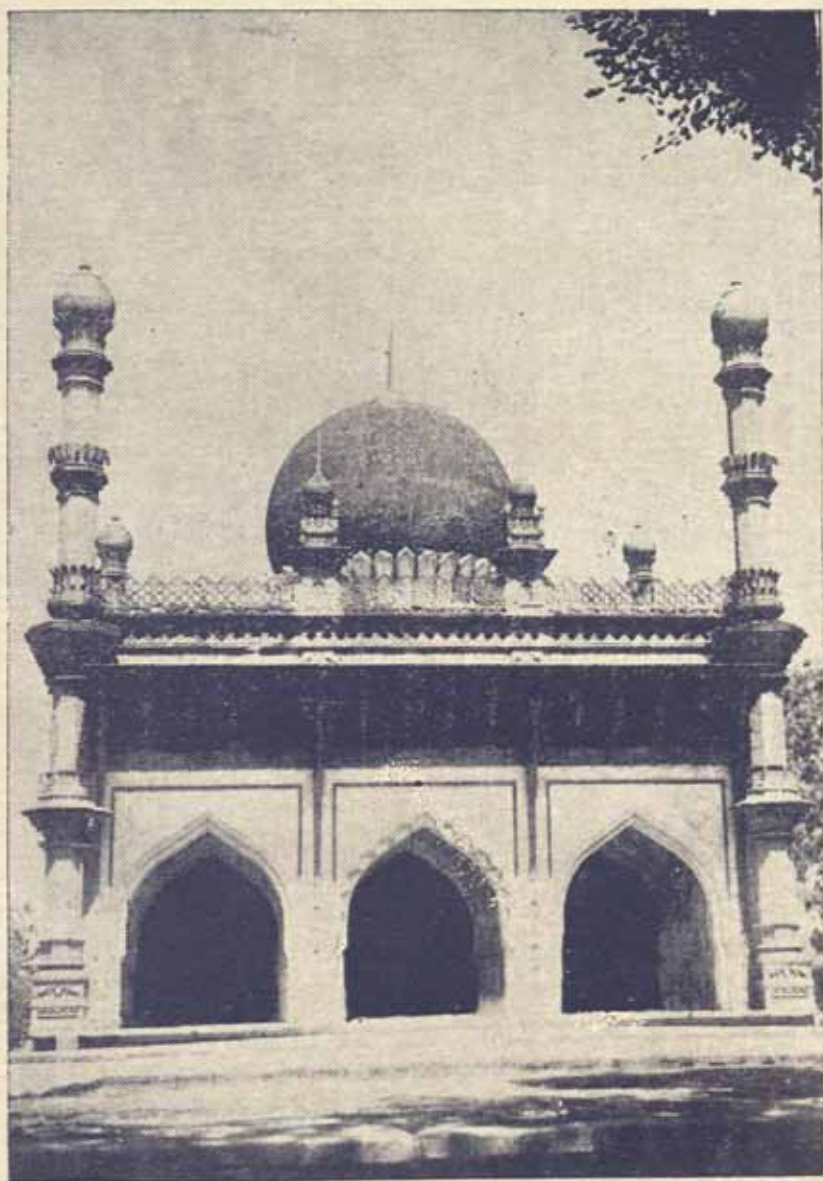
THE SOLAH KHAMBA MOSQUE
BIDAR FORT

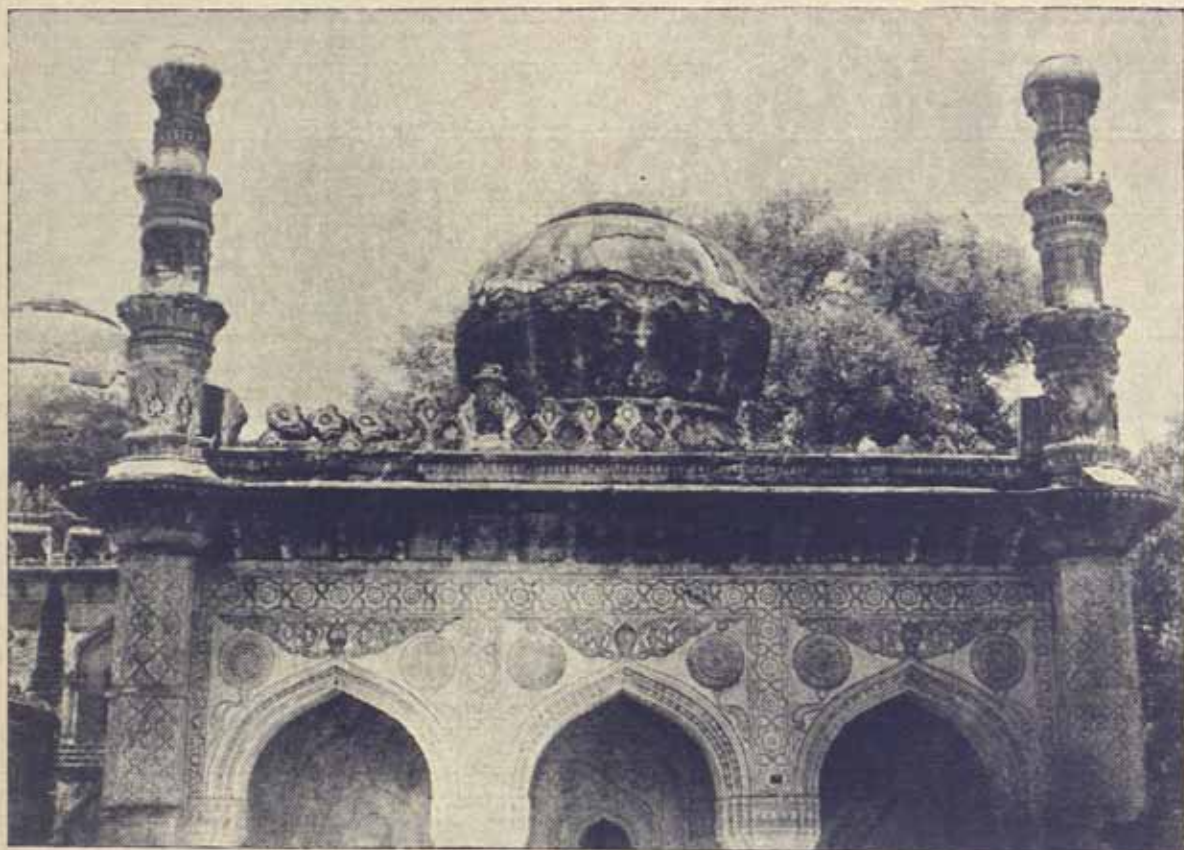
JAMI MOSQUE : BIJAPUR



MALIKA JAHAN BEGAM'S MOSQUE :

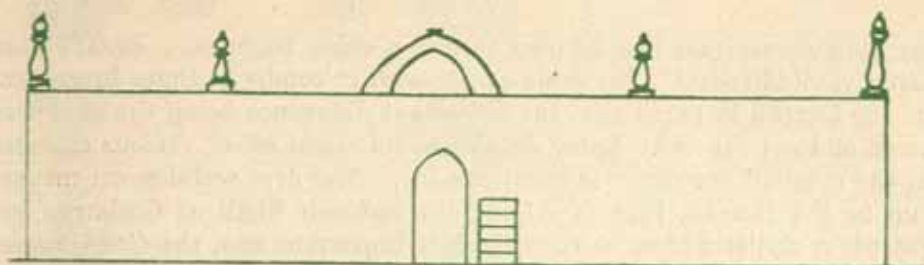
BIJAPUR : An extremely pleasing and well-balanced mosque structure. No member, neither the minarets nor the dome get undue emphasis and hence the impression of harmony is unmistakable.





MOSQUE NEAR TOMB OF HAZRAT
QUADIRI : BIDAR

This is another example of a well-balanced elevation. As in the structure shown in the previous plate, no member gets over-emphasis. Also noteworthy is the intricate stucco ornamentation.



Sketch of an idgah at Ahmednagar

appropriate size and shape. And on both sides minarets of light nature that would go flush with the flying arch were erected. An idgah at Ahmednagar illustrates this type very well. Soon, however, the size of these walls increased greatly and it was possible not only to build a dome on the central portion, but even to erect cupolas over it. Increase in size made the use of several devices feasible. As just mentioned, on the central portion a dome or a cupola-like room with a domed roof was erected. To support this room the central portion was projected forward considerably. Staircases were built in the main wall to reach the cupolas. In addition to this dome and cupola, similar structures were erected over the flanking turrets. Very often the upper storey projects much beyond the diameter of the bastion supporting it. Heavy stone brackets of the south Indian style support these projections. The cupolas look extremely solid due to the lack of wide openings in their walls while their overhang make the idgah seem extremely top-heavy and ill-balanced. It might be suggested that these were crude copies of the cupolas that the Mughul and Rajput architects used to so good a purpose. But the slender pillars and the broad arches making for wider openings that make these structures so light and graceful in appearance, are absent here. The cupola-like structures are visible only on late idgahs and it is obvious that this is a case of ill-conceived adaptation. [See plate I].

Thus three well-marked types can be distinguished in the Deccan idgahs. Each represents a stage in the development of the idgah design. Each stage is utilised as a separate model by itself and hence we find that most of the idgahs of the region fall closely in either of the above three categories. Out of these, it is only the second variety, that of the Ahmednagar idgah that is really important. It embodies so well the Islamic conception of structural beauty, the idea of the balance in the outline of the building. The problem and solution present themselves here in their most elementary form.

TOMB

The structure of the tomb is common practically all over the Islamic world. 'From the earliest times to which it can be traced the Syro-

Egyptian mausoleum has its own style : a cubic room on a square base with a vaulted roof'.⁴ The same can be said of tombs in India in general and the Deccan in particular, the important difference being the roof was domed and not vaulted. Later developments might effect various changes but the original prototype is unmistakable. The first well-known mausoleum in the Deccan, that of Ala-ud-din Bahman Shah at Gulburga represents a stylistic idea, so does the last important one, the Gol Ghumat at Bijapur. In between these two are several monuments that reflect the various stages of the development of this architectural concept as well as its various branches.] The aspects relating to construction and ornamentation are discussed separately; here the evolution of the important features in the design being studied. The common tomb structure is a square chamber containing the sepulchre. To quote the *Encyclopædia of Islam*, 'For the dead of the lower orders a grave is sufficient. Those of the higher classes, not content with a grave require a mausoleum.'- Probably the Deccan was always bristling with 'those of the higher classes', for, the number of tombs in this area is literally innumerable. Generally, these structures are conceived on a spacious scale and it is their size that impresses the onlooker more than any other thing.

Before entering into a detailed discussion of the aspects of the tomb-structure as a type, it would be useful to describe the tomb of Ala-ud-din Bahman Shah as the proto-type for future progress. This structure is modelled after the Pathan structures then current in the imperial city of Delhi. The tomb follows the main characteristics of the parent type quite closely. It is a chamber square on plan with very thick walls, roofed over with a dome. On all the four corners are short minarets of a peculiar design. They have deep flutings and create the impression of a bundle of a number of cylindrical objects. The tops of the wall carry parapet crestings similar to those commonly used for forts. The walls of this tomb have a very pronounced taper upwards. This taper creates the impression that the walls and consequently the entire structure are standing four-square on the plinth. Similarly, the dome with its near hemispherical section rests squarely on its base. These features impart to the building a strength and vitality, which mere large dimensions do not make for. [Plate II].

Later structures show that the Deccan architects developed this basic structure in a number of ways. The first important and most notable change effected in the succeeding buildings is the elimination of the taper or slant in the wall. It was indeed the elimination of a valuable architectural device, a device that was meant to lend strength to the structure. In other respects, both as regards the plan and elevation, various

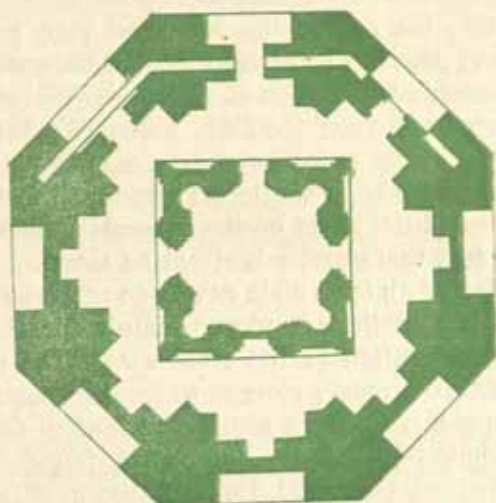
⁴ *Ibid.*

⁵ *Ibid.*



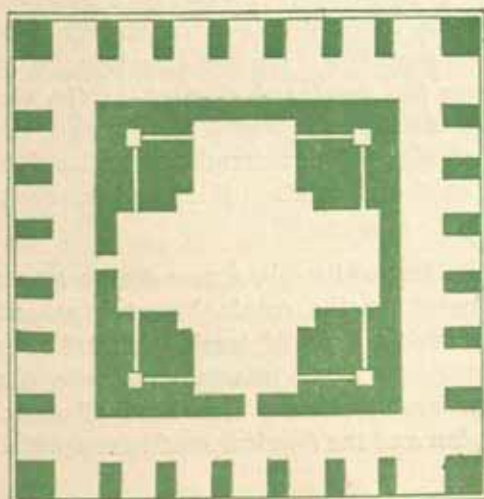
(a)

*Tomb of Ahmad Shah
Wali : Bidar*



(b)

*Tomb of Hadrat
Khalil-ullah : Bidar*



(c)

*Plan of the tomb of
Muhammad Qutab Shah :
Golconda.*

Fig. 3

*After G. Yazdani
in 'BIDAR'*

improvements were made. It might be remarked that in spite of these improvements, the tomb structures, except in very few cases, present an appearance so uniform as to verge on the borders of drab monotony. Not because there is no divergence in the artistic detail, there is abundance of it, but due to the fact that some features have been adhered to with a fanatical persistence. Two aspects of a building are to be considered in this respect. First is the plan and second is the elevation. They cannot be torn asunder being parts of a single unified design. At the same time they yield most fruitfully to separate analysis. Both of these seem to be governed by artistic and ritualistic traditions. The most common and orthodox plan of a Moslem tomb as stated earlier is the square. The vast majority of Moslem tombs are on this plan. Their dimensions might differ but they are square all the same. It is only in the later phases of Deccani architecture that a variety of plan is obtained. Next to the square the octagonal plan prevails. Two examples of this type of plan can be seen in the Jod Ghumat at Bijapur and the mausoleum of Jamshid Qutb Shah at Golconda. [Plates IV, V, VI]. This refers to the external outline of the plan. Internally there might be a composite variety of an octagon and a square as seen in a Golconda tomb. However, this relates mainly to matters regarding the techniques of construction and has very little effect on the external appearance of the structures. Notice in detail, therefore, might not be taken. Another alteration is the introduction of an open aisle or arcade around the square chamber of the tomb. This is a method employed mainly for the purpose of effecting changes in the elevation of the structures. The arcade or aisle rises up to the height of a single storey, while the central chamber rises up to two or more storeys. Here also a noteworthy fact is that it is at Bijapur and Golconda that this type of plan is found. The famous tomb in the composite tomb-mosque, Ibrahim Rauza at Bijapur, in the tomb of Afzal Khan at the same place and in the mausoleum of Abdullah Qutb Shah at Golconda is this change of plan visible. [Plate VIII]. To put in a nutshell, the square form of plan dominated the conception and construction of Deccani tombs. This imposes a great restriction on the elevation. One vast plain surface necessarily becomes the dominant element in the elevation. Out of the two, the plan and elevation, it seems certain that the plan had a sanctity, grown out of orthodox religious tradition and usage, for it is the elevational aspect that is subjected to alterations and improvements while the plan is left untouched. [Figure 3]

In the late manifestations of the Deccani tomb, a new design seems to be creeping. There is no mistake about the original prototype and the source. This is the 'chhatra' or cupola type of tomb. The chhatra was fully evolved in Rajasthani architecture and resembles closely the open pavilions so common in Mughul architecture. This kind of structure is either square or octagonal on plan and the domical roof is supported

by slender pillars or piers leaving large arched openings in place of surrounding walls. It is at Bijapur and Bidar that a number of these structures occur. The tomb of Allah Baba, the green stone tomb at Bijapur and the dog's tomb and the barber's tomb at Bidar, belong to this variety. However, the Deccani architects could not bring that touch of grace and the feeling of lightness to their structures. [Plate VII]

ELEVATION

The traditional elevation of a tomb as represented by the mausoleum of Bahman Shah at Gulburga, consists of four elements. First is the dome. Next come the minarets, thirdly the parapet cretings and last and most important a huge wall surface. All these go in to create a combined unified effect, a united whole. The problem naturally is to effect a balance and harmony amongst all these. The solution is by no means easy, it again brings us down to the fundamental issue, viz. the ideal form of architectural construction as visualised by Islamic artists. A number of lines has already been devoted to the discussion of this point. However, a very general conclusion can again be stated here profitably. The Islamic artists, at least as far as the Deccan was concerned, occupied themselves more with the betterment of the general outline of the structure than with the better arrangement of mass. The tendency is towards better balanced and finer curvilinear silhouette, very often at the cost of the mass and weight of the building. This is a very broad and general statement and there is no denying the fact that there are exceptions to it. But there is no need to enter into the same discussion again. A restatement would suffice for the present purpose.

[The very first example spells out a certain concept regarding the visualisation of the elevation. Although as stated above, the entire structure presents an appearance of strength no single element has been given prominence. The dimensions of the lower structure and those of the dome are so arranged that none seems to dominate the other. Secondly, unlike the mosques and the later tombs the early structures do not use three-point balance i.e. the minarets on either side are not big enough to distract attention from the height of the dome. In late examples this system is used, but more about it later. Minarets are there but they do not play any significant role in the over-all composition of the elevation; they are there through convention and usage. Can the balance between the two aspects of the facade, viz. the wall and the dome be defined? This question of harmony and balance is one that belongs more to the field of subjective taste than scientific definition and calculation. Hence no hard and fast rule can be stated. However, certain points might be mentioned profitably. In the first place, the wall i.e. the cubic sepulchral chamber is the main building and the dome is its roof i.e. the dome is meant for the building and not *vice-versa*. Neither should the dome

look too insignificant nor the lower structure too much oppressed below the roof. Instances can be pointed out where due to inescapable subjective ideas of beauty both these deformities have been brought into existence. To cite examples, the dome of the tomb of Hadrab Qadiri at Bidar is so large as to cripple the structure under it. While the structure known as the Dog's Tomb from the same place has a dome too small to grace the building.

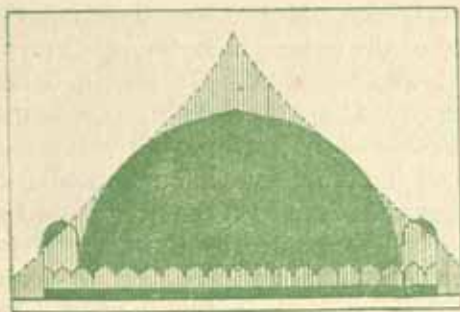
A change most intimately related with the balance of the elevation is the introduction of storeys in the tomb. Internally there need not be so many horizontal divisions, externally however, three distinct plains are visible. The lower storey is the one with more breadth, upper with less and the topmost less than that. This is a double-edged device. By the introduction of the pyramidal sort of aspect, it gives a better balanced horizontal top-line and also greatly relieves the vertical strain the earlier structures exercise.

The elevation is considered here from the two dimensional point of view. The balance and harmony of the outline of the structure is examined. Its effect on the arrangements of mass and weight are highly important. The earlier outlines make for solidity, the later for lightness, this irrespective of size. However, when one notices that the main problem to which attention was devoted was not so much mass as line, an appreciation of the Deccani works becomes easier. It is then quite clear that the Islamic architect has been able to maintain a very well balanced elevation. Even in the later stages with a trend towards the unorthodox, very few important structures display anything fanciful or crazy. The later outlines, more curvilinear and with graceful shapes are probably aesthetically superior to their robust predecessors.

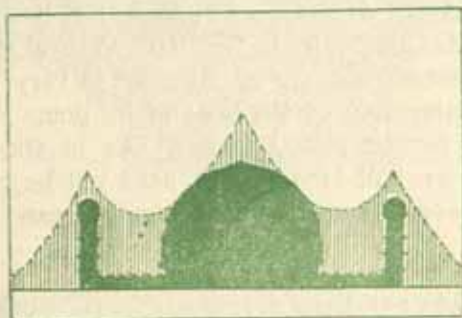
With these remarks a detailed examination of the various component parts of the elevation can be now undertaken.

DOMES

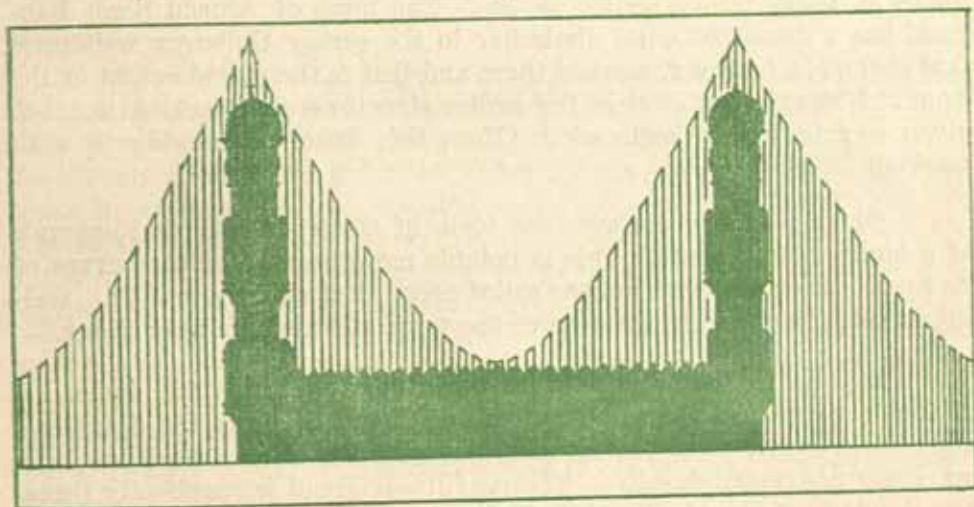
The original model has a dome the outline of which is hemispherical or its lesser section. A dome with this section appears as if it is resting squarely on the substructure. The eye moves smoothly over the outline — no angles and no sharp turnings are necessary. The outline falls down in a stately downwards flow. This imparts the structure a majesty and weight of its own. In some cases, the dome is raised on higher drums and the outline is not spherical but ogee. This change is seen not only on structures with Persian origin like the Jammi Masjid at Gulburga, but also in various later buildings like the Hadrat Makhum Quadiri at Bidar or the one at Fatehpur. Another change, popular in the Deccan, is the introduction of the spherical or the celebrated bulbous dome. With its raised drum this kind of a dome is an extremely artistic



(a)



(b)



(c)

Fig. 4

Diagrams showing changes in the elevational aspect.

device, but it is very tricky. More often than not the size of the bulb and the inward sweep of the outline have the effect of disjoining it architecturally from the lower structure. To obtain balance in such cases, some alterations were made in the other components of the elevation. So long as the dome covered the entire lower structure or a sizable part of it, as in the case of the tombs at Gulburga and Bidar, the dome and the lower structure together formed a unit complete by itself. With the reduction in the area to be occupied by the dome large spaces were left empty on its either side and it was necessary to evolve some means or a scheme for the upper structure in this context. To fill the gaps in, more emphasis was laid on the minarets turning the entire outline of the structure into what can be called a three-pointed one. This three-pointed outline is visible all over Bijapur. [See Figure 4]. At Golconda also this tendency is evident. But a step further has been taken there, and instead of the two flanking minars, we have several, breaking the horizontal plain. The Jammi mosque at Bijapur is very significant in this connection. The contraction of the base of its dome is slight and it resembles the earlier hemispherical domes. As in the latter, so in the former — minarets are subdued. They need not be prominent for reasons explained above. Some typical domes can be cited—below. [Figure 5].

Gulburga domes : These domes are a roof over the building in every sense of the term. Their sides are nearly straight and if they do not move outwards, they do not contract below the dome. The early tombs at Bidar utilise similar domes. The tomb of Ahmad Shah Bahmani has a dome not quite dissimilar to the earlier Gulburga buildings. One change is, however, marked there and that is the raised height of the drum. Not only that, but in the earlier structures this necking was not given any individual expression. Here this drum or necking is well-marked.

Bidar : The dome over the tomb of Qadiri is a typical example of a highly stilted dome. This is notable more because of the curves of its lines. They are what may be called ogee. But slightly so. This feeling is most emphatic in the case of the tomb at Fatehpur near Bidar.

Bijapur : Here the outlines begin curving inside the dome, i.e. giving it a spherical shape. The tomb of Chand Bibi and the dargah of Hazrat Khwaja Banda Nawaz at Gulburga display this tendency in a markedly restrained fashion. The curvilinear trend is manifestly there, but the dome still maintains its dignity, its weight. The Bijapur domes throw away this restraint and go in full length for the spherical or bulbous shape. Very often they do not roof over the entire structure, they are placed on it.

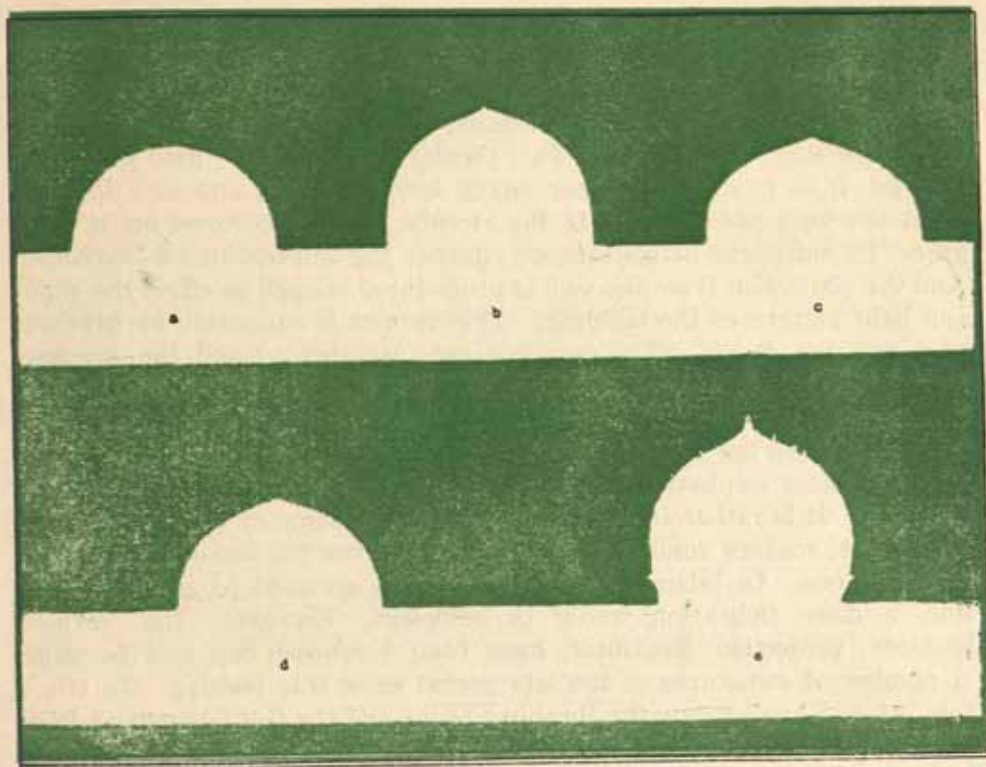


Fig. 5 *Outlines of Domes*

MINARETS

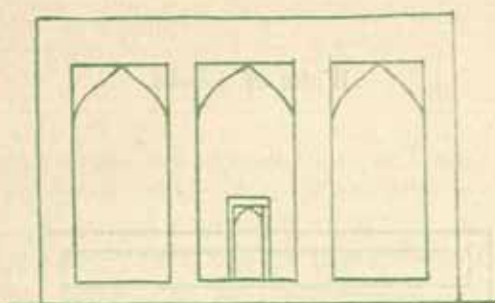
Minarets standing independently such as those at Daulatabad, Bidar, Raichur, etc. as well as those functioning as parts of buildings have been discussed fully in the relevant section. Their role as members of the elevation has been indicated above. As a rule, applicable in most cases, it can be stated that the lighter, more insignificant the central feature of the roof, i.e. the dome, the more prominent and heavy are the minarets. Nowhere in the early buildings are the storeyed tall minars of Bijapur and Golconda to be encountered. The development of the minarets in relation to the facade of the mosque is greatly interesting and that discussion in the section on 'mosques' might be consulted at this stage also. The minarets flanking the dome were always there. But the thing that is new is the shift in the emphasis. This change is so profound that ultimately it results in a total eclipse of the dome as at Golconda and Hyderabad.

CORNICE

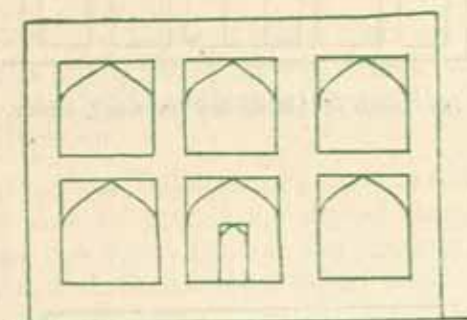
A novel feature, obviously an adoption from local building art, the heavy cornice, imprinted itself very strongly on the monuments at

Bijapur, Golconda and Hyderabad. Nowhere in early structures, viz. the buildings of the Bahmani period, do we come upon this feature. As most planning in Islamic architecture is the arrangement of plains and lines on a two dimensional geometrical basis, there is little scope for the type of cornice that was adopted. This cornice is of the type used on Hindu temples, it is in itself a rather heavy looking affair, and juts forward from the wall powerfully. If the circular section bestows on it some grace, its thickness in appearance clinches the impression of heaviness. And the projection from the wall is pronounced enough to affect the shade and light pattern of the building. This cornice is supported by brackets of a massive design. The two together, the cornice and the brackets form a part in the horizontal composition of a Hindu temple. They enjoy a very prominent role in the temple structure; the cornice does not merely indicate the end of one and the beginning of another storey. It marks it most emphatically; and in addition plays its role in the light patterns. It is rather interesting that amongst some of the few features the Islamic masons condescended to borrow from the infidels heavy cornice was one. In Islamic structures there is no need to emphasise the line, a mere indication would be sufficient. However, the cornice, brackets, projection, heaviness, have been borrowed bag and baggage. A number of structures of the late period show this feature. To cite a few, Afzal Khan's tomb, the Ibrahimi rauza and the Gol Ghumat at Bijapur and the tomb of Sultan Qutb at Golconda. All have prominently projecting cornices supported on heavy moulded brackets. This item has a two-way significance. It plays a role in the formation of the surface of the facade, also in the outline of the facade. Taking up the latter first, the cornice plays a role in the formation of the outline. It adds one more point that arrests the eye that is sliding down from the apex of the dome. In other words, it serves the same purpose as the minarets do — of course not in the same degree — of balancing the horizontal and vertical aspects of the outline. Any break in the outline can be pleasing to the eye, if it is not very violent. The dimensions of the projections of cornices on tombs are generally well-adjusted and do not violently disturb the grace of the outline. About the first aspect, it can be said in a very general manner, that when the whole tendency of the structures is towards the horizontal and when such a structure has a number of openings, the heavy shadows cast by the cornices do not go ill with it. But if the structure has a vertical emphasis and there are no openings, but only the usual recessed arches and panelling so common to tombs, the cornice is out of place. It cuts a majestic vertical sweep in two — to the great detriment of the building. The heavy cornice does not suit a structure the emphasis of which is towards large plain surfaces; it is suitable only to those structures that have accentuated the arrangement of mass by the introduction of wide arched openings, or the

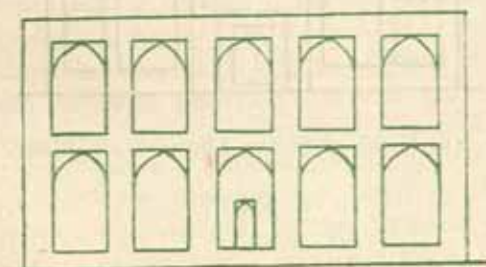
Walls of tombs



(a) Dargah at Nevasa.

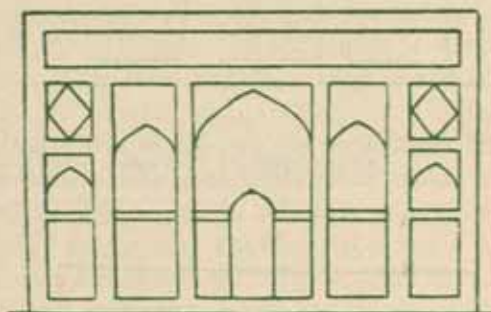


(b) Tomb of Chand Bibi, Gulburga.

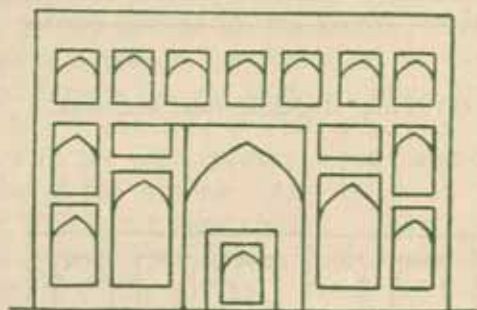


(c) Tomb of Firuz Shah, Gulburga.

Fig. 6

Walls of tombs

(a) Tomb of Ala-ud-din Bahmani, Bidar.



(b) Tomb of Sultan Ahmed Wali, Bidar.

Fig. 7

peculiar mouldings used in Hyderabad architecture at the point where the pier ends and the arch springs up. Earlier works visualised from a purely geometrical basis i.e. two dimensional basis — do not have any scope for such a cornice.

WALLS

Coming down from the cornice, the wall and the outline of the structure are to be noted. The effect of the slanting walls has already been pointed out. It is also mentioned that this feature was very soon eliminated and its place was taken by perpendicular walls. The treatment of the wall-surfaces is quite interesting in the case of tombs. It has assumed three main forms. All these are often used together and very few structures of consequence have used the simple or elementary form. This makes it difficult to trace the methods clearly. However, three chief modes of surface decoration of the walls are as below : [Figures 6 and 7].

(i) The wall is treated as one large plain and treated with panels of recessed arches or to be more precise, arched niches. Innumerable combinations have resulted in the application of this method. They are discussed in detail later on.

(ii) The storeys of the structure are marked out clearly by the introduction of an aisle all around the central chamber. The result is that instead of one, two distinct plains are obtained. These two, or if three-storeyed, three, plains are treated as in *i* or *iii*.

(iii) Here also two surfaces are envisaged. But they are two parts of the same plain and not two distinct plains as in *ii*. Keeping the large arched niches of the lower portion as in *i*, the upper part is treated in a different manner, in which small rectangular openings dominate.

In addition to these three, other devices are also utilised. These consist mainly of projecting pilasters, various recesses for the arches, stucco designs in relief, a projecting cornice and pronounced emphasis on the corner minarets turning them into something like turrets as in the Gol Gumat. These methods, especially the first three affect the overall designing of the building in its two-dimensional aspect. This treatment, the result of the artists' desire to relieve the plain wall faces, in course of time came to affect the three dimensional aspect of the structures also. The large and numerous shadows cast by the different patterns led to the heightening of the effect of mass to a certain degree. However, this advantage was not exploited to the fullest extent, as the patterns were only in relief and there were no openings in the wall except the central entrance arch, in a large number of buildings. It is to be noted that the tomb structure is expected to present the same appearance from all the four

directions and as such all the walls are given the ornamental treatment. Fuller description of these modes follows :—

(i) In the earliest example the wall surface was a trapezium with an ogee arch in the centre for entrance into the sepulchral chamber. Then came rectangular or square wall faces with the entrance arch. This leaves large portions absolutely plain. To relieve this, recessed blank arches were introduced on either side of the central arch that housed the entrance. This is a method most commonly used in these regions. Numerous tombs have utilised this simple device throughout the period under consideration. The plain, pointed arches, the broad squat arches with low imposts of the Gulburga variety and the cusped ornate of Bijapur and Hyderabad, all shapes are used to decorate the walls. The wall-design of even the latest and grandest of them all, that is the Gol Ghumat at Bijapur revolves round the same concept. The next step is the introduction of five instead of three arches. These arches or niches as they really are, help to erase the monotony of the plain surface in its horizontal aspect. But the vertical strain is not relieved. A division of the entire surface into two or three parts solves the problem. Externally the structure shows two or more storeys although internally there might not be more than one. The niches are introduced in rows on the upper and lower storeys either three or five. (Chand Bibi's tomb and Firuz Shah's tomb at Gulburga). These arches are, from an early date, set in slightly recessed rectangular panels. This also makes for a kind of uniformity that is evident to anybody who has seen structures on which it is employed. A number of structures at Bidar display alterations in the pattern that introduce a change for the better. They are mainly in the proportions of the component niches and their disposition. The wall of the tomb of Ala-ud-din Bahmani is divided into five vertical panels. The central panel is broader than the rest and a recessed arch occupies it in its entirety. The parts immediately flanking it have arches less in height than the central one, the panels on the extremes have arches still smaller in size. And the space above them, remaining vacant due to the reduction in sizes, is filled in by lozenge designs in stucco. The tomb of Sultan Ahmed Wali at Bidar utilises a very similar arrangement, but here the sizes of the arches are reduced to a greater extent and a horizontal row of niches is introduced above the five arches. Other structures like the tomb of Qasim Barid and the tomb of Hadrat Makhdum have the three arched pattern, with the central arch much larger than the flanking ones. The main idea behind these arrangements is the prominence given to the central arch and a symmetrical disposition of arches in diminishing sizes. In more ornate and rich buildings this arched-panel has served as the basis and framework of stucco designs in relief or designs in colour, mainly with the help of glazed tiles. But the general lot has to depend on the arrangement of arches for their artistic aspect.

(ii) Tombs with two storeys, the upper one smaller in size than the lower one, are visible at Bijapur and Golconda but are absent from the early capitals. It is not only a development of the square sepulchre but also a novel exercise in designing. In buildings noted in (i) the arches seen on wall faces were elements of ornamental patterns. Now in the type under discussion, they are elements of construction. Arcading in the real sense of the term is implicit in the designing in most cases. The general effect of these structures has more of the massive in it. The open aisle all around creates deep shadows while the reduction in the size of the plan of the upper storey cuts a pyramidal outline that makes for the monumental, the solid. This new design was in all probability inspired by the mosque facades. The two approximate closely. The sepulchre of Abdullah Qutb Shah at Golconda illustrates this type of building in its most elementary form. The tombs of Shah Karim, that of Afzal Khan, and the Ibrahim Rauza at Bijapur are of the same variety. However, in the case of the Bijapur buildings the strongly projecting cornices, the numerous minarets and greatly decorated parapets are likely to obscure the basic pattern of the facade.

(iii) In *i* and *ii* it is noted that the facade was divided in two horizontal compartments; also that both were treated with arched designs. In late Golconda and Hyderabad structures a marked departure occurs. The upper storey is much smaller in height as compared to the lower, and smaller motifs create a honeycomb-like effect. These consist of numerous small minarets, vertical rectangular and arched openings, parapet designs, brackets and stucco designs in high relief. A great crowding of all these elements very often takes place.

MOSQUES

The first mosques in the Deccan were converted Hindu temples. Destruction of the holy places of the Infidel and utilisation of the same material for construction of Islamic shrines were accepted practices. The Deccan has got several mosques of this variety. Notice cannot be taken of them all. Only those that help to emphasise the basic features of a mosque are taken into consideration.

The first, though not chronologically the earliest, to be considered is the Deval Mosque at Bodhan in the Nizamabad district of Andhra. Here, a giant Hindu temple is adopted as a Moslem shrine. The process of conversion is most simple. The image was removed and its niche replaced by a mihrab. A mimbar was constructed nearby and the entire western wall closed. No other alterations were effected. The ground plan and the original construction remained as before. To give it a 'respectable Moslem look', stucco domes were surmounted in the place of the shikhars. The conversion is ascribed to Muhammad Tughluq. A rather comic phenomenon is seen at Bid. Here the Moslems use the upper

part of a temple as a mosque while the lower storey is still a temple. The place is known as the Khanquah Deval. These two examples illustrate how all sorts of make-shift arrangements were undertaken to provide for the most pressing need of the ruling community. While doing this, no attention was paid to any other traditional features of a mosque except the mihrab and the mimbar.

A slightly advanced stage in the development is to be seen in the Jammi mosque in the Daulatabad fort, built of the materials of a demolished Hindu temple. Its author was Qutb-ud-din Mubarak Shah and its date is as early as 1313 A.D. This is one of the earliest mosques in the Deccan and has all the then common components of a mosque scheme. Here the entire court-yard measures some 206 feet square and is surrounded by an enclosure. Three arched openings give access to the court. The western part of this is occupied by the liwan which is five aisles deep. The cell containing the mihrab is a square much larger than the rest of the cells and has a domical ceiling. The eastern face of the liwan, that is the facade, has three arches, one in the centre, the other two flanking it. However, the three are not connected by any wall or screen and as such the facade is formed by a row of pillars and the three arches.

Early Mosques Plans:

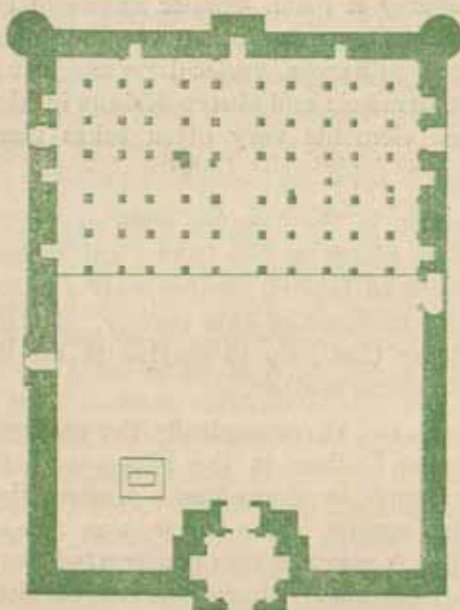
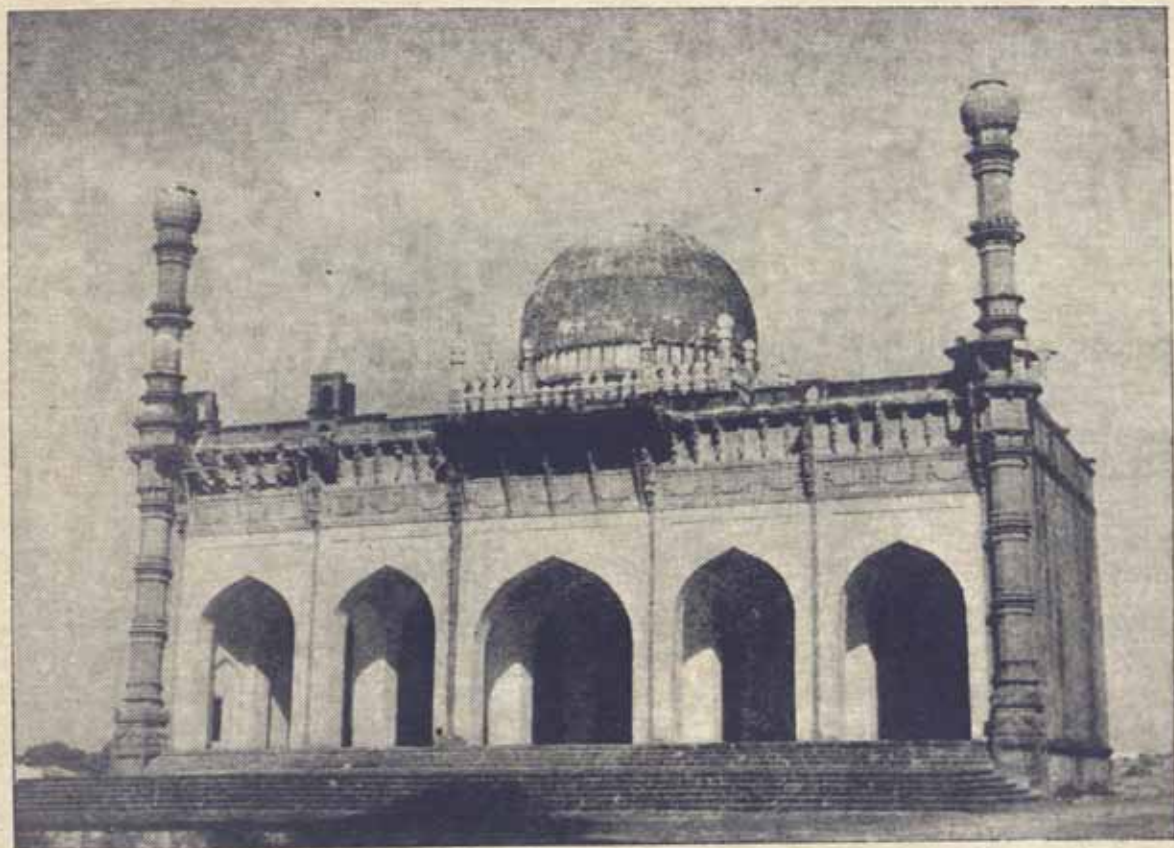


Fig. 8(a)

(a) Karim-ul-din's mosque, Bijapur.

After Cousens : BIJAPUR :

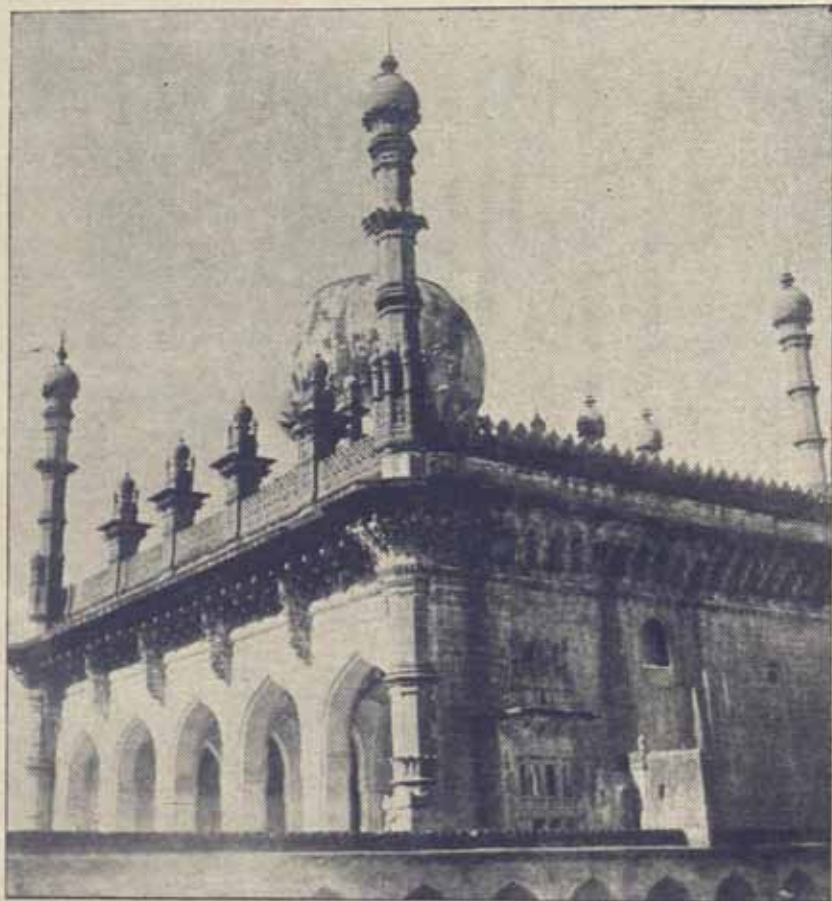


MOSQUE NEAR GOL GHUMAT, BIJAPUR

This structure shows a stage of the transition from the dome-dominated elevation to the minaret-dominated elevation. Here the contrast is not violent but certainly is the size of the dome lesser as compared to the other members.

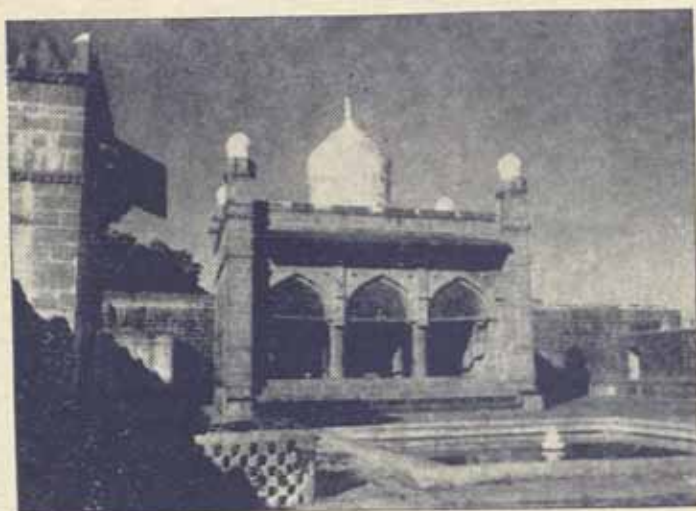
MOSQUE IN THE IBRAHIM RAUZA :
BIJAPUR

This is another instance where the dome is clearly losing its importance. In addition to the flanking minarets, smaller minarets distract the attention from the dome.

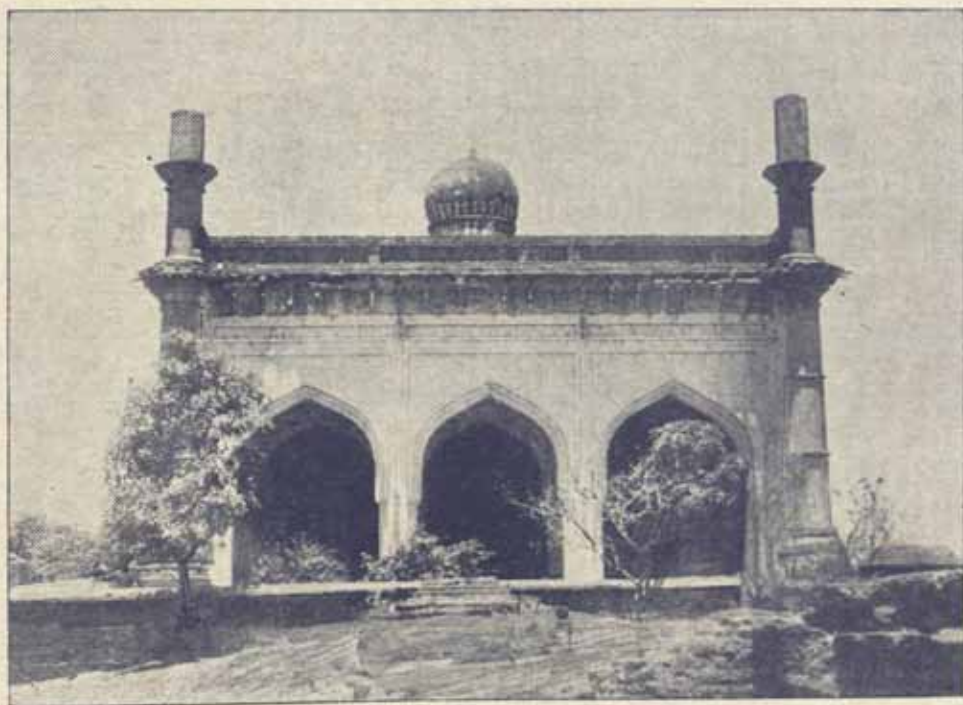


(a) Jami mosque;
Jalna.

Both the structures
illustrate the final
stages of the elimina-
tion of the dome as a
vital factor in the com-
position of a mosque
facade.

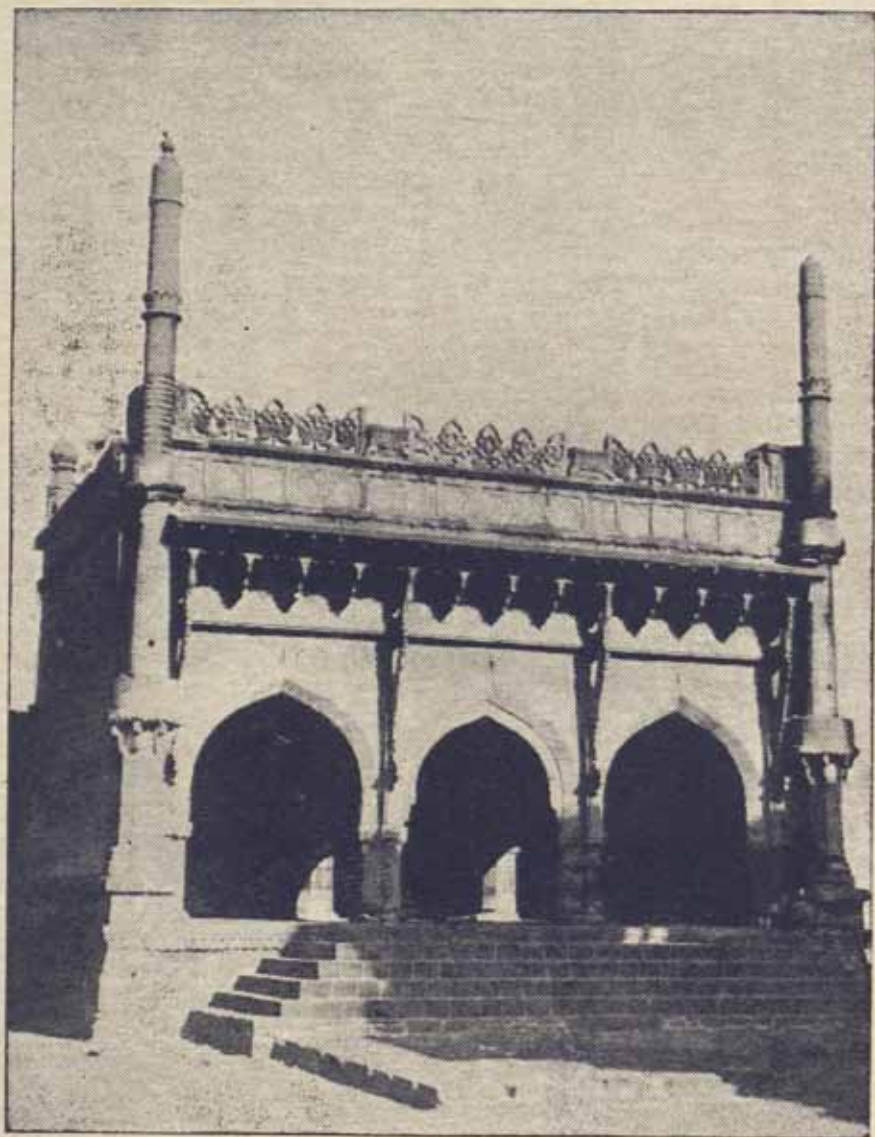


(b) Kali mosque; Bidar.



MOSQUE NEAR MIHTARI MAHAL,
BIJAPUR

The dome has probably fallen off from the
structure ! The journey from this to Golconda
mosques is not far.





(a) Jami Mosque, Hyderabad



(b) Mosque near Quth Shahi tombs, Golconda.

Here the dome has ceased to play any role in the elevation of the building.



MOSQUE IN THE AFZALGANJ : HYDERABAD

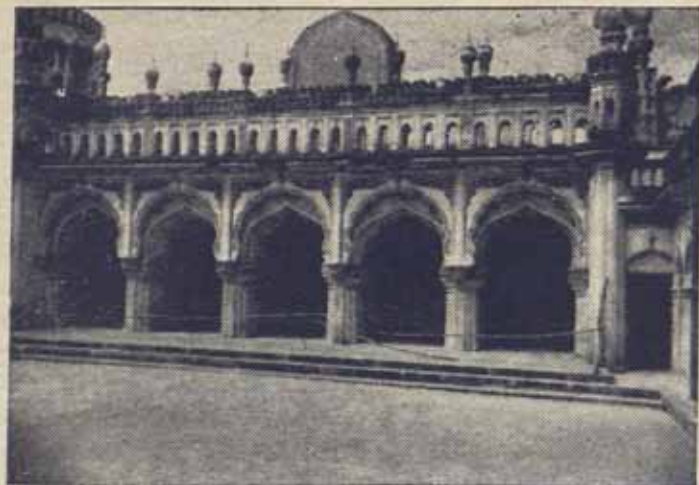
Note the near baroque stucco ornamentation of each and every component of the building.

TOLI MOSQUE, HYDERABAD

The final stage of the development of the mosque pattern. The dome is eclipsed and the minarets have assumed huge proportions.

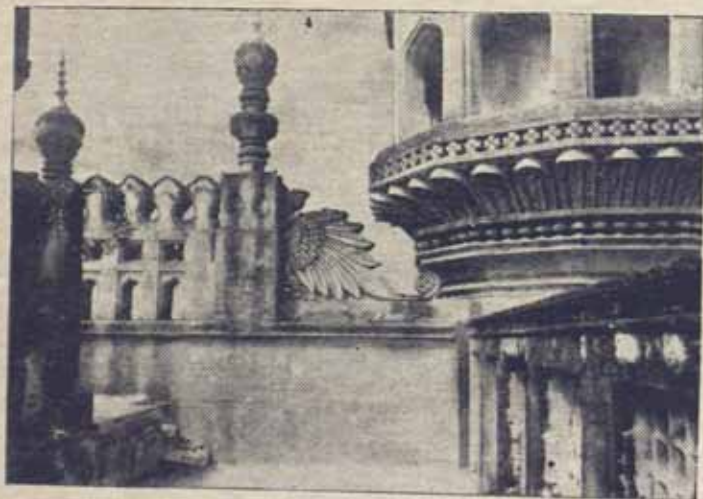
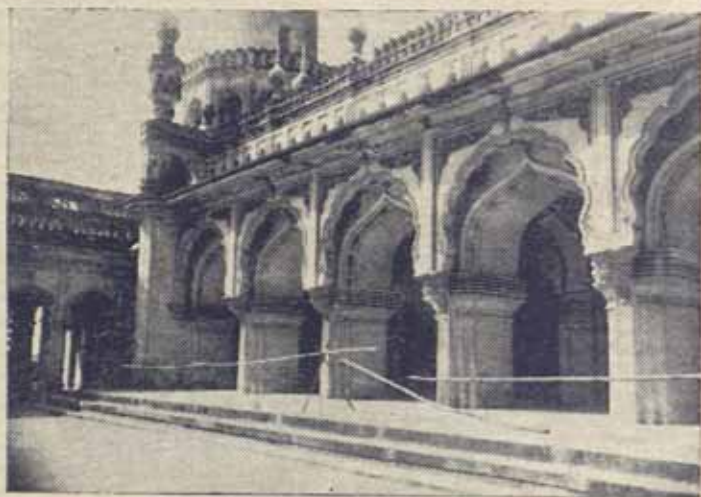


MOSQUE AND DETAILS
OF CHAR MINAR
Hyderabad:

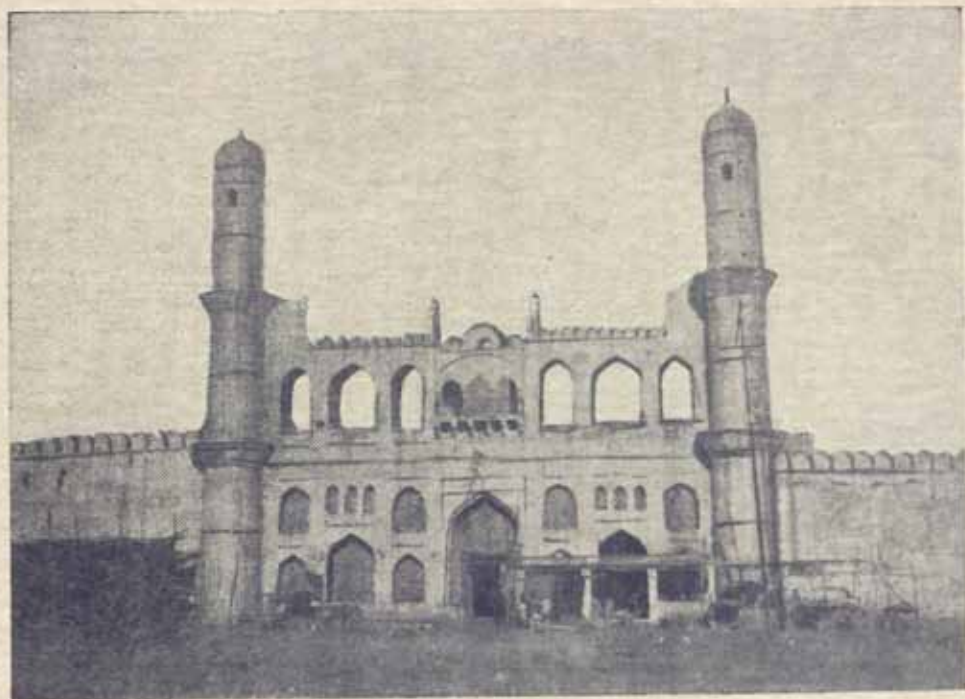


(a) Facade of the mosque.

(b) A closer view of the arches. The cusped arch is a novel feature in Deccani architecture.



(c) Stucco lotus motif and ornamentation of the base of a balcony.

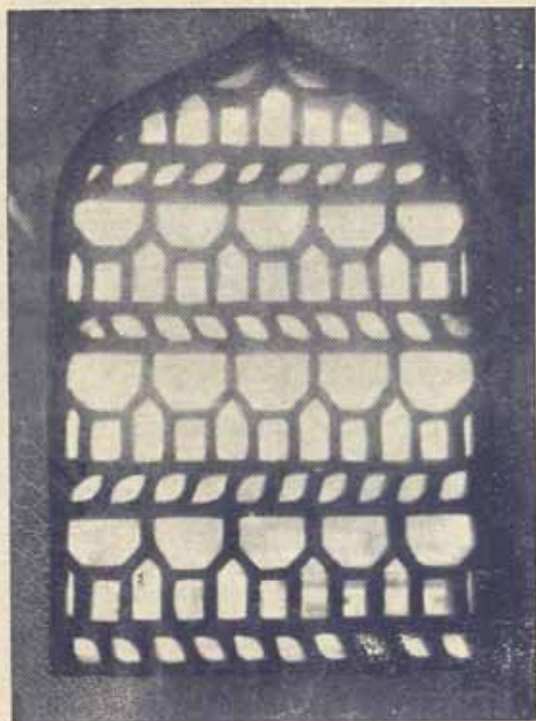


FACADES OF STRUCTURES AT GULBURGA
THAT WERE EITHER MOSQUES OR MADRASAS :

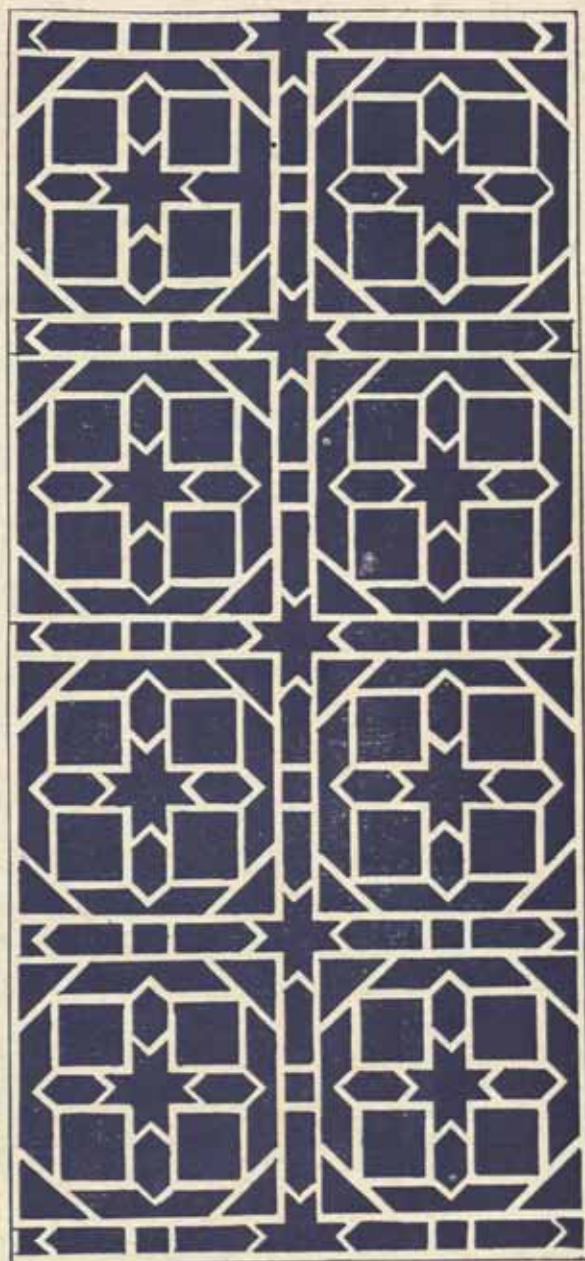
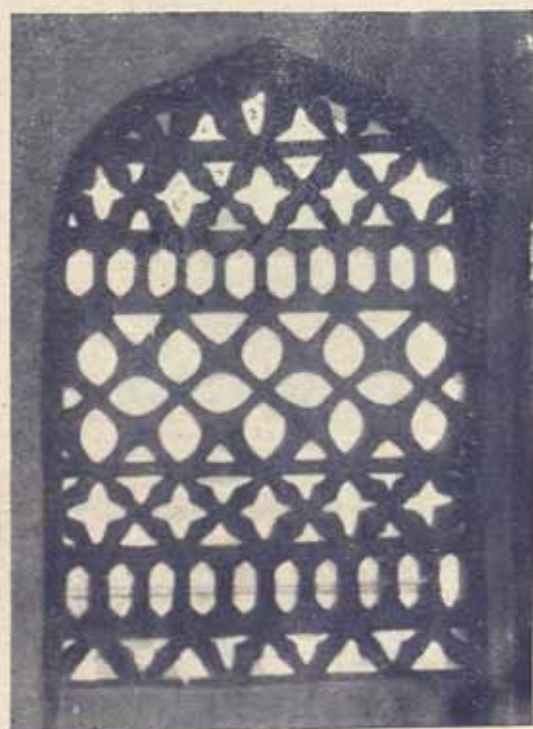


CHAND MINAR
DAULATABAD

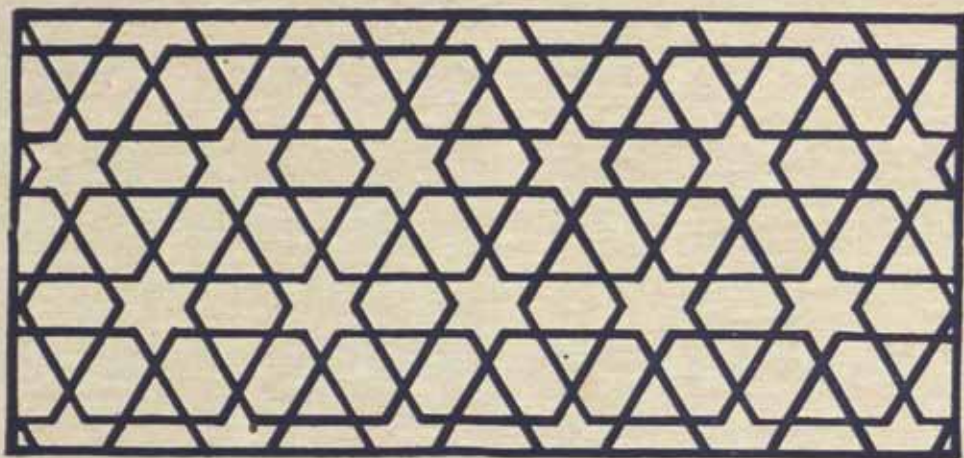




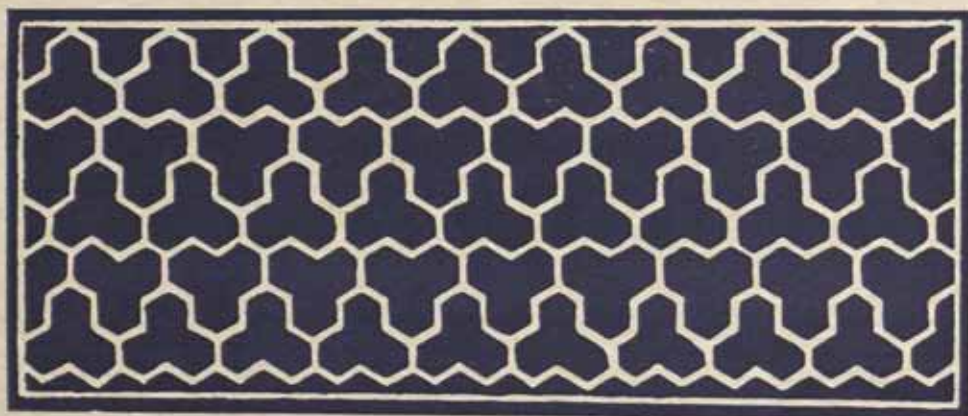
CHAND MINAR
HYDERABAD



AURANGABAD

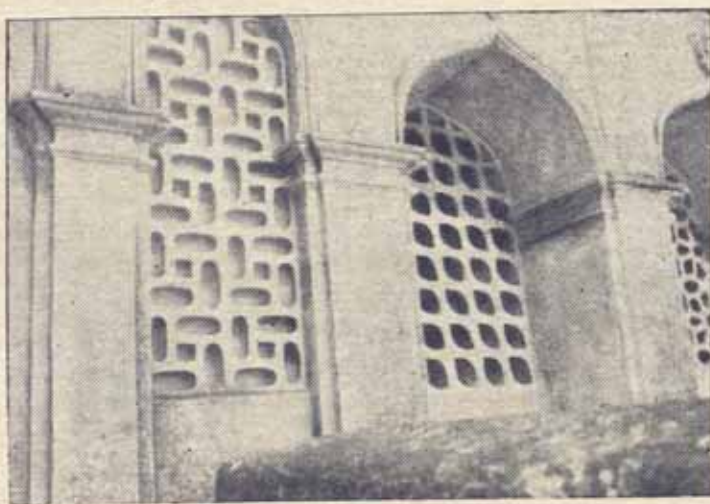
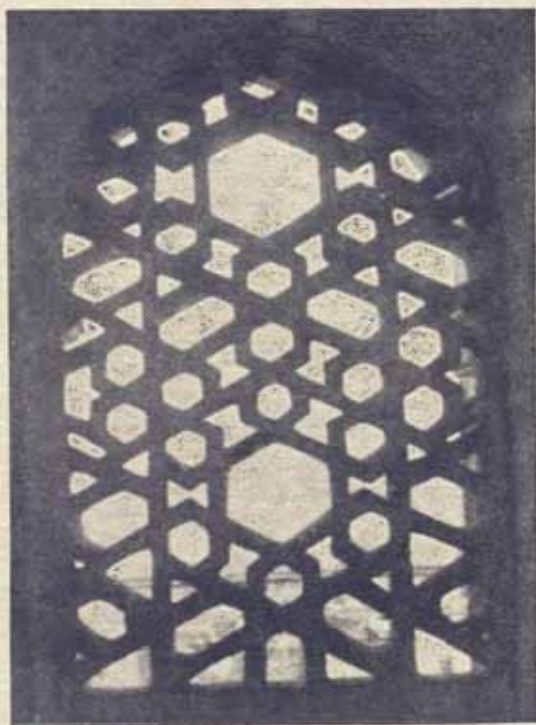


JALNA



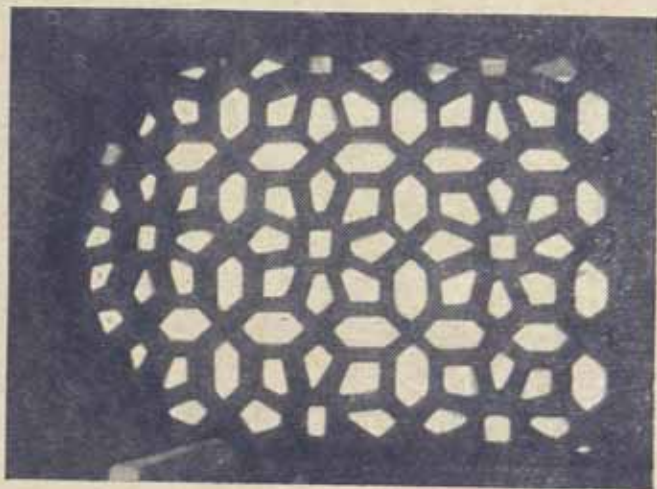
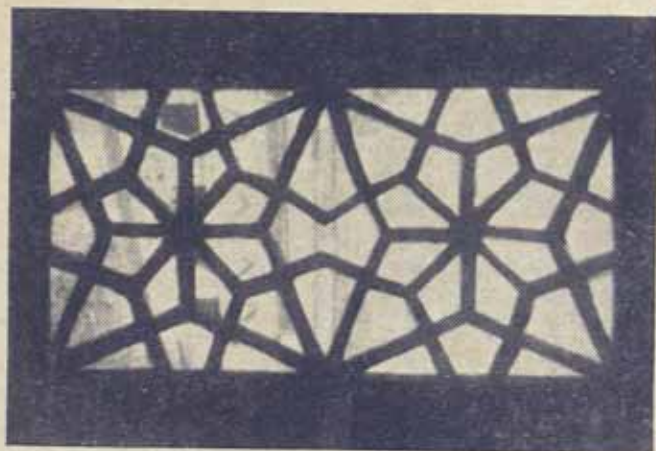
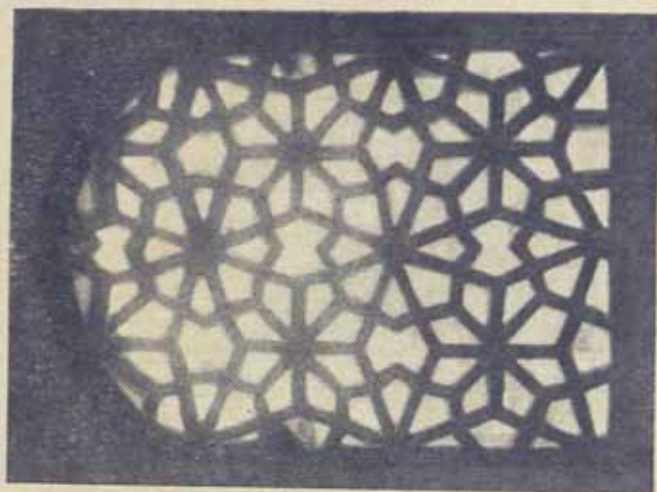
JALNA

PATTERNS OF TRELLIS WORK



CHAND MINAR : HYDERABAD

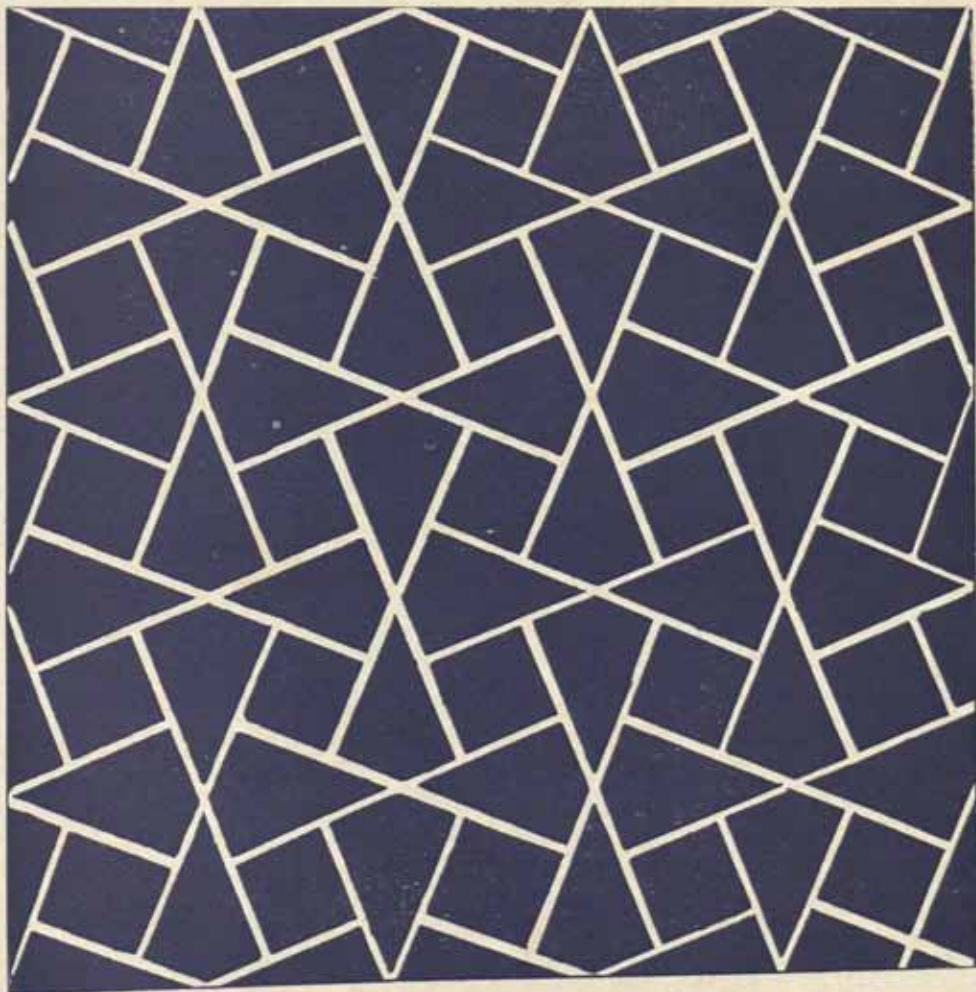
PATTERNS OF TRELLIS WORK



CHAR MINAR : HYDERABAD
PATTERNS OF TRELLIS WORK

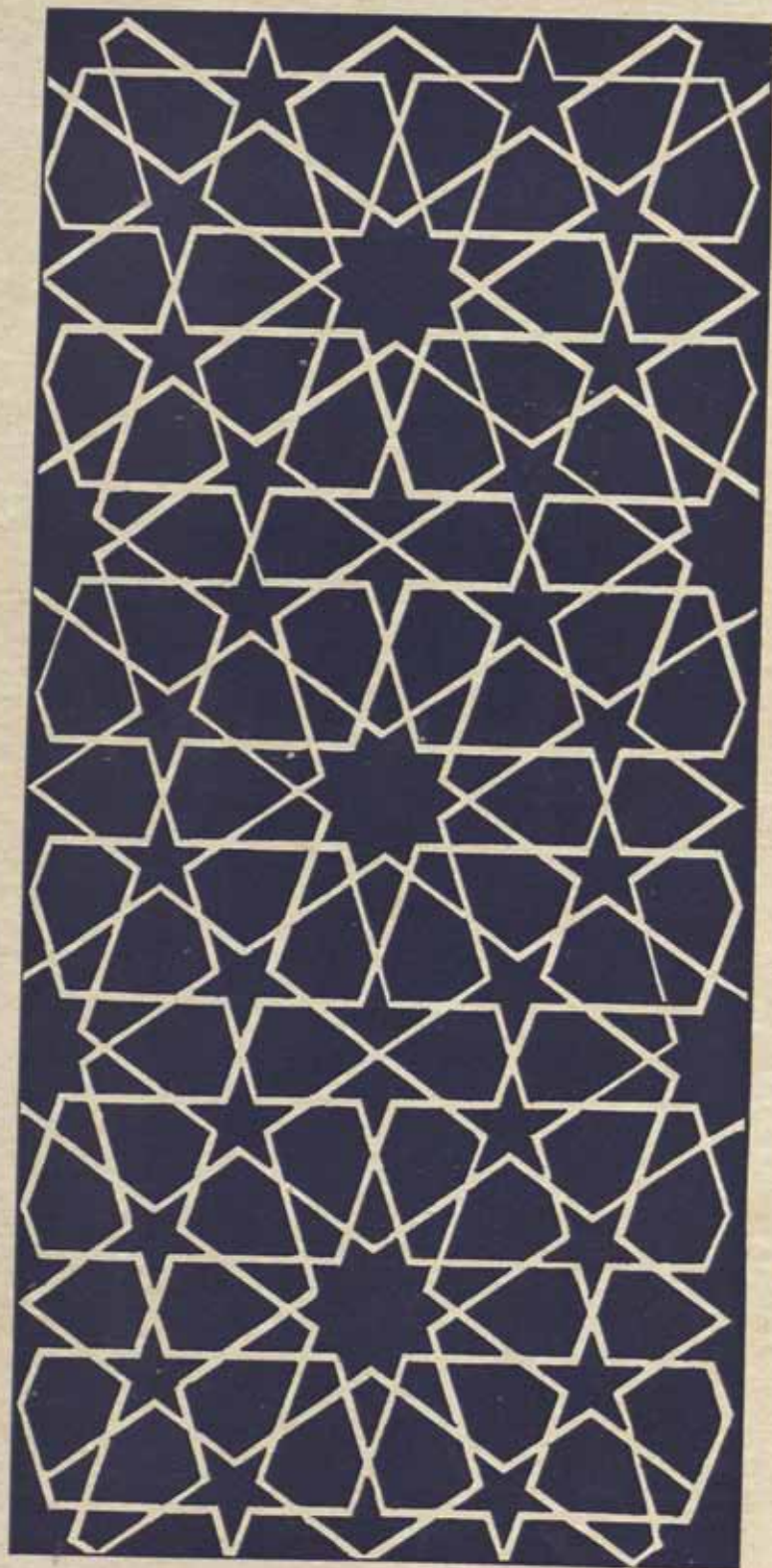


PLATE XXVIII



PATTERNS OF TRELLIS WORK :

JALNA



AURANGABAD

TRELLIS WORK
DESIGN

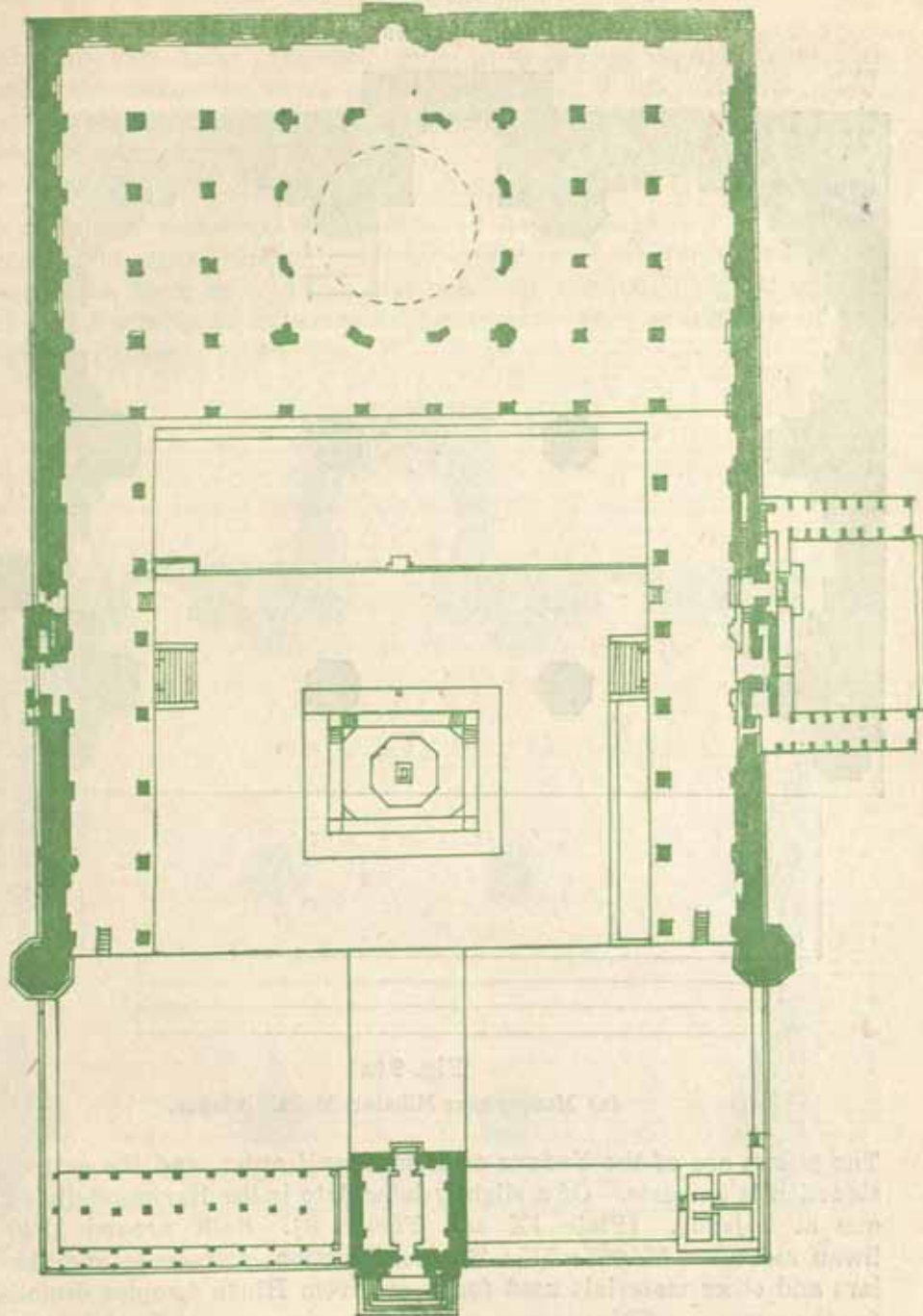


Fig. 8(b)
(b) Jammi mosque, Bijapur.

After Cousens : BIJAPUR :

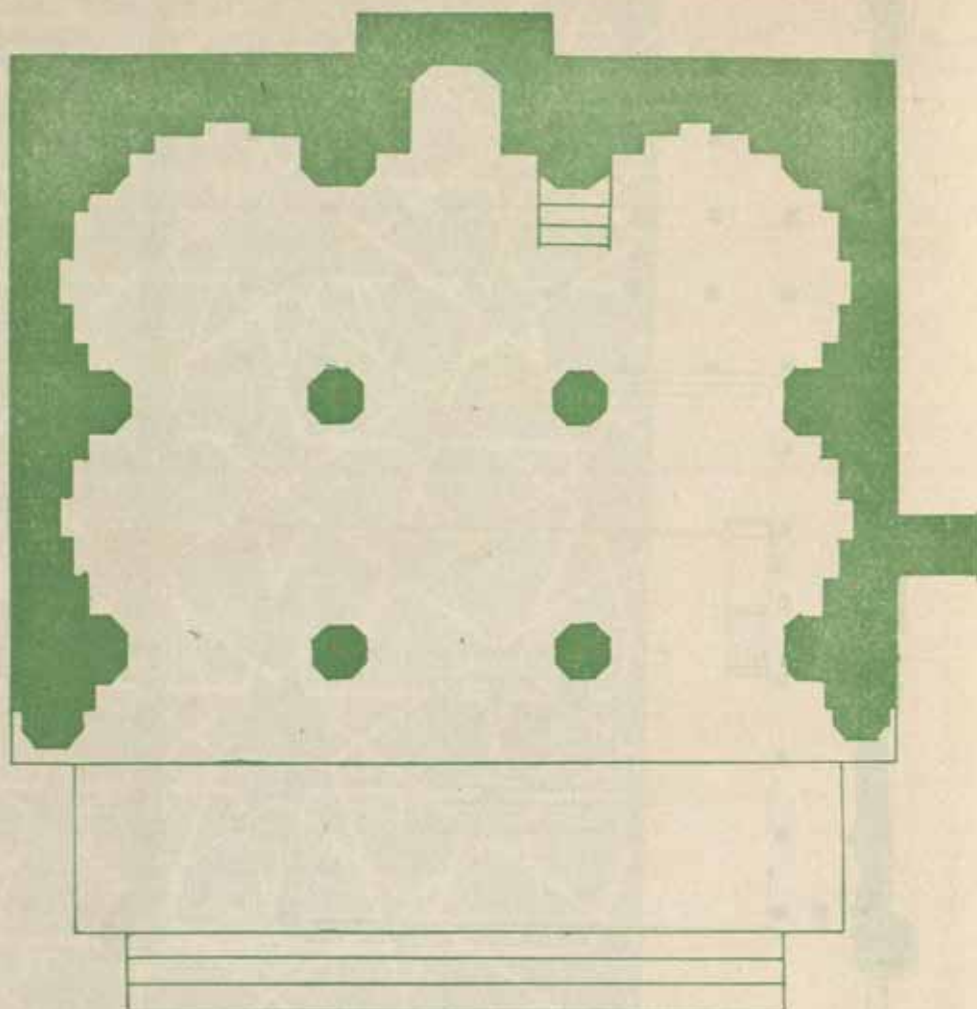
Later Mosque Plans:

Fig. 9(a)

(a) Mosque near Mihatari Mahal, Bijapur.

The pillars are of the Yadava or Hemadpanti order, and the entire construction is trabeate. Of a slightly later date is the Karim-ud-din's mosque at Bijapur. [Plate IX and Figure 8]. Built around 1320 its liwan measures 85'.66" \times 51'. The construction is trabeate and the pillars and other materials used for it are from Hindu temples demolished for the purpose. This mosque and the Jammi mosque at Daulatabad were the handiwork of persons obviously well-acquainted with the traditional mosque pattern. The sheltered liwan, the mihrab, mimbar, the open court-yard in front and the enclosing walls are all quite familiar parts

of a mosque structure. The addition of aisles around the court-yard and of minarets makes the scheme complete. Most of the important mosques, the Jammi mosques in particular, at all the chief centres in the area follow this pattern.

The most renowned departure from this set scheme is the Jammi mosque in the Gulburga fort. With all its innovations and aesthetic graces, this mosque remains a solitary exception to the general rule. So strong is the force of tradition that this bold and most original experiment failed utterly to influence in any manner the development of the mosque structures. [Plate X].

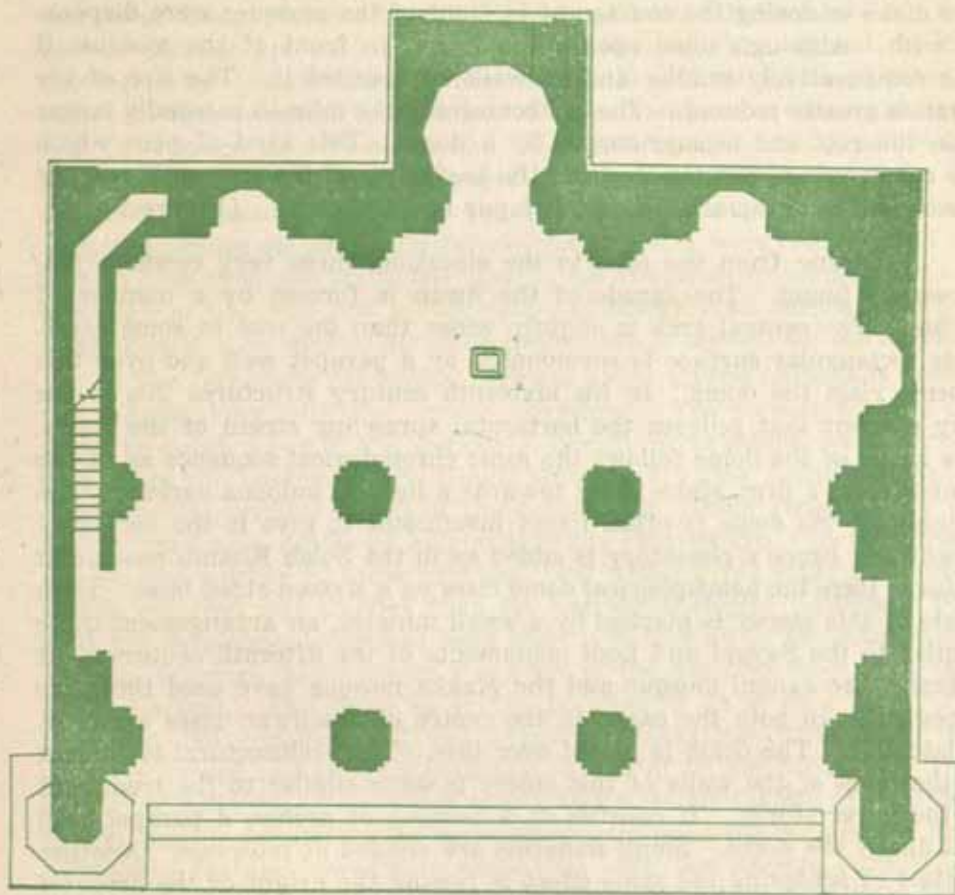


Fig. 9(b)
(b) Kali masjid, Bidar.

After G. Yazdani : 'BIDAR'

As already stated, the plans of most of the important mosques in the Deccan conform to the traditional design. The liwan has in its front a spacious court-yard, usually surrounded by either walls or arched aisles. So also enlargement of the cell or chamber containing the mihrab was a common practice. This ground plan is followed only in a very few examples. A more typical Deccani mosque is much smaller. It consists only of a liwan and a small space in its front. The prayer hall is formed very often by two north-south and three east-west aisles. Sometimes the number is three and five respectively. This is probably a result of the need for economy both in money and space. Such economising led to the elimination of a number of features common to the larger mosques. The aisles enclosing the court-yard in front of the mosques were dispensed with. Although some open space is left in front of the mosque, it was comparatively smaller and no walls surrounded it. The size of the liwan is greatly reduced. The cell containing the mihrab is usually larger than the rest and is surmounted by a dome. This kind of plan which one comes across practically from the beginning of the sixteenth century is common to mosques at Bidar, Bijapur and Golconda. [Figure 9].

Turning from the plan to the elevation, three very common features are found. The facade of the liwan is formed by a number of arches. The central arch is slightly wider than the rest in some cases. This rectangular surface is surmounted by a parapet wall and over this scheme rises the dome. In the sixteenth century structures this is the only element that relieves the horizontal sprawling strain of the liwan. The shape of the dome follows the same chronological sequence as of the tombs; from a firm, stable dome towards a lighter, bulbous variety. The necking of the dome is often found insufficient to give it the necessary height and hence a clerestory is added as in the Solah Khamb mosque at Bidar. Here the hemispherical dome rises on a sixteen-sided base. Each angle of this storey is marked by a small minaret, an arrangement quite similar to the Sayyid and Lodi monuments of the fifteenth century. At Bijapur, the Jammi mosque and the Makka mosque have used the same expedient. In both the cases, in the centre of the liwan rises a storey. [Plate XI]. The dome is placed over this. The architectural treatment of the faces of the walls of this storey is quite similar to the treatment of the lower storey. It consists of a number of arches, a parapet wall and finally the dome. Small minarets are erected at intervals. Another method of achieving the same effect is raising the height of the drum of the dome. Several Bijapur structures like the mosques in Shahpur sub-urb display this feature.

The next stage is the lessening of the size of the dome along with a new emphasis on the minarets. The increase in the size of the minarets led to a lessening in the proportions of the dome. The outlines are bul-

bous. The best examples of such mosques are the Malika Jahan mosque [Plate XII] and the Bukhari mosque at Bijapur and the mosque near the tomb of Hazrat Makhdum Quadiri, [Plate XIII] at Bidar. In the Bijapur structures in addition to the two flanking minarets are added two more, above the piers bearing the arches. In the last and final phase as witnessed at Golconda, the central dome sinks into oblivion and the minarets dominate the elevation. These minars rise to great heights and have a clear taper upwards. However, the projecting balconies are so treated as to make them extremely heavy in aspect and the entire structure of the Qutb Shahi mosques becomes top heavy in appearance.

There are also to be found some fancy buildings. The mosque known as Langar-ki-masjid at Gulburga and the Ali Shahid Pir's mosque at Bijapur are roofed over by barrel vaults. The normal mode of roofing is by domes. Usually the mosque is divided into a number of cells and each is sealed by a dome. These domes are covered externally if a flat terrace is to be obtained. The Anda mosque at Bijapur is another one with an uncommon design. The mosque is two-storeyed. The upper one is exactly similar to the Malika Jahan mosque. The ground storey is square on plan. Its facade consists of a wide central arch and two on each side, one above the other. All are false arches and the only openings in the wall are a rectangular doorway and three-arched windows over it. No special aesthetic impression is created by the mosque.

The forcefully projecting cornices form a very important part of the facade along with the parapet crestings. The former i.e. the cornices, as pointed out in the section on design development, were borrowings from the contemporary Hindu structures. This feature helped to eliminate the vertical strain of the facade. In Hindu structures it was mainly used as a device of heightening the chiaroscuro. In the case of the mosque neither of these problems was present, for what the mosque facade required was a relief from the horizontal strain. Although basically the pronounced cornices have little role to play in the scheme of a mosque structure they enhance the effect of the building when seen from close quarters. And more so if the building is in stone. More often than not the cornices and the brackets supporting them have been superbly carved and are in themselves objects of no mean beauty. Their beauty as individual members is worth appreciation, inspite of their having no organic relation to the main design. Unlike the cornice the parapets are a feature irrevocably associated with the mosque pattern. In addition to the plain battlement type, numerous designs have been introduced. They are discussed under 'decoration', being a feature common to all Islamic buildings. The arches and blind arches used for mosques and practically all other structures in the various periods show very little change. The sizes of the arches may change but the shapes do so most infrequently. The first arch to be noted as a proto-type is the arch

of the entrance arch of the tomb of Hasan Bahmani at Gulbarga. It can be described as stilted ogee. The inward sweep of the lines of the arch is confined to the upper one-third and it is more suggestive than real. The result is an extremely artistic intersection of the lines of the arch, the lines indeed meet and merge into each other than intersect. This feeling is kept constant throughout the period under study. The Jammi mosque at Gulbarga has plain four centred arches and those used in the interior have a span slightly more in proportion to their heights. Certain features were introduced by the end of the Bidar period. One of them is the use of horizontal mouldings on the piers carrying the arches. These are introduced at the base of the arches. The mouldings are not quite unlike capitals on pillars, with a flat horizontal entablature on the top. This portion projected farthest from the line of the pillar and a moulding with a flaring section joined this to the vertical face of the pillar. Another feature was the use of a number of recesses in the arches like the door-frames of Hindu temples. In late Bijapur examples the cusped arch is used either independently or as the outer ring of the recessed arch. [Plates XI and XII].

The last notable characteristic of the later mosques is the design of the minarets. The minarets received prominence not only in their vertical aspect. Instead of standing on the roof of the mosque they now come to the ground. It projects from the walls and its base spreads over the ground covering an area greater in diameter than that of the tower it supports.

It is extremely interesting in this connection to note the Madrasa of Mahmud Gawan at Bidar. If its facade, a complete reconstruction of which is presented by Figures 10 and 11, is carefully scrutinized, the origin of the novel mosque design is most obvious. The top-heavy mosque having tall minarets with projecting balconies and the absence of the central dome are ideas inspired by the Persian architectural scheme of the Madrasa. Instead of the colour decoration the Deccani mosque uses floral carving in low relief or stucco ornamentation with the same motifs. Of this more later on. For the present it is sufficient to indicate the broad direction of the development of the mosque pattern.

MADRASA

[Madrasa of Mahmud Gawan, Bidar.]

The madrasa of Mahmud Gawan is a structure most uncommon in this part. There are records showing that madrasas were built at other places as well, but none is standing and none could compare architecturally with the one at Bidar. It is practically unique. And as is well-known the building is erected on a pattern commonly used in Western Asia. As such there is very little that can be added on the subject of its design or

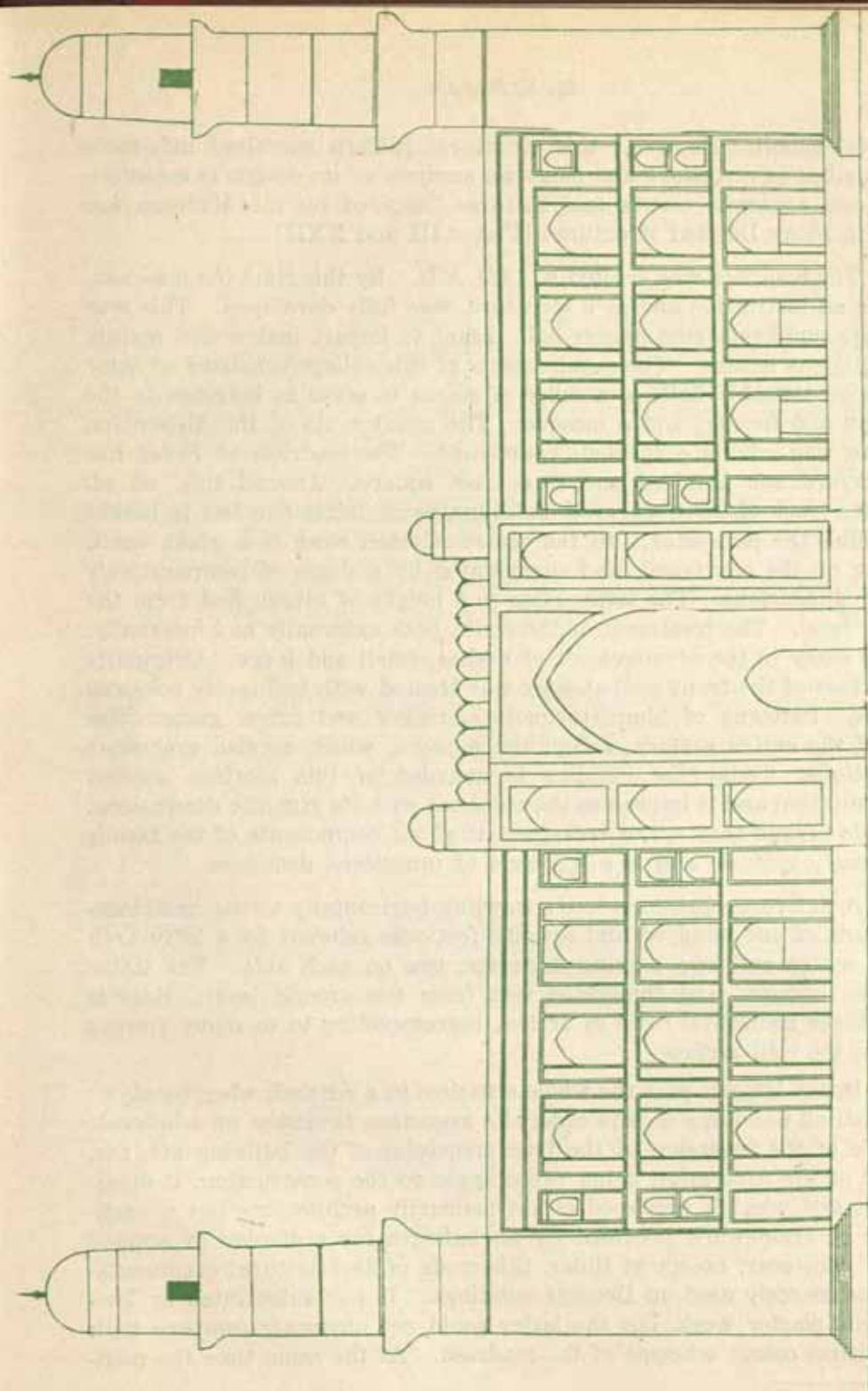


Fig. 10

Elevation of the Madrasa of Mahmud Gawan, a conjectural restoration.

its development. However, this structural pattern exercised influences in a number of directions and hence an analysis of its design is essential. Ideas and concepts, motifs and features, inspired by the Madrasa are found in many Deccani structures [Plates III and XXII].

The madrasa was erected in 1481 A.D. By this time the madrasa, both as an institution and as a structure, was fully developed. This was a college-cum-hostel-cum-prayer hall, meant to impart instruction mainly of a religious nature. The requirements of this college consisted of some lecture or assembly halls, a number of rooms to serve as lodgings to the students and faculty, and a mosque. The usual mode of the disposition of these was around a spacious court-yard. The madrasa at Bidar has a courtyard one hundred and three feet square. Around this, on all sides is a block of three-storeyed buildings, nearly sixty-five feet in height (including the parapets). In the centre of each wing is a giant vault, opening on the courtyard, and surmounted by a dome of comparatively smaller dimensions. The latter rises to a height of ninety feet from the ground level. The treatment of the walls, both externally and internally, was an essay in the arrangement of arches, small and large. Originally the surface of the front wall at least was treated with brilliantly coloured mosaics. Patterns of blue (turquoise), yellow and green glazed tiles covered the entire surface, except the parapet, which carried arabesque inscriptions. Today the building is denuded of this glorious applied ornamentation and it impresses the onlooker with its gigantic dimensions, but little beyond that. The arrangement of the components of the facade is tediously uniform and is a spectacle of unrelieved drabness.

A flat rectangular surface sprawling horizontally to the considerable extent of one hundred and seventy feet was relieved by a lofty arch in the centre and two soaring minarets, one on each side. The latter rose one hundred and thirty-one feet from the ground level. Besides these, three horizontal rows of arches, corresponding to so many storeys relieved the wall surface.

PERCY BROWN puts the whole criticism in a nutshell when he says : "As with all buildings of this order, its execution furnishes an admirable example of the inversion of the true principles of the building art, for, instead of the decoration being subordinate to the construction, it dominates it and what is produced is not primarily architecture but a background or framework provided by its builders for a display of applied art!"⁶ However, except at Bidar, this mode of architectural ornamentation was scarcely used on Deccani buildings. It was substituted by low-relief cut plaster work, but the latter could not obviously compare with the lustrous colour schemes of the madrasa. At the same time the mad-

⁶ BROWN P., *Indian Architecture (Islamic)*, 75.

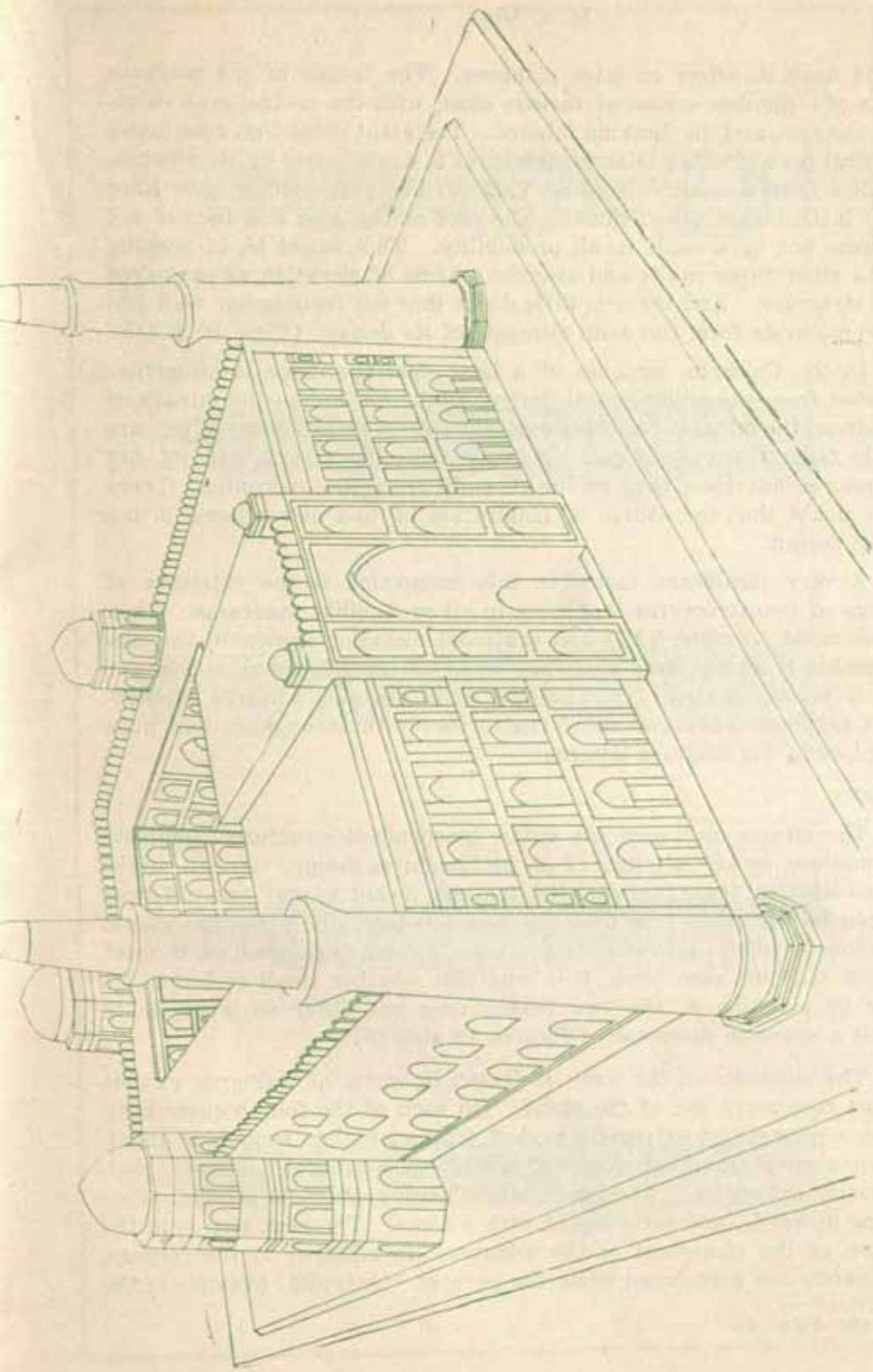


Fig. 11 *Perspective View of a Conjectural Reconstruction of the Madrasa of Mahmud Gawan : Bidar*

rasa did have its effect on later planning. The facade of the madrasa consists of a number of arches of various sizes, with the central arch dominating the rest, and the flanking minars. The giant dome that rose above the central part of other Islamic structures is conspicuous by its absence. If at all a central dome existed as YAZDANI has suggested it must have been of insignificant proportions.⁷ The roof of the gate was formed not by a dome but by a vault in all probability. This would be in keeping with the other three vaults and also the scheme of elevation as envisaged in this structure. And there is little doubt that the rectangular wall and the two minarets form the main elements of its design. (Figs. 10 & 11)

In the Golconda mosques of a later date the dome is altogether eliminated from the architectural design, while, not unlike the minars of the madrasa the minarets of these mosques rise to prominence. They are not only taller than would really go flush with the mosque heights, but have assumed heaviness through the strongly projecting balconies. There is little doubt that the source of inspiration of this new scheme is the madrasa design.

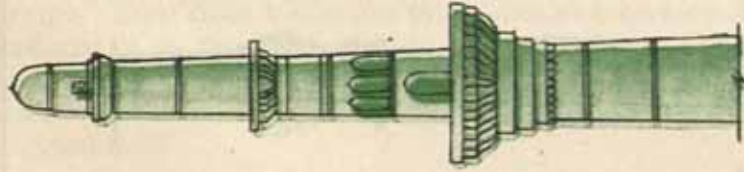
A very significant factor in this connection is the existence at Gulburga of two structures that were in all probability madrasas. They are illustrated on plate XXII and the front elevation shown in the pictures makes it amply clear that they were the prototypes of the newer trends in mosque designs. So also they go a long way towards supporting the argument advanced above that a very prominent dome had little or no place in the madrasa design.

MINARETS

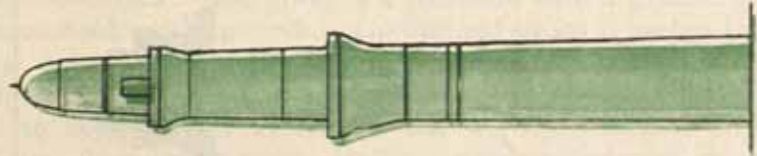
The minars or towers are either independent structures, complete by themselves, or are adjuncts of an architectural design. And it might be asked whether these two varieties that are meant to play two different roles can be discussed together; the free-standing structures are giants while those forming parts of a structure are dwarfs in comparison in most instances. At the same time, it is true that whether small or large, the scheme or planning of the two towers does not differ so much as to warrant a separate discussion [Figures 12 and 13].

The minarets on the tomb of Hasan Bahmani at Gulburga exhibit the most customary use of the motif. On each of the four corners is to be seen a minaret of extremely modest dimensions but enough to introduce an element that balances the dome. The minaret is fluted, each flute nearly cylindrical. It is generally a plain cylindrical column, often tapering upwards, and surmounted with a dome. The next step is in the direction of the placement of the minarets; in addition to the corners, the minarets are introduced along the parapet. A typical example is the

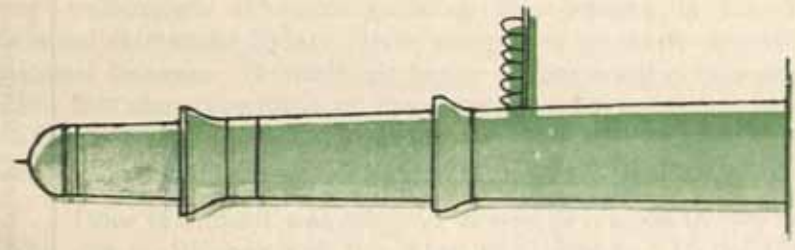
⁷ YAZDANI, *Bidar*, 94.



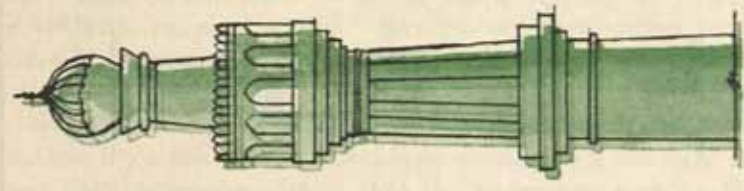
Chand Minar :
Daulatabad.



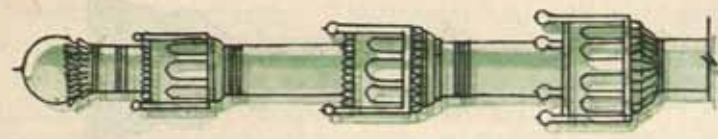
Madrasa of
Gawan : Bidar



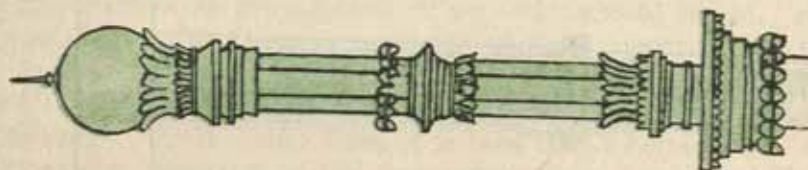
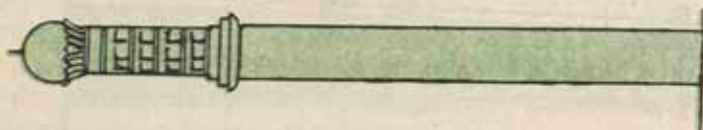
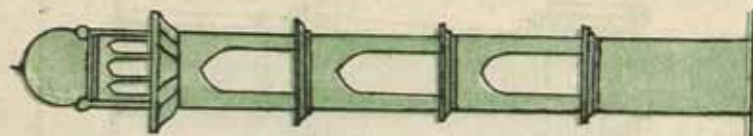
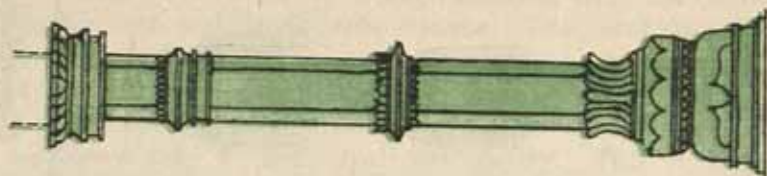
Gulburga



Hyderabad



Hyderabad



Minarets : Bijapur

mosque in the Balekillah at Mudgal fort. On several tombs at Golconda the same treatment is seen. Later on there came about an elaboration in the design of the minarets. The square and octagonal plans are now adopted with an elevation with minature storeys. The introduction of several horizontal mouldings is sufficient to mark the different storeys. The height of the minaret increases considerably.

However, the most signal change in the conception of the minaret takes place, when the minaret no longer remains a motif or feature placed on or erected on the roof. Instead the minaret extends downwards and becomes a kind of buttress. Whether there was any structural need for such a buttress cannot be said. But the span of arches in the Deccani structures is not quite big, and this device of a corner buttress to counteract the outward thrust of the arches of the facade seems to be unnecessary. Whether out of some basic need or out of an adherence to a current fashion, one finds that the minaret now starts from the base of the structure and then submerges itself into its customary role on the roof. A very well-known structure utilising this scheme is the Madrasa of Mahmud Gawan at Bidar. Here the corner minarets are utilised in the grandest manner. It would not be far off the mark if it is suggested that either this structure itself or the artistic traditions which were responsible for its design were the inspiration for this novel design of the minaret. The traditions implied being those from Persia.

Once this motif was adopted, it was developed in two very distinct ways, one at Bijapur and the other at Golconda. If the Chand Minar at Daulatabad and the minars of the Madrasa are examined, it becomes obvious that this type of design has certain constituents which can be termed essentials. The tower is a structure with a circular plan and has a pronounced taper upwards. The vertical sweep is broken by three horizontal balconies in the case of the Chand minar and two in that of Madrasa minars. These balconies project forth considerably and thereby help to contrast the horizontal and vertical elements in a pleasant manner. The minars of the Madrasa were treated with mosaic tiles and in view of the plain walls of the Chand minar that structure might also have been similarly treated. Another remarkable feature of these minars is that in spite of their grand dimensions, they are extremely light in appearance. Seen from a distance this lightness impresses an onlooker as emphatically as the impression of sweeping height does from close quarters. In fact, the Chand minar seems to be floating in the air. The balconies do not in any way hinder this impression, although they project quite a good deal.

The Bijapur and Golconda minars are to be examined in the light of the above remarks regarding their proto-types. Those at Bijapur follow the example only to the extent of becoming buttresses. They are

not comparable for sizes, as the Bijapur minarets are quite small. Their bases or plinths are highly ornate. Various mouldings form layers of decreasing diameters to support the main column. Motifs like the legs of chairs or thrones decorate these pedestals. The minar is usually octagonal in Bijapur buildings. The upward element is punctuated by horizontal projecting mouldings reminiscent of balconies, but these are not balconies. Often these balcony motifs are highly ornate, decorated with miniature minarets, stone chains, parapet jalties etc. In these structures, although the minarets have decidedly received more prominence, they do not dominate the scheme. They are confined to their traditional role of balancing the central dome.

The Golconda minars have gone headlong into the new experiment. They are attached to structures like mosques, but their dimensions are so vast as to deprive the other parts of the building their due share of importance. The towers generally have a taper upwards. The storeyed treatment is most emphatic. In most cases, the place of the open projecting balcony is taken by a covered one. This makes the balcony quite heavy looking. And in spite of the care taken to adopt diminishing dimensions for each upper balcony, the entire design is detrimental to the basic minar design. The tower that displayed such lightness and grace at Daulatabad assumes a top heavy aspect at Golconda. Consequently, the mosques of which these are parts gain the same top-heavy appearance. And as pointed out in the discussion on mosques, it is these towers that now occupy the dominant position of the building instead of the domes. There is a reversal of the role — so much so that at times one wonders whether the towers are for the mosque or *vice-versa*. This is not very surprising as even in other respects the Golconda structures display a tendency towards the baroque.

MANSIONS

To perceive any set design in civil architecture and to follow its development are tasks beset by an obstacle of the first magnitude. It is the difficulty of finding the structures in their original form. Most of the palaces and mansions of the Deccani rulers have collapsed with the passage of time. Matters are made worse by the fact that from time to time alterations and additions have been carried out by succeeding princes. Hence, even the plans — when and if they can be made out clearly — fail to reveal anything significant. Secondly, civil architecture is less likely to be governed by codes or traditions rooted in the religious beliefs of the people. In other words, the close similarity or even uniformity seen in the designs of mosques or tombs is not to be expected in the case of palaces or mansions. Some ideas of palace scheme can be still formed. There are certain factors which can be described as constants in domestic architecture. Palaces and hamamkhanas are the two main types of

buildings to be found. The latter is an essential adjunct of the former, but is a separate building. It usually consists of a number of square cells, with one or two of larger dimensions to serve the royalty. The baths have cistern-like depressions in the floors. A number of cells are usually screened. The hamamkhana at the Golconda fort is still in a good state of preservation. The palace commonly had a large open courtyard. There was a vast open hall on one of the sides of the courtyard. There were some rooms immediately adjoining the hall which served as the audience or darbar hall. Some of the chambers around this audience hall were screened off so as to house the female members of the royalty that chose to attend the darbar. The height of this hall generally amounted to two storeys. Some portion of this hall, adjacent to the back wall, was raised to serve as a seat for the monarch. The darbar hall on Golconda fort has such a seat, so also there was one in the Asar Mahal at Bijapur. In the palace at the foot of Golconda fort a balcony on the second storey opens out into a great hall that served as the court hall. More than one courtyard was not uncommon. In the centre of these courtyards small cisterns with fountains existed. In most palaces a part of the structure was raised to a height of more than four storeys. It seems seven was the standard number of floors, as many medieval mansions have been referred to as having seven storeys. A typical example of these mahals is the Sat Manzil at Bijapur. These structures were mainly luxury resorts where the king could retire with his favourites. There is very little doubt that in addition to these, other mahals common to medieval times, such as ranga-mahals, chitra-mahals etc. were in existence in the Deccani palaces. These and other rooms in the palace were grouped around the courtyards, care being taken to seclude the zanana apartments from the parts where access was comparatively easy.

In later times it became a fashion to erect independent large darbar halls or so-called pavilions. Perhaps the best specimen of this kind of a building was the Ashar Mahal at Bijapur that has recently collapsed, and the Anand Mahal at the same place. Its plan and the arrangement of the royal seat did not differ much from the darbar halls of the earlier palaces. Its facade was most remarkable. Four tall timber columns divided the otherwise open frontage into five compartments. The central of these was broader than the flanking. A large pond immediately in its front bestowed a grandeur and beauty very rarely to be come across.

Jalamandirs, small pavilions in the midst of or bordering on ponds were a common mode of luxury resorts.

The elevations were like other Islamic structures composed of a number of arches either blind or open. The treatment of surfaces does

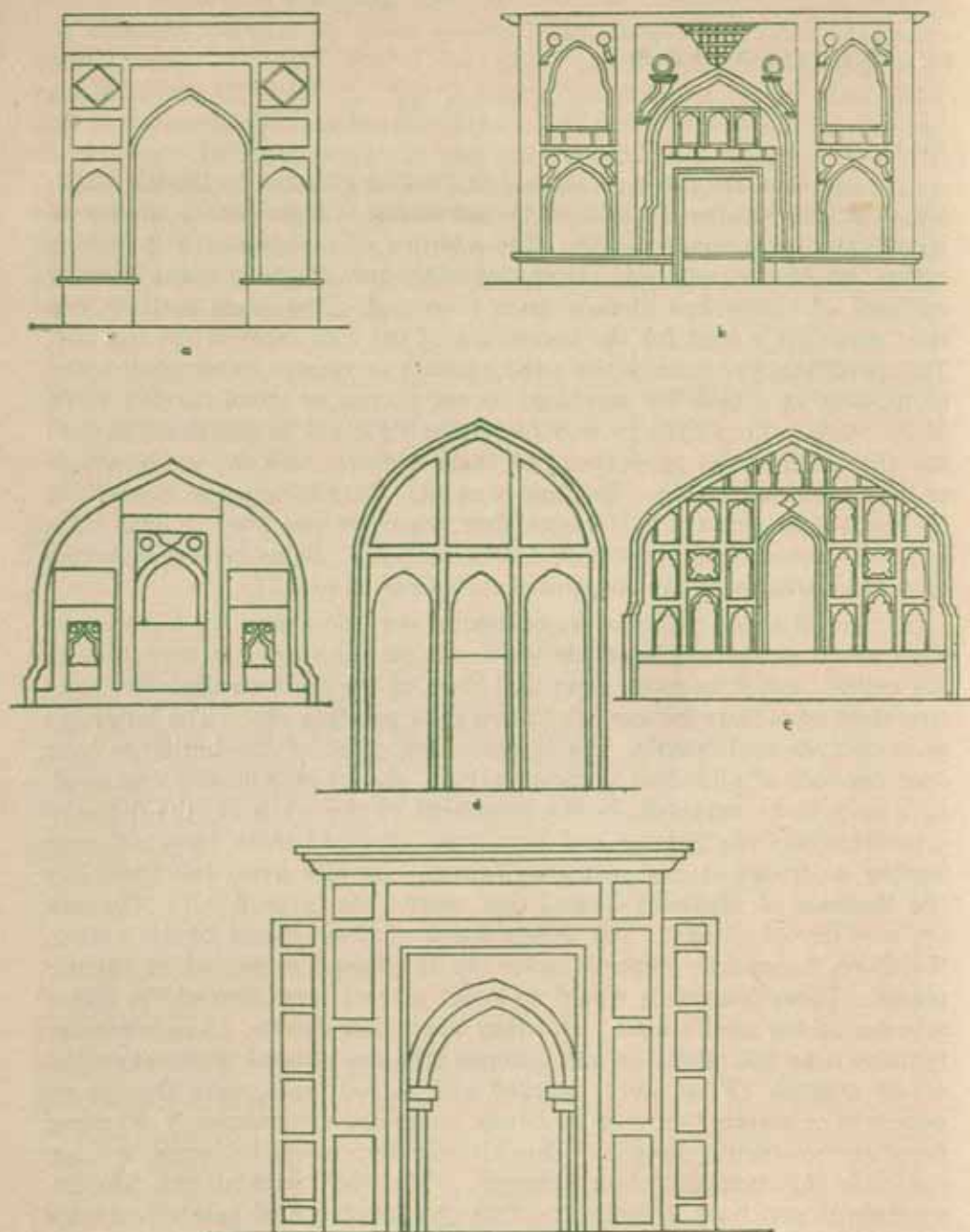
not vary materially from that used on tombs or mosques, as is shown by the standing Bijapur or Bidar works. The shapes and sizes of arches were altered. The central arch was taller and broader, and panelling of arched niches resorted to. The dome or the minaret played very little role in the composition of the elevation. The needs satisfied by the domestic structure being numerous it was not easy to yield to a fixed pattern for the elevation. The later additions destroyed whatever semblance of balance or harmony the architect had striven to introduce. The possibilities of the organic element in the field of art being thus limited, the architect relied on applied modes of ornamentation for the artistic effect. More of it in the next section.

IV. DECORATION

PANELLING

The standard mode of surface decoration common to Islamic building practices was the division of the particular surface into a number of rectangular and square panels. The addition of arches to this panelling makes the scheme complete. How this method was applied to the exterior surfaces of tombs has already been discussed. The same method was most extensively used for the decoration of the wall faces of the interior. This panelling was usually the setting meant to receive either glazed-tiles or to serve as a base for paintings or cut plaster or stone carving work of the walls. Very little by way of originality could be exercised, beyond the alteration of the proportions of these features and the combinations of the panels and arches. But that was all. Very little scope existed for the individual artist. It is hence that wherever one goes a drab similarity, a monotonous repetition, meets the eye. Some typical instances of surface treatment are illustrated in figures 14 and 15.

To all these means of embellishing the appearance of a structure were added painting, glazed tile work, cut plaster work and sculpture in low relief. Let it be made clear that most of the methods described upto now were of a more permanent nature than painting etc. The latter are more delicate and fragile. As things stand, most of the buildings have been denuded of all colour ornamentation. Colour was largely employed, as is only to be expected, in the treatment of the walls of the domestic structures like the palaces and pavilions. Most of them have collapsed leaving no traces of any paintings behind. So also great buildings like the Madrasa of Mahmud Gawan that were once covered with tile-work are now devoid of any. Our appreciation of these means of decoration, therefore, necessarily depends upon the fragments preserved at various places. These fragments would no doubt give us some idea of the colour schemes or the motifs used. But they are minor details. And whatever remains does not afford us any glimpse into the general impression that colour created. First were panelled and niched walls, over them were paintings or stucco, their border bands, cufics and symmetrically arranged floral and geometric designs. This visualisation would be complete when one adds the dazzling colour schemes. However, with all this, the impression is still hazy, indistinct. This disappearance of painted schemes from the Deccani buildings is undoubtedly a great hindrance in their proper appreciation and evaluation. What is left is a mere skeleton devoid of flesh and blood. The appreciation based on skeletons is, let it be confessed, less than just.

Panelling of Wall Surfaces.**Fig. 14**

(a) Chaukhandi of Hadrat Khalil Ullah, Bidar. (b) Anda mosque, Bijapur. (c) Sat Manzil, Bijapur. (d) Chotta Asar, Bijapur. (e) Hall on the first gateway to the tomb of Ali Barid, Bidar.

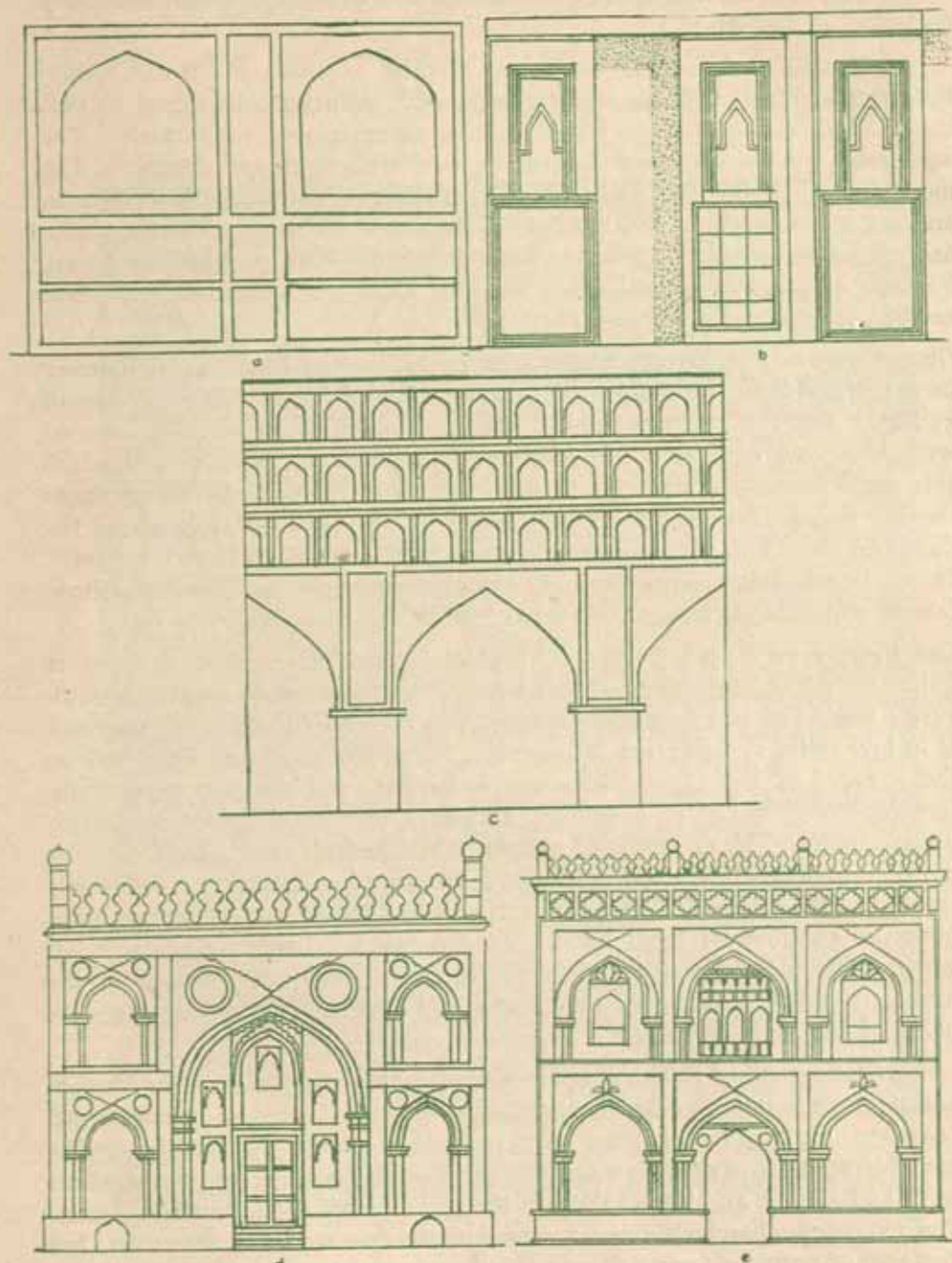


Fig. 15

(a) Rangin Mahal, Bidar. (b) Minister's room, Palace Bidar. (c) Tarkash-Mahal (?), Bidar. (d) Takht-i-Kirman, Bidar. (e) Ali-Barid's tomb, southern gateway, Bidar.

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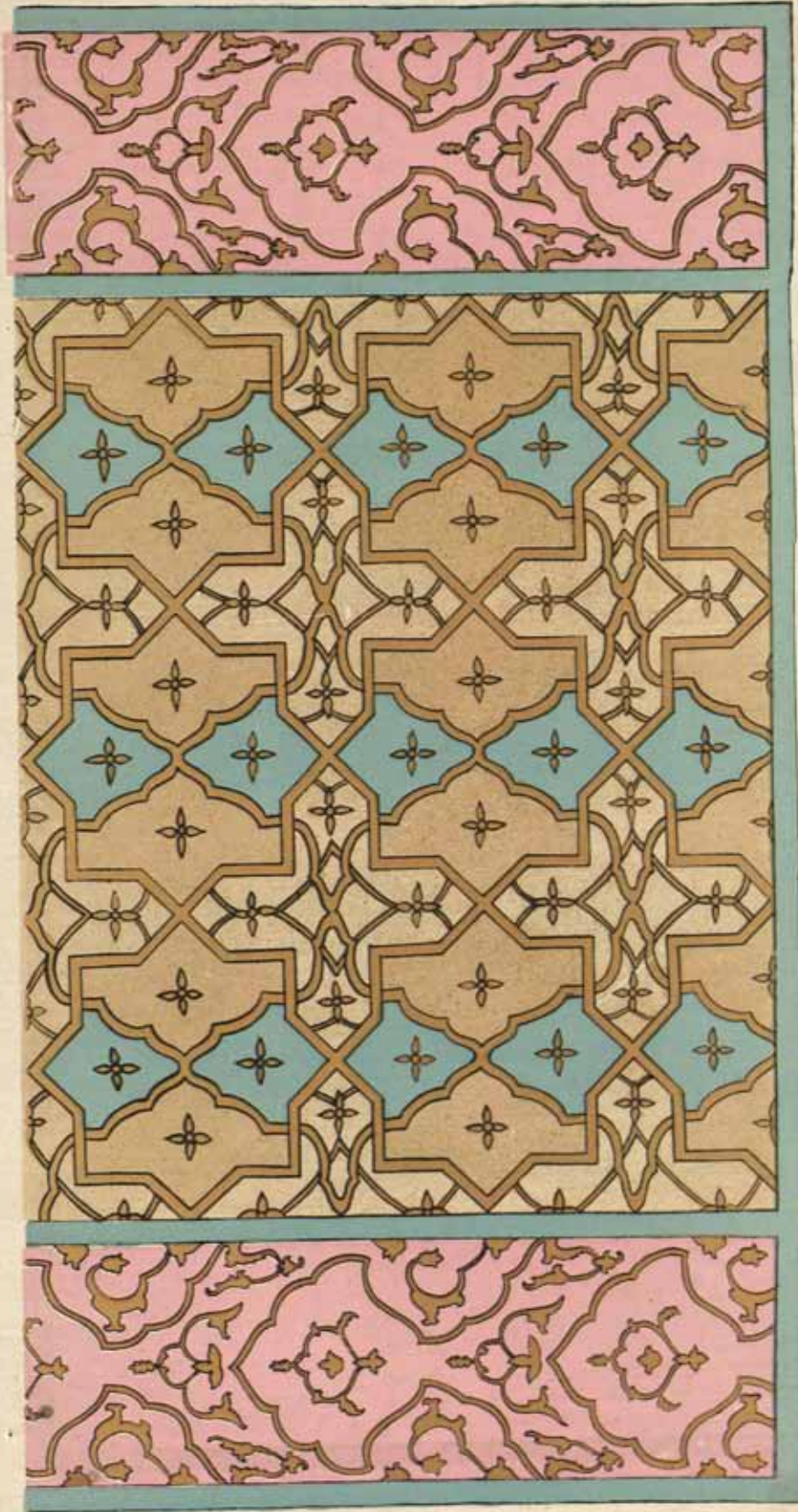
The information about these modes of ornamentation can be briefly narrated as follows :

Mother of pearl work is to be found at Bidar only. *Painting* : Wall surfaces were treated with paintings arranged to suit the groundwork of panels. The ceilings (domical) were painted. The squinches were also in some cases treated with coloured designs. The motifs used to be two main classes, arabesque and cufic inscriptions, and a great variety of floral and semi-geometric patterns. Crimson lake and white served as the ground, while foliations were in white or green. Flowers and buds were yellow or scarlet. Gold tint was used in several cases. [See Figures 16 and 17].

Glazed tiles : Polychrome glazed tiles covered walls in the same manner as paintings did. Although early structures like the Madrasa of Gawan at Bidar and the royal palaces at the same place were entirely covered with tiles, the extensive use of colour tiles was probably restricted to this particular place and also to this particular period. At other places the use was confined mainly to the parts of walls immediately above the door frames. The patterns used are not quite dissimilar to painted ones. In colour schemes the predominant colours are turquoise blue and yellow. Green, white and crimson play second fiddle to these two.

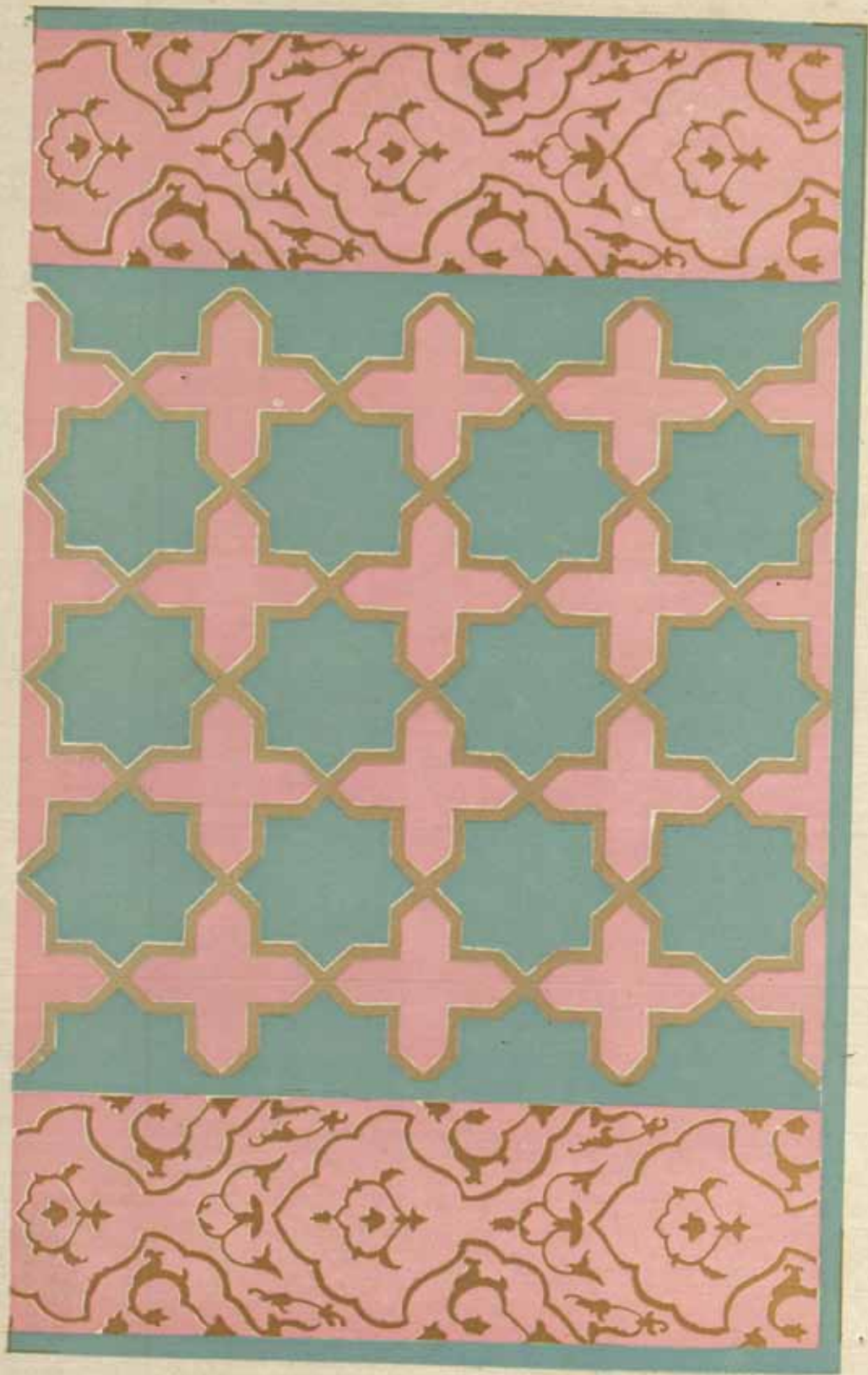
Cut Plaster or stucco work : Cut plaster work at its best is seen at Golconda. The beginnings of this kind of treatment were evident at Gulburga itself but the fullest development is seen at Golconda. The work is in low relief and barring some exotic items like the huge lotus bud on the parapet of the Char Minar at Hyderabad, the designs were traditional. They consist of geometric and floral motifs of which the latter predominate. The extrados of arches, the spandrels, and bands running parallel to but just below and above the cornices are parts commonly treated with stucco designs. In certain Hyderabad and Golconda mosques the entire wall faces have been decorated in extremely low relief work. The most popular motifs are the medallions on the tops of the arches, a tusk-like support they have, and the flower that rests on the point of the arch.

Stone carving : The position occupied by stone sculpture in Deccani architecture is minor. Brackets and cornices, mouldings on minarets etc. have been already referred to. And it must be mentioned that the craftsmanship of these is of a high order. What remains is a reference to stone work at Bijapur, and its parallels in the stucco work on Golconda mosques. The extrados, spandrels have received their due share of attention, but surfaces of cornices facing downwards have also been carved. Medallions and stone chains on some Bijapur structures are well carved. At other centres stone work is conspicuous by its absence. The illustrations on figures 20, 21, 22 and plate XXI give a better idea of the ornamental



Portions of Colour Decoration : Ibrahim Rauza — Tomb — Bijapur.

By the permission of the Department of Archaeology.



*Portions of Colour-Decoration : Ibrahim Rouze — Tomb — Bijapur.
By the permission of the Department of Archaeology.*

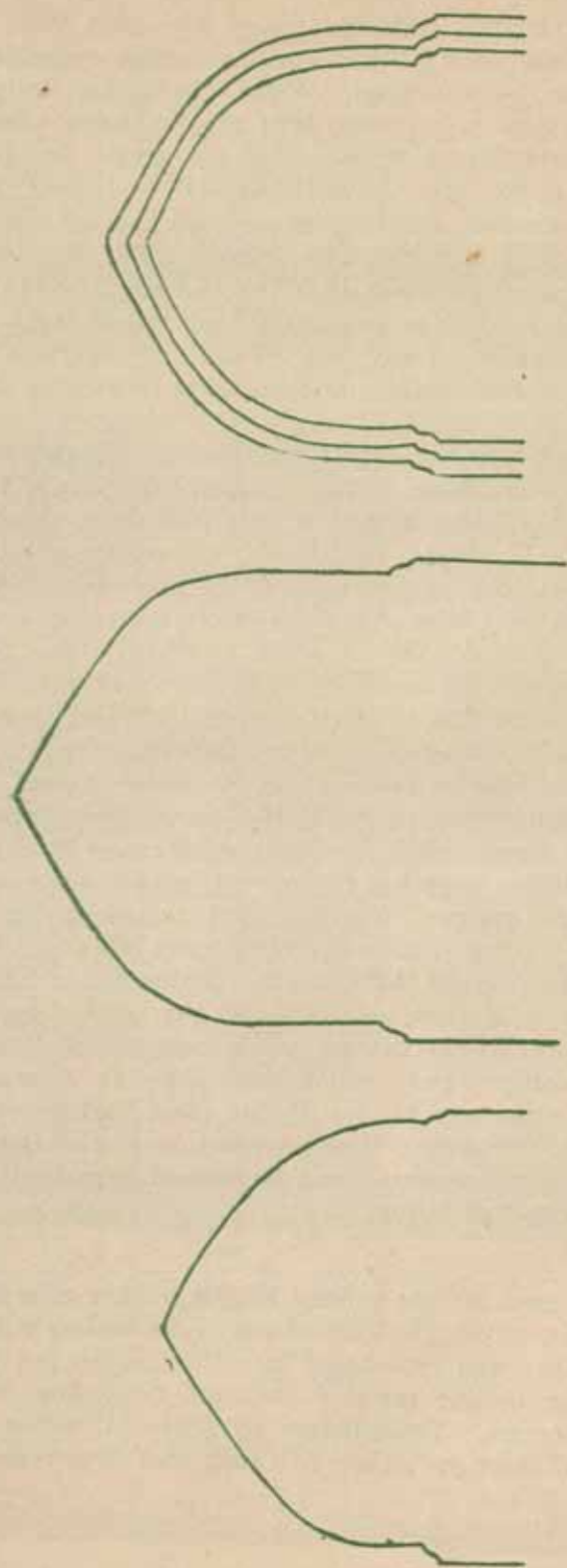
aspects of the Islamic buildings under discussion than words can do. But words would make evident certain factors regarding them which might otherwise go unnoticed. While considering design development it has already been pointed out that the architects adhered to certain concepts and methods of architectural planning. For construction the Moslem has a predilection towards the arch and dome, for planning of buildings a preference for two-dimensional and for ornamentation the choice falls on applied rather than organic. The ornamentation aims at the beautification of the structure. This can be achieved in two ways. A building can be erected in a manner that would make it good-looking without embellishment of any sort. This is to a certain extent achieved by the shapes of the domes and the arches in Islamic structures. The other mode is application of ornamental elements from the outside. There is no doubt that this calls for certain adjustments in the structural aspects so as to be better suited to receive the applications. Amongst the applied modes, colour is the only one which goes absolutely flush with two-dimensional planning. And that is the method most widely utilised in Islamic architecture in general and the Deccani architecture in particular. Cut plaster and sculpture works in extremely low relief are the subsidiary modes used. Out of these, as stated above, colour has faded obstructing thereby our appreciation of the structures. Stucco and low-relief work in stone look quite good when looked at from close quarters, but alter very little the general appearance of the entire building concerned.

As to the sources from which the newer trends seen in Deccani architecture emanate, it has been often shown that glazed tile-work was inherited from Persia, while the stone work comes from the local temple building traditions. One has to be very careful when attributing items and determining sources. There is very little question about the Persian influence. When it comes to indigenous influences, it is a different story. Similarities exist between the features like brackets, cornices, and mouldings on Moslem buildings and the Hindu temples of the area. But that is as far as one can go. Only independent items that could be adjusted or so altered as to suit Islamic planning were accepted. There did not come about any change in the ideas that governed the overall planning of the buildings. The architecture of the Deccan, in spite of the obviously Hindu features just mentioned, remained to the last true to Islamic concepts of beauty.

ARCHES

Arches used for the various buildings have already been referred to in the section on 'design development' while dealing with mosques. The typical arch that was introduced into the Deccan can be called 'ogee'. This particular outline remains constant throughout the life-span of Deccani architecture. There indeed are slight variations in the shapes of the arches, but these variations are such that they could be appreciated

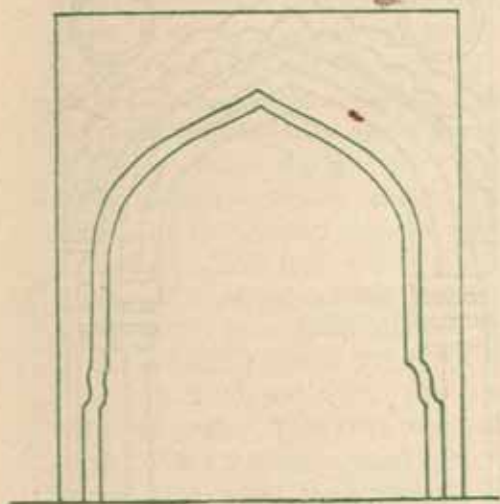
Shapes of Arches.



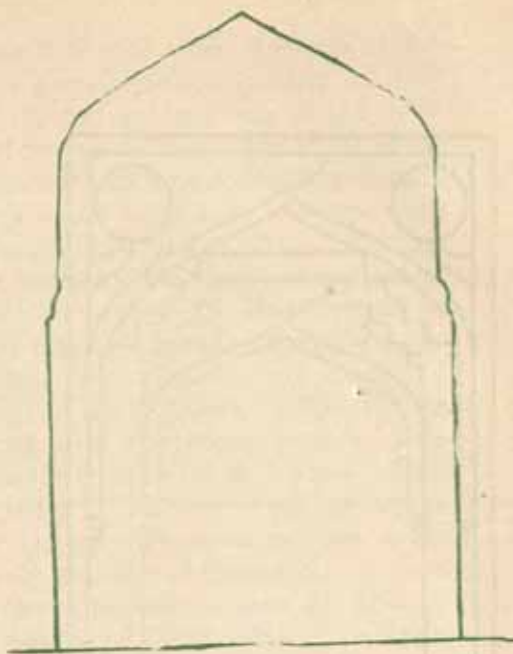
(i) Jammi mosque, Gulburga.

Fig. 18 (a)
(ii) Jammi mosque, Bidar.

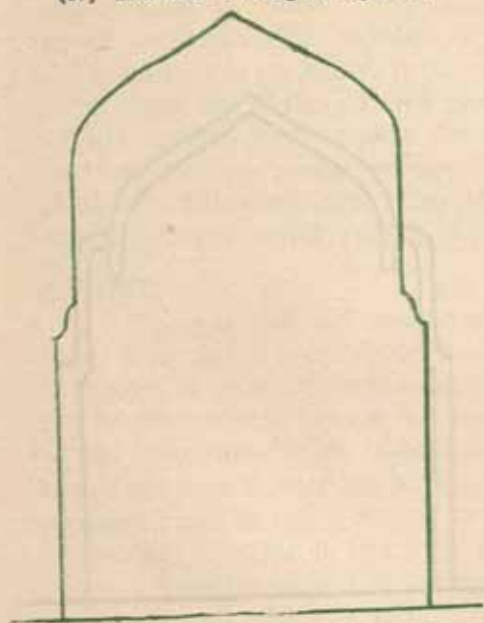
(iii) Tomb of Ali Barid, Bidar.



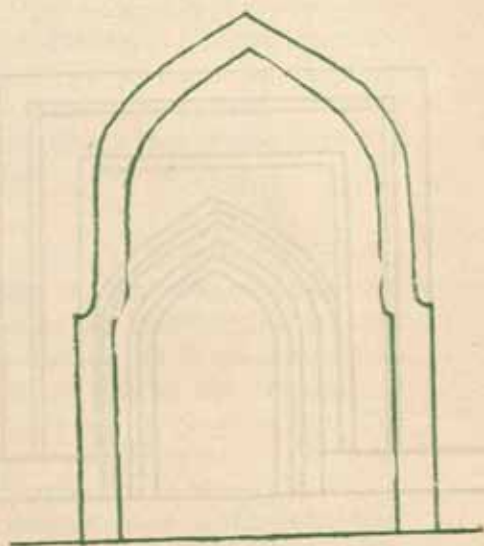
(iv) Haidariah mosque, Bijapur.



(v) Mosque near Golconda Tombs.

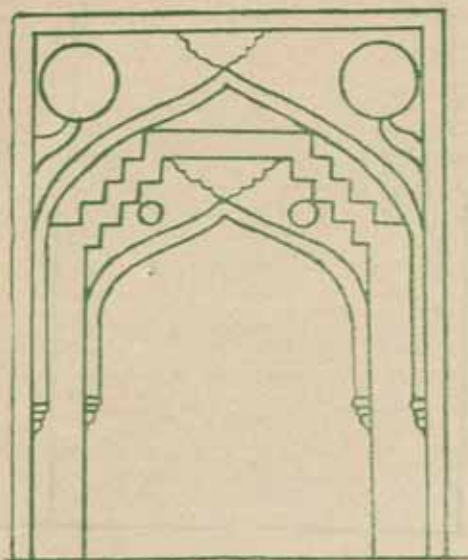


(vi) Jammi mosque, Gulburga.

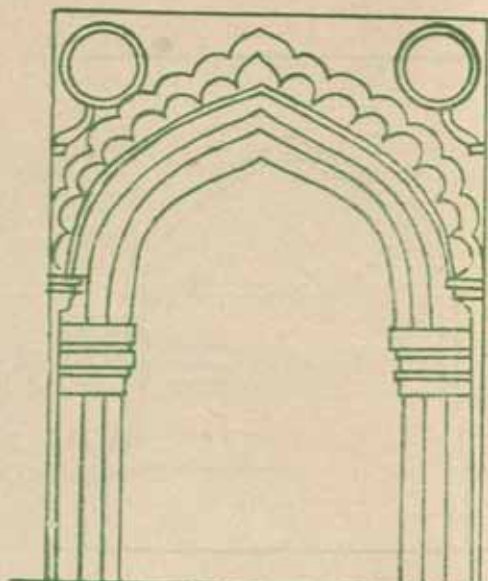


(vii) Royal Chamber, Bidar.

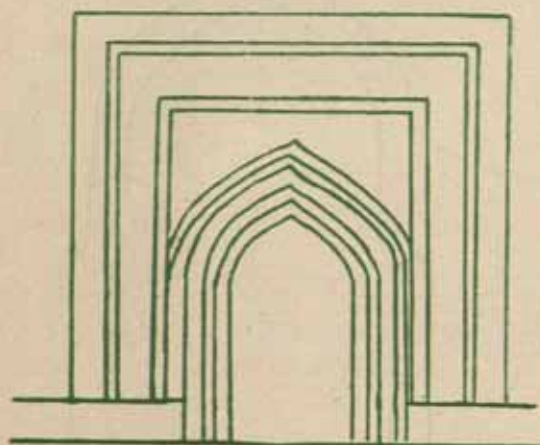
Fig. 18(b)
Shapes of Arches.



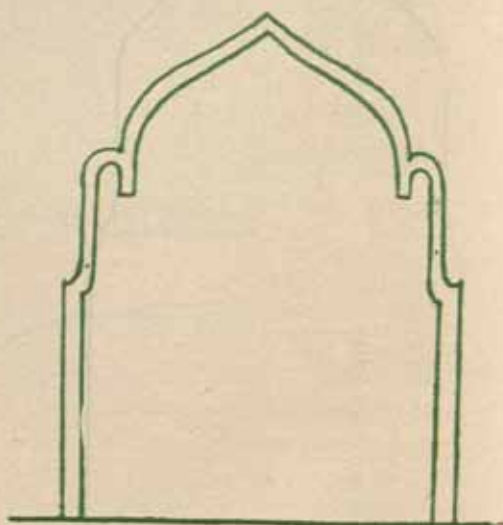
(i) Ikhlas Khan Mosque, Bijapur.



(ii) Ali Shahid Pir's mosque, Bijapur.



(iii) Mihatari Mahal, Bijapur.



(iv) Langur Ki Masjid, Gulburga.

Fig. 19
Shapes of Arches.

by the eye but would not affect the above definition when it comes to description in words. In earlier stages the piers were not marked off very prominently, were not distinguished from the general line of the arch. The Bidar period saw the introduction of horizontal mouldings to mark the junction of the pier and the arch. These were nothing more than slightly projecting bands like the 'kani'-mouldings in the beginning. As time went on, however, greater elaboration was effected in these mouldings. At both Golconda and Bijapur are three to four bands visible, each bearing sculptured or stucco designs in relief. Another change is that instead of broad arches with low imposts, the most notable example of which is the arches of the Jammi mosque at Gulburga, the arches became taller and narrower. This tendency is most obvious in the Golconda buildings. The device of recessed arches came into vogue in the Bidar period. This might be an innovation adopted from Hindu recessed door frames. Two or three plain recesses form the usual pattern. In some cases one of the arches is a cusped arch. In others a beaded string-course runs along with the arch. This is a motif extremely popular at Golconda. A very good-looking example employing both these methods is seen at Bijapur in the Ali Shahid Pir's mosque. The mosque of Ikhlas Khan, the Anda mosque, and some other buildings at Bijapur and some at Bidar like the gateways to various tombs have utilised a combination of arches and door-frames in relief. The Langar-ki-masjid at Gulburga has a very queer pendentive-like member in its arch. If the entire trend of these developments is examined, it becomes clear that the architect is struggling hard to get out of the set arch patterns handed down to him traditionally. In his endeavour to escape from the monotony inherent in the arch-patterns he has sought refuge in certain expedients utilised in Hindu temples. These are none other than the mouldings that create light and shade patterns which relieve the flat surfaces [Figure 20].

PARAPET

The parapet wall was originally a utilitarian feature. It was in early West Asian architecture meant to shield the warriors on fort walls. However, in due course it achieved a place in the architectural scheme, not because of that reason, but because it helped to add to the appearance of the structure. This change came about because of the necessity to break the even flow of the horizontal line of the top of the structure. The purpose could be better served by crestings of various shapes. The most elementary cresting is one with a 'pointed-arch' top as shown in Fig. 1 below. Another variety that can be described as basic is the 'lotus-bud' or 'cup' design. This is widely used for religious and civil buildings. The most elementary shape is seen on the Solah Khamb mosque at Bidar. It is illustrated in fig. 2. These two have served as the proto-types of all future designs. Other shapes that become popular at Bidar, Bijapur and Golconda are discussed below. In the later examples one notices a very

remarkable change. The parapets of type 1 were massive, their thickness and size (often 5 feet in height) made them heavy looking. The slanting embrasures made them look grim. The later examples in contrast are very light. They no longer remain walls but become pieces of trellis work. This is done, no doubt, to accelerate the effect of the skyline. In addition to stone, brick is also employed to erect the parapet walls and here instead of the perforated designs, we have stucco designs in relief. Some varieties are described below.

These are the most commonplace battlement crestings found on medieval Islamic structures. The early buildings of the Bahmanis such as the tomb of Ala-ud-Din Bahman Shah at Gulburga, display the same design.

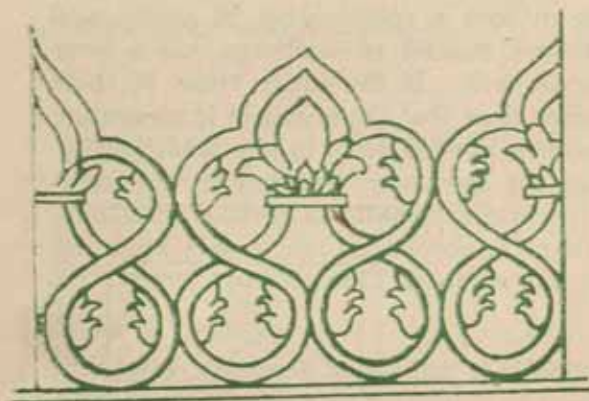
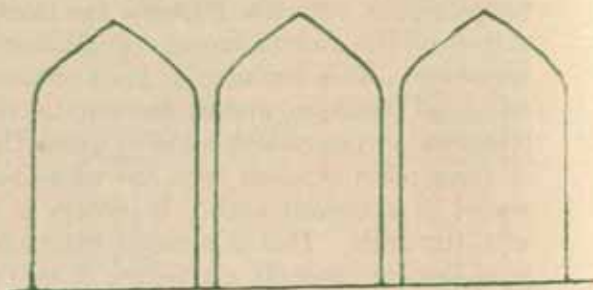
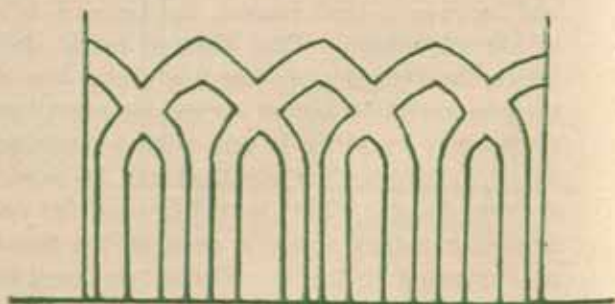


Figure 2 shows the 'lotus-bud' or 'cup-shaped' motif. This along with the one shown in Fig. 1 was the prototype of later crestings. Its numerous varieties are seen on Deccani buildings. Bijapur.

This type of parapet was obtained by overlapping forms of the shape of Figure 1. However, instead of being solid, this parapet is as good as trellis work. Bidar.



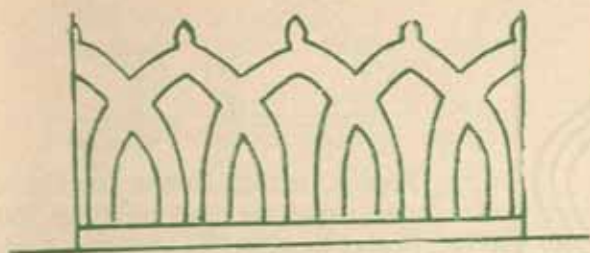


Figure 4 shows the same method as figure 3, but has made the additions of small spherical finials on every point. Secondly, the corners assume curvatures instead of the angular ones of the former design. Bijapur.

These crestings are quite akin to number 1. Their bases are extended to give slanting sides upto one-half their height, and over this, shoulders project. Their tops are rounded. Bijapur.

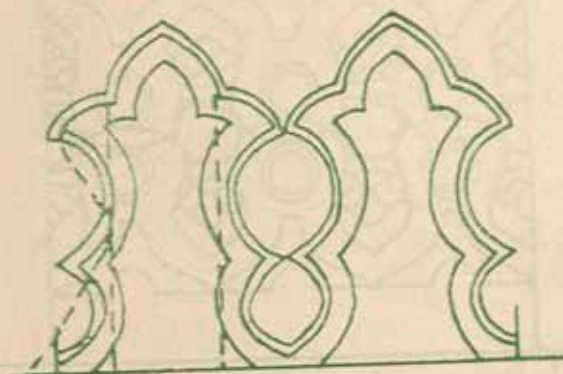
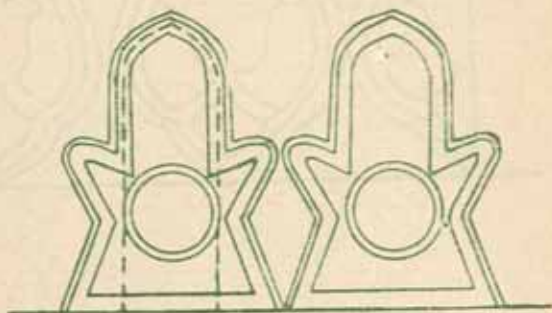
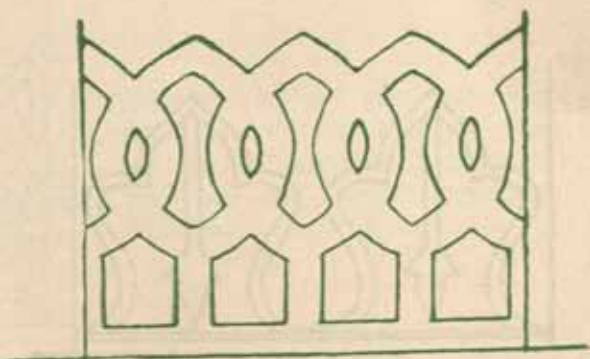


Figure 6 is to some extent a combination of the crestings in figure 1 and the shoulder motif of figure 5. It can be also derived from the design of number two. Both these combinations are explained in the figure. Bijapur.

Figure seven depicts crestings which are based on number one. Only their sides are turned in at the base and the forms overlap as in number three. Bijapur.



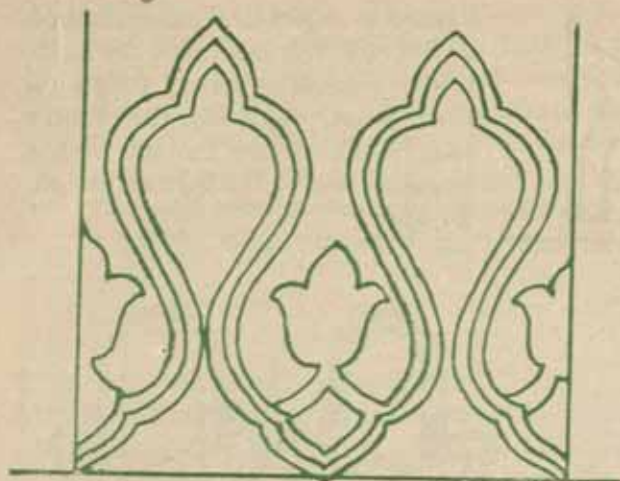
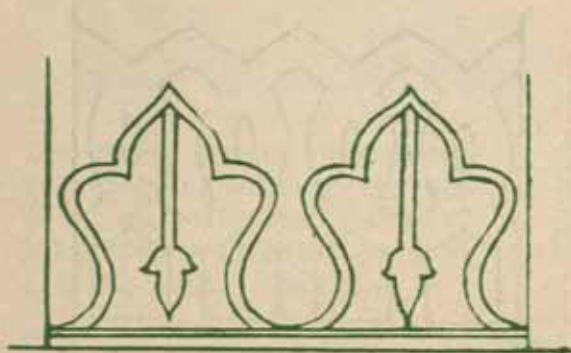
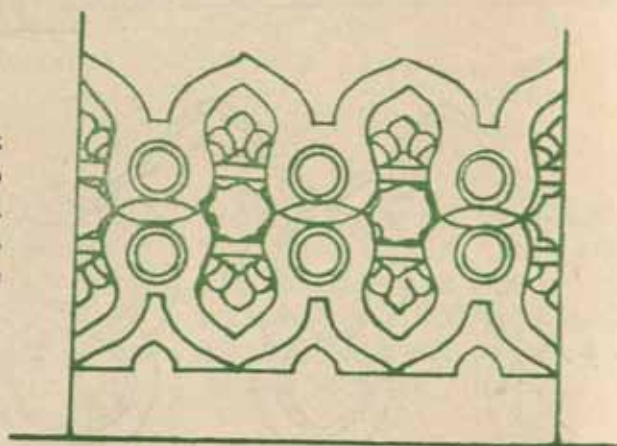
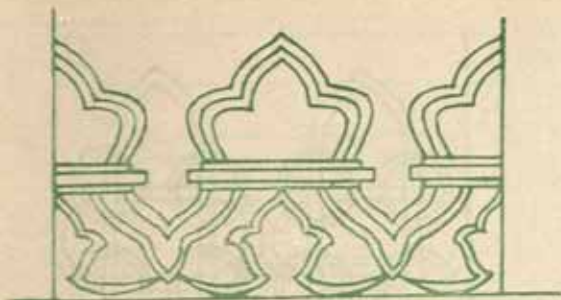


Figure eight shows a slightly elaborated form of crestings illustrated in figure two. Small trefoil flower motifs are introduced in between the crestings. Bijapur.

This a very fine although a bit complicated version of the cup motif. In addition to the lateral repetition of the motif one sees here the vertical repetition of the entire parapet wall. Bijapur.

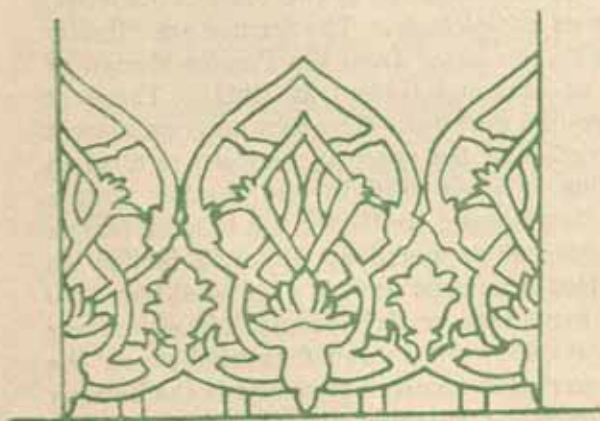
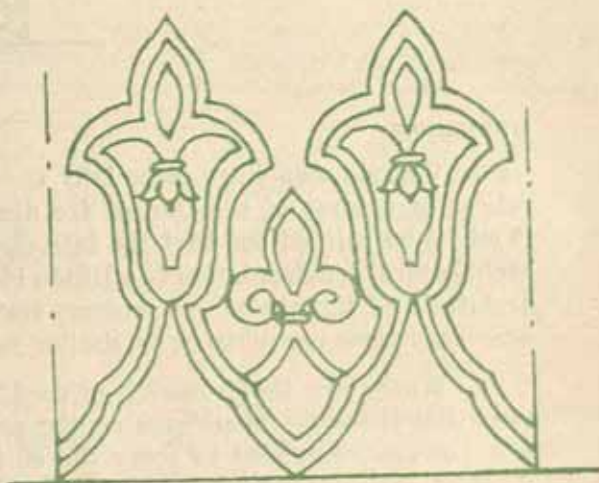


Here it will be noted, the shapes of the crestings and the empty space in between are not similar to each other. This is a version of number five with all angles substituted by curved lines. Bijapur.



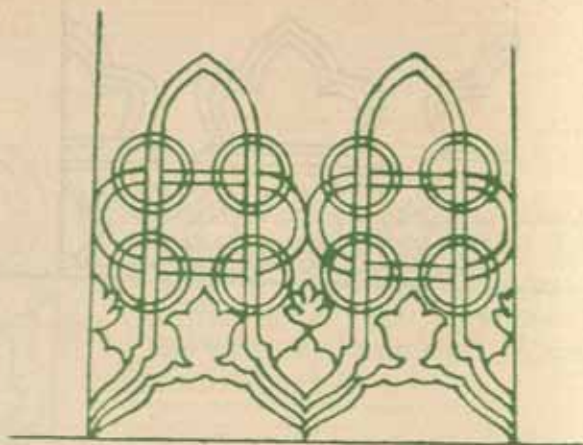
This is an ornate development of number ten. Horizontal waistbands and miniature bud-designs in cut plaster are introduced. Bijapur.

Figure 12 is an elaborated version of 2. Bijapur.



Number 13 is also one more example of the highly ornate varieties of number 2 that were used in the Deccan structures. Bijapur.

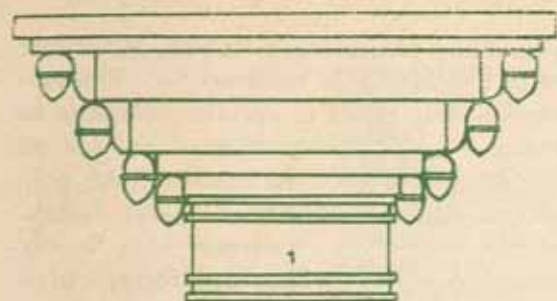
Figure 14 depicts a cresting which was woven round the skeleton of the ordinary battlement motif, with various circles, oblongs and bud motifs, to turn it into quite a motifs, to turn it into quite a good-looking trellis design. Bijapur.



MOULDINGS

Various mouldings, especially those that were used for the minarets in structures of the Deccan are discussed here. In this connection it might be pointed out that the introduction of horizontal mouldings in architectural ornamentation is a Hindu idea or practice adopted by Islamic architects of the region. Moreover, certain designs of these mouldings bear very close resemblance to similar parts of Hindu temples.

Where are these mouldings used? Starting from the base, it is seen that there are mouldings on the pedestals of the minarets. These are, however, extended to cover the entire mosque facade and take the form of so many steps. These steps, plain though they are, do add to the light and shade pattern and keep harmony with minaret pedestals thereby giving the entire structure the illusion of an extended and firmer base. The mouldings at the base of minarets are of two distinct varieties, one as at Bijapur and the other as at Golconda. The former are directly derived from Hindu temples while the latter from the Persian design of the minarets of the Madrasa of Mahmud Gawan at Bidar. Those at Bijapur have a four-legged table-like pedestal. The legs are reminiscent of the curved 'simhasana' supports and the space in between is filled in by various floral patterns. This is often used in combination with a rectangular block-like member that is quite similar to the base of temple pillars. The pedestal of the minaret as found at Golconda is like an inverted lotus flower. The incised ornament used is also petal-like. To add to its effect roll and 'kani' mouldings or string-courses in stucco are utilised. In certain buildings stucco work in relief is applied on the minarets. The next important part that received attention is the balcony projection on minarets. The minarets at Bijapur, although highly ornate, are smaller in size as compared to that of Golconda. And unlike the



(1) Mosque near Ibrahim Rauza, Bijapur.



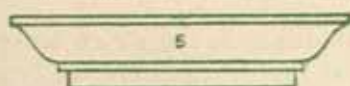
(2) Ibrahim Rauza Mosque, Bijapur.



(3) Qutb Shahi Mosque, near Golconda tombs.



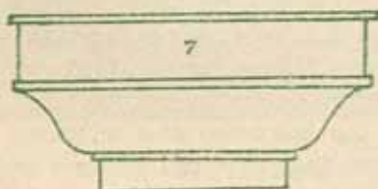
(4) Qutb Shahi Mosque, near Golconda tombs.



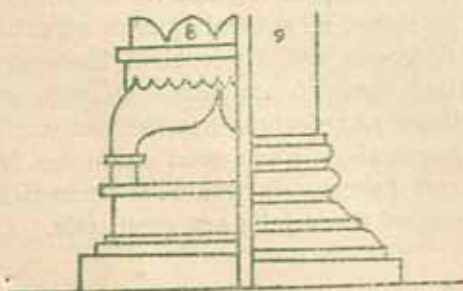
(5) Qutb Shahi Mosque, near Golconda tombs.



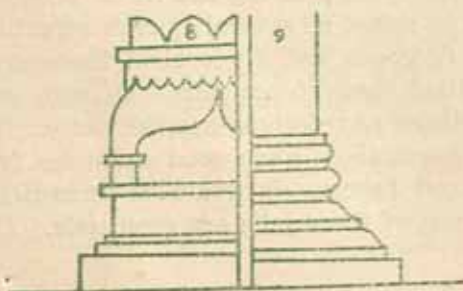
(6) Ibrahim Rauza Mosque, Bijapur.



(7) Qutb Shahi Mosque, near Golconda tombs.



(8) Nagar-Khana, Gol Ghumat, Bijapur.



(9) Mushirabad Mosque, Hyderabad.

Fig. 20
Mouldings on Minarets.

latter place, most of them do not have any projecting balconies. Wherever they have these balconies, stalactite bracketing is resorted to. The emphasis laid on the balconies at Golconda is given in certain instances to the part marking the end of one storey and the beginning of another at Bijapur. Here, the pedestal design is repeated. At Golconda the projection of the balcony is ornamented with a conventional petal design. The section of this moulding is flaring (fig. 20). This sort of a flaring band is preceded by two or three stucco bands. They are formed of a kind of string-course, and a wreath motif. There also occurs a beaded band on some minarets. There are no horizontal mouldings on Golconda minarets other than the ones at the base, those immediately below and above the balconies and the one below the domes. As far as the vertical aspect goes, the minarets were sometimes octagonal on plan. At Bijapur and also to a certain extent in late Bidar buildings, the horizontal mouldings are employed in their proper role. They are so placed as to break the vertical strain that the slim and slender minaret creates. The most commonplace band used for this purpose is the 'kani' motif. Next to it comes a flower like band with flaring section. Lastly comes the most artistic variety. This is a miniature cornice with the typical 'S' shaped brackets. To their ends are fixed bud-shaped pendants. The effect of these mouldings is singularly pleasing.

Apart from these, which are mouldings in the strict sense of the term, there are certain other features that are not far removed from them either in purpose or in execution. They are the various types of recessed arches, the cornices, the pillars and pilasters on the corners etc. However, as they are discussed separately, only a mention would be sufficient here. All these devices are employed for the purpose of relieving the plain surfaces of buildings through the medium of chiaroscuro.

TRELLIS-WORK

Perforated stone screens or 'jalis' have been used in a number of structures. It is certain that we have lost some good specimens, when the domestic structures crumbled during all these years. There was more scope for the use of this artistic device in domestic architecture. There were various partitions and screens, the balconies and windows of the houses, especially of the ladies' quarters that required screens and there was no method of doing this in a manner as pleasing and as useful as the trellis work in stone. In addition to stone, in several Deccan structures are seen jalis cast in stucco. At Golconda and Hyderabad there are a number of buildings that have utilised these stucco jalis. Of whichever material the screens are, their patterns and designs are the same. The illustrations in the following few pages show some good examples from the towns of Bijapur, Hyderabad and Jalana. It would be immediately obvious that the constructions of most of these jalis are geometric. Cer-



The two photographs give some idea of the pre-Islamic fortifications in the Deccan. The parapet crestings are Islamic but the heavy block dry masonry construction of Hindu military architecture is clearly seen as also the angular bastions typical of that class. The lower picture shows the parapets from inside the ramparts, note the flight of steps that continue all along the length of the walls.

FORT WARANGAL



This is an excellent view of the triple moats and the strong fortifications of the fort at Bidar. It is to be noted that the moat was cut mostly in rock as is evident from the dividing partition walls that are cut in the rock.

TRIPLE MOATS : FORT BIDAR



This is the Gulburga fort. Very clearly visible are the broad ditch that encircles the fortified area, and the double lines of ramparts. Here as at Bidar the walls stand on a solid foundation of rocks through which the moat is cut.

DITCH AND RAMPARTS : FORT GULBURGA

A view of the defensive outworks and ruined moat of the Golconda fort from one of the towers. The moat is to a large extent filled up now, but enough remains to show clearly the glacis (marked A) and the perpendicular wall retaining it (marked B). The figure on page 82 showing a section of the glacis, moat and ramparts would make the idea clearer.

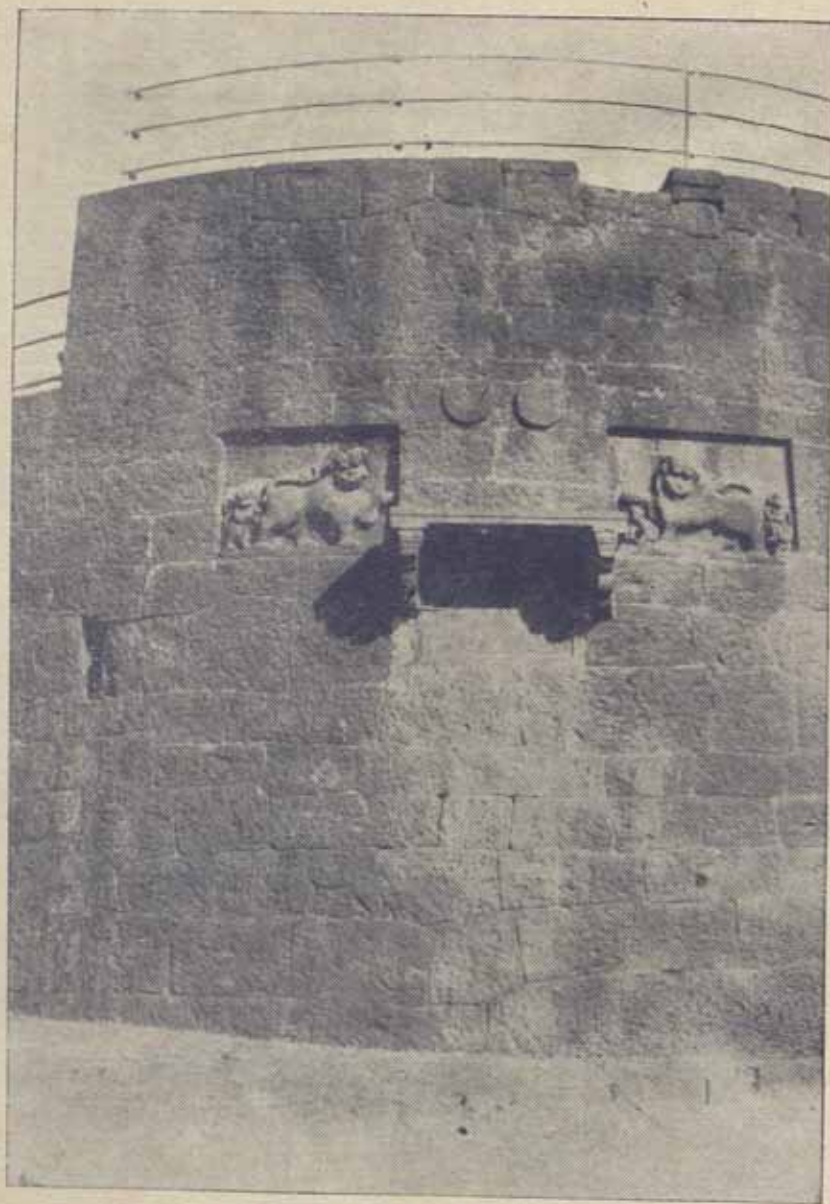
DEFENSIVE OUTWORKS
FORT GOLCONDA



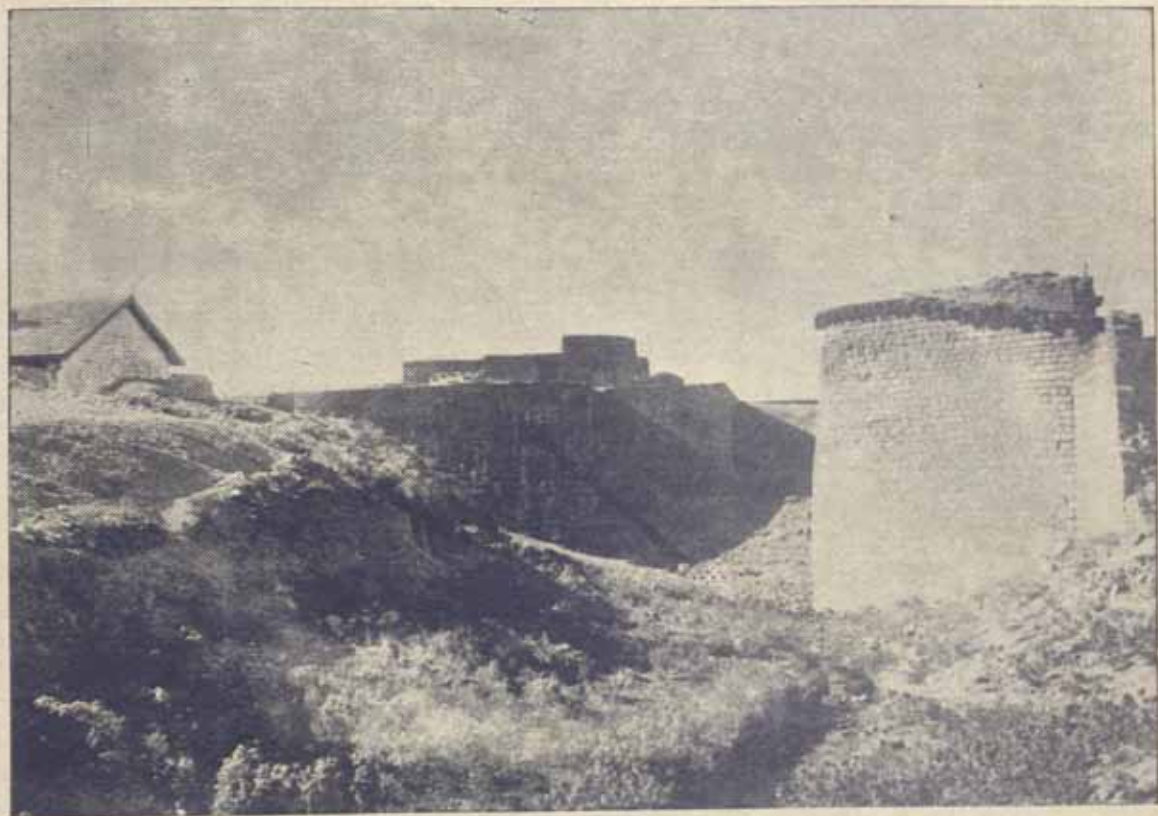
A general view of the Golconda fort, from the ruined Palace below. Clearly seen is the great labyrinth of formidable ramparts that protect the citadel on the hill. The staircases that lead from the Bara Dari to the palace is also seen in the centre of the picture.

GENERAL VIEW
FORT GOLCONDA





FORT BIJAPUR : The bastion on which the famous Mulki-i-Maidan stands.



A view of the same bastion as in XXXV from the ditch encircling it.



Gulburga Fort. Gate to the fort. The arched gate is flanked on either side by towering bastions and its piked timber doors are still in position. It is protected by a barbican.

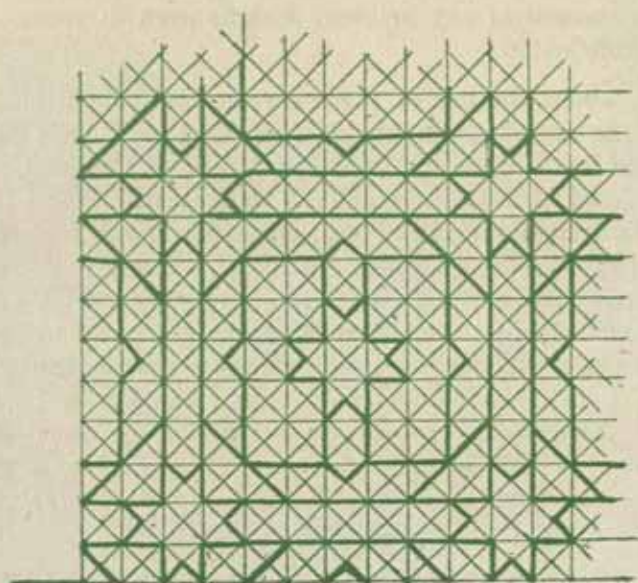
ENTRANCE GATE : FORT GULBURGA

tain types are of extremely common occurrence. None of the Deccan examples seems to be original. They are to be found on Islamic structures all over India. In this connection, the reluctance of the stone cutter to wield his chisel for creating floral patterns is most marked. The Gujarat and Delhi craftsmen had created masterpieces with the help of the tree and vine motifs and floral motifs. The lack of any such work points to the conclusion that the Deccani draftsmen were not well versed in this art and remained satisfied with copying older patterns of geometric designs. The absence of any original designs even in geometric patterns supports this conclusion.

A word about the use of these screens in some Deccani buildings is necessary. As stated above, the various houses etc. that have now disappeared would have contained good specimens of the jalis. The perforated screens used at Jalana are built in the wall that surrounds the mosque. In an arched opening several patterns are made to fit in. Hence the space each motif gets is absolutely limited. Similar is the case of the window openings that are seen at Bijapur or Hyderabad. Most of the openings are arched but their dimensions are too small to bring out the real beauty of the trellis designs used. It is only when the space covered by the screen is considerable, at least say ten feet by ten or twelve, that the repeating patterns in the screen work impress themselves on the onlooker. Thus not only in the technique and execution of the jalis, but also in the use of them were the Deccani architects far behind their counterparts at Agra, Delhi or Gujarat.

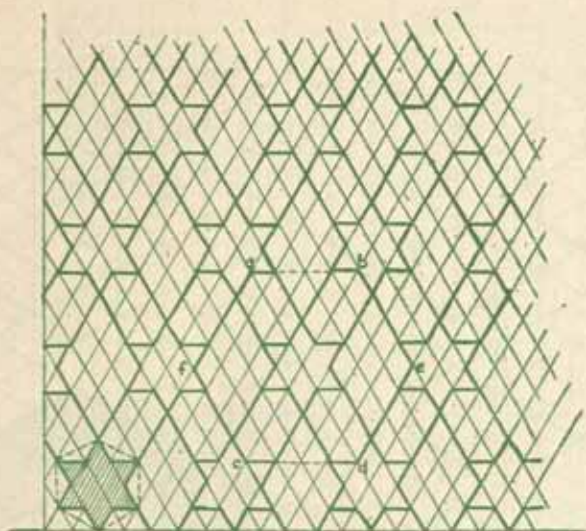
The construction of some of the patterns is explained in the following pages.

It is not necessary to explain the construction of the patterns shown in photographs numbers XXVIII and XXIX as they are very simple.



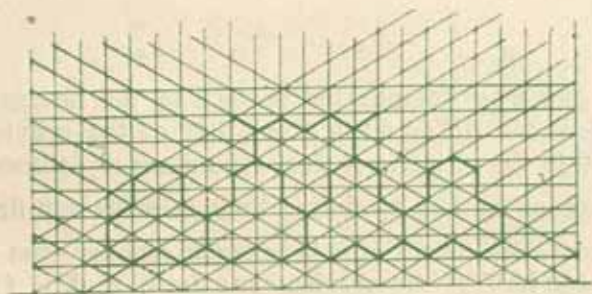
Number 1

The design illustrated on Plate XXIV and explained above is obtained by the following method. In addition to the vertical and horizontal lines from each point, lines are drawn at an angle of forty-five degrees from the base line. The removal of the unwanted lines would give the pattern. The chief motif is a square on the corners of which are eight pointed stars.



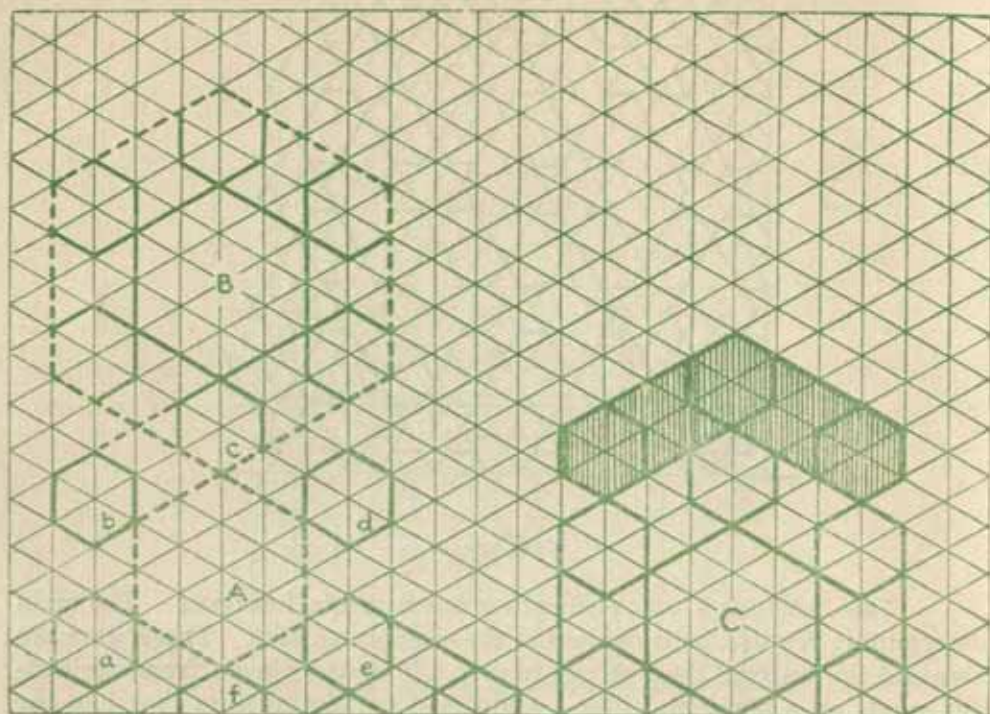
Number 2

This design is a very elementary one based on hexagons. The main determining feature, as is obvious is the six-pointed star. These stars are obtained by drawing lines at one-twenty and sixty degrees from equidistant points on a horizontal line. Additional horizontal lines that join the proper intersections form the star design. [Plate XXV].



Number 3

The pattern is formed thus : Points are marked on a line at fixed intervals. From every alternate point angles of one-fifty and thirty degrees are drawn. From every point perpendicular lines are drawn. The resulting network of lines forms the skeleton. Elimination of portions of lines that really form sides of a hexagon, results in this design. [Plate XXV].



Number 4

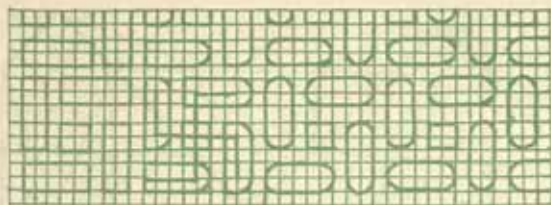
This is the most complicated pattern of the hexagon series. Its construction does not differ much from that of the previous one. The stages that lead to the ultimate or final design are as follows:

An hexagon, marked by dotted lines is made out first.

A — From each corner of this hexagon, smaller ones are projected, their width being half of the previous one (a, b, c, d, e, f). It may be noted that the outer lines of these six smaller hexagons form a bigger hexagon. This bigger one is shown in dotted lines . (B).

A repetition of this firm hexagon gives the pattern. In this case two smaller hexagons are common to bigger ones.

However, in the trellis work under discussion the repeat pattern is not used quite strictly. The portion shown in hatched lines, which itself results from the same basic framework, (C) is interposed between two bigger hexagons [Plate XXVI].

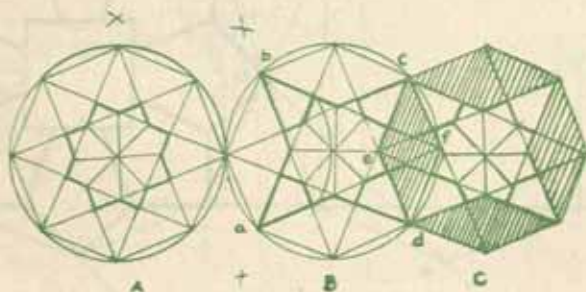


Number 5(a)



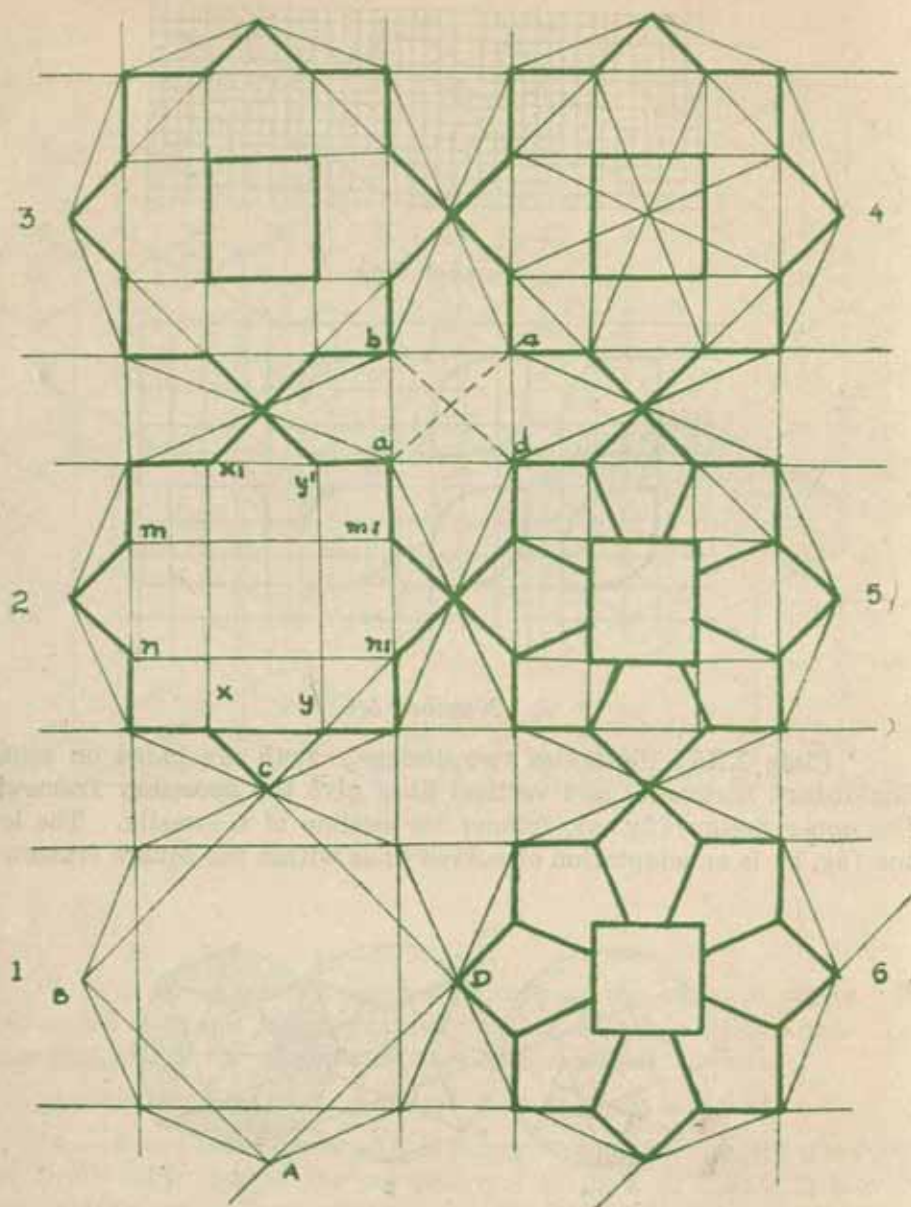
Number 5(b)

Plate XXVI illustrates two designs. Both are based on squares. Equidistant horizontal and vertical lines give the necessary framework. The upper design (fig. a), follows the outline of a swastik. The lower one (fig. b) is an adaptation of curved lines within the square framework.



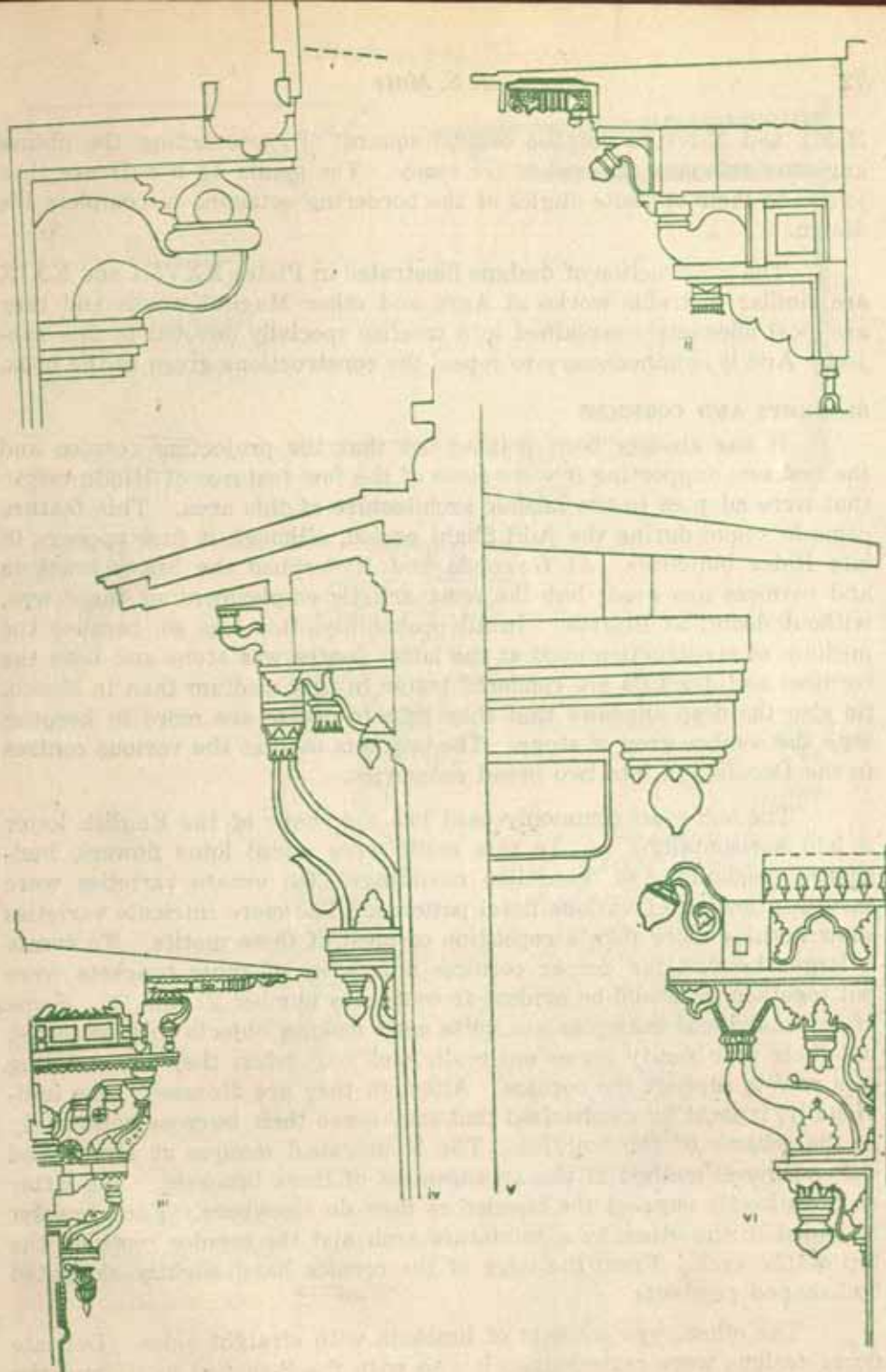
Number 6

This pattern is based on octagons. Here the octagons overlap (shaded portion of the figure) instead of touching each other. 'A' shows how the eight pointed star in the centre and its spokes are arrived at. 'B' shows the prominence gained by the four pointed star, a, b, c, d. 'C' shows the overlapping portion c, e, d, f. A repeat of these overlaps gives the design [Plate XXVII a and b].



Number 7

Photograph number XXVII c shows and the above figure explains one of the common octagonal patterns used in Islamic art. A number of octagons are placed near each other so as to meet one another at alternate angles (AB CD). Placing the octagons on parallel vertical and horizontal diagonals facilitates the construction. An eight pointed star is then made by joining the points of the octagon. Join points X-X1, Y-Y1,



Brackets and Cornices **Fig. 21**
 (i) Ali Shahi Pir Mosque, Bijapur. (ii) Gol Ghumat, Bijapur. (iii) Malik Jehan Begam Mosque, Bijapur. (iv) Bahlol Khan's Mosque, Bijapur. (v) Tomb near the tomb of Sultan Quli Qutb, Golconda. (vi) Kumbhar Mosque, Bijapur.

M-M1 and N-N1 to get the central square. By connecting the obtuse angles of this star the spokes are ready. The points (a b c d) are then joined to their opposite angles of the bordering octagons to complete the design.

The construction of designs illustrated in Plates XXVIII and XXIX are similar to trellis works at Agra and other Mughul works and they are most adequately explained in a treatise specially devoted to this subject.¹ And it is unnecessary to repeat the constructions given in the book.

BRACKETS AND CORNICES

It has already been pointed out that the projecting cornice and the brackets supporting it were some of the few features of Hindu origin that were adopted in the Islamic architecture of this area. This feature came in vogue during the Adil Shahi period, although it first appears in late Bidar buildings. At Golconda and Hyderabad the heavy brackets and cornices are used; but the most artistic employment of these was, without doubt, at Bijapur. In all probability, this was so, because the medium of construction used at the latter centre was stone and both the cornices and brackets are rendered better in that medium than in stucco. So also the deep shadows that they help to create are more in keeping with the sombre grey of stone. The brackets used at the various centres in the Deccan fall into two broad categories.

The one most commonly used has the shape of the English letter S laid horizontally. To this motif were added lotus flowers, bud-shaped pendants, and 'kani'-like mouldings. On ornate varieties were carved in low relief various floral patterns. The more intricate varieties show nothing more than a repetition of most of these motifs. To create a larger bracket for deeper cornices a number of these brackets were put together, as would be evident from figures number 21 and 22. Some of the individual examples are quite good looking objects in themselves, but their real beauty comes out really well only when they are standing in a row to support the cornice. Although they are discussed here individually, it must be emphasised that they serve their purpose collectively in the scheme of the building. The Mushirabad mosque at Hyderabad shows a novel method of the arrangement of these brackets. The latter do not directly support the cornice as they do elsewhere. Each bracket is joined to the other by a miniature arch and the cornice rests on the top of the arch. From the edge of the cornice hang slightly elongated bud-shaped pendants.

The other type consists of brackets with straight sides. Delicate floral designs were carved upon it also with the S-shaped motif and the lotus-bud pendants. This type of bracket is more common, and is suited

¹ HANKIN, *The Drawing of the Geometric Patterns in Saracenic Art*.

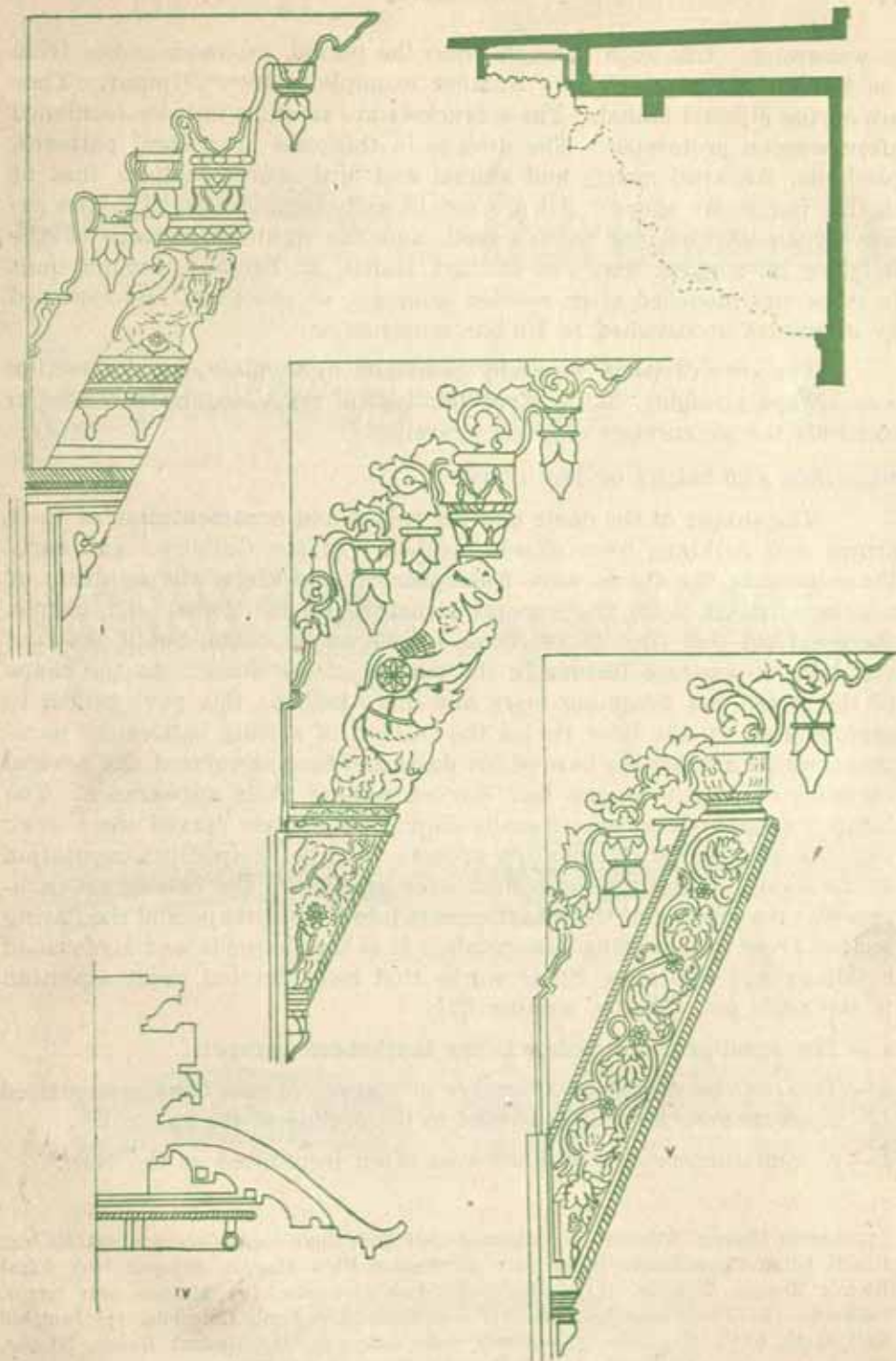


Fig. 22

(i, iii, v) Mihatari Mahal, Bijapur. (ii) Gol Ghumat, Bijapur. (iv) ?

to woodwork. One such example from the period, in wood, comes from the Rangin Mahal at Bidar. Another example is from Bijapur. They are on the Mihtari Mahal. These brackets are in stone but are fashioned after wooden prototypes. The designs in this case are: floral patterns, pendants, S-shaped motifs and animal and bird representations that fit in this particular shape. All are cut in extremely low relief. The excess ornamentation, the motifs used, and the light appearance of the building all suggest that the Mihtari Mahal, at Bijapur, though built in stone was modelled after wooden originals, or conceived and executed by architects accustomed to timber construction.

The cornice itself generally remained quite plain, i.e. its section was always straight. It acquired the typical wavy section so common to Hindu temple cornices only very rarely.

NECKINGS AND DRUMS OF THE DOMES

The shapes of the dome and the height and ornamentation of their drums and neckings were closely related. In the Gulburga and early Bidar periods, the domes were hemispherical and there was no drum or necking distinct from the general structure of the dome. Of course, there existed that part of the dome known as its drum, but it was not visible as a separate feature in the outline of the dome. As the shape of the latter was becoming more and more bulbous this part gained in prominence. In the later period the fashion of setting battlement parapets in relief against the base of the dome had become current and several varieties of stucco designs had started making their appearance. The Eijapur structures which generally display exquisitely carved stone work have not lavished much attention upon the parapet shaped ornamentation of the dome. The only refinement over and above the battlement-parapets was the turning of these battlements into a petal-shape and the flaring section given to these long slim petals. It is the Golconda and Hyderabad buildings and also some Bidar works that have devoted great attention to the neckings. [Figure number 23].

- a—The most primary design is the battlement parapet.
- b—This was decorated in a number of ways. A thin band was incised upon them so as to run parallel to the outline of the parapet.
- c—A miniature replica of itself was often introduced at the base.

(a) Jammi Mosque, Bijapur. (b) Mahmud Quli Qutb Shah tomb, Golconda (c) Hadrat Khalil Ullah Chaukhandi, Bidar. (d) Ali Shahid Pir's Mosque, Bijapur. (e) Afzal Khan's Mosque, Bijapur. (f) Abdul Qutb Shah, Golconda. (g) Mosque near tombs, Golconda. (h) Tomb near Golconda. (i) Quli Qutb Shah tomb, Golconda. (j) Jamshid Quli Qutb tomb, Golconda. (k) Tomb near Golconda. (l) Hadrat Banda Nawaz, Gulburga. (m) Sultan Ali Barid's tomb, Bidar. —→

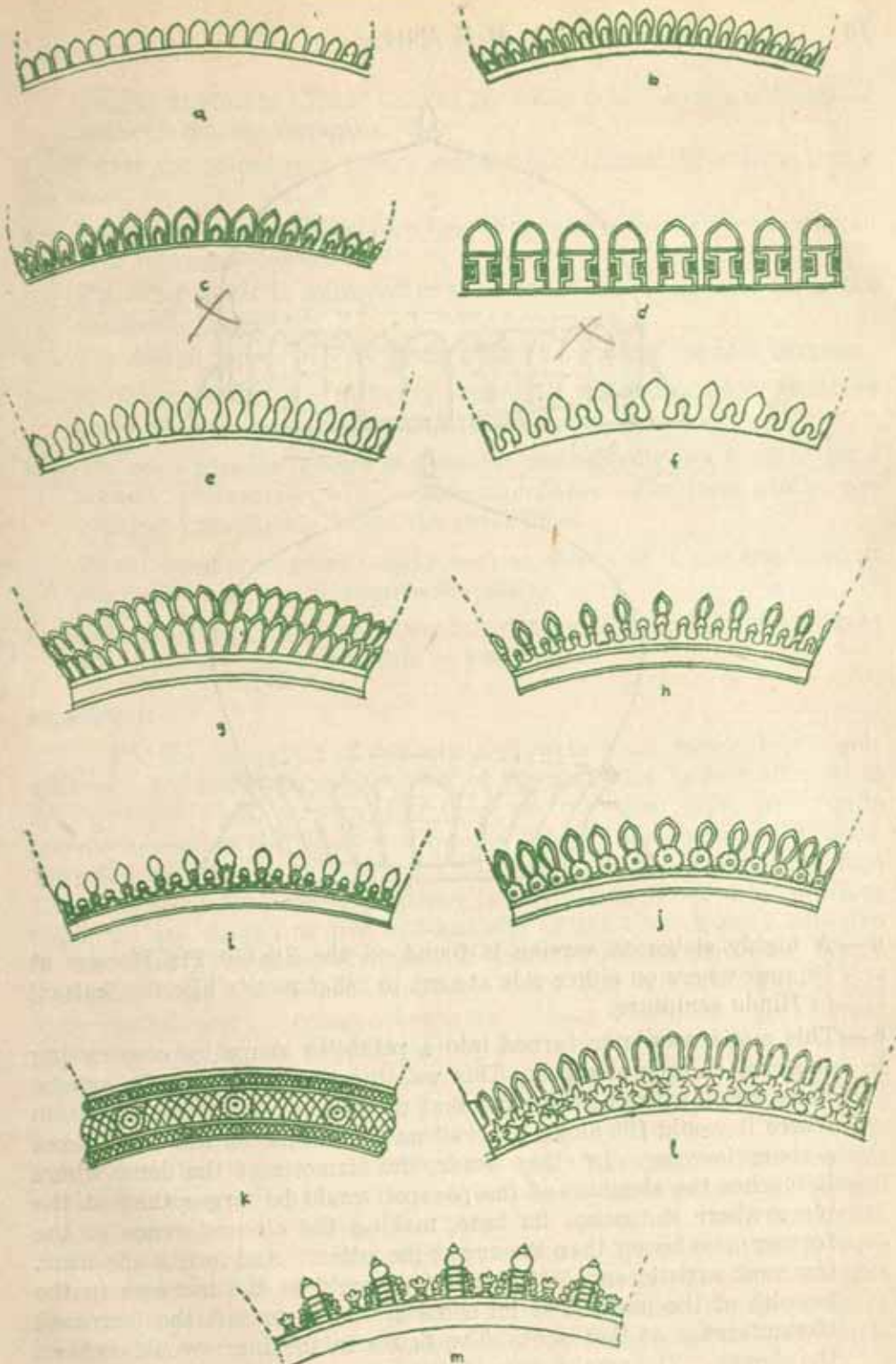
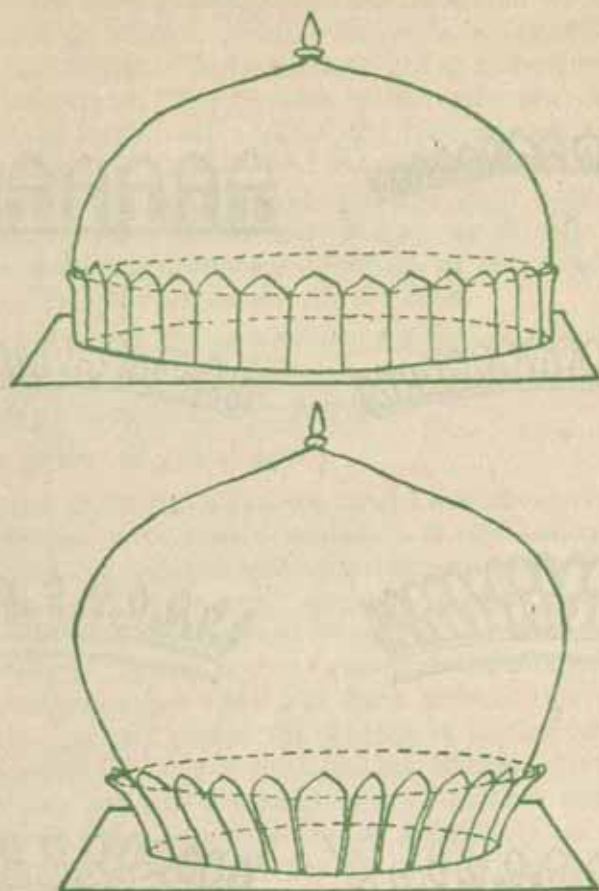


Fig. 23



- d — A highly elaborate version is found on the Shahid Pir Mosque at Bijapur where on either side are cut in relief motifs like the 'kalash' in Hindu sculpture.
- e — This motif was later turned into a petal-like shape by constricting the base of each member. This was the result both of the artists' imagination as well as the fact that the petal is occupying a position where it would tilt along the wall as the outline of the dome takes a sharp inswing. In other words, the diameter of the dome where it touches the shoulder of the parapet would be larger than at the place where it touches its base, making the circumference at the former point larger than the one at the latter. And in this situation, the most artistic and logical solution would be the increase in the breadth of the parapet at its shoulders so as to suit the increased circumference at that spot. The figure in the inset would explain the change. The petal design is now onwards used to evolve various

designs in stucco. These designs generally take the course described in the following examples.

- f—Petals are placed in a row, a smaller one alternating with a bigger one.
- g—Two rows are placed one upon the other so as to create the impression of a blooming flower.
- h—The same motif is employed in three rows, the lower-most being the smallest.
- i—The design shown in 'i' in figure 23 is also utilized for this purpose.
- j—At Golconda is seen the next step. All the independent members come to be linked together with the vine and bud band.
- k—The most popular feature at Golconda undoubtedly is a band of thick wreath interspersed with rosette medallions. The band girdles the necking immediately below the petal lines.
- l—Floral designs of great beauty such as shown in 'l' are employed at some places in combination with petals.
- m—The design on the dome of the tomb of Sultan Barid Ali has utilized the minarets and vine motifs to great effect.

WOODWORK

For the decoration of domestic architecture woodwork was largely utilised. Although the construction of the mansions largely adhered to the arcuated form, wooden structures on trabeated style were quite popular as seen by the remains of various palaces from Bidar and Bijapur. Very few remains of the woodwork of these structures are extant today. However, those that are in existence or have been recorded by previous observers are enough to give us some idea of the type of work executed in this area. The parts of timber in these structures that were highly decorated were the pillars, brackets, beams and ceilings. The pillars were mostly square or octagonal columns. Many times they were of great dimensions as at the Asar Mahal at Bijapur where each of the four central columns was thirty-five feet in height and had a circumference of four feet. The pillar shapes do not seem to have undergone any change, new shapes like the cypress pillars at Delhi are not to be seen. The shafts were plain, but a great deal of carving was introduced on their capitals in many cases. This consisted of a stepped arrangement of several mouldings where the upper one projected somewhat from the lower. Bead and flower motifs were carved on these. Here the brackets were enlarged to form the two parts of an arch. The lower edge of the brackets was cusped and lotus pendants hung from each stage. On the body of the brackets were carved vines and flowers as delicate as those in painting. Their execution is generally very good.

The beams were strictly utilitarian, no special attention being lavished on them. The brackets and ceilings claimed all the attention. They were treated with the most intricate and exquisite carving. The type of bracket most in use, other than the ones described above, was the slanting support to the beam quite like the hypotenuse of a triangle. This was carved with vines and flowers woven around various birds. Often the typical 'S' shaped pattern makes its appearance on them. The ceiling designs follow the traditional geometrical patterns and repeat motifs.

It is to be confessed that lack of evidence does not allow a fuller appreciation of Deccani woodwork. However, if later Maratha works, which were more or less a continuation of the Deccani art, are any guide, there should be little hesitation in saying that the wood carving of this region was a highly developed craft.

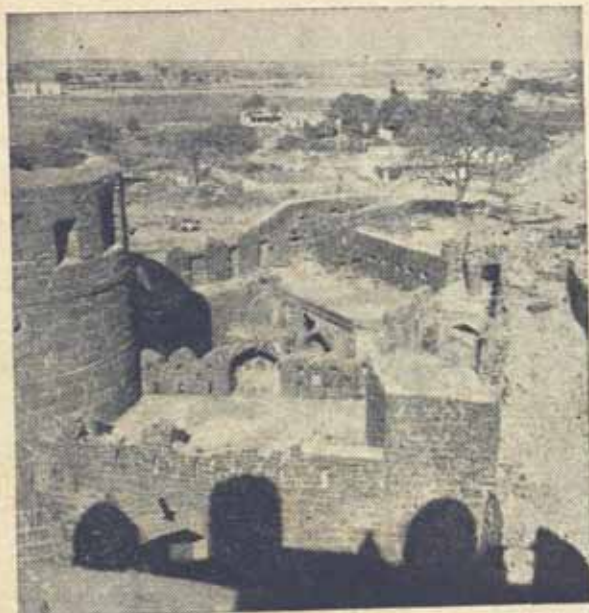
V. FORTS

In keeping with the general aim of the work, Islamic forts in this area are discussed here as a class or a type. As such, descriptions of individual fortresses do not find any place here. Most of the forts have been described in great detail elsewhere and it would serve no useful purpose to repeat those details. Moreover, such a discussion does not suit the aim of this study, which is to analyse and to study various types of buildings. From this point of view, military architecture is a larger group and townwalls and fortresses are the sub-groups. Both these sub-groups have various things in common. Various features of both that can be called characteristic are dealt with below. Many of these contingent parts of Deccani forts are such that their real significance cannot be brought home through words alone. Hence a number of illustrations are specially prepared for the work. Especially the general plan or layout of a military stronghold, the disposition of gates, etc. can be explained with the help of illustrations only. They are prepared from existing Islamic fortifications.

The art of fortification was practised in India from very early times. Towns belonging to the Indus Valley Culture had strong protective ramparts round them. Vedic literature abounds in references to 'durgas'. Sculptures and literature from around the beginning of the Christian era show and describe fortifications. The art and science of erecting formidable masonry barriers were highly developed. The ancients had given careful thought to all the aspects of military architecture. Treatises like *Arthashastra* or the *Niti* works explain all factors, starting with the strategic location of strongholds to the minutest detail regarding provisions and payments etc. Early medieval India could boast of several redoubtable fortresses, Deogiri being one of these. In the Deccan the Yadavas and the Kakatiyas were great builders of forts and many of the more well-known Deccani forts are situated on the spots where once their forts stood [Plate XXX]. Certain elements were considered essential to Indian forts. Among them count strong battlemented ramparts and gates strengthened by towers; broad and deep moats with the proper arrangements to flood and drain them; the creation of traps, pitfalls, underground approaches, etc. and the necessary measures to provide the fort with water and food supply. The ramparts were constructed of large stone blocks set in dry masonry and the towers were angular or square but not round. The gates had large trabeate door-frames. So long as the mainstay of assault was weapons like bows and arrows, javelins and swords, these forts served their purpose well. With the introduction of

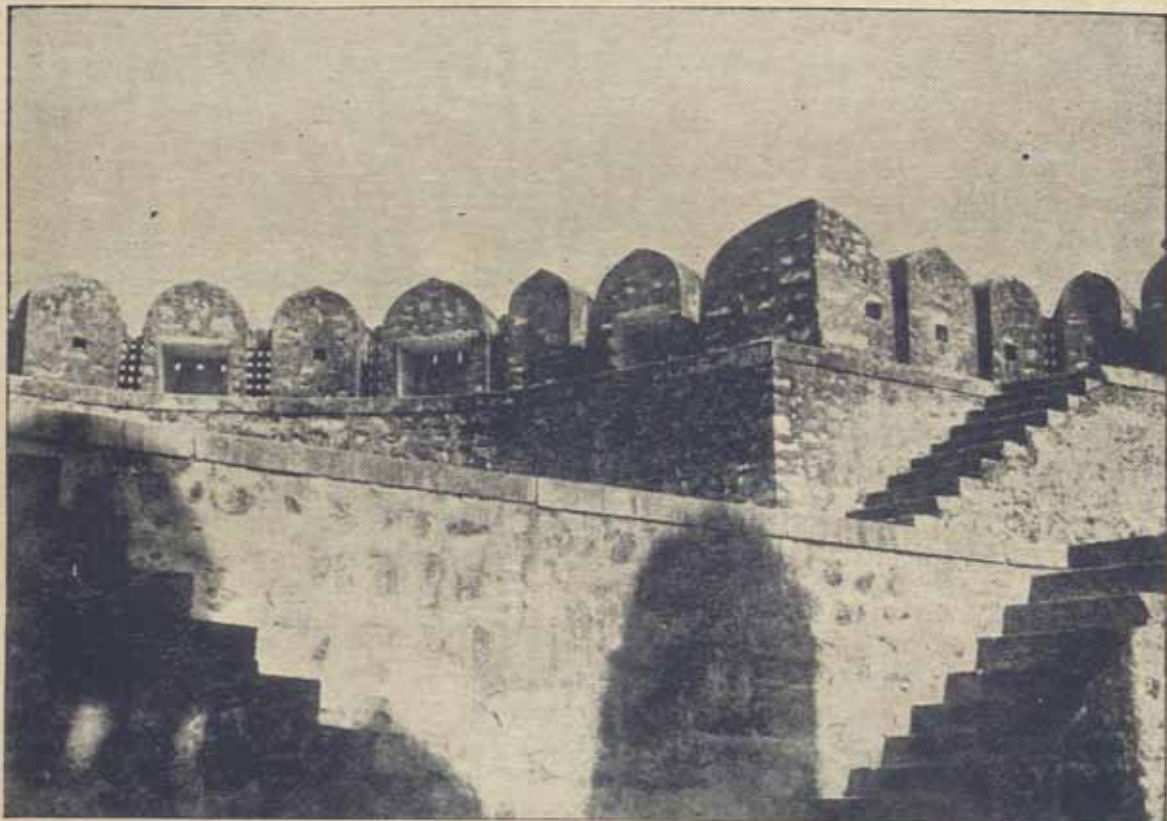
gunpowder these fortifications became completely out of date. It was the Islamic armies who first used guns on a large scale in Indian wars. By the end of the fourteenth century use of gunpowder became widespread. The new fire-spitting machines made imperative revolutionary changes in the hitherto common modes of warfare and defensive architecture. Some aspects already existing achieved a greater significance and vitality while some new ones were added. The changes concerned two chief factors of gun-warfare. In the first place, the great destructive power of the shells and other forms of gun-fire had to be taken into account. Similarly the range of the guns was a vital factor. The former called for an immense increase in the strength of military structures and the latter increased greatly the diameter of the outer perimeter of the fortifications. In other words, the fortifications became both in mass and the area covered vastly greater than earlier ones. Both these problems and sundry others dealing with gun-warfare had arisen sometime back in Europe and the solutions for them were also evolved there. The Crusaders brought these to Western Asia and from there came very slowly into India. The soldiers and architects of the Khalji and Tughluq Sultans who came to the Deccan were acquainted with this art. But the Deccani Sultans also brought it directly from Western Asia through officers and soldiers imported from that quarter. This is the origin generally traced.

The Bahmani kingdom was protected on the north by the very good natural barriers provided by the Vindhya and Satpuda mountain ranges. Immediately to the north of the actual boundaries of their territory were the rivers Tapi and Narmada. To the west the Sahyadris and to the east the 'Ghats' stood sentinel over Bahmani interests. The Krishna and the Tungabhadra marked the ever fluctuating southern frontier. These features gave the Bahmani kingdom very good natural definition, but were not in themselves capable of providing adequate protection. Human agency had to complement them, which meant the erection of a string of forts girdling the territories under Bahmani domination. Places fortified by earlier rulers with reference to the then existing boundaries could not be neglected. Towns serving as seats either of the central Government or of provincial administrations had to be taken care of. Several highways were important commercially and militarily. A particularly troublesome area had to be kept in check. The best remedy for all these was construction of forts. The Bahmanis and the succeeding Shahis undertook the task most zealously. And thus came into existence in this region numerous fortresses, large and small. The great complications in the political situation at the beginning of the sixteenth century, when the Bahmani Sultanate disintegrated giving rise to a number of successor states resulted in an increase in the number of forts. Each new state strove to strengthen its ever-changing boundaries with the help of fortresses. A chain of strongholds hinging on those at Gawilgarh,



Inside view of the gate, Gulbarga Fort. The arched cells seen in the foreground of the picture on the left hand housed guards. In the picture on the right the arrows mark the outer and inner gates.

ENTRANCES : FORT GULBURGA



A view of the barbican standing in front of the Bala Hisar Gate of Golconda Fort. The details of parapets and embrasures are clearly seen. The picture is taken from the gate.

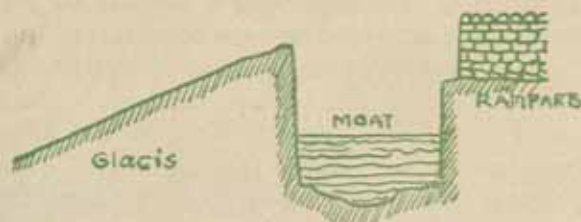
Narnala, Ellichpur and Mahur stood on the north and north-east. To the west Daulatabad, Purandhar, Panhala, Parenda, Naldurg and finally Gulburga constituted the nucleus of the defence. Mudgal and Raichur faced the enemy on the south and south-west. To the east, Warangal and Golconda supported by numerous smaller forts like Bhongir, Elagandol, Jagtil, Balaconda etc. guarded the frontier. In later years Bidar, Bijapur, Ahmednagar, Aurangabad, Sholapur and a number of other places were fortified and several strong fortresses were constructed in the hilly ranges on the west. The effectiveness of this system of fortifications is illustrated by an incident in the life of Mujahid Shah Bahmani. The Sultan besieged the fort of Oodnee. "The siege continued for nine months but to no avail. Mallek Syef und Dien Ghoree, hearing at Gulburga of the unpromising state of affairs, petitioned the Sultan for leave to join him with his troops, as he had a great desire to see the fort of Oodnee, of which he had heard so many wonderful accounts. The Sultan having consented to his request, he marched with great expedition and soon had the honour of kissing the border of the royal Musnud. After reconnoitring the fortress, he observed to the Sultan in private that the conquest of such a place which had fifteen forts communicating with each other, was not to be hoped for in such a short time; that preparatory to it, the forts between the rivers from Goa to Malgaon and Bijapur should first be taken."¹ The Sultan accordingly raised the siege and returned to his capital."

The period over which all these forts were built is a span of three centuries and as such it is only natural that they differ from each other. This difference, this distinctness, is however, very slight and all of them follow the same principles of military engineering. The strength of each fortification is bound to vary according to the natural situation and according to the skill of the engineer concerned. But the essentials do not. They are : going from the outer perimeter towards the centre, glacis and counterscarp, moats, scarp, walls, towers and gun-turrets, gateways, storehouses, residential quarters and water-supply [Plate XXXII].

Glacis : The glacis is a sloping earthen mound encircling the entire outer perimeter. This serves a number of purposes, the most important of which is to provide an effective cover against gun-fire. The accuracy of the gun-fire was not pinpoint and a huge earthen mound of the same or even more height as the ramparts was likely to carry a great number of shells on itself, leaving the walls unharmed. Secondly, it prevented any stealthy approach towards the foot of the walls, as one had to climb the mound to go near the walls, thereby exposing himself. A very good example of a land fort provided with the protective glacis is the Warangal fort. From a distance one feels as if one is looking upon a huge earthen hillock, as nothing of the formidable ramparts or towers is visible. The outer ram-

¹ SCOTT. *Ferishta's History of the Dekkan*, Vol. 1, 47.

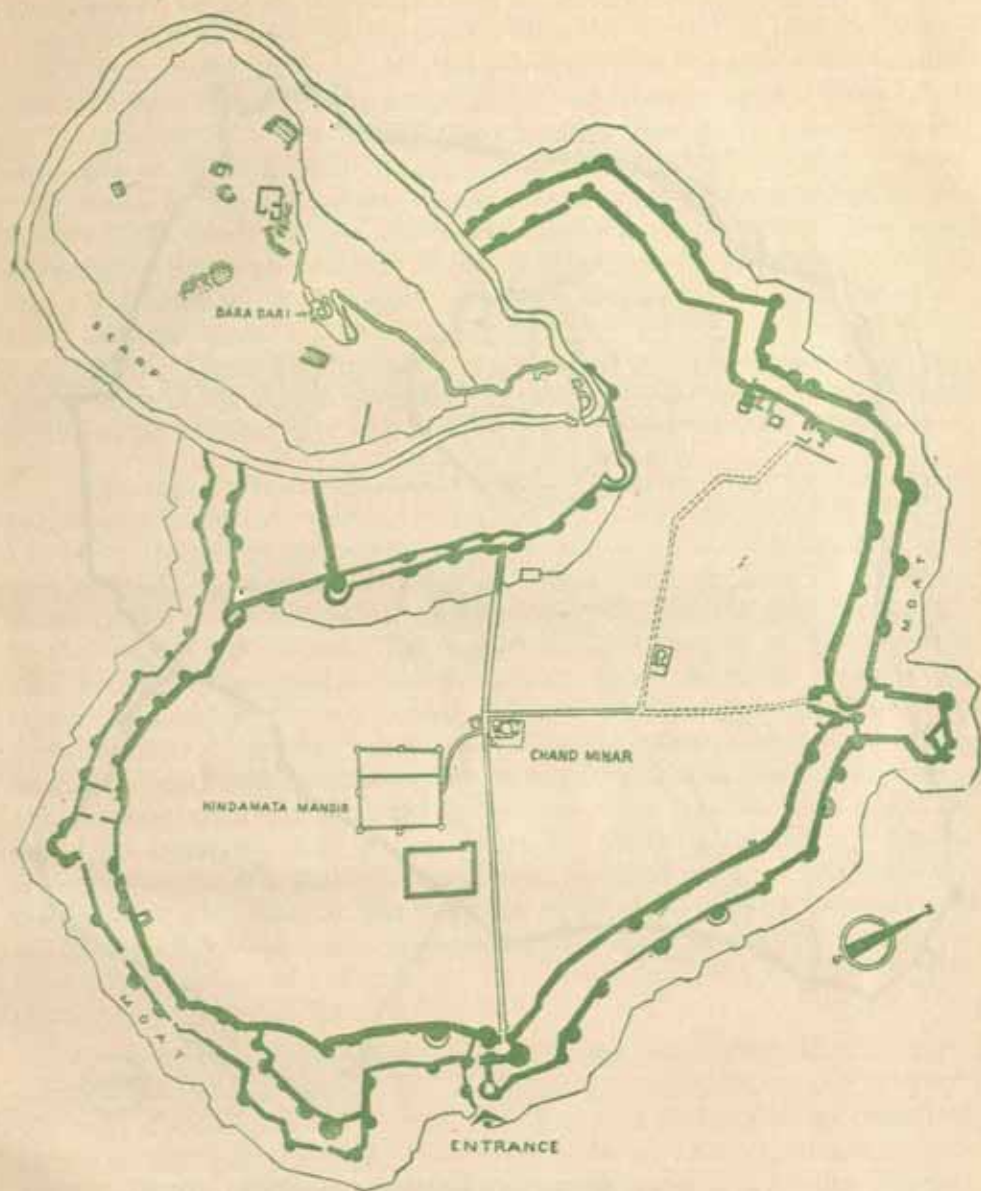
parts of the Golconda fort also have very good glacis before them. This feature is not mentioned in the literature about pre-Islamic fortifications. The section of the mound is triangular, one of the sides sloping towards the open ground, away from the fort. Immediately next to the glacis is dug the moat. The line of the glacis falls perpendicular to the base of the moat, making any attempt to get in the ditch difficult, though not impossible.



Sketch of section showing Glacis Moat and ramparts.

Moats : Immediately next to the glacis comes the moat, either a single ditch encircling the fortified area or a number of them. As at Bidar there were two or three lines of ditches and walls. Most of the Deccani forts like Bidar, Daulatabad, Golconda and Parenda, and almost all fortified towns like Ahmednagar, Bijapur, Gulbarga, Sholapur have broad and deep moats included in their system of defences. They were always kept full of water and the only contact between the fort and the outer area was by means of a drawbridge. This could be easily removed and moreover was very well covered by fire from the ramparts and bastions. Both the sides of the ditches were kept steep and perpendicular.
[Plates XXXII and XXXIV]

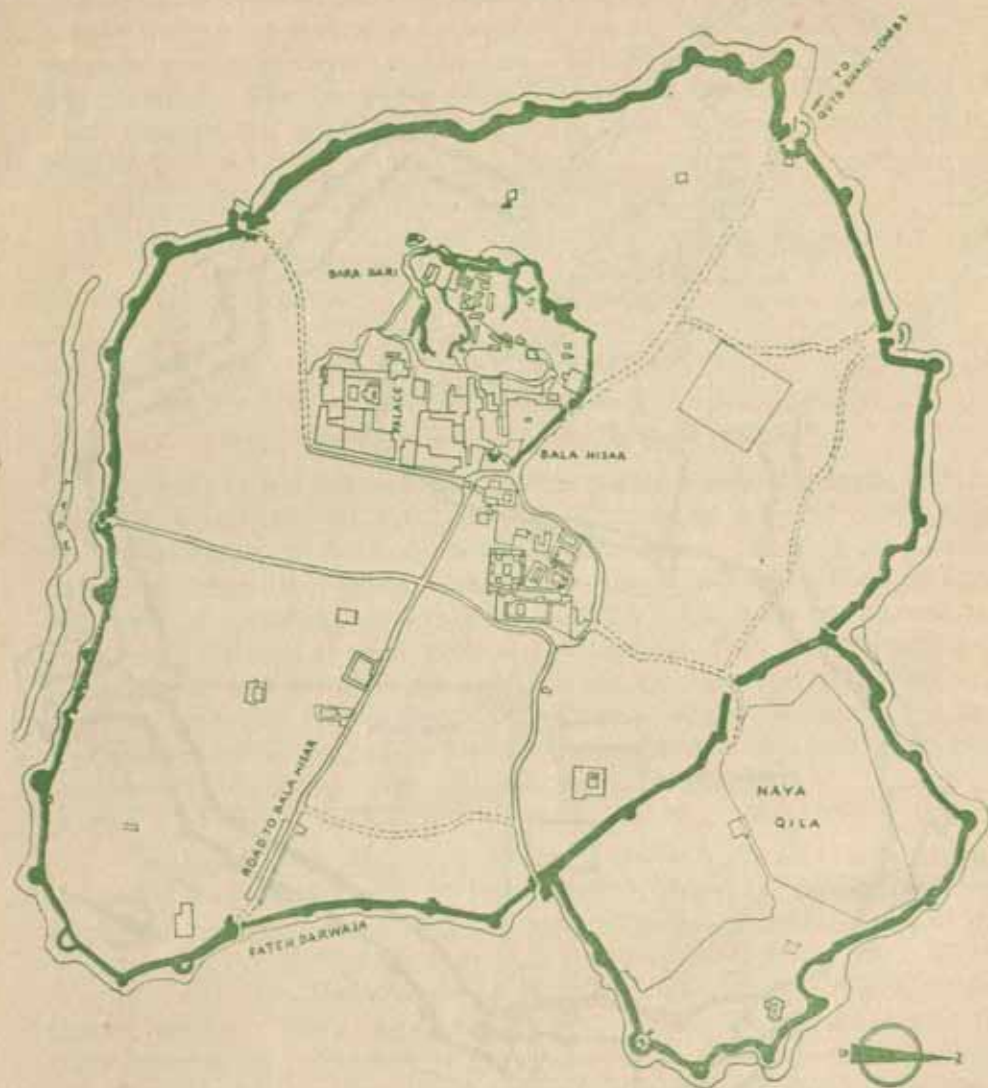
Ramparts : Strong stone masonry walls, more than seven to ten feet in thickness and twenty to thirty feet in height on the average constitute the real backbone of the defences. The indigenous method of dry masonry was dropped and lime mortar masonry became the rule. Above this wall were the battlements or parapet walls often as much as five feet in height. There were embrasures both in the parapets and the walls themselves. Ordinary gun-fire could be directed at the enemy through these holes. They were so arranged and their angles so adjusted that very large areas adjoining the fort came within the range of the defendant fire, while the defenders were well protected. In addition, balconies projected from the walls and bastions that served as excellent observation posts and also as pillboxes. Numerous staircases provided the approach to the parapets. In other examples like the Warangal fort, the inside of the walls was a large flight of steps resembling a ghat, or like the seats of a modern stadium. This was obviously not an Islamic feature as it is not repeated elsewhere. Access through the ramparts was to be gained only by means of the gates provided for. Or else the ram-



SITE PLAN OF THE DAULATABAD FORT

Scale 1" = 150'

By permission of the Archaeological Survey of India



SITE PLAN OF THE GOLCONDA FORT

Scale 1' = 200'

By permission of the Archaeological Survey of India.

parts had to be scaled with ropes and ladders or had to be blown up with dynamite. Both these pre-supposed either the overcoming of the defensive fire from the walls as also the crossing of the moats in the face of constant watch and prompt action of the defenders. Or else a spot had to be selected, with great patience or cunning diversionary raids, where dynamite or ladders could be used. In the case of well maintained forts both these alternatives were less than practical and hence impossible. Sultan Firuz Shah besieged the fort of Bilconda (Balaconda). The siege extended to two whole years; "at the end of which its reduction not being the will of heaven, a pestilence broke out into the royal army and fear filled the survivors."² Other forts tell the same tale. To capture the fort of Bidar Yusuf Adil Shah had to use all sorts of stratagems including the holding Amir Barid to ransom against the keys of the fort. These incidents go to show how well the Deccani forts served their purpose.

At regular intervals and at strategic points along the line of the fortifications were projecting towers. They were similarly embattled. Generally they were semi-circular in plan but if need be square ones were also erected. Octagonal or hexagonal plans were common for bastions flanking the important gates. Very often small domed cells were built in the body of the towers. The most important purpose of these towers was as observation posts. However, guns could be easily mounted on them. In addition to these towers, very strong bastions were erected at certain points along the line of fortifications as well as outside it, to act as gun-turrets. These bastions stood on an eminence that could command a wide area surrounding them and were to a certain extent, what might be called an assertive part in an otherwise negative defensive complex. Heavy guns like the Mulk-i-maidan were fastened on them and arrangements for storing ammunition etc. were made in its construction. [Plate XXXV and XXXVI]. The citation of these bulwarks required considerable military skill and experience. They were generally situated outside the citadel, but inside the outer walls.

The picture upto now painted would lead one to think that the fortresses were a simple affair. Let it be made clear that this is not the case. The means used to defend a place were the same everywhere as described in the above lines. However, their application to a particular spot was far from easy. A number of important considerations had to be attended to, the first and most important of which was terrain. Just as a rough and hilly terrain afforded more protection or cover to a place, it also created difficulties for the architect. Ravines or low areas called for additional rows of walls. Various looplines and bastions had to be constructed. Jutting prominences of land had to be secured with towers. Approach

² *Ibid.* 90.

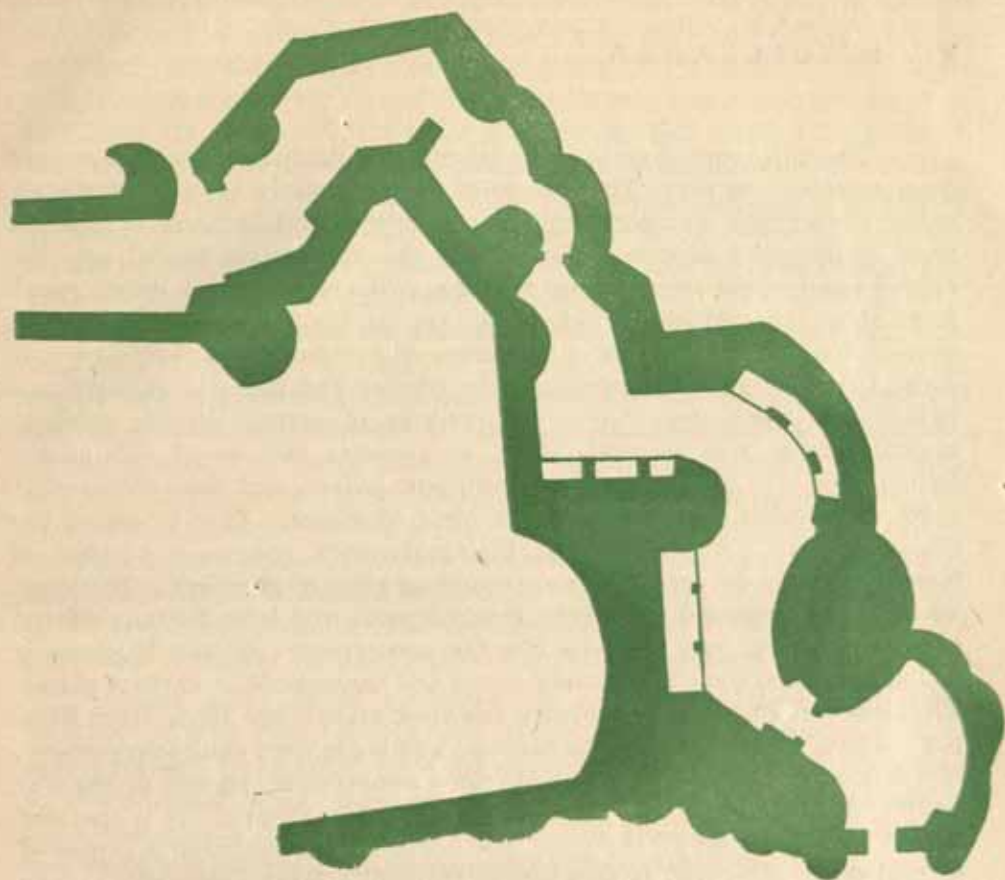
routes had to be covered. All this varied from place to place and hence the greatly complicated and varied aspects of the Deccani forts. The plans produced in Figures 24-25 would make this point clearer.

Gates : The ingenuity and knowledge of the architect were nowhere so extended as in the case of the arrangements of gates. The gate was the only inlet into the fortified area and as such the weakest part in the defensive scheme. By its very nature the gate could not be as strong as the solidly built stone walls. Even the very thick wooden doors fitted with long iron-pikes could not compare with the walls. This deficiency had to be made good by the introduction of human agency, mainly as made manifest by gun-fire. The safest way to protect the gate being to prevent all approach near it. This was achieved by the erection of barbicans and flanking towers, fire from which would make it impossible to come near a gate. Long pikes were fixed in the door to deter thrusts by elephants. Looplines were introduced immediately behind the gate. These lines also had a gate and towers, all battlemented. Thus if an enemy succeeded in forcing the outermost gate, he landed himself into a situation not quite dissimilar to the one before the opening of the first door. Here, however, he was at a disadvantage as fire could be directed at him even from behind. The ground between the first gate and the next one might be a small quadrilateral space as at Bijapur or might be a zig-zag labyrinth as in the case of the Gulburga gates. Over these spaces loom large a number of bastions of inner ramparts and gates. The illustration in Figure 26 would explain the arrangements of gates. [Plates XXXVII XXXVIII XXXIX]

Scarp : This is a feature common to hill forts and the Daulatabad fort displays a classic example of a scarp. Here the rock is cut absolutely perpendicular to a height of three hundred feet. This device makes the upper tableland literally inaccessible. The only approach was by a steep narrow path winding deviously through the ribs of the hill and through underground tunnels.

Citadel : The forts and fortified towns were divided into two distinct entities. The first was a larger one and encompassed within itself the second and smaller one. The former was the fort proper and skirted along the smaller, but similarly fortified area known as the citadel or arkillah. The latter, a fort within a fort, repeated all the important features of the former. It contained the royal palaces and government houses. The arkillahs at Bijapur, Daulatabad, Golconda to date preserve their general appearance and indicate the relation between the inner and outer works. Plans produced on Figures 24-25 show the two entities distinctly. [Plate XXXIV]

Well stocked stores of grain and ammunition, stables for cavalry, government houses and unfailing sources of drinking water completed the material and structural equipment of a fort.



Sketch plan of the entrance to Gulburga Fort.

The Deccani forts were by and large excellent specimens of the art and science of military architecture. Most of them were impregnable. Only stratagem depending on treachery or else starvation through long drawn sieges could reduce them. This did not happen very often, as has been indicated by episodes in the Bahmani history quoted earlier. Forts being parts of a much larger defence net-work, arrangements existed for weeding out any treacherous elements and sieges could be raised in time with the help of diversionary raids and alliances. The Deccani forts are the most vigorous expression of the war-like tendencies and politics of the rulers. Even the gloomy shells remaining today do not fail to impress the onlooker with their sturdy strength.

VI. MISCELLANEA

The chief constituents of the Islamic architecture of the region have been examined so far. The discussion relates mainly to what might be called the artistic as apart from the scientific, architectural as distinct from engineering aspects. Now under the head 'miscellanea' are discussed some minor architectural features and some features which speak more about the engineering side of things. In the first category the most obvious topic is the gardens. The ruins of buildings and towns as they stand today afford no glimpse into the layouts and plans of gardens and pavilions if there were any. The practice of laying out big gardens around palaces was certainly there, as Ferishta tells us of Alla-ud-din Bahmani II, '... he erected a magnificent palace, and laid out elegant gardens round it on the banks of a piece of water. This he called the abode of bliss...'.¹ Traditionally the architectural scheme of a palace or mansion usually did consist of a surrounding piece of greenery. However, whether the congested citadels of the Bahmanis and later Sultans offered enough scope for vast gardens like the ones created by the Mughuls is doubtful. Then come the various ponds and tanks built at various places. The most well-known and probably the most artistic are those from Bijapur. Here, water was near the surface, 'and wells were sunk everywhere'. The largest of these wells was a spacious composition, known as the Taj Bauri. It is a sheet of deep green water 223 feet square. It is enclosed within high walls on all the sides, the northern one containing a row of several cells. The well is approached through a large arch with a span of thirty-five feet, erected in the central portion of the northern side. This opening is flanked by small octagonal structures rising to two storeys and surmounted by bulbous domes. A running balcony projects on the water from all the four walls, giving an excellent view of the entrance arch. Various stairs lead down to the water. Provision has been made for drawing water by water-lifts. The large pool in front of the Ashar Mahal that has recently collapsed was a delightful spectacle. A very small tank held in its centre the small water pavilion opposite the Sat Manzil at Bijapur while larger pavilions were located at Kumtagi, a suburb of that place. If necessary water was led to these large ponds from distant reservoirs, located on higher ground. These arrangements are described below under 'water-supply'.

Any architect, more especially some one who would be in charge of laying out a new town would certainly have some ideas and concepts of

¹ SCOTT. *Ferishta's History of the Dakkan*, Vol. 1. 74.

town-planning before him. As far as the Deccan goes, the royal capitals were located on spots that were already inhabited and as such Islamic architects had their hands tied down. Only in the case of a few spots like the pleasure resort, Firuzabad on the Bhima, was it possible for them to have a free play of their imagination. But this was by its nature a very limited enterprise and town-planning in its real sense was not needed. We are assured by Ferishta that in Firuzabad, built by Firuz Shah Bahmani on the banks of the river Bhima, 'the streets were laid out with regularity and were very broad'.² Bidar itself has its main streets running parallel to and at right angles to each other. The Madrasa road, running north-south and the Shahganj road running east-west are quite straight and broad. The roads at Hyderabad, delving on the Char-Minar are similarly in a straight line and at least the one running east-west is spacious. This arrangement of streets, certainly facilitated military transport and this might have been a consideration, apart from their aesthetic appeal, weighing in the minds of the planners. Apart from the roads, the most important feature of Deccani town-planning is undoubtedly defence requirements. This was a cardinal necessity and all other considerations are subordinated to this one. This would lead to the selection of the proper spot, strategically defence-worthy, where water is available and which is not far from the chief routes of the kingdom.

Great water-supply networks are a notable feature of Deccani capitals. Water thus brought was utilised for two purposes. First to supply water for the daily life of the monarch and other people. Secondly, water channels, small ponds and fountains played an important role in the architectural scheme of the palaces. Bidar, Bijapur, Firuzabad, all had water channels and fountains around their mansions.

Water was brought by open canals as at Firuzabad, but more often through underground conduits. These conduits were either brick-built or were made of tight-fitting terra-cotta pipes. The descriptions of the channels at Ahmednagar and Bijapur, recorded at a time when they were in good order, make the following important points :

1. Water was supplied to the cities from sources some miles distant and on a higher plain. The difference of levels was carefully ascertained and this enabled the engineers to take water upto heights of forty or more feet in the city palaces.

2. The sources tapped were usually wells with an unfailing supply of water. In addition, other possibilities were also taken into consideration. For example, the channels of brick masonry that conducted water from the Surang Bauri to Bijapur proper is lined by concrete only on one side. 'The reason for this is that the strata of rock and murum

² *Ibid.*

through which it passes dip from south to north, so that water percolating down through the strata is intercepted and falls into the tunnel where it is diverted towards the city, the opposite side of the tunnel being concreted to prevent its escape'. This clearly shows that the builders were experts in water-supply engineering.

3. The conduits, whether in brick or of terra-cotta pipes, were provided with air-shafts. A hollow tower was built. It acted as a trap to intercept silt, and also helped to break the force of water to lessen the strain it would otherwise exercise on the channel. The inlet pipe entered the shaft at a level lower than that of the take-off pipe. Thus the latter carried off only the clear water, the silt being deposited beneath. These towers were erected at regular intervals and were periodically cleaned. Similar arrangements exist at Ahmednagar, where water was brought from some fifteen suburban villages.

4. The water brought through these pipes was then led to private houses or wells and reservoirs meant for public use.

5. The distribution of water in a particular house or palace was done with terra-cotta pipes of various diameters. One end of each pipe was smaller than the other and fitted perfectly in the next one. The joint was then covered with lime and mortar. Such lines are seen all over the palaces at the Golconda fort. Water usually came from higher levels and thus could be raised to great heights. In case this was not possible, it was raised by Persian wheels to tanks on water towers and from there distributed.

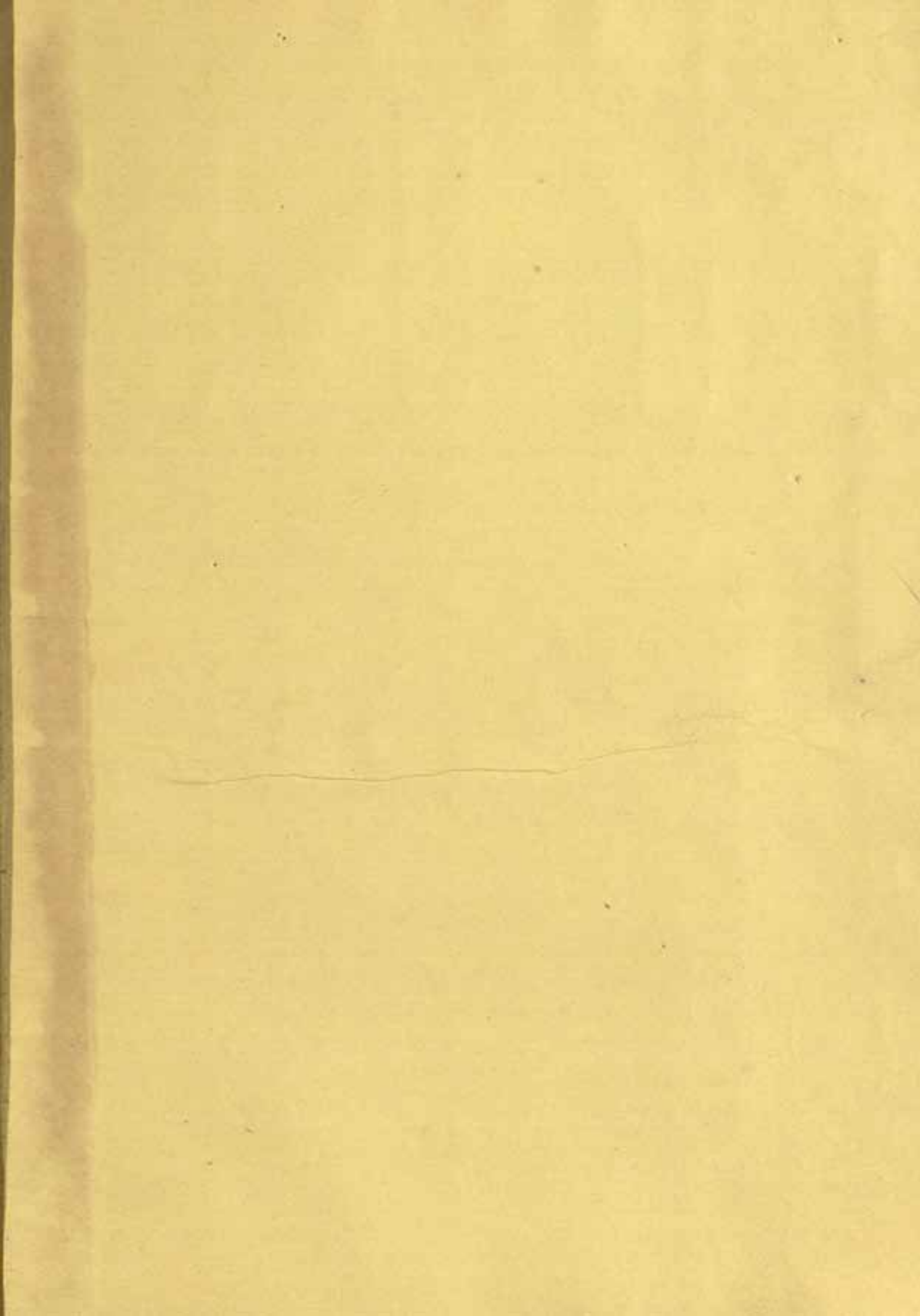
These features are common to all the places where water-works were constructed during Moslem times. Dams were widely used. One exists today in the Naldurg fort. But only the typical Islamic features are discussed above in detail.

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