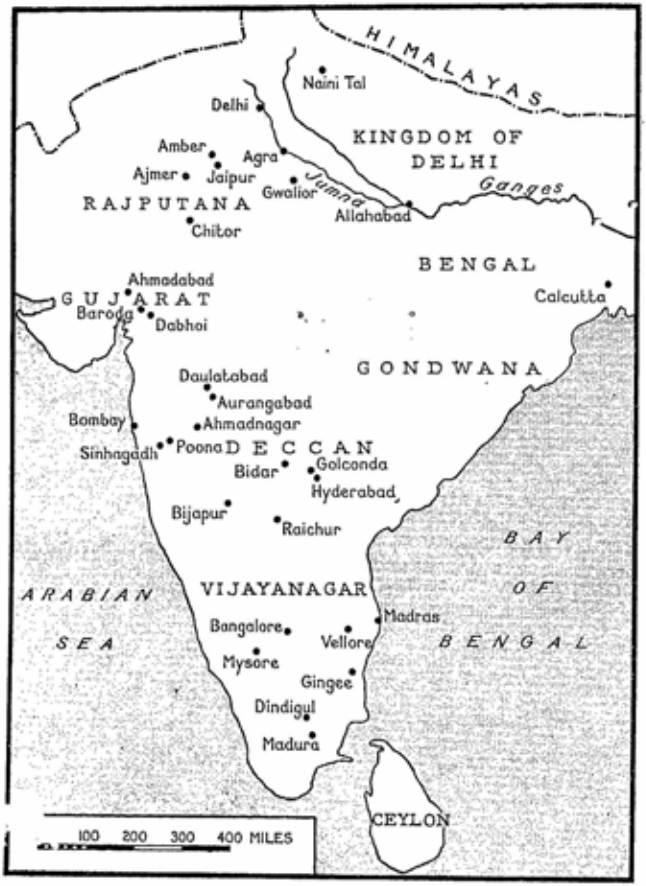
THE STRONGHOLDS OF INDIA

BY THE SAME AUTHOR

A History of Fortification
The Castles of Great Britain



INDIA

SHOWING fortifications described in text
AND other chief towns

SIDNEY TOY
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THE STRONGHOLDS OF INDIA

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This Book is Dedicated
to my Distinguished Friend
NAWAB ZAIN YAR JUNG
MIE(IND.) FIIA

CONTENTS

LIST OF ILLUSTRATIONS

PREFACE

In the course of many years devoted to the study of ancient and mediaeval fortifications the writer has been struck with the dearth of reliable literature on the forts of India. Despite the wealth of books with long descriptions and numerous illustrations of the temples, mosques, tombs and victory columns of that country, the attention given to fortifications is confined to a few meritorious monographs; there has been no comprehensive work devoted to the subject as a whole.

Since no work, on such a technical subject, is of any value unless it is the result of personal investigation on the spot, the author spent the six months of winter, 1955–6, in the survey of a number of these fortifications, extending his operations from the foot-hills of the Himalayas in the north down to Madura in the south of India. Owing to the limited time at his disposal, examination of the numerous fortresses in Pakistan, many of which (such as those at Attock and Lahore) are of the greatest interest had, perforce, to be deferred to a future visit.

The mediaeval fortifications of India are practically innumerable. There are hundreds of them scattered about through that sub-continent, principally occupying the summits of high hills, often relatively close together, as in the hill ranges of Rajputana and the Deccan. Many of them are in a state of ruin but a large number are so well preserved as to retain their mediaeval defences practically intact. In these circumstances it is obvious that the author's survey had to be restricted to the selection of typical and outstanding examples of these works, culled, not from one part of the country only, since that would give but a partial conception of the motives underlying their construction, but from the north and the south of India.

It must be quite clear that this work is generally confined to the treatment of the fortifications in their military aspect. Practically all of them include magnificent and renowned temples, mosques, palaces and tombs, which have been described and illustrated at length elsewhere; it is because of the lack of information on the military architecture of India that this work has been undertaken. None the less the author has considered it desirable

to include some cursory notes of outstanding examples of these structures, as well as to append short accounts of sieges and other episodes relating to the fortresses.

That this work has been carried out, even to its limited extent, was made possible only by the unstinted assistance rendered to the author by friends throughout India: architects, superintending engineers, archaeologists and others. His especial thanks are due to Nawab Zain Yar Jung, F.I.I.A., Hyderabad; M. K. Jadhov, Architect to the Government of India: G. B. Mhatre, President of the Indian Institute of Architects; Shri Mohamed Farhatullah, Superintending Engineer, Aurangabad; F. B. Blomfield, F.R.I.B.A., Delhi; Shri I. K. Naik, B.E., A.M.I.E., Executive Engineer, Baroda; Shri N. H. Dhrangadharia, G.D.Arch., A.I.I.A., Gwalior; Shri Salaamat Ali Khan, A.R.I.B.A., Hyderabad; Shri K. Jagannathrao, Department of Archaeology, Bijapur; the Rev. Fr. Keneth Sharp and The Cambridge Brotherhood, Delhi; the Rev. Fr. E. F. Bishop and The Cowley Fathers, Poona; Rev. Robert C. Llewlyn, Principal, Sherwood College, Naini Tal; Mrs. K. Jowers, Delhi; Mr. and Mrs. Viol, Bombay. He also gratefully acknowledges information obtained from the following: *Bidar*, by G. Yazdani, 1947; *Bijapur*, by Henry Cousens, 1916; *The Antiquities of the Town of Dabhoi in Gujarat*, by J. Burgess and Henry Cousens, 1888; *History of Industani*, by Robert Orme, 4th Ed., 1803; and *The Cambridge History of India*, Vols. III and IV. In *The Cambridge History of India* there is an extensive bibliography at the end of each volume.

The author is also deeply indebted to Major J. B. Harrison, B.A., Lecturer in Indian History, University of London, who read the manuscript and offered valuable suggestions thereon.

All the fortresses included in this volume were examined by the author, who paid two or three visits to some of the most important of them: he has prepared all the drawings and taken all the photographs.

SIDNEY TOY

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CHAPTER ONE

MEDIAEVAL FORTIFICATIONS OF INDIA

THE mediaeval fortifications of India occupy a position in the history of military architecture quite distinct from the sequence of development as observed in Europe, the Levant, or indeed in China. It is clear that important factors in their design, quite apart from the question of defence, is that they should impress the observer, or the enemy, with their imposing and formidable aspect, as well as express the power and affluence of the ruler. The walls are of great thickness and height, strengthened at short intervals by massive towers, and the gateways, though not nearly so well defended as those in the West, are of no less imposing appearance than the walls. Another factor is the decorative ornament on the defences—gateways covered with panelling and moulded and sculptured ornament; constructive features, such as arches, corbels and lintels, carved in rich and elaborate designs, and even the merlons of the parapets cut in ornamental shapes.

A striking feature in these fortifications is that tall and massive walls and towers, designed in all essentials on mediaeval concepts, were being built in India up to the middle of the eighteenth century (as at Poona and in the north-east extension at Golconda), two hundred years after such designs had been abandoned in the West, where forts designed on entirely different principles, for defence by heavy guns, were being built in all countries. Parapets were adapted for defence by musketry and by heavy guns. Tall pedestals were also built within the walls on which very heavy pieces were mounted, as at Daulatabad and Bidar. But it was not until the penetration of armies from the West into the country that forts suitable for defence against the growing force and destructive power of artillery were constructed; as Fort William at Calcutta and Fort St. George at Madras, both built by the British.

Military defences are practically innumerable throughout India. Almost every hill in the range running north-east through the south of Rajputana has a fortification on its summit; the same

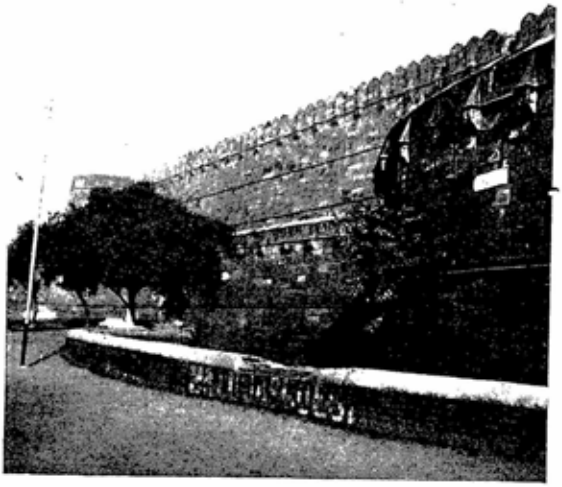
may be said of the Deccan, with its numerous ranges of hills, strewn with massive boulders piled one above another; and of the hilly districts of south India. Except where they stand on the banks of, or near, a river, or occupy some kindred strategic site, they are perched on top of a precipitous hill, from 600 ft. to over 2,500 ft. above its foot. They were all built by the absolute ruler of the state in which they stand, well knowing that they were subject to attack at any moment by the monarch of an adjoining or far-off state—an event which was of frequent occurrence. These military works are also of great extent, their curtain walls forming circuits many miles round; and when on hills there are from two to four lines of such walls, built at different levels and one within the other, the uppermost enclosing the citadel. Most of these extensive fortifications consist of a city and a citadel, the latter either within the city or on its flank; having one side towards the field, where it is defended by a precipice, or a river as at Delhi and Agra. Gingee occupies a special position since it covers three adjoining hills, all within an outer wall which runs round to enclose the three of them, the citadel being perched on the top of the middle and highest hill.

There is an abundance of stone throughout the whole subcontinent; in the north, even in the plains, in many places, the soil is of no great depth and there are outcrops of rock here and there; while the numerous hills of the Deccan bristle with outcrops of granite and are strewn with huge granite boulders. The southern portion of India is of scarcely less rocky character. Basalt, hornblende, laterite and trap-stone occur and are used in building. Laterite is the upper stone stratum at Bidar and forms the principal building material of that fortress, while trap-stone, also found locally, is widely used at Bijapur. Where granite was plentiful, huge blocks of that stone were used (p. 2a).

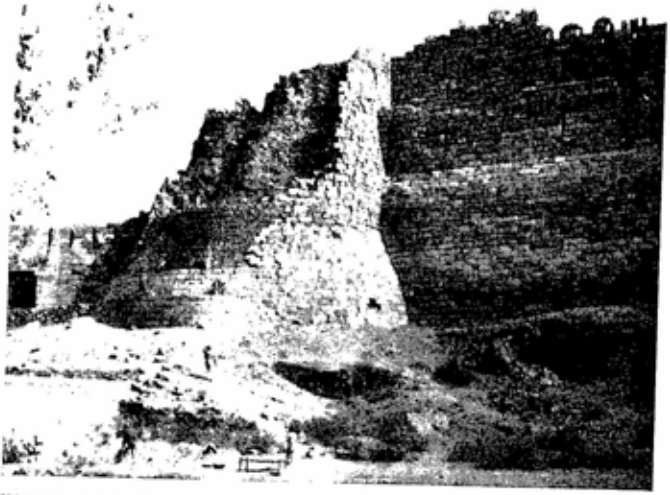
Great attention was paid to the defence of the approach to a fortress. Generally a high hill naturally defended by precipices was selected and the side that offered any facilities of ascent was cut into to form a steep, sinuous path, guarded by a wall on one side and the vertical fall of the hill on the other. From four to seven powerful gates were thrown across this path at strategic points in the ascent. The curtain walls of forts built on level ground were defended by wide and deep ditches, and if they were situated on the bank of a river, they were defended by the river

GOLCONDA. HUGE GRANITE BLOCKS AT FATEH GATE

BIDAR. THE TRIPLE MOAT BETWEEN THE CITY AND THE FORT



AGRA. DOUBLE WALLS ON THE SOUTH-WEST SIDE OF THE FORT



TUGHLUQABAD. DOUBLE WALLS AND BASTION ON SOUTH SIDE OF CITADEL

on that side and by ditches on the other sides, the ditches being crossed at the gates by drawbridges, as at Agra. When on a hill the outer walls are often so defended, as at Gingee and Golconda. At Daulatabad there is also a deep, wet ditch defending the entrance to the citadel. At Bidar, in addition to the ditch round the city, there is a treble wet ditch defending the fort (p. 2a).

The walls are normally of great thickness, especially on level ground, as at Bijapur, where they are from 31 ft. to 35 ft. thick. When on a hill the sides of the hill are often scarped; either left with the natural rock exposed, as at Daulatabad, or revetted up to the level of the summit, where the revetment dies into and forms part of the curtain wall, as at Gwalior and Tughluqabad. The walls are built of stone on the exterior and interior faces, often composed of huge blocks, and of a core, or infilling, of various strength, sometimes consisting largely of earth. In some forts the curtain walls are doubled with only a short distance between the two, the inner wall soaring high above the outer, as at Golconda, Tughluqabad and Agra. At Tughluqabad the space between forms a fortified gallery; at Agra there is a ditch between the walls (p. 2b). The curtain walls are strengthened by bastions of the same height as themselves and often of enormous size and having sides considerably battered from base to summit (pp. 2b, 102).

The defence was from the battlements. Generally there were two tiers of loopholes, the upper tier piercing the merlons and the lower dipped rapidly down from the wall-walk to appear on the outer face far below the parapet; the holes, though sometimes opening out laterally at the back, were often parallel straight through, varying in size from 3½ in. wide by 3 ft. high at Chitor to 6 in. by 6 ft. at Tughluqabad. At Purana Qila there are three tiers of loopholes, one from an internal wall-arcade and two from the battlements; and at Tughluqabad there are four, one from the external gallery, one from the internal gallery and two from the battlements. Very often the parapets have been rebuilt in brickwork with numerous small square holes above, which are parallel through the parapet and were apparently for defence by musket-fire barrage, because there is no provision for sighting, and below, large holes opened out later for cannon. At Chitor some of the upper loopholes are divided into sections by transoms, while the

lower ones, divided into two sections, open out widely at the foot to provide for lateral fire (p. 10a). The eagle in the illustration is not an ornament; it perched itself there while my photograph was being taken.

In some cases, as at Bijapur, Fatehpur Sikri and Agra, the outer face of the loophole is covered with a small stone hood for the defence of the man firing through it. These holes are far too small to be used as machicolations and, moreover, are used in places, as at Fatehpur Sikri where the loophole occurs immediately over the back of a stone elephant, where such use would be futile. But stone hoods of similar design though of much greater width and projection, and covering large holes, as at Bijapur and Agra, are evidently machicolations (pp. 10a, 106b). Machicolations projected out on corbels at the parapets of walls and gateways are relatively rare in the north but profuse in the Deccan, as at Bidar and Golconda; but machicolations within the gateway passage, like that in the West Gate at Purana Qila, are rare.

Machicolations appear to have originated in the West. They are holes formed in the roofs of the passages through the gateways, or projected out on corbels from the parapets of walls and gateways, through which boiling pitch, stones, darts and other missiles were thrown down on the enemy below. When over the entrance to the gateway, they also enabled the defenders to quench fires lighted by besiegers to burn down the gates; and this appears to have been their original purpose. Flagius Vegetius, writing about A.D. 390, says: "It is also necessary to have a projection above the gates with openings from which one can pour water on the fire which the enemy has lighted." [1] Machicolations were also built on the crests of walls and towers to repel the operations of sappers at the base. In this position they first took the form of hoards (or brattices); timber platforms projected out from the battlements in time of siege, which, in one form or another, had been in use from about 1500 B.C. By the end of the twelfth century A.D. temporary hoarding gave place in many new fortifications to machicolations in stone; but it was not until the end of the thirteenth century that this custom became general. As constructed in stone the parapets are built out on corbels, the corbels being spaced sufficiently wide apart to allow a large hole, or machicolation, between each pair of corbels. It is stated that machicolations of this character first

[1] Vegetius, Bk. IV, cap. 4.

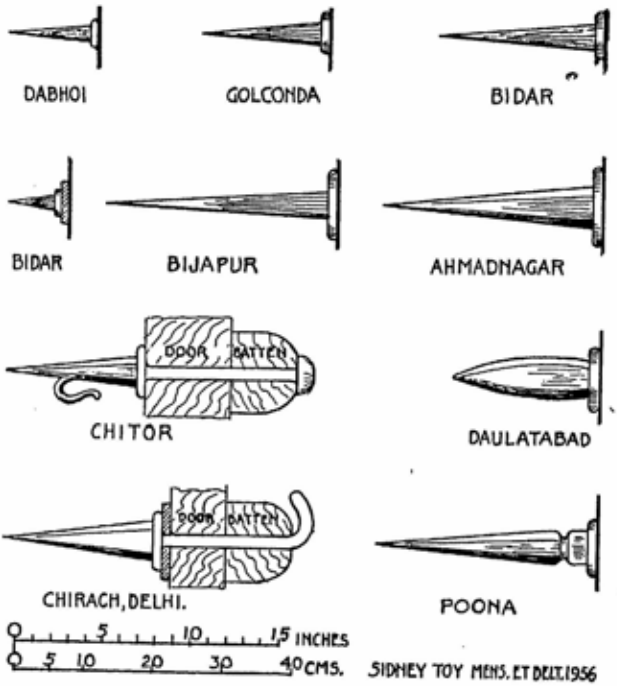
appeared in India about 1354 in the walls of the citadel built by Firuz Shah Tughluq.[1]

The gateways differ in strength but are often very powerful, as at Bidar, Daulatabad and Golconda. They are frequently defended by barbicans which sometimes take the form of two powerful walls that extend out beyond the gate with towers at the end and a sinuous road between; the road being defended by "box" machicolations jutting out from the parapets, as at Golconda and Bidar. At some forts the gateways are trebled with open courtyards between, as at Gingee and Daulatabad; in the latter the outer gate of the three has two doors, one at the entrance and one at the exit into the first court, with a vaulted passage between. An unusual defence is the one at the Mandu gate at Bidar; here the approach to the gate is through an ascending tunnel, with a guardroom midway in its course.

Though, as at Daulatabad, at the Lahore Gate of the Red Fort at Delhi and at the upper gates of Agra, the passage through the gateway occasionally has a door at either end, normally there was only one door, and that at the entrance. The doorways are very large, generally from 12 ft. to 16 ft. wide and up to 25 ft. high to the point of the arch or underside of the lintel. Though the width is not much greater than that of the Roman and Mediaeval town gates in the West the height is considerably more and this greater height was doubtless provided in order to allow the entrance of elephants with their howdahs (p. 100a). The doors closing these large openings are heavy timber structures about 6 in. thick, strengthened by large battens behind; they are often plated and studded with numerous sharp iron spikes to protect them from being butted into by elephants. There is generally a wicket gate, about 3 ft. wide by 4 ft. high and also armoured, in one leaf of the door. In some forts, as at Golconda, a richly carved moulding is carried all round the outer edges of the door and down the middle of the junction of its two leaves at the overlap. The doors work on heavy trunnions which fit into stone sockets at the bottom and top; often the lower sockets rise up about 2 ft. 6 in. above the level of the sill of the door, the lower part of the door working round it. When closed the doors are secured by heavy timber bars which are drawn out from a socket in one jamb, passed behind the door and fitted into a corresponding socket in the other jamb.

[1] *The Cambridge History of India*, Vol. III, p. 590.

At the Shahpur Gate, Bijapur, and at both the entrance into the barbican and that into the inner gate at Ahmadnagar, a heavy iron chain was drawn across the opening in front of the door in time of siege. As mentioned above, machicolations within the



TYPICAL EXAMPLES OF IRON SPIKES AGAINST ELEPHANT ATTACK

passage are rare and the author has seen no indication of the existence of any portcullis in the fortifications he has examined. The defence of the passage depended largely on the strong guard in recesses and guardrooms within it, which were often in two tiers. Except in a few instances there is no gatehouse above the

gateway. The wall in front of the gateway, raised at a considerable height above the passage, is devoted entirely to defence, having a gallery behind, the roof of which forms the wall-walk of the battlements; but the rest of the gateway is levelled off to form a platform immediately above the roof of the passage (pp. 104, 124).

The iron spikes attached to a door, which was generally of teak, were arranged in horizontal tiers across its outer face. Their purpose was to prevent the doors being pushed open by the mighty force which elephants could otherwise have brought to bear upon them. There are about twelve spikes in a row and the rows are about 9 in. apart; sometimes they cover the whole door, as at Chiragh, Old Delhi, but often begin from about 5 ft. to 8 ft. above ground level and continue upward from that point, as at Bijapur. The spikes are from 3 in. to 13 in. long and vary slightly in shape on different doors. (Typical examples are shown on pp. 6, 10a). Two methods of fixing them to the doors are also shown, the spigot of each passing through both the door and the batten behind it; in one, the end of the spigot is beaten round the batten and in the other the end is riveted over a washer. The hook attached to the spikes at Chitor must be a rare development; it is the only case to come under the author's notice. It was probably intended to have the same effect as a fish-hook.

When there are three or more lines of curtain walls, one behind the other, the defences increase in strength, in succession, as they occupy higher ground, as at Gingee, Golconda and Daulatabad. The power of resistance to attack of the citadel at Gingee, with its precipitous sides and deep ravines, was amply proved during the unsuccessful attacks upon it by the British forces in 1761. At Golconda the second line is surrounded by a double wall, while the third is powerfully defended by nature as well as by art. At Daulatabad the entry into the citadel is obstructed by a deep wet moat and, on the far side of the moat, by a narrow and sinuous path, commanded from the battlements of high walls on either side. If, and when, these formidable obstacles were overcome, the enemy, from this point, must file up through a steep, narrow tunnel, cut through the living rock and provided with guardrooms at intervals in the lower half, and of means for filling the upper half with smoke.

Great care was taken that there should be an abundant supply of water within these extensive fortresses. Wells were dug here and

there and large and deep reservoirs, called tanks, were excavated in the solid rock to conserve the rainwater falling during the rainy seasons. Systems for conveying water through pipes from lower to higher ground were often installed; as at Fatehpur Sikri, where there was an elaborate water-works, including Persian wheels and lifts, for conveying water from the lake up to the palace and thence to distribute it through pipes to its various buildings. Supplies of water were also directed to ornamental fountains and cascades in the gardens of the palaces, as at Delhi, Agra and Poona. Silos were also provided for the storage of grain.

In addition to the forts, many of the mosques and tombs are surrounded by high walls with fortified gateways. The tomb of Ghias-ud-din Tughluq, at Tughluqabad, south of Delhi, which is somewhat exceptional, is a perfect keep, surrounded by a strongly fortified wall, with a paved walk behind it, and includes a well and a storage chamber for food. The East, or King's, Gateway into the Jami Masjid at Fatehpur Sikri is designed on a similar plan to the West Gate at Purana Qila, except that it has no machicolation and that whereas the latter has only one two-leaved door, at the entrance, the former has a two-leaved door at each end of the passage. It is clear that when occasion offered these structures could be occupied and put into a state of defence, for during the Mutiny of 1857, Indian sepoys quartered themselves in the Jami Masjid at Delhi and put up a stout defence within that building.

SIEGE ENGINES[1]

There appears to be little record of the use of siege engines in India before the latter part of the thirteenth century, and then these records refer principally to projectile engines, such as petrariae, mangonels, ballistae and trebuchets, under the names, variously applied, of *manjaniqs*, *maghribis*, or *arradahs*, and of a magnified form of crossbow called *charkhs*.

When the sultan Jalal-ud-din Khalji, 1290–6, besieged the fort of Ranthambor, he ordered his troops to prepare maghribis for breaching the walls. These engines were used both by the besieged and the besiegers. In 1299, in the course of the attack by Nusrat Khan, general of Ala-ud-din Khalji, on Ranthambor,

[1] *Vide* Sidney Toy, *A History of Fortification from 3000 B.C. to A.D. 1700* (pp. 20, 27, 35, 51, and Chapter Twelve).

showers of stones, issuing from maghribis within the fort were cast out on the enemy, and Nusrat Khan, venturing too near the walls, was struck by a large stone and so severely wounded that he died a few days later. Ala-ud-din Khalji ordered that every fort in his kingdom should be equipped with a large number of these engines. In the Deccan campaign, carried out by Malik Kafur, at the same period, stones cast from these powerful engines during the siege of Warangal made a lengthy breach in the city walls.

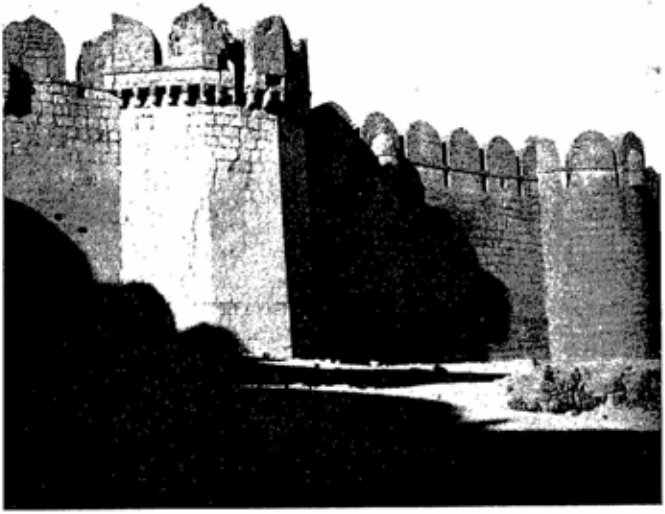
Projectile engines, worked by means of springs, thongs, twisted ropes, or counterpoised weights, have been given various names, which may be grouped under three heads: petrariae, engines casting huge rocks; ballistae, or mangonels, for stones of about half a hundredweight; and catapults, or scorpions, for casting smaller stones, darts and firebrands. By the end of the twelfth century projectile engines had become very powerful. At the Siege of Acre in 1189–91 the King of France had a petraria, called Bad Neighbour, which by constant blows broke down part of the main wall of the city; and at the same siege one of the engines belonging to King Richard of England killed twelve men at one shot. Even at the Siege of Rhodes in 1480, when heavy artillery was used on both sides, a trebuchet throwing enormous stones with great violence was brought up to the walls by the defenders and was successful in defeating the enemy at that point when fire-arms had failed.

The missiles used included stones, poles sharpened at the points, and firebrands. Flaming torches, burning pitch and boiling oil were thrown from the walls on the besiegers; and burning and highly inflammable missiles were projected from the engines of both parties. In order to spread disease among the besieged, dead horses and other carrion were thrown from these engines into a fortress.

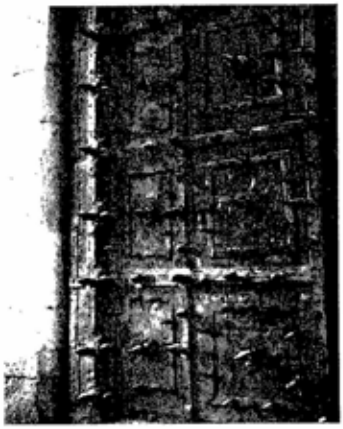
In India other uses were found for these projectile engines in addition to their normal one. On the occasion of Ala-ud-din Khalji's approach towards Delhi after the assassination of his uncle he used a ballista for scattering gold and silver coins among the mob in order to win their support.[1] Another use was found by the sultan Mahrund Bahmani who, following his taking of the fort of Telingana and the capture of the Rai, Nag Dev, ordered that the Rai be cast into the fire. The Rai was put into the sling of a manjaniq and projected into the fire forthwith.

[1] *The Cambridge History of India*, Vol. III, p. 99.

For many centuries the military conquest of India was from north to south, but while Muslim rule became relatively stable in the north it was always violently contested in the Deccan and in the south, until eventually, in the eighteenth century, the wave of conquest proceeded in the opposite direction, when the Mahrattas extended their conquests as far north as the Indus and the Himalayas. Thus with the exception of Gujarat, where the Jain influence continued to be exercised in constructive works, Hindu fortifications are much better preserved in the Deccan and in the south than in the north of India. In view of this fact the following chapters, each of which deals with a particular fortress, are arranged in topographical instead of chronological order; beginning with the south, following with the Deccan and terminating with the north of India.



BIJAPUR. WALL ON EAST SIDE OF CITADEL WITH MACHICOLATION



GOLCONDA. SPIKES ON DOOR OF MECCA GATE

CHITOR. CRENELLATIONS ON WEST SIDE OF FORTRESS

GINGEE FROM THE SOUTH-EAST. THE THREE FORTIFIED HILLS WITH THE CITADEL IN THE CENTRE

CHAPTER TWO

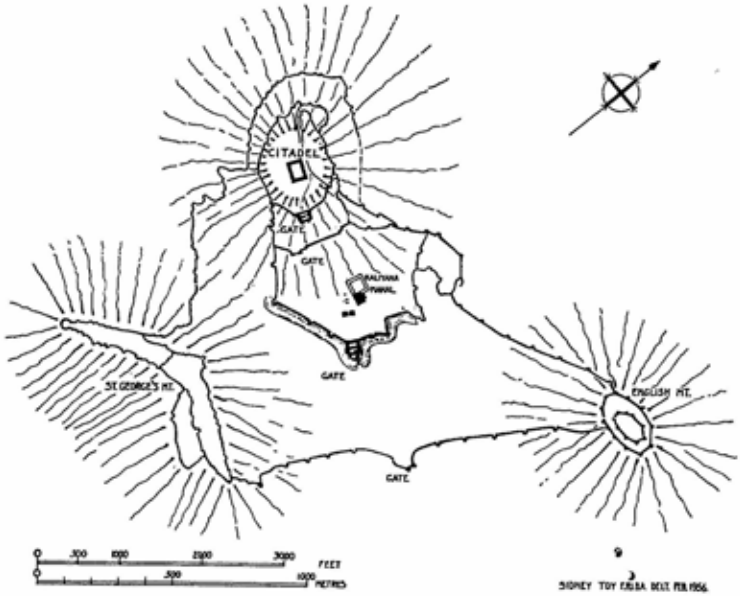
GINGEE

THE great fortress of Gingee, ninety-five miles south of Madras, embraces three strongly fortified hills which stand in the form of a triangle, the highest and most precipitous being at the apex of the triangle, pointing westwards. This last, called Rajagiri, soars up in conical form high above the other two hills and presents a most formidable object, with its precipitous sides and dominating citadel on the summit (pp. 10b, 12).

Though the origin of the fortress is unknown, there can be no doubt that such a naturally powerful site, situated in a fiercely contested area, was selected for fortification at a very early period, and there is reason to believe the tradition that it was held by the kings of the Chola dynasty, who ruled a large tract of country in the south of India from the third century B.C. down to about A.D. 1250, and it is highly probable that the citadel, which bears the name of the Chola kings, was fortified long before walls were built round the other two hills. The fortification as a whole is said to have been begun by a governor of Tanjore in 1442 and completed by the Vijayanagar kings in the following century, and certainly much of the work above the lower portion of the walls relate to the fifteenth and sixteenth centuries.

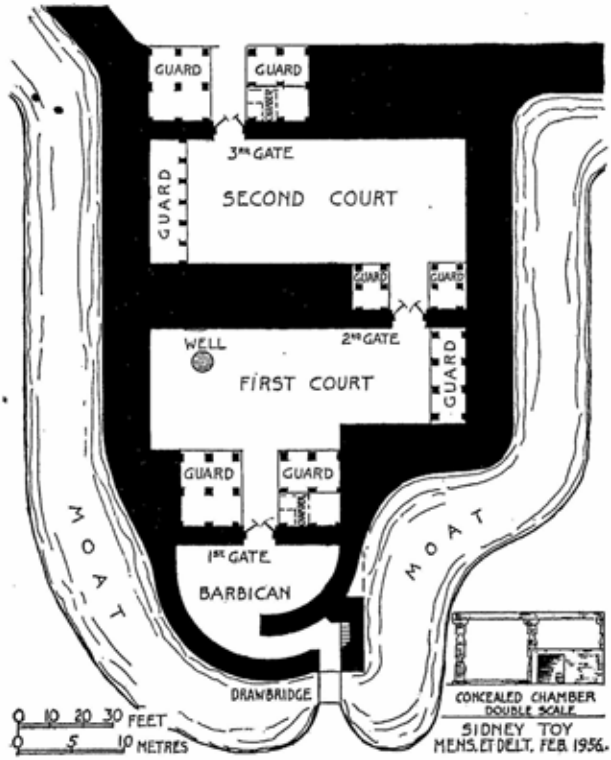
In 1677 the fort fell to the great Mahratta leader Sivaji, and during the eighteenth century it was the constant bone of contention between the local princes, the French, and the English; it was regarded as the strongest fortress in the Carnatic. In 1750, when held by the Mughuls, it was captured by the French, under their commander Bussy, by a bold feat of arms. British forces advanced against it in 1761, and it was not until after a siege of six weeks that the French capitulated on terms; the place proved to be malarial and not only had the French lost a large number of men through sickness but the British besieging forces were greatly reduced from the same cause.

In addition to the outer curtain wall which runs round to enclose all three hills the citadel is defended by three lines of walls in succession, all having powerful gateways, two of them tripled.



PLAN OF GINGEE

At one point, where the precipitous hill rises from the level plain, there is a narrow and steep ravine, and, to prevent attack by escalade on this side, three walls, each about 25 ft. high, have



GINGEE. GATES IN THE OUTER WALL

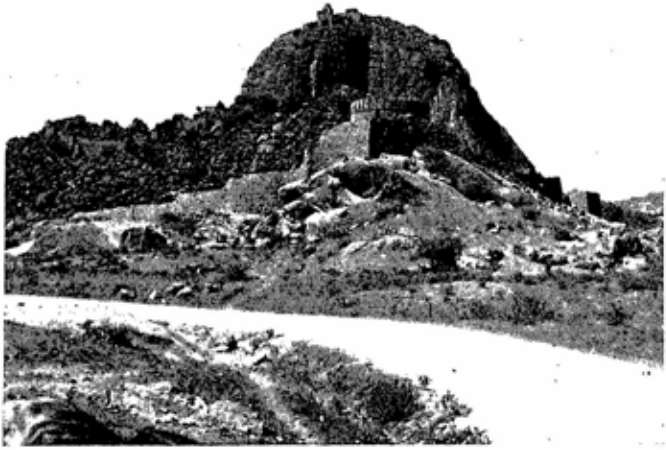
been thrown across the ravine at different points in the ascent. Another ravine has been artificially extended up the side of the hill and the only means of access to the citadel from this direction

was by a timber bridge, thrown across the ravine at a point where it is 24 ft. wide and 60 ft. deep and through a narrow fortified gate on the further side (p. 144).

Direct access to the citadel from within the outer wall is barred by seven gateways in succession, three of the gates in the second and fourth walls being conjoined with large open courts between them. The first of the series (p. 13) is defended by a barbican and a wet moat, originally crossed by a drawbridge, the moat being extended along the walls on either side. The barbican is semi-circular and consists of two wings which overlap in order to form a passage between them, a short wall projecting out from one wing to secure a right-angled turn into the passage. The walls of the barbican are 7 ft. 3 in. thick and are surmounted by a parapeted walk, the crenellations of the parapet being adapted later for defence by musketry, their embrasures blocked and the infilling pierced with small square holes running straight through.

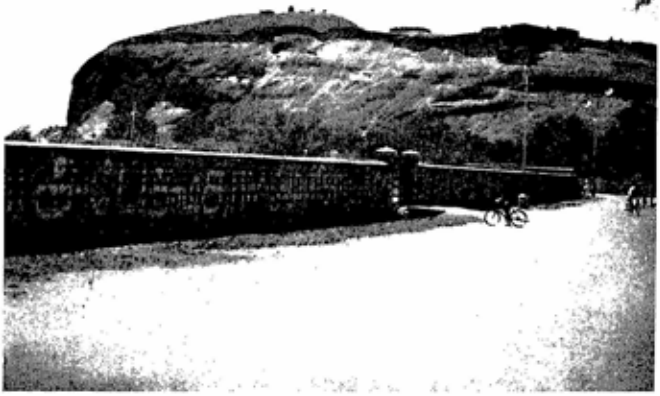
The upper parts of the walls round the two courts have been destroyed. The gateways are 8 ft. 5 in. wide, 11 ft. 8 in. high, and have straight lintels; over the lintel of the second gate is a small circular carving of what appears to be a demon. The original walling of these courts, consisting of large granite blocks with straight joints running through three of four courses, is of early date; it is clear that the walls have suffered considerable damage from the attacks made upon them and that they have been repaired from time to time. Entry from the first gateway to the first court is defended by guardrooms immediately inside the gate. These guardrooms, like those inside the two following gates, are open on both the sides facing the passage and the court, their roofs being supported on square pillars. The first bay of the guardroom on the right contains a low right-angled recess (p. 13).

In order to reach the second gate the enemy must proceed diagonally across the first open court, under fire from the guardrooms behind and from another guardroom, immediately beside the second gate and open towards the court. There is a well in this first court. The guardrooms inside the second gate are smaller than those of the first and third gates but the second court is strongly defended by a guardroom of six open bays, which faces down the court beside the third gate. Again the third gate is so placed as to involve a diagonal passage, this time to the left, through the whole length of the court. Beyond the third gate are



GINGEE. THE CITADEL FROM THE SOUTH-EAST

GINGEE. FIRST COURT OF THE OUTER TRIPLE GATE



DINDIGUL. THE FORTRESS, BARBICAN AND ENTRANCE ON THE RIGHT

DINDIGUL. ENTRANCE TO BARBICAN

DINDIGUL. GATEWAY FROM BARBICAN TO THE FORT

guardrooms similar to those at the first gate and there is a similar low right-angled chamber at the first bay on the right.

Among the principal buildings within the fortress are the granaries, two pagodas, and the Kaliyana Mahal. The last consists of a large tower of eight storeys and a square court, surrounded by rooms, stretching westward from the tower; the rooms round the court were for the ladies of the governor's household. The tower is square and each of the storeys, except the upper two, consists of a small room surrounded on the outside by an arcaded verandah.

The water supply of the fortress has many interesting features. On the summit of the citadel are two perennial springs of excellent water, and below are three reservoirs for the reception and storage of rainwater. Water, brought from a reservoir 600 yards away and outside the walls, was supplied to the Kaliyana Mahal by means of an earthenware pipe, carried to the ladies' quarters and then up to the sixth storey of the tower.

An interesting and conspicuous object low down on the east side of the citadel is the Prisoners' Well. It is a huge boulder, about 18 ft. high, perched on a rock and having a large natural vertical hole which pierces it from top to bottom. The lower end of the hole has been stopped with masonry and the mouth of the pit, now reached only by means of a ladder, surrounded by a circular brick wall. It is reported that prisoners were thrown down this pit and left to die of starvation, the sides of the mouth of the pit being worked perfectly smooth to prevent escape. The pit is now filled in with rubbish.

CHAPTER THREE

DINDIGUL

THE fortress of Dindigul, 300 miles south-west of Madras, stands on the top of a hill which is composed of a huge, bare and smooth-faced outcrop of granite, standing 280 ft. above the plain; the rock is precipitous on all sides but one, and even on that side the rise is very steep. The highest and most strongly fortified walls and the entrance gates are concentrated on this only line of approach. From this point a curtain wall is carried all round the top of the hill at the edge of its precipitous sides (p. 14b).

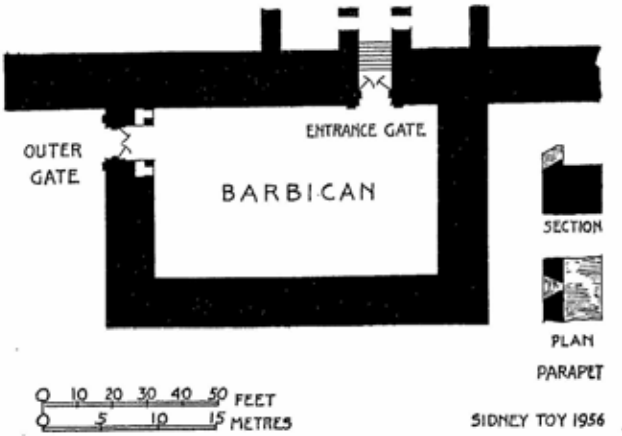
Occupying, as it does, a position of great natural strength and (commanding the passes between Madura and Coimbatore) a site of great strategic value, its history is one of strife and constant change of ownership. The date of its foundation is unknown but it is clear from the character of the bonding of the masonry of the lower parts of the walls, which is composed of large stones, that it relates to a period far anterior to its historical records.

In the middle of the sixteenth century it passed into the hands of the Nayakka kings of Madura, who refortified and strengthened it. During the seventeenth century it was the scene of many encounters between the Mahrattas and the Mysore and Madura forces. In 1755 it became the stronghold of Haidar Ali, a commander who held it ostensibly for Mysore but actually as an independency for himself. He seems to have become the terror of the neighbourhood, for he destroyed his prisoners by casting them down from the walls of the fort to the foot of the precipices below. For many years Dindigul was a serious obstruction to British advance; it was taken by the British in 1767, lost by them in the following year, retaken in 1783, given up to Mysore in 1784 and finally ceded to the British in 1792. A British garrison was in occupation until 1860.

It is obvious from its present state that the fort has suffered considerable damage in the numerous engagements it has undergone and has been much restored from time to time. Its latest extensive works, probably carried out in the latter years of the eighteenth century, included the rebuilding of the upper part of

the walls in brickwork with embrasures at the parapets designed for the use of cannon of considerable calibre.

The entrance gateway is defended by a strong barbican, so designed as to ensure a long passage and a right-angled turn, under fire from all directions, in the enemy's transit from the outer to the entrance gateways. There is no other approach to the outer gate than that which is formed by the surface of the steep bare-faced rock; the steps now cut into the rock are of a later period.



DINDIGUL. PLAN OF ENTRANCE GATES

Both the outer and the entrance gateways belong to the period of a seventeenth-century refortification; they are of Renaissance style and have been inserted into older walls. They are each flanked by flat pilasters, those at the entrance gate having urns on the capitals; both gateways have flat lintels and the spaces between the arches and lintels are filled in with decorated tympani. The outer gateway is surmounted by a pediment (p. 14b).

The internal buildings of the fort are very ruinous. From the entrance gateway a flight of steps, flanked by guardrooms, leads first by a gradual rise and then steeply up to the citadel on the top of the rock.

CHAPTER FOUR

VELLORE

THE fortress of Vellore, one hundred miles west of Madras, is built on level ground. It is roughly square in plan and is defended by a double wall, with wall-towers of great projection at frequent intervals. The whole fortress is surrounded by a wide, deep moat (pp. 18a, 18b).

Vellore differs so much in character from most of the forts of the same period in India and so closely resembles many of those in Europe that its design was probably that of a foreign architect, or engineer, employed for the purpose. It was built by the Vijayanagar princes about the end of the fourteenth century and soon became the great stronghold of the Rajas of Vellore and Chandragiri. It was captured by Sivaji in 1677 and was held by the Mahrattas and Muslims until garrisoned by the English in 1768.

Since Vellore is commanded by adjoining hills the rapid rise in the range and power of artillery rendered it essential that these hills should be held by the governor of the fort below. The Mahratta and Muslim rulers therefore fortified and held these hills, which became key positions. In one attack on Vellore in the eighteenth century the enemy conducted two operations simultaneously, one directed against the fort on the nearest hill and the other against the main position below; neither succeeded, nor did the blockade of two years to which the enemy then subjected the fort, for it was relieved at the end of that period.

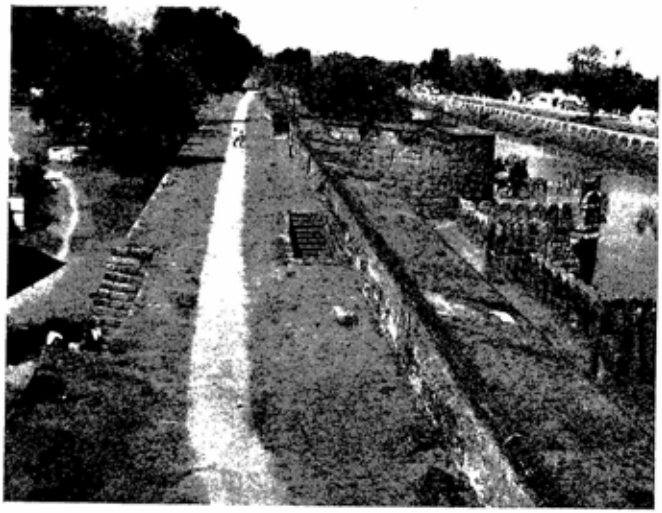
The walls of the fort are conjoined so that the walk on the outer wall, which is much lower than the other, extends back to the inner wall; together these walls form a curtain of enormous thickness. Some of the towers extend out from the inner wall and across the walk to protrude beyond the outer wall, the circulation being preserved by a narrow gallery running round its outer face. As can be seen from the photograph (p. 18b) looking down on both the inner and outer wall-walks. The inner walk is reached from inside the fort by flights of steps up, spaced at intervals along the inside face of the wall and the outer walk by flights of steps

VELLORE. THE ENTRANCE AS MODERNIZED

VELLORE. WALLS AND MOAT WEST OF THE ENTRANCE

VELLORE. WALLS AND MOAT ON THE EAST SIDE OF THE FORTRESS

VELLORE. WALLS AND MOAT ON EAST SIDE OF ENTRANCE



VELLORE. DOUBLE WALLS FROM ABOVE, SHOWING STEPS UP TO INNER AND DOWN TO OUTER WALLS

down from the inner walk. In some places wide ramps, rising from within the fort to the wall-walk, have been constructed for the use of gun-carriages. Box machicolations, at parapet level, project out at intervals from the towers and walls.

The main entrance (p. 18a) was considerably altered in the eighteenth century and adapted for defence by artillery. The upper part has been rebuilt, the crenellations on either side filled in, the wall raised and the new parapet adapted for artillery, much of this work being carried out in brick, plastered over. The former entrance was approached by a winding road and was defended by a drawbridge and a strong gateway. There is a postern on the south side of the fort.

The Sepoy mutiny at Vellore in 1806 was a short but interesting incident in the history of the fort. It appears to have been due primarily to the injudicious orders of the Commander-in-Chief at Madras, Sir John Cradock, prohibiting the wearing of beards and caste-marks by the sepoys. At that time the garrison consisted of 280 British soldiers of the 69th Regiment and 1,500 sepoys. On the morning of 10 July the sepoys, led by the Indian officers, shot down the British officers and barred the men of the 69th in their barracks, where eighty-two were killed and ninety-one wounded. The imprisoned survivors escaped, mounted the ramparts and there, under the command of two young surgeons, named Jones and Dean, held their own against vastly superior forces.

Meanwhile, an officer who resided outside the fort, realizing what was going forward, rode post-haste to the Cantonment at Ranipet, fourteen miles away, where Colonel Gillespie was in command. Colonel Gillespie, with a squadron of H.M. 19th Dragoons and a troop of the 7th Madras Cavalry, dashed to the spot, ordering the guns to follow. Having arrived, Colonel Gillespie swarmed up to the ramparts by a rope and took command of the defenders. When the guns came up they blew open the gates, the cavalry dashed in and the mutiny was crushed.

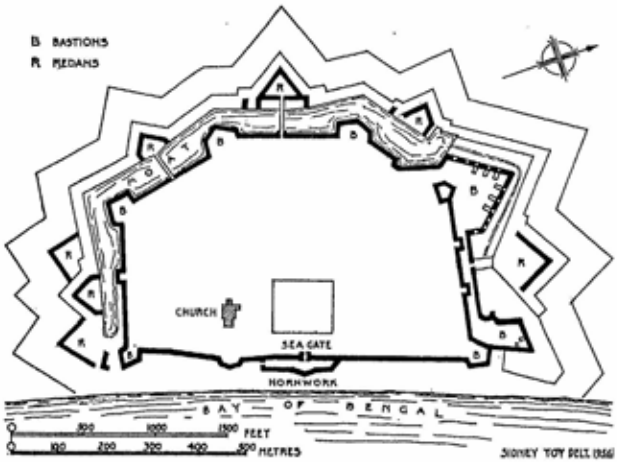
CHAPTER FIVE

FORT ST. GEORGE, MADRAS

FORT St. George, Madras, was built by the British and, from the first, was designed for defence by artillery; it stands on the sea-shore defended by the Bay of Bengal on the east and the river Cooum on the south, the walls forming roughly a crescent on the north, south and west. The first fort on the site was built in 1639 and consisted of two lines of walls, both built on a rectangular plan and enclosed one within the other with wide spaces all round between them. The inner enclosure had an angular bastion at each corner and a gateway in each of the east and west walls; it contained the governor's residence. The outer walls had a round bastion at each corner and the spaces between the two walls were occupied by barracks, government offices, the arsenal and the church.

This structure sustained its first attack in 1702; the assault was by the Mughuls, under Aurangzeb's general Daud Khan, who, after an unsuccessful blockade of three months, were forced to retire. An attack by the Mahrattas in 1741 also ended in failure. In 1745, after six days' bombardment, the fort was taken by the French but was returned to the English by the treaty of Aix-la-Chapelle in 1749. It would appear that some minor additions and improvements were made to the fort about this time, before the attack by the French under their general Lally in 1758. Lally's attack was from the north, the most vulnerable side of the fort; he had set up three batteries at different points. After the garrison had successfully repelled his attacks for two months, it was relieved by the arrival in the Bay of a British fleet of six men-of-war. Thereupon the French retreated, leaving behind them many wounded and fifty-two cannon. After this last event the fort was enlarged and practically rebuilt, under the direction of Bartholomew Robins, who had been mathematical professor at Woolwich, and on a design following the defensive principles of the day. The fort as then built is much as it appears to-day except for minor adaptations and the construction of a wide road on the east between the fort and the sandy foreshore (p. 21).

In outline the fort is roughly semi-lunar, with the diameter, protected by the sea, on the east, and the rounded part, defended by a moat, on the west. There are bastions at each end of the sea wall and at intervals along the other sides, while redans, field-works with two faces forming salients, are built beyond the moat and arranged alternately with the bastions behind. On the north, the most vulnerable side of the fort and the point upon which the French concentrated their attack, the wall is doubled and



MADRAS. PLAN OF FORT ST. GEORGE

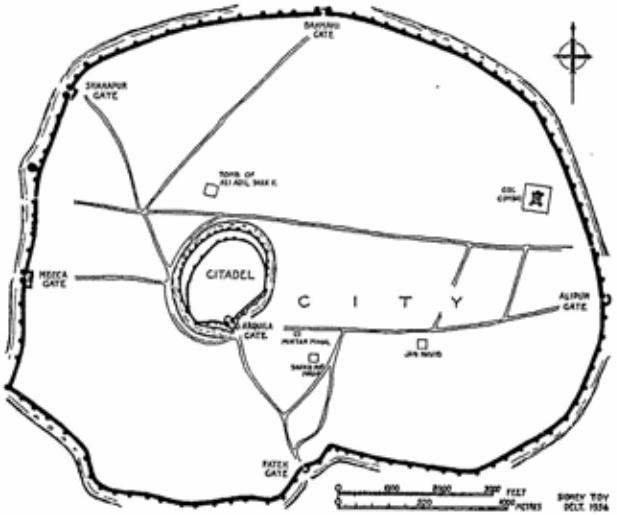
bastions are larger and more powerfully armed. On the south, though here the fort is protected by the river Cooum, there are three redans, arranged in close proximity to each other. All the walls are low and the parapets are built with open embrasures, splayed laterally and vertically from inside to outside for cannon fire directed at both sides and downwards as well as in front. The main entrance, called Sea Gate, was in the middle of the east wall, protected by a hornwork in front and a bastion at the side. There are two gates on the north side of the fort (one of which is blocked) two on the west and one on the south.

Within the fort are official buildings and barracks, not shown on the accompanying plan, and the church of St. Mary. The original edifice here, built 1678–80, was the first Anglican church in India. It gave place in 1759 to the existing structure; which consists of a nave with aisles, chancel, west tower and porch, and is of Transitional Gothic design.

CHAPTER SIX

BIJAPUR

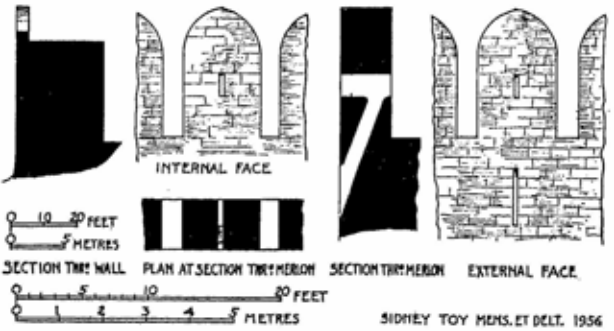
BIJAPUR, a provincial headquarters under the Bahmani dynasty, was governed by Mahmud Gawan when he took Goa in 1471, and, on his death, by Yusuf Adil Khan. By throwing off his allegiance to the Bahmanids in 1490 Yusuf founded the Adil Shah dynasty and made Bijapur a capital city. There are various accounts of the origin of Yusuf Khan, whose rise from obscurity to become the commander of great armies appears to have been unchecked and rapid, but of his ability as the ruler of a province as well as of his skill as commander in the field there can be no doubt. The dynasty he founded, which lasted for nearly two hundred years, corresponds with the most brilliant period in the



BIJAPUR. PLAN OF THE CITY

history of the city. 'Most of the fine buildings in the city, many of them now in a very ruinous condition, belong to this period. Following the conquest of Vijayanagar in 1565 and the extension of the kingdom to the west coast of India, Bijapur became a city of great importance and influence. The dynasty came to an end on the taking of Bijapur by Aurangzeb in 1686:

The curtain wall round the city, which is 6¼ miles in length, was built principally during the first half of the sixteenth century and completed in 1565. Its construction is reported to have been made the duty of the leading citizens, each of them being responsible for a certain length of walling, but although there are some

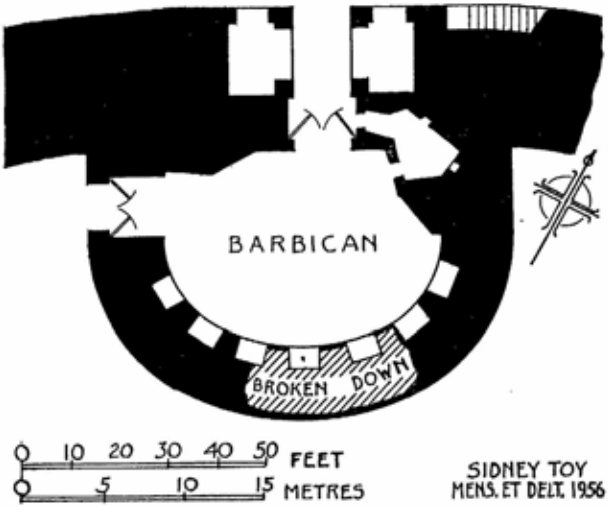


BIJAPUR. CRENELLATIONS ON CITY WALL

variations in the work there is a similarity in character throughout. The wall is very thick, in places from 31 ft to 35 ft.; it is 30 ft. high and is constructed of outer and inner faces of stone, set in mortar, and a core of well-rammed earth. It is strengthened by ninety-six massive bastions, of the same height as the wall and spaced at intervals varying from 50 yards to 130 yards apart. On the top of the wall there is a wide crenellated wall-walk, which runs all round the curtain, across the bastions and over the gateways. The crenellations are somewhat varied but a typical example is shown above. Here the merlons are pierced with a single loophole on the inner face which in its passage outwards breaks into two branches, one going straight through the merlon and the other descending rapidly to a loophole far down on

the outer face of the wall. The embrasures are left free from obstruction.

Beyond the curtain there was a wide, deep ditch, now largely filled in, which in some places had been excavated out of the solid rock; the counterscarp was revetted and there was a berm, or covert way, on the far side. Many of the bastions were adapted later as artillery emplacements and a particularly large one, between Shahpur and Mecca gates on the west, was built well out



BIJAPUR. PLAN OF FATEH GATE

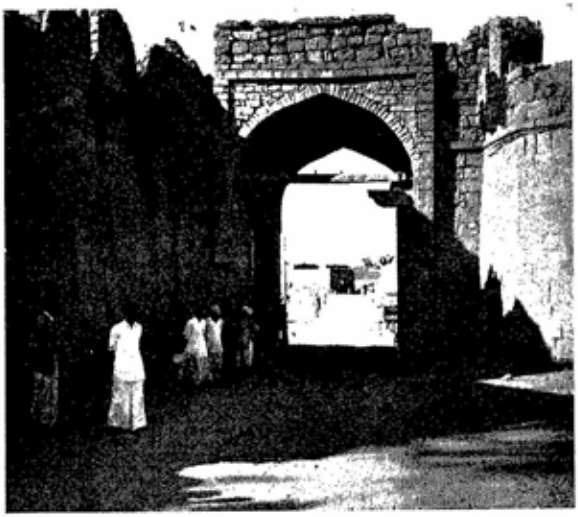
into the ditch to command the full length of the wall on either side. The principal gates are Bahmani Gate, on the north; Fateh Gate, on the south; Alipur Gate, on the east; and Shahpur and Mecca gates, on the west; in addition there are posterns and breaches in the wall made at later periods for access to new roads. The gateways are flanked by a bastion on either side and were approached from across the moat by drawbridges; some of them, as the Fateh and Alipur gates, are defended by a barbican on the

outside, others, as the Shahpur and Mecca gates, by an open court within.

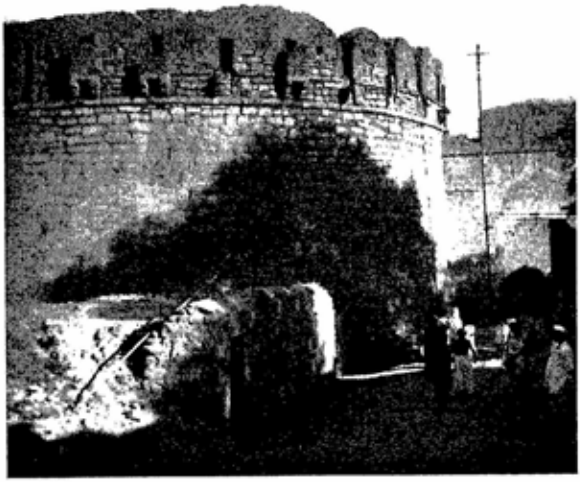
Fateh Gate is defended by a semi-circular barbican with recesses all round its curved inner face; the entrance is at the side, immediately below the curtain wall and therefore at the command of the defenders upon the wall. On entry, an enemy must pass through the barbican and turn at the gate, exposed to attack from the guards in the recesses at his rear. He is also under attack from guards in a mural chamber on the right, which passes round the door from the gateway passage to the barbican; while should he carry or burst through the doors, then guards within the chamber, perhaps hitherto concealed, could rush out and attack him in the rear. Beyond the entrance are other guardrooms flanking the passage within. All the doors of this gateway are missing (pp. 25, 26a).

Mecca Gate has a large rectangular court within the passage which appears to have been a kind of donjon, or keep, but there is no indication of provision against attack from within as well as from without, as has been suggested; indeed both the outer and inner doorways of the original court are closed against attack proceeding from without; the annex with much thinner walls on the south side of the court was clearly added in the latter part of the eighteenth century. The court has recesses for a large guard on all sides; the gateway from the court into the city is at right-angles to that in the outer wall and there is a by-pass from the gateway passage to the other side of the door in both gateways. At the south-east of the court there is a large circular well. Figures of lions trampling on an elephant are carved on either side of the entrance gateway.

The Shahpur Gate is a massive structure, flanked by large towers, or bastions, and having an inner court enclosed by very thick walls (pp. 26a, 26b, 27). The outer gate was defended by a drawbridge, a heavy iron chain (which was drawn across the entrance) and a two-leaved door. When closed, the door was secured by a timber beam, drawn out from a socket on one side, passed behind the door and fitted into a corresponding socket on the other side. In addition defenders on the battlements of the bastions outside covered the approach from holes in the crenellations, the holes having been enlarged for musket fire and their outer faces protected against enemy attack by stone hoods: the



BIJAPUR. FATEH GATE FROM THE BARBICAN

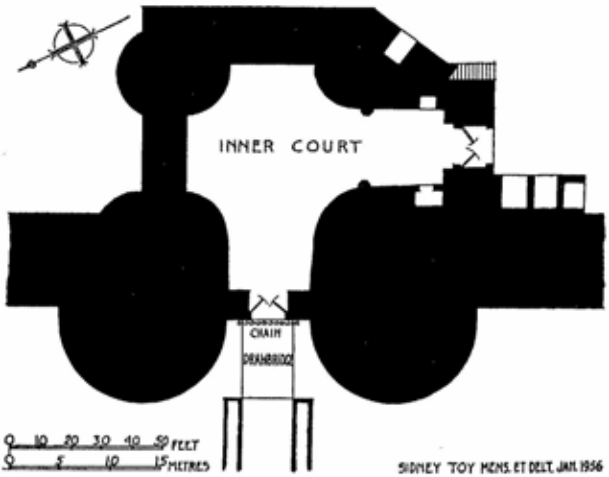


BIJAPUR. SHAHPUR GATE FROM WITHOUT

BIJAPUR. EAST WALL OF THE CITADEL

BIJAPUR. SHAHPUR GATE FROM INNER COURT LOOKING TOWARDS THE INNER GATE

door here is missing. The inner court is fortified all round and on the south side is constricted into a passage leading towards the gate which opens on to the city. The leaves of this door are in position and are formidable barriers; they are 7 in. thick, strengthened at frequent vertical intervals with battens 8 in. by 6 in., they are covered with iron plating and studded with rows of thin iron spikes. The spikes, which are a protection against elephant attack, begin 8 ft. 7 in. above ground level and, closely



BIJAPUR. PLAN OF SHAHPUR GATE

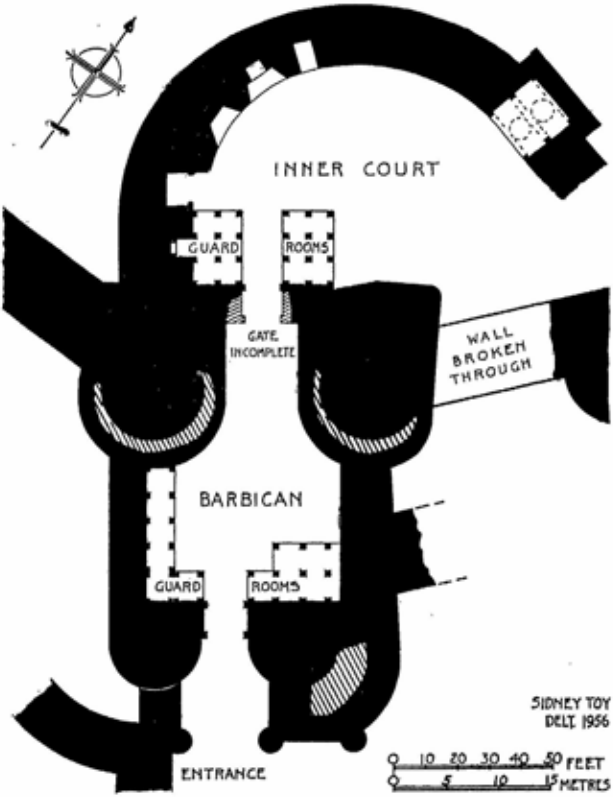
set, are continued up the door row after row (p. 6). There are recesses for the guard both within and without the gateway. Steps leading from the city up to the battlements are on the east side of the inner gate.

The fortifications of the citadel of Bijapur are of various dates, due to the restoration and repairs carried out and the additions made from time to time. And here it is pertinent to observe that early references to "mud" walls should be taken with reserve. Some walls were undoubtedly made of compressed earth and were

a useful defence against projectile engines, the missiles penetrating into but otherwise doing little damage to the walls. But it is unreasonable to suppose that a people whose expert skill as masons and sculptors is so strongly shown (as witness the temples they built of stone and excavated out of the living rock) were content with mud walls as a defence against enemies menacing their very existence. They were all the less likely to be content with mud walls in a country where there is an abundance of stone and where attacks were frequent. Evidence of refortification and addition is particularly noticeable in and around the Arkqila gate. Here some of the older bastions have been remodelled while others have been partially rebuilt. A good deal of the oldest work (such as the pillared guardrooms behind the inner gate and the bastions above referred to) is obviously of Hindu origin. When Yusuf Khan obtained possession of Bijapur there is no doubt that the citadel was then refortified and to some extent remodelled by him.

It is quite clear that the citadel was a particularly formidable structure with powerful double walls and a strongly fortified gate, but although as late as the last quarter of the nineteenth century the walls were almost complete, they are now in such a state of mutilation and ruin that it is not easy to recover the full design. On the east side, where the walls were rebuilt about the middle of the sixteenth century, they are practically intact (p. 26b), but on the north and west they are largely destroyed; while so much rebuilding and subsequent destruction has taken place at and around the gateway on the south that the periods of the various works are somewhat difficult to determine. It is also not quite clear whether or not all the works begun were ever completed. There were two gates, the main entrance on the south and another, probably a postern, on the west.

Despite the present ruinous state of the Arkqila gate, the refortification and the repair and destruction effected, it is still possible to recover its general plan and to some extent the sequence of its development. It consists of a barbican, to which some outer works were added; the main gateway, flanked by two enormous towers; and an inner court enclosed by a semi-circular wall. The main gateway is the earliest part of the structure. The great flanking towers are of two concentric shells and, owing to the fact that both shells were repaired and remodelled before their



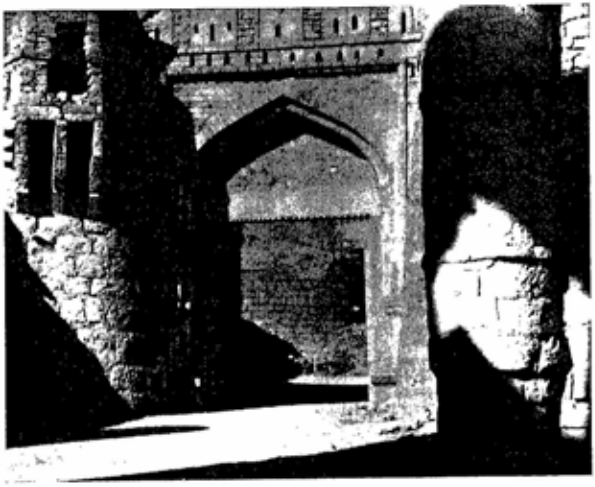
BIJAPUR. PLAN OF THE MAIN GATEWAY TO THE CITADEL

partial destruction, it is not quite clear which of the shells is the older, though having regard to the position of the curtain wall on both sides and to the stonework at the base it would appear that the outer shell belonged to the original structure (p. 29).

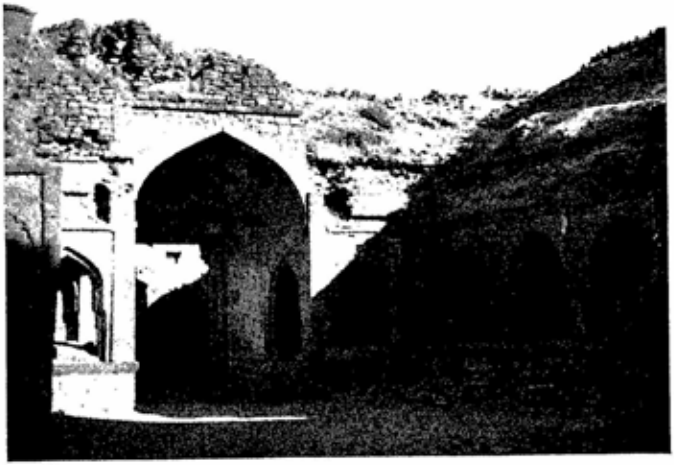
The jambs and the upper part of the gate have been torn away but the pillars of the guardrooms inside the gate still remain in position. These guardrooms, open at the sides, with their roofs supported on pillars, are of Hindu design, like those at Daulatabad, Gingee, and particularly at Chitor, where (as here) the pillars are elaborately moulded and sculpted. It has been suggested that the pillars at Bijapur were taken from Hindu temples and rebuilt here at the end of the fifteenth century but, although in the extensive refortification of that period it is probable that some of the pillars used in restoration came from that source, it is still more probable that it was restoration and not entirely a new design and work. In this respect these guardrooms should be compared with those round the sides of the barbican, which are obviously of Muslim design (p. 30a).

The barbican was added about 1490. The gateway, the upper part of which was restored later, is in the front wall; it was closed by a two-leaved door, and was defended by machicolations on the outside. Within are extensive rooms for a strong guard, ranged along the west wall as well as on either side of the gateway (p. 30a). In the inner court there are many recesses in the face of the curved enclosing wall, and near the entrance into the citadel is a large mural room of two domed bays which was probably for the guard. The entrance itself has been entirely broken away and there is no evidence as to its precise character but it is clear that some reconstruction occurred here before the pulling down of the wall, for the side of the east bastion of the main gateway facing the court at this point has been rebuilt with a slightly rounded corner (p. 30b). Both the inner and outer curtain walls have been broken down on the east side of the gateway (p. 29).

As already mentioned in the preface, it is beyond the scope of this work to describe the numerous sacred and secular buildings standing inside the fortifications dealt with—that has been done at great length elsewhere; but in exceptional cases, as here, a few cursory notes on this subject will not be amiss. From the evidence of the mosques, palaces, tombs and other buildings, within the city, some practically intact, others partially destroyed, and a

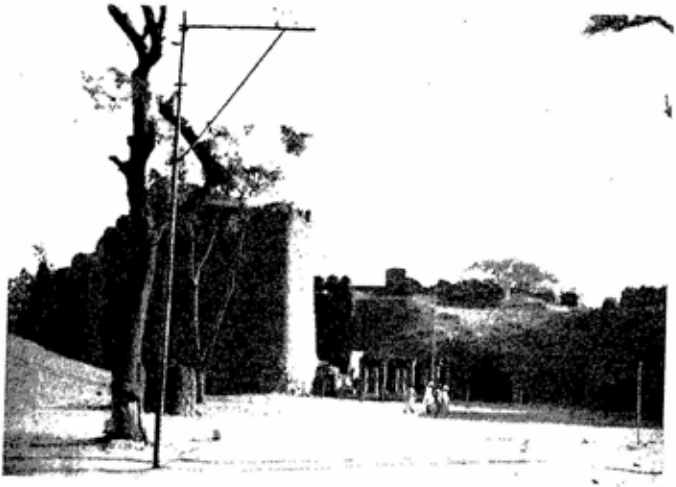


BIJAPUR. THE CITADEL: GATEWAY TO THE BARBICAN



BIJAPUR. THE CITADEL: THE BARBICAN, LOOKING TOWARDS THE OUTER GATE

BIJAPUR. THE CITADEL: INNER COURT OF GATEWAY, LOOKING TOWARDS THE GUARDROOMS



BIJAPUR. THE CITADEL, FROM THE ENTRANCE FROM THE CITY TO THE INNER COURT OF GATEWAY

large number in ruins it is obvious that Bijapur in the sixteenth and seventeenth centuries was a city of great splendour and magnificence.

Among the mosques of outstanding interest are the Jami Masjid and the Masjid of Shahid Pir and of the tombs the group known as Ibrahim Rauza, outside the Mecca gate, and the unfinished tomb of Ali Adil Shah II. These buildings have skilful vaulting, beautiful traceried windows of stone perforated in geometrical patterns, and are profusely decorated with delicate sculpture. The tomb of Muhammed Adil Shah, known as the Gol Gumbaz, is principally renowned for the size of its dome, 124 ft. 5 in. internal diameter, and therefore the second largest in existence, St. Peter's, Rome, with its 139 ft., being the largest. The dome is in effect a concrete shell 10 ft. thick at the base and 9 ft. at the crown, built of rings of bricks in the Byzantine manner, set in thick mortar. Thrust is practically eliminated. The dome stands on the square central space of the tomb and the design of the ribbed pendentives transmitting the weight of the dome across the corners of this space is particularly skilful and graceful. Apart, however, from these fine structural qualities, it is difficult to appreciate the extravagant claims to beauty made in respect to this huge building. As seen from outside, the plain sides of the structure with their deep corbelled cornices and ornamental parapets are quite effective, but the turrets at the corners, of pagoda design, with seven tiers of open arches, give an impression of weakness where strong support of the dome should be emphasized.

One of the most elegant buildings in the city is that known as the Mihtar Mahal; it is but a small building and actually the gateway to a mosque. It is of three storeys, flanked at the corners by small hexagonal buttresses which rise through all storeys and, ascending high above the roof, terminate in oval balls. The first storey is plain except for the doorway. The second storey is pierced with windows from the jambs of which spring enormous brackets rising up to support a very wide cornice; in the centre there is a wide balcony supported on moulded corbels. The whole of this work, including the free-standing brackets, is richly carved in delicate formal ornament. The third storey is decorated with a blind arcade in line with its windows. The most interesting feature of the Mihtar Mahal is its construction. In common with other structures in the city it is built of trap, a fine-grained, dark,

igneous stone which is brittle and friable; yet it is used here in the tall brackets, noted above, which have long free-standing struts projecting outwards and upwards to the cornice above. Having regard to the long period these brackets have remained intact it is obvious that the confidence of the builders in their durability was amply justified.

The water supply of Bijapur during the period of its early prosperity was abundant and well distributed throughout its area. It was brought in through underground pipes and aqueducts from springs and reservoirs without the walls and dispersed in all directions through the city. Lofty square towers were built at intervals along the routes of the conduits as silt traps and relief for high pressures of water. Some supplies served ornamental as well as useful purposes. Pipes from these sources were directed into open cisterns. The water brimming over the edges of the cisterns was carried through ornamental gardens, where it ran through open stone channels following sinuous courses over uneven beds, producing a sparkling and rippling effect. Beauty and health as well as the supply of an essential of life were evidently important factors in the design of this system.

CHAPTER SEVEN

DAULATABAD

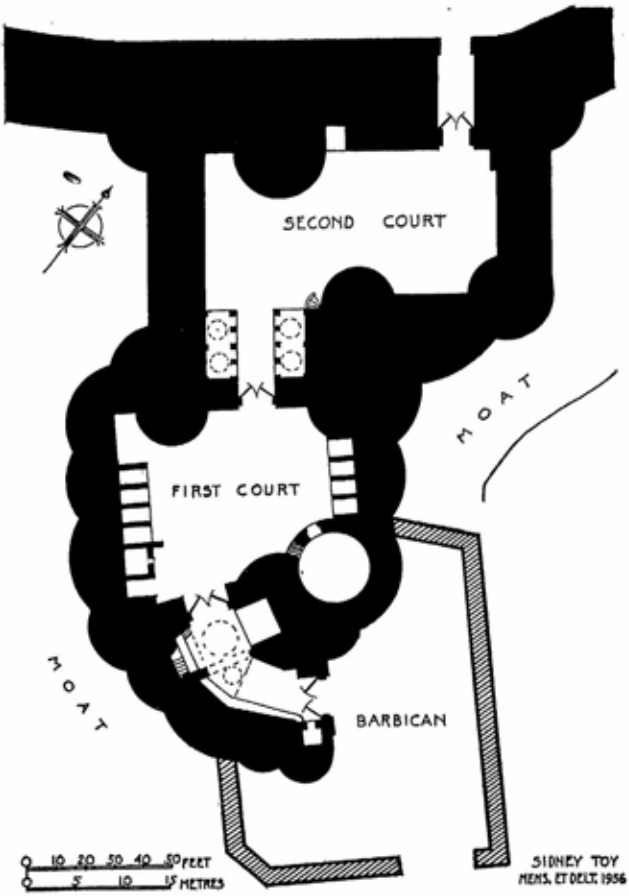
DAULATABAD, originally called Deogiri, was the capital of the Yadava Rajas, a Hindu dynasty which ruled all the western Deccan from 1210 to 1318. In 1327 the city was taken by Muhammad bin Tughluq, King of Delhi, but the citadel held out against him and finally, having demanded considerable treasure as ransom, he raised the siege. The ransom consisted of 15,000 lb. of pure gold, 175 lb. of pearls, 50 lb. of diamonds and 25,000 lb. of silver. Tughluq determined to make this city in central India the capital of his kingdom, transferred much of the population of Delhi here and changed the name of the city from Deogiri to Daulatabad (City of Fortune). It would appear, as might be expected, that the transference was in no way agreeable to the inhabitants of the northern city and in 1335 they were allowed to return to their old home. In the latter part of the sixteenth and early part of the seventeenth centuries the city was held by the Nizam Shahi kings of Ahmadnagar but it was retaken for the Delhi empire by Shah Jahan in 1636. In this last engagement, after the Mughuls had penetrated through the city and up to the foot of the citadel, the defenders found themselves entirely isolated. They surrendered and the kingdom of Ahmadnagar was merged into the empire of Delhi.

There can be no question that Daulatabad, both in design and construction, was one of the most powerful (as it is one of the best preserved) fortresses of the Middle Ages in existence. The conical rock on which it is built is 600 ft. high and stands isolated at some distance from the surrounding hills. A powerful wall, about three miles in perimeter and defended by a moat and glacis, runs round the hill at its foot, and between this outer curtain and the citadel are two other encircling walls. Beyond the third rises the citadel, the sides of which have been scarped all round vertically for a height of 150 ft. with sides so smooth as to render escalade quite impracticable. From this point the only approach to the citadel is across a moat, around a narrow and strongly defended gallery, and up through a narrow, steep and tortuous tunnel, with

chambers for the guard opening off it at intervals. Emerging from the tunnel one is still some 200 ft. from the summit. In its design, its plan, and the general disposition of its defences, this powerful fortification is essentially Hindu in character and belongs to the period of the Yadava occupation; in all respects it agrees with Hindu work elsewhere, as at Gingee and Chitor. No doubt the smooth and lofty scarping round the base of the citadel relates to a much earlier period, for it is in the tradition of the skilled labours performed by the workmen at the Ellora excavations, only a few miles away. There is no question also that both the Bahmanis and the Muslims have left their impress on the work, particularly in some adaptations to artillery defence, as at the outer gate. But in all essentials of mediaeval defence the fortification is Hindu work of the thirteenth century.

The entrance to the city through the outer curtain is by way of a strong hornwork, consisting of a succession of gateways and courts which extends far beyond the curtain; it has very thick and lofty walls, convoluted on the outer faces, and is defended by large bastions both without and within the courts. A barbican of later date, the entrance to which has been broken away, stands in front of this hornwork (p. 35). On the right of the entrance gateway is an enormous bastion, the upper part of which has been rebuilt and loopholed for musket fire. The face of the gateway above the door has been pierced with three large openings for artillery and the parapet over it has been rebuilt with a level coping. The entrance from the barbican to the first court is through a lofty vaulted passage, with a turn midway and a two-leaved door at either end, a large recess for the guard on the right and a stairway to the parapet walk over the gate on the left. The inner door is missing but the outer door, studded and spiked against elephant attack, is still in position. It is a formidable barrier 6 in. thick, strengthened behind by heavy battens spaced at short intervals, and secured when closed by a timber bar about 10 in. square, drawn out from a long socket in one jamb, passed behind the door and fitted into a socket in the other jamb. The iron spikes are fearsome-looking objects; they are arranged in horizontal rows up the face of the door, beginning 6 ft. 6 in. from the ground, and from a thick base they project 8 in., to a sharp point (p. 6).

The first court is defended by a row of guardrooms on either side, from the towers flanking the next gateway and from the large

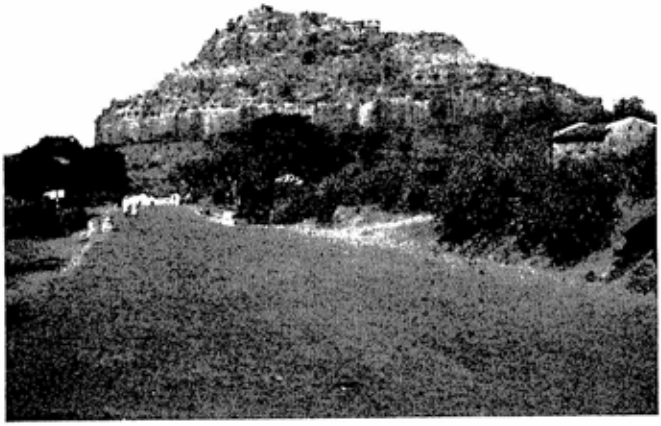


DAULATABAD. GATEWAYS TO CITY THROUGH HORNWORK IN OUTER WALL

bastion, already mentioned, on the right of the outer passage. The next gateway is defended by strong towers and an embattled parapet. Two elephants on low pedestals, carved in relief, face each other across the doorway; above the arch there is a corbel table and, at parapet level, are two round pinnacles, one on either flank. There is only one two-leaved door here but it is of the usual heavy construction and is armed with iron spikes. Within the doorway are two guardrooms, each of two vaulted bays. In the next court, facing the second gateway, is a large conical tower which has lost its upper part and from this tower, about midway in its height, projects a covered balcony supported on sculptured corbels of Hindu character; a window adjacent to the balcony has lions carved in the spandrels over its head. Even now, in its present truncated state, this tower rises above the rest of the hornwork while from the height of its battlements when complete it must have commanded not only the field outside the fort but a large portion of the city inside (p. 36b). To reach the following gate in the hornwork one must pass diagonally through the court exposed to attack from all sides; this gateway, closed only by a single two-leaved door, is much narrower than those already passed, being 9 ft. 5 in., jamb to jamb as compared with 11 ft. for the gateway at the entry to the second court, and 12 ft. 2 in. for the doors at either end of the outer passage.

The second curtain, within the city, has a simpler entrance, but here the gateway is still narrower (6 ft. 1 in. across), and the entrance is defended from within by a guardroom on either side of the passage at its issue. The third wall is much further up the hill and the rise begins to grow steeper, the entrance here is complicated and difficult to negotiate, and is defended by a tower on either side. A flight of steps leads up to the first door; this door being carried, an assailant is faced by guards in a recess directly in front of him, and his further progress is obstructed by a door on the right, opening to a passage through the wall with a flight of steps up, under attack from guards posted in a large recess in the rear, another recess on the right-hand side of the passage and a third directly facing him. A third door opening to a flight of steps on the left and under attack from the rear must finally be carried before he has arrived inside the wall (p. 37).

Ascending from this level and passing by the ruins of the Chini Mahal, a palace decorated with encaustic tiles, one reaches a

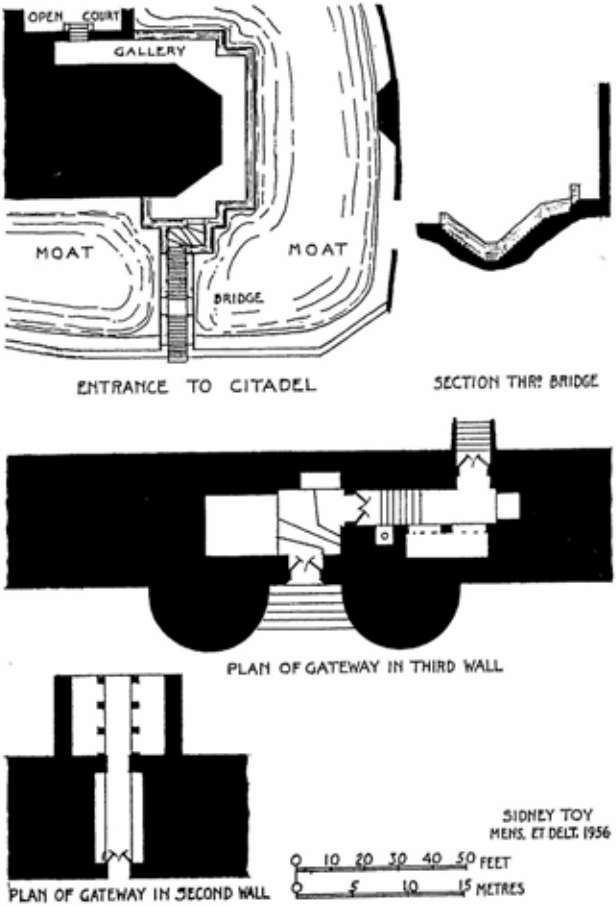


DAULATABAD. THE FORTRESS FROM THE SOUTH

DAULATABAD. SECOND GATEWAY IN THE HORNWORK FROM THE FIRST COURT

DAULATABAD. CONICAL TOWER IN SECOND COURT OF HORNWORK

DAULATABAD. SCARPED FACE OF THE CITADEL

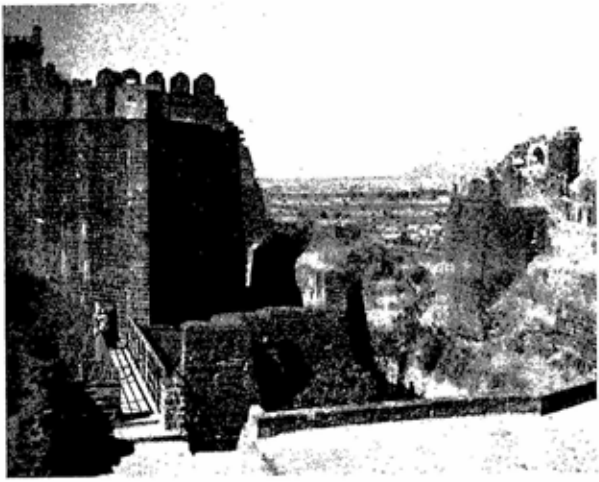


DAULATABAD. PLANS OF SUCCESSIVE GATES TO CITADEL

platform at the foot of the citadel. From this point of vantage one can appreciate the skilful manner in which the hill has been scarped all round from this level up to a height of 150 ft. Even to-day, after centuries of weathering in a country visited annually by monsoons, the vertical face of the rock is practically as smooth and unassailable as when first tooled (p. 36b).

The entrance to the citadel is defended by a wide and deep wet moat which has been excavated out of the living rock, leaving dams across it and a submerged causeway for the bridge (p. 38a). The bridge is of unusual design; it descends rapidly by a flight of steps down from the counterscarp and rises again to the level of the gallery on the other side. There can be little doubt that the principle of this arrangement is that of an alternative to a draw-bridge. The height of water in the moat was under control and any adjustment in this height could be restricted to the space between the dams. In time of siege, if the enemy had carried all the outer barriers, the portion of the moat including the bridge could be flooded, and the water in that portion raised to such a height as to render the bridge impassable, or at least to make the crossing under attack impracticable. The gallery passes round three sides of a tall bastion and an assailant rushing through it would be under attack from the battlements of the bastion and from those of a high wall and strong tower on the counterscarp of the moat, which are so built as to face in that direction. From the end of the gallery a few steps lead down to a small open court, on one side of which is the entrance doorway to the tunnel (pp. 37, 38a).

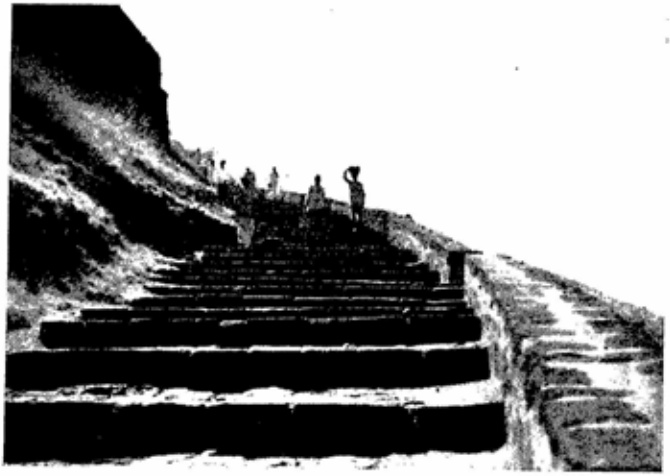
The long ascending tunnel rises rapidly and tortuously by flights of steep steps. Opening off it at intervals are chambers for guards commanding the approach. At the head of the tunnel is an iron shutter (now raised some feet from its original position) which runs horizontally on small wheels, covering or uncovering the opening like a trap-door; part of the original cover has been lost. A most ingenious and effective defence of this tunnel was the provision of a barrier of smoke. At a point about half-way through, where the tunnel passed near the vertical face of the rock a hole was cut through to secure draught for the fire in an iron brazier which was installed in a small chamber opening into the tunnel. When the fire was kindled the current of air from the hole would waft the smoke up the tunnel and render its



DAULATABAD. ENTRANCE TO CITADEL. STEPS DOWN TO BRIDGE ON THE RIGHT OF MODERN VIADUCT

DAULATABAD. BRIDGE OVER MOAT AT ENTRANCE TO CITADEL

DAULATABAD. THE CITADEL: ENTRANCE TO TUNNEL



DAULATABAD. THE CITADEL: FLIGHT OF STEPS ASCENDING FROM TUNNEL

passage impossible.[1] A somewhat similar device, described by Polybius, was adopted during the siege of Ambracia in 190 B.C. to expel the Romans from the mine they had driven towards the city.[2]

On issuing from the trap-door at the head of the tunnel one arrives at the foot of a very wide and long series of flights of steps, ascending to a pavilion (p. 38b). The pavilion is held to have been the residence of a princess of the early Hindu period, and it is very probable that the lofty pedestal on which it stands relates to the time of the Yadava occupation, but it is obvious that the building itself has either been entirely rebuilt or considerably remodelled at a much later period. It is perched on the top of the precipitous side of the escarpment and its wide veranda commands extensive views of the surrounding country.

From this level a further flight of a hundred steps leads up to the level summit of the citadel. Here there are gun batteries, established in this commanding position about the middle of the seventeenth century; one heavy cannon, difficult to hoist, was brought up and mounted in position under the direction of a skilled Dutch artilleryman. The citadel possesses a plentiful supply of water from its own perennial springs.

[1] The description of this defence given by a later writer, and often copied, that a fire was kindled on the top of the upper door, was evidently written without knowledge of the true character of the device; the upper door was originally down in a shallow pit, where there could have been no draught, and was raised up in its present position in modern times.

[2] *Vide* Sidney Toy, *A History of Fortification*, p. 36.

CHAPTER EIGHT

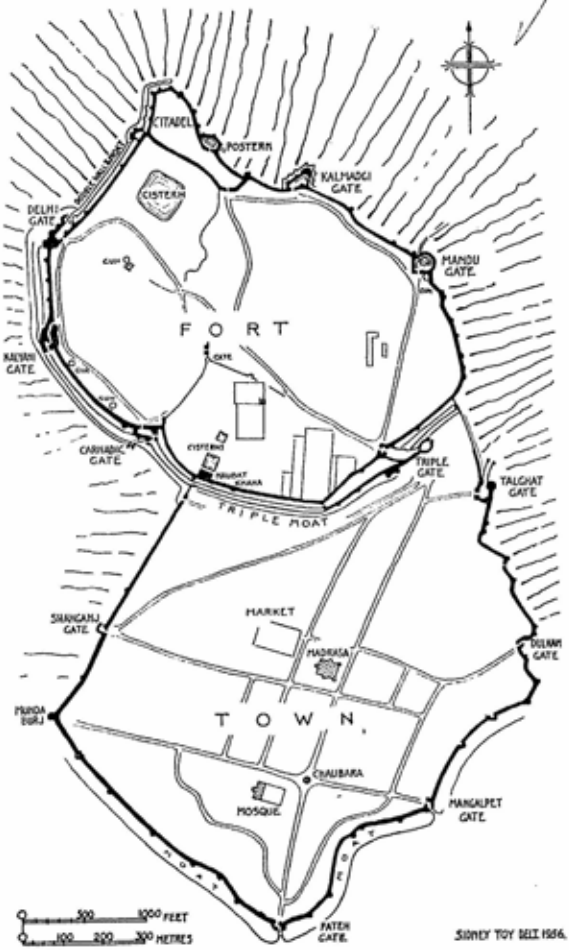
BIDAR, DECCAN

BIDAR is built at the head of a land promontory, jutting northward, the promontory forming the edge of a ridge which, rising gradually from a point some miles south of the town, attains the height of 300 ft. above the plain at its head. The fort occupies the head of the promontory and the town stretches immediately south from the fort (p. 41).

The town was of considerable importance in the Middle Ages; it was a flourishing centre of trade in the fourteenth century, and it was very probably surrounded by walled defences at that period. The existing fortifications, however, date principally from the fifteenth century, following the transfer of the seat of government from Gulbarga to Bidar in 1429; the defences round the fort were built between 1429 and 1432. In view of the growing strength and range of powder weapons, much rebuilding work and adaptation of the battlements to defence by musketry was carried out during the sixteenth and seventeenth centuries.

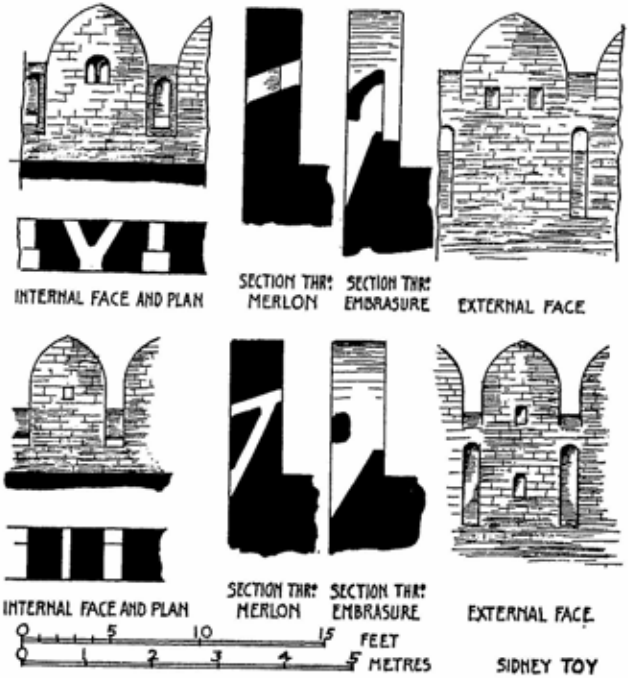
The curtain wall follows the irregular edge of the promontory and varies in thickness according to the strategic value of the site it occupies, from 17 ft. up to about 50 ft.; on the south and west sides of the town, where the ground inside the walls attains no great height above the terrain beyond, the walls are about 50 ft. wide. A moat is carried round the walls on the south side of the town and the height of the walls from the bottom of the moat to the top of the parapet is 42 ft. Huge bastions project at intervals from the walls, a particularly large bastion, called Munda Burj, built in the sixteenth century to support a large gun, occupies a prominent angle on the west side of the town, overlooking the flat terrain on that side. Three pedestals, the Black, Red, and Long Gun bastions, were also built behind the walls within the fort to carry heavy guns. The walls are built of the laterite rock quarried on the site, and of trap.

At the two junctions, east and west, of the curtain round the town with that of the fort, the wall-walks of the town walls terminate and only the relatively thin walls of the parapet are



BIDAR. PLAN OF THE TOWN AND FORT

continued on to the fort; on the east this thin wall is continuous with the end walls of the triple moat on the side; on the west the thin wall abuts against the outer partition of the triple moat. This plan, observed also in Europe, is designed to isolate the defences

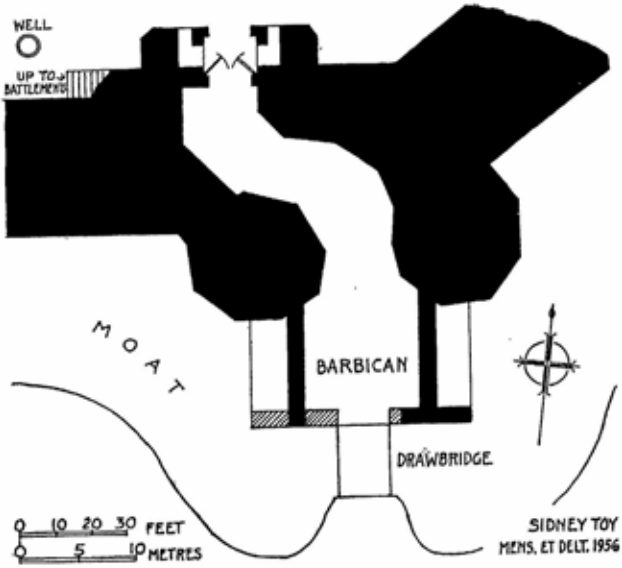


BIDAR. CRENELLATIONS ON THE TOWN WALLS

of the town from those of the fort in the event of the town being taken by the enemy or of the defection of its inhabitants.

The parapets consist of pointed merlons, 3 ft. thick and from 7 ft. 6 in. to 8 ft. 9 in. high, with embrasures from 1 ft. 2 in. to 1 ft. 9 in. wide. The embrasures are partly filled in and the infilling pierced by loopholes with sills descending rapidly from

inside to outside. Often there are two tiers of loopholes in line with the embrasures, one going straight through and the other, lower down, descending rapidly from the wall-walk to an opening far down the wall face (as in those on p. 42). Of the two measured examples in the accompanying drawing, in the upper one, taken from the walls on the south side of the town, the single hole on the inside of the merlon diverges into two holes laterally,



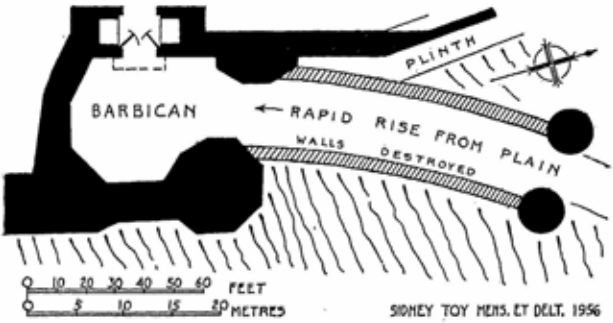
BIDAR. PLAN OF FATEH GATE

to provide for lateral fire; the lower one, taken from the east walls of the town, has a branch with a steep descent vertically, to command the path of approach to the gate.

There are five gateways to the town of which two, the Mangalpet and the Dulhan Gates, have been rebuilt in relatively modern times. Fateh Gate, on the south, is the principal entrance into the town and is a particularly formidable structure (pp. 43, 44a, 44b).

It is defended by a moat, formerly crossed by a drawbridge, and a barbican: the barbican jutting out in front of the two enormous towers flanking the sinuous passage to the gate. The passage is commanded on both sides by box machicolations, jutting out from the parapets and from loopholes descending from the wall-walks. The gate is closed by a very heavy two-leaved door, which is plated with iron and studded with knobs and spikes as a defence against elephants. Within the doorway are two tiers of recesses for the guard.

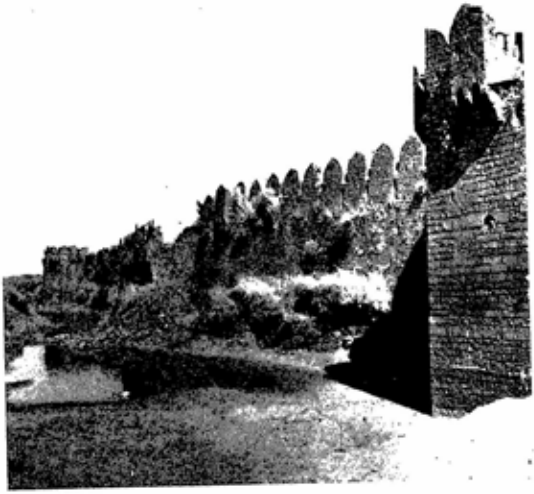
The Talghat Gate, at the north-east of the town, stands high above the plain and there is a steep rise up to it from without. It



BIDAR. PLAN OF TALGHAT GATE

is defended by a powerful barbican, and a long steep ramp with walls on either side and round towers, or bastions, at the end of the walls; the walls of the ramp have been destroyed, above. The barbican, here actually part of the gateway, is flanked by two towers, and the entrance to it is so placed as to involve a right-angled turn in the passage to the inner gate; the barbican is commanded on all sides from the battlements on its walls and towers, and the entrance to the inner gateway is defended by a row of machicolations immediately above its head. The heavy two-leaved door of the gateway is plated with iron and studded with iron spikes; the passage inside the door has a recess on either side for the guard (pp. 44, 44b).

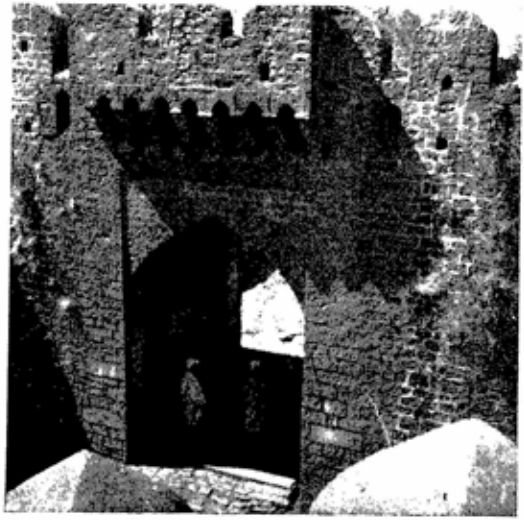
This gate shows clear evidence of restoration and repairs and



BIDAR. CURTAIN WALL ON THE SOUTH-EAST SIDE OF TOWN

BIDAR. FATEH GATE FROM WITHOUT

BIDAR. PASSAGE THROUGH THE FATEH GATE



BIDAR. TALGHAT GATE, FROM THE BARBICAN

its Persian inscription, dated 1671, is interesting both in respect to the period of the repairs and for its typical fulsome phraseology. The following is a translation:

> "On Monday the 20th of Dhu-Qa 'da in the 15th year of the auspicious reign of His Majesty, powerful like fate, glorious like Jamshīd, the lord of the army of angels, the victorious king, Muhī-ud-Din Muhammad Aurangzeb Bahadur 'Ālamgir, the conqueror (may God perpetuate his kingdom and sovereignty) corresponding to the year 1082 of the Flight of the Prophet, during the governorship of the humblest servant (of the court) Mukhtar Khan al-Husain as Sabzwari, this gate was completed."

At the crossing of the two main roads in the town there is a tall round tower, called Chaubara; it rises from a high pedestal, where it is 33 ft. in diameter, and, tapering as it rises, attains the height (including the pedestal) of 71 ft. There are recesses round the pedestal and a stairway rises from ground level to the top of the tower (p. 46a). This building is undoubtedly a watch tower and, although the pedestal encircling its base may be a later addition, the tower is probably of Hindu construction. The building of municipal towers was abnormal with the Muslims and if exception was made in this case one would expect an inscription to that effect in so important a structure. A police station which encumbered the base of the tower, and a clock turret erected on the top, were both removed some years ago.

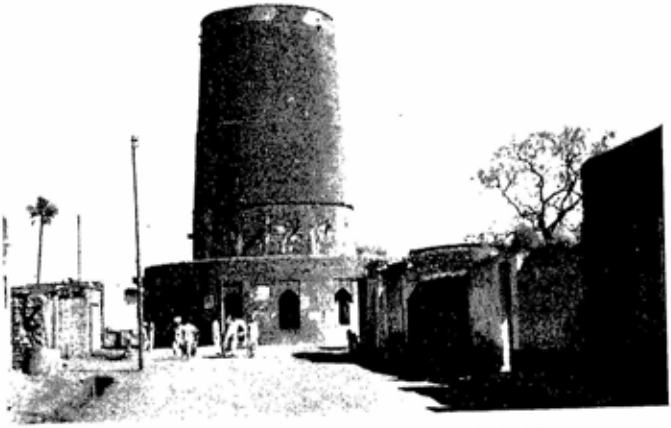
The Fort, standing at the head of the promontory, rises high above the surrounding terrain; it rises particularly high on the north and east where it is 300 ft. above the plain. On the south and west sides, where the height above the plain is much less, the walls are defended by a triple moat. The moat, which was excavated in three sections, leaving the natural rock as partitions between the sections, is 30 ft. deep, the two inner sections about 35 ft. wide, and the outer section 43 ft. wide. At the east end all three sections terminate in a dam, in line with the town wall on this side, the middle section being entirely occupied by a low fortified tower (pp. 44, 46a, 46b). There are two other dams at intermediate points, one of which, in line with the town wall on the west side, crosses the outer section only to abut against the first

partition. There are sluices in the partitions and there can be no doubt that the dams were intended to confine the flooding of the moat to such areas as the exigencies of the circumstances demanded. The excavation of this moat before the period of blasting operations was a great feat of engineering skill.

The walls all round the fort are of great strength and they are defended by massive bastions and gun emplacements; at the north-west, between the Delhi Gate and the north point of the citadel, the walls are doubled and there is a double moat. The gateways are skilfully designed, having strong barbicans with sinuous passages; the gateways on the east side, standing high above the plain, are approached through steep and winding tunnels. The citadel, formerly cut off from the rest of the fort by a wall now largely destroyed, occupies the peak of the promontory and, in addition to its gate from the fort, has a particularly strong postern to the field through which, in an emergency, supplies could be introduced or escape effected.

The main entrance to the fort is from the town through a triple gate, or more precisely through three distinct gateways in succession. The first was defended by a moat (since filled in) and was closed by two doors in succession, the outer door being studded with spikes. Between the first and second gates there is an open court with recesses all round for the guard. The second gate, called Sharza, from the two tigers in low relief which embellish its outer face, was closed by one double door only; above this gateway, which is decorated with encaustic tiles, there is a music-room with adjacent chambers. Between the second and third gates is a long passage with fortified walls on either side. The third gate, called Gumbad, differs in design from the other two; the passage through it is octagonal, with recesses on either side for the guard, and the whole is surmounted by a dome. All three gates show distinct signs of repairs and alterations in their masonry and design; some indication of the periods of these later works in the first and second gates is given by inscriptions upon them, the inscription on the first gate being dated 1683, and that on the second gate 1503 (p. 48a).

One of the gateways on the east side of the fort, the Mandu Gate, is of special interest on account of its open-roofed subterranean guardroom, intercepting the steep tunnel of approach (p. 47). The tunnel forms a complete loop in its course from the



BIDAR. THE CHAUBARA, FROM THE NORTH

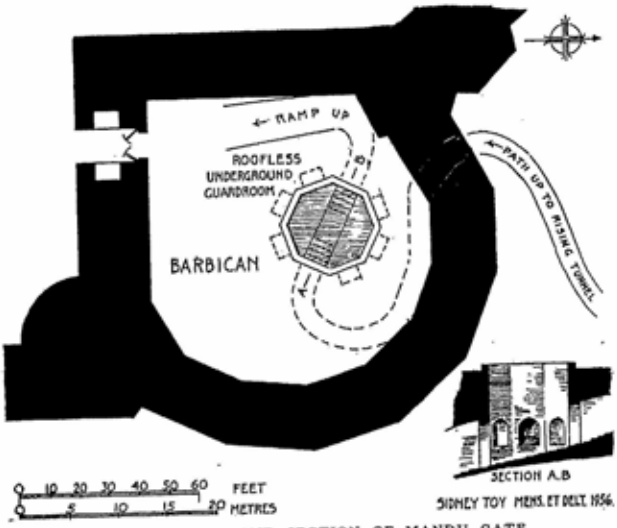
BIDAR. THE TRIPLE MOAT BETWEEN THE TOWN AND THE FORT

BIDAR. EAST END OF THE TRIPLE MOAT BETWEEN TOWN AND FORT

BIDAR. WEST END OF THE TRIPLE MOAT BETWEEN TOWN AND FORT

lower entry to the ramp rising up to the barbican; it passes straight through the guardroom, and here an advancing enemy faced an attack by the defenders occupying six large recesses, three on either side as well as from the opening above. The upper gate was closed by a heavy two-leaved door and there are recesses for the guard on either side of the passage.

South-west of the fort, in line with the town wall at this point,



BIDAR. PLAN AND SECTION OF MANDU GATE

there is a large tall building, called Naubat Khana, or music-room, probably a relatively modern name given it on account of the large hall it contains. It was doubtless built especially for the military and situated at a strategic point for defence (p. 48a). The water supply in both town and fort was abundant, from wells, cisterns and, especially in the town, from trap-doors opening to underground watercourses.

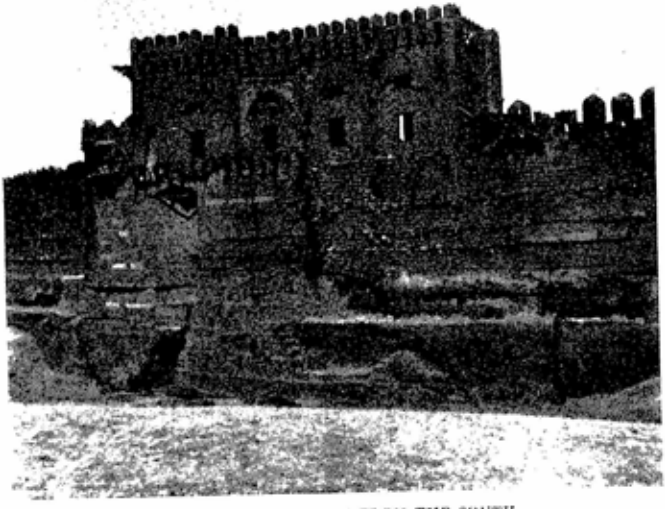
CHAPTER NINE

AHMADNAGAR

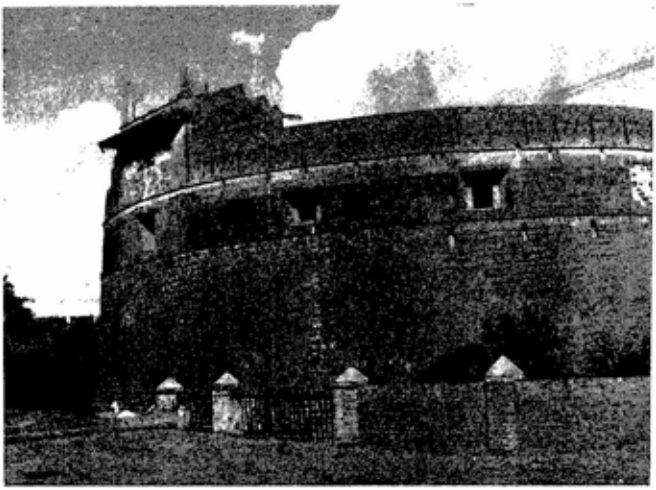
THE fort of Ahmadnagar, eighty miles north-east of Poona, dates from the end of the fifteenth century and was probably built by Ahmad Nizam Shah Bahri, who founded the town of Ahmadnagar, half a mile west of the fort, about 1490 and was the first of the kings of the Nizam Shahi dynasty. Ahmad Nizam Shah was a powerful prince and his territories extended over wide areas in this part of the Deccan. About the middle of the sixteenth century a considerable amount of refortification was undertaken to adapt the upper parts of the walls and gates to musket and artillery defence; the parapets were rebuilt in brickwork and large apertures for cannon were opened out in the walls below them. In 1596 large forces sent by Akbar, Emperor of Delhi, into the Deccan, laid siege to the fort of Ahmadnagar and breached the walls. But the breach was brilliantly defended by Chand Bibi, Dowager Queen of Bijapur. A renewed attack in 1600 was successful and the Mughuls took possession of it. In 1760 it was taken by the Mahrattas, and in 1808, following a severe bombardment, the fort was surrendered to the British under Arthur Wellesley, later Duke of Wellington.

Ahmadnagar stands on level ground surrounded by a wide and deep moat; it is a roughly circular fort, about half a mile in diameter, enclosed by a high wall with bastions at intervals. The main gate is on the west side, looking towards the town, and there is a postern on the east side. The original part of this structure, practically the whole up to the level of the wall-walk, is built of dressed and coursed ashlar stone; the alterations and additions carried out at later periods are of brickwork. In the alterations made about 1560 the embrasures of the battlements on the curtain wall were filled in and the whole brought up to a level coping. It would appear that at this period the battlements of the bastion-shaped barbican were rebuilt above the level of the wall-walk and that later, when the apertures for cannon were opened out below them, the embrasures were filled in and the whole brought up to a level coping as in the curtain wall.

BIDAR. TRIPLE GATEWAY BETWEEN TOWN AND FORT



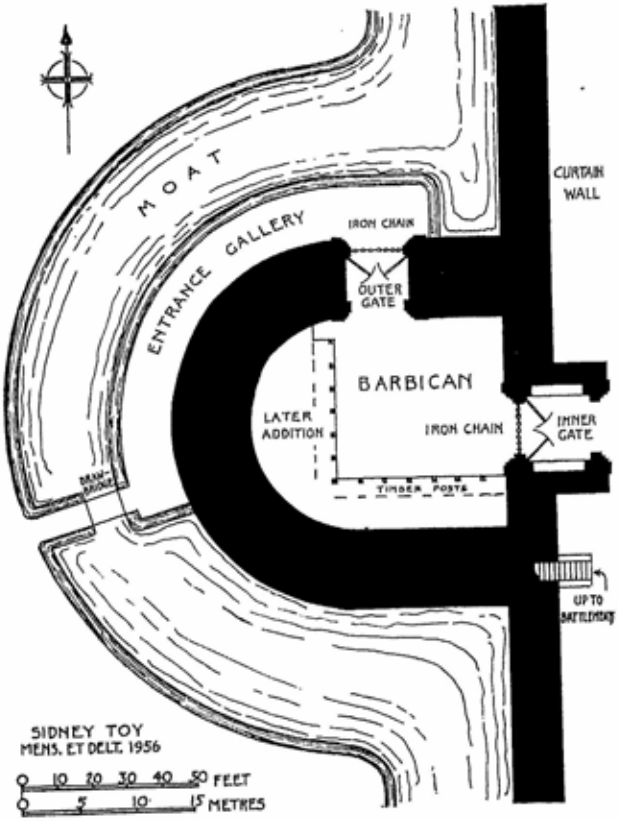
BIDAR. THE NAUBAT FROM THE SOUTH



AHMADNAGAR. THE BARBICAN FROM THE WEST

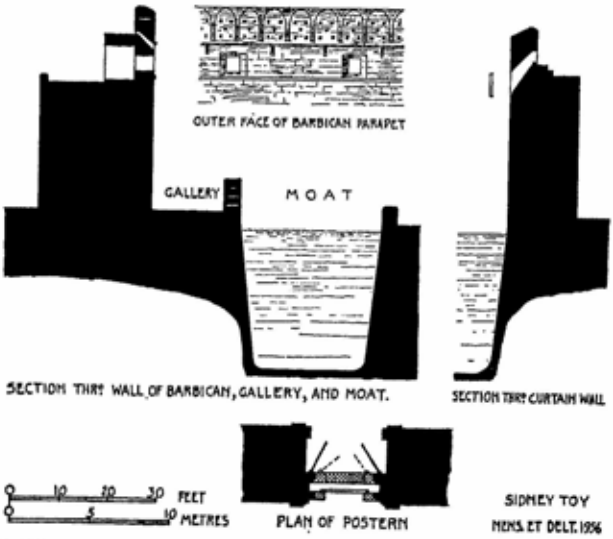
AHMADNAGAR. GATEWAY FROM THE BARBICAN INTO THE FORT

AHMADNAGAR. THE POSTERN FROM WITHOUT



AHMADNAGAR FORT. PLAN OF THE MAIN GATEWAY

The main gateway is defended by a powerful barbican, taking the form of a large bastion, and the wide moat. Here, intercepted between these normal defences, is a gallery, or berm, making it necessary for an assailant, who has crossed the moat, to negotiate a narrow passage half-way round the barbican before he reaches its outer gate, all under attack from the defences on the wall above, which were particularly strengthened at the point of arrival from



AHMADNAGAR FORT. SECTION THROUGH CURTAIN WALL, SECTION THROUGH BARBICAN, ELEVATION OF PARAPET OF BARBICAN. PLAN OF POSTERN

the drawbridge (pp. 48b, 50). The parapet of the barbican, as rebuilt in brickwork for musket-fire, is pierced by numerous small holes, about 7 in. square, arranged in three tiers, some going straight through the parapet, which is 3 ft. 3 in. thick, others pointing in lateral directions, others again pointing downwards. Since their small size and the short intervals between them, would make it practically impossible to take aim at any particular object

through them, one must conclude that the principle of the arrangement was to set up a kind of barrage around the whole entrance area. Numerous musket holes of similar size and disposition made in the remodelling of parapets at later dates, occur in many other forts in India, as at Gingee and Golconda.

In order to involve the enemy in an awkward turn within the barbican, under attack from all directions, the gateway into the fort is set at right-angles to that into the barbican. At the time of siege a strong iron chain was drawn across in front of each of these entrances and the heavy two-leaved door in each case is protected against elephant attack by rows of long iron spikes. The spikes on the outer door are 2½ in. in diameter at the base and protrude 12 in. to a sharp point; there are eight rows of them, rising up at 2 ft. intervals from the first row, which is 7 ft. up from ground level (p. 6). There are figures of animals flanking the west, or entrance, side of the gateway to the fort, and on the east side there are figures of lions in the spandrels of the arch.

The postern is in the east wall of the fort (pp. 48b, 50). It is a relatively simple gate which has been considerably altered since it was first built. In the first change the opening was restricted by filling in between the pilasters on the outer face and between the jambs of the doorway itself, a new door and new socket holes being provided; and in the second alteration the outer opening was blocked with a wood screen and the doorway with masonry. The latrine on the north side of the postern belongs to the original, late fifteenth-century, work. The existing bridge is relatively modern.

The entry of the Mughuls into Ahmadnagar in 1600 was at the end of the second siege to which they had subjected that fort and, gaining experience from the strong defence against open attack they had met with in the first siege, they decided to concentrate on mining in the second; and to this end they had brought men skilled in mining operations down from the north. For a considerable time then there was relative silence—a form of cold war. Soon, however, the defenders realized what was going on and rushed out at night from the coverts on the counterscarp, in which they were stationed, destroying the trenches and killing many of those they found in them. At length the Queen, having regard to her small garrison, and its composition, and to the fact that no help was forthcoming from Bijapur or Golconda, began to feel

that the position within the fort was practically hopeless. She expressed herself confidentially to this effect, within the hearing of an officer, who proved to be a traitor, and the officer (a eunuch) rushed out of the palace and brought in soldiers who literally cut her in pieces. Chand Bibi was evidently one of the greatest women of her day and it is pertinent here to quote from Colonel Meadows Taylor:

> "Thus perished one of the noblest characters that the Deccan had ever produced. Beautiful in person and at an early age a widow, there is yet no stain upon her honour. The trying scenes of her early life at Beejapoor were often repeated; yet, with a devotion rarely excelled, she never hesitated to do her duty in the great political emergencies, which occurred both at Beejapoor and Ahmednugger. Her valour was unquestionable, and was put to the severest proof on many occasions; and her sad fate excited a feeling of universal commiseration, which has survived to the present time—among her old people." [1]

[1] Meadows Taylor, *Students' Manual of the History of India*, pp. 315–16.

CHAPTER TEN

GOLCONDA

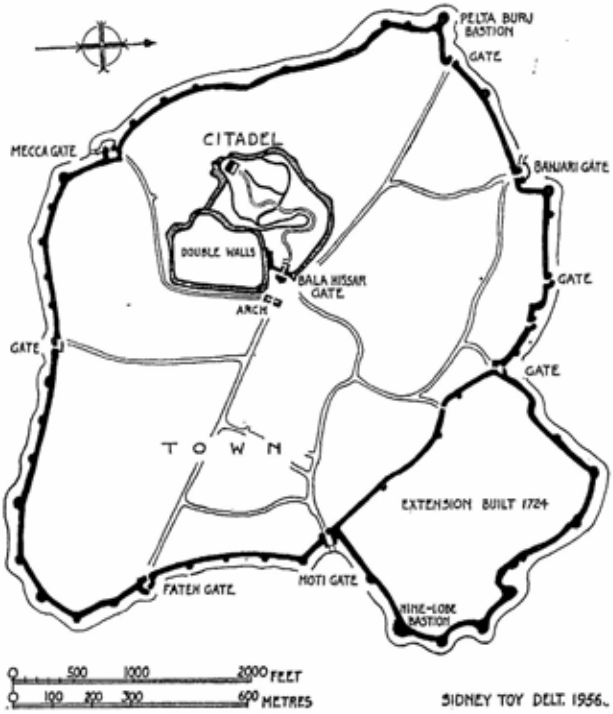
GOLCONDA is built in a part of Deccan which for many miles around is overspread with outcrops of granite and with huge granite boulders, many of them piled up one above the other and so evenly poised as to be capable of being rocked; the fortress stands on a boulder-strewn hill of this character, five miles west of Hyderabad.

In the thirteenth and early part of the fourteenth centuries Golconda formed part of the Deccan ruled by the Rajas of Warangal; in 1363 it was ceded to the Bahmani kings and from them passed in 1512 to Sultan Quli, who became king under the title of Qutb Shah and made Golconda the capital of his kingdom. This kingdom was extended with the fall of Vijayanagar in 1565 and its capital rose to greater heights of importance and splendour until it was taken by Aurangzeb, Emperor of Delhi, and added to his empire.

Golconda was a flourishing city during the Middle Ages and was mentioned by Marco Polo, who visited the neighbourhood in 1292; he writes that large quantities of most brilliant diamonds were procured in and exported from this district. Actually these diamonds were cut at Golconda and sent from there to far distant countries. The city probably attained the height of its fame and importance during the Qutb dynasty, 1512–1687, but much of the walling of the defences is of a date long anterior to that period.

Though there has been considerable alteration from time to time, necessitated by repair of the damage done during the attacks the fortress has sustained, and by the ever-advancing character and power of weapons, there can be no doubt that, in the main, the walls and gates date from the thirteenth and fourteenth centuries. Much of the work which is built of megalithic masonry, such as the outer flanking walls of the Fateh Gate (p. 2a), is of the same character as the early work at Chitor and Bijapur. In some places rebuilding and repairs are obvious, while in others, as along the east outer wall of the citadel, south of the Bala Hissar Gate, there is much hasty reconstruction and patchwork.

There are three lines of powerful curtain walls, one within the other in succession. The first line encloses the town; the second, a double wall, runs round the foot of the hill on which the citadel stands, 350 ft. above the town; and the third line, within the



GOLCONDA. PLAN OF THE FORTRESS

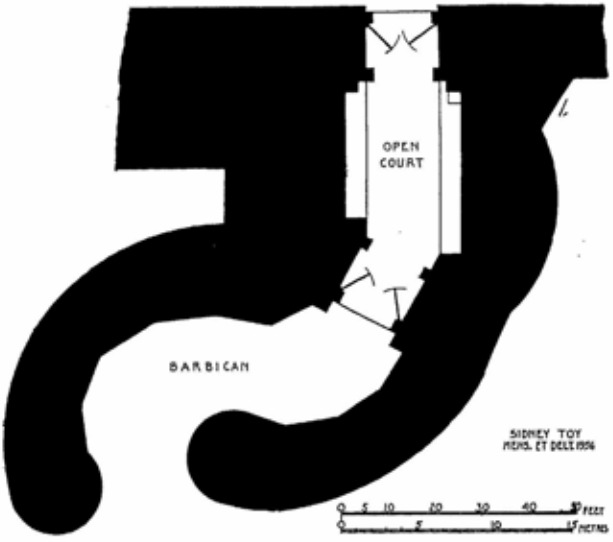
second and further up the hill, is formed by connecting with walls of masonry the natural boulders which project round the hill face. An extension of the outer wall to enclose a small hill was made on the north-east of the town in 1724.

The outer curtain varies in thickness from 17 ft. to 34 ft.; it has a battered plinth which in some places rises in barrel shape form to the full height of the wall; and it is surmounted by crenellations with pointed merlons. It is strengthened at short intervals by large bastions, one of which, at the north-west, called Pelta Burj, juts well out from an angle in the fortifications and commands long stretches of the wall on either side. Another, in the north-east extension called the Nine-Lobed bastion, is built with a corrugated face, with nine lobes. The advantage of this design is that it provides greater length of parapet for defence and greater facilities of fire in all directions from the battlements (p. 56a). The curtain is defended all round by a wide moat, formerly crossed at the gateways by drawbridges. There are eight gates, of which four only are now in use. They are massive tall structures, with sinuous approaches, outer and inner doors and liberal provision for the guard in between the doors. The Fateh, Mecca, and Banjari Gates are good examples of these fine structures.

Fateh Gate, the main entrance to the town, is entered through a sinuous barbican composed of two huge wings jutting out from the walls with crenellated parapets and box machicolations, defending the full length of the passage; at ground level were recesses for the guard but these have been blocked. Defence through machicolations and loopholes in the parapet is also provided over the gateway (p. 2a). The merlons of the parapet here are pierced by relatively large loopholes, while below the embrasures (themselves filled in and the infilling perforated with small holes) are loopholes pointing directly downwards to command the footway immediately below. The entrance gateway is 12 ft. 10 in. wide in the clear and about 26 ft. high; it is closed by a very thick, two-leaved door of teak which is plated with iron and covered with iron studs and sharp spikes. The spikes are dispersed well over the door to guard against elephants. The upper edge of the door is flat, but a very fine carved moulding, planted against it, follows the line of the door jambs and the soffit of the arch above. The door when closed was secured from within by a very heavy timber bar which was pulled out from a socket on one side, drawn across behind the door, and fitted into a corresponding socket on the other side.

Between the first door and the second is an open court which was defended from platforms for the guard on either side and from

loopholes and machicolations at parapet level (p. 56a). The doors here are similar to those in the first gateway except that they have no sharp spikes. It is interesting to note the figures of animals carved on the corbels of the machicolations over the gateway, here the parapet they supported is destroyed (p. 56b); it is most probable that the rebuilding of the upper parts of both the outer and



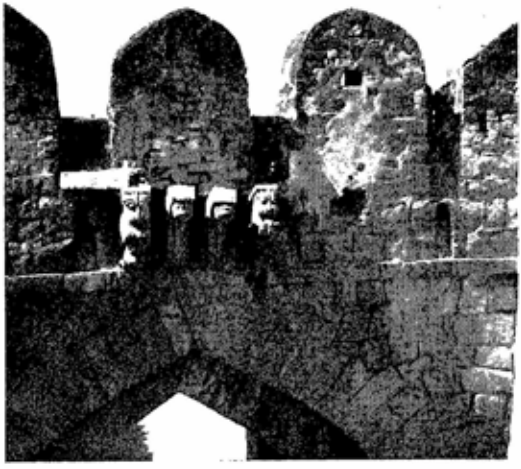
GOLCONDA. PLAN OF FATEH GATE

inner gates was the work of the Qutb Shahis in the early part of the sixteenth century.

Mecca Gate, at the south-west of the curtain, is composed of an outer and inner gate, set at right-angles to each other, with a large square open courtyard between. The outer gateway is defended by a barbican with an entry at the side involving a full transit through the barbican to the gate; the gateway is defended by loopholed crenellations and machicolations at parapet level and the doors are plated and studded with iron spikes (pp. 10a, 56b).

GOLCONDA. THE NINE LOBED BASTION

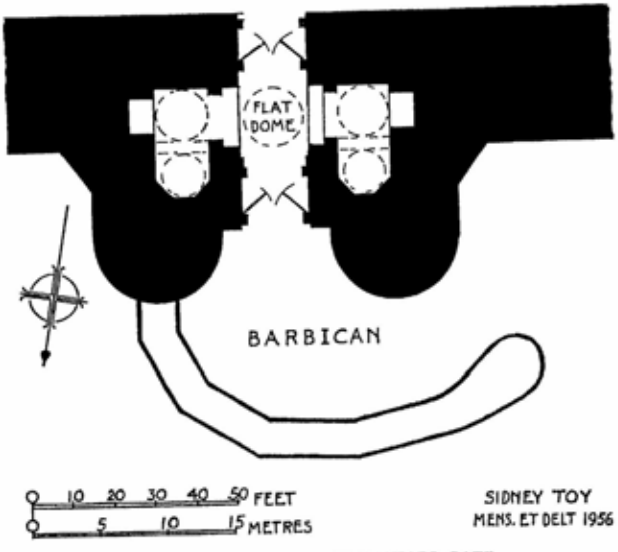
GOLCONDA. FATEH GATE: THE SECOND DOOR FROM THE OPEN COURT



GOLCONDA. FATEH GATE: CORBELS OF MACHICOLATION OVER SECOND DOOR

GOLCONDA. MECCA GATE

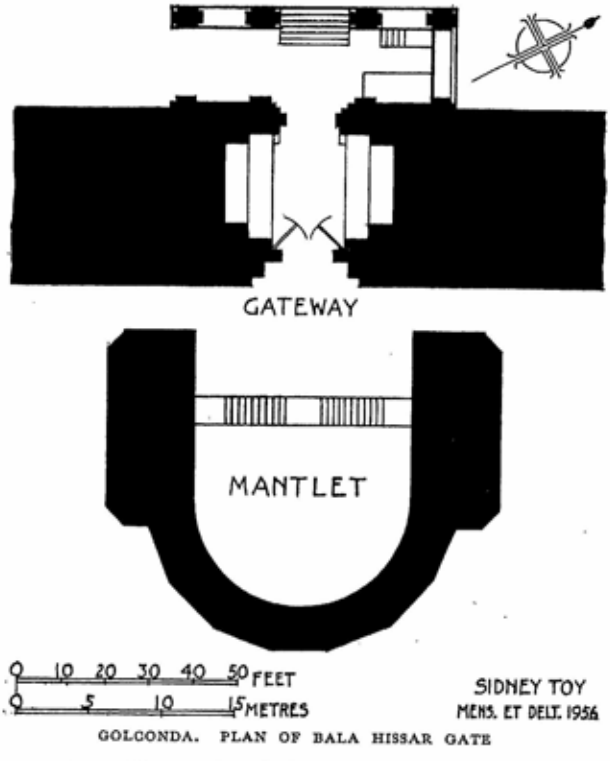
The Banjari Gate, at the north-west of the curtain, was also protected by a barbican. Here the outer and inner doors of the gateway are connected by a covered passage, and opening off the passage on either side are capacious chambers for the guard (p. 57). Each of the chambers is of two bays covered by cupolas but the central square space of the passage is roofed over by what



GOLCONDA. PLAN OF BANJARI GATE

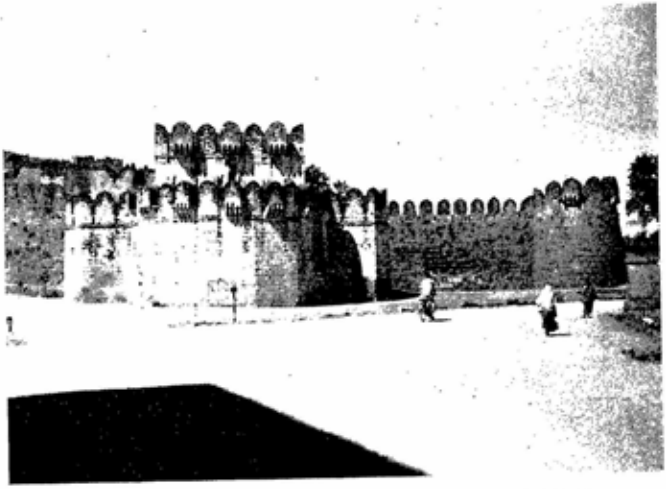
may be described as a flat dome. Such structures, which occur elsewhere in Indian military architecture, are composed of stones arranged in concentric courses with a flat underside exposing only the ends of the stones. The stones are probably long, rising up to form a thick vault which, when the platform provided for its construction was removed, depended for its stability on the excellence of the mortar and the conical arrangement of the courses behind. The confidence of the builders was amply justified, for this vault shows no sign of fracture or deformation.

The citadel, called Bala Hissar, occupies the whole hill which rises rapidly from the level of the town to its summit; it is defended by one line of fortifications near the foot and another, a composite wall as described above, half-way up the hill. A winding series of



GOLCONDA. PLAN OF BALA HISSAR GATE

steps and roughly paved paths leads to the numerous buildings on the top of the hill. A triumphal arch stands in front of the Bala Hissar Gate, the entrance to the citadel through the lower wall. The Bala Hissar Gate is shielded by a powerful fortified



GOLCONDA. MANTLET BEFORE THE BALA HISSAR GATE

GOLCONDA. DOUBLE WALLS OF CITADEL: BATTLEMENTS IN FOREGROUND

GOLCONDA. WALL OF CITADEL FROM THE NORTH

mantlet (pp. 58, 58a), which was defended from within from a platform raised to the height of its battlements and consists of a polyhedral centre with side wings. The gateway behind this formidable mantlet is closed by a two-leaved door and has a long passage with provision for a strong guard on either side. Over the entrance and on the side walls of this gate are figures, carved in relief, of lions and of griffins and other allegorical animals; these indicate Hindu construction. Inside the gateway is an arcaded annex directing the passage to the left. Facing the exit from this annex there is a three-storey building, called the armoury, with a vaulted cellarage. The wall round this line of curtain walls, i.e. the second line as described above, is doubled, the inner wall rising high above the outer with a short space between (p. 58a). As will be seen in the same view the battlements have been subjected to much alteration to adjust them to musket and artillery fire, pedestals and recesses being provided for the convenient use of ammunition. Half-way up the hill towards the last line of fortifications there is a large well. On the summit are the ruins of the royal apartments and offices and the tall, white-washed Hall of Justice.

The great strength of this fort was amply proved in 1687 when during a siege lasting eight months its defenders repelled again and again the onslaughts of the armies of the Emperor of Delhi. At first the main attack appears to have been from the south and east; this attack was met by heavy and incessant fire from the fort. The besiegers dug trenches, advancing them nearer and nearer the fort day by day. The defenders made sallies on the enemy and great slaughter occurred on both sides; but many of the king's chief officers took advantage of these sallies to desert to the enemy. Still the king fought on, and the garrison being well equipped with guns and ammunition, an incessant and heavy fire was kept up on both sides; meanwhile the imperial camp was ravaged by pestilence and famine.

One night in May, after the siege had lasted nearly four months, an officer made an attempt to carry the fort by escalade, but before his party reached the parapet a dog within began to bark and the garrison, who were on the watch, ran to the spot, overturned the ladders and, hurling the enemy back into the ditch, peppered them with hand grenades. For his important part in the exploit the dog, bedecked with a jewelled collar and a

gold chain, had the honour of being kept by the King's side. Meanwhile a premature message had reached the imperial camp that the fort had been taken; the rejoicing and the beating of drums which ensued ended abruptly when the real facts were disclosed. Heavy rains which fell in June beat down the tents of the besiegers and washed away their batteries and, taking advantage of the confusion which followed, the garrison made a sortie, captured many important prisoners and brought them into the fort. The king received them courteously, gave them presents, showed them his stores of powder and provisions, and sent them back to the camp with messages to Aurangzeb offering to surrender the fort on terms. The emperor refused and the siege continued.

The besiegers then resorted to mining and three mines were driven to the walls, but by countermining the defenders skilfully turned the tables on the enemy. Having reached the mines from the other side they abstracted the powder from one mine and damaged the other two with water. All being ready the enemy assembled in force opposite the mines as though to attack and so bring as many of the garrison as possible to the spot. The first mine, on being fired, exploded outwards—the powder towards the fort being wet—killing a thousand of the enemy, including officers of high rank. The firing of the second mine was still more disastrous, about two thousand men being killed or wounded. The firing of the third mine was to be witnessed by the emperor; but that was the one from which the powder had been extracted and the result was simply a fizzle. Eventually, in October, the fort was entered, not by force of arms but through the base treachery of one of its officers, who arranged with the enemy to leave one gate insufficiently guarded and not to give the alarm until the enemy had passed through. The enemy then being on the inside, the Fateh Gate was opened to admit the large force assembled there.

GOLCONDA. CITADEL FROM THE SOUTH-EAST

GOLCONDA. CITADEL FROM THE NORTH-EAST

SINHAGADH. THE KALYAN GATES AND WALLS AT THE SOUTH-WEST

SINHAGADH. SOUTH END OF THE WEST WALL

CHAPTER ELEVEN

SINHAGADH

SINHAGADH, formerly called Kundhiyana, is a hill fort standing fifteen miles west of Poona and rising 2,300 ft. above the Poona plain.

The fort was evidently in existence in the early part of the fourteenth century for a contemporary chronicler mentions its capture by Muhammad bin Tughluq, Emperor of Delhi, in 1328. He writes that Tughluq found the fort so strong that he was unable to take it by storm, and was forced to resort to investment; the garrison sustained the blockade for eight months until their supplies were exhausted and they finally surrendered. In 1483 the fort was taken by Ahmad Nizam Shah, founder of Ahmadnagar. After other vicissitudes it was taken from the Mughuls, in 1670, by the Mahrattas under Sivaji's general Tanaji, whose exploit in scaling the walls has become the occasion of an annual celebration. In 1703 it again, by bribery, became subject to Delhi. On 1 March 1818 Sinhagadh was taken by British troops without loss after a bombardment from the adjoining hills.

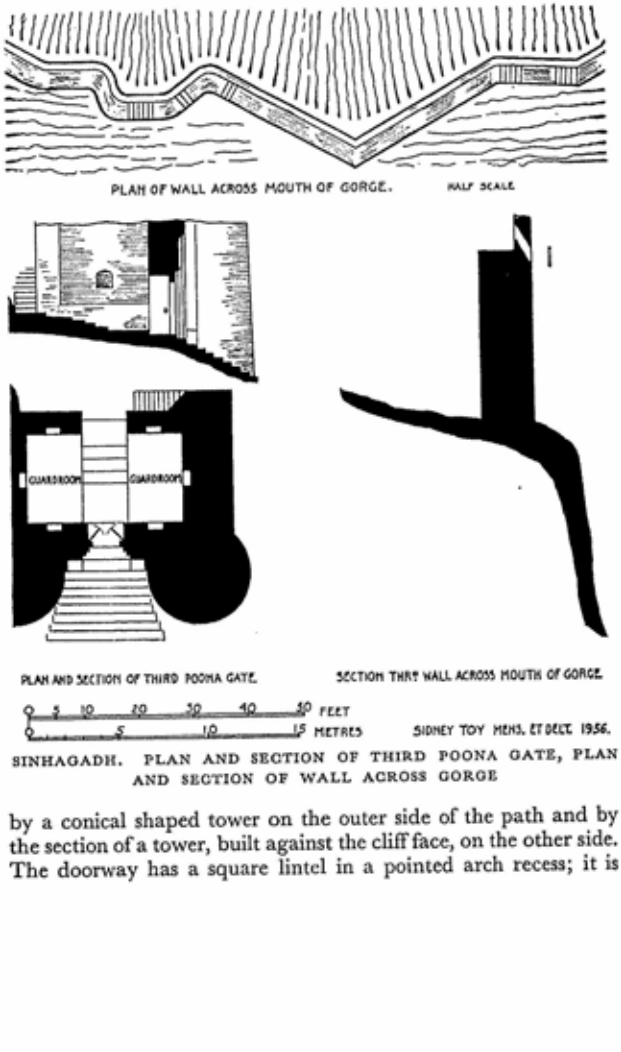
The hill on which the fort stands is one of the highest in the range and rises principally by sheer precipices all round, which in themselves constitute sufficient defence. Where the rise is less precipitous or mounts up in vertical tiers, strong walls with bastions at intervals are built; these walls wind along the hillside at different levels, climbing vertically here and there to connect the lower with the higher levels (pp. 60b, 62).

Two steep and tortuous paths, rough and with flights of steps in many places, one at the north-east and the other at the south-west of the hill, and each defended at the top by three gates, ranged in succession, rise to the fort on the summit. The north-east path, ascending from the Poona road and leading to the Poona Gate, is about two and a half miles long; the other, leading to the Kalyan Gate, the first on that side, is shorter and somewhat less steep. All six gates stand astride the path with one side built against the cliff and the other, with a steep batter, rising up from the outer edge of the path. All are considerably damaged and

PLAN OF SINHAGADH

ruinous. The curtain walls and the gates are built of dressed stone, coursed but roughly bonded.

Poona Gate, the first of those on the north-east side, is flanked



SINHAGADH. PLAN AND SECTION OF THIRD POONA GATE, PLAN AND SECTION OF WALL ACROSS GORGE

by a conical shaped tower on the outer side of the path and by the section of a tower, built against the cliff face, on the other side. The doorway has a square lintel in a pointed arch recess; it is

4 ft. 1 in. wide by 8 ft. high; the actual door, of two leaves, has disappeared long since. This gate retains its central battlements, which are 4 ft. 6 in. high and are pierced by loopholes descending rapidly from inside to outside; the battlements are approached by a flight of steps rising on the right from the inside face of the gateway (p. 64a).

The second gate is of similar design to the first, but is much more ruinous (p. 64a). The third gate is the most complete of the three. Being near the summit of the hill and almost free from the cliff, both towers are fully developed and the gradual rise on the left is blocked by a wing wall projected out from the tower on that side. The doorway here is 5 ft. 1 in. wide and the two-leaved door when closed was, like the doors of the other gates, secured by a timber bar drawn across from the socket in one jamb to the socket in the other. Within the gateway capacious guard-rooms, with recesses in their walls, flank the passage on either side; and beyond the passage, on the right, is a flight of stairs rising to the battlements.

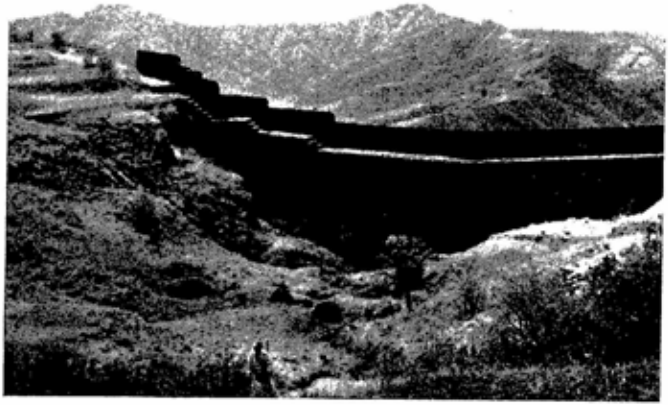
As its assailants soon discovered, Sinhagadh was so strongly defended by nature and by fortification that, except on rare instances when the hillsides and walls were carried by escalade, the attempt to capture it must either be abandoned or resort made to tedious and costly blockade. A gorge on the west side of the hill constituted a vulnerable point; so across the mouth of the gorge the builders constructed a strong fortified wall forming a sharp angle pointing up towards the gorge so that at times of the monsoons and heavy rains, when the small stream, which normally runs through the culvert becomes a rushing torrent, the sharp point would act as a cut-water, like the starling of a bridge pier, and preserve the wall from being washed away. There is a wall-walk, 6 ft. 9 in. wide, and a parapet towards the field, 6 ft. high, pierced at intervals with loopholes directed downwards (pp. 63, 64b).

The upper surface of the fort is undulating, some points being on much higher levels than others; and its contour, following the outline of the curtain walls and the precipices, is very irregular. Scattered about within the fort are temples, or shrines, and tombs, but except for two ruinous towers at the south-west and two walled enclosures, or courtyards, the place is practically denuded of early military dwellings or stores. A modern building on the

SINHAGADH. FIRST POONA GATE

SINHAGADH. SECOND POONA GATE

SINHAGADH. THIRD POONA GATE



SINHAGADH. WALL ACROSS MOUTH OF GORGE, FROM WITHIN

south side of the fort, called the palace, is conjectured to occupy the site of a structure of that name, but there is no evidence to that effect. The fort was occupied in the 1939–45 war by military forces and buildings were provided for their stores and equipment. The water supply is good, for there are over fifty reservoirs of various sizes, most of which are in constant service. In the side of the cliff near the Poona Gate are two cave cisterns which can be reached by crawling through narrow entrances.

A monument near the head of the gorge on the west side of the fort commemorates the capture of Sinhagadh by the Mahrattas in 1670 and was erected in 1937 in honour of General Tanaji the commander of the attack, which was by escalade. The capture of the fort at this time and the means by which that object was attained have elevated Tanaji into the position of a national hero among the Mahrattas and legend is not wanting to add piquancy to the event. The escalade is thus said to have been effected by a lizard, or iguana; the reptile being accredited with sufficient strength to take a rope up the rock and, having arrived at the top, with the intelligence and ability to attach it there so that men could swarm up it.[1] However attractive the story may be it is pure invention. Again it is said that the escalade was effected by means of a human ladder, each man climbing up in succession and standing on the shoulders of the one below. This event, however (certainly the most interesting and striking in the whole history of the fort) deserves recording here, as written from Mahratta documents by J. C. Grant Duff.

Sivaji in his attempt to counter the aggressive moves of the Emperor Aurangzeb realized that his communication with Poona and Chakun was completely obstructed by the fortresses of Sinhagadh and Purandar; he therefore determined to get possession of those strongholds; he considered the first to be one of the strongest forts in the country. At that time Sinhagadh was held, under the Emperor, by Ooday Bawn ("a very celebrated soldier") and a choice body of Rajputs; the place was considered to be impregnable. Grant Duff's account proceeds:

> "This fancied security of the garrison, however, had rendered them negligent: and Sivajee laid a plan for surprising the place. Tannajee Maloosray, whom he consulted on the

[1] H. A. Acworth, *Ballads of the Marathas* (London, 1894), p. 34.

occasion, offered to take it, on condition of being permitted to have his younger brother along with him and to choose one thousand Mawulees for the purpose. None of the Mawulee attacks are given so consistently and distinctly in different Mahratta manuscripts as the account of this interesting and daring enterprise.

Singurh (Sinhagadh) is situated on the eastern side of the great Syhadrie range, near the point at which the Poorundhur hills branch off into the Deccan: with these hills it only communicates on the east and west by very narrow ridges, while on the south and north it presents a huge rugged mountain, with an ascent of half a mile, in many places nearly perpendicular. After arriving at this height there is an immense craggy precipice of black rock, upwards of forty feet high, and similar to that which has in the first instance been described as a common feature in the mountains of Contan and Ghaut-Mahta: surmounting the whole there is a strong stone wall with towers. The fort is of a triangular shape, its interior upwards of two miles in circumference, and the exterior presents on all sides the stupendous barrier already mentioned; so that, except by the gates, entrance seems impossible. From the summit, when the atmosphere is clear, is seen to the east the narrow and beautiful valley of the Neera; to the north a great plain, in the fore part of which Poona, where Sivajee passed his youth, is a conspicuous object; and though, at the period we have reached, only a small town, it was destined to become the capital of the vast empire he was founding. To the south and west appear boundless masses of rolling mountain, lost in the blue clouds and mingled by distance with the sky . . .

Directed by Tannajee Maloosray, the thousand Mawulees prepared for the attempt on Singurh, set out by different paths, known only to themselves, which led them to unite near the fortress, according to the words of the Mahratta manuscript 'on the ninth night of the dark half of the moon, in the month Magh' (February).

Tannajee divided his men: one half remained at a little distance, with orders to advance if necessary, and the other half lodged themselves undiscovered at the foot of the rock. Choosing a part most difficult of access, as being the least

liable to discovery, one of their number mounted the rock and made fast a ladder of ropes, by which they ascended one by one, and laid down as they gained the inside. Scarce three hundred had entered the fort, when something occasioned an alarm among the garrison that attracted their attention to the quarter by which the Mawulees were ascending. A man advanced to ascertain what was the matter. A deadly arrow from a bowman silently answered his enquiries; but the noise of voices and a running to arms induced Tannajee to push forward in the hopes of still surprising them. The bowman plied his arrows in the direction of the voices; till a blaze of blue lights, and a number of torches kindled by the garrison, showed the Rajpoots armed or arming, and discovered their assailants. A desperate conflict ensued; the Mawulees, though thus prematurely discovered and opposed by very superior numbers, were gaining ground, until Tannajee Maloosray fell. They then lost confidence and were running to the place where they had escaladed, but by that time the reserve, led by Tannajee's brother, Sooryajee, had entered. On hearing what had happened, Sooryajee rallied the fugitives, asked who amongst them would leave their father's remains to be tossed into a pit by Mhars, told them the ropes were destroyed, and now was their time to prove themselves Sivajee's Mawulees. This address, their loss of Tannajee, the arrival of their companions, and the presence of a leader, made them turn with a resolution which nothing could withstand. 'Hur, Hur, Mahdeo', their usual cry on desperate onsets, resounded as they closed, and they soon found themselves in possession of the fort. Their total loss was estimated at one third of their numbers, or upwards of three hundred killed or disabled. In the morning five hundred gallant Rajpoots, together with their commander, were found dead or wounded; a few had concealed themselves and submitted; but several hundreds had chosen the desperate alternative of venturing over the rock, and many were dashed to pieces in the attempt." [1]

[1] James Cunninghame Grant Duff, *A History of the Mahrattas* (1921), Vol. I, pp. 187–90.

CHAPTER TWELVE

SANIVARA PALACE, POONA

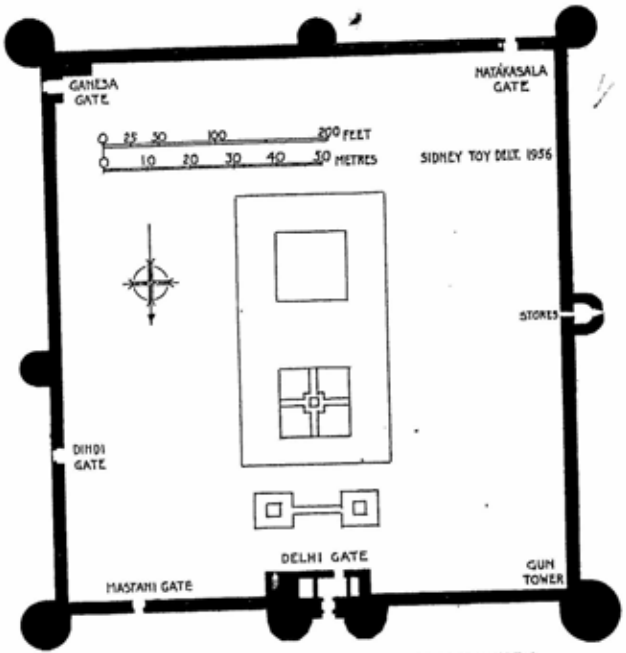
SANIVARA (Shanwar) Palace, Poona, stands on the right bank of the Mutha, facing the river on the north and enclosed on the other sides by the streets and houses of the city. It was built towards the middle of the eighteenth century and was essentially a grandiose residence for the Peshwa, with houses for guests and retainers, well laid out gardens and ornamental fountains, the whole enclosed by lofty fortified walls, built on a rectangular plan and having towers at the angles and sides, and gateways at convenient points. As the result of fires in 1791 and 1812, and more particularly of a devastating conflagration which broke out on 21 February 1828, all the buildings within the walls were destroyed. The walls, however, with their gateways and towers, remained, and still remain, intact.

It is remarkable that these walls, towers and gateways, though built as late as the second quarter of the eighteenth century, were designed essentially on mediaeval principles of defence, with lofty walls and towers, narrow loopholes, and iron-plated and studded doors, while in all countries in the West, two centuries before this time, forts were being built with low walls and bastions, redans and outworks: the whole designed for defence with and against heavy artillery. It is true that the parapets of the wall-towers and of the towers flanking the Delhi Gate are pierced with large apertures for guns in addition to their narrow loopholes and small square holes for musket-fire; but the whole design is rather the adaptation of a mediaeval castle to more modern defence than one conceived on the structural principles of the day. One must, however, bear in mind that it was a palace that these walls were designed to conceal as well as to defend and that a powerful appearance was a strong factor in their design.

The walls and wall-towers are built of large dressed stones from the base up to a little more than a third of their height; above that level they are of brickwork. Delhi Gate is of dressed stone for its full height. All the corner towers project well out from the angles they occupy so that their weapons could completely com-

mand the outer faces of the walls on either side. The tower on the north-west, called the Gun tower, occupying an important position facing the river, is larger than the others and probably carried the most powerful artillery.

The walls are 10 ft. thick, 33 ft. high from the ground outside,



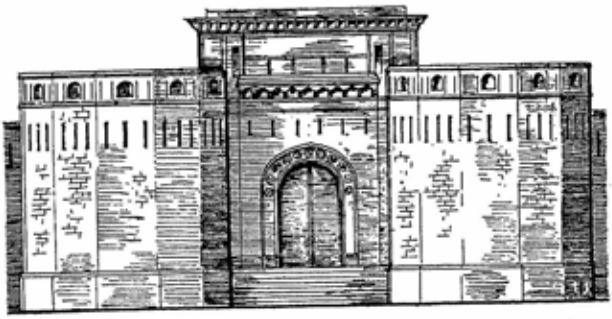
POONA. PLAN OF THE PALACE OF SANIVARA

which is 4 ft. 6 in. lower than that inside, and carry a wall-walk on top with a parapet, pierced with loopholes, on the outer and a low wall on the inner face. The wall-towers are of the same height as the walls; that in the middle of the west wall has a chamber at ground-floor level which is said to have been a store-room for ammunition. In addition to the main, or Delhi Gate, in

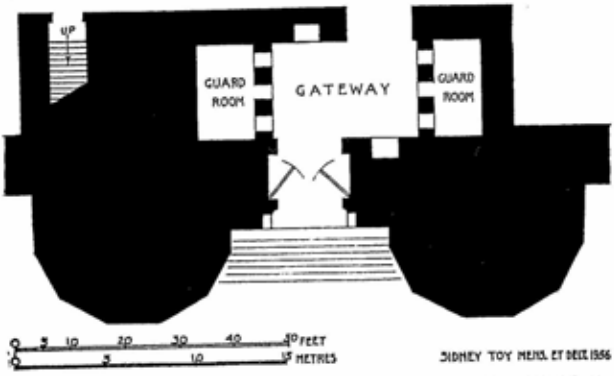
the middle of the north wall, there are four other gateways which, with the exception of the Ganesa Gate at the south-east corner, are mere piercings through the wall; these gateways are closed by thick two-leaved doors, armoured and studded with iron nails. On the Ganesa Gate the anti-elephant spikes are 8 in. long; they are in seven horizontal rows, twelve in each row, the rows being at 9 in. vertical intervals and beginning at 4 ft. from the ground. There is a small wicket gate in the right-hand leaf of the door, 3 ft. wide and 4 ft. high. Dindi Gate was originally a small postern which was widened out later (p. 69).

Delhi Gate is of powerful appearance, flanked by multangular shaped towers and pierced by long narrow loopholes, small square holes for musket-fire, and large apertures for cannon; all operated from the wall-walk behind the parapet, the loopholes descending rapidly from the walk to the outer faces (p. 71). The central portion of the structure rises up above the towers to form a balcony with rooms behind, covered by a roof with projecting cornice. The entrance is approached by a flight of steps and is flanked by a seat on either side. It has a tall pointed archway, 12 ft. wide, and is closed by a thick two-leaved door of teak, plated and studded with iron and armoured with spikes. A richly carved moulding runs round the inner edge of the door, following the contours of the jambs and arch and passing down the centre to form the overlap between the two leaves. The spikes are a formidable defence against elephants; they are 12 in. long and arranged in horizontal rows across the door, beginning at 8 ft. above the ground and rising up in eight rows 6 in. apart (p. 6). When closed, a timber bar, with an iron ring at the end for pulling it out, is drawn out from a long socket in one jamb, passed across behind the door and fitted into a corresponding socket in the other jamb. Inside the passage there is a rectangular hall with recesses in the walls and a capacious guardroom on either side; to reach the archway of exit to the courtyard, which has no door, it is necessary to pass diagonally across the hall. On the left of the exit, flights of steps lead to the battlements.

As stated above, the whole area within the walls was laid waste by disastrous fires in the early nineteenth century, and for very many years remained covered by heaps of ruins; but as the result of clearances and excavations in recent times, much of the plan of the houses, gardens and fountains have been brought to



POONA. THE DELHI GATE OF THE PALACE OF SANIVARA, FROM WITHOUT



POONA. PLAN OF DELHI GATE OF THE PALACE OF SANIVARA

light. Outstanding among these recoveries is the Hazari Karanje, or Fountain of a Thousand Jets: a circular structure representing a full-blown lotus, from the centre and petals of which there issued 197 jets of water. Both the water supply and the drainage system of the palace were excellent.

An event associated with the latter days of Sanivara Palace may be mentioned here. A favourite method of executing criminals, and others, at that time was to tie them to the feet of an elephant to be trampled and crushed to death, in full sight of people who had assembled to witness the revolting scene. One such event occurred in the days of the last Peshwa on 1 April 1802, the victim being Vithoji Holkar, a princely person and brother of Jaswant Rao Holkar. The Peshwa with his favourite, Balaji Kunjar, watched the gruesome scene from a convenient position in the palace. Nemesis followed this repellent entertainment for on 25 October in the same year Jaswant Rao Holkar defeated the combined armies of the Peshwa and Scindia, capturing great booty.

CHAPTER THIRTEEN

DABHOI

DABHOI, sixteen miles south-east of Baroda, is an ancient city of Gujarat. Its fortifications are of Hindu origin and, mutilated and partially destroyed as they are, form one of the most valuable examples of Hindu military architecture in India. They were built in the first half of the thirteenth century. About fifty years later, in 1297, Gujarat was overrun by the forces sent out by Ala-ud-din Khalji, Emperor of Delhi, and from that time Dabhoi remained in Moslem possession until 1725, when it was taken by the Mahrattas. Between 1775 and 1783 the city was occupied by British troops. The events which led up to the building of the fortifications by the Hindus is thus recorded in a manuscript of 1308:

> "In the early part of the thirteenth century the citizens of Dabhoi were in constant dread of the raids of bands of dacoits, whose sudden and frequent depredations brought their business affairs almost to a standstill. They determined therefore to surround the city with fortified walls and gateways and to put their temples and shrines in repair and add others. Meanwhile, during the progress of these works, Viradhavala, King of Gujarat 1244–61, took the field against the dacoits, with whom Gulgul, chief of Godhra, had identified himself. Gulgul, evidently confident of his own success, gratuitously insulted the King by sending him women's apparel to wear. In the course of the operations Gulgul was taken prisoner and, as a warning to other miscreants, was, during the remainder of the campaign, in which the robbers were wiped out, taken about with the army exposed in a wooden cage on the back of an elephant. At the end of the operations Gulgul was brought to the capital and there compelled to vest himself in the feminine clothes he had sent to the king from Godhra."

The city stands upon level ground and, when complete, took the form of an irregular square; there were rectangular bastions spaced at intervals along the walls, a large round bastion at each

corner, and a gateway in the middle of each side. The original work is built of finely dressed and well coursed ashlar masonry; the repairs and additions are principally of brickwork.

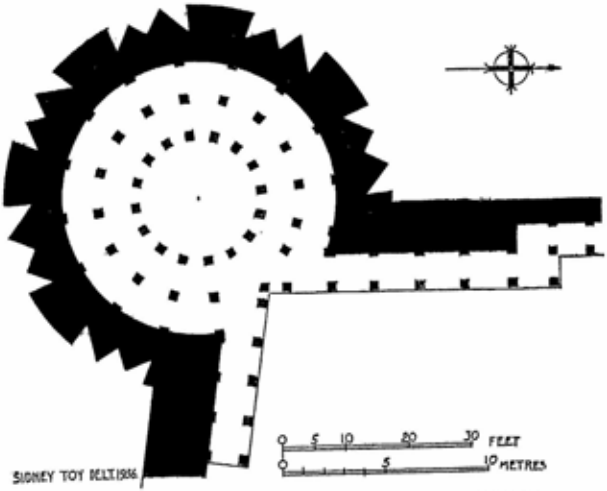
The curtain walls are about 30 ft. high to the top of the parapet, 10 ft. thick at the level of the wall-walk and very much thicker at the base. The narrow embrasures of the parapets, originally opening out at the base into notched apertures (as seen on p. 76a), were, on the introduction of musketry, found to be too large for the safety of those behind them; they were therefore filled in with brickwork up to a level coping, leaving small holes here and there, as seen in the drawing of the parapet. Much of the blocking has been cleared out in recent years. Built against the inner face of the curtain walls, all round the city, were long colonnades for the military, some one bay deep, others two bays deep, and many of them raised about 7 ft. above ground level. The columns, which support an entablature, are of typical Hindu design, square from the base to half-way up the shaft, octagonal above, and their capitals composed of four corbels. When complete all round the walls these colonnades must have formed a very handsome feature of the city (p. 76a). Now, unfortunately, the walls on the north, south and east are in ruins and in places razed almost to the ground. It would appear that this extensive destruction is due, to a large extent, to the deliberate pulling down of the walls for the stonework they contained, for a large bastion at the south-west corner, described and illustrated in a book published in 1888[1] has since disappeared.

The external face of this bastion was divided into six vertical panels, with wide plain surfaces between them, each panel containing two large pointed projections; the whole following the circular form of the structure. Within the bastion was a circular hall which was entered from the colonnades and contained two concentric lines of columns supporting the roof. The plan (p. 75), adapted from that by Henry Cousens, shows the bastion in its original form which, aesthetically, must have been a very fine structure as seen from outside. But on the introduction of cannon fire it was found that the pointed projections were easily knocked away and the panels were filled in to produce a plain circular face all round. Further alterations were made by the building of

[1] Jas. Burgess and Henry Cousens, *The Antiquities of the Town of Dabhoi in Gujarat*, (Edinburgh, 1888).

brick towers, with embrasures for cannon, above the bastions and the insertion of extra piers for their support in the halls below.

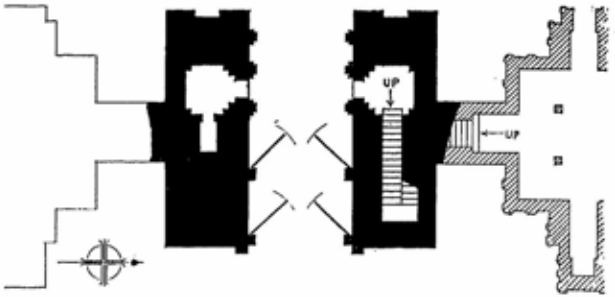
Of the four gateways the Baroda Gate on the west is the most complete in its original condition; the Nandod Gate on the south and the Mori Gate on the north are next in order of preservation. Hira Gate on the east was heightened and to some extent rebuilt by the Muslims. All these gateways have suffered severe damage from various causes: siege, refortification and neglect. Originally



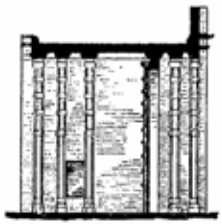
DABHOI. PLAN OF THE SOUTH-WEST BASTION

each of them was entered through a barbican, involving a diagonal passage from the outer to the inner gate; portions of the east barbican remain.

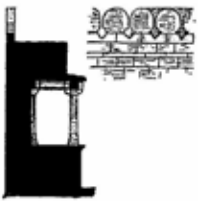
As originally built the gateways were of one storey and their flat roofs were supported on enormous sculptured corbels, springing from pilasters spaced at intervals through the passage and rising up in tiers to the lintels. In the Baroda Gate the corbels are each in four tiers, carved into small horizontal panels containing figures of various subjects. The upper tier is vertical and, since



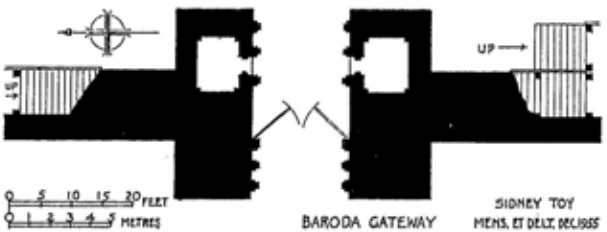
PLAN OF HIRA GATEWAY



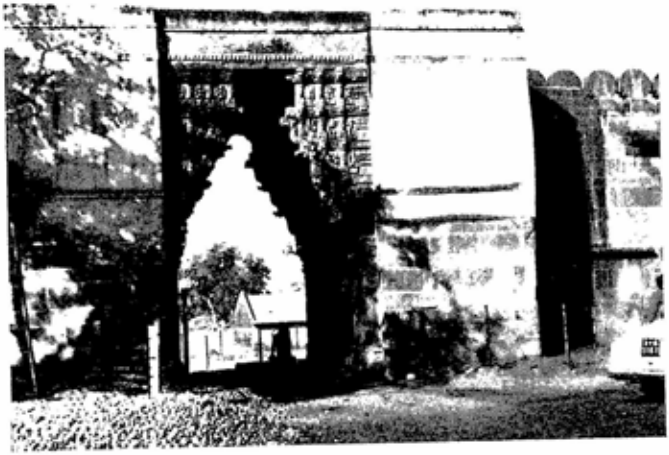
SECTION THRU BARODA GATEWAY



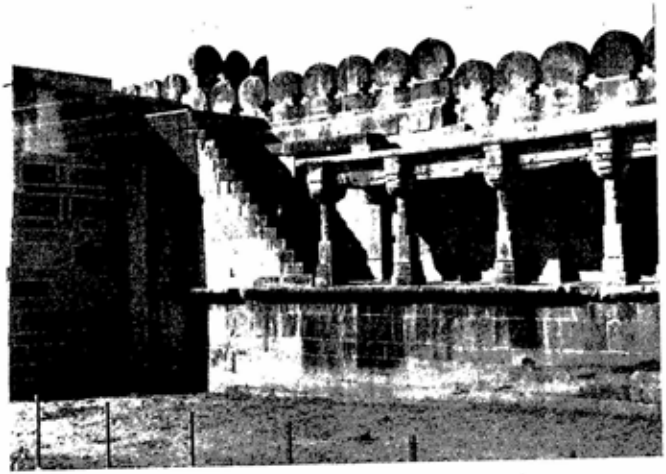
CURTAIN. SECTION. PARAPET AS BLOCKED.



DABHOI. PLAN AND SECTION OF BARODA GATE, PLAN OF HIRA GATE, SECTION THROUGH CURTAIN, PARAPET OF CURTAIN



DABHOI. BARODA GATE FROM WITHIN



DABHOI. THE COLONNADED CURTAIN WALLS FROM WITHIN

DABHOI. HIRA GATE FROM THE BARBICAN, LOOKING SOUTH-WEST

DABHOI. HIRA GATE FROM THE BARBICAN, LOOKING NORTH-WEST

the span here is short, this is a much stronger disposition structurally than if the corbelling was continued up to the lintel. The two-leaved door is a third of the way through the passage from the outside, and further in are two rectangular guardrooms, one on either side (pp. 76, 76a).

In their present state neither the Nandod nor the Mori Gates are as complete as the Baroda Gate and, the great corbels supporting their roofs having one tier less, they are not so high as that structure. Above the cornice of the Nandod Gate, facing towards the city, are two mutilated seated figures, larger than life-size. They are the remaining figures of a triad of Indian deities; one has fallen down bringing a portion of the cornice down with it.

The Hira Gate is the largest and, judging from the old pilasters in the passage, was the highest of the four gates; it formed one design with the temples flanking it on either side and was more elaborately decorated than the other gateways. The temples are built on the form of a Greek cross, with the shrine in the eastern arm, and are covered with a profusion of decorative sculpture; the temple on the north is practically intact; the other is in ruins. The gateway was considerably remodelled by the Muslims; the pilasters in the outer half of the passage were replaced by pointed arches and the great corbels taken away; the outer face of the structure was practically rebuilt, using old materials, and the door, originally in the middle of the passage, brought to the outer face. A hall for the guard, built of brickwork, was added above the gateway, balconies and old ornament being rebuilt in the new walls; the parapet of this upper storey is pierced with small square holes, some pointing in front, others in lateral directions, for fire by musketry. The inner end of the passage is flanked by small mural chambers, that on the north opening to a stairway up to the hall above; the hall is also reached by a stairway leading out from the temple on the north (pp. 76, 76b).

Marble slabs, inserted in the inner face of the gateways, were inscribed with a long eulogy in Sanskrit by the court poet of King Visaladava, and bore the date corresponding with 14 May 1253.

Inside the walls on the north of the city is a large reservoir, from which the citizens obtain their main water supply; flights of steps descend to the water's edge and there is a mosque on one side. In former times the main supply, from the periodical rains, was augmented by sources outside the city which were brought within

the walls through an aquaduct, passed beneath the temple and issued by a cascade into the reservoir.

During the Middle Ages Dabhoi must have been a city of great beauty, and even at the end of the eighteenth century, having by that time lost much of its pristine grandeur, it still retained many charming features since destroyed. James Forbes, who for three years, from 1780 to 1783, was in charge of Dabhoi and the surrounding district, under the British, thus describes the city at that time.

"The remains of its fortifications, gates, and temples indicate great magnificence. The temple near the east gate, called the Gate of Diamonds, a work of immense labour and expense must have employed a number of artificers many years. The city is nearly quadrangular, exceeding two miles in circumference: such parts of the fortification as remain entire are of large hewn stone and the interior colonnade is a beautiful and useful work: within the walls is a large tank, surrounded by strong masonry, with a grand flight of steps, the whole extent descending to the water, from the Hindoo temples, choultris, and solemn groves, which generally border this beautiful reservoir.

"Dhuboy, with the other Hindoo cities in Guzerat, became an early part of the Mahomedan conquests, and remained in their possession until the Mahrattas took it on the decline of the Mogul power in the eighteenth century; it is now chiefly inhabited by Hindoos; a few Mahomedan families are permitted to reside there on condition of not eating beef. The pundit or governor, appointed by the ministers at Poonah, submitted to Ragobag, and on our approach acknowledged him as Peshwa of the Mahratta empire; the latter immediately levied a contribution of three lacs of rupees from the inhabitants, which they were unwilling and almost unable to pay; for, although some cotton manufactures are carried on there, Dhuboy and its dependences are poor.

"The durbar and some of the principal houses were well built, and the streets generally broad and airy; many acres within the walls were cultivated, and produced abundant crops of corn and vegetables; the city contained forty thousand inhabitants, and nearly as many monkeys, which occu-

pied the roofs of the houses, or enjoyed the shade of the mango and tamarind trees with the peacocks and squirrels, and green pigeons, that lived there as unmolested by the Hindoos as if in the midst of a forest. Pelicans, wild ducks, and adjutant birds, and a variety of water fowl, animate the beautiful lake, adorned by nymphea and many aquatic plants." [1]

[1] James Forbes, *Oriental Memoirs* (London, 1813), Vol. II, pp. 123–4.

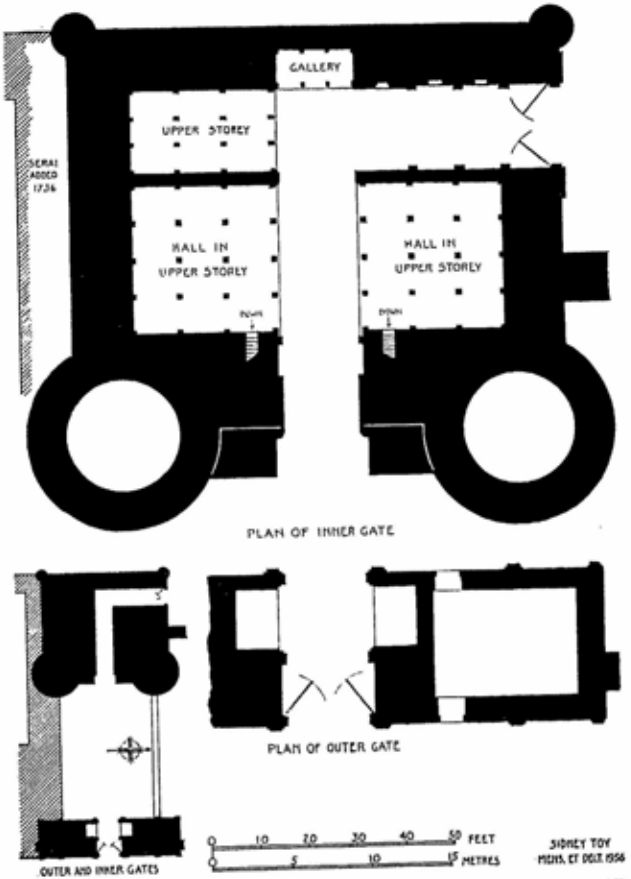
CHAPTER FOURTEEN

AHMADABAD

AHMADABAD was founded in 1411 by Sultan Ahmad I and soon became one of the foremost cities in India both for the importance of its industries and the beauty of its buildings. Its mosques, palaces and tombs are of outstanding architectural merit and are quite distinct from other Muslim buildings found either in India or elsewhere: the reason being that the Hindu kingdom of Gujarat had arrived at a high state of culture long before its subjugation by the Muhammadans. The Muslims "found themselves among a people their equals in conception, their superiors in execution, and whose tastes had been refined by centuries of cultivation. While moulding them they were moulded by them; and, though insisting on the bold features of the minaret and pointed arch, they were fain to borrow the pillared hall, the delicate traceries, and the rich ornaments of their despised and prostrate foe." [1] Naturally the Muslims made full use of the material at their disposal. Gujarat was a stronghold of the Jains, who had developed a trabeated style of architecture; their roofs and superstructures being supported on numerous pillars, varying in height with the levels of the lintels they carried, as distinct from the arches and vaults normally employed by the Muslims. The result of this compromise is the production of a group of buildings unsurpassed in beauty by any city in India. Though not quite so distinct as in the mosques, Hindu influence is also to be observed in the military architecture of the city.

The city stands on the left bank of the Sabarmati, its west wall, following the line of the bank from north to south, being almost straight; the other walls, extending eastward from the river, enclose an area of about two square miles. The wall, which is of burnt brick, set in cement, dates from the fifteenth century. Repairs were carried out between 1676 and 1702, and, having been breached and damaged during the British assault of 1780, it was restored by the East India Company in 1832–42. There are

[1] Sir Thomas C. Hope and James Fergusson, *Architecture of Ahmadabad*, p. 28.



AHMADABAD. BHADRA QILA. PLANS OF GATES AT MAIN ENTRANCE
GENERAL PLAN QUARTER OF THE SCALE

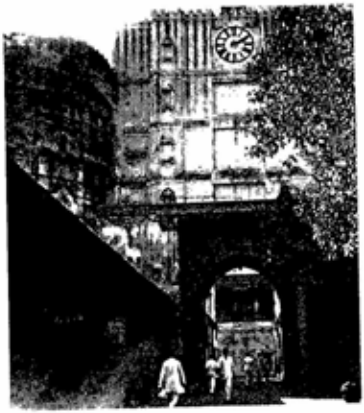
bastions at frequent intervals and there were twelve gateways. At present the wall is broken down in many places. The Khanpur Gate, one of the city gates, in the west wall north of the citadel, is shown on p. 82a; it is built of stone and has a wide and lofty arch, closed by a two-leaved iron-studded door. The passage is of two bays, the inner bay having a recess on either side; if there were any guardrooms they have disappeared long since.

The citadel, called the Bhadra Qila, is a square enclosure extending inwards from the middle of the west wall of the city. It was built by Ahmad Shah, at the foundation of the city, to contain the palaces of the Sultan and his nobles. The buildings within, of various dates, are now occupied by municipal and other offices. A large bastion at the south-west corner is said to contain the foundation stone of the city. The main gateway is in the middle of the east wall; though to some extent damaged and mutilated, it is still a fine structure (pp. 81, 82a, 82b). It consists of an outer gate, from the city, a large inner gate and a long passage between the two. The outer gate has a lofty arched entrance, 16 ft. 10 in. wide, closed by a heavy two-leaved door of teak, plated and studded with iron.

The inner gateway is a monumental structure, flanked by enormous bastions and surmounted by a relatively narrow building of three storeys. A porch, projected from the main building between the bastions, has so altered the passage that it is now difficult to determine the precise position of the original door; at present there is no door here. Beyond the archway the passage runs between two-storied buildings on either side, takes a right-angled turn and continues to the outer gate, which opens inwards (p. 82b). Except for the three bays at the angle, facing the main gate, the bays of the ground floor of the passage have been adapted to the use of offices. In the upper storey there is a large hall on either side, now, except for the lower parts of the pillars, destroyed and roofless; each of the halls was divided into twelve bays by stone pillars and pilasters supporting the roof, and was approached by stairways from the passage. The three bays of both storeys at the angle, referred to above, have been converted into a temple, or shrine; the bays of the lower storey being filled in with perforated stonework and those of the upper storey left as an open arcade, backed by screens. On the south side of the gateway is a large serai, built in 1637 round a square courtyard. The

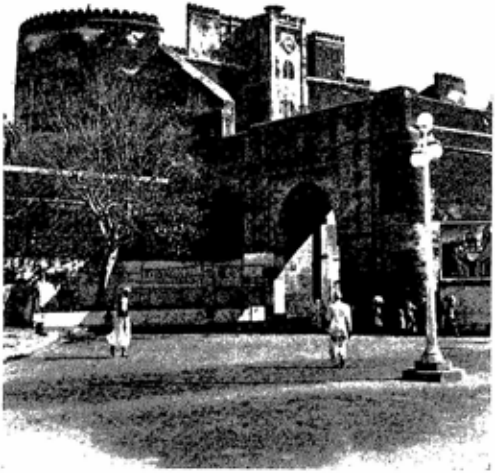
AHMADABAD. KHANPUR GATE

AHMADABAD. BHADRA QILA GATE: THE OUTER GATE



AHMADABAD. BHADRA QILA, INNER GATE

AHMADABAD. BHADRA QILA: LOOKING WEST TOWARDS CORNER OF PASSAGE



AHMADABAD. BHADRA QILA: INNER ENTRANCE TO CITADEL

CHITOR. OUTER CROSS WALL OF SINUOUS PATH TO FORT

walls of the citadel, built of brickwork 5 ft. 6 in. thick, are now broken down in many places.

A short notice of three among the wealth of unusually fine non-military buildings of this city, will not be out of place here.

The Tin Darwaza, or Three Gateways, in the centre of the city, is a structure of three tall arches in line, the middle one wider than the other two. It is decorated with carved ornament and surmounted by an attic storey with ornamental cresting. It was built by Ahmad Shah to form an imposing entrance to the Royal Square, has no doors and is of purely monumental character; a newel stairway at one end leads to the top of the monument.

Sidi Saiyad's mosque, incorporated in the wall at the north-east corner of the citadel, is a moderate-sized building celebrated principally for the delicacy and beauty of its window tracery. The windows are large semi-lune openings, some of them filled with square panels; but that which is most renowned contains exquisitely carved tracery of intertwined stems of trees, palm trees and others, in which natural and formal motifs are blended in an incomparable manner.

Jami Masjid, in the centre of the city, was built in 1412–24. It has an open front towards its cloister and is approached from the cloister through wide open arches. It is a large building of much greater width than depth and is divided internally into a great number of squares by tall columns supporting the fifteen cupolas of the roof; there are two hundred and sixty columns. The central cupola is larger and much higher than the others and the columns supporting it are correspondingly higher. The effect of this forest of columns, of different heights, with highlights coming from the open front and through the traceried windows, is most enthralling.

CHAPTER FIFTEEN

CHITOR

CHITOR stands on a hill 500 ft. above the surrounding country and has steep declivities on all sides. At the summit it is three and a half miles long, north to south, but only half a mile across at its widest part, east to west. It is surrounded by a powerfully crenellated curtain wall and is approached on three sides, north, east and west, by sinuous paths, checked by gates at intervals in their ascent.

This fortress was a Hindu stronghold of Rajputana in the eighth century of our era and from the eighth until the sixteenth century Chitor was the capital of the premier Rajput house, that of Gahlots. By virtue of its growing importance and the strength of its position Chitor drew upon itself the attention and cupidity of its foes far and near. None the less, it seems to have increased in prosperity and to have maintained its independence until the early years of the fourteenth century, for the fortifications, though the battlements were repaired and in some cases rebuilt by the Muslims, are Hindu work dating principally from the thirteenth century. Chitor was besieged and taken by Ala-ud-din Khalji, Emperor of Delhi, in 1303, but recovered by the Rajputs ten years later; it was taken by the Sultan of Gujarat in 1535 and again by Akbar, Emperor of Delhi, in 1567. The success of the enemy on all three occasions was followed by the self-immolation of the Rajput women and the advance of the men outside the gates to fight to the death.

The sides of the hill are precipitous and the curtain wall follows the contours of the edge of the table-land at the summit, the only access to the fortress being by the three paths mentioned above, p. 86. The main approach is by the steep serpentine road which winds up from the town at the foot of the hill on the west side, this road being guarded by seven massive gateways, placed at strategic points in its course. The first gateway, at the entrance from the town, probably dates from about 1100 in respect to its lower parts; here the masonry is of large hewn stones, roughly coursed, and similar to other early Hindu work found

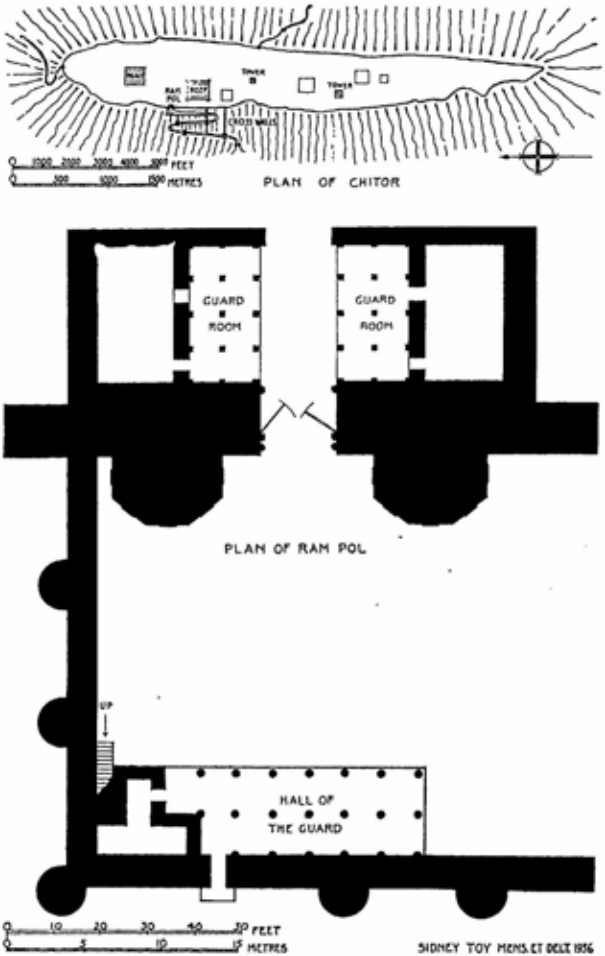
elsewhere in India. The battlements have been rebuilt in smaller but well-coursed stones and are of similar design, with wide openings at the feet of the arrow-loops, to those built generally throughout the fortress. They probably date from the latter part of the thirteenth century. There is no record of Ala-ud-din Khalji having used siege engines in his attack on the fortress such as might demolish older battlements and the design of the existing ones is unlike either that of the Muslims found elsewhere in the country or of the Hindus of later periods. The gateway is flanked by a complete tower on one side only, that on the east being the segment of a tower, dying into the vertical face of the cliff (p. 86a).

The other gates (except for the fourth which is broken down) between the first and Ram Pol at the entrance into the fort, are complete with towers on either side. In all cases the battlements have been rebuilt, those of the sixth gate having expanded openings at the base of their arrow-loops, like those of the first gate, while the other three have narrow loops descending from the upper wall-walks without such expansions. In three of the gates, second, third and sixth, the heads of the passages are constructed with lintels and corbels, as in the first, but the head of the fifth gate was rebuilt by the Muslims with a pointed arch (pp. 86a, 86b).

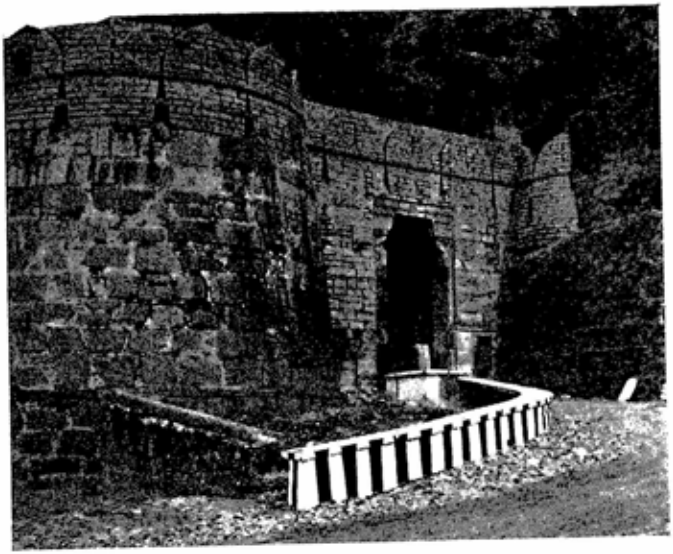
In order to prevent the by-passing of the gateway by flank advance across the hill face, cross walls are built, which rise straight up the hill from the gateways to the curtain wall at the summit. The southernmost and longest of these cross walls is fortified, its wall-walk rising up in steep flights of steps behind the crenellated parapet (pp. 82b, 86).

The full length of this sinuous path of ascent is commanded by the battlements of the curtain wall immediately above it as well as from the gateways in its course: the gateways being so disposed that they could subject the whole length of the straight portions to raking fire as well as govern the bends from both sides (p. 86b).

Ram Pol, the gateway at the head of the path, must have been, when complete, one of the most elegant entrances into a fort in India; even now in its present mutilated condition it is still a most imposing structure. It is built of large finely dressed stones and richly embellished with decorative ornament. It has a lofty passage, 13 ft. 10 in. wide, with a head composed of a lintel supported on sculptured corbels. The upper portion of the structure above the passage, now covered with protective masonry, and the

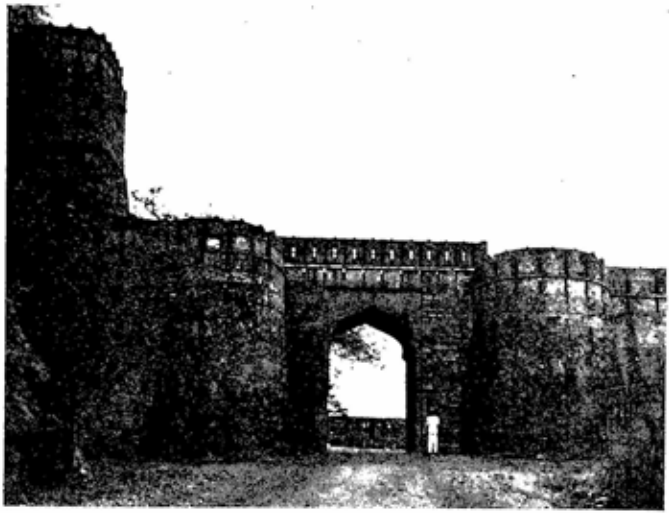


CHITOR. PLAN OF THE WHOLE FORTIFICATION, PLAN OF RAM POL AND THE HALL OF THE GUARD

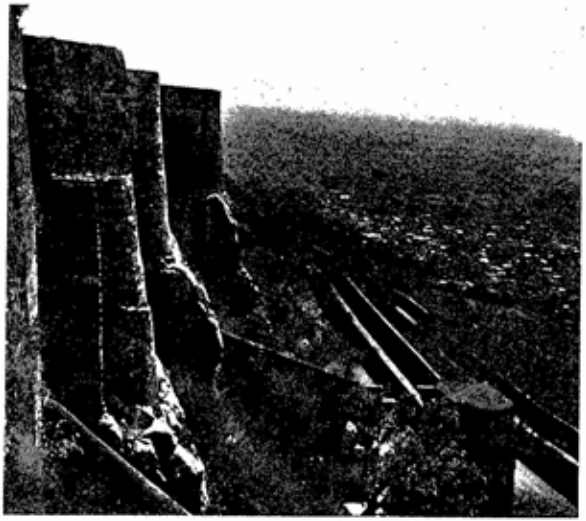


CHITOR. FIRST GATE ON APPROACH FROM THE WEST

CHITOR. THIRD GATE ON WEST APPROACH



CHITOR. FIFTH GATE ON WEST APPROACH. TOWER OF SIXTH GATE ON LEFT



CHITOR. LOOKING DOWN ON APPROACH ROAD FROM BATTLEMENTS

upper parts of the octagonal towers, one on each side, have been destroyed, but a long piece of sculptured stone, which is probably the original lintel, now lies at the foot of the hall of the guard opposite. The passage still retains its armoured two-leaved door, which has a small wicket gate in the left leaf. Beyond the door there are large pillared halls, or guardrooms, on either side, both now in ruins and roofless (pp. 86, 90a).

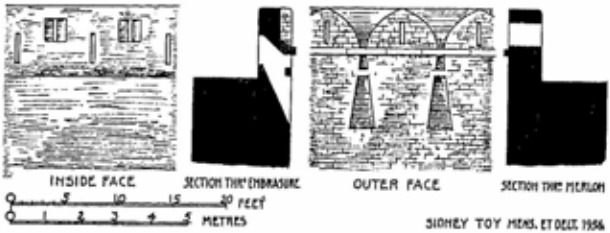
Outside the gate and built against the curtain wall directly facing Ram Pol there is a very handsome hall for the guard, commanding not only the entrance into the gateway from the rear but also the approach at the head of the path. The outer pillars are richly sculptured and all the pillars have heads composed of four moulded corbels; the chatris on the roof are later additions to the Hindu work (pp. 86, 90a).

The precipitous path on the north is guarded by one gate at the head; that on the east is guarded by four gates in succession. The gate at the head of the latter, called the Suraj Pol, or Sun Gate, was always regarded as an important post of defence in case of attack on the fortress and was assigned to one of the leaders of the defence. At the south end of the fortress there is a small hole in the wall through which criminals and traitors were thrust to be dashed to pieces at the foot of the precipice hundreds of feet below.

The curtain wall with its wall-walk and parapet runs all round the fortress at the edge of the precipitous sides of the hill; its battlements are pierced by the same kind of loopholes, with wide exterior feet, as noted above. The embrasures are partly filled in from behind; they appear as long, narrow loopholes on the inside and, descending steeply from inside to outside, expanding both laterally and vertically in their descent, they present on the outer face the shovel-shape form as shown on pp. 88, 90b. The embrasures are tied in to the merlons by cross stones near the head of the opening and by a string course which is continuous all round across the heads of the openings and the face of the merlons. This construction of the loopholes at the embrasures ensures both lateral and frontal attack on enemies immediately below as well as those further away. The merlons are each pierced in the middle, above the string course, by a loop, showing a long narrow hole on the outside which in some cases is widened on the inside to permit of lateral fire and in others is narrow on both sides, but its base, in lieu of being level, dips down rapidly from inside to outside.

Within the walls, scattered along the length of the fortress, are two temples, two monumental towers, and the ruins of many palaces which date principally from the fifteenth century; there is also the portion of a building, consisting of two of the adjoining walls and a corner tower, now called the keep, of what was, or was to be, a rectangular structure. Both towers are Hindu buildings; the Tower of Fame, erected probably in the twelfth century, and the Tower of Victory, built about 1450.

The Tower of Fame is a square monument, rising in five storeys above a tall pedestal to the height of 75 ft. Balconies project out on all sides from the second and third storeys and the whole tower is covered with a profusion of sculptured ornament. The fifth storey is an open pavilion, which, standing on the wide



CHITOR. ELEVATIONS AND SECTIONS OF THE CRENELLATIONS OF THE CURTAIN WALL

and deep corbelled cornice of the storey below, projects out beyond that storey on all sides.

The Tower of Victory was built by the Rana Khumbha to commemorate his victory over Mahmud Khalji of Malwa in 1440. It stands on a tall pedestal 47 ft. square, is 30 ft. square at the base and rises in nine storeys to the height of 122 ft. above the ground; the two upper storeys are open pavilions. The storeys are distinctly divided by lines of string courses and the whole monument is covered with a profusion of sculptured ornament. The shell-form cupola at the head, having been destroyed by lightning, was rebuilt about 1850.

Among the many sources of water supply of the fort are the

Gaumukh, or Cows' Mouths, springs and reservoir, on a terrace below and to the south-west of the Tower of Fame. Here the springs issue from the face of the cliff through spouts carved in the form of cows' mouths.

Three times in its history has this great fortress been the scene of most tragic events at the termination of its brave, relentless, but fruitless struggle against a foe of superior strength.

The first of these events occurred when Ala-ud-din Khalji, the Pathan Emperor of Delhi, laid siege to it in 1303. Ala-ud-din had sent out three armies of conquest, one to the Deccan, one to the Gujarat and a third to Rajputana. Hearing of the noted beauty of Padmani, wife of the Rana, Ratan Singh, and desirous of possessing her, he led the third expedition in person and laid siege to Chitor. After a brave defence and realizing that further resistance was hopeless, the Rajputs resorted to what they called the *Jauhar*. All the young and fair women, said to be thirteen thousand persons, descended into an underground chamber, where they were destroyed by fire, and the chief among the men, having donned saffron robes, issued forth from the gates to perish fighting to the death. Having captured the city Ala-ud-din carried the Rana a prisoner to Delhi.

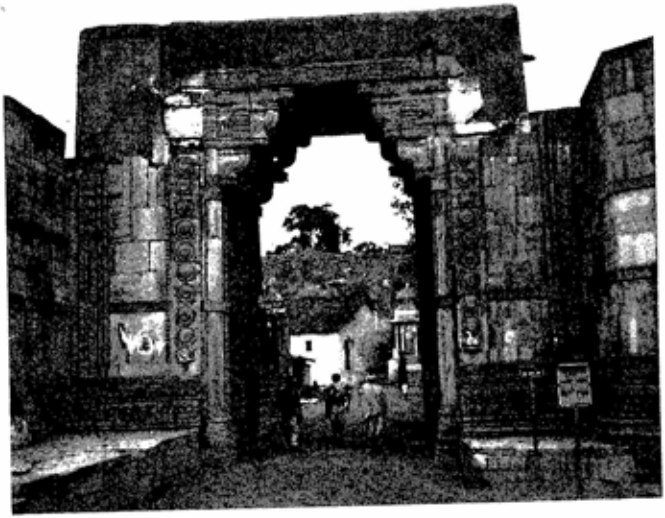
The Rana remained a prisoner at Delhi for two years and became so weary of his confinement that when Ala-ud-din demanded the surrender of his beautiful wife Padmani as the price of his liberty he was disposed to comply. His *thakurs*, or nobles, who were wandering as outlaws in the hills and jungles of Mewar, heard of his intention and sent him messages beseeching him not to disgrace the name of Rajput. They offered to send him poison, which would enable him to avert dishonour, but the fertile brain of his daughter devised a scheme for restoring him to liberty without the sacrifice of his honour or his life. He and his nobles were to feign compliance with the demand, and a train of litters, ostensibly containing the Rana's wife and her retinue, but filled with armed men, was to be sent to Delhi, escorted by a large force of horse and foot. The cavalcade reached Ratan Singh's prison in safety, and the armed men sprang from their litters, slew the guards, and carried off their master. Bodies of Rajputs had been posted at intervals along the road to cover his flight, and though they were defeated one by one they so delayed the pursuers that Ratan Singh reached his country in safety and assembled in the

hills a force which enabled him to raid even the environs of Chitor.[1]

The second tragedy occurred in 1535 when Chitor was besieged by the Sultan of Gujarat. At that time the Rana was a minor and the lead was taken by Jawahir Bai, the Queen Mother. She was slain on heading a sally outside the gates; the infant prince was sent away to a place of safety and, since by their laws Chitor could only be defended by royalty, the crown was placed on the head of the Prince of Deolia. Resistance, however, appearing to be hopeless, *Jauhar* was again ordered and many thousands of Rajput women gave themselves up to the flames and over thirty-two thousand of the men died fighting.

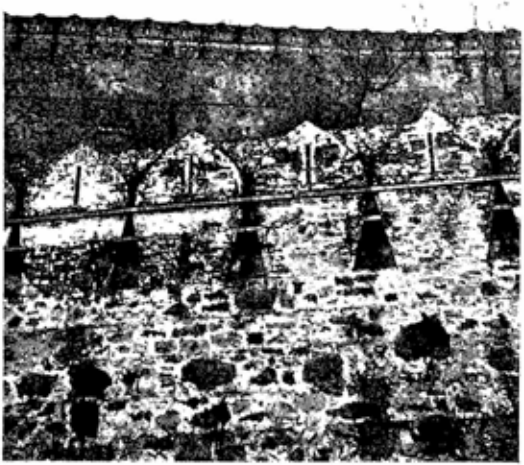
The third event of this character occurred at the end of the siege of Chitor, carried out by Akbar, Mughul emperor of Delhi, in 1567. The heroes on this occasion were two Rajput princes, Jai Mal and Patta, vassals of Chitor, on whom, the Rana being absent at the time, devolved the defence of the place. The Salumbar chief, Jai Mal, fell at his post at the Sun Gate, killed by a musket shot fired by Akbar himself. On the instructions of his mother Patta donned the saffron robe, *Jauhar* was again performed, and with his mother and his bride beside him, Patta died fighting. Many princesses perished with the women in the flames and of the eight thousand Rajputs who passed outside the gates few, if any, survived. The names of Jai Mal and Patta are still household words in Mewar and their deeds form the subject of many ballads. Even Akbar recognized their bravery and erected statues to them.

[1] *The Cambridge History of India*, Vol. III, p. 111.



CHITOR. RAM POL FROM WITHOUT

CHITOR. HALL OF THE GUARD FACING RAM POL



CHITOR. GRENELLATIONS ON APPROACH PATH AND ON CURTAIN WALL ABOVE

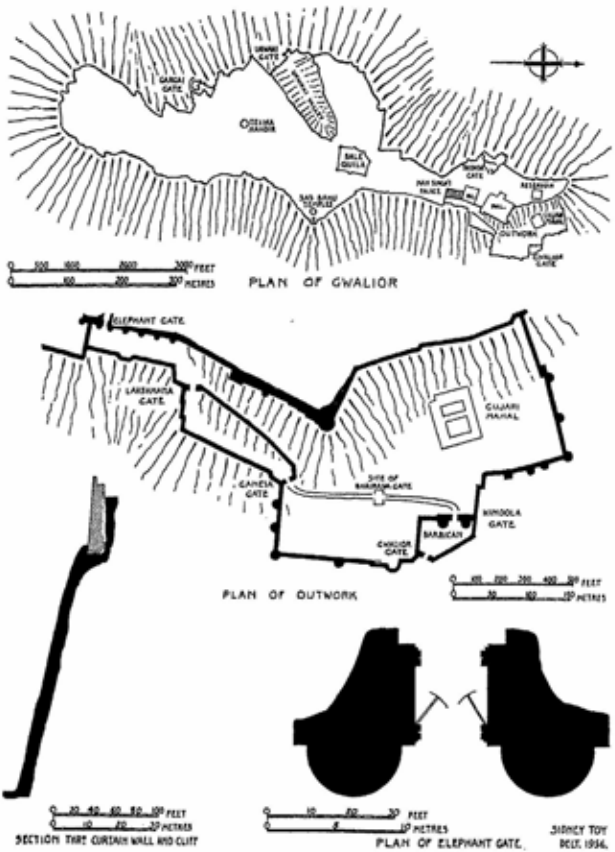
GWALIOR. SOUTH HALF OF THE EAST SIDE OF FORTRESS

CHAPTER SIXTEEN

GWALIOR

GWALIOR stands on a long and narrow rocky hill of sandstone and basalt and rises precipitously to 300 ft. above the surrounding country. It is a mile and three-quarters long, north to south, and varies in width from 600 ft. to 2,800 ft., east to west; in some places the cliff overhangs and in others, where the hillsides are less precipitous than elsewhere, they are scarped. A curtain wall, following the irregular contours of the summit, is carried all round the fort. The citadel, where the palaces are concentrated, is at the highest point at the north end of the hill; it is defended on the east, its most vulnerable side, by a large and powerful outwork, which extends down the side of the hill to the plain below and encloses the main path of approach to the fortress. In the middle of the west side of the hill there is a deep wedge-shaped gorge, called the Urwahi valley, the mouth of which is defended by a strong cross wall with bastions at intervals and a gateway in the middle (p. 92).

Gwalior is reputed to have been founded about A.D. 950 by a Kachhwaha chief, called Suraj Sen, who was a leper. While he was hunting on the hill on which the fort now stands a hermit gave him a drink of water which healed him of his leprosy. In gratitude for his cure he asked what benefit he could bestow on the hermit and was requested to build a fort on the spot and to enlarge and embellish the spring from which the water came; the hermit further changed the chief's name from Suraj Sen to Suraj Pal and prophesied that as long as his descendants used the termination Pal to their names so long should they rule over the region. The author repeats this legend here because, although not innocent of "corroborative detail", added at later periods, there is often some residuum of truth in ancient traditions. In any case this dynasty ruled for about one hundred and seventy years and its kings are the "Pals" of the ancient ballads; the last of them changed his name to Tej Karan. They were followed in 1129 by the Parihara dynasty which was brought to an end on the capture of Gwalior by Iltutmish, Emperor of Delhi, in 1232.



GWALIOR. PLAN OF WHOLE FORT, PLAN OF OUTWORK, SECTION THROUGH CURTAIN, PLAN OF HATHI POL, OR ELEPHANT GATE

GWALIOR. NORTH SIDE OF URWAHI VALLEY WITH CROSS WALL IN FOREGROUND

GWALIOR. SOUTH SIDE OF URWAHI VALLEY

GWALIOR. HINDOLA GATE

GWALIOR. HATHI POL

During Iltutmish's siege the city maintained a brave and desperate struggle against a superior foe; at length, having abandoned all hope of success or relief, the defenders followed their custom in such circumstances; the Rajput women of the royal harem gave themselves up to self-immolation. The Raja fled by night and made good his escape. Iltutmish, enraged by the ten-month resistance, then butchered 700 Hindu prisoners in cold blood. The Muhammadans occupied Gwalior until 1399 when, after the confusion following the sack of Delhi by Tamerlane, Amir of Samarqand, Har Singh, the Tomar chief, set himself up as independent Raja of Gwalior and established the Tomar dynasty; this lasted until 1516, when the city again fell to the rule of Delhi, first under the last of the Pathan emperors and then under the Mughuls. The Mughuls retained it for about two hundred years until 1754 when it was taken by the Mahrattas. Man Singh, 1486–1516, the most famous of the Tomar Rajas, was a great patron of the arts and he was responsible for many of the finest of the architectural buildings within the fortress. Under the Mughuls Gwalior was used as a state prison and it was here that Murad, brother of Aurangzeb, was done to death by slow poison.

The main entrance to the fortress is by a steep path through the outwork at the north east. This path is so precipitous that no wheeled vehicle can use it and persons unable to negotiate the climb unaided must do so mounted on an elephant. Originally the higher parts of the path consisted of flights of high steps, but these have been replaced by steep slopes. The path is defended by five gateways, placed at strategic points along its course; originally there were six but the third gate has been removed.

Gwalior, or Alamgiri, Gate, the entrance from the town at the foot of the path, is a plain structure, built in 1660; it admits to a small barbican with the second, the Hindola, Gate at the far corner. The Hindola Gate was built in the fifteenth century at the Tomar period; it is flanked by round towers on either side and defended by one two-leaved door. Muslim influence is apparent in the passageway; here the corbelled construction gives place to the arched form, the soffits of both the outer and inner arches being decorated with inverted cresting and the spandrels are relieved with large circular ornament. The gate has been repaired and the turrets surmounting the towers renewed (pp. 92, 92b).

Bhairaon Gate, which crossed the path between the Hindola

and Ganesa Gates, no longer exists. The Ganesa Gate is a plain doorway of the Tomar period. Lakshmana Gate probably marks the position of what was the outer gate before the conquest of the city by Iltutmish in 1232 and represents Hindu work much anterior to that date. It probably suffered considerably from Iltutmish's attacks upon it, for it was subsequently rebuilt, or extensively repaired, some of the stones being reset upside-down, with the sculptured faces upon them inverted.

The Hathi Pol, or Elephant Gate, so called from the life-size figure of an elephant on the outside, long since removed, is a handsome structure forming part of the palace built by Man Singh in the last quarter of the fifteenth century. It is at the south end of the east front of the palace and follows the general design of that front which, while being elaborate and ornate, is yet powerful and consistent with the purpose of the building of which it forms a part. The gateway is flanked by towers on either side, which are repeated at wider intervals along the whole front of the palace, about 360 ft. north to south. Here the head of the entrance to the passage through the gateway is typical Hindu construction, with tiers of finely moulded corbels supporting a lintel, but it is enclosed by an arch of decorative rather than structural character. The spandrels are enriched with decorative canopied projections and, stretching from tower to tower above them is a balcony supported on moulded corbels and having a stone traceried parapet. The towers are surmounted by open turrets with domed roofs supported on pillars. The entrance, defended by a two-leaved door, opens on to a long passage running through and within the south end of the palace to issue on its west front. Here there was another gate, now destroyed, called Hawa, or Wind Gate, from the draught of cool air which wafted into the passage when the door was opened and refreshed those who had climbed the long and arduous path up to that point (pp. 92, 92b).

The curtain wall is carried all round the cliff face, in and out at its most irregular contours; it rises up from foundations far below the upper surface, in places fifty feet and over, and is built against the scarped face of the rock, cut back for its reception. The perpendicular face of the cliff below the wall is well shown in the photograph (p. 90b). At strategic points such as the west side of the citadel and the mouth of the Urwahi valley, the fortifications are especially strong; those on either side and across the mouth

of the valley are shown on p. 92a. There is a parapeted wall-walk all round the curtain with small square holes at the embrasures and others which dip rapidly down from inside the parapet to appear as arrow loops far down the face of the wall outside.

The Bala Qila, or keep, near the middle of the fortress was built by the Mahrattas after their capture of Gwalior in 1754. The water supply comes from numerous wells, rock-cut cisterns and reservoirs; some of the last were probably quarries from which stones for the buildings were excavated and afterwards found to be useful as water cisterns.

There are within the fortress many palaces and temples of great interest and beauty of detail, of which, though non-military, a short notice will be appropriate. The palace of Man Singh, built about 1490 and known as the Painted Palace, is a magnificent structure of two storeys above and two below ground level; both the east and the south fronts are of striking design, the north and west fronts are somewhat ruinous. The palace was repaired in 1881. It is a rectangular building about 360 ft. long, north to south, and 160 ft. wide, east to west. The east front, which includes the Elephant Gate at its south end and overlooks the steep cliff, is about 80 ft. high and is practically unpierced for about three-quarters of that height but is relieved by towers at intervals, by corbelled string courses and, at the head of the plain portion, by a blind arcade which is continuous along the wall face and around the towers. The towers are surmounted by lanterns with stilted domes. The south front is of somewhat similar design but is more richly decorated. Here, in addition to its bold string courses and continuous blind arcade, the whole windowless wall surface with its towers is embellished with enamelled tiles and mosaics of many colours, blue, green and gold, forming bands of conventional figures of men, elephants, tigers, peacocks, ducks and trees; the whole imparting an effect at once of delicacy and strength. The courts within the palace and the rooms surrounding them with their bracketed balconies, galleries with pierced stone tracery, their coloured tile decoration and their stone ceilings, are no less interesting and charming. The Gujari Mahal, at the foot of the rock on the north of the outwork, is a palace built by Man Singh for his favourite Queen; it has a plain exterior relieved by elaborate turrets which project from the parapet at the corners. It now houses an archaeological museum.

The larger of the Sas Bahu temples, built in 1093, has the form of a Greek cross, having a central square hall, a porch on each of three sides and a shrine on the fourth; four sturdy piers forming a square in the centre of the hall support the domed ceiling and the Sikhara, or tower, above. The whole of this building is covered with figure and conventional sculpture. The Teli ka Mandir, a temple dating from the ninth century, has a relatively small plan, but its Sikhara soars up to the height of over 100 ft., and has a design similar to those in the south of India.

Gwalior is celebrated for its rock sculptures; the figures, many of them of gigantic size, are cut out in high and low relief on the perpendicular rock faces. These are found in many places along the hill side, at the north-east, north-west, south-east and particularly at the entrance and on both sides of the Urwahi valley. They have been described in detail by many writers.

One episode in the later history of this fort may be recorded. In the summer of 1858 there was much fighting around Gwalior between the British on one side and the mutineers on the other, resulting in the end in the rebels being driven out of Gwalior and the recovery of the fortress. The Maharaja Sindia had remained staunch throughout but the Rani of Jhansi threw in her lot with the rebels of Gwalior and was the life and soul of the conspirators. Dressed in man's attire and mounted on horseback she was to be seen animating her troops all day long. In the last engagement, when her party was in retreat, her horse, in spite of her efforts to restrain him, carried her along with the others and, in crossing the canal, he stumbled and fell. One of the pursuers, ignorant of her rank or sex, cut her down. Her devoted followers recovered and buried her body.

CHAPTER SEVENTEEN

AMBER

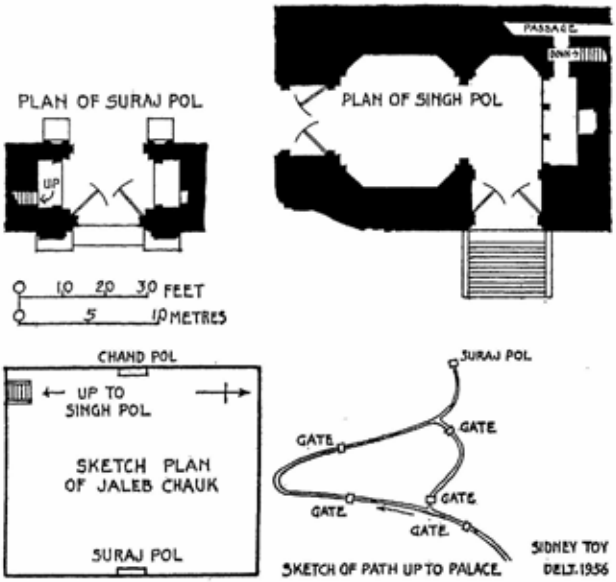
AMBER is an ancient city which was flourishing in the tenth century; it was in the hands of the Rajputs in the eleventh century and from the twelfth century was their capital city until 1728, when the seat of government was transferred to Jaipur, five miles to the south-east.

At present the main objects of interest are concentrated in the palaces and their fortifications, built principally during the first half of the seventeenth century. The city lies at the foot of one of the highest of a range of fortified hills. The palaces, with their immediate defences, are built about a third of the way up that hill and occupy a most charming position, backed by the wooded hill, which rises 400 ft. above it, and having its white stone buildings reflected in the waters of the large artificial lake which lies at the foot of the hill. High up on the long and flat summit of the hill there is a fort, built for the defence of the town and palaces below; it is a powerful and extensive work, with walls and wall-towers, following round the contours of the hill, pierced with arrow loops and having crenellated parapets. On account of its strength and commanding position the fort was regarded as the place of last resort in the event of serious attack on the town and palaces below. For many years it was used as a state prison (p. 100a).

The approach to the palace from the town is by way of a granite-paved road of fairly easy gradient with a long serpentine loop in its course. This road is defended by three gates, placed at intervals along its course and by walls on either side; from it, a short distance beyond the first gate, another road, of much steeper gradient, branches off from the first to by-pass the loop and rejoin the other before it reaches the gateway into the palace. The second road is defended by two gates. The five gates while differing slightly in detail are of similar design; the passages are wide and tall, closed by one two-leaved door, and they are defended from square holes for musket-fire in the battlements. The first and lowest gate, through which, by chance, a full grown elephant with its occupied howdah was passing at the time the

photograph was taken, is shown on p. 100a. Another view on p. 100a, taken from the upper junction of the two roads, shows the upper gate on the by-pass and the first hill, with its fortifications, on the range to the east of Amber.

Entrance into the Jaleb Chauk, the first court of the palace, is through Suraj Pol, or Sun Gate, at the head of the approach road



AMBER. PLANS OF THE JALEB CHAUK COURT, TWO OF ITS GATEWAYS, THE PATH TO THE PALACE

and on the east side of the court. There is a stone seat on either side of the entrance archway and beyond the two-leaved door, the only barrier in the passage, are recesses for the guard and a stairway to upper rooms and the battlements. On the west side of the court there is another gateway, called Chand Pol, or Moon Gate.

A broad flight of steps at the south-west of the court leads through the Singh Pol, or Lion Gate, to the upper court.

Singh Pol is a double gate with a right-angled turn passing through two large bays, with recesses for the guard on all sides. The guard chamber on the right of the entrance, facing down the whole length of the passage and in position for attack from the rear on an enemy rushing through, is in two tiers, both the upper and lower chambers opening in front by an arcade of three arches with cusped heads. There is a low parapet in the arcade of the upper chamber and opening off the lower chamber there is a stairway and passage to other apartments. The gateway, which was formerly decorated with frescoes, now faded away, has one two-leaved door at the entrance and another at the exit.

Having passed through Singh Pol one arrives at two upper courts surrounded by magnificent palaces, which are of a charm, beauty and elegance of design and decoration placing them among the finest works of their kind in India.

In the first court is the Diwan-i-Am, Hall of Audience, raised on a podium and approached by flights of steps; it has a portico, or veranda, having a double line of sandstone columns with corbel capitals carved with figures of elephants. Inside is a splendid rectangular hall with a vaulted roof supported on marble columns. The roof is flat above, to provide an open sleeping place on hot nights, and is surrounded by galleries with latticework enclosures. Beyond this court and on the south of it, a fine gateway, the Ganesh Pol, covered with mosaics and sculptures, leads up to a court containing a garden, with a beautiful cascade, and surrounded by the private apartments of the Maharaja. Here are halls and chambers resplendent with exquisite decoration in mosaics and marbles; alabaster panels inlaid with decorative motifs; doors inlaid with ivory and sandalwood, arranged in various geometrical patterns; walls glowing with bright and subdued colours; and roofs glittering with translucent mosaics of glass. In fine, Amber Palace well deserves the title of an "enchanted castle".

As a local and period sidelight the following is appended. Bishop Heber was conducted through Amber Palace in 1825, and having expressed his high appreciation of its splendours adds:

> "On returning to the stable yard, our conductor asked us if we wished to see the temple? I answered of course 'anything

more that was to be seen', and he turned short and led us some little distance up the citadel, then through a dark low arch into a small court, where, to my surprise, the first object which met my eyes was a pool of blood on the pavement, by which a naked man stood with a bloody sword in his hand. The scenes through which we passed were so romantic, that my fancy had almost been wound up to expect an adventure, and I felt, I confess, for an instant my hand instinctively clench more firmly a heavy Hindoostanee whip I had with me, the butt end of which would, as a last resource, have been no despicable weapon. The guide, however, at the same instant, cautioned me against treading in the blood, and told me that a goat was sacrificed here every morning. In fact a second glance showed me the headless body of the poor animal lying before the steps of a small shrine, apparently of Kali. The brahmin was officiating and tinkling his bell, but it was plain to see, from the embarrassment of our guide, that we had intruded at an unlucky moment, and we therefore merely cast our eyes round the court without going nearer to the altar and its mysteries. The guide told us on our way back that the tradition was that, in ancient times, a man was sacrificed here every day; that the custom had been laid aside till Jye Singh had a frightful dream, in which the destroying power appeared to him and asked him why her image was suffered to be dry? The Raja, afraid to disobey, was reluctant to fulfil the tradition to its ancient extent of horror, took council and substituted a goat for the human victim with which the

> Dark goddess of azure flood
> Whose robes are wet with infant tears
> Skull-chaplet wearer, whom the blood
> Of man delights three thousand years.

was graciously pleased to be contented." [1]

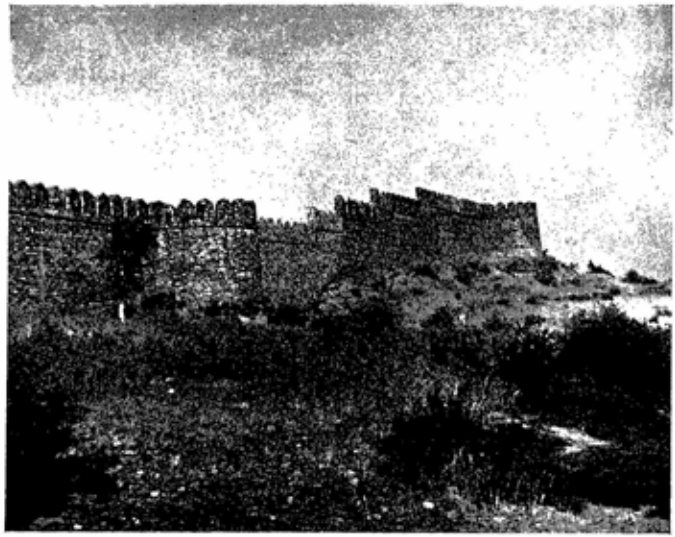
[1] R. Heber, D.D., Lord Bishop of Calcutta, *Narrative of a Journey through the Upper Provinces of India—1824-25*, Vol. II, pp. 14-15.

AMBER. THE FORT ON SUMMIT OF THE HILL. PALACE ABOVE TREES ON THE RIGHT

AMBER. FIRST GATE ON APPROACH ROAD

AMBER. SECOND GATE ON THE BY-PASS

FATEHPUR SIKRI. AGRA GATE



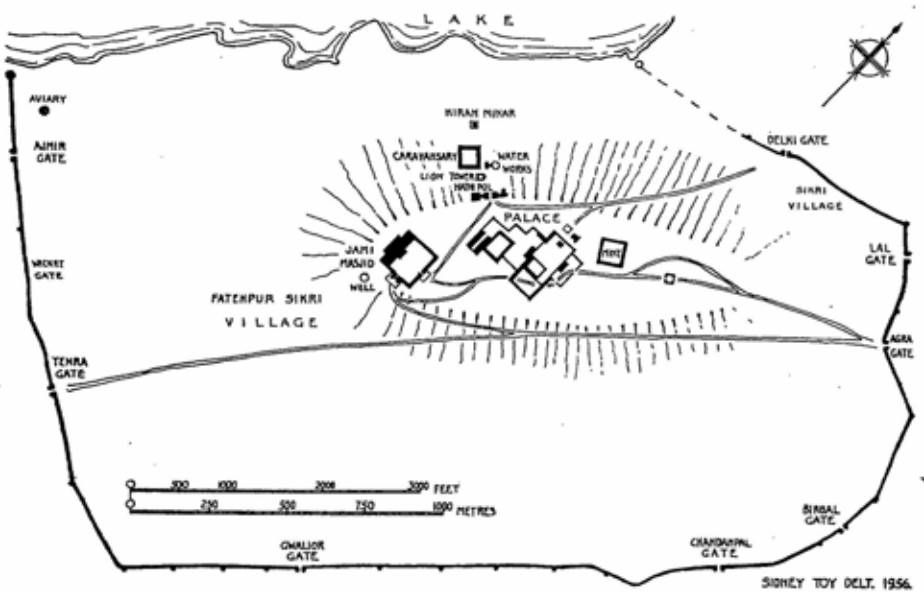
FATEHPUR SIKRI. CITY WALL NORTH OF AGRA GATE

CHAPTER EIGHTEEN

FATEHPUR SIKRI

FATEHPUR Sikri was begun by the Mughul Emperor Akbar in 1571, left by him in 1586, and thereafter abandoned. Akbar was childless, his first three children having died in infancy. Returning from his capture of Rantambhor in 1569 he halted at the village of Sikri to consult a holy man on the subject and it is recorded that on the holy man's advice he sent his Rajput wife from Agra to Sikri and there a son, who later became the Emperor Jahangir, was born in August 1569. Akbar began in 1571 to build his new capital on this site, with the citadel on the ridge and the city at its foot. The reason for his selection of this site has been described by the Emperor Jahangir in his memoirs. "My revered father, regarding the village of Sikri, my birthplace, as fortunate to himself, made it his capital, and in the course of fourteen or fifteen years the hills and deserts, which abounded in beasts of prey, became converted into a magnificent city, comprising numerous gardens, elegant edifices and pavilions, and other places of great attraction and beauty. After the conquest of Gujarat, the village was named Fatehpur: the town of victory." In order to secure an abundant supply of water to his new city Akbar caused a masonry dam to be thrown across the Khari Nadi stream, thus forming a large lake at the north-west of the site.

In 1586 risings among the Pathan tribes on the North-West Frontier of India led Akbar to remove his court to Lahore, where he remained supervising operations until 1599. When he returned southward it was to make Agra his capital and Fatehpur Sikri has remained forsaken and forlorn ever since. The palaces and adjacent buildings were practically complete by the time they were forsaken and have the inestimable value, from a historical standpoint, of remaining in their original condition to this day without alteration or addition; and they are in a remarkably good state of preservation. The fortifications, however, were not finished. The city wall with its gates and bastions is complete except for a relatively short piece running westwards from the Delhi Gate; but of the defences of the citadel the only parts



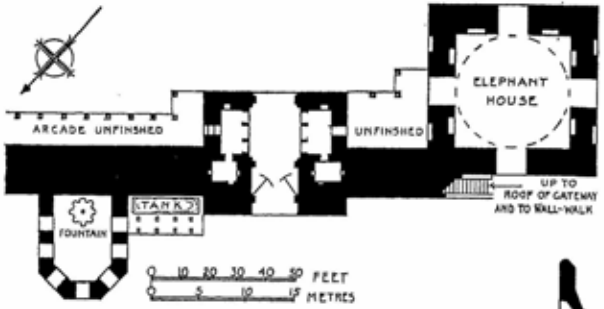
PLAN OF FATEHPUR SIKRI

completed are the Hathi Pol; an advanced fortified tower defending the approach to it; and short pieces of the citadel wall adjoining the Hathi Pol on either side.

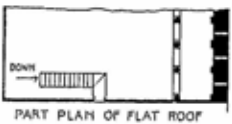
The fortifications, the palatial and ancillary buildings are all of red sandstone quarried in the neighbourhood. The city wall is built of coursed stone with a concrete core; it is 8 ft. thick, 32 ft. high and is defended at the summit by two tiers of loopholes, one through the merlons of the parapet and the other dipped rapidly down from the wall-walk to the outer face. There are bastions at intervals along its length which have a considerable batter from base to summit. The wall with the lake encloses an oblong area, the wall running round three sides and the southern shore of the lake forming the fourth (pp. 100b, 102).

There are eight gateways, each flanked by a bastion on either side, and one wicket, or postern, gate. Agra Gate, opening on to the road from Agra, twenty-three miles distant, is a typical example of the gateways (p. 100b). The entrance front is raised above the general height of the bastions and curtain walls, thus securing greater command of the approaches and enhancing the formidable appearance of the structure; as with the walls and bastions there are two tiers of loopholes for musketry in the battlements. Flights of steps from the inside lead up to the wall-walks of the curtain, the bastions and to the flat roof of the gateway. The passage through the gate was defended by a two-leaved door and has a domed ceiling, and there are recesses for the guard on either side.

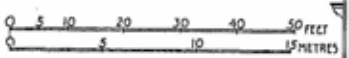
Hathi Pol, or Elephant Gate, received its name from the life-size figures of elephants which stand, facing each other, on tall pedestals on either side of the passage at the entrance front; they are built up of blocks of dressed stone closely cemented together and, when complete, their trunks were raised and intertwined over the archway. Now, decapitated and otherwise mutilated, they present a forlorn aspect. Their present state is attributed to the iconoclasm of the Emperor Aurangzeb, distinguished for his zeal in the destruction of images (pp. 104, 106a). The gate is built of finely dressed stone with panelled faces both on the outer and inner fronts. The approach to the outer front was defended from three tiers of loopholes: one from a gallery running along behind the wall at the level of the flat roof and the other two from the battlements above. The lower tier from the battlements consists



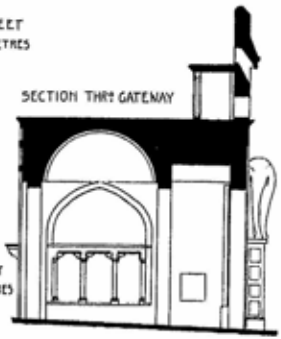
PLAN OF HATHI POL AND ADJOINING TOWERS



PART PLAN OF FLAT ROOF



SECTION THRU GATEWAY



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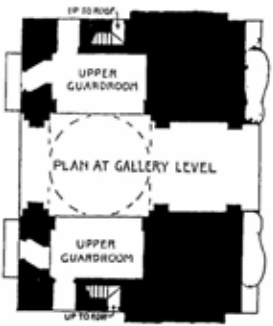
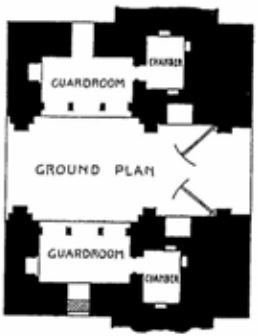




FATEHPUR SIKRI. PLANS AND SECTION OF THE HATHI POL

of three slightly larger holes covered on the outside by stone hoods. The function of these hoods, which are used profusely in some fortifications, as at Agra in the north and at Bijapur in the Deccan, must be varied according to the situation. Some of those at Agra are unquestionably machicolations while others appear to be for the defence of those firing through the loopholes. Here the two lateral ones, opening directly above the backs of the elephants, were obviously useless as machicolations.

The passage through the gate was defended by a two-leaved door, now missing, and by two tiers of guardrooms on either side of a square hall; the hall having a domed ceiling embellished by moulded ribs, which die into a foliated boss at the crown. The lower guardrooms open towards the hall by an arcade of three arches with flat lintels and corbel supports. Both the lower and upper guardrooms were entered through doorways at the back; the lower rooms from arcades, only portions of which now remain, and the upper ones from passages above the arcades, now entirely destroyed, if ever completed. From the upper passages stairs rose on either side to the flat roof over the gateway. Doorways from the upper guardrooms lead straight out to balconies on the inner face of the gate (p. 106a). There are short lengths of the wall of the citadel, built of rubble up to parapet level, on either side of the Hathi Pol, and a stairway behind the large square tower immediately to the west of the gate rises to the wall-walk and to the roof over the gate (p. 104).

The Sangin Burj, or Solid Tower, immediately outside the Hathi Pol, was built to command the approaches to that gateway. It is constructed of dressed sandstone and has a semi-octagonal front towards the roadway to command the approaches in three directions. A central hall with six chambers opening off from it provides accommodation for an ample guard. The defence was from the battlements, which are pierced with hooded loopholes similar to those on the gateway.

Since there is no record as to the function of many of the buildings of the citadel they have received arbitrary names, often quite unsuitable to them; such is the case with the square tower immediately to the west of the Hathi Pol. This is a powerfully built, lofty but single-storey building, with walls 10 ft. thick and a domed ceiling; the walls being decorated with plain niches both inside and out. It is sometimes called a pigeon house, at others a store for

ammunition; for neither of these uses is it in the least degree suitable. It is a strong, well-aired building with a wide open arch on each side and was most probably the stable of Akbar's favourite elephant, of which he was obviously very fond, for at its death he erected the Hiran Minar over its burying place.

The Hiran Minar, though not particularly beautiful, is an interesting monument. It consists of a tall tower, octagonal for a third of its height and circular for the remainder; it stands upon two tiers of pedestals and is surmounted by a wide cornice and a domed pavilion; a spiral stairway within ascends to the pavilion. The circular part of the tower, which tapers as it rises, is covered all over with hundreds of elephants tusks, carved in stone.

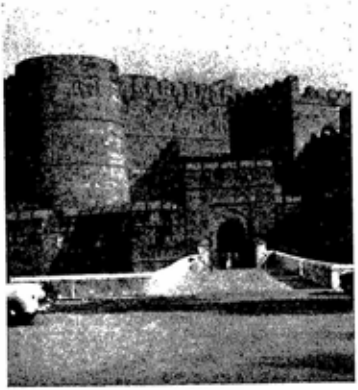
One of the most interesting buildings in the palace is what is known as the Diwan-i-Khas, or Hall of Private Audience, a square structure of unusual design. Externally it has the appearance of a two-storey building, with two tiers of windows and of cornices, the lower cornice being half-way in the height of the wall. Internally, however, the square hall is open up to the roof; a pillar in the centre rising only half-way in the height of the hall. The capital of this pillar is composed of many tiers of corbels, spreading outward all round as they rise to form a large circular floor on the upper surface. From this floor four galleries cross the open space between it and the corners of the hall, where they are carried along the inner faces of the wall all round.

The water supply to the citadel from wells and tanks was on an extensive scale and included a water works between the palace and the lake. The water works consisted of a range of buildings surmounted by a large tank, to which water from the lake was raised by a device of Persian wheels and lifts, for distribution to various parts of the palace through an elaborate system of conduits.

Though it is very probable that the great convenience of being beside the river Jumna was a strong factor in Akbar's choice of Agra as his final seat of government, there can be no doubt that a potent consideration in his forsaking Fatehpur Sikri was the brackish nature of the water obtained there, whether from wells or streams. The dam he had thrown across the Khari Nadi had been broken through by the torrent even in his time. The water in the lake must have been very salt at all times while in seasons when

FATEHPUR SIKRI. HATHI POL FROM WITHOUT

FATEHPUR SIKRI. HATHI POL FROM WITHIN



AGRA. AMAR SINGH GATE FROM WITHOUT

AGRA. AMAR SINGH: INSIDE OF BARBICAN WALL

AGRA. MACHICOLATIONS ON RIGHT OF SECOND GATE OF AMAR SINGH GATE

AGRA. THIRD GATEWAY IN AMAR SINGH GATE

the stream was low the lake must have developed into a pestilential swamp. The dam, having been broken through several times later was finally abandoned as a weir. After North India had come under British rule a military force was stationed at Fatehpur Sikri, but it had to be abandoned in 1850 as an unhealthy site.

CHAPTER NINETEEN

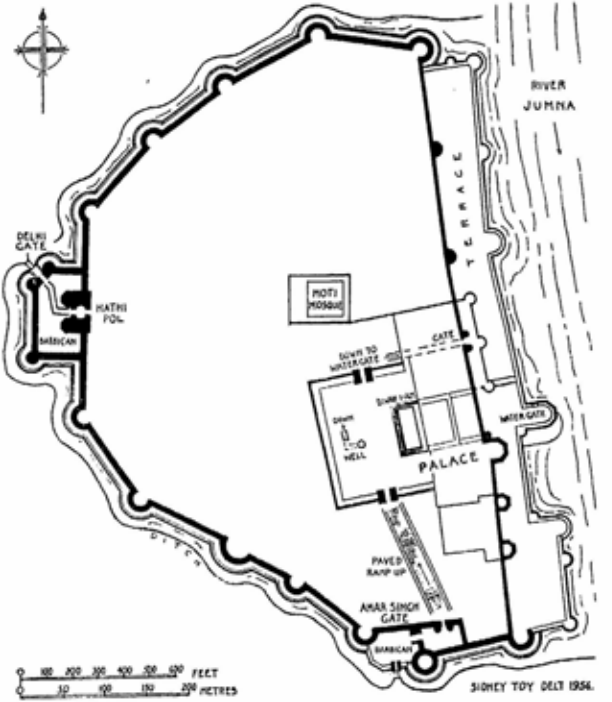
AGRA

THE fort at Agra, called Lal Qila, or Red Fort, from the red sandstone of which it is built, stands on the right bank of the river Jumna, which formerly flowed along beside its east wall. It was built by Akbar on the site of an old brick fort which had fallen into ruin and was razed to the ground for the purpose. The work was begun in 1564, the fort was ready for occupation in 1574 and by 1605, the end of Akbar's reign, the fortifications were complete. Some of the internal buildings at the south-east were also finished at this time; but the principal palatial edifices within the fort were erected under the direction of Shah Jahan between 1632 and 1658.

The fortress is enclosed by two walls. The inner wall, towering above the outer, reaches a height of 105 ft. The walls on the north, west and south, together forming a semi-circle, are about 30 ft. apart and there is a narrow ditch between them; but on the east the distance between is widened out to form a spacious terrace running straight along from north to south beside the river. They are constructed with a very thick but feeble core of sand and rubble, faced with large blocks of dressed red sandstone; there are bastions at intervals in both walls, the outer bastions being concentric with the inner ones; both have crenellated battlements and are defended by tiers of loopholes, of which many of those at the battlements are protected by stone hoods (p. 26). During British occupation some of the parapets were remodelled for defence by artillery, either by rebuilding the parapet, as in some of the bastions, or by removing a merlon here and there. The fort was further defended by the Jumna on the east and by a wet ditch, 35 ft. deep, which runs all round the north, west and south walls (p. 109).

There are four gates, Delhi Gate on the west, Amar Singh Gate on the south, Water Gate on the east and a fourth, unnamed, at the north end of the terrace; the last two are blocked. The Delhi Gate is defended with a barbican with a double wall: the inner wall extending out, at a lower level, from the inner wall of the

curtain, and the outer wall continuous with the outer wall of the curtain. The ditch is crossed by a drawbridge, still complete with wheels and chains. The gateway into the barbican is defended by a two-leaved door. From the first gateway the approach through



AGRA. PLAN OF THE FORT

the barbican to the second, the Hathi Pol, or Elephant Gate, was by a walled passage, originally pierced by arcades; the passage having a rise of 20 ft. from the outer to the inner gates and taking two turns in its course. The Hathi Pol is a tall and

magnificent structure, flanked by semi-octagonal towers and surmounted by an embattled parapet with loopholes for defence; it is crowned by pillared pavilions and pinnacles. Balconies, supported on carved and moulded corbels, project from the towers at second-storey level. At the entrance into the passage are two elevated platforms on which stood elephants mounted by the Rajput heroes Jaimal and Patta (noted on p. 90). The elephants and their mounts, from which the gateway received its name, are said to have been destroyed by Aurangzeb. The entrances, defended by a two-leaved door, leads into a domed hall with large recesses for the guard on either side. The gateway is built of red sandstone, inlaid with architectural designs in white marble and each of the outer and inner fronts has a rich and imposing appearance.

The Amar Singh Gate is defended by two barbicans: the outer barbican formed by the extension of the outer wall of the curtain round an oblong space; and the inner enclosed by the full double curtain, with a bastion at each end on one side, and extensions from the inner wall on the other three. There are three gates. The first, opening into the outer barbican, is reached by a drawbridge, still in working order, across the ditch; it has one two-leaved door and is defended, like the wall on either side, by battlements with hooded loopholes. These loopholes are seen both externally and internally in the illustrations on p. 106b, those in shadow in the internal view being the ones covered by the hoods on the outside. The holes are too narrow to be of use as machicolations and were therefore for the defence of the men firing through them. Passing through the outer gate and taking a turn to the right one faces the gate into the inner barbican. The wall on the right of this gate is defended by two tiers of loopholes and, in the upper tier by two apertures covered by large stone hoods (p. 106b). Here these large hooded holes are clearly machicolations, designed to counter sapping operations at the base of the wall by casting heavy and lethal missiles through them.

The gateway into the inner barbican has a straight-faced front with decorative panels. The passage through has a domed hall with two tiers of recesses for the guard on either side. It is noticeable that the recesses have no entry at the back, so that the guard must leave as well as enter them from the front: an awkward situation if the enemy has forced the gate. The third gate, reached

by a turn to the left in passing through the inner barbican, is an ornate structure of three storeys, flanked by multangular towers and profusely decorated with panels and string courses. The third storey is an open arcade and the towers are surmounted by domes at parapet level. Here the defence was reduced to a minimum and was from a relatively weak parapet only. The passage through the gateway has at present no rooms or recesses for a guard, but this may be the result of relatively modern alterations (p. 106b).

From the Amar Singh Gate a wide and steep paved road, between high walls, leads up to a large open square with arcaded enclosures on three sides and the buildings of the palace on the fourth; there is a gateway in each of the north and south walls of the enclosure. The gateways are complementary to each other and are alike in design. In each case the passage through is defended by a pair of two-leaved doors, one at either end and both opening inwards, and by two tiers of deep guardrooms, both tiers opening in front by arcades with cusped arches. There is a stone seat on either side of the arch opening towards the square.

Flights of steps outside and at the north-east corner of the square lead down to the Water Gate, now blocked; it is on the north side of a bastion and formerly opened on to the river. The little bay immediately on the south of the bastion was the bathing place of the ladies; indeed the whole of the terrace south of this bastion was screened off as the private recreation ground for the ladies of the Zenana.

The Palace, even in its present state, uninhabited and shorn of much of its former glory, is still of great beauty; in the heyday of its royal occupation, with its brilliant halls and chambers, and its attractive outlook on the river and the wooded country beyond, it must have been a royal residence of exceptional splendour and charm. It is built of red sandstone, faced with white marble, wrought in delicate and elaborate ornament. The buildings overlooking the river, 70 ft. below, are faced, both internally and externally, with marble, inlaid with brilliant mosaics of precious stones, jasper, agate, cornelian, bloodstone and lapis-lazuli. Wide panelled friezes, wrought in various patterns, run along at roof level below the parapet and the pavilions are surmounted by golden domes. The Taj Mahal, a mile down the river, with its minarets and white domes, is seen at great advantage from this point.

Agra was captured by the Jats, a powerful agricultural caste in North India, in 1761 and taken from them by the Mahrattas in 1785. The Mahrattas held it until driven out by the British forces in 1803. The fort was held successfully against the mutineers in 1857.

On the expulsion of the Mahrattas in 1803 the British entered the fort by the Amar Singh Gate, seized the treasure, large quantities of stores and ammunition, 163 guns and the renowned Great Gun of Agra. This powerful piece, of 23 in. bore and 43 tons weight, was believed to be composed of all the precious metals and it is reported that some Indian bankers offered a lac of rupees for it. But General Lake, in charge of the British forces, with the object of sending it to England via Calcutta, dispatched it down the Jumna on a raft. The raft capsized, the gun fell to the sandy bed of the river and there it has remained.

CHAPTER TWENTY

DELHI: SUCCESSIVE CITIES

At Delhi, and in the immediate neighbourhood to the south of it, are the sites of about nine cities, built by successive occupants of the imperial throne and called by the name of the emperor of the time. It would appear that this constant change of site by the rulers was actuated more by the desire to vie with the works of their predecessors and to perpetuate their own names than by reasons of defence or health; certainly the drain on the exchequer on each occasion must have been enormous. Many of these cities are now represented only by scattered ruined walls, but Tughluqabad, with its adjunct Adilabad, and Purana Qila still retain extensive defences, some of which are almost complete.

The earliest tangible evidence of these cities are fragments of walls of the Hindu city of Lal Kot, built in 1052, and of the city built by Rai Pithora, about 1180; both contained within the area now known as Old Delhi, ten miles south-west of the present city. Within this area are the Qutb precincts, containing a great mosque, Quwwat-ul-Islam, constructed of richly sculpted pillars and other material from demolished Hindu temples; the Iron Pillar, a smooth column of wrought iron 1 ft. 4 in. in diameter and 22 ft. high above ground, dating probably from the fourth century of our era; an elaborately decorated gateway of entry, the Alai Darwaza, into the enclosure, built in 1319; and the Qutb Minar.

The Qutb Minar is a round tower 238 ft. high and divided into five storeys by galleries projected out on corbels; it is 47 ft. 3 in. in diameter at the base and, tapering as it rises, is about 9 ft. in diameter at the summit. The first three storeys are built of sandstone and embellished with convex fluting, crossed at intervals by deep horizontal bands of inscriptions. The flutings of the lowest storey are alternately round and pointed; those of the second storey are all round and those of the third storey are all pointed. The decorative detail of the galleries and particularly of the honeycomb corbelling contrasts well with the relatively plain flutings of the face of the tower, and the divisions are well proportioned, diminishing in height as they rise, the lowest having a

most delicate and agreeable entasis. The two upper storeys were rebuilt, or added, in 1368; they are encased in white marble and differ widely in character from the work below. The inscriptions round the lowest storey include the names of Muhammad bin Sam, King of Delhi, 1193–1206, and of Qutb-ud-din, first of the slave kings of Delhi, 1206–10; those of the upper storeys include the name of Iltutmish I, Emperor, 1211–36. Sikandar Lodi, 1489–1517, added an inscription at the entrance door, dated 1503. The tower was repaired in the fourteenth and fifteenth centuries and again, after serious damage by earthquakes, by the British Government in 1829.

There can be no doubt that the first three storeys of the Qutb Minar were built during the first half of the thirteenth century and, although under the command and instruction of their Muslim conquerors and, further, influenced by the purpose of the building —a Tower of Victory—the design and construction are largely those of Hindu architects and workmen impressed into the service. While having an indescribable "atmosphere" reminiscent of Hindu work in temples and elsewhere, it bears no sort of resemblance to the Towers of Victory built elsewhere by the Muslims, as at Chitor and Daulatabad. The abortive attempt, on a gigantic scale, to vie with the Qutb Minar, obviously in existence at that time, by Ala-ud-din Khalji (an attempt abandoned on his death in 1316) in no manner gives promise, if ever completed, to have been its superior, or even its peer.

The Qutb Minar is one of the finest towers in existence; the accuracy of proportion of height and girth of the succeeding storeys; the just relation of structural ornament in the galleries to the relatively plain flutings on the face of the tower; the fine texture imparted by the changing forms of the flutings themselves and the delicate entasis of the lowest storey; all are factors in the making of a superb monument. No photograph or drawing can convey any real impression of the beauty of this tower, it must be seen close at hand.

The first Muslim city of Delhi, called Siri, lying two miles north-east of Old Delhi, was built by Ala-ud-din in 1304; the second, five miles east of Old Delhi, was built by Ghiyas-ud-din Tughluq in 1321–3 and called Tughluqabad, followed by its adjunct Adilabad, built by his son about 1325. Then, in succession, Jahanpanah, filling the space between Old Delhi and Fort

Siri, 1327; Firuzabad, lying between the present city and Purana Qila, 1354; Purana Qila, three miles south of the present city, 1540–5; and the present city, Shahjahanabad, with its fort Lal Qila, 1638–58. New Delhi, immediately south of the last, was begun in 1913, formally inaugurated in 1931 and is still in process of development.

CHAPTER TWENTY-ONE

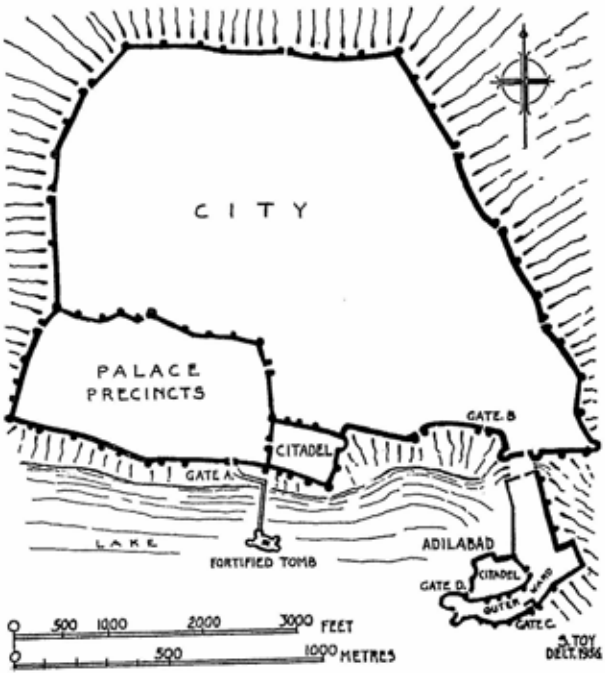
DELHI: TUGHLUQABAD

GHIYAS-UD-DIN Tughluq, Governor of Debalpur, having overthrown the previous emperor, ascended the throne of Delhi in 1320 and founded the third Turkish dynasty. He selected as the site for his capital the edge of a rocky outcrop five miles east of Old Delhi. Here between 1321 and 1325 he with his son and successor, Muhammad bin Tughluq, built most extensive and powerful fortifications which were so enormous and well built as to remain to the present day among the most complete examples of defensive works of their period in the country. They include a city, palace precincts, citadel and a fortified tomb, built largely by Ghiyas-ud-din and called Tughluqabad, and, connected by a causeway to the south-east end of the first works, a separate ward and citadel, called Adilabad, built by Muhammad.

Considering the present state of these ruins and the manner in which their disintegration has been effected there can be no doubt that they have been used as a quarry for centuries. The internal buildings, being easiest of access, were first demolished and the material required for use elsewhere taken away; then followed the walls from the inside and the upper parts of the outer rock casing. The protection against adverse climatic conditions having thus been removed, disintegration followed from natural causes.

The outer curtain walls, carried round the city, the palace precincts and the citadel, follows the contours of the rocky outcrop of the site; on the north, east and west, where the falls are less precipitous, they are defended by a deep ditch, and on the south by a lake, flooded in rainy seasons. These walls, as well as those dividing the three areas, are built of enormous stones, some 10 ft. long and over and up to 2 ft. 6 in. high. The rocky sides of the site are scarped all round and faced with masonry up to the base of the wall proper, where the wall, including the outer gallery, is about 30 ft. thick. Measuring from the outside, the walls round the city are from 30 ft. to 50 ft. high, while those round the citadel reach a height of 98 ft. (p. 118). There are large bastions at intervals and gateways at convenient points. Defence was from three tiers,

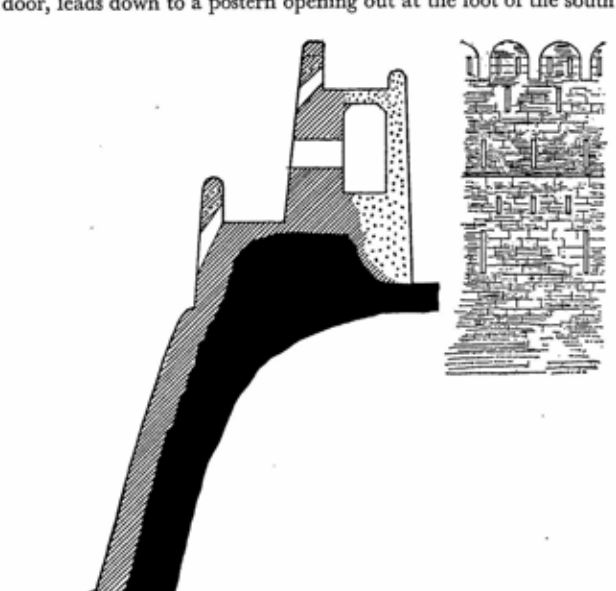
carried all round the walls and bastions, the lowest tier from an external gallery, the next, higher up, from a mural gallery and the third from the battlements on top of the wall; much of the internal wall of the mural gallery has been torn away (pp. 118, 118a). The



DELHI. PLAN OF TUGHLUQABAD AND ADILABAD

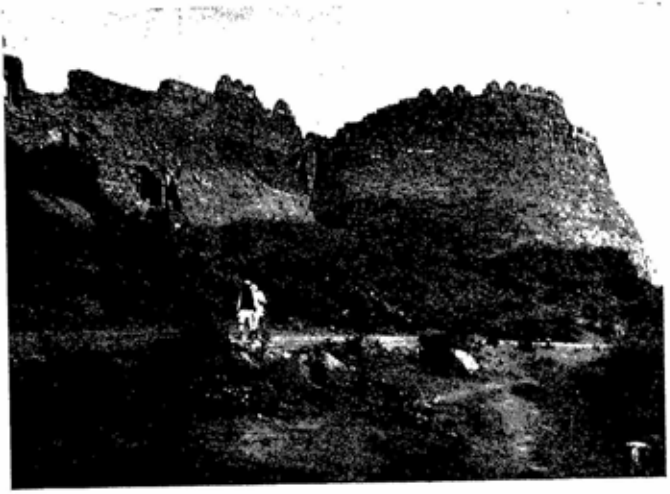
parapets of each of the first and third tiers are pierced with two rows of loopholes, the lower ones dipped steeply down from inside to outside and the upper row slightly dipped; the loopholes from the mural galleries are relatively wide, they are 6 in. wide by 4 ft. high and parallel all the way through.

In the citadel, from a cellar within a building which appears to have been a donjon or a keep, a stairway, concealed by a stone door, leads down to a postern opening out at the foot of the south



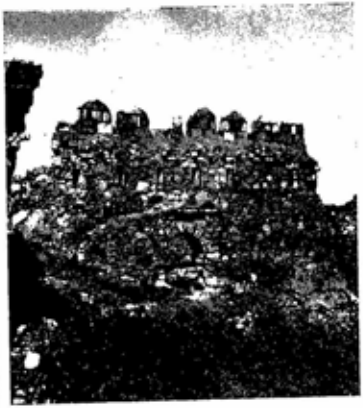
TUGHLUQABAD. SECTION AND ELEVATION OF CURTAIN WALL

wall, the exit being hidden by the rocks below. The heads of many of the gateways are formed by corbels and lintels (as in p. 2b), some appear to have had arched heads (as in p. 118a). Within each gateway of the city are numbers of circular chambers, excavated in the rock; they are 25 ft. in diameter and 30 ft. deep and were



TUGHLUQABAD. WALLS AND BASTION AT SOUTH-EAST OF CITY, INCLUDING GATE B

TUGHLUQABAD. SOUTH WALL OF CITADEL



TUGHLUQABAD. CITADEL FROM WITHIN, SHOWING MURAL GALLERY TORN AWAY

TUGHLUQABAD. OUTER GALLERY IN SOUTH WALL OF THE CITADEL

ADILABAD. GATEWAY IN SOUTH WALL AT C.

DELHI. LAHORE GATE, LAL QILA, FROM SOUTH WEST

DELHI. WEST WALL OF LAL QILA

probably for the storage of grain and other comestibles. The water supply was from wells and reservoirs; the stone from a large reservoir, excavated in the rock within the palace precincts, was doubtless used in the building of the walls.

A bridge, originally fortified, leads from the south gate of the palace precincts to the tomb of Ghiyas-ud-din Tughluq, built out in the lake. This outwork is a small fort in itself; it comprises a tall square tomb with battered sides, a paved walk surrounding the tomb and an outer fortified wall; there are also a store chamber for food and a well. The whole structure is practically intact.

The photograph on p. 2b shows the south wall of the citadel, the adjoining bastion, now in course of repair, and the south gateway to the palace precincts, marked A on plan; the second view on p. 118a is of the south wall of the citadel, taken a little further along from the same bastion and showing clearly the outer gallery; the view on p. 118b is taken looking along the gallery towards the bastion. On p. 118 are a section and elevation of the wall of the citadel; black shading representing rock, hatched shading the masonry and walling, and stippled shading the parts destroyed. The third view on p. 118a is taken from the palace precincts, with the gateway to the citadel in the foreground and the inside face of the citadel wall, with the mural gallery torn away in the background. In the last view many of the corbels which supported the lintels of the roof over the mural gallery are seen still in position. The upper view on p. 118a is of the city wall, including gate B and the great bastion on the right. It will be observed in this view that the head of the gate and a long length of the outer gallery above have been destroyed.

CHAPTER TWENTY-TWO

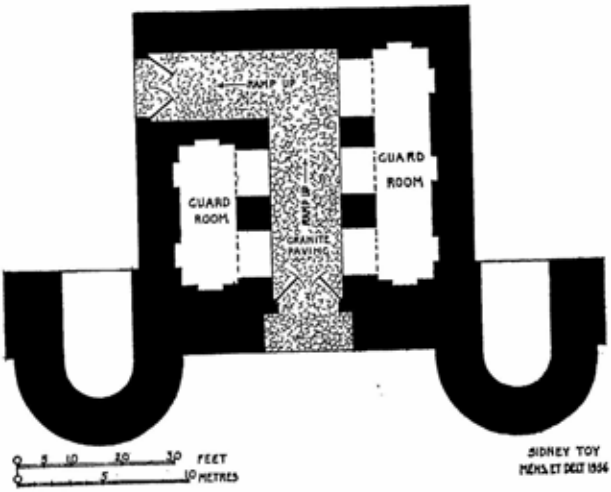
DELHI: ADILABAD

ADILABAD, extending out from the south-east corner of Tughluqabad and connected with it by a causeway, consists of a citadel and an outer ward covering its south and east sides. The walls of this structure are of much the same character as those of its larger neighbour, though they are less substantial and are in a more ruinous condition (pp. 117, 118b). The defence is also from three tiers in the upper parts of the walls, an outer gallery, a mural gallery and the battlements at the summit. The internal faces of the walls are constructed with continuous wall arcades, which provide ample posts for the guards and have the additional merits of a great saving of material and of localizing any breach an enemy may have made in the wall.

The gateway, marked C on the plan, is practically intact (pp. 118b, 121). It is vaulted throughout and the passage, with a right-angled turn half-way through the gate, has a steep ramp up from outside to inside and is paved with large stones. There was a two-leaved door at the entrance and another at the exit into the ward. On either side of the passage is a large guardroom, that on the right extending across the angle to allow of attack from the rear of such enemies as may be forcing the entrance. A portion of the high vaulting of the short space outside the entrance door, with the wall above it, has fallen down, but the vaulting of the passage and of the guardrooms is complete and the whole is well preserved. Otherwise the gateways of Adilabad are in very ruinous condition; that into the citadel, marked D on plan, has a narrow barbican, involving two right-angled turns and a stepped ramp up from the outer to the inner gate.

The ascent of Ghiyas-ud-din Tughluq to the throne of Delhi was, according to legend, as violent and tragic as was his descent from it. Nasir-ud-din, having murdered his predecessor, sent robes around to his provincial governors by the donning of which they acknowledged him as their true emperor. Ghiyas-ud-din Tughluq refused to comply with this gesture and was therefore proclaimed a rebel. Two expeditionary forces in succession were

sent against him; he defeated them both and in the second engagement put the emperor's brother to death; he subsequently slew the emperor himself, who had reigned but five months, and Ghiyas-ud-din was proclaimed emperor. He at once determined to build a new city which should bear his name. It is obvious from the extent and character of these works and the short time in which they were raised that an immense number of workmen,



ADILABAD. PLAN OF THE SOUTH GATEWAY

skilled and unskilled, must have been employed in their execution, and the whole countryside drained of such personnel.

It is reported that a famous shaikh, who was in course of building a shrine about five miles away, finding himself delayed through lack of workmen, appealed to the emperor for the release of some of those engaged in the work of Tughluqabad, stressing the point of the religious character of his own effort. Following several passages between them (rather more acrimonious than amicable) the emperor refused the shaikh's request and the shaikh laid a curse on him. Soon afterwards, the emperor led an

expedition into Bengal, leaving his son Muhammad Tughluq in charge of the works during his absence. There are several accounts of the manner in which the emperor met his death but they agree in the main facts, some of them suggesting the connivance of Muhammad and the shaikh in settling the details.

Returning victorious from Bengal the emperor received disquieting reports of his son's doings at Tughluqabad during his absence and in particular of his association with the inimical shaikh, who was said to have prophesied that Muhammad would soon ascend to the throne and that the emperor would never return alive. He thereupon wrote letters, couched in severe terms, to his son and to the shaikh, the latter replying with the cryptic words, "Delhi is yet far off." Pending the emperor's arrival, Tughluqabad was elaborately decorated and, under the instructions of Muhammad, who employed an expert carpenter for the purpose, a timber pavilion was built outside the city for his reception. The pavilion was constructed as a trap with a heavy beam projecting on one side which, when subjected to sufficient pressure, as by the butting into it by an elephant, released the supports and ensured the collapse of the whole structure. Here, on the emperor's approach, Muhammad came out to welcome him, entertained him to a meal and at the end requested that the elephants he had brought from Bengal be paraded and driven round the pavilion. The request being granted the elephants were paraded, driven round the building, butted into the beam and brought the whole structure down on those within, killing both the emperor and his younger son. So died Ghiyas-ud-din, and Muhammad Tughluq became Emperor of Delhi. This monarch was at once a great warrior and a cruel despot. He occupied the throne for twenty-six years, during which he extended the empire as far south as Mysore. Having got possession of Daulatabad in the Deccan he decided to transfer his capital to that city and ordered the whole population of Tughluqabad, much to their distress and loss, to evacuate their home in the north and to trek down to Daulatabad, seven hundred miles to the south. There they remained for seventeen years before they were allowed to return to their old city. Many of them died during the journey down and many others on the road back.

CHAPTER TWENTY-THREE

DELHI: PURANA QILA

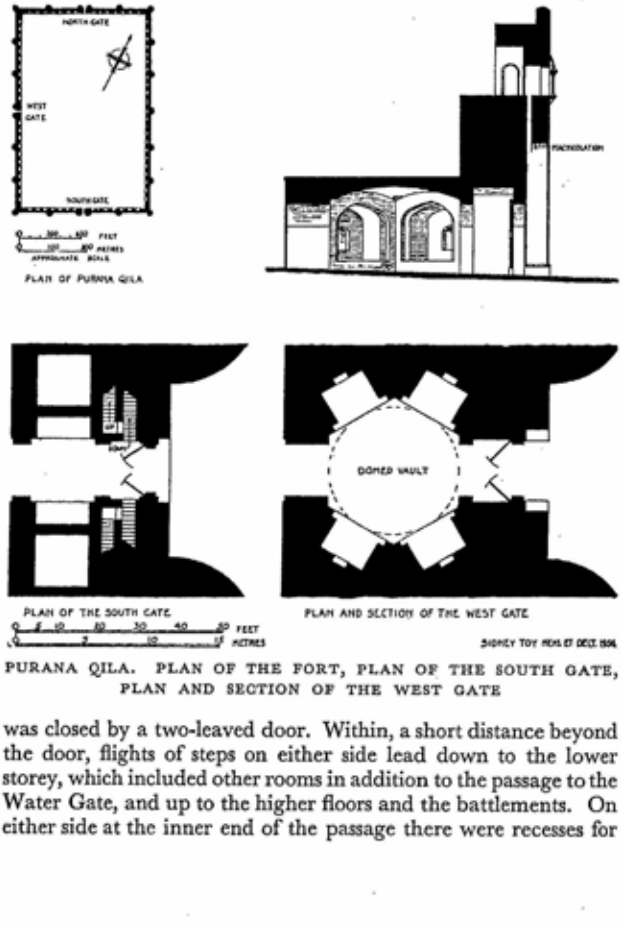
PURANA Qila stands on land between the Jumna on the east and an old branch of that river on the west and, being on practically level ground is laid out on geometrical principles. Its walls form a rectangle, the long sides running roughly north and south, and are strengthened by bastions at the corners and at wide but regular intervals along the sides. There is a massive gateway in the middle of each of the north, south and west sides (p. 124).

The fort was built under the instructions of two emperors, Humayun and Sher Shah. It was probably begun by Humayun in 1530 and completed later. There was clearly an interval between the early and later periods of the work; the walls and bastions up to about three-quarters of their height and the south gateway belonging to the early period, and the upper parts of the walls and the other gateways to the latter period.

The walls are built of coursed rubble; they are about 60 ft. high and 50 ft. thick at the base, diminishing by wide offsets, for two tiers of wall arcades, to 12 ft. 6 in. at the top. There are two tiers of fighting platforms, one from the upper arcade and the other from the wall-walk at the top; the latter having two sets of loopholes, one dipped down rapidly from inside to outside. The outside face of the walls is perpendicular but the bastions rise with a considerable batter from base to summit. Small windows, spaced at wide intervals, open on the outer face of the wall, each window from one of the recesses of the lower wall arcade. The inner faces of the walls are stepped back for the tiers of arcades from 63 ft. in thickness at the base to 7 ft. 6 in. at the head. A view of the inside face, showing a portion of the north wall, occurs on p. 124a; this shows the remains of the two tiers of wall arcades and the line of the wall-walk above.

The south gateway, though in fairly good condition in front (p. 124a), is very ruinous at the back. It was the first gateway to be built and was a Water Gate, the old branch of the Jumna on the east of the fortress passing round in front of it to rejoin the river. Below the main gate, which now stands high above the ground, is

another gate which gave access to the water and the river craft. Both gates appear to have been closed by drawbridges, fitting back into a recess when raised and thus forming an additional barrier to the passage; the upper bridge, when lowered, falling down on a causeway which jutted out from the off bank. The upper passage



PURANA QILA. PLAN OF THE FORT, PLAN OF THE SOUTH GATE, PLAN AND SECTION OF THE WEST GATE

was closed by a two-leaved door. Within, a short distance beyond the door, flights of steps on either side lead down to the lower storey, which included other rooms in addition to the passage to the Water Gate, and up to the higher floors and the battlements. On either side at the inner end of the passage there were recesses for

PURANA QILA. SOUTH GATE FROM WITHOUT

PURANA QILA. THE NORTH WALL FROM WITHIN

PURANA QILA. WEST GATE FROM WITHOUT

PURANA QILA. NORTH GATE FROM WITHIN

the guard, now destroyed down to the level of the passage, and square rooms rising up in tiers from the basement. The gateway is built of sandstone ashlar, is surmounted by kiosks and on the outer face relieved by balconies and decorated with white marble inlay and coloured glass.

The west gateway, approached by a bridge over the old branch of the Jumna, noted above, is of different character from that on the south and is more closely allied in design to the gateways built at a later period by Shah Jahan, as the Lahore Gate of the Lal Qila. It is built of dressed sandstone ashlar and decorated on the outer face with white marble inlay; here kiosks originally surmounted both bastions flanking the gate. There is a stone seat on either side of the entrance. The entrance is defended by a two-leaved door, and by a machicolation, built within the outer face of the wall immediately in front of the door and operated from the floor of the central opening high above the gate. This particular kind of machicolation, most common in Europe, is rare in India. Here, where they exist, machicolations are usually projected on corbels from the parapets beyond the outer face of the walls, as at Bidar and Golconda. The door, still in position and well preserved, is of the usual heavy construction, is armoured with iron studs and has the unusual feature of five iron rings, about 6 in. in diameter, in the upper part of each leaf; they are arranged four square with one in the centre. The doors of fortresses in India are of enormous size and weight, and great strength is required to open and close them; it is probable that chains or ropes were attached to the rings, or to some of them, to enable several men to close them. Pushing them open by two or three men would be a relatively easy matter. There are no anti-elephant spikes on the door. One of the leaves has a small wicket gate. Beyond the door is a spacious hexagonal hall, covered by a low circular dome and having two large recesses for the guard on either side (pp. 124, 124b).

On p. 124 there is a general plan of the fortress, a plan to scale of the south gate and a plan and section to scale of the west gate. On p. 124b is a view, from within the fortress, of the north gate, which will be seen to be of similar character to the west gate. Within the fortress there are some subterranean baths and a deep stepped well.

CHAPTER TWENTY-FOUR

DELHI: SHAHJAHANABAD

THE present Delhi, as distinct from New Delhi immediately to the south of it, was founded by Shah Jahan and called Shahjahanabad; it includes an older fort, called Salimgarh, Lal Qila, or Red Fort, built on the right bank of the Jumna in 1638–48, and the city, stretching in half-moon form westward from the fort and separated from it by a wide open space.

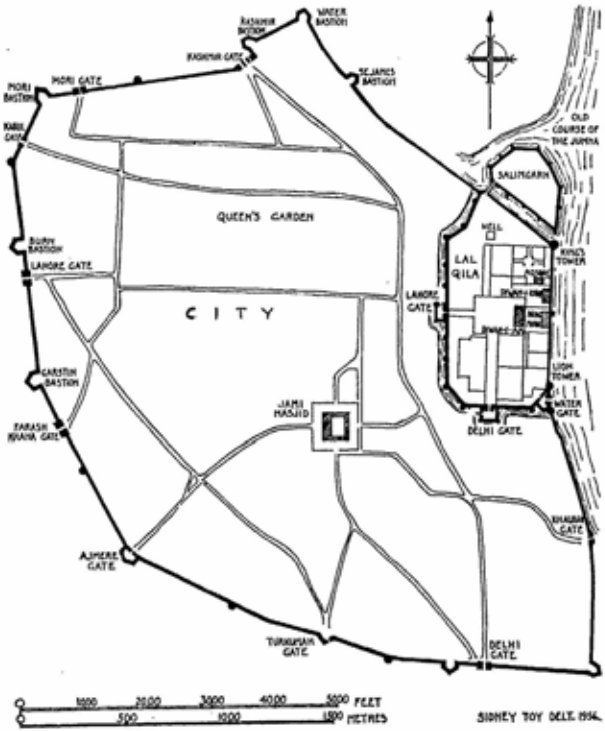
Salimgarh was built by Salim Shah (son of Sher Shah), Emperor, 1545–54, in 1545 as a bulwark against the return of Humayan, while Purana Qila was still the city; it was entirely surrounded by the waters of the Jumna and later connected to Lal Qila by a bridge, since taken down. In later days it was used chiefly as a prison; Aurangzeb confined his brother here before adopting more sinister measures at Gwalior.

Lal Qila is a rectangular fort with the north side adjusted to the line of the river branch between it and Salimgarh; it was built fundamentally to contain, and in a measure to defend, the magnificent palace within. Its walls on the land side present a most formidable aspect; they are of great thickness and rise from a battered plinth to the height of 100 ft.; they are protected by a wide and deep ditch. The plinth, which rises from the bed of the ditch to ground level, is built of rubble but the wall above this level is built of sandstone ashlar, finely dressed and of large stones; it is defended by round towers, is relieved at intervals in its height by string courses and surmounted by a battlemented parapet. There are three tiers of loopholes, one about midway in the height of the wall and the other two from the battlements; the merlons of the parapet are decorated with cusping.

The east side of the fort is much more vulnerable. Here a relatively low wall runs straight along from the King's Tower on the north to the Lion Tower on the south. This side, however, was defended by the Jumna, which formerly ran close to the fort. But the unprotected palace, with its large windows, decorated walls and tall domes, soars high above the curtain wall, offering an easy

target to the weapons of the day (mid-seventeenth century) posted on the opposite bank (pp. 118b, 127).

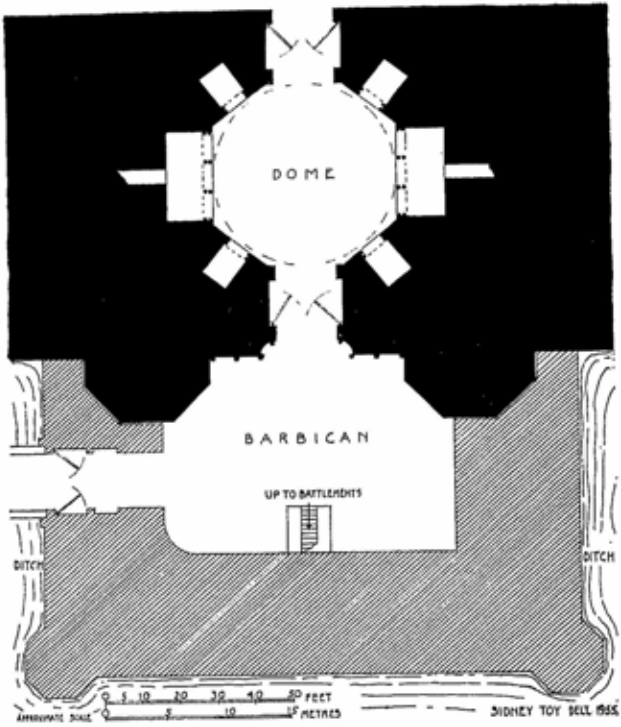
There are three gates, Lahore Gate in the middle of the west



DELHI. PLAN OF SHAHJAHANABAD, THE CITY AND LAL QILA

wall, Delhi Gate on the south and Water Gate, giving access to the river, at the south end of the east wall. Delhi Gate is defended by a barbican, involving a right-angled turn in transit through it; the inner passage is defended by a tall octagonal tower on either side.

Facing the entrance on either side is a stone elephant, erected there under Lord Curzon's instructions to replace original ones destroyed by Aurangzeb. Lahore Gate, as originally built, had no



DELHI. LAL QILA, PLAN OF LAHORE GATE

barbican but the present one was added about 1670. This barbican is of great strength, with very thick walls, and it is strongly defended from the battlements. The main gateway is flanked by octagonal towers and the passage is defended by two two-leaved doors, one at the entrance and the other at the exit; the

outer door is of teak and of very heavy construction; it is 7½ in. thick, with battens at intervals at the back, 4 in. by 5 in., plated in bronze in small panels and armoured with heavy iron straps. Between the doors is a large octagonal hall covered with a low dome and having on either side two tiers of recesses for the guard, ranged round the octagon. High above the parapets of each of the Delhi and Lahore Gates is a row of small arches, flanked by pavilions, which are purely decorative features (pp. 118b, 128).

Within the fort there is a large open space in the centre, approached from the Lahore Gate through a vaulted arcade and from the Delhi Gate by a wide street, formerly occupied by the houses of attendants and by shops. Facing westwards on the east side of this open space is the Diwan-i-Am, or Hall of Public Audience, and behind the hall the whole range of buildings, running north to south against and above the east wall of the fort, is occupied by the imperial private apartments; the Diwan-i-Khas, or Hall of Private Audience; sleeping rooms; Zenana, or women's quarters; baths; and the Rang Mahal, or Painted Palace, the residence of the chief Sultana. The Moti, or Pearl Mosque, is at the north end of this suite of apartments. The other spaces within the fort are occupied by courts for public ceremonies, houses for guests, houses for attendants, domestic offices and gardens. It would be beyond the scope of this work to describe these buildings in detail. There can be no doubt that in their pristine condition they must have been one of the most sumptuous and rich palatial groups in the East. Even now, stripped of their decoration of gold, silver and precious stones, they still retain ample evidence of their past glories.

The Diwan-i-Am is built of stone; it is open on three sides by arcades, with nine arches in front and three on either side, the vault being supported on octagonal and fluted columns and cusped arches. In the middle of the wall at the back there is a recess containing the imperial throne. In this recess stood the Peacock Throne, later removed to the Diwan-i-Khas. The stonework of this hall, which is of exceptionally good proportions, was originally covered with ivory and brilliant chunam, a plaster made of shell lime and sea sand.

The Diwan-i-Khas is built of white marble; it is open on three sides by arcades with square piers and cusped arches; the piers being decorated with formal motifs and inlaid work and having

capitals and bases carved with foliated ornament. Originally the ceiling was of silver, but the silver was carried off by the Mahrattas in 1760 and the ceiling is now restored in wood; there were a marble pavement, arcaded screenwork at the sides, and in front of the hall a fountain with the water flowing over niches containing lighted lamps. All these were removed after the Mutiny in 1857.

The walls of the city were built of brickwork in 1658; they are pierced by many gates and defended at wide intervals by bastions. At present much of the walling has been broken down but a considerable length on the north, between the Kashmir Gate and the Mori Bastion, still remains to its full height. Many of the old gates are also still standing with roads diverted round them. It would appear that these old walls were never quite completed; they suffered severely from an earthquake in 1720 and presented no serious obstacle to an attacking force. As they stand now they are as reconstructed by the British Government between 1804 and 1811, after an attack by the Mahrattas in 1804.

The splendour of the palace within the Red Fort reached its culmination in the Peacock Throne, which was carried away to Teheran by Nadir Shah of Persia, in 1739, and broken up eight years later following the murder of that prince. Such fragments of it as remain are inserted in the seat of a throne now in the museum of the royal palace at Teheran. It was seen at Delhi in 1665 and described by J. B. Tavernier, a professional jeweller. He writes that the throne had the shape of a bed 6 ft. long by 4 ft. wide and was supported on four massive feet, 20 in. to 25 in. high; from the four bars of the seat rose twelve columns to support the canopy, which was in the form of a four-sided dome; the columns were at the sides and back, there were none in front. Both the feet and the bars were covered with gold inlaid with diamonds, rubies and emeralds, in the middle of each was a cross of rubies and emeralds. Three steps led up to the open front of the throne, on which were three golden cushions; round it were suspended a mace, a shield, a bow and a quiver of arrows. In all there were 108 rubies on the throne, and 116 emeralds. The twelve columns supporting the canopy were decorated with rows of splendid pearls. The inside of the canopy was covered with diamonds and pearls and had a fringe of pearls all round it. On the top of the dome stood a peacock with spread tail; the body being of gold inlaid with precious stones and having in front of the breast a large ruby from

which depended a pear-shaped pearl of 50 carats of a somewhat yellow water hue. The tail was made of blue sapphires and other coloured stones. On the side of the throne which is opposite the court is to be seen a jewel consisting of a diamond of from 80 to 90 carats weight[1] with rubies and emeralds around it, and when the king is seated on the throne this jewel is in full view. On either side, at 4 ft. distance from the throne are two umbrellas of red velvet embroidered and fringed all round with pearls; the sticks for about 7 ft. to 8 ft. in height are covered with diamonds, rubies and pearls. Tavernier says that the throne was commenced by Tamerlane and finished by Shah Jahan.

The Indian Mutiny of 1857, as it affected Delhi, broke out at Meerut, forty miles to the north-east. The mutineers advanced towards Delhi and entered the city on 11 May 1857; proceeding to the Red Fort they were there joined by the king and his dependents, and then passed through the streets of the city, killing all the Europeans they encountered and setting fire to their houses. The officer in charge of the arsenal, with only nine men, held it against the rebels for three hours until, finding further resistance impossible, he blew up the stores of ammunition, disposing of large numbers of the enemy in the process. The brigadier in charge, without a single company of British soldiers under his command, finding himself helpless to stem the tide of bloodshed, was compelled to retreat with such officers as survived and the women and children in his charge. Then followed the horrors of the massacre of Europeans within the city and the escape of some of the women and children to gather round the Flag Staff Tower pending their flight northwards. Meanwhile the rebels mounted guns on the walls, bastions and gates and made them so strong as to repel all attacks that the British, with the scanty forces and artillery then at their disposal, made upon them.

And here it is pertinent to remark that the reason why these walls were so strong as to resist, for a long time, all attempts of the British forces to breach or carry them, while suffering great loss in the attacks, was because the British Government itself had, some years previously, rebuilt and adapted them for defence by artillery.

[1] This diamond, though as here described of much less weight, is reasonably held to be the Koh-i-noor, now among the Crown Jewels in the Tower of London.

During the next three months many skirmishes occurred outside the city, particularly along the ridge which runs northward for three miles from a point half a mile to the west of the Mori Bastion. Early in September, reinforcements and heavy guns having arrived, a renewed attack on the city was begun.

It was decided to concentrate on the demolition of the Mori, Kashmir and Water Bastions. On 11 September the walls of Delhi began to fall and long stretches of the parapets were destroyed. All through 12 and 13 September bombardment with heavy guns was kept up continuously and arrangements for storming at several points were made. During the bombardment breaches had been made in the wall near the Kashmir Bastion and near the Water Bastion. One column was to attack at the breach near the Kashmir Bastion, another at that near the Water Bastion, a third was to assault the Kashmir Gate, and a fourth to carry and enter the Lahore Gate; a fifth column was held in reserve, while a sixth force was posted to prevent sallies from the Lahore and Kabul Gates.

The attack began on the morning of 14 September under severe and deadly fire from the enemy, the stormers carrying ladders in addition to their normal equipment. Both the breaches at the Kashmir and Water bastions were carried, the latter with a loss of fifty out of seventy-five men. The first column, then joined by the second, proceeded along inside the wall to the Mori Bastion; the Kabul Gate, near this bastion, was next carried. The third column, forcing through the Kashmir Gate was then joined by the reserves and together they pushed their way across the Queen's Garden southward to the Jami Masjid; this mosque, however, was so strongly defended that without guns or means of blowing the gate they could not occupy it. On 16 September the Magazine was captured and on the 19th Lahore Gate was taken and the cavalry, passing through Delhi Gate on the south, occupied the Jami Masjid. Next day the Fort and Palace were taken and on 21 September the king was captured. Thus ended an epic struggle of almost superhuman valour and gallantry.

In conclusion, as stated in the preface, the mediaeval fortresses of India are so numerous that a selection only of some of the most important was requisite. Further, except in that of St. George,

Madras, introduced for comparison, the forts built in India by Europeans for their own defence are not included. The author is not without hope of amplifying this survey at a future date. He trusts, however, that he has made some contribution towards filling a gap long requiring abridgement.

INDEX

References are arranged in order of importance