

of enemies which they may have once resisted, but they had certainly helped to ward off that worst danger of ancient remains in the desert region—the erosive action of winds and moving sand. Looking around from the ruined walls it was easy to realize that the original level of the surrounding ground had been lowered at least 10 ft. by erosion. Inside the circumvallation the drift-sand, when once accumulated, was less liable to be shifted by the winds, and thus provided a protecting cover for the ruins. While thus fulfilling for many centuries its defensive function in a fashion the original builders could never have contemplated, the circumvallation itself had suffered badly. The portion facing due south and flanking the gate, which Fig. 51 shows, about 160 ft. long in all, alone still retained distinct indications of its original construction and character. The small segments surviving at other points, as marked in the plan (the background in Fig. 48 and in the photograph of E. v in Plate X shows two of them), had decayed into more or less shapeless mounds, which, however, were useful for determining the original circumference. The circumvallation consisted of a solid rampart of stamped clayey loess, probably built up in rectangular forms, after the fashion which still prevails throughout Central Asia wherever mud walls are used for buildings or fortification³. In the north-western segment, however, I noticed that pieces of hard loess held together by calcareous formations had been embedded in horizontal layers into the usual stamped clay.

Dimensions
of rampart
and parapet.

Gate of fort.

Circular
shape of
fort.

The width of the rampart appears to have been about 30 ft. at the base, diminishing higher up, as seen also in the section of the ancient walls of Ak-sipil fort (Plate XXXIX). The height in the southern segment, where alone it could be determined with some approach to accuracy, was $17\frac{1}{2}$ ft., measured from the floor-level of E. III. On the top of the ramparts ran a parapet, 5 ft. 6 in. high and about 3 ft. thick, built of sun-dried bricks, and still clearly traceable for a distance of about 40 ft. to the east of the gate. The bricks were of the larger size used in the main walls of E. III. Behind the parapet ran a platform, indicated by horizontal layers of brushwood embedded in the clay, evidently for the sake of giving greater consistency to the top of the rampart. The gate, now marked only by a gap in the rampart, and approximately 18 ft. wide, was flanked on either side by a small square bastion or tower, projecting about 20 ft. beyond the outer foot of the circular rampart. These flanking defences had decayed too far to permit of an accurate survey. To the west of the gate, and close to the inner side of the rampart, rows of massive posts (see Fig. 51) indicated a small room which had been built into the inner escarpment, evidently to serve the purposes of a guard-room. Owing to the erosion proceeding along the inner foot of the circumvallation the floor of the gate now appears in the photograph to be raised above the general ground-level.

The other surviving small segments of the ramparts, varying in height from 5 to 15 ft., showed no indications of any other gate, nor of bastions. Nor were the latter particularly needed, seeing that the circular shape of the fort effectively provided against any 'dead angles'. This circular construction was traced by me again in the wall remnants of the ancient fort of Ak-sipil⁴, while modified into an oval it recurs in the probably mediaeval small stronghold found near the site of Uzun-Tati⁵. The manifest advantages of this ground-plan for fortified stations of modest size seem still to be appreciated by the Chinese authorities in Eastern Turkestan, since I found the mud walls of the little military post of Ōpal between Tāshmalik and Kāshgar constructed exactly in the same fashion^{5a}.

³ I have noticed it used in many a place of Baluchistān and the Indian N.W. Frontier, from Kalāt to Peshāwar, much after the manner commonly employed throughout Turkestan, both Chinese and Russian.

⁴ See below, chap. xiv.

⁵ Comp. chap. xiii.

^{5a} See *Ruins of Khotan*, p. 117.