

of preventing the Kodaj-darja from being robbed of its current. The portion of the bed of this old watercourse which lay below the dam was  $\frac{1}{2}$  meter lower than the portion above it, that is to say, to the north of it. There was bright stagnant water on both sides of the dam, but the end of the channel next the river was perfectly dry. At the time this channel was stopped, the river divided again, as we have stated, at Kuruk-asti, so that, to retain the water in the Kodaj-darja, a fresh dam had to be put in there also.

The former dam (*togh*) was 32 m. long, and thus stretched transversely across the bed of the river, and was 12.30 m. broad. It consisted of four rows of piles, driven vertically into the bottom of the river, the two outermost rows being 12.30 m. apart, and the two innermost 10.10 m. apart, while the individual piles were driven at a distance of  $\frac{1}{2}$  m. from one another. The spaces between the rows of piles (*a* in cut) were rammed with branches and brush-wood, and the middle space (*b*) was filled with clay and earth. The top of the dam was barely more than one meter above the existing level of the river. This is the method of construction generally adopted for dams in East Turkestan; and from their temporary character it is evident, that they are unable to offer any serious resistance to the pressure of large volumes of water. Since the Jarkent-darja deserted the old bed between the canals, the dam there has lost all importance.

October 4th. Between 2 o'clock in the afternoon of the 2nd and 7 o'clock on the morning of the 4th the river dropped 3.9 cm. At Kara-tokaj (Black Young Forest) the river is joined from the right by another Kona-darja, which was abandoned, I was told, fourteen years before, and since then has been dry. It issues from the main stream a little way below Schamal. This Kona-darja probably used to unite with the Kodaj-darja, for the arm of

the Jarkent-darja which we were navigating was quite new. The district on the opposite bank is called Jigde-örtäng. The river here flows towards the east-south-east, and is sometimes straight, sometimes sinuous. For long distances it maintains the same uniform breadth of 50 to 60 meters, and is inclosed between tolerably high banks, overgrown with kamisch and underwood, and very often beset with dense thickets. In fact, it resembles generally an artificial canal, with regularly rounded curves and for the most part no traces of alluvial deposits. The depth was considerable, and the current sluggish. The transparency of the water was 30 cm., a consequence of the copious contributions made by the canals from the Schor-köl, the reedy basins of which act as settling beds for the sedimentary matter held in suspension by the current.

At Ak-jasik and Älgätschi the river makes a sharp bend to the north. Shepherds' huts made their appearance at intervals. Further on we passed the districts of Häser and Jigde-jasuk. A little below the latter two canals are led off from the river to the right, that is to the south, one of which was dry, while the other

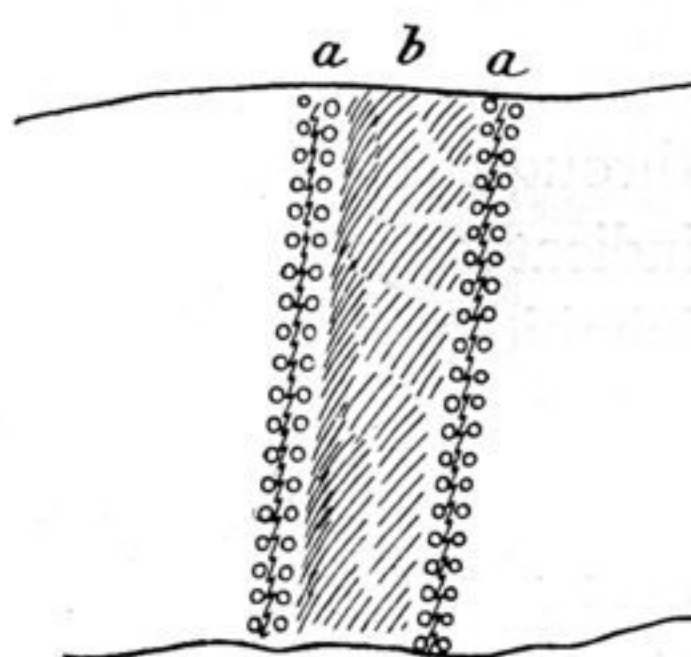


Fig. 46. DAM IN AN OLD RIVER-BED.

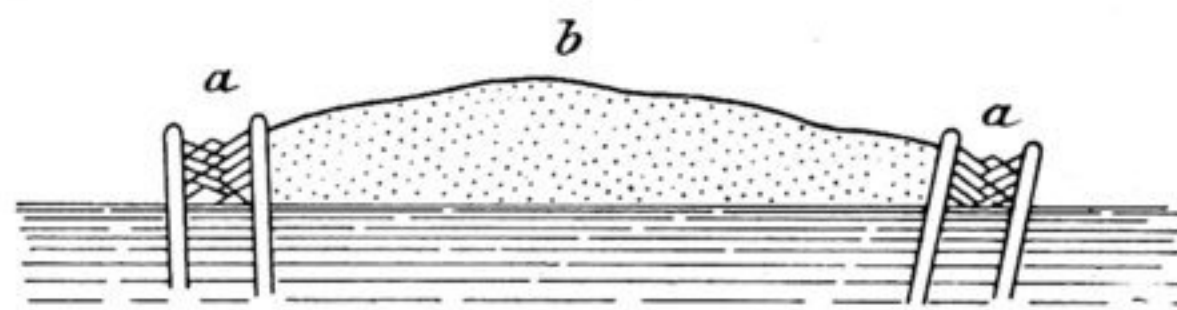


Fig. 47. DAM IN AN OLD RIVER-BED.