

CHAPTER II.

CHARACTER OF THE WORK.

THE circumstance which gave the most interest to this work, was the fact of its being the pioneer bridge across the Missouri River, and to the distinguishing features of that river the chief difficulties of the undertaking were due.

Of the three great tributaries of the Lower Mississippi, the Missouri is at once the largest, the wildest, and the least known. The Ohio, draining the eastern slope of the Mississippi basin, flowing through a well-settled country, between high banks, over a hard and undisturbed bed, has long proved a most serviceable stream for navigation, and offers no peculiar difficulties to the bridge-builder. The Upper Mississippi, rising among the plains of the central valley, and flowing for its whole navigable length through a low bottom land between the high bluffs which mark the level of the surrounding country, has in general a sandy and somewhat unstable bed ; but its light fall and easy current render it a good river to navigate, while its regimen is sufficiently fixed to make the task of bridging more properly one of magnitude than of special difficulty. The Missouri, drawing its source from the eastern face of the Rocky Mountains, and flowing with a rapid descent down the westerly slope of the great basin, unites within itself all elements of unstableness and irregularity, combining the impetuosity of a mountain torrent with the volume of a lowland river. The navigable length from Fort Benton to its junction with the Mississippi, is computed by the river pilots at about 3,150 miles, and the area of its drainage is given by Humphreys and Abbot as 518,000 square miles, or more than one-third greater than the united basins of the Ohio and Upper Mississippi. Owing to the lightness of the rain-fall on a large part of this district, the mean annual discharge is far from being proportionate to the extent of the drainage, and the overwhelming floods of exceptional years must be taken as the real examples of the size of