of the city, but material changes have taken place above. The shore line of 1826, the oldest of which any record remains, differed 3,000 feet from the present shore line, the river having been steadily cutting into the Kaw bottom, above Kansas City.* The effect of this cutting has been to diminish the angle at which the current impinges on the bluff in front of the city, so that in 1867 the current line had become nearly parallel to the shore line at this point, though somewhat divergent to the north, causing it to wear away the opposite shore a mile farther down. A further continuance of this abrasion of the Kaw bottom, must have resulted in so sharp a bend as to throw the current against the northern shore at or near the bridge site, and this change of channel would have been accompanied by the deposit of a sand bar in front of the steamboat landing, and eventually, by the formation of a new bottom land between the city and the river.

A daily water record was kept during the whole progress of the work from January 1, 1867, to June 30, 1869.† The surface of the water at the former date was taken as a datum height and called 100 ; this served as the bench to which all levels subsequently taken upon the works were referred. This elevation may also be taken as the ordinary low-water level, though the extreme low-water mark is about three feet lower ; a stage of 97.4 was observed on the 24th of December, 1867, and the low water of 1860 was probably a few inches below this. The height of the great flood of 1844, the highest flood of which any authentic record could be found, was pointed out in several places by old residents, the elevation of the water marks thus shown was carefully levelled, and the height of this flood referred to the datum line ; the result of these observations proved that the water then reached the elevation 134.29, showing a range of 37 feet three and a half inches between the extremes of high and low water. The highest flood which has occurred since took place in 1858 ; but the water then rose no higher than 122, falling more than 12 feet below the flood of 1844.

The Missouri is subject to floods of greater or less magnitude during six months of the year, from February to July inclusive. The most violent of the early floods are to be attributed to the breaking up of the ice in the Kaw and the Platte, especially the latter ; the others are due to local causes. In June

---

* See Map, Plate I.

† This record is given in profile on Plate II.