to give the chain a sinking or curve of the one full seventh of the span. The ends of the chains must descend from the tops of the piers with the same inclination that they take inwards, until each end reaches the bottom of a digging, large enough to contain stones and other materials sufficient to counterbalance the weight of the Bridge, and what may chance to be thereon. The chains, if only one to a side, must be made with four branches, at each end, to be let down through as many stones, and to be bolted below. These stones are laid flat on the bottom of the digging; other flat stones may be placed thereon, to bind and connect the whole, that they may have the same effect as a platform of one piece; four or more joists will be necessary for the upper tier—to extend from end to end of the Bridge—each will consist of more than one piece; the pieces had best pass each other side by side, so that the ends may rest on different joists on the lower tier. The splice will then extend from one joist to another of the lower tier, and must be bolted together by one bolt at each end of the splice. The plank flooring is laid on this tier. It will be probably found most convenient that the chains be made with links as long as the space between the joists: every other suspender must attach to a link of the chain edge upwards; perhaps this may best be done by a clevis to go through the upper link of the suspender, and embrace the link of the chain and receive a key above—the other suspenders will come up through the flat links of the chain and receive a key above—the lower end of the lower link of the suspender may be made so wide as to receive the end of the lower tier of joists.

The author further observes there are eight of these Bridges, erected since the year one thousand eight hundred and one; the largest is at the falls of Schuylkill, three hundred and six feet span,* one pier ten feet wide; supported by two chains of inch and a half square bar.

One at Cumberland, (Maryland) one hundred and thirty

* If the ten feet pier is in the centre of the three hundred and six feet length, the span of each division is one hundred and forty eight feet.