

puddling may be lowered to the bottom through the water and well ramened without being very much moistened.

The cofferdam being thus constructed, the water in it is to be pumped out, and the rock bed of the river, suitably prepared for receiving the masonry of the towers ; so that the towers will have the solid rock for a foundation.

When the towers are completed the crib work of the cofferdam is to be removed to the line of low water, and on either end, ice breakers are to be constructed above and below the piers.

Heavy iron plates are to be secured to the angles of the ice breakers at the intersection of the planes ; the effect of which will be to break up the ice by its own gravity as it rises on the planes, so that it may pass away harmless, on either side.

OF THE STRENGTH OF THE BRIDGE, ETC., ETC.

It will readily be perceived by reference to the plans, that the cables have to sustain their own weight, the weight of the roadway and attachments, and any additional load which may come upon it. These loads are transmitted through the cables to the towers and anchors.

OF THE CABLES.

To those unacquainted with mechanical combinations, it no doubt, at first glance, seems almost futile to suggest, that a bridge of the enormous span of sixteen hundred and ten feet, with two shorter spans each of eight hundred and five feet, either of which is of itself, equal to most of the largest bridges in the world : over which the roaring locomotive, with its train of more than an hundred tons, is to fly, almost, as with the wings of the wind, should depend for its ultimate strength upon the cohesive force of iron wire, in