

suitable dimensions, attached to a system of cables, hung in catenarian curves from the top of one tower to the other, and from the tops of the towers to the abutments.

The cables are to be composed of iron wires laid parallel to each other. There will be one centre span and two land spans. The centre span will be sixteen hundred and ten feet, and each land span eight hundred and five feet; making the entire length of the roadway inside the abutments, three thousand two hundred and twenty-two feet.

The anchors and retaining walls are the attachments on the main land, to which the cables of support are fastened.

The mechanical arrangement consists of a system of bars to which the wire cables are attached. They pass through archways in the abutments and over segmental figures of massive masonry down through a shaft fifty-six feet into the solid rock of the banks of the river. The banks on either side are composed of the same formation as the bed of the river, a hard compact slate and lime.

In the shafts, which are slotted transversely, two inverted arches of cut masonry are to be turned; these arches will receive the keys of the anchors under suitable cast iron plates which form the key of the arch. See sheet N^o. 3.

An adit level of sufficient size to get the machinery in and out, and to allow any water to escape, is to be cut, slightly sloping from the bottom of the shafts to the river bank.

These adits will cause a free circulation of air in the shafts about the retaining anchors, which will prevent any decomposition from dampness accumulating about them.

It is proposed to build the segments, retaining walls, offices, etc., of rough masonry laid in cement, with cut caps and corners. The offices and buildings for tools, stores &c., will be in the revetments as represented: Sheet N^o. 1.