

stationed in the centre. These, and other circumstances have all been properly attended to, and I feel confident that any difference of tension that may exist, does not exceed a few pounds per wire. The tension of one complete strand, was about fifty tons, or two hundred pounds per single wire. Two strands were made at the same time, one for each of the two cables, under process of construction. On the completion of one set, temporary wire bands were laid on, about nine inches apart, for the purpose of keeping the wires closely united, and securing their relative position. They were then lowered to occupy their permanent position in the cables. On completion of the seven pair of strands, two platform carriages were mounted upon the cables, for laying on a continuous wrapping, by means of my patent wrapping machines. During this process, the whole mass of wire was again saturated with oil and paint, which together with the wrapping, will protect them effectually against all oxidation.

Five hundred tons of the wire used in the cables, were manufactured by Richard Johnson & Brother, of Manchester, in England, and contracted for, by Mr. James Cocker & Co., of New York. It is but justice to these parties, to state here, that they have faithfully observed all the stipulations the contract imposed upon them. My specification required, that the wire, when suspended between two posts, 400 feet apart, should not break at a greater deflection than nine inches; also, that it should stand bending square over the jaws of a large pair of pliers, and rebending, without rupture.—The size of wire was to be twenty feet per pound, but subsequently modified to eighteen feet. The above test