

4. *The Guidewire.*—The guidewire serves as a guide, parallel to which the single wires of a strand are suspended and adjusted. This is the work of a few minutes, while the regulation of the guidewire requires days and sometimes weeks; but once adjusted it guides all wires in the cable. With the commencement of every new strand it is lengthened an inch or two as a precautionary measure to assure sufficient lengths for the former. For too short a strand there is no remedy, while one longer than necessary is easily shortened in the manner already described.

The cable, which at first hangs parallel with the guidewire, occupies in the finished bridge a considerably lower position, caused by the weight of superstructure, etc. This last position must be determined before hand, and in the case of the East River Bridge depends upon the following considerations:

The law demands that the lowest point of the bridge in the center of the river shall in no case be less than 135