feet above mean high water. An indiscriminate raising of the cable however, would not only increase its tension, but also the grade of floor which already amounts to 3\(\frac{1}{4}\) feet in 100'.

The latter difficulty might be overcome by lengthening the suspenders, but this again deprives the bridge of the advantage, obtained by short suspenders, viz., a rigid connection between cable and floor in the center of the span which prevents oscillations.

It follows, therefore, that a strict adherence to the maximum deflection is imperative. This deflection in the finished bridge will be 124.74 feet below saddle plates or 127.64 feet below the point of intersection of the two tangent lines, drawn common to cable and saddle in river and land span. Let us now examine the influences acting on the cable, which tend to change its elevation. They are of various kinds:

1. The weight of superstructure produces an elongation of the wires and hence a sinking of the curve throughout its length.