Wrought Iron Thrust Members.

In the case of an upper chord of rectangular trunks, and uprights of other than a cylindrical form, the joint piece will be correspondingly modified.

The position of diagonals may be reversed, connecting by an eye with a wrought cylindrical connecting pin at the lower chord, and by screw and nut with the joint piece of the upper chord. This involves merely a question of practical economy and convenience.

Sometimes, also, the connection is made by an eye at both ends of the diagonal, depending upon accuracy, as to length, in the manufacture, for the proper adjustment of parts. It is also practicable to provide means of adjustment in the length of vertical members.

CXXIII. But, to enumerate all the changes, and peculiarities of detail admissible in the construction of the Trapezoidal Truss Bridge, even if practicable, could hardly be regarded as expedient in this place. The essential requisites are, to provide material enough of good quality in all parts, to withstand the forces to which they are respectively liable, with efficient connections of parts, by the most direct and simple means, and with such an arrangement and adjustment as may produce the most uniform degree of strain upon all parts of each member. For instance, each section of the lower chord is usually composed of several bars, and it is important that each should sustain its proportionate share of the stress.

In the link chord composed of two links to each panel, if the links be properly fitted, the two sides of each must act very nearly alike, while the connecting block acts as a sort of balance beam to equalize the tension of links acting upon its two ends; and, if the two links of a pair vary slightly in length, the connect-