TABLES

OF COMPARISON OF WEIGHT AND COST OF TRUSSES, VARYING FROM 200 TO 400 FT. SPAN,
WITH AND WITHOUT CABLES.

In the following tables various lengths of trusses have been calculated, and the strains and sections of their different members have been tabulated. The maximum transitory load has been assumed at the invariable figure of 3,000 lbs. per lineal foot for single track. This is one-half more than is generally allowed, and the estimates, therefore, will suffer a reduction where less strength is wanted. In each case, the weight and cost of the truss has been made out, to support the whole of the load in addition to its own-weight. Then cables are added to support either a part or the whole of the load. Thus a comparison is instituted with a view of ascertaining the greatest economy which is attainable by this system.

A much greater degree of economy may be obtained by this system as well as by any other, by observing a continuity of girders when spanning more than one opening. This system indeed offers the greatest inducements for continuity. By the erection of towers on the centre pier, where the girder is stationary, fixed higher than the depth of truss, but forming one with the truss, the deflection of the cables will be increased, and thus their power of support.

We can also bring into useful play the application of inclined members, in the form of stays which run directly from the summit of the tower to the upper and lower chords, and which will prove the most economical members of the system.