plates about 5'. A piece of 6" 8.5# channel will be strong enough for the bent eye bearing. It is not worth while to calculate the number of rivets for the combined upper lateral strut jaw and vibration rod bearing plate: so we will average the dimensions as in the "Bill of Iron."

Next on the "List" comes the angle iron around the edges of the roller plates, which we will assume to be 3" × 3", weighing 5.9# per foot. The length on one side is 33", and at the end say 4½" on each side of the anchor bolt hole; making seven feet in all for each plate.

Next come the pieces of channels, which we will assume to be of the sizes marked on the "Bill," and next the rivet heads, for which we will make a separate bill, then enter the total weight with the other items. Considerable approximation is used in ascertaining the numbers; and the floor-beam rivets are omitted, for their weights are included in the weight of the beams. The total length of top plate for chords and batter braces is about 350': let us average the rivet spacing therein at 3½", making the total number 2 × 370 × 12 × 5 = 2537.

We may say that there is one rivet for each latticing or lacing bar for attachment to channels, and one to every two lattice bars for attaching latticing to latticing. Half-inch rivets will be used for the latter purpose, so as not to weaken the bars unnecessarily. Let us assume that half the stay plates are attached by three-fourths inch, and half by five-eighths inch, rivets, and that there are six or eight rivets per plate. Let us average the number at each joint of the chord at sixty-four, and at each pedestal, not including those through the shoe plate, at thirty-two; and let us assume eighteen rivets at the foot of each post, six per bracket, and fourteen per jaw. The following will then be the approximate