be thus represented: draw full parallel lines across the rivet for countersinking on the upper side, dotted parallel lines for countersinking on the lower side, and two sets of parallel lines crossing each other at right angles for countersinking on both sides. Be careful to always note how many rights and how many lefts of each piece will be required, when there are both rights and lefts.

Do not forget to write conspicuously the scale or scales of the drawing. Lay out all bevelled edges on an enlarged scale, say from half to full size, and mark their dimensions along the edges, referring all measurements to a transverse line through some well-defined point, as the centre of the pin hole. These measurements should be checked by calculation. The slight bevels at the joints of the top chord should be treated with as much accuracy as the bevels at the hip joints; but, as the bevel is very slight, it will be legitimate to put it all on one of the abutting ends, making the other a square cut.

The centre lines for lacing-bars on the under side of a strut should be dotted. In laying out a long row of rivets—for instance, lattice rivets, or those for the top plate of a chord or batter brace—calculate the distance of some of the intermediate rivet holes from one end of the strut. Lay out these holes, then interpolate the others; because, if the spacing be laid out continuously from one end with dividers, any error in the span of the dividers will be multiplied by the number of times the distance is laid off.

After laying out a complete system of rivets for any member, check by seeing that the sum of the distances between rivet holes plus the distance of each end rivet from the end of the member is equal to the total length of the member. Make duplicates of as many parts of the bridge as possible, even at the expense of a small amount of iron, not only to save time in draughting, but also in the shop, and to facilitate the work in erection.

Arrange to have as few loose pieces for shipment as possible, and mark on the drawing of each connecting-piece to what it is to be attached, or if it is to be left loose. Thus the hip connecting-plates should be attached to either the chords or batter-