For a 16 panel truss, as arranged in Figures 18 and 19. Suppose \( w = 12m \) (\( m \) representing 1,000 lbs); \( w' = 4m \), and \( W = 16m, = w + w' \); — diagonals (except the steep ones), inclining 45°.

The end brace, then, sustaining \( 7\frac{1}{2}W = 120m \), produces tension equal to 60\( m \), upon the first and second section of chord, in Fig. 18, the proportions for which will be here considered. Allowing then, 10\( m \) to the square inch, each half chord requires a plate of about 8" by \( \frac{7}{8}" \), up to the second node from the end.

This plate may extend — say within 8" of the centre of the connecting pin at the 2d node, where it may be connected with a \( \frac{3}{8}" \) plate, by two splice-plates about 27" long (see A, Fig. 45), with a net section equal to the \( \frac{7}{8}" \) plate, or, say \( \frac{1}{4}" \) thick. Fig. 45, exhibits a disposition of rivet and pin holes, at A, so arranged as to preserve the full section of plates, less the diameter of a single 1" rivet hole.

Or, the splice-plates may be 7" shorter, and \( \frac{1}{4} " \) thicker, and the two rivets next the joint (\( j \)), on either side, opposite one another, as at BB, Fig. 45; thus giving the same section (of splice-plates), through two opposite rivets in the thicker, as through one rivet in thinner and longer splice plates. In this case, the joint should be 4\( \frac{1}{4} " \) from centre of connecting pin (\( p \)), and a little more, when the rivets exceed 1" in diameter.

At the third node, an increase of section is required, and a \( \frac{3}{8} " \) plate may be added on the inside, lapping 9 or 10 inches back of the pin, with a \( \frac{1}{4} " \) splice plate of the B pattern to balance the extra inch in width required for opposite rivet holes, and a 2" pin hole.

The inside plate continuing past the next, or 4th node, the \( \frac{3}{8} " \) outside plate may be met by, and spliced to a \( \frac{5}{8} " \) plate, in either of the modes indicated by A and