shoulder or heading \( \frac{3}{4}'' \) deep, upon both sides of the half chord, as shown by the vertical dotted line in the diagram A, Fig. 66; the brace being forked with counter shoulders upon the inside. This affords 36 square inches of shoulder surface, which, assisted by 2 bolts of 1'' diameter, give 50 square inches, to withstand less than 44,000lbs. The end of the brace is thus made to bear directly upon the abutment without any crushing action upon the chord.

At \( b \), the space in the chord is 12'', while the verticals descending parallel, would occupy 11''. But giving a divergence of \( 2\frac{1}{2}'' \), and boxing \( \frac{3}{4}'' \) upon the inside of chord timbers, leaves a space of \( 6\frac{1}{2}'' \) between verticals at \( b \). Then, boxing \( bh \frac{1}{2}'' \) upon the inside at the crossing with \( ic \), there will be a \( 3'' \) space between braces \( bh \) at \( b \), and a thickness of \( 4\frac{1}{2}'' \) (of the pieces \( bh \)) between the verticals \( bi \); also, a shoulder of \( 1\frac{1}{4}'' \) upon the outside, which may be made to act vertically in a boxing upon the inside of \( bi \), thus securing the requisite bearing surface for the thrust of \( bh \). Thus arranged, the point should be fastened with 2 bolts and 1 pin of \( 1\frac{3}{4}'' \) diameter.

The piece \( bj \) will have \( 3'' \) in thickness at \( b \), and will be furred out, if necessary, to fill the space at \( j \).

The space at \( c \) is 10''; and, \( cg \) being shouldered \( \frac{3}{4}'' \) at the upper side of the chord at \( c \), and boxed \( \frac{1}{4}'' \) at the crossing with \( hd \), the point \( c \) may be secured by 2 bolts and 1 pin of \( 1\frac{5}{8}'' \) or 2'' diameter.

A \( \frac{1}{2}'' \) boxing of \( df \) at \( d \), upon the inside, leaves a thickness of \( 9'' \), being 1'' greater than the space in the chord, and the pieces \( df \) therefore require a further reduction in thickness upon the outside between chord timbers, of \( \frac{1}{4}'' \) upon each. The point \( d \), requires \( 1\frac{7}{8}'' \) bolts and pin.