the brace while we require, as seen above, \(1.59 \times 7 = 11.13\) inches to be cut away to form foothold for brace, making aggregate section of chord = \(15 + 11.13\) = 26.13 sq. inches, equal to about 7" \(\times 3\frac{3}{4}\)", by strict computation.

Timbers so small, however, although capable of sustaining, without excessive stress, any action to which a bridge is legitimately exposed, is not to be recommended in practice, as the structures might be destroyed by casualties which would but slightly affect the large timbers required in heavier and longer structures.

The centre of bearing of the truss upon the abutment, should be directly under the point \(i\), at the meeting of central axes of the brace, and the unsevered portion of the chord. Otherwise, an injurious lateral strain would result to the chord at its weakest point.

The transverse beam at the centre of the truss, may be placed above the chord or below, as preferred, and sustained by 2 suspension bolts descending divergently from a saddle, or double washer at the vertex of the braces, passing through the beam, and secured by nuts and washers upon the under side of the beam, as shown in Fig. 61. The divergence of bolts should be from \(\frac{1}{4}\)th to \(\frac{1}{4}\)th their length, and the section of bolts, a trifle more than what is required simply to sustain the weight, as they may act unequally, in consequence of a small lateral tendency of the braces.

A small bolt should pass vertically through chord and beam, to preserve them in place. Also, a small bolster, or corbel block