in the more central portions, avoiding generally the use of very thin timbers. This arrangement may afford the advantage of breaking joints, which will sometimes perhaps, be worth taking into account.

On the other hand, for short and light bridges, the single mortised thrust braces may be adopted with satisfactory results.

6. For Truss F. 35, the upper chord may be composed of tapering pieces; say, 5×9 inches at the ends, and 7×9 at the middle of the truss. Or, the timbers may be sawn with a uniform section, and a 2" plank taken off through about half of the length of each piece. The timbers should have a plain half-lap of about 18" at the middle splice.

The single brace c, should be replaced by two, of about 3½"×6", and the brace e, by 3½"×5" pieces, which may halve and lock with like pieces meeting them at the upper chord; or perhaps better, one pair remaining uncut, the other pair may be cut off near the lower side of the chord, & a piece of 3×6 timber bolted fast between the cut, and extend up between the uncut braces, where it is to be secured by the transverse bolt, in this case, about 1¾" in diameter. A smaller bolt was specified in the Original, as reliance was partially had upon the boxing in the chord timbers.

The diagonals c & d, may have two 1½" bolts at the upper, and b & e, the same at the lower chord; the short pins, (indicated by dotted circles,) being dispensed with in both cases.