

7. In [the case] of Truss F. 37, the following modifications may be recommended. For upper chord, one course of  $7 \times 10$  inch timbers upon each side, with the length of one panel at each end, reduced to  $5''$  in thickness, by taking off  $2''$  from the inside, forming a shoulder near the first node from the end.— For Thrust braces, (in pairs,)  $4'' \times 7''$  at  $e$ ,  $3 \times 6$  at  $h$ , &  $3 \times 5$  at  $k$  &  $m$ ; unless for convenience or other reasons, it be deemed proper to use  $3 \times 6$  es for all, except at  $e$ .

In view of a possible *non*-decussation through  $l$ , (a contingency not originally anticipated,) the Tension diagonal  $i$ , should be enlarged to  $3'' \times 12''$ , & should be secured at the upper end, by 2 bolts and 1 plain pin, each made of  $1\frac{3}{4}''$  iron, and all passing through both chords and diagonals; the short pins, indicated by dotted circles, being in this, as in other cases generally, dispensed with; it being thought preferable, to furnish the requisite surface for bearing upon bolts, by *through* bolts and pins.

In cases where doublets are required to cross, as in the case of  $k m$  &  $n$ , one pair may be cut short, as specified with respect to  $e$  & its opposite, F. 35, and spliced out with a single piece, filling the space, and secured between the cut pieces, with bolts and pins affording the necessary bearing surface, namely, one square inch for each 1000 lbs of pressure, whether from tension or thrust. The intermediate piece should have width enough to give the required strength, and also, for bolt holes at the chord.