3. The device of passing diagonals sustaining tension *mainly*, through mortises in those exposed mostly to thrust, as described with reference to Figs. 34, 35, & 37; has been modified in practice, by substituting for each mortised piece, (as *ff*, F. 34,) *two* pieces, containing together, about the same section; one being placed upon each side of the tension piece. In F. 34, *ee* are tension pieces.

With regard to F. 34, however, perhaps such a change would be attended with no advantages. But it would undoubtedly be advisable to form the upper chord of timbers not less than 5×6 inches, the same space being preserved between them, as originally specified. In view, moreover, of the action of *beams* upon the lower chord, it might be well to add one or two inches to the *depth* of lower chord timbers; though the dimensions given, are theoretically, of sufficient strength.

The double Thrust Diagonals should usually be as 1 to \(1\frac{1}{2}\) or 2, in thickness to width; thus giving more room for bolt holes, than is afforded in case of single, mortised pieces.

4. Judging from past experience, this Plan of Bridge construction is not destined soon to become very popular; in consequence, it is believed, of its capabilities not being fully comprehended.

The "Howe Plan", with Thrust braces and Iron Tension verticals, variously modified, seems to captivate by its great simplicity and uniformity of