Notes & Suggestions upon the
SUBJECT OF
WOODEN TRUSS-BRIDGES.

1. On page 94, [Original Work,] the safe negative strength of White Pine, for length equal to 18 diameters, was assumed to be 700lbs to the square inch. Further experience and reflection induce the belief, that 500lbs, as a general rule in practice, would be a better standard for adoption, although, with carefully selected material, the former assumption is undoubtedly quite reliable. In practice, therefore, I would recommend that the weights given in the Table at the foot of said page 94, be reduced by one quarter.

2. The plan for a 20' Bridge, described in P. 100, et seq., and illustrated by F. 33, Pl. VII, doubtlessly appears frightfully inadequate to the requirements of a Rail-road bridge; especially to persons in the habit of seeing bridges of such dimensions constructed of timbers 10 or 12 inches square, instead of 5×6 inches.

If the above suggested modification of the Table for negative strength of timber, be judicious, the braces of the Truss in question, (A, F. 33,) should be 6″², instead of 5″×6″, as in the original specification. And, in view of the greater liability of so light a structure to injury from the effects of sud-