the errors were on the side of safety, and the strains thus calculated in excess of those which actually occur. This will appear from the accompanying figures.

FIG. 1.

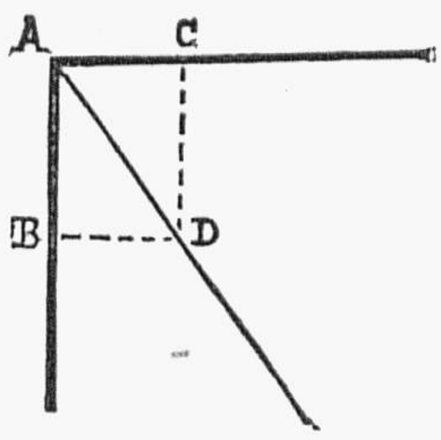


FIG. 2.

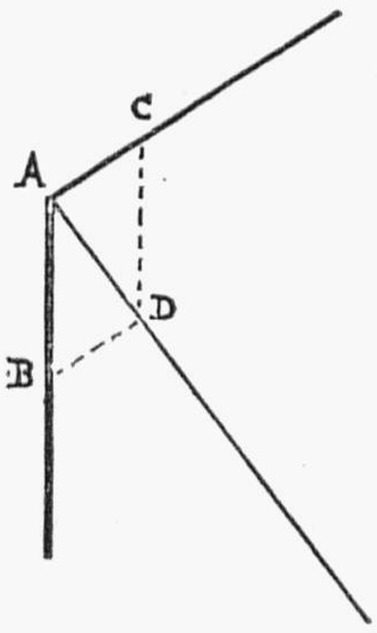


FIG. 3.

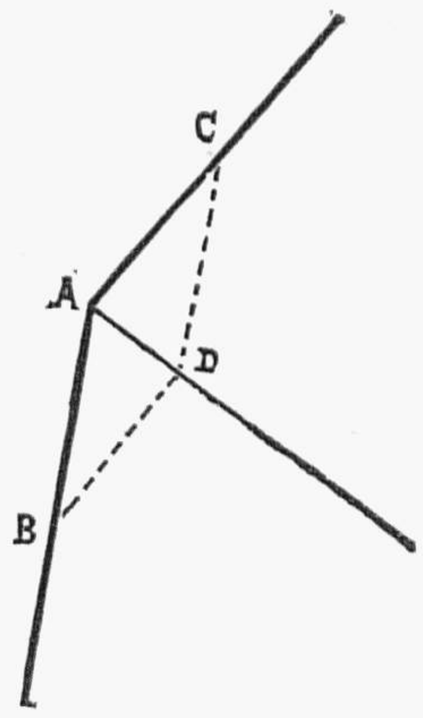
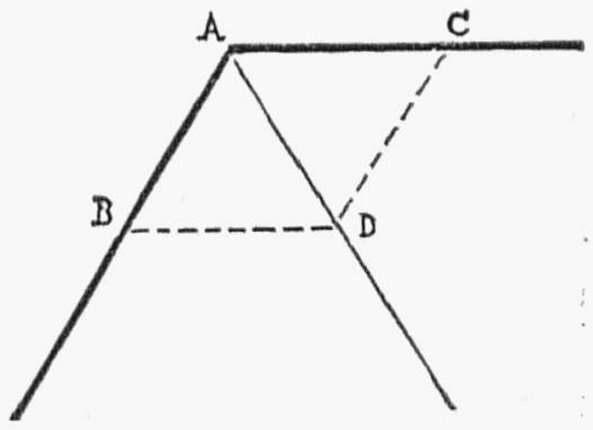


FIG. 4.



Figs. 1 and 2 represent the upper parts of the end panels of single triangular trusses in which the end post is vertical, and Figs. 3 and 4 the same parts of similar trusses in which the end post is inclined. In Figs. 2 and 3 the upper chord is inclined as in the end panels of a truss in which the upper chord is arched, and in Figs. 1 and 4 it is horizontal. As the end posts carry the full weight transferred to the masonry, the weight upon them will be the same in every case; representing the strain upon these parts by AB, and completing the parallellograms of forces A B D C, it is evident, by an inspection of the figures, that the diagonal AD, representing the weight carried by the panel tie, is less in Figs. 2 and 3 than in Figs. 1 and 4. The same will be true in every panel where the arch of the upper chord gives it a sufficient inclination to have an appreciable effect, and as the double triangular truss is simply a combination of two single triangular trusses, in one of which, according to the arrangement adopted in this bridge, the end post is vertical and in the other inclined, the strains in the web will be reduced by the action of the arch in the same manner.

The maximum strains upon the different parts of the fixed spans under the action of a moving load, computed as above stated, are given in Appendix F.*

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* Skeleton Diagrams of the 130, 176, 198 and 248 ft. spans are given on Plate XII. The figures denote the strains in tons of 2,000 lbs., the compressive strains being marked +, and the tensile —.