remembered that at least ninety per cent of all American iron highway-bridges are built on these systems. This fact alone ought to prove conclusively that they are the best type of bridge. Moreover, the author has demonstrated, in a paper entitled "Economy in Struts and Ties," published last year in the "Canadian Magazine of Science," and copied in the "American Engineer," by a method entirely practical, that for economy the web compression members of trusses should be vertical, or nearly so; thus showing, that, of all the ordinary types of truss, the Pratt or Whipple is the best.

Through bridges and pony trusses, both having inclined end posts, have alone been treated at length; for highway deck bridges are uncommon, and inclined end posts not only are more economical than vertical ones, but are also superior to them because they produce tensile stresses in the end panels of the bottom chords, thus adding to the rigidity of the structure.

The work is written for engineers, students, and, to a certain extent, county commissioners. It is not intended, though, to be used by itself as a text-book on bridges, dealing, as it does, with only one general style of truss, but to supplement the books generally used by classes in engineering schools.

It is essentially a treatise upon bridge designing, and not one upon stresses: nevertheless, it has been found necessary to discuss the latter subject in order to make the work complete. The author would refer those who wish to study concerning stresses to Burr's "Stresses in Bridge and Roof Trusses," Bovey's "Applied Mechanics," and Du Bois' "Strains in Framed Structures."

For county commissioners, Chapters IV., XIV., and XVII., Tables I.-V., XV.–XXV., XXX.–XXXIII., and XXXVIII., and parts of Chapter II., will be found very useful; containing, as they do, directions and data for making estimates of cost, and means of proving whether either designs or finished structures have or have not in many particulars sufficient strength.

Those portions of the "General Specifications" in Chapter II., relating to quality and tests of materials, workmanship, painting, etc., have been taken from standard specifications too numerous to permit