

it down, and transporting it to where it can be sold for old iron.

The method of having plans and specifications on file for every competitor to bid upon is not a good one. In the first place, it necessitates the sending of engineers to the letting, or at least those who are capable of figuring out the weight of a bridge, thus greatly increasing the bidding-expense; then, if the plans are at all defective in design, a first-class company is unwilling to bid upon them. It is much better to let each company bid upon its own designs.

For most city bridges and for very large county bridges, it is worth a bridge company's trouble to prepare special drawings; but, for ordinary county lettings, standard drawings will answer every purpose when accompanied by a diagram of stresses and special specifications. If the letting is to be done by an engineer, a plate of details similar to Plate III. or Plate IV. will be sufficient; but the ordinary county commissioner does not understand such plans, and generally wants to see what the bridge will look like. Such a picture as the one given on Plate I. would be very taking with county commissioners, but there is a great deal of labor involved in making such a drawing. As a general rule, a sheet showing side and end elevations, and a plan of either the whole or one-half of the bridge, will be sufficient when supplemented by a sheet of details.

It is not unusual for a fancy drawing to take a contract when there are much better and even cheaper structures in competition.

The diagram of stresses should be filled out as shown on Plate V.

Specifications should be quite explicit without being long, or confusing to a reader of ordinary intelligence. The author would recommend the following or some similar form of blank for the use of bidders. By a few erasures it may be made to suit any case.