Details of Construction.—All details of construction to be properly proportioned with due regard to the various direct and indirect stresses that may come upon them. All joints to be machine dressed and to fit perfectly. Riveting in the field to be performed in a skilful manner, using the button set. There shall be no loose rivets in the bridge.

Quality of Materials.—Iron for tension members to have an ultimate strength of __________ pounds per square inch, and an elastic limit of __________ pounds per square inch. Iron for compression members to have the usual correspondence of strength. All timber to be sound and of good quality.

Workmanship.—All workmanship to be first class in every respect, and to be performed to the satisfaction of the engineer or commissioner in charge.

(Signed) SMITH & WILLIAMS.

With the diagrams of stresses, plans, and specifications, there should be handed in, or sent to the commissioner, a proposal in the following or some similar form:

To the County Commissioners of __________ County,

State of __________

GENTLEMEN,—We the undersigned hereby agree to build, and put in condition for travel, the superstructure of an iron highway-bridge of __________ spans, across __________, in the County of __________, State of __________, according to accompanying plans and specifications, for the sum of __________ dollars __________ cents ($ __________).

SMITH & WILLIAMS.

After the contract has been awarded, the successful competitor and the commissioners must sign it, and a bond must generally be given by the company as a guaranty that they will complete the work according to the specifications. It is well for the representative of each company to be provided with