PREFACE.

From the great importance of the art of bridge construction, it might be supposed that its principles would be familiarly understood by all whose occupations require an acquaintance with it. If, however, any work exists, containing an exposition of a theory sufficient to account generally for the various phenomena observed in the mutual action of the parts of trussed combinations of wood or metals, the author has neither seen or heard of it. When his attention was first directed to the subject of properly proportioning the parts of bridges, by being called upon in the discharge of professional duties to superintend their construction, he found it impossible to procure satisfactory information, either from engineers and builders, or from books. In fact, if he may be permitted to judge from the contradictory