the community, and shake the public faith in iron bridges. Reference has been made above to the proper loads to be placed upon wrought-iron when under a tensile strain. Similar loads have been determined for other materials, and for other kinds of strain.

The preceding remarks in regard to the loads for which bridges should be designed, and the safe weight to be put upon the material, are given to show how far the safety of a bridge is a matter of fact, and how far a matter of opinion. It will be seen that the limits within which we are at liberty to vary, are quite narrow, so that bridge-building may correctly be called a science; and there is no excuse for the person who guesses, either at the load which a bridge should be designed to bear, or at the