the same as given by the committee of the American Society of Civil Engineers.

The load which any bridge will be required to carry being determined, and the general plan and dimensions fixed, the several strains upon the different members follow by a simple process of arithmetic, leaving to be determined the actual dimensions of the various parts, a matter which depends upon the power of different kinds of material to resist different strains. This brings us to the exceedingly important subject of the nature and strength of materials.

It has been said that we know what one square inch of iron will hold. Like the question of loads above examined, this is a matter which has been settled, at any rate within very narrow limits, by the experience of many years of both European