OF BRIDGES.

construction of this Bridge, and made the experiments of which we are about to give an account.

A rib of the Bridge, taken at a venture, had been fixed upon a frame of wood-work, so joined together in parts, that it could not sensibly lengthen; to it were adapted cast-iron beds similar to those fixed upon the piers, and upright bars, with forked tops, in order to prevent the rib from deviating from a perpendicular during its being loaded, and also to support it in case of its breaking, and seven boxes suspended at the same points, where every rib will experience the pressure of a part of the flooring, and of the persons who shall pass over the Bridge.

The boxes were filled at the same time, till they contained double the weight which each rib must bear, under the supposition of an extraordinary concourse of people upon the Bridge; and, during this operation, attention was paid to the changes of figure which took place in the great arc gg: it successively sunk at the key or summit d, and rose towards the haunches bb, as every other body possessed of a slight degree of elasticity would have done, and it returned to its former position in proportion as the load was diminished.