

of the structure, together with the above specified rolling-load, shall in no part cause a tensile strain of more than 10,000 pounds per square inch of sectional area. Iron used under tensile strain shall be tough, ductile, of uniform quality, and capable of sustaining not less than 50,000 pounds per square inch of sectional area without fracture, and 25,000 pounds per square inch without taking a permanent set. The reduction of area at the breaking-point shall average 25 per cent, and the elongation 15 per cent. When cold, the iron must bend, without sign of fracture, from 90 to 180 degrees."

A specification like this, properly carried out, would put an absolute stop to the building of such structures as the Tariffville Bridge, and would prevent a very large part of the catastrophes which so often shock