

when cold, without showing any signs of fracture, and should stretch fifteen per cent of its length before breaking; but much of the iron used in bridges, although it may hold 40,000 or 50,000 pounds per inch before failing, will not bend over 90 degrees without cracking, and has an elastic limit as low as 18,000 pounds. It is thus full as important to specify that an iron should have a high elastic limit as that it should have a high breaking-weight. A specification which allowed no material to be strained by more than 10,000 pounds per inch, and no iron to be used with a less elastic limit than 25,000 pounds, would, at the same time, agree with the standard requirement, both in England and in the United States, and would also secure a good quality of iron.

Two documents published some time since