

deterioration of iron under repeated straining ; and we are gravely told that after a while all iron loses its fibre, and becomes crystalline. This is one of the "mysteries" which some persons conjure up at tolerably regular intervals to cover their ignorance. It is perfectly well known by engineers the world over, that with good iron properly used, nothing of the kind ever takes place. This matter used to be a favorite bone of contention among engineers, but it has long since been laid upon the shelf. No engineer at the present day ever thinks of it. We have only to allow the proper margin for safety, as our first-class builders all do, and this antiquated objection at once vanishes. The examples of the long duration of iron in large bridges are numerous and conclusive. The Niagara-Falls railroad suspension bridge was carefully inspected