

will enable the bridge to carry the load without exceeding the specified strains. When the work is erected, the inspection must show that the plan has been exactly carried out, that the details are good, and proper evidence of the quality of the material used should also be given. Such inspection as this would at once prevent the erection of bridges like those at Ashtabula and Tariffville, and would save the public from such traps as those that fell at Dixon and at Groveland. Perhaps the most difficult thing to do will be to get satisfactory evidence in regard to the bridges that have been for a considerable time in use, and of which we do not know the history. This will be especially true in regard to the wooden bridges, of which there are so many about the country. Not only is it very difficult to be sure