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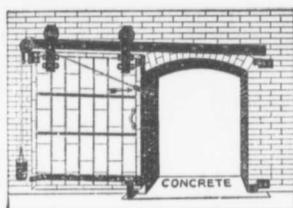
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ed without protest by all interested.

(h) A grave error was made in assuming the dead load for the calculation at too low a value, and not afterwards revising this assumption. This error was of sufficient magnitude to have required the condemnation of the bridge if the details of the lower chords had been of sufficient strength because, if the bridge had been completed as designed, the actual stresses would have been considerably greater than those permitted by the specifications. This erroneous assumption was made by Mr. Szapka and accepted by Mr. Cooper, and tended to hasten the disaster.

(i) We do not believe that the fall of the bridge could have been prevented by any action that might have been taken after August 27th, 1907. Any effort to brace or take down the structure would have been impracticable owing to the manifest risk of human life involved.

(j) The loss of life on August 29th, 1907, might have been prevented by the exercise of better judgment on the part of those in responsible charge of the work for the Quebec Bridge & Railway Company, and for the Phoenix Bridge Company.

(k) The failure on the part of the Quebec Bridge & Railway Company to appoint an experienced bridge engineer to the position of chief engineer was a mistake. This resulted in a loose and inefficient supervision of all parts of the work on the part of the Quebec Bridge & Railway Company.

(1) The work done by the Phoenix Bridge Company in making the detail drawings and in planning and carrying out the erection, and by the Phoenix Iron Company in fabricating the material was good and the steel used was of good quality. The serious defects were fundamental errors in design.

(m) No one connected with the general designing fully appreciated the magnitude of the work nor the insufficiency of the data upon which they were depending. The special experimental studies and investigations that were required to confirm the judgment of the designers were not made.

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