twice as great. But, in addition to this advantage on the score of time, the high level avoids the delay consequent on a total ascent and descent of 100 feet at every trip, besides the occasional delays incident to the simultaneous approach of vessels and trains at the same passing point. The advantage in time is, therefore, all in favor of the high level.

But there is another consideration. It is an error to suppose that the depression of the bridge is greater when a body of a given weight is moving along it, than when the same body is resting quietly on the platform. Careful experiments have been made on the Fairmount bridge, which seem fully to prove that the depression produced in the flooring by carts moving over the rough planks, is considerably less than that produced by the same carts when standing quietly in the centre of the arch.

I have caused a spirit level to be placed on the shore near the bridge, and the height of the flooring to be accurately ascertained; then, two carts, of which the total weight was four thousand pounds, to be brought on the bridge, and stood opposite the apex of the curve, and the corresponding depression accurately noted.

The same carts, horses and loads, were then driven over the bridge in the same relative position, and the depression again noted.

The depression of the bridge was less when the carts were in motion, than when they were at rest on the flooring.