

I make by actual estimate, and liberal allowances for contingencies, a cost from 900 to \$1000, according to circumstances.

Thus it will be seen, that actual estimate makes the cost of a single stretch of any length, very nearly as the square of the length, as should be expected from the nature of the case.

Hence, knowing the cost of a span of any given length, we readily deduce that of a span of any other length, in similar circumstances, with reliable certainty.

These estimates of cost provide for superstructures entirely of iron, except the string timbers to support the iron rail. By the substitution of wooden cross bearers, a considerable saving may sometimes be effected without incurring serious inconveniences.

But though my investigations have forced upon me the conviction, that in general, where strong and durable bridges are required, iron should be preferred in their construction, still, there is a multitude of cases where wooden structures should be preferred, especially in sections of country comparatively new, where timber is plenty and capital scarce; and where improvements must necessarily be of a more temporary character. With this view of the subject, I have given much attention to the details of wooden bridges, and with a good deal of investigation and experiment, have arranged plans which are confidently believed to possess important advantages over the plans generally in use.

I may therefore be excused the expression of a belief, that I might be able to render valuable services to those interested in the construction of important bridges, generally, and with this conviction I make the proffer of my services, wherever they may be desired, for the purpose of furnishing plans, superintending the construction of bridges, either of wood or iron, and of consultation generally, in matters pertaining to this, as well as other subjects in **Mechanics and Civil Engineering.**