cables will be equal to that of about 180,000 horses, or a team extending over a line of some 500 miles.

But still such computations do not prove the sufficiency of the cables; they show only that they are strong in comparison with certain other things. We have yet to compare their power with that which will be needed to sustain the heavy timbers of this bridge, and superadded thereto, the action of a column of freight cars filling the platform of the bridge from end to end.

**OF THE LOAD TO BE SUPPORTED BY THE CABLES.**

The load which the cables of this bridge will be required to sustain, will consist of three distinct items, viz: their own proper weight, the weight of the flooring which they uphold, and that of the transitory loads which may come upon the flooring.

The weight of the cables is immediately deduced from the dimensions already given, and amounts to — 1200 lbs. per lin. foot.

The weight of the timber in the flooring is determined from the plan, and is — 2200 ″ ″

The weight of the suspenders and other iron work supported by the cables, is — 150 ″ ″

To which is to be added for flagging or ballast, — 450 ″ ″

Making for the total permanent load, — 4000 lbs per lin. foot,