DESCRIPTION OF COR.

In like manner, whether an arm of a Bridge on this plan be erected one hundred feet in length from its abutment, as A B, on diagram fig. 1, plate 3, or twelve hundred feet, as A M, on said diagram, or any of the intermediate distances therein marked, it matters not, as they each will be alike strong in proportion to their extent, to carry their own weight, and also whatever additional gravity the men and materials employed in the erection of the Bridge may furnish. This fact is rendered certain, not only by the above rule, but also by many others equally incontrovertible.

PROP. 12.

The small proportion that the thickness of each rib, for the arm of a Bridge of any dimensions on this plan, bears to the depth thereof, is also a sure mean of strength suited to an arm of extra extent.

SCHOLIUM.

The causes that explain the above fact have been abundantly illustrated in practice, in various instances. Hence we witness a superior strength, possessed in a beam of oblong section, with its greatest breadth placed perpendicular to the horizon, to that of a square beam; though the former should contain less timber than the latter. See Plate 6, fig 5.

COR.

But, as the greatest strength that a beam of timber of any dimensions will furnish, by its lateral grain, is far inferior to that strength or resistance