COR. 2.

By the above end-grain rests and longitudinal needles being lined with sheet-iron or tin, a prevention is also secured against the compression or indentation of the timber in the internal part of each rib, in an arm of any extent.

PROP. 14.

Though the strength of the whole of the timber in the arms of this Bridge is unitedly in action at one and the same time while building, yet the taking out of any single part to repair, after it is built, cannot in the least degree affect the strength of the Bridge; as the said strength is not in one single instance dependent on any one part or side of the rib; therefore, the whole of the arms of a Bridge, of any extent on this plan, may be repaired at any period, without the smallest risk; which furnishes an advantage not to be equalled in any other Bridge.

SCHOLIUM.

This last proposition has been partly explained under the head of Construction and the Inclined Plane; but, as the whole of this Bridge is capable of being repaired with far more ease and less expense than any other heretofore invented, which is an acquisition of no small importance to a structure of this extra magnitude, we shall further particularize the simple means by which it is accomplished.

First. The thickness of each rib being made up of two parts, (see page 211 and 12) and both of