his resting-plates and linings, particularly for certain parts intended to prevent a compression of the timber, the less vegetable acid or sap the better. But this valuable precaution will only be adopted in Bridges of vast extent. We now proceed to state that the cap-plates and the archivolt-rails are also secured at the top and bottom of the rib to the angular levers, by chain-plates and screw-bolts.

Fig 2, on Plate 5, is a common lifting crane, by which the logs may be lowered down in succession, on the end-grain rests of the angular levers, or inclined plane, from A to B. But fig 3 represents a Lever Jack (as that is the name the author has fixed on this machine, it being one of his own invention.) The arm of this lever is made out of a number of pieces of timber, and is of simple construction and great strength. T. is the frame in which the weight called the regulator traverses. K. the regulator and winch. The mode of hoisting and lowering a log with this machine is far more simple and safe, as also of less expense than any crane heretofore made use of, as the strength of a child of twelve years of age properly applied is sufficient to hoist or lower the heaviest log required in a Bridge, whereas it would take two strong men at least to perform the same task with a crane on the former construction; but as this makes up no essential part in the author's Bridge, we shall pass on to an explanation of the nature and use of the other figures contained on the Plates first mentioned.