the fixture to bear upon, so as to keep the beam from throwing the weight altogether upon the inside of the upright, and producing unequal strain.

Another suggestion is, to form a Stirrup in the upright, just above the connecting-block, for the beam to pass through and rest in; as seen at $b$.

This will admit of the projection of beams for the support of Side-walks. The stirrup may be formed of iron 1" by 2" or 2 1/4", according to size and character of bridge. The iron should be upset, so as to give sufficient width and strength at the bottom of the stirrup, to allow a 1 1/4" stem to be screwed in, to pass down through, and support the connecting-block. This stem may extend above the bottom of the stirrup, 1/2", or a little more, a hole being made in the under side of the beam, to receive that projection. It would be well to have the thread turned or chipped off from the projecting part which enters the beam. This plan may be used in bridges either with or without side-walks.

To enable this kind of beam to be inserted in the place of wood, in the case of bridges originally constructed with wooden beams, a fixture somewhat like that described in the preceding page, but made in two pieces, with lips or flannges, to be riveted or bolted together upon the outside of the upright.

In the case of Double uprights, the beam being cut to go between the inner branches, the fixture should lap about 20" upon the beam, and extend so as to clasp both branches of the upright.