If the bottom be bare rock, incapable of holding piles, the
mud-sills must again be resorted to. They should be weighted
so that they may be sunk into place, then drift-bolted to the rock.
This can be done without the aid of a diver. Of course the sills
must be firmly attached to the lower tier before being put down.
The tops of all piles should be cut off to an exact level, so
that, when the bents are erected, the upper surfaces of the
upper caps will lie in the same horizontal plane.

On these caps should be placed timber-beams stretching from
one bent to the next, and lying immediately under the trusses: joists will answer the purpose. It is generally customary to
place the bents under the panel points; but the author prefers
to put them two feet to one side, so that the floor beams may be
swung into place without taking down the falsework. This
method may, and probably will, require an extra bent at one end
of the span; so, if the bents be expensive, it is better to put one
under each panel point, and remove the upper tiers before swing-
ing the floor-beams. The level of the top of the longitudinal
beams should be at least six inches below the feet of the posts,
so as to permit of the use of camber blocks, like those shown
on Plate VII. The angle which the contiguous faces make with
the horizontal (less, of course, than the angle of friction of the
wood) enables the under block to be easily knocked out when
the span is to be swung.

The timbers for the caps and posts of the falsework are gen-
erally square, and the sizes for the latter are to be found from
Table XXXIX., after the stresses in them have been ascer-
tained as follows:—

Let

\[ W_1 = \text{weight per foot of the iron-work of the bridge,} \]
\[ W_2 = \text{average weight per foot in height of one bent of falsework} \]
\[ \text{and the timbers whose weight it supports,} \]
\[ \rho = \text{wind pressure per square foot,} \]
\[ A = \text{area per lineal foot which the two trusses present to the wind} \]
\[ \text{(it is generally about five or six square feet),} \]
\[ A' = \text{the average area subject to wind pressure per foot in height} \]
\[ \text{on one bent, and its share of longitudinal bracing,} \]
\[ l = \text{panel length,} \]