XXIII. It truss Fig. 9 be inverted, dropping the oblique members below the roadway of the bridge, thus reversing the action of thrust and tension members, the thrust material would act with nearly equal advantage in both plans, and with about the same amount of action. But the 30 per cent advantage as to amount of action upon tension material, would still be in favor truss 8. Besides, it is only in exceptional cases that this arrangement can be adopted, on account of interference with the necessary space below the bridge.

XXIV. In truss Fig. 10, suppose the points $b, c, d, e,$ to be loaded successively from left to right, with uniform weights equal to $w$ each, and suppose the truss to be without weight, as we have hitherto done. When $b$ alone is loaded, $\frac{1}{2}w$ must bear at $f,$ [XVIII] which may be effected, either by tension of $bl,$ thrust of $bc,$ tension of $ck,$ thrust of $kd,$ &c., by tension vertical and thrust diagonal alternately, till it reaches $f;$ acting in its course upon 4 verticals, and 4 obliques, with a weight upon each, equal to $\frac{1}{2}w.$ Or, the weight may be transferred by tension of $bk, ci$ and $dg,$ and thrust of $ke, id$ and $gf$. These alternatives are subject to the control of the builder, and he will form and connect the parts accordingly. Let it be assumed that the truss has tension diagonals, and thrust uprights at $c$ and $d,$ while $lh$