which would be decidedly an unfavorable condition, with regard to economy.

LXXVII. The operation of the web in distributing the action upon the outer and inner curved members of the rib, and transferring it from one to the other, may be understood by the diagram Fig. 23, exhibiting said curved members, connected by a web consisting of a simple system of diagonals, capable of acting by thrust or tension as may be required. The normal curve is represented parallel with, and midway between the curved members; and the equili-

![Fig. 23](image)

brated curve is represented as crossing the normal near $f$, meeting it again at $a$ and $k$, at the ends; and having its greatest aberrations at $c$ and $h$. It is manifest that the action of the outer member at $i$, is to that of the inner one at $j$, as $jh$ to $ih$ (inversely as their distances from the distorted curve), and that the action upon the outer diminishes, while that of the inner one increases each way from $i$ and $j$, until the action upon the two becomes equal at the meeting of the curves at $k$, and at the crossing point near $f$. Hence the diagonals leaning toward the point $i$ must act by thrust, while those leaning from $j$, act by tension. On the contrary at $d$, where the greatest compression is upon the inner member, and diminishes each way, the diagonals leaning from $e$, act by thrust, while those lean-