subjected to equal pressure, and if R and R' represent the forces acting upon the fibres at n and n', these forces may be represented by some portion of their lines of direction, as $n\,p''$ and $n'\,p$.

In the present case, these forces are supposed equal, and the line $p\,p''$ will be parallel to $n\,n'$; the point of intersection, which determines the distance of the neutral axis, will therefore be infinite.

If w be applied at W' the pressure at n' would become greater than at n, and if $n\,p'$ and $n'\,p$ represent the relative magnitudes of the forces at n and n', the line $p\,p'$ will be inclined to $n\,n'$ and must intersect at some point O, and, consequently, the distance of the neutral axis will become finite and could be determined if we knew the relative values of the forces at n and n'.

As w approaches B, the differences of the forces at n and n', which, for brevity, will be called R and R', will become greater, and O will approach n.

After the post yields laterally, the fibres along $A\,C$ will be extended, and, before it arrives at this point, there must be a certain magnitude of the weight, or a certain position of its line of application, that will cause neither extension or compression along $A\,C$, which will accordingly become the neutral axis.

With a still greater weight, the fibres along $A\,C$ being extended, and those along $B\,D$ compressed, the neutral axis must be within the post at some point O'.

If the post is long, and the pressure be supposed still to increase, the elasticity of the timber being unimpaired, O' will approach very near the centre. Lastly, a still greater increase of weight, and consequent flexure, will destroy the elasticity, and the position of the neutral axis will then depend on the relative powers of the fibres to resist the crushing or extending forces.

Let it be assumed, that the direction of the weight coincides with the edge of the post, and that $A\,C$ suffers neither extension or compression, the neutral axis will be at n, and R, as formerly, representing the maximum force, which will be at n', the resistance will be expressed by $(n\,n' = b) \times \frac{R}{2}$, its moment will be $\frac{b\,R}{2} \cdot \frac{2}{3}\,b = \frac{b^2\,R}{3}$. The moment of the weight being