

other, is under a maximum stress, and is nearly the same in both cases.

XV. If i and h be unloaded, the pressure on the support at h , is equal to $\frac{1}{7}w$, & the thrust of $ih = \frac{10w \times ih}{7ig}$. Taking iq' by the scale to represent this quantity, draw $q'r'$ parallel with if , and $q'r'$, compared with the same scale, will give the stress of if , from which, as in the former case, we obtain ft' to represent the thrust of kf . Also ir' represents the thrust of ki . Then, taking $kv = ir'$, on ik produced, raising the vertical $vx = ft'$, and joining kx , the line kx will represent the resultant of the forces kv and ft' , and xy , drawn parallel with ke , will represent the tension of ke , which is its maximum strain. Also, ky represents the thrust of kl , and taking $ez = xy$, and drawing za' parallel with ef , we have ea' to represent the maximum thrust of el .

By a similar process, removing the weight from l , we obtain db' and dc' as the maximum action of dl and dm , and so of mc , nb , &c.

Or the analysis may be commenced at a instead of h , varying the process as the tyro in dynamics will readily see the circumstances to require; the same results will be obtained, except what may arise from inaccuracies of construction and measurement.

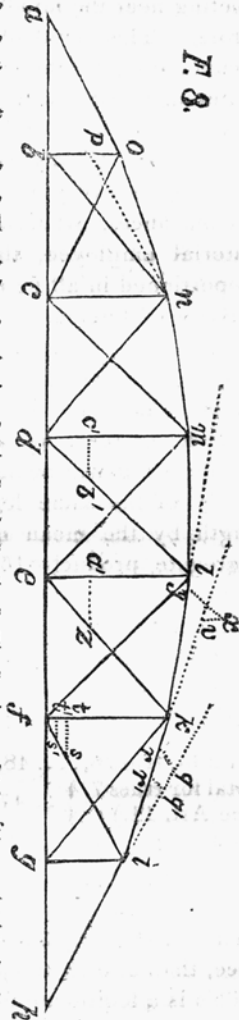


FIG. 8.