the consideration, that the future cable is uniformly loaded so heavily that the differences in own weight, calculated per foot of its horizontal projection, are vanishing.

Hence point $m$ is a point of a parabola, which, if prolonged, would have its vertex in $v$. Taking point $v$ as origin and calling the coordinates of $a$ and $B$, those of $m$ : $(a-h)$ and $(B-l)$, we have as first condition:

$$\frac{B^2}{a} = \frac{(B-l)^2}{a-h} \quad (1)$$

The equality of the tensions on either side of $g$, gives the second condition:

$$\frac{\sqrt{B^2 + \frac{4a^3}{2a}}}{Bq_i} \times \frac{\sqrt{w^2 + 4f^2}}{2f} = wq$$

$q$ and $q_i$ signify the weight of the wire per unit of length in center and side span. The actual tension being of no importance, we assume $q$ equal to 1 and $q_i$, in consequence of the steeper curve equal to 1.01.