Again, referring to analysis of truss Fig. 10, we find action upon chords represented by $20k^2m$, and action upon other parts, by $(s^h + 11.2v)m$. To make these quantities equal, requires that $v = 1.03h$, and that the length of truss be equal to $\frac{5}{1.03}$ times its depth, or nearly 5 to 1.

From this last case, we may infer as a probability, that a ratio of length to depth as 5 to 1, is the most economical for a truss of 5 panels, other things the same. We know, moreover, that by making $v = \frac{1}{2}h$, in the same truss, we double the amount of action upon chords — making it equal to the aggregate upon all parts with the ratio of 5 to 1, while the action, and consequently, the material of the other parts is probably reduced one-half. Hence, a ratio of length to depth as 10 to 1, probably increases the aggregate amount of action by some 25 per cent, over what takes place with a ratio of 5 to 1. We may therefore unhesitatingly conclude, that whether the ratio of 5 to 1 be too small or not, the ratio of 10 to 1 is much too large.

Referring again to the 7 panel truss, it appears above, that a ratio of 5.2 to 1 indicates the same amount of action upon chords, as on all other parts. But we can not with certainty infer that the absolute amount of action upon the truss, is less with $v = 1.34h$, than with $v = h$; in which case length is to depth as 7 to 1. In fact, if we estimate the absolute amount of action, assuming these two values of $v$ successively, we shall find no essential difference in the results. Hence, if other conditions were the same in both cases, it would follow that the ratios of 5.2 to 1 and 7 to 1 were equally favorable to economy, and that there is a better ratio still, between the two; probably, about 3 to 1.