compression throughout, though some deduction may be made in the central portion in case economy can be promoted thereby, as perhaps may not be the case to any considerable extent.

The lower chord $gb$, is relieved of tension throughout its whole length by the action of $eb$, which must continue nearly or quite at its maximum while loads are in transit, as the end $b$ will seldom be raised when unloaded, so as to relieve $eb$ to any considerable extent; while the tendency of load to elongate the lower chord, will also tend to increase the tension $eb$, and may increase it considerably beyond what it endures from simply sustaining half the weight of the truss. But this point can not be precisely determined.

These facts may properly be considered in proportioning the lower chord; but the matter should be handled with caution, and with a constant leaning to the side of safety, in case of any uncertainty in regard to the amount and kind of stress upon the various parts.

In case of unequal arms, as represented in the Figure, the short arm will generally require a greater weight to be thrown upon the king post $fh$ than upon $eg$, upon which two (regarding at present only one side of the bridge), the weight of superstructure is concentrated. It therefore becomes necessary, in order to a uniform distribution of weight upon the turn table, that a portion of this excess be transferred from $fh$ to $eg$, through the tension of $ee$ and $hn$, or by equivalent means. But assuming that the reader is versed in the general modes of calculating strains, as explained and illustrated in this and other works treating of the subject, I shall not go much into detail in that branch of the matter in hand, at this time.