But, since, as we now see, the weight of structure tends to throw a constant weight of $2\omega'$ upon $ac$, which is antagonistic to $bn$, the actual maximum weight upon $bn$, is $1\omega''-2\omega'$, which will always be a negative quantity, in practice; whence $bn$ must always be inactive, and may be dispensed with.

The maximum weight upon $cm$, as modified by weight of structure, is in like manner reduced to $3\omega''-\omega'$, which will in practice, be either negative, or of quite small amount. Hence, we have the following rule: For the absolute maximum stresses of diagonals (in case of parallel-chord trusses with verticals), we add the effects of weight of structure to the maximum effects due to variable load, where both fall upon the same, and subtract the former, in cases where the two forces fall upon counter, or antagonistic diagonals.

In case of parallel-chord trusses without verticals, we add the effects of constant and variable load upon each diagonal, when alike, i.e., when both tensile or both compressive, and subtract the former when the effects are alike.

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**DOUBLE CANCELATED TRUSSES.**

LV. The use of chords in a truss being to sustain the horizontal action (whether of thrust or tension) of the oblique members, it follows that the aggregate stress of chords, is equal to the aggregate horizontal action of all the diagonals acting in either direction. And, the horizontal action being obviously as the number and horizontal reach directly, and as the vertical reach inversely; also, the length of truss being as