

sections of the half chord, added together, & doubled to represent the whole chord, and multiplied by the length of section, ($\frac{2}{3}$), produce $56.66w$, = . . . $34W$; whence, material for top chord = $34M$.

The two End Posts obviously sustain the gross load of the truss, (deducting one half of what comes upon the short spaces, mn & xy), which equals . . . $9\frac{1}{2}(w + w')$, = $12.66w$; and the length being 1, the material = $12.66m$, = $7.6M$.

Summing up the amounts thus determined for material for the several classes of thrust pieces, We have;

for Braces, or Inclined Posts,	9.01M,
,, Upper Chord, 34.00M,
,, End Posts, 7.60M;
Total, for Thrust, <u>50.61M.</u>

For Tension, (line 5, P. 178,) 52.58M.

Whipple's Trapezoidal Truss.

The distinctive characteristics of this plan are,—an Upper Chord made shorter than the Lower, by the width of one panel at each end, giving to the truss a Trapezoidal form, and the Proportioning of the several parts, in strict accordance with the maximum stresses to which they are respectively liable; devices first promulgated in the Original part of This Work, and applied by its author in the construction of Trusses with Parallel Chords.