

quire material =  $17.28m_1 = 10.37M$ .

The Truss, then, requires Thrust material—for...  
Uprights,  $3.97M$ ; for Upper Chord,  $32.6M$ ; &  
for End Braces,  $10.37M$ ; making a Total for the  
Truss, of  $46.94M$ .

### Synopsis of Results above obtained.

For convenience of comparison, the following condensed statement may be of utility.

Trusses   desig-   nated	Material required, in Ms.				
	Tens'n    total.	Compression,			
		Chord	Ends	Posts	Total.
Bollman	65.29	58.33	7.	*	65.33
Finck	70.29	58.33	10.	†	68.33
Post	52.58	34.00	7.60	9.01	50.61
Whipple	50.50	32.60	10.37	3.97	46.94

These figures are understood in all cases as prefixed to the quantity  $M$ , which, as far as relates to Tension material, represents a determinate amount of Wrought Iron, (since the trusses under discussion are assumed to be of Wrought and Cast Iron,) while, as it relates to Compression material,  $M$  represents an amount of Cast Iron, varying as the forms and proportions of parts vary. But, in the present discussion,  $M$  may be assumed to have a uniform value in expressions relating to material for Chords and End Pieces, oblique or vertical.

\* † Actual, but not comparable quantities.