

Mult. Steel Roller by Mess Kearsdnean for Mess:
J. Fullerton & Co. 2^d 1844.

Plate? $\frac{6.75-1}{6.75} \times 100 = 85-$

Rivet? $\frac{5 \times 7854 \times 1.45 \times 85}{6.75 \times} = 90$

Shell $\frac{21 \times 85 (15.5-2)}{14.5} = 164 \text{ lbs}$

Samac $\frac{50(300 \times 7.5 - 72)}{46.5} = 163 \text{ lbs}$

Cone & Ch. $\frac{135 \times 9^2}{7.75^2} = 183 \text{ lbs}$

" Stays $\frac{1.24 \times 8000}{7.75^2} = 168 \text{ lbs}$

Girders $\frac{9000 \times 6.5^2 \times 2}{(28-445) 7.75 \times 28} = 178 \text{ lbs}$

End top

160 lbs " Working pressure

$\frac{185 \times 15^2}{240.5} = 170 \text{ lbs}$

Stays

$\frac{4.22 \times 10000}{15 \times 16} = 176 \text{ lbs}$

Front tube

$\frac{140 \times (12 + \frac{8}{2})^2}{14.5^2} = 170 \text{ lbs}$

Back tube

$\frac{140 \times 12^2}{11.5^2} = 152 \text{ lbs}$

Roller back

$\frac{135 \times (11 + \frac{8}{2})^2}{121} = 252 \text{ lbs}$

Stays

$\frac{2.07 \times 9000}{10.625 \times 7.75} = 227 \text{ lbs}$