

fc :	$\frac{1}{4}(3+2+1) \times 10,000$	compression =	8,571
fg :	same as $fc \times \frac{1 \frac{1}{2}}{10}$	tension =	12,086
hg :	same maximum as fc	compression =	8,571
hj :	$\frac{1}{4}(2+1) 10,000 \times \frac{1 \frac{1}{2}}{10}$	tension =	6,040

If to these are added the previously computed effects of the dead load, there result the maximum strains that can come upon the web system by any possible condition of loading.

Since the counter diagonals can only act when the main diagonals of the same panel are relaxed, it follows that to obtain the maximum tension of any counter, the effect of the dead load to which it is opposed must be subtracted from the effect due to the live load alone. Thus, counter hj is strained from the live load 6040 lbs., but main diagonal gi is strained by the dead load 4230 lbs.; therefore the counter is to be proportioned for 6040 less 4230 lbs., or only 1810 lbs.

In the case of the Whipple double-cancelled truss, each system of the web must be computed independent of the other, and their joint effect on the chords added.

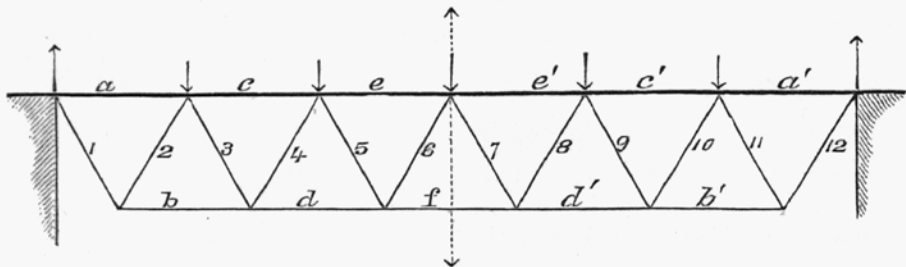


FIG. 47.

WARREN GIRDER (Fig. 47).—Load supposed to be concentrated at the panel-points of the top chord.