Average length of cables and chains,	1359 feet.
Elongation of wire per square inch caused by 2240 lbs., - - - - -	$\frac{1}{10{,}000}$
Elongation of cables by 2240 lbs.,	0.1359 feet.

From these data now we can find the elongation of the cables caused by 326 tons,

$$2240 : 4917 = 0.1359 : x \text{ and } x = 0.2983 \text{ feet.}$$

The depression of the bridge, caused by this elongation is found by the following formula, see appendix C:

$$X = \sqrt{\tfrac{3}{4}(Z^2 - Y^2)}$$

where Z expresses half length of curve, or	416 ft.
Y represents half length of chord, or	410.66 "
The deflection was, - - - -	57.50 "
The elongation of the whole cable, -	0.2983 "
One half, - - - - - - -	0.1491 "
Add value of Z - - - - -	416.0000 "
Gives value of z to be substituted in formula,	416.1491 ft.

The above quantities substituted, make

$$X = \sqrt{\tfrac{3}{4}(416.1491^2 - 410.66^2)}$$

or X = - - - - - - -	58.34 feet.
deduct former deflection, - - -	57.50 "
And we get the depression caused by the load, - - - - - - - -	0.84 feet.
The actual depression ascertained by the instrument was - - - - -	0.82 "

Calculation therefore, and fact, agree almost exactly. On the removal of this train, the structure rose again to its former level. Ordinary freight, or large passenger trains cause a depression of 3 to 5 inches, which is as