

nclined plane will produce a negative factor in the causes for depression.

In other words, it will raise the vertex of outer cables 0.455 feet, and that of the inner 0.163 feet. Hence, the cables can be hung this much lower, and the above given deflection of 127.64 can be increased to 128.095 feet.

5. *Changes of Temperature.*—A difference of three degrees Fahrenheit causes the vertex of river cable to rise or to fall one inch. In the following calculation no reference will be taken of changes produced by heat and cold; it is sufficient to carry it out for a certain fixed temperature, and we assume the given deflection to take place at ninety degrees Fahrenheit. Afterwards the guidewire can be corrected according to the temperature of the day in which it is regulated.

The circumstance, that the motion of saddles is not known before hand, or in other words, that the relative span of middle and land cable is not defined, makes a general solution of the problem