

and only 4 mm. in diameter it would stand a greater strain before yielding than it would were it any other shape.

Considering it as above, the first reading would naturally be expected to be a minimum, for as the volume of the bulb is a maximum the mercury stands lowest in the stem, and the readings on subsequent observations would increase until a fairly stationary point is reached, indicating that the bulb has regained its normal volume.

The first reading taken Saturday, November 16th, showed the thermometer to be in error 0.1479° . The second reading taken on the following Wednesday was 0.1528° . The third, taken on the following Saturday, was 0.1540° , and the fourth, taken on Wednesday, November 24th, was 0.1553° . These readings are each the mean of four and five separate observations. They show a gradual increase in the length of the mercury column which is in direct accordance with what was first expected, *i. e.*, that the pressure on the bottom of the bulb would increase the size of the same and which in consequence would lower the mercury column.

The part that seems strange to me, and that I can assign no direct reason for, is the behavior of the seven subsequent readings that were taken extending over a period of three and one-half weeks. The fifth reading shows a slight decrease, and so also does the sixth reading show a decrease compared with the fifth, after which it oscillated, as it were, about a mean of 0.1493° . The greatest deviation above this mean being $.0036$, and the greatest below $.0026$ of a degree.

It was found that the position in which the thermometer was kept had no appreciable effect upon its readings.

GRAPHICAL REPRESENTATION OF THE LAW OF FALLING BODIES.

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[ABSTRACT.]

It was shown that by subdividing a right-angled triangle by lines parallel to the hypotenuse and the sides into similar smaller triangles, the following could be graphically represented—the distance traversed each second, the velocity at the end of each second, the effect of gravity each second.