

any possible error due to change in the relative direction of the wind with respect to the car. The superelevations of all curves were carefully ascertained and made a part of the records.

RESULTS.

A total of about four hundred tests were made in the determination of train resistance for straight, level track, and the values obtained in these tests were plotted. As is to be expected in work of this nature, all of the points did not lie on a curve, so an average curve was drawn such that the sum of the moments of the points lying on one side of the curve was equal to the sum of the moments of the points on the other side of the curve. In this way a curve was obtained which was held to represent the average values of train resistance for ordinary interurban cars on a track of this type. At the same time the fact that a considerable number of points lay further from the curve than any possible error could account for would indicate that the train resistance varies over a considerable range, and shows the necessity of experiments to determine the values of the individual elements of train resistance.

The results of the tests to determine the increase of train resistance due to curvature were plotted in a series of curves showing the increase for curvature of one, two, three, five, eight, ten, and fifteen degrees.

Owing to the fact that these results are to be published shortly by the University of Illinois, it has been found impracticable to reproduce the curves at this time.