ADAPTATION OF THE STEWART SPEEDOMETER FOR FORD CARS TO TRAVERSE WORK FOR THE SOIL SURVEY.*

by

Thomas M. Bushnell

of the

Texas Co-operative Soil Survey.

The one essential point of construction of any model of speedometer which adapts it to accurate measuring is that the dial registering tenths of a mile shall move continuously in proportion to the distance traveled. By simply placing a small scale before this dial and reading from the bottom of each successive figure, it is possible to make readings accurate to 1/100 of a mile, or 1/2 of a chain scale division. Extreme care is required to avoid errors due to parallax, vibration of the car, etc., but this method was used successfully in traversing certain roads in White County, Indiana and in Richmond County, Georgia, and in making the complete soil map of Lake County, Indiana.

The Stewart speedometer for Ford cars can easily be adapted to accurate measuring by slight modifications and a simple attachment. Any service station should be able to make these changes.

This speedometer consists of two elements,—the speed indicator and the odometer, or mileage register. The speed indicator is not changed, but is important as an indicator of any trouble in the drive from the car wheel to the speedometer head. The odometer is subdivided into the season mileage and the trip mileage registers. The former is left unchanged and is useful in securing data of tire mileage, etc.

The trip mileage register may be set back by means of the trip setter which extends from the side of the speedometer head. A small ball and spring holds the setter either engaged or disengaged with the gears of the trip mileage register. This ball must be removed and the setter is permanently soldered to the trip mileage gears. This register may still be set back at any time, but the setter now revolves with the tenth dial and makes one complete revolution in a mile of travel. The milled head of the setter should be removed,