

UNITED STATES PATENT OFFICE.

JOHN THOMAS TAYLOR, OF SOUTH BOSTON, VIRGINIA, ASSIGNOR OF ONE-THIRD TO JOHN C. HARRIS AND ONE-THIRD TO FOWLER T. HUNT, BOTH OF SOUTH BOSTON, VIRGINIA.

RAILROAD CURVE TESTER AND GAGE.

No. 880,837.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN THOMAS TAYLOR, a citizen of the United States, and a resident of South Boston, in the county of Halifax and State of Virginia, have invented certain new and useful Improvements in Railroad Curve Testers and Gages, of which the following is a specification.

My invention is in the nature of a new gage designed for testing, correcting or laying the curves of a line of railroad, and especially the short curves of street railroads.

It consists in a simple and practical device for this purpose, which may be successfully used either in laying a new track or in correcting an old one, by track hands having no special knowledge of surveying, the device enabling the ordinary workman to correctly lay a curve of any desired radius or correct the irregularities of an old curve, as hereinafter fully described with reference to the drawing, in which

Figure 1 is a plan view of my curve tester and gage shown applied to a railroad curve. Fig. 2 is a vertical transverse section taken on line 2—2 of Fig. 1, and Figs. 3 and 4 are enlarged detail views of the ends of the gage showing their relation to the rails.

A is a stiff wooden bar of perfectly straight grain and free from knots and imperfections. This bar is about fifteen feet long, six inches wide in the middle and one and a half inches thick. Near the ends it is tapered as shown in Fig. 1 and is provided at one end with a laterally projecting steel plate B riveted to the end of the bar in a horizontal plane and at the other end has a similar plate C projecting on the same side of the bar A. These two plates project at right angles from the longitudinal axis of the bar A and are graduated and marked with figures exactly alike, in the present instance from 1 to 10. Plate B has in line with the graduation, a series of holes *b*, see Fig. 3, which are preferably arranged in two rows to avoid running into each other and into any of these holes a pair of detachable pins *x, x* may be placed, which pins are made long enough to project below the head of the subjacent rail R.

In the middle of the gage bar, see Fig. 2, a stop lug *a* is attached to its under side, which stop lug is designed to rest against one side of the rail head, while a set screw D is tapped through a screw-nut *a'* fixed to the bottom

of the gage bar, and is arranged to bear against the other side of the rail head to tightly hold the gage bar thereto, as seen in Fig. 2.

The use of my gage bar is as follows: To line a curve, the bar A is applied to the top of the rail R, and the rail is tightly clamped between the stop *a* and the set screw D, being careful to observe that there is no looseness. The two pins *x, x* are then inserted in two of the holes *b* in the plate B, one on each side of the rail. As shown in Fig. 3, the position would be in holes 6 and 8 as indicated by the lead lines from the pins *x*. The correct position of the rail where it crosses the other plate C will then be between the graduation lines 6 and 8 as shown. The rail end J is therefore bent or thrown in one direction or the other until it comes to the proper position between the lines 6 and 8 corresponding to the position of the rail in relation to the plate B. The gage bar is then released by loosening its set screw D and the bar moved along until the plate B comes to the point where the rail was formerly clamped by the set screw D; the bar is then fixed by the set screw at the middle point again and the operation of bending or adjusting the rail end at the end J is repeated until the curve is completed.

The length of bar A and the graduations and numbered holes on the plates B and C may be varied for any desired radius of curve.

I claim—

1. A railroad curve tester and gage, comprising a long straight bar having at each end a laterally projecting plate marked with similar graduations and numbers, and projecting on the same side of the bar at right angles to its longitudinal axis, means for fixing the relation of one plate to the rail, and means for clamping the middle of the bar to the rail.

2. A railroad curve tester and gage, comprising a long straight bar having at each end a laterally projecting plate marked with similar graduations and numbers and projecting on the same side of the bar at right angles to its longitudinal axis, one of said plates having holes through it opposite each graduation, and detachable pins fitting said holes, and means for securing the middle of the bar to the rail.

3. A railroad curve tester and gage, com-

prising a long straight bar with a stop at its middle and an adjustable set screw connected to the bar in transverse position opposite the stop, and two laterally projecting and similarly graduated and numbered plates secured to the opposite ends of the bar and projecting on the same side of the same, at right angles

to its longitudinal axis, and adjustable means for connecting one of these plates to the rail.

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Witnesses:

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