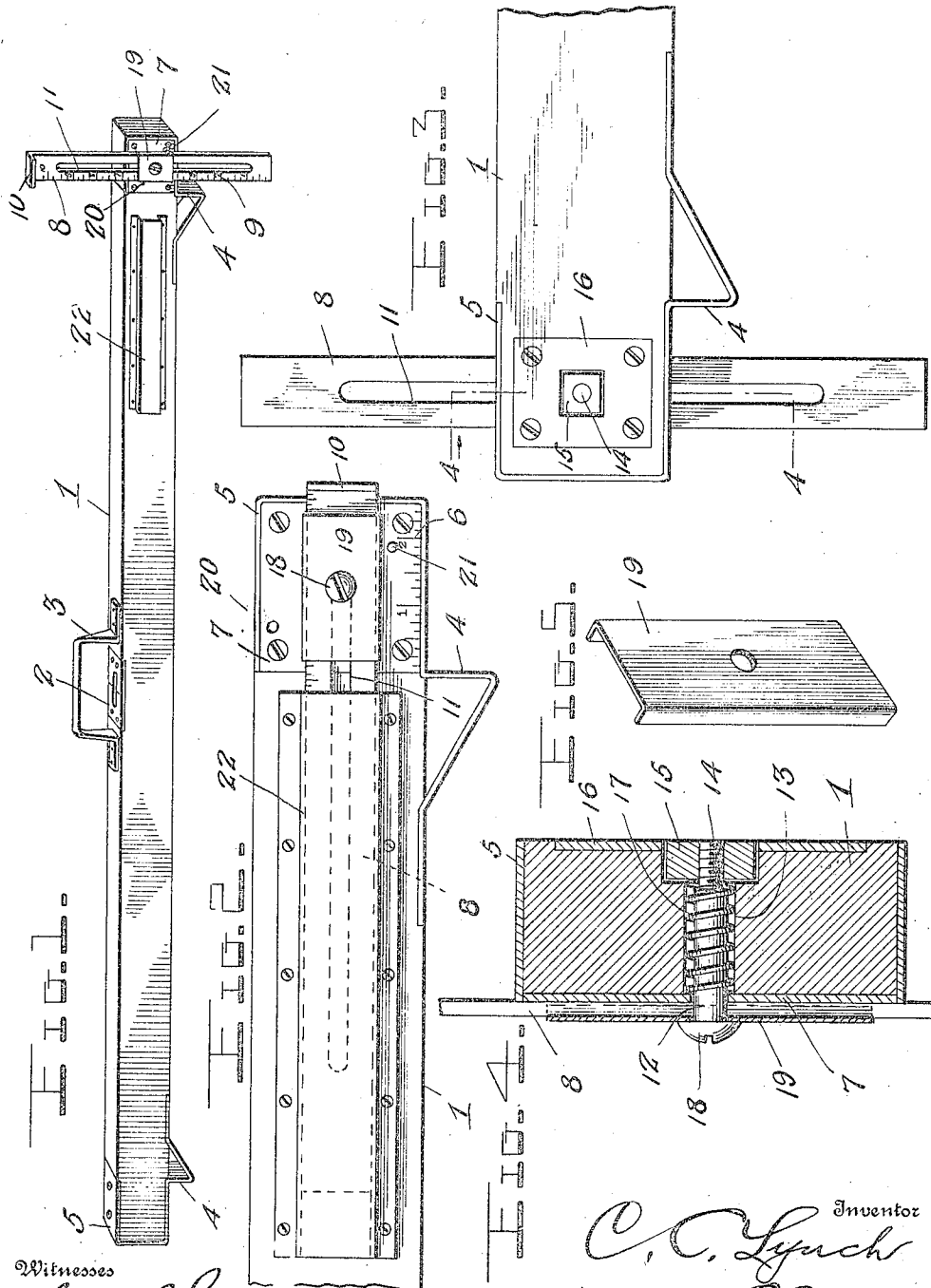


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 TRACK LEVEL AND GAGE.
 APPLICATION FILED OCT. 15, 1908.

935.038.

Patented Sept. 28, 1909.



Witnesses

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UNITED STATES PATENT OFFICE.

CHRISTOPHER C. LYNCH, OF PARKERSBURG, WEST VIRGINIA.

TRACK LEVEL AND GAGE.

935,038.

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To all whom it may concern:

Be it known that I, CHRISTOPHER C. LYNCH, a citizen of the United States, residing at Parkersburg, in the county of Wood and State of West Virginia, have invented certain new and useful Improvements in Track Levels and Gages, of which the following is a specification, reference being had to the accompanying drawings.

This invention is a combined track level and gage.

The object of the invention is to provide a simple and practical device of this character which may be conveniently used for testing the level of railway tracks and also measuring the rail elevations on curves.

With the above and other objects in view, the invention consists of the novel features of construction and the combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the improved track level and gage; Fig. 2 is an enlarged side elevation of one end of the device showing the gage plate or rule partially in its retaining pocket; Fig. 3 is a similar view looking at the opposite side of the same end of the device but showing the gage plate or rule in its operative position; Fig. 4 is a sectional view taken on the line 4—4 in Fig. 3; and Fig. 5 is a detail view of the tension plate for the rule.

In the drawings 1 denotes the body of the device preferably in the form of a rectangular bar of wood or other material and having at its center upon its top a spirit level 2 and also a U-shaped handle 3. The latter permits the device to be conveniently carried and manipulated and also serves to protect the spirit level, which latter is arranged beneath it. Adjacent to the ends of the body bar 1, upon its bottom, are stop shoulders 4 adapted to engage the track rails, said shoulders 4 being formed by bending portions of metal binding plates or strips 5 secured by screws or other fastenings to the ends of the body bar when the latter is constructed of wood. The stop shoulders or projections 4 are at known distances from each other and the portion of the body bar from one of said shoulders to the adjacent extremity of said bar may be provided with suitable scale graduations 6, as shown more clearly in Fig. 2. Said graduations are preferably formed upon a rectangular metal

wear plate 7 secured on one side face of said end of the rod within the binding strip, as shown.

In order to permit the elevation of the inside rail of a curve to be taken, a gage plate or rule 8 is slidably and pivotally mounted on one side of the body bar adjacent to one of its ends, and preferably upon said plate 7. Said gage 8 is in the form of a rule having one edge graduated in inches or other suitable scale graduations, as indicated at 9, and one of its ends bent at right angles to provide a finger piece 10. Extending through its center is a longitudinal slot 11 to receive a pivot bolt 12 on which it is adapted to slide and swing. Said bolt extends through a centrally arranged opening in the plate 7 and through a transverse opening 13 formed in the body bar 1; the threaded end 14 of said screw being engaged with a square nut 15 located in a similar-shaped recess formed in the opposite side face of the body bar 1 and also in a metal wear plate 16 set in said other face of the body bar, as shown more clearly in Fig. 3. A coil spring 17 surrounds the bolt 12 within the opening 13 in the body bar and is confined between the plate 7 and the nut 15 so that it tends to force the bolt inwardly and to cause the notched head 18 of said bolt to hold the gage plate or rule 8 under tension in any position to which it may be turned or moved. In order to render the tension of the bolt more effective and to strengthen the sliding and pivotal connection for the gage plate or rule, a channeled or U-shaped tension plate 19 is arranged over said rule beneath the head 18 of the bolt, as clearly shown in Figs. 2 and 4. The parts just described not only provide an effective sliding and pivotal connection for the gage rule or plate 8 but also a tension device for the same for maintaining it in any adjusted position.

When the gage plate or rule is swung at right angles to the body bar for use in taking the elevation of the outside rail of a curve, stop pins 20, 21 arranged upon the plate 7 and adapted to be engaged by the opposite sides of the tension plate 19 limit the swinging movement of the rule so that it will be maintained in a vertical or perpendicular position at right angles to the body bar. When the gage plate or rule is not needed, it is swung to a horizontal position or to a plane parallel with the longi-

tudinal axis of the body bar and is pushed into a guard casing or pocket 22 secured to the side of the body bar. Said pocket is preferably constructed of sheet metal by bending the same into U-form and then bending its edges to provide outwardly projecting flanges which are secured by screws or other fastenings to the body bar.

The finger piece 10 on one end of the rule permits the latter to be conveniently manipulated in inserting it in and removing it from its pocket 22 and also in adjusting it vertically when it is in an operative or vertical position. When in the latter position, the gage rule or plate 8 may be conveniently moved up or down by pressing inwardly upon the nut 15 to relieve the rule of the tension of the spring 17 and when this is done there will be no wear upon the outer graduated face of said rule.

From the foregoing description taken in connection with the accompanying drawings it is thought that the construction of the invention, its use and advantages will be readily understood without a more extended explanation.

While the preferred embodiment of the invention has been shown and described in detail, it will be understood that the invention is not limited to the specific construction as set forth and that various changes in the form, proportion and minor details may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described the invention what is claimed is:

1. A device of the character described comprising a body bar formed adjacent to one end with a transverse opening, a longitudinally slotted gage plate arranged on one side of the body bar, a pivot pin arranged in the opening in the body bar and the slot in the gage plate, said pin being longitudinally slidable in said opening and adapted to slidably and pivotally mount the gage plate upon the body bar, a spring for actuating said pivot pin longitudinally, whereby the gage plate will be held under tension and a spirit level upon the body bar.

2. A device of the character described comprising a body bar formed adjacent to one end with a transverse opening, a longitudinally slotted gage plate arranged on one side of the body bar, a pivot pin arranged in the opening in the body bar and the slot

in the gage plate, said pin being longitudinally slidable in said opening and adapted to slidably and pivotally mount the gage plate upon the body bar, a spring for actuating said pivot pin longitudinally, whereby the gage plate will be held under tension, a spirit level upon the body bar and a pocket arranged on one side of the body bar and adapted to receive said gage plate.

3. A device of the character described comprising a body bar formed adjacent to one end with a transverse opening, a longitudinally slotted gage plate arranged on one side of the body bar, a pivot pin arranged in the opening in the body bar and the slot in the gage plate, said pin being longitudinally slidable in said opening and adapted to slidably and pivotally mount the gage plate upon the body bar, a spring for actuating said pivot pin longitudinally, whereby the gage plate will be held under tension, a spirit level upon the body bar and outwardly projecting stop pins upon one side of the body bar to limit the swinging movement of the gage plate.

4. A device of the character described comprising a body bar formed adjacent to one end with a transverse opening, a spirit level on said bar, a slotted gage plate or rule, a nut set in one face of the body bar at one end of the opening in the latter, a pivot bolt passed through the slot in the gage plate and the opening in the body bar and into said nut, and a spring surrounding the pivot bolt to actuate the latter longitudinally in the opening in the body bar to place said gage plate under tension.

5. A device of the character described comprising a body bar having stop shoulders adjacent its ends, a centrally arranged spirit level on the bar, a handle for said bar, a transverse pivot in said bar adjacent to one of its ends, a slotted gage plate arranged upon said pivot and having a finger piece at one end and scale graduations on one edge, a spring for actuating said pivot to maintain said gage plate or rule under tension, and a pocket upon one side of the body bar to receive said guide plate or rule when the latter is not in use.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

CHRISTOPHER C. LYNCH.

Witnesses:

JOHN T. COOPER,
HERMAN A. LYNCH.