(No Model.)

W. ROSE.

DEVICE FOR LEVELING RAILROADS.

No. 420,245. Patented Jan. 28, 1890.

Fig. 1.

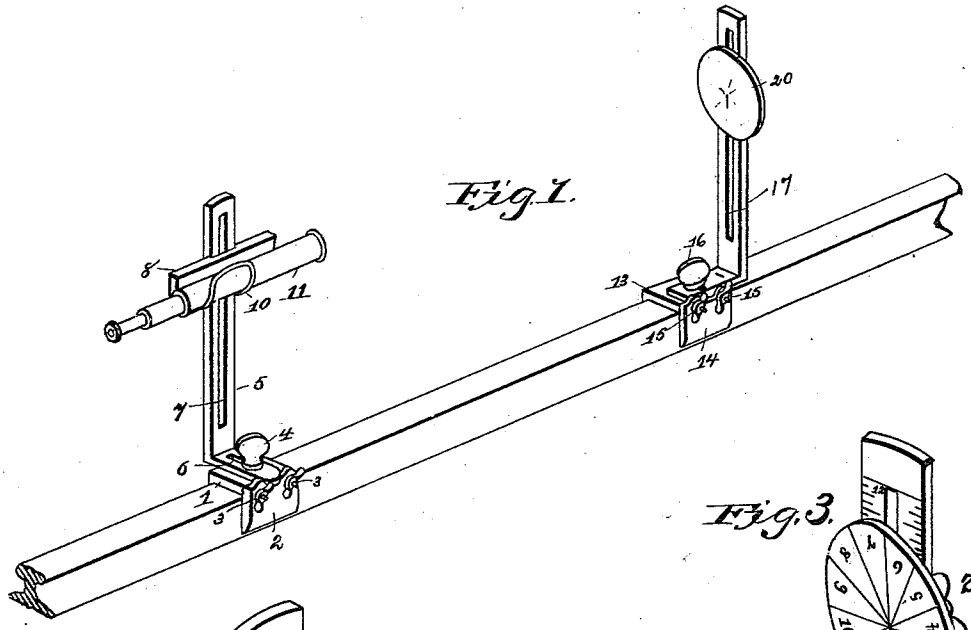


Fig. 3.

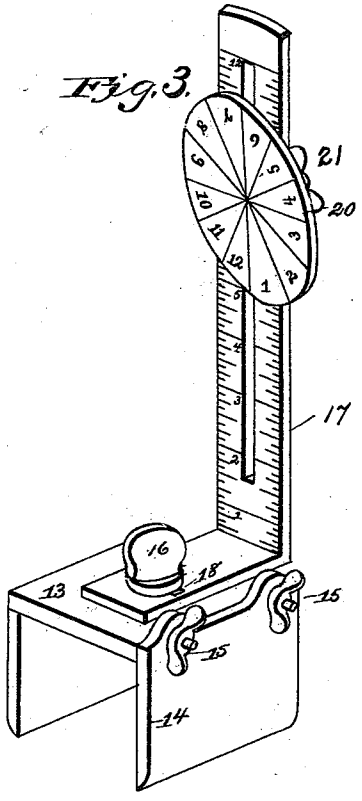
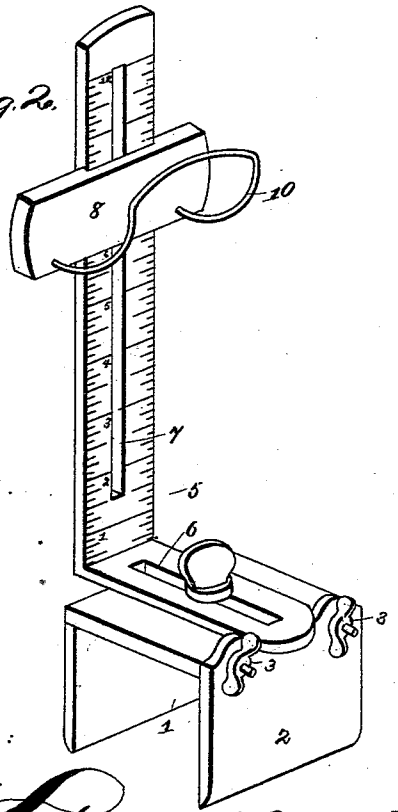


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM ROSE, OF LERADO, KANSAS.

DEVICE FOR LEVELING RAILROADS.

SPECIFICATION forming part of Letters Patent No. 420,245, dated January 28, 1890.

Application filed August 10, 1889. Serial No. 320,406. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM ROSE, a citizen of the United States, residing at Lerado, in the county of Reno and State of Kansas, have invented a new and useful Device for Leveling Railroads, of which the following is a specification.

This invention has relation to devices of precision of that class employed in leveling railroads and aligning the tracks thereof, and among the objects in view are to obviate the necessity of the employment of numerous instruments of precision and subsequent lengthy mathematical calculations and to provide a simple contrivance adapted to be clamped to the rails; and the invention consists in essentially the provision of a target-stand having a graduated scale and a clamp for securing the same to the rail and means for adjusting the target-stand upon the clamp, and also in a similarly constructed and adjusted telescope-stand.

The invention also consists in certain other features of constructions and combinations of novel parts hereinafter referred to, and particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a general view, the target and telescope stand being in operative position. Figs. 2 and 3 are details in perspective of the two devices.

Like numerals of reference indicate like parts in all the figures of the drawings.

Referring particularly to Fig. 2, which is a perspective of the telescope-stand, 1 represents an inverted-U-shaped clamp adapted to embrace the head of a rail, one of the sections 2 of the U acting as a clamping side and being connected to the opposite section by means of set-screws 3. The base is provided at its center with a set-bolt 4, and upon the base is mounted an L-shaped standard 5, the base of the L being longitudinally slotted, as at 6, for the reception of the screws, whereby it is adapted for both longitudinal and lateral adjustment, and the upper portion of the L is likewise slotted nearly from end to end, as at 7, and is provided upon each of its faces with corresponding scales of inches and fractions thereof.

8 represents a rabbeted cross-piece movable up and down upon the standard and maintained in position thereupon by a set-screw passing through the same and the slot of the standard and bearing against the rear face thereof, as shown at 9.

10 represents a wire telescope-support of inverted-U shape, and preferably formed of spring stock and adapted to support and embrace the telescope 11. This completes the construction of the glass-stand, and that of the target-stand is similar, so far as its base is concerned, in that it comprises the base 13, clamping-plate 14, set-screws 15, and central standard-screw 16.

17 represents the standard, which, like its companion, is of L shape, but is only transversely slotted, as at 18, for the reception of the set-screws. The standard is longitudinally slotted in its upper portion, and is provided with the usual disk or target 20, secured in place by a set-screw 21, fastened to the slot and bearing against the rear face of the stand. This stand, like its companion, is also provided with a scale of inches.

The operation of the invention is as follows: The glass-stand is placed upon a rail at any point and the target upon the opposite rail. By setting the telescope, for example, at six inches, should a view through the same show the same number of inches upon the target when it is set at six inches upon its stand, it will be apparent that the track is level. It will be apparent, also, that the track may be raised perfectly level by placing the instruments upon separate tracks, thus avoiding the changing of the instruments from one track to the other. To raise the track for curves, a proper elevation can be readily secured. For instance, if the operator is raising the inner rail six inches and the outer rail requires two inches elevation, then he sets the target at eight inches—the aggregate number—and he has the desired elevation.

Having described my invention, what I claim is—

1. The combination, with a rail, of a telescope-stand clamped thereon adjustably and having an adjustable telescope-support, and of a target-stand carrying an adjustable target and provided with a base clamped upon the rail in front of the telescope-stand, substantially as specified.

2. A stand for targets or sight-telescope, consisting of a U-shaped base adapted to em-

brace and to be secured upon the head of a rail, and a laterally and longitudinally adjustable glass or target carrying standard having a longitudinal slot provided with a scale and for the reception of a telescope or target supporting set-screw, substantially as specified.

3. The combination, with the base having an adjustable clamping side adapted to embrace the head of a rail and a vertical set-screw, of an L-shaped standard, the lower portion of which is longitudinally slotted and connected to the base by set-screw and the upper portion of which is longitudinally slotted and provided with a scale, and a glass-supporting cross-piece mounted on the standard and having a spring-glass-retaining arm, and a set-screw passing through the cross-piece and through the slot in the standard, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

WILLIAM ROSE.

Witnesses:
JAMES J. MONROE,
CHARLES THOPE.