No. 883,685. PATENTED APR. 7, 1908.

L. BARCELOUX.

TRACK GAGE.

APPLICATION FILED NOV. 1, 1907.

2 SHEETS—SHEET 1.

FIG. 1.

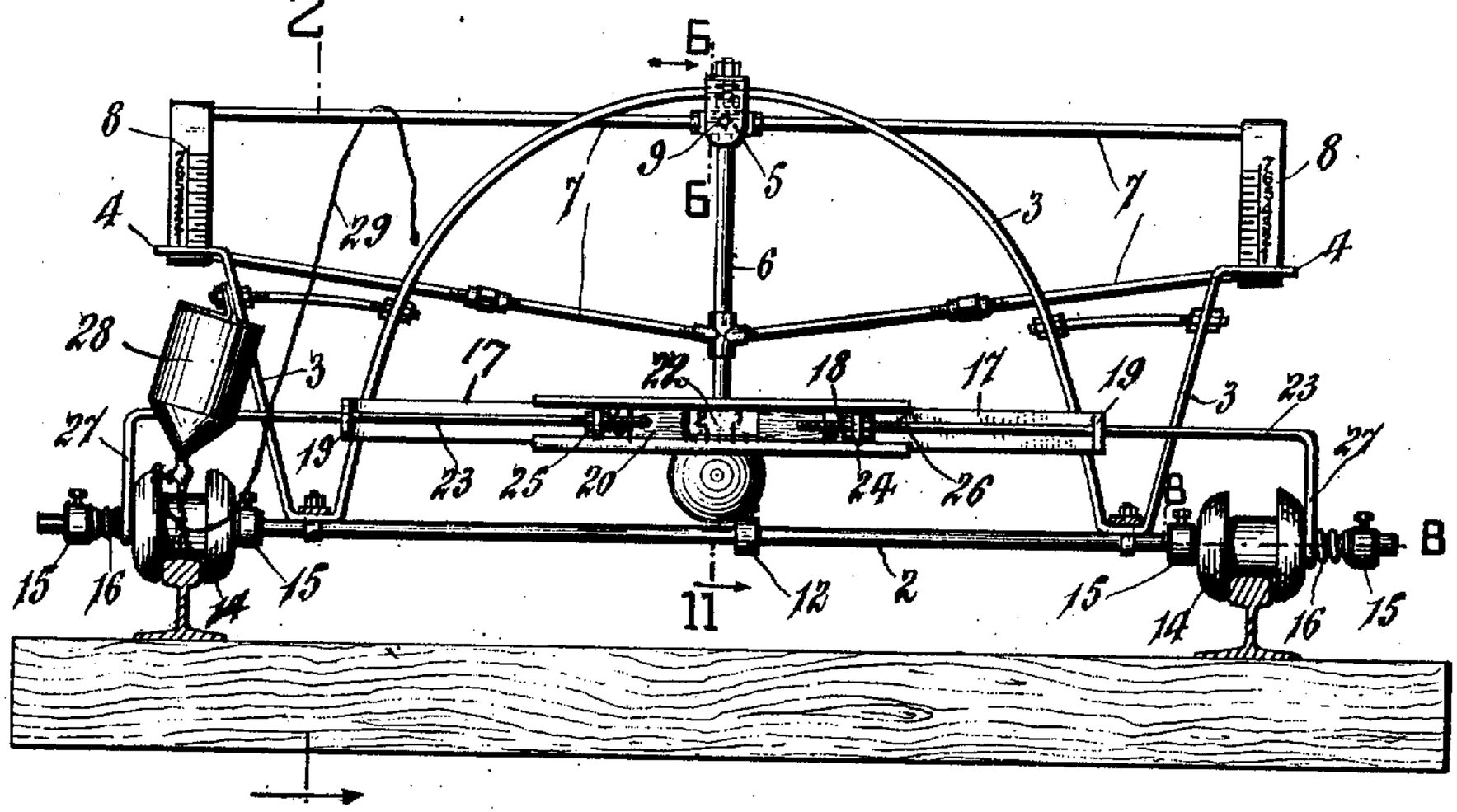


FIG. 2.

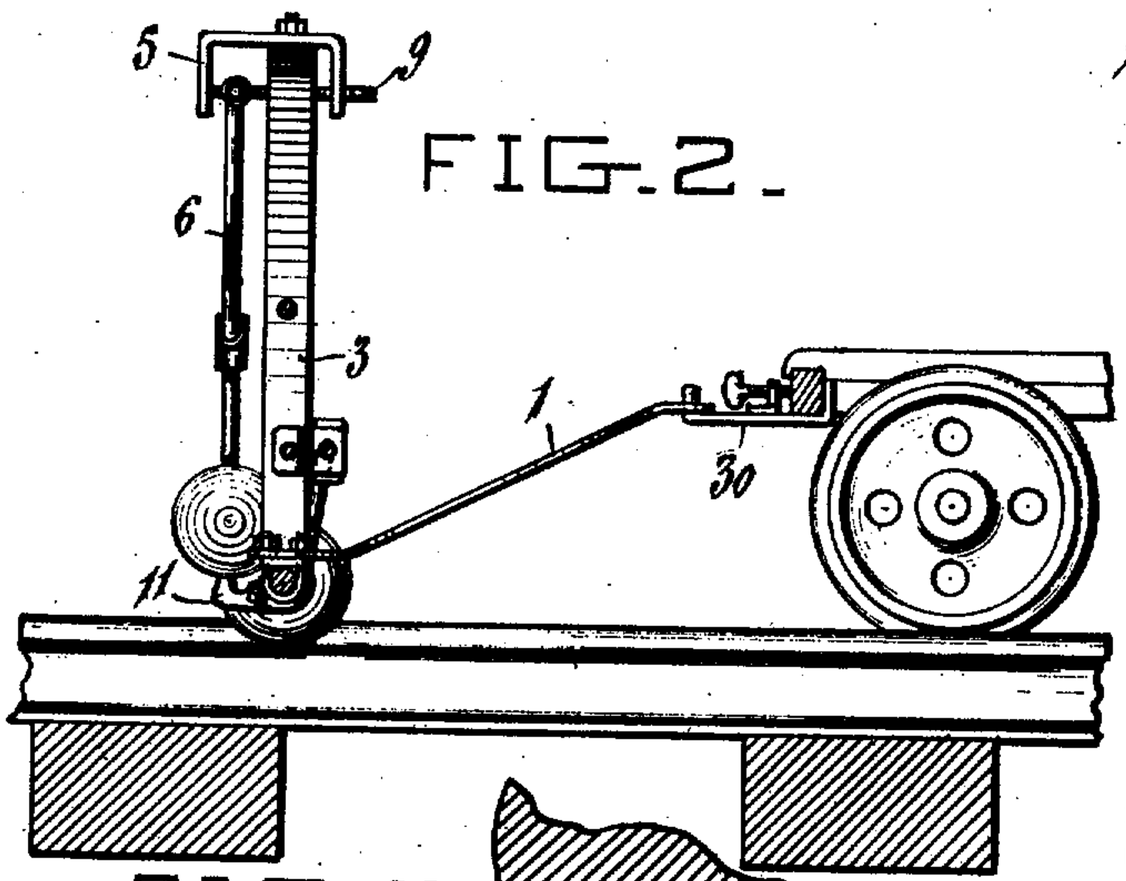


FIG. 10.

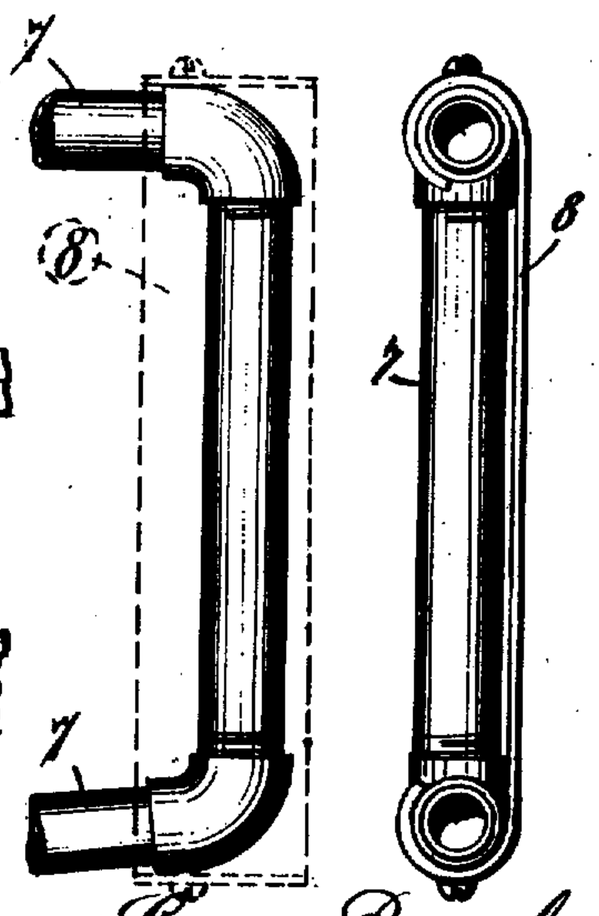
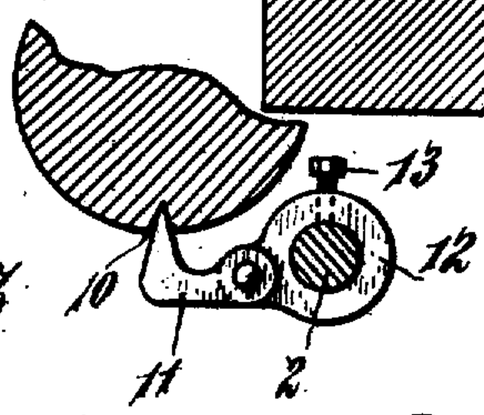


FIG. 11.



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2 SHEETS—SHEET 2.

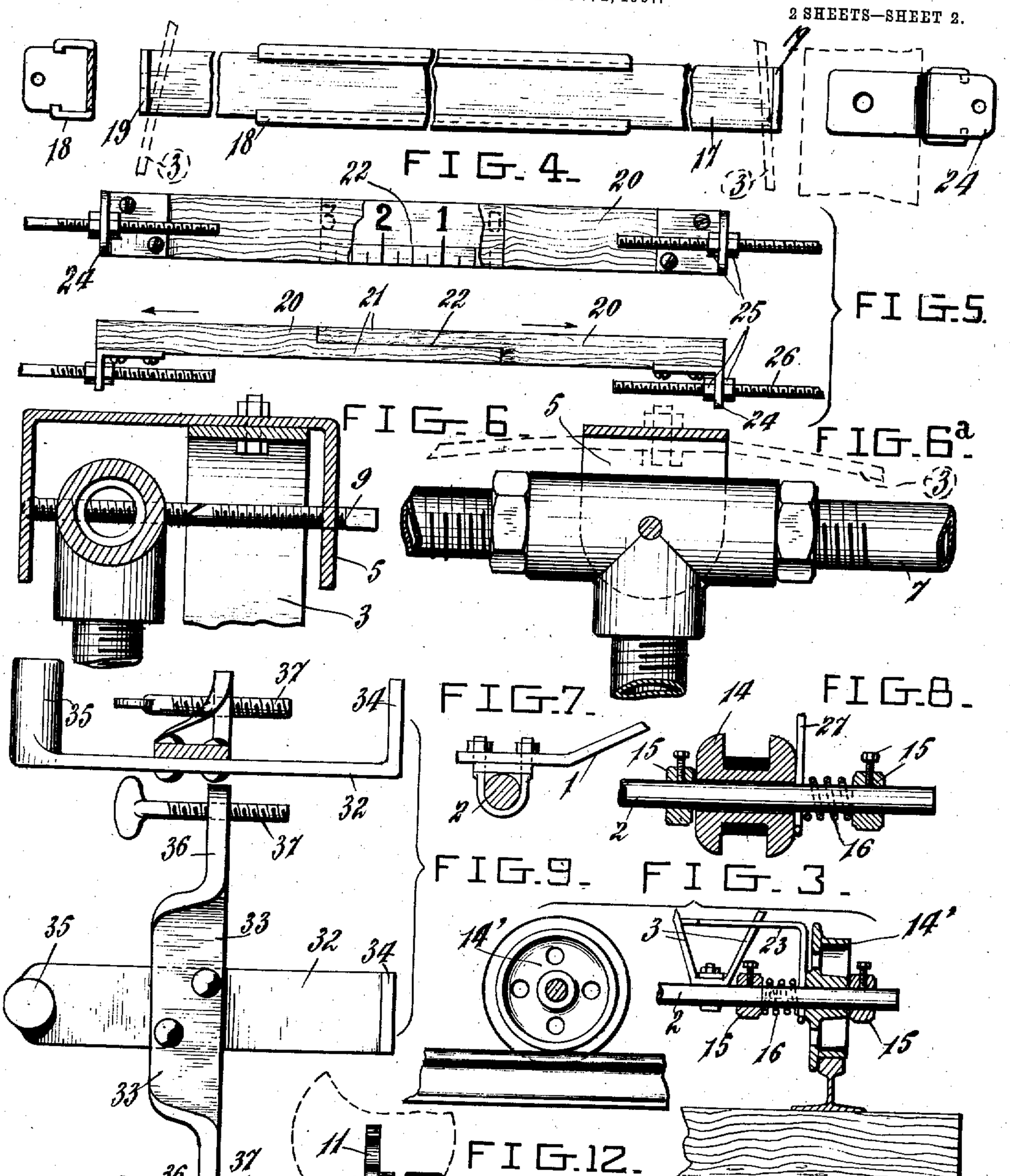

FIG. 4.

FIG. 5.

FIG. 6.

FIG. 6a.

FIG. 7.

FIG. 8.

FIG. 9.

FIG. 3.

FIG. 12.

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UNITED STATES PATENT OFFICE.

LOUIS BARCELOUX, OF ST. GUILLAUME STATION, QUEBEC, CANADA.

TRACK-GAGE.

No. 883,685. Specification of Letters Patent. Patented April 7, 1908.

Application filed November 1, 1907. Serial No. 400,270.

To all whom it may concern:

Be it known that I, LOUIS BARCELOUX, a subject of the King of Great Britain, residing at St. Guillaume Station, county of Drummond, in the Province of Quebec, Canada, have invented certain new and useful Improvements in Track-Gages; and I do hereby declare that the following is a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to track gages, and more particularly to that class of track gages adapted for use on railways, and is designed to indicate both a spreading of the rails or variations in the respective elevations of the same, and to mark the portions where either of these variations from a normal position is indicated.

Broadly speaking, the device comprises a framework mounted upon wheels adapted to travel upon the rails of a track and to be moved laterally of their supports, together with means for indicating the extent of such lateral movement; a plumb carried by the framework and adapted to coöperate with indicating members on the framework to show the variations in the elevations of the rails, and a device for dropping coloring matter on the rail either by hand or automatically when any variations is indicated.

In order to more thoroughly disclose the construction, use and operation of the device, reference should be had to the accompanying drawings forming part of this application, wherein similar reference characters designate like parts in the several views.

In the drawings: Figure 1 is a rear elevation of the device, showing the several indicating scales; Fig. 2 is a section on line 2—2 of Fig. 1; Fig. 3 is a detail sectional view, showing a modified form of mounting the rods for operating the horizontal scales; Fig. 4 is a plan view, a section on line 4—4, and an end view of the scale guide; Fig. 5 is a plan and edge elevation of the scale for indicating the spreading of the rails; Fig. 6 is a cross section, taken on line 6—6 of Fig. 1, looking in the direction of the arrow; Fig. 6[a] is a cross section, taken on line 6—6 of Fig. 6, looking in the direction of the arrow; Fig. 7 is a fragmentary detail, showing the means for coupling the axle supporting rollers to the frame; Fig. 8 is a section on line 8—8 of Fig. 1; Fig. 9 is a plan and edge view of the clamp for attaching the device to a car or other means for moving it over the track; Fig. 10 is an edge and front view of the part of the frame 7 supporting the scale 8, the scale being merely indicated; Fig. 11 is a fragmentary sectional view, showing the means for locking the plumb in inoperative position; and, Fig. 12 is a front view of the same.

A frame 1 is provided, and adapted to be carried by an axle 2 extending transversely of the track. A bowed supporting member or supplementary frame 3 is secured to and carried by the frame 1. The opposite ends of this frame are bent up to form indicating members 4, which coöperate with scales to indicate the variations in the elevations of the rails, as will later appear.

The bowed supporting member 3 is provided at its center with a bracket 5, from which is pivotally suspended the plumb 6, carrying the framework 7, at the ends of which are mounted adjacent the indicating-members, the scales 8. In order to allow perfectly free movement of the plumb crosswise of the track over which it is used, and at the same time to prevent contact between the framework 7 carried by it and the supporting member 3, from which it is suspended, an adjusting screw 9 is threaded through one side of the bracket 5, through the head of the plumb, and seated in the opposite side of the bracket. Thus it will be clear that on rotation of this screw in one or the other direction, the plumb will be moved either toward or from the member 6, and that the only pendulum movement of the plumb will be crosswise of the track.

It will be noted on reference to Figs. 1 and 2, that the ball or weight of the plumb in normal position hangs adjacent the axle 2. In order to lock the plumb in normal or inoperative position, a notch 10 is formed in the ball of the same, and a dog 11 is provided to engage this notch. The dog 11 is carried by the sleeve 12, which may be slid along the axle and locked thereto when desired by the thumb screw 13, or the like. It will be readily understood from the above that, the supporting frame 3 being free to assume any position relatively to the plumb 6, as the device moves over the track, the upward or downward movements of the ends of the axle 2, caused by varying elevations of the rail, will be indicated on the scales 8, by the members 4.

On reference to Figs. 1 and 3, it will be evident that the grooved rollers 14 or wheels

14′ are mounted to have both rotary and bodily longitudinal movement relatively to the axle 2, and that their longitudinal movement is limited in opposite directions by adjustable collars 15. Between the roller or wheel and one of the collars is interposed a spring 16, adapted to force the roller or wheel toward the opposite collar. The springs are adapted to exert a yielding pressure on the rollers or wheels to maintain them in a normal position, that is spaced apart at a distance equal to the normal gage of the track on which they are used, and to yield sufficiently to allow them to be forced from such normal position by any irregularity in the spacing of the rails. In order to indicate these variations from the normal gage, a plate 17 having overturned flanges 18 and ears 19 is provided, and secured to the frame 3, as shown in Fig. 4, and adapted to loosely receive beneath such flanges bars 20. The bars 20 are provided with overlapping portions 21, the rear one of which is provided with a scale 22. Rods 23 are adapted to pass through ears 24 on the bars 20, and to be adjustably secured thereto by means of the nuts 25 and threaded portions 26 of the rods 23, as clearly shown in Fig. 5. These rods 23 are extended through the ears 19, and are bent to form arms 27, which pass out adjacent one face of the wheels or rollers and slide easily back and forth on the axle 2 with the same, being held in engagement therewith by the springs 16, see Figs. 1, 3 and 8. Thus it will be clear that if the device has been set to the normal gage of the track by means of the nuts 25, placing the portions 21 in full overlapped position, so that 22 will not be seen, any outward movement of the guide rollers or wheels will carry with them the rods 23, thus separating the portions 21 and indicating on the scale 22 the variations.

In order to facilitate the use of this device over long stretches of the road and to obviate the necessity of stopping every time an irregularity in the road is indicated by it, in order to mark such irregularity for correction, a marking device is mounted on the framework. This comprises a receptacle 28, fixed to the member 3 in any suitable manner, and provided with a cut off, plug cock, or the like, of well known form, to which is attached a cord 29, by which the same may be operated. This receptacle is adapted to contain a coloring material, either in powdered form or as a liquid, to deliver the same to the rail tread either immediately ahead of or immediately behind the roller or guide wheel. Preferably, it delivers ahead, as, by so doing, the coloring matter will be pressed into the surface to give a substantial and reliable mark.

For attaching the frame 1′ to a hand car or the like, a bracket 30 is provided. This bracket comprises two plates 32 and 33, the plate 32 being provided with an ear 34 at one end adapted to take against a beam of the car frame, and an upright lug 35 at its opposite end adapted to engage the end of the frame 1, as clearly shown in Fig. 2. The plate 33 is bent to form ears 36 at its opposite ends, through which are threaded tightening screws 37. Thus it will be clear on reference to Figs. 2 and 9, that by placing the ear 34 on one side of the beam of the hand car, and tightening the screws 37, the bracket 30 may be securely attached to the car and the frame 1, in turn, attached to the bracket.

It is only necessary to mark the locality of the irregularity of the rails, and not the particular rail, and therefore the marking device is placed above one rail only.

Many changes in the details of construction, in the arrangements and combinations of the several parts, and many other applications of the device may be had, without in any way departing from the field and scope of the present invention, and it is meant to include all such within this application, wherein only the preferred form of the device has been illustrated.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is:—

1. In a gage for railway tracks or the like, an axle, guide rollers carried by said axle and adapted to travel on the rails of a track, and means carried by said axle for indicating the variations in the elevations of the rails, said means comprising a supporting member, a bracket carried thereby, a plumb carried by the bracket, a frame carried by the plumb, scale marks placed on the frame, and indicating members connected to the supporting member and adapted to coöperate with the scale marks to indicate the deviation of the rails.

2. In a gage for railway tracks or the like, an axle, guide rollers carried by said axle and adapted to travel on the rails of a track, and means carried by said axle for indicating the variations in the elevations of the rails, said means comprising a supporting member, a bracket carried thereby, a plumb carried by the bracket, a frame carried by the plumb, scale marks placed on the frame, indicating members connected to the supporting member and adapted to coöperate with the scale marks to indicate the deviation of the rails, and means for securing said gage to a hand car or other means for moving it over the tracks.

3. In a gage for railway tracks or the like, an axle, guide rollers carried by said axle and adapted to travel on the rails of a track, and means carried by said axle for indicating the variations in the elevations of the rails, said means comprising a supporting member, a bracket carried thereby, a plumb carried by the bracket, a frame carried by the plumb,

scale marks placed on the frame, indicating members connected to the supporting member and adapted to coöperate with the scale marks to indicate the deviation of the rails, and means for adjusting said plumb.

4. In a gage for railway tracks or the like, an axle, guide rollers carried by said axle and adapted to travel on the rails of a track, and means carried by said axle for indicating the variations in the elevations of the rails, said means comprising a supporting member, a bracket carried thereby, a plumb carried by the bracket, a frame carried by the plumb, scale marks placed on the frame, indicating members connected to the supporting member and adapted to coöperate with the scale marks to indicate the deviation of the rails, and means for locking said plumb in inoperative position.

5. In a gage for railway tracks or the like, an axle, guide rollers carried by said axle and adapted to travel on the rails of a track, and means carried by said axle for indicating the variations in the elevations of the rails, said means comprising a supporting member, a bracket carried thereby, a plumb carried by the bracket, a frame carried by the plumb, scale marks placed on the frame, indicating members connected to the supporting member and adapted to coöperate with the scale marks to indicate the deviation of the rails, means for adjusting said plumb, and means for locking said plumb in inoperative position.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

LOUIS BARCELOUX.

Witnesses:
H. LAMBERT,
R. GODBOUT.