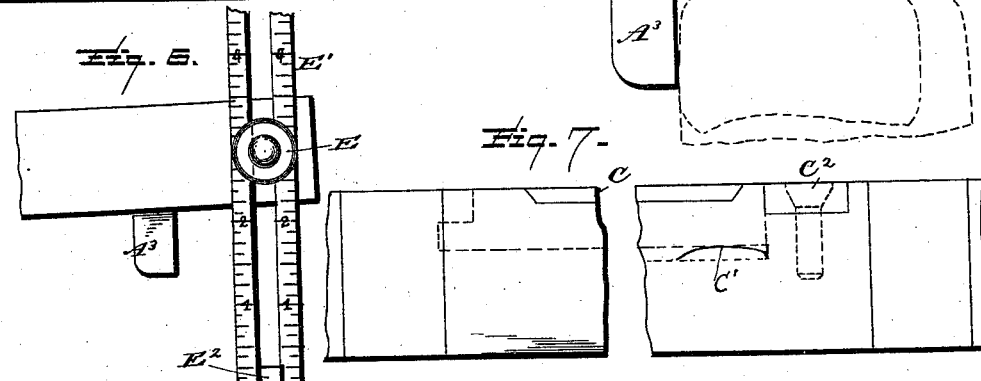
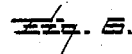
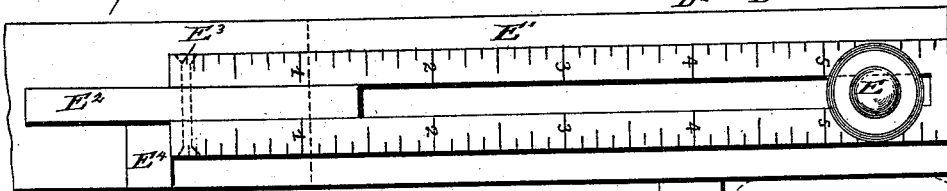
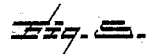
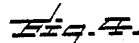
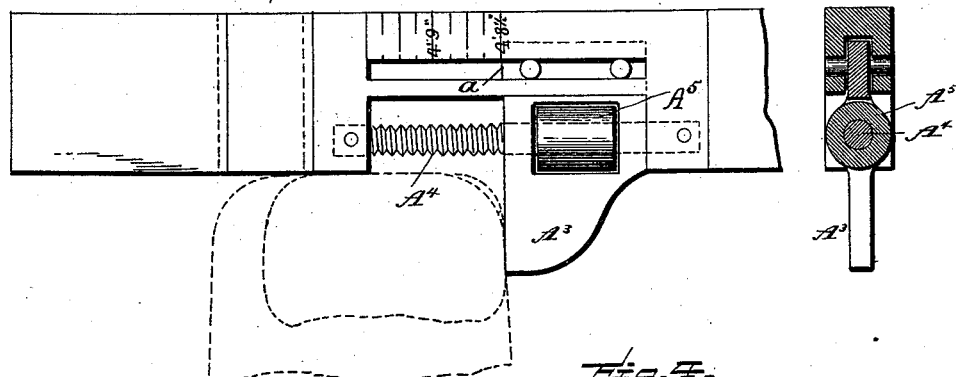
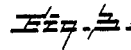
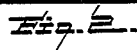


J. J. GRIFFITH.
TRACK GAGE.

Patented Jan. 7, 1890.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN J. GRIFFITH, OF SAN BERNARDINO, CALIFORNIA.

TRACK-GAGE.

SPECIFICATION forming part of Letters Patent No. 418,712, dated January 7, 1890.

Application filed April 10, 1889. Serial No. 306,656. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. GRIFFITH, a citizen of the United States, residing at San Bernardino, in the county of San Bernardino, State of California, have invented certain new and useful Improvements in Track-Gages, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention has relation to track-gages for the purpose of adjusting railway-tracks at the proper width and level, either on straight line or upon curves.

The object of my invention is to provide such a gage which shall be portable and convenient for the various uses of track-gages, and which shall at the same time be simple of construction and not likely to lead to difficulty in the use of the same.

To this end I construct my gage as will be described in the following specification, and with such novel features as will be particularly pointed out in the claims at the end of the same.

Referring to the drawings, Figure 1 is a side elevation of my gage, showing the same in position for tracks laid in a straight line, said tracks being shown in section. Fig. 2 is a side elevation of the end of my gage to which the adjustable stop is attached, showing the adaptation of my gage to two sizes of rails. Fig. 3 is a vertical transverse section of the insertion of the adjustable stop in the body of the gage. Fig. 4 is a plan of one of the vertical hinges of my gage, showing the construction for the locking of said hinge. Fig. 5 is a side elevation of that end of my gage to which is attached the vertical adjustment. Fig. 6 is a side elevation of the same end as is shown in Fig. 5, with the vertical adjustment in operation, the track being shown in section. Fig. 7 is a side elevation of one of the spirit-levels attached to my gage.

Like letters of reference refer to the same parts in all the drawings.

A represents my track-gage in position upon the tracks B. This gage is adapted to be folded up like a two-foot rule, having a central hinge with a horizontal axis and two other hinges, one on each side of the center, having vertical axes. These hinges are shown at A' and D, respectively. Upon each side of

the center of this gage there is placed a spirit-level for the purpose of ascertaining when the same is perfectly level. The use of two of these levels is advisable, inasmuch as there is slight danger of the drooping, or rather raising, of the central joint, and the consequent possibility that one of said levels might be correct while the other side of the gage would not be perfectly level. However, where error owing to this cause is not feared, one longer spirit-level might be used in the place of the two, as shown. The position of these levels is shown in Fig. 1 at C.

My gage is provided at its two ends with stops A³, one or both of which may be adjustable in the direction of the length of the gage. I prefer to have only one of these adjustable, however, as the other should be used for vertical adjustment.

As shown in Fig. 2, there is a space or section cut from the under side of the gage, from end to end of which there extends a screw-shaft A⁴, upon which the stop A³ is fitted to run loosely. From the body of said stop there is cut out a perforation, in which is inserted a nut A⁵, which is provided with a female screw fitting said screw-shaft A⁴, and by the revolution upon which shaft it is possible to run the stop A³ back and forth in the direction of the length of the gage. This adjustment is for the purpose of changing the length of the gage between tracks. There is an upward extension from the top of the stop A³, and opposite the side of the same the body of the gage is cut away, as shown in Fig. 3. Upon the side of the upward extension there are drawn lines, or more ordinarily a single line, to serve as an indicator in placing the stop for different gages. This line is shown at a in Figs. 1 and 2. Upon the top of the side of the gage there are placed graduated lines, as shown, which run from four feet eight inches and a half, which is the standard gage in this country, to any convenient maximum gage. This will be necessary, of course, even where the tracks are being laid everywhere at a uniform gage, for at curves there will be the necessity of widening the distance between the tracks. The readings upon this scale indicate the distance between the straight edges of the stops A³ when the line a is at any one of said readings. Quite an ac-

curate adjustment of the stops can be obtained by means of the nut turning upon the screw A¹.

As shown in Fig. 4, each of the vertical hinges D may be secured by a bolt D', which has an end entering into the hole D², extending through a portion of the two sections of the gage, which meet at the point of the hinge.

The end of the gage which is arranged for vertical adjustment has the special construction shown in Figs. 5 and 6. Extending through the end of the gage is a screw E, having a broad head, as shown, and between the head of the same and the gage-body there is placed a vertical scale, which is made in two parts, straddling the shaft of the screw, as shown plainly in Figs. 5 and 6. At the end of this scale there is a rivet or screw E³, which extends through the two parts of the scale, and upon that part of the screw E³ which is between the two legs of the scale is pivoted a foot-piece E², which is adapted to be swung up between the two parts of the scale, as shown in Fig. 5, but which, when desired, can be swung out into the position indicated in Fig. 6 at right angles to the scale, when it will form a foot-rest or support for the same, said rest being laid along the length of the track, while the gage extends across between tracks. In this position the end of the gage to which this scale is attached may be raised or lowered and secured at any height by simply tightening the screw E upon the scale. When the gage has been used in this position, as will be further described, the screw may be loosened and the gage swung back into place, the foot-piece being turned into the position shown in Fig. 5 while the scale is secured in this position by the bracket E⁴, Fig. 5. This bracket may be of almost any form, and merely serves to support the end of the scale when not in use.

As shown in Fig. 7, the levels are placed in recesses provided for that purpose on each side of the center of the gage, as at C. Under the levels, and tending to raise one end of the same, there is a spring C', and at the end of the levels there is a screw C² for adjusting the same, whereby they may be made to indicate the position of the gage when coincident with the horizontal plane.

The operation of my gage is as follows: When the tracks are being laid along a straight line, one of the stops, having been adjusted to the desired gage, is brought against the side of the rail and the next rail is brought against the other stop. The rails are then wedged or tamped up until the levels indicate the exact horizontal. The rails are thus adjusted to the proper position. If it

be desired to place rails upon the curve, the stops are placed, according to the proper calculation, a given width apart by means of the longitudinal adjustment, and the scale E' being swung out the foot-piece is made to lie along the track as a support and the gage raised until, the levels still indicating horizontality and the scales expressing the proper elevation of the outer track on the curve, the operator knows that the tracks are properly gaged.

It will be seen that by the construction above described the gage may be folded without interference of the adjusting appliances.

What I claim is—

1. A track-gage having adjusting appliances upon one side and vertical hinges upon the other, whereby said gage may be folded flat and without the interference of the said appliances, substantially as described.
2. In a track-gage, a body perforated at one end and a screw passing through said perforation, in combination with a bifurcated scale straddling said screw, and a foot-piece pivoted to said scale, substantially as described.
3. In a track-gage, a body having a perforation at one end and a screw passing through said perforation, in combination with a bifurcated scale straddling said screw, and a foot-piece pivoted between the bifurcations of said scale, substantially as described.
4. In a track-gage having a deep cut in one end thereof and a fixed stop at the other end and a fixed screw in said cut, in combination with a stop riding upon said screw and having an upward extension bearing a reference-mark, graduations before which said reference-mark is adapted to move, and a nut turning upon said screw, whereby said stop is adjusted, substantially as described.
5. A track-gage having a vertical hinge on one side thereof and a sliding lock upon the other side adapted to be projected through the two sections of the gage, substantially as described.
6. In a track-gage, a body perforated at one end and a screw passing through said perforation, in combination with a bifurcated scale straddling said screw, a foot-piece pivoted between the bifurcations of said scale, and a projection upon the side of said gage near said scale, whereby the same is held in place, substantially as described.

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

JOHN J. GRIFFITH.

Witnesses:

G. H. COQUENGRUDT,
P. J. MASTERSON.