

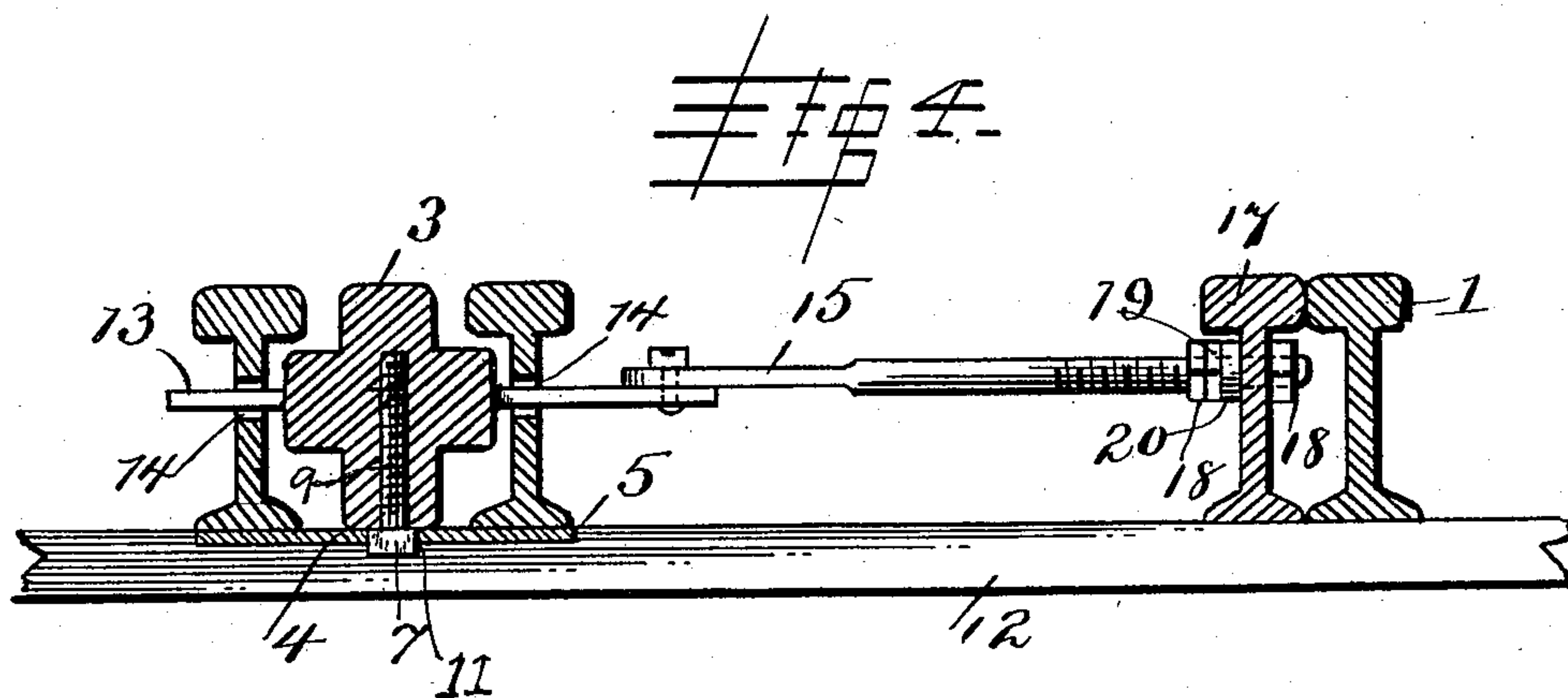
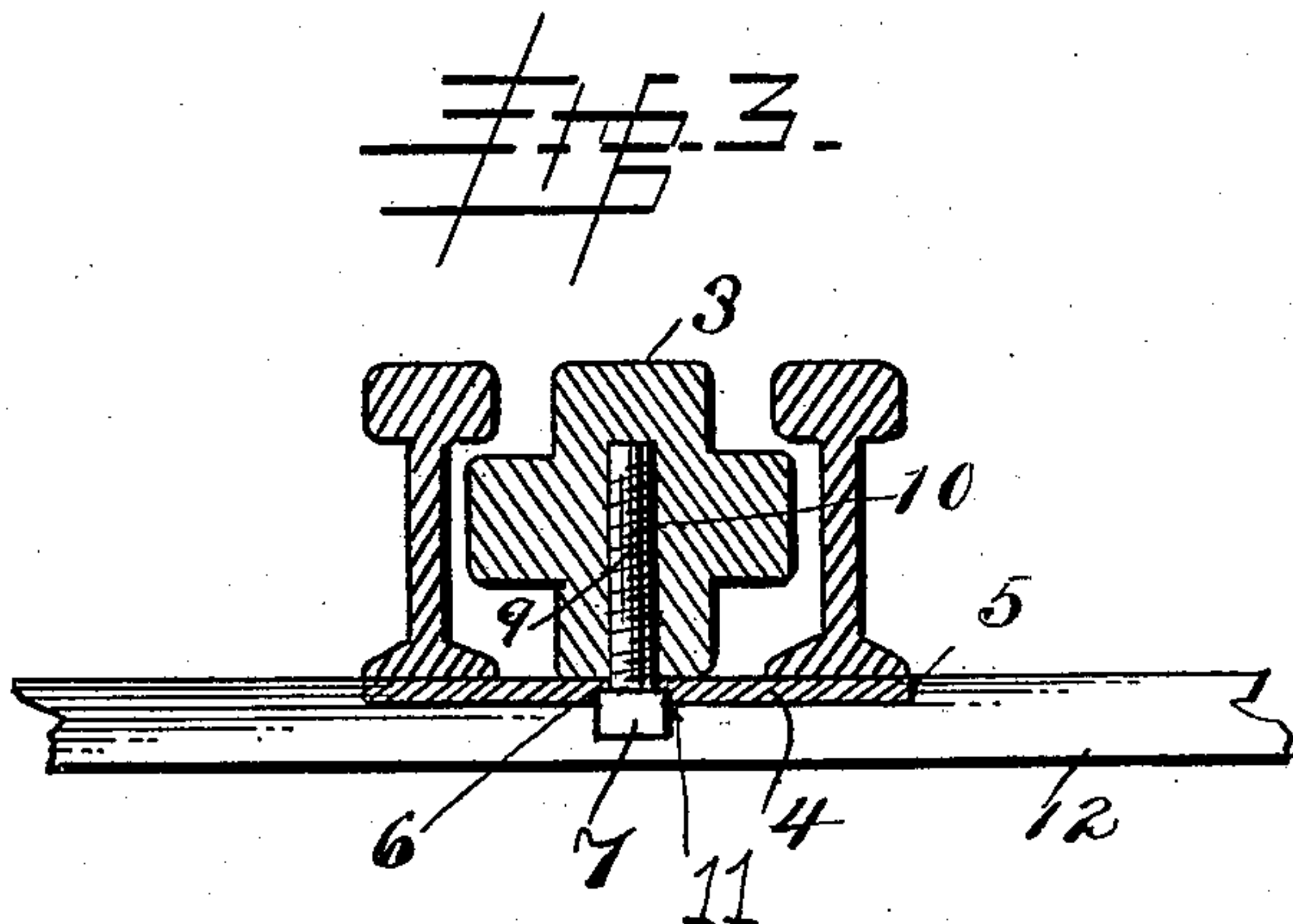
(No Model.)

2 Sheets—Sheet 2.

A. L. THAYER & C. B. ROLAND.
AUTOMATIC RAILWAY FROG.

No. 599,155.

Patented Feb. 15, 1898.



Witnesses

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Attorney

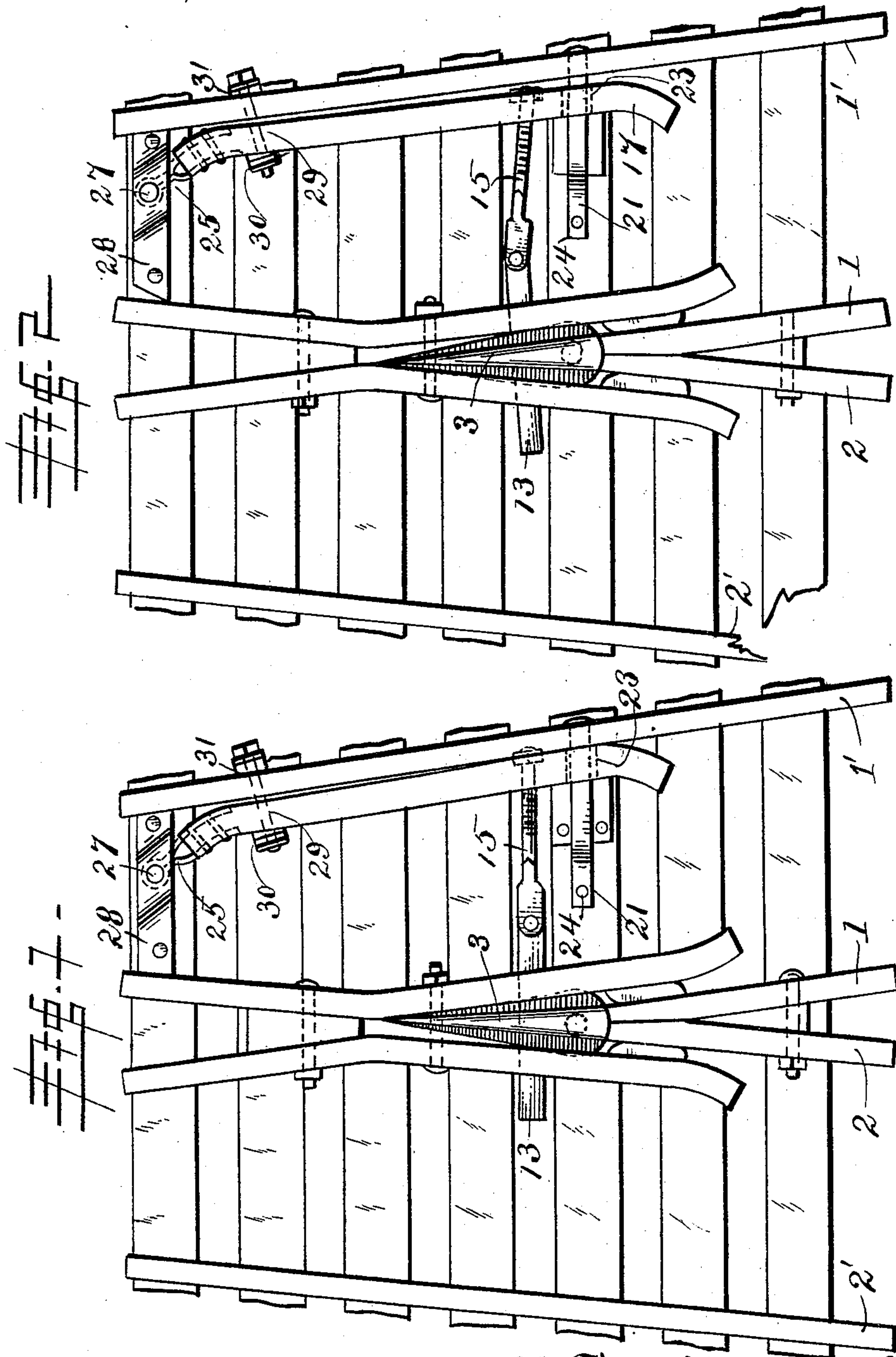
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2 Sheets—Sheet 1

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A. L. Thayer
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UNITED STATES PATENT OFFICE.

ATTILA L. THAYER AND CLIFFORD B. ROLAND, OF CHANDLER'S VALLEY,
PENNSYLVANIA.

AUTOMATIC RAILWAY-FROG.

SPECIFICATION forming part of Letters Patent No. 599,155, dated February 15, 1898.

Application filed April 29, 1897. Serial No. 634,393. (No model.)

To all whom it may concern:

Be it known that we, ATTILA L. THAYER and CLIFFORD B. ROLAND, citizens of the United States, residing at Chandler's Valley, in the county of Warren and State of Pennsylvania, have invented certain new and useful Improvements in Automatic Railway-Frogs; and we do declare the following to be 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.

Our invention relates to improvements in automatic safety-frogs; and the object is to provide a continuous rail at the point where the crossing rails intersect.

To this end the novelty consists in the construction, combination, and arrangement of the same, as will be hereinafter more fully described, and particularly pointed out in the claims.

In the accompanying drawings the same reference characters indicate the same parts of the invention.

Figure 1 is a plan view of the improved railway-frog in its normal position. Fig. 2 is a similar view showing the frog-point shifted to the opposite track. Fig. 3 is a transverse section on the line of the pivot-post of the frog-point. Fig. 4 is a similar view on the line of the operating-rod.

1 1' represent the right-hand track, and 2 2' the left-hand track.

3 represents the frog, arranged at the intersection of the rails 1 and 2.

4 is a plate or chair secured in a rectangular recess 5 in the bottom of the frog, and it is provided with a rectangular orifice 6, through which passes a portion of the square head 7 of a cylindrical stud 9, which extends into a corresponding recess 10 in the frog-point 3 and forms a vertical pivot for the heel of the point to turn on.

11 represents a vertical rectangular recess formed in the upper face of the tie 12, which encompasses the rectangular head 7 of the stud 9.

13 represents a horizontal bar rigidly fixed in the frog-point and extending transversely at a right angle through an orifice 14 in the frog, and to its outer end is pivoted a rod 15, the opposite end of which is threaded and

extends through a plain orifice in the guard or crowd rail 17. The threaded end of said rod is provided with adjustable lock-nuts 18, a washer 19, and a compressing-spring 20, so that when said rail 17 is crowded away from the track-rail 1' by the intervening flange of a car-wheel it carries the rod 15 with it, and this being pivoted to the bar 13, rigidly fixed to the frog-point, it turns said point on its heel and throws it into alinement with the track-rail 1. The compression-spring 20 may be of rubber or any suitable resilient material, and it serves to compensate for the variation of the width of different trucks and the thickness of the flanges on different makes of car-wheels.

21 represents a horizontal guide-bracket having its outer end secured in the rail 1', and its body portion extends transversely through a guide-orifice 23 in the guard-rail 17. The inner end of the bracket 21 is then turned downwardly and parallel with the tie, to which it is fixed by a bolt 24. The opposite end of the rail 17 is provided with a shoe 25, provided with an orifice, through which a bolt 27 passes to pivot said shoe in the bracket 28, fixed to the tie.

29 represents a horizontal bolt passing transversely through alined orifices in the guard and track rail, and 30 31 represent compression-springs arranged on the bolt on opposite sides of the rails to assist in restoring the guard or crowd rail to its normal position after a car has passed.

Although we have specifically described the construction and relative arrangement of the several elements of our invention, we do not desire to be confined to the same, as such changes or modifications may be made as clearly fall within the scope of our invention without departing from the spirit thereof.

Having thus fully described our invention, what we claim as new and useful, and desire to secure by Letters Patent of the United States, is—

1. An automatic frog for the intersecting rails of railway-tracks, comprising the stationary frog; the point 3 pivoted therein and provided with the rigid lateral bar 13, in combination with the guard-rail 17, provided with the transverse orifice and the rod 15 engaging

said orifice, and provided with the compression-spring 20, and the lock-nuts 18, and having its inner end pivoted to the contiguous end of the bar 13, substantially as shown and
5 described.

2. The stationary frog, the frog-point 3, pivoted on the vertical cylindrical stud 9 formed with a rectangular head 7; the plate 4 secured to said stationary frog and provided with the
10 rectangular orifice, and the lateral bar 13, fixed in said frog-point, in combination with the guard-rail 17, provided with the shoe 25, pivoted in the fixed bracket 28, and formed

with the transverse orifice, and the rod 15 engaging said orifice, and provided with the
15 compression-spring 20 and lock-nuts 18, and having its inner end pivoted to the contiguous end of the bar 13, substantially as shown and described.

In testimony whereof we hereunto affix our
20 signatures in presence of two witnesses.

ATTILA L. THAYER.
CLIFFORD B. ROLAND.

Witnesses:

JOHN SPENCER,
P. L. BROOKS.