

No. 754,875.

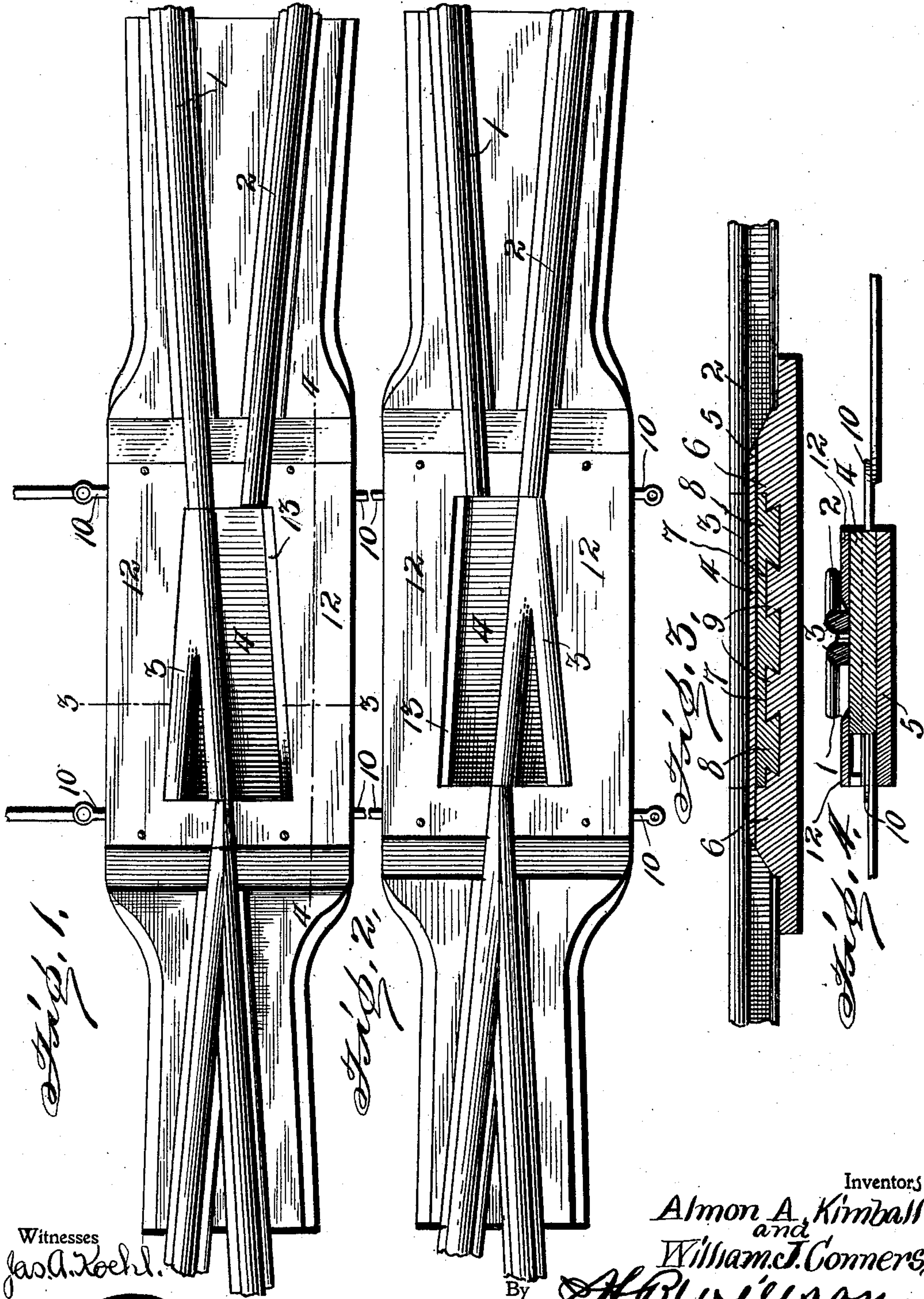
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RAILWAY FROG.

APPLICATION FILED NOV. 12, 1903.

NO MODEL.



Witnesses

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UNITED STATES PATENT OFFICE.

ALMON A. KIMBALL AND WILLIAM J. CONNERS, OF SCANLON, MINNESOTA.

RAILWAY-FROG.

SPECIFICATION forming part of Letters Patent No. 754,875, dated March 15, 1904.

Application filed November 12, 1903. Serial No. 180,898. (No model.)

To all whom it may concern:

Be it known that we, ALMON A. KIMBALL and WILLIAM J. CONNERS, citizens of the United States, residing at Scanlon, in the county of Carlton and State of Minnesota, have invented certain new and useful Improvements in 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.

This invention relates to improvements in railway-frogs, and particularly to the class of movable rail-frogs.

The object of the invention is to provide a movable frog at the crossing-point of railway-rails which is adapted to be shifted after the manner of a switch to enable trains on one track to cross over onto another track.

Another object is to provide a frog which is shifted bodily from one crossing-rail to the other, thereby providing practically a continuous rail over which the wheels of the train are to pass.

A further object is to provide a frog of this character which will be simple, strong, and durable, means being also provided whereby the accumulation of snow or ice on the parts of the frog is removed by the shifting of the parts.

With these and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a plan view of a railway-crossing, showing the improved frog in one position. Fig. 2 is a similar view showing the same in its shifted position. Fig. 3 is a vertical longitudinal sectional view on the line 4 4 of Fig. 1. Fig. 4 is a vertical cross-sectional view on the line 3 3 of Fig. 1.

Referring more particularly to the drawings, 1 denotes the rails of the straight or main track, and 2 denotes the rails of the crossing or side track. 3 denotes the frog-rails, which are secured to a plate 4, which is mounted to slide on a bed-plate 5 between guides 6, ar-

ranged at the ends of the plate 4 and secured to the plate 5, as shown.

On the under side of the plate 4 are formed transverse dovetailed grooves or channels 7, of which there are preferably two, the ends of the plates being also dovetailed, as at 8. These grooves are adapted to engage dovetail ribs or cleats 9, which are secured to or formed on the bed-plate 5, thereby holding the frog-plate in place, but permitting the same to be shifted to bring the ends of the frog-rails into proper engagement with the ends of the main and cross track rails, the ends of said main and cross track rails being secured in the guide-castings 6, between which the frog-plate slides.

Secured to the sides of the sliding frog-plate 4 are shifting-rods 10, which extend beneath the lines of tracks to suitable operating mechanism, (not shown,) whereby the frog-plate and rails are thrown.

Secured at their ends to the guides 6 are longitudinally-disposed plates 12, said plates being arranged at each end of the guides 6 and over the sliding plate 4. The inner edges of the plates 12 are beveled to an edge 13, which engages the upper surface of the plate 4, and as the same is shifted back and forth beneath said plates 12 the snow and ice thereon will be scraped off by the sharp beveled edge 13 of said plates. The plates 12 are detachably secured to the guides 6, so that, if desired, they may be removed during warm weather or when there is no danger from snow or ice accumulating on the frog-rail plate.

A frog constructed as hereinbefore described dispenses with the usual guard-rails and dangerous constructions usually found in connection with frogs of the ordinary construction, also providing a substantially continuous rail for either the main line or side track-rails.

The contraction and expansion of the parts of the frog, due to climatic changes, will not effect the working qualities of the same, as frequently happens in stationary or other forms of frogs.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the inven-

tion will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be
5 resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—
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1. In a railway-frog, the combination with intersecting tracks, of a bed-plate, guides formed on said bed-plate, a frog-rail plate slidably mounted on said bed-plate between said
15 guides, and means for engaging the upper surface of the sliding frog-rail plate when said plate is adjusted to clear the same of snow and ice.

2. In a railway-frog, the combination with
20 intersecting tracks, of a bed-plate, guides formed on said bed-plate, a frog-rail plate slidably mounted on said bed-plate between said guides, locking-grooves formed on said frog-rail plate and locking ribs or cleats formed
25 on said bed-plate in position to be engaged by said locking-grooves whereby said frog-rail plate is slidably connected to said bed-plate, substantially as described.

3. In a railway-frog, the combination with

intersecting tracks, of a bed-plate, a frog-rail
30 plate slidably mounted on said bed-plate, and means carried by the bed-plate for engaging the upper surface of the frog-rail plate when the latter is actuated to clear the same of snow and ice, substantially as described.
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4. In a railway-frog, the combination with intersecting tracks, of a bed-plate, guides formed on said bed-plate, a frog-rail plate slidably mounted on said bed-plate between said
40 guides, locking-grooves formed on said frog-rail plate and locking ribs or cleats formed on said bed-plate in position to be engaged by said locking-grooves whereby said frog-rail
45 plate is slidably connected to said bed-plate, and plates having beveled or sharpened edges and removably secured to said guides in position to engage said frog-rail plate and clear the same of snow, ice or debris, substantially as described.

In testimony whereof we have hereunto set
50 our hands in presence of two subscribing witnesses.

ALMON A. KIMBALL.
WILLIAM J. CONNERS.

Witnesses:

MARTIN G. MOONEY,
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