

(No Model.)

M. A. ROLLMANN.

RAILWAY FROG.

No. 461,511.

Patented Oct. 20, 1891.

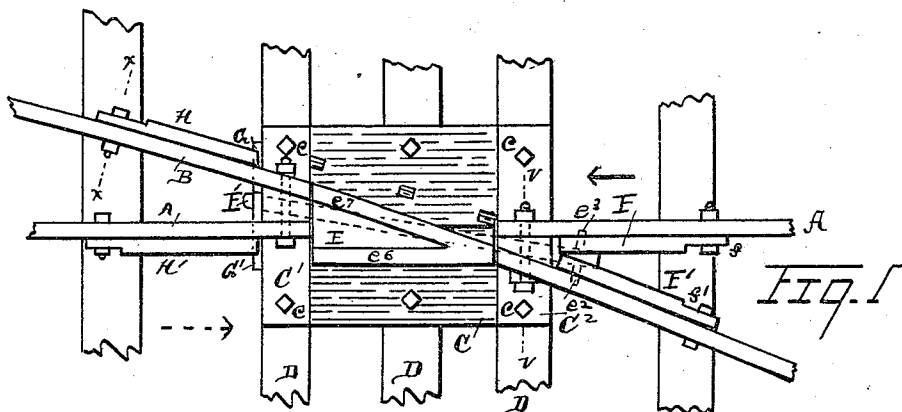


Fig. 1

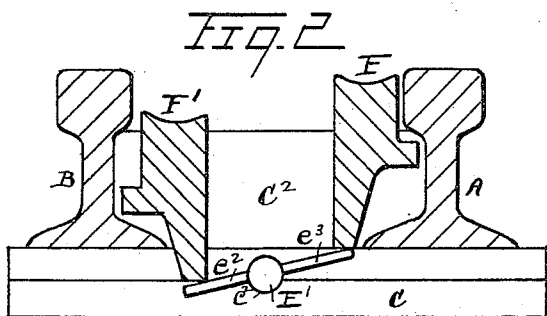


Fig 2

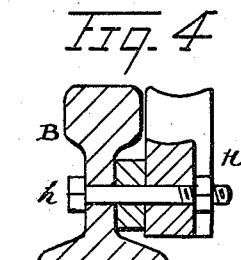


Fig. 4

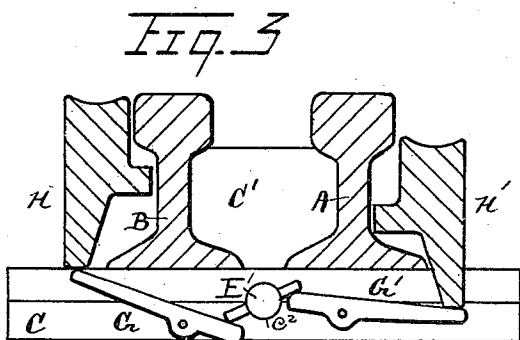


Fig. 3

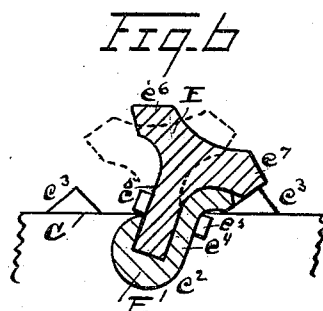


Fig. 6

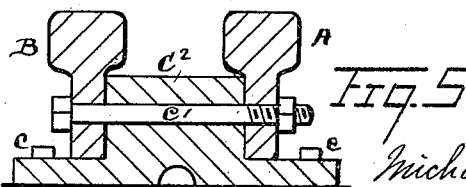


Fig. 5

Witnesses

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UNITED STATES PATENT OFFICE.

MICHAEL A. ROLLMANN, OF DETROIT, MICHIGAN, ASSIGNOR OF ONE-HALF
TO BERNARD PADBERG, OF SAME PLACE.

RAILWAY-FROG.

SPECIFICATION forming part of Letters Patent No. 461,511, dated October 20, 1891.

Application filed January 21, 1891. Serial No. 378,567. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL A. ROLLMANN, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Railway-Frogs; and I 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, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to certain new and useful improvements in railway-frogs; and it consists of the combinations of devices and appliances hereinafter specified and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a plan view illustrating features of my invention. Fig. 2 is an end elevation of the bed-plate, showing parts in section. Fig. 3 is an opposite end elevation of the same, showing parts in section. Fig. 4 is a vertical section on the line *xx*, Fig. 1. Fig. 5 is a vertical section on the line *vv*, Fig. 1. Fig. 6 is a vertical cross-section of the rocking rail-section.

My invention has for its objects, first, to dispense with the guard-rails commonly employed with the ordinary railway-frogs; second, to do away with the ordinary open ends usual in frog-rails, necessitating the employment of safety-guards to prevent dangers frequently arising therefrom; third, to provide a continuous safety frog-rail; fourth and particularly, to provide a shifting rail-section automatically operated to form a continuous track either in connection with the main rails or side track.

My invention also contemplates the general construction, combination, and arrangement of devices, and is carried out as follows:

In the drawings, A represents a main-line rail; B, a side-track rail. My improved frog is located at the intersection of said main rail A and a side-track rail B, and consists, essentially, of a supporting bed-plate C, which may be provided with end brackets C' C², with which the ends of the rails A and B are engaged in any suitable manner. These

brackets are preferably made detachable from the bed-plate. For this purpose they may be united thereto by bolts *c*. The bed-plate may be bolted upon underlying ties D. The ends of the rails A B are preferably bolted upon said brackets, as shown at *c'*. This gives to the ends of the rails a very firm engagement.

E represents a rocking or oscillatory rail-section located between the adjacent ends of the intersecting rails A B and upon the bed-plate C. Said bed-plate is preferably recessed, as shown at *c³*, upon its upper surface to receive the base of the section E and its shaft. To limit the rocking of said section the bed-plate is also preferably provided with shoulders *c³*, either made integral therewith or engaged thereupon. The rail-section E is provided with a shaft E', journaled in the brackets C' C², upon which said section oscillates. I prefer that the shaft should be bolted firmly upon said section, as shown in Fig. 6, the section being shown with a flange at *c⁵* and the shaft with a flange *c⁴*. The shaft and section may be bolted together, as shown at *e⁵*. In this manner when it becomes necessary to renew the rail-section E, when worn, the section may be unbolted from the shaft and a new one be engaged therewith, thus facilitating and greatly economizing the renewal of the frog. So, also, should it be necessary to renew the rails A B they may simply be unbolted from the brackets of the bed-plate and new rails be engaged therewith.

At one end of the rail-section E the shaft projects outward from its journal-bearing in one of the brackets of the supporting bed-plate and is provided with laterally-extended arms *e² e³*, engaged therewith in any suitable manner.

F and F' denote operating-bars which may be pivotally engaged at one end with the rails A and B, respectively, as shown at *ff'*. The opposite or free ends of said bars rest upon the arms *e² e³*, respectively.

It should be noted that the shaft extends through the rail-section E at an angle, as shown in Fig. 1 in dotted lines. The upper face of said section is also constructed with treads *e⁶ e⁷*, converging to a point, said treads

adapted to carry the car-wheels upon either the main rail A or side track B, according as the section is thrown to and fro. Being journaled upon the shaft in the manner described, the oscillation of the section will throw either the tread e^b or e^c upward to the level of the rails, according as it is required to turn the wheels upon one track-rail or the other, the one tread being thrown over and down out of the way when the other is thrown up for use, as shown in Fig. 6. It will be evident, therefore, that a wheel on track A running in the direction of the full arrow will ride upon the bar F, by which means the free end thereof is depressed, throwing the shaft E' and the section E accordingly, so as to make a continuous track along rail A. On the other hand, a wheel running on rail B in the direction of the full arrow will ride upon the operating-bar F', depressing its free end, thereby throwing the shaft E' and rail-section E in the corresponding direction, shifting the section, so as to form an automatic continuous track along rail B, as shown in Fig. 1. I prefer that said operating-bars should project in under the tread of the adjacent rails A and B to prevent their accidental displacement. At the opposite end of the shaft E' from that having the arms e^2 e^3 the bracket upon the bed-plate is provided with levers G G', fulcrumed thereupon. The rails A and B are also provided with additional operating-bars H H', pivotally engaged therewith at one end, as shown at h, the free ends thereof resting upon one end of the levers G G', respectively. The opposite ends of said levers are engaged with the shaft E' in any suitable manner to rock said shaft as one or the other of said operating-bars is depressed. It will thus be seen that a wheel running on the rail A in the line of the dotted arrow will ride upon the bar H' and thereby throw the section E over to form a continuous track therewith, while, again, a wheel running on the rail B in the direction of the dotted arrow will ride upon the bar H, and thereby shift the section E to form a continuous track therewith. I do not limit myself to this precise mechanism, however, for oscillating or rocking the section E to shift it so as to form a continuous track either along rails A or B, as required, as I would have it understood that I contemplate, as coming within the scope of my invention, broadly, such a rocking or oscillating section at the intersection of the rails. It is evident that the device is applicable both for steam and city railway-tracks. It is obvious that the bars F F' and H H' are too far apart to catch the foot, while also the bars F F' are made with straight inside

faces, tending to prevent danger of that nature.

Therefore what I claim as my invention is—

1. In a railway-frog, the combination, with a supporting bed-plate, of an automatically-operated rocking rail-section engaged thereupon, substantially as and for the purpose described.

2. In a railway-frog, the combination, with a supporting bed-plate provided with end brackets, of an automatically-operated rocking rail-section journaled in said brackets, substantially as and for the purpose described.

3. In a railway-frog, the combination, with intersecting rails, of an automatically-operated rocking rail-section provided with converging treads to form a continuous rail along either of said rails, according as said rail-section is rocked in one direction or the other, substantially as described.

4. In a railway-frog, the combination, with intersecting rails, of a bed-plate supporting the adjacent ends of said rails and an automatically-operated rocking rail-section engaged upon said bed-plate between the intersecting ends of said rails, substantially as and for the purpose described.

5. In a railway-frog, the combination, with intersecting rails, of an automatically-operated rocking rail-section located between the intersecting ends of said rails, substantially as and for the purpose described.

6. In a railway-frog, the combination, with intersecting rails, of a bed-plate provided with removable brackets supporting the intersecting ends of said rails and a rocking rail-section located between the intersecting ends of said rails, substantially as and for the purpose described.

7. In a railway-frog, the combination, with intersecting rails, of a rocking rail-section located between the intersecting ends of said rails and shifting mechanism to rock said section, said mechanism operated by the passage of a wheel upon the track, substantially as and for the purpose described.

8. In a railway-frog, the combination, with intersecting rails, of a rocking rail-section located between the intersecting ends of said rails and operating-bars located adjacent to said rails arranged to throw said rocking section, substantially as and in the manner described, and for the purpose set forth.

In testimony whereof I sign this specification in the presence of two witnesses.

MICHAEL A. ROLLMANN.

Witnesses:

N. S. WRIGHT,
JOHN F. MILLER.