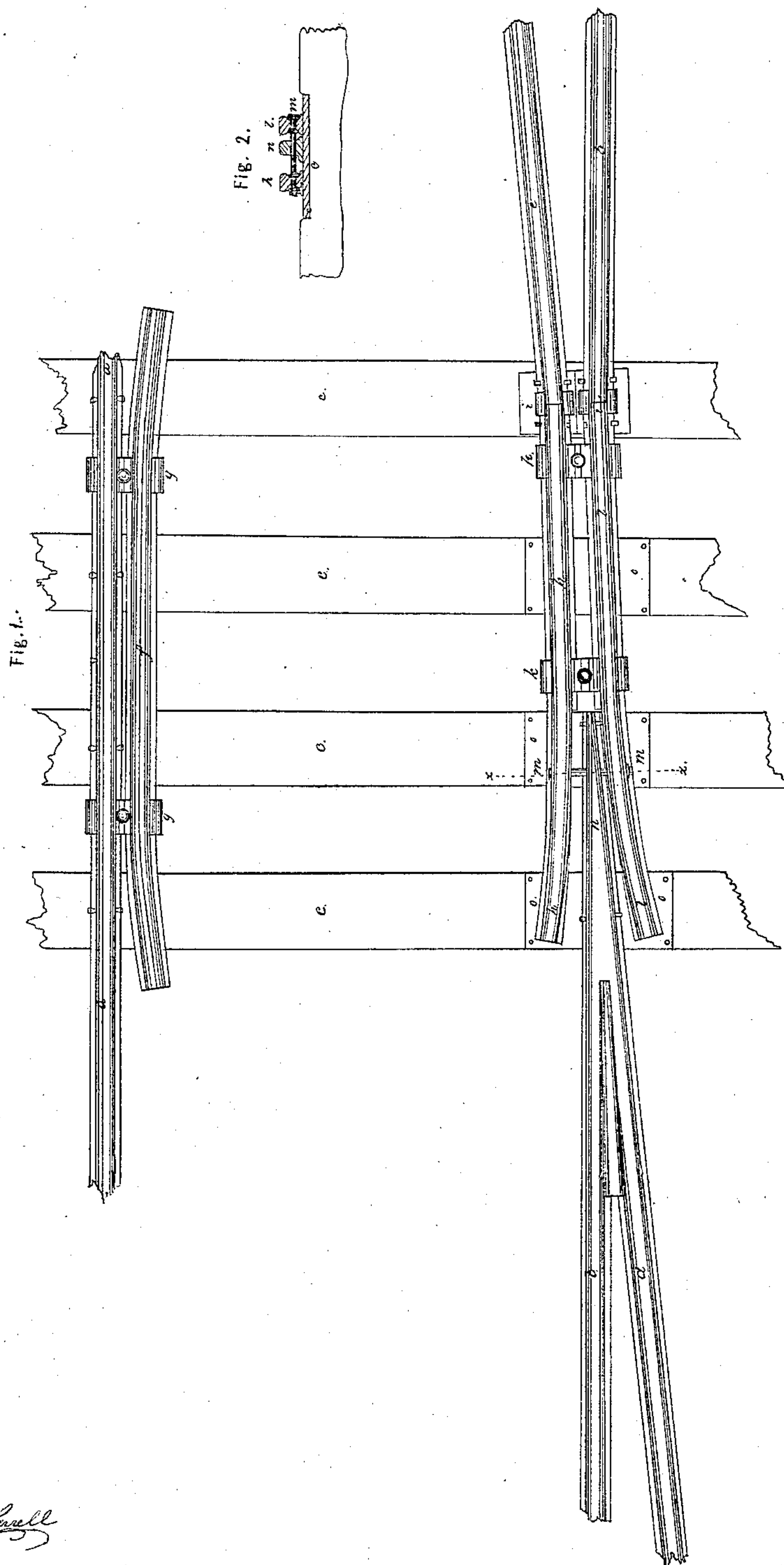


No. 34,022.

PATENTED DEC. 24, 1861.

J. WOOD.  
FROG FOR RAILROADS.



WITNESSES.

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# UNITED STATES PATENT OFFICE.

JOSEPH WOOD, OF RED BANK, NEW JERSEY.

## IMPROVEMENT IN FROGS FOR RAILROADS.

Specification forming part of Letters Patent No. 34,022, dated December 24, 1861.

*To all whom it may concern:*

Be it known that I, JOSEPH WOOD, of Red Bank, in the county of Monmouth and State of New Jersey, have invented, made, and applied to use a certain new and useful Improvement in Frogs for Railroads; and I do hereby declare that the following is a full, clear, and exact description of my said invention, reference being had to the annexed drawings, making part of this specification, wherein—

Figure 1 is a plan of my frog, and Fig. 2 is a cross-section at the line *x x* of Fig. 1.

Similar marks of reference denote the same parts.

At the points of crossing between the rails of main tracks and turn-outs frogs are introduced, those for ordinary city travel being composed of a metallic plate with the two intersecting grooves, and those adapted to locomotives and trains being either of this same general character, or else a movable rail is introduced to make the track continuous. In the former instance concussion is produced on the wheels in passing the grooves of the frog. In the latter case the switchman has to attend to the frog also. Two rails have also been used, kept to the sides of the frog by springs; but in all such instances the springs are liable to become injured, and each wheel of the train in passing has to move and keep open the track against the action of the spring-bar on the inner part of the track, the tread of the wheel running on the outer bar of the frog.

The nature of my said invention consists in two bars at the termination of the track-rails extending to the point of the frog and connected to each other by a bar passing through the point of the frog in such a manner that the rail, to take the weight, is moved to its place by the flange of the wheel taking the other rail, no matter in which direction the train may be moving, and in that position the rails of the frog remain until a train passes along on the other track or turn-out, when the rails are again moved, and so remain until acted upon as before.

In the drawings, *a* and *b* are the rails of the main track upon the cross-ties *c c*.

*d e* are the rails of the turn-out crossing the rails *b b*.

*f* is a bar curved at the ends adjoining the rail *a*, and united to said rail by the tie-pieces *g g*, there being room enough between the rails *a* and *f* for the passage of the wheel-flanges.

*h* and *l* are my frog-bars extending from the ends of the rails *e* and *b*, said rails being tied together at their bases by the pieces *k k*.

*n* is the cast point of the frog at the ends of the rails *b* and *d*.

*m* is a tie-bolt between the rails *h* and *l*, that passes through a hole near the end of the frog-point *n*.

*o o* are metallic plates on the cross-ties *c c* to sustain the rails *h* and *l*. These rails *h* and *l* being attached at the ends *i i*, swing from those ends, so that either the rail *l* or the rail *h* is close to the point *n*, leaving on the other side of said point *n* sufficient room for the wheel-flange. Hence either the rail *l* or the rail *h* forms a bearing from the point *n* to the rail *e* or *b* for the tread of the wheels in passing the frog, the rail *f* on the main track or a similar one on the other side in the turn-out track keeping the wheels on the rails and insuring that the rails *h* and *l* shall be moved when the train passes from the position they have been left in by a previous passage of a train on the other track.

It will be seen that my frog-bars *h* and *l* are moved by the flange of the first wheel passing, and remain in that position for all the other wheels and trains on the same track, and said bars are moved and remain in position by the passage of the first wheels on the other track.

What I claim, and desire to secure by Letters Patent, is—

The combination-rails *h* and *l*, connected together and prolonged from the rails *e* and *b*, with the frog-point *n*, in the manner and for the purposes specified.

In witness whereof I have hereunto set my signature this 12th day of August, 1861.

JOSEPH WOOD.

Witnesses:

LEMUEL W. SERRELL,  
THOS. GEO. HAROLD.