

(No Model.)

J. WOOD.
RAILROAD FROG.

No. 494,768.

Patented Apr. 4, 1893.

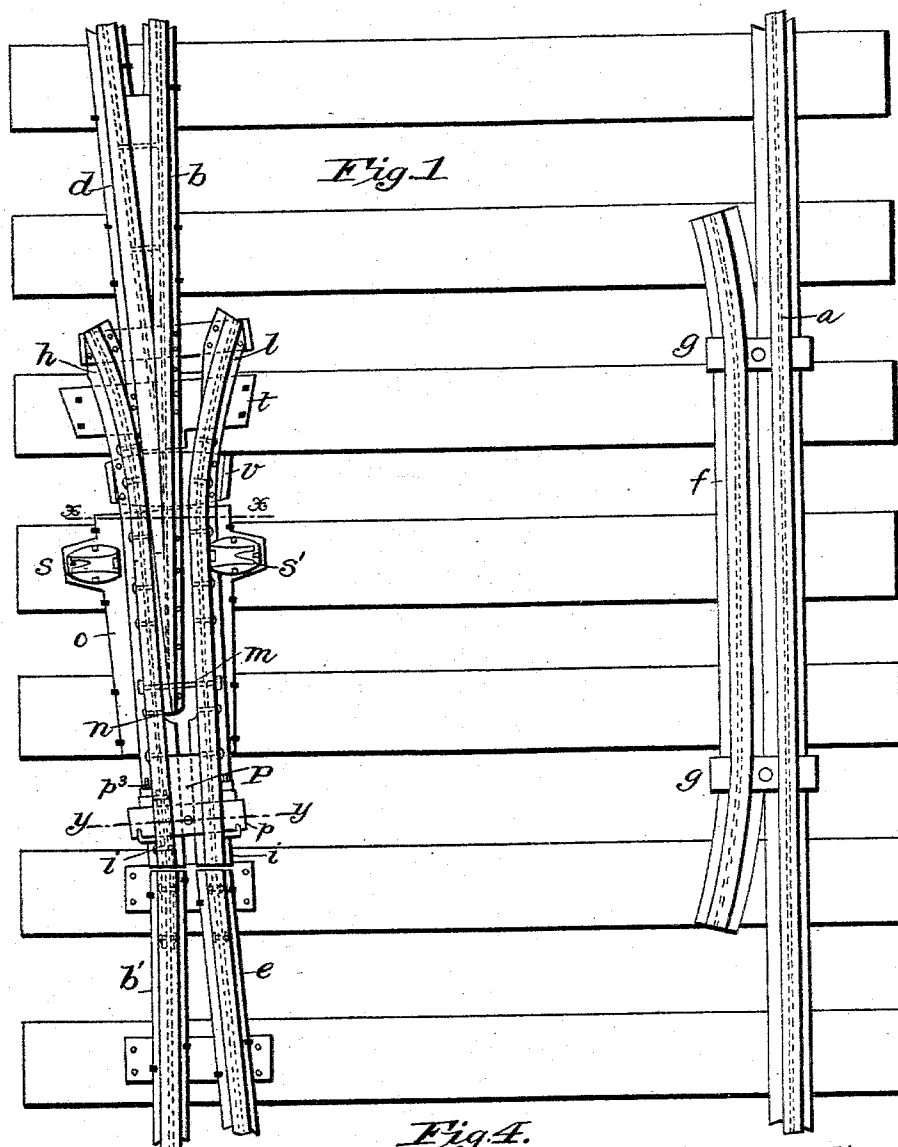
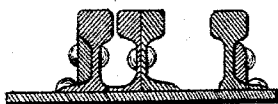


Fig. 2.



Witnesses:

A.B. Deyges

L. D. Heinrichs.

Fig. 4.

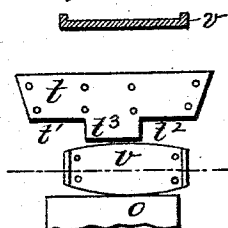
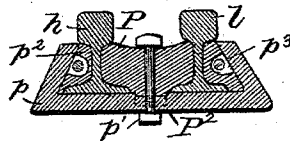


Fig. 5.

Fig. 3.



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UNITED STATES PATENT OFFICE.

JOSEPH WOOD, OF RED BANK, NEW JERSEY.

RAILROAD-FROG.

SPECIFICATION forming part of Letters Patent No. 494,768, dated April 4, 1893.

Application filed December 15, 1892. Serial No. 455,235. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH WOOD, a citizen of the United States, residing at Red Bank, Monmouth county, New Jersey, have invented a new and useful Improvement in Railroad-Frogs, of which invention the following is a specification.

This invention relates to the frog patented to me in Reissue No. 5,473, dated July 1, 1873.

The object of my invention is to overcome the tendency of the wing or movable rails to "walk" or move endwise toward the point of the frog when the wheels of the passing cars strike the ends of these rails.

My invention consists of a combination with the other essential parts of the frog of special devices below described for the purpose above mentioned.

In the annexed drawings, Figure 1 is a plan of the frog embodying my invention; Fig. 2 a vertical section of the frog at the line *x, x*; Fig. 3 a vertical section of the same at the line *y, y*; Fig. 4 a vertical section of the plate or bar *v*; Fig. 5 a top view of the plates *t*, and *v*, and of the end portion of the main plate *o*.

Similar letters indicate similar parts in the several figures.

a and *b, b'* are the rails of the main track.

d and *e* represent the rail of the turnout before and after passing the frog.

f is a guard rail curved at each end and connected to rail *a* by the tie pieces *g*, there being room enough left between the rails *a* and *f* for the passage of the flanges of the car wheels.

h and *l* are two wing rails, wing *l* connecting with and being a continuation of rail *e* of the turnout and wing *h* answering the same relation to rail *b* of the main track. The bolt *m* passes through a hole in the point *n* and is secured to the wing-rails *h* and *l* by screw-nuts or other suitable means, thus serving in a measure to hold the wing-rails together and at the same time to secure them to the point of the frog. The point *n* is rigidly fastened to the plate *o* upon which the wings *h* and *l* also rest. The ends of the wing rails *h* and *l* are secured in place by ordinary fish plates at *i, i*, the flexibility of the joints when so formed being found in practice sufficient to let the wings swing from these ends and the rail *l* or the rail *h* come close up to the point,

n, leaving on the other side of the point sufficient room for the wheel flanges to pass, and presenting an immediate bearing for the tread of the wheel as soon as it leaves the point or side rail; the guard rail *f* on the main track or a similar one on the other side in the turnout track keeping the wheels on the rails and insuring that the wing rails *h* and *l* shall be moved by the wheels of a passing train from the position they have been left in by the previous passage of a train on the other track. The inner foot flanges of the wing rails are cut away as shown in Fig. 2, to allow the rails to come up close against the point, on either side thereof as required.

s and *s'* represent two studs or stops secured to plate *o* for limiting the lateral movements of the wing rails *h* and *l*.

t, Figs. 1 and 5, represents a plate fastened to the cross-tie upon which it rests its front edge *t'*, see Fig. 5, projecting toward the edge of plate *o* a little over the side or edge of the cross-tie.

v, Figs. 1, 4 and 5 represents a plate or bar the ends of which are turned up forming hooks which engage the outside foot flanges of the respective wing-rails *h* and *l*, to which flanges said plate *v* is bolted or otherwise fastened. The two sides of plate *v* are made slightly convex in order that said plate shall move easily along with the wing-rails while bearing against the straight edges of plates *t* and *o*. This device affords means for effectually resisting the tendency which wing rails *h* and *l* have to "walk" or move toward the point *n* whenever the wheels of passing cars strike them.

The plate *t* instead of being provided with a front edge projection *t'*, see Fig. 5, may have a plain front edge, obtained by extending the edge *t'*, *t''* from end to end of this plate but this is unnecessary inasmuch as the movement of the wing-rails is limited and plate *v* moves only against the middle portion of plate *t*.

The ends of the wing-rails *h* and *l* adjacent to the fish-plates *i* are united together by a stirrup-plate *p* having its ends inwardly bent over the flanges of the rails; and between said inwardly bent ends and the web of the rails, properly fitted blocks *p'* are placed, and retained by means of bolts *p''*. The rails *h, l* are firmly kept apart by a slightly wedge-

shaped block P, fitted between said rails and connected with the stirrup *p* by means of a vertical bolt *p'*. The block P has centrally in its under side a pendent rib P², shown dotted in Fig. 3, that passes between the foot-flanges of the rails on a lower level than the latter, and in the same plane as the edge of the plate *o*, and abuts against the latter when the wing-rails have a tendency to "walk" toward the point *n*. In regard to the plate *v*, it is not always essential that it should have bearing against the plate *o* as the tendency of the wing-rails to walk is principally toward the point; and if ever toward the rails *b'*, *e*, is resisted by them at the end of the wing-rails abutting thereto.

I claim—

1. The combination of the wing-rails *h* and

l, the point *n* fixed on plate *o*, the plate *t* and the plate or bar *v* fastened to said wing-rails and adapted to move with them while abutting against the straight opposing edges of plates *o* and *t*, to prevent "walking" of the wing-rails, substantially as set forth.

2. The combination with ties or supports, and the point-rails, of a plain metallic plate secured to said supports and point rails, the wing-rails, a metallic piece firmly secured to the latter and projecting below the said wing-rails and adapted to engage the plate upon the supports, to prevent "walking" of said wing-rails substantially as described.

JOSEPH WOOD.

Witnesses:

J. E. SHAW,

JOS. B. WILLITS.