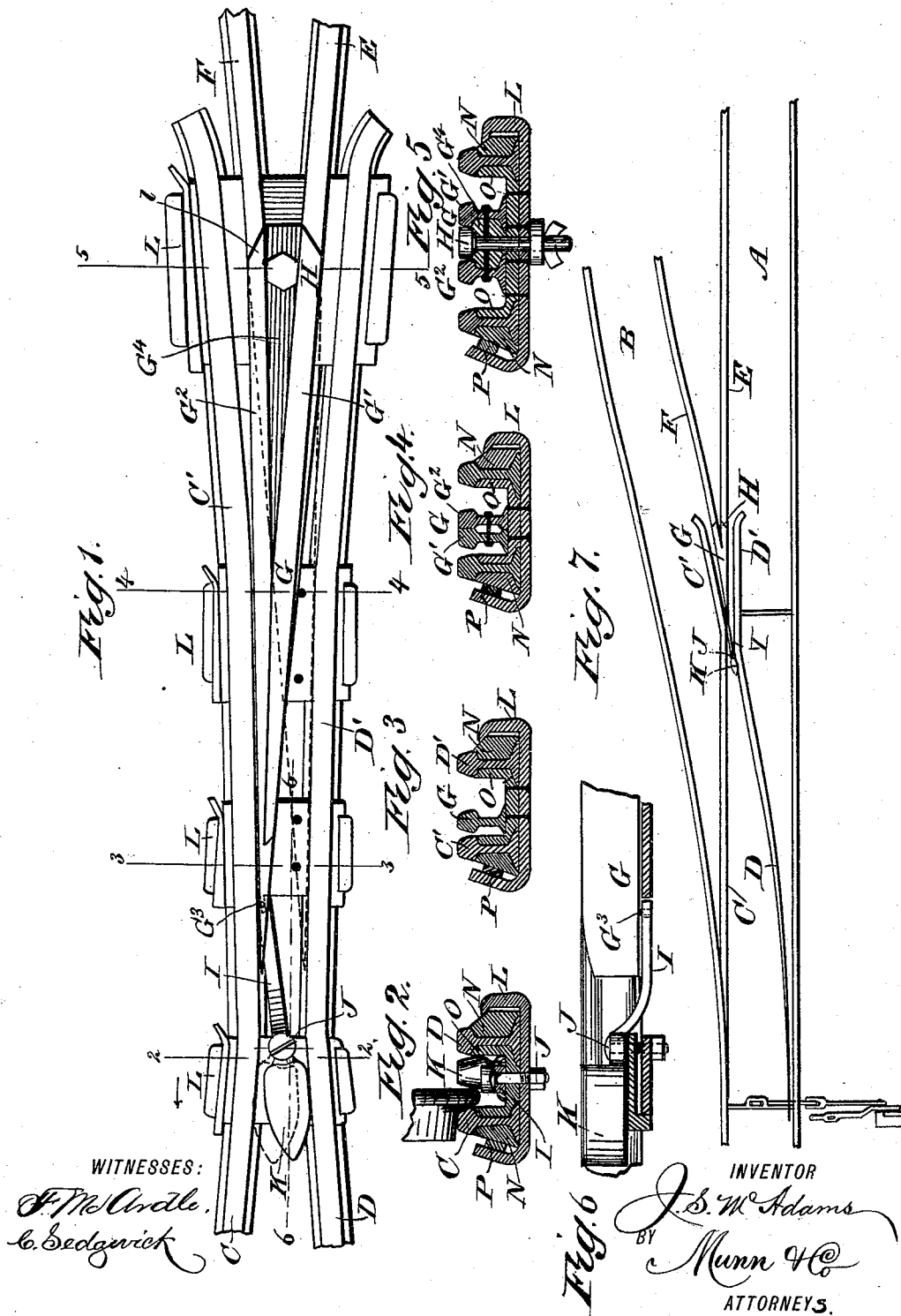


J. S. McADAMS.
RAILROAD FROG.

Patented Dec. 13, 1892.



UNITED STATES PATENT OFFICE.

JOHN S. MCADAMS, OF ASHLAND, PENNSYLVANIA.

RAILROAD-FROG.

SPECIFICATION forming part of Letters Patent No. 487,957, dated December 13, 1892.

Application filed May 22, 1891. Serial No. 393,723. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. MCADAMS, of Ashland, in the county of Schuylkill and State of Pennsylvania, have invented a new and Improved Railroad-Frog, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved railroad-frog, which is simple and durable in construction, prevents the disagreeable jar and noise incident to car-wheels passing over a frog, reduces the wear and tear to a minimum, and presents a full bearing to the car-wheels of the trains moving in any direction, either on the main track or turn-out.

The invention consists of certain parts and details and combinations of the same, as will be hereinafter fully described, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the improvement. Fig. 2 is a transverse section of the same on the line 2 2 of Fig. 1. Fig. 3 is a like view of the same on the line 3 3 of Fig. 1. Fig. 4 is a similar view of the same on the line 4 4 of Fig. 1. Fig. 5 is a similar section of the same on the line 5 5 of Fig. 1. Fig. 6 is a longitudinal section of the same on the line 6 6 of Fig. 1, and Fig. 7 is a reduced plan view of the improvement as applied.

The main track A is adapted to be disconnected from or connected with the turn-out or branch track B by means of the usual switch-rails C and D, provided on the frog, with the wing-rails C' and D', respectively, extending to the inside of the inner or adjacent rails E and F of the main track A and the branch or turn-out track B, respectively. (See Fig. 7.)

The ends of the inner or adjacent rails E and F continue in a point G, hung on a vertical pivot H near the ends of the said rails, the pointed end of the point being adapted to connect alternately with the switch-rails C and D at the junction with their wing-rails C' and D', respectively. The pivoted point G is made of two rails G' and G², fitted and dovetailed together and then fastened to each other

by rivets or other means passing through their webs, as plainly shown in Figs. 4 and 5. The rails G and G' at their pivot end fit onto the rails E and F, respectively, the joint being made diagonally, as plainly shown in Fig. 1, and sufficiently close to the pivot H, so that but a small space exists between the joints.

On the under side of the point G and near its pointed end is arranged a downwardly-extending pin G³, (see Fig. 6,) engaged by a slot in a lever I, pivoted at J and carrying a pear-shaped offset K, extending between the rails C and D and adapted to abut close to the inner sides of the said rails, as plainly shown in Figs. 1 and 2, so that the said offset is acted on by the flange of the wheel passing over the respective rail. Thus when the said offset K is acted on by the wheel the lever I swings the point G so as to change its position relative to the respective wing-rail C' or D', so that when the main track is open to the turn-out the point G changes its position—that is, swings closed with its pointed end onto the wing-rail D' to make the rail D continuous with the rail F, as shown by dotted lines. In a normal position the point G rests with its pointed end against the wing-rail C' for about three and one-half feet, so that the rails C and E are continuous, being part of the main track A.

In order to fasten the several parts in place, heavy wrought-iron U-shaped clamps L are provided, which extend with their vertical parts to the sides of the outer rails, blocks N being passed between the outer surface of the web and the said ends of the U-shaped clamps, as plainly shown in Figs. 2, 3, 4, and 5. Keys P may also be inserted between the blocks N and the respective end of the U-shaped flange L to securely tighten or lock the blocks in place relative to the rails, or they may be bolted, as in stiff frogs. The inner webs of the rails are connected with each other by the U-shaped plates O, bolted, riveted, or otherwise fastened to the clamps L, as plainly shown in said figures, or the rails C and D may be riveted or otherwise fastened to the U-shaped clamps L, so that the point G, if made of the same-sized rails as C and D, may have a bearing on the clamps L, and thus omit the pieces O. The pivot-pin H for the point G passes

through the throat-piece G^4 , held between the two rails G' and G^2 , the lower end of the said pivot being journaled in the middle parts of the plate O and clamp L. (See Fig. 5.) In a like manner the pivot-pin J for the lever I is journaled in the plate O and clamp L at the rails C and D. (See Fig. 2.)

It will be seen that absolutely no spring is employed for shifting the point G in connecting or disconnecting the main track A and the turn-out B. It will further be seen that the respective rails E C and F D are made continuous by the point G, so that a train passing over the frog has a continuous bearing and a jar or noise is thus avoided. It will further be seen that as the said rails are made continuous the wear and tear of the rolling-stock is reduced to a minimum.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A railroad-frog comprising the pivoted point G, abutting at its pivoted end the rail-

sections E F, and the pivoted lever I, pivoted at its inner end to the free end of the point G and provided at its opposite end with an offset K between the rail-sections C D, substantially as set forth.

2. A railroad-frog comprising the switch-rails C D, provided with wing-rails $C' D'$, and the rail-sections E F between the diverging rails $C' D'$, the U-shaped clamps L, in which said rails rest and are secured, the blocks N between the sides of the clamps and outer sides of the rails, the point G, formed of two rails $G' G^2$, with an intervening throat-piece G^4 , bolted together and pivoted at the juncture of rails E F and aligning the rails C D, and the pivoted lever I, pivotally connected at G^3 with the free end of the point G and provided at its opposite end with the offset K between the switch-rails C D, substantially as set forth.

JOHN S. McADAMS.

Witnesses:

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ALT. L. LAUBENSTEIN.