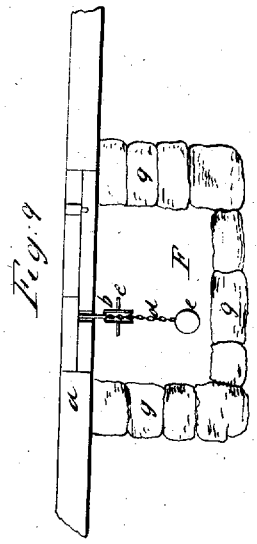
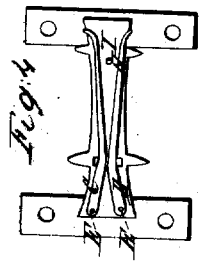
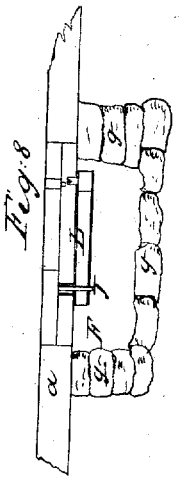
J. W. Hoffman.

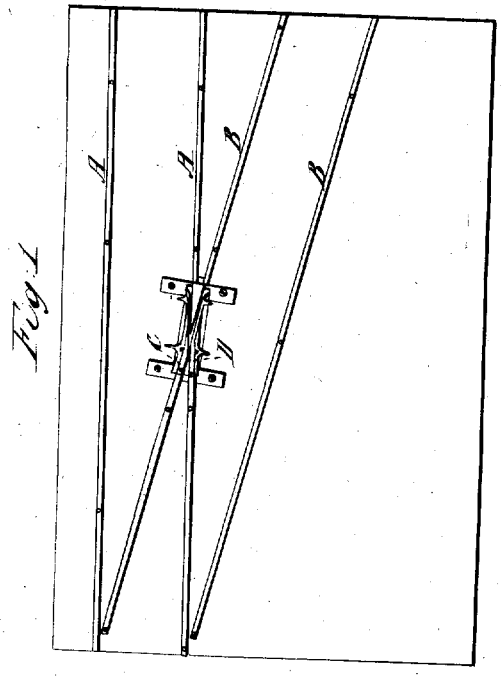
Railroad Switch.

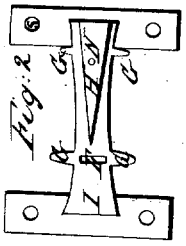
No. 6,921. Patented Dec. 4, 1849.

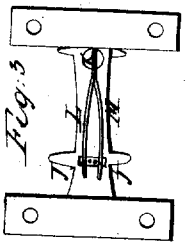












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UNITED STATES PATENT OFFICE.

JNO. W. HOFFMAN, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HENRY A. LANDRY.

FROG FOR RAILROADS.

Specification of Letters Patent No. 6,921, dated December 4, 1849.

To all whom it may concern:

Be it known that I, JOHN W. HOFFMAN, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful machine for the purpose of enabling car-wheels to pass where rails cross each other on railroads, known as a new and improved "frog;" and I do hereby declare that the following is a full, clear, and exact description of the construction, and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view; Fig. 2, a sectional ground or base view; Fig. 3, an inverted view; Fig. 4, a sectional perspective view; Fig. 5, a top sectional view; Fig. 6, a side sectional view, and Figs. 7, 8, and 9 are sectional views.

Fig. 1: letters A, A, and B, B, are rails on rail road; C, and D, are leaves of frog; H, is point where rails meet.

Fig. 2: I, is base; G, G, G, G, are projections of same, H, is point where rails meet. F, is an opening. S, S, S, S, and N, are holes.

Fig. 3: J, J, and K, are studs; L, and M, are springs.

Fig. 4: I, is base; N, is a hole; C, and D, are leaves; E, E, are bolts.

Figs. 5, and 6: E, is a hole; J, is a stud.

Figs. 7, 8, and 9: L, and M, are springs; J, and K, are studs; *a*, is rail; *g*, a stone wall; F excavation, or cistern. *b*, a pulley; *c*, an axle; *d*, a chain; *e*, a weight.

In the construction of my invention Fig. 2, is a cast iron base with the exception of point H, which is made of wrought iron or steel and secured in base, by the metal of base being cast around it, projecting at same time above the base, to the level of rails A, and B, Fig. 1. When this is done, springs L, and M, Fig. 7, are placed on the under side of I, Fig. 2, and fastened to I, with stud K, Figs. 3, and 7, as shown in Fig. 3. The springs L, and M, Fig. 3, being fastened on the underside of base I, Fig. 2; as above described, the base is then ready for the leaves C and D Fig. 1; which leaves are made of wrought iron with a stud fastened on the under side, as shown by J, Fig. 6, a hole is also made in the heel of leaves C, and D, Fig. 4, as shown by E, Fig. 5. Leaves C and D Fig. 1, being thus constructed, they are placed on base I, Fig. 2, with stud J, Fig. 6, passing down through open space F, Fig. 2, and coming between spring L, and M, Fig. 3, as shown by J, J, Fig. 3. Leaves C and D Fig. 1, are then fastened to base I Fig. 2, by means of a bolt, passing through hole E Fig. 5, and then made fast in I, Fig. 2, as shown by E, E, Fig. 4, forming at the same time, a joint or hinge at the heel of C, and D, Fig. 1, and permitting them to be moved out from point H, Fig. 1. This is done in order to let the flanche of a car wheel pass through between C, or D, Fig. 1, and point H, Fig. 1.

The frog being thus completed, it is ready to be placed permanently on a foundation, which is made, by forming an excavation and building up a stone wall as shown by *g*, Figs. 8, and 9. In the center or between the walls an open space forming a cistern is left as shown by F, Figs. 8, and 9. In space F, Fig. 8, springs L and M, Figs. 3, and 8, have room to act and are free from the effects of water, ice, or dirt. Space F, Figs. 8, and 9, can also be formed by substituting a cast iron cistern. The frog is then placed on its foundation and secured to the foundation, by bolts passing through holes S, S, S, S, Fig. 2, and down through the wall. The rails A, and B, Fig. 1, are then attached to the frog and ready for action.

When the cars are on A A, Fig. 1, and in motion, the flanche of the car wheels will come in contact with leaf C, and move C, out from point H, making room for the flanche of the car wheel to pass through, while C, is moved out in the manner described by the action of the car wheel; D, remains stationary and affords a solid and substantial bearing for the car wheels to run upon, as soon as the train of cars has passed over the frog, the leaf C, is again moved in against point H, by the action of spring M Fig. 3. When the cars are on the track B, B, Fig. 1, and in motion, the action will be on leaf D, moving D out, making room for the flanche, while C will afford the bearing for the car wheels, the action of leaves C and D are similar, also the action of springs L and M are similar, which springs are only applied to bring back the leaves C, and D, Fig. 1, against point H, Fig. 1. This purpose can also be accomplished by means of weights pulleys and chains, as shown in Fig. 9, by *e*, *b*, and *d*,

when these are applied the chain *d*, Fig. 9, is fastened to stud *j*, Fig. 6, passing over pulley *b*, Fig. 9, suspended in excavation F, with weight *e* attached.

By the application of my invention to rail roads, a solid and substantial bearing is afforded to the car wheels, which is not the case in the common frog, now in use.

What I claim as my invention and desire to secure by Letters patent, is a rail road frog, constructed with hinged leaves acted upon either by weights or springs, essentially in the manner and for the purposes herein described.

J. W. HOFFMAN.

Witnesses:
C. A. DALE,
A. E. HOFFMAN.

DISCLAIMER.

To the Commissioner of Patents:

The petition of HENRY A. LANDRY, of Camden, in the county of Camden and State of New Jersey, respectfully represents that Letters Patent of the United States for an Improved Frog for Railroads was granted to him on the 4th day of December, 1849, as the assignee of John W. Hoffman, of Philadelphia, in the State of Pennsylvania, who was the original and first inventor of the said Improved Frog for Railroads; that he has reason to believe that, through inadvertence and mistake, the claim made in the specification of said Letters Patent is too broad, including that of which the said JOHN W. HOFFMAN was not the first inventor. Your petitioner, therefore, hereby enters his disclaimer to that part of the claim in the aforesaid specification which is in the following words, to wit:

"What I claim as my invention and desire to secure by Letters Patent is,

"a railroad frog, constructed with hinged leaves acted upon by either weights or springs."

I desire to limit and restrict this said claim so that it will only cover and protect the attachment of the said "weights or springs" to that part of the said "hinged leaves" of a "rail-road frog", at or near the angles of the same or the point of the V of the frog, and the hinged ends of the said leaves, which disclaimer is to operate to the extent of the interest in said Letters Patent vested in your petitioner, who has paid ten dollars into the Treasury of the United States, agreeably to the requirements of the act of Congress in that case made and provided.

HENRY A. LANDRY.

Witnesses:
Z. C. ROBBINS,
H. H. YOUNG.