P. Quinn.

Railroad Frog.

No. 53,673. Patented Apr. 3, 1866.

Fig;1.

Fig;2.

Fig;3.

Fig;4.

Fig;5.

Fig;6.

Witnesses.
Wm Albert Lisle.
John Parker.

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UNITED STATES PATENT OFFICE.

PETER QUINN, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVED RAILWAY-FROG.

Specification forming part of Letters Patent No. **53,673,** dated April 3, 1866.

To all whom it may concern:

Be it known that I, PETER QUINN, of Philadelphia, Pennsylvania, have invented an Improvement in Railroad-Frogs; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists of a frog rail or rails adapted to the main rails of a railroad and to those of a turnout, and operating substantially as described hereinafter, so that railway-cars may be transferred from the main track to the turnout without the necessity of cutting the main rails and without resorting to the use of expensive permanent frogs.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is a plan view of my improved railroad-frog, and Figs. 2, 3, 4, 5, and 6 modifications of the same.

Similar letters refer to similar parts throughout the several views.

On reference to Fig. 1, A and A′ represent the permanent rails of the main track, and B and B′ the rails of the turnout, D being a guard-rail, and E the movable frog-rail, which can be so adjusted as to form a continuation of the rail B of the turnout, or can be moved away from the said rail. This frog-rail is in the present instance hinged to the track at *e*, and is connected to a bar, *f*, the latter being jointed at *m* to a bar, *h*, and link *i*, the link being connected to the track by a suitable pin, *n*, and the bar *h* being connected to an operating-lever, *q*, to which also may be connected the switch, as I have described in a separate application for a patent for the combination of the switch-rails with the said frog-rail.

Where the rails of a turnout cross those of the main track it has been usual to cut the rails and introduce expensive permanent frogs in order to allow the traverse of the car-wheels. These permanent frogs are expensive, and are soon worn away. At the same time they cause rapid deterioration of the rolling-stock of railways—evils which my invention has been designed to obviate.

It will be seen that when the frog-rail E has been so adjusted as to form a continuation of the rail B; it crosses and rests on the rail A′ of the main track, the frog-rail being of such a thickness that on being traversed by car-wheels the flanges of the latter can cross the rail A′ without coming in contact therewith, the rail B being, of course, on the same level with the frog-rail for some distance from the point where the latter meets the said rail B, so that the car-wheels may gradually ascend to the height required for crossing the rail A′ of the main track.

By the above-described arrangement the cutting of the main rails and the use of expensive permanent frogs are avoided. At the same time a steady foundation is presented by the rail A′ for the frog-rail.

In the modification shown in Fig. 2 the rails of the turnout are curved, and a short frog-rail, E, is applied in a manner which will be readily understood by those familiar with the construction of permanent ways without description.

In the modification illustrated in Fig. 3 the frog-rails E E′ are introduced, one being jointed to a bar, *f*, which is connected to one arm of a lever, H, the other arm of which is connected by a rod, *g*, to the other frog-rail, E′, so that on operating the bar *h* by means of a lever, as described in explaining the view Fig. 1, the two frog-rails can be simultaneously turned on their pins *e* away from the rail A′, or made to form a continuation of the rail B.

In the modification illustrated in Fig. 4 the frog-rail E is guided to and from the rail B, during its movement by slides *w w*, attached to the said frog-rail and adapted to guides *t t* on the track.

In Fig. 5 the frog-rail E is operated by means of parallel connecting-bars *f f* in a manner which will be readily understood.

The frog-rail E in the modification seen in Fig. 6 is bent to the peculiar form illustrated, so that the wheels of cars traversing the main track in either direction will move the said frog-rail away.

In Fig. 1 the frog-rail E will be moved away from the rail A′ by car-wheels moving in the direction of the arrow, and the same will be the case in Figs. 2, 4, and 5 when the cars move in the directions pointed out by the arrows in the respective views.

In Fig. 3 the two frog-rails must of necessity

be moved away from the rail A′ by the car-wheels, no matter in what direction they may traverse.

The importance of these movements of the frog-rails by the wheels of the cars will be readily understood by those familiar with the management of railroads, and who are aware of the accidents which frequently result from the want of such salutary provisions.

I claim as my invention and desire to secure by Letters Patent—

A frog rail or rails adapted to the main rails of a railroad and to those of a turnout, and operating substantially as and for the purpose herein set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

PETER QUINN.

Witnesses:

CHARLES E. FOSTER,

JOHN WHITE.