

P. C. DUNN.
RAILWAY FROG CROSSING.

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Fig. 4.

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UNITED STATES PATENT OFFICE.

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RAILWAY FROG-CROSSING.

SPECIFICATION forming part of Letters Patent No. 348,516, dated August 31, 1886.

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To all whom it may concern:

Be it known that I, PATRICK C. DUNN, of the city of Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Railway Frog-Crossings, of which the following is a specification.

This invention relates to an improvement in that class of adjustable railroad frog-crossings which are adapted to be moved away from the main rail when not connected with the siding, and leave an unbroken or unobstructed rail for the main track.

The object of my invention is to construct a frog of this character that will automatically lock itself in position over the main rail when it is desired to connect with the siding; and the invention consists, to that end, of the improvements which will be hereinafter fully set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 represents a plan view of a railroad frog-crossing provided with my improved frog. Fig. 2 is a top plan view of the frog on an enlarged scale. Fig. 3 is a similar view with the frog thrown back from the main rail. Fig. 4 is a cross-section in line *x x*, Fig. 2.

Like letters of reference refer to like parts in the several figures.

A A' represent the rails of the main track, and B B' B² the rails of the siding. The pointed ends of the rails A' B' are connected by a switch-rod, *c*, and are moved toward or from the rails A B by the switch-lever C, in the usual manner.

D represents the frog, arranged on the rail A', and forming the connection between the side rails, B' B². The base-plate D' of the frog is pivoted to standards *d*, secured to the ties *d'*, by lugs *e*, which are formed on one side of the plate D', and a rod, E, which passes through the lugs *e* and the standards *d*. The rod E is held from turning in the lugs *e* by set-screws *e'*. The rod E extends from the frog D to the switch-lever C, to which it is connected by means of the crank-shaft *f*.

F represents a pointed or V-shaped rail formed in the base-plate D', the side *f'* of which forms a continuation of the side rail B², and its opposite side, *f''*, a continuation of the main rail A'. The sides *f'* *f''* of the rail F intersect each other at *f''*, and form the ordinary frog-point. The opposite or wide end of the

rail F is bifurcated, and its portions *f''* and *f''*, which rest above and form continuations of the rails A' B², are tapered or inclined, so that the wheels can ride easily upward on the rail F from the rails A' or B². The rail F is made of the proper length to permit the wheels to ride freely over the same without coming in contact with the base-plate D'.

G G' represent short rails formed on the opposite end of the plate D', and which connect, respectively, with the side rail B' and the main rail A'. The rails G G' terminate in guard-rails *g g'*, on opposite sides of the frog-point *f''*, in the usual manner. The rails G G' are also inclined or tapered to permit the wheels to pass easily over the same from the rails A' B'. H represents a longitudinal U-shaped channel or groove formed on the under side of the bed-plate D', and which is adapted to straddle the main rail A' and fit snugly over the same. The frog, when in this position, connects the side rails, B' B², and forms a bridge over the main rail A', and permits the wheels to pass over the frog in the direction of the siding or in line with the main track.

When the parts are in the position shown in Figs. 1 and 2, trains passing over the main track in the direction of the arrow in Fig. 1 are switched onto the siding. Upon moving the switch-lever in the opposite direction to open the main track, the frog D is lifted from off the main rail A' by the connecting-rod E and swung back, disconnecting the side rails, B' B², and leaving the main rail A' unbroken and unobstructed. When it is desired to run on the siding, the switch is again turned, which also causes the rod E to turn and swing the frog on the pivots *d* until its groove H again engages over the main rail, where it locks itself in position and forms a connection between the side rails, B' B².

I represents chairs or pillow-blocks secured to the ties *d'*, and forming supports or seats for the bed-plate D' when the frog is in the position shown in Figs. 1 and 2. If it is desired to operate the frog independent of the switch, the set-screws *e'* are loosened, so as to permit the rod E to turn in the lugs *e*. In this case the frog may be provided with a lever, *h*, as shown in dotted lines in Fig. 4, whereby the frog can be thrown forward and backward.

I claim as my invention—

1. The combination, with the main rail A' and side rails, B' B², of the frog D, hinged on one side of the main rail and provided with a pointed rail, F, and guard-rails G G', forming 5 continuations of the main rail and side rails, and a longitudinal groove or channel, H, formed on the under side of the frog, and adapted to engage over the main rail, substantially as set forth.

2. The combination, with the main rail A' and side rails, B' B², of a frog, D, hinged on

one side of the main rail and provided on its under side with a channel or groove, H, adapted to engage over the main rail, and a rod, E, 15 forming a pivot for the frog and connecting the latter with the switch-lever, substantially as set forth.

Witness my hand this 19th day of December, 1885.

P. C. DUNN.

Witnesses:

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