

UNITED STATES PATENT OFFICE.

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RAILWAY-FROG.

940,523.

Specification of Letters Patent.

Patented Nov. 16, 1909.

Application filed June 9, 1909. Serial No. 501,103.

To all whom it may concern:

Be it known that I, JAMES A. FOSTER, a citizen of the United States, residing at Heiskell, in the county of Knox and State of Tennessee, have invented a new and useful Improvement in Railway-Frogs, of which the following is a specification, reference being had to the accompanying drawing.

My improvement is applicable particularly to the junction of a main line track with a side track.

The object of the invention is to provide a frog which is normally set to make the main track clear, but which is adapted to be automatically changed by engagement of the car wheels to permit the passing of a car or train from or to the side track.

In the accompanying drawings, Figure 1 is a plan of my improved frog; Fig. 2 is a section on the line 2—2 of Fig. 1, looking toward the right.

Referring to said drawings, A, A are ties supporting the track rails and the frog.

B is an outside, continuous main track rail.

C, C are two inner main track rails or rail sections parallel to said rail, B, and in line with each other and almost meeting, a transverse gap being left between them.

D is an outside, continuous side track rail; and E, E are two inner side track rail sections parallel to said rail, D, and in line with each other and almost meeting at the gap between the two rails or rail sections, C, C, so that a transverse gap is formed through both of these rails at the intersection of their lines.

F is a supporting plate resting upon ties, A, beneath the adjacent ends of the rail sections, C, C and E, E. The left hand rail sections, C and E, meet each other and are preferably joined in any suitable manner, as by means of bolts, G, G, extending horizontally through said rails and through a wedge-form spacing block, H, interposed between said rails. The adjacent ends of the right hand rails, C and E, are bent away from each other to make a portion, E¹, of the rail, E, parallel to the main portion of the rail, C, and to make a portion, C¹, of the rail, C, parallel to the main portion of the rail, E, the portion, C¹ and E¹, being separated sufficiently to make room for the apex of the "point", I, and the flange of a car wheel. The "point", I, has its apex resting between said portions, C¹ and E¹, and has its

base abutting against the right hand rails, C and E, and hinged on an upright journal J, so as to adapt the point to swing horizontally as far as permitted by the inner faces of said portions, C¹ and E¹. Said point is wide enough at its base to bring its lateral faces even with the outside faces of the adjacent meeting end portions of the right hand rails, C and E; and the angle of the apex of said point approximately equals the angle at which the portions, E¹ and C¹, are deflected from the main portions of the left hand rails, C and E; and said point is of proper length to bring the apex to the place at which said rails, C and E, are bent. Thus said point is adapted to fill a gap between the two rail sections, C, C, or between the two rail sections, E, E, the change from one to the other being made by turning said point horizontally upon the hinge formed by the journal, J. Said left hand rail sections, C and E, are firmly joined to each other in any suitable manner, as by means of bolts, E², extending horizontally through said sections and a wedge-form spacing block, C², filling the space between said rail sections at the left of the deflected portions, E¹ and C¹. Said point is shifted automatically by the action of the car wheels upon the shifting mechanism which I will next describe.

A shifting member, K, is placed adjacent the inner side of the outer, continuous side track rail, D, and hinged to one of the ties, A, at L, a short distance from said rail. The opposite end of said member is curved away from said rail, and at the inner side of the curved portion of said member, a stop, M, is located upon the adjacent tie, A, to limit the movement of the member, K, away from said rail, D. On one of the ties near said member, K, and between the ends of the latter is located an abutment, N, and between said abutment and said member is located an expanding coiled spring, O, which normally holds said member against said rail, D, so that the flange of a car wheel passing on the rail, D, in either direction will force said member away from said rail against the pressure of said spring.

From about the middle of the point, I, and in the transverse gap between the inner rail sections a rigid connecting member, P, is joined to and extends from said point to the member, K, and is joined to the latter. The length of said connecting member is such as to bring the apex of said "point" into con-

tact with the portion, C¹, of the adjacent rail section, C, when the shifting member, K, lies in contact with the rail, D. By means of said connecting member, the shifting member, K, and the point, I, are made to move in unison. If the member, K, is forced away from the rail, D, by a car wheel, such motion is transmitted through the connecting member, P, to the point, I, whereby the latter is moved into contact with the portion, E¹, of the adjacent inner rail section, E, thereby making a clear way for the passage of a car wheel from either rail section, E, to the other rail section, E.

The spring, O, it will be observed, is adapted to hold both the shifting member, K, and the point, I, in their normal positions; but, for the sake of affording greater spring power, and for the purpose of insuring the pressing of the point, I, closely against the portion, C¹, of the left hand rail section, C, when the connecting member, P, is out of adjustment or broken or the spring, O, becomes disabled, I apply a spring, Q, directly to the point, I, said spring being placed between said point and an abutment, R, resting on an extension, S, of the supporting plate, F. By thus providing a spring acting directly upon the point, I, the latter is positively held in its normal position, excepting when pressed away from said position by the action of a car wheel on the shifting member, K, or directly on said point when the wheel moves from the right toward the left on the right hand rail section, E.

I claim as my invention:

1. In a structure of the nature described, the combination of a continuous, outer main track rail and a continuous, outer side track rail, sectional inner main track and side track rails located between said continuous rails and separated by a transverse gap, a hinged point located between the sections of said inner rails, and a spring-controlled shifting member connected with said point in said gap and normally held against one

of said continuous outside rails, substantially as described.

2. In a structure of the nature described, the combination of a continuous, outer main track rail and a continuous, outer side track rail, sectional inner main track and side track rails located between said continuous rails and separated by a transverse gap, a hinged point located between the sections of said inner rails, and a spring-controlled shifting member connected with said point in said gap and normally held against said continuous side track rail, substantially as described.

3. In a structure of the nature described, the combination of a continuous, outer main track rail and a continuous, outer side track rail, sectional inner main track and side track rails located between said continuous rails, a hinged point located between the sections of said inner rails, a shifting member connected with said point, and a spring combined with said point and normally pressing the latter in the direction of said shifting member.

4. In a structure of the nature described, the combination of a continuous, outer main track rail and a continuous, outer side track rail, sectional inner main track and side track rails located between said continuous rails, a hinged point located between the sections of said inner rails, a shifting member adjacent one of the outer rails, a spring connected with said shifting member to normally hold the latter against said rail, and a spring applied to said point to normally press the latter in the direction of said shifting member, substantially as described.

In testimony whereof I have signed my name, in presence of two witnesses, this 5th day of June, in the year one thousand nine hundred and nine.

JAMES A. FOSTER.

Witnesses:

E. A. McDONALD,
W. J. Cox.