

L. F. LEARMAN & E. M. COON.
FOOT GUARD.

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1,051,423.

Patented Jan. 28, 1913.

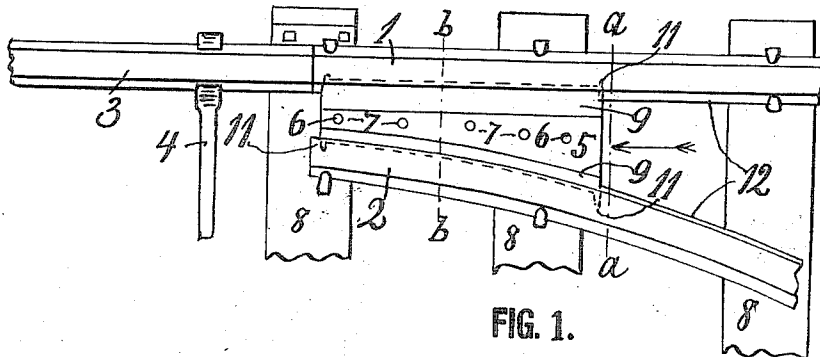


FIG. 1.

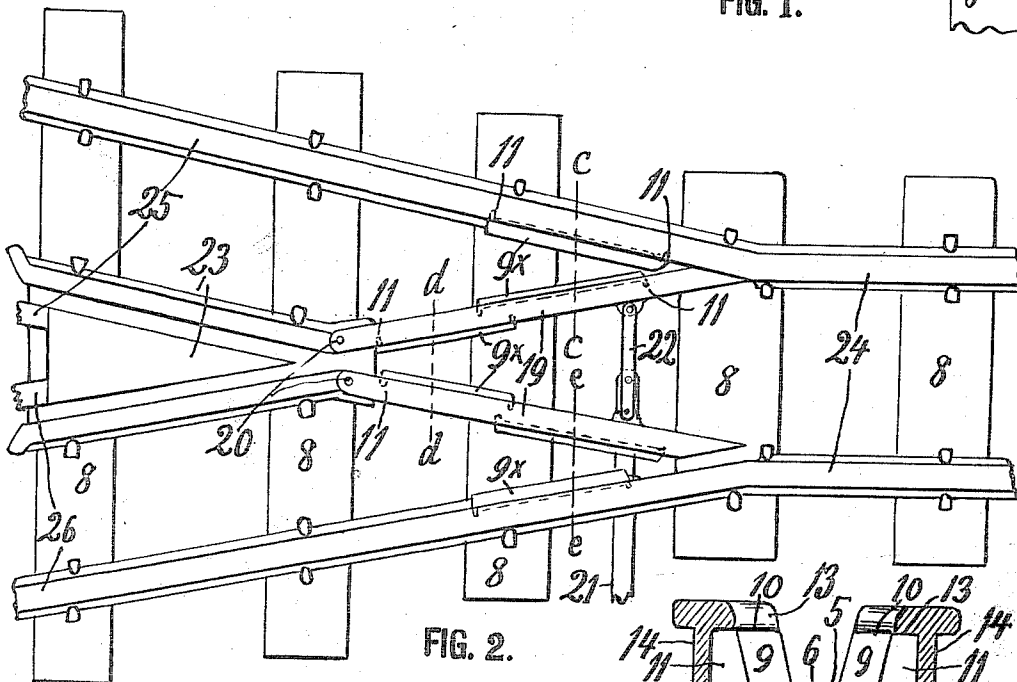


FIG. 2.

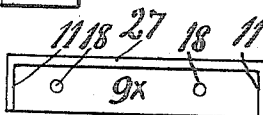


FIG. 5.

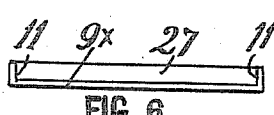


FIG. 6.

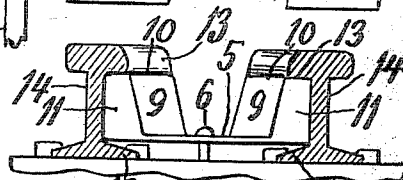


FIG. 3.

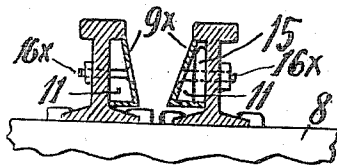


FIG. 7.

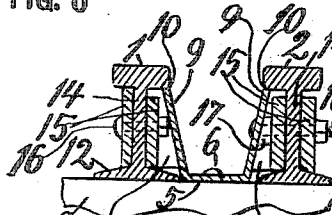


FIG. 8.

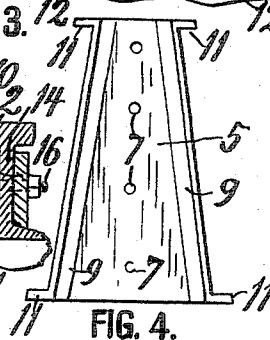


FIG. 4.

WITNESSES:

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FOOT-GUARD.

1,051,423.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, LOUIS F. LEARMAN and EDITH M. COON, citizens of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, and at Minneapolis, in the county of Hennepin and State of Minnesota, respectively, have invented a new and useful Foot-Guard, of which the following is a specification.

Our invention relates to safety blocks or foot guards for railway tracks, to prevent the feet of persons and animals from getting caught in the sharp angles of crossing rails, frogs and switches of the tracks; and the object is to provide a very simple and inexpensive device of said kind.

In the accompanying drawings,—Figure 1 is a plan view of a main rail and side track rail and a butt-switch and our foot guard applied thereto. Fig. 2 is a plan view of a railway frog with adjacent rails and a split switch, and our device applied to various parts thereof in a modified form. Fig. 3 is a section on the line *a—b* Fig. 1. Fig. 4 is a top view of the guard plate shown in the middle of Fig. 3. Fig. 5 is an inner side elevation of the modified guard plate shown in several places in Fig. 2. Fig. 6 is the plate shown in Fig. 5 viewed from its lower edge. Fig. 7 is a section on either of the lines *c—c*, *d—d*, or *e—e* Fig. 2. Fig. 8 is a section about as on the line *b—b* Fig. 1, but with some modifications.

Referring to the drawing by reference numerals, it will be seen that in Figs. 1, 3 and 4, when a track has a fixed main rail 1, a fixed side track rail 2, and a switch rail 3 adapted to be moved by a switch rod 4 into line with either the main rail or the side rail, the angle between the latter two rails is guarded by a plate 5 having holes 7 for spikes 6 to be driven into the ties 8. Said plate 5 is tapered to one end according to the spread of the angle between the rails, and is formed with outwardly leaning side portions or plates 9, which fit with their upper edges under the adjacent edges of the tread of each rail, as best shown at 10 in Figs. 3 and 8, while the ends of said side plates are provided with angular portions 11, fitting between the base flange 12 and the tread 13 of the rail, and bearing against the central web 14 of same.

In Fig. 8 it is shown that the level bottom portion 5 may be lower than the wings 11, so as to rest directly upon the ties. In

said view it is also shown that if the guard plate happens to get into a place where there are fish-plates 15, the latter find ample space between the guard plate and the center web of the rail; and if convenient and so desired the bolts 16 holding the fish-plates, may be passed also through the inclined portion 9 of the guard plate, and in so doing washers or bushings like 17 may be employed to fill between the fish plate and the guard plate to prevent the bolt from bending the latter when its nut is drawn up tight.

The arrangement just described as to the fish plate, or plates, is equally as well applicable in Fig. 7, although in the latter view, and in Figs. 2, 5 and 6, the guard plate is made in two sections or independent plates, 9*, and provided with holes 18 (see Fig. 5) through which are passed bolts 16* (see Fig. 7), by which each plate section is secured to one of the rails adjacent a dangerous angle of the rails, but which angle is subject to spreading and closing by the operation of the switch, as in Fig. 2 when the switch tongues or rails 19 swing on their pivots 20, being operated by the rod 21 and link 22 connecting them. In said view, Fig. 2, the construction of the frog 23, main track 24 and branch tracks 25 and 26 will be understood without further description.

In Figs. 5, 6, and 7, the single plate, as it may be termed, 9*, is stiffened by a longitudinal rib 27, preferably along its lower edge, said rib contacting with the center web 14 of the rail, the same as the end portions 11 do.

In the use of the device, it is obvious that whether two single plates as 9* are used, one at each side of a dangerous angle, or two such plates are united by the base plate or portion 5, the result is the same, in that a V-shaped form is given to the space and thereby any foot of man or beast getting into the space may be removed again with but little effort. The only difference being, as already stated, that the divided plate permits of spreading and closing the parts to which the plate is secured, and where no such spreading is involved, the two plates 9* may preferably be united into a single body, as in Figs. 1, 3 and 4.

What we claim is:

1. The improved foot guard for frogs, switches and the like, comprising two plates arranged to stand below the edges of the

treads of two laterally adjoining rails and converging with their lower edges toward each other, each of said plates having angular end portions adapted to fit between the tread and the base flange of the rail and against the center web thereof, and means for holding said plates in said position.

2. The improved foot guard for frogs, switches and the like, comprising two plates adapted to stand below the adjacent edges of the treads of two rails and converging with their lower edges toward each other, and means for holding said plates in said position, said plates having each along its lower edge a horizontally disposed rib adapted to bear against the center web of the rail, and angular end portions adapted to fit between the tread and the base flange of the rail and to bear against the center web thereof, said holding means for the plates involving bolts passed through the plates and through the center web of the rail.

3. The combination with a rail-joint having fish-plates, of a foot guarding plate covering the fish plate of one side of the joint and fitting with one edge up under the edge

of the tread of the rail and slanting with its lower edge away from the rail, and means for holding said guard plate in said position, said guard plate having angular end portions bearing against the center web of the rail and filling between the base flange and the tread of the rail beyond the ends of the fish-plate.

4. The combination with a rail joint having fish plates and bolts therethrough, of a guard plate covering one of the fish-plates and having holes for the bolts by which the fish-plate is secured, and angular ends fitting between the upper and lower flanges of the rail and bearing against the center web of the rail when the upper edge of the plate fits up under the edge of the upper flange or tread of the rail, and bushings on the bolts between the fish plate and the guard plate.

In testimony whereof we affix our signatures, in presence of two witnesses.

LOUIS F. LEARMAN.
EDITH M. COON.

Witnesses:

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A. E. CARLSEN.