(No Model.)

W. DRISCOLL.

FOOT GUARD FOR RAILWAY FROGS.

No. 478,504. Patented July 5, 1892.

Fig 1

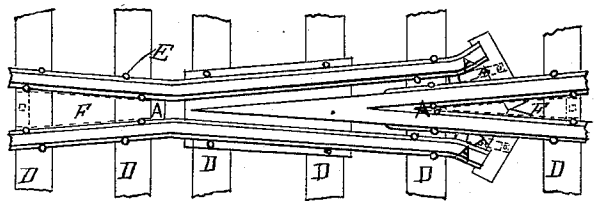


Fig 2

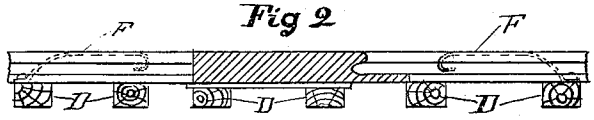


Fig 3

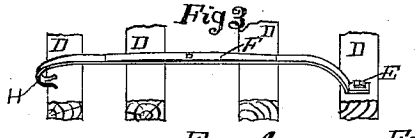


Fig 6

Fig 4

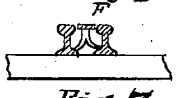


Fig 5

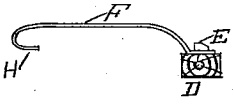


Fig 7

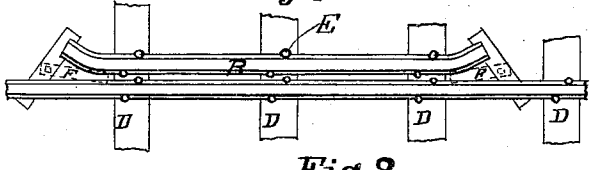
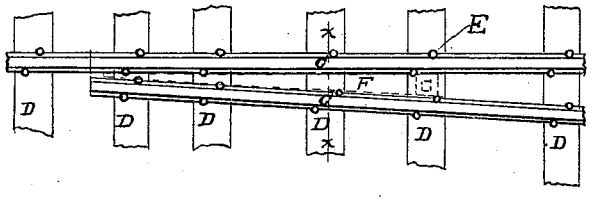


Fig 8



William Driscoll

Inventor

Witnesses

C. H. Buell Jr.

Wm. Baker

UNITED STATES PATENT OFFICE.

WILLIAM DRISCOLL, OF BROCKVILLE, CANADA, ASSIGNOR OF ONE-HALF TO JAMES HALL, OF SAME PLACE.

FOOT-GUARD FOR RAILWAY-FROGS.

SPECIFICATION forming part of Letters Patent No. 478,504, dated July 5, 1892.

Application filed May 8, 1891, Serial No. 392,116. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM DRISCOLL, a subject of the Queen of Great Britain, residing at Brockville, in the county of Leeds and Province of Ontario, Canada, have invented new and useful Improvements in Danger-Guards for Railway-Frogs, (patented in Canada April 23, 1887, No. 26,512,) of which the following is a specification.

Now be it known that I have invented an improvement on the aforesaid danger-guard for railway-frogs.

The title by which I designate my invention is "Driscoll's foot-guards for railway-frogs," of which the following is a specification.

My invention relates to an improvement on my former patent; and it consists in the peculiar construction and combination of devices that will be more fully set forth hereinafter, and particularly pointed out in the claims.

My improved guards have two objects in view: first, to provide a foot-guard for railway-frogs that will come up to the level of the top of the rails; second, to provide a guard which can be made wide enough to fill the space between the top of the rails. This my original patent guards would not do. To accomplish this desired result, my improved guards will have to be pliable—that is, constructed of the best quality of spring-steel of suitable thickness—and the width and length of the guards will vary to suit the converging of the rails.

The new guards will be made strong enough to resist the weight of man, but will be depressed by the action of the car-wheel flanges passing over them, being constructed of elastic material, which enables them to spring back into their normal shape when the pressure is relieved. Thus it will be seen that my improved guards block the space between the top of the rails so effectually as to prevent the foot of any person, even that of a child, from being caught between the converging railway-rails at frogs, switches, guard-rails, and the like. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a plan or bird's-eye view of a railway-frog, together with point and wing-rails. Fig. 2 is a vertical longitudinal sectional view together with a side view of two of the guards shown in dotted lines. Fig. 3 is a perspective view of the switch-rail guards. As these guards will require to be about double the length of any of the rest, there will have to be a leaf riveted onto them, as shown in the drawings. Fig. 4 is a transverse vertical sectional view on lines X X, Fig. 8. Fig. 5 is a profile view of one of the short guards detached from the frog. Fig. 6 is a profile view of the wing-rail guards detached from the frog. These guards are quadrant and do not rest on the flanges at the front end, but are designed to block the space at the mouth of the wing-rails, as shown in the drawings in dotted lines. Figs. 7 and 8 are bird's-eye views of both guard and switch rails.

The guards are designated by the letter F and shown in the drawings in their respective places by dotted lines.

In the drawings, A represents the frog-point and wing-rails.

B represents the guard-rails.

C represents the switch-rails.

D represents the ties to which the said rails are secured by spikes E, all of the ordinary construction, and now in common use, and to which my invention is applicable.

F represents a spring-steel bar of suitable dimensions. The ends of said bar are bent downward, as shown, one of the said ends having a hole pierced through it to receive the spike E or other means of securely fastening it to the tie. The opposite end is bifidate and folds backward on the under side of the bar and rests on the lower flanges of the rails. This causes a double-action spring to the front ends of the bars, and the spike driven into the tie at the outside or wide ends of the bars will keep them firmly in position.

The advantage I claim for my improved guards over my original guards is in the fact of their elasticity, which allows them in all cases to come up to the level of the tops of the rails, and in their cheapness and simplicity of construction, combined with durability and mode of operation under various condi-

tions, which make them applicable to all frogs, points, wings, guard-rails, and switches now in use on railroads; also, whereby they can be made wide enough to prevent ice and snow from packing in between the rails, as is usually the case in winter.

I am aware that prior to my invention safety devices, frog-protectors, and foot-guards for frogs, guard-rails, and switches have been constructed of spring-steel. I therefore do not claim such material in the manufacture of guards as broadly new; but

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

1. A foot-guard for railways, consisting of a spring-steel bar having one end bent downward and extended at an angle with an opening therethrough to receive a fastening-spike, and the opposite end bent down and under in a curved line and of bifidate form to provide a double-spring action at the free end of the bar, the said front end of the bar being reduced in width, substantially as and for the purposes set forth.

2. A foot-guard for railways, consisting of an elongated spring-steel bar having both ends bent downward, one of said ends being secured and the other free, the free end being bent under or backward in a curved line and of bifidate form, and a leaf pivoted on the top surface of the bar to modify the resiliency thereof, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

Brockville, April 23, 1891.

WILLIAM DRISCOLL.

Witnesses:

C. H. BUELL, Jr.,

W. J. BEECHER.