

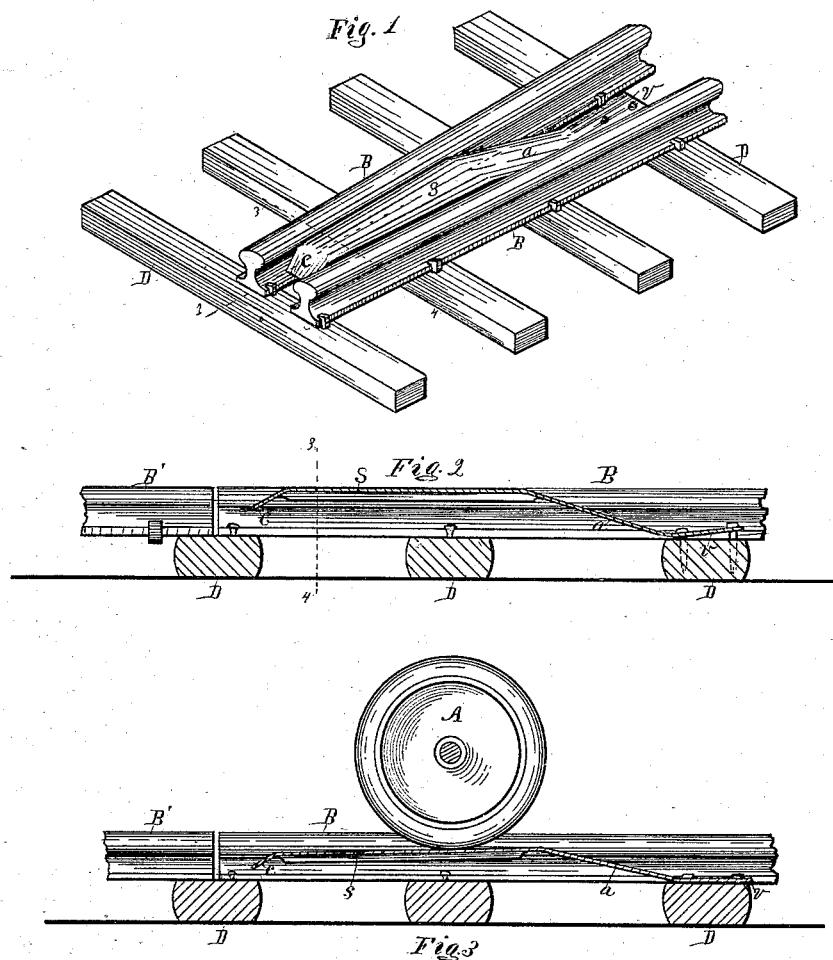
(No Model.)

P. P. SCHAU & W. B. STROWGER.

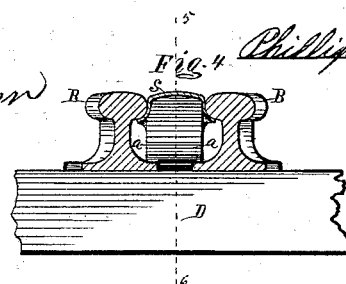
RAILWAY FROG PROTECTOR.

No. 262,988.

Patented Aug. 22, 1882.



Attest.  
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# UNITED STATES PATENT OFFICE.

PHILLIP P. SCHAU, OF KALAMAZOO, AND WILLIAM B. STROWGER, OF  
PORTAGE, MICHIGAN.

## RAILWAY-FROG PROTECTOR.

SPECIFICATION forming part of Letters Patent No. 262,988, dated August 22, 1882.

Application filed May 9, 1882. (No model.)

*To all whom it may concern:*

Be it known that we, PHILLIP P. SCHAU and WILLIAM B. STROWGER, residing at Kalamazoo and Portage, county of Kalamazoo, State of Michigan, citizens of the United States, have invented a new and useful Railway-Frog Protector, of which the following is a specification.

Our invention relates to devices for preventing the foot from being caught in the frog of a railway, or at any location where two rails forming converging angles are located near enough together to catch the foot.

The object of our invention is to construct an improved device for this purpose, the peculiar form and utility of which are described as follows.

In the drawings forming a part of this specification, Figure 1 is a perspective view of two converging rails and our spring protection-plate located between them; Fig. 2, longitudinal section on line 1 2 and 5 6 in Figs. 1 and 4; Fig. 3, same in operation; and Fig. 4 is a cross-section on line 3 4 in Figs. 1 and 2.

The protection plate or bar is formed from a strip of spring steel having upper straight portion S, inclines *a c*, and perforated end *v*, adapted to be secured to the ties D. This plate is made sufficiently stiff to sustain the weight of a person, and yet so elastic as to yield under the heavy pressure of the train. The straight portion S comes on a level with the upper surface of the rails B B, and is formed of such a length that all the space between the rails in which the foot would be liable to be caught is filled or covered. The object of having this portion of the plate flush with the upper face of the rails is to prevent the heels and soles of the boot or footwear from becoming wedged in between the flange of the rails. Said portion S is provided with a downward and outward extending flange on each side, catching under the flange of the rail, Fig. 4, which prevents the plate from springing up above the rails, and also stiffens it in this portion, thus locating all the spring in the incline *a*. End *v* is perforated and spiked down to

the tie D. Said end may be parallel with the rail, as in Fig. 3, but by forming it on an upward incline, Fig. 2, when the spikes are driven down, as in Fig. 3; an extra upward strain is exerted on the spring, which stiffens it, requiring greater pressure to spring it down. By this means lighter steel may be used.

If desired, the perforated end of the plate may be secured to the lower flange of the rails; but this is not deemed so practicable from the fact that the rails spring sidewise when the train runs over them, which interferes with the plate.

The operation is clearly shown in Fig. 3. When the train passes over the rails the wheels A intercept the upper portion of inclines *c* or *a*, according to the direction of the train's transit, and, rolling over portion *s*, springs the plate downward. After the train has passed the plate springs up to place again, as in Figs. 1, 2, and 4.

We are aware that prior to our invention plates have been located in the frog of a railway, and also between the rails and crossing-planking, having springs adapted to sustain them and to allow them to yield under the pressure of the train. Such features we do not claim.

Having thus described our improved device, what we claim as new is—

1. In a device for preventing the foot from being caught in a railway-frog or between two converging rails, a spring-plate having the upper straight portion, the side flanges, and the perforated end formed on an upward incline, substantially as specified and shown.

2. In a railway-frog foot-protector, a spring-plate provided with the upper straight portion having the downward and outward extending flanges, whereby said portion is stiffened and allowed to rise flush with the upper face of the rails, all substantially as set forth.

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Witnesses:

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