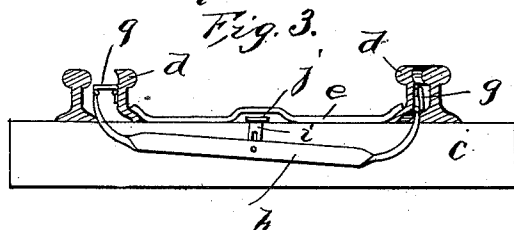
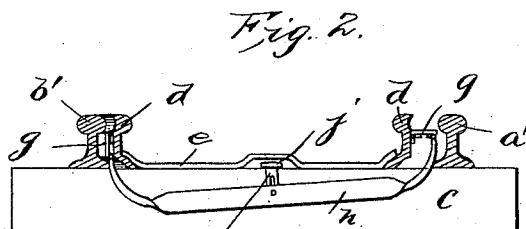
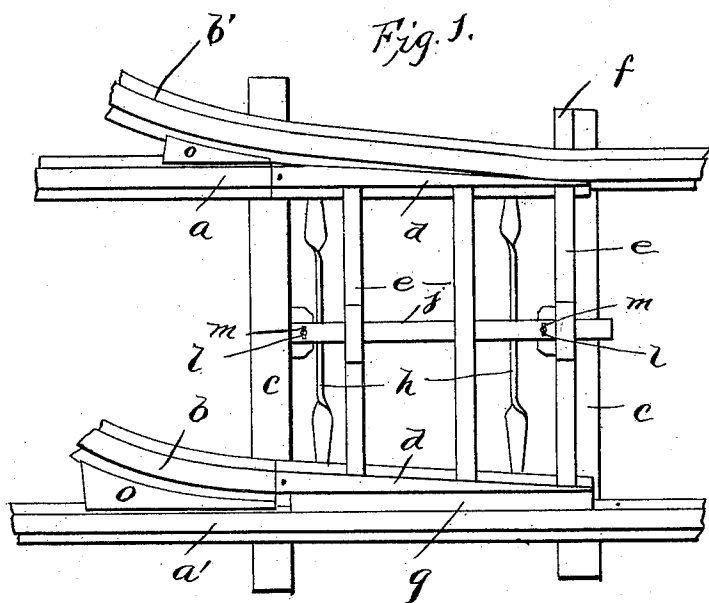


(No Model.)

J. H. PFLIEGER.
FOOT GUARD FOR SWITCHES.

No. 463,074.

Patented Nov. 10, 1891.



WITNESSES:

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JOHN H. PFLIEGER, OF JOHNSTOWN, PENNSYLVANIA.

FOOT-GUARD FOR SWITCHES.

SPECIFICATION forming part of Letters Patent No. 463,074, dated November 10, 1891.

Application filed April 11, 1891. Serial No. 388,460. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. PFLIEGER, of Johnstown, in the county of Cambria and State of Pennsylvania, have invented certain new and useful Improvements in Foot-Guards for Switches; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention relates to certain improvements in railway-switches, and more particularly to improvements in foot-guards for railway-switches.

The object of the invention is to provide a railway-switch with an improved automatic foot-guard automatically operated by the movement of the switch, so as to alternately close the space between its opposite switch-tongues and main rails. These objects are accomplished by and this invention consists in certain novel features of construction and in combinations of parts, more fully described hereinafter, and particularly pointed out in the claims.

Referring to the accompanying drawings, Figure 1 is a plan of the railway-switch having this invention, showing main and side track rails. Fig. 2 is a cross-section through the switch, and Fig. 3 is a cross-section of the switch swung in the opposite direction.

In the drawings, reference-letters *a a'* indicate the main-track rails.

b b' indicate the side-track rails.

c indicates the cross-ties of sleepers on which the rails are mounted.

d indicates the two similar switch-tongues, respectively hinged to the end of inner side rail *b* and to opposite main-track rail *a*, so as to swing laterally upon the cross-ties to alternately leave spaces between a switch-tongue and main-track rail *a'* on one side and the opposite switch-tongue and side rail *b'*, forming continuation of the main track. The two switch-tongues are connected to swing together by the cross-bars *e*, one of which can be extended, (see *f*.) to which the operating mechanism (not shown) of the switch can be attached.

To the side of each switch-tongue adjacent to the rail a plate *g*, about equal in length to the switch-tongue, is at its upper edge hinged to the upper portion of the switch-rail just beneath the tread, so as to swing up horizontally or vertically in against the web, so that the tongue can fit snugly in its usual position against the rail. These plates form the foot-guards, and whichever way the switch is swung one of the plates will be held in the raised horizontal position, closing the open space between switch-tongue and adjacent rail, while the other plate will be folded in against its switch-tongue, so that the switch-tongue can fit close against its adjacent rail. These plates are held and operated automatically by the spring-bars *h*, extending transversely beneath the track and each having its opposite ends bent up and hinged, respectively, to the outer edges of the foot-guard plates. The several bars *h* are, relatively to the switch, held by suitable means, as by securing to downwardly-extending rigid arms *i* from the plate *j*, located between the rails transversely above said bars *h*, and secured to the sleepers by screws, bolts, or the like *m*, passing through transverse slots *l*, as shown, so that the plate can be adjusted. The outer ends of bars *h* are formed and bent up so as to spring vertically. Thus when flange of a passing wheel engages the foot-guard, which is raised up to close the opening between one tongue and rail, the said plate will be pressed down sufficiently to allow the flanges of the wheel to pass, the spring of the bar immediately returning the plate to its normal position. The plate *j* being held stationary relatively to the switch, the foot-guard plates are automatically raised and lowered when the switch-tongues are swung by means of the spring-bars before described, as the said spring-bars are held stationary by said plate.

o indicates spring-guard plates between the stationary portions of the ends of side and main track rails, upheld by coil-springs. (Not here shown.)

The many advantages and great utility of this invention are obvious, in view of the many accidents caused by persons catching their feet in switches.

It is evident that various changes might be made in the forms, constructions, and ar-

rangements of parts described without departing from the spirit and scope of my invention. Hence I do not wish to limit myself to the exact construction shown.

5 Having thus fully described my invention, what I desire to claim, and secure by Letters Patent of the United States, is—

1. In a railroad-switch, a switch-tongue having a foot-guard carried thereby and moving
10 therewith.

2. A railway-switch tongue having a foot-guard carried thereby and hinged thereto, and means for automatically raising and lowering the foot-guard when the tongue is
15 swinging.

3. The switch-tongues moving together, swinging foot-guards carried thereby, and connections between the foot-guards, whereby one guard is raised and the other lowered
20 when the switch is thrown in one direction, and vice versa when the switch is thrown in opposite direction.

4. A switch tongue or rail, in combination with a plate longitudinally hinged to the side
25 thereof adjacent to the rail to assume a horizontal position or fold against the switch-rail,

and connections secured to said plate arranged to swing the plate to the horizontal position when the tongue or rail is swung from said adjacent rail and to fold the same when
30 the tongue is swung toward adjacent rail.

5. The combination, with the switch, of the foot-guard longitudinally hinged to the outer sides of the rails, and the spring-bars held stationary relatively to said switch and at
35 their opposite ends hinged to outer edges of said guards, substantially as described.

6. The combination, with the switch, of the foot-guards hinged to rails thereof, the transverse bars beneath the switch having their
40 outer ends bent up and hinged, respectively, to outer edges of said guards, and a stationary plate to which said bars are secured, substantially as described.

In testimony that I claim the foregoing as
45 my own I affix my signature in presence of two witnesses.

JOHN H. PFLIEGER.

Witnesses:

WM. WILLIAMS,
H. R. ROSE.