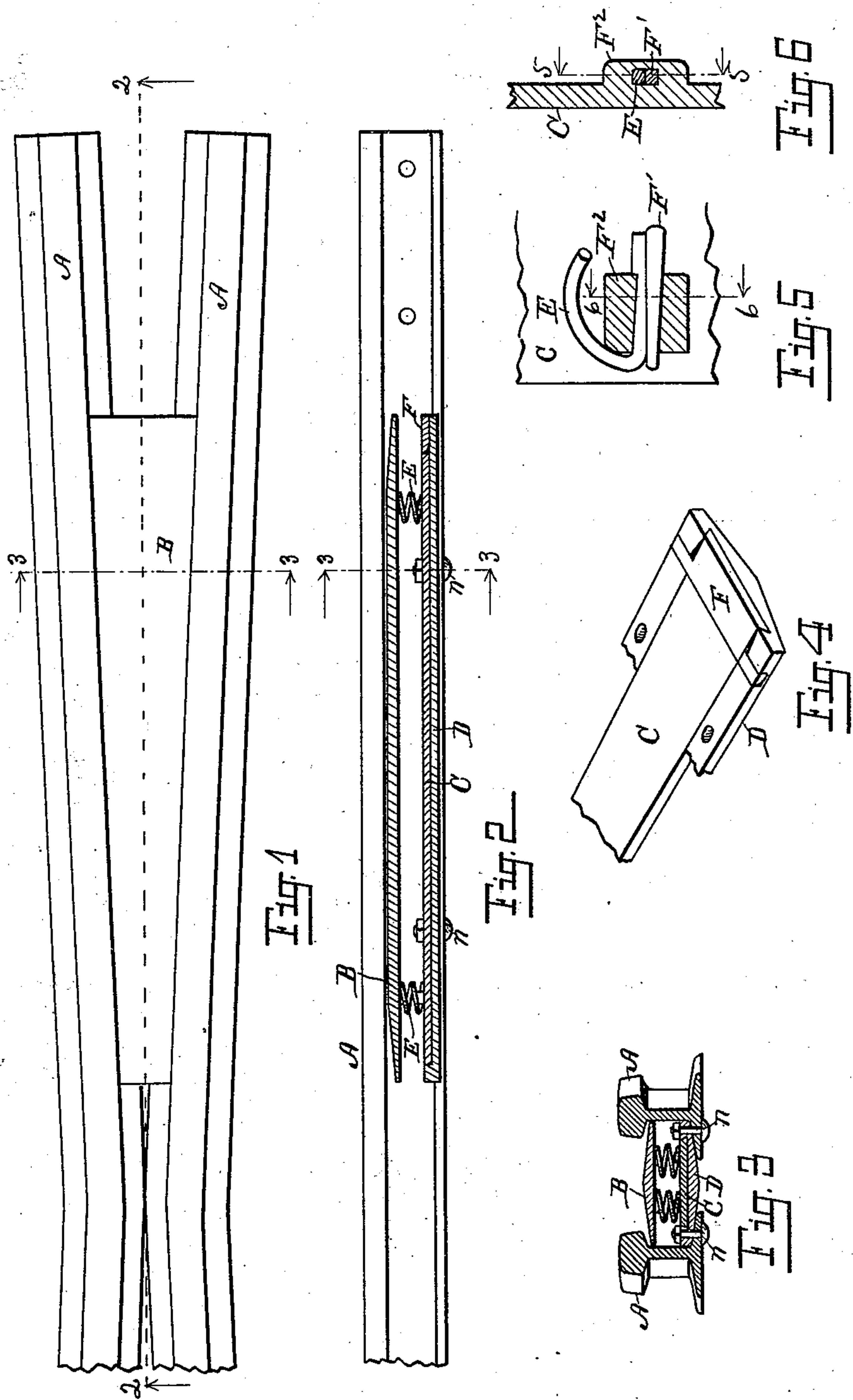


(No Model.)

J. K. RILE.  
FOOT GUARD FOR RAILWAY TRACKS.

No. 550,060.

Patented Nov. 19, 1895.



Witnesses:

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Att'y.

# UNITED STATES PATENT OFFICE.

JOSEPH K. RILE, OF CENTREVILLE, MICHIGAN.

## FOOT-GUARD FOR RAILWAY-TRACKS.

SPECIFICATION forming part of Letters Patent No. 550,060, dated November 19, 1895.

Application filed May 2, 1895. Serial No. 547,884. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH K. RILE, a citizen of the United States, residing at the village of Centreville, in the county of St. Joseph and State of Michigan, have invented certain new and useful Improvements in Foot-Guards for Railway-Tracks, of which the following is a specification.

My invention relates to improvements in foot-guards for railways, as for frogs, guard-rails, and branching rails wherever they occur.

As heretofore constructed such guards have been inconvenient to remove and insert in place, and where springs have been employed have been noisy and liable to get out of order without any convenient means of repairing the same when that became necessary, and guards have been inconvenient for removing accumulations of dirt, gravel, or cinder, which will accumulate in such places in the railroad.

The objects of my invention are to provide an improved guard which can be quickly and conveniently inserted or removed for convenience in clearing the track, which will be perfectly safe, and which will be noiseless and not be liable to get out of order, and which, when it does finally become worn, can be easily repaired. I accomplish these objects of my invention by the devices shown in the accompanying drawings, in which—

Figure 1 is a top plan view of a portion of a railway with my improved guard in place. Fig. 2 is a sectional view on line 2 2 of Fig. 1. Fig. 3 is also a sectional view on line 3 3 of Figs. 1 and 2. Fig. 4 is an enlarged detail view of the improved means of securing the guard detachably in place. Fig. 5 is an enlarged detail sectional view on line 5 5 of Fig. 6, showing the means of securing the ends of the springs in my improved guard. Fig. 6 is a sectional view on line 6 6 of Fig. 5.

In the drawings all of the sectional views are taken looking in the direction of the little arrows at the ends of the section-lines.

Similar letters of reference refer to similar parts throughout the several views.

Referring to the lettered parts of the drawings, A A represent the branching rails of a railway-track, which may occur in a frog or at

an intersection of two tracks or between a guard-rail and a rail of the main track.

To the base of the two rails and between the same is secured a plate D by suitable bolts, as *n n*, through the sides of the base. The top of the plate is dovetailed out to serve as a suitable guideway and means of clamping the plate C securely in place, and as the sides of the dovetailed part of the top plate D taper the plate C can be quickly moved to place. A locking-plate F is inserted at the back of the same to prevent its being withdrawn. This locking-plate F can be secured in place by a screw or bolt, if desired, but the weight of it will usually be sufficient to hold it in place. To the upper side of the plate C are secured springs E E, as many of them as may be required to properly support the upper or guard-plate B. The springs are secured by slipping the end of the same through appropriate lugs F<sup>2</sup> and keying them there by the key F'. A notch is cut into the spring to enable the same to be secured there. The springs are also secured to the under side of the plate B in the same manner. The plate B in place is supported a little distance below the head of the rail to each side, so that it does not come in contact with it at any time. The springs E are of sufficient size and strength to support a weight of about three hundred pounds without yielding. That being above the weight of an ordinary man, will prevent the foot of an individual stepping upon the same depressing the spring sufficiently to allow it to be engaged by the heads of the rail at each side. The guard-plate B, being a little distance below the head of the rail, will not strike the same when a train passes over it. The train, owing to its great weight, will depress the guard-plate and will pass by without being interrupted by the foot-guard. The ends of the plate B are tapered off gradually at each end, so that the wheels of a train in passing over it and coming in contact with it will pass upon the same gradually and will leave it gradually, so that the springs will not have a tendency to snap and throw the plate against the head of the rail to cause a noise, which is objectionable in railroad construction.

Having thus described my improved foot-



guard, I desire to say that it can be considerably varied in its details without departing from my invention.

My improved guard-plate, supported a little distance below the head of the rail on powerful springs, can be used with other means of securing it in position than those which I have described. The means, however, which I have described are greatly preferred on account of the ease of removing and replacing the guard properly to permit of keeping the same properly swept and clean. I believe that I have solved the problem of providing an efficient foot-guard for railways and railway-frogs that can be easily secured to the rails themselves so as to remain constantly and permanently in position, and I believe that I have provided a guard that is thoroughly efficient for the purpose; that will not become out of order; that can be easily kept free from accumulations, and that will afford protection to thousands of employes and others that may have occasion to pass over the tracks of railways, and I trust it may be the means of affording such employes a perfect protection both in their lives and limbs.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a foot guard for railways, the combination of the plate, D, securely bolted to the base of the rails with longitudinal dovetail grooves in the top; the plate, C, beveled at its edges to fit said dovetailed grooves; the cross block, F, to rest back of said plate, C, and secure it in position; the guard plate, B, a little beneath the heads of the rails sloping

gradually down at each end; powerful coiled springs, E, to support said guard plate in position securely attached to said guard plate, B, and the plate, C, by being inserted through lugs, F<sup>2</sup>, on said plates and keyed in place by keys, F', all co-acting together substantially as described for the purpose specified.

2. In a foot guard for railways, the combination of a plate securely bolted to the base of the rails between the angle portion; a suitable guide in the top of said plate; a detachable plate adapted to be slipped into the guides on the top of the fixed plate with suitable means of securing the same in position; the guard plate, B, a little beneath the heads of the rails sloping gradually down to each end and tapered to conform to the sides of the rails; powerful springs between the guard plate and removable plate for holding the guard plate definitely in position, as specified.

3. In a foot guard for railways, the combination of the guard plate sloping downwardly at each end supported a little beneath the heads of the rails; a detachable plate beneath; a spring, E, between the guard plate and detachable plate connected to the same by passing through suitable lugs, F<sup>2</sup>, and being crowded to one side to engage the same by keys, F', as specified.

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses.

JOSEPH K. RILE. [L. S.]

Witnesses:

WILLIAM F. PACK,

J. A. RUSSELL.