

(No Model.)

W. RAYMOND.
RAILWAY SWITCH.

No. 555,182.

Patented Feb. 25, 1896.

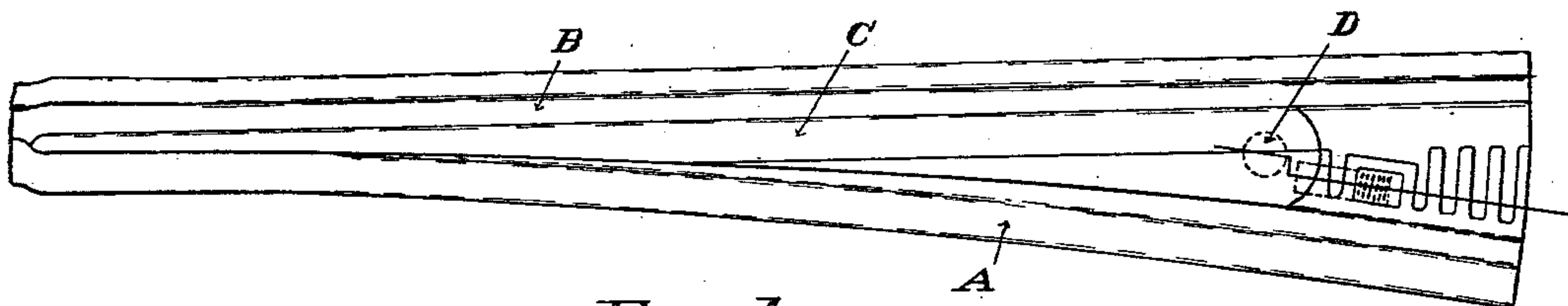


Fig. 1.

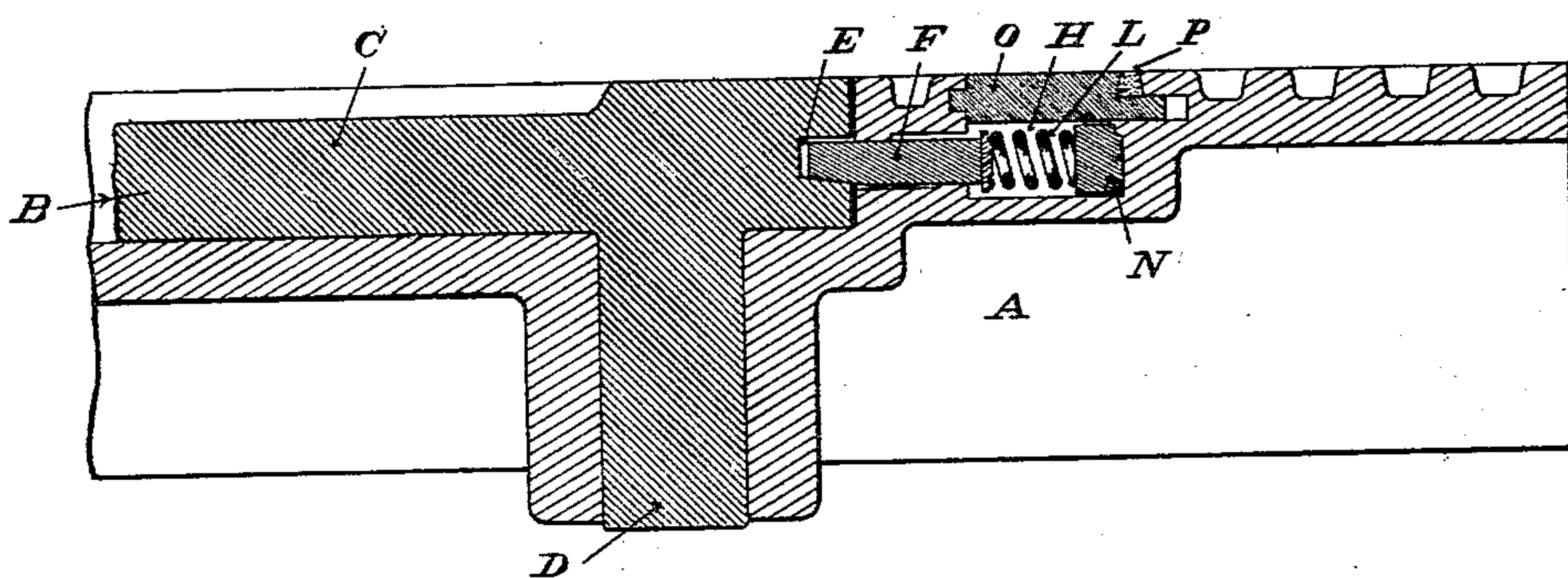


Fig. 2.

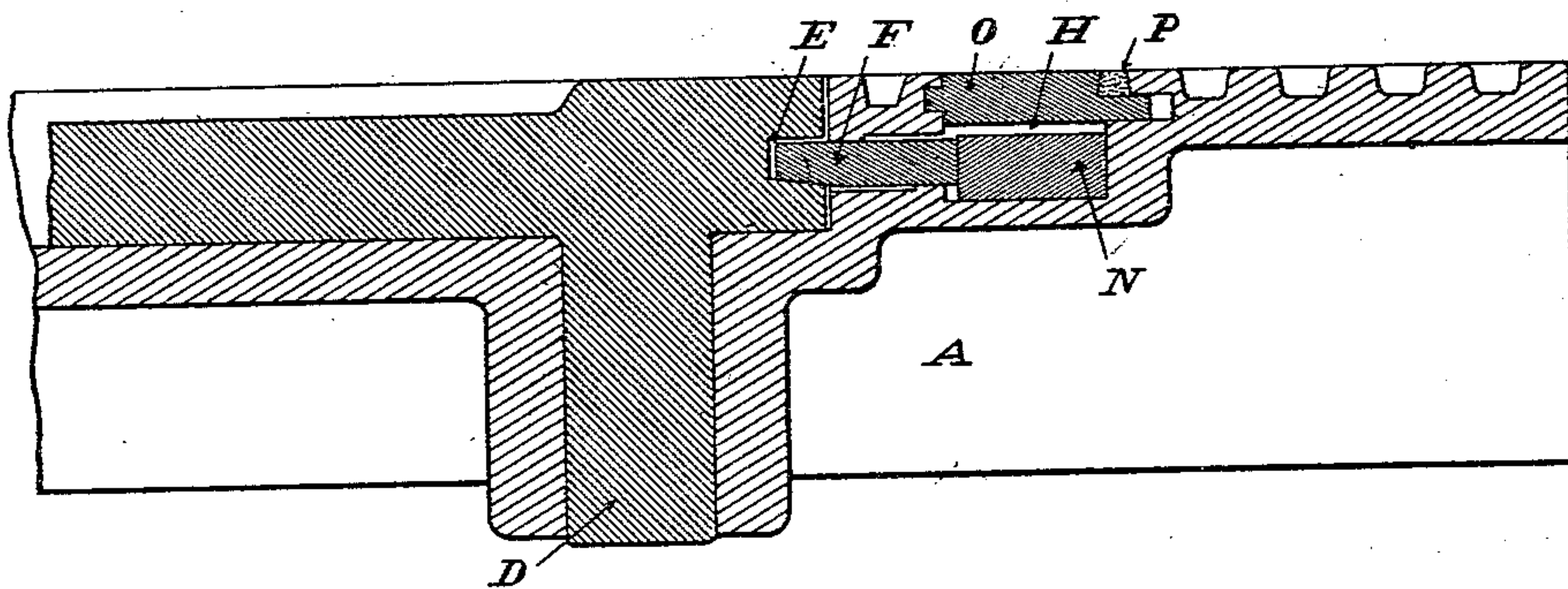
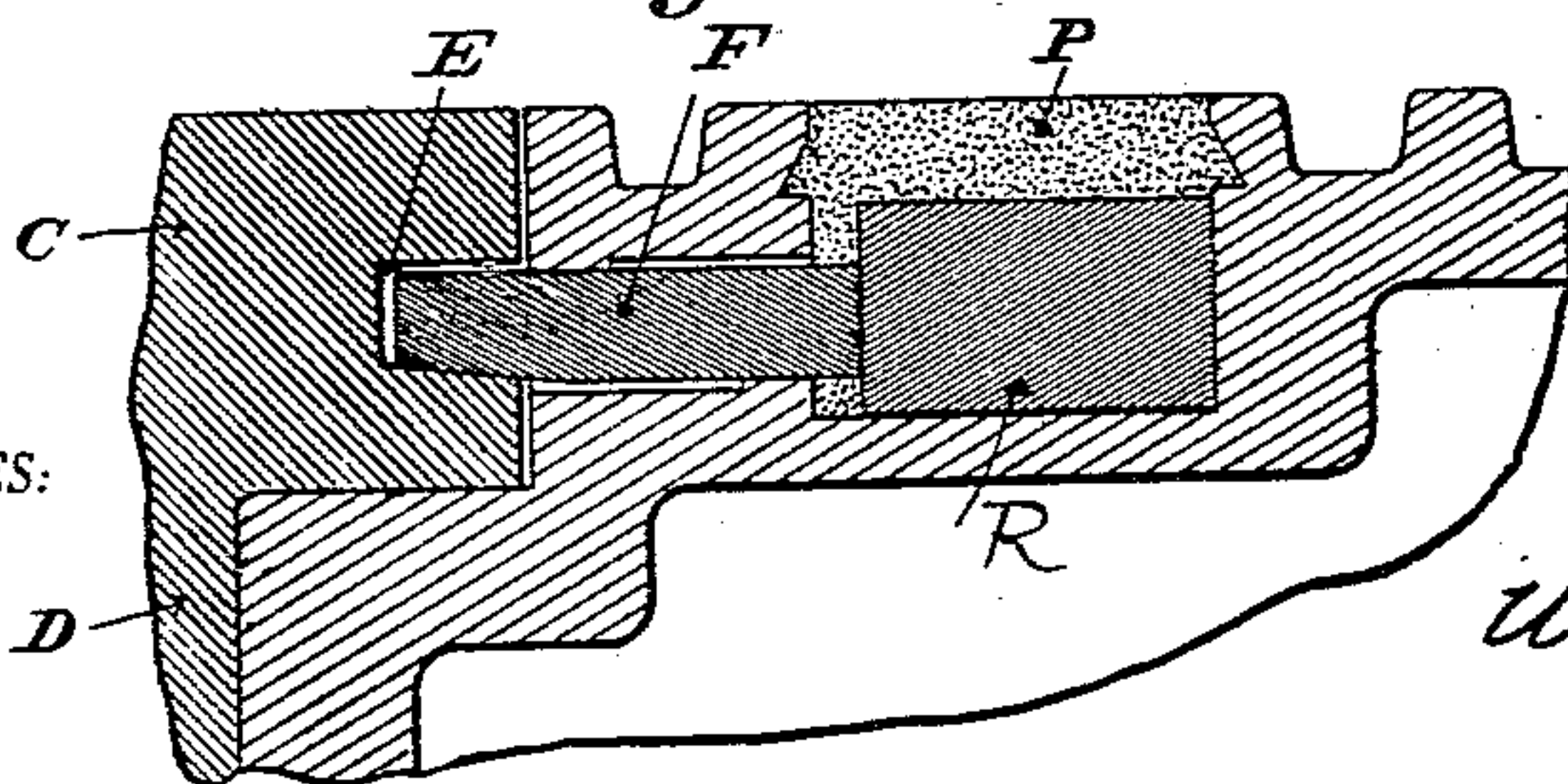


Fig. 3.



WITNESSES:

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Fig. 4.

UNITED STATES PATENT OFFICE.

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RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 555,182, dated February 25, 1896.

Application filed December 4, 1895. Serial No. 570,972. (No model.)

To all whom it may concern:

Be it known that I, WARD RAYMOND, of Johnstown, county of Cambria, State of Pennsylvania, have invented a new and useful Improvement in Railway-Switches, of which the following specification is a true and exact description, due reference being had to the accompanying drawings.

My invention relates to that class of tongue-switches largely used in street-railways, and in which the tongue is pivoted at one end upon a vertical pin or pivot.

The object of my invention is to provide a simple and durable means for holding the tongue down in the pocket of the switch-piece and, when desired, of affording an automatic means for compensating for any wear that may occur, and which, if not taken up, would allow the tongue to rise in the pocket.

Referring to the drawings, Figure 1 represents a general top view of a tongue-switch embodying my invention. Fig. 2 is a section on line *x x* of Fig. 1. Figs. 3 and 4 illustrate the modifications of Fig. 2, as will be herein-
after described.

Referring to Figs. 1 and 2, A is the frame of the switch having the pocket B adapted to receive the tongue C. This tongue C is pivoted on pivot-pin D. In the rear of the tongue I form a recess E, adapted to receive the keeper F, which is longitudinally movable in an orifice in the frame of the switch. Back of the keeper F, I form a small pocket H in the body of the switch, and in this pocket is the spring L, pressing the keeper F forward into the tongue.

It will be noticed that the bottom of recess E in the tongue and the front bottom edge of keeper F are inclined so that the keeper acts as a wedge upon the tongue to press it downward. The action of spring L is, therefore, to force keeper F forward and cause it to exert a downward pressure on the tongue. As fast as there is any wear the spring is there to force the keeper forward and so take the wear up without attention.

In order to facilitate assembling the several parts, I preferably form the pocket H of such shape and size that the spring may be inserted in it and placed in position behind the keeper

without any compression. I then compress the spring and insert the liner N behind it.

The pocket H may be so shaped that the keeper F can be inserted through it, or the keeper may be placed in its orifice before the tongue is put in, the keeper being pushed back out of the way and after the tongue is in it may be pushed forward into position.

In order to protect the parts, I provide the cover O for the pocket, which cover may be secured in any suitable way. As shown, it has a tongue on each end entering recesses in the frame of the switch. One of the recesses is formed of greater depth than the tongue which enters it and the cover and frame are so formed that one end of the plate may be inserted in this recess and pushed far enough into it to allow the other end to enter its recess. The cover is then slipped forward into position. This leaves a cavity between the cover and frame, and in order to lock the cover in position and fill the cavity I form its walls sloping so that the cavity itself is dovetailed in shape, and I pour it full of melted lead, sulphur, or other suitable material P, or a piece of cold soft lead may be inserted and upset therein by a hammer.

To remove the tongue, it is only necessary to cut away this soft metal, and, taking out the cover, remove the liner N and spring L and push back the keeper F, when the tongue may be lifted out.

When it is not desired to take up any wear, the spring may be omitted and a solid block R (shown in Fig. 3) substituted, and as in this case there is no movement of the several parts the cover O may be omitted and the whole cavity around the parts filled with lead or sulphur.

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

1. In a railway-switch having a vertically-pivoted tongue, a recess in the end of the tongue, a keeper entering the recess and extending into the body of the switch, an orifice extending downward from the top surface of the switch said orifice being so arranged that the keeper may be drawn back into it for the purpose of releasing the tongue

and means in said orifice adapted to retain the keeper in position.

2. In a railway-switch having a vertically-pivoted tongue, a recess in the tongue, a keeper entering the recess and extending into the body of the switch and a spring contained in a pocket in the body of the switch and adapted to act upon the keeper to maintain it in engagement with the tongue.

3. In a railway-switch having a vertically-pivoted tongue, a recess in the tongue having an inclined floor, a keeper entering the recess and extending backward into the body of the switch, that portion of the keeper in the recess in the tongue having an inclined bottom to engage the inclined floor of the recess an orifice in the body of the switch and adapted to permit of access to said keeper from the top of the switch and means in said orifice adapted to retain the keeper in position.

4. In a railway-switch having a vertically-pivoted tongue, a recess in the tongue having an inclined floor, a keeper entering the recess and extending backward into the body of the

switch that portion of the keeper in the recess in the tongue having an inclined bottom to engage the inclined floor of the recess, an orifice in the body of the switch and adapted to permit of access to said keeper from the top of the switch and a spring in said orifice and adapted to force said keeper into the recess in the tongue.

5. In a railway-switch having a vertically-pivoted tongue, a keeper adapted to have a longitudinal movement in the body of the switch, and adapted by said longitudinal movement to engage and draw down the tongue, an orifice in the body of the switch permitting of access to the keeper from the surface of the switch and means in said orifice for maintaining said keeper in engagement with the tongue.

In testimony whereof I have affixed my signature in presence of two witnesses.

WARD RAYMOND.

Witnesses:

WM. D. McELHINNY,

S. G. BONN.