No. 814,172. PATENTED MAR. 6, 1906.

J. M. SMITH.

RAILROAD SWITCH.

APPLICATION FILED NOV. 18, 1905.

FIG. 1.

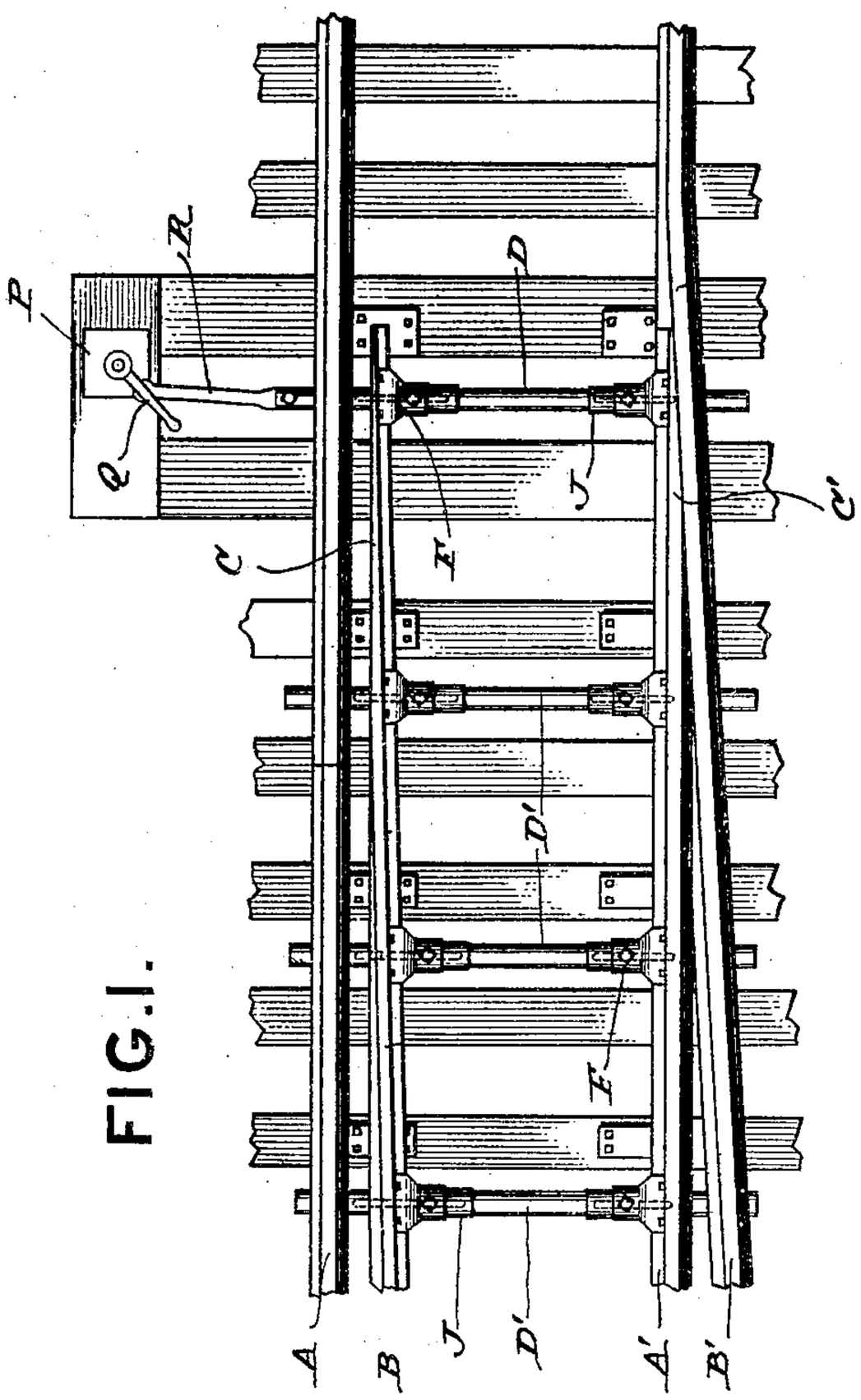


FIG. 3.

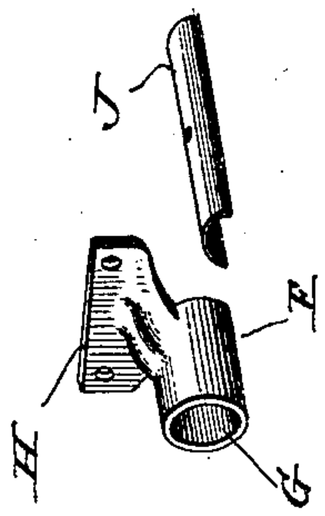
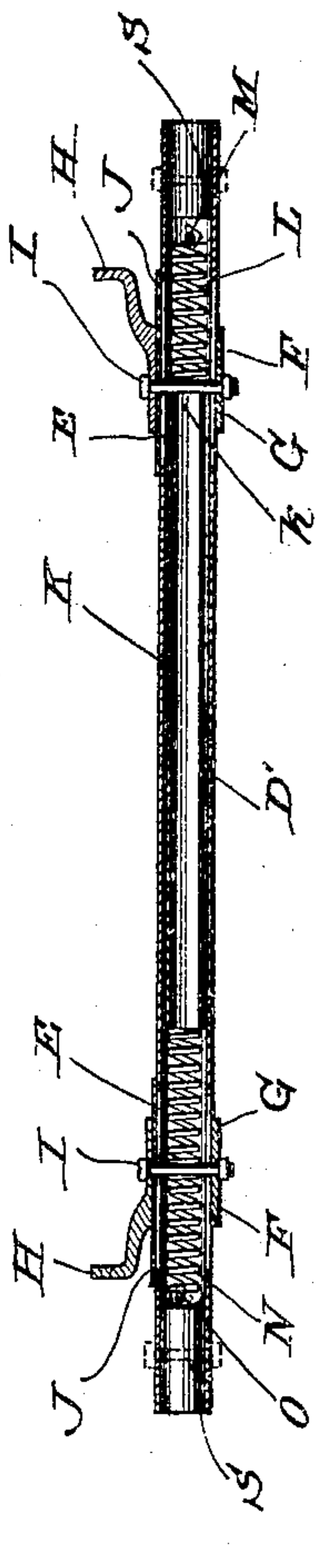


FIG. 2.



Witnesses,
Francis E. Gelden.
S. H. Rudolph Jr.

John M. Smith, Inventor.
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UNITED STATES PATENT OFFICE.

JOHN M. SMITH, OF WAITE PARK, MINNESOTA.

RAILROAD-SWITCH.

No. 814,172. Specification of Letters Patent. Patented March 6, 1906.

Application filed November 18, 1905. Serial No. 287,962.

To all whom it may concern:

Be it known that I, JOHN M. SMITH, a citizen of the United States, residing at Waite Park, in the county of Stearns and State of Minnesota, have invented certain new and useful Improvements in Railroad-Switches, of which the following is a specification.

My invention relates to railway-switches, and particularly to that class of switches in which the switch-points are held by means of springs, so that they will give in case a train or car should be sent through the switch when set for the adjoining track, and has for its object the improvement of a switch of the type described to the end that the operating parts are effectually covered from the weather, so that there is no danger of the parts disintegrating, and consequently becoming easily broken and the switch becoming dangerously useless.

The construction and advantages of my invention will be fully explained hereinafter, and illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of a fragment of a railroad-track, showing a switch with my improved rods in position; Fig. 2, a longitudinal sectional view of one of my improved rods, and Fig. 3 a detail perspective view of the clamp for securing the switch-point to the rods.

In the drawings similar reference characters indicate corresponding parts throughout the several views.

A and A′ represent the main-line rails, while B and B′ represent the turnout-rails leading to a siding. (Not shown.)

C and C′ represent the switch-points, which are pivotally secured at the end of rails A′ and B′, respectively.

D and D′ represent tubular rods having slots E.

F represents clamps each having a tubular portion G, mounted on the rods D or D′, and an upright member H, secured by means of bolts to the switch-point. The clamps F are slidably mounted on rods D or D′ by means of bolts I, secured through tubular portions G and the slots E.

J represents a curved plate mounted under each tubular portion G to prevent rain-water from getting into the tubular rods D and D′.

K represents a rod or tube inserted in each of the rods D and D′ and loosely mounted therein, so as to be slidable. One end *k* of rod or tube K bears against the bolt I, secured through one of the clamps F, and a coil-spring L is secured to the end *k* and the bolt I aforesaid and has its free end secured to a bolt M, secured through the tubular rod D or D′. N represents another coil-spring mounted in each tubular rod D and D′ and having one end bearing against the end *k*′ of the rod K and its other end secured by means of a bolt O to the tubular rod D or D′. The bolt I on the other clamp F is secured through the coils of spring N midway of its length.

P represents a switch-stand, Q the lever, and R a rod connecting the lever Q with one end of the tubular rod D. The ends of rods D and D′ are plugged, as shown at S.

In operation it will be apparent that the springs L and N in the rods D and D′ permit movement of the switch-points C and C′ independently of the rods D and D′. For instance, if the switch be set as shown in Fig. 1 the main line is open in both directions for the free movement of trains; but should a train or a car be on the siding to which the turnout-rails B and B′ lead it may be run onto the main line without opening the switch to the turnout-rails, the springs L and N allowing the switch-points to move during the passage of the car or train and after its passage returning them to their former position.

I am aware that switches having their points held by means of springs so as to operate as above described have been patented heretofore; but my invention adds the feature of protecting the operating mechanism from the weather and also provides means for causing the switch-points to swing simultaneously, the springs operating as buffers as well as means for returning the points to their normal position when pressure is released.

Having thus described my invention, what I claim is—

1. In combination with a railroad-switch, tubular rods, one of said rods connected with a switch-operating device, clamps slidably mounted on said rods and secured to the switch-points, and springs secured to said rods and the clamps, substantially as shown and described.

2. In combination with a railroad-switch, slotted tubular rods, one of said rods connected with a switch-operating device, clamps slidably mounted on said rods and secured through the slots therein, said clamps being

secured to the switch-points, and springs secured in said tubular rods and to said clamps, substantially as shown and described.

3. In combination with a railroad-switch, slotted tubular rods, one of said rods being connected with a switch-operating means, clamps secured to the switch-point and having tubular portions fitting on said tubular rods, bolts securing said tubular portions through the slots in the rods, and springs secured to said bolts and inside of said tubular rods, substantially as shown and described.

4. In combination with a railroad-switch, slotted tubular rods, one of said rods being connected with the switch-operating device, clamps secured to the switch-point and having tubular portions fitting on said tubular rods, bolts secured to said tubular portions and through the slots in the rod, a rod slidably mounted in each tubular rod and having one end secured to the bolt secured to one of the clamps, a spring secured to the same bolt and inside of the tubular rod, and a spring secured to the other end of said rod and inside of the tubular rod, the bolt secured to the other clamp being secured to the last-named spring intermediate of its length, substantially as shown and described.

In testimony whereof I hereto affix my signature in the presence of two witnesses.

JOHN M. SMITH.

Witnesses:
J. I. DONOHUE,
J. BOEHM.