

J. B. CAREY.
Railway-Switch.

No. 222,127.

Patented Dec. 2, 1879.

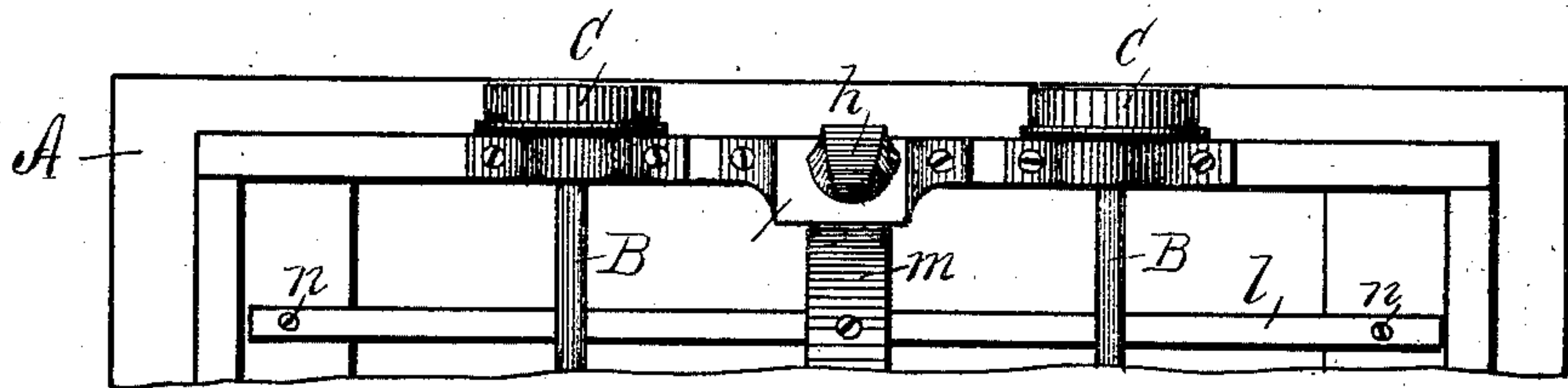
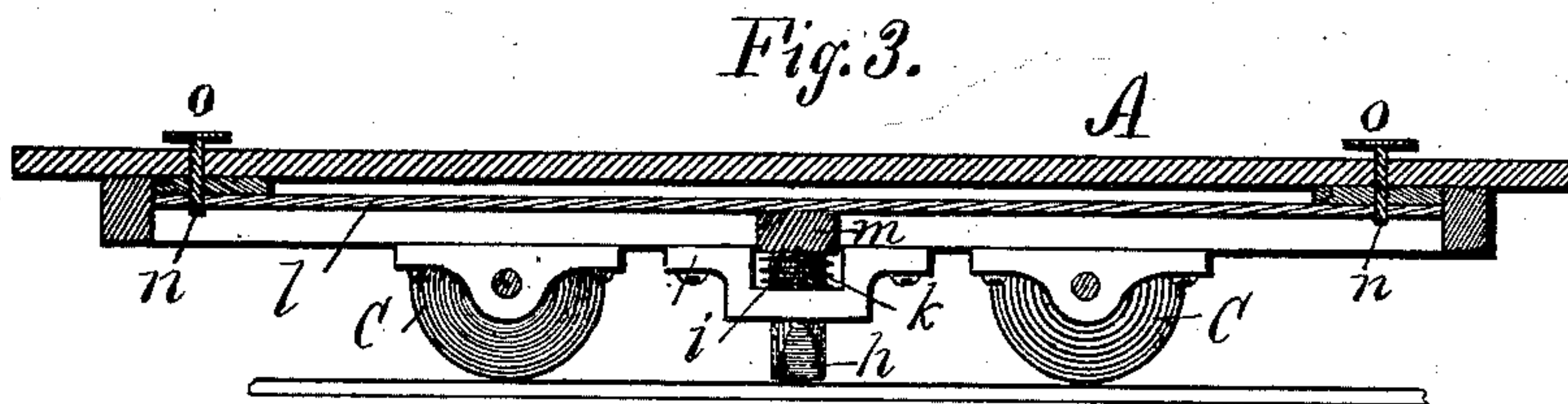
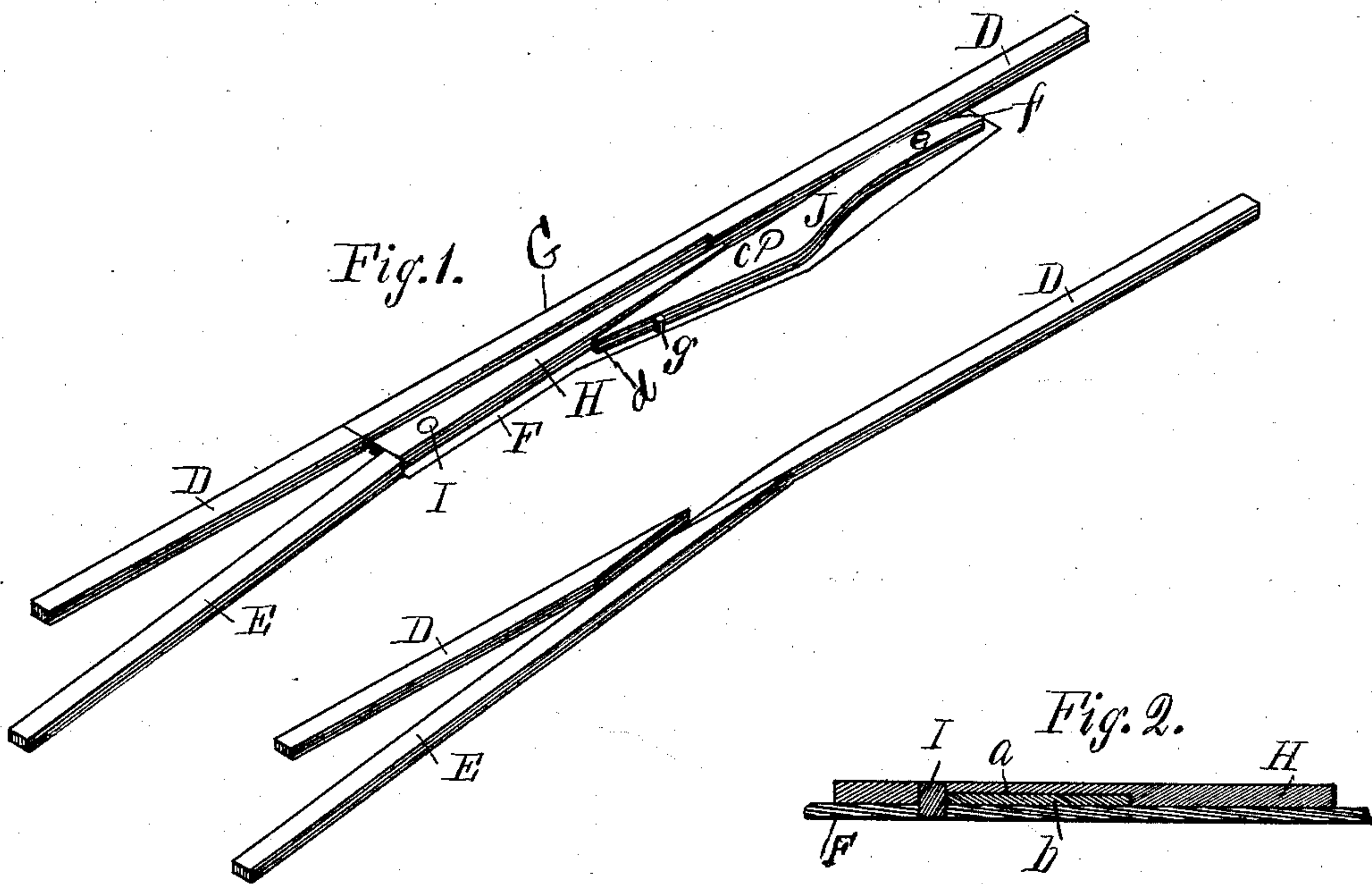


Fig. 4.

Witnesses.

Inventor.

H. B. Lodge.
Wm. T. Andrews, Jr.

John B. Carey

UNITED STATES PATENT OFFICE.

JOHN B. CAREY, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO WILLIAM V. HUTCHINGS, OF SAME PLACE.

IMPROVEMENT IN RAILWAY-SWITCHES.

Specification forming part of Letters Patent No. 222,127, dated December 2, 1879; application filed October 13, 1879.

To all whom it may concern:

Be it known that I, JOHN B. CAREY, of Boston, county of Suffolk, and State of Massachusetts, have invented certain new and useful Improvements in Railway-Switches, of which the following is a specification.

This invention relates to means for enabling the driver of a street-railway car to change the switch-point and switch his car without leaving the latter; and the invention consists in the employment, in combination with the tongue or point of a swinging lever pivoted to the bed-plate at one end of said tongue, and operating against the latter to close it, the tongue being kept in its open or normal position by means of a spring, and the tail of the lever being operated by a presser-foot depending from a bar arranged below the floor of the car, and operated by the foot of the driver, as hereinafter explained.

The drawings accompanying this specification represent, in Figure 1, a perspective view of a railway-track, sidetrack, switch-point, and lever, partly embodying my invention. Fig. 2 in such drawings represents a longitudinal section of the point. Fig. 3 is a central longitudinal section of the car, and Fig. 4 is an under-side view of the same.

In said drawings, A represents the bottom or floor of a street-railway car, B B its axles, and C C C C its wheels, while D D represent the rails of the main track of the railway, and E E those of the siding. The base-plate of the switch-point is shown at F, its main rail portion at G, and its swinging tongue at H, the pivot of such tongue being shown at I. The tongue H is channeled or chambered on its under side, as shown at *a*, to receive a plate-spring, *b*, such spring being secured at one end to the pivot I, and exerting its stress against the tongue to crowd the latter outward and permit the main track to remain open.

J in the drawings represents a lever disposed upon the top of the base-plate F, and pivoted at its center, or thereabout, by a vertical pivot, *c*, to the base-plate of the point, the said pivot *c* being near the free end of the tongue, and one end—viz., *d*—of the lever lying

alongside of the said free end. The tail or opposite end—viz., *e*—of the lever J is situated alongside of the rail D, and is flaring, as shown at *f*, to permit of entrance of the presser-foot, to be explained. A stop, *g*, is erected upon the base-plate of the point, against which the lever and tongue conjointly bear to determine the proper position of the point or tongue to leave the main track open.

The presser-foot before named is a wedge-shaped block, *h*, secured to the lower end of a vertical slide bar or rod, *i*, sliding in a hanger or housing, *j*, secured to the under side of the car-floor A, and at one side thereof, as shown in Fig. 4 of the drawings, the slide-bar being elevated by a spring, *k*, disposed within the box of the housing, and exerting its stress between the bottom of such box and a shoulder upon the bar. An anti-friction roller may, if desirable, be added to the lower end of the foot *h*, to reduce friction between it and the lever J.

The slide-bar and presser-foot are lowered by means of a long bar, *l*, which extends centrally and longitudinally beneath the car-floor, and is connected with the slide-bar by a cross-bar, *m*, while upon each end of the said bar *l* a rod, *n*, is erected and extends upward through the adjacent platform of the car-floor, and is provided at top with a foot-rest, *o*, for reception of the foot of the driver.

To adapt the device to levers upon both sides the track a presser-foot and its slide-bar, as well as the supporting-hanger, should be applied to each side of the car.

The operation of the device is as follows: As the car approaches a siding or turnout, to which the car is to be switched, the driver places his foot upon the top of the adjacent foot-rest O and lowers the same, the result being that the presser-foot upon that side of the car strikes against the inside of the tail of the lever J, and crowds the latter inward toward the center of the track, at the same time forcing the opposite end of such lever and the free end of the movable tongue in the opposite direction, and by so doing closes the main track and opens the siding, the portion of the lever lying against the tongue being of less height

than the latter, in order to offer no obstruction to the flange of the wheels. The flange of the car-wheel engages with the inner side of point or tongue H when the latter is thus thrown outward, and this engagement compels the wheel and car to diverge upon the side track, E, thus practically closing the main track. As the last wheel of the car passes by the tail of the lever the spring *b* restores the parts to their primitive positions and the main track is opened while the siding is closed. As the car returns to the main track the flange of the wheel operates the switch-point, while the presser-foot being elevated passes over the shipper-lever without actuating the latter.

As the switch-point and the shipper-lever are situated upon the top of the base-plate of the point, and are readily removable, no obstruction from ice or snow need be apprehended, for the reason that they may be readily cleaned, while by letting the spring which actuates the tongue into a recess in the under side of the latter, it is, in turn, protected from injury.

The entire device is strong, effective, and durable, and may be applied at small expense.

I claim as my invention, and desire to secure by Letters Patent of the United States, as follows:

1. In combination with tracks D and E, the point H and a lever lying partly parallel to said point, and operating in contact therewith and against a spring adapted to keep the main

track open, when engaged by a device carried by a car, substantially as set forth.

2. In combination with tracks D and E, point H, and bed-plate F, the lever J, pivoted to said bed-plate, said lever being partly parallel to said point, and arranged to operate in contact therewith and against a spring adapted to keep the main track open, when engaged by a device carried by a car, substantially as set forth.

3. In combination with point H, plate F, and lever J, pivoted to said plate, the spring *b*, inserted in a recess of said point H, and operating substantially as set forth.

4. The stop *g*, in combination with lever J and point H, actuated by a spring, substantially as set forth, said lever being arranged for engagement with a device carried on a car.

5. The combination, with presser-foot *h*, cross-bar *m*, and long bar *l*, parallel to the side of the car, of treadles or foot-rests *o o* at or near the ends of said bar *l*, substantially as set forth.

6. In combination with tongue H, impelled by a protected spring, the lever J and the sliding presser-foot *h*, carried by the car and operated by the driver.

JOHN B. CAREY.

Witnesses:

H. E. LODGE,

W. H. WILKINSON.