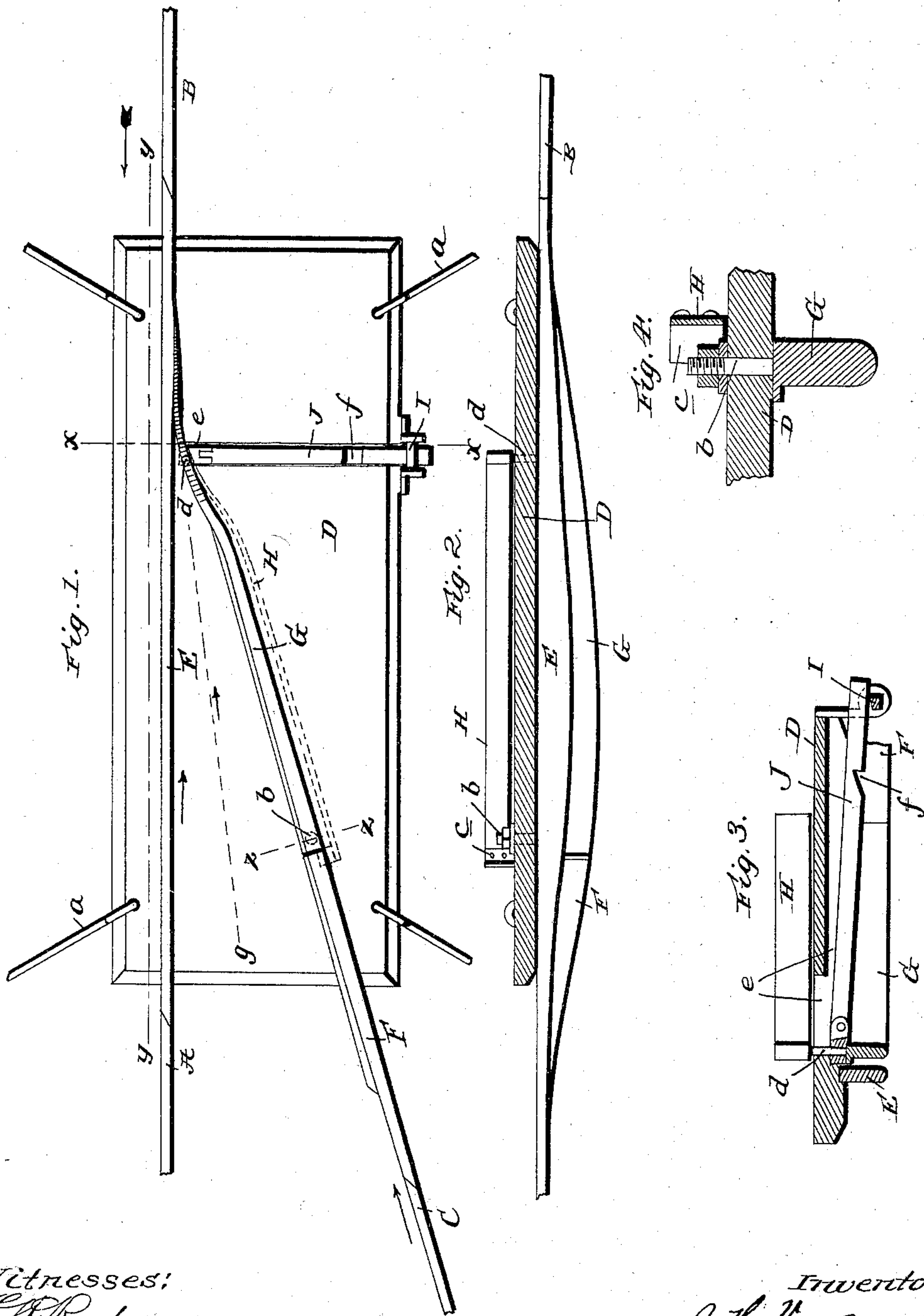


(No Model.)

J. H. VANASSELT
TROLLEY SWITCH.

No. 605,211.

Patented June 7, 1898.



Witnesses:
C. B. Raeder
J. H. Money

Inventor
J. H. Van Asselt
By *James J. Shuchy*
Attorney

UNITED STATES PATENT OFFICE.

JACOB H. VANASSETT, OF SEATTLE, WASHINGTON.

TROLLEY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 605,211, dated June 7, 1898.

Application filed October 2, 1897. Serial No. 653,841. (No model.)

To all whom it may concern:

Be it known that I, JACOB H. VANASSETT, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Trolley-Switches; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to trolley-switches or switches for guiding a trolley-wheel from a main-line conductor onto a turnout or siding conductor, and its novelty and many advantages will be fully understood from the following description and claims when taken in conjunction with the annexed drawings, in which—

Figure 1 is an inverted plan view of my improved switch. Fig. 2 is a longitudinal section taken in the plane indicated by the line *y y* of Fig. 1. Fig. 3 is a transverse section taken in the plane indicated by the line *x x* of Fig. 1, and Fig. 4 is a detail section taken in the plane indicated by the line *z z* of Fig. 1.

In the said drawings similar letters designate corresponding parts on all of the several views, referring to which—

A B designate portions of the main conductor of an electric railway—that is to say, the conductor which rests over the main line of the railway.

C designates a turnout or siding conductor, and D designates the body-plate of my improved switch, which is preferably of cast-brass. This body-plate D is designed to be held in position by stays *a*, connected to suitable supports, (not illustrated,) or by other suitable means, and it is provided at its under side with a fixed guide portion E, which is interposed between the wire-sections A B and forms a part of the main-line conductor, as shown. Said body-plate D is also provided at its under side with a fixed guide portion F, which abuts at its heel against the wire C of the turnout or siding conductor, as shown. At its opposite end the guide portion F abuts against the heel of the switch-point G, which point is disposed below and pivotally connected to the body-plate and is normally pressed against the guide portion E by a

spring H. In the preferred embodiment of the invention the pivotal connection of the point G to the switch-plate is preferably effected by loosely arranging a trunnion *b*, which is integral with the switch-point, in the plate and mounting a nut on the upper threaded end of said trunnion, as best shown in Fig. 4. This spring H is mainly disposed above the body-plate D, as better shown in Fig. 2, it being connected at one end to a shank *c*, rising from the body-plate, and having a depending branch *d* at its opposite end, which extends through a cross-slot *e* in the body-plate and is connected to the point G, adjacent to its free end, as illustrated. In virtue of this construction it will be observed that the spring H will normally hold the free end portion of the switch-point G against the guide portion E and will return said point G to such position when it is moved away from the portion E. It will also be observed that by reason of the spring being arranged as described it cannot be struck and injured by the trolley-wheel in its passage through the switch, which is an important advantage.

The guide portion E is gradually increased in depth from its ends to an intermediate point of its length, as shown, so as to enable a trolley-wheel passing along in engagement with the said guide portion to clear the body-plate D. The switch-point G is also increased in depth from its free end to its heel and is deeper than the guide portion E, as better illustrated in Fig. 2, so as to enable the flange of the trolley-wheel to clear the guide portion E when said trolley-wheel, traveling in the direction indicated by the large arrow, takes upon the switch-point. The said switch-point abuts against the inner end of the guide portion F, and the said guide portion F is gradually diminished in depth from its inner to its outer end, as shown, so as to enable the trolley-wheel to readily pass from the switch-point on the guide portion F and from thence onto the conductor or wire C.

As stated, the switch-point G is normally held against the guide portion E by the spring H. In consequence of this a trolley-wheel traveling in the direction indicated by the large arrow will pass from the conductor-wire B on the contiguous end portion of the guide

E and from thence over the switch-point G, guide portion F, and turnout-conductor C in the order named. A trolley-wheel traveling on the main conductor in the direction indicated by the medium-size arrow will pass from the main conductor on the guide E, and when it reaches the switch-point one of its flanges will push the same away from the guide E and will pass between said guide and point and continue its travel over the main conductor. The arrangement is also such that a trolley-wheel traveling on the turnout-conductor in the direction indicated by the medium-size arrow is enabled to freely pass from the switch-point G to the guide E and from thence to the main-line conductor B.

It is advantageous in some cases, as when it is not desired to have any cars pass from the main line into the turnout, to lock the switch in its open position. To this end I provide the keeper I, which is connected with and disposed below the body-plate C, and the latch-bar J, which is pivotally connected to the switch-point and has a notch *f* to seat the keeper I when the switch-point is moved sufficiently far away from the guide portion E. The switch-point will not be moved sufficiently far by the flange of a wheel traveling on the guide portion E in the direction opposite to that indicated by the arrow to place the notch *f* in engagement with keeper I. When, however, it is desired to place the notch *f* in engagement with the keeper I, and thereby lock the switch-point in its open position, the same may be readily accomplished by the conductor of a car guiding the trolley-wheel on the dotted line *g* in the direction indicated by the small arrow, so that the entire width of the trolley-wheel will pass between the guide portion E and the switch-point G. This will move the said point sufficiently far to place the notch *f* in engagement with the keeper I, and the point will thereby be secured in its open position. When it is again desired to have the point G rest normally against the guide portion E, the latch-bar may be released from the keeper I by the conductor guiding the trolley-wheel, so as to enable the same to strike and raise the latch-bar, when the spring will automatically press the switch-point against the guide E.

In virtue of the construction described it will be seen that the wires or conductors are not interrupted or disconnected, and consequently there is no liability of the trolley-

wheel leaving the conductors, which is an important advantage.

Having thus described my invention, what I claim is—

1. In a trolley-switch, the combination of a suitably-supported switch-plate provided with a keeper, a guide arranged at the under side of the plate, a movable, spring-pressed switch-point arranged at the under side of the switch-plate and normally bearing against the guide, and a latch also arranged at the under side of said plate and connected with the switch-point and adapted to engage the keeper and hold the switch-point away from the guide, substantially as specified.

2. In a trolley-switch, the combination with the main-line and turnout conductors; of a suitably-supported switch-plate having a guide on its under side interposed between the main-line conductors, a guide abutting against the turnout-conductor, and a keeper, a switch-point pivotally connected with and disposed at the under side of the plate, a spring for normally holding said point against the first-named guide of the plate, and a latch-bar loosely connected to the switch-point and resting on the keeper and adapted to engage said keeper, substantially as specified.

3. In a trolley-switch, the combination with the main-line and turnout conductors; of a suitably-supported switch-plate provided with the slot *e* and having, on its under side, a guide interposed between the main-line conductors, a guide forming the terminal of the turnout-conductor, and a keeper, a switch-point pivotally connected with and disposed at the under side of the plate and having its heel arranged contiguous to the second-named guide of the switch-plate, and a latch also arranged at the under side of said plate and connected with the switch-point and adapted to engage the keeper, and the flat spring H disposed above the switch-plate and connected at one end to the same and having a depending portion at its opposite end loosely arranged in the slot *e* and connected to the switch-point, substantially as specified.

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

JACOB H. VANASSETT.

Witnesses:

FRANK B. WIESTLING,
J. D. ROBUL.