

F. L. BILLE.
AUTOMATIC RAILWAY SWITCH.
APPLICATION FILED FEB. 1, 1911.

995,317.

Patented June 13, 1911.

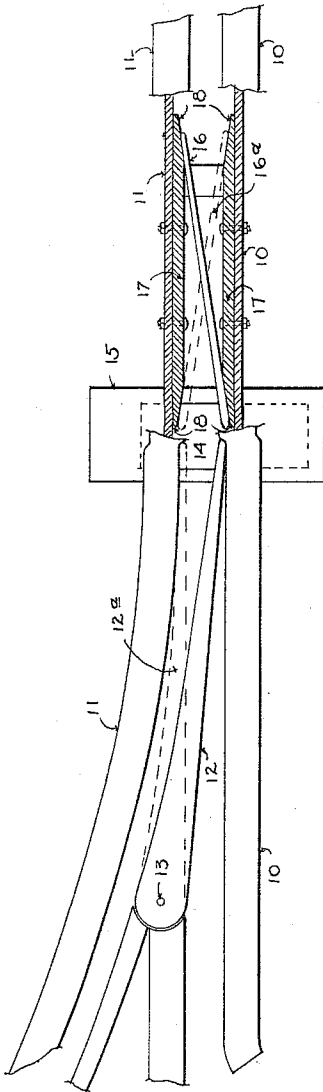


FIG. 1.

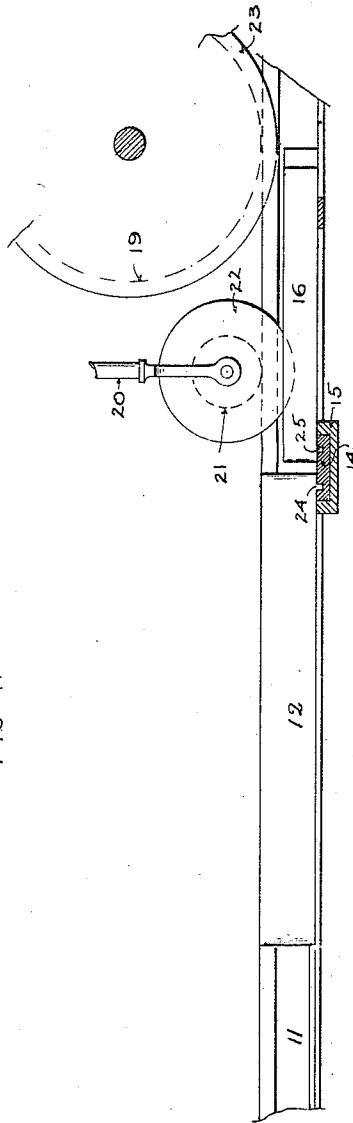


FIG. 2.

WITNESSES

E. M. Engstrom.
G. L. Westfall

Fred L. Bille

INVENTOR

by R. L. Westfall
his attorney

UNITED STATES PATENT OFFICE.

FRED L. BILLE, OF SPOKANE, WASHINGTON, ASSIGNOR OF ONE-TENTH TO JOHN T. CASPER, OF SPOKANE, WASHINGTON.

AUTOMATIC RAILWAY-SWITCH.

995,317.

Specification of Letters Patent. Patented June 13, 1911.

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To all whom it may concern:

Be it known that I, FRED L. BILLE, citizen of the United States, residing at Spokane, in the county of Spokane and State of Washington, have invented certain new and useful Improvements in Automatic Railway-Switches, of which the following is a specification.

This invention relates to railway switches of the kind adapted especially to street railways and electricized roads.

The switch is opened and closed entirely automatically with the exception that the motorman or other person operating the car presses down a rod with his foot in order to throw a small wheel into connection with the mechanism.

A special object of the invention is to provide a practical and simple mechanism whereby a switch may be opened and closed by a simple process and that by a motorman or other person on board the car, without the necessity of stopping the car.

The invention consists largely in a supplemental switch point ingeniously arranged at the front end of a switch point of ordinary construction and operated by a small wheel attached to the car and brought into engagement therewith by a mechanical process of the motorman or other person in charge of the car.

In the drawings Figure 1 is a combined plan and sectional view of the invention together with the connecting mechanism, and Fig. 2 is a combined side elevation and sectional view of the mechanism together with the connecting parts and showing the manner of engagement therewith of a small wheel preceding a car wheel in its passage over the track.

I have shown a main track rail 10, a switch rail 11 and a switch point 12, all relatively situated and of usual construction, the top surfaces of the three parts being horizontal with the other, the back end of the switch point 12 being pivoted at 13. Transversely arranged at the front end of the switch point 12 and underneath the rails 10 and 11 is a plate 14 slidably adjusted within a casing 15. Pivoted to the plate 14 is the front end of the switch point 12 and one end of the supplemental switch point 16. The supplemental switch point 16 is so attached between the rails 10 and

11 that the upper edge thereof is approximately one and one-half inches below the top surface of the rails 10 and 11 and the switch point 12. To the inner side of the rails 10 and 11 adjacent to the supplemental switch point 16 are attached plates 17 with beveled ends 18. To the floor of the front end of a car and in front of the front wheels 19 is attached a rod 20 carrying a small wheel 21 at its lower end, with a wide flange 22. This flange 22 being wide enough to reach downward and engage the side surface of the supplemental switch point 16 as the car passes over the rails, while the front wheels of the car 19 are provided with a much narrower flange 23 and will not engage the supplemental switch point 16. As hereinbefore inferentially referred to, the front end of the switch point 12 is pivoted to the plate 14 as at 24 and one end of the supplemental switch point 16 is pivoted thereto as at 25. The rod 20 carrying the wheel 21 may be so attached to the floor of the car that the wheel may be thrown down or elevated by electric or other power and should provide for the elevation of the wheel 21 after the switch has been turned, as is desired.

One and the same process is applied for either opening or closing the switch. For instance, if it is desired that a car coming from the right should take the switch when the apparatus is in the position shown in Fig. 1, there is no occasion for the use of the appliance as the switch is open, while on the other hand if it is desired to take the main track, the apparatus being in the position shown in Fig. 1, it would be necessary to use the apparatus and the wheel 21 be thrown down to a position shown in Fig. 2, whereby the flange 22 of the wheel 21 engages the side surface of the supplemental switch point 16 and carries the same together with the primary switch point 12 to the position shown by the dotted lines 16^a and 12^a, the plate 14 gliding transversely within the casing 15. It will be observed that the beveled ends 18 of the plate 17 during the process just described have caused the loose end of the supplemental switch point 16 as well as the end pivoted to the plate 14 to reverse their positions and that by putting into operation the small wheel 22 as shown in Fig. 2 the switch point 12

will be thrown in an opposite direction. It will thus be seen that one and the same process will either open or close the switch or in other words one process will change the position of the switch to either an open from a closed switch or a closed from an open switch.

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

1. A railway switch appliance consisting of a plate slidably adjusted within a casing transversely arranged at the juncture of a railroad main track and switch track and at the end of the switch point, to which plate is pivoted the front end of the switch point, a supplemental switch point also pivoted to the plate near the front end of the main switch point, between the rails of the main track and of the switch and extending in an opposite direction from the plate, plates with beveled ends attached to the inner side of the rail of the main track and of the switch adjacent to the supplemental switch point and extending approximately half way over the slidably adjusted plate, such switch appliance adapted to be operated by a small wheel attached to the frame of a

car running over the railway and actuated by a workman accompanying the car.

2. A railway switch appliance consisting of a plate slidably adjusted within a casing transversely arranged at the juncture of a railroad main track and switch track and at the end of the switch point, to which plate is pivoted the front end of the switch point, a supplemental switch point, with its top surface approximately one and one-half inches below the top surface of the rails, also pivoted to the plate near the front end of the main switch point between the rails of the main track and of the switch and extending in an opposite direction from the plate, plates with beveled ends attached to the inner side of the rails of the main track and of the switch adjacent to the supplemental switch point and extending approximately half way over the slidably adjusted plate.

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

FRED L. BILLE.

Witnesses:

WILLIAM H. KAYE,
ESTHER M. ENGSTROM.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
