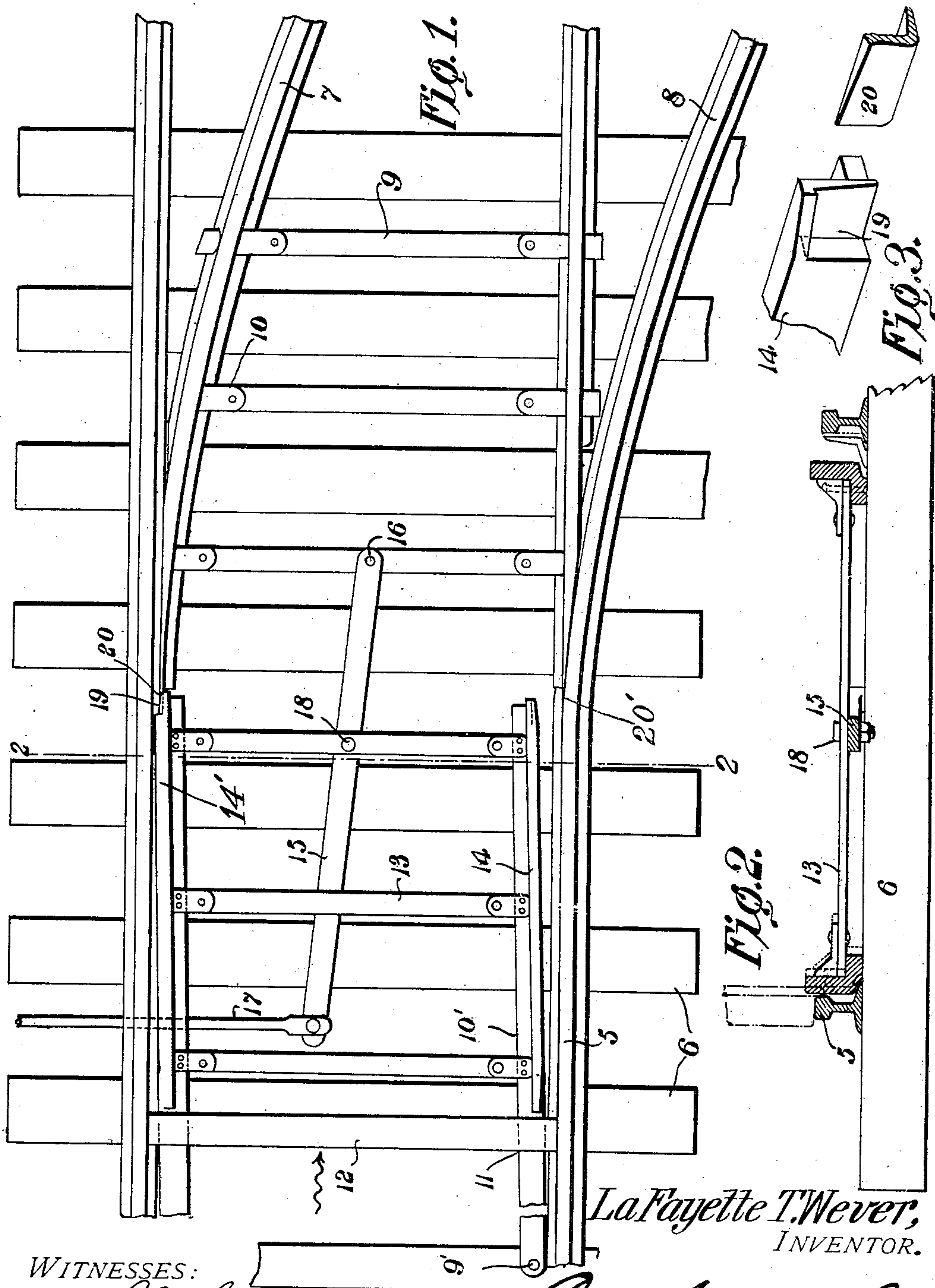


No. 859,270.

PATENTED JULY 9, 1907.

LA FAYETTE T. WEVER.  
RAILWAY SWITCH.

APPLICATION FILED OCT. 26, 1906.



WITNESSES:

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## RAILWAY-SWITCH.

No. 859,270.

Specification of Letters Patent.

Patented July 9, 1907.

Application filed October 26, 1906. Serial No. 340,764.

To all whom it may concern:

Be it known that I, LA FAYETTE T. WEVER, a citizen of the United States, residing at Crawfordville, in the county of Wakulla and State of Florida, have invented a new and useful Railway-Switch, of which the following is a specification.

This invention relates to rail-road switches and has for its object to provide a switch in which danger of splitting or otherwise mutilating the switch point by contact with the wheel-flanges is positively eliminated.

A further object of the invention is to provide a switch including movable switch rails having guard rails operatively connected therewith and movable simultaneously in opposite directions to operative position.

A further object is to provide means operable by the wheels of the car for moving the switch points in engagement with the adjacent rails thereby to prevent spreading of said switch points.

A further object is to provide the guard rails with terminal seating recesses for the reception of the adjacent switch point when the opposite switch point is in contact with the main rail.

A still further object of the invention is to generally improve this class of devices so as to increase their utility, durability and efficiency.

With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, and illustrated in the accompanying drawings, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

In the accompanying drawings forming a part of this specification: Figure 1 is a top plan view of a switch constructed in accordance with my invention. Fig. 2 is a transverse sectional view taken on the line 2—2 of Fig. 1. Fig. 3 is a perspective view of the adjacent ends of one of the guard rails and switch points.

Similar numerals of reference indicate corresponding parts in all of the figures of the drawings.

In the accompanying drawings 5 designates the main rails secured in any suitable manner to the cross-ties 6, 7 the movable switch rails, and 8 the siding. The switch rails 7 are connected by suitable tie rods 9 disposed between adjacent cross-ties 6 and rigidly secured to the switch rails by removable clamps or similar fastening devices 10.

Arranged in advance of the switch rails 7 and pivotally secured to the cross-ties 6 as indicated at 9' is a movable frame 10' the side bars of which extend through suitable recesses 11 formed in a cross-beam or bar 12 and are connected by transverse braces 13.

Secured to the side bars of the frame 10' are guard rails 14 and 14' which project a short distance above

the tread surface of the main rails 5 and are supported in parallel relation to each other by the transverse braces 13. The movable frame 10' and switch rails 7 are connected by a longitudinal actuating bar 15 one end of which is pivoted at 16 to the adjacent tie-rod of the switch rails while the opposite end thereof is pivotally connected to a rod 17 extending laterally beneath the main rail and operatively connected with a switch stand of any suitable or approved construction. The intermediate portion of the actuating bar or lever 15 is pivotally connected at 18 to the adjacent brace rod 13 so that when the lever on the switch stand is thrown in either direction the switch rails 7 and movable frame 10' carrying the guard rails 14 will be moved simultaneously in opposite directions to operative and inoperative position. The inner ends of the guard-rails 14 are provided with terminal recesses 19 the walls of which are inclined or beveled towards the adjacent ends of the guard-rails for engagement with the inclined terminals of the switch points 20 and 20'.

Attention is here called to the fact that when the rod 17 is actuated to either open or close the switch one of the guard-rails will assume a position at an angle to the adjacent main rail so that when the car is traveling in the direction indicated by the arrow in Fig. 1 of the drawings the flange on the car-wheel will bear against the adjacent longitudinal edge of the guard rail and thus force the point of the switch against the opposite main rail while at the same time preventing the flange of the wheel from engaging the adjacent switch point and spreading or otherwise mutilating the same. This result is accomplished by reason of the fact that the actuating bar or lever 15 is held in locked position by the switch stand while the switch rails and guard rails are attached to the actuating lever so that lateral pressure exerted on either guard rail will have a tendency to force the frame 10' together with the switch rails 7 laterally of the cross-ties and thereby press one of the switch points in engagement with the adjacent rail.

In operation when the switch is moved to open position so as to permit the train to travel on the main rails one of the switch points 20 will engage the recess 19 in the adjacent guard rail, while the opposite switch point will bear against the adjacent main rail, as best shown in Fig. 1 of the drawings. As the train approaches the switch the flanges on the car-wheels will bear against the guard rail 14' which being arranged at an angle to the main rail 5 will cause the flange of the wheel to press laterally on the movable frame 10' and thus force the opposite switch point in engagement with the adjacent main rail, as before stated. When the switch is moved to closed position so as to permit the train to pass onto the siding 8 the reverse operation will take place, that is to say the flange of the car wheels will engage the guard-rail 14 and force the switch point 20



in engagement with the adjacent rail in the manner before stated. It will thus be seen that when the switch is in either open or closed position one of the switch points will always be housed in the recess in the adjacent guard rail while the opposite switch point will be forced against the main rail by the action of the car wheel against the guard rails thus serving as an auxiliary means for pressing the switch points against the main rails and eliminating danger of splitting or otherwise mutilating the switch points. If desired one end of the movable frame 10' may be rigidly secured to the cross-ties or other suitable support instead of being pivotally mounted thereon and the switch may be operated from a signal-tower instead of from the switch-stand.

From the foregoing description it is thought that the construction and operation of the device will be readily understood by those skilled in the art and further description thereof is deemed unnecessary.

Having thus described the invention what is claimed is:

1. In a switch, the combination with the switch-rails, of guard-rails arranged in advance of the switch rails, means for connecting said guard rails for moving the same in opposite directions to open and close the switch, said guard rails being actuated by the wheels of a car for holding the switch in closed position.
2. In a switch, the combination with the main rails, of the switch rails, means for moving the switch rails to open and close the switch, and guard rails disposed parallel with the main rails and arranged in advance of the switch rails for pressing the points of said switch in engagement with the main rails.
3. In a switch, the combination with the main rails, of the switch rails, means for moving the switch rails to open and close the switch, and guard rails disposed in advance of and operatively connected with the switch rails for holding the point of the switch in contact with the main rails.
4. In a switch, the combination with the main rails, guard rails and switch rails co-operating therewith and provided with interengaging ends, and means connecting the guard rails and switch rails for moving the latter to open and closed position.
5. In a switch, the combination with the main rails, of guard rails and switch-rails co-operating therewith and provided with interengaging ends, means connecting the guard-rails and switch-rails for moving the latter to open and closed position, said guard rails being actuated by engagement with the wheels of the car for pressing the points of the switch rails in engagement with the main rails.
6. In a switch, the combination with the main rails, of the switch rails, guard rails disposed in advance of the switch rails and having recesses formed therein for the reception of the points of the switch rails, and means forming a pivotal connection between the guard rails and switch rails for moving the switch rails to open and close the switch.

7. The combination with the switch-rails, of the guard rails, means forming a pivotal connection between the guard and switch rails for moving the latter to open and closed position, and means operatively connected with the pivotal means for operating the switch.

8. In a rail-way switch, the combination with the switch-rails, of the guard-rails disposed in advance of the switch rails, a lever forming a pivotal connection between the switch rails and guard rails, and means operatively connected with one end of the lever for actuating said lever, thereby to open and close the switch.

9. In a switch, the combination with the switch-rails, of the guard rails disposed in advance of the switch rails, a lever having one end thereof pivotally connected with the switch rails, means operatively connected with the opposite end of the lever for moving the switch-rails to open and closed position, and a pivotal connection between the lever and one end of the guard-rails.

10. In a switch, the combination with the switch-rails, of a laterally movable frame disposed in advance of the switch rails, guard rails secured to the frame and provided with recesses for the reception of the adjacent portions of the switch rails, and means forming a pivotal connection between the frame and switch rails for actuating the latter to open and close the switch.

11. In a switch, the combination with the switch-rails, of a frame slidably mounted for lateral movement in advance of the switch rails, a lever having an intermediate portion thereof pivotally connected with the frame and one terminal thereof pivotally connected with the switch-rails, and means connected with the opposite end of the lever for moving the switch-rails to open and close the switch.

12. In a switch, the combination with the main rails, of the switch-rails, laterally movable guard-rails, means operatively connected with the switch rails and guard rails for moving one of the guard-rails at an angle to the adjacent main rail and simultaneously moving one of the switch rails in engagement with the opposite main rail.

13. In a switch, the combination with the main rails and switch rails, laterally movable guard rails, means forming a pivotal connection between the guard rails and switch rails, means connected with the connecting means for moving one of the guard rails at an angle to the adjacent main rail when one of the switch points is in engagement with the opposite main rail, said inclined guard-rail being actuated by the wheel of the car for forcing the rail point in engagement with the main rail.

14. In a rail-way switch, the combination with the main rails, spaced switch rails, guard-rails interposed between the switch-rails, a lever connecting the guard and switch rails, and means operatively connecting said rails for moving one of the switch rails in engagement with the main rail and the opposite switch rail in engagement with the adjacent guard-rails.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

LA FAYETTE T. WEVER.

Two witnesses:

A. V. REESE,

J. M. TOWLES.