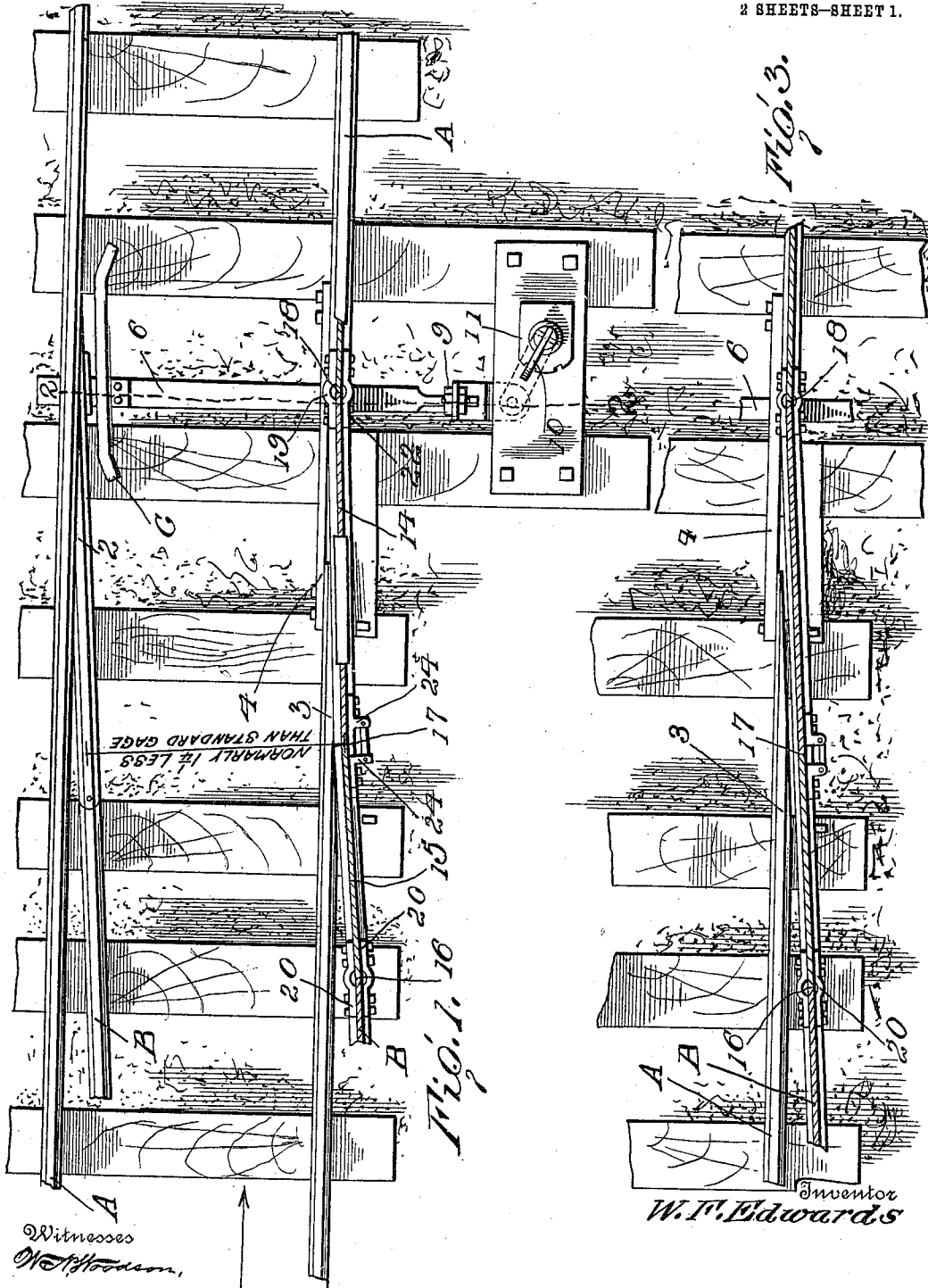


975,517.

Patented Nov. 15, 1910.

2 SHEETS—SHEET 1.



By

Attorneys

W. F. EDWARDS.
RAILROAD SWITCH.
APPLICATION FILED JAN. 22, 1910.

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2 SHEETS—SHEET 2.

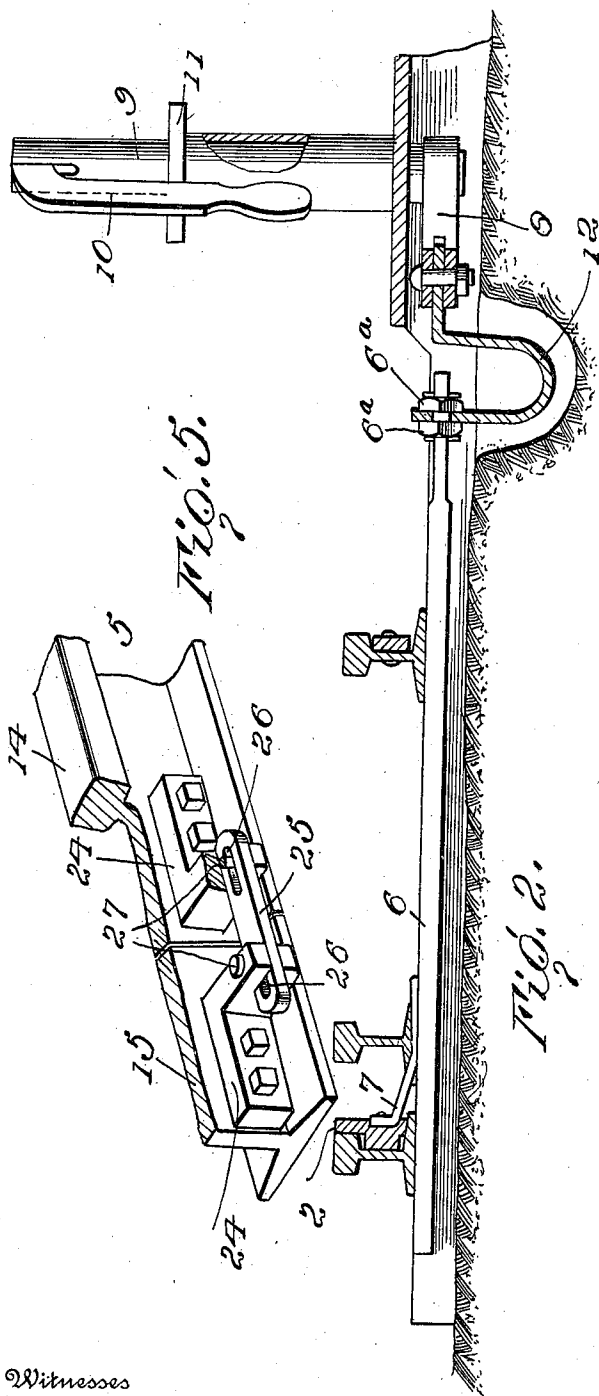


Fig. 2.

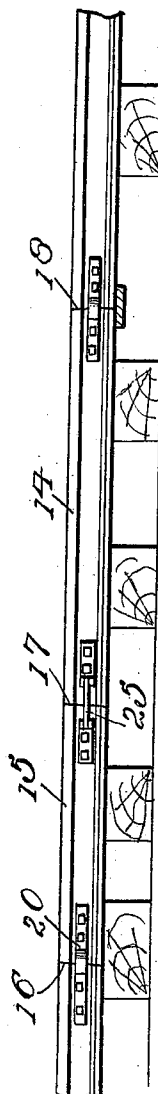


Fig. 7.

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UNITED STATES PATENT OFFICE.

WILLIAM F. EDWARDS, OF CEDARTOWN, GEORGIA.

RAILROAD-SWITCH.

975,517.

Specification of Letters Patent. Patented Nov. 15, 1910.

Application filed January 22, 1910. Serial No. 539,483.

To all whom it may concern:

Be it known that I, WILLIAM F. EDWARDS, citizen of the United States, residing at Cedartown, in the county of Polk and State of Georgia, have invented certain new and useful Improvements in Railroad-Switches, of which the following is a specification.

My invention relates to railway switches and that type in which the switch will automatically remain closed to the main line, but will automatically yield for the passage of a train from the siding, my invention consisting in the provision of a yielding connection between the switch stand and one of the points, and also consisting in the provision of a yielding connection in the siding rail resiliently held in engagement with the fixed switch point, but yieldable when a train passes from the siding to the main line.

My invention is shown in the accompanying drawings, wherein,

Figure 1 is a plan view of my improved switch. Fig. 2 is a sectional elevation of a switch stand and the resilient connection between the stand and the point operating bar taken on the line 2—2 of Fig. 1. Fig. 3 is a fragmental plan view, partly in section, showing the fixed switch point and the movable siding rail in the position it would assume when forced outward by the passage of a train; Fig. 4 is a side elevation of the movable siding rail; and Fig. 5 is a perspective view, partly broken away, of the joint between the two sections of the movable siding rail.

Corresponding and like parts are referred to in the following description and indicated in all the views of the accompanying drawings by the same reference characters.

Referring particularly to Fig. 1 A designates the rails of a main track, and B the rails of a side track, C designating a guard rail attached to the ties of the main track opposite the extremity of the movable switch point. 2 designates a movable switch point such as ordinarily used in railway switches, and C indicates a guard rail with which the extremity or point 2 contacts when it is moved away from the main rail. 3 designates a fixed point whose extremity rests upon and is supported on a block 4 which is attached to the ties and to the main rail A, and which acts to support the flange of a wheel of a train moving upon the main line. The block 4 extends beneath the ex-

trermity of the main rail A and also beneath the movable section 14 of the siding rail, as will be later described so as to support not only the fixed switch point 3 but the movable section 14. The movable point 2 is connected to a switch stand by the actuating bar 6 which actuating bar extends beneath both main rails, and is movable relative thereto. This actuating bar carries upon one end the upwardly projecting angle iron 7 which is bolted to, or otherwise connected with the point 2 so that as the bar 6 moves, the point 2 will be moved. The switch stand is provided with a rotatable post 9 which carries at its upper end the pivoted handle 10 engageable with the usual notched table 11 when the switch has been thrown to either of its extreme positions. The rotatable post 9 at its lower end carries the crank arm 8 which is pivotally connected to a U-shaped resilient connector 12, to which the bar 6 is also connected by the nuts 6^a. This U-shaped connector 12 being resilient, is adapted to yield when a train coming along the main line in the direction of the arrow in Fig. 1, passes through the switch and moves the switch point 2 away from its adjacent rail. At the same time, this U-shaped connector is strong enough so that when the switch post 9 is rotated in either direction, the bar 6 will be actuated to throw the switch point.

Any suitable stand may be used in place of the construction shown in Fig. 2, as it is obvious that any means moving the switch point may be connected to the resilient U-shaped strip 12 for this purpose.

As a means for normally holding the siding rail in engagement with the fixed switch point 3, so that there may be no jar when the train passes the switch on the main line, I form the siding rail B, as shown in Fig. 1, in two sections 14 and 15. Joints are therefore formed at 16, 17 and 18 between the moving sections and between the main rail A and the siding rail B. It is necessary for the proper operation of my invention that the sections 14 and 15 be jointed to the rails A and B in such a manner as will permit the sections 14 and 15 to be yieldingly held inward, and to this end I attach to the extremity of the rails A and B the resilient connecting bars or fish-plates 19 and 20. The ends of these fish-plates are bolted to the rails A and B respectively, and their extremities are resilient so as to yield out-

wardly and yet be normally held inward and thus hold the rail section 14 in contact with the fixed point 3. The ends of the rail sections 14 and 15 are bolted to the fish plates or connecting bars 19 and 20, as at 22, so that the rail sections are sufficiently rigidly connected to the rails A and B, but so that the sections 14 and 15 may yield outwardly, as before described.

10 In order to provide for a connection between the sections 14 and 15, and yet permit them to yield, I attach to the meeting ends of these sections the outwardly projecting angle irons 24. Connecting these angle irons is the coupling bar 25 which is slotted at its ends as at 26. Bolts 27 pass through the angle irons and through these slots in the opposite ends of the bar 25. It will be seen that this connection will hold the rails in alinement with each other and will permit the rails to yield sufficiently so that the section 14 may be forced into engagement in the point 3 by the resilience of the fish plates 19 and 20. The extremity of the angle irons 25 24 are bifurcated to receive the bars 25.

In the operation of my invention it will be seen that the resilient fish plates will force the section 14 into the position shown in Fig. 1, and normally hold it at this point. 30 Now if the bar 2 be shifted to open the main line, trains can pass up and down the main line without any jar or shock when they pass the switch points. A train coming from the siding on to the main line will act to force outward the sections 14 and 15, at the same time forcing the movable switch 2 into engagement with the main track rail, by reason of the yielding connection 12 and the actuating bar, as shown in Fig. 3. As soon as 40 the train has passed, however, the resiliency of the U-shaped connector 12 will throw the movable switch point 2 away from the main track rail and against the guard rail so that the switch will be in its normal position with the main line open. When it is desired to 45 throw the switch so as to direct trains into the siding from the main line, it is only necessary to actuate the switch stand, and movable point 2 will be shifted to the position shown in Fig. 1. This will not throw the movable sections 14 and 15, but as soon as the wheels have engaged the switch point 2 they will then wedge outward the movable sections 14 and 15, and the train will pass 55 on to the siding.

It will be seen that my invention provides a switch construction permitting trains to pass from the siding onto the main line without the switch being shifted, permitting 60 the passage of trains along the main line in one direction without the switch being shifted, but permitting trains to be directed from the main line on to the siding if desired. It will also be seen that the construction is such that there will be no chance of

the switch splitting inasmuch as the movable sections of the siding are held up closely against the fixed point when the switch is in the main line position. It will also be seen that my construction provides for the passage of a train over the joint between the fixed point and the main track lines without any jolting, such as normally occurs. 70

It is to be noted that in its normal position, the spring-held movable siding rail composed of the sections 14 and 15 is spaced from the other rail B one and a quarter inches less than the standard gage at the joint 17 of the two sections. As the train passes, the wheels of the first car will crowd out the movable section until it is of standard gage relatively to the movable point 2. This position is shown in Fig. 3. 80

Having thus described the invention what is claimed as new is:— 85

1. In a railway switch, main track rails, side track rails, and a movable switch point, a guard rail located inwardly of the switch point and against which it bears in its opposite position a rotatable switch operating member having a crank, an actuating bar connected to the point, and a U-shaped resilient connecting member attached at one end to the actuating bar, and at its other end pivoted to said crank said actuating bar being reduced at its end and passing through one end of the U-shaped connecting member and provided with nuts on each side of the member, whereby the actuating bar may be adjusted relative to the member. 90 100

2. In a railway switch, main track rails, in alinement with each other, a fixed point interposed between the main track rails, a side track rail and a yielding rail attached at one end to the side track rail in alinement therewith, and at its other end to the main line rail in alinement therewith, said yielding rail being composed of sections jointed to each other, and springs mounted upon the main track rail and the side track rail and bearing against the outer ends of the yielding rail, acting normally to force the yielding rail sections into contact with the fixed point. 105 110

3. In a railway switch, main track rails in alinement with each other, a fixed point interposed between the main line rails, a side track rail, and a yielding rail attached at one end to the side track rail and at its other end to the main track rail, said yielding rail being made of two sections jointed to each other and jointed to the main line and side track rails, and springs attached to the inner ends of the main line rail, and the side track rails projecting over the ends of the jointed rail and operating to force the jointed rail normally into contact with the extremity of the fixed point. 115 120 125

4. In a railway switch, main line rails in alinement with each other, a fixed point in- 130

terposed between the main line rails, a side track rail, and a yielding rail attached at one end to the side track rail and at its other end to the main line rail, said yielding rail being made into two sections, angle irons on the adjacent ends of the two sections, and a coupling bar connecting said angle irons, said bar and its extremities being slotted, and bolts passed through said slots and through the angle irons.

5. In a railway switch, main line rails, a fixed point interposed between the main line rails, a side track rail, a yielding rail connected at one end to the side track rail and at its other end to the main track rail, said yielding rail being made in two sections jointed to each other at their adjacent ends for yielding movement, and springs carried on the ends of the main track rail and the side track rail, and bearing against the sections of the yielding rail forcing said sections inward and into contact with the extremity of the fixed point.

6. In a railway switch, the combination with main track rails, and side track rails, of a movable switch point and a fixed switch point, a switch stand, an actuating bar connected to the movable switch point and to the switch stand, means whereby said actuating bar may yield to permit movement of the movable switch point away from the adjacent main rail, and a sectional yielding rail disposed at the junction of the main track with the side track, and adjacent to said fixed switch point, said yielding rail being composed of sections and jointed at its ends to the main track rail, and to one of the side track rails, a yielding joint between the two sections of the yielding rail, and re-

silient means attached to the ends of the main track rail and side track rail engaging with the sections of the yielding rail and normally acting to force said yielding rail into engagement with the fixed switch point.

7. In a railway switch, main line rails, a fixed point interposed between the main line rails, a side track rail, a yielding rail connected at one end to the side track rail, and at its other end to the main track rail, said yielding rail being made in two sections jointed to each other, and at their adjacent ends having yielding movement, and resilient fish plates connecting the ends of the adjacent main track rail and side track rail to the adjacent sections of the yielding rail, said resilient fish plates acting to hold the sections of the yielding rail inward and in contact with the extremity of the fixed point.

8. In a railway switch, main line rails, a fixed point interposed between the main line rails, a side track rail, a yielding rail connected at one end to the side track rail, and at its other end to the main track rail, said yielding rail being made in two sections, the sections being jointed at their outer ends to the main track rail and to one of the side track rails, and a coupling bar connecting the adjacent ends of the sections, said bar being slotted for sliding engagement with the sections.

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

WILLIAM F. EDWARDS. [L. S.]

Witnesses:

W. E. PRITCHARD,
J. E. EVANS.