

June 10, 1924.

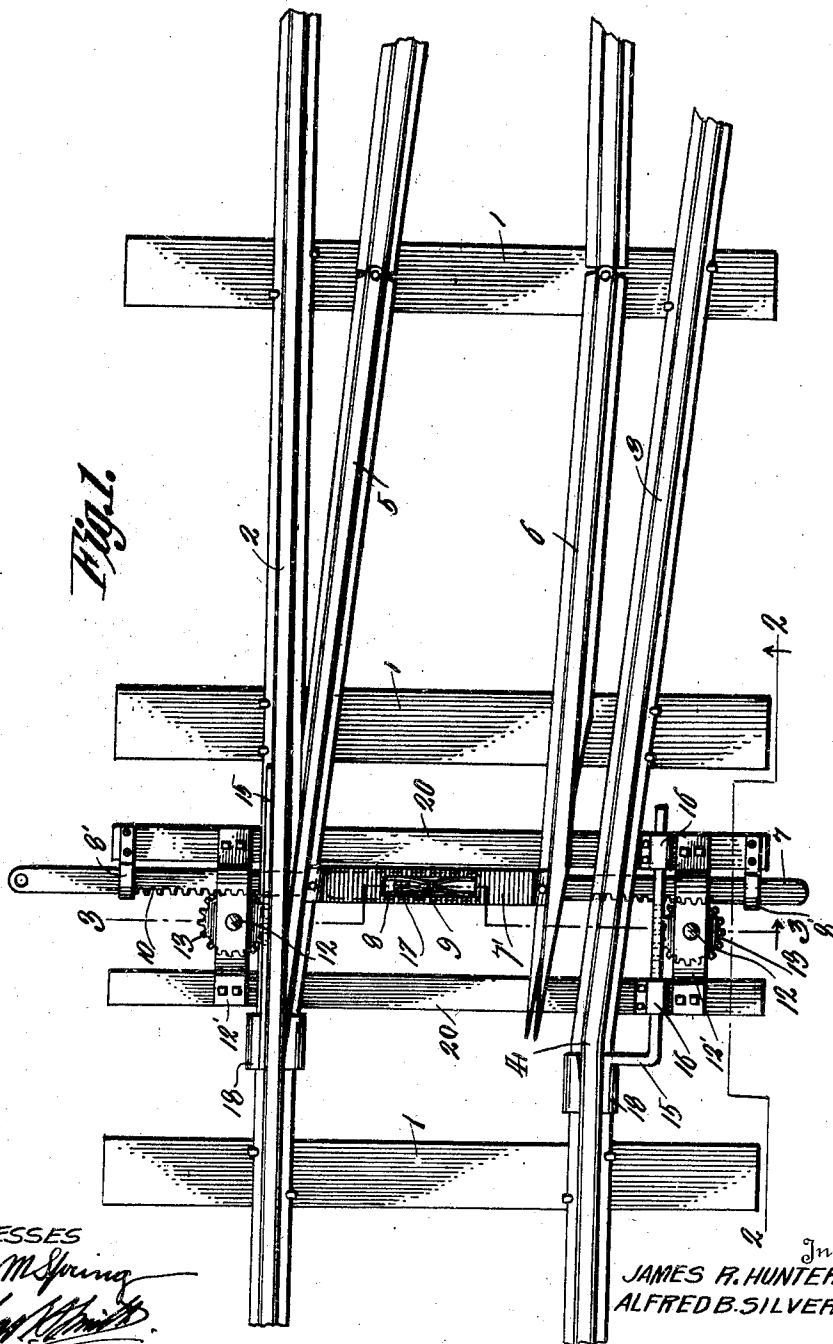
J. R. HUNTER ET AL

1,497,565

RAILROAD SWITCH

Filed Jan. 3, 1924

2 Sheets-Sheet 1



WITNESSES

Gay M Spring
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Fig. 2.

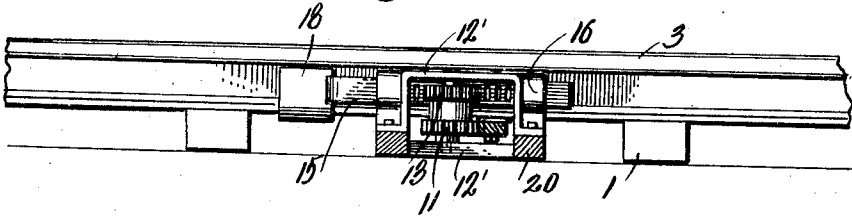


Fig. 3.

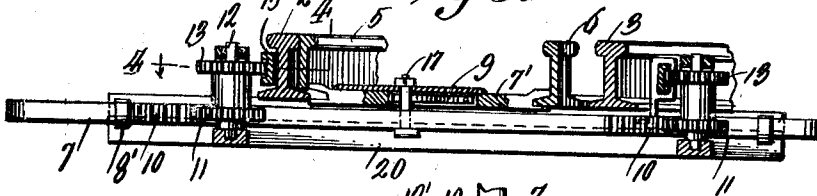


Fig. 4.

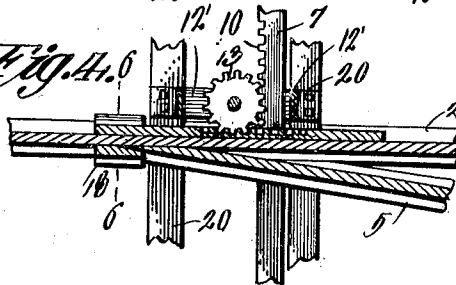
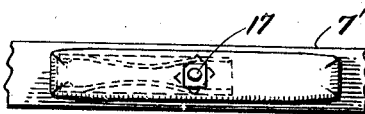


Fig. 6.



Fig. 5.



WITNESSES

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UNITED STATES PATENT OFFICE.

JAMES R. HUNTER AND ALFRED B. SILVER, OF MARSHALL, NORTH CAROLINA.

RAILROAD SWITCH.

Application filed January 3, 1924. Serial No. 684,233.

To all whom it may concern:

Be it known that we, JAMES R. HUNTER and ALFRED B. SILVER, citizens of the United States, residing at Marshall, in the county of Madison and State of North Carolina, have invented certain new and useful Improvements in Railroad Switches, of which the following is a specification.

The present invention relates to railroad switches and has for its principal object to provide means for clamping the points of the switch rails against the main rails, said means being operable by the device for moving the switch rails.

Another important object of the invention is to provide a clamp of this nature and an operating mechanism therefor which possess simple and efficient structures that are reliable in operation, inexpensive to manufacture, durable, strong, and well adapted to the purposes for which they are designed.

With the above and numerous other objects in view, the invention resides in certain novel features of construction, and in the combination and arrangement of parts as will be hereinafter more fully described and claimed.

The invention illustrated in the accompanying drawing, described in a specification and pointed out in the appended claims, is adapted to perform the functions hereinafter described and attain the objects described and others incident thereto.

In the drawings:—

Figure 1 is a plan view of a railroad switch embodying our invention,

Figure 2 is a section taken substantially on the line 2—2 of Figure 1 looking in the direction of the arrow,

Figure 3 is a section taken substantially on line 3—3 of Figure 1,

Figure 4 is a section taken substantially on line 4—4 of Figure 3,

Figure 5 is a bottom plan view of the central portion of the rack bar, and

Figure 6 is a section taken on line 6—6 of Figure 4.

Referring to the drawing in detail it will be seen that the ties 1 support the main rails 2 and 3, the latter being bent or curved at 4. The switch arms 5 and 6 may be of any conventional construction and are connected adjacent their points by plate 7 which in the present instance is provided with a longitudinally extending slot 8 dis-

posed intermediate its ends for receiving a bolt 9 rising from the bar 7 slidable through brackets 8'. This bar 7 is engaged with gears 11 journaled on bolts 12 disposed between plates 12' supported by ties 20, an upper gear 13 is disposed on each bolt 12 for rotation with the gear 11, the gears 11 and 13 are preferably formed integral with each other. A rack 15 is operable by each gear 13. One rack 15 is slidable through brackets 16 while the other lies alongside of rail 2. One end of each rack 15 has mounted thereon a clamp 18 including a pair of jaws for engaging the base of the rail, one jaw engaging the base of one of the fixed or main rails 2 or 3 and the other jaw adapted to engage the points of the bases of the movable or switch rails 5 and 6.

The slot 8 provided in plate 7' houses a pair of intermediately bowed springs 9. A pin 17 rising from bar 7 extends into the slot 8 between the springs 9. When the bar 7 is moved transversely of the track, e. g. downwardly in Figure 1, the clamps 18 are moved first while the rails 5 and 6 remain stationary until the disengaging clamp is free, at which time the pin 17 engages the bowed portions of springs 9 and thus causing movement of plate 7' and rails 5 and 6.

Referring to the operation of the switch particular attention is called to Figure 1 wherein it will be seen that by moving the bars 7 downwardly the gears 11 and 13 will be rotated in a clockwise direction. Thus the gear 13 in the upper portion of the figure will move the bars 15 adjacent thereto to the left releasing the clamp from engagement with the point of switch arm 5. At the same time the gear 13 to the bottom of the figure will be moving bar 15 to the right so as to engage the point of switch rail 6 when the same has been brought into abutment with rail 3.

Having thus described our invention what we claim as new is:

1. In a switch of the class described, fixed rails, a movable switch rail, a bar for operation of the movable switch rail, a gear including two segments, rack teeth provided on the bar for meshing with one segment of the gear, a rack meshing with the other segment of the gear, and a clamp on the rack movable to engage the point of the movable switch rail as it is brought into abutment

with the fixed rail holding the same in this abutting position.

2. A switch of the class described including a pair of fixed rails, a pair of movable switch rails provided with points for abutting the fixed rails, a bar attached to the movable switch rails and provided with rack teeth adjacent its ends, a pair of gears meshing with the rack teeth, a second pair of gears, one on each first gear, a rack bar meshing with each of the second gears, a clamp on each rack bar adapted to be brought into engagement with the point of the adjacent movable switch rail as it is brought into abutment with the adjacent fixed rail upon operation of the first mentioned bar all in the manner and for the purpose specified.

3. In a switch of the class described, fixed rails, a movable switch rail, a bar movable transversely of the rails, a gear including two segments, rack teeth provided on the bar for meshing with one segment of the gear, a rack bar meshing with the other segment of the gear, a clamp movable by the rack bar to be brought into engagement with the point of the switch rail for holding it in abutment with the fixed rail, a plate attached to the switch rail and provided with

a slot, a pin rising from the first bar into said slot, and a pair of bowed springs in the slot for engagement by the pin so that the switch rail will not be moved until the clamp is released from the point of the switch rail.

4. In a switch of the class described, a pair of fixed rails, a movable switch rail, a bar movable transversely of the fixed rails, a clamp for engaging the point of the movable switch rail to hold the same in engagement with one of the fixed rails, means actuable by the bar for operating the clamp to move the same in and out of engagement with the point of the movable switch rail, a plate attached to the switch rail and provided with a slot, a pin rising from the bar into said slot, and a pair of bowed springs in the slot for engagement by the pin so that the switch rail will not be moved until the clamp is released from the point of the switch rail all in the manner and for the purpose specified.

In testimony whereof we affix our signatures in presence of two witnesses.

JAMES R. HUNTER.
ALFRED B. SILVER.

Witnesses:

J. C. DUETON,
J. N. DOON.