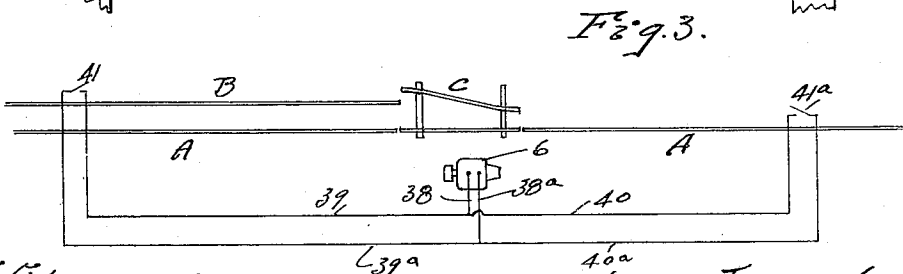
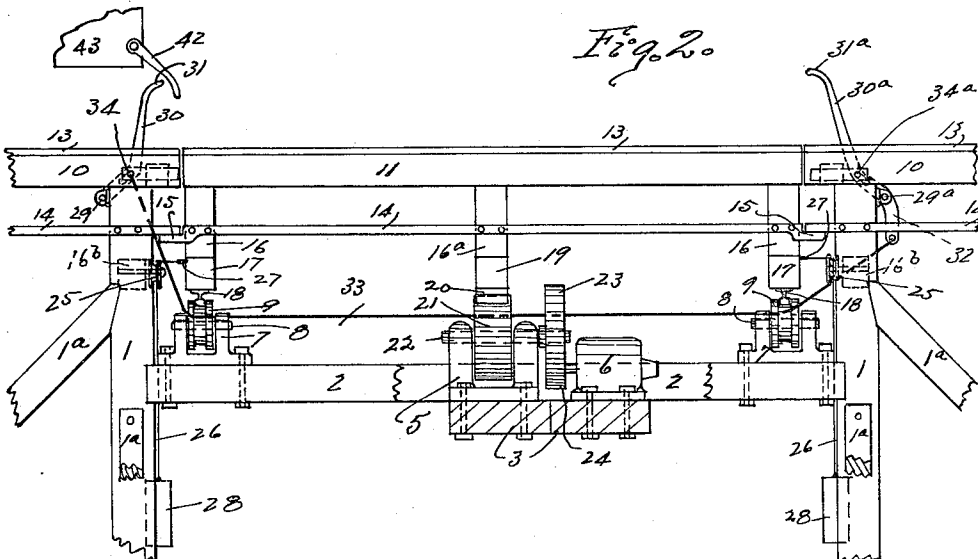
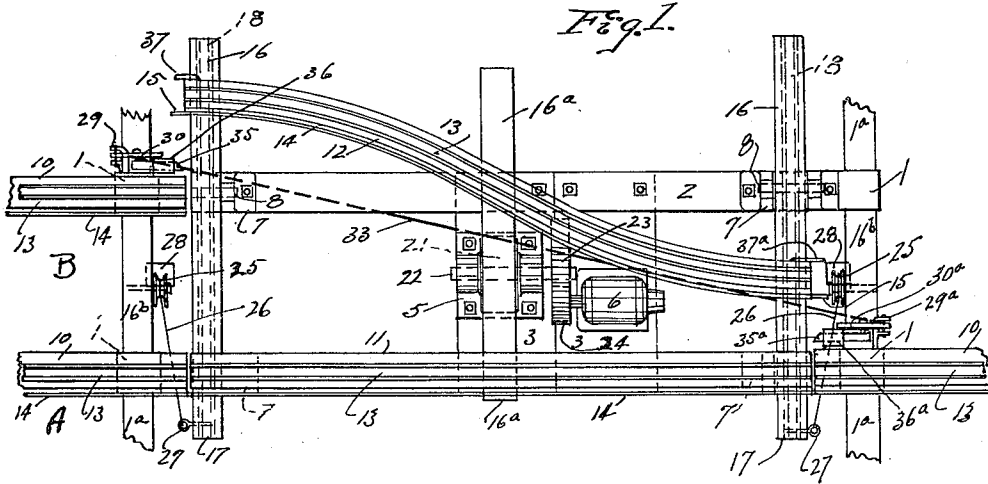


R. A. McCLURE.
SWITCHING DEVICE.
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1,138,880.

Patented May 11, 1915.



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UNITED STATES PATENT OFFICE.

ROYAL A. McCCLURE, OF SEATTLE, WASHINGTON.

SWITCHING DEVICE.

1,138,880.

Specification of Letters Patent.

Patented May 11, 1915.

Application filed July 6, 1914. Serial No. 849,149.

To all whom it may concern:

Be it known that I, ROYAL A. McCCLURE, a citizen of the United States, and resident of Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Switching Devices, of which the following is a full, true, and correct specification.

This invention relates to switching devices and has for its principal object to provide a device of this character which is power operated and which automatically closes after the passing of a train thereover.

Other objects and features will appear as the invention is more fully described and explained in the following specification, illustrated in the accompanying drawings and pointed out in the appended claim.

In the drawings, Figure 1 is a plan view of my device. Fig. 2 is a side elevation with a part of the frame work broken away and showing a fragment of a train and its tripping projection. Fig. 3 is a wiring diagram of my device.

Referring now more particularly to the drawings, A designates the main line track; B, designates a siding.

The numeral 1 designates upright frame members which support the tracks. The said uprights have supporting braces 1^a, stud members 1^b and 2. Secured to the members 2 are transverse members 3 upon which are bearings 5 and a motor 6. Secured to the members 2 are bearings 7 and supporting shafts 8 upon which revolve grooved traction wheels 9. The tracks A and B have stringers 10 supported by the upright members 1. The switch has similar members 11 and 12, the latter being curved to fit the turnout of the switch. Secured to the stringers 10 are rails 13, and parallel to all the stringers, and secured to the frame work, is a third rail 14. That part of the said third rail secured to the said switch has projecting contact pieces 15, which close the third rail 14 when in register with the same. Stringers 11 and 12 are secured to and supported by transverse caps 16 and 16^a. The caps 16 are in turn supported by other caps 17, to which carrying rails 18 are secured. The said rails rest on the grooved traction wheels 9. Secured to the cap 16^a is a member 19 having a rack 20 secured to its lower face. Meshing with the rack 20 is a pinion 21 which is secured to a shaft 22 revolvably mounted in a bearing 5. To the other end

of the shaft 22 is secured a gear 23 which meshes with a pinion 24, secured to the shaft of the motor 6. Supported from strut 16^b are grooved sheaves 25. Cables 26 pass through the said sheaves, one end of each of said cables being fastened to an eye piece 27, which is driven into the cap 17. The other ends of the said cables are attached to weights 28. Pivotaly mounted in brackets 29 and 29^a are levers 30 and 30^a respectively, the said brackets being secured to the strut members 16^b. The levers 30 and 30^a have inwardly curved ends 31 and 31^a respectively. The lever 30^a has a projection 32 below its pivot point and the said levers are connected, as shown, by a bent rod 33. Attached to the said levers, by means of sliding pins 34 and 34^a, which work in slots in the said levers, are spring bolts 35 and 35^a respectively, which are slidably mounted in bearings 36 and 36^a secured to the stringers 10. Latch plates 37 and 37^a, adapted to engage the spring bolts 35 and 35^a, are secured to either end of the stringer 11.

Referring particularly to Fig. 3, in which the entire switch mechanism will be designated by the character C, it is seen that the main line is closed. From the terminals of the motor 6 wires 38 and 38^a branch into wires 39 and 40 and 39^a and 40^a respectively, the wires 39 and 39^a and 40 and 40^a leading in opposite directions along the track from the switch, the wires 39 and 40 being connected to the third rail 14 as a source of current. The wires 39 and 39^a and 40 and 40^a form circuits which are open at 41 and 41^a respectively, the former along the siding B and the latter along the track A, as shown.

The operation of my device is as follows— When the train is approaching the switch C from the right, as seen in Fig. 3, and it is desired to turn it on to the siding the train is stopped at the open circuit 41^a, which circuit is then closed, thereby causing the motor 6 to start and move the switch C, by means of the connecting gears 21, 23 and 24 and rack 20, until the said switch has been brought into a position in which it forms a continuous track connection between the main line A and siding B. At this time the circuit 41^a is again opened. When the switch is in the above indicated position the latch plates 37 and 37^a are in engagement with the spring bolts 35 and 35^a respectively, thereby holding the switch securely in place. The train may now pass on to the siding B,

the lever 30 being tripped by engagement of its hook end 31 with a suitable projection such as indicated at 42 from the rear end of the train indicated at 43. The tripping of the said lever releases the spring latch 35 and, through the connecting rod 33, also releases the spring latch 35^a from engagement with the latch plates 37 and 37^a respectively, thereby allowing the switch to return to its normal position, as seen in Fig. 1, under the influence of weights 28. The moving of a train from the said siding onto the main line is accomplished by closing the circuit 41 in substantially the same manner as above described, and with similar results as stated above, with the exception that the switch is released from the siding by tripping the lever 30^a instead of the lever 30, as will be understood.

From the foregoing it is believed that my invention will be fully understood by others, and while I have shown a particular form of embodiment of my invention I am aware that many minor changes in the details thereof will readily suggest themselves to others skilled in the art without departing from the spirit and scope of the invention

and I therefore desire to avoid being limited to the exact construction shown and described.

What I claim as new and desire to protect by Letters Patent is—

The combination in a switching device of a frame work for the switch tracks proper, a supporting structure upon which the said frame work which is adapted to be bodily moved at right angles to the tracks of the switch proper, counterweights which hold the said frame work in normal position, a motor and connections between the same and the said framework whereby the latter is adapted to be moved to a predetermined position, means for holding the said framework in such position, the said means including latch plates and spring bolts, and a lever adapted to be struck by a passing train, there being connections between said lever and said holding means whereby, when the said lever is so struck, the said holding means is released.

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Witnesses:

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