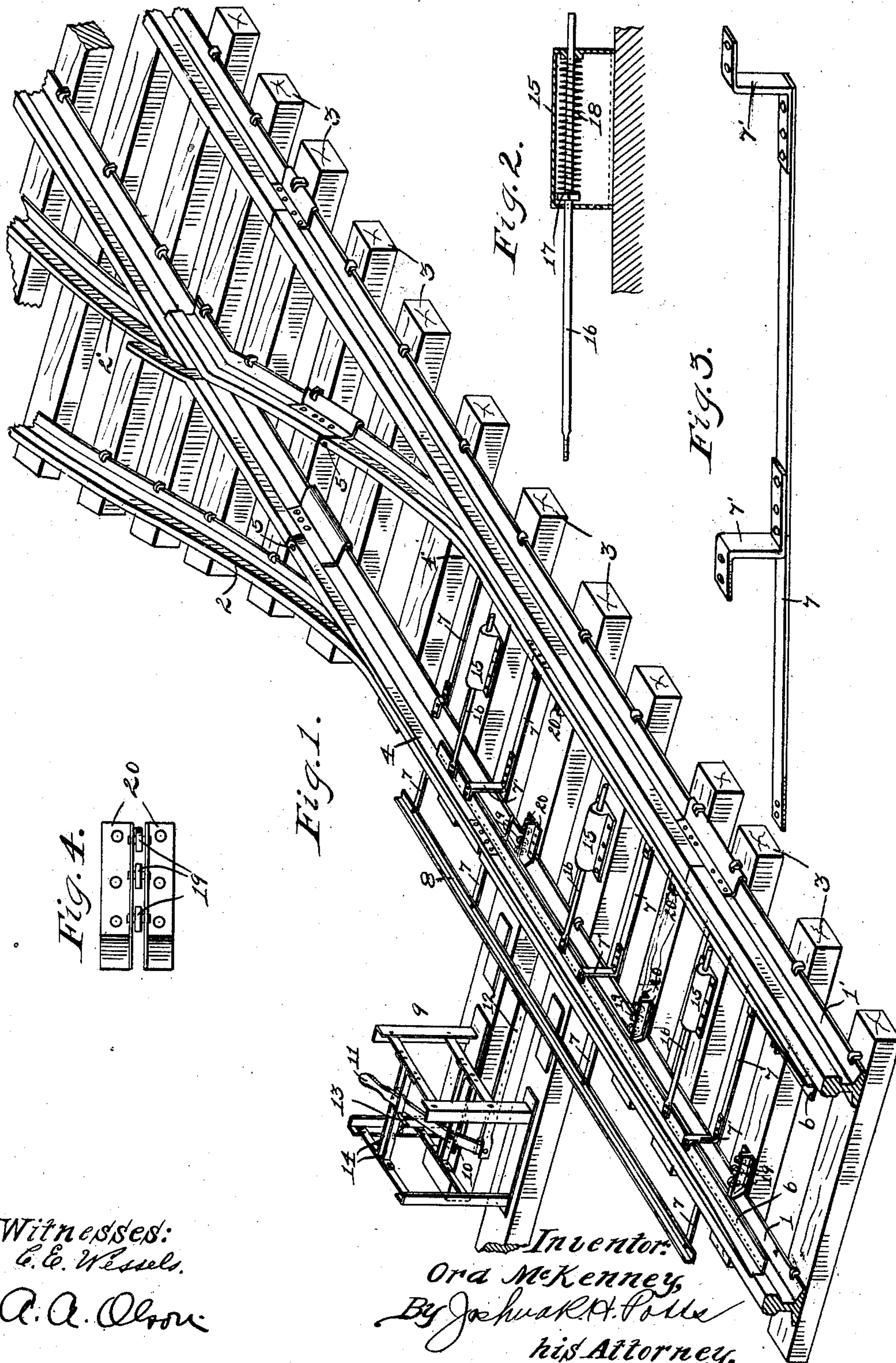


O. McKENNEY.
RAILWAY SWITCH.
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983,560.

Patented Feb. 7, 1911.



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UNITED STATES PATENT OFFICE.

ORA McKENNEY, OF EDINBURG, INDIANA.

RAILWAY-SWITCH.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ORA McKENNEY, a citizen of the United States, residing at Edinburg, county of Johnson, and State of Indiana, have invented certain new and useful Improvements in Railway-Switches, of which the following is a specification.

My invention relates to railway switches and has for its object the production of a device of this character which will be self-closing in its operation, and whereby the possibility of a switch being accidentally or negligently left in the open position or entirely closed will be eliminated; it being my aim to provide a switch such as will be conducive to the prevention of railroad disasters which, as is known, are generally occasioned by open or only partially closed switches.

A further object is the provision of a switch as mentioned which will be of strong, durable and economical construction and positive and efficient in operation.

Other objects will appear hereinafter.

With these objects in view my invention consists in a railway switch characterized as above mentioned and in certain details of construction and arrangement of parts all as will be hereinafter fully described and particularly pointed out in the appended claims.

My invention will be more readily understood by reference to the accompanying drawings forming a part of this specification, and in which,

Figure 1 is a perspective view illustrating the preferred application of my device, Fig. 2 is a sectional detail of a spring housing employed in the device, Fig. 3 is a perspective detail, and Fig. 4 is a detail plan view.

Referring now to the drawings 1—1' designate the main rails and 2—2' the rails of a branch or side track, said rails being arranged upon and secured to the ties 3 in the usual manner.

4—4' indicate the switch points which are suitably pivoted at 5 so as to be adapted to move toward or from the main rails. The lower edge of the free end portion of each of said switch points is preferably provided with an inwardly projecting integral flange 6.

Arranged at intervals under the rails 1—1' are transversely extending bars 7 which are connected, by means of angular irons 7', to the flanges 6 of the switch points

4—4'. With this provision simultaneous movement or operation of switch points is effected. Corresponding ends of the bars 7 project laterally from the track rails beyond the extremities of the ties and are connected together by a yoke 8. Mounted opposite the substantially central portion of the member 8, two of the ties 3 being preferably extended in order to form a support therefor, is a rigid frame-work or structure 9 in which is pivotally mounted as at 10 a lever 11. A link 12 connects the lower extremity of said lever with a substantially central portion of the yoke 8. Hence an operative connection is established between the switch points and the lever 11. The arrangement is such that, when said lever is in the position indicated in Fig. 1, that is, tilted toward the tracks, the switch will be closed, it requiring merely the outward rocking of said lever to effect the opening of the switch. A pin 13 adapted to be loosely inserted into alining perforations provided in parallelly disposed guide members 14 for said lever, is provided in order to hold or lock said lever in closing position, said pin being provided only as a safe guard against idle tampering with the switch.

Mounted upon and rigidly secured to certain of the ties 3 provided below the switch points are substantially semi-cylindrical housings 15 disposed at right angles to the track rails. Slidably mounted in each of said housings in bearings formed in the end walls thereof is a rod 16, one extremity of which is connected to the flange 6 of the switch point 4. Rigidly secured to each of the rods 16 at the portion thereof positioned within its housing is a collar or flange 17. Interposed between said flange and one of the end walls of the housing is a compression spring 18. The arrangement is such that the several springs 18 will exert pressures upon the rods 16 such as will tend to forcibly hold the switch points in closed position or that illustrated in the drawing. Hence with this construction, unless otherwise forcibly retained, the switch will constantly remain closed. With the construction thus far described, in order to permit of a train being switched or directed onto the branch track, it will be necessary for the trainman to hold the operating lever in switching position until the entire train of cars has passed the switch. Upon releasing said lever the switch points, without any ef-

fort on the part of the trainman will, by reason of the springs 18, be instantly returned to their initial closing position.

The switch points it will be observed are of considerable length. More precisely the same are of lengths slightly greater than the greatest distance between the trucks of an ordinary freight car. In order to support the free ends of said points and at the same time to reduce friction in order to facilitate easy operation thereof, the same are supported at intervals upon rollers 19, series of which are mounted between supporting plates 20 arranged at intervals below said switch points, the flanges 6 at the bases of the latter resting upon said rollers. With this provision in order to effect the switching of a train it will only be required to hold the switch points in open or switching position until the front wheels of the first car of the train has reached the switch; it being evident that the flanges of the wheels of the succeeding cars will themselves hold the switch open. Because of the stated length of said switch points, one set of trucks will not leave the latter until another has reached the same. Hence the switch will remain in any position to which it has been adjusted until the entire train has traveled over the same, whereupon the same will be automatically instantly returned to normal or closed position.

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

1. In a railway switch mechanism, the combination of a main and branch track-rails; movable switch points connected for simultaneous operation, said switch points being of lengths greater than the distance between wheels of cars destined for travel thereover; a yoke movably mounted at one side of the switch; a plurality of bars connecting said yoke with one of said switch points at a plurality of points; yieldable means for holding said switch points in closed positions; and an operative lever connected centrally to and adapted to operate said yoke, substantially as described.

2. In a railway switch mechanism, the combination of a main and branch track-rails; movable switch points connected for simultaneous operation, said switch points being of lengths greater than the distance

between wheels of cars destined for travel thereover; non-frictional supports for the free ends of said points, a yoke movably mounted at one side of the switch; a plurality of bars connecting said yoke with one of said switch points at a plurality of points; yieldable means for holding said switch points in closed positions, and an operative lever connected centrally to and adapted to operate said yoke, substantially as described.

3. In a railway switch mechanism, the combination of a main and branch track-rails; movable switch points connected for simultaneous operation, said switch points being of lengths greater than the distance between wheels of cars destined for travel thereover; each of said points being provided with a base flange; a plurality of supporting members for said switch points each provided with a plurality of rollers contacting with the bottoms of said flanges; a yoke movably mounted at one side of the switch; a plurality of bars connecting said yoke with one of said switch points at a plurality of points; yieldable means for holding said switch points in closed positions, and an operative lever connected centrally to and adapted to operate said yoke, substantially as described.

4. In a railway switch mechanism, the combination of a main and branch track-rails, a movable switch point; a rigid frame mounted adjacent said main track-rails and switch point; rigid parallel guide members arranged across the upper part of said frame substantially perpendicular to said main track-rails; said guide members being provided with registering holes adapted to receive a locking pin; a switch operating lever pivoted in the lower portion of said frame and operating between said guide members; a locking pin adapted to be inserted in said holes to lock said lever in position; and an operative connection between said lever and said switch point, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ORA McKENNEY.

Witnesses:

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