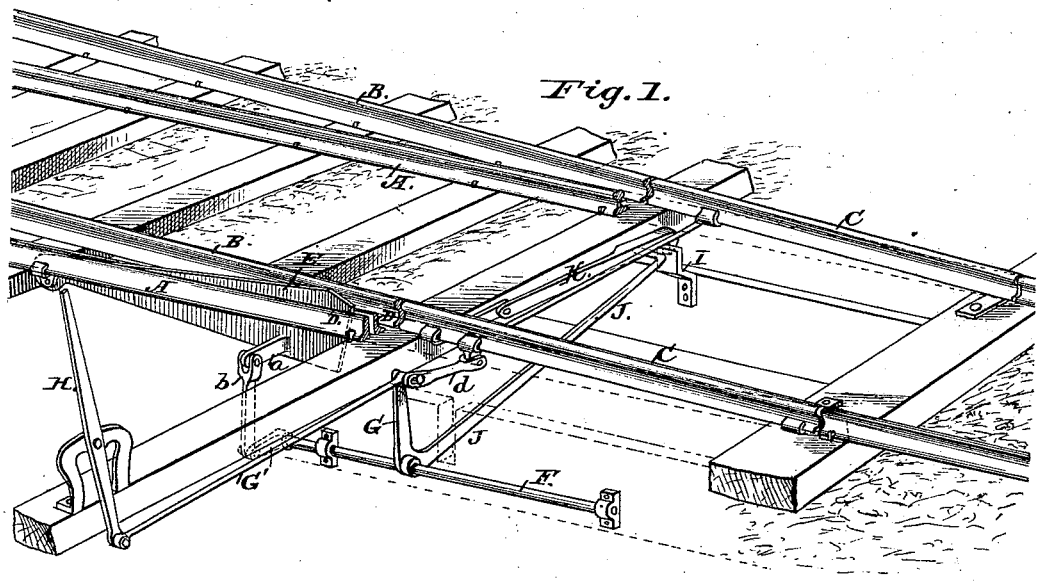
W. A. WEANT.

Railway-Switch.

No. 161,918. Patented April 13, 1875.

Fig. 1.



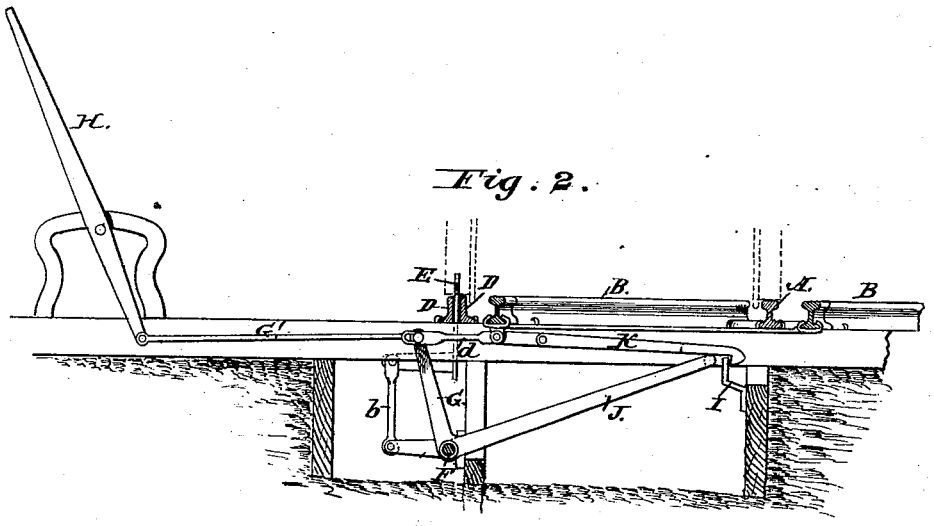


Fig. 2.

Attest:

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UNITED STATES PATENT OFFICE.

WILLIAM A. WEANT, OF SALISBURY, NORTH CAROLINA.

IMPROVEMENT IN RAILWAY-SWITCHES.

Specification forming part of Letters Patent No. **161,918**, dated April 13, 1875; application filed February 27, 1875.

To all whom it may concern:

Be it known that I, WILLIAM A. WEANT, of Salisbury, in the county of Rowan and State of North Carolina, have invented certain new and useful Improvements in Railroad-Switches, of which the following is a specification:

The object of the present invention is to provide simple and effective means for operating movable switch-rails by an approaching train, so as to cause said rails, when open or on a line with side rails, to be brought in line with the main rails upon which the train is traveling, thus avoiding accidents in case the switch is not properly set by hand. This invention relates to switches in which a movable plate is used, which is connected with mechanism for shifting the switch-rails, in such manner that when a train is approaching on the main rails and the switch is open or set in line with the side rails, the plate will be depressed by the weight of the locomotive, thus shifting the switch, and throwing it in line with the main rails before the train reaches the same. My invention consists of a novel construction and combination of parts, which will be hereinafter fully described, the arrangement of mechanism being such that the movement of the switch-rails is rendered reliable under all circumstances.

In the accompanying drawings, Figure 1 is a perspective view of my invention. Fig. 2 is a transverse section of Fig. 1.

In the drawings, the letters A A represent the stationary main rails of a railroad-track; B B, the side or turn-out rails, and C C the switch-rails, which are located between the main rails in the ordinary manner. A short section of one of the main rails adjoining the switch-rails is composed of two plates or half-rails, D, between which is located a movable plate or bar, E. Said plate is pivoted to the rail at one end, and from thence it is made to project gradually to such an extent above the top surface of the rail that the locomotive of a train approaching on the main rails will depress said plate, and set the switch in line with said rails, in case the same has not been previously set by hand. The movable plate E is connected with the mechanism employed for operating the switch by hand, so that after the train has passed on the main rails, the switch can be set in line with the side rails, at the same time resetting the movable plate, so as to cause it to project above its rail. A lateral arm, *a*, on the outer side of the movable plate E, is connected, by means of a link, *b*, with a rocking crank-shaft, F, located beneath the switch-rails. This rock-shaft carries an upwardly and outwardly projecting rod or arm, G, which is bent at its upper end, for attaching it to a link, *d*, on the outer switch-rail, and also to form the point of attachment of a horizontal arm, G′, connected at its outer end with an ordinary switch-shifting lever, H. To the inner side of the switch-rail, connected with the shifting mechanism, is applied a pivoted hook, K, which is made to engage with a catch-plate, I, on the rail-foundation, or longitudinal sleepers supporting the switch. When the switch-rails are shifted or thrown in a line with the side rails, said hook K drops over the catch-plate I, and firmly locks the switch-rails in position, so as to prevent trains properly passing over the side rails from displacing the switch. If, however, a train is approaching the switch on the main rails, and the switch is open, or not in line with the main rails, then the switch is unlocked and shifted automatically by means of the movable plate, and the devices connecting the same with the hand shifting mechanism. The hook K is disengaged from the catch I, so as to permit the switch-rails to move, by means of the inwardly and upwardly projecting arm J on the rock-shaft F. Said arm is elevated and caused to raise the hook K when the rock-shaft is turned, but at other times it is not in contact with the hook. The movable plate E, instead of being located between two plates, comprising a rail, may be arranged at the side of an ordinary rail. The switch-shifting operation is the same in both instances; but I prefer the arrangement of the plate as illustrated and heretofore described, because it is more reliable, and a plate centrally located in respect to the rail is also protected from injury.

Having thus described my invention, what I claim as new, and desire to obtain by Letters Patent, is—

1. The plate E, pivoted between the two rail-sections, and having the laterally-projecting arm *a*, in combination with the rock-shaft F, vertical arm or link *b*, attached to the lateral arm of the movable plate, and the vertical arm G, connected with the switch-rails by a link, *d*, and to a switch-moving lever, H, by a rod, G′, all substantially as and for the purpose described.

2. The combination of the hook K, catch-plate I, and disengaging-arm J with the rock-shaft F and switch shifting mechanism, substantially as described.

In testimony that I claim the foregoing, I have hereunto set my hand.

WILLIAM A. WEANT.

Witnesses:
JAMES L. NORRIS,
WM. H. MINNIX.