

2 Sheets--Sheet 1.

E. P. WHEELER.
Railway Switches.

No. 144,007.

Patented Oct. 28, 1873.

Fig. 1.

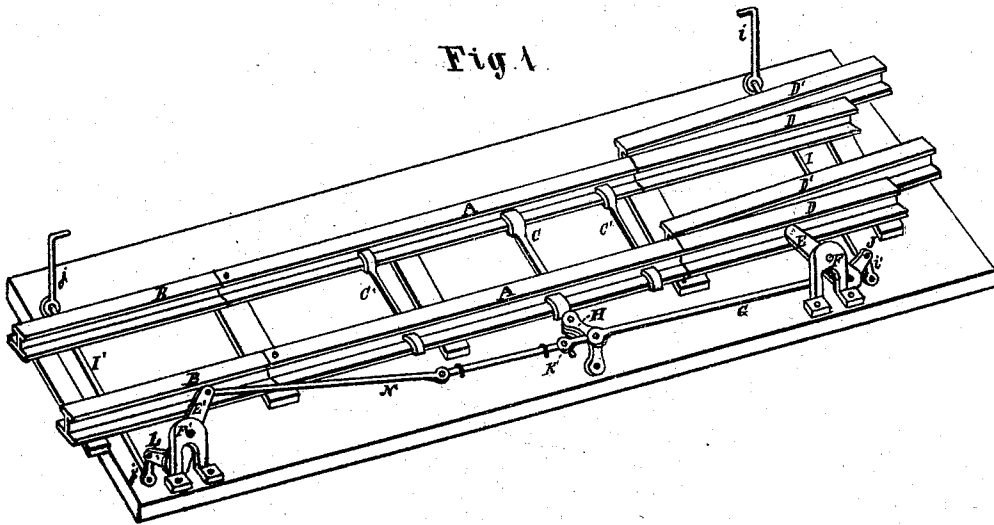
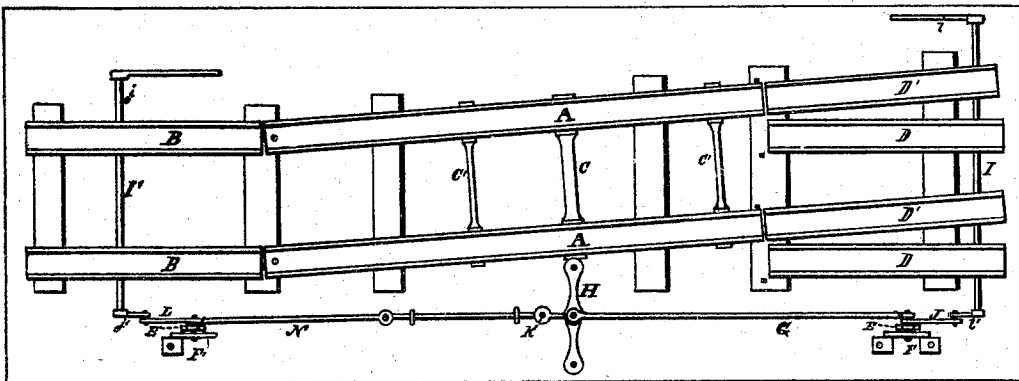


Fig. 2.



Witnesses

Alexander Lynch
G. F. Ferriss

Inventor.

Edward P. Wheeler

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Fig 3.

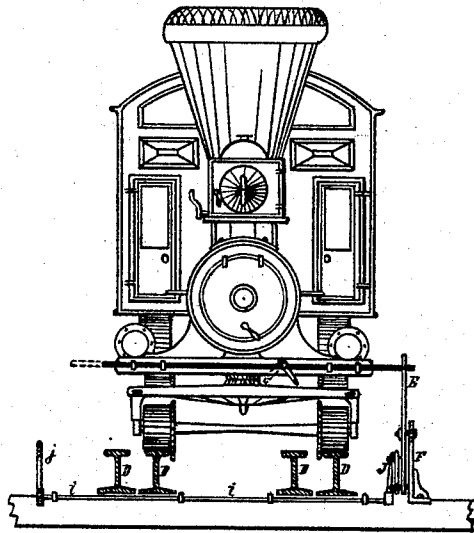
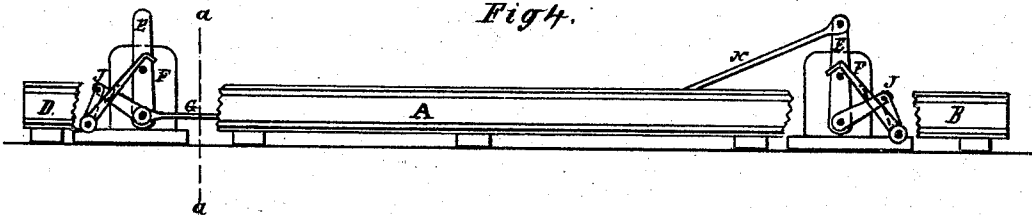


Fig 4.



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UNITED STATES PATENT OFFICE.

EDWARD P. WHEELER, OF CORINTH, MISSISSIPPI.

IMPROVEMENT IN RAILWAY-SWITCHES.

Specification forming part of Letters Patent No. **144,007**, dated October 28, 1873; application filed September 6, 1873.

To all whom it may concern:

Be it known that I, EDWARD P. WHEELER, of Corinth, in the county of Alcorn and State of Mississippi, have invented certain new and useful Improvements in Automatic Railroad-Switch; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings which form part of this specification.

My invention relates to an improvement in automatic railroad-switches; and consists of a double-crank lever which traverses the stationary track beneath the rails, so that a crank comes on each side of the track, connected at an angle of about forty-five degrees by a toggle-joint to the power end of a simple lever pivoted in an upward position to a standard, and fixed at one side of the stationary track, and connected by a bent pivoted rod to a toggle-joint fixed outside of the movable track and secured to the sliding bars thereof, in combination with a double-crank lever, which traverses the stationary tracks at the opposite end of the movable track, beneath the rails thereof, in such a manner that one crank of the double-crank lever will come upon each of the stationary tracks, connected by a toggle-joint at an angle of about forty-five degrees, opposed to the angle of the opposite double-crank lever to the weight end of a simple lever pivoted in an upward position to a standard and fixed at the same side of the tracks as the other fixed standard, the object of the invention being to permit the movable track to be shifted either to the right or left by levers under the control of the engineer while the train is in motion, no matter from which end it approaches the movable track.

In the accompanying drawing, Figure 1 is a perspective view. Fig. 2 is a top or plan view. Fig. 3 represents a cross-section through dotted lines *a a* shown in Fig. 4. Fig. 4 is a side elevation with the track broken away.

The movable track A is pivoted or hinged in the ordinary way at the end next to the stationary track B, and its rails are held in a parallel position by the customary sliding bars C C', to which the rails are fixed. Double or diverging tracks D D' are placed at the other

end of the movable track A. A simple lever, E, is pivoted to a standard, F, fixed outside of the tracks D D', and connected by a rod, G, pivoted at one end to the weight end of the lever E, and at the other to a toggle-joint, H, which is fixed outside of the movable track A and secured to the sliding bar C. A double-crank lever, I, traverses the tracks D D' beneath the rails, crank *i* coming on one side of the tracks D D', and the crank *i'* on the other. The crank *i'* is connected by a toggle-joint, J, to the weight end of the lever E, in such a manner that the cranks *i* and *i'* are at about an angle of forty-five degrees with the lever E'. The shaft portion of the double-crank lever I is incased in a suitable bearing beneath the rails of the tracks D D'. A simple lever, E', is pivoted to a standard, F', fixed at the side of the stationary track B and connected by a pivoted rod, N, pivoted at one end to the power end of lever E', and at the other to a short joint, K, pivoted to the toggle-joint H. A double-crank lever, I', traverses the track B beneath the rails thereof, a crank, *j*, coming on one side, and a crank, *j'*, on the other. The double-crank lever I' is secured by a toggle-joint, L, to the weight end of lever E' in such a manner that the cranks *j* and *j'* are at an angle of about forty-five degrees to the lever E', and directly opposed to the angle of the cranks *i* and *i'*.

To operate the invention it is necessary to provide the locomotive or the rear car of a train with a lever on each side. It may be placed in position by the engineer or brakeman, so as to come in contact with the levers E or E', or the cranks *i* or *j*, and drive them from an upward position to an angular position while the train is in motion. The levers E E', double cranks I I', and the toggle-joint H, are to be connected by the pivoted rods G and N.

It is intended to provide the locomotive and tender each with a lever on each side, so that one set of levers will be in front of the front wheels when the locomotive is moving forward, and one set in front of the rear wheels when moving backward, and each car should be similarly provided with levers. Any suitable arrangement may be used for operating these levers so as to apply or withdraw them at will.

It will be readily seen that the switch can

be operated from either end and to either side by the engineer, as he may desire.

Having thus described my improvement, what I claim as new and useful, and desire to secure by Letters Patent, is—

The double-crank lever I', connected with lever E' by the toggle-joint L, in combination with the pivoted rod N, toggle-joint H, pivoted rod G, and the double-crank lever I, connected with the lever E by the toggle-joint J,

substantially as and for the purpose hereinbefore set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 5th day of September, 1873.

EDWARD P. WHEELER.

Witnesses:

BENJAMIN N. MEEDS,
G. J. FURRISS.