E. B. Lake.

Railroad Switch.

No. 49,536. Patented Aug. 22, 1865.

Fig: 1

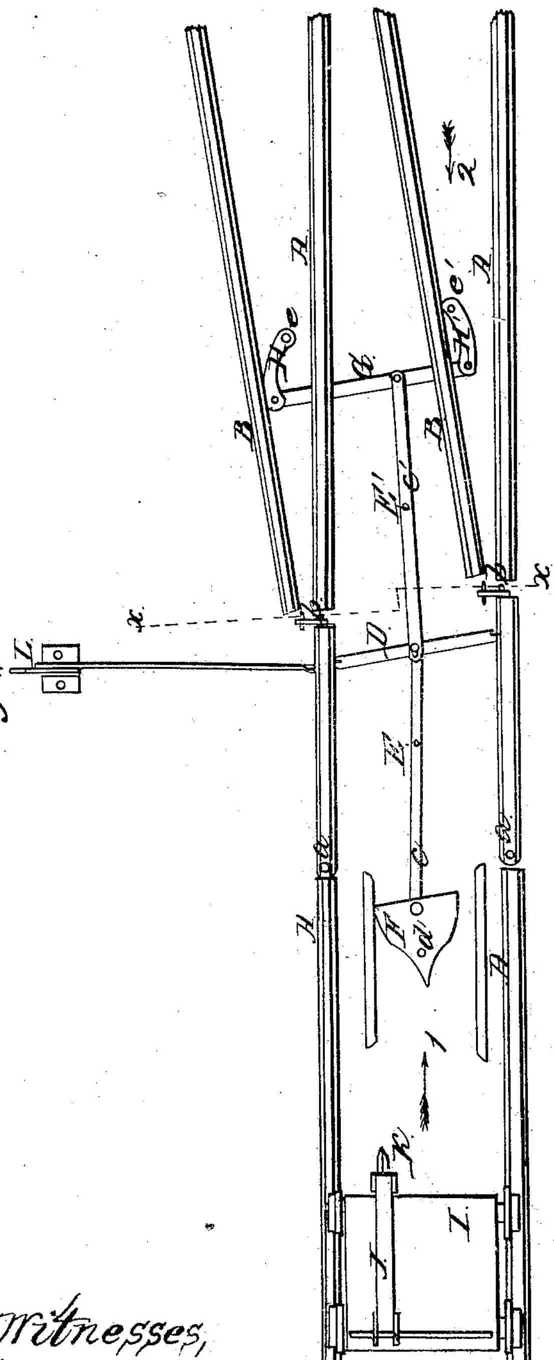


Fig: 2

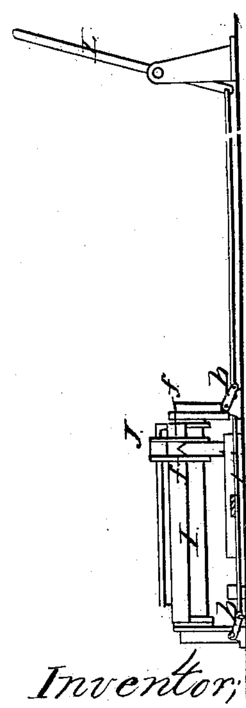
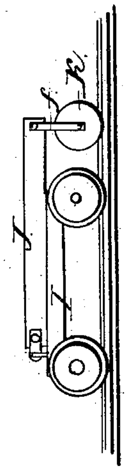


Fig: 3



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UNITED STATES PATENT OFFICE.

EZRA B. LAKE, OF BRIDGEPORT, NEW JERSEY.

IMPROVED RAILROAD-SWITCH.

Specification forming part of Letters Patent No. **49,536**, dated August 22, 1865.

To all whom it may concern:

Be it known that I, EZRA B. LAKE, of Bridgeport, in the county of Gloucester and State of New Jersey, have invented a new and Improved Railroad-Switch; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan or top view of my invention; Fig. 2, a transverse section of the same, taken in the line *x x*, Fig. 1; Fig. 3, a detached side view of the runner-gear of a locomotive provided with an attachment to be used with my improved switch.

Similar letters of reference indicate corresponding parts.

This invention relates to a new and improved self-acting switch for railroads; and it consists in a novel construction and arrangement of the same, as hereinafter fully shown and described, whereby the switch may be operated by the locomotive when in motion, and all casual or accidental moving of the switch prevented.

A A represent the rails of a main track, and B B the rails of a branch track; C, a switch, the rails of which are pivoted at their junction with A A, as shown at *a*, the opposite or free ends of the switch-rails being connected to links *b b*, which are of such a length as to admit of the switch being thrown in line with either A A or B B. These links prevent the casual or accidental moving of the switch, and at the same time insure a complete legitimate movement of the same from the rails of one track to those of the other.

The switch-rails are connected by a transverse bar, D, to which two levers, E E′, are connected, having their fulcra respectively at *c c′*. One of these levers, E, is connected to a triangular block, F, which works on a pivot, *d*, between the rails A A, near the pivoted ends of the switch-rails, and the other lever, E′, is connected to a bar, G, the ends of which are pivoted in arms H H′, one of which, H, works on a pin or pivot, *e*, near the outer rail B of the branch track, and the other, H′, on a pivot, *e′*, near the inner branch rail B, between it and the adjoining rail A of the main track. (See Fig. 1.)

I represents the running-gear of a locomotive, and J is a bar attached thereto in such a manner that it may be raised or lowered and also moved or adjusted laterally. The outer end of this bar has pendent plates *f* attached, between which a wheel, K, is fitted, said wheel, when the bar J is down in a horizontal position, being in front of the locomotive, and at such a height as to come in contact with the block F, and by adjusting the bar J laterally rendered capable of being brought in contact with either side of said block.

The operation is as follows: Suppose the switch C to be in line with the branch track A A, in which case the end of the arm H which is pivoted to bar G will be close to the outer rail B of the branch track, and the block F will be turned to the left, looking in the direction of arrow 1. A train of cars in passing along on A A in the direction indicated by said arrow would, if the switch were not changed or moved, pass directly on A A beyond the switch; but in case it is desired to have the train pass on the branch track B the engineer lets down the bar J and adjusts the same so that the wheel K will come in contact with the left side of bar F, which will cause the switch to be thrown in line with the rails of the branch track. In case a train be moving on the main track in the direction indicated by arrow 2, and the switch C be in line with the rails B of the branch track, the wheels of the locomotive at one side will come in contact with the arm H′ and move the switch in line with the rails A A. Thus it will be seen that the switch is rendered self-acting, and by an exceedingly simple means.

I would remark that the switch may have the ordinary hand-lever, L, connected with it.

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

The levers E E′, block F, and the arms H H′, connected by the bar G, all arranged, in connection with the switch and the rails of the branch and main tracks, to operate in the manner substantially as and for the purpose set forth.

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