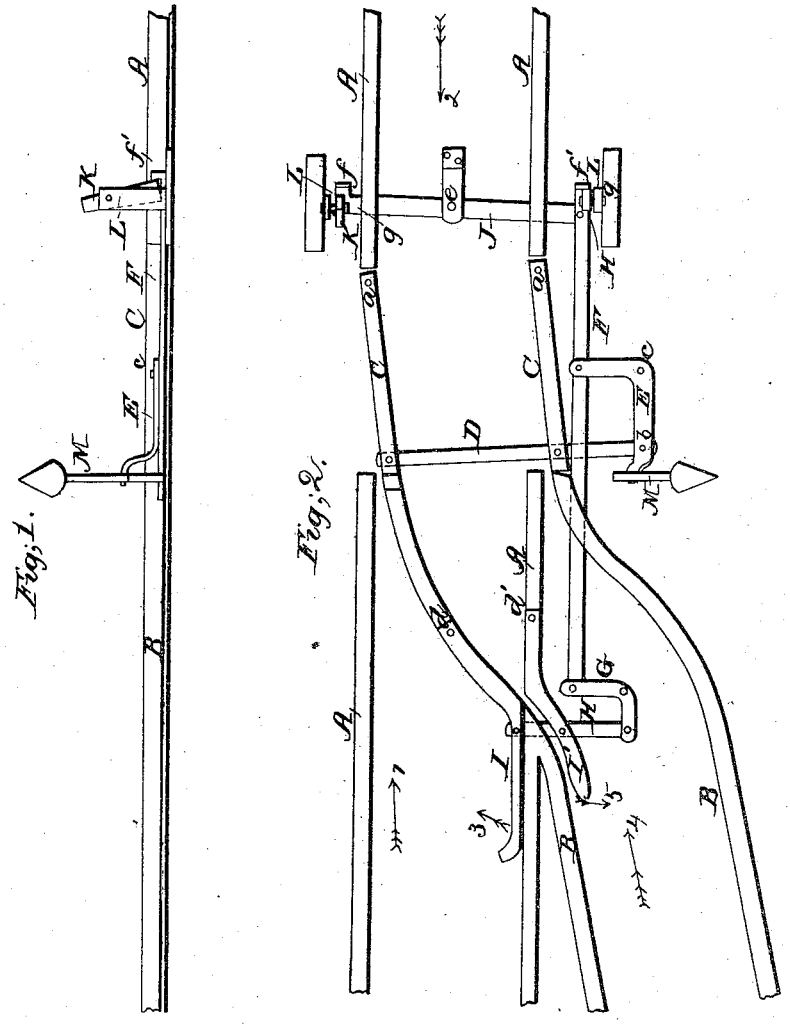
M. V. Cummings.

Railroad Switch.

No. 46,338. Patented Feb. 14, 1865.



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UNITED STATES PATENT OFFICE.

MARCELLUS V. CUMMINGS, OF WINTHROP, MAINE.

IMPROVEMENT IN RAILROAD-SWITCHES.

Specification forming part of Letters Patent No. **46,338**, dated February 14, 1865.

To all whom it may concern:

Be it known that I, MARCELLUS V. CUMMINGS, of Winthrop, in the County of Kennebec and State of Maine, 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 side view of my invention; Fig. 2, a plan or top view of the same.

Similar letters of reference indicate corresponding parts.

This invention relates to a new and improved railroad-switch, of that class which is commonly termed "self-acting"—that is to say, is set by the train itself, so as to form a connection with the rails of the track on which the train is to pass.

The object of the invention is to obtain a reliable switch of the class specified, one which will be actuated with certainty, and at the same time be simple in construction, so as not to be liable to get out of repair.

A A represent the rails of the main road, and B B the rails of a branch road or turn out.

C C represent the rails of a switch, which are pivoted at one end in line with the rails A A, as shown at *a a*, the opposite or free ends being moved in line with either the rails A A or B B, as may be desired.

The switch-rails C C, near their free or disengaged ends, are pivoted to a cross-bar, D, and one end of the latter is connected by a pivot, *b*, to one end of a bent or L-shaped lever, E, which works on a fulcrum, *c*, the opposite end of E being pivoted to a sliding bar, F, one end of which is pivoted to one end of a bent or L-shaped lever, G, the opposite end of the latter being connected by a bar, H, with two frog-bars, I I′, pivoted, respectively, at *d d′*, one of which frog-bars I is by the side of one of the rails A of the main track, and the other frog-bar I′, by the side of one of the rails B of the branch track. The position of the parts above described is shown clearly in Fig. 2.

The bar F, near the lever E, has a bar or lever, J, pivoted to it, which works on a fulcrum, *e*, and the free or disengaged end of J has a vertical ledge or projection, *f*, attached, a similar ledge or projection, *f′*, being at the end of bar F, which is near the lever J.

K K′ are two pivoted or suspended arms, the pins *g*, of which pass through uprights L—one at each side of the main track A A—the lower ends of the arms being the heaviest, in order that they may adjust themselves in an upright position and have their lower ends in contact with or near to the ledges or projections *f f′* of the bar F and lever J.

The operation is as follows: Suppose, for instance, that the switch-rails C C are in line with the rails B B of the branch track and a train is passing along on the main track in the direction indicated by arrow 1. In this case the frog-bar I will be in contact with one of the rails A and the flange of the car-wheel will move or force I outward from the rail A in the direction indicated by arrow 3, and the switch-rails C C will be moved in line with the rails A A through the medium of bar H, lever G, bar F, lever E, and bar D, and in case a train is passing along the branch track B B in the direction of arrow 4 and the switch-rails C C are in line with the rails A A, the frog-bar I′ will be in line with one of the rails B, and the flange of the car-wheel will force or move the frog-bar I′ in the direction indicated by arrow 5 and bring the switch-rails C C in line with the rails B B. In case a train is running on the main track A A in the direction indicated by arrow 2 and it is designed to keep on said track, the switch-rails are in line with the branch rails B B, the engineer adjusts or throws out a bolt or bar from the locomotive, which will strike the suspended arm K and cause the lower end of the latter to act against the ledge or projection *f′* and move the bar F, and thereby throw the switch-rails in line with the rails A A; and in case the switch-rails C C are in line with the rails A A of the main track, and it is designed to pass on the branch rails B B, the engineer actuates the suspended arm K′, which causes the switch-rails C C to be thrown in line with the rails B B.

I would remark that the switch-rails C C may be operated by hand at any time through

the medium of a lever, M, having a weight at its upper end. This weight serves to assist the movement of the switch when automatically operated, and also serves to prevent it from casually moving.

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

1. The two frog-bars, I I′, bent or L-shaped levers E G, connected with the frog-bars and the switch-rails, substantially as and for the purpose herein set forth.

2. The suspended arms K K′, arranged, respectively, with the bar F and lever J, substantially as and for the purpose specified.

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