J. M. TOUCEY.

RAILROAD SWITCHES.

No. 184,119. Patented Nov. 7, 1876.

Fig: 1

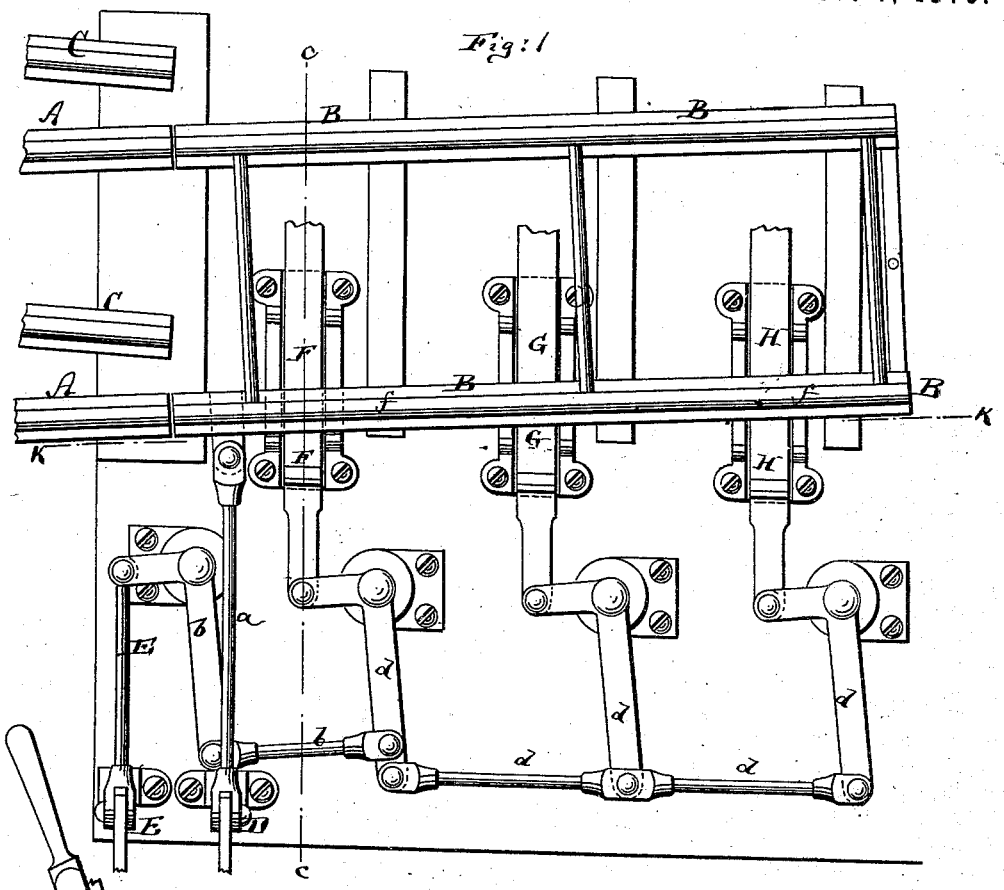


Fig: 2.

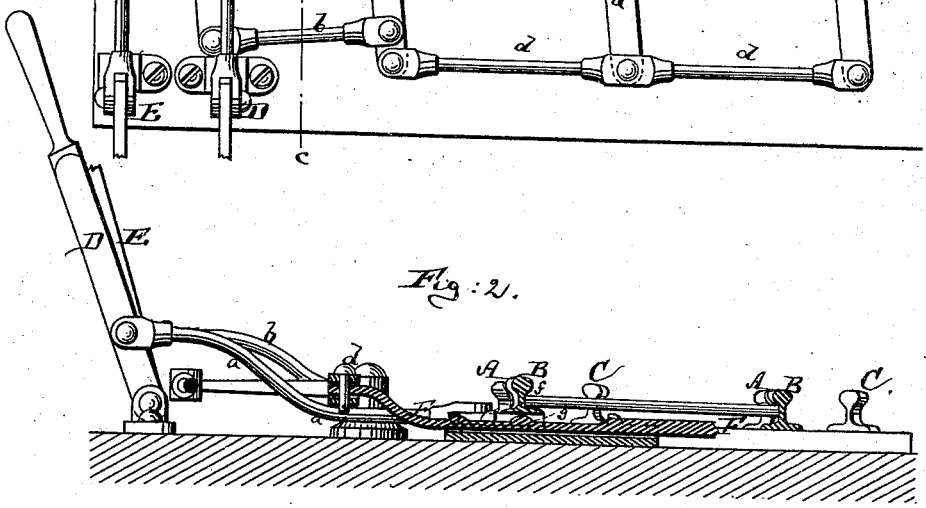
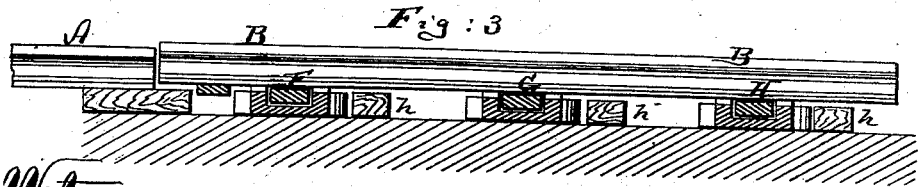


Fig: 3



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN M. TOUCEY, OF NEW YORK, N. Y.

IMPROVEMENT IN RAILROAD-SWITCHES.

Specification forming part of Letters Patent No. **184,119**, dated November 7, 1876; application filed October 10, 1876.

To all whom it may concern:

Be it known that I, JOHN M. TOUCEY, of New York city, in the county and State of New York, have invented a new and Improved Railroad-Switch Lock, of which the following is a specification:

Figure 1 is a plan view of a railway-switch provided with my improved switch-lock. Fig. 2 is a vertical transverse section of the same on the line *c c*, Fig. 1; Fig. 3, a longitudinal section on the line *k k*, Fig. 1.

Similar letters of reference indicate corresponding parts in all the figures.

This invention has for its object to prevent the movement of a railroad-switch while a train, or part of a train, is standing on or moving over the same; and consists, principally, in supplying the usual switch-locking mechanism with one or more sliding plates, that extend beneath one of the switch-rails, and constitute the support of said rail, so that they will be locked and prevented from moving by the weight of the train or car that stands upon or moves over said rail. The said plates, being thus locked, prevent the switch-lock from being operated. In other words, my invention consists in utilizing the spring or deflection of a switch-rail, for the purpose of thereby locking a plate or plates, which otherwise, when the rail is not weighted, will be freely movable beneath the same, and which is or are connected with the switch-locking mechanism.

In the drawing, the letter A represents a portion of the main track of a railroad; B, the movable switch, and C the branch track, with which such switch may connect the main track. The switch is, by a suitable rod, *a*, or otherwise, connected with the switch-moving lever D. E is the switch-locking lever, which, by a crank and rod, *b*, or otherwise, connects with suitable mechanism for locking the switch in either of its two positions, such mechanism being described in several patents heretofore issued, (such as Patent No. 160,364,) and not part of my present invention. It is therefore not shown in the drawing. The switch-locking lever E connects also by said rod *b*, and other intermediate levers or mechanism *d*, with one or more sliding plates, F G H, all of which extend transversely under one of the rails *f* of the switch, as clearly shown in the drawing. One of these plates may connect directly with the switch-lock. The surfaces of these plates F G H are higher than the intermediate sleepers *h* of the track, so that the rail *f* of the switch will virtually rest upon said plates, and it is clear that when the weight of a car or train is on such rail it will press upon said plates with sufficient force to prevent their being moved by the lever E. I thus utilize the deflection of a weighted railroad-rail for locking the lever E, and preventing it from moving the switch-lock and unlocking the switch while the train is passing over or standing on said switch.

In their construction the plates F G H may be varied. They may be provided with tapering ends, as indicated in Fig. 2, so as to wedge under the switch-rail and increase the effect of the weighted rail, or they may be provided with projecting lugs or ribs *g*, which, when under the rail, will still more powerfully cause the same to lock said plates in position, and in place of three such plates, one, two, or a larger number may be used; but I prefer to use at least three, as that number enables me to properly utilize my invention along the entire length of the switch-rail. After the weight of a train or car has been removed from the switch the rail will no further obstruct the motion and the use of the lever E, and by said lever the switch can then be unlocked, and thereupon moved by the lever D in a suitable manner.

I claim as my invention—

1. In combination with a switch-rail, and with the switch-locking lever E and locking mechanism, the sliding plate F, placed under the switch-rail, to be locked by a weight on said rail, but which plate F is free to move beneath the rail when the same is not weighted, substantially as specified.

2. In combination with a switch-rail, the plates F G H, united for simultaneous action with the switch-locking lever E, substantially in the manner and for the purpose herein shown and described.

J. M. TOUCEY.

Witnesses:
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