(No Model.)

R. WOODS.

RAILROAD SWITCH.

No. 453,825. Patented June 9, 1891.

Fig 1.

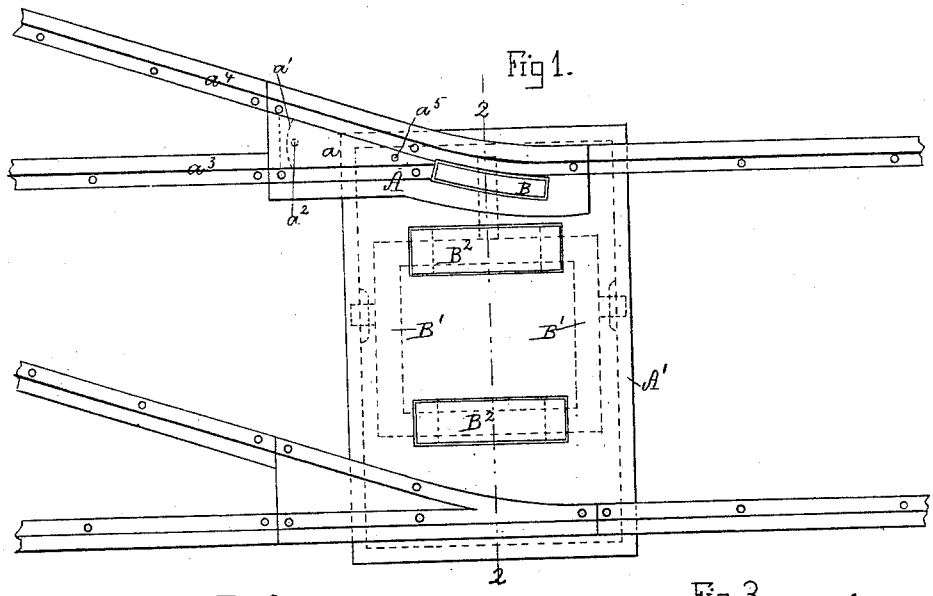


Fig. 2.

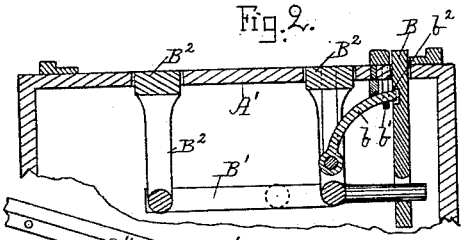


Fig. 3.

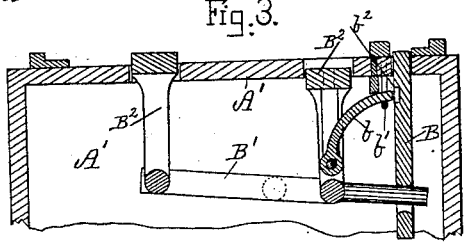
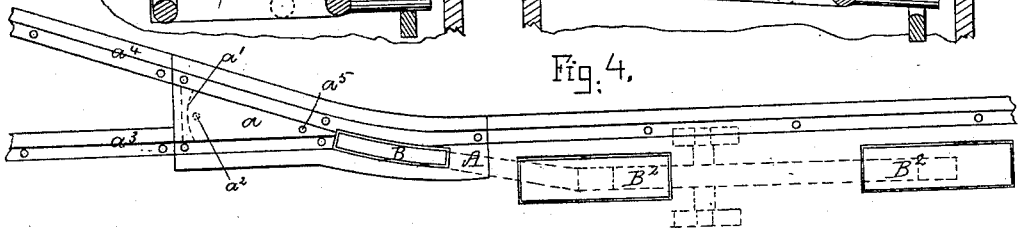
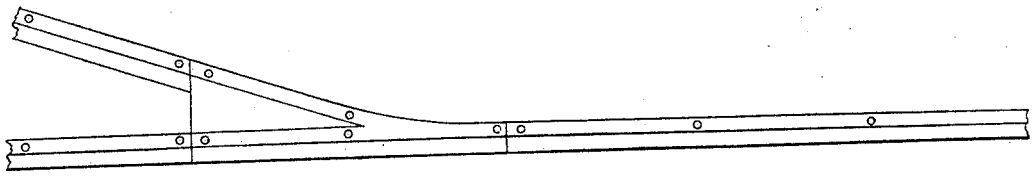


Fig. 4.





Witnesses.

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UNITED STATES PATENT OFFICE.

RICHARD WOODS, OF BOSTON, MASSACHUSETTS.

RAILROAD-SWITCH.

SPECIFICATION forming part of Letters Patent No. 453,825, dated June 9, 1891.

Application filed August 22, 1890. Serial No. 362,783. (No model.)

To all whom it may concern:

Be it known that I, RICHARD WOODS, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Railroad-Switch, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a plan of my new switch. Fig. 2 is a section on line 2 2 of Fig. 1, showing the auxiliary block in its highest position and locked. Fig. 3 is a similar view showing the block in its lower position and unlocked. Fig. 4 shows a modification.

The object of my invention is to produce a simple and practical improved switch for railroads; and the main feature of my invention consists in the combination of any suitable switch or switch-piece having a hole through it with an auxiliary movable block and two exposed studs.

In the drawings, in which I show my invention embodied in the best way known to me, although I have contemplated other almost equally good forms, A is the switch or switch-piece, preferably like the so-called "mate" or "dead" switch now in common use—that is, the tongue a is preferably rigid. It may be movable, however, if desired, as indicated by the dotted lines a' and pivot a^2. The auxiliary movable block-piece B is located at any proper point to block one of the tracks when it is desired to send the car on the other track. Switch-piece A has a hole through it, and the block plays up and down in this hole to block or unblock the track. Thus in Fig. 2 the block is in position to block track a^3 and to send the car on track a^4, as will be plain to all skilled in the art. In Fig. 3, however, block B is in its lower position, the track a^3 is not blocked, and the car will of course keep track a^3. I prefer to have the tongue rigid, as shown; but if it is made so as to slide (see dotted lines in Fig. 1) it is desirable to lock the tongue in a rigid position. A bolt a^5 is a convenient form of lock. Should the auxiliary block B fail to work, the lock-bolt a^5 may be removed and the tongue moved in the usual way to switch the car.

To actuate that form of block B above described, I support it by a lever B′, which also supports the two exposed studs or plates B^2. Two studs B^2 are employed, these studs being in a line which is at an angle to the track, as shown in Fig. 1, or otherwise located, as desired. The arrangement of studs B^2 shown is suited for cars carrying a drop-weight or pusher; but of course the studs may be located to serve as "horse-plates," if desired.

By the use of block B the movable tongue a is dispensed with. Heretofore this movable tongue has been apt to become clogged up with mud and ice, and has been frequently inoperative in bad weather when it is particularly desirable that it should be in working order. Block B being actuated by a lever is an effective clearer—that is, if clogged frees itself and clears a passage for itself when power is applied to the lever. Power is best applied by a pusher or weight on the car, the pusher or weight engaging the exposed studs or plates B^2. It is practically important to lock block B in its highest position, and a convenient form of lock consists in a locking-lever b, having for its fulcrum a projection b' from a wall of the box A′ in which the parts are preferably inclosed, as will be readily understood by those skilled in the art. Block B has a projection b^2, with which the lever b engages to lock the block B. The lever is fast to a stud or plate B^2, and when one of the studs is depressed the lever b is slid on its fulcrum sufficiently to draw it out of engagement with projection b^2, the connection between block B and lever B′ having sufficient play to allow the lever B′ to draw the locking-lever b out of engagement with the projection b^2 before block B begins to drop.

The locking device may be variously constructed, as will be plain to all mechanics.

In Fig. 4 I show a modification in which the exposed studs or plates B^2 are in line with the track. This arrangement is not so desirable as that shown in the other figures, which showed the exposed studs B^2 in a line at an angle to the track, because when the plates are covered with snow the driver cannot easily distinguish the location of one stud from the location of the other stud, and so might force the pusher against the wrong stud, whereas when the studs are in a line at an angle to the track the right or left hand pusher may be let down before the car reaches the studs

and the desired stud certainly depressed to cause the car to be switched on the desired track.

I am aware of English patent No. 707, of 1884, Postley's patent, No. 8,171, of June 24, 1851, and Tarbox's patent, No. 224,054, of February 3, 1880, and disclaim all that is shown in them.

What I claim is—

1. In a switch, the combination of a switch-piece having a hole through it, with a lever, two exposed studs, and a reciprocating block, the lever supporting the two studs and the reciprocating block and being fulcrumed between the studs, and the reciprocating block being connected to the lever near its end and reciprocating in the hole through the switch-piece, all substantially as and for the purpose set forth.

2. In a switch, the combination of a switch-piece and reciprocating block with a lever, two exposed studs, and a locking device, the lever and studs being each supported by the said lever, all substantially as and for the purpose set forth.

RICHARD WOODS.

Witnesses:
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