(No Model.)

W. McCALL.

RAILROAD SWITCH.

No. 273,865. Patented Mar. 13, 1883.

Fig. 1.

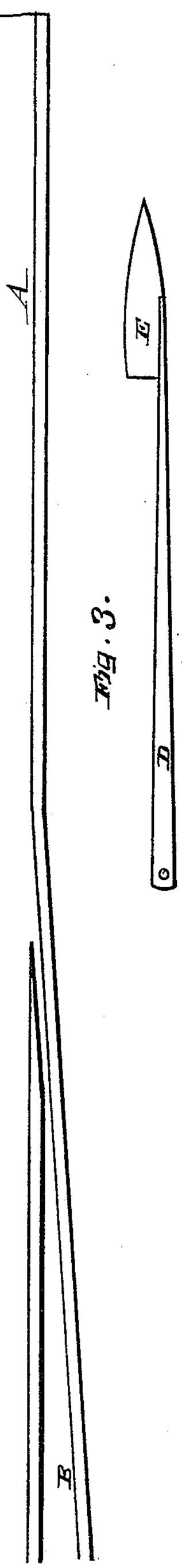

Fig. 3.

Fig. 2.

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UNITED STATES PATENT OFFICE.

WILLIAM McCALL, OF SAN FRANCISCO, CALIFORNIA.

RAILROAD-SWITCH.

SPECIFICATION forming part of Letters Patent No. 273,865, dated March 13, 1883.

Application filed June 4, 1880. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM McCALL, of the city and county of San Francisco, State of California, have invented an Improved Railroad-Switch; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to certain improvements in the construction and operation of railroad-switches, being particularly adapted to street-railroads; and it consists in the formation of the switch-rail, or an attachment to it, by which the passage of the car is made to change the position of the rail, so that a car will be directed upon either branch of the track, as will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a view of the switch rail or tongue having my attachment fixed to the point. Fig. 2 shows the switch-rail having the base or heel adapted to be operated by the passing car. Fig. 3 shows a detached view of the switch-rail with its tongue.

A is a line of rails, and B is the branch line from the line A, the switch-rail D being the means by which the cars are directed upon one line or the other.

My invention contemplates such a construction of the rail, or an attachment to it, that the passage of the cars may be made to throw the rail, so that the cars will run upon one line or the other, as may be desired.

My switch tongue or rail D is pivoted between the two lines A and B, its point extending to the place where the change is made from the single line A to one of the two lines B or C. In order to change the connection and throw the switch-rail over before the car reaches it, I fix a plate, E, shaped like an arrow-head, to the bottom of the rail at its point. The point of this plate is at or near the point of the switch-point, while the broad portions or base is toward the pivoted end of the rail. In order to operate this rail from the car, I attach to the latter an arm, which is adapted to be forced downward by means of a foot-lever within reach of the driver. This arm, when forced down, enters the space between the inclined or arrow head, which is below the rails, and the side of the channel within which it lies, and as the car moves forward it forces the head or plate E to one side, carrying with it the switch-rail, so that when the car-wheels arrive at the switch they will be guided upon either one or the other of the tracks B or C. When the arm from the car is introduced at one side of the switch-rail, the rail will be thrown to the opposite side of the channel or space within which it lies.

Two arms may be arranged at one end of a car, if desired; but for ordinary uses the cars which are to use the line B will be provided with an arm, which will operate the switch to guide them into that line, and the cars which are to run upon the line C will have an arm adapted to throw the switch-rail to connect with that line.

As the plate E is secured directly to the point of the rail D and below the surface, it is entirely out of the way of passing vehicles and in no danger of damage from above. By attaching the plate to the point of the rail itself I avoid the use of all levers and connections either above or below the track.

In some cases it may be desirable or necessary to throw the switch back after the car has passed, so that if the car is switched upon the line B the rail will be thrown back after the car has passed, so as to again connect with line C. This I effect by forming an enlargement or swell upon the rear end of the rail, this swell being beyond the pivot and of such a size that it will be forced to one side or the other by the flange of a passing wheel, thus throwing the point of the rail to the opposite side. By this construction it will be seen that when the point of the rail is at one side, so that the car-wheels enter the channel thus formed for them, they will run along the rail until they pass the pivot upon which the rail turns, and, when they reach the swell or enlargement at the rear end of the rail, will crowd it over to the opposite side, thus forming a channel, through which they may pass, while the tongue is again moved to the opposite side, and will there connect with the other line of track.

I am aware that switch-rails have been arranged to be operated from a passing car, and that such rails have been returned to their normal position by a weight.

I am also aware that a pivoted switch-rail

provided with the swell or enlargement at a point behind the pivot, whereby the flanges may force the switch-rail over, is not new with me, having been invented by another; hence I make no broad claim thereto.

I am also aware that switch-rails have been operated from a passing car by means of intermediate levers and connecting-rods, and I do not claim, broadly, any of these devices; but

What I do claim as new, and desire to secure by Letters Patent, is—

1. In combination with a switch-rail pivoted so as to connect either of two lines of track, B C, with a single line, A, the double-inclined arrow-headed plate E, secured to the bottom of the rail at the point, and moving in a recess or channel, so that its inclined sides may be acted upon by an arm from the passing car to force it to either side, and thus direct the car to the desired line, substantially as herein described.

2. In a pivoted switch-rail, and in combination with the double-inclined or arrow-headed plate E, secured to the bottom of the rail-point, the swell or enlargement formed upon the rail at a point behind the pivot, substantially as and for the purpose herein described.

In witness whereof I have hereunto set my hand.

WILLIAM McCALL.

Witnesses:
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