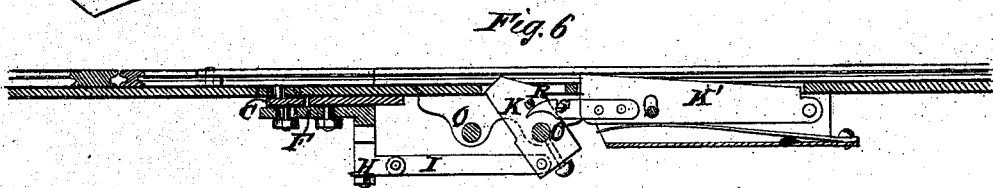
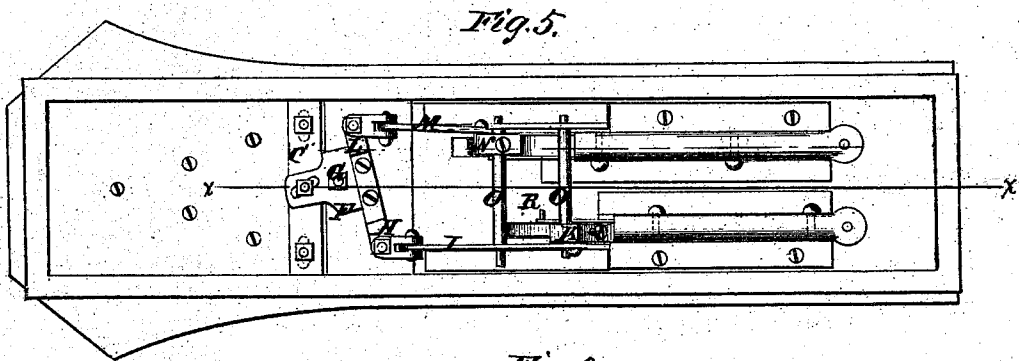
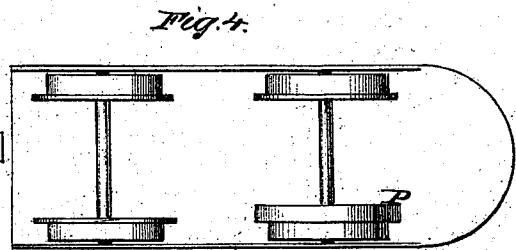
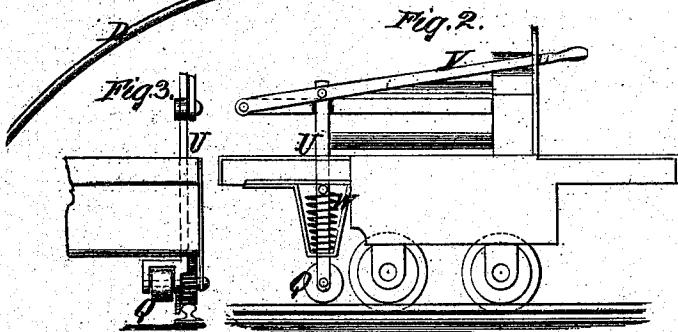
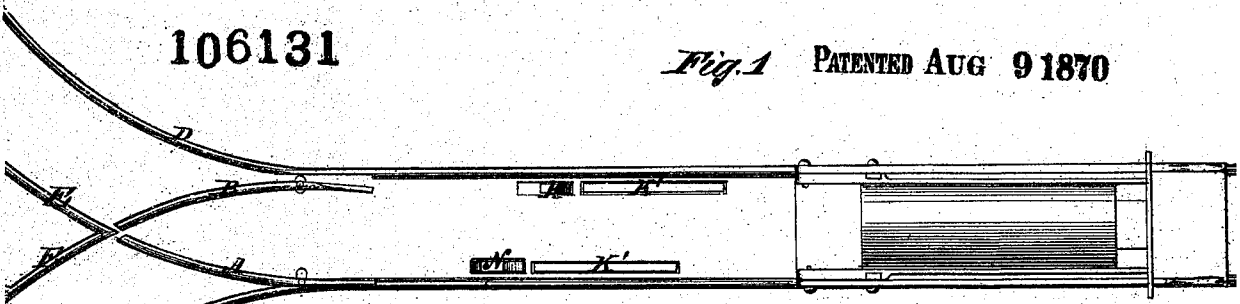


J. Davis R.R. Switches.

106131

Fig. 1 PATENTED AUG 9 1870



Witnesses:
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S. S. Mabe

Inventor:
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United States Patent Office.

JAMES DAVIS, OF NEW ORLEANS, LOUISIANA.

Letters Patent No. 106,131, dated August 9, 1870.

IMPROVEMENT IN RAILWAY SWITCHES.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, JAMES DAVIS, of New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and useful Improvement in Railroad Switches; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

My invention relates to railroad switches, and aims to make certain improved arrangements of the mechanism whereby greater convenience and certainty is attained in the operation thereof. I will first describe my improvements in connection with all that is necessary to a full understanding thereof, and then specify the same in the summary or claim.

Figure 1 is a plan view of a railroad track and switch arranged according to my improvement. Also, a plan of a car thereon with switch-operating wheels; Figures 2 and 3 are side and end elevations of the said car;

Figure 4 is a plan view of a car with a broad flange on one wheel for shifting the switches;

Figure 5 is a plan of the bottom of the switch-shifting and locking apparatus inverted; and

Figure 6 is a section of the same on the line *x x*. Similar letters of reference indicate corresponding parts.

A and B represent the switch-rails.

D and E represent the main rails.

The switch-rails are connected by bolts to the shifting bar C at the under side, the latter is connected to the vibrator, F, pivoted at G, and connected by the arm H and link I, at one side, to the lever K, and, at the other side, by the arm L and link M to the lever N.

Three short levers, K and N, are pivoted, at their centers, to the axles O, and project upward into the paths of the flanges P, or the shifting wheels, Q, of the cars.

These levers, K N, have studs, R, at one side, which are engaged by the catch-bars K', pivoted below the track, with their upper edges inclined and elevated into the paths of the flanges or wheels, by which they are actuated.

They are provided with catches, S, which engage the studs R and lock the levers K N, when they are in a vertical position.

The levers K N are placed on opposite sides, one near each rail, to be acted on alternately for shifting the switches in either direction.

The forward wheel of the car, which is to shift the switch, is provided with a broad flange, P, which first acts on the inclined upper face of the locking-bar K', pressing it down and disconnecting the catch S from the stud R of the lever K or N, as the case may be.

It then strikes the lever K or N and throws it forward, drawing back the arm of the vibrator F, and moving the slide C and the switch-rails A B; also throwing forward the opposite arm of the vibrator to which the other lever, K or N, is connected, thereby moving the said lever into a vertical position, ready to be acted upon by the flange or wheel on the opposite side, when it is required to shift the switch.

When the shifting lever K or N is thrown up to the vertical position, the switch is locked by the catch-bar K'.

Of course, in all double switches, the flange for throwing one way will be on one side of the car, and the one for throwing the other way will be on the other side of the car.

The same arrangement is applicable also to single switches.

Instead of the flanges P, I propose to use, in some cases, wheels, Q, preferably attached to the cars, so as to be supported above the rails a suitable distance, and be moved down at the proper time by the engineer or brakeman, to act on the switch-locking bars and the shifting levers.

In this example I have represented the wheel Q as attached to a vertically-sliding-bar, U, connected to a hand-lever, V, for moving it down, and provided with a spring, W, for raising it up and supporting it; but any other arrangement of apparatus for supporting and working these wheels may be employed.

Such wheels may also be permanently supported in the right position for effecting the unlocking and switching.

Having thus described my invention.

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

1. The combination of vibrator F, arms H L, links I M, and levers N K, with an elastic projecting catch-bar, S K', constructed and operating as and for the purpose specified.

2. The arrangement of studded levers K B, K N, and spring projecting catch-bars S K', when constructed as and for the purpose described.

JAMES DAVIS.

Witnesses:

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