(No Model.)

T. L. CARLETON.

RAILWAY SWITCH.

No. 453,690. Patented June 9, 1891.

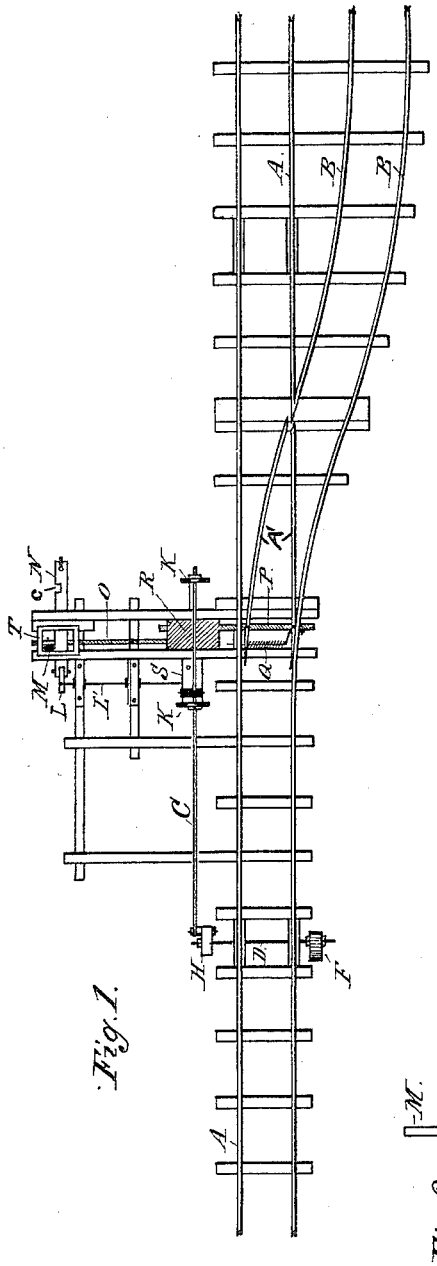

Fig. 1.

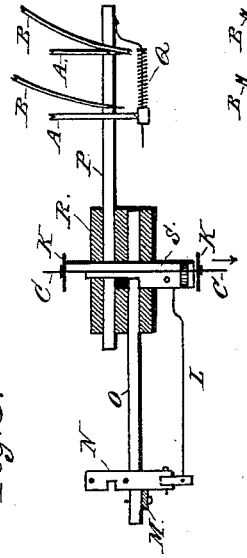

Fig. 3.

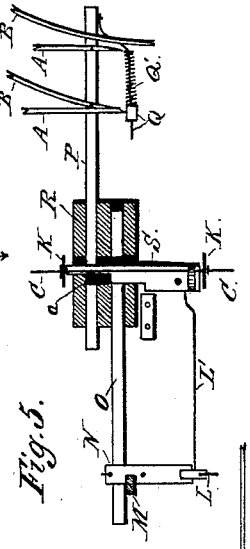

Fig. 5.

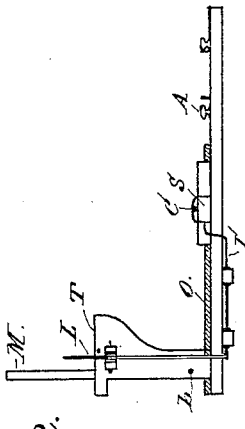

Fig. 2.

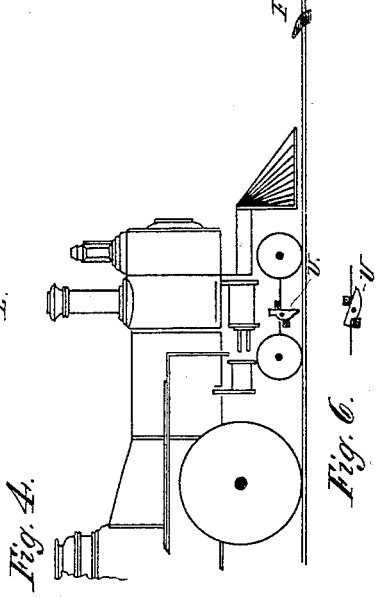

Fig. 4.

Fig. 6.

WITNESSES

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THOMAS L. CARLETON, OF NEW ORLEANS, LOUISIANA, ASSIGNOR OF ONE-HALF TO WILLIAM H. BOFINGER, OF SAME PLACE.

RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 453,690, dated June 9, 1891.

Application filed September 6, 1890. Serial No. 364,156. (No model.)

To all whom it may concern:

Be it known that I, THOMAS LEWIS CARLETON, a citizen of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented certain new and useful Improvements in Railway Switches; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has relation to an improvement in automatic railway-switches; and it has for its object, among other things, to provide a construction of switch whereby an engineer upon a moving train is enabled to throw the point of the switch against the main track without leaving his engine; and to the accomplishment of this and other ends my invention consists in the construction, novel combination, and adaptation of the parts hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a top plan view of my improvements complete applied to an ordinary split switch, the said switch being in position for clear "main track." Fig. 2 is a side elevation of the lever-locking post, together with its component parts. Fig. 3 is a top plan view of the switch-operating mechanism with the top or the guide-block removed and the switch set at "main line." Fig. 4 is a side elevation of a portion of a locomotive carrying the trip for actuating my improvements. Fig. 5 is a top plan view of the switch-operating mechanism adjusted to "side track." Fig. 6 is a side view of the trip removed from the locomotive, the same being shown elevated out of an operative position.

Referring by letter to the said drawings, A indicates the main line of a railway, and B a siding, while A′ indicate the split-switch rails designed to be operated by my improvements, as will be presently described.

Connected in a suitable manner to the under side of the switch-rails A′, one of which forms a part of the main track and the other a part of the siding, is a transverse bar P, which is approximately of the proportional size shown, and is designed, in conjunction with the other parts, to throw the point of the switch against the main track, as will be presently described. Adjacent to its free end the bar P is provided with a recess or guide *a* transverse of its length to receive a stepped bar S, which is adapted to move at right angles to the bar P or longitudinal of the track and to operate in conjunction with said bar P, as will be presently described.

R indicates a block or casing, in which the transverse bar P, the stepped bar S, and another transversely-disposed bar O, presently to be described, are guided, said block or casing R being provided with guideways for the said bars, as illustrated. The bar O, which is provided with a recess adjacent to its end to seat the enlarged portion of the stepped bar, moves in a guideway parallel to that of the bar P, and is connected adjacent to its other end with a vertically-disposed lever-arm M, pivotally mounted at *b* in the upright post T.

Connected at one end to the side and adjacent to the end of the slide-bar P and having its other end sliding in a bearing connected to the immovable rail of the main line is a bar Q, on which is mounted a spiral spring Q′, which is of a resiliency suitable to the performance of functions presently to be set forth, and is connected at one end to a fixed disk on the rod, while its opposite end is attached to the bearing of said rod.

Connected to the upper side of the stepped bar S and running longitudinally with respect to the track is a bar C, which is provided adjacent to the ends of said stepped bar with disks K to engage the stepped bar to move the same to operate the switch, as will be hereinafter more fully specified. This bar C, which is of any suitable length, is pivotally connected at its end to a short lever-arm H, carried at the end of a transverse rocking bar D, which is journaled in a suitable manner beneath the track at a suitable point in advance of the switch. Fixed adjacent to the end of said rocking bar D and upon the right-hand side of the track with respect to the direction of travel is a beveled trip F, arranged to be engaged by a trip carried at the right side of the locomotive. The trip U, which is pivotally mounted upon the locomo-

tive adjacent to the track, may be of any preferable construction, although that disclosed in the present embodiment of my invention is preferable.

In practice the trip U is designed to be connected with the cab of the locomotive, so that the engineer may readily adjust the same to engage or pass over the trip F, as may be desired.

Moving in suitable guides formed in the post T adjacent to its upper end is a slide-bar N, which moves in a direction parallel to the track, and is provided adjacent to its end with a notch or recess *c* to seat the upper end of lever M, for a purpose presently to be described. Pivotally and loosely connected to one end of this bar N is a lever L, which is formed integral with or connected at its lower end to a rocking bar L′, the opposite end of which is cranked and is connected in a suitable manner adjacent to the enlarged end of the stepped bar S.

In operation the devices are normally in the positions shown in Figs. 1 and 3 of the drawings, so as to present a clear main track to an approaching train. Now, if the engineer desires to run on the siding he adjusts the trip U down, and said trip engages the trip or shoe F, which moves the bar C in the direction indicated by the arrow and with said bar moves the stepped bar S, which carries the reduced end of said stepped bar into the recess of the bar P, when by the action of the spring Q′ upon the bar Q one of the split switch-rails will be thrown against one of the main-track rails, while the other will be thrown from the side-track rail, and thus present a siding to the approaching train. The adjustment of the stepped bar S, as described, will carry the first or large step thereof into the recess of the slide-bar O, and through the medium of the crank rocking bar L′ and lever L will move the bar N so as to bring the recess *c* into alignment with the lever M, and by this construction it will be seen that simultaneously with the movement of the stepped bar S by reason of the spring Q′ and bars P and O the upper end of lever M will move toward the track and seat itself in the notch *c* of the bar N. It will also be seen that when the switch is set at "main track" the bar N will lock the lever M and prevent it from moving toward the track.

In practice it is obvious that signal-lights of suitable character might be placed upon the lever M, so as to notify the engineer whether the switch is set at main or side track. It is further obvious that such modifications may be made in the form and general arrangement of the several parts as fairly fall within the scope of my invention.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a railway-switch, the combination, with a switch-rail, of a block arranged adjacent thereto and provided with guide-slots at right angles to each other, a transversely-disposed sliding bar connected to said switch-rail and moving in one of the guides of said guide-block, a retracting-spring mounted on a bar having one end connected to the slide-bar and the other end connected to one of the immovable track-rails, a stepped bar arranged at right angles to the transverse slide-bar and adapted to engage a transverse recess therein, and a bar connected to said stepped bar and arranged longitudinally of the track, said longitudinal bar carrying devices adapted to be engaged by a locomotive to adjust the same longitudinally to move the switch, substantially as and for the purpose specified.

2. In a railway-switch, a switch-rail, a guide-block arranged adjacent thereto, a sliding bar P, guided in said block and connected to said switch-rail, a bar connected at one end to said bar P and at its other end to an immovable track-rail, a retracting-spring on said bar, a stepped bar arranged at right angles to the bar P and adapted to engage a recess therein, a bar connected to said stepped bar and arranged longitudinally of the track and connected at its ends to devices adapted to be engaged by a locomotive, in combination with a slide-bar moving in the guide-block parallel to the bar P and having a recess designed to be engaged by the stepped bar, the rocking bar cranked at one end and connected to the stepped bar, the lever connected at one end to said rocking bar, a slide-bar guided in an upright post and having one end connected to said lever, said bar being provided with a notch in its side, and a lever connected to the slide-bar O adjacent to its end, all adapted to be operated substantially as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS L. CARLETON.

Witnesses:
PERCY D. PARKS,
J. B. ROSSER, Jr.