

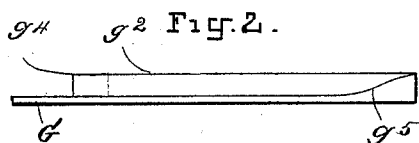
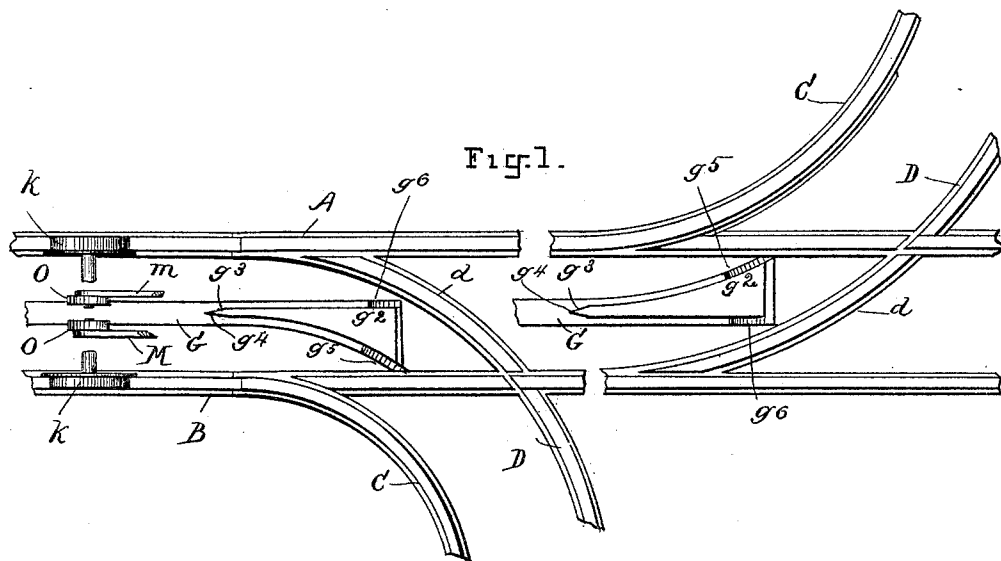
(No Model.)

2 Sheets—Sheet 1.

L. L. WANDS.
RAILWAY SWITCH.

No. 581,669.

Patented Apr. 27, 1897.



WITNESSES:

E. E. Whitney.
C. G. Gresh.

INVENTOR

Lucius L. Wands.
BY
Edgar Tate & Co.
ATTORNEYS.

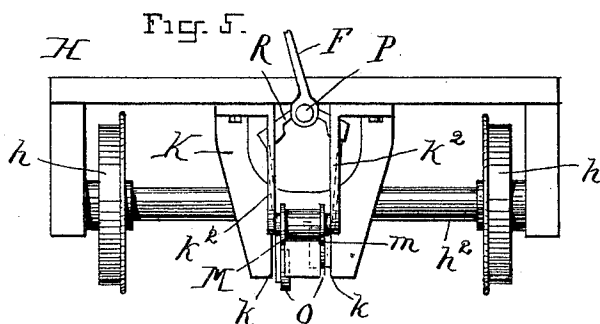
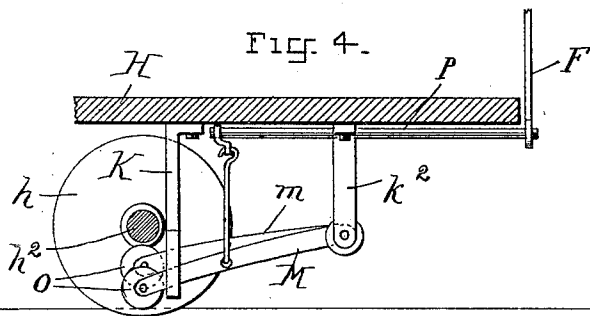
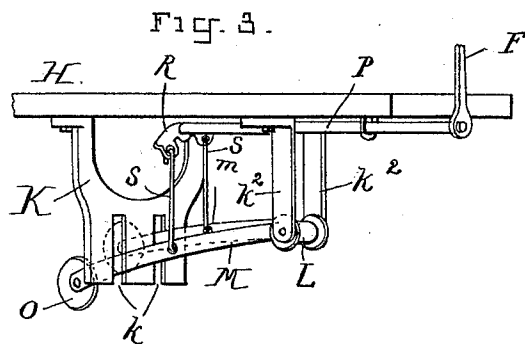
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2 Sheets—Sheet 2.

L. L. WANDS.
RAILWAY SWITCH.

No. 581,669.

Patented Apr. 27, 1897.



WITNESSES:

B. E. Whitney.
C. G. Smith.

INVENTOR

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UNITED STATES PATENT OFFICE.

LUCIUS LAWSON WANDS, OF WHITFIELD, NEW YORK, ASSIGNOR OF TWO-THIRDS TO ALEXANDER DAVIDSON, OF SAME PLACE.

RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 581,669, dated April 27, 1897.

Application filed December 23, 1895. Serial No. 573,140. (No model.)

To all whom it may concern:

Be it known that I, LUCIUS LAWSON WANDS, a citizen of the United States, and a resident of Whitfield, in the county of Ulster and State of New York, have invented certain new and useful Improvements in Railway-Switches, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts.

This invention relates to railway-switches; and the object thereof is to provide an improved switch apparatus whereby the pivoted switch plate or tongue usually employed is rendered unnecessary, and a stationary central switch-plate, which is preferably located midway between the rails of the track, is employed, and devices connected with the engine or a car which operate in connection with said switch-plate to turn the engine or car onto the switch or side-track; and with this and other objects in view the invention consists of the construction, combination, and arrangement of parts hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is a plan view of a railway-switch involving my invention and showing also the wheels of one truck of a car and portions of the operating mechanism; Fig. 2, a side view of the switch-plate which I employ; Fig. 3, a perspective view of the operating mechanism which is designed to be connected with a car or the engine of a train; Fig. 4, a side view of said operating mechanism, and Fig. 5 an end view thereof.

In the drawings forming part of this specification, reference being made to Fig. 1, A and B represent the rails of a main railway-track, and C and D the rails of side-tracks at each side of the main track, and the inner rail D of said side-tracks is carried across the main track, as shown at *d*, and the rails of each side-track and the main track are stationary and secured together in any desired manner, and the object of employing two side-tracks is to show the double operation of my improved

switch-operating mechanism, as will hereinafter appear.

In the practice of my invention I provide a switch plate or bar G, which is preferably flat and which is also preferably about level with the base-flange of the railway-rails, and said switch-plate is placed centrally between the rails of the main track and extends a predetermined distance from the switch, and the end thereof adjacent to the switch is triangular in form and provided with a central raised triangular block or piece *g*², the side of which adjacent to the side-track or switch is curved in line with the rails of the side-track and the opposite side being straight or in line with the rails of the main track, and the outer end of said triangular block or raised portion is beveled or inclined at each side, as shown at *g*³, and provided with a vertical edge *g*⁴, and formed at the inner end of said triangular portion and the curved side thereof and on the switch-plate G is an incline *g*⁵, which rises to a level with the adjacent rail of the main track, and on the opposite side of said triangular block *g*² is a similar incline *g*⁶, which rises to a level with the cross-rail *d* of the switch. In this arrangement of parts all the rails of the main track and the side-tracks, as hereinbefore stated, are rigidly secured in position, as is also the switch-plate G, and the device or apparatus for switching a car or a train onto one of the side-tracks is shown in Figs. 3, 4, and 5.

This apparatus may be connected with the platform of a car or with an engine, and in said last-named figures H represents the platform of a car, and secured to the bottom thereof, adjacent to one of the trucks, the wheels of which are shown at *h* and the axles thereof at *h*², is a hanger K, which is preferably of the form shown in Figs. 3 and 5, and in the lower end of which are formed two vertical slots *k*. In front of the hanger K are two hangers *k*², the lower ends of which are united by a cross-bar L, on which are pivotally mounted two levers M and *m*, the inner ends of which pass backwardly through the slots K, and secured to the rear ends of each of said levers are wheels or other devices O.

Supported in suitable bearings longitudinally

nally of the platform H and below the same is a rod P, the inner end of which is provided with a cross-head R, with each end of which is connected a rod S, the lower ends of which are connected with the levers M and m, respectively, and secured to the forward end of the rod P is an arm F, which extends upwardly at the end of the platform or through a slot formed therein or through the bottom of the cab of the engine, as the case may be.

As thus constructed it will be seen that by turning the arm F from one side to the other the rear ends of the levers M and m may be raised or lowered at the will of the operator, and the operation will be readily understood from the foregoing description when taken in connection with the accompanying drawings. If a car or engine provided with the switching apparatus hereinbefore described be passing on the main track in the direction of the arrow a (shown in Fig. 1) and it is desired to take the right-hand side-track, the arm T is operated so as to depress the lever M and with it the wheel or other devices O at the rear end thereof into contact with the switch-plate G, and said wheel will strike the beveled side of the triangular block or piece g^2 , and passing along the concave or curved side of said block will ride up over the incline g^5 , and the car or engine will be drawn onto the right-hand side-track, composed of the side rails C and D, and in this operation the wheel or other device O, connected with the lever M, will ride up over the incline g^5 and pass over the rail of the main track, as will be readily understood.

If it is desired to take the left-hand side-track, the arm T is not operated until the car or engine has passed the switch of the right-hand side-track, after which the arm T is operated so as to depress the lever m, and in this event the operation will be substantially that above described, the wheel or other device O and the end of the lever m passing along the concave or curved surface of the block or piece g^2 and up over the incline g^5 , and drawing the car or engine onto the left-hand side-track.

In the normal position of the parts the arm T is in a vertical position and the levers M and m are held at the same height, and the wheels or other devices O, at the rear ends thereof, are held above the rails of the tracks and do not come in contact with the switch-plate G or the blocks or pieces g^2 , formed thereon, and in this position but slight movement of the arm T in either direction will operate the levers M and m, as hereinbefore described, and in practice I prefer to support these levers in such manner that the lateral movement thereof will be impossible, and for this purpose it is necessary that the hangers with which they are connected be

strong and substantial and be rigidly secured in position.

If it is thought necessary to operate the apparatus connected with the car so as to prevent the car or engine from accidentally taking a switch or side-track, the arm T is operated so as to depress one of the levers M and m in such manner that the wheels or other devices O at the rear end thereof will move along the straight side of the triangular block or piece g^2 and up over the incline g^5 , across the cross-rail; but this operation and this feature of the construction is only to provide means for guarding against the accidental switching of a car or train and may or may not be employed, as desired.

The depressible levers M and m and the wheels or other devices O, connected with the rear ends thereof, are not absolutely essential, and other forms of operating devices may be employed in place thereof, and my invention is not limited to the exact form, construction, and arrangement of parts herein described, and I therefore reserve the right to make all such alterations therein and modifications thereof as fairly come within the scope of the invention.

Having fully described my invention, I claim as new and desire to secure by Letters Patent—

In a railway-switch and means for operating the same, the combination with a main and a side track, of a switch plate or bar as G, the end of which is triangular in form, and provided with a central raised triangular portion or block g^2 , and means connected with the platform of a car or truck for operating the switch, consisting of a hanger K, in the lower end of which are formed two vertical slots k, two hangers k^2 , adjacent to the hanger K, the lower ends of which are connected by a cross-bar L, two levers M, and m, mounted on said cross-bar, the inner ends of which pass backwardly through the slots k, wheels O, mounted on the inner ends of said levers, a rod P, arranged below the platform of the car, the inner end of which is provided with a cross-head R, rods S, connected with the ends of said cross-head, the said rods being also connected with the levers M, and m, and an arm F, secured to the forward end of the rod P, and extending upwardly through the bottom of the platform, said parts being constructed and adapted to operate, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 20th day of December, 1895.

LUCIUS LAWSON WANDS.

Witnesses:

C. GERST,
L. M. MULLER.