W. Wharton, Jr.

Railroad Switch,

No. 69,599, Patented Oct. 8, 1867.

Fig 1.

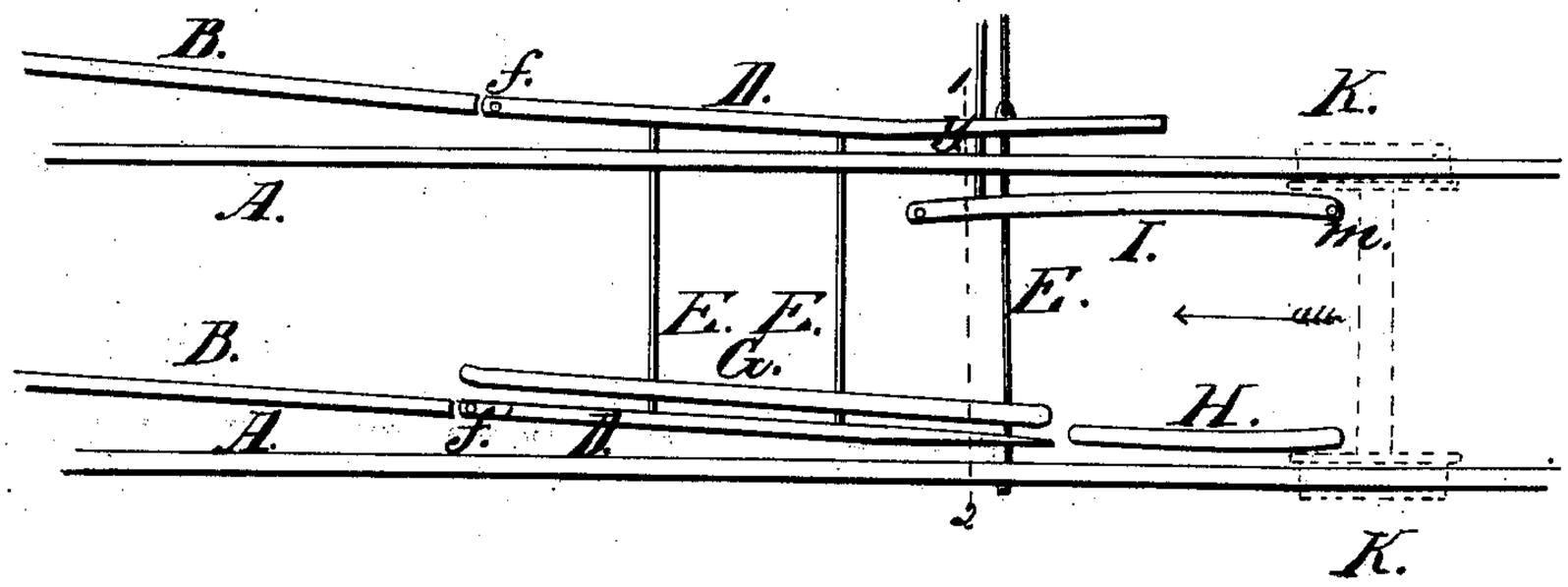

Fig. 2.

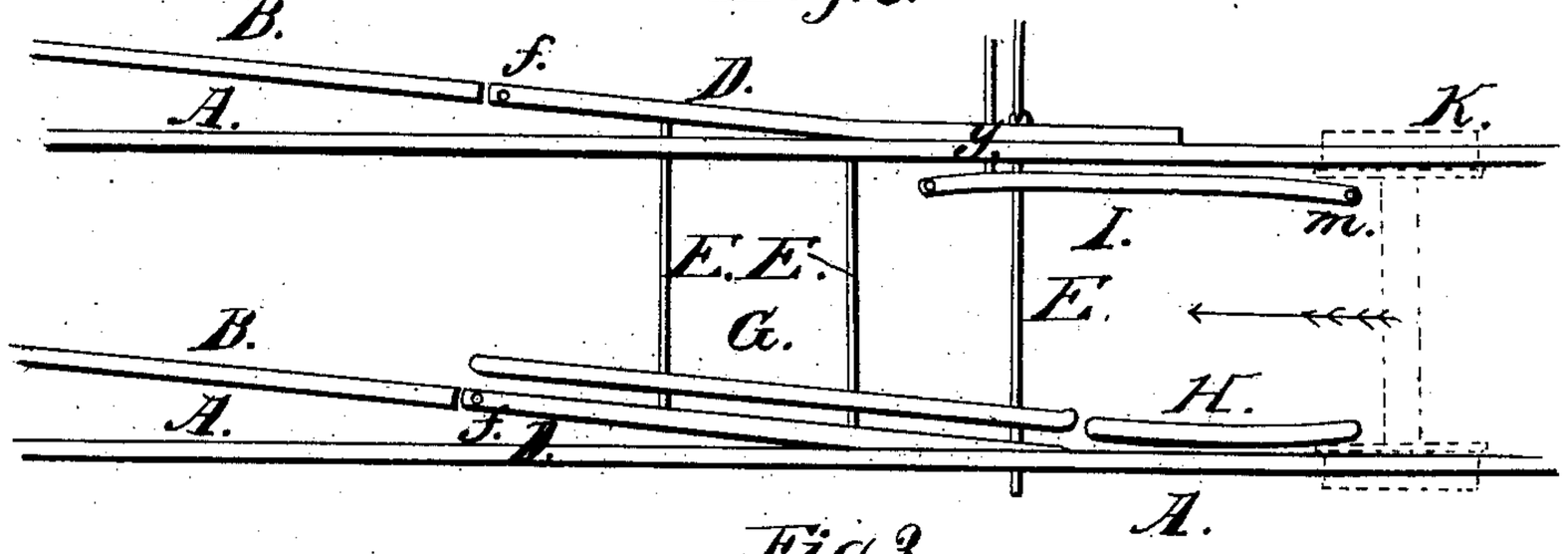

Fig. 3.

Witnesses.

Wm Albert Steele

John Parker

Inventor.

Jm Wharton Jr.

UNITED STATES PATENT OFFICE.

WILLIAM WHARTON, JR., OF PHILADELPHIA, PENNSYLVANIA.

IMPROVED RAILROAD-SWITCH.

Specification forming part of Letters Patent No. **69,599,** dated October 8, 1867.

To all whom it may concern:

Be it known that I, WILLIAM WHARTON, Jr., of Philadelphia, Pennsylvania, have invented certain Improvements in Railroad-Switches; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to improvements, fully described hereinafter, in the railroad-switch for which Letters Patent were granted to me on the 27th day of June, 1865.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation, reference being had to the accompanying drawing, which forms a part of this specification, and in which—

Figures 1 and 2 are plan views with the movable parts in different positions; and Fig. 3, a transverse vertical section on the line 1 2, Fig. 1.

A and A′ are the permanent rails of the main track, and B and B′ those of the turn-out. D and D′ are the two rails which form the switch, the rail D being secured to the track at *f*, so as to form a continuation of the rail B, and the rail D′ being secured at *f′*, so as to form a continuation of the rail B′. G is a guard-rail, coupled to or forming a part of, and arranged parallel with, the switch-rail D′, but at such a distance therefrom that the flanges of the car-wheels can pass freely between them, the guard-rail being bent slightly toward the center of the track at both ends.

The two switch-rails D and D′ and the guard-rail G are so connected by cross-bars E E E or otherwise that they can be moved to and fro simultaneously, and caused to assume either of the positions shown in the drawing.

H is a permanent guard-rail, situated at such a distance from the permanent rail A′ of the main track that when the several rails occupy the position illustrated in Fig. 2 it will coincide with the movable guard-rail G. I is a guard-rail, hinged or secured to the track at *m*, and arranged to assume the different positions illustrated in Figs. 1 and 2.

The appliances for operating the switch should be such that the guard-rail I shall be moved in one direction simultaneously with the movement of the rails D and D′ and guard-rail G in the opposite direction.

The rails A and A′, the switch-rail D′, and the guard-rails G and H are of the same height; but the guard-rail I is somewhat higher at or about the middle than the rail A of the main track, "and the rail D of the switch is at its end of the same height as the rail A, but gradually increases in height from the said end to about the point *y*, from which point the rail is continued at a uniform level to a suitable distance, and then, if desired, may be gradually decreased in height until it is of the same altitude as the rail D′," as described in my aforesaid patent of June 27, 1865.

When the several rails are in the position illustrated in Fig. 1, the car-wheels will traverse the rails A and A′ of the main track without coming in contact with any of the switch-rails or guard-rails, (if we except the permanent guard-rail H, which might occasionally be touched by the wheel K′;) but when the cars have to be transferred from the main track to the turn-out, the switch-rails D and D′ and guard-rails G and I must be moved to the position shown in Fig. 2, in which case the wheels K and K′ of a car backed in the direction of the arrow will pass from the main track to the turn-out, for the switch-rail D is now in contact with the outside of the permanent rail A of the main track, and is consequently in a position to receive the projecting portion of the tread of the wheel K. The guard-rail I is in a position to control the flange of the said wheel, and consequently to draw the wheel K′ onto the tapering end of the rail D′; hence as the wheel K approaches the outer end of the rail D its flange is confined between the main rail A and the movable guard-rail I, and the wheel, as it continues its course, must of necessity ascend the inclined end of the rail D, and being thus elevated above becomes free from the control of the rail A, and is under that of the switch-rail D, toward which it is directed by the flange of the wheel K′ bearing against the inside of the switch-rail D′, the two wheels being thus transferred to the turn-out. The guard-rail I performs the further duty of drawing the wheel K′ away from the thin end of the tapering portion of the switch-

rail D′, so that it cannot be wounded, and so that the usual plan of setting this end of the switch-rail into a recess of the main rail, and the consequent injuring of the latter, may be obviated.

It will be observed that the guard-rail I is out of the way of the flange of the car-wheel K at all times excepting when it becomes necessary to transfer the cars from the main track to the turn-out and back again—an important feature, as it is desirable that the guard-rail should not be struck or worn by, and should present no obstruction to, the wheels when the cars are traversing the main track.

When the cars return from the turn-out to the main track (the several movable rails being still in the position shown in Fig. 2) the flange of the wheel K′ will pass between, and will be controlled by, the rail D′ of the switch and the guard-rail G, and will insure the proper transfer of the opposite wheel K from the switch-rail D to the rail A of the main track.

I claim as my invention and desire to secure by Letters Patent—

1. The combination of the permanent rails A and A′ of the main track, the permanent rails B and B′ of the turn-out, the switch-rails D and D′, (the former being inclined,) and the movable guard-rail I, the whole being arranged and operated substantially as and for the purpose set forth.

2. The switch-rail D′ and guard-rail G, coupled together, or forming a part of each other, in combination with the rails B and B′, A and A′, and switch-rail D.

3. The switch-rails D and D′ and guard-rails G and I, in combination with the permanent rails A and A′ of the main track and the permanent rails B and B′ of the siding, substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WM. WHARTON, JR.

Witnesses:
JOHN WHITE,
CHARLES HOWSON.