M. Kerr,

Railway Switch.

No. 90,272. Patented May 18, 1869.

FIG. 1.

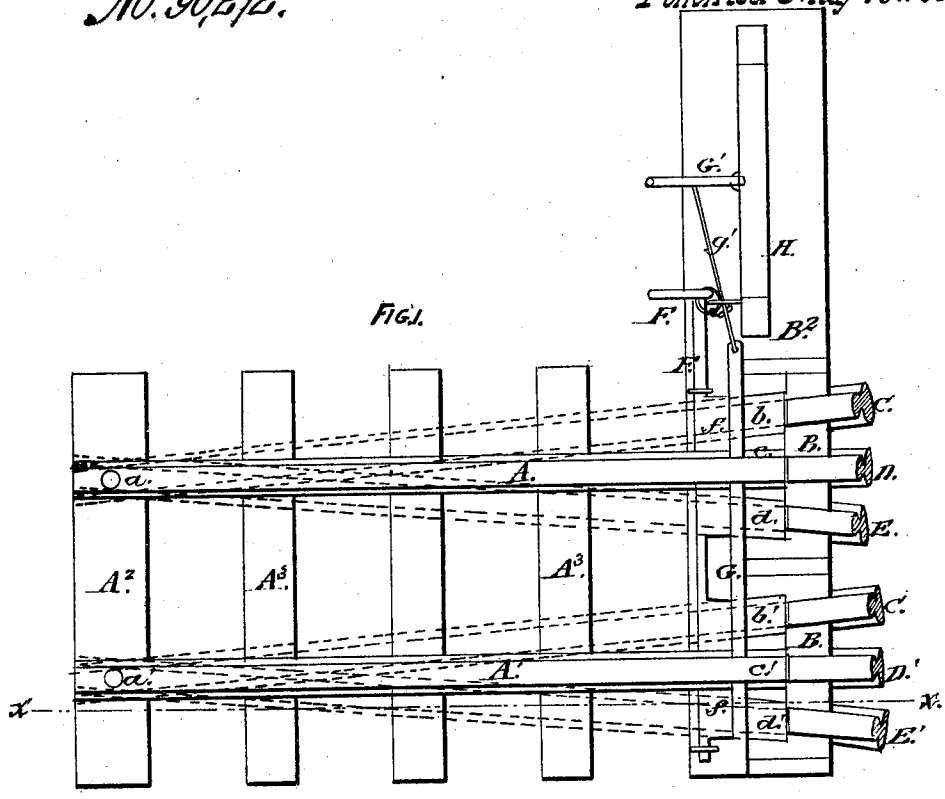
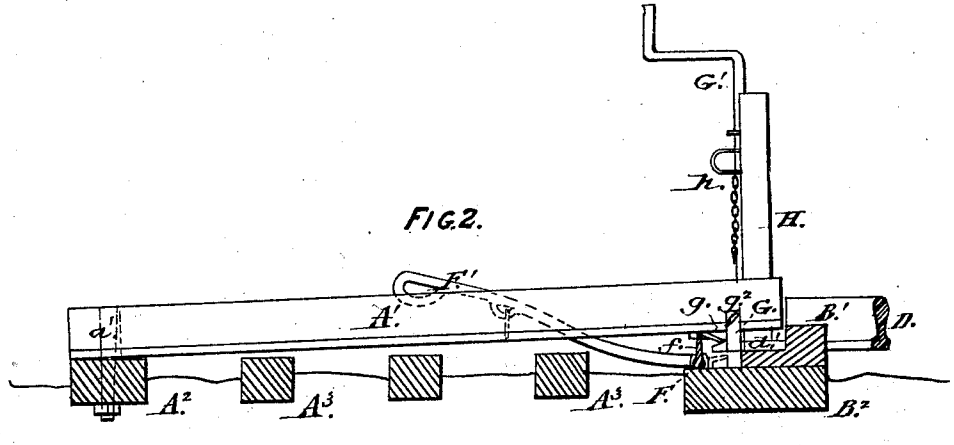


FIG. 2.



WITNESSES:

J. Snowden Bell.

D. E. Simms.

INVENTOR:

Matthew Kerr.

D. E. Symes & Co.

attorney.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

United States Patent Office.

MATTHEW KERR, OF NEW FLORENCE, PENNSYLVANIA, ASSIGNOR TO HIMSELF, D. C. HOOVER, AND W. N. HAYS, OF SAME PLACE.

Letters Patent No. 90,272, *dated May* 18, 1869.

IMPROVEMENT IN RAILROAD-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, MATTHEW KERR, of New Florence, in the county of Westmoreland, and in the State of Pennsylvania, have invented an Improved Railroad-Switch; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which make part of this specification, and in which—

Figure 1 represents a plan or top view of my improved railroad-switch; and

Figure 2, a vertical longitudinal section of the same, at the line *x x* of fig. 1.

The object of my invention is to provide a simple and secure railroad-switch, which can be readily operated, and when locked, will hold the movable rails firmly in position, obviating all risk of lateral or vertical displacement, and causing it to be as safe as any other part of the track.

The device to which my improvement applies consists of a chair or chairs, in which the ends of the rails with which the switch is to communicate rest, provided with a series of recesses to receive the ends of the movable rails. The movable rails are operated by a switch-rod or bridle in the ordinary manner, and are raised out of the recesses to be shifted, by means of a locking-rod, carrying arms which bear against the bottoms of the movable rails.

By my improvement, flanges are formed on the side of the switch-rod, beneath the rails, on which the arms of the locking-rod rest when the switch is locked, and thereby prevent tilting or vertical displacement of the rails, the bottom flanges of which rest in the recesses, which hold them firmly, and prevent lateral displacement, as hereinafter more fully set forth.

In the accompanying drawings, which show a convenient arrangement of the parts for carrying out the objects of my invention,

A A^1 represent the movable rails, pivoted by pins, *a a'* to the cross-tie A^2, and when locked, resting upon the cross-ties A^3.

The drawings show what is termed a "three-throw switch," D D', C C', and E E', representing portions of three lines of track, with any one of which the rails A A^1 can be thrown into communication, as shown by the full black lines, dotted black lines, and full red lines, respectively.

My improvements, however, are equally well adapted to be used in connection with a greater or less number of tracks.

The ends of the rails C C', D D', and E E' which are adjacent to the movable rails A A^1, rest in chairs, B B^1, secured to a cross-tie, B^2.

Recesses *b b'*, *c c'*, *d d'*, are formed in the chairs B B^1, to receive the lower flanges of the movable rails A A^1, when the same are brought in line with either of the three tracks before stated, respectively, and when resting in the recesses, the movable rails are effectually secured from lateral displacement

The rails A A^1 are shifted by means of a switch-rod or bridle, G, having lips, g^2, which embrace their lower flanges, and connected by a rod, g^1, to a crank-shaft, G', pivoted to a frame, H, on the cross-tie B^2.

Flanges *g* are formed on one side of the switch-rod G, beneath the rails A A^1.

A locking-rod, F, operated by a lever, F', is pivoted upon the cross-tie B^2, transversely to the rails A A^1, and carries arms, *f f*, which bear against the bottoms of the same, near their ends, and raise them from the recesses in the chairs B B^1, to be shifted as desired, by means of the crank-shaft G', and connections, as shown in fig. 2.

The rails A A^1 being moved into such position as to have their ends stand above the recesses, in which it is desired that they shall rest, the arm or lever F' is raised, and secured by a chain and padlock, or other suitable fastening, to a staple, *h*, on the frame H.

The ends of the rails A A^1 then drop into a pair of recesses, and the arms *f f* bear upon the flanges *g* of the switch-rod G, and the lever F' being secured to the staple *h*, it is impossible for the rails to be tilted or vertically displaced.

The red lines in fig. 2 show the relative position of the arms and flanges when locked.

The pins *a a'* are so formed as to admit of the proper lateral and vertical swing of the movable rails.

It will be seen that my improved switch is of simple construction, and free from liability to derangement of its parts when operated. The ends of the movable rails resting in the recesses of the chairs, and being likewise held down by the locking-rod, as hereinbefore described, all risk of displacement is removed, and the switch is rendered as safe for the passage of a train as a permanent portion of the track.

It is a well-known fact that in switches in common use, accidents from displacement are frequent, and the jar of a passing train can readily operate to produce this result, which, by my improvement, is effectually guarded against.

I do not claim the chair, nor the devices for lifting and moving the rails, as new, but

What I do claim, is—

The flanges *g*, of the switch-rod or bridle G, in combination with the locking-rod F, and arms or flanges *f f*, substantially as and for the purpose set forth.

The above specification signed by me, this 24th day of February, 1869.

MATTHEW KERR.

Witnesses:

F. C. SOMES,

CHARLES HERRON.