T. Mayhew,

Railroad Switch.

No. 23,931. Patented May 10, 1859.

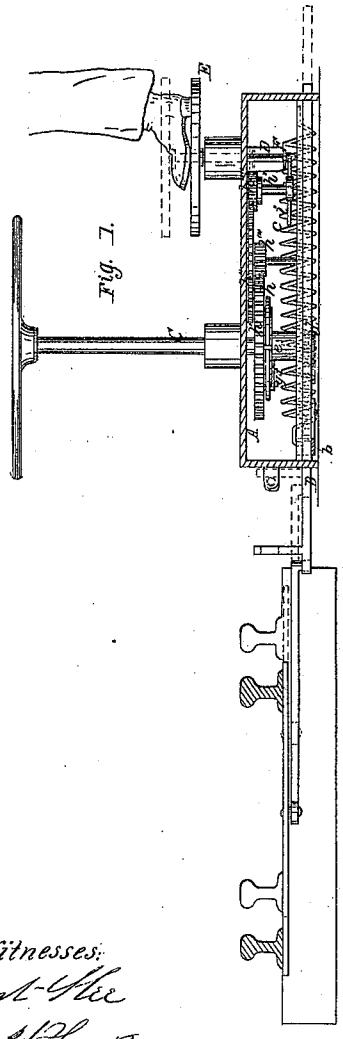

Fig. 1.

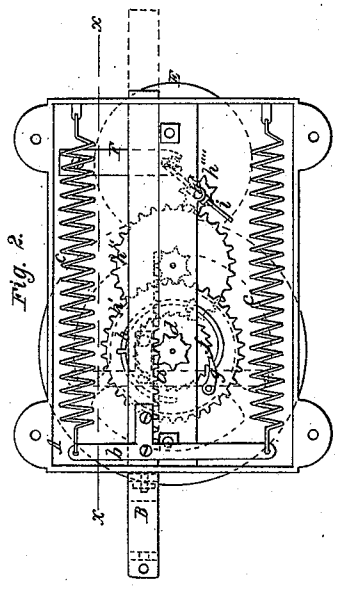

Fig. 2.

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UNITED STATES PATENT OFFICE.

T. MAYHEW, OF POUGHKEEPSIE, NEW YORK.

RAILROAD-SWITCH.

Specification of Letters Patent No. 23,931, dated May 10, 1859.

To all whom it may concern:

Be it known that I, T. MAYHEW, of Poughkeepsie, in the county of Dutchess and State of New York, have invented a new and useful Improvement in Operating Railroad-Switches; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a longitudinal vertical section of my invention taken in the line *x*, *x*, Fig. 2. Fig. 2, an inverted plan of ditto.

Similar letters of reference indicate corresponding parts in the two figures.

The object of this invention is to prevent accidents attending the carelessness of switchmen in failing to properly adjust the switch after moving the same in line with a track to accommodate a passing train.

The invention consists in the employment or use of an adjustable or movable platform arranged in connection with certain gearing, a switch bar and springs substantially as hereinafter fully shown and described, whereby the attendance of the switchman is rendered imperative at every adjustment of the switch and while the train is passing over it and the return movement of the switch to its usual position after being temporarily moved fully insured.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A, represents a box or case in the lower part of which a switch bar B, is placed and allowed to slide freely back and forth. This switch bar has a rack *a* formed at one side of it as shown clearly in Fig. 2, and the switch bar has a cross bar *b*, attached, to each end of which a spiral spring *c*, is connected, said springs being also connected to the box or case A, and having a tendency to keep the switch bar within the box or case, or as far within its front part as it is designed to pass, as shown in red in both drawings. The switch bar B, is attached to a rail-road switch, (shown in blue figures,) in the usual way, and the switch is of ordinary construction. The box or case is secured to any proper framing adjoining the switch. The switch bar is so arranged with the springs *c*, *c*, and the switch, that the springs will have a tendency to keep the switch in line with the direct or main track of the road.

Into the rack *a*, of the switch bar B, a pinion *d*, gears, and this pinion is on the lower end of a shaft C, which passes vertically into the box or case A. The pinion *d* is attached to a collar *e*, which is fitted on and secured to the shaft C, and the upper end of this collar has a ratchet *f*, attached to it, into which ratchet a pawl *g*, catches, and is kept engaged therewith by a spring *h*, said pawl being attached to the under side of a toothed wheel *h'*, which is fitted loosely on the shaft C. The wheel *h'*, is one of a train of wheels which are represented by *h'*, *h''*, *h'''*, *h''''*, the arbor $h^{\times}$, of the latter wheel having an arm *i*, passing through it and projecting out from it at equal distances from opposite sides of the arbor. Through the top of the box or case A, a shaft D, passes vertically. This shaft has a circular horizontal platform E, on its upper end, and the lower end of this shaft is stepped in a spring plate F, the lower end of the shaft D, projecting a little below the spring plate and within the path of the rotation of the arm *i*, when the platform E, is depressed.

The operation is as follows: When it is necessary to throw the switch in line with a branch track the switchman stands on the platform E, and thereby depresses it, and throws the lower end of the shaft D, within the plane of the rotation of arm *i*, when the platform E, is relieved of the weight of the switchman. When therefore the platform E is depressed by the weight of the switchman, the shaft C, is turned by him from left to right and the pinion *d*, throws out the switch bar B, and moves the switch in line with the branch track. If the platform E, were not depressed, the train of wheels *h'*, *h''*, *h'''*, *h''''*, would be set in motion on the movement of the shaft C, and there would be no stop or retaining device to retain the bar B, as it moved out, nothing to resist the action of the springs *c*, when the shaft C, is relieved of the hold of the switchman, but when the platform E, is depressed the arm *i*, in connection with the pawl *g*, serve as stops. Thus it will be seen that the presence of the switchman is required in order to operate the switch or move it and keep it retained in line with the branch track, the switch being moved back to its normal or original position by the action of the springs *c*. The presence of the switchman who, by means of the invention is imperatively demanded when the switch is to

be adjusted or moved in line with a branch track, effects the desired object. Accidents are avoided for the switchman cannot move the switch and keep it in line with the branch track without being present and remaining by the switch until the train has passed, and then by his stepping from the platform the springs *c*, serve to throw the switch back in line with the main track, and any irregular or imperfect movement of the switch would of course be observed and corrected.

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

The employment or use of the adjustable platform E, in connection with the switch bar B, and gearing, *d*, *h'*, *h''*, *h'''*, *h''''*, springs *c*, *c*, and stops, *i g* substantially as shown and described, to operate as and for the purpose set forth.

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Witnesses:
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