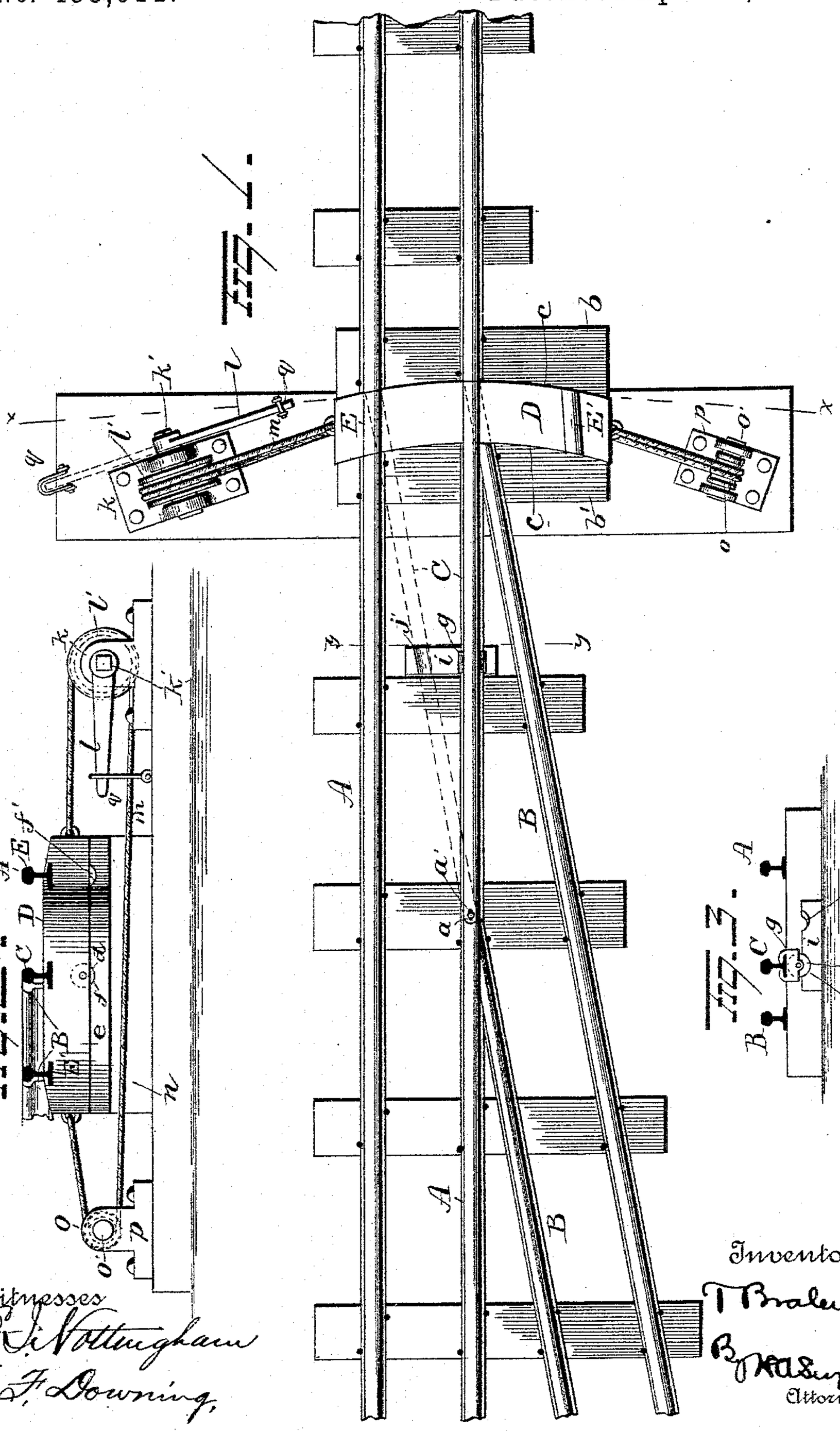
(No Model.)

T. BRALEY.

RAILROAD SWITCH.

No. 495,011. Patented Apr. 11, 1893.



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THURMAN BRALEY, OF LANGSVILLE, OHIO.

RAILROAD-SWITCH.

SPECIFICATION forming part of Letters Patent No. 495,011, dated April 11, 1893.

Application filed November 17, 1892. Serial No. 452,349. (No model.)

To all whom it may concern:

Be it known that I, THURMAN BRALEY, a citizen of Langsville, in the county of Meigs and State of Ohio, have invented certain new and useful Improvements in Railroad-Switches; and I do hereby 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 relates to an improvement in railroad switches,—the object of the invention being to construct the switch in such manner that a frog will be dispensed with and the number of rails usually required will be greatly reduced.

A further object is to so construct the switch that it shall be easy and sure of operation.

A further object is to produce a railroad switch which shall be simple in construction and effectual in the performance of its functions.

A further object is to construct the switch in such manner that it can be easily moved from one position to another and retained in the position to which it is moved.

With these objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts as hereinafter set forth and pointed out in the claims.

In the accompanying drawings: Figure 1 is a plan view illustrating my invention. Fig. 2 is a sectional view on the line *x*—*x* of Fig. 1. Fig. 3 is a sectional view on the line *y*—*y* of Fig. 1.

A, A, represent the main rails of the track and B, B, the siding rails. At the point of juncture of the inner main and siding rails, a movable rail section C is pivoted by means of a pin *a*,—the perforation *a'* in the end of said movable rail section being preferably somewhat larger than is necessary for the accommodation of the pin *a*, so that said movable rail can have a slight vertical movement for a purpose which will presently appear. Adjacent to the free end of the movable or pivoted rail section C, the main rails are cut away for the accommodation of a curved sliding bar D and the outer siding rail terminated in close proximity to said sliding bar. The ties *b*, *b'* on which the ends of the main rails and the outer siding rail rests, are made with curved inner faces *c* for the accommodation of the curved bar D as will be readily seen. The free end of the movable or pivoted rail section C is secured to the center of the movable bar D, and in proximity to one end of said movable or sliding bar a short rail section E is secured and adapted to align, when the switch is closed, with the outer main rail and thus make said rail continuous. Near the other end of the sliding bar D, another short rail section E' is secured and adapted to align, when the switch is open, with the outer siding rail and the inner main rail, as shown in dotted lines in Fig. 1.

The under face of the sliding bar D is recessed for the reception of a roller *d*, which is adapted to run on a curved plate *e* located between the ties *b b'*. The plate *e* is provided at its center with a recess *f* in which the roller *d* rests when the sliding bar D is at rest and the switch is closed. Another recess *f'* is made in the plate *e* in line with the outer main rail of the track and receives the roller *d* when the sliding bar D is at rest and the switch is open. From this construction and arrangement of parts it will be seen that when the switch is to be opened or closed, the movable or pivoted rail section C will be thrown from one position to the other by sliding the bar D and that when said bar is moved the roller *d* will ride out of the recess in which it rested and cause the free end of the movable or pivoted rail section to rise slightly and that during the continued movement of said sliding bar the roller *d* will run freely on the plate *e*, and thus render the operation of the rail very easy, until it reaches the other recess in the plate *e* when it will drop therein and retain the movable or pivoted rail section in the position to which it is thrown.

At a point between the ends of the movable or pivoted rail section a bracket *g* is located, in which a roller *h* is mounted and adapted to run on a plate *i*, said plate being provided with recesses *j*, *j'*, in which said roller is adapted to rest in the same manner as above described.

Located at one side of the track is a switch stand *k*, in which a shaft *k'* is mounted and provided at one end with a hand lever *l* by means of which to oscillate it. A wire rope

or chain *m* is secured to a drum or wheel *l'* secured to the shaft *k'*, and is adapted to be wound thereon, one end of said wire rope or chain being secured to one end of the sliding bar D. The other end of the wire rope or chain *m* is passed through a groove *n* under the plate *e* and is wound on a wheel or drum *o* (preferably considerably smaller than the drum or wheel *l'*) carried by a shaft *o'* mounted in a stand *p* at the opposite side of the track from the stand *k*. After passing over the wheel or drum *o* the wire rope or chain is secured to the other end of the sliding bar D. By operating the lever *l* the movable or pivoted rail section C can be thrown from one position to the other to open or close the switch.

The devices above described are very simple in construction easy in operation and effectual in the performance of their functions. In order to retain the lever *l* in the position to which it is thrown, loops *q* are provided.

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

1. The combination with the main rails of a track and the siding rails, of a sliding block, short sections of rail secured to said sliding block and a rail section pivoted at one end at the juncture of the inner main and siding rails and secured at the other end to the sliding bar, substantially as set forth.

2. The combination with the main rails of a track and the siding rails, of a sliding block, short sections of rail secured to said sliding block a rail section pivoted at one end at the juncture of the inner main and siding rails and secured at the other end to the sliding bar and a roller on which said sliding bar runs, substantially as set forth.

3. The combination with the main rails of a track and the siding rails, of a sliding block, short sections of rail secured to said sliding block a rail section pivoted at one end at the juncture of the inner main and siding rails and secured at the other end to the sliding bar, a plate under said sliding bar having recesses therein and a roller carried by the sliding bar and adapted to run on said plate and enter said recesses therein, substantially as set forth.

4. The combination with main, and siding rails, of a pivoted rail, and a slide bar secured to the free end of the pivoted rail and adapted to travel in the arc of a circle the center of which is the pivotal point of the pivoted rail, the main rails having openings therein and the slide bar carrying rail sections adapted to fill the said openings, substantially as set forth.

5. The combination with the main rails of a track and the siding rails, or a pivoted rail section, and a roller carried by said pivoted rail section at a point between the ends of the same, substantially as set forth.

6. The combination with the main rails of a track and the siding rails, of a sliding bar, short rail sections secured to said sliding bar, a pivoted rail section secured at one end to said sliding bar, a switch stand at each side of the track, drums carried by said switch stands, a lever carried by the shaft of one of said drums, and a wire cord attached at its respective ends to the respective ends of the sliding bar and wound about the drums carried by said switch stands, substantially as set forth.

7. The combination with the main rails of a track and the siding rails, of a sliding bar, short rail sections secured to said sliding bar, a pivoted rail section secured at one end to said sliding bar, a switch stand at each side of the track, drums carried by said switch stands, a lever carried by the shaft of one of said drums, loops for retaining said lever in the position to which it is thrown, and a wire cord attached at its respective ends to the respective ends of the sliding bar and wound about said drums, substantially as set forth.

8. The combination with the main rails of a track, the siding rails and two ties having curved inner faces, of a sliding bar adapted to slide between said curved faces of the ties, short rail sections secured to said sliding bar, a pivoted rail section secured at one end to said sliding bar, and means for sliding said bar to open or close the switch, substantially as set forth.

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

THURMAN BRALEY.

Witnesses:
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