

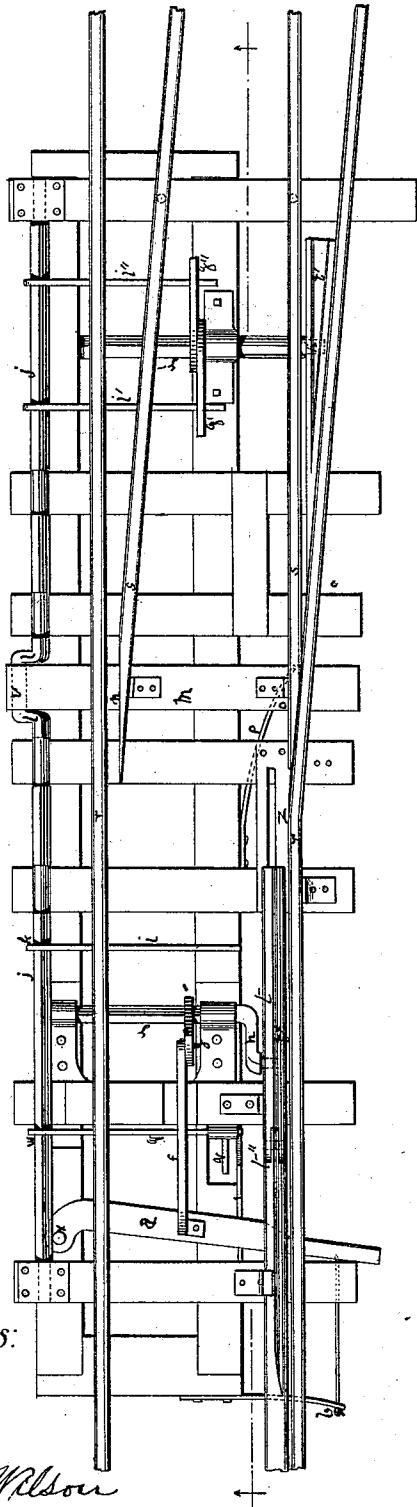
(No Model.)

L. WASHINGTON & W. H. ROBERTS.
AUTOMATIC RAILROAD SWITCH.

No. 521,518.

Patented June 19, 1894.

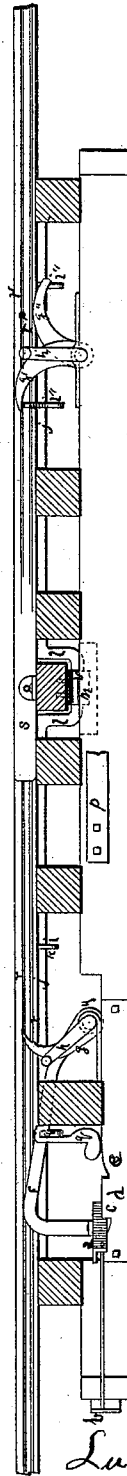
Fig. 1.



Witnesses:

C. J. Wilson
J. C. Atkins

Fig. 2.



Inventors:

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UNITED STATES PATENT OFFICE.

LURIA WASHINGTON AND WILLIAM H. ROBERTS, OF COAL CREEK,
TENNESSEE.

AUTOMATIC RAILROAD-SWITCH.

SPECIFICATION forming part of Letters Patent No. 521,518, dated June 19, 1894.

Application filed September 21, 1891. Serial No. 406,410. (No model.)

To all whom it may concern:

Be it known that we, LURIA WASHINGTON and WILLIAM H. ROBERTS, of Coal Creek, Anderson county, Tennessee, have invented a new and useful Device for Moving Railroad-Switches, to be known as the Automatic Adjusting Railroad-Switch; and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Our machine consists of levers and springs so adjusted that the weight of the engine or car will change the switch; and the objects of said machine are to so arrange the termini of side tracks by means of said machine that any car or train of cars may pass out upon the main track without adjusting the switch by hand; and that, when any car or train of cars has taken the side track, said switch will be readjusted automatically for the main track.

Figure 1 is a representation of two of said machines, the one upon the left being attached to the main track and the one upon the right to the side track; and Fig. 2 a vertical sectional view of the same, the difference between said two machines being as hereinafter indicated.

Similar letters refer to similar parts in both figures; and the same letters marked ' and ' ' indicate the same parts of the machine in the drawings upon the right similar to those upon the left.

a is a lever. *b* is a spring attached to said lever.

c is a notch in which the lever *a* rests when the machine is adjusted for the main track.

d is the beam in which the notches *c* and *e* are cut.

e is the notch in which the lever *a* rests when the machine is adjusted for the side track.

f is a bar connecting the levers *a* and *g*.

g is a lever attached to the bar *f* and rockshaft *y*.

h is a lever attached to the rockshaft *y* and guard rail *t*.

i is a lever attached to the rockshaft *jj* at *k*.

jj is a rockshaft.

k is the junction of the lever *i* and rockshaft *jj*.

ll is a crook or crank in the rockshaft *jj*.

m is a movable bar attached to the crank *ll* at *v*, and to which the inside rails are attached at *n* and *o*.

n and *o* are the points at which the inside rails are fastened to the tie-bar *m*.

p is a spring attached to the tie bar *m*.

q q is a lever attached to the rockshaft *jj* at *w*, and working under the lever *a* when set for the side track.

r r are the stationary rails.

s s are the inside or movable rails.

t is a guard rail to which the lever *h* is attached. It is jointed at *t'*, and has bearing surface *t^x* for the flange of the wheel.

v is the junction of the crank *ll* and bar *m*.

w is the junction of the rockshaft *jj* and lever *q q*.

x is the bolt upon which the lever *a* works.

y is a rockshaft to which the levers *g* and *h* are attached.

The illustration on the left shows the machine adjusted for the main track. To adjust it for the side track, raise the lever *a* out of the notch *c*, bring it forward and lower it into the notch *e*. This through the bar *f* presses the lever *g* forward upon the lever *i*; and the lever *g* being attached to the rockshaft *y* which is in turn attached to the lever *h*, the motion of the lever *g* causes the lever *h* to move forward a little beyond a vertical, which elevates the guard rail *t* above the track. An approaching engine or car mounts the guard rail *t* which presses it forward and downward, its forward end being guided by the slotted bearing *z* with which it engages. This downward motion through the lever *h* and rockshaft *y* is communicated to the lever *g*, which presses the lever *i* downward; and this lever being attached to the rockshaft *jj* at *k* produces a rotary motion in said rockshaft and thus causes the crank *ll* to move outward drawing with it the tie bar *m* and the movable rails *s s* attached thereto, and causing them to move in the direction indicated by the arrow heads in Fig. 1, and producing a tension in the spring *p*. The movable rail *s*, which is attached to the tie bar at *n*, is thus pressed against the stationary rail, while the movable rail attached at *o* is drawn away from the stationary rail upon

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that side, and the car or engine takes the side track and depresses a guard rail *t'* mounted similarly to *t*. When the car or engine moves off the guard rail *t'* the tension in the spring *p* produces a reverse motion, which returns the movable rails to the position indicated in the drawings. And the lever *a* having been drawn out of the notch *e* and held above it by the lever *q q*, is, by the tension in the spring *b*, returned to the notch *c*; and the machine is thus readjusted for the main track.

The machine in the right of the drawings is always adjusted for the side track. When the car or engine mounts the guard rail *t'* this through the rockshaft *y'* produces a downward motion in either the lever *g'* or *g''* according to the direction in which the car is traveling; which motion is communicated to the tie bar *m* in the manner and with the result as above explained. Consequently, any car or train of cars upon the side track can move out upon the main track without any hand adjustment of the switch.

Another advantage of the machine is, that no danger arises to a train which has taken

a side track of being run into through an open switch, as this machine is automatically adjusted for the main track.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The combination, with the rail *t*, connected with the lever *g* by the lever *h* and rockshaft *y*, of the lever *a* to adjust said parts and the lever *q q* and spring *b* substantially as and for the purposes set forth.

2. The combination with rail *t*, rock shaft *y*, and lever *g* of the lever *i*, the rockshaft *j j*, and the tie-bar *m* and spring *p*, as and for the purposes set forth.

3. The combination with the tie-bar *m* and rockshaft *j j*, provided with arms *i'*, two or more, of track levers, adapted to be actuated by train and adapted to actuate rockshaft *j j*, by arms overlying the said arms *i'*, substantially as set forth.

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