

(No Model.)

W. H. JACKSON.  
RAILWAY SWITCH.

No. 578,641.

Patented Mar. 9, 1897.

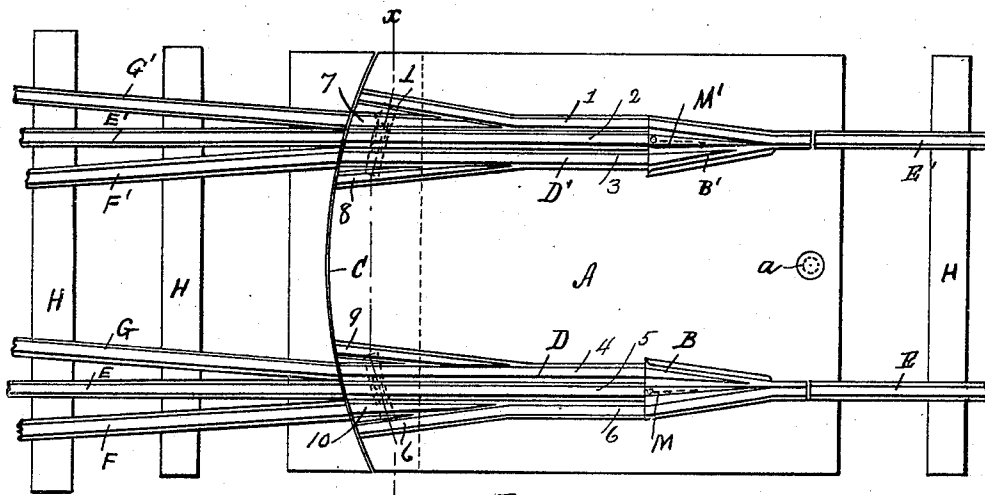


FIG. 1

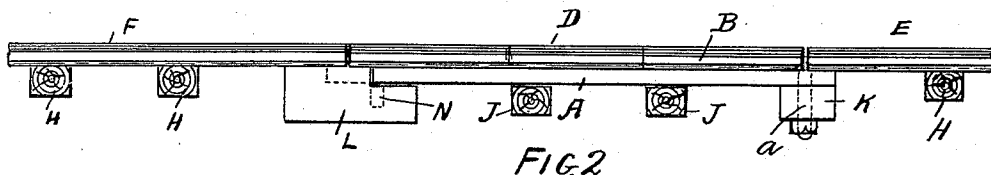


FIG. 2

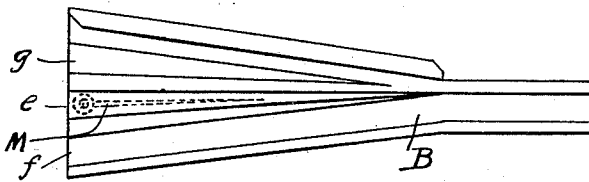


FIG. 3

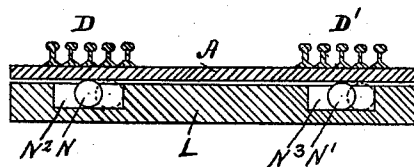


FIG. 4

Witnesses.  
Charles Marien.  
W. C. Proctor

Inventor:  
WILLIAM H. JACKSON.  
BY *Thurman & Sibus*  
Attorneys.

# UNITED STATES PATENT OFFICE.

WILLIAM H. JACKSON, OF INDIANAPOLIS, INDIANA.

## RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 578,641, dated March 9, 1897.

Application filed July 13, 1896. Serial No. 598,929. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. JACKSON, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Railway-Switches; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to certain devices to be used in connection with railway-tracks at the ends of sidings or turnouts; and it consists of a novel combination and arrangement of rails and frogs, forming a switch, by which railway-cars are prevented from being derailed should a switch be set for a wrong track, as will be more fully described herein-after.

My objects are to provide a safety-switch that shall be reliable at all times, which may be used for either single or double sidings, and which may be used by trains when leaving a siding without regard to which siding the switch is set for. With these objects in view my invention is, furthermore, durable and economical in use and may be cheaply constructed and easily operated. By its use much damage to rolling-stock may be prevented and many lives saved.

Referring to the drawings, Figure 1 represents a plan view of my devices in connection with a section of railway; Fig. 2, a side elevation; Fig. 3, a plan of safety-frog, and Fig. 4 a transverse sectional view on the line *xx* of Fig. 1.

In the drawings, *E E'* designate the rails forming the main track; *F F'*, a left siding; *G G'*, a right siding; *A*, the switch-table; *D D'*, the switch-rails; *B B'*, the frogs; *H H H*, cross-ties; *K*, the head-block; *L*, the guide-block; *N N'*, antifriction-rollers, and *J J* foundation-sills.

In constructing my devices I make the table *A* of metal, and in some cases instead of making it of sufficient weight in one piece to stand the strains upon it I build it up of a number of pieces of metal combined with

timber-frames. It is connected at one end to the head-block *K*, supporting it by means of a heavy pivotal bolt *a*, located centrally between the two main rails, the ends of the latter resting upon the table, to which they may be suitably secured by common means. The frogs and switch-rails are also suitably secured to the table, and all are made of such length as is suitable to the degree of lead for which a crossing-frog is designed. The central portion of the table is supported by suitable sills *J J*, and the opposite end is carried by rollers *N N'*, working in recesses *N<sup>2</sup> N<sup>3</sup>*, which are limited in length to suit the transverse travel of the table. The tail end *C* is curved, and the upper part of the block *L* is curved to correspond. The adjoining ends of the stationary rails are secured to the block *L* by any suitable means.

The frogs *B B'* are similarly constructed, but are "right and left." The frog *B* has a shifting point *M*, and the frog *B'* a point *M'*, pivoted to the frog at its heel by a suitable bolt, and each is normally held toward the outside of the track by means of any suitable spring connected below, which permits the point to be parted from the adjoining rail by a wheel-flange when passing outward through it. The switch or shifting rails embracing the parts 1, 2, 3, 4, 5, and 6 are connected at one end to rail-like parts of the frog, as represented by *g e f*, Fig. 3, corresponding to the rails. The rail 1 is turned outward at its opposite end a distance equal to the space between the ends of rails *E'* and *G*, and a bevel-pointed spring-rail 7 is secured at its heel in the position rail 1 would occupy if straight, the point of 7 being normally spring-pressed against 1, but permitting the passage of a wheel-flange outward. A similar bevel-pointed spring-rail 8 is normally held against rail 3, and another spring-rail 9 is normally held against rail 4. Rail 6 is turned outward in a direction opposite to rail 1, and a pointed spring-rail 10 is normally held against it. The spring-pressure for the rails 7, 8, 9, and 10 is provided by suitably securing the butt-ends, while the tapered ends are free to be moved by the flanges of the wheels. Any suitable means may be employed for connecting the shifting end *C* of the table to a suitable switch stand or appa-

ratus, whereby its movements may be controlled and its proper positions secured.

In Fig. 1 a car would pass in either direction upon the main track, or would pass outward from either siding without being derailed. Should the switch be set so that a car would pass into the right siding from the main track, the rails 2 and G' and 5 and G would match, in which case a car could pass outward from the rails E E' over the rails 10 and 3, or from the left siding from F F' over 6 and 8. From this description the other operative situations will be apparent.

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

A railway safety-switch, comprising in combination the table suitably supported and secured at one end by a pivot-bolt, and at its opposite end supported upon rollers; the

pair of frogs situated near the pivotal end of said table; said frogs each having three rails converging toward a point connecting the rails of a main track, the central one of which three rails is a pivotally-supported tapering-pointed piece spring-pressed toward the outer rail; the series of switch-rails connecting the rails of said frogs, and the bevel-pointed rails spring-pressed against adjoining switch-rails as shown, with suitable means for moving the rolling end of said table so that said switch-rails may be brought in line with the fixed rails of the track, substantially as described, for the purposes set forth.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. JACKSON.

Witnesses:

JNO. S. THURMAN,  
E. T. SILVIUS.