A. E. HOVEY.

RAILROAD SWITCHES.

No. 183,928. Patented Oct. 31, 1876.

Fig. 1

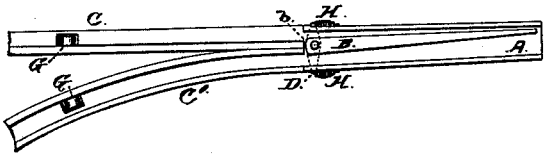


Fig. 2

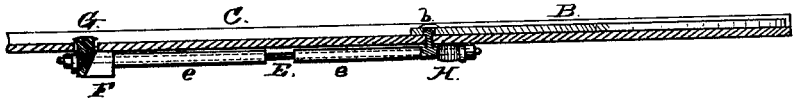
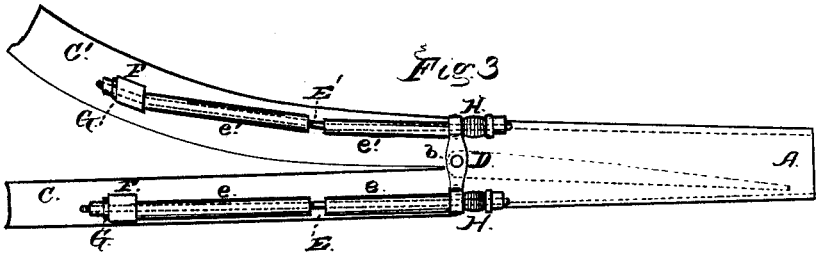


Fig. 3



Witnesses.

Edward L. Osborn

E. Patten.

Inventor.

Asa E. Hovey

By L. W. M. Smith.

his Attorney.

UNITED STATES PATENT OFFICE.

ASA E. HOVEY, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO THE SUTTER STREET RAILROAD COMPANY.

IMPROVEMENT IN RAILROAD-SWITCHES.

Specification forming part of Letters Patent No. **183,928**, dated October 31, 1876; application filed September 22, 1876.

To all whom it may concern:

Be it known that I, ASA E. HOVEY, of the city and county of San Francisco, in the State of California, have invented an Improved Automatic Switch for Railways, of which the following is a specification:

My invention relates to a self-setting switch for railways, and is designed more particularly for use on street-railways where dummies are used.

Its object is to allow the dummy and its car to separate and pass to different tracks without the need of a switch-tender.

It consists in the arrangement, with a pivoted switch-tongue, of a cross-head and draw-rods for operating it, the movement of the rods being produced by the action of the wheels in passing over wedge-blocks that work up through slots in the track, as will hereinafter more fully appear.

The following description of the manner of making and using my invention is sufficiently full and clear to enable any person skilled in the art to construct and apply the same, reference being had to the accompanying drawing, forming part of this specification.

Figure 1 is a top view of the switch-plate and tongue, and parts of the main and switch-rail. Fig. 2 is a longitudinal vertical section, enlarged. Fig. 3 is a view of the under side of the switch-plate and operating mechanism.

A represents the switch-plate that holds the tongue-rail B, and C C′ are portions of the rails of the main track and the switch leading from it. The pin of the tongue B (shown at *b*, Figs. 2 and 3) is secured to a cross-head, D, working beneath the track, and as this head is moved the tongue is thrown to one side or the other of the switch-plate. The movements of the cross-head D are produced by the draw-rods E E′, secured at one end to the cross-head, and passing beneath and in line with the rails, the one, E, under the rail C of the main track, and the other, E′, under the rail C′ of the switch. These draw-rods are protected by the tubes *e e′*, that are fixed to the under side of the rails, and serve to prevent any clogging of the rods and mechanism by the accumulation of dirt around them. At the end of each tube *e* is a fixed block, F, secured to the under side of the rail, with an inclined face and a slot through which the rod passes. The dogs G G are secured to the ends of these rods by a nut and washer, as shown in Figs. 2 and 3, and they are held against the face of the blocks F by the action of the buffer-springs H on the front ends of rods. These dogs have an inclined face that rests against and slides upon the face of the block F, and a rounded head that projects through a slot in the rail in line with the tread of the wheels, so that the depression of the dogs by the weight of the cars causes them to slide upon the inclined face of the blocks, and draw upon the rods E E′.

The springs H, placed between the end of the cross-head D and the end of the rod E, are employed to allow the rods to yield when from any cause the tongue-rail B of the switch should become clogged and refuse to work. The use and arrangement of these springs with the draw-rods E allows the parts to receive the shock of the wheels without straining or breaking.

As thus constructed, my invention operates as follows: When the switch-tongue is in position, as shown in Fig. 1, the dummy being detached from its cars and started in advance of it, will turn off from the main track to the switch C′, and in striking the dog G will depress it, and set the tongue B in position for the car following after, so that the dummy can leave its car and switch off, while the car keeps the main track. Thus the depression of the dog G in the switch by the passing of the dummy sets the switch for the car, while the car, in passing over the dog in the main track, sets the tongue B in position for the next dummy.

By the use of my invention no care or attention is required by the switch in separating the cars and dummies, for when properly set at the beginning it operates automatically to switch off the one and keep the other on the main track.

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

1. An automatic railway-switch, composed of the tongue B, its cross-head D, the yielding draw-rods E E′, and the dogs G G, secured to the ends of the rods, and working against the fixed blocks F, and through slots in the rails of the main and switch tracks, all combined and operated substantially in the manner and for the purpose set forth.

2. In an automatic railway-switch, the combination and arrangement, with the main and switch rails C C′, of the dogs G G, projecting above the rails, and connected with the switch-tongue by the means herein described, said dogs having an inclined face, and working with a sliding motion upon a similar face of the fixed blocks F, constructed and operated as and for the purpose described.

3. In an automatic railway-switch, the combination and arrangement, with the tongue B and its cross-head D, the draw-rods E, and their dogs G, of the springs H, for allowing the parts to yield against the action of the car-wheels without being strained or broken, when the same are constructed and arranged as herein described and set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 5th day of September, 1876.

ASA EBENEZER HOVEY.

Witnesses:
WILLIAM HARNEY,
EDWARD E. OSBORN.