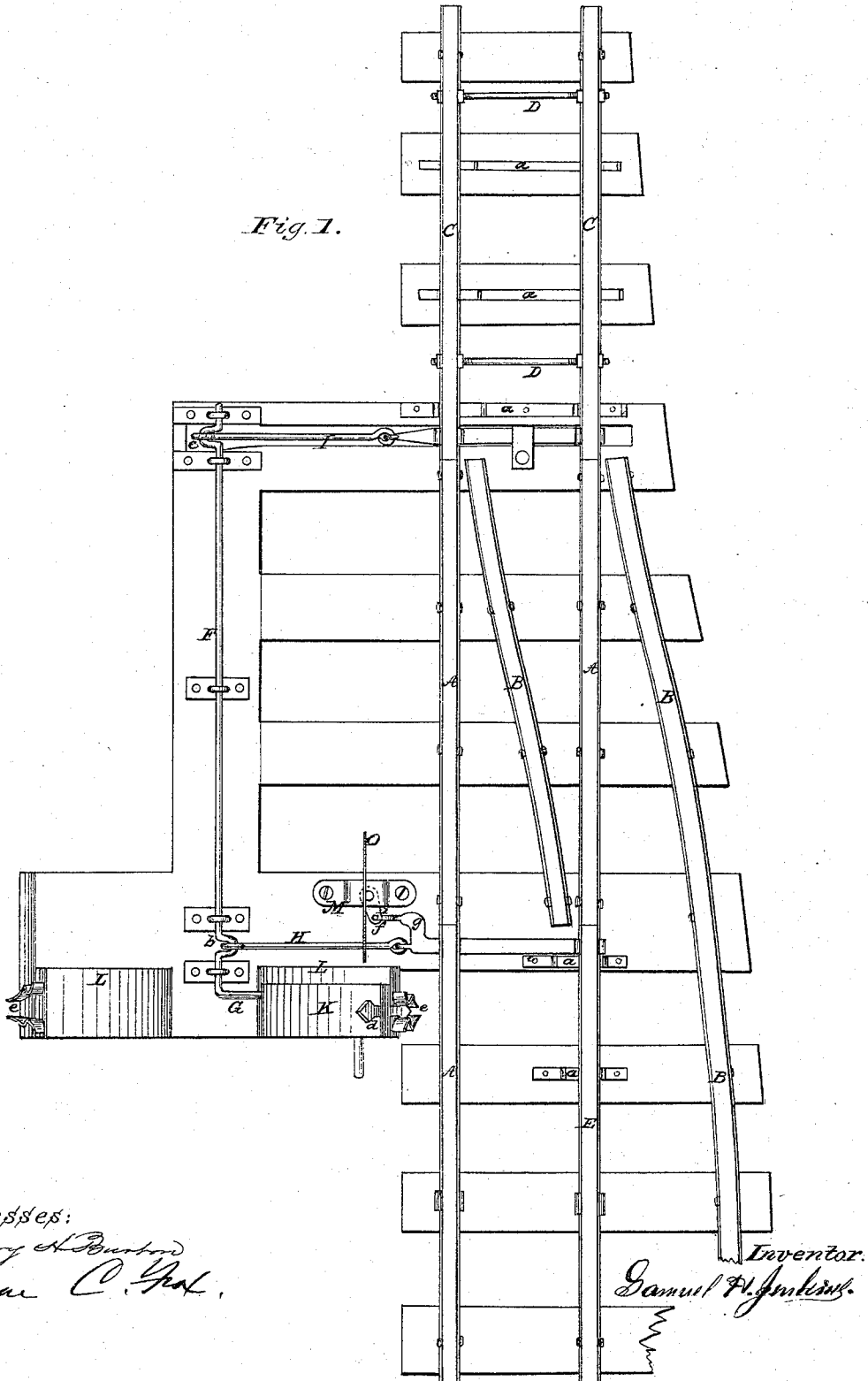


S. H. JENKINS.
Railway Switches.

No. 144,102.

Patented Oct. 28, 1873.

Fig. 1.



Witnesses:

Henry H. Burdett
Oscar C. York.

Inventor.
Samuel H. Jenkins.

S. H. JENKINS.
Railway Switches.

No. 144,102.

Patented Oct. 28, 1873.

Fig. 2.

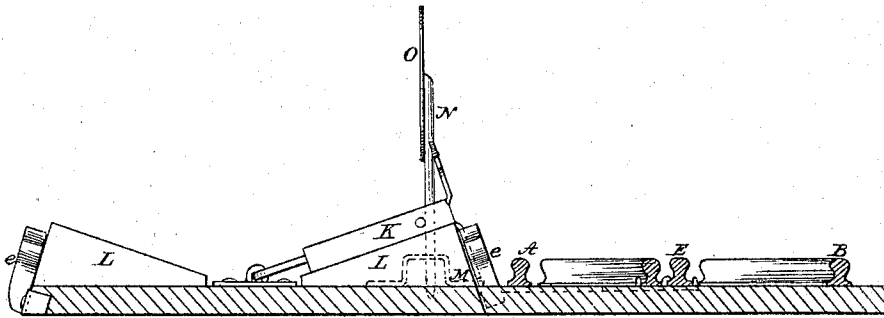


Fig. 3.

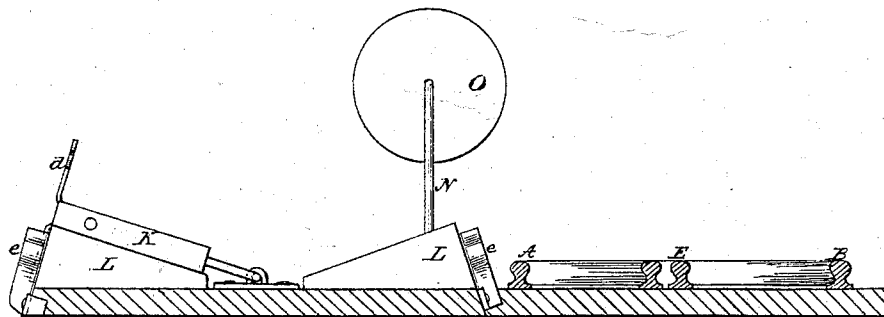
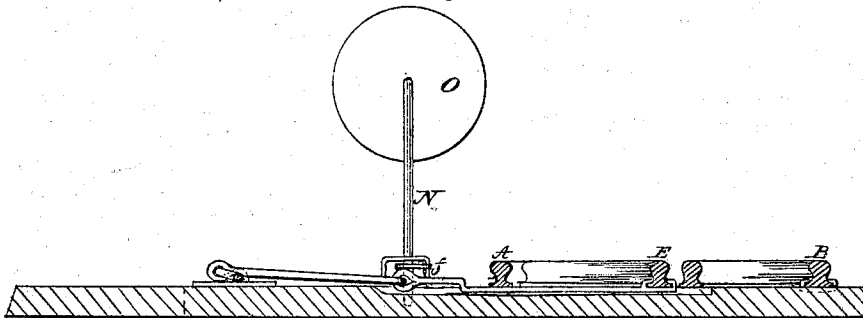


Fig. 4.



Witnesses

Henry H. Buxton
Oscar C. Fox

Inventor:

Samuel H. Jenkins.

UNITED STATES PATENT OFFICE.

SAMUEL H. JENKINS, OF NASHVILLE, TENNESSEE.

IMPROVEMENT IN RAILWAY-SWITCHES.

Specification forming part of Letters Patent No. **144,102**, dated October 28, 1873; application filed May 3, 1873.

To all whom it may concern:

Be it known that I, SAMUEL H. JENKINS, of Nashville, county of Davidson, State of Tennessee, have invented certain Improvements in the Construction and Management of Railway-Switches; and I do hereby declare that the following is a full, clear, and concise description of the same, reference being had to the accompanying drawing as forming a part of the specification.

This invention relates to an improvement in railroad-switches; and the nature thereof consists of the combination, with a single and double switch-rails, of shifting-bars, united to a double crank-rod, having a weighted lever, supplied with spear-headed catches, engaging with clamp-springs, or their equivalents, adjusted to pillow-blocks, substantially as hereinafter more fully set forth.

Figure 1 is a plan of the entire switch, lever, throw, and the various connections. Fig. 2 is an end elevation of the same, showing lever, pillow-blocks, and springs. Fig. 3 is an end elevation from the opposite direction. Fig. 4 is a cross-section, showing toggle on track.

The main track A A is the ordinary railway now in use; so also is the side track B B, and its connecting or turn-out rail B. The portion of the switch C C is composed of two ordinary rails, spiked or fastened down to ties about one-third their length. The balance is so connected by rods D D that it is held firmly in place as a track. The switch end of this section rests and slides on metal slide-chairs *a a* of the required length, having on each end the ordinary rail-chair clamp, against and under which the base of the rail can rest and be held fast. The single switch-rail E is spiked or fastened down about one-third of its length, and the loose end works on the same form of slide *a* as is used under the double switch. The parallel rod F, running along the track, can be of any convenient size and strength to answer the purpose, and is from thirty to sixty feet in length, and held in place and operated in proper rests or journal-chairs attached to extended rail-ties or otherwise. One end of this rod F is bent at right angles with the rod, forming a lever, G, by which the switch may be handled. Near the elbow formed by the rod F proper and lever G is a

crank-journal, *b*, in the same direction and parallel with it. On the further or extreme end of rod F is another journal-crank, *c*, adverse though not in the same plane with the lever, so that the two crank-journals cannot be on the center at once. Connected with this rod at *b* and *c*, by any of the journal-joints now in use, are two rods, H and I, perpendicular to rod F, and connected with it at one end, the other end attached by any form of hinge-joint to the switch-rails, respectively—I to the double-rail switch C C, and H to the single-rail switch E—forming a connection between the lever and switch, by which it can be operated.

By throwing the lever toward the track, the crank-journal *c* is withdrawn, and with it the bar I and the double-rail switch C C, at the same time throwing forward the journal-crank *b*, bar H, and the single-rail switch, opening up the main track, and reducing the gage of the side track near the switch. By reversing the lever the side track is thrown open and the gage of the main track near the switch reduced.

When the track is in this condition and a train should come down the main track, the moment the wheels strike the narrowed gage the lever will be reversed by the weight of the advancing train, and the switch properly adjusted; so in coming from the side track, the arrangement is so carefully adjusted that the car striking the narrowed gage will reverse the lever and switch, and it would be impossible to run off.

On the upper end of the lever G is a carefully-adjusted weight, K, and on the extreme end is a double spear-head catch, *d*, that drops into and is grasped by a double spring-clamp, *ee*, attached to pillow-blocks L L, on which the lever rests. These pillow-blocks are arranged at such an angle as will give sufficient throw to the lever and switch, and may be regulated by a disk, if desirable.

A signal-target, consisting of stand and base M and revolving shaft N, with a sweep-arm, *f*, surmounted by the target O, may be located near to and connected with rod H by means of the sweep-arm *f* and an elbowed arm, *g*, attached to rod H, both connected to and working on a pivoted joint, 1, and so arranged that, when

the lever G is thrown to or from the track, the target will be rotated. When the side track is open, the danger signal may be presented, and the reverse by reversing the switch.

By my improvement in railway-switches I combine economy with safety, dispense with the frog now in use, at the same time producing a self-acting safety-switch—that is to say, one that will correct itself in an emergency.

Having now set forth all that is material to describe to make my invention clear to those skilled in such matters, what I claim as my invention, and ask to protect by Letters Patent, is—

1. The combination and arrangement of the pivoted rail E, shifting-bar H, and crank-rod

F, having one of its cranks, *b*, and its weighted lever K in the same plane with each other, and the latter resting upon an inclined pillow-block, L, substantially as and for the purpose set forth.

2. The pillow-blocks L L, weighted lever G, spear-headed catch *d d*, clamp-springs *e e*, or their equivalents, in combination with rod F, cranks *b c*, bars H I, and switch-rails C C and E, all arranged as and for the purposes set forth and described.

SAMUEL H. JENKINS.

Witnesses:

HENRY H. BURTON,
OWEN C. FOX.