

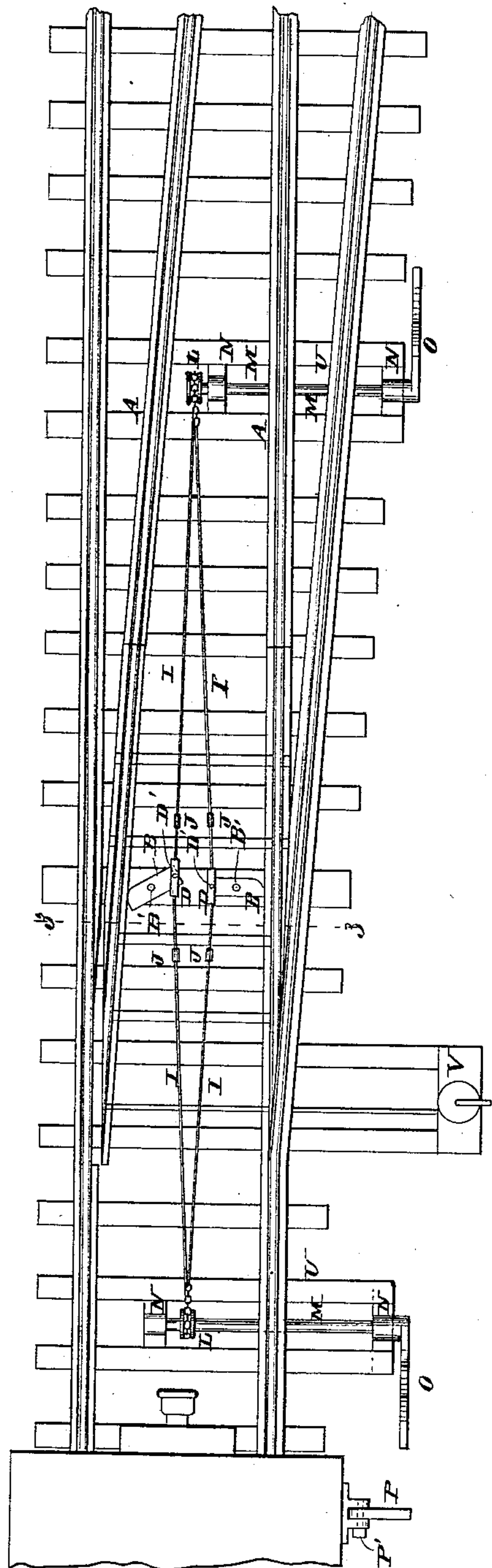
(No Model.)

I. W. NEWLAND, W. J. IREDALE & A. H. NEWLAND.

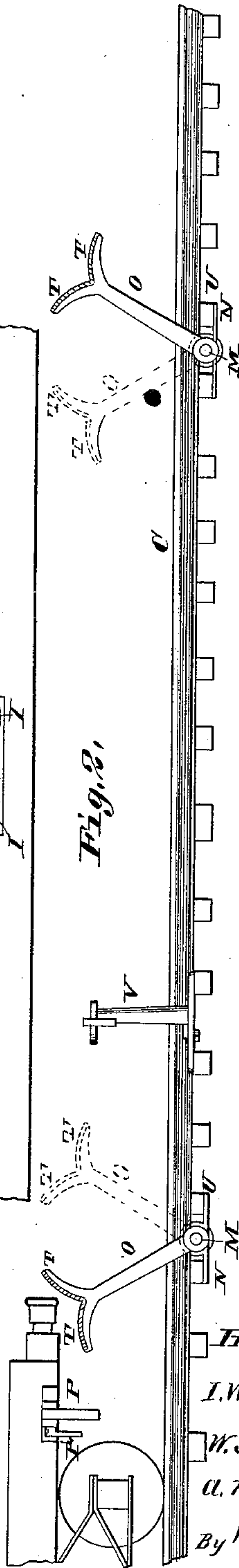
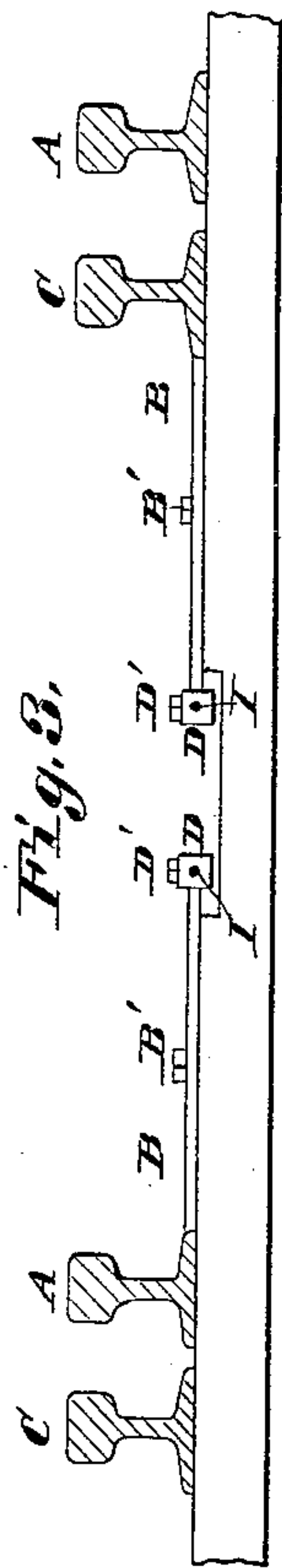
AUTOMATIC RAILWAY SWITCH.

No. 336,058.

Patented Feb. 9, 1886.



Attest,
Charles Pickles,
Geo. L. Wheelock.



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UNITED STATES PATENT OFFICE.

IVANHO W. NEWLAND, WILLIAM J. IREDALE, AND ALONZO H. NEWLAND,
OF BOULDER, COLORADO.

AUTOMATIC RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 336,058, dated February 9, 1886.

Application filed June 8, 1885. Serial No. 168,000. (No model.)

To all whom it may concern:

Be it known that we, IVANHO W. NEWLAND, WILLIAM J. IREDALE, and ALONZO H. NEWLAND, all of Boulder, in the county of Boulder, and State of Colorado, have invented a certain new and useful Improvement in Automatic Railway-Switches, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is a top view of our improved switch, showing also the end of a car with the "trip" for working the switch. Fig. 2 is a side view of same with the trip down out of position for striking the switch-levers. Fig. 3 is an enlarged transverse section taken on line 3 3, Fig. 1.

Our invention relates to railway-switches, by means of which an engineer, brakeman, or trainman can operate the same without leaving his engine, car, or train; and the objects of our improvements are, first, to avoid danger to life and limb of railroad employes in switching trains, by avoiding the necessity of their having to leave a train in order to switch it; secondly, to avoid delays and stoppages of trains while switching; thirdly, to avoid smash-ups or damages occasioned by misplaced or open switches, as our switch cannot be operated or left so as to wreck a train; fourth, to insure greater safety to the traveling public, and the least amount of damage to shippers and railroad-owners, by enabling an engineer of a train in running forward or a conductor or brakeman in backing to make a switch, and various other reasons that need not be mentioned.

Our invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Referring to the drawings, A represents the switch, and B switch-locks pivoted at B' to an iron bearing or support.

C represents the main rails.

D are iron arms or levers pivoted at D' at or near the inner ends of the levers, and to these arms are attached ropes or chains I by means of

an adjustable swivel, J. These ropes or chains—or rods may be used—pass around sprocket wheels or pulleys L on rock-shafts M, journaled in boxes N, secured to suitable supports. On the outer ends of the shafts are secured levers O, bifurcated or forked at top, as shown, and being of the proper height for a trip, P, on the car to come against the faces T of the forks, which are preferably roughened to prevent slipping of the trip thereon.

U represents the switch-stand, and V the target or hand-switch. The trip can be thrown into the position shown in Fig. 1, to operate the switch, or into the position shown in Fig. 2, to miss the levers and not operate the switch, by any suitable means. We have shown it provided with a handle, P', for that purpose.

When the levers are moved by the trip coming against one of their arms, as stated, they turn their shafts, which move the rope, rod, or chain, and operate the locks, forcing the switch in either direction, according to which lever is struck by the trip. A moving train can thus throw the switches for itself or for a coming train, or for both itself and another train, or can pass by throwing the trip down without operating the switch at all.

The roughened surface of the forks of the lever may be made of rubber to form bumpers.

We claim as our invention—

1. The combination, with the switch-rails, of a pair of alternately-engaging switch-locks, a rope or chain connected to each of said locks, and a pair of rock-shafts with which said ropes or chains engage, whereby the parts connected to the respective locks are moved in opposite directions, as set forth.

2. The combination, with the alternately-engaging switch-locks B B, of an endless rope or chain, I, to which said locks are connected, as shown and described, a rock-shaft with which said endless rope or chain engages, and a lever for rocking said shaft.

3. The combination of the switch, locks, rock-shafts, connection between the locks and shafts, bifurcated levers, trip, and rubber bumpers on the arms of the levers, substantially as set forth.

4. The combination of the switch, locks, rock-shafts, sprocket wheels or pulleys on the shafts, connection between the pulleys and the locks, levers on the shafts, and trip, substantially as
5 set forth.

5. The combination of the switch, locks, pivoted arms connected to the locks, ropes or chains connected to the arms, rock-shafts provided with pulleys, around which said ropes

or chains pass, levers on the shafts, and trip, substantially as set forth.

IVANHO W. NEWLAND.

WILLIAM J. IREDALE.

ALONZO H. NEWLAND.

In presence of—

GEO. STIDGER,

GEORGE ROGERS.