C. C. SHELBY.

Switches.

No. 157,876. Patented Dec. 15, 1874.

Fig. 1.

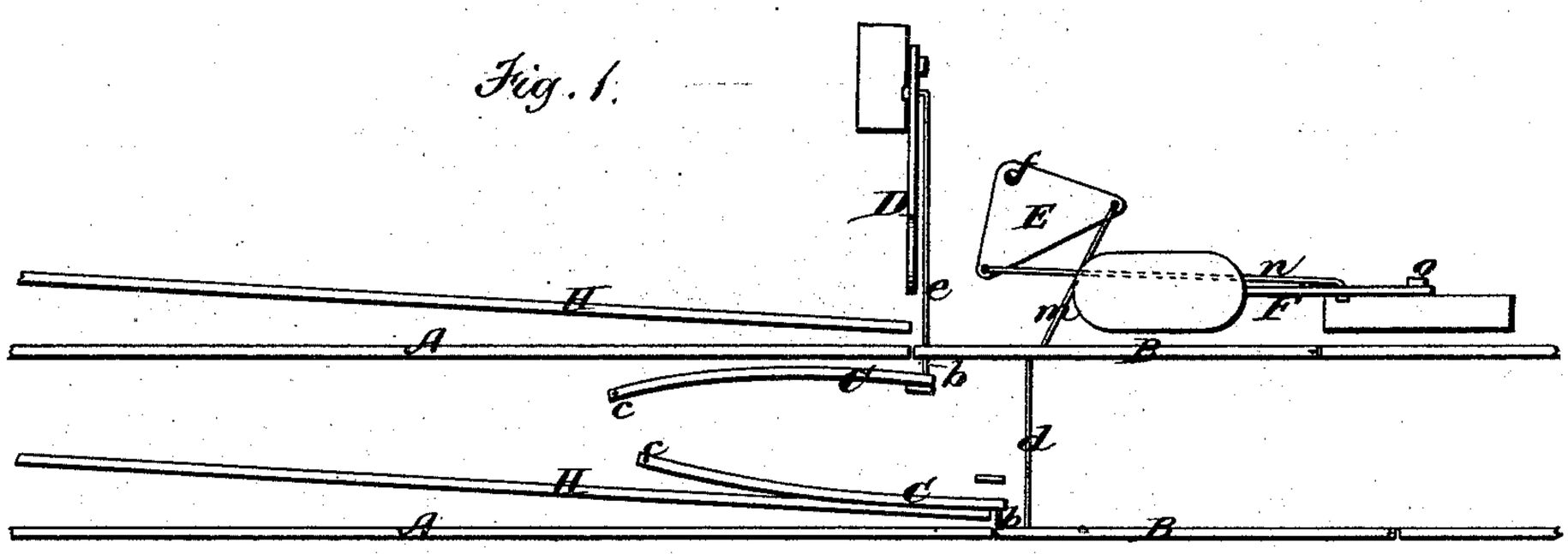
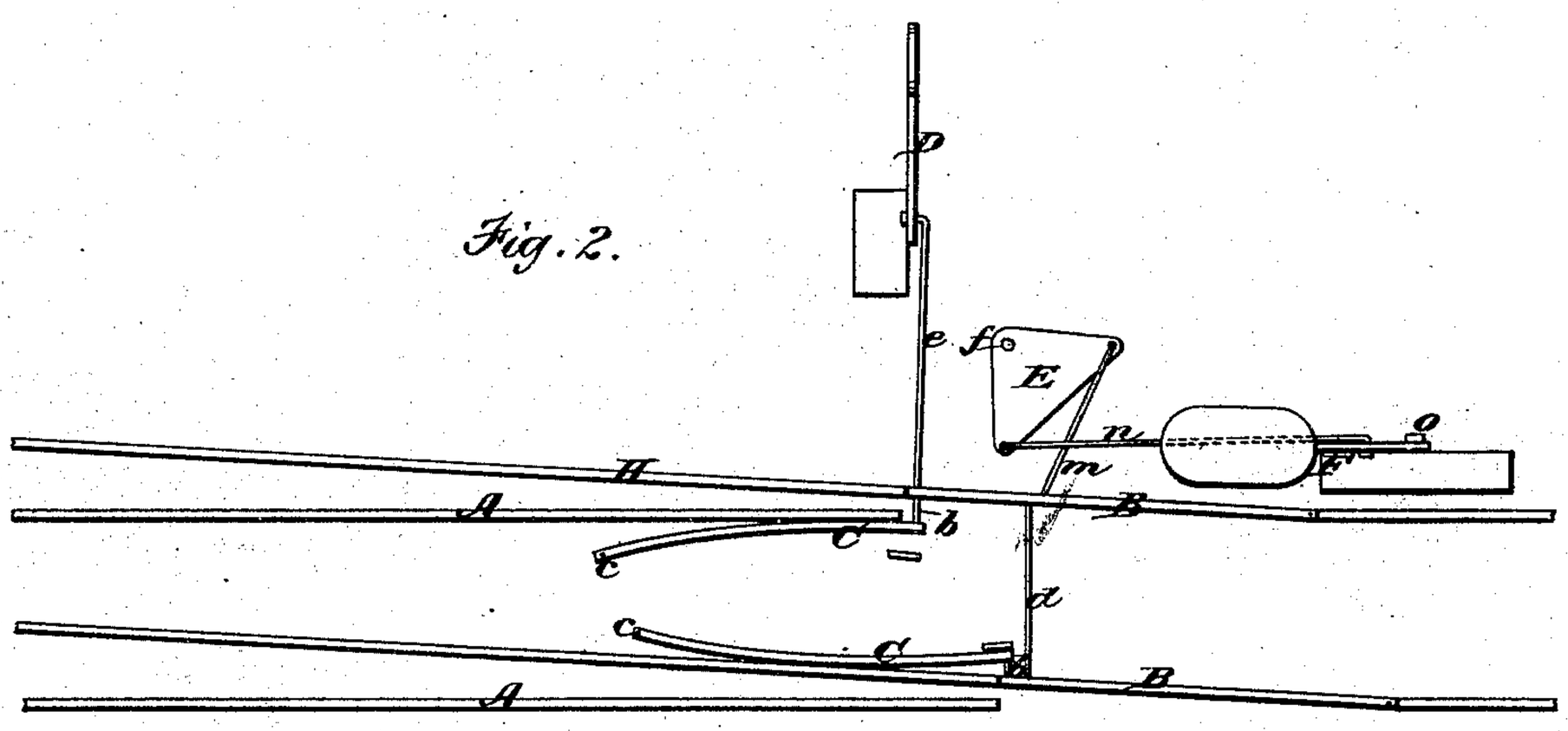


Fig. 2.



Witnesses.
C. F. Brown.
M. Church

Inventor
C. C. Shelby.
by his Attys.
Hill Ellsworth

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

CHRISTOPHER C. SHELBY, OF SPRING VALLEY, NEW YORK.

IMPROVEMENT IN SWITCHES.

Specification forming part of Letters Patent No. **157,876**, dated December 15, 1874; application filed September 21, 1874.

CASE A.

To all whom it may concern:

Be it known that I, CHRISTOPHER C. SHELBY, of Spring Valley, of the county of Rockland and State of New York, have invented certain new and useful Improvements in Automatic Switches; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top view of my improved automatic switch, with the main track open; and Fig. 2 is a similar view, showing the siding open.

Similar letters of reference in the accompanying drawings denote the same parts.

My invention relates to improvements in automatic switches; and consists in the employment of two switch-rails, pivoted at their junction with the main rails, in combination with two short swinging rails connected therewith, one of which is made to slide to and from the inner side rail, and the other to and from the inside main rail, as is hereinafter more fully set forth, by means of which a train moving on the siding in one direction switches itself on the main track, and, on its return, forms a connection with it.

In the accompanying drawings, A A are the rails of the main track. B B are the switch-rails, pivoted at one end where they join the main track, their free ends being connected by rods or bolts *b b* with the free ends of the short rails C C, pivoted at *c c*. *d* is a rod connecting the switch-rails, and *e* is a rod connecting the movable switch with a lever, D, by means of which the switch and short rails C C may be operated when desired. E is a bell-crank lever, having its fulcrum at *f*, to one of the arms of which is attached a rod, *m*, the opposite end of which is attached to one of the movable switch-rails B, the other arm of the bell-crank lever E being connected by a rod, *n*, with a lever, F, fulcrumed at *o*. H H are the side rails. The upper end of the lever F is preferably broadened and painted red to serve as a signal to the engineer of the state of the switch before the passage of his train over it.

The operation of my automatic switch is as follows: Suppose the main track is closed for the passage of trains, which can readily pass without interfering with the short swinging rails, and that a train is on the side track H H; as the train moves forward, the wheels strike one of the short rails C, moving it sidewise, and carrying both switch-rails laterally to connect with the main track. Should another train, in this arrangement of the rails, pass over the main track in the same direction, the wheels would operate on the short rail in contact at its free end with one of the rails of the main track and move the switch-rails to connect with the main track. When a train is passing in the opposite direction, and the switch is connected with the siding, and the lever F, with its broad painted face, is elevated to indicate to the engineer the state of the switch, and it is desired to move on the main track, a lever attached to the cow-catcher or other front part of the engine, which may be moved out and in by the engineer at pleasure, is thrown out so as to bear on the upper surface of the lever F and connect the switch with the main track.

I am aware that short swinging rails have heretofore been employed in connection with the main track, switch, and side rails, and I, therefore, lay no claim to such short swinging or pivoted rails, *per se*.

I claim as my invention—

The switch-rails B B, pivoted at their junction with the main rails, in combination with the short swinging rails C C, side rails H H, and levers D E F and their connecting-rods, by means of which a train in motion on the siding switches itself on the main track when moving in one direction, and forms a connection with the main track on its return, substantially as described.

CHRISTOPHER C. SHELBY.

Witnesses:

M. CHURCH,

M. H. N. KENDIG.