C. C. COATS.

Railroad-Switch.

No. 167,499. Patented Sept. 7, 1875.

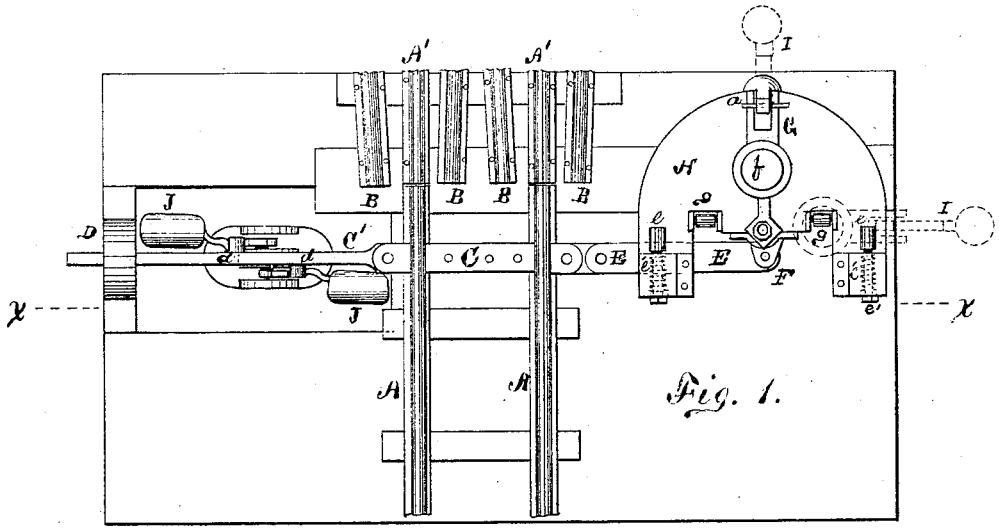

Fig. 1.

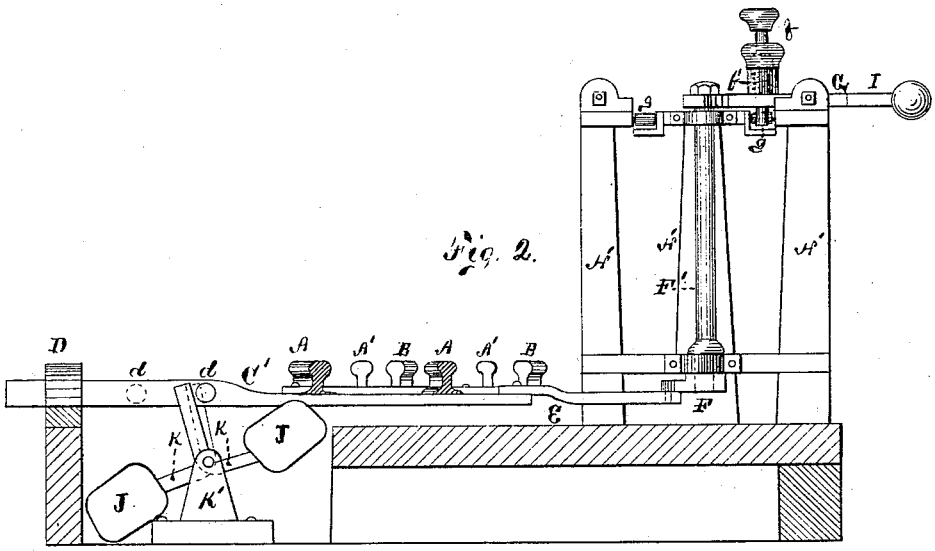

Fig. 2.

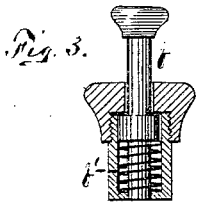

Fig. 3.

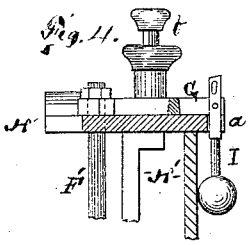

Fig. 4.

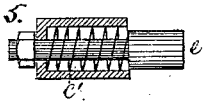

Fig. 5.

Witnesses.

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UNITED STATES PATENT OFFICE.

CHANDLER C. COATS, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN RAILROAD-SWITCHES.

Specification forming part of Letters Patent No. **167,499**, dated September 7, 1875; application filed August 26, 1875.

To all whom it may concern:

Be it known that I, CHANDLER C. COATS, of the city of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Railway-Switches; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The nature and object of this invention is to facilitate the operating of railway-switches, and prevent accidental displacement of the same.

My invention consists in certain devices by means of which the switch tracks or rails, when moved by a switch-tender from the main to a side track, are readjusted to the main track automatically, and retained in such position firmly and immovably until changed by a switchman.

In the accompanying drawing, Figure 1 is a top or plan view of a switch combining and illustrating my invention. Fig. 2 is a sectional view of the same, taken through lines *x x*; and Figs. 3 and 4 are detail views of detached portions of the same.

The rails lettered A in Fig. 1 are the switch-rails shown in their normal position, connecting with the main-track rails A′, and those lettered B are diverging track-rails, all of which are constructed and arranged in the ordinary manner, and constitute no part of my invention, which, as above stated, relates more especially to the means and manner of operating the switch, as will be hereinafter more fully set forth. The rails A are held in their proper positions with relation to each other by means of a strap, C, which is riveted or otherwise secured to the rails A, or to the bar C′, which extends about four feet horizontally from and at right angles with said rails A, and rests upon a suitable support, D, shown in Fig. 2. The opposite end of said rod or bar C′, when it extends across and unites the rails A, though this is not necessary, is pivoted to a rod or bar, E; or the latter may be pivoted to the bar C, and its opposite end connected to a crank, F, and actuated by a vertical shaft, F′, by means of a lever, G, better shown and illustrated in Fig. 2. Said shaft F′ has its bearings in suitable supports H and H′, illustrated in Figs. 1 and 2. An arm, I, is pivoted to the lever G, which, when the rails A are in their normal position—that is, in line with the main-track rails—falls automatically in a groove, *a*, in the table or support H, best shown and illustrated in Fig. 4, and locks and holds said rails A in such position, preventing accidental displacement thereof, as will be obvious. The automatic adjustment of the switch is secured by means of weights J, buffers *e*, and spring *e′*, and their connections, in the following manner, viz: The weights J are each secured to a bent or curved arm, K, pivoted at or near their centers upon a suitable support, K′, said arms engaging with suitable lugs *d* on the bar C′, and operate as will be hereinafter set forth. The lever G, when moved to the right or left to change the switch from the main to a diverging track, as indicated in Figs. 1 and 2, comes in contact with buffers *e* actuated by springs *e′*, which, when the lever is released, acts upon said lever, giving it a sudden start backward, and one of the arms K being in contact with a lug, *d*, on the bar C′, by means of the weight J, which has been raised by the previous changing of the switch, as indicated in Fig. 2, forces the switch back into its normal position connecting with the rails of the main track. Attached to the lever G, as an additional safeguard, is a stop-pin, *f*, actuated by a spring, *f′*, which the switchman, with his hand, presses down behind a friction-roller, *g*, pivoted into a recess in the table H, for the purpose of holding the lever G in position, and when released from pressure said spring *f′* forces the pin *f* out of gear with said roller, thereby releasing the lever G, and the switch, as before stated, immediately resumes its normal position. The weights J, arms K, support K′, &c., should be suitably inclosed and sheltered from the weather, as also the buffers *e* and springs *e′*.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a railway-switch, the combination, with the rails A, of the bar C′, having the lugs *d*,

the weighted arms or levers K pivoted to suitable supports K′, when operating substantially as and for the purposes set forth and shown.

2. The combination, with the rails A, of the rod or bar E, crank F, shaft F′, lever G, buffers *e*, and springs *e′*, when operating substantially as and for the purposes set forth and shown.

3. The combination of the lever G, stop-pin *f* actuated by spring *f′*, and friction-rollers *g*, arranged and operating substantially as and for the purposes set forth and shown.

In testimony that I claim the foregoing as my own invention I affix hereto my signature in presence of two witnesses.

CHANDLER C. COATS.

Witnesses:

OLIVER DRAKE,

J. C. TUNBRIDGE.