2 Sheets—Sheet 1.

J. J. GOLDEN.

RAILROAD SWITCH.

No. 189,855. Patented April 24, 1877.

Fig 1

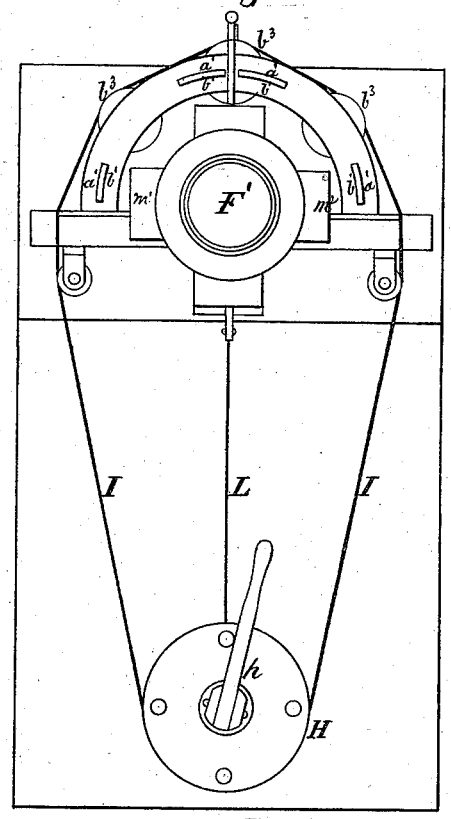


Fig 3

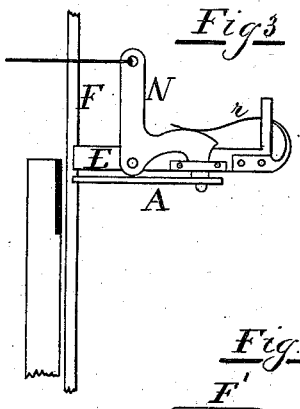
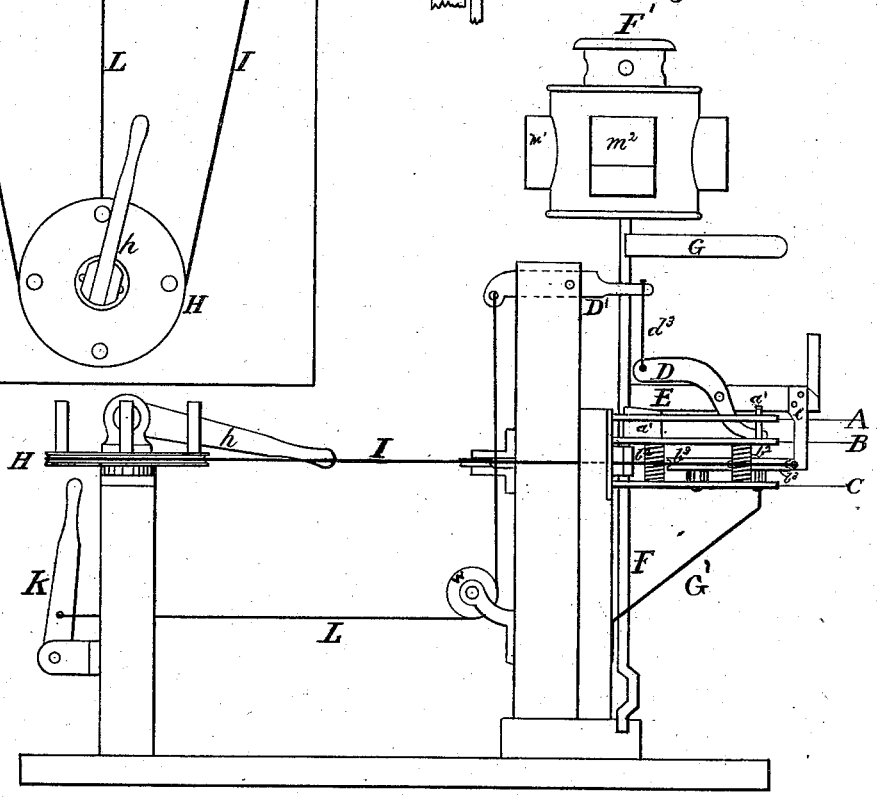


Fig. 2.



Witnesses
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William Gill

Inventor
Justin Joseph Golden

2 Sheets—Sheet 2.

J. J. GOLDEN.

RAILROAD SWITCH.

No. 189,855. Patented April 24, 1877.

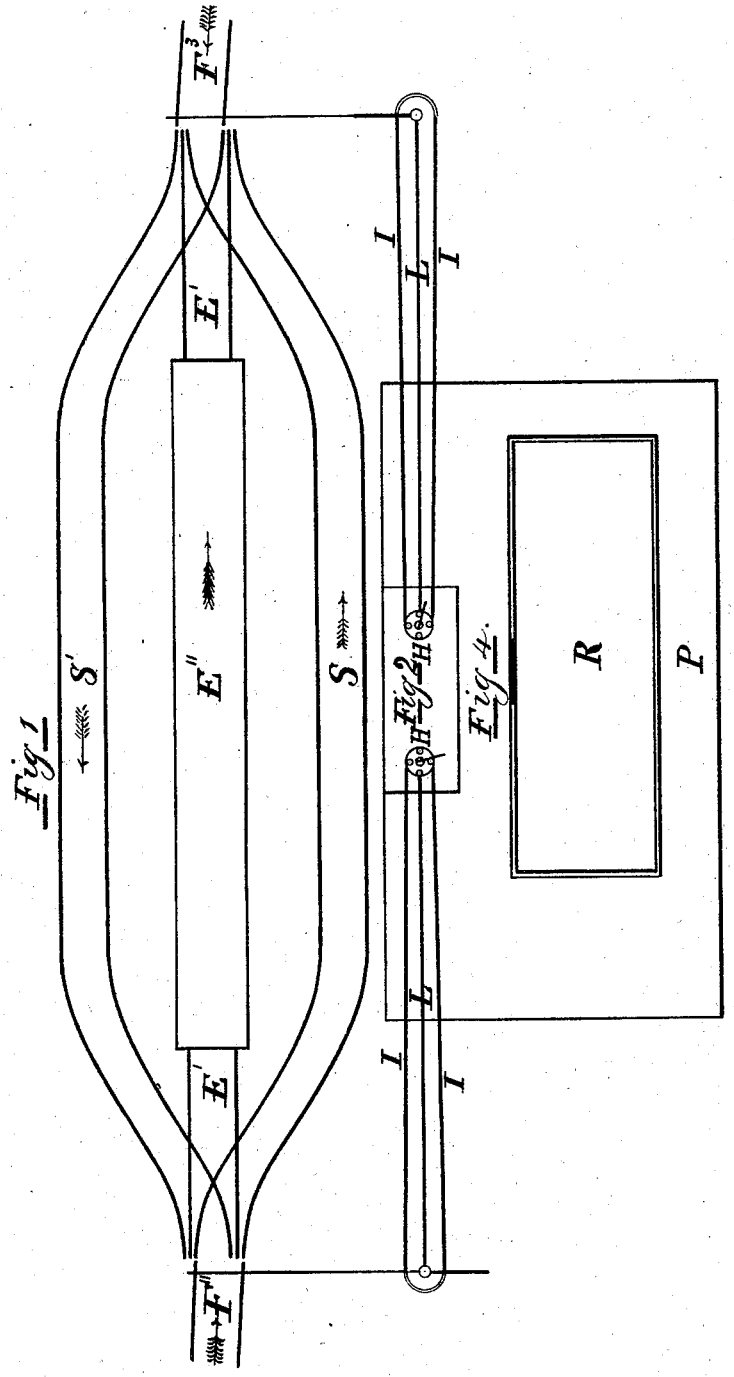

Fig 1

Fig 2

Fig 4.

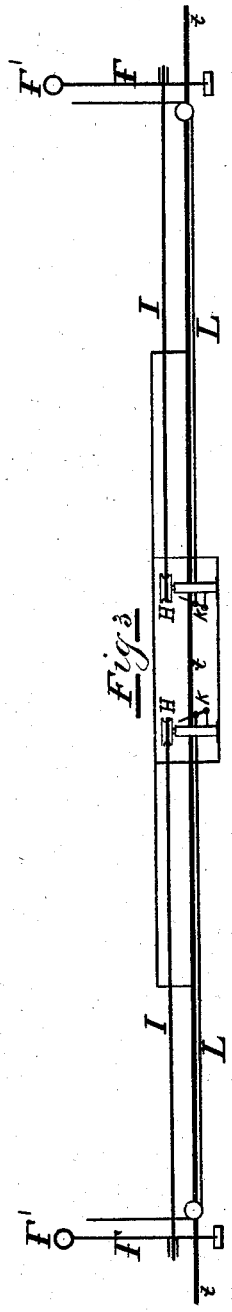

Fig 3

Witnesses
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UNITED STATES PATENT OFFICE.

JUSTIN J. GOLDEN, OF TORONTO, ONTARIO, CANADA.

IMPROVEMENT IN RAILROAD-SWITCHES.

Specification forming part of Letters Patent No. **189,855**, dated April 24, 1877; application filed January 15, 1877.

To all whom it may concern:

Be it known that I, JUSTIN JOSEPH GOLDEN, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in the Manner of Operating Railway-Switches; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to the operating of switches by certain mechanism which will enable the switchman to operate the switches placed at each end of a siding from a central position—about midway between the said switches—which will save time, and thereby shorten the delay of trains at the station, rendering it unnecessary for the switchman to run from one switch at the one end of the siding to the other switch at the opposite end of the siding, when shunting trains.

It consists of (for each switch) an endless-wire cable, passing round and attached to a pulley, placed about midway between the switches, and is the first-motion pulley. The cable also passes over a series of smaller pulleys in connection with switch-gear, and is attached to the arm on the upright cranked axle of the ordinary switch-gear, and placed, as usual, close to the switch.

It consists, also, of three semicircular bars attached to the frame-work of the switch-gear, and placed one above the other, the upper and under ones being secured in a stationary position, while the middle bar is free to move up and down for the purpose of locking and unlocking, in three positions, the switch-arm on the upright axle, already referred to.

In the accompanying drawings the same letters of reference indicate the same parts in all the views, and in this specification.

Figure 1, Sheet 1, is a plan of my invention, in which H represents the first-motion pulley, supposed to be placed about midway between the switches, and which operates one of the same, the other switch being operated by a duplicate of this device, as hereinafter shown and described. *h* is the handle for turning the pulley H; I, the endless-wire cable; A, the upper one of three semicircular bars, hereinbefore alluded to. The middle bar is marked B, on which are fastened the stops a' which slide up and down in the slots b^1 in bar A; C, the lower bar on which are secured the pulleys b^3 and the springs b^2; F, the upright cranked axle; G, the signal-board; F′, the signal-lamp; m^1, circular red light; m^2, compound light; G′, the brace under bar *c* for supporting the same; E, the ordinary switch-arm by which the switch is operated; D and D′, levers for pressing down the circular bar B, with stops a', releasing the same from the arm E, and is operated by the handle K and wire cable L; *e*, a bracket on arm E, to which the cable I is attached for operating arm E. Fig. 2 is a side view, showing more plainly some of the parts specified in Fig. 1, viz: the pulleys b^3 on lower bar C, the springs b^2, also attached thereto, the signal-board G, angular brace G′, levers D D′, and link d^3, cranked axle F, and handle *k*, and pulley *w*.

Fig. 1, Sheet 2, is a plan, to a reduced scale, of a portion of a railway, of which E″ represents an express-train standing on the main track E E; S, a right-hand siding, and S′ a left-hand siding; F″, a freight-train being shunted onto the right-hand siding S, and F^3 another freight train being shunted onto the left-hand siding S′. Fig. 2 is a plan, showing a duplicate of my device, one of which has, by means of pulley H and handle K, moved the switch for train F^3 to pass onto the siding S′, and the other has, by its pulley H and handle K, moved the switch at train F″, allowing the same to pass onto the siding S. The switch by which the train F^3 was shunted onto the siding S′ has now to be adjusted for the main track, to allow the express-train E″ to proceed on its journey, which, when through the switch the same will be adjusted to allow the train F″ to pass onto the main track, and, also to proceed on its journey. The switch which admitted the train F″ onto the siding S will then be adjusted to allow the train F^3 to pass out of siding S′, which, when out, both switches will be readjusted for the main track, and left in this position until other trains come up requiring the same adjustments, and this from time to time, as required. Fig. 3 is a side view of the invention as shown in working order in Fig. 2, and showing platform P, main track *t t t*, pulleys H H, handles K K,

cables I I and L L, upright axles F F, and lamps F′ F′. Fig. 4 is a plan, showing platform P and station R.

Returning to Sheet 1, Fig. 3 shows a modification of the manner of locking and unlocking the arm E, which consists of a pawl, N, with spring *r*, which pawl falls into one of three holes, alternately, in bar A, and is a substitute for bar B with stops *a′* and springs b^2, as shown in Fig. 2.

Having thus described my invention, I claim—

1. The combination of the pulley H with handle *h*, endless cable I, semicircular bars A B C, pulleys b^3, springs b^2, stops *a′*, slots b^1, bracket *e* on arm E, attached to cable I, as shown and described, and for the purposes set forth.

2. The combination, with the pulley H with handle *h*, endless cable I, semicircular bars A B C, pulleys b^3, springs b^2, stops *a′*, slots b^1, bracket *e* on arm E attached to cable I, of the handle K, cable L, pulley *w*, for locking and unlocking the arm E by means of the levers D D^1, link d^3, and semicircular bar B, with springs b^2, and stops *a′*, as specified and described, and for the purposes set forth.

JUSTIN JOSEPH GOLDEN.

Witnesses:
JOHN JAMES EGAN,
WILLIAM GILL.