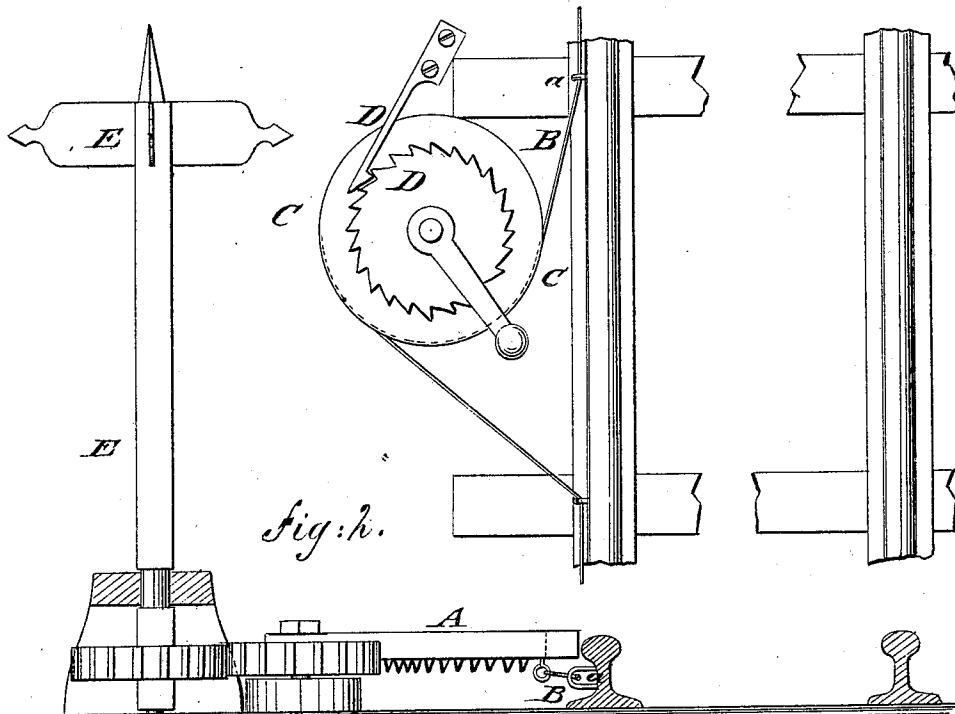
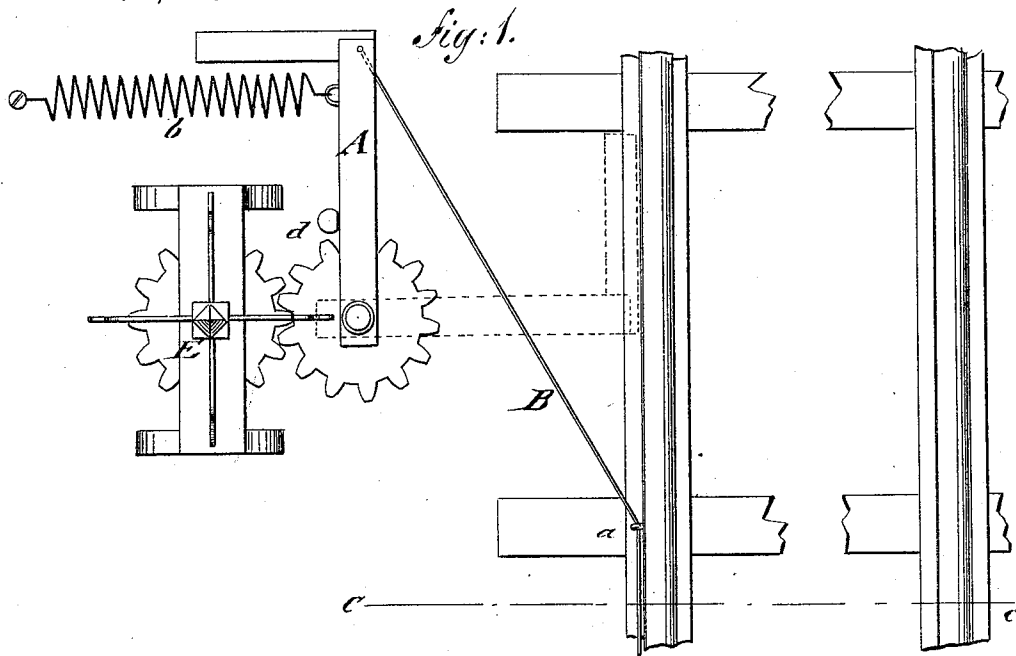


J. E. McCARTY.
RAILWAY SIGNAL.

No. 179,935.

Patented July 18, 1876.



WITNESSES:

Chas. M. ...
John ...

INVENTOR:

J. E. McCarty
BY *Munroe*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JAMES E. McCARTY, OF COLD SPRING, NEW YORK.

IMPROVEMENT IN RAILWAY-SIGNALS.

Specification forming part of Letters Patent No. **179,935**, dated July 18, 1876; application filed June 20, 1876.

To all whom it may concern:

Be it known that I, JAMES E. McCARTY, of Cold Spring, in the county of Putnam and State of New York, have invented a new and Improved Signal Device for Railroad-Tracks, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a top view of my improved signal device for railroad-tracks, and Fig. 2 a side elevation of the same, partly in section, on line *c c*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The invention has for its object to provide an improved signaling device for railroad-tracks, by which the track-tender or the automatic action of the train can readily set a torpedo-signal to warn the trains in either direction of the danger ahead, and make them proceed cautiously, or stop until the cause of danger is ascertained and removed.

The invention consists of a torpedo setting and signaling device that is operated by wire connection with suitable ratchet-and-pawl devices at some distance from the danger-signal, or at intermediate points, or by suitable mechanism worked by the train itself.

In the drawing, A represents a lever-arm that is pivoted at one end in suitable manner and applied at the other end to an operating wire, B, that runs in suitable guide-staples *a* of the rails or ties to any suitable distance along the track, and, finally, wound on a drum or cylinder, C, that is turned by a crank, and provided with a ratchet-wheel and pawl, D.

When the drum C is turned the lever-arm A is brought from a position parallel to the track to one at right angles thereto, as shown in dotted lines in Fig. 1, and thereby a torpedo that is attached to an extension of lever-arm A brought on the top of the railroad-rail.

The lever-arm A is acted upon by a strong spiral or other spring, *b*, that tends to pull

the arm against a stop-pin, *d*, carrying the lever-arm back into its original position as soon as the pawl D is released from the ratchet of the drum C.

In the winter season the lever-arm A is provided with suitable scraping-knives that clear the top of the rail of snow, and secure thereby the explosion of the torpedo. The pivot of the lever-arm A works also by means of suitable gear-wheels a post, E, with signal-arm that is set to danger jointly with the torpedo when the device is operated by the track-tender.

The gear-wheels, lever-arm, and spring may be suitably incased to be protected against the weather.

When the signaling device is applied to a single track the drum, ratchet, and pawl may be employed to set the device in both directions, which may be placed at the distance of half a mile, one mile, or more, along the track, as shown in Fig. 1, so as to give the signal of danger to a train coming in either direction.

On a double-track line a separate drum, ratchet, and pawl device has to be arranged for each track to work the signaling device in either direction.

For the purpose of setting the device from points intermediately between the track, suitable boxes with small ratchet-and-pawl devices may be arranged by which the track-tender, as well as the engineer and conductor of a train, may be enabled, by the use of a key, to set the signal to danger without being obliged to go to the point where the operating-drum is located.

Suitable mechanism may also be arranged in connection with the track by which the lever-arm may be set and released in automatic manner by action of the locomotive and train to give warning to the train following, either of being too close to the train ahead, or of any danger or accident that may have occurred.

When the track is clear the lever-arm is released by withdrawing the pawl from the operating ratchet-wheels.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination of a swinging and spring lever-arm carrying a torpedo or other detonating device, and of a common signaling-post, worked in connection therewith, with a wire running along the track, and suitable operat-

ing mechanism, at some distance from the same, that sets or releases the signals as required, substantially as and for the purpose described.

JAMES E. McCARTY.

Witnesses:

WM. K. LAWSON,
S. B. NELSON.