D. H. WHILLDIN.

SIGNAL-BOXES FOR DISTRICT AND FIRE TELEGRAPHS.

No. 184,566. Patented Nov. 21, 1876.

Fig. 2.

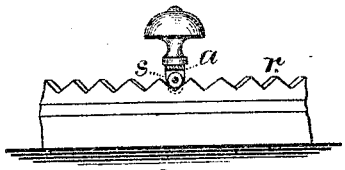
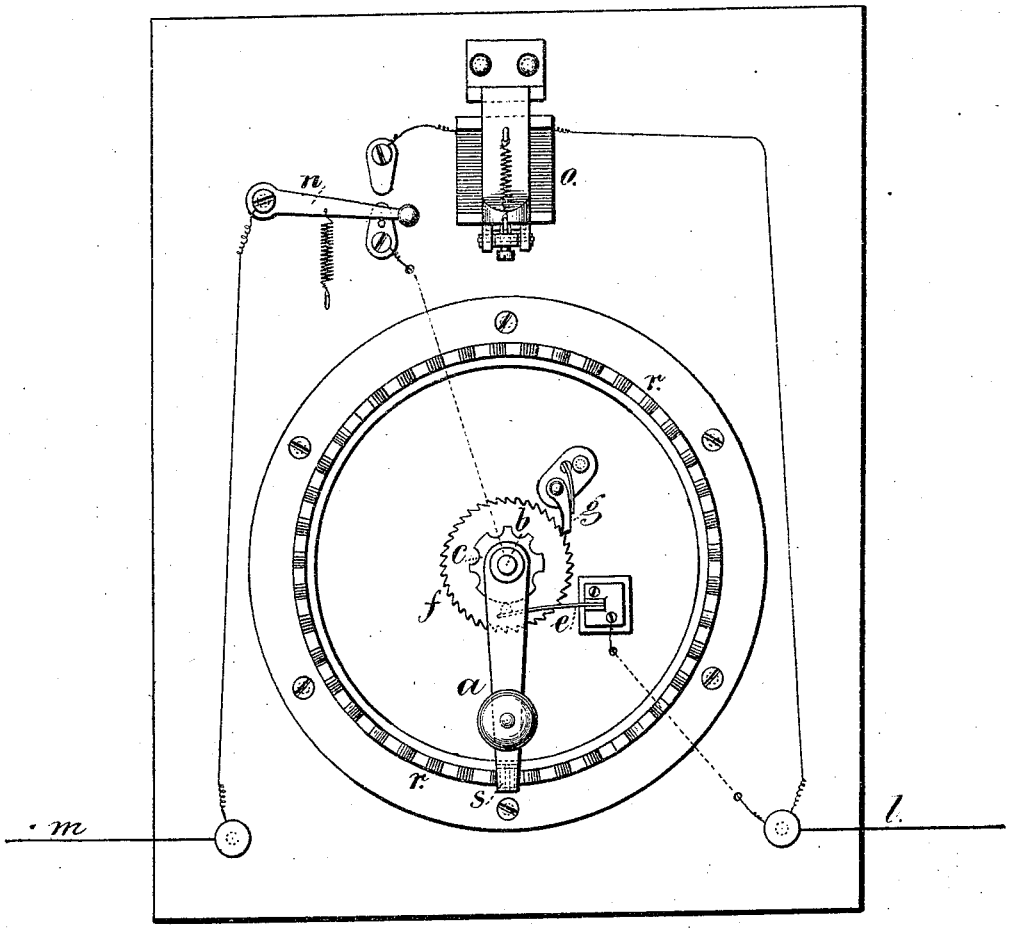


Fig. 1.



Witnesses,

Chas. H. Smith

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per Lemuel W. Serrell

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UNITED STATES PATENT OFFICE.

DANIEL H. WHILLDIN, OF BROOKLYN, NEW YORK, ASSIGNOR TO HIMSELF AND ALEXANDER MORTEN, OF NEW YORK CITY.

IMPROVEMENT IN SIGNAL-BOXES FOR DISTRICT AND FIRE TELEGRAPHS.

Specification forming part of Letters Patent No. **184,566**, dated November 21, 1876; application filed May 13, 1876.

To all whom it may concern:

Be it known that I, DANIEL H. WHILLDIN, of Brooklyn, in the county of Kings and State of New York, have invented an Improvement in District and Fire-Alarm Telegraphs, of which the following is a specification:

District and fire-alarm telegraphs have been provided with signal-boxes containing various devices to operate the circuit-closers, so that the movement of the break-wheel may not be too rapid. These devices are generally automatic, because if they were moved only by hand the operator would be likely to operate the signal with too much rapidity, especially when using the same as a fire-alarm.

My invention relates to a means for regulating the speed of movement of the break-wheel, so that it cannot be turned too rapidly. I also combine with the transmitting mechanism a signal electro-magnet, that serves to indicate whether the line is in use by any other party, and also to allow the sender to receive a signal indicating that the message has been received at the central station.

In the drawing, Figure 1 is an elevation of the instrument and circuit-connections, and Fig. 2 is a view of the edge of the governor-ring.

The handle *a* is upon a shaft, *b*, that carries the break-wheel *c*, having the required notches to open and close the circuit and give the signal at the central station, the said break-wheel *c* and circuit-closing spring *e* acting together, in the usual manner. A ratchet-wheel, *f*, and pawl *g* are provided to prevent the break-wheel being turned the wrong way.

The break-wheel *c*, spring *e*, ratchet-wheel *f*, and pawl *g* may be within a case, and the handle *a* outside the case; but in the drawing the front plate of the case is not shown. The revolution of the break-wheel opens and closes the circuit to the central station, the wire *l m* either being part of a continuous line, or of a branch to the earth.

When in a continuous circuit the switch *n* can be used to close the branch circuit and bring the electro-magnet *o* into the main circuit, to indicate, by the movement of its armature, whether the line is in use by any other person. This switch or key returns automatically by a spring to the normal position, so as to close the circuit through the break-wheel *c*.

In order to prevent the handle *a* being moved too rapidly, I make use of a governor, consisting of a circular notched flange, *r*, the notches of which have inclined or beveled surfaces, so that the tooth *s* at the end of the spring-arm *a* may slide over the same as the arm is revolved, and check the too rapid movement of said arm, but not interfere with the operator turning the same at a suitable speed for the signals to be given by the break-wheel, as aforesaid.

The circuit-breaker may consist of conducting and non-conducting surfaces around the notched governor, and a spring on the handle.

I claim as my invention—

1. The combination, with the break-wheel, circuit-closing spring, and circuits, of the handle *a*, circular notched governor *r*, and yielding tooth *s*, substantially as and for the purposes set forth.

2. The combination, with the break-wheel, circuit-closing spring, handle *a*, and circuits, of the self-acting spring switch or key and electro-magnet in the branch circuit, substantially as and for the purposes set forth.

Signed by me this 10th day of May, A. D. 1876.

DANIEL H. WHILLDIN.

Witnesses:

GEO. T. PINCKNEY,

CHAS. H. SMITH.