

H. E. WALTER.
Electric Burglar-Alarm.

No. 159,369.

Patented Feb. 2, 1875.

Fig. 1

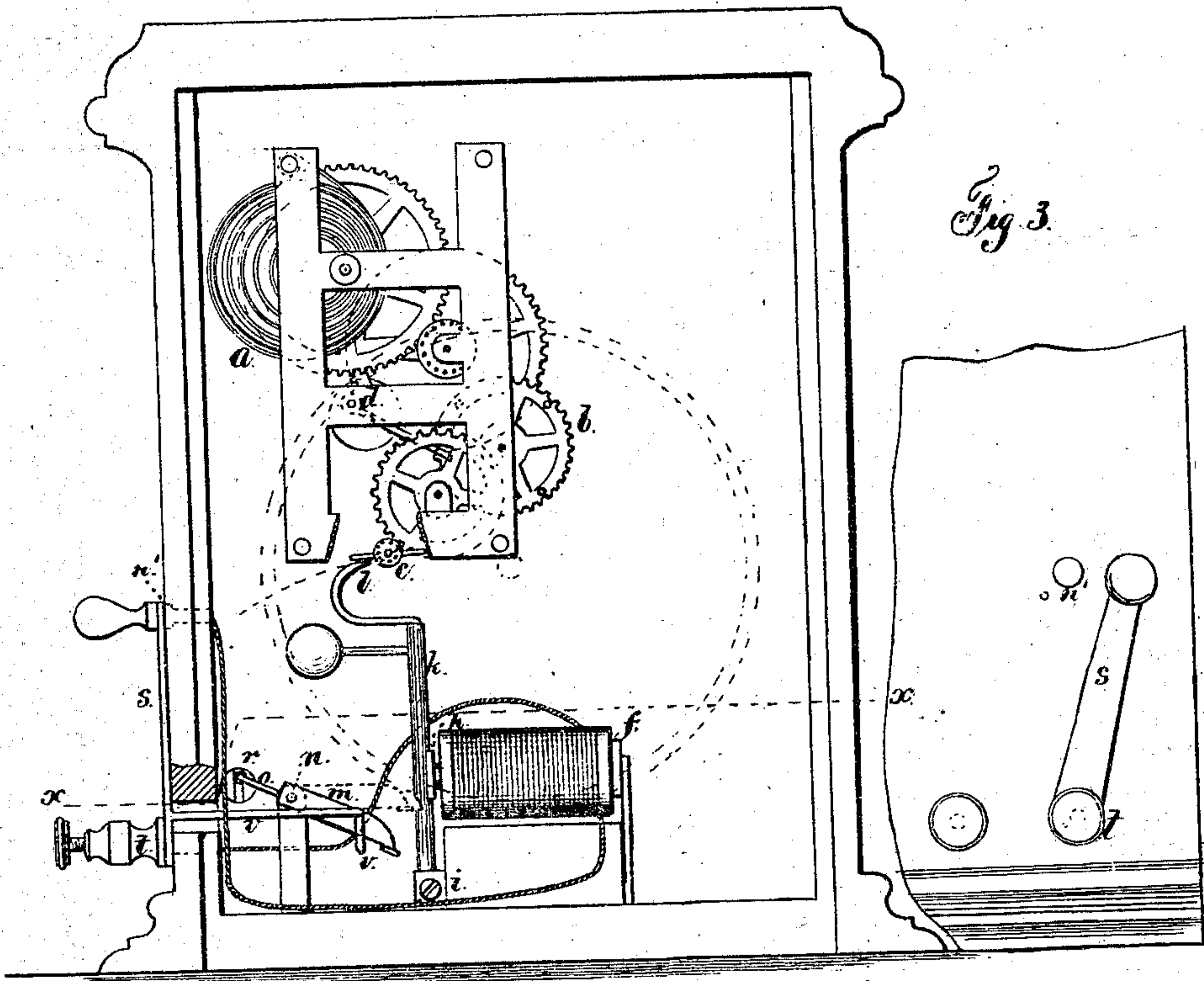


Fig. 3

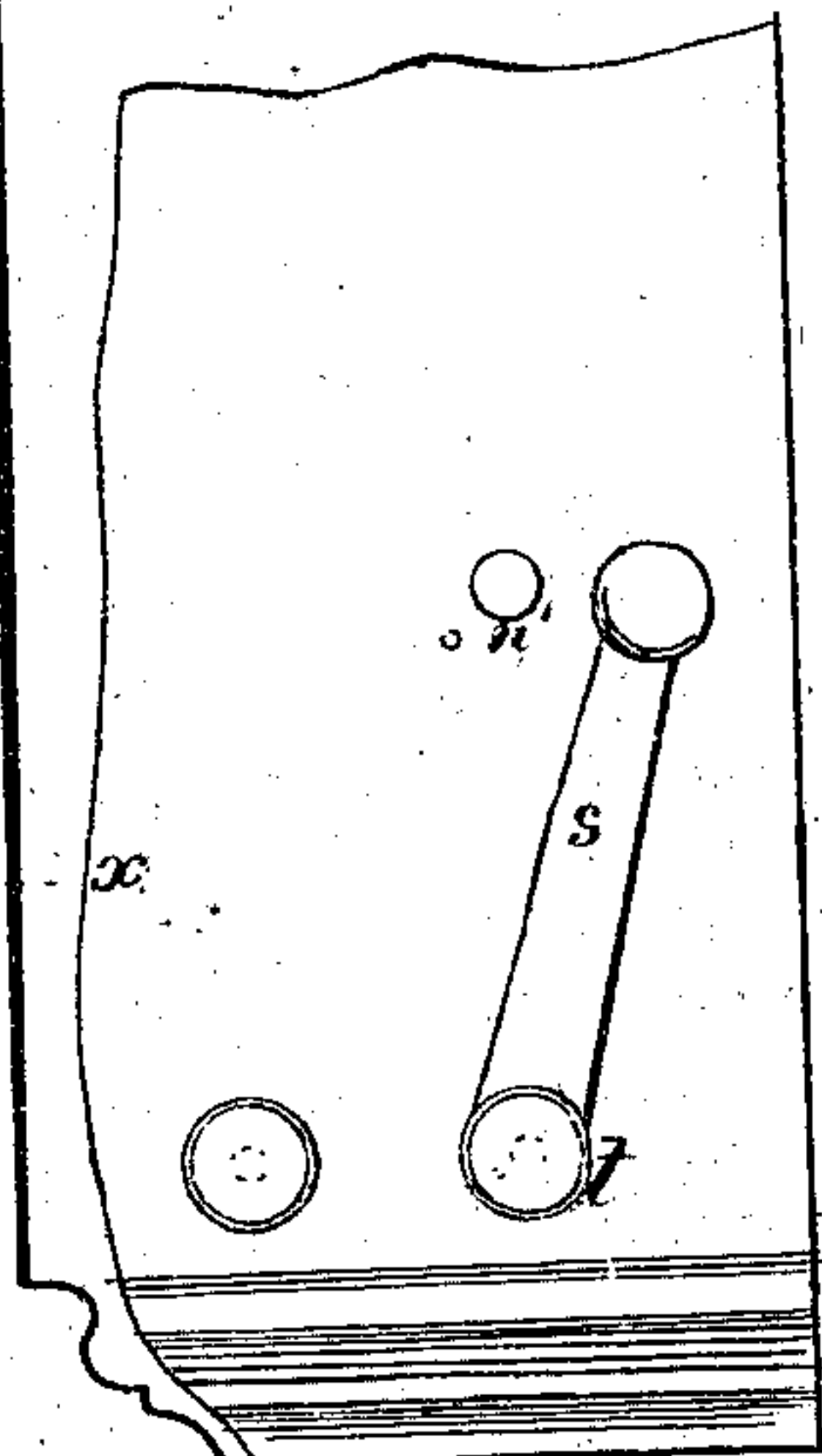
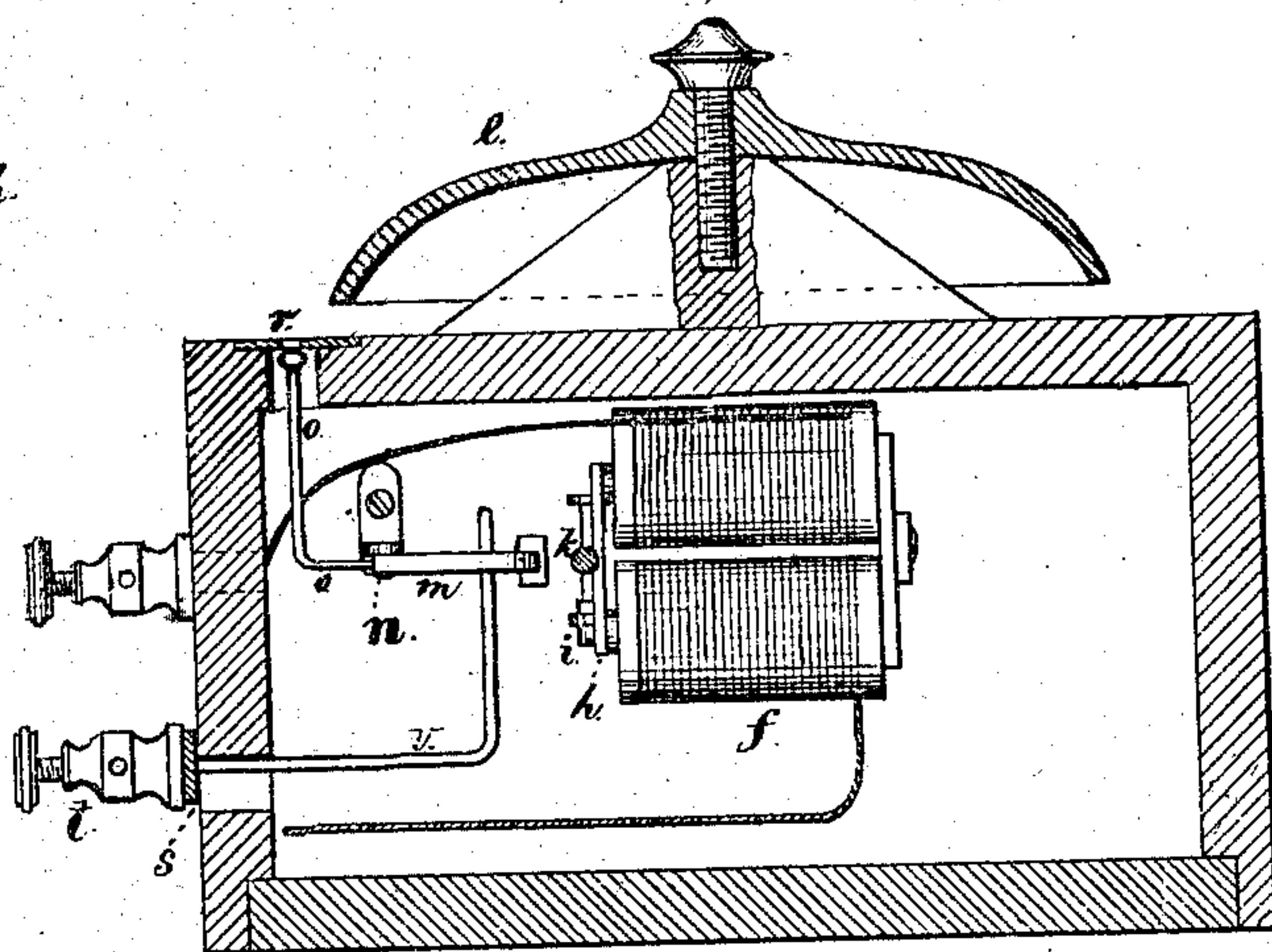


Fig. 2



Witnesses.

Chas H Smith
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UNITED STATES PATENT OFFICE.

HORACE E. WALTER, OF RICHFIELD SPRINGS, NEW YORK.

IMPROVEMENT IN ELECTRIC BURGLAR-ALARMS.

Specification forming part of Letters Patent No. **159,369**, dated February 2, 1875; application filed July 7, 1874.

To all whom it may concern:

Be it known that I, HORACE E. WALTER, of Richfield Springs, in the county of Otsego and State of New York, have invented an Improvement in Electric Burglar-Alarms, of which the following is a specification:

This alarm is made with a clock movement that is stopped by the armature lever of an electro-magnet, and when the circuit is broken by the opening of a door or window the armature falls back, liberating the clock-work so that it rings a bell.

A mechanism operated by a hand-lever prevents the armature falling back during the day-time, when the windows and doors are being opened and shut, and there is an indicator that is visible from outside the case, to show whether or not the instrument is in proper working condition.

In the drawing, Figure 1 is a rear view of the instrument with the back of the case removed. Fig. 2 is a sectional plan of the apparatus at the line *x x*; and Fig. 3 is an elevation of the lever-switch and circuit-closer.

The clock-work is provided with a main-spring, *a*, train of gearing, striking-wheel *b*, and a fly, *c*, of the usual character. The hammer swings upon the arbor *d*, and one arm thereof is operated upon by the pins upon the striking-wheel *b*. The other arm passes through the case and acts upon the bell *e*.

The electro-magnet *f* is provided with an armature, *h*, and weighted lever-arm *k* swinging upon the fulcrum *i*, and when the circuit through the electro-magnet *f* is closed, and the armature attracted, the finger *l*, at the end of the lever *k*, is contiguous to the fly *c*, and arrests its movement, but when the electro-magnet is demagnetized in consequence of the circuit being broken, the armature *h* and lever *k* fall back and liberate the fly *c*, and allow the clock-work to run and ring the bell.

The blocking-piece *m* on the fulcrum *n* has an arm, *o*, extending to an opening, *r*, in the front of the case, so that the same forms a tell-tale to indicate whether the blocking-piece *m* is up against the back of the armature-lever, or whether such blocking-piece has fallen away from behind that lever.

The switch-lever *s* moves upon the binding-screw *t*, and closes the circuit to the electro-magnet when moved into contact with the button *u*, which is to be done when the instrument is set for use.

The arm *v*, extending from the switch *s*, passes beneath the blocking-piece *m*, and when the circuit is broken this arm *v* lifts the blocking-piece up behind the armature-lever *k*, and prevents said lever falling back. This is done in the morning when the instrument is thrown out of action.

The moving end of the blocking-piece is caught on a small offset, or in a notch upon the armature-lever, so that it is held up and prevents the armature falling back when the switch *s* is changed at night, to set the instrument.

If the circuits are all closed then the electro-magnet draws and holds the armature, allowing the blocking-piece *m* to drop, but if the circuit is not complete, any window or door being open, the armature will not be attracted, and hence the blocking-piece will not fall, and the tell-tale end thereof being visible through the opening in the case, will indicate whether or not the line is in order, as soon as the switch *s* is moved.

By these simple devices the attendant is enabled to throw the instrument into or out of action, and know whether or not the electric circuit is complete.

This mechanism may be employed with the alarm patented to me May 13, 1873, wherein the clock movement is made to operate the connecting and disconnecting devices periodically.

I claim as my invention—

The blocking-piece *m* and the tell-tale *o*, in combination with the armature-lever *k*, electro-magnet *f*, switch *s*, and clock-work alarm, substantially as and for the purposes set forth.

Signed by me this 29th day of June, A. D. 1874.

HORACE E. WALTER.

Witnesses:

GEO. T. PINCKNEY,
CHAS. H. SMITH.