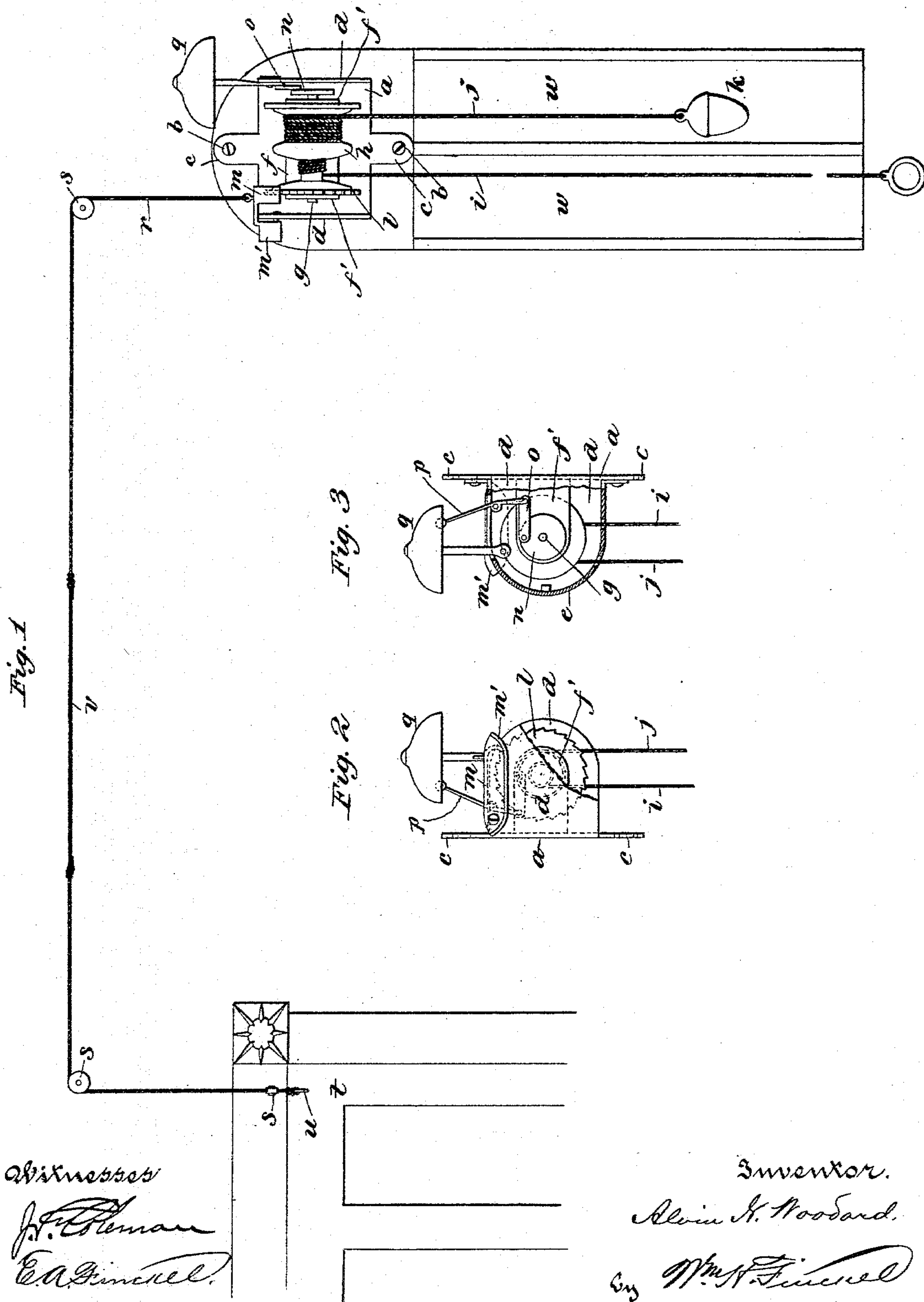


(No Model.)

A. N. WOODARD.
BURGLAR ALARM.

No. 515,851.

Patented Mar. 6, 1894.



UNITED STATES PATENT OFFICE.

ALVIN N. WOODARD, OF MANSFIELD, OHIO, ASSIGNOR OF ONE-FOURTH TO
LEWIS REED, OF SAME PLACE.

BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 515,851, dated March 6, 1894.

Application filed May 5, 1893. Serial No. 473,132. (No model.)

To all whom it may concern:

Be it known that I, ALVIN N. WOODARD, a citizen of the United States, residing at Mansfield, in the county of Richland and State of Ohio, have invented a certain new and useful Improvement in Burglar-Alarms, of which the following is a full, clear, and exact description.

The object of this invention is to provide a cheap but reliable burglar alarm, more especially for use in country places, but which, of course, is not limited in its application to any locality.

In the preferred form of my invention, I employ a double-barreled spool provided with a cord wound about one of its barrels, so that by pulling upon said cord the spool will be rotated in one direction, and having a weight suspended by a cord which is wound about the other barrel in the reverse direction so that the unwinding of one cord will wind the other. This double-barreled spool is combined with a pawl-and-ratchet let-off mechanism adapted to be actuated or released by the opening of a door or window, and is also combined with a bell or equivalent alarm mechanism, all as I will proceed now more particularly to set forth and finally claim.

In the accompanying drawings illustrating my invention, in the several figures of which like parts are similarly designated, Figure 1 is an elevation of a complete apparatus, saying that the cover of the casing is removed. Fig. 2 is a side elevation, with part of the casing broken away; and Fig. 3 is a side elevation looking at the side opposite to that in Fig. 2, also with part of the casing broken away.

The casing consists of a back-plate *a*, by which the apparatus may be mounted in suitable position, as by means of screws *b* passed through holes in ears *c* of said back-plate; side-pieces *d* projecting from said back-plate at substantially right angles, and a face-plate or cover *e*, the latter being removed in Figs. 1 and 2, and being shown in section in Fig. 3. Secured to the back-plate *a* is a rectangular bracket *f*, the sides *f'* of which form bearings for the shaft *g* of the double-barreled spool *h*. This spool may be made of wood or other material. The cord *i* is wound in one direction

upon one of the barrels of this spool, and a cord *j* is wound in the other direction upon the other of said barrels, and said cord *j* is provided with a weight *k*. One end of the spool is provided with a ratchet *l*, and this ratchet is engaged by a pawl *m*, pivoted to one of the side-pieces *d* of the casing. At its other end the spool is provided with an eccentric or crank *n*, which is connected by a link *o* with the bell-hammer lever *p* of the bell *q*, so that the rotation of the spool in either direction will serve to actuate the bell-hammer lever to sound the bell. The pawl *m* may be operated in a variety of ways, and I have shown two such ways. In Fig. 1, the cord *r* leads over pulleys *s* to a door *t*, to which it is fastened, as, for example, by a screw-eye *u*. If the cord *r* be stretched between the pawl *m* and the door, at its full length, then obviously the opening of the door will pull upon the cord and hence raise the pawl out of its engagement with the ratchet *l*, and thus the weight *k* will be free to act to rotate the spool, and so sound the alarm. Now, in order to keep the cord *r* taut, and, at the same time, take up any slack, there may be interposed in it at any suitable place or places one or more pieces *v* of elastic or elastic cord, or coiled spring, or other resilient medium. The pawl may be a gravity pawl and returned by gravity into engagement with the ratchet.

The form of the apparatus so far described relates to the employment of the alarm apparatus itself at one point, while the connection with the door or other opening is at a distant point, as, for example, the alarm mechanism may be in a bed chamber while the door may be a front or rear door of a dwelling some distance from the bed chamber. It is obvious that as many alarms may be arranged in a given place as there are openings to be protected.

I prefer to employ in connection with my alarm the guides or ways or troughs, *w*, *w*, for the cords and weight, and in case a number of alarms are arranged in a given place, these troughs may also receive cards to indicate the opening with which that particular alarm mechanism is connected. If the alarm be arranged at the point to be protected, say,

for example, at a door-way, then the pawl *m* will have a laterally-projecting shoe *m'*, of substantially the shape shown in detail in Fig. 2, which shoe will project into the path of movement of the upper edge of the door, and hence, when the door is opened, the said door acting upon the said shoe, will disengage the pawl from the ratchet *l*, and thus let off the alarm. It is obvious that as the weighted cord *j* runs down, the cord *i* will be wound up, so that after the alarm has struck it may be set again by pulling upon or unwinding the cord *i*.

If at any time, as, for instance, during the daytime, it be not desired to use the alarm, it may be rendered inoperative, either by detaching the cord *r* from the door, or by suspending the weight *k* from a fixed portion independent of the alarm mechanism.

The casing may be a casting, or it may be struck up of sheet metal and of any ornamental form.

What I claim is—

1. An alarm mechanism consisting essen-

tially of a double-barreled rotary spool, a pawl-and-ratchet let-off mechanism connected therewith, and adapted to be operated by the opening of a window or door with which it may be in communication, a winding cord for said spool and an unwinding weighted cord therefor, a bell, a bell-hammer lever, a crank or eccentric on the spool, and a link connecting the bell-hammer lever and the crank or eccentric to ring said bell as the spool is rotated, substantially as described.

2. In a burglar alarm, the combination with a bell-actuator, of a let-off mechanism for said actuator, the said let-off mechanism comprising a pawl and ratchet and a shoe projecting laterally from such pawl, substantially as described.

In testimony whereof I have hereunto set my hand this 4th day of May, A. D. 1893.

ALVIN N. WOODARD.

Witnesses:

WM. H. FINCKEL,
E. A. FINCKEL.