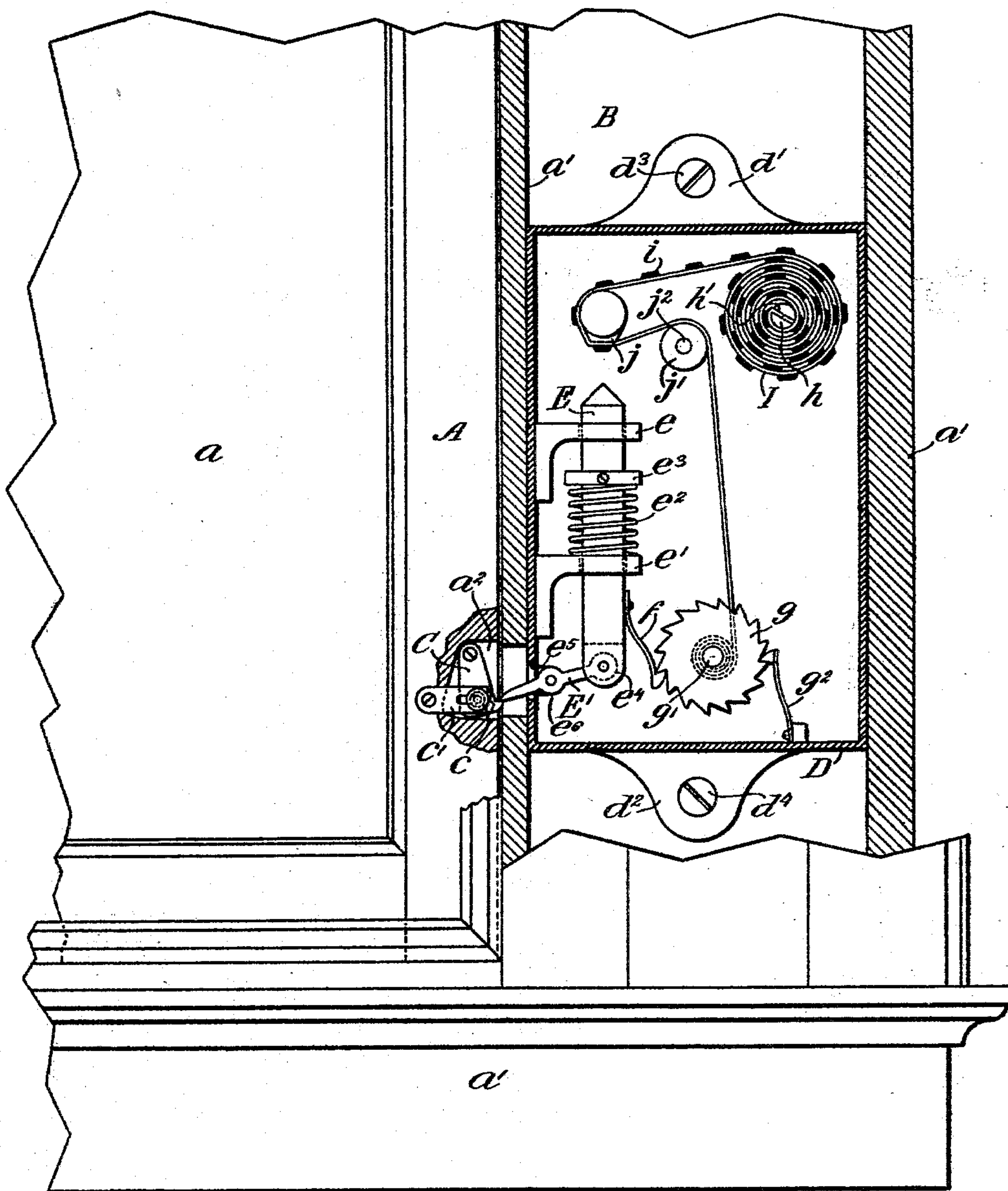


(No Model.)

H. C. F. E. SNOWMAN & N. E. LACEY.
BURGLAR ALARM.

No. 515,558.

Patented Feb. 27, 1894.



Witnesses:
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UNITED STATES PATENT OFFICE.

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BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 515,558, dated February 27, 1894.

Application filed December 20, 1893. Serial No. 494,154. (No model.)

To all whom it may concern:

Be it known that we, HERMAN C. F. E. SNOWMAN, residing at New Paltz, and NICHOLAS E. LACEY, residing at Highland, in the county of Ulster, State of New York, citizens of the United States, have jointly invented certain new and useful Improvements in Burglar-Alarms, of which the following is a specification.

Our invention has relation to burglar alarms; and more particularly to the construction and arrangement thereof.

The principal objects of our invention are first, to provide a simple, inexpensive and effective burglar-alarm for application to windows and other somewhat similar parts of a building; second, to provide a burglar-alarm which is so constructed and arranged as to be automatically operated by the raising of a window or the like for producing a sharp report by the explosion of a cap or pellet; and third, to provide an automatically operating burglar-alarm actuated by means of a pawl-lever for operating a spring plunger hammer to cause the same to contact with a pellet or cap disposed in regular sequence on a strip, tape or ribbon and automatically fed by a pawl-and-ratchet connection to cause when set a loud report to be given by the movement of a window or the like of a building.

Our invention stated in general terms, comprises a burglar alarm constructed and arranged for operation in substantially the manner hereinafter described and claimed.

The nature and scope of our invention will be more fully understood from the following description taken in connection with the accompanying drawing, illustrating partly in front elevation and partly in section a burglar-alarm embodying the features of our invention.

Referring to the drawing A, is the window sash provided with a glass a , supported in suitable frame-work a' , in a well understood manner.

a^2 , is a recessed chamber formed in a portion of the sash A.

C, is a detent pivotally connected with the wall of the chamber a^2 , and having a stud pin or tightening screw c , connected therewith and engaging a slotted arm c' , rigidly secured

to the sash for supporting the detent or pawl C, to required position.

D, is a housing set into a recess B, of the frame-work a' , adjacent to the sash A, and provided with a removable cap or cover engaging with the housing D, and secured to the recessed portion B, of the frame-work a' , from the projections d' and d^2 , of the cover by means of screws d^3 and d^4 .

e and e' , are brackets secured to the side wall of the housing through which freely plays a plunger hammer E, having coiled around the same a spring e^2 , engaging with the lower bracket e' , and with a collar e^3 , adjustably secured to the plunger hammer E. At the lower extremity of the plunger hammer E, is pivoted at e^4 , a pawl lever E', which is fulcrumed at e^5 , to the housing D, and extends through a slot e^5 , provided in one of the side walls of the housing and normally engaging with the notched detent C.

f , is a spring-pawl connected with the plunger hammer E, and engaging with a toothed wheel g , provided with a hub g' , pivotally connected with the rear wall of the housing D, and at the opposite side thereof is a back-stop or pawl g^2 , adapted to normally engage with the teeth of the wheel g , for a purpose to be presently described.

h , is a pivotal stud located in the upper part of the housing D, and provided with a slot h' , for engaging one end of a strip, tape or ribbon I, having fulminating pellets or caps i , arranged at suitable distances apart thereon.

j , is an anvil secured to the wall of the housing D, and j' , is a guide roll mounted on a stud or pin j^2 , secured to the wall of the housing D, and this roll has a rotary motion on the pin or stud j^2 .

The operation of the apparatus hereinbefore described, is as follows:—Assuming that the parts of the apparatus are in the positions as illustrated in the drawing and with a pellet of the strip I, adapted to be fed and presented to the anvil j , the fulcrumed pawl lever E', connected with the spring plunger hammer E, and normally contacting with the notched end of the detent C, will first depress the spring hammer E, and when the pawl lever E', is disengaged from the detent C, the

plunger hammer pivotally held under compression, by means of the spring e^2 , coiled around the same, will be caused to suddenly rise so as to contact with a pellet fed to the anvil j , to explode the same and produce a loud report, by the actuation of the pawl f , connected with the spring plunger hammer E , and engaging a tooth of the ratchet-wheel g , and winding at the same time the expended strip, tape or ribbon onto the hub portion g' , of the wheel g . In the downward movement of the sash A , the rear edge of the detent C , will ride past the pawl lever E' , and so that the latter may engage with the notched portion of the detent C , to depress the spring plunger hammer E , momentarily when the sash A , is again raised, as will be readily understood from the drawing. The back-stop g^2 , normally engaging with a tooth of the wheel g , will during the feeding of the tape, strip or ribbon I , be caused to engage another tooth of the wheel g , and thus to prevent retrograde movement thereof. This back-stop g^2 , moreover is adapted to maintain the tape, strip or ribbon I , taut during actuation of the devices of the alarm.

It will be observed that the action of the device is automatic and that the same is controlled by means of the adjustable detent C , connected with the sash-frame A , of the window, which acts first, to depress the spring plunger hammer E , in order to permit the same to contact with a pellet or cap and in the return movement of said hammer by means of the coiled spring e^2 , the spring pawl f , connected with said hammer will engage a tooth of the ratchet-wheel g , and thereby feed the same step by step until the entire strip, tape or ribbon containing the fulminating pellets or caps has been used and the same will be wound off of the movable slotted stud or pin h , onto the hub g' , of the ratchet-wheel g , and under the required tension for the effective operation of the device.

It will be manifestly obvious that as to minor details, modifications may be made in the arrangement of the parts for the performance of the functions of our invention; and hence we do not wish to be understood as limiting ourselves to the precise construction and arrangement hereinbefore explained and illustrated; but

Having thus described the nature and objects of our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A burglar-alarm, comprising an adjustable detent connected with a movable frame, a pivotally supported pawl-lever connected with a spring plunger hammer adapted to contact with a fulminating strip, tape or ribbon presented to an anvil and passing over a guide to a ratchet controlled hub, and maintained under required tension by means of pawls engaging respectively said hammer, and a ratchet-wheel, substantially as and for the purposes set forth.

2. A burglar alarm provided with a detent adjustable in two directions and connected with a movable frame, a housing provided with a slotted wall having a fulcrumed pawl-lever extending therethrough and engaging a spring plunger hammer, a tape, strip or ribbon provided with fulminating pellets, and means controlled by the movements of said spring plunger hammer for feeding the pellets or caps of said tape, strip or ribbon to an anvil and winding up the expanded tape, strip or ribbon, substantially as and for the purposes set forth.

In testimony whereof we have hereunto set our signatures in the presence of two subscribing witnesses.

HERMAN C. F. E. SNOWMAN.
NICHOLAS E. LACEY.

Witnesses:

THOMAS M. SMITH,
RICHARD C. MAXWELL.