(No Model.)

J. H. SMITH, G. THOMSON & H. A. CLOSSER.

ALARM LOCK.

No. 458,600. Patented Sept. 1, 1891.

Fig. 1.

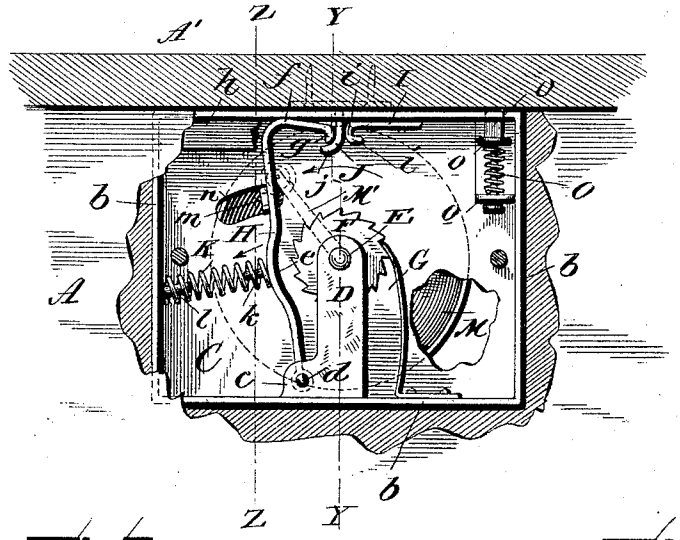


Fig. 2.

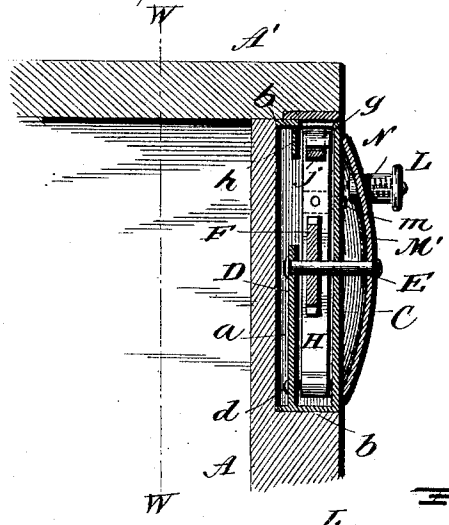


Fig. 3.

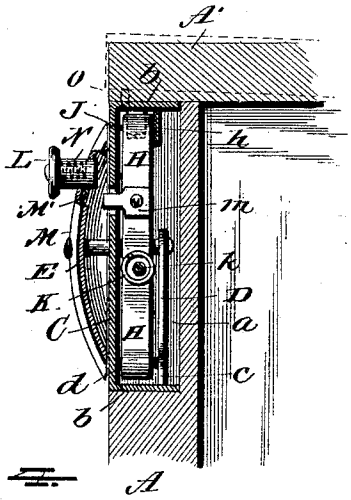
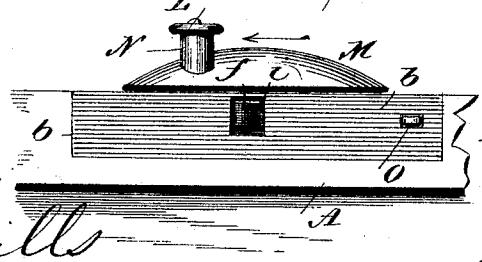


Fig. 4.



Witnesses

L. C. Hills

E. H. Brad.

John H. Smith,
George Thomson
Horace A. Closser.
Inventors

per Chas. H. C. Fowler.
Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN H. SMITH, GEORGE THOMSON, AND HORACE A. CLOSSER, OF FAIRCHILD, WISCONSIN.

ALARM-LOCK.

SPECIFICATION forming part of Letters Patent No. 458,600, dated September 1, 1891.

Application filed May 20, 1891. Serial No. 393,377. (No model.)

To all whom it may concern:

Be it known that we, JOHN H. SMITH, GEORGE THOMSON, and HORACE A. CLOSSER, citizens of the United States, residing at Fairchild, in the county of Eau Claire and State of Wisconsin, have invented certain new and useful Improvements in Alarm-Locks; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

This invention relates to certain new and useful improvements in alarm-locks; and it has for its objects, among others, to provide a simple, cheap, and durable lock of this character which cannot be tampered with without sounding an alarm, and which shall be automatic in locking, and provided, preferably, with means for throwing open the cover when the same is unlocked.

We provide a ratchet-alarm operated by the turning of the handle to unlock the device, the parts being constructed to unlock at a certain point only, while it will lock at any point. The handle is normally held out of engagement with the spring-held locking-bar; but when the proper point is reached it is forced inward and engages a projection on the bar and unlocks the device. The parts are inclosed within a suitable case and are cheaply constructed and easily assembled.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a section on the line W W of Fig. 2 with a portion of the side of the box broken away. Fig. 2 is a section on the line Y Y of Fig. 1. Fig. 3 is a section on the line Z Z of Fig. 1. Fig. 4 is a top plan showing the lock applied in position.

Like letters of reference indicate like parts throughout the several views in which they occur.

Referring now to the details of the drawings by letter, A designates a portion of a box, drawer, or any other receptacle to which it may be desired to apply the lock, and A′ is a portion of the lid or cover or other portion which is supposed to be hinged and the lock applied at the side opposite the hinge. The side of the box is recessed or chambered, as shown at *a*, for the reception of the case of the lock, as seen in Figs. 2 and 3.

C is the lock-case provided with a surrounding inwardly-extending flange *b*, and upon the lower portion of this flange is supported an upright D, in which and in the front wall of the case is journaled the shaft E, on which between the upright and the outer wall of the case is secured a ratchet-wheel F, with which is designed to engage a spring-pawl G, consisting of a strip of spring metal secured to the flange *b*, as seen best in Fig. 1, and its free end curved to engage the teeth of the said ratchet-wheel. The upright D is provided near its lower end with a lug or extension *c*, as shown best in Fig. 1, to which is pivoted, as at *d*, the arm H, which is provided with a curved portion *e* between its ends, as shown in Fig. 1, to provide plenty of room for the ratchet-wheel, and its free end is bent substantially at a right angle to its length to form the lateral portion *f*, as seen best in Fig. 1, the end of the said lateral portion being in turn bent at an angle thereto, as shown at *g* in Fig. 1. This lateral portion is located within a suitable box formed by the strip *h*, secured within the lock-case, as shown, to protect it and prevent tampering therewith. Secured to the upper flange *b* is a strip I, the end of which nearest the free end of the said lateral portion is similarly bent, as shown at *i* in Fig. 1, and between these two parts the catch J, secured to the under side of the cover A′, is designed to engage, the said catch passing through an opening in the flange *b*, as shown in Fig. 1, the end of the catch being preferably slightly curved, as shown at *j* in Fig. 1. The arm H is provided with a teat *k* at a point between its ends, around which and around a similar teat *l* on the side flange *b* of the case a spring K is arranged and designed to normally keep the said arm forced inward, but designed to yield when the arm is acted upon by the handle hereinafter described. The arm H is provided with a lug

or extension *m*, which works through a curved slot *n* in the front wall of the lock-case, as shown in Figs. 1 and 3, the said lug extending at right angles to the arm.

M is a disk centrally pivoted on the shaft E and designed to be revolved thereon. This disk covers the opening or slot in the front wall of the lock-case and carries the operating-handle L, which is connected with the shaft E by the arm M′, as seen in Figs. 1 and 3. This handle has a surrounding spring-actuated collar or sleeve N, which is normally held outward by the spring, but free to be pressed inward when desired to operate the lock.

The operation will be readily understood. The parts, as shown, are locked; but when it is desired to unlock it the handle is turned around to the right, as indicated by arrow, and the turning of the handle turns the shaft E, which revolves the ratchet-wheel in contact with the spring-pawl and gives an alarm. When the handle has reached the point opposite the lug on the arm H, the movable portion of the handle is pushed inward and engaged with the said lug, when a slight further movement of the handle will move the said arm in the direction of the arrow in Fig. 1 and unlock the parts by withdrawing the lateral portion of the said arm away from the catch when the parts are unlocked. In order to throw the cover open when it is unlocked, we provide the spring-actuated arm O, which is arranged to slide in suitable guides *o* within the case, the spring serving to throw the end of the arm against the cover and give it an impetus upward as soon as it is unlocked.

What we claim as new is—

1. The combination, with the lock-case, the shaft, and the spring-actuated locking-arm, of the ratchet-wheel on the shaft, the spring-pawl engaging therewith, and the rotatable handle having the said shaft as its center and arranged to engage the locking-arm, as set forth.

2. The combination, with the case, the shaft, and the ratchet-wheel thereon and pawl, of the pivoted spring-actuated locking-arm having a lug working in a slot in the front wall of the case, the rotatable disk, and the handle carried thereby and having a portion designed to engage the lug on the locking-arm, as set forth.

3. The combination, with the lock-case, its shaft, and ratchet-wheel and pawl, of the pivoted spring-actuated locking-arm having a lug working in a slot in the case, the disk on the shaft, the handle on the disk and provided with a connection with the shaft, and a spring-actuated collar on the handle, substantially as and for the purpose specified.

4. The combination, with the case having a curved slot in its front wall, the upright, the shaft with its ratchet-wheel and pawl, the locking-arm pivoted to the upright, and a spring acting upon the arm, of a lug on the arm working in the slot, a disk movable on the shaft, a handle on the disk with an arm connected to the shaft, and a spring-actuated movable portion on the handle, as set forth.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

JOHN H. SMITH.
GEORGE THOMSON.
HORACE A. CLOSSER.

Witnesses:
O. A. FOSTER,
WM. F. HOOD.