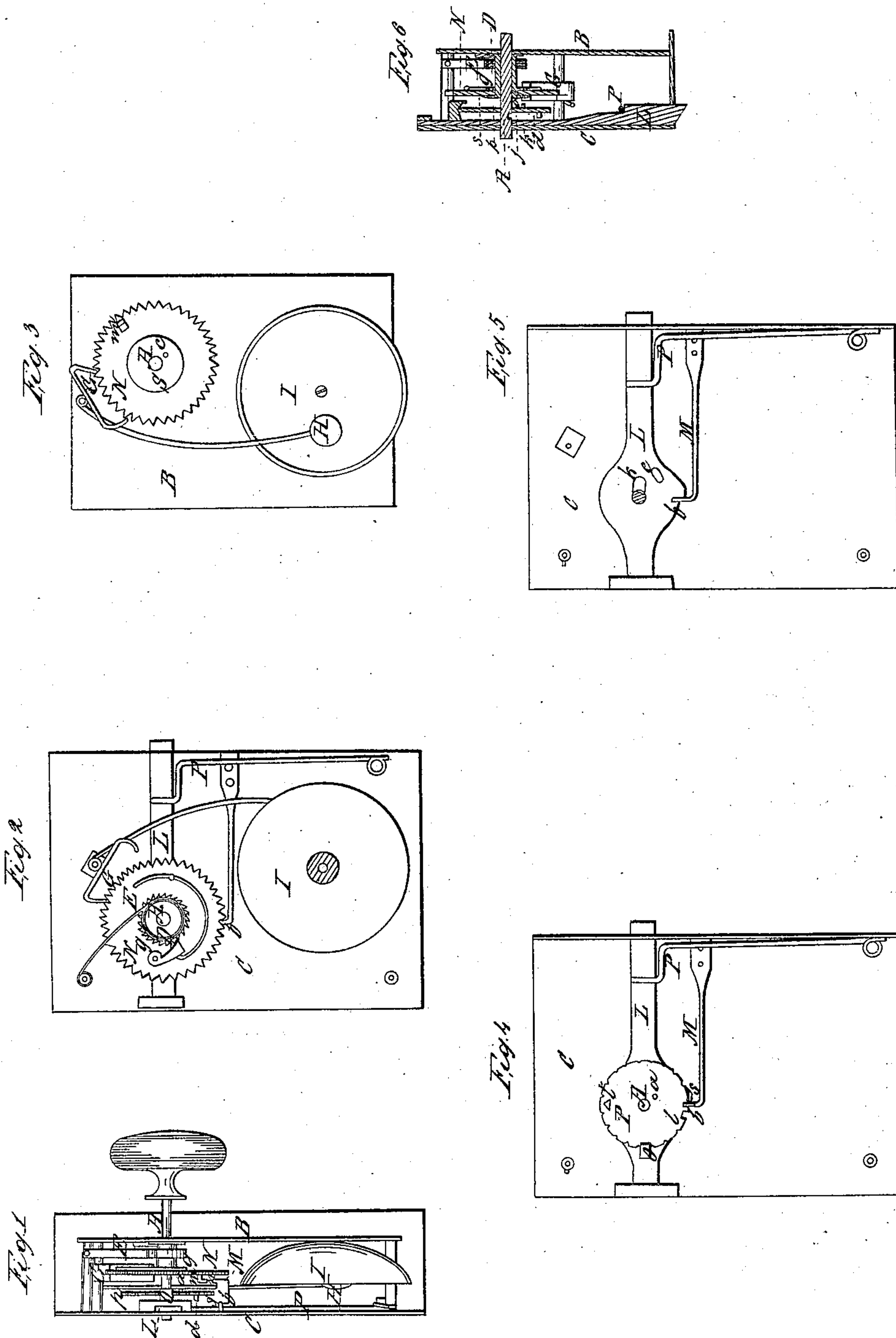


J. Cone,
Alarm Lock.

N^o 15,168.

Patented June 24, 1856.



UNITED STATES PATENT OFFICE.

JULIUS CONE, OF YELLOW SPRINGS, OHIO.

ALARM-LOCK.

Specification of Letters Patent No. 15,168, dated June 24, 1856.

To all whom it may concern:

Be it known that I, JULIUS CONE, of Yellow Springs, in the county of Green and State of Ohio, have invented a new and Improved Alarm-Clock for Drawers, &c.; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification, Figure 1 being an edge view of the lock, Fig. 2 a side view of the lock, the outer lock plate B being removed; Fig. 3, view of the alarm apparatus, looking from the inside toward the plate B; Fig. 4, view from the inside and looking toward the inner lock plate C and exhibiting the coupling and counting disk with the bolt beneath; Fig. 5, similar view, the coupling disk being removed; Fig. 6, transverse section through the center of the knob shaft.

Like letters designate corresponding parts in all the figures.

A lock case of ordinary construction is employed; and it is provided with a latch bolt L, to be actuated by a knob and knob shaft A, in the usual manner. But the knob shaft A, is arranged so as to be disconnected from the bolt L, at pleasure, and so separated therefrom, that the bolt cannot be moved till the said shaft has been brought into connection therewith by a certain movement known only to the person who locks the drawer—or other article to which the lock is attached, while if one who has not disconnected the bolt and knob shaft, should undertake to connect them, an alarm, hereafter to be described, will be sounded. A spring P, keeps the bolt constantly forced out, except when acted upon by the knob shaft.

The knob shaft passes through a slot *k*, in the bolt, of sufficient length to allow the proper degree of motion to the said bolt, as seen in Fig. 5. The knob shaft then extends through the adjacent plate C, of the lock case, in which, together with the opposite lock plate B, it freely turns, as permanent bearings. A longitudinal movement to the knob shaft is also given of sufficient extent cause the desired connection and disconnection with and from the bolt.

Inside of the bolt L, and a short distance therefrom, a disk *p*, is firmly secured to the knob shaft, as represented. This disk is the key to the whole lock, and on it, when operating in connection with the parts of

the lock, as hereinafter described, depends the safety of the whole apparatus. On its inner face is a pin, or projection, *d*, which, when the knob shaft is pushed toward the bolt L, enters a slot *e*, in said bolt whereby the bolt is actuated, when the knob shaft is vibrated. When the bolt is thus drawn into the lock, the edge of the slot *k* enters a notch *j*, in the side of the knob shaft, as seen in Figs. 5 and 6; so that the drawer may be opened by pulling upon the knob of the lock; but when the bolt is not thus forced in, the pin *d* will not be retained in the slot, if the knob is pulled.

A pin *a*, projecting from the other side of the disk *p*, serves to wind up the alarm apparatus. This consists of a driving spring E, scape wheel N, pendulum crutch G, hammer H, and bell I, arranged substantially as represented in the drawings. The spring E, winds upon a drum, or collar, D, which turns freely on the knob shaft, so that the apparatus does not in the least interfere with the ordinary use of said knob shaft for moving the bolt. The scape-wheel N, is mounted in a groove between a ratchet-wheel *g*, and flange S, on the inner end of the collar D. The ratchet-wheel *g*, and its catch, are arranged in the ordinary way for winding up the spring. The flange S is provided with a hole *c* (Fig. 3,) in its inner face, in which the before mentioned pin *a*, on the outer face of the disk *p*, is inserted, for the purpose of winding up the alarm, when it is to be set. A flange on the outer end of the collar D, may turn beneath a small lip, or hooked projection, secured to the inner side of the lock plate B, (as shown in Fig. 1,) in order to keep the alarm apparatus in place, while the knob shaft is moved in the various ways required.

On the inner face of the scape-wheel N, is a projection *m*, which at a little distance from the face of the wheel, is bent outward, at right angles, toward the periphery of the wheel, as represented in the drawings. This projection strikes a projection *n* on the end of a spring M, (which I call the "ward-spring,") and this acts as a stop, to prevent the alarm from unwinding. But if the "ward-spring" is moved but a little, either inward or outward, or in a direction away from the knob shaft A, the stop *m* will be set free and the alarm will sound.

There is another projection *b* on the end of the "ward-spring" M, which is forked,

as shown in Fig. 1. Within this fork the periphery of the disk is inserted, when the knob shaft is disconnected from the bolt, and it cannot be removed therefrom except
 5 by bringing a notch *l*, (Fig. 4) cut in the periphery of the disk, opposite the prongs of the fork *b*. This notch is so situated that when it is brought to the fork, and the disk *p*, pushed inward, the pin *d* will enter
 0 the slot *e*, in the bolt. When the disk is in the fork *b*, if the knob shaft is drawn out or pushed but slightly, the alarm will be sounded; so that if any one attempts to unlock the drawer, or whatever the lock is
 5 upon will give an alarm, which if attended to will insure his detection or prevent the accomplishment of his purpose. And even should he succeed in getting the disk beyond the "ward-spring," if he attempts to pull
 0 open the drawer, except when the bolt is drawn as before described, the disk will be forced against said "ward-spring" and spring the alarm.

The disk *p*, is provided with a series of
 5 rounded notches around its periphery, against which a hooked projection *O*, on the bolt *L*, is slightly pressed by the spring *P*, of said bolt. The object of these notches, is to enable a person who sets the lock, to
 0 move the notch *l* a certain distance from the fork *b*, ascertained by the number of said notches passed over, so that he may, when he wished to open the drawer, move it back again the same number of notches, and
 5 thus unlock without striking the alarm. But any other person not knowing the situation of the notch *l*, is entirely at a loss when to push the knob shaft inward; and any attempt to guess at the position unless he
 0 should guess right, will inevitably give the alarm. There is also a little cam *t*, (Fig. 4,) on the outer face of the disk *p*, which strikes the projection *n*, of the "ward-spring," every time it is brought around
 15 thereto; and sets the alarm free for a single turn of its spring. By this device, a person who may be attempting to find the proper position to move the disk to, in order to reach the bolt, will be very liable
 30 to give the alarm or be frightened away.

The hooked shape of the projection *O*, prevents the disk *p* being brought near enough to the scape wheel *N*, to wind up the alarm. Therefore, when the alarm is to be wound up, not only must the notch *l*,
 55 in the edge of the disk, be brought around to the forked projection *b*, of the "ward-spring," but the bolt *L* must be pushed into the lock, in order to couple the disk to the winding arrangement; and said bolt must be
 60 held into the lock, during the act of winding, and while returning the disk to its place between the prongs of the forked projection.

What I claim as my invention and desire
 65 to secure by Letters Patent, is—

1. Disconnecting the knob shaft from the latch bolt, thereby dispensing with a key, key hole, separate key bolt, and all devices for operating a key bolt, in the manner set
 70 forth.

2. I also claim placing the alarm spring and scape wheel upon the knob shaft itself when combined with the arrangement for
 75 connecting said knob shaft with, and disconnecting it from, the alarm, so that said alarm may not interfere with the ordinary use of the lock simply for a latch.

3. I also claim the disk *p*, constructed and operating in connection with the bolt,
 80 alarm, and "ward-spring," substantially as described, and for accomplishing the various purposes specified.

4. I also claim the "ward-spring" *M*, constructed and arranged substantially in
 85 the manner and for the purposes herein set forth.

5. I also claim the notch *j*, in the knob shaft, in combination with the slot *k*, in the bolt, when arranged and operating substan-
 90 tially in the manner and for the purpose herein described.

The above specification of my new and improved alarm lock, signed by me this fourth day of April 1856.

JULIUS CONE.

Witnesses:

DANIEL DAVIS,
 G. F. BENEDICT.