

(No Model.)

2 Sheets—Sheet 1.

G. J. KELLER.
ALARM LOCK.

No. 423,328.

Patented Mar. 11, 1890.

Fig. 1.

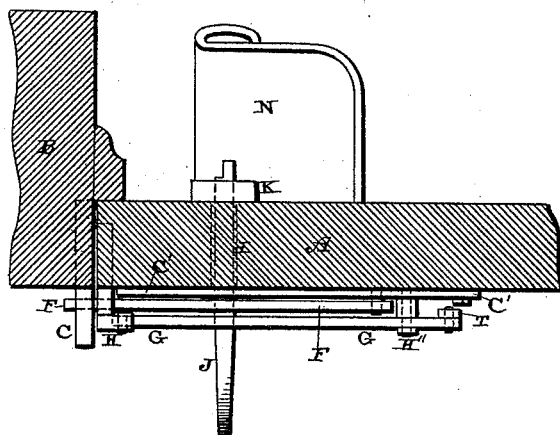
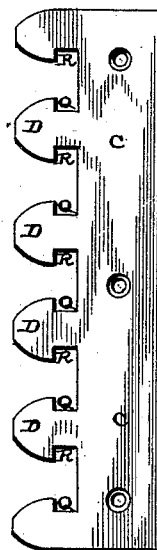


Fig. 4.



Witnesses:

E. P. Ellis,
B. Brocken,

Inventor:

Geo. J. Keller,
per
F. W. Lehmann,
att'y.

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2 Sheets—Sheet 2.

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Fig. 2.

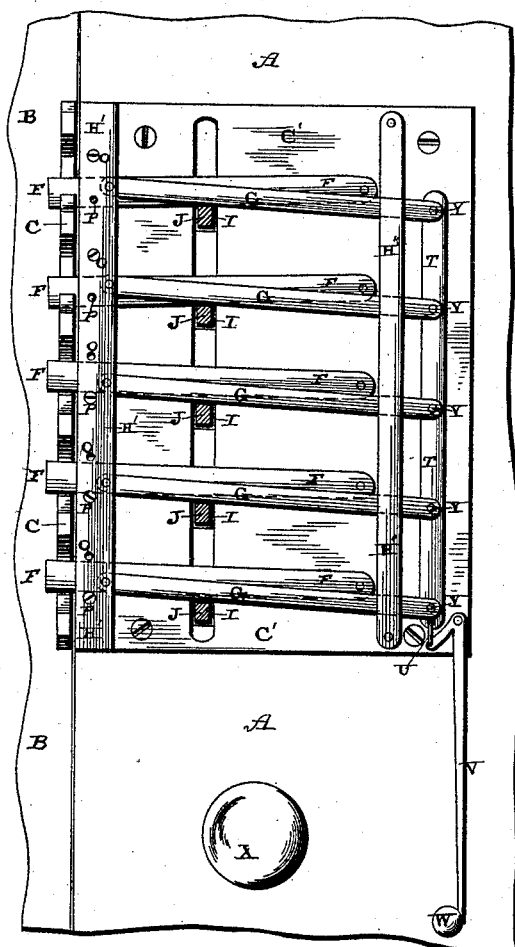
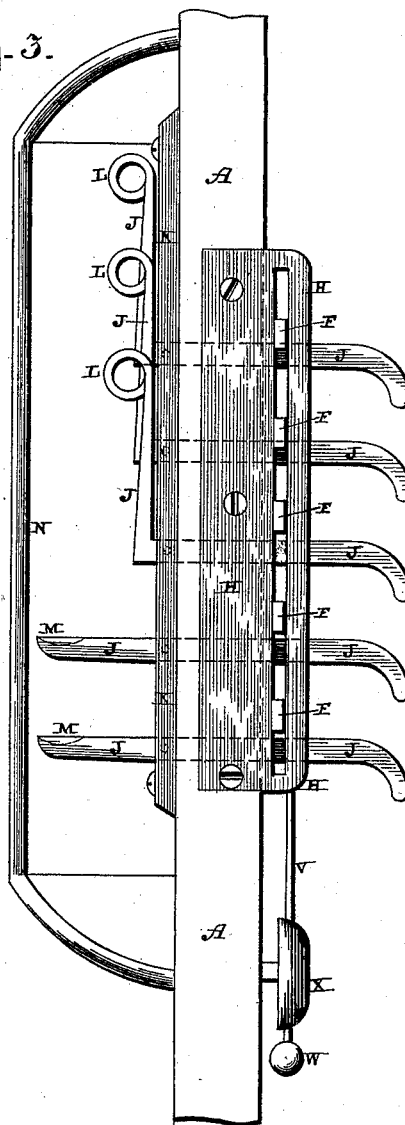


Fig. 3.



Witnesses:

E. P. Ellis,
B. Brooker.

Inventor:

Geo. J. Keller,
per
J. A. Lehmann,
att'y.

UNITED STATES PATENT OFFICE.

GEORGE J. KELLER, OF OSCEOLA, NEBRASKA.

ALARM-LOCK.

SPECIFICATION forming part of Letters Patent No. 423,328, dated March 11, 1890.

Application filed December 30, 1889. Serial No. 335,339. (No model.)

To all whom it may concern:

Be it known that I, GEORGE J. KELLER, of Osceola, in the county of Polk and State of Nebraska, have invented certain new and useful Improvements in Alarm-Locks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in combination door-locks; and it consists in the combination of a series of pivoted operating-levers, a corresponding series of latches, a latching-plate provided with double notches or catches, a pivoted rod, bar, or strip for each latch, and an alarm mechanism, as will be more fully described hereinafter.

The object of my invention is to provide a combination-lock which is to be applied to doors of offices and other such places, and by means of which a person knowing the combination can readily open the door and pass through by a slight pressure of the fingers, but which will not only not open to one who is not acquainted with the combination, but will be more securely locked and an alarm sounded at the same time, so as to give notice of the presence of an intruder.

Figure 1 is a horizontal section through the door taken above the lock. Fig. 2 is a side elevation of the same. Fig. 3 is an edge view of the door. Fig. 4 is a detached view of the latch-plate.

A represents the door, B that portion of the door-frame against which it closes, and C the latch-plate, which is secured to the door-frame, as shown in Fig. 1. This latching-plate C is provided with double catches D, as shown, so that all of the latches which are in the combination will catch only in the lower recesses of the notches, and all of the latches which are not in the combination, and which are operated by one not knowing the combination necessary to open the door, will catch in the upper catches, as will be more fully described hereinafter.

Secured to the side of the door is a metallic plate C', upon which all the rods, levers, or strips G are pivoted. The latches F are pivoted at their inner ends in direct contact with

the plate C'; but the rods or strips G are moved outward therefrom a suitable distance by a plate H' and a casting H'', as shown in Fig. 1, so that they will not interfere with the operation of the latches F. The outer free ends of the latches F pass through a guiding-plate H, (shown in Fig. 3,) and by means of which the latches are held in close contact with the plate E, and are always in position to engage with the latch-plate C.

Through the door A are made a number of slots I, and through these slots are passed the operating-levers J, which are pivoted at or near one end in or upon a plate K, which is secured to the opposite side of the door from the plate C'. The ends of these operating-levers J may be given any desired shape. Either the ends may be turned upward, as shown in Fig. 3, and have rings L formed upon their upper ends for the insertion of the fingers, or the ends of the levers may project outward, as shown at M, as may be preferred. If the rings L are used, an outward pull will be exerted upon those levers which are in the combination, while the other levers are left untouched; but if the ends of the levers are made to project straight outward, as shown at M, a downward pressure upon their ends will be necessary. Placed over the ends of the levers is a shield or covering N, of any suitable kind, as shown in Fig. 1, and which will prevent a person from seeing which one of the levers is operated when the door is opened. These levers J pass through the door just below the latches F, so that when the levers are operated at either end the latches will be raised. Each of the latches F is pivoted at its inner end. The outer free end of each of the latches F will engage with the lower notch Q of its corresponding catch D; but if the latch F has its outer end resting on the screw in the hole P, when the lever J is operated it will be raised high enough to catch in the notch R of the catch D just above it and lock the door and prevent it from being opened. Those latches which are in the combination are at their outer ends resting underneath the screws in the holes O, and the levers then raise these latches midway between the two catches D, so that the latches will pass freely between them. All of those latches not in the combination are resting on the screws in the holes P, and

hence when the levers F are operated the latches are raised so as to catch in the notches R. Any number of the latches may be used in the combination, and any desired number 5 left out. If any of the levers J are used which are not in the combination, instead of unlocking the door they will only lock it.

For each latch F and lever J there is a corresponding rod or strip G, which is pivoted 10 at its outer end upon a plate H', which is secured to the free edge of the door, as shown, and which extends along the side of the door any suitable distance, and is pivoted at its inner free end to the vertical strip T. These 15 rods or strips G are guided in their perpendicular movement by the slotted casting H'', which is secured against or to the plate C', as shown in Fig. 1. The perpendicular strip or rod T is connected at its lower end by a 20 connecting-rod U to a bell-crank lever V, which is provided at its lower end with a weight W, and which weight W strikes against the bell or alarm X when one of the rods or strips G is operated by one of the levers J. If any one of the latches F is used 25 in the combination, its corresponding rod or strip G must not be used. If not used, the pivot Y at its outer end must be taken out, and then this end of the rod or strip is left 30 free to rise and fall with its operating-lever J without producing any effect. For every latch F that is not used in the combination the corresponding strip or rod G is pivoted at Y, so that when the corresponding lever J is operated this rod or strip will be made to raise 35 and operate the rod T and the alarm-lever V.

The operation of this lock is as follows: If the door is closed, the left-hand ends of the latches used in the combination rest in the 40 notches Q of the catches D. If the operator wishes to open the door from the outside, he pulls upon the rings L of those levers which are in the combination, or presses down upon the ends M of those levers which are in the 45 combination and which have their ends to extend straight out, thereby raising those latches which are in the combination midway between the catches D, and leaving the door free to be pushed or pulled open. If the operator wishes to open the door from the inside, 50 the right-hand ends of the levers J, which are in the combination, are raised and the same result will follow. If any of the levers J which are not in the combination are used, 55 the corresponding latches F will be raised so as to catch in the notches R of the catches D

and thus lock the door so that it cannot be opened, and at the same time the rods or strips G will be operated so as to sound an alarm and give notice that an intruder is at the 60 door. From the above it will be seen that it will be very difficult for any one not acquainted with the combination to enter, while one who knows the combination can pass back and forth by a simple pressure of the 65 fingers. The gravity of the latches will lock the door when it is pushed shut, and the gravity of the rod T and the alarm-lever V will bring the device into position again ready for use.

Having thus described my invention, I 70 claim—

1. The combination of the door provided with a series of slots, the operating-levers which pass through the slots, the latches 75 which are operated by the levers, and the latch-plate C, provided with the double catches D, substantially as shown.

2. The combination of the door A, provided with a series of slots, the operating-levers J, which extend through the slots, the latches 80 F, which are operated by the levers and which latches are provided with a pivotal point, and the latching-plate C, provided with the double catches D, any of the latches being adapted 85 to be used in or thrown out of the combination, substantially as described.

3. The combination of the door, with a series of slots, the operating-levers which extend through these slots, the latches F, the latching-plate C, provided with double catches 90 D, the rods or strips G, the connecting-rod T, and the alarm-lever connected to the rod T, substantially as set forth.

4. The combination of the door A, provided with a series of slots, the operating-levers 95 which extend through the slots, the plate or casting K, in which the levers are pivoted, the latches F, placed above and operated by the levers J, and provided with a pivotal point at or near their inner ends, the latch- 100 plate C, provided with the double catches D, the rods or strips G, the casting H', in which they are pivoted at their outer ends, the slotted guide H'', through which they pass at their inner ends, the connecting-rod, and the alarm- 105 lever, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE J. KELLER.

Witnesses:

PETER H. MACKIE,
JOSEPH A. JACKSON.