C. F. ATWOOD.

TIME LOCK.

No. 105,291. Patented July 12, 1870.

Fig: 1.

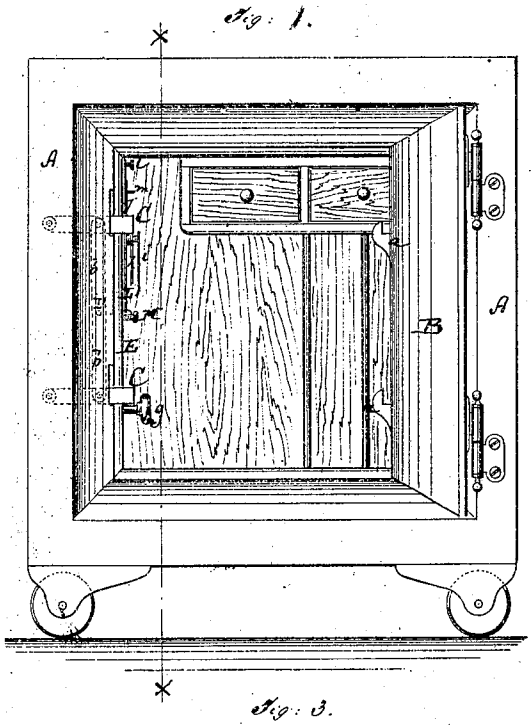


Fig: 2.

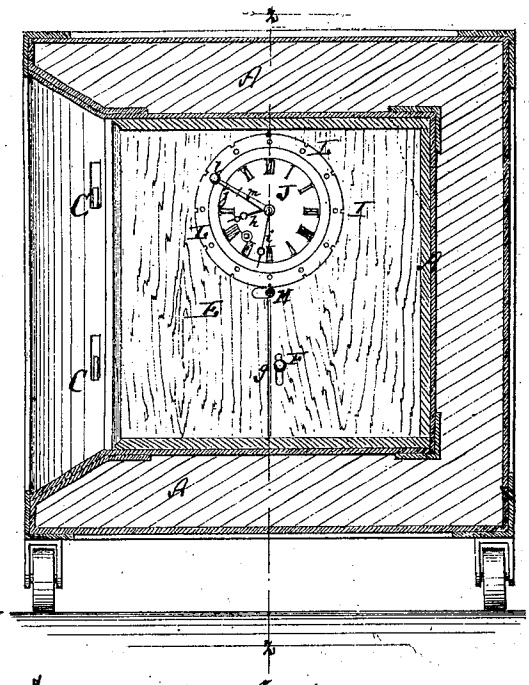


Fig: 3.

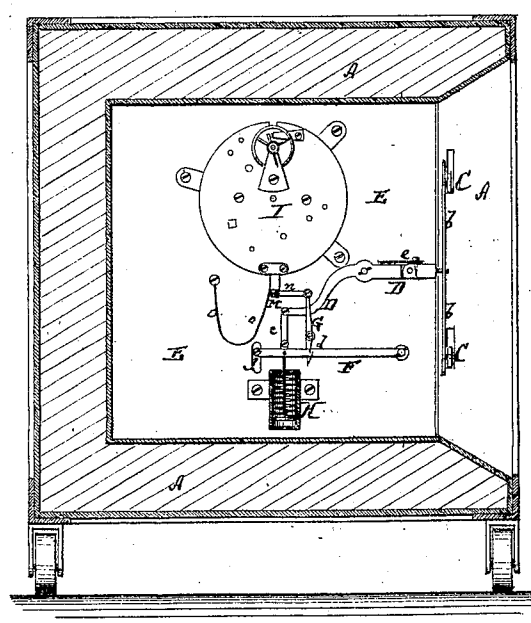


Fig: 4.

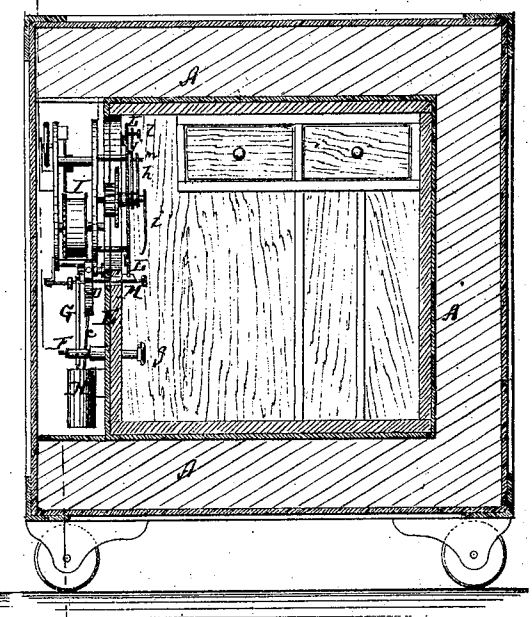
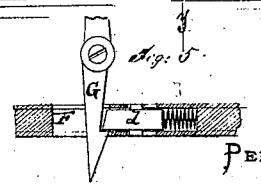


Fig: 5.



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UNITED STATES PATENT OFFICE.

CORYDON F. ATWOOD, OF HANCOCK, WISCONSIN, ASSIGNOR TO JAMES F. WILEY AND VINCENT C. PRICE.

IMPROVEMENT IN TIME-LOCKS.

Specification forming part of Letters Patent No. 105,291, *dated July* 12, 1870.

To all whom it may concern:

Be it known that I, CORYDON F. ATWOOD, of Hancock, in the county of Waushara and State of Wisconsin, have invented a new and Improved Safe-Lock; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification.

Figure 1 represents a front elevation of a safe provided with my improved lock. Fig. 2 is a vertical longitudinal section of the same, the plane of section being indicated by line *x x*, Fig. 1. Fig. 3 is a vertical longitudinal section of the same, the plane of section being indicated by the line *y y*, Fig. 4. Fig. 4 is a vertical transverse section of the same taken on the plane of the line *z z*, Fig. 2. Fig. 5 is a detail longitudinal section of the locking-bolt.

Similar letters of reference indicate corresponding parts.

This invention has for its object to construct a safe-lock which will be absolutely safe against false keys, and which, in fact, cannot be opened by any key, being locked by clock-work that is concealed within the safe. No key-hole or knob will, therefore, enable burglars to apply their tools with a view of opening the lock.

This invention consists in an improved combination of parts with a safe-lock under such an arrangement that the lock cannot be opened by any key.

The invention also consists in the construction of the setting and locking apparatus, and of other details, as hereinafter described.

A in the drawing represents a safe, vault, or other burglar-proof apparatus. B is the door of the same. On the inner face of the door are formed hooks or equivalent catches *a a*, into which the bolts are to be locked. These catches are represented in Fig. 1, in which the door is shown open. The bolts C C are pivoted to the side of the safe, and are, if desired, connected with each other by a rod, *b*, (shown by dotted lines in Fig. 1,) so that they will move simultaneously. The lock is connected with the rod *d* by means of a lever, D, which is pivoted to the side of a plate, E, that constitutes part of the inner lining of the safe. The lever D is, by means of a jointed rod, *c*, connected with a lever, F, which is also pivoted to the plate E, and which contains a spring-catch, *d*, that can be used to lock a pivoted hook, G, as shown in Figs. 3 and 5.

When the lever F is locked to the hook G, it will serve to lock the lever D, which, in that position, holds the rod *b* down upon the hooks, locking the door. The lever D has a spring, *e*, which allows its outer part, even if locked by the hook G, to swing up, thereby permitting the bolts to move over the hooks *a* while locking the door. The spring *e* will at once throw the bolts down into the hooks when the door is properly closed. The lever F has at its free end an arm, *g*, which projects inwardly into the safe, through a slot of the plate E. By means of this knob the lever F can be swung up to be locked over the hook G.

When the safe-door is locked, it cannot be opened from the outside as long as the bolts remain locked in the hooks. As the bolts are not connected with any outside apparatus, they can only be unlocked by apparatus concealed within the safe.

The apparatus is made in form of a clock, which, when wound up, can be set to swing the hook G, and thereby release the lever F at any desired time.

A spring, H, is connected with the lever F, to draw the same down, and with it one end of the lever D, thereby releasing both of the hooks *a* as soon as the hook G is swung clear of the catch *d*.

The clock-work I, which is concealed within the safe, operates two hands, *h* and *i*, that move over the face of a dial, J, as in every ordinary clock. The dial is affixed to the inner face of the plate E, to be readily seen when the safe is opened.

Around the dial is placed a notched or toothed ring, L, which can be easily turned. Around the spindle is loosely fitted a third hand, *j*, which is made of spring metal, and carries a pin, *l*, that can readily be placed into one of the notches of the spring L. A projecting pin, *m*, on *j*, is in the way of the hour-hand *h*. When the hour-hand strikes the pin *m* it will carry the hand *j*, and with it the ring L, around.

The upper end of the hook G is, by a link,

n, connected with a horizontal lever, M, that extends inward through a slot of the plate E. The lever M is also locked into a notch of the ring L.

When the hand *h* strikes the pin *m* and commences to turn the ring L, the latter will carry the lever M along until the same swings the hook G clear of the catch *d*. The safe is then opened. A spring, *o*, carries the lever M back to its original position, so that all parts will again be ready for relocking.

When the clock-work is wound up, it will only be necessary to set the hand *j* to that mark on the dial which represents the time at which the safe is to be opened. When the hour-hand arrives at the time it will unlock the door, as aforesaid.

In order to allow the closing of the safe for two or more days, the dial may be divided into twenty-four, forty-eight, or more hour-divisions, and the clock-movement be geared accordingly.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The ring L, placed around the dial of a clock within the safe, and connected with a hand, *j*, which is moved by the hour-hand *h*, substantially as herein shown and described.

2. The combination of the safe-bolts with the levers D F, hook G, and lever M, all arranged to operate as set forth.

3. The ring L, turned by the hand of a clock, and connected with the catch-hook G, to release the same, as specified.

The above specification of my invention signed by me this 17th day of December, 1869.

CORYDON F. ATWOOD.

Witnesses:

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