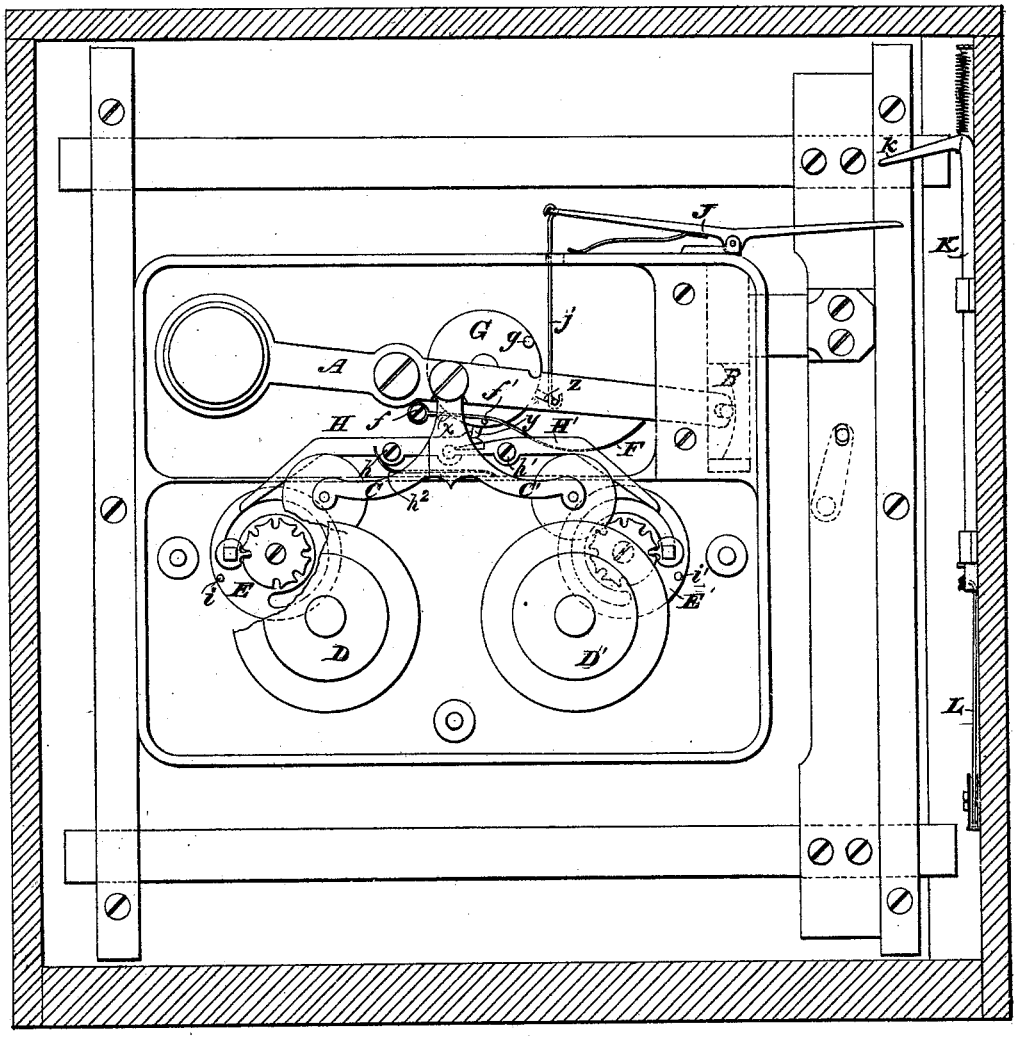
2 Sheets—Sheet 1.

E. STOCKWELL.

TIME-LOCK.

No. 185,983. Patented Jan. 2, 1877.

Fig 1.



WITNESSES

Wm a Skinkle

F. Stich

INVENTOR

Emory Stockwell.

By his Attorneys,

Baldwin, Hopkins, and Peyton.

2 Sheets—Sheet 2.

E. STOCKWELL.

TIME-LOCK.

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Fig 2.

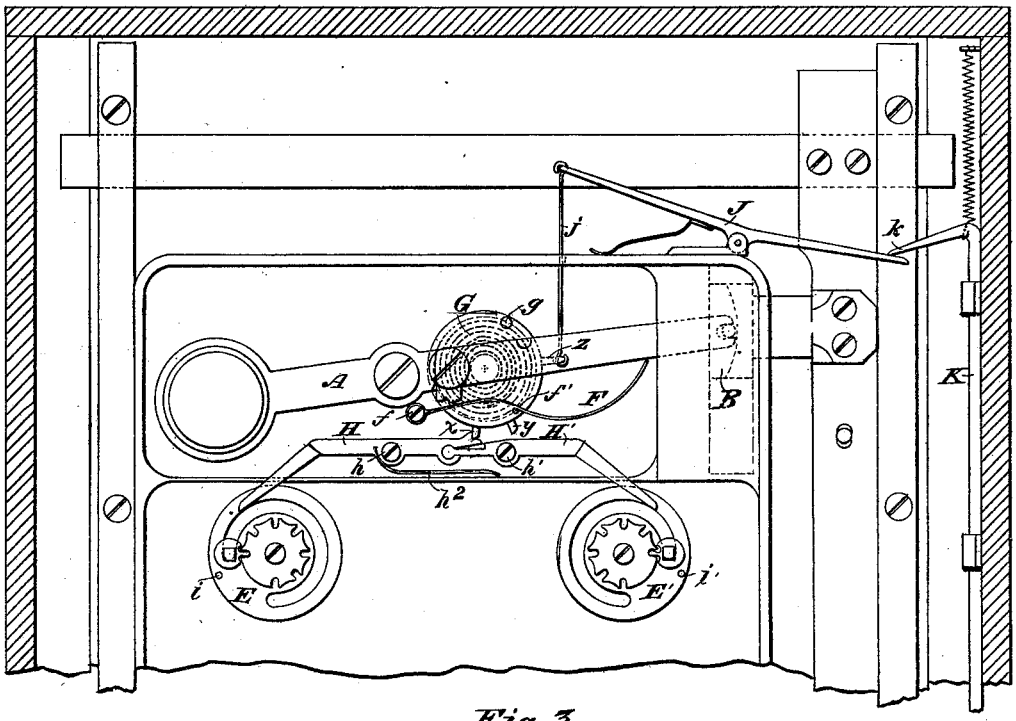
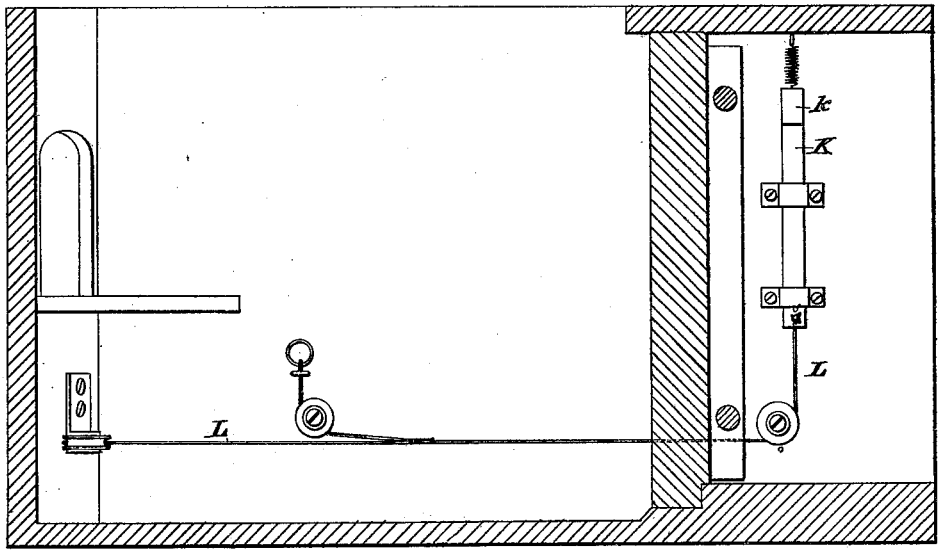


Fig 3



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UNITED STATES PATENT OFFICE.

EMORY STOCKWELL, OF STAMFORD, CONNECTICUT, ASSIGNOR TO THE YALE LOCK MANUFACTURING COMPANY, OF SAME PLACE.

IMPROVEMENT IN TIME-LOCKS.

Specification forming part of Letters Patent No. **185,983**, dated January 2, 1877; application filed October 20, 1876.

To all whom it may concern:

Be it known that I, EMORY STOCKWELL, of Stamford, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Time-Lock Mechanism, of which the following is a specification that will enable those skilled in the art to which my improvements appertain to make and use the same, reference being had to the accompanying drawings.

The object of my invention is to afford an additional security to the contents of safes or vaults, through the instrumentality of time-locks, by enabling bank officers, in the event of a sudden attack by bank robbers, to instantly spring the bolt of the time-lock into the locked position from any part of the banking-room, without going to the safe or vault, and thus prevent the opening of the door till the movements of the time-lock have nearly run down, or until a certain time has elapsed.

My invention consists in connecting with the bolt of a time-lock suitable appliances, partly inside and partly outside, of a safe or vault, by which this object can be accomplished.

A convenient embodiment of my invention, and one which I prefer to use, is illustrated in the drawings as connected with the time-lock for which Letters Patent were granted me September 21, 1875, No. 168,062.

Figure 1 is a front view of my time-lock and attachments on the inside of a safe or vault door, the lock-bolt being shown in the unlocked position. Fig. 2 represents a section of Fig. 1 with the lock-bolt in the locked position. Fig. 3 is a view of the outside of a safe or vault, showing a connecting cord or wire extending through the wall of a safe or vault into a banking-room.

A is the counter-balance lever; B, the bolt; C C′, the yoke; D D′, the dials; and E E′ the winding-indicators, as shown and described in my said patent. Underneath the counter-balance lever is a curved spring, F, pivoted at *f* to the lock-case, and bearing at its opposite end on the under side of the said lever. Behind this lever is a spring-barrel, G, provided with a spring lifting-pin, *f′*, and a pin, *g*, which latter bears on the top of the lever, and tends, by the force of the spring within the barrel, to hold down that end of the lever connected with the bolt B. Triggers H H′, pivoted at *h h*[1], hinged together, and pressed upward by the spring *h*[2], are located underneath the lever and spring-barrel, and are operated on at their outer ends by the studs *i i′* on the winding-indicators whenever the time-movements are nearly run down. *x*, *y*, and *z* are radial pins or studs projecting from the periphery of the spring-barrel, the first two for engagement with the triggers, as will presently appear, and the last connected to the spring-lever J by means of the link *j*. K is a spring-slide upon the inside of the wall of the safe or vault, provided with a hook or projection, *k*, to engage with one arm of the lever J. To this spring-slide is attached a cord or wire, L, which passes through the wall of the safe or vault, and may be continued to any part of a bank, and be provided with knobs or rings within convenient reach of the bank officers, so that it can be pulled to instantly lock the time-lock.

The operation of the parts described, as will be obvious from the drawings, is as follows: Supposing the spring-barrel G stands in such position that the tooth *y* engages with the triggers; it has then no effect on the counter-balance lever A, which controls the bolt B through the action of the yoke C C′, because the lifting-pin *f′* does not, in that position, raise the curved spring F to tilt the lever. Yet in that position the triggers may be tripped by the studs *i i′* on the winding-indicators, and the lock-bolt lowered to the unlocked position before the time movements have fully run down, as is specified in a pending application of mine for a supplemental unlocking mechanism, which I do not claim in this application.

If the lock is unlocked, and the safe-door closed, and the bolt-work merely thrown forward into engagement with the jamb, and the barrel-spring stands in the position just described—which is the ordinary condition of affairs during the day-time—then the lock can be instantly locked from the outside of the safe or vault by pulling on the cord or wire L, which will depress the spring-slide K, tilt the

spring-lever J, and turn the spring-barrel G until the pin *x* engages with the triggers, and the curved spring F has tilted the counter-balance lever and elevated the lock-bolt to the locked position behind the tongue-piece attached to the bolt-work. Nothing will then unlock the lock but the action of the studs on the winding-indicators to trip the triggers just before the time-movements run down, when the pin *g*, driven by the spring-barrel, will tilt the counter-balance lever and depress the lock-bolt to the unlocked position.

The object of using the curved spring F, instead of a rigid pin on the spring-barrel to tilt the counter-balance lever, is to enable one using the lock to set it in the locked position to remain over Sunday or a holiday without disturbing the arrangement of the sliding pins in the large dials through which unlocking is effected on other days, as described in my patent. This may be done when the pin *x* is in engagement with the triggers, the bolt in the locked position, the bolt-work of the door thrown forward, and the safe or vault door open by depressing that end of the counter-balance lever connected with the lock-bolt with the finger, (the curved spring F permitting this depression,) and then retracting the bolt-work of the door, so that the tongue-piece enters the aperture in the lock-case over the lock-bolt, and prevents it from being again raised by the action of the curved spring F. This accomplished the door may be closed and the bolt-work thrown, thus liberating the lock-bolt, which will be elevated by the curved spring to the locked position, and so remain dogging the bolt-work until the time-movements nearly run down on the morning of the third day.

It will be obvious to one skilled in mechanics that different equivalent appliances might be substituted for the spring-barrel, and for other minor features of my device, without departing from the substance of my invention; and, therefore, I do not limit myself to the details here set forth; but,

Having thus described my invention in the form that I deem preferable, what I claim as new, and desire to secure by Letters Patent, is—

1. In combination with a time-lock, a locking attachment, substantially as described, whereby the time-lock can be instantly locked from any convenient point outside of a safe or vault within which the lock is attached.

2. A time-lock, provided with mechanism substantially as described, whereby it can be instantly locked from the outside of a safe or vault to which it is applied, at a distance therefrom, and also with supplementary unlocking mechanism by which it will always be automatically unlocked before the time movements have fully run down.

3. The lever J, or its equivalent, pivoted on the time-lock case, and suitably connected with the interior of the same, in combination with devices, substantially as described, whereby its manipulation from the outside of a safe or vault can be effected to lock the time-lock.

4. The spring-barrel, or its equivalent, provided with the pins or studs X, Y, and Z, for the purpose specified.

5. The combination of the spring-barrel, the curved lifting-spring, and the counter-balance lever, substantially as described.

6. The combination of the spring-barrel, having the projections X, Y, and Z, the triggers, and the winding-indicators, substantially as described.

In testimony whereof I have hereunto subscribed my name.

EMORY STOCKWELL.

Witnesses:
C. E. VAIL,
WALTER FULLER.