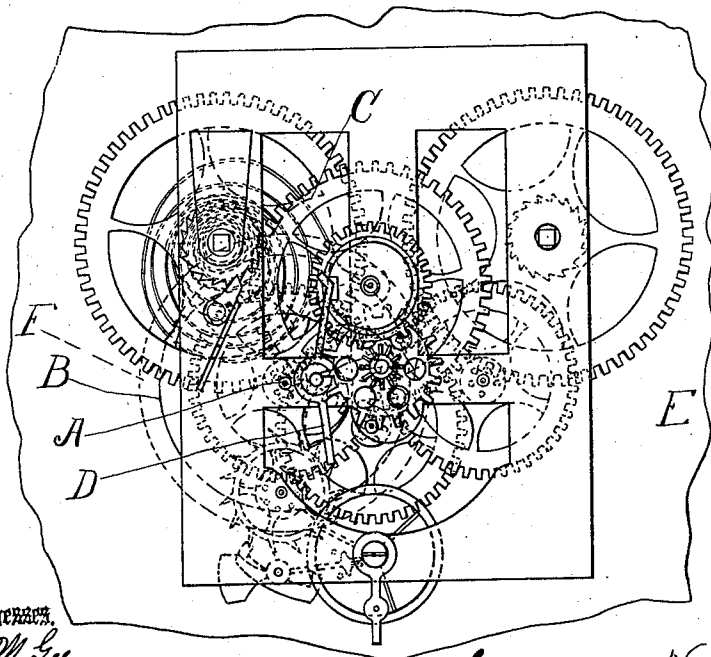
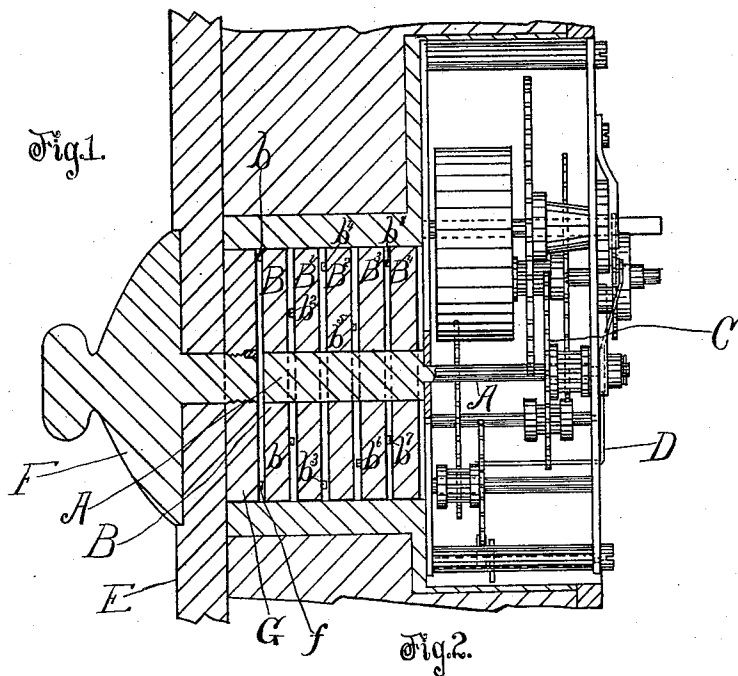


(No Model.)

L. N. BEDFORD.
TIME LOCK.

No. 478,213.

Patented July 5, 1892.



Witnesses,
W. M. Lee.
F. M. Townsend.

Inventor,
Lyman N. Bedford
by Hazard & Townsend
his Attys.

UNITED STATES PATENT OFFICE.

LYMAN N. BEDFORD, OF SAN BERNARDINO, CALIFORNIA.

TIME-LOCK.

SPECIFICATION forming part of Letters Patent No. 478,213, dated July 5, 1892.

Application filed June 18, 1891. Serial No. 396,686. (No model.)

To all whom it may concern:

Be it known that I, LYMAN N. BEDFORD, a citizen of the United States, residing at San Bernardino, in the county of San Bernardino and State of California, have invented a new and useful Improvement in Time-Locks, of which the following is a specification.

My invention relates to that class of time-locks in which the time mechanism is arranged to disarrange the permutation tumblers.

The object of my invention is to increase the efficiency of such locks.

My invention consists of the combination of a rotating arbor, time mechanism arranged to rotate the arbor, and a series of permutation-tumblers journaled upon such arbor and adapted to rotate therewith and to be rotated thereupon.

The accompanying drawings illustrate mechanism for carrying out my invention.

Figure 1 shows a section of a safe-door and a train of tumblers mounted upon a rotating arbor or spindle connected with mechanism for rotating the arbor, which mechanism is shown in plain side elevation. Fig. 2 is a view of the same, looking from the inner side of the door.

No illustration is made of the bolts and other portions of the lock not relating immediately to my invention.

A represents the rotating arbor or spindle upon which the series of tumblers B are journaled.

In Fig. 1 the tumblers are shown in mid cross-section to expose the spindle, which is shown partly in section. The rotating arbor A is connected with a suitable train C of time mechanism arranged to rotate the arbor.

D represents suitable stop mechanism, for stopping the rotation of the arbor at the time desired.

E represents a portion of the door in cross-section.

F represents the outside tumbler-operating handle journaled in the door.

G represents the actuating-tumbler fixed to the outside tumbler-operating handle. It is to be understood that this actuating-tumbler

is essentially a part of the handle, and that its form as shown is non-essential. It need only to consist of an arm provided with the actuating-pin *f*, which engages the pin *b* on the first tumbler B to move such tumbler when it is desired to adjust the tumblers to allow the bolts to be drawn.

The operation is as follows: The time mechanism is wound and set in operation and the stop mechanism is set to stop the time mechanism or its connection with the arbor, so as to stop the rotation of the arbor at the time desired. This is done from the inside of the safe or other door before such door is closed and the bolts are thrown into place, thus releasing the tumblers and leaving them free to rotate with the arbor. This causes them to be immediately thrown out of their adjustment, so that the bolts cannot again be withdrawn. The arbor A continues to turn until the mechanism operates to stop it. In case an attempt is made to unlock the lock while the spindle is rotating, such rotation causes the displacement of each tumbler as soon as it is adjusted, so that it may be made impossible to unlock the lock even though protected by only two tumblers. When the arbor stops rotating, the person in possession of the combination opens the lock with the same ease as though the lock were unprovided with the time mechanism, and this is the case whether the rotation ceases because of the operation of the stop mechanism or by accidental stoppage of the time mechanism, thus giving absolute security against being locked out by stoppage of the time mechanism.

Now, having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination of the rotating arbor, time mechanism arranged to rotate the arbor, and a series of tumblers journaled upon such arbor and adapted to rotate therewith and to be rotated thereupon, substantially as described.

L. N. BEDFORD.

Witnesses:

JAMES R. TOWNSEND,
A. D. BEDFORD.