J. B. OVERMYER & J. A. HUSTON

TIME-LOCK.

No. 193,544. Patented July 24, 1877.

Fig: 1.

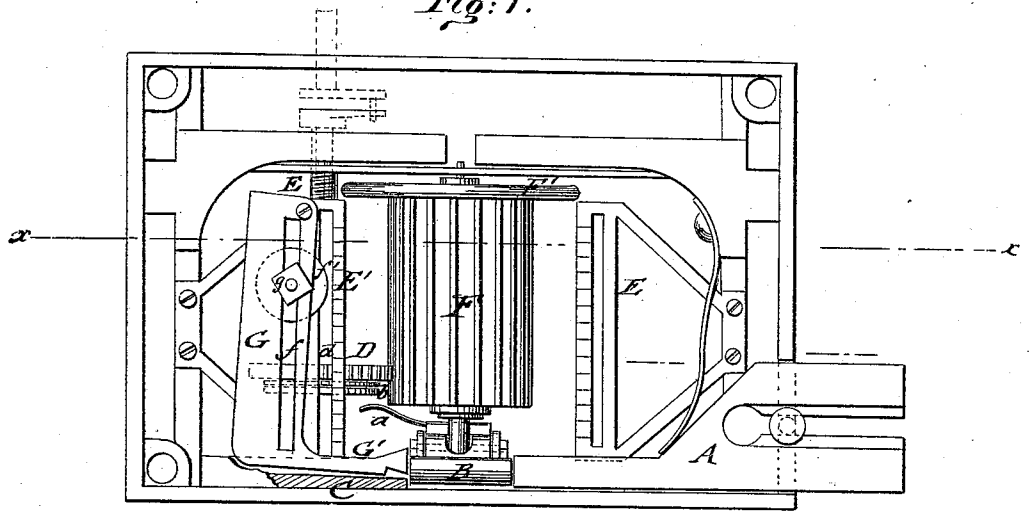


Fig: 2.

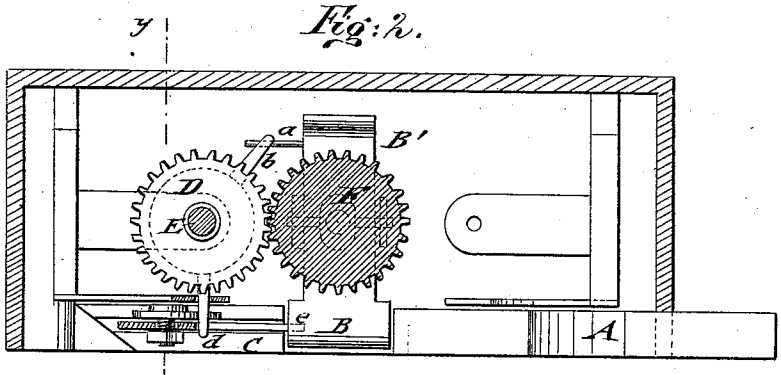
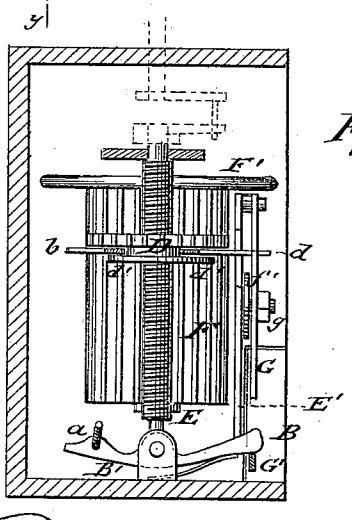


Fig: 3.



WITNESSES:

Chas. Nida

J. H. Scarborough.

INVENTORS

J. B. Overmyer.

BY J. A. Huston.

ATTORNEYS.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN B. OVERMYER AND JAMES A. HUSTON, OF NEW LEXINGTON, OHIO.

IMPROVEMENT IN TIME-LOCKS.

Specification forming part of Letters Patent No. **193,544**, dated July 24, 1877; application filed May 5, 1877.

To all whom it may concern:

Be it known that we, JOHN B. OVERMYER and JAMES A. HUSTON, of New Lexington, in the county of Perry and State of Ohio, have invented a new and Improved Time-Lock, of which the following is a specification:

In the accompanying drawings, Figure 1 represents a front view; Fig. 2, a horizontal section on line *x x*, Fig. 1; and Fig. 3 a vertical transverse section on line *y y*, Fig. 2, of our improved time-lock.

Similar letters of reference indicate corresponding parts.

The object of this invention is to so improve the time-lock for which Letters Patent have been granted to us under date of July 25, 1876, and numbered 180,262, that the setting of the lock is facilitated and accomplished in a simple manner without interfering with the time-pieces that work the bolt-releasing mechanism, and also the stop mechanism, arranged to be thrown at a certain fixed time in automatic manner.

The invention consists of a time-lock in which the releasing-nut is moved by time mechanism to throw out the lever-stop and release the bolt at the proper time, the nut being reset by a toothed drum gearing with the toothed nut.

The lever-stop is retained in position by the bottom arm of a pivoted lever that is automatically worked by the pointer of the nut engaging an adjustable disk of the retaining-lever.

In the drawings, A represents the bolt of our time-lock; B, the lever-stop, and C the bracket, by which and the stop the bolt is prevented from being drawn back.

The stop B is attached to the front end of a fulcrumed and spring-acted lever, B′, whose rear arm is engaged by an arm, *b*, of the vertically-traversing nut D, which is moved along a vertical screw-shaft, E, by means of a time-movement, which is connected with the upper end of the screw-shaft, so as to cause it to rotate.

The nut D is provided with a pointer, *d*, that moves along a graduated scale, E′, the pointer *d*, as well as arm *b*, projecting radially from a ring which is fitted loosely on a flanged collar, *d′*, of nut D, so that the latter may turn independently.

The rotation of the shaft E in the nut, or the rotation of the nut on the shaft, causes the nut to move up or down on the shaft, and the ring (with its pointer and arm) necessarily partakes of the latter movement without revolving.

The nut D is toothed at the circumference, so as to be engaged by a toothed drum, F, that is turned by means of a milled thumb-disk, F′, for setting the nut to any desired height on the scale E′. The higher the nut is set thereon the longer will be the time before the bolt is released.

To secure the reliable working of the lock, two or more time-movements and releasing devices may be arranged, so that in case one time-piece should stop the other would release the bolt.

All the traversing nuts could be made to intermesh with the drum F, so that they could be simultaneously set by the same. During the downward motion of the nut the drum remains perfectly still, as the screw-shaft moves the nut, while during the upward motion of the nut, by the action of the drum, the screw-shaft is at rest, producing thus the setting of the nut to the required position without interfering in the least with the regular running of the time-movement.

A lever-plate, G, is pivoted to the upper end of the scale E′, and is provided at its lower end with the arm G′, which is guided and moved in a groove of the bracket C toward the lever-stop B, and dropping below the same, so as to engage a bottom recess, *e*, of the same, when the stop is raised by the releasing-arm *b* of the nut D engaging the rear arm of the stop.

The lever-plate G has a longitudinal slot, *f*, along which a disk, *f′*, is adjusted by a set-screw, *g*, to be engaged by the pointer *d*, for withdrawing the arm G′ automatically by the downward motion of the nut.

By a proper adjustment of the disk *f′* the bolt may be thrown, while the stop is retained in raised position by the arm G′, until the pointer, bearing against the disk, carries the arm back and allows the stop to drop. Thus the additional facility of the automatic throw-

ing of the stop of the time-lock at a certain fixed time may be accomplished, which adds greatly to the usefulness and convenience of the lock.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a time-lock, of the sliding bolt A and lever-stop B with the releasing traversing nut D, and the intermeshing-drum F, to set the releasing-nuts to any desired position without interference with the actuating watch-movements, substantially in the manner and for the purpose specified.

2. The combination of the stop-lever B with the slotted and pivoted lever-plate G, having bottom arm G′, and adjustable disk *f′*, and the pointer *d* of the traversing releasing-nut D, to produce the automatic dropping of the lever-stop at a fixed time, substantially as and for the purpose specified.

JOHN B. OVERMYER.
JAMES A. HUSTON.

Witnesses:
REUBEN BUTLER,
JOS. G. HUFFMAN.