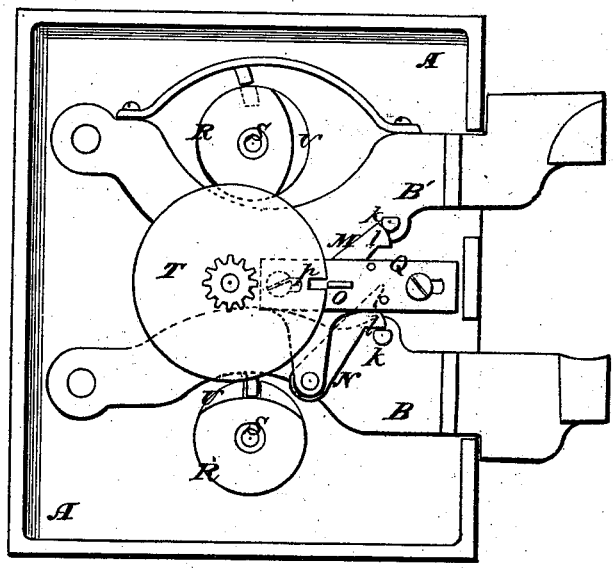
J. WEIMAR.
Time-Lock.

No. 210,070. Patented Nov. 19, 1878.



Witnesses
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UNITED STATES PATENT OFFICE.

JACOB WEIMAR, OF NEW YORK, N. Y., ASSIGNOR TO HERRING & CO., OF SAME PLACE.

IMPROVEMENT IN TIME-LOCKS.

Specification forming part of Letters Patent No. **210,070**, dated November 19, 1878; application filed April 27, 1877.

To all whom it may concern:

Be it known that I, JACOB WEIMAR, of the city, county, and State of New York, have invented certain new and useful Improvements in Time-Locks, whereof the following is a specification:

This invention relates to time-locks composed of a time mechanism and a combination or permutation lock combined.

Two permutation-locks are combined with a time-wheel, (driven from a time mechanism by an intermediate device common to both locks,) through which the time mechanism may obstruct or release the bolts at the required times, for the locking and unlocking of both or either of the locks.

The intermediate devices here consist of a bar adapted to move or slide toward and away from the time-wheel, and provided with certain cam-pieces that take the motion of the bolt in unlocking and transfer it to said bar. The latter, or some part affixed thereto, rests against or is brought in contact with the periphery of the time-wheel, except at the proper time for unlocking, at which time a notch in the time-wheel permits the sliding bar to move and the bolts to unlock.

The cam-pieces are stationary when taking the unlocking strain of the bolts, but are constructed to yield and allow the lock-bolt to move when the bolts are being locked, without moving the sliding bar, after which the cam-pieces resume their normal place as fixtures of the sliding bar.

In the annexed drawing I have shown parts of a lock which illustrate the invention.

A is a lock-case. B B′ are the bolts, which, in this instance, are in the form of vibrating latches, and represent those used in what is known as the "Dexter" combination-lock. S is the operating-spindle, to which is fixed a suitable handle or knob, by which the lock is operated. Said spindle carries the usual rotary tumblers U, the bolts having the corresponding "fence." R is a cam or eccentric, by which the bolt is lifted and lowered when the spindle S is rotated. T is a time-wheel, having a pinion for gearing into a time mechanism or clock-work, said wheel being the part which, under control of a time mechanism, forms the obstruction to the unlocking of the lock excepting at the time previously set. Q is a bar adapted to slide or move in suitable bearings at right angles or thereabout to the motion of the bolts of the two locks, and said bar, or some part fixed thereon, is adapted to enter a notch or slit, *p*, in the time-wheel in the unlocking. In this instance such part is a stud or projection, *o*. M N are cam-pieces adapted for co-operation with a stud or projection, *k*, on the bolts, respectively, to cause the sliding bar Q to move toward the time-wheel in the unlocking or downward motion of the bolt. Such cam-pieces are pivoted to the sliding bar Q.

When the bolt is in the unlocked position, and the time-wheel is set for unlocking, the projections *k* are beneath the cam-pieces, as shown by the bolt B, and when subsequently the bolts are thrown into locked position—that is, to lock the combination-lock after the time mechanism is set—the cam-pieces yield, to allow the studs *k* to pass them, whereupon they resume the position shown, with the studs *k* above and resting on the cam-surface of the cam-piece, as shown by the bolt B′. When in this position, if the bolts are released or forced downward in any manner for unlocking them, or either of them, the cam-surfaces of the cam-pieces receive the force and transfer it to the stud *o* of the sliding bar Q, and thence to the periphery of the time-wheel T, if it be not in position, as shown, for unlocking; from which it will be seen that such time-wheel obstructs the unlocking of the bolts, except when the notch *p* therein is brought opposite the stud *o* on said bar Q, at which time nothing prevents the bolts from moving and unlocking when operated in the usual way of combination-locks.

For the part *k* any device may be substituted which, moved by or with the bolt, will operate the sliding bar Q through suitable cams.

The cam-pieces M N also may be displaced

by any other cam that will perform substantially the same office.

I claim as my invention—

1. The combination of the bolts, the sliding bar Q, and cam-pieces M N.

2. The combination of the bolt-studs *k*, the cam-pieces, the sliding bar, and time-wheel.

3. The combination of the time-wheel, sliding bar, cam-pieces, and bolts with the operating-spindles of a permutation lock or locks.

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Witnesses:

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