

(No Model.)

2 Sheets—Sheet 1.

C. A. ERICHSON.
LOCK.

No. 533,006.

Patented Jan. 22, 1895.

Fig. 1.

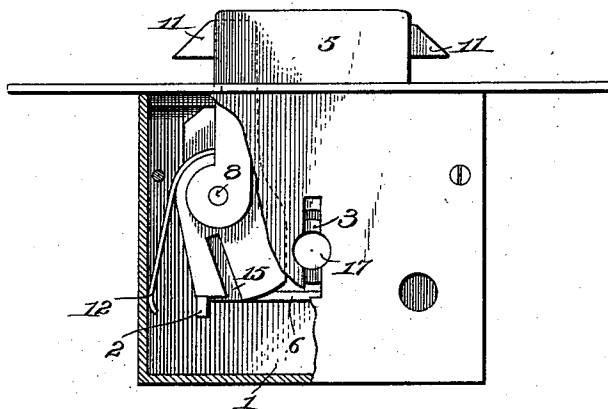
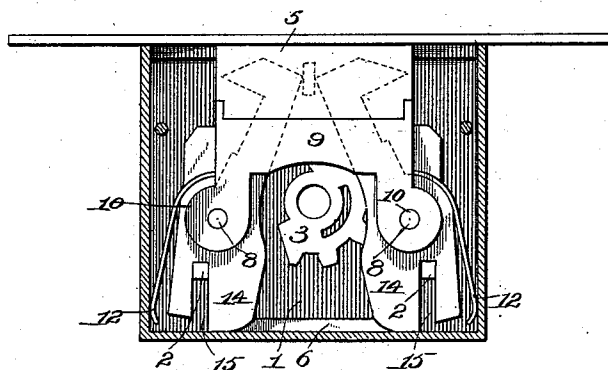


Fig. 2.



witnesses:

Harry T. Rohm.
Walter E. Allen.

Inventor:

Charles A. Erichson.

By Knight Bros.
Atty.

(No Model.)

2 Sheets—Sheet 2.

C. A. ERICHSON.
LOCK.

No. 533,006

Patented Jan. 22, 1895.

Fig. 3.

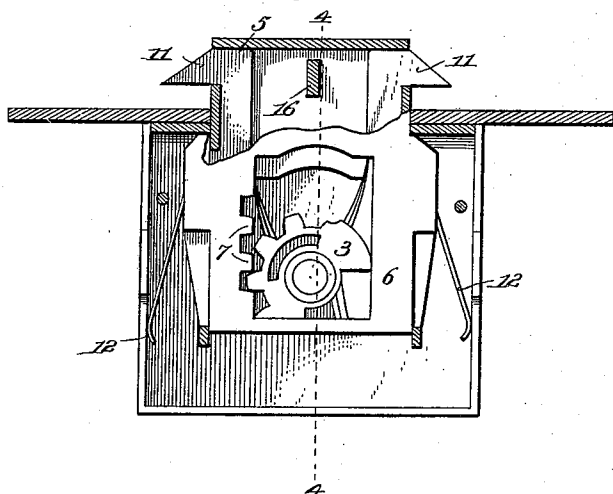


Fig. 4.

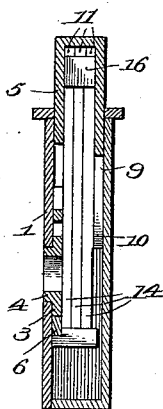


Fig. 5.

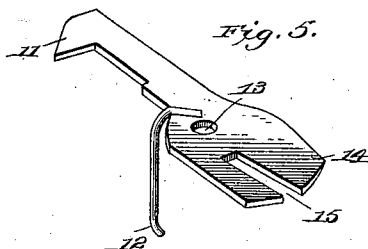
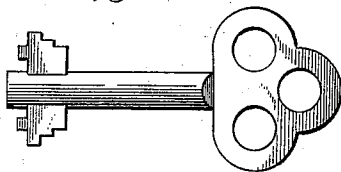


Fig. 6.



witnesses:
Henry S. Arthur.
Walter E. Allen.

Inventor:
Charles A. Erichson.
By Knight Bros.
Atty.

UNITED STATES PATENT OFFICE.

CHARLES A. ERICHSON, OF STAMFORD, CONNECTICUT, ASSIGNOR TO THE
YALE & TOWNE MANUFACTURING COMPANY, OF SAME PLACE.

LOCK.

SPECIFICATION forming part of Letters Patent No. 533,006, dated January 22, 1895.

Application filed January 3, 1894. Serial No. 495,517. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. ERICHSON, a citizen of the United States, residing at Stamford, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Cabinet-Locks, of which the following specification, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to improvements in the form of automatically locking locks for pianos, desks, &c., such as is shown in Patent No. 295,270, granted March 18, 1884, to Frank W. Mix.

In my improvement I employ a hollow bolt within and attached to which are the organized locking mechanism and tumblers. The locking mechanism comprises a series of spring pressed hooks which project from each side of the hollow bolt, while the tumblers are formed integral with the locking hooks and are adapted to engage with the stumps that project up from the lock case. The springs controlling the combined locking hooks and tumblers tend to keep the hooks always in locked position. When the tumblers are set so as to disengage the stumps, the hooks are in unlocked position, and the hollow bolt carrying the combined hooks and tumblers can be moved back, and the desk lid or other part fastened can be withdrawn.

In order that my invention may be fully understood I will first describe the same with reference to the accompanying drawings and afterward point out the novel features in the annexed claims.

In said drawings:—Figure 1 is a top elevation of my improved lock showing the parts in locked position, and having a portion of the upper plate of the case broken away to show the controlling tumblers. Fig. 2 is a similar view having the top plate entirely removed, and showing the parts in unlocked position. Fig. 3 is an inside view taken from the opposite side of the lock, and showing the parts in locked position. Fig. 4 is a longitudinal sectional view taken on the line 4—4 of Fig. 3. Fig. 5 is a perspective view of one of the series of combination locking hooks and tumblers. Fig. 6 is a side elevation of the key.

1 is the base plate of my improved lock to which the stumps or lugs 2 are securely riveted.

3 is a rotatable mutilated pinion formed with the integral collar 4 which is journaled in the base plate 1.

5 is the hollow bolt, which is formed with the extended cut-out portion 6 having the rack teeth 7 with which the teeth of the pinion 3 mesh, so that the rotation of the pinion 3 will cause a longitudinal movement of the bolt. Projecting up from the extension 6 of the bolt at each side are the integral pivot posts 8, upon which are pivotally mounted the combination locking hooks and tumblers, of the construction presently to be explained.

9 is a removable plate formed with perforated extensions 10. The plate 9 fits over the locking hooks and tumblers after they are put in place and the perforations of the extensions 10 engage the pivot posts 8. It will thus be seen that the hollow bolt carries the organized set of locking hooks and tumblers.

The construction of the locking hooks and tumblers is shown clearly in Fig. 5. Each comprises the hook 11, an actuating spring 12 suitably connected to it, a pivot opening 13 which is adapted to journal on one of the posts 8, and an enlarged dog or tumbler end 14 which is adapted to engage with one of the stumps 2 for preventing movement of the bolts, and is formed with a longitudinal slot 15 which is adapted to receive one of the stumps 2 and permit the movement of the bolt when the tumbler is properly set. The combination hooks and tumblers are assembled and arranged in the hollow bolt so that the springs 12 will engage the side walls of the lock case and tend to throw the hooks always into locked position. For the purpose of limiting the backward movement of the hooks within the hollow bolt, a stop 16 is securely riveted centrally within the hollow casing. In Fig. 6 I have shown a double-bitted key which is adapted to disengage the two series of three tumblers each and slide the bolt back.

The operation of my lock may be briefly described as follows:—The double-bitted key being inserted in a keyhole 17, is turned to the right until the tumbler ends 14 are engaged

and move on the pivot-posts 8 until the slots 15 co-incide with the stumps 2. In this position the hook ends 11 are also moved out of engagement with the keeper of the lock, and the pinion 3 which is also engaged by the key, draws the bolt back by reason of its engagement with the rack teeth 7.

My improved lock can be applied to a rolling top desk by attaching the lock proper to either the curtain or the table, as may be preferred. In cases where the lock is fastened to the curtain of the desk it is unnecessary to withdraw the hollow bolt, but simply to move the spring hooks out of engagement with the keeper, when the curtain can be raised and the key removed, leaving the lock in locked position and ready to automatically engage the keeper when the top is closed. When, however, the lock proper is attached to the table or desk, the bolt should be entirely withdrawn so as to leave the lock flush with the surface of the table and not form any obstruction.

It is obvious that a single series of tumblers could be employed if preferred without departing from the spirit of my invention and in this case a single bitted key would of course be used.

It will be observed that the hollow bolt protects the edges of the combination hooks and tumblers, so that no tool can be inserted between the cover and the table of the desk to

press back the tumblers and unlock the lock. This feature of protecting the edges of the hooks, however, I do not claim as my invention, it being the invention of Frank W. Mix, of Stamford, Connecticut, who has filed an application for a patent thereon.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. In combination with a movable hollow bolt, a combined locking hook and tumbler formed in an integral piece, and adapted to engage the keeper and dog the movable bolt, substantially as described.

2. In a lock, the combined locking hook and slotted tumbler, in combination with the dogging stump located to enter the slot of said tumbler when the latter is properly set as described.

3. In combination with the movable hollow bolt, a spring-pressed combined locking hook and tumbler formed in an integral piece, a pinion engaging the hollow bolt, and a key adapted to act directly upon the combined hook and tumbler and which first sets the tumbler and then through the pinion withdraws the bolt, substantially as described.

CHARLES A. ERICHSON.

Witnesses:

FRANK W. MIX,
SCHUYLER MERRITT.