

(No Model.)

C. M. STINER.
LOCK.

No. 413,794.

Patented Oct. 29, 1889.

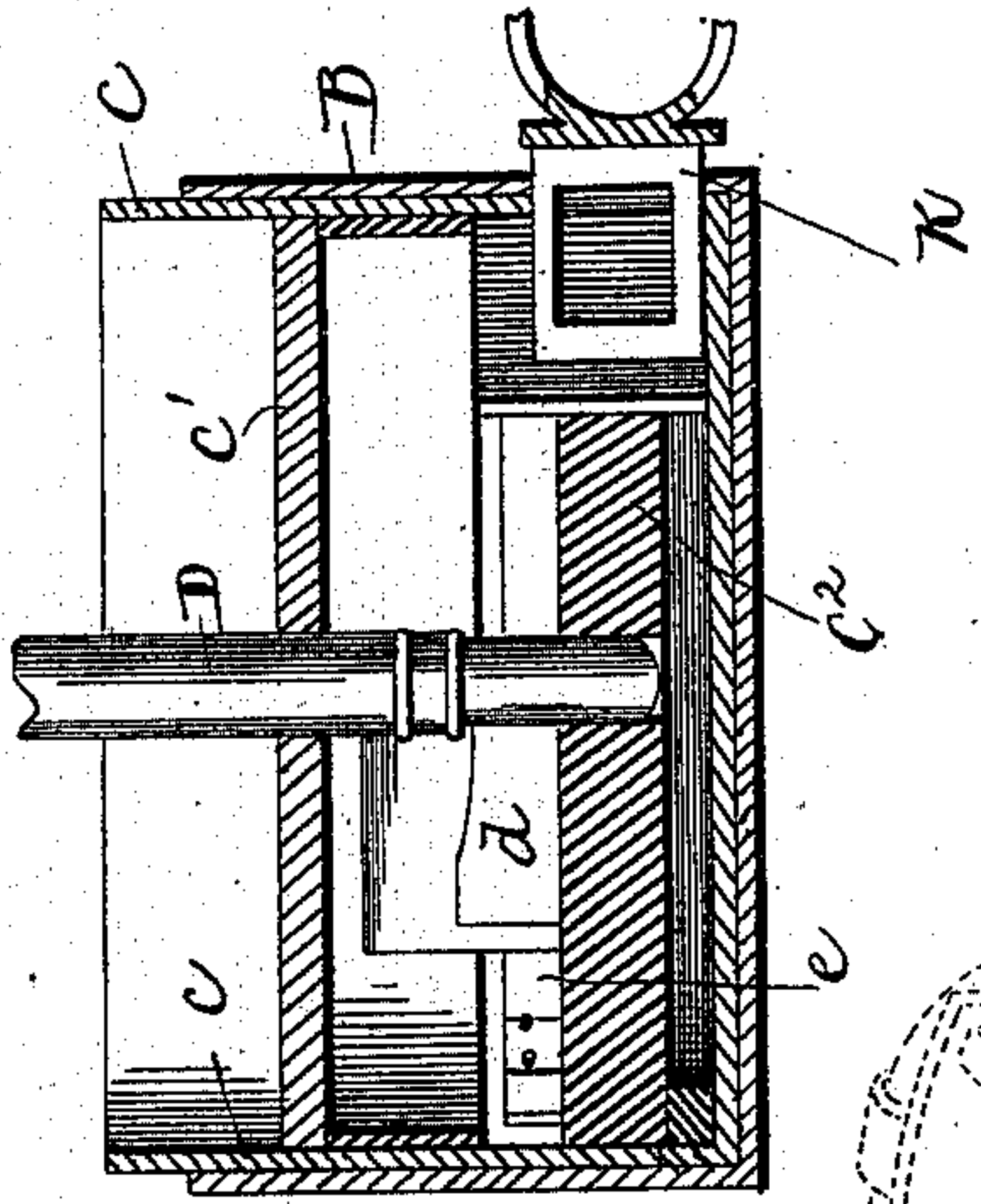


Fig. 3.

Fig. 2.

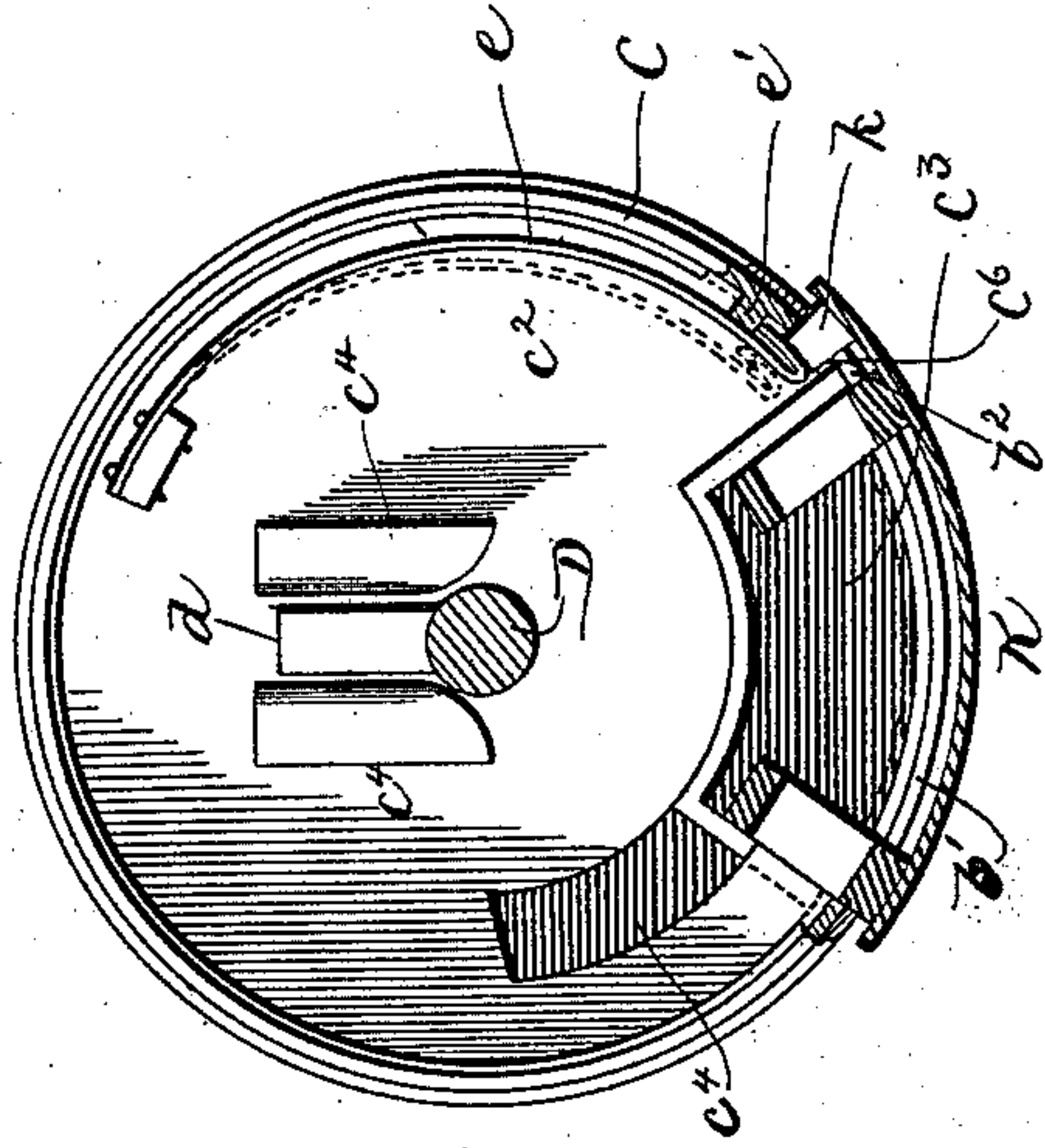


Fig. 5.

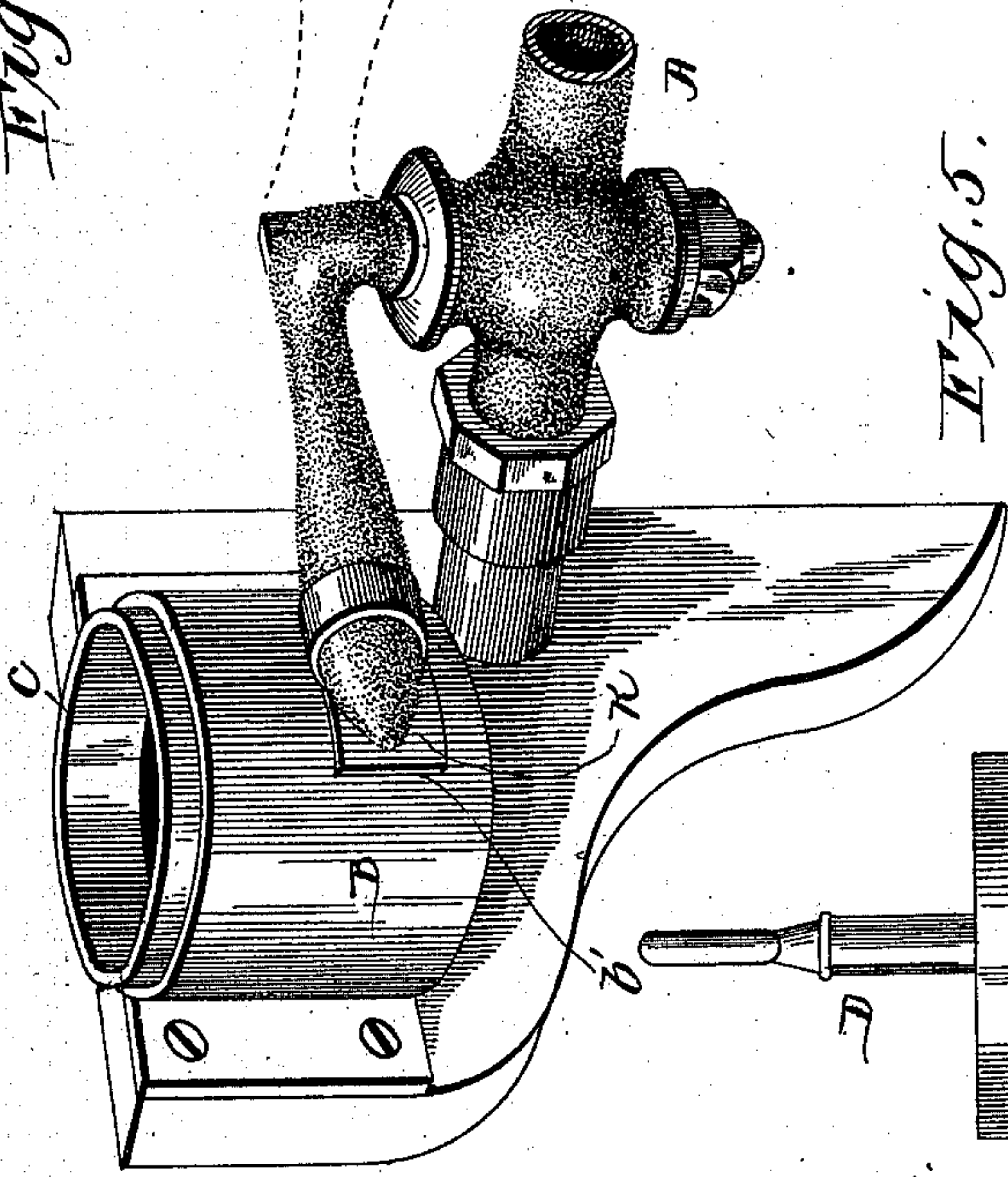
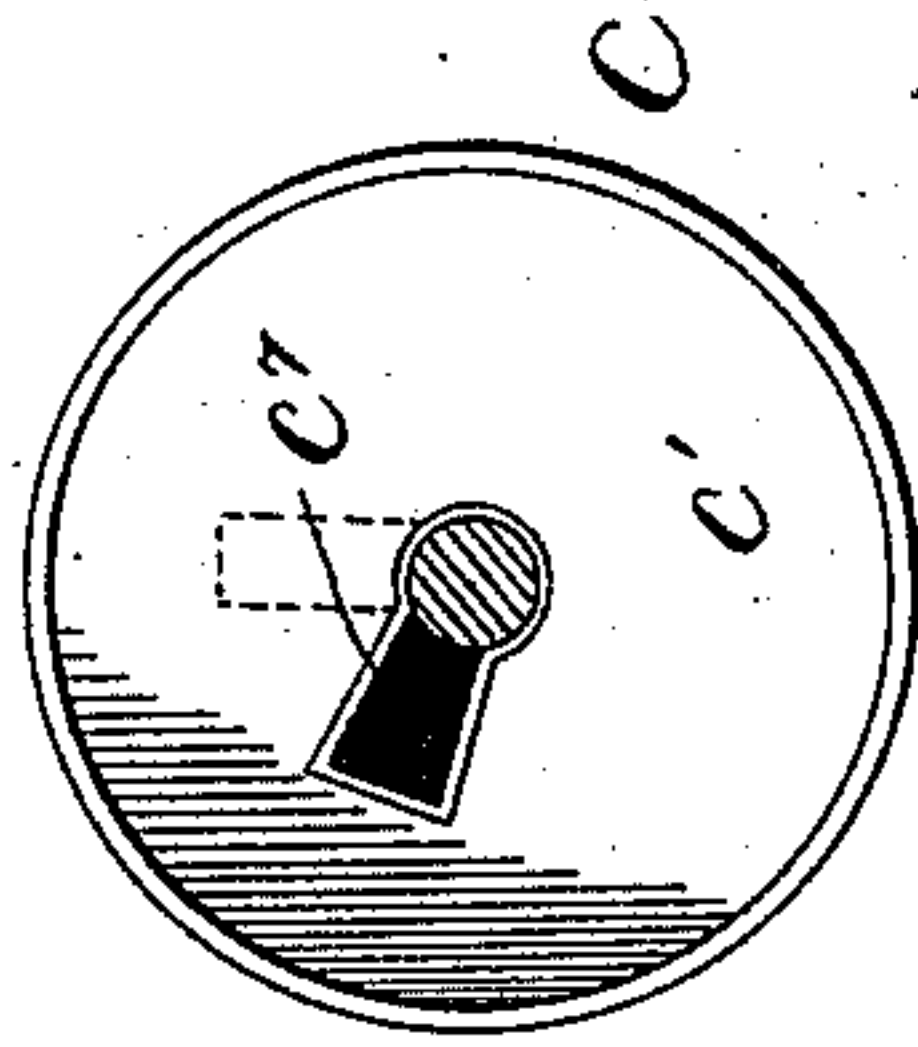
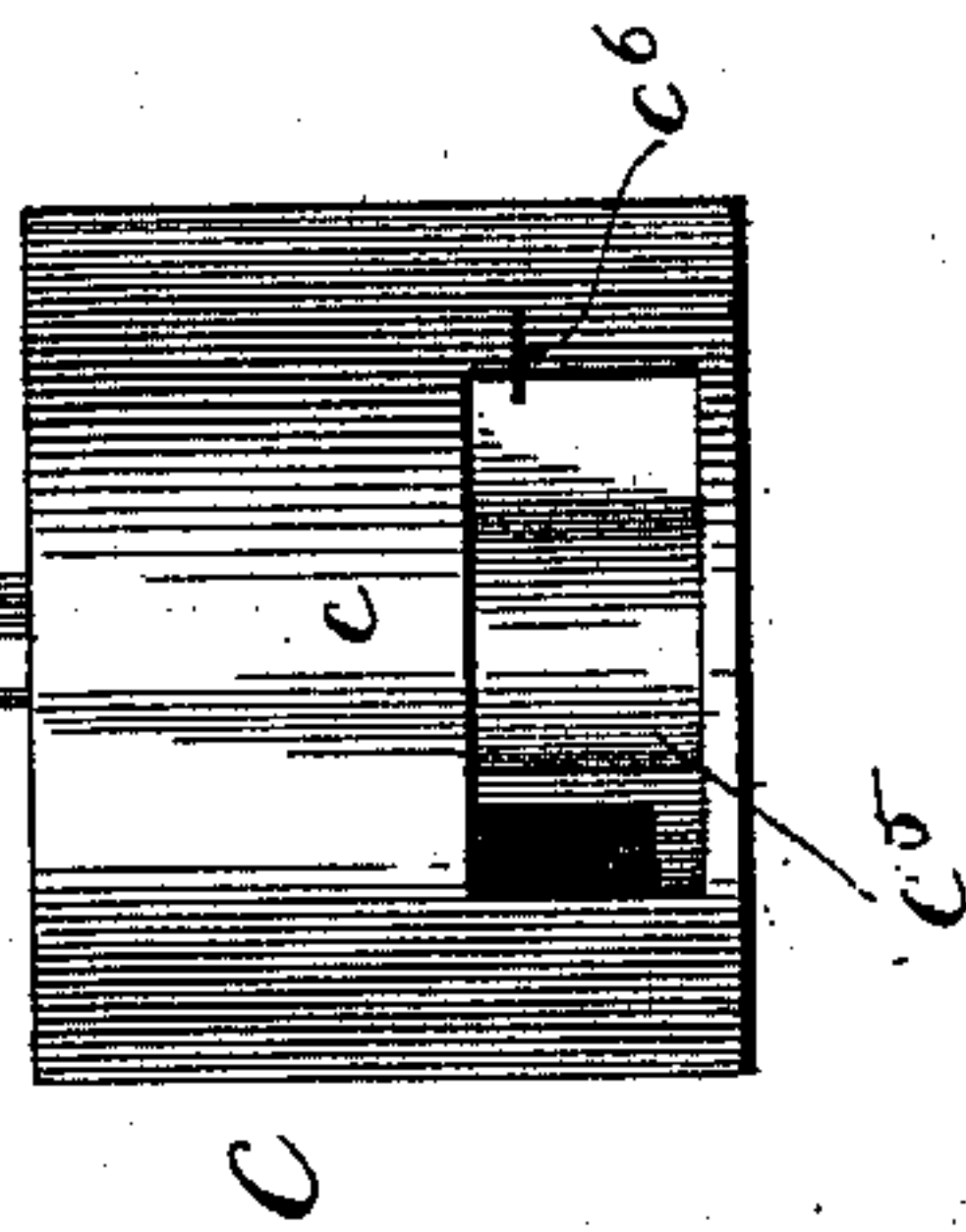


Fig. 1.

Fig. 4.



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LOCK.

SPECIFICATION forming part of Letters Patent No. 413,794, dated October 29, 1889.

Application filed April 23, 1889. Serial No. 308,309. (No model.)

To all whom it may concern:

Be it known that I, CLARENCE M. STINER, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Valve-Locks, of which the following is a specification.

The invention relates to the class of valve-locks. It is a device for insuring the performance of an act—such as the turning off of water in a building at night—and is accomplished by making the conditions such that it is impossible to perform another act—such as the locking of the front door of the same building—until the water has been turned off.

The device used consists of a key which fits two different locks. One of the locks is arranged so that when not in use as a seal it may be carried about or removed from its normal position, and its construction is such that it cannot be thus removed without first inserting the key and turning it. This act locks the key within the lock, so that when the lock is removed the key cannot be used in another lock until it has been released. To release the key necessitates the replacement of the lock and the throwing of the bolt. This having been accomplished the key may be removed from the lock and used on the second lock.

My invention is illustrated in one of its forms in the accompanying drawings, in which—

Figure 1 represents a perspective view of a valve or cock shown "cut off" and locked, the key being removed. Fig. 2 is a plan of the lock and its case with the retaining-plate removed, the keeper, the key, and a part of the frame being in section. Fig. 3 is a vertical section of the lock, case, and keeper. Fig. 4 is an elevation of the lock removed from casing, the key being retained by the same; and Fig. 5 is a plan of the lock, the key being shown in section.

The device which is about to be described is simply one form out of many which may be used in carrying out my invention. I therefore do not confine myself to the particular form of lock nor to the particular man-

ner of handling it. The central idea is to enforce the performance of an act or duty by rendering the performance of another act or duty dependent upon the performance of the first act.

I will now proceed to describe one method of carrying out this idea.

Referring to the drawings by letter, A represents a cock, valve, or switch controlling the supply of water, gas, electricity, or any other material for consumption to a building. B represents a lock casing or shell, and C a lock fitting into the same.

D is a key, which is made to fit lock C and also some other lock located in any desired place, and acting as a seal for any passage, path, inclosure, or cover. In this instance we will regard the other lock as being attached to the front door or main entrance of the building in which valve A is located, and for convenience' sake we will give it the indefinite reference X.

The lock C consists of a cylindrical shell *c*, having an opening *c*⁵ in its side. Two horizontal diaphragms *c*¹ and *c*² are fitted into the shell. *c*¹ is stationary and rigidly secured in place, while *c*² is adapted to rotate on its seat. *c*² is provided with an opening *c*³ in one side corresponding to opening *c*⁵, the purpose of which will be described later on. This diaphragm is also cut out, in the manner shown at *c*⁴, so as to form a bolt, which will be thrown across the opening *c*³ when the diaphragm is rotated. The key-socket is in the center. The toe of the key-shaft fits into an opening in the diaphragm, and the wing *d* lies between two lugs *c*⁴ *c*⁴, attached to the diaphragm. When the key is turned, it is obvious that the bolt will be thrown across the opening. I have, however, provided means for preventing the turning of the key unless certain conditions exist. The rotating diaphragm has attached to it a spring-hook *e*, which is adapted to spring into engagement with a lug or pin *e*¹, fixed to the shell of the locks. When these two devices are engaged, it is obvious that the bolt cannot be thrown. The head of the spring-hook extends up close to the opening *c*⁵, and the shell is provided with an opening or slit *c*⁶, adjacent to the head of the spring. The stationary diaphragm

c' is provided with the key-hole c^7 , through which the key is passed to reach the socket in diaphragm c^2 . It is obvious that the key can be removed from the lock only when the wing coincides with the key-hole, and this condition exists only when the bolt is thrown across the opening c^5 .

In carrying out the invention, I provide the socket or casing B, which is permanently mounted adjacent to the cock, valve, or switch operated upon. This shell has an opening b' , which coincides with the opening c^5 in the lock-casing proper when the latter is properly inserted in the shell. It also has a slit or opening b^2 , which coincides with the slit c^6 . Upon the operating handle of the cock, valve, or switch is securely fastened the keeper K, consisting of two strong metallic loops. As an attachment to the keeper a blade or lug k is provided.

When the valve presents an open passage, the handle occupies the position shown in dotted lines; but when the passage is completely cut off the handle must of necessity occupy the position shown in full lines—that is, the keeper K must have entered opening c^5 and blade k must have entered slit c^6 . The keeper, however, cannot enter the opening fully without the blade forcing the spring-hook e out of engagement with lug e' , thus putting the lock into position to be turned.

Having described the construction of a practical apparatus, let us follow out the operation. Let us suppose that the porter or clerk having charge of the keys and the closing and opening of a business-house uses the key in the morning to open the front door. After doing this he proceeds to the valve to admit water, gas, or electricity to the building for use during the day. On finding the valve locked he inserts the front-door key into the lock C, throws the bolt, and turns the valve-handle into the position shown in dotted lines. This act allows spring-hook e to engage with lug e' , thus locking the diaphragm and making it impossible to release the key. The whole lock C, together with the key, however, may be removed and hung up in the office or in any other safe place. When the building is to be closed for the night, it is found that the front door cannot be locked until the key is freed from lock C, and the only way to accomplish this is to place the lock into shell B, turn off the valve, and throw the bolt. The key may then be removed and used to lock the front door.

The form of lock here shown it is obvious may not be adhered to. I may use a "Yale" lock and key or any other form of lock wherein it is impossible to withdraw the key except it be turned to a certain point. It is obvious also, as before stated, that the invention may be used in many instances, among which may be mentioned in couples a front

and back door, any two doors, a stable-door and a house-door, a safe or vault and main door of a bank, and many other instances which it is not necessary to mention herein.

Having described my invention, I claim—

1. In combination with a lock-holder, a lock which may be embraced by the said holder, but which is removable therefrom, a keeper, and a key adapted to operate said lock to lock the keeper, holder, and lock together, for the purpose described.

2. A lock provided with a bolt and with a catch to prevent the movement of the bolt, in combination with a lock-holder in which the lock is placed, and a keeper provided with an attachment for releasing the bolt, substantially as described.

3. A lock provided with a bolt and with a catch to prevent the movement of the bolt, in combination with a lock-holder embracing the lock and provided with an opening, a keeper adapted to pass through or into said opening to become engaged with the lock, and an attachment upon said keeper for releasing the bolt, substantially as described.

4. A lock, in combination with a lock-holder which embraces the lock, said holder being provided with an opening, and a keeper adapted to pass through or into said opening to become engaged with the lock.

5. The combination, with a lock and key, of a holder for the lock, a keeper engaging with the lock-bolt to hold the lock, holder, and keeper together, and mechanism operating on the withdrawal of the keeper when it is unlocked to prevent the removal of the key from the lock, as described.

6. A portable lock constructed to retain or hold the key while the bolt is withdrawn, in combination with the key, a stationary lock-holder, and a keeper adapted to be locked to the lock when the bolt is thrown by the turning of the key.

7. A lock provided with a bolt, and a latch for holding the bolt in its withdrawn position, in combination with a keeper provided with a releasing device for releasing said bolt and allowing it to be turned when the keeper is brought into position to be locked to the lock.

8. The combination, with a key, of a lock, a bar to the removal of the key from the lock while the bolt is in the withdrawn position, a catch for holding the bolt in its withdrawn position, and a keeper provided with a device for releasing the bolt when the keeper is brought into position to be locked to the lock.

In witness whereof I have hereunto signed my name in presence of two subscribing witnesses.

CLARENCE M. STINER.

Witnesses:

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THOMAS K. TRENCHARD.