

H. R. Towne,

Prison Lock.

No. 111,586.

Patented Feb. 7. 1871.

Fig. 3.

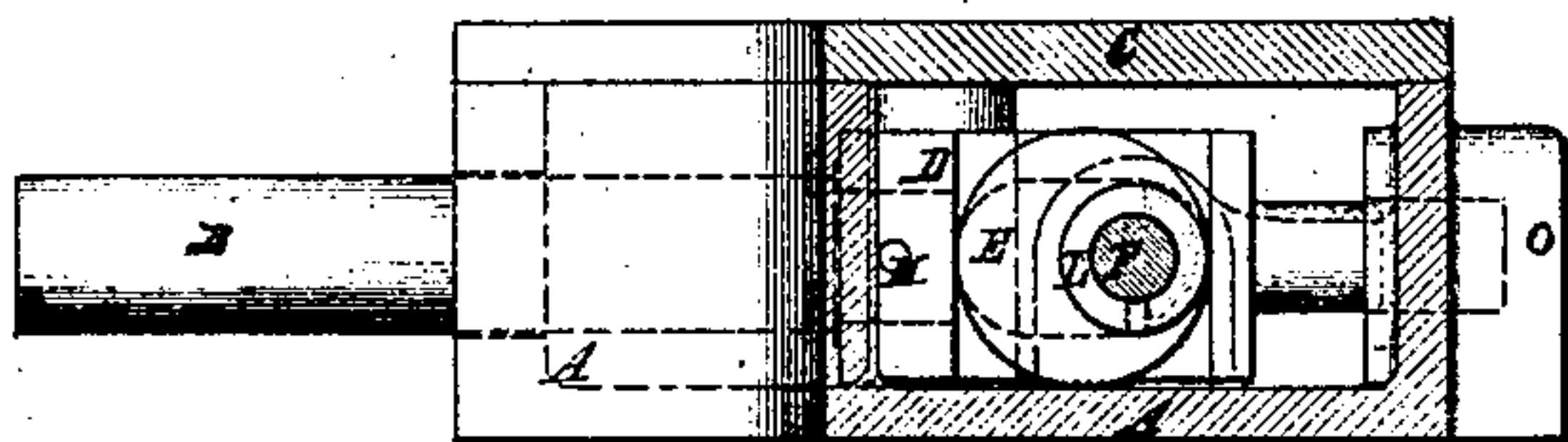


Fig. 1.

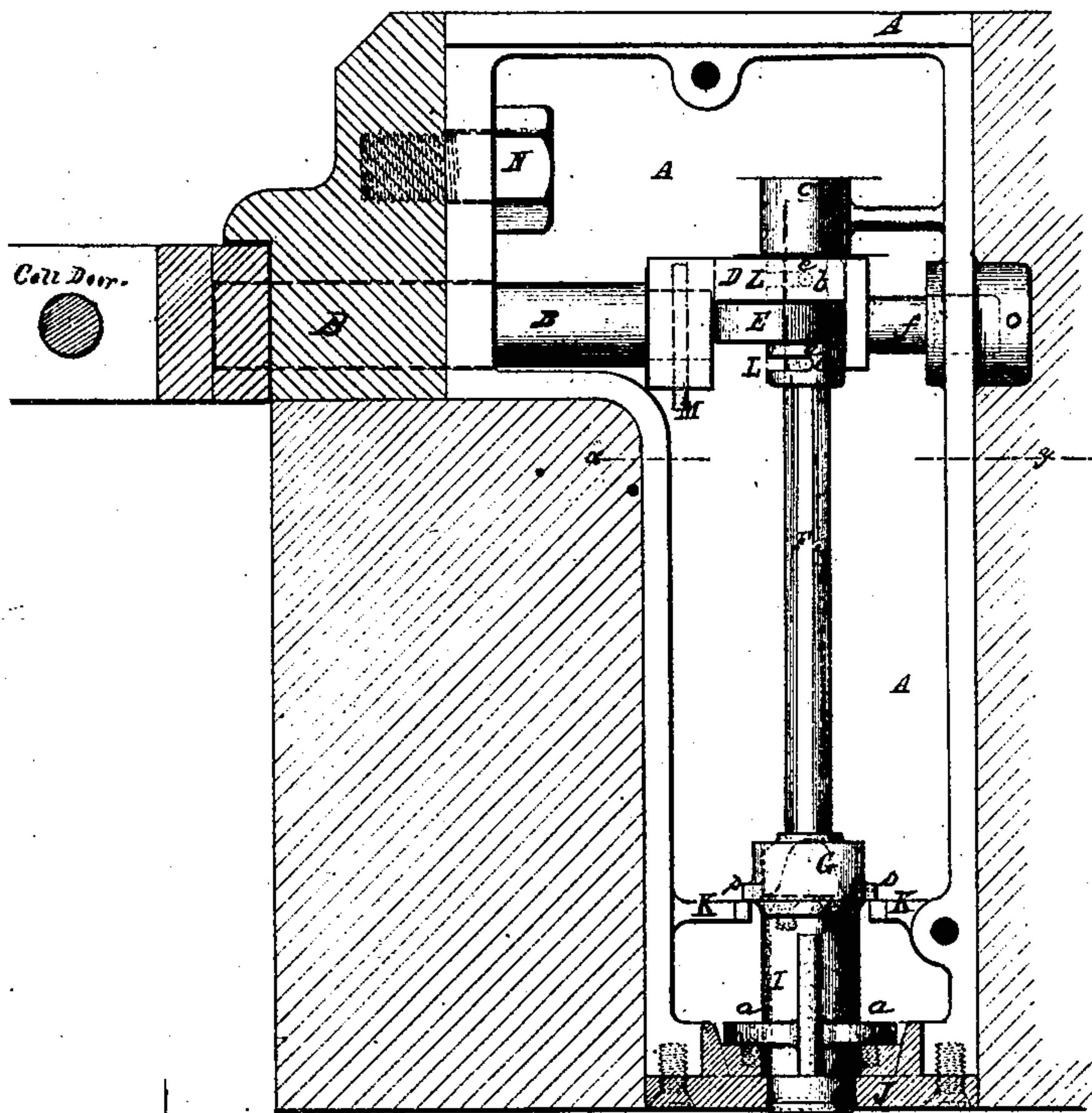


Fig. 2.

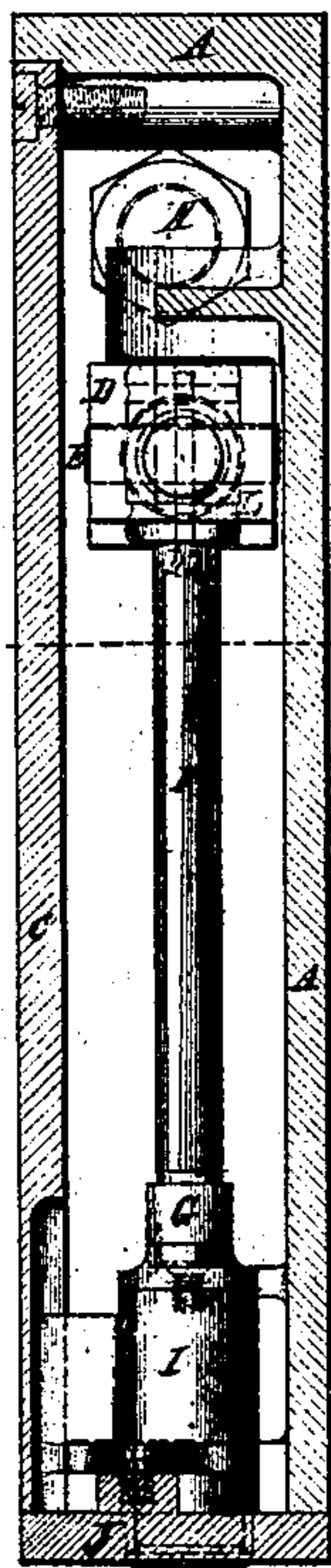


Fig. 4.

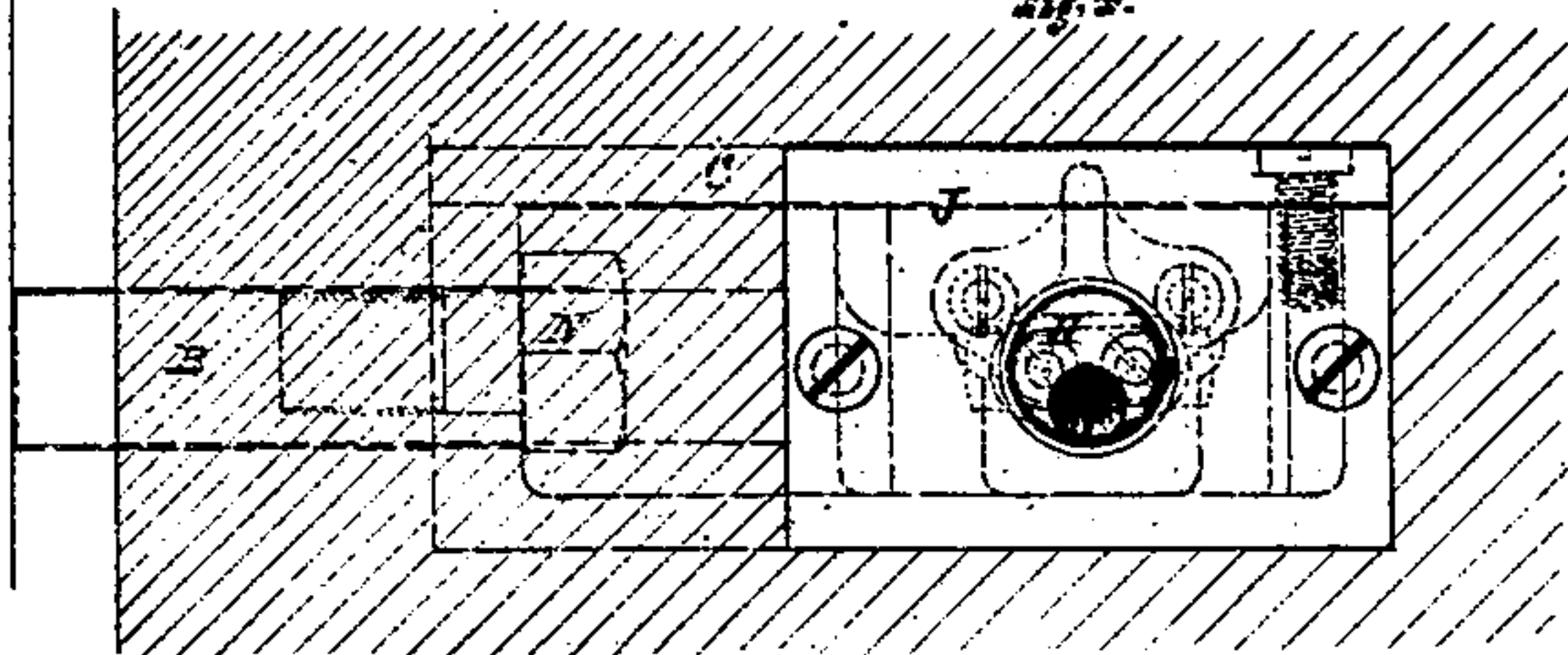
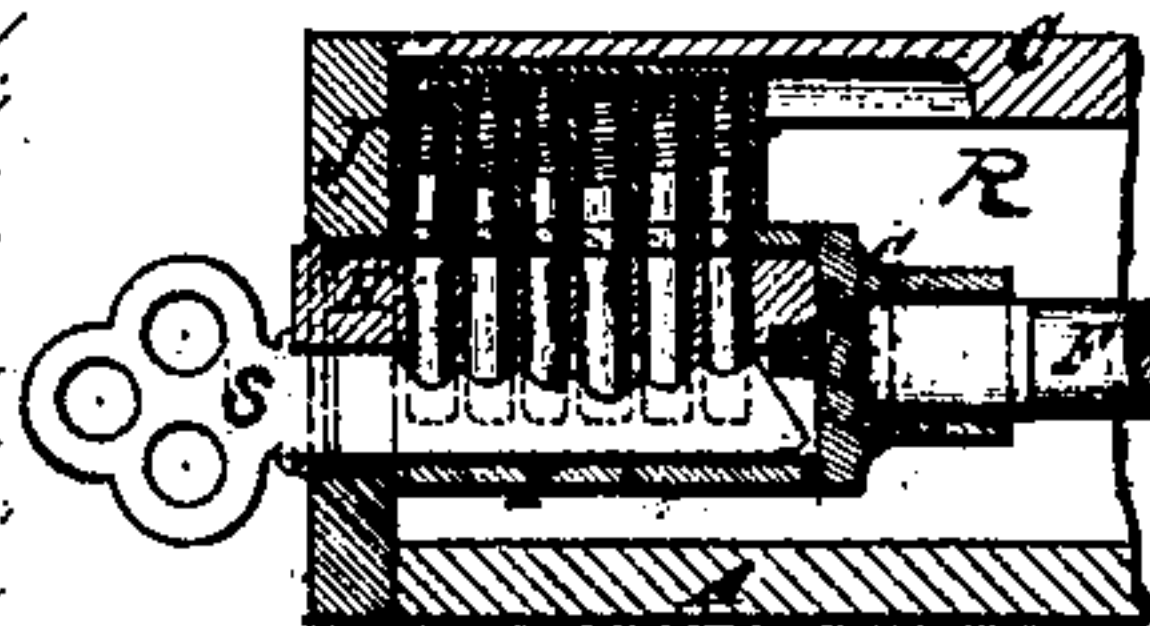


Fig. 5.



Witnesses.

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UNITED STATES PATENT OFFICE.

HENRY R. TOWNE, OF STAMFORD, CONNECTICUT.

IMPROVEMENT IN PRISON-LOCKS.

Specification forming part of Letters Patent No. **111,586**, dated February 7, 1871.

To all whom it may concern:

Be it known that I, HENRY R. TOWNE, of Stamford, in the county of Fairfield and State of Connecticut, have invented a new and Improved Prison-Lock; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon, making a part of this specification.

This invention consists in the construction, arrangement, and combination of parts, as hereinafter described, and more particularly mentioned in the claims.

In the accompanying drawing, Figure 1 represents a plan or top view of my lock with the top plate removed, showing the mechanism; Fig. 2, a sectional side view of same; Fig. 3, a sectional view of same on line *x y*; Fig. 4, a plan view of front plate, showing key-hole, &c.; and Fig. 5, a sectional view of lock mechanism and key.

Similar letters of reference indicate corresponding parts in the drawing.

Fig. 5, and the several parts therein represented by the letters H, I, and S, being in all respects similar to what is known as the "pin-lock" heretofore patented by one Linus Yale, Jr., it needs at this time no further description.

A represents the box or casing of lock; B, the bolt; C, the cover of box or casing; D, the cross-head; E, the cam or eccentric; F, the shaft; G, the coupling; H, revolving plug; J, front plate of box or case; K K, lugs; L L, slots; M, pin; N, screw-bolt; R, lock; *a a*, screws; *b b*, hubs of cam or eccentric; *c*, guide-stud or bearing; *e e*, pins; *f*, guide; *o*, stud; *s*, key; *p p*, ears.

The shell or box A may be of cast-iron or other suitable material, and it will be seen by reference to Fig. 1 that it is in shape similar to the letter L, and the front part thereof of the exact width of a single brick, so that when it is built into the masonry its peculiar shape will preclude the possibility of withdrawing it therefrom; and as an additional means of keeping the lock in place it is firmly secured to the jamb of the door by the screw-bolt N.

The lock mechanism proper may be that known as the "pin-lock" of Linus Yale, Jr., heretofore mentioned, and shown in Fig. 5,

and which I prefer to use; or any other lock mechanism may be employed.

Securely attached to the front plate, J, by screws or otherwise, is the lock R, to the revolving plug H of which is fitted the coupling G, into which is coupled one end of the shaft F, the other end of said shaft passing through the cam or eccentric E into the guide-stud or bearing *c*.

B represents the main bolt, one end of which passes through the shell or box into the cell-door, and the other is fixed by the pin M to the cross-head D. This cross-head is of such shape and size as will readily admit the cam or eccentric E to revolve therein. (See Fig. 1.)

From the foregoing it will be readily seen that when the key *s* is turned a revolving motion is imparted to the plug H and shaft F, bringing the pins *e e* on said shaft in contact with the collars *b b*, and thus throwing the cam or eccentric E against the cross-head D, and shooting the bolt B out or in as the key is turned right or left.

To enable the key to be withdrawn from the lock when the same is unlocked, it is necessary that the revolving plug H should make a full revolution, and it is equally essential that the cam or eccentric E should make but one-half a revolution. To accomplish this the shaft F is provided with two small pins, *e e*, which enter into the slots L L in the collars *b b* of the cam or eccentric E. These collars are so arranged that the cam or eccentric E remains stationary or "idle" during one-half the revolution of the shaft F, and so remains until the pins *e e* are brought in contact with said collars during the other half of the revolution of said shaft F.

The coupling G is formed with two ears, *p p*, which are so arranged that in any effort to withdraw the front plate, J, and lock R from the case unfairly or without the key *s*, (except in the manner hereinafter mentioned,) said ears will come in contact with the lugs K K, cast onto the inner side of the shell or box A, and thus effectually prevent such withdrawing while the lock is either in the locked or unlocked position; but should it become necessary to remove said front plate and lock, it may be done by inserting the key *s* and turning it one-fourth of a revolution, in which po-

sition the ears on the coupling G will readily pass between the lugs K K, and the lock may be removed with facility, which being done the pin M may be withdrawn, when each and every piece of the lock mechanism may be removed through the shell or box A for repair.

To insure a certainty of movement to the cross-head D it is provided with the guide *f*, working into the stud *o*.

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

1. The coupling G, securely attached to the inner end of lock R, when constructed with projecting ears *p p*, arranged to engage with suitable lugs K K, when the lock stands in either the locked or unlocked position.

2. The eccentric E, provided with bearings *b b*, containing slots L L, in combination with the shaft F, containing pins *e e*, the cross-head D, bolt B, and pin M, all constructed, arranged, and operating substantially as and for the purpose described.

3. The combination of the bolt B, cross-head D, shaft F, cam E, coupling G, and lock R, all constructed and arranged to operate substantially as herein described.

HENRY R. TOWNE.

Witnesses:

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