No. 771,619.

PATENTED OCT. 4, 1904.

L. A. FOOTE.

SEAL LOCK.

APPLICATION FILED DEC. 14, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 2.

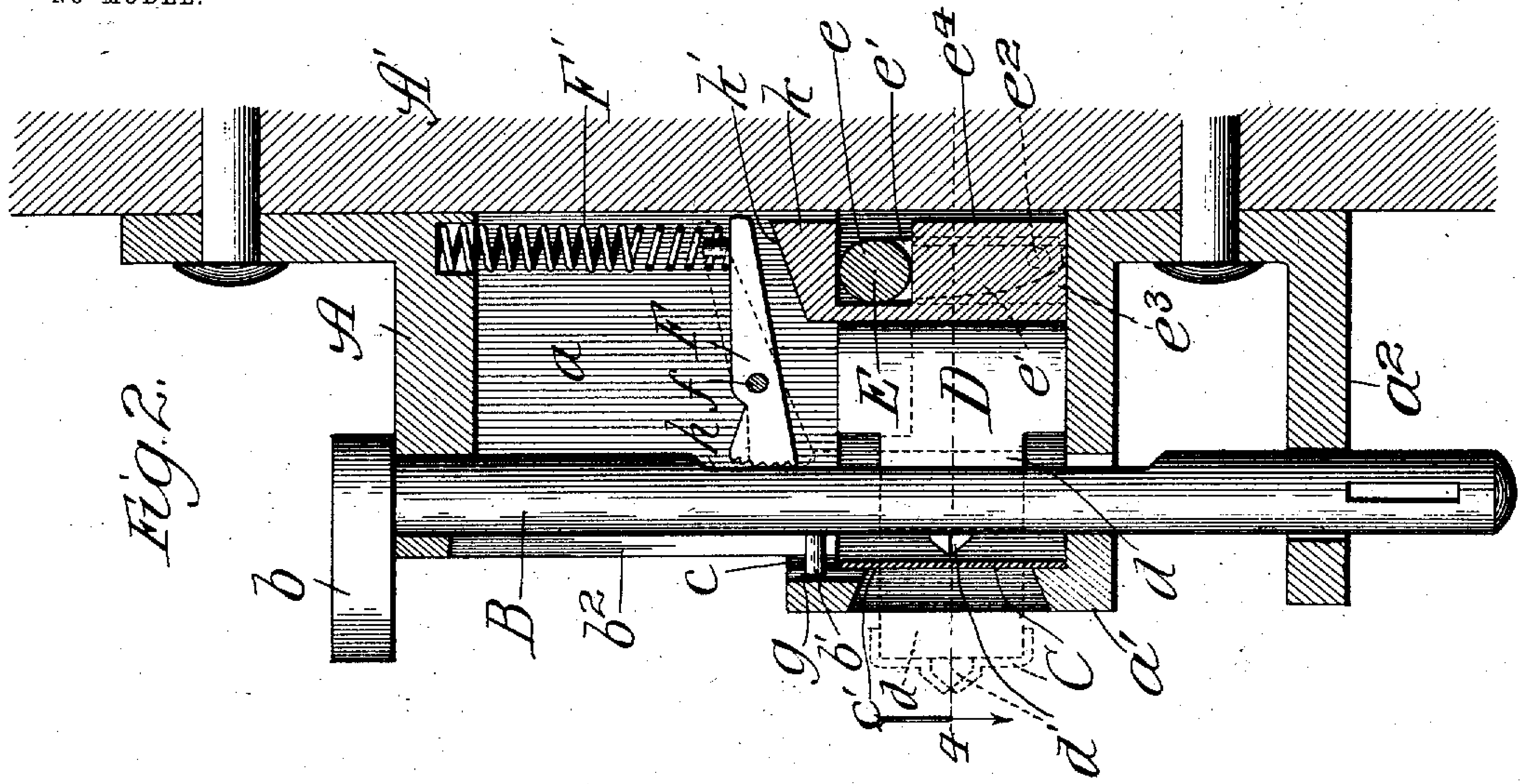
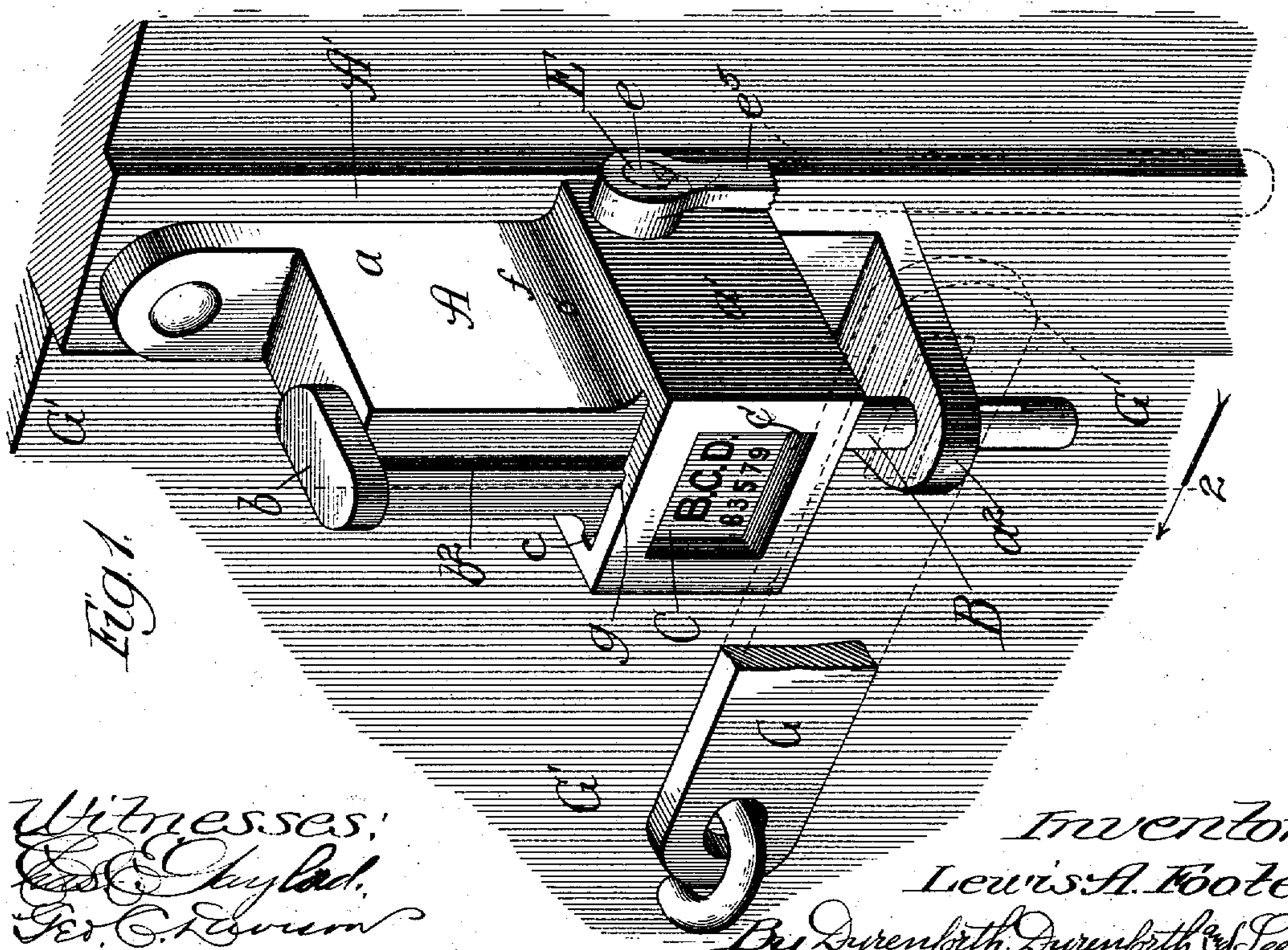


Fig. 1.



Witnesses:

[illegible]

[illegible]

Inventor:

Lewis A. Foote,

By Dyrenforth, Dyrenforth & Lee,

Att'ys.

No. 771,619. PATENTED OCT. 4, 1904.

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NO MODEL. 2 SHEETS—SHEET 2.

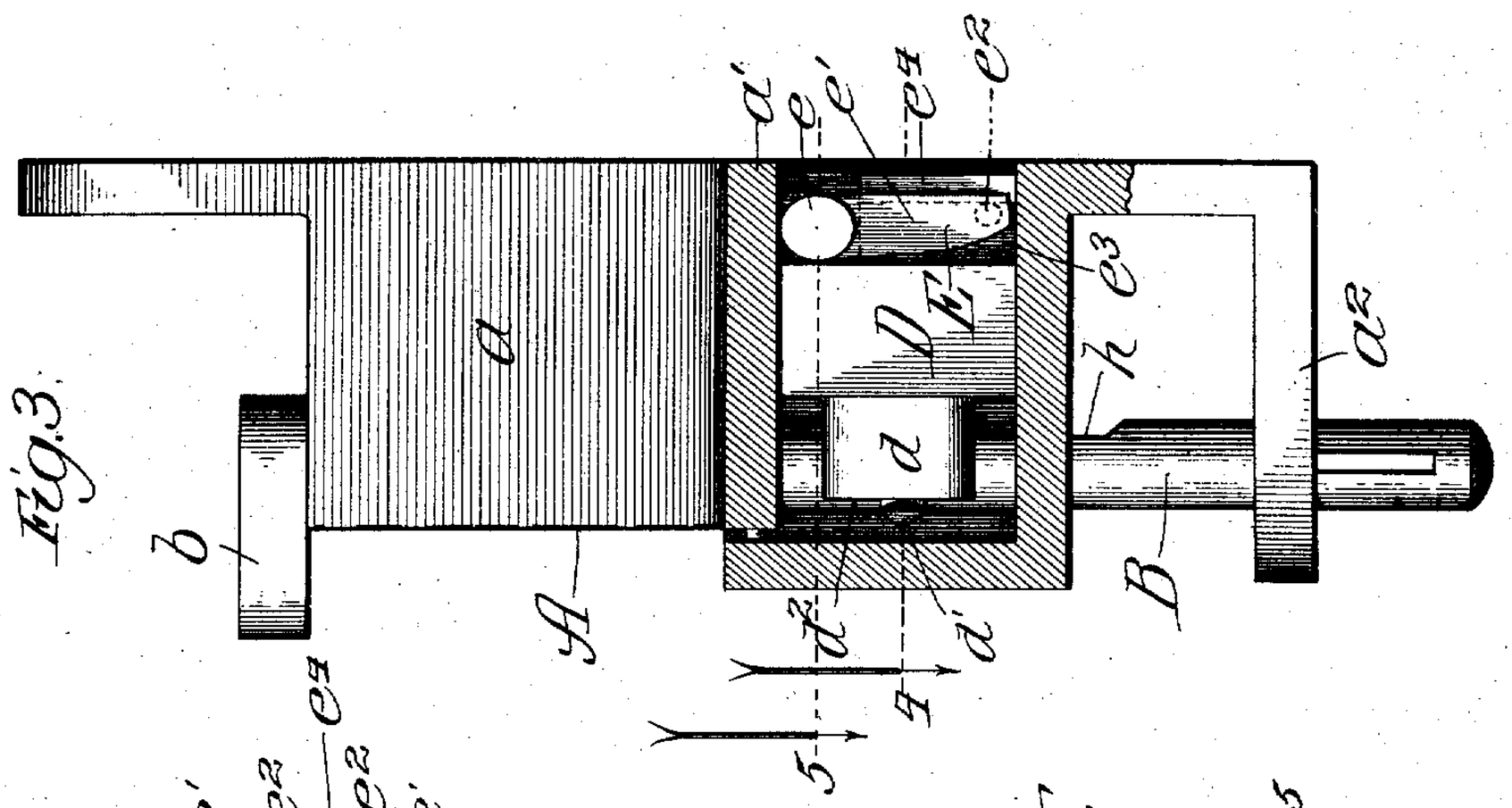

Fig. 3.

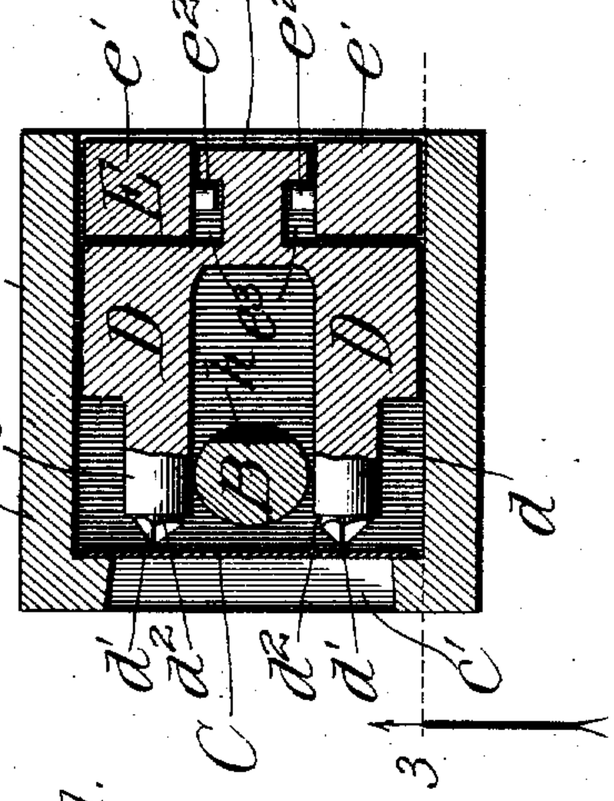

Fig. 4.

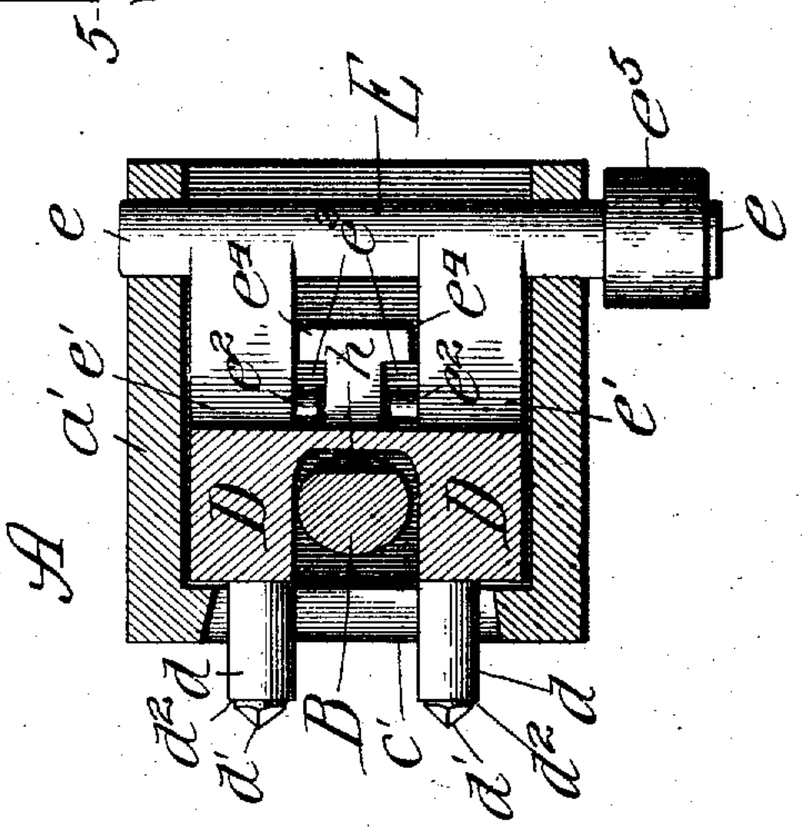

Fig. 5.

Witnesses:
Chas. E. Gaylord.
Geo. C. Larson.

Inventor:
Lewis A. Foote,
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Attys.

No. 771,619. Patented October 4, 1904.

UNITED STATES PATENT OFFICE.

LEWIS A. FOOTE, OF CHICAGO, ILLINOIS.

SEAL-LOCK.

SPECIFICATION forming part of Letters Patent No. 771,619, dated October 4, 1904.

Application filed December 14, 1903. Serial No. 185,080. (No model.)

To all whom it may concern:

Be it known that I, LEWIS A. FOOTE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Seal-Locks, of which the following is a specification.

My invention relates particularly to combination locks and seals for use in connection with car-doors and in analogous situations.

My primary object is to provide a combination lock and seal operating in such a manner that it is impossible to open the door to which the device is applied without first destroying the seal.

My invention is illustrated in its preferred embodiment in the accompanying drawings, in which—

Figure 1 represents a broken perspective view of my improved combination lock and seal applied to a car-door; Fig. 2, a vertical sectional view taken as indicated in line 2 of Fig. 1; Fig. 3, a vertical section taken as indicated at line 3 of Fig. 4; Fig. 4, a horizontal sectional view taken as indicated at line 4 of Fig. 3 and showing the seal breaker and ejector in its normally retracted position, and Fig. 5 a similar section showing the seal breaker and ejector in its advanced or ejecting position.

In the preferred construction, A represents a casing which is securely attached to the door-jamb A′ of a car, said casing having a contracted upper chamber a, an intermediately-located larger chamber a', and in a lower plane a keeper or perforated hasp-receiver lug a^2; B, a vertically-reciprocable bolt movable in a guide at the front portion of the casing and provided at its upper end with a forwardly-projecting arm or handle b and intermediately with a forwardly-projecting lug b', working in a vertical slot b^2 in the front wall of the casing; C, a seal, preferably of thin sheet material, such as tin or cardboard, insertible at a vertical slot c, with which the forwardly-projecting part of the enlarged chamber a' is provided and exposed to view at an opening c' in the front wall of the chamber a', said seal resting upon the bottom wall of the chamber a'; D, a combination seal breaker and ejector slidable upon the bottom of the chamber a' and equipped with forwardly-projecting lugs d, provided with puncturing-points d', projecting from the ends d^2 of said lugs; E, actuating means for the member D, comprising a rock-shaft e, having its ends journaled in the rear portions of the side walls of the chamber a', cam-arms e', engaging the rear surface of the main portion of the member D and having inwardly-projecting lugs e^2, working in vertical slots e^3, with which a rearward extension e^4 of the member D is provided, and a normally depending actuating-handle e^5, with which a projecting end of the rock-shaft e is equipped; F, a pawl located in the chamber a and pivoted on a pin f, supported at its ends by the side walls of the chamber a; F′, a spring confined between the rear end of the pawl and the upper wall of the chamber a, and G a hasp fixed to the door G′ of the car.

The casing A comprises, preferably, a casting and is open at its rear side to permit the internal parts to be put in place. When the casing is secured to the door-jamb, it is thereby securely closed. The lug b' of the bolt B projects across the slot c whereat the seal is inserted and into a slot g in the front wall of the chamber a'. When the bolt B is in the depressed position, the lug or seal-retainer b' serves effectually to prevent removal of the seal. The rear portion of the bolt is cut away to provide a plain surface h, against which the front end of the pawl normally bears. The front end of the pawl is serrated and is inclined very slightly forwardly and downwardly, so that any effort to raise the bolt before the pawl is released causes the pawl to grip the bolt the tighter. The bolt extends between the lugs d of the member D, or, in other words, the forward extension of the member D is slotted to receive the bolt and to permit the member to be thrust forwardly in ejecting the seal. The member D is provided at its upper portion with a rearward extension k, having an inclined upper surface k', which serves when the member D approaches the forward end of its traverse to

lift the rear end of the pawl F, thereby releasing the pawl from the bolt and permitting the latter to be raised, so that the hasp can be removed from its keeper. In the normally retracted position of the member D the rock-shaft *e* lies beneath the extension *k* and above the extension e^4 of the member D. Otherwise stated, the rearward extensions e^4 *k* may be regarded as a single rearward extension slotted transversely at its upper portion to receive the rock-shaft *e* and cut away along vertical lines at its sides to accommodate the arms *e'* of the member E.

From the foregoing detailed description the operation of the improved device will be readily understood. Assuming the bolt to be in its raised position, the hasp may be placed upon its keeper and a seal inserted at the slot *c*. The bolt may then be depressed to secure the hasp on its keeper and prevent removal of the seal. After depression of the bolt the locking-pawl serves normally to prevent the bolt from being raised. When it is desired to open the car, the handle e^5 is drawn forwardly to the horizontal position, thereby turning the rock-shaft *e* and causing the cams *e'* to move the seal breaker and ejector forward. When the points *d'* engage the seal, they puncture the same, and as the member D continues to move forwardly the shoulders d^2 engage the rear surface of the seal and force the seal out through the opening *c'*, the seal in the last portion of the operation having its margins bent rearwardly, so that it is utterly destroyed. The opening *c'* flares outwardly, as shown, to prevent the seal from sticking. As the member D nears the forward end of its traverse the bevel surface *k'* engages the pawl in the rear of its pivot, thereby releasing the bolt and permitting the same to be raised, so that the hasp can be removed from its keeper.

In the improved construction it will be observed the bolt is equipped with means for preventing removal of the seal and a combination seal breaker and ejector is equipped with means for releasing the locking-pawl engaging the bolt, so that a single operation of the mechanism provided serves to puncture and eject the seal and release the locking-pawl.

Since the improved device renders it practicable to use plain disk seals and renders the use of sealing implements unnecessary, it is obvious that the seals may be produced at greatly-reduced expense and may be much more conveniently handled and applied than when lead sealing blocks and shackles connected therewith are employed.

Since seals are used in vast quantities in connection with cars and in many other situations, it is obvious that the improved device is of great practical advantage. The seals themselves may be of any suitable material, it being desirable that they shall either be frangible or readily puncturable, however. Where pasteboard seals are employed, they are suitably coated to protect them from moisture. Where tin seals are employed, they are preferably painted or coated to protect their exposed surfaces. The characters used on the seals are of course printed, embossed, or stamped thereon in the manufacture of the seals, and the seals are at the same time consecutively numbered. They may be provided with perforations to permit them to be strung in consecutive order.

Changes in details of construction within the spirit of my invention are contemplated. Hence no undue limitation should be understood from the foregoing detailed description.

What I regard as new, and desire to secure by Letters Patent, is—

1. In a device of the character described, the combination of a suitable casing provided with a seal-receiving channel and a view-opening, a bolt equipped with seal-retaining means, a locking-pawl engaging said bolt, a seal breaker and rejector within the casing and equipped with means for moving the pawl to effect release of the bolt, and external actuating means for said seal breaker and ejector.

2. In a device of the character described, the combination of a suitable casing provided at its front portion with a channel for a seal and adjacent to said channel with an opening, a vertically-movable bolt extending through the front portion of the casing, a locking device for said bolt, and mechanism for breaking the seal and releasing said locking device, including a reciprocable seal-breaker and a rock-shaft equipped externally with an unobstructed operating-handle, for the purpose set forth.

3. In a device of the character described, the combination of a suitable casing provided at its front portion with a seal-receiving channel and adjacent to said channel with an opening, a bolt, a locking-pawl, a forwardly and backwardly reciprocable seal-breaker equipped with means for moving said pawl to release the bolt, and means for actuating said seal-breaker, for the purpose set forth.

4. In a device of the character described, the combination of a suitable casing provided at its front portion with a seal-receiving channel and adjacent to said channel with an opening, a bolt, a locking-pawl, a forwardly and backwardly reciprocable seal-breaker equipped with means for releasing said pawl, and means for actuating said seal-breaker comprising a rock-shaft having suitable connections with the seal-breaker inside the casing and equipped outside the casing with an operating-handle.

5. In a device of the character described, the combination of a suitable casing provided at its front portion with a seal-receiving channel and adjacent thereto with an opening, a vertically-reciprocable bolt, a locking-pawl engaging said bolt, a forwardly and backwardly reciprocable seal-breaker bifurcated at its front

portion to receive said bolt and equipped with pawl-releasing means, and means for actuating said seal-breaker.

6. In a device of the character described, the combination of a suitable casing provided at its front portion with a seal-receiving channel and adjacent thereto with an opening, a bolt provided with a seal-retainer, a locking-pawl engaging said bolt, a forwardly and backwardly reciprocable seal-breaker bifurcated at its front portion to accommodate said bolt, a rock-shaft journaled in the rear portion of the casing and serving to actuate said seal-breaker, and external actuating means for said rock-shaft.

7. In a device of the character described, the combination of a casing provided at its front portion with a seal-receiving channel and adjacent thereto with an opening, a vertically-reciprocable bolt, a forwardly and backwardly movable seal-breaker, and actuating means for said seal-breaker comprising a rock-shaft, cam connection between the rock-shaft and the rear portion of the seal-breaker, and external actuating means for said rock-shaft.

8. In a device of the character described, the combination of a suitable casing provided with a seal-receiving channel and an adjacent opening, a bolt, a reciprocable seal breaker and ejector having a forward extension capable of passing through said opening, a locking device, and actuating means connected with said seal breaker and ejector, including an external operating-handle, for the purpose set forth.

9. In a device of the character described, the combination of a suitable casing, a bolt provided at its rear portion with a plain surface, a pawl having a serrated front end engaging said surface, and releasing means for said pawl comprising a reciprocable member within the casing and actuating means therefor having an external handle, for the purpose set forth.

10. In a device of the character described, the combination of a casing provided at its front portion with an extension having a vertical seal-receiving channel and adjacent opening, a vertically-movable bolt having a forwardly-projecting seal-retainer, a substantially horizontally disposed locking-pawl, a spring in the upper portion of the casing serving to depress the rear portion of said pawl, a forwardly and backwardly reciprocable seal breaker and ejector equipped at its rear portion with a pawl-engaging surface, and actuating means for said seal breaker and ejector.

LEWIS A. FOOTE.

In presence of—
F. M. WIRTZ,
WALTER N. WINBERG.

It is hereby certified that in Letters Patent No. 771,619, granted October 4, 1904, upon the application of Lewis A. Foote, of Chicago, Illinois, for an improvement in "Seal-Locks," an error appears in the printed specification requiring correction, as follows: In line 89, page 2, the word "rejector" should read *ejector;* and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 18th day of October, A. D., 1904.

[SEAL.]

E. B. MOORE,
Acting Commissioner of Patents.

portion to receive said bolt and equipped with pawl-releasing means, and means for actuating said seal-breaker.

6. In a device of the character described, the combination of a suitable casing provided at its front portion with a seal-receiving channel and adjacent thereto with an opening, a bolt provided with a seal-retainer, a locking-pawl engaging said bolt, a forwardly and backwardly reciprocable seal-breaker bifurcated at its front portion to accommodate said bolt, a rock-shaft journaled in the rear portion of the casing and serving to actuate said seal-breaker, and external actuating means for said rock-shaft.

7. In a device of the character described, the combination of a casing provided at its front portion with a seal-receiving channel and adjacent thereto with an opening, a vertically-reciprocable bolt, a forwardly and backwardly movable seal-breaker, and actuating means for said seal-breaker comprising a rock-shaft, cam connection between the rock-shaft and the rear portion of the seal-breaker, and external actuating means for said rock-shaft.

8. In a device of the character described, the combination of a suitable casing provided with a seal-receiving channel and an adjacent opening, a bolt, a reciprocable seal breaker and ejector having a forward extension capable of passing through said opening, a locking device, and actuating means connected with said seal breaker and ejector, including an external operating-handle, for the purpose set forth.

9. In a device of the character described, the combination of a suitable casing, a bolt provided at its rear portion with a plain surface, a pawl having a serrated front end engaging said surface, and releasing means for said pawl comprising a reciprocable member within the casing and actuating means therefor having an external handle, for the purpose set forth.

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