

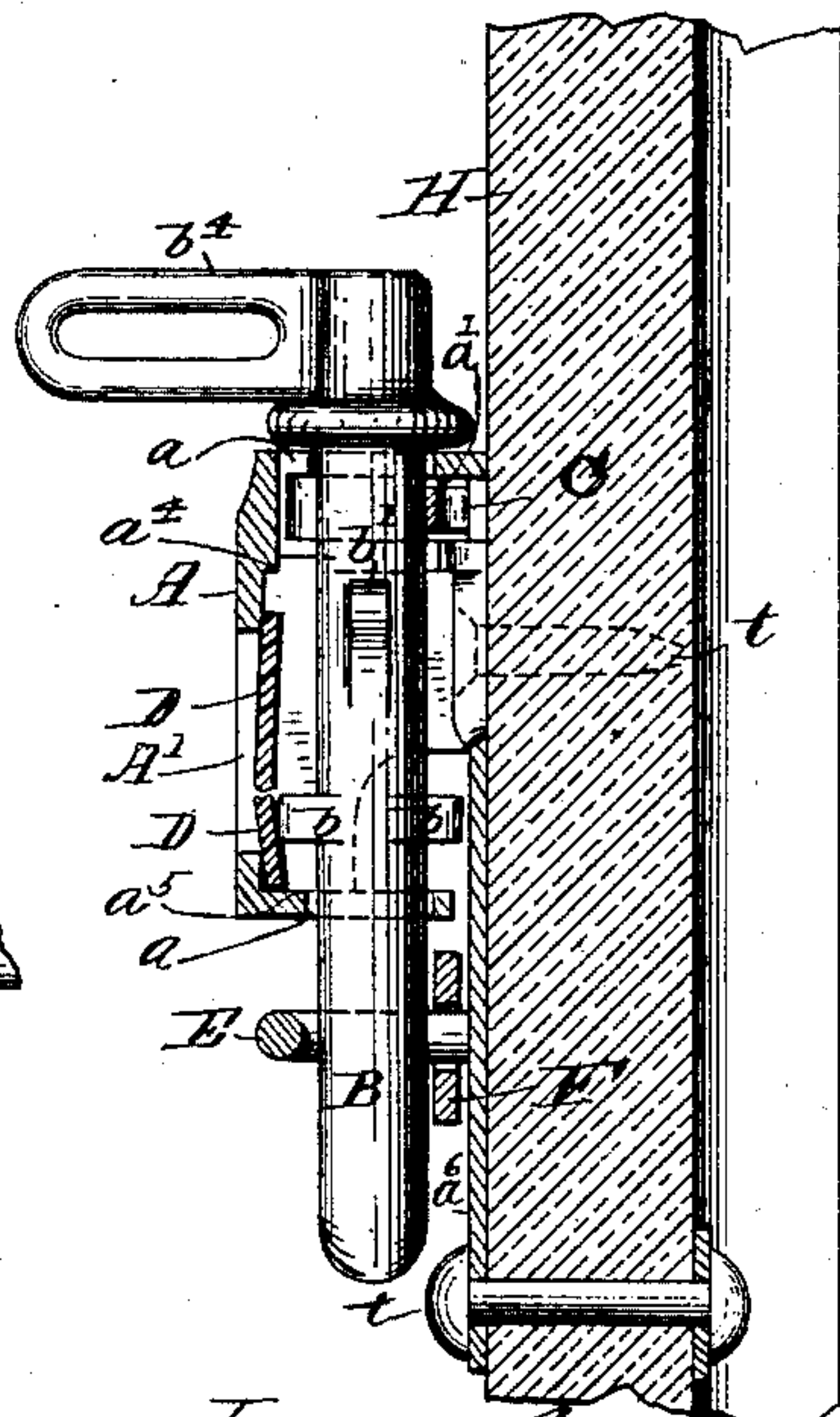
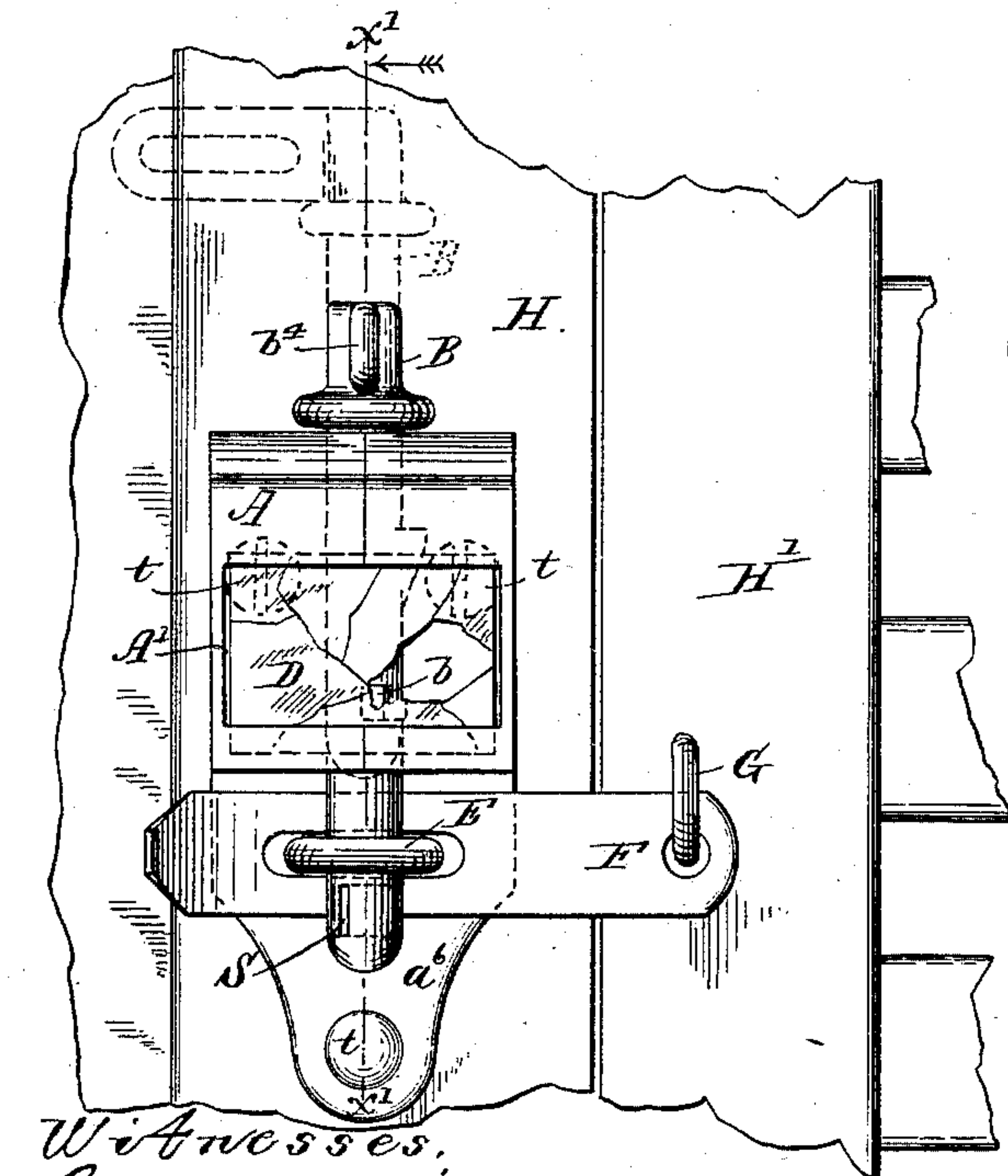
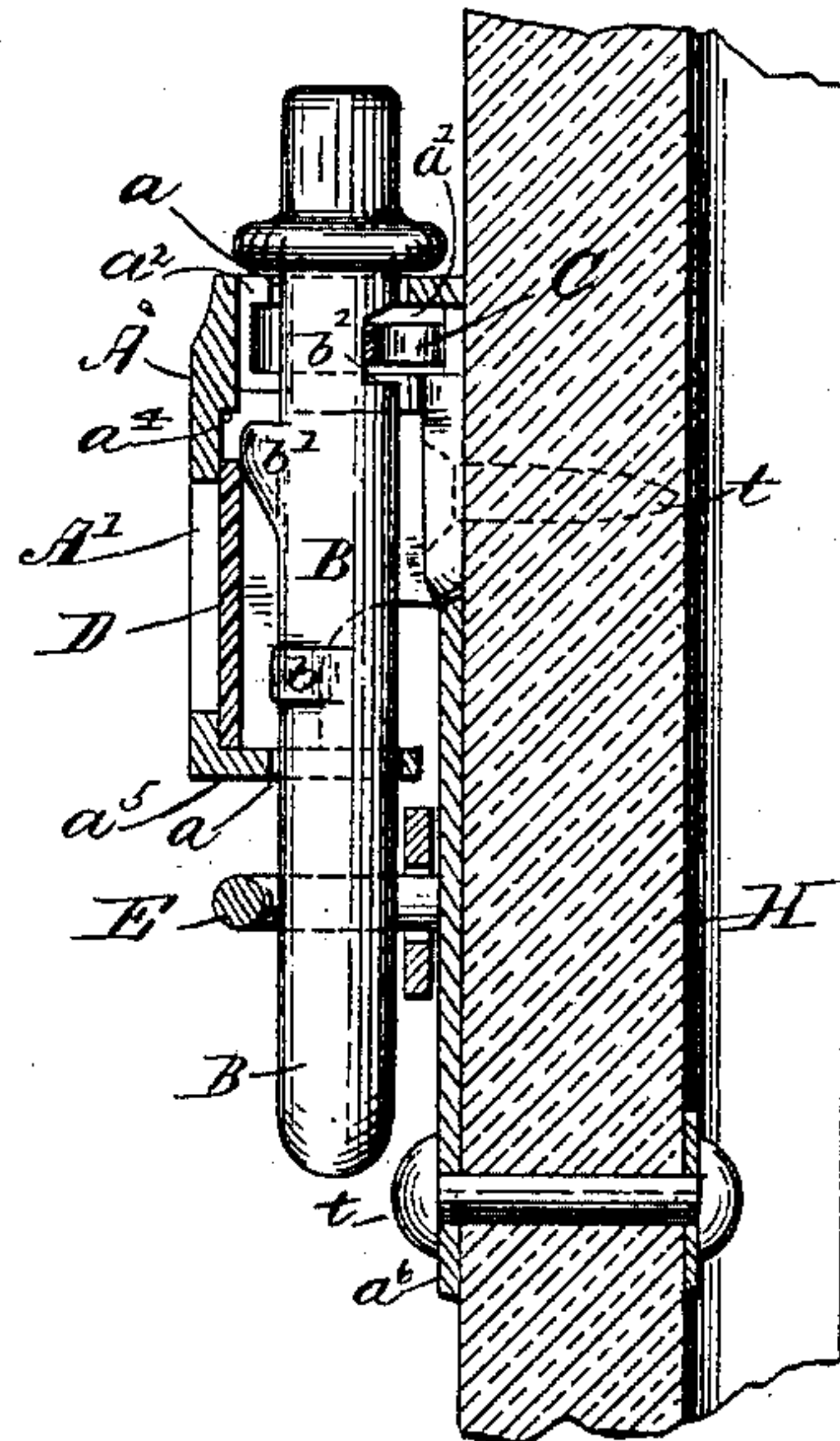
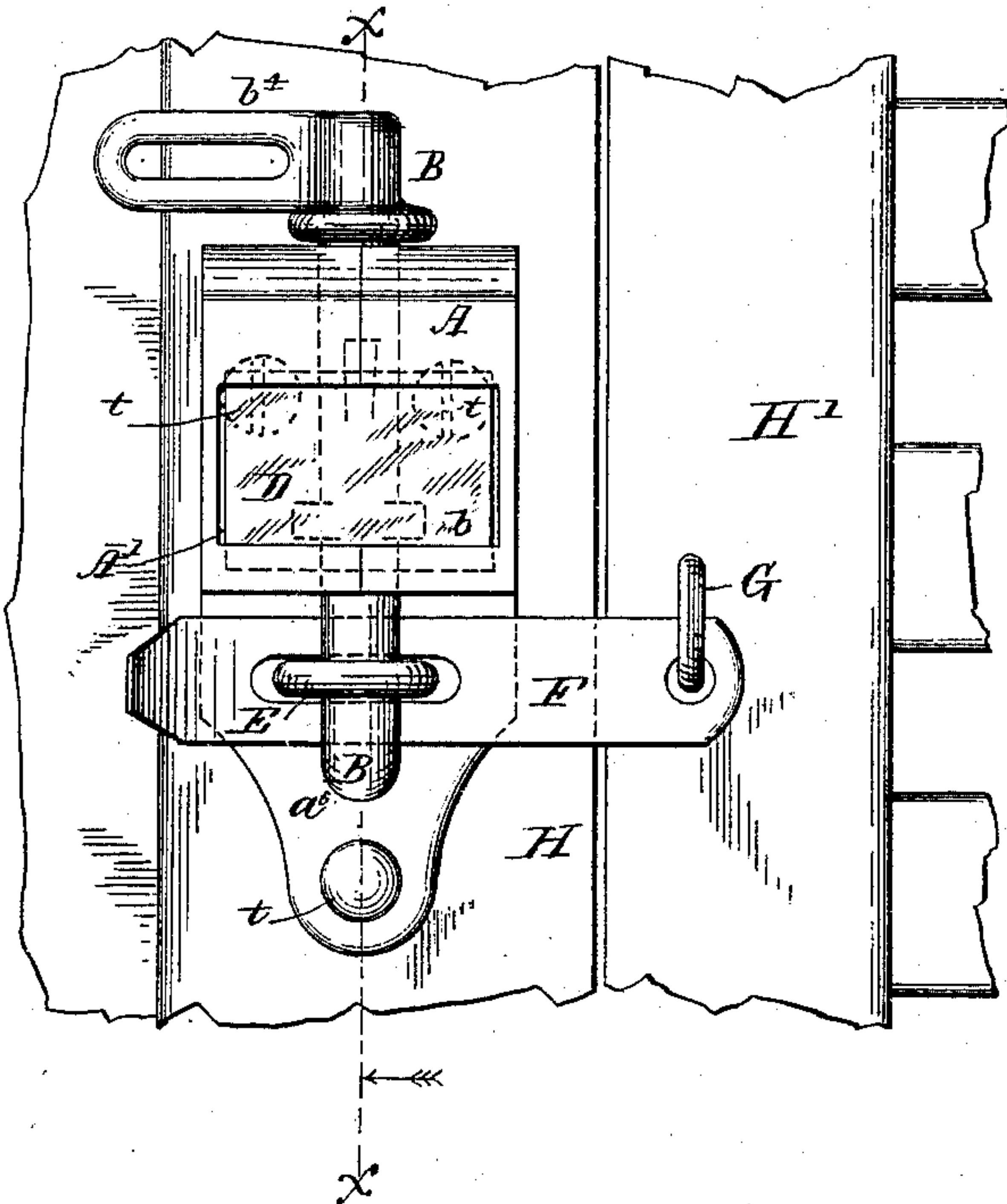
(Model.)

2 Sheets—Sheet 1.

C. E. DAVIS.  
SEAL LOCK.

No. 371,037.

Patented Oct. 4, 1887.



Witnesses,  
Jno. W. Davis,  
March Polk

By

Inventor,  
Charles E. Davis.  
Geo. W. Le Vin, Attorney.

(Model.)

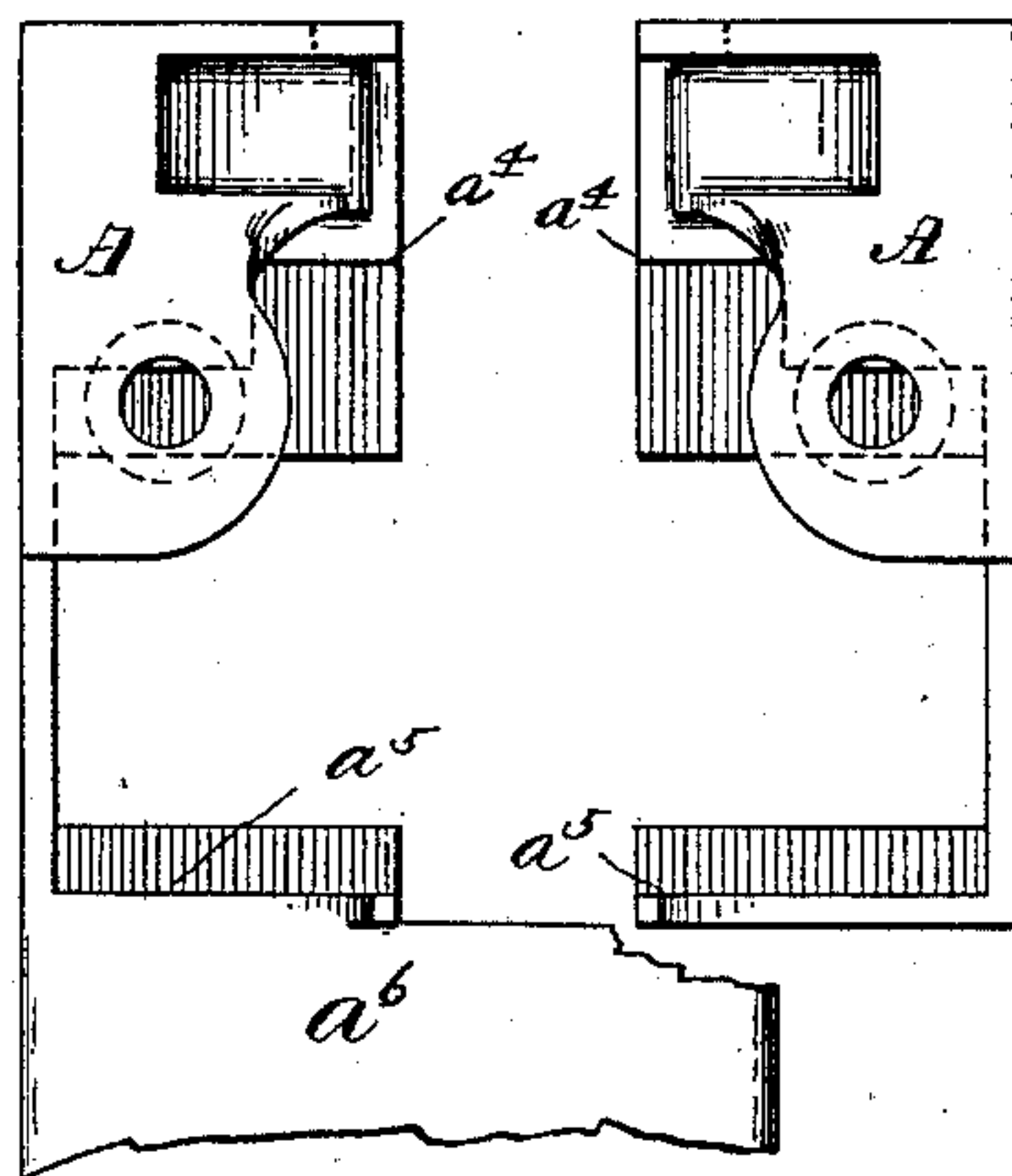
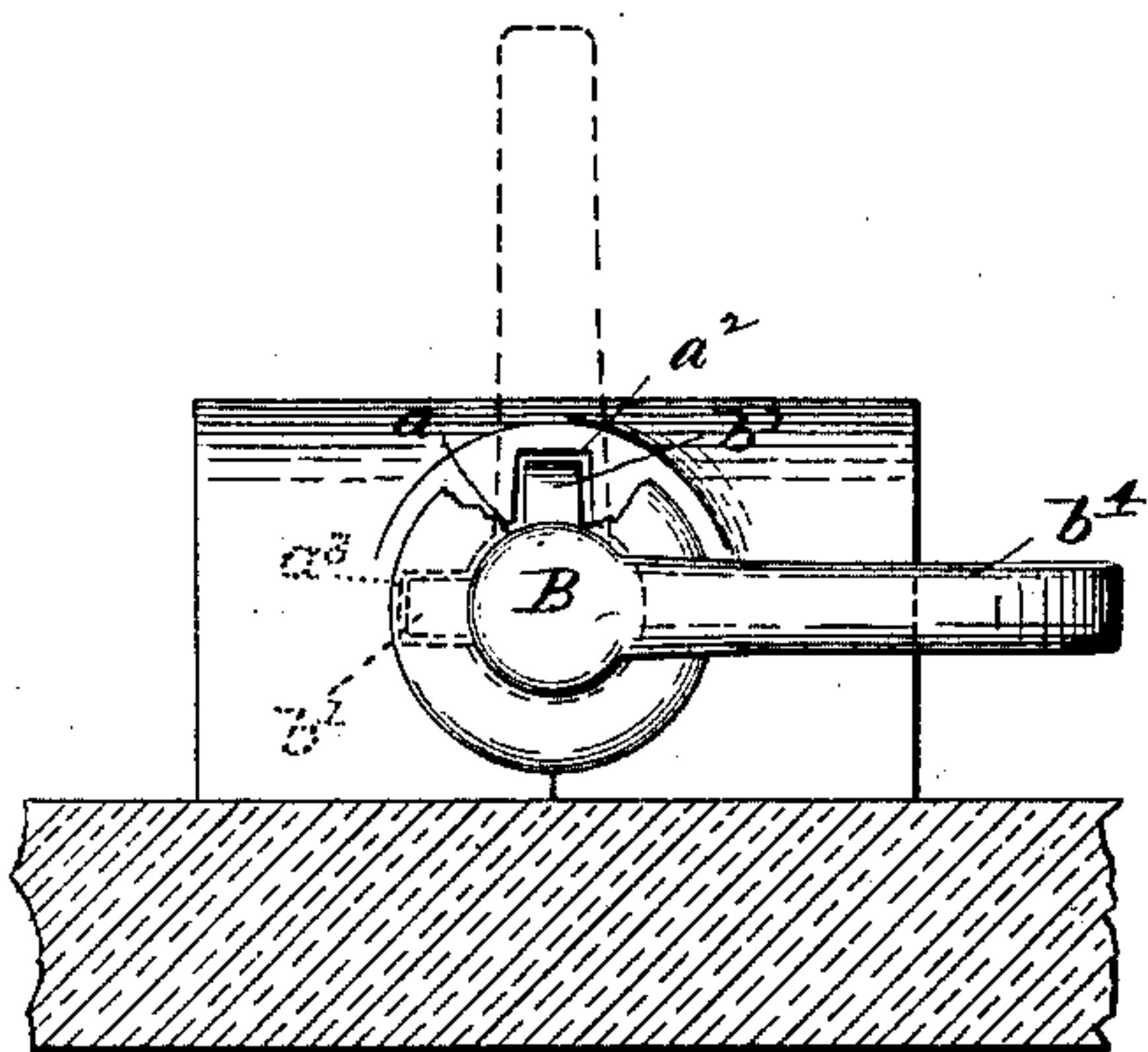
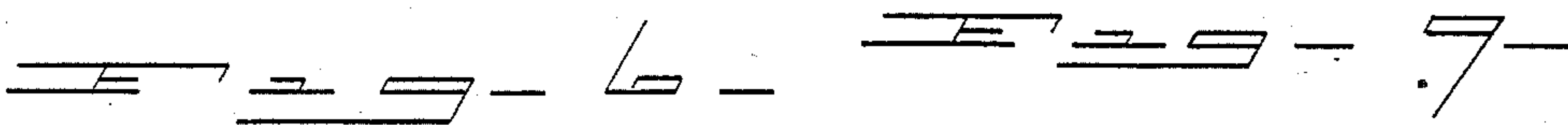
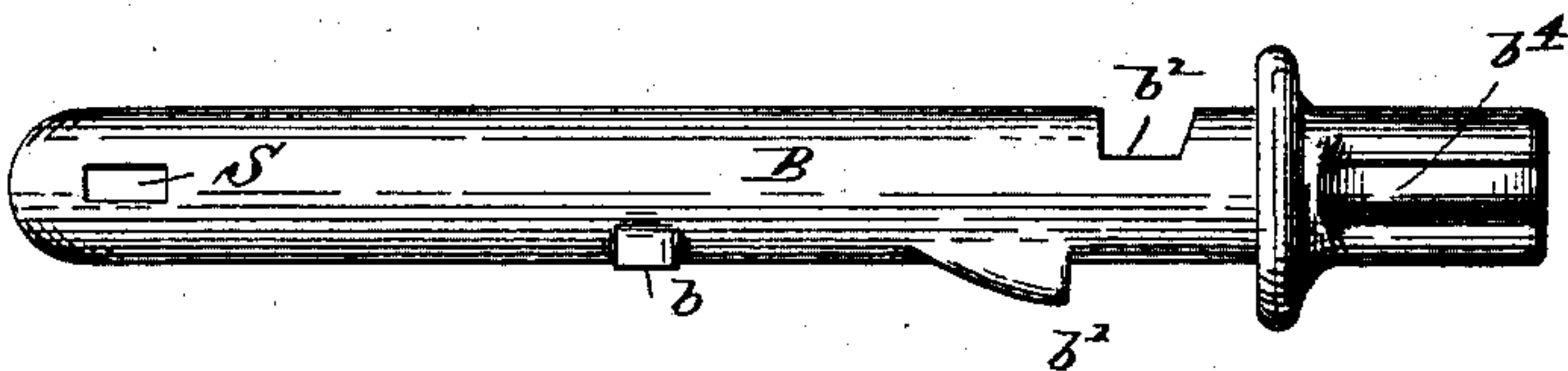
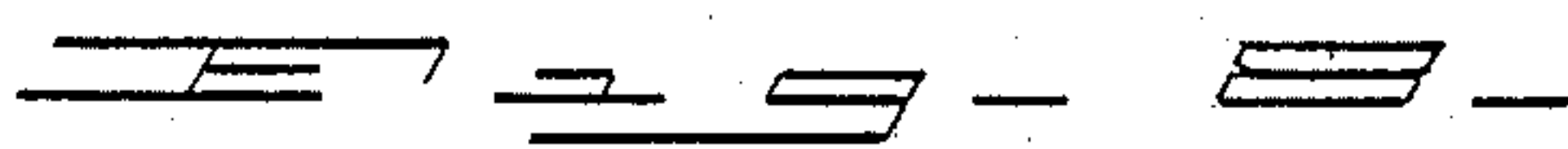
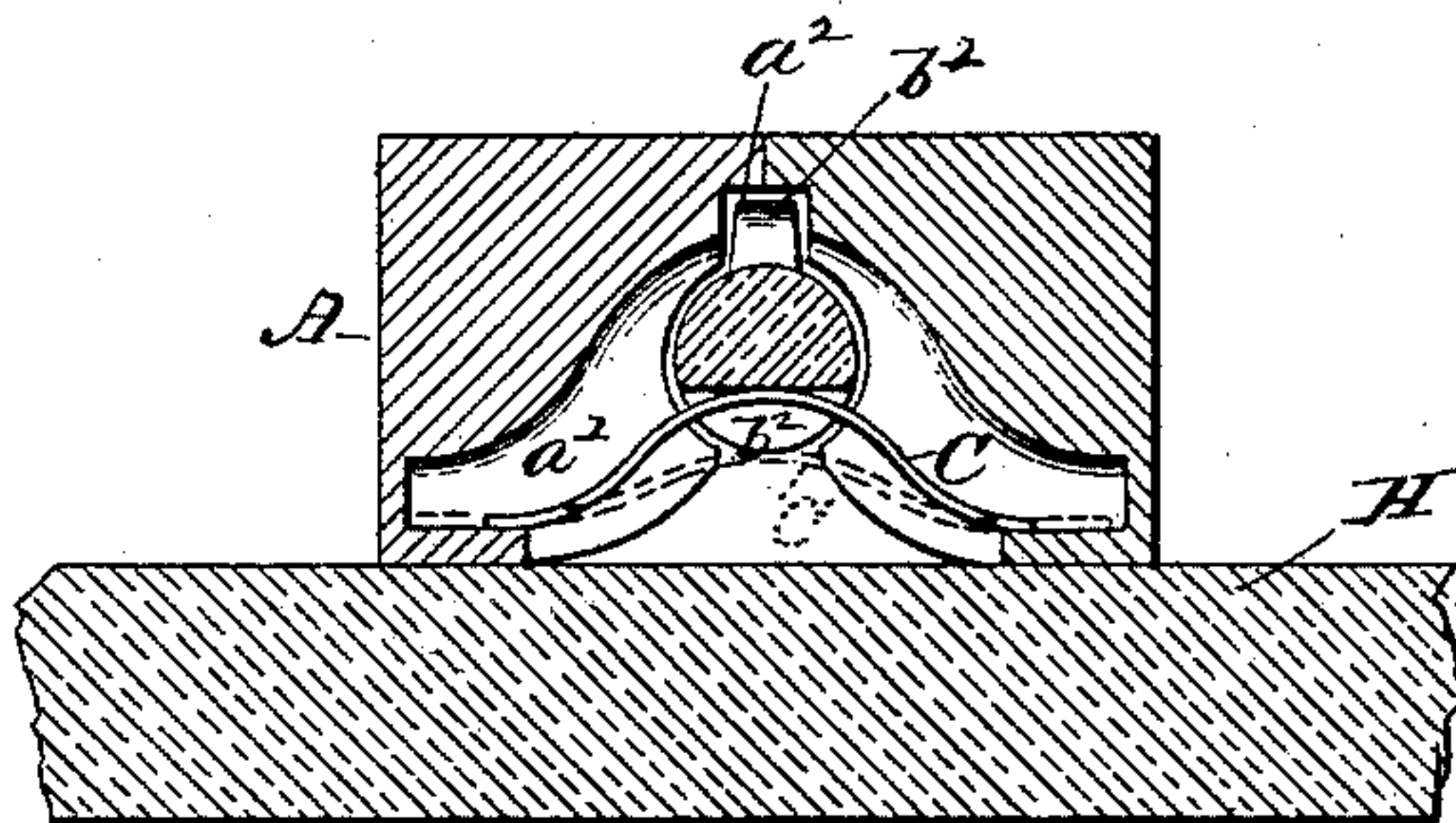
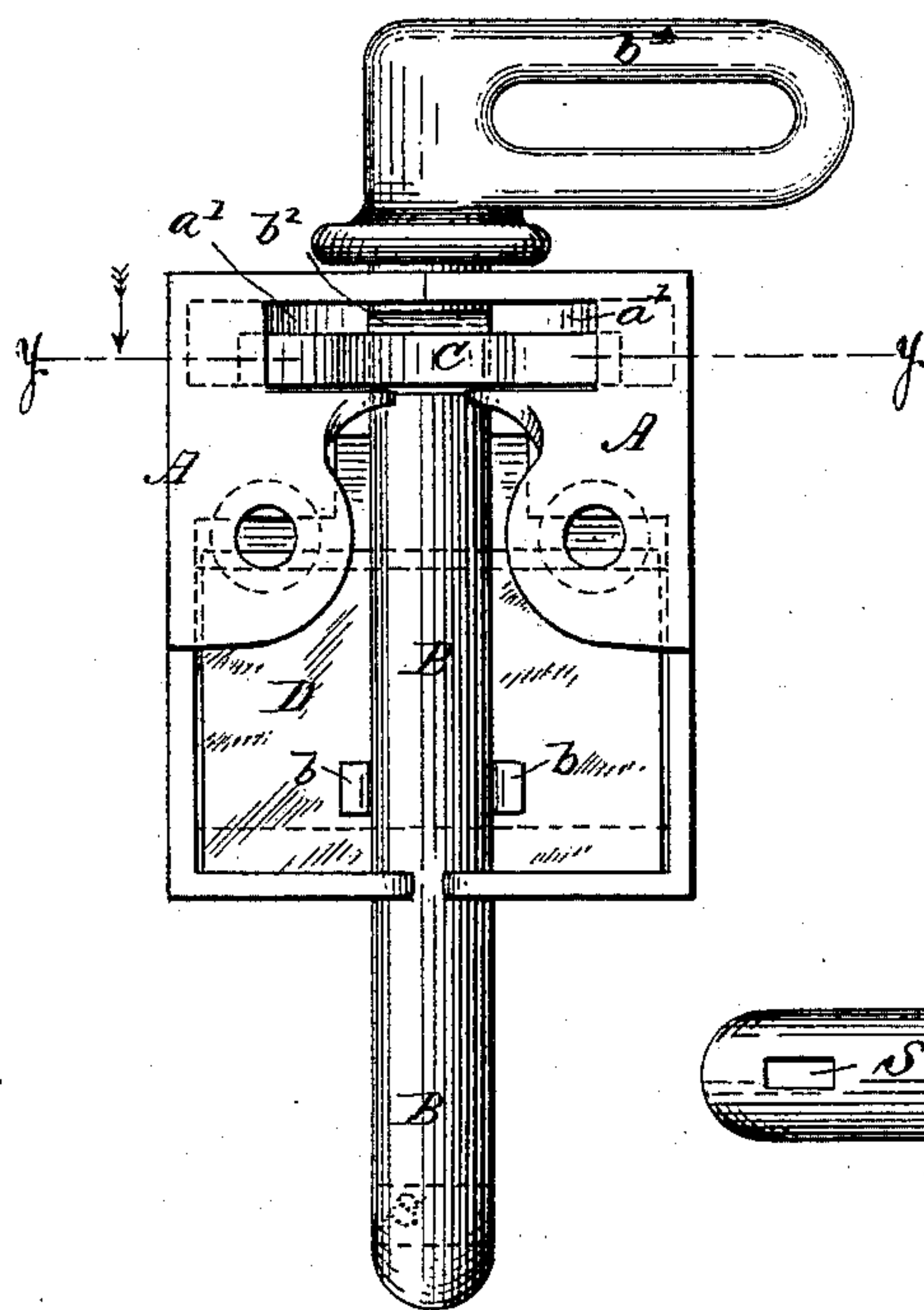
2 Sheets—Sheet 2.

C. E. DAVIS.

SEAL LOCK.

No. 371,037.

Patented Oct. 4, 1887.



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Attorney.



# UNITED STATES PATENT OFFICE.

CHARLES E. DAVIS, OF CHICAGO, ILLINOIS, ASSIGNOR TO JOHN W. NORRIS,  
OF SAME PLACE.

## SEAL-LOCK.

SPECIFICATION forming part of Letters Patent No. 371,037, dated October 4, 1887.

Application filed June 29, 1887. Serial No. 242,824. (Model.)

*To all whom it may concern:*

Be it known that I, CHARLES E. DAVIS, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Seal-Locks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

My invention relates to seal-locks of the class particularly designed for employment on or about car-doors; and the same consists in the matters hereinafter set forth, and pointed out in the appended claims.

The main features of novelty and utility embodied in my present invention are as follows: A bolt operatively sustained by a suitable frame, preferably rigidly connected with the car or car-door and capable of subserving the general purposes of the ordinary shackle-pin usually employed conjointly with a hasp and keeper or equivalent devices for securing a car-door in a closed position, and for which it is obviously substituted, is arranged and adapted to be carried into a suitable locking position, from which it cannot be withdrawn or removed, so as to admit of the opening of the car-door, without evidencing such withdrawal or removal through the destruction, by suitable means forming part of or fixed to said bolt, of an adjacently-located frangible sealing-plate, which is likewise sustained by said frame.

The essential feature of the invention is the operative arrangement of the said bolt and sealing-plate with relation to each other, whereby in removing or withdrawing the bolt from its locking or locked position it must come in breaking-contact with the frangible seal; but in carrying out the invention in the preferred manner it also embraces certain details of construction, which will hereinafter fully appear.

In the accompanying drawings, which comprehensively illustrate my said invention, Figure 1 shows in front elevation a seal-lock embodying the principles of my invention applied to a car, with the car-door secured in closed position by the said bolt, which is in its locked position. Fig. 2 is a vertical sec-

tion taken through the frame of the lock and the car-door jamb upon the line X X of Fig. 1. Fig. 3 is a front elevation of the said lock applied to the car-door similarly as shown in Fig. 1, said view being mainly intended to illustrate the bolt as having been moved from its locking position and the sealing-plate as having been destroyed through such movement thereof. Fig. 4 is a vertical section taken on the line X' X' of said Fig. 3, further illustrating the bolt in its unlocked position and the manner of its breaking the sealing-plate in being carried thereto. Fig. 5 is an enlarged rear view of the said device, showing the general features of its construction and arrangement, the bolt being in locked position, substantially as shown in Fig. 1. Fig. 6 is a top view of said device, the bolt occupying a similar position to that shown in said Fig. 5. Fig. 7 is a transverse section taken through the device on the line Y Y of Fig. 5, looking in the direction of the arrow therein shown. Fig. 8 illustrates the construction of the bolt shown in the several-described views. Fig. 9 is a rear elevation of the frame, substantially showing the preferred manner of its construction and arrangement.

Referring by letter to the several figures of the drawings, in which like letters denote like parts, A indicates a frame, which is provided with means for suitably sustaining the several operative parts of the device and, by preference, adapted to be fixedly secured in position in or about the car-door.

B refers to a bolt adapted to hold the car-door in closed position in substitution for the shackle-pin or other device employed in conjunction with a hasp and keeper, F E, or equivalent devices intended for such purpose. The said bolt, which is adapted to work axially and perpendicularly in bearings *a a*, formed by the frame A, is provided with a suitable seal-breaking projection, *b*, and with a radially-projecting longitudinally-tapering lug, *b'*, the office of which will be hereinafter fully shown. The bolt is also provided near its upper termination with a transverse recess, *b<sup>2</sup>*, within which works, as is hereinafter more particularly explained, a leaf-spring, C, which is secured in operative position within a suitable recess, *a'*, provided therefor within said frame.



The said frame A, for the convenience of construction and adaptation to the bolt B, &c., is desirably formed in two sections, as particularly shown in Fig. 9, which are held in working contiguity, as shown in the other views, by means of screws or bolts *t*, which are entered therefrom into or through the wood-work or other material to which it is desired to fix the same.

10 The upper or cap wall of the frame is provided with slots  $a^2$   $a^3$ , (see Fig. 6,) which open into the upper bearing-space, *a*, the same being provided for the passage of the lug *b'* from and to the interior of the frame when it becomes necessary to move the bolt perpendicu-

15 larly, as hereinafter referred to. The said frame is provided in its front wall with an opening, *A'*, preferably rectangular in form, through which the frangible sealing-plate D is introduced to its operative position interior thereof, as shown in Figs. 1, 2, 3, 4, and 5. The upper position of the inner face of said front wall is transversely provided with a projection,  $a^4$ . (Shown in Figs. 2 and 4.)

25 In Figs. 1, 2, 3, 4, and 9 the frame is shown to have a downwardly-extended portion,  $a^6$ , which carries a keeper, E, for employment with the hasp F, attached to the car-door H' by the staple G; but such arrangement is entirely optional, as the device may be employed and operated to equal advantage in conjunction with the ordinary keeper present and fixed to the car. An arm,  $b^4$ , projects from the upper termination of the bolt B at right angles to the

30 axis thereof, and is the preferred means by which the same is manipulated. S, Figs. 3, 5, and 8, indicates a slot cut through the lower terminal portion of the bolt, the same being provided for the employment of any ordinary car-seal applicable to the purpose—in instances where the frangible sealing-plate may not be at hand or obtainable.

The operation of the device is as follows: To locate the sealing-plate D within the frame A, the bolt, being turned upon its axis to the position shown in Figs. 3 and 4, is moved or withdrawn perpendicularly until the projecting portion *b* thereof comes in contact with the upper wall of the frame, being then given a quarter-revolution rearwardly, as indicated by the dotted lines shown in the upper part of Fig. 3, which carries the projecting portion *b* into a position parallel with the vertical front of the frame, similarly to the position thereof shown in Figs. 1 and 2, the bolt, however, being shown in said Figs. 1 and 2 as occupying a different position perpendicularly. A frangible sealing-plate, D, having a width suitably in excess of the width vertically of the opening *A'*, is passed through said opening to the interior of the frame, the upper portion of the sealing-plate extending in the direction of the projection  $a^4$  and its lower edge resting upon the floor  $a^5$  of the frame. The position of the bolt being as above described—to wit, as shown by the said dotted lines in Fig. 3—it is carried downwardly through its

bearings until it reaches the position particularly shown in Figs. 1, 2, and 5, at which time the spring C drops into the recess  $b^2$  thereof, vertically locking the bolt in such position. Through the said downward movement of the bolt the upper edge of the sealing-plate is engaged by the inclined face of the lug *b'*, which guides the same under the projection  $a^4$ , provided therefor, the said lug thereafter preventing the removal of the plate from such position, as shown in Fig. 2, until the bolt shall have been started through its unlocking operation. It may be noted that the seal-breaking projection *b* is so located upon the bolt that in the last above described position of the bolt a line drawn lengthwise through said projection would be in a plane parallel with the vertical plane of the sealing-plate; also, that the length of said projection is greater than the distance between the sealing-plate and the bolt.

The unlocking of the device is accomplished as follows: The bolt being given a quarter-revolution forward by means of the arm  $b^4$ , the projection *b* is brought rigorously in contact with the sealing-plate, breaking and destroying the same, as shown in Figs. 3 and 4. Through this partial rotative movement of the bolt the recess  $b^2$  is carried beyond engagement with the spring C, which then bears upon the regular or peripheral surface of the bolt, (see Figs. 4 and 7,) in which position it is no longer capable of locking the bolt as against perpendicular movement preliminarily necessary to the introduction of another sealing-plate within the frame. To adjust another sealing-plate in position within the frame the bolt is withdrawn from its last above described position and otherwise manipulated, as above fully described. Recurring to the relation which the slots  $a^2$  and  $a^3$  bear to the projecting lug *b'*, appearing on the bolt B, it will be observed that said slots are so arranged that the bolt cannot be withdrawn, except when the sealing-plate is broken or absent from the frame and the said lug is in vertical alignment with the slot  $a^3$ , (shown by dotted lines in Fig. 6,) the spring C, when the bolt B is in its lower position, as shown in Figs. 1, 3, and 5, vertically locking it against withdrawal; also, that when a sealing-plate is carried into position within the frame the bolt cannot be returned without the projecting portion *b* coming in breaking-contact with said sealing-plate, except when said lug is in vertical alignment with the slot  $a^2$ , and through which arbitrary movement the proper situation of the projection *b* with relation to the sealing-plate in locking the device is invariably guaranteed.

Other means than the particular construction and arrangement hereinbefore described and illustrated in the accompanying drawings may obviously be employed in carrying out the general features of my invention, which embraces all devices arranged and constructed upon the general principles embodied in the construction and arrangement herein described. Thus, for example, the bolt may be



of any irregular form adapting the same to breaking the sealing-plate, in contradistinction to employing thereon the projection *b*. I therefore do not limit my invention, except as set forth in the appended claims.

I claim as my invention and desire to secure by Letters Patent—

1. In seal-locks, the combination of a lock-frame adapted to sustain in fixed position a frangible sealing-plate, substantially as shown, a perpendicularly and axially movable shackle-bolt sustained by said frame and provided with a suitable projecting portion, *b*, and lug *b'*, and means for securing said bolt in a certain position, from which it cannot be withdrawn or removed without breaking the said sealing-plate when the same is fixed in position, all arranged and adapted to be operated substantially as set forth.

2. The combination, as hereinbefore set forth, of a lock-frame arranged and adapted to sustain in operative position a frangible locking-seal, a perpendicularly and axially movable shackle-bolt provided with a suitable seal-breaking projecting portion, *b*, and a spring adapted, as specified, to secure the said bolt vertically in operative position, from which it cannot be withdrawn without being primarily turned upon its axis and thereby caused through its said projecting portion to come in contact with and demolish the said seal when in operative position, substantially as shown and described.

CHARLES E. DAVIS.

Witnesses:

GEO. W. LEVIN,  
MARCH POLK.