

(Model.)

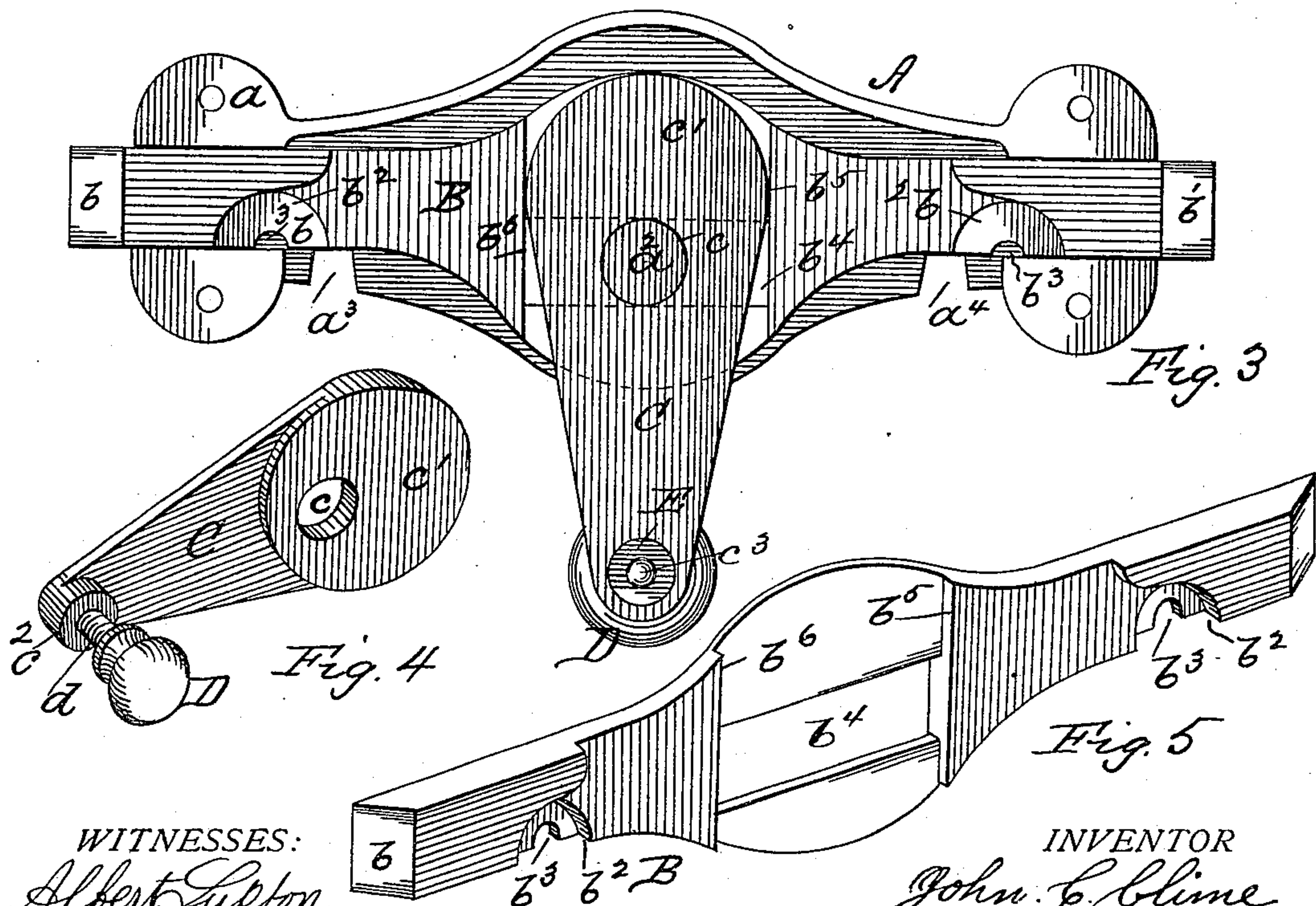
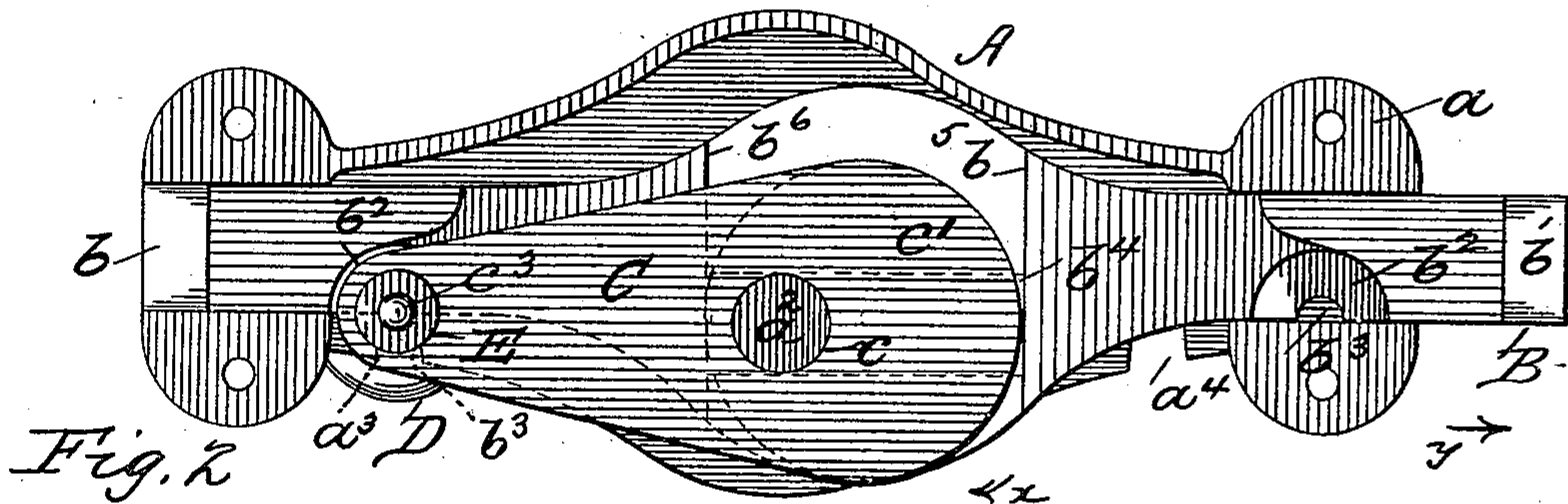
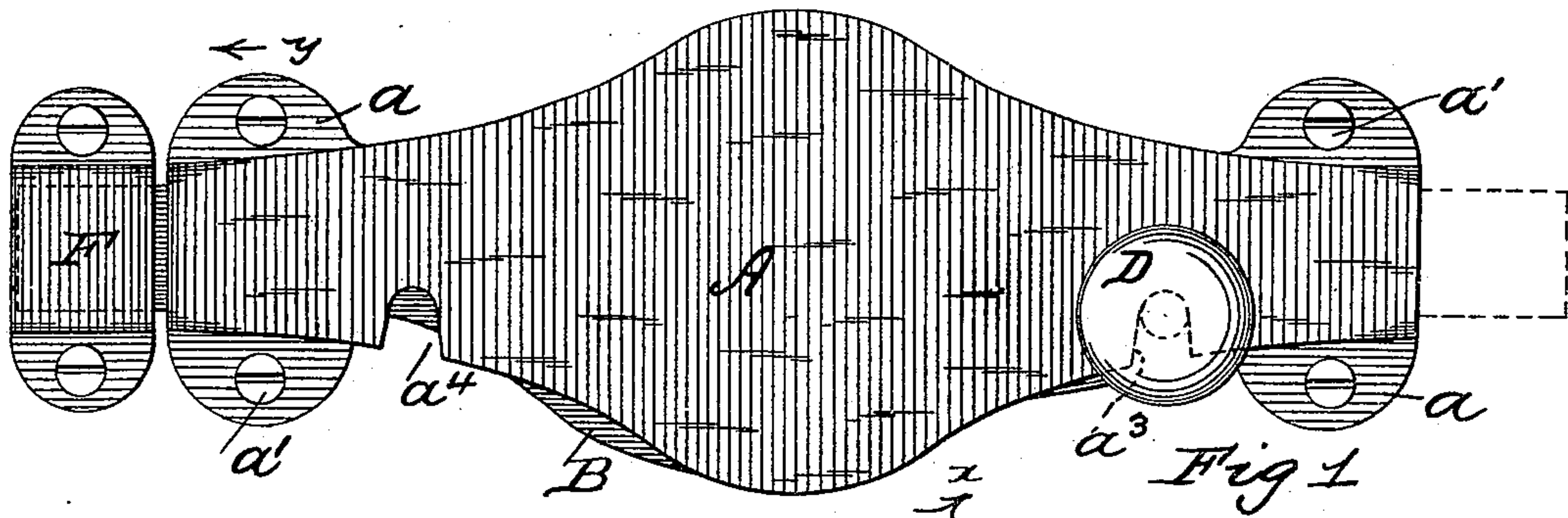
J. C. CLIME.

2 Sheets—Sheet 1.

BOLT.

No. 248,847.

Patented Nov. 1, 1881.



WITNESSES:  
Albert Lupton  
Thomas Williams

INVENTOR  
John C. Clime

(Model.)

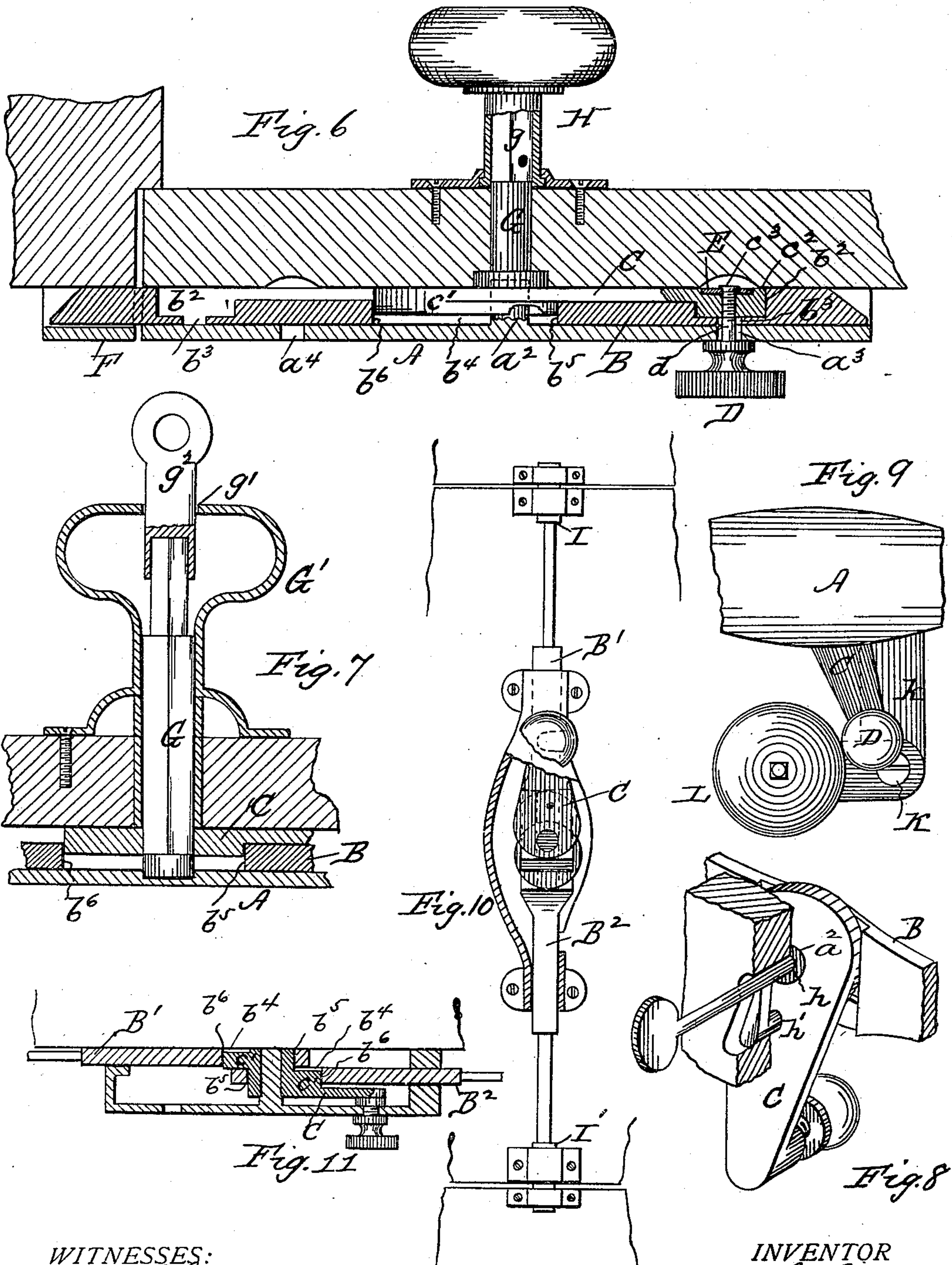
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WITNESSES:  
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John C. Clime



# UNITED STATES PATENT OFFICE.

JOHN C. CLIME, OF PHILADELPHIA, PENNSYLVANIA.

## BOLT.

SPECIFICATION forming part of Letters Patent No. 243,847, dated November 1, 1881.

Application filed June 20, 1881. (Model.)

*To all whom it may concern:*

Be it known that I, JOHN C. CLIME, a citizen of the United States, residing in the city of Philadelphia, in the county of Philadelphia and State Pennsylvania, have invented certain new and useful Improvements in Door and other Bolts, of which the following is a specification, reference being had to the accompanying drawings, wherein—

10 Figure 1 is a front elevation of my improved bolt. Figs. 2 and 3 are rear elevations of the same, illustrating the parts thereof in two different positions. Fig. 4 is a detail perspective of the operating-cam or eccentric-lever. Fig. 15 5 is a similar view of the bolt-bar. Fig. 6 is a longitudinal section of the bolt with knob attachment. Fig. 7 is a broken sectional view of the same with blind knob attachment. Fig. 8 is a broken sectional perspective with key. 20 Fig. 9 is a broken elevation, showing alarm attachment. Fig. 10 is an elevation, partly in section, of a modification of my invention; and Fig. 11 is a broken longitudinal section of the same.

25 My invention has for its object to provide an improved bolt; and it consists in the novel combination, construction, and arrangement of parts, as hereinafter described.

Referring to the accompanying drawings, A 30 represents a case for a bolt, formed with ears or lugs  $a$ , through which pass screws  $a'$  to fasten the same to a door or other fixture. Said case is also formed with a stud or pintle,  $a^2$ , and with notches  $a^3$   $a^4$  in its lower edge, at 35 each end thereof, as shown.

B is the bolt-bar, the ends of which are beveled, as shown at  $b$   $b'$ , and is provided with recesses  $b^2$   $b^2$  and notches  $b^3$   $b^3$  at either end thereof, as illustrated.

40  $b^4$  is a central elongated slot formed in said bar, and through which passes or projects the stud  $a^2$ . Said bar is also provided with shoulders  $b^5$   $b^6$  adjacent to the ends of the slots  $b^4$ .

C is a lever, having an opening,  $c$ , into which 45 passes the stud  $a^2$  to form a pivotal bearing therefor. Said lever is provided with a cam or eccentric,  $c'$ , fitting between and impinging against the shoulders  $b^5$   $b^6$  of bar B, as shown in Figs. 2 and 3. Said lever is also provided 50 with a knob, D, having a threaded stem,  $d$ , which screws into the boss  $c^2$  of said lever, and

is formed with an enlarged head,  $c^3$ , which bears against a washer, E, to secure said knob to said lever, so as to allow said knob and stem to turn, for the purpose hereinafter explained. 55

The operation is as follows: Said parts being arranged in position and attached to a door or other fixture, and it is desired to protrude the bar B into its keeper F to lock the door, the lever C is turned or oscillated on its pivotal bearing in the direction indicated by arrow  $y$  in Fig. 1. As soon as said lever begins to move, its cam  $c'$  impinges against the shoulder  $b^5$  of bolt-bar B, and slides the latter in the direction indicated by arrow  $y$ , Fig. 2, until it 65 enters the keeper. When said lever has been moved to such extent that the screw-stem  $d$  of knob D enters the notch  $a^3$  of casing its further movement is thereby prevented, and the bolt B is then fully protruded into its keeper. 70 The notch  $b^3$  and recess  $b^2$  in the opposite end of said bar then register with said notch  $a^3$  in the casing. Hence said stem  $d$ , when it enters notch  $a^3$ , also passes into notch  $b^3$ , while the boss  $c^2$  of said lever enters said recess  $b^2$  of the 75 bolt-bar. The knob D is then screwed down until it impinges against the face of the case, and by frictional contact therewith secures said lever fixed in position and locks the bolt-bar in its keeper. By reason of the described registration of the notches  $a^3$   $b^3$ , and the receiving of the boss  $c^2$  in recess  $b^2$ , the bolt-bar and lever C are both locked together on the casing. 80 Such locking of said parts will offer great resistance to the pushing back of the bolt-bar 85 from the outside of the door. To withdraw said bolt-bar, the knob D must first be unscrewed, the lever C may then be turned or moved in a reverse direction to that above described until stem  $d$  enters the notch  $a^4$  on the 90 opposite side of casing A, when the bar B is then fully retracted from its keeper and the door unfastened. As said stem enters said notch  $a^4$  the notch  $b^3$  and opening or recess  $b^2$  on the other end of bolt-bar then register with notch 95  $a^4$ , and said stem passes into both said notches, while boss  $c^2$  enters recess  $b^2$ , whereupon knob D is turned to lock the bolt-bar in its retracted position to prevent it accidentally slipping into the keeper as the door is opened and closed. 100

It will thus be seen that the bolt is reciprocated by simply moving the lever C from one



side of the casing to the other, and said bolt-bar is locked both in its protruded and retracted positions.

If the lever C is permitted to hang vertically, as shown in Fig. 3, the bolt-bar will be partially pushed into its keeper. In such position it affords a desirable catch or temporary bolt for the door for a person occupying a room and not wishing to be disturbed, but still not desiring to completely fasten the door.

If desired, the lever C may be formed with a pintle, G, having a square end,  $g$ , which passes through the door, and to which is secured a knob, H, as shown in Fig. 6. The bolt is thereby converted into a door-lock having an outside knob attachment, and as long as the lever C and bolt-bar B are not locked, as described, the door may be opened and shut in the ordinary manner.

Fig. 7 shows a modification of the knob attachment, wherein the knob  $G'$  is a blind knob, but is hollow and formed with an opening,  $g'$ , in its face, through which a key,  $g^2$ , is designed to pass to engage with the pintle G on lever C, said construction forming a convenient form for a dead-latch.

If desired, the blind knob attachment may be dispensed with, and a key hole or opening formed in the door, as shown in Fig. 8, in which case the stud  $a^2$  is provided with an aperture,  $h$ , and the lever C has an opening,  $h'$ , as shown, for the key to engage with to retract the bolt from its keeper.

In the last-described constructions no springs are required to reversely turn the bolt-bar after the same has been moved by the knob or keys, as is heretofore necessary in door-locks and dead-latches, for the reason that the lever C is of sufficient gravity to perform that operation.

Figs. 8 and 9 show my invention applied to a door having an upper and lower bolt designed to be operated simultaneously. The bolt-bar is made in two parts,  $B' B^2$ , each having the central slot,  $b^4$ , and shoulders  $b^5 b^6$ . The lever C is provided with double cams or eccentrics, as shown, one for each bolt-bar, and fitting be-

between the shoulders thereof, as indicated. Hence when said lever is moved in one direction the bolt-bars  $B' B^2$  and their attached fastening-bars I I' are simultaneously moved to protrude said bars I I' into their keepers, and when said lever is moved in the contrary direction the bars I I' are retracted from the keepers. This form of locking-bolt is very advantageous for large doors whereon an upper and lower bolt is used. The application of my invention thereto renders their manipulation comparatively easy, and dispenses with the use of hanging-chains heretofore required.

If desired, an alarm may be connected to the bolt-case, as shown in Fig. 9, said alarm consisting of a bell or cartridge secured by a screw, K, to a lug,  $k$ , depending from the bolt-case. When the bell or alarm is in use it is swung on its pivotal attachment until it is in line with the path of travel of the knob D, so that if the bolt be by any means withdrawn from its keeper by a person seeking to obtain entrance through the door to which the devices are attached, the movement of said bolt will cause the lever C to drop or move, and its knob D will strike the bell or cartridge L and sound an alarm.

The bar B is beveled at both ends, so that the bolt may be applied to any part of the door or other fixture, either on its inside or outside.

What I claim as my invention is—

1. In a door-bolt, the combination, of a casing having notches on its lower edge near its ends and a central stud or projection, a bolt-bar having a central elongated slot and shoulders on each end of said slot, and an eccentric or cam lever for operating said bolt-bar, substantially as shown and described.

2. The combination of casing A, bolt-bar B, cam-lever C, having locking devices D, substantially as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 18th day of May, A. D. 1881.

JOHN C. CLIME.

Witnesses:

E. H. WOOD,  
C. J. WOOD.