

(No Model.)

2 Sheets—Sheet 1.

H. G. VOIGHT.
LOCK.

No. 574,506.

Patented Jan. 5, 1897.

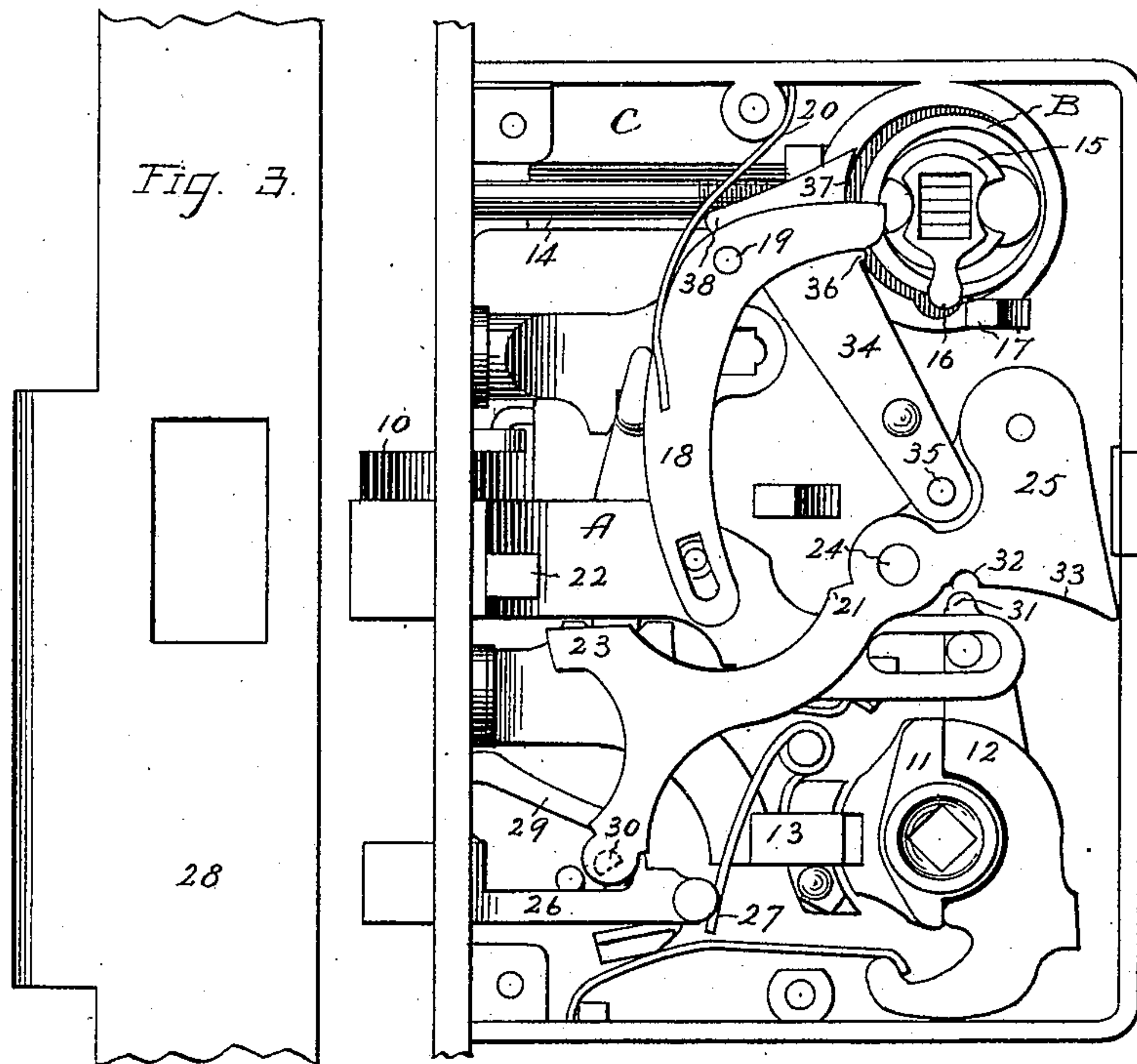
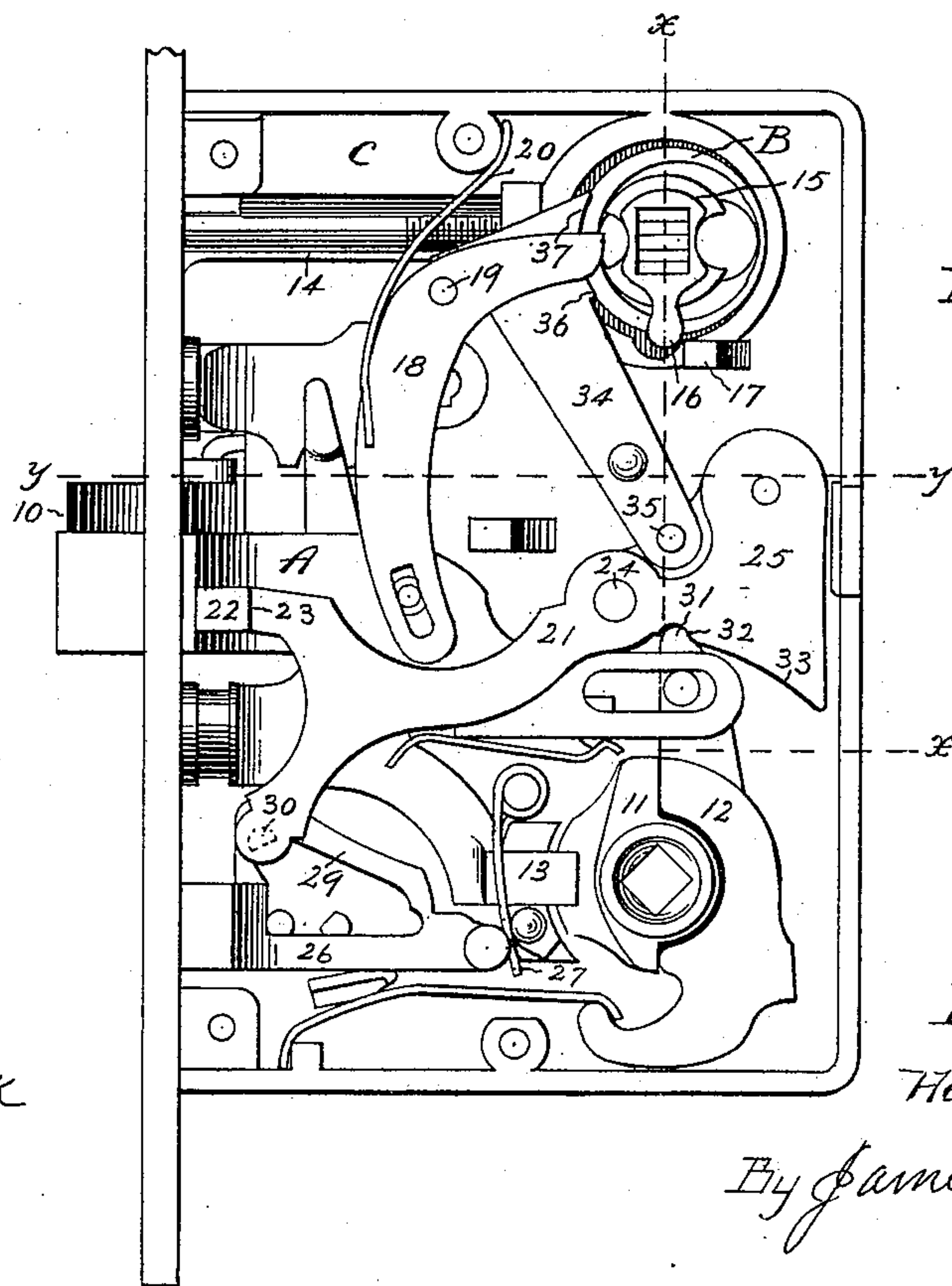


Fig. 1.



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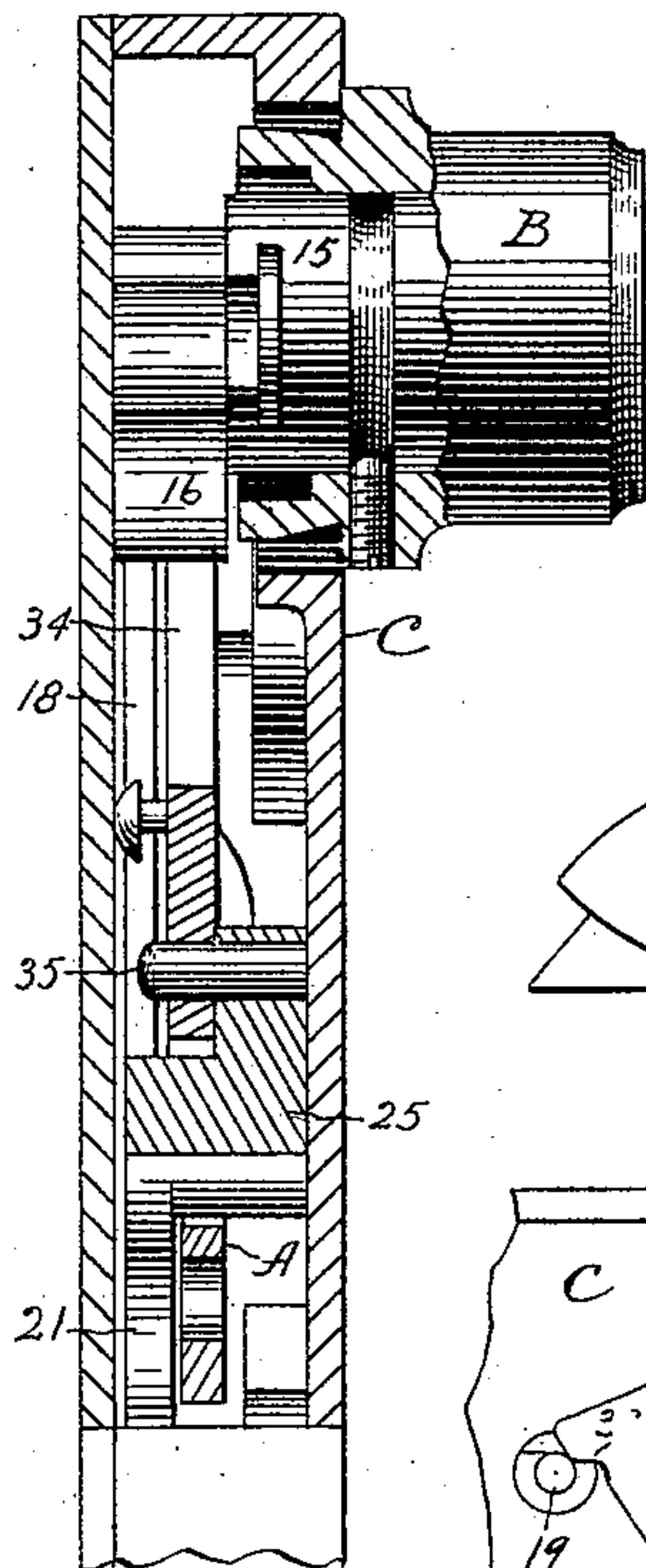


Fig. 4.

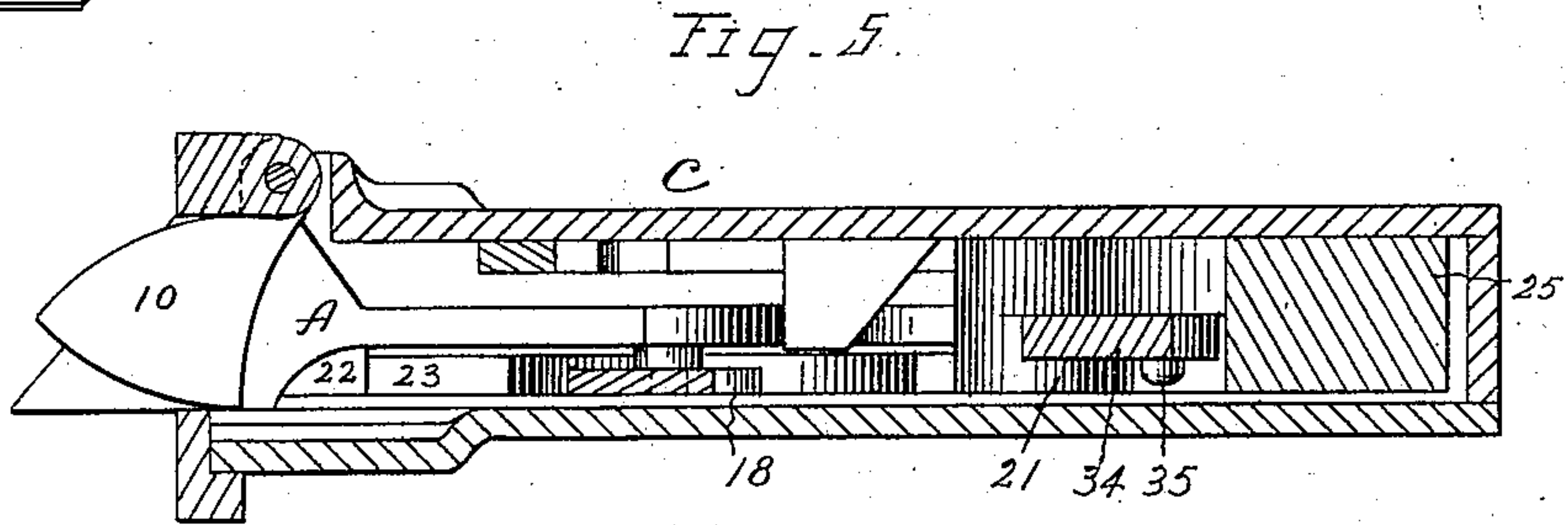


Fig. 5.

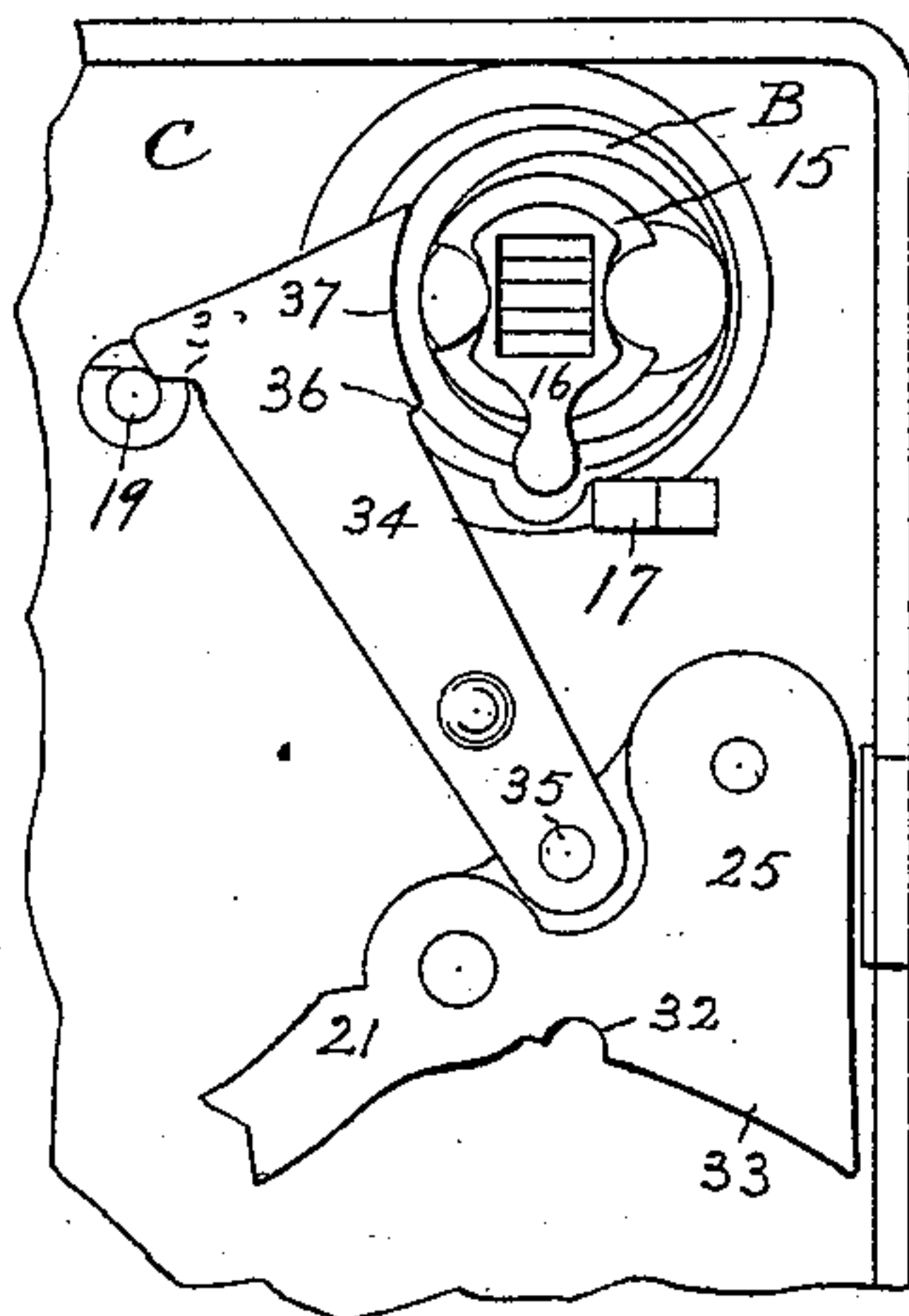


Fig. 6.

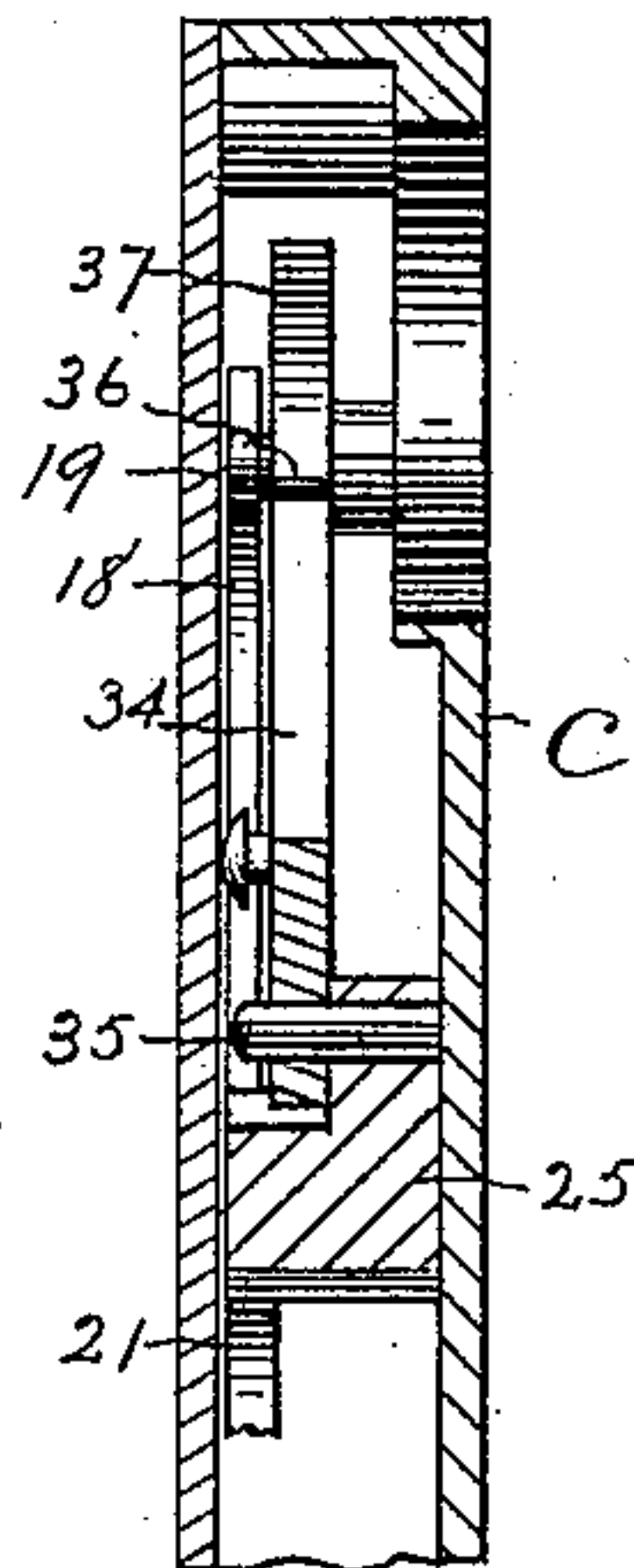


Fig. 7.

Fig. 8.

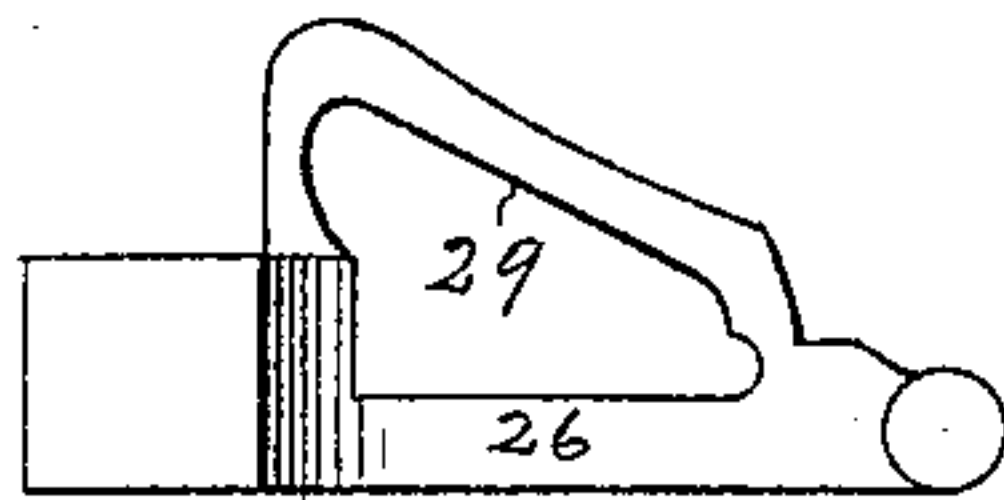
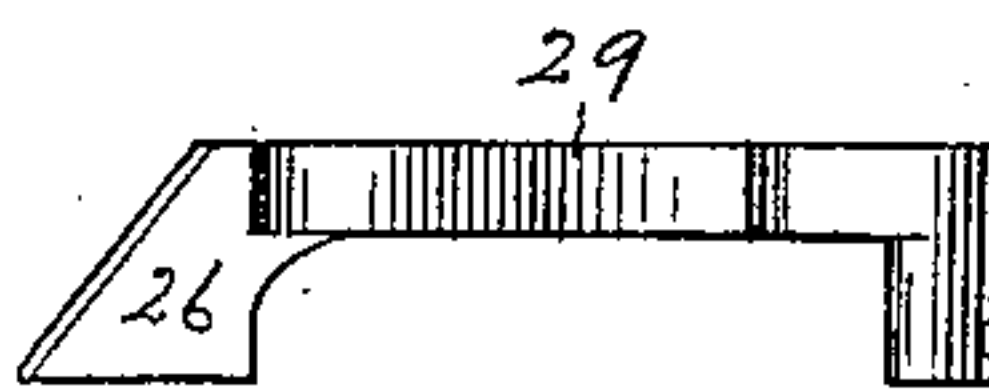


Fig. 9.



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UNITED STATES PATENT OFFICE.

HENRY G. VOIGHT, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO THE
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LOCK.

SPECIFICATION forming part of Letters Patent No. 574,506, dated January 5, 1897.

Application filed October 15, 1896. Serial No. 608,935. (No model.)

To all whom it may concern:

Be it known that I, HENRY G. VOIGHT, a citizen of the United States, residing at New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Locks, of which the following is a specification.

My invention relates to improvements in locks of the class known as "night-latches" or "combined latch and lock;" and the objects of my improvement are simplicity and economy in construction and efficiency and security in use.

In the accompanying drawings, Figure 1 is a front elevation of my lock with the cap-plate removed. Fig. 2 is a corresponding view with some of the parts in a different position. Fig. 3 is a face view of the striker-plate or keeper. Fig. 4 is an enlarged vertical section on the line *x x* of Fig. 2 with some of the parts in elevation. Fig. 5 is an enlarged horizontal section on the line *y y* of Fig. 2. Fig. 6 is a detached front elevation with the latch-throwing lever removed, said figure being on the same scale as Fig. 1. Fig. 7 is a detached sectional view on the line *x x* of Fig. 2, the cylinder-lock being removed. Fig. 8 is a detached front elevation of the false latch bolt or slide, and Fig. 9 is a plan view of the same.

The main portion of the latch-bolt A, the latch-bolt cam 10, the divided hub 11, the lever 12 for operating the latch-bolt through said hub, the stop 13 for the outer part of said divided hub, and the stop-operating devices are of an ordinary construction. An ordinary cylinder-lock is secured through its case B to the latch-case C by means of the bolt or screw 14 in the ordinary manner. The rotary cylinder 15 of this lock is provided with the usual tumblers and the ordinary wing 16. A stop 17 on the case C limits the rotation of this wing in one direction. A lever 18 is pivoted to a post 19 on the case with one end in position to be operated upon by the wing 16, its opposite end being connected to the latch-bolt by a pin-and-slot connection, while said lever and the latch-bolt are held in their normal position by means of the spring 20.

The present invention relates to the lock-

ing-dog 21 for holding the latch-bolt in its extended position and to the parts that co-operate with said dog. The latch-bolt is provided with a shoulder 22, back of which the holding-arm 23 of the dog 21 passes to lock the latch-bolt from being pushed inwardly. This dog is pivoted on the post 24 and is arranged to normally rest in the position shown in Fig. 2 (preferably by means of the weighted end 25) with its holding-arm 23 back of the shoulder 22 of the latch-bolt. Below the latch-bolt A is a false latch bolt or slide 26, which is pressed outwardly by means of the spring 27 and inwardly by means of the striker-plate 28, which has no keeper-mortise for said false latch-bolt to enter, so that whenever the door is closed this false latch-bolt is forced inwardly and held in by the striker-plate. It is provided with an incline or cam 29, that engages a lateral pin or projection 30 (indicated by broken lines in Figs. 1 and 2) for forcing the holding-arm 23 downwardly out of engagement with the shoulder 22 of the latch-bolt whenever the door is opened, so as to permit the spring 27 to force the said false latch-bolt outwardly into the position shown in Fig. 1. Whenever this false latch-bolt is held within the case in the position shown in Fig. 2, the incline or cam is withdrawn, so as to permit the locking-dog to act through gravity and move the holding-arm 23 behind the shoulder 22 and secure the latch-bolt against being pushed inwardly. At the same time the locking-dog is so connected with the latch-operating levers that it is withdrawn from behind the shoulder of the latch-bolt whenever said bolt is operated through the cylinder-lock or through the knob-spindle. The upper end 31 of the lever 12, when in its normal position, lies by the side of a shoulder 32 in the under side of the weighted end 25 of the dog 21, whereby the movement of said lever acts to raise the said weighted end, thereby withdrawing the latch-holding arm 23 of the dog 21 from behind the shoulder 22 of the latch-bolt. The under side of the said weighted end, to the right of the shoulder 32, as seen in Figs. 1 and 2, is curved, as at 33, on an arc corresponding to that described by said upper end 31 of the lever 12, whereby after passing said shoulder 32 the holding-arm

of the dog is held out of engagement with the shoulder 22 of the latch-bolt until the lever 12 is again in its normal position.

A swinging arm 34 is pivoted to the weighted end 25 of the dog 21 by the pin 35. One edge of this arm 34 faces the wing 16 of the cylinder-lock, and is provided with a shoulder 36 and curved face 37 concentric with the axis of said wing. At the opposite edge there is a projection 38, which rests against the post 19, as shown in Fig. 6. Whenever the wing 16 of the cylinder-lock is turned for operating the latch through the lever 18, the said wing first engages the shoulder 36, so as to raise said swinging arm and weighted end of the dog until the projection 38 can slide over the top of the post 19 and permit said arm to swing away from the wing 16 sufficiently to let said wing pass the shoulder 36 and move over the curved face 37, whereby the holding-arm 23 of the dog 21 is withdrawn from behind the shoulder 22 of the latch-bolt and held out of engagement therewith until the wing 16 is turned back to the position shown in the drawings.

I claim as my invention—

1. The combination of a cylinder-lock having the wing 16, a latch-bolt, the lever 18 connecting said wing and latch-bolt, the latch-hub 11, lever 12 connecting said hub and

latch-bolt, the false latch-bolt having the incline or cam 29, the latch locking-dog pivoted on the case in engagement with said false latch-bolt and lever 12, and the pivoted swinging arm on said dog for being engaged by the wing 16 of said cylinder-lock, substantially as described.

2. In a lock the combination of the latch-bolt having a shoulder 22, the latch-hub 11, the lever 12 acted upon by said hub, the locking-dog 21 pivoted at 24 and having the holding-arm 23, pin 30, shoulder 32 and curved face 33, the end of the lever 12 being adapted for acting on said shoulder and curved face, and the spring-pressed false latch-bolt having the incline or cam 29 for engagement with the pin 30 of the locking-dog, substantially as described.

3. In a lock, the combination of the latch-bolt and its operating devices with the locking-dog pivoted on the case, the swinging arm pivoted to the weighted end of said dog and having the projection 38 shoulder 36 and curved edge 37, and the wing 16 of a lock for engaging the said swinging arm, substantially as described.

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Witnesses:

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