

No. 643,729.

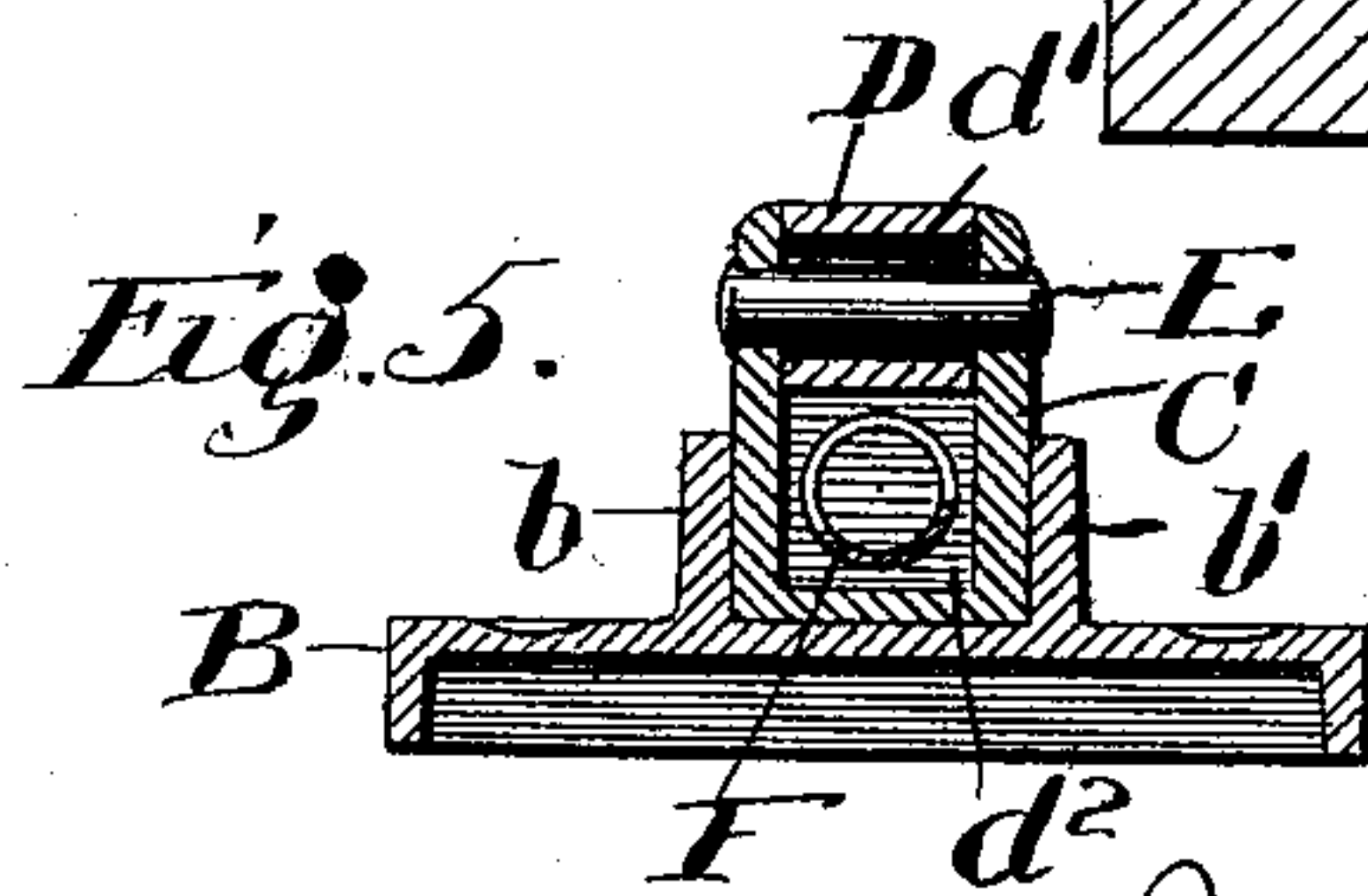
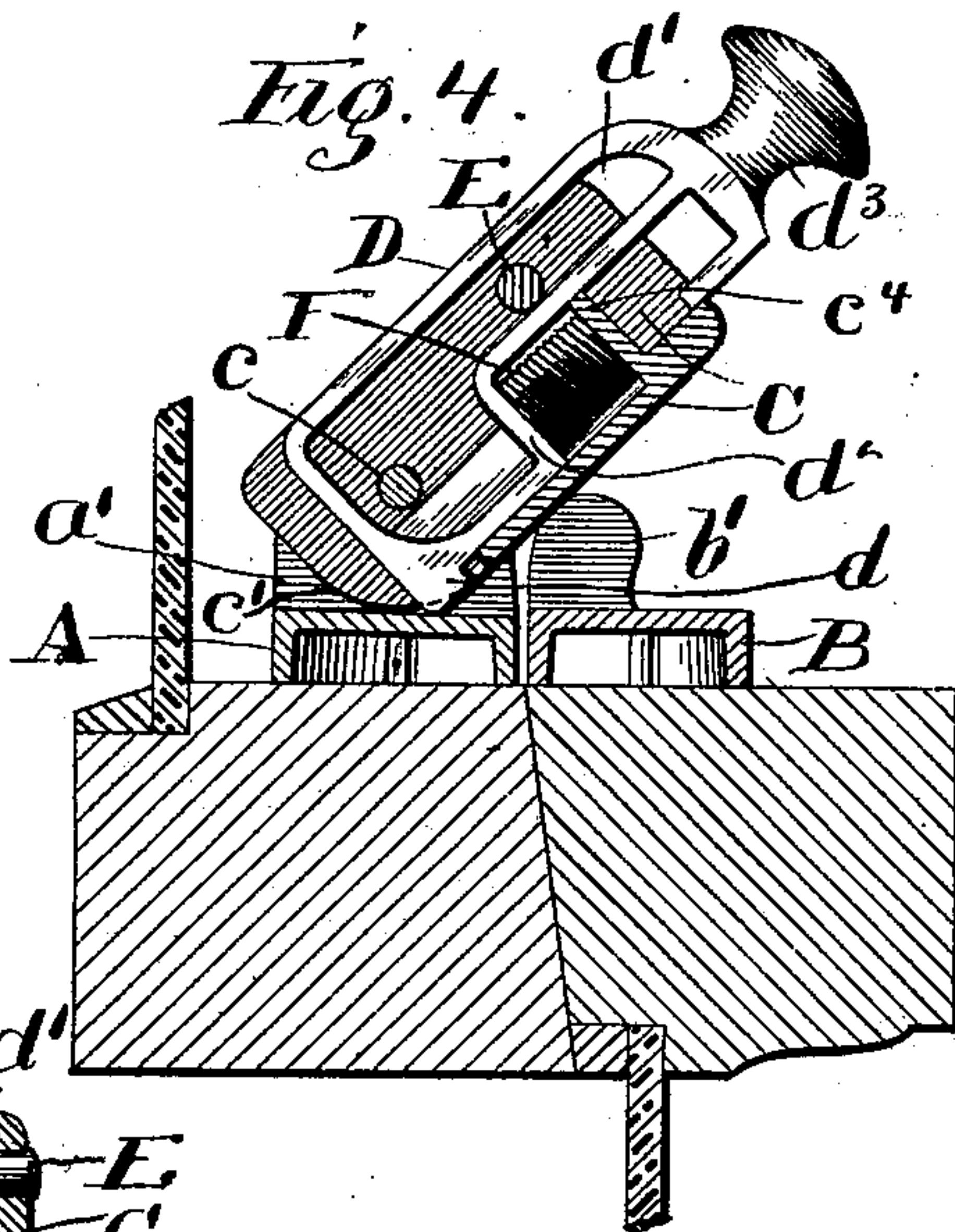
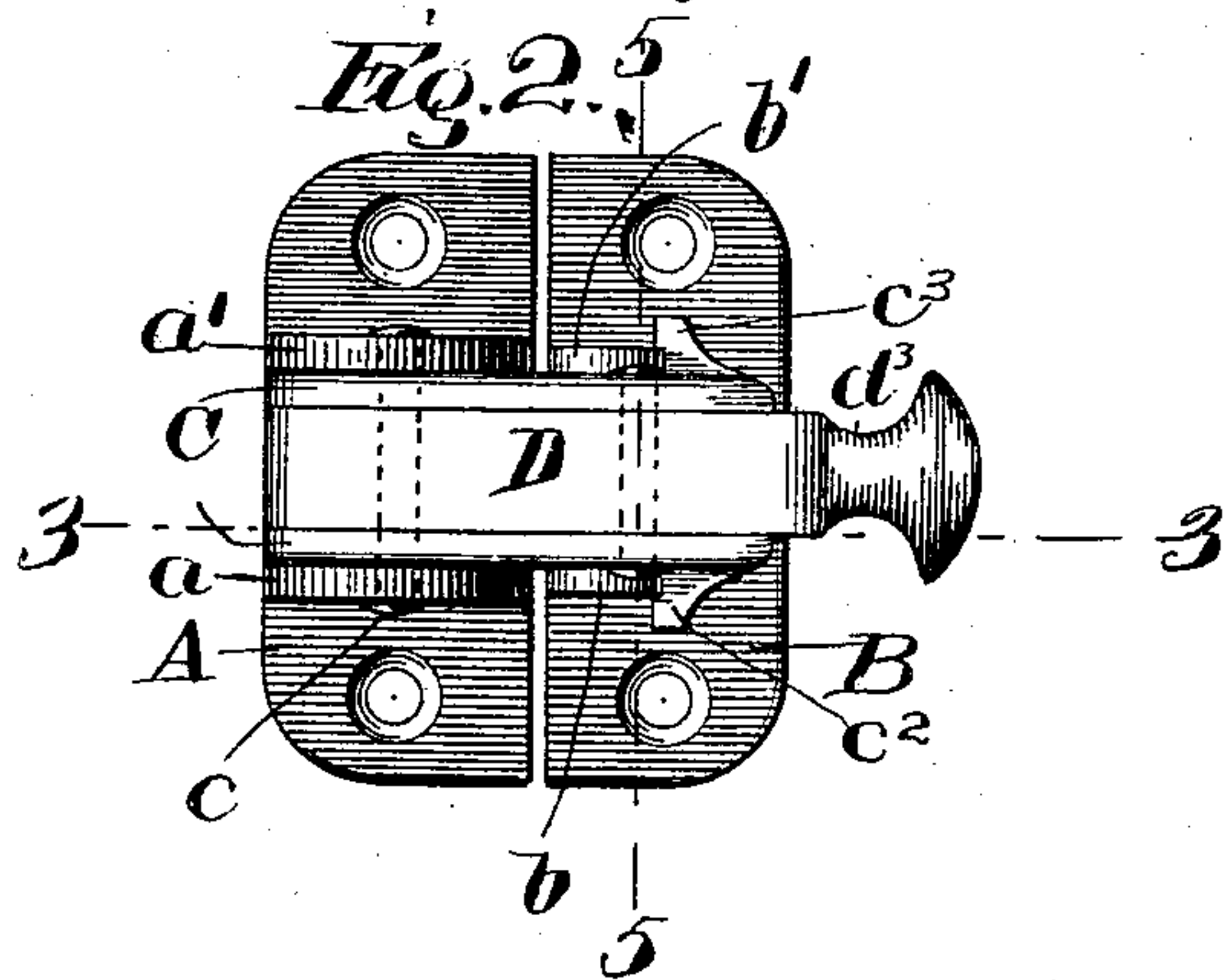
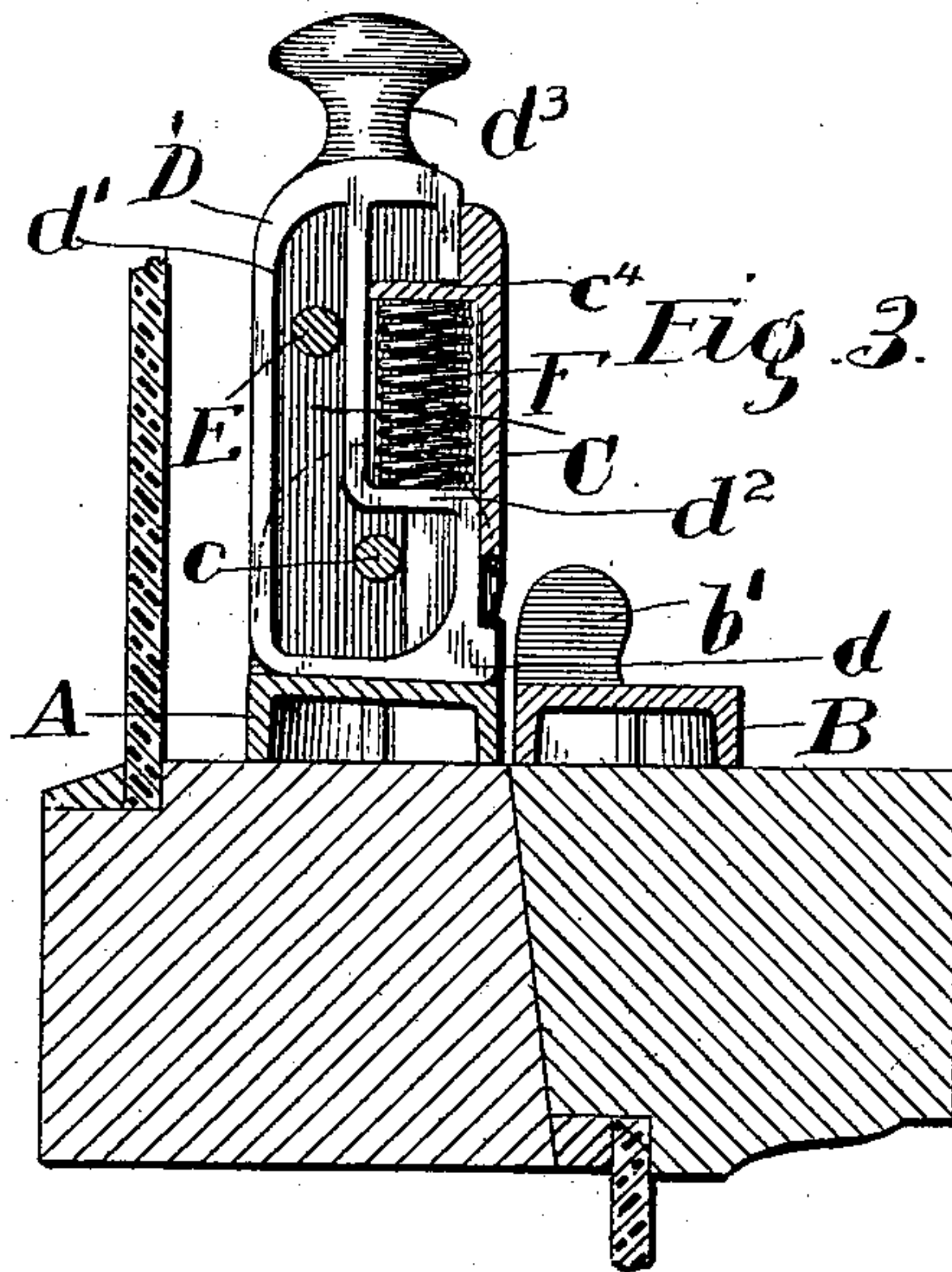
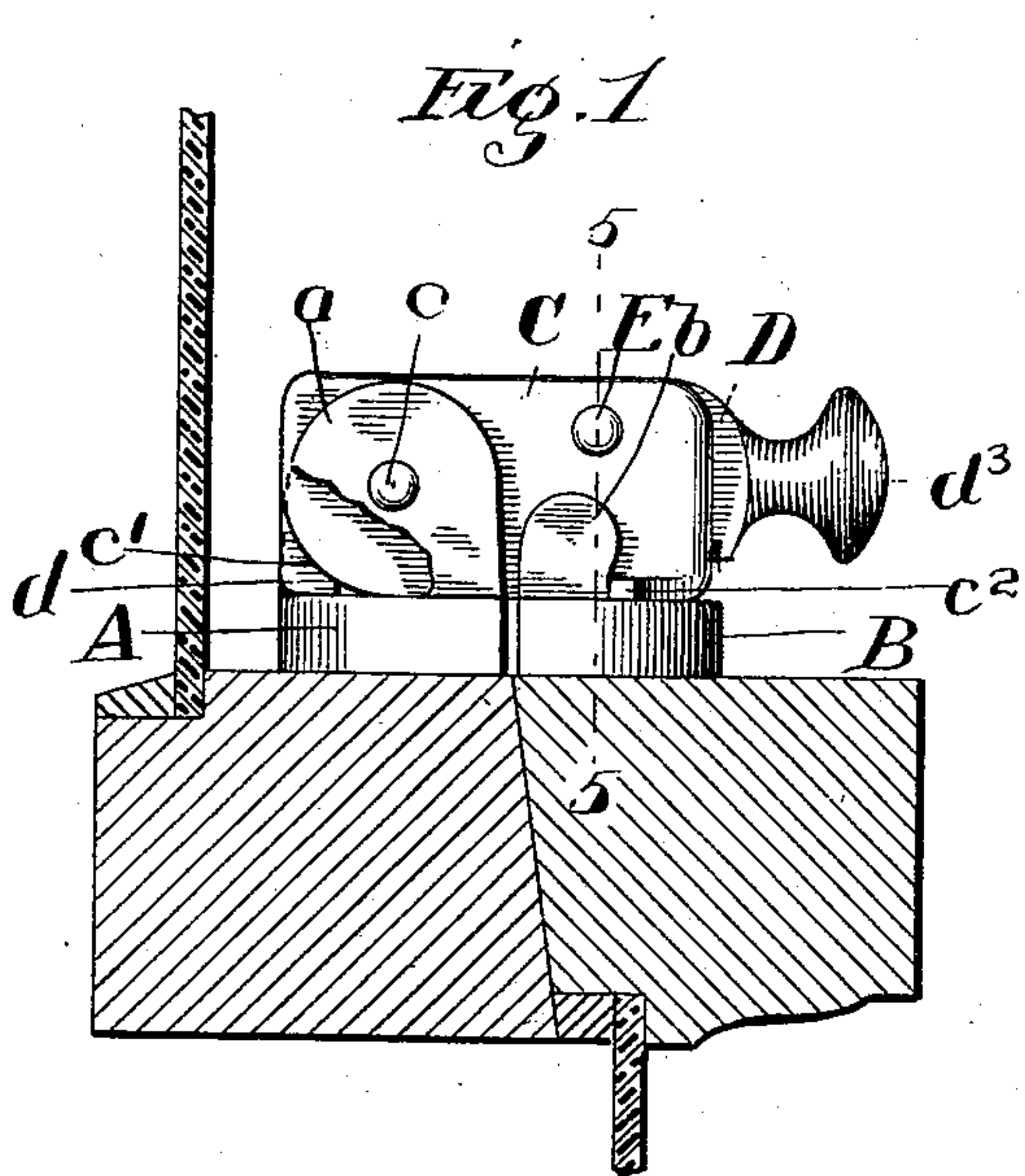
Patented Feb. 20, 1900.

J. R. PAYSON, SR.
SASH LOCK.

(Application filed Nov. 6, 1899.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:
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Inventor:
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2 Sheets—Sheet 2.

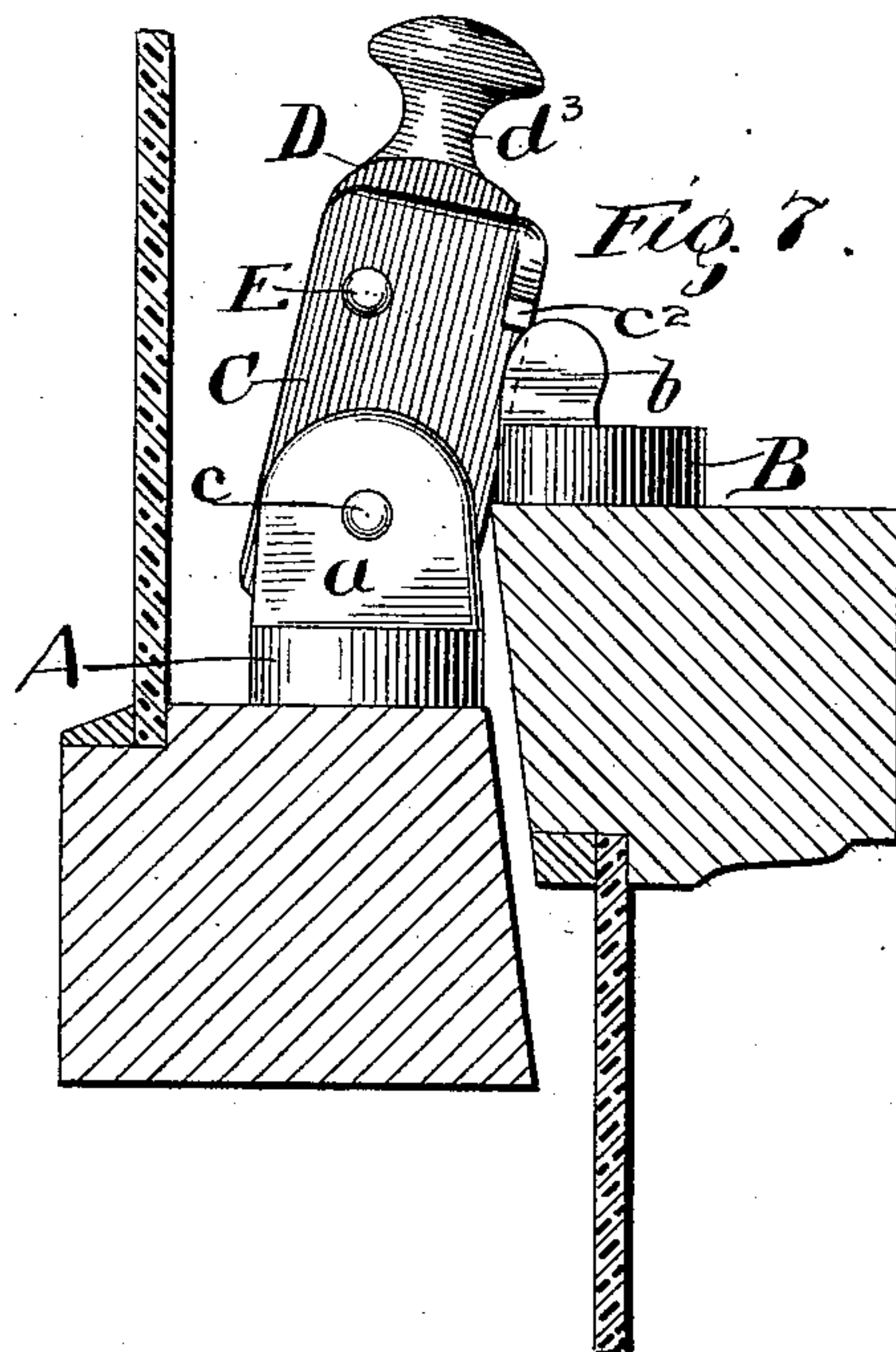
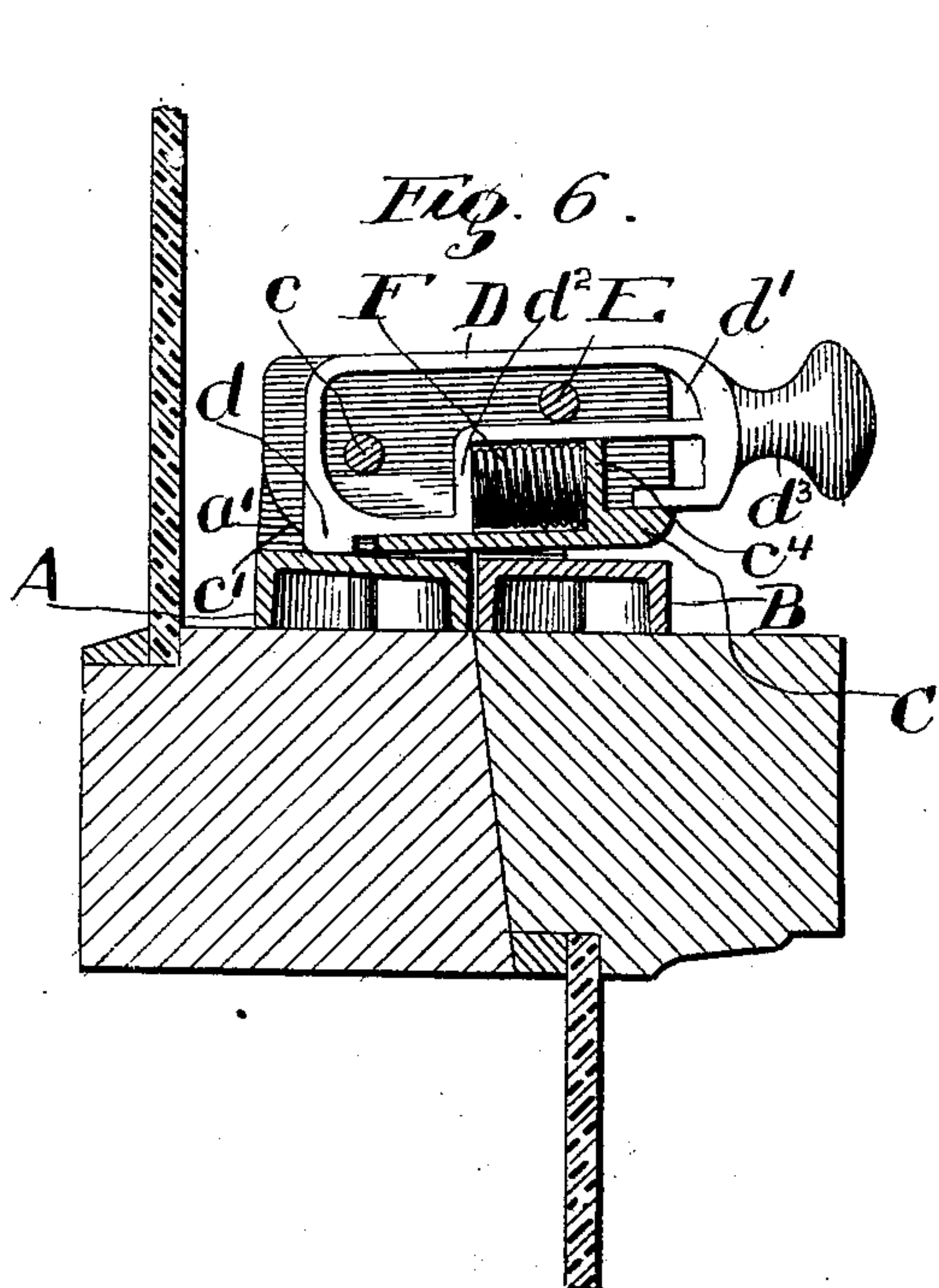
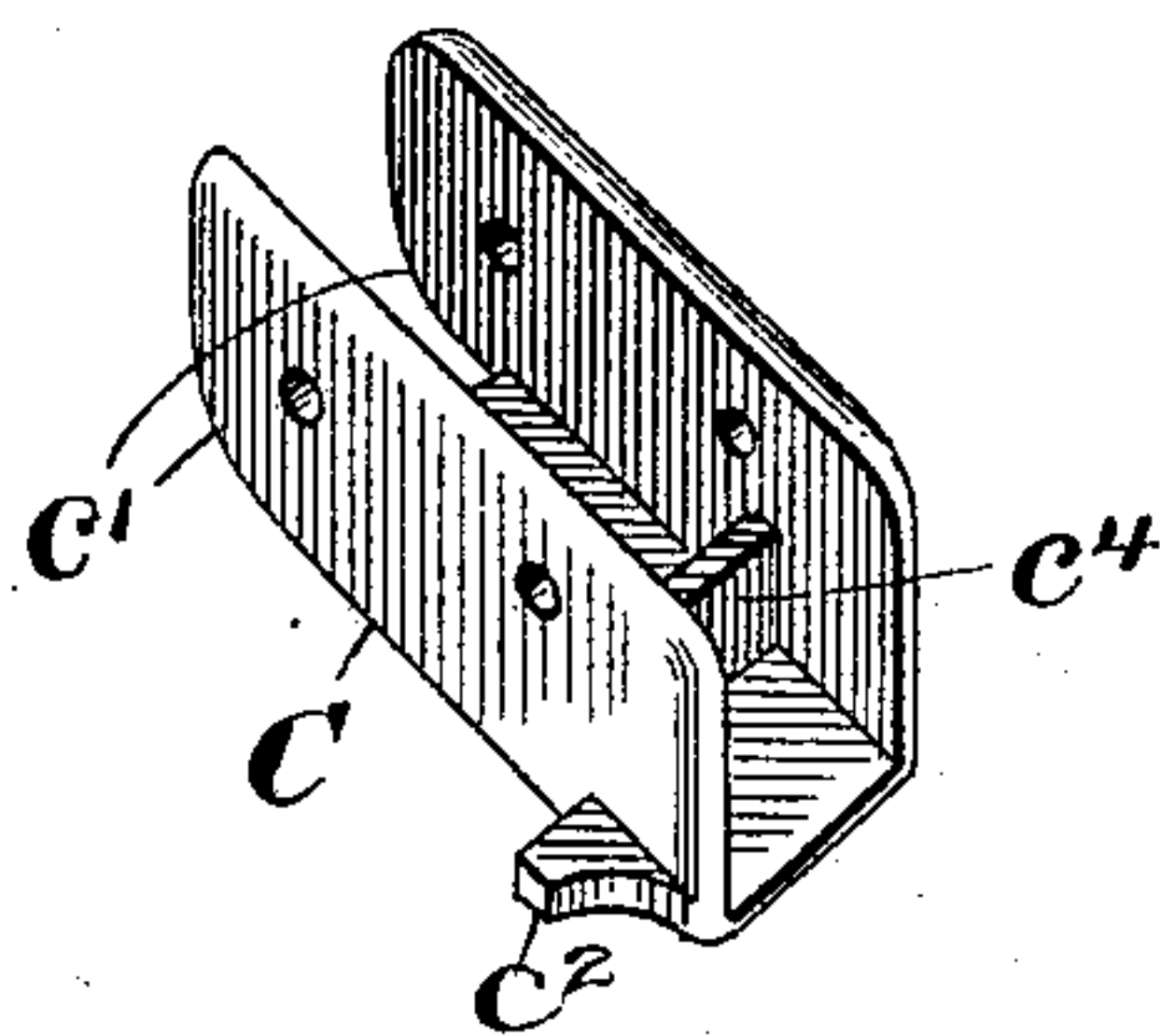


Fig. 8.



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UNITED STATES PATENT OFFICE.

JOSEPH R. PAYSON, SR., OF CHICAGO, ILLINOIS.

SASH-LOCK.

SPECIFICATION forming part of Letters Patent No. 643,729, dated February 20, 1900.

Application filed November 6, 1899. Serial No. 735,869. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH R. PAYSON, Sr., a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Sash-Locks, of which the following is a specification.

My invention relates to certain improvements in sash-locks of the class used upon the meeting-rails of window-sash; and the object of the invention is to produce a neat, compact, and efficient sash-lock as cheaply as possible.

To such end the invention consists in the arrangement and combination of parts set forth in the following description and clearly defined as to the essential features thereof in the appended claims.

In the drawings, Figure 1 is a side elevation of the preferred form of my invention, showing the meeting-rails of the sash in cross-section and the lock in its closed position. Fig. 2 is a plan view of the same. Fig. 3 is a vertical transverse section in line 3 3 of Fig. 2, showing the lock in its open or unlocked position. Fig. 4 is a view similar to Fig. 3, showing the locking-arm swung inward as in the act of locking the meeting-rails of the sash together. Fig. 5 is a vertical section in line 5 5 of Figs. 1 and 2. Fig. 6 is a vertical transverse section similar to Figs. 3 and 4, but showing the locking-arm when slightly raised from the position shown in Fig. 1. Fig. 7 is a view similar to Fig. 1, showing the locking-arm in the act of engaging the drawing-lugs to force down the lower sash and raise the upper; and Fig. 8 is a perspective of the case of the locking-arm proper, showing its channeled construction, by means of which it receives and incloses the sliding bolt.

Referring to the drawings, A is the back plate, adapted for attachment to the top of the meeting-rail of the outer or upper sash, and B is the front plate, adapted for attachment to the top of the inner or lower sash. From the back plate A rise two lugs or knuckles $a a'$, between which a locking-arm C is pivoted by means of a pivot-pin c , said arm being preferably of rectangular form, with a rounded lower rear corner c' to permit of its swinging from the position seen in Fig. 1 to

that seen in Fig. 3. The free end of the arm preferably has two oppositely-extending horizontal lugs $c^2 c^3$, which I will term "drawing-lugs," as they engage with upright posts or bearings $b b'$ upon the front plate B to draw the two plates together as the locking-arm is swung forward or inward. The posts are preferably rounded to properly engage the drawing-lugs and furnish the means by which the two meeting-rails are drawn and held together in a horizontal plane. The lower sash is crowded down and the upper sash raised by pulling the locking-arm C forward and inward into the horizontal position. To lock it in this position, the sliding bolt D is longitudinally guided in the locking-arm and adapted to slide rearwardly to present its square inner and lower end d to the rear upper surface of the back plate and prevent the lifting of the forward end of the arm. To accommodate this sliding bolt, the upper surface of the locking-arm is channeled longitudinally, with the exception of a vertical web c^4 , adapted to furnish a bearing for a spring to throw the bolt. The sliding bolt is preferably made with a longitudinal slot d' , and a guide-pin E is passed through the arm and the slot to guide the bolt in the arm. A shoulder d^2 is also provided, and between this shoulder and the web c^4 is interposed a spring F under compression and tending to crowd the sliding bolt backward. A handle d^3 is provided upon the end of the sliding bolt, and the portion of said bolt within the locking-arm is preferably made of the light and open construction here shown to reduce the weight and the cost of the lock.

The operation of the lock is clearly illustrated by the various views. Fig. 1 shows it locked with the lower squared rear corner of the sliding bolt bearing upon the top of the back plate to prevent the raising of the arm. Fig. 3 shows the locking-arm raised into an upright position and the rear squared end of the sliding bolt bearing upon the upper surface of the back plate under the tension of the spring to hold the arm in this position. Fig. 4 illustrates the swinging inward and downward of the locking-arm, during which the sliding bolt is crowded inward against the tension of the spring until its lower rear corner clears the upper surface of the back plate

and is thrown backward, as seen in Fig. 6, by the spring F. In Fig. 6 the locking-arm is shown as slightly raised to show the manner in which the sliding bolt prevents the raising of the arm even if the latter be not forced down to the limit of its movement, but because of sticking or swelling of the sash stops somewhat short of such position. It should be noticed that after the lower rear corner of the sliding bolt clears the portion of the upper surface of the back plate nearest the pivot it thereafter slides backward as the arm is forced downward and locks the arm against return movement at whatever point the downward movement ceases. This is of great importance, inasmuch as it may often be impossible to force the locking-arm downward to its fullest extent in case the window-sash are swollen or the window-frame obstructed by ice or otherwise.

As to the specific construction of the lock it should be noticed that the same is exceedingly simple and cheap of manufacture, all of the various parts being of such form as to cast readily and in the cheapest manner and the work necessary to put the lock together being limited to the drilling necessary to form the pivot-holes and the insertion and securing of said pivots.

I do not confine myself to the specific construction herein shown and described, as the same may be varied greatly without departing from my invention.

I claim as new and desire to secure by Letters Patent—

1. The combination, in a sash-lock, of a

back plate, a vertically-oscillating locking-arm pivoted thereto and a longitudinally-sliding spring-bolt guided in the arm, extending beyond the pivot-pin and adapted to engage with and lock upon the rear upper surface of the back plate when the arm approaches a horizontal position; substantially as described.

2. The combination, in a meeting-rail sash-lock, of a back plate, a vertically-oscillating arm pivoted thereto, forming a three-sided case and a longitudinally-sliding spring-bolt guide within said case extending beyond the axis of oscillation and engaging the rear upper surface of the back plate when the locking-arm is moved toward a horizontal position; substantially as described.

3. In a meeting-rail sash-lock, the combination with a back plate, and front plate having suitable means of engagement, of a vertically-swinging arm pivoted to the back plate consisting of a three-sided outer case, having an inside web for a spring-seat, outside drawing-lugs and suitable cross-perforations for pivot and guide pins and an inner spring-bolt provided with handle, suitable slots to receive pivot and guide pins and a spring interposed between the spring-seat and the bolt; substantially as described.

In witness whereof I have hereunto set my hand, at Chicago, in the county of Cook and State of Illinois, this 3d day of October, A. D. 1899.

JOSEPH R. PAYSON, SR.

Witnesses:

J. R. PAYSON, Jr.,
EDWARD PAYSON.