

W. H. TAYLOR.  
Padlock.

No. 218,200.

Patented Aug. 5, 1879.

Fig. 1.

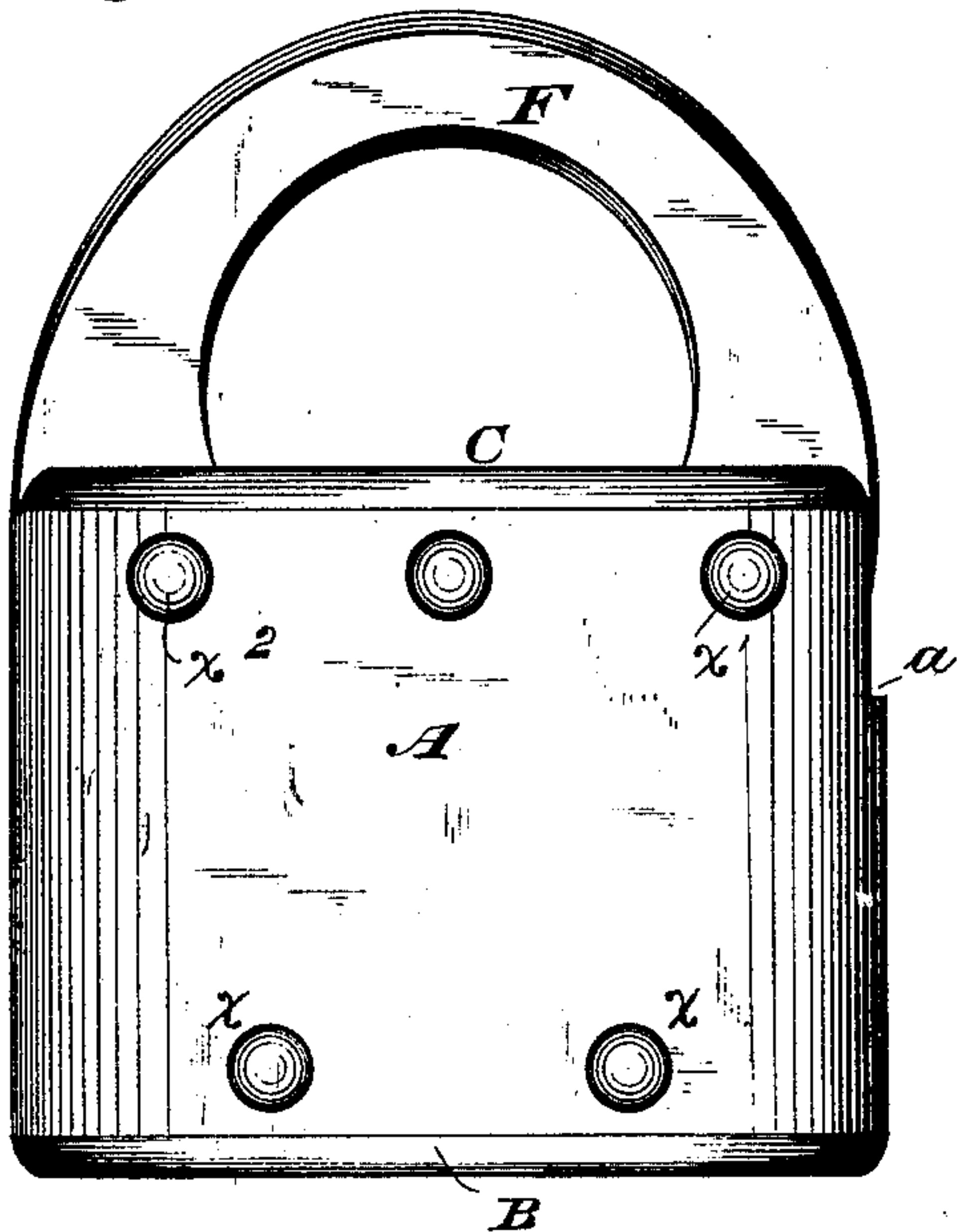


Fig. 2.

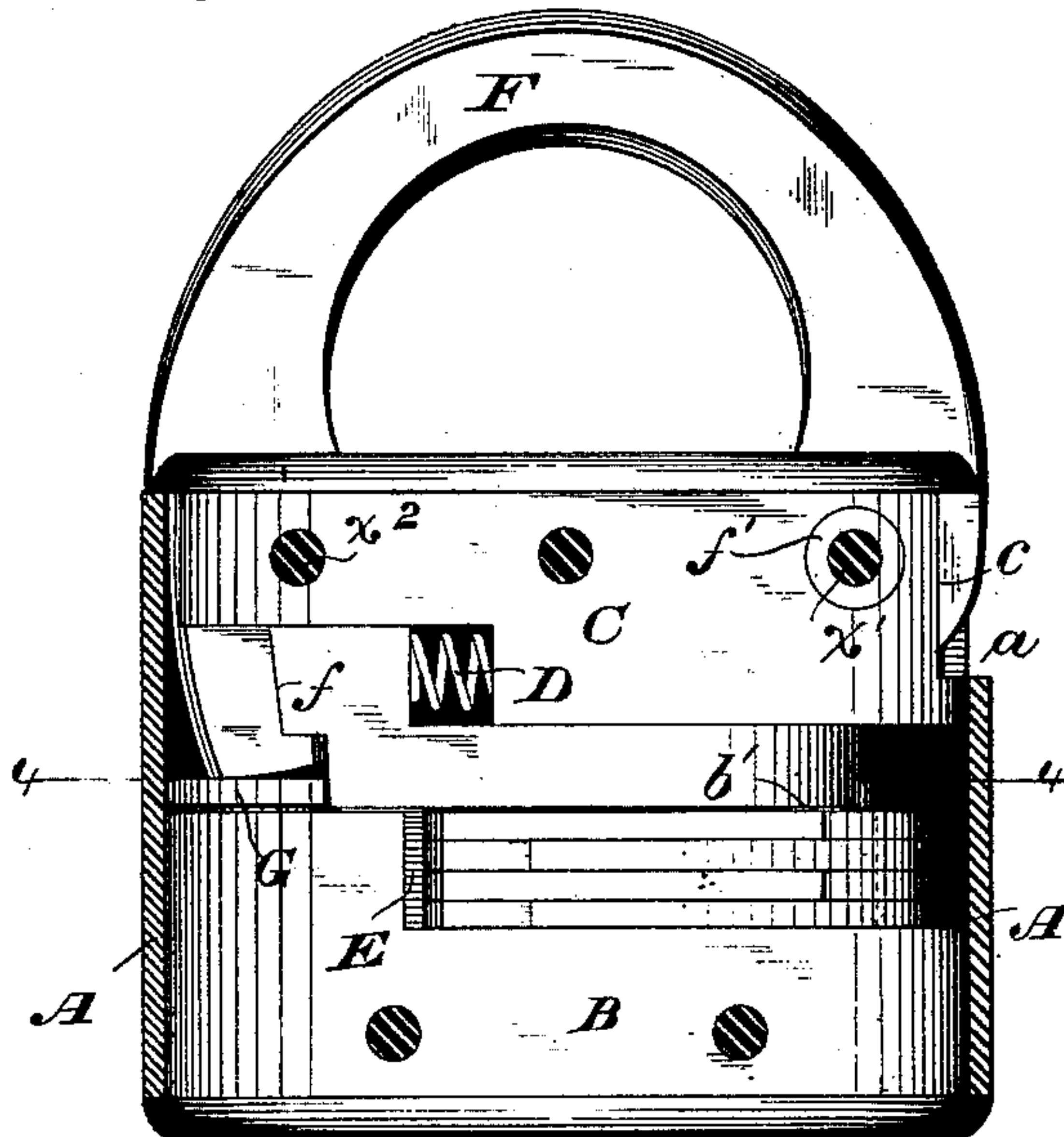


Fig. 3.

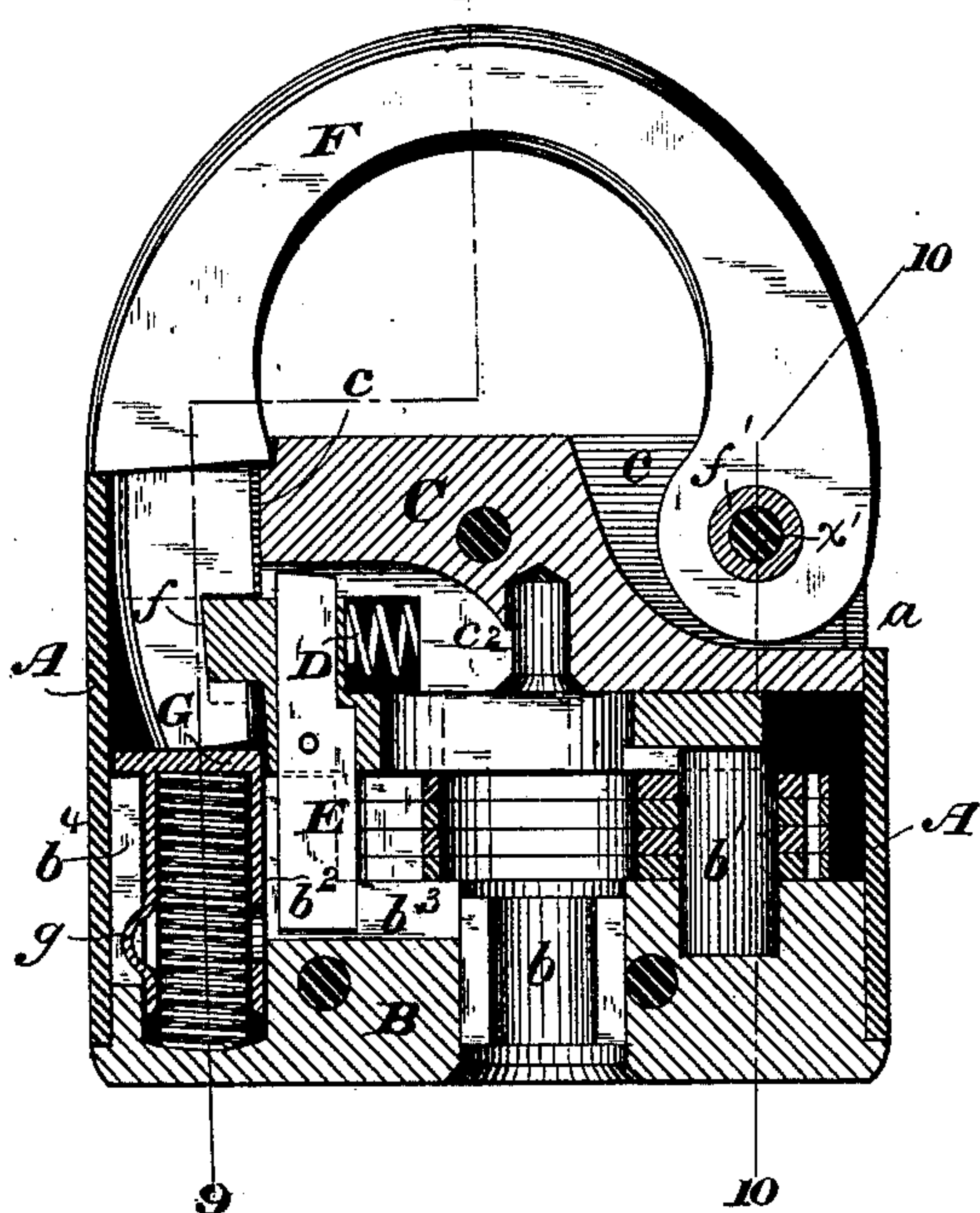


Fig. 4.

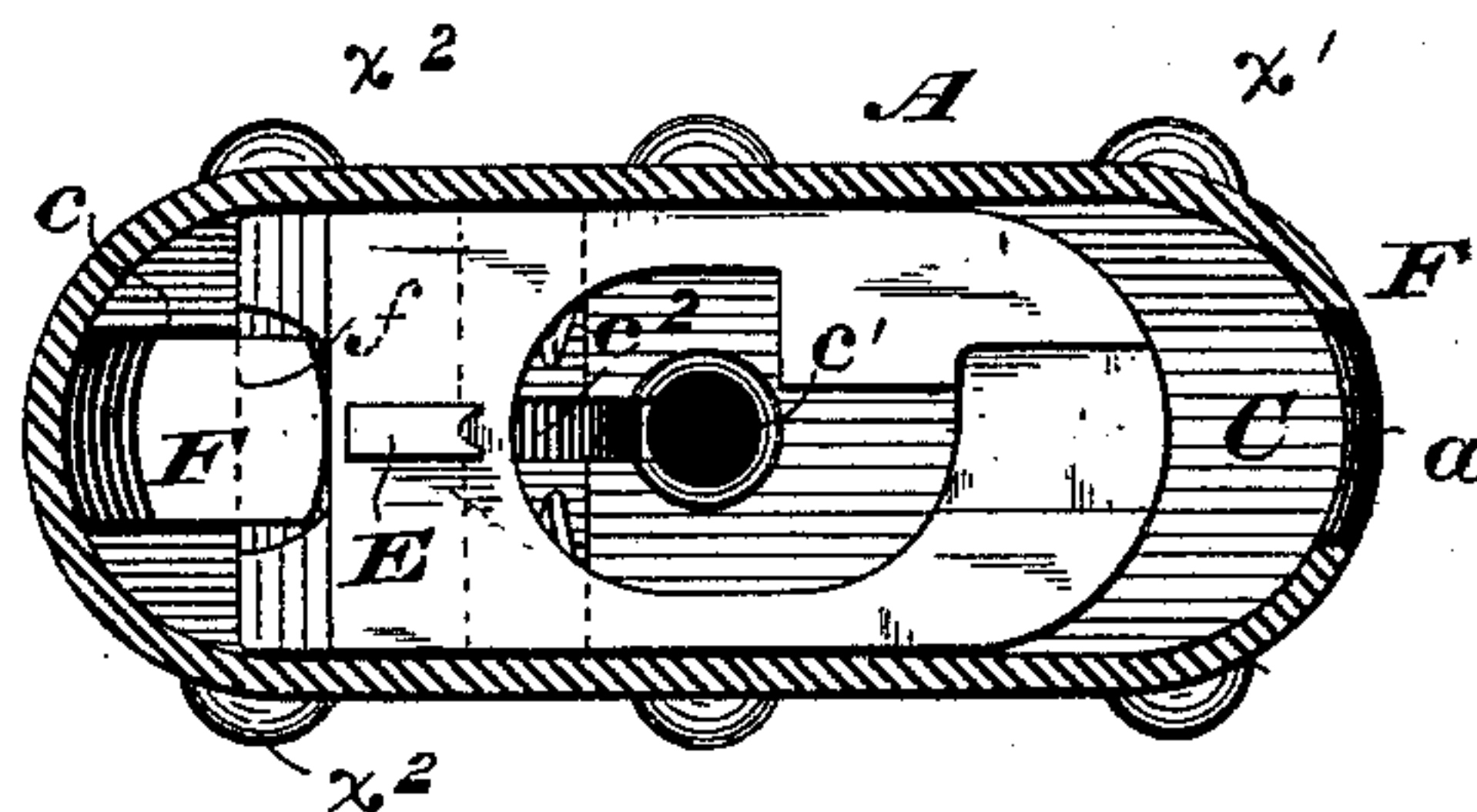
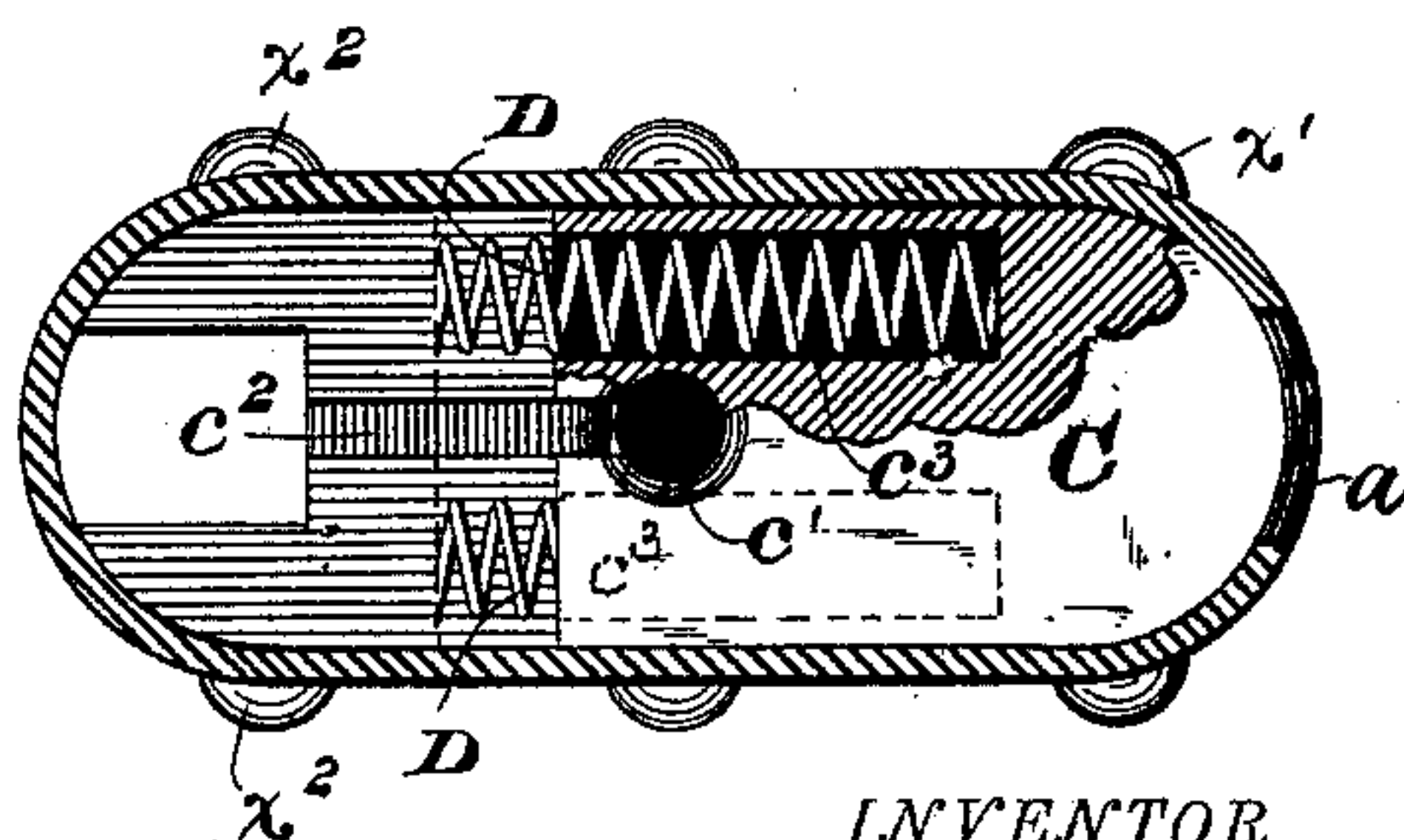


Fig. 5.



WITNESSES

Wm<sup>3</sup> A. Skinkle.  
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INVENTOR

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3 Sheets—Sheet 2.

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Fig. 6.

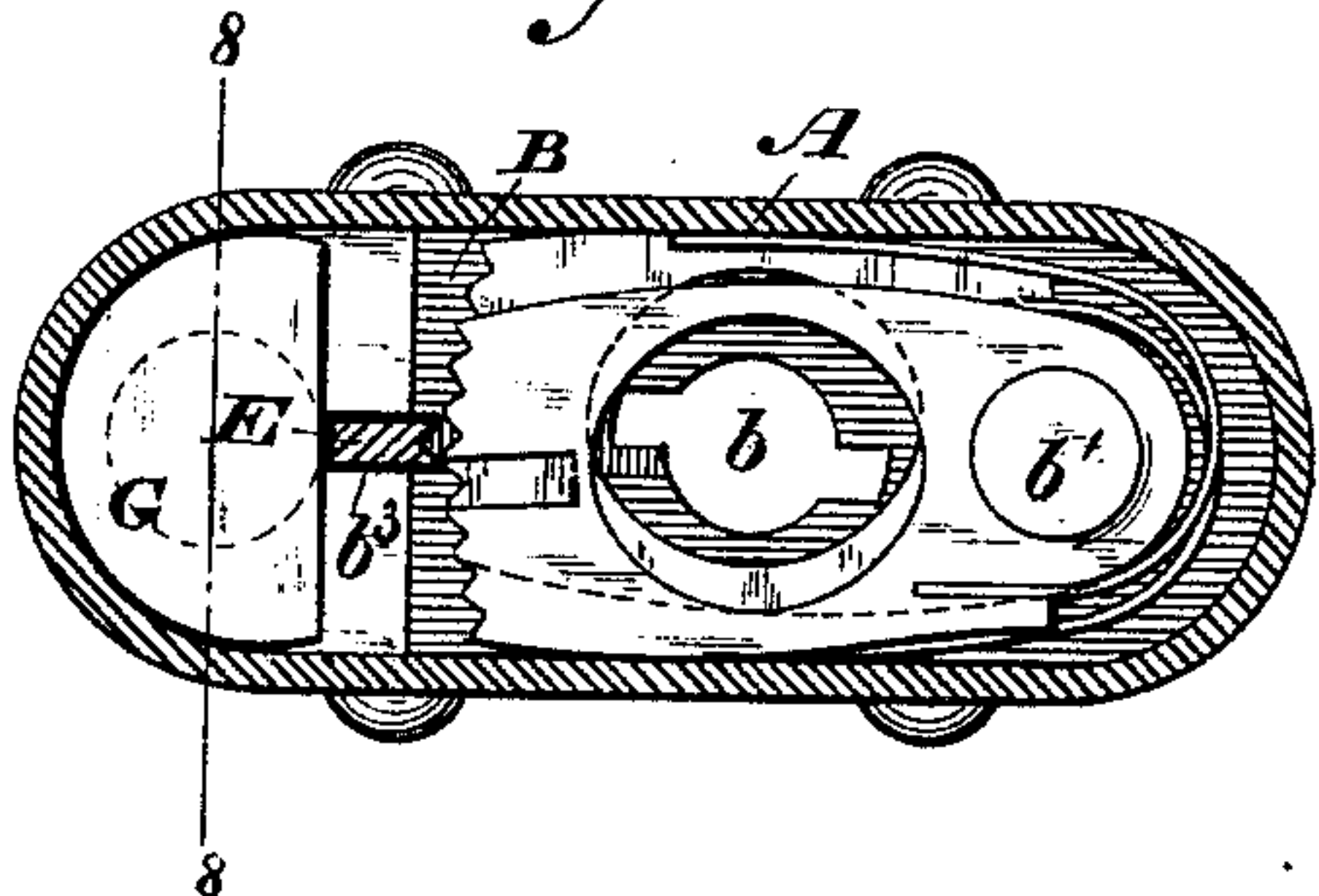


Fig. 9.

Fig. 10.

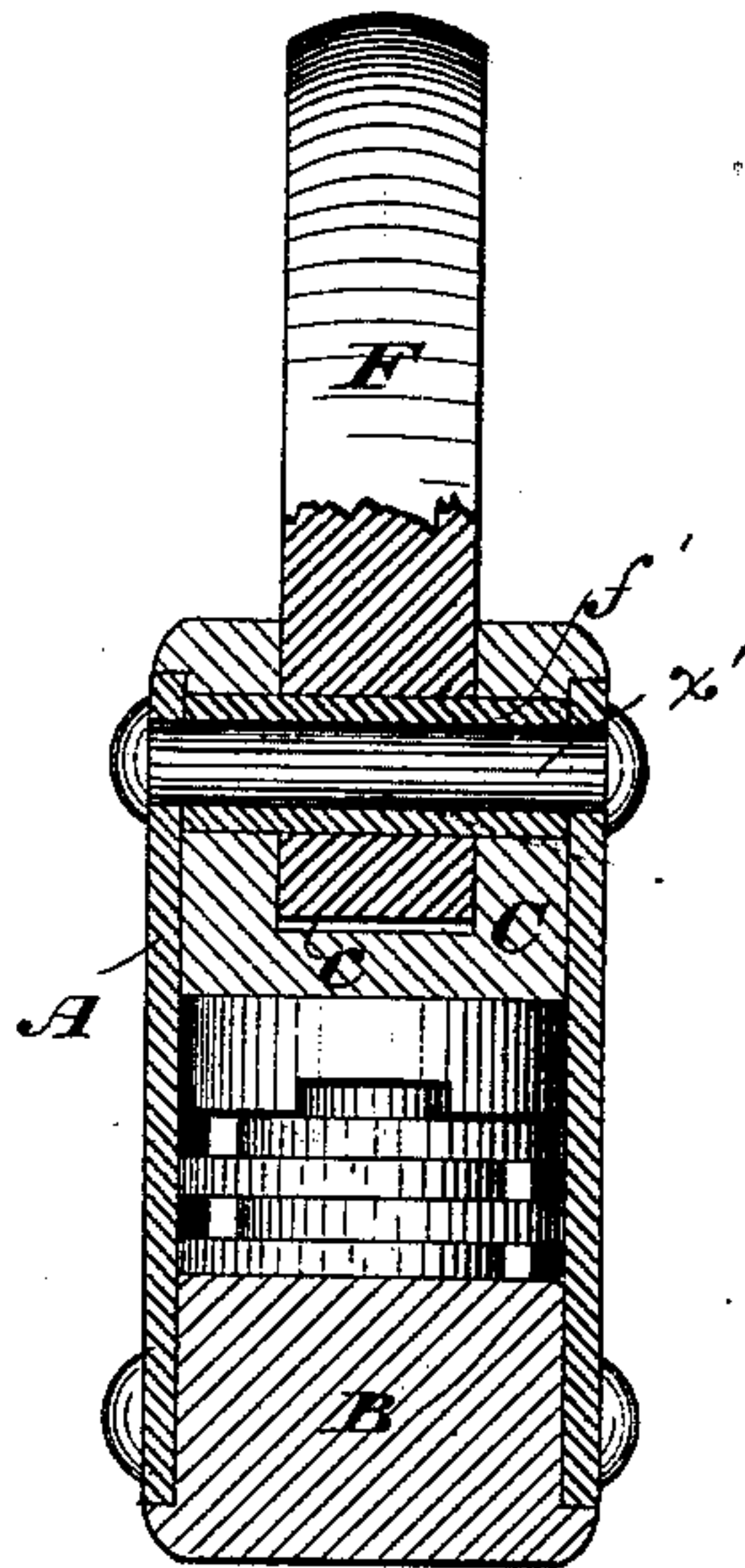
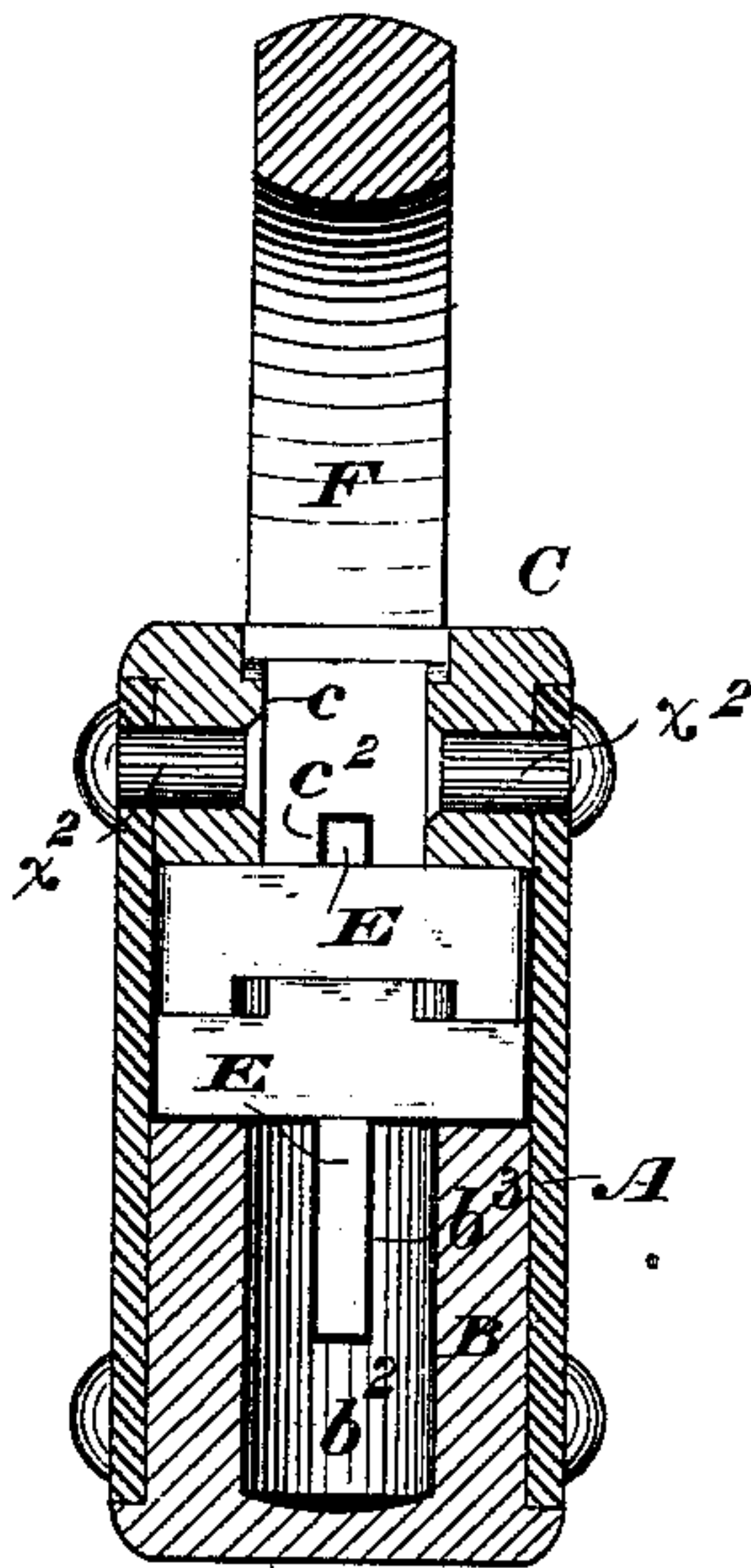


Fig. 7.

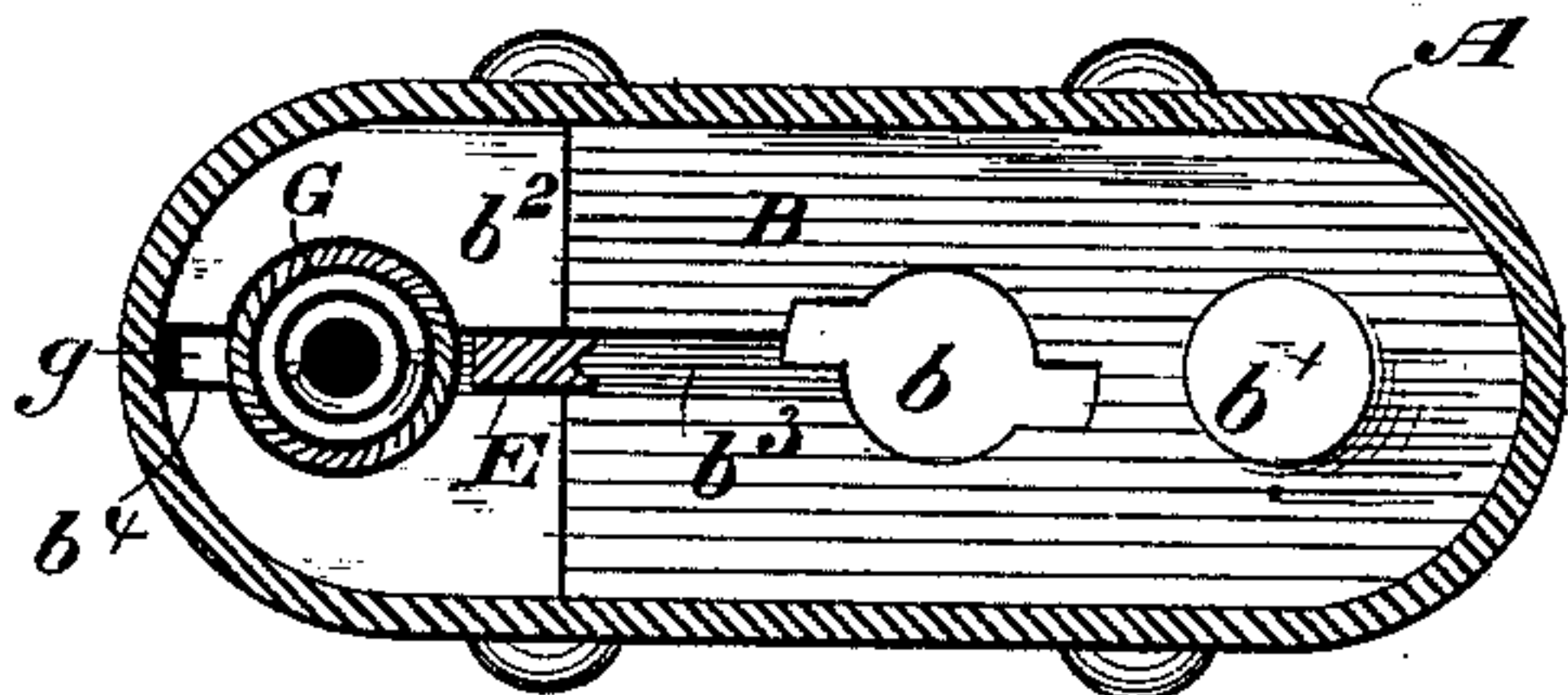


Fig. 8.

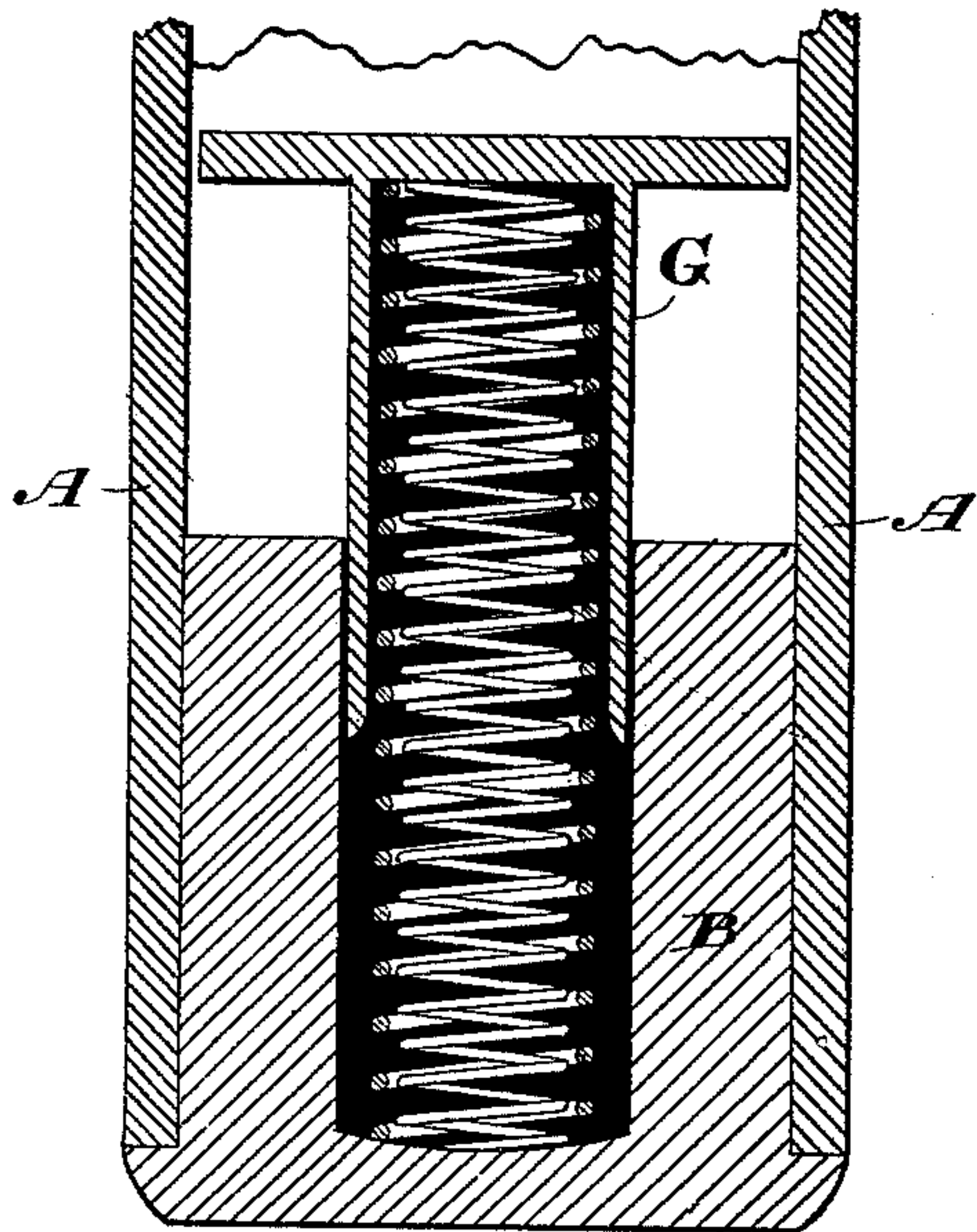
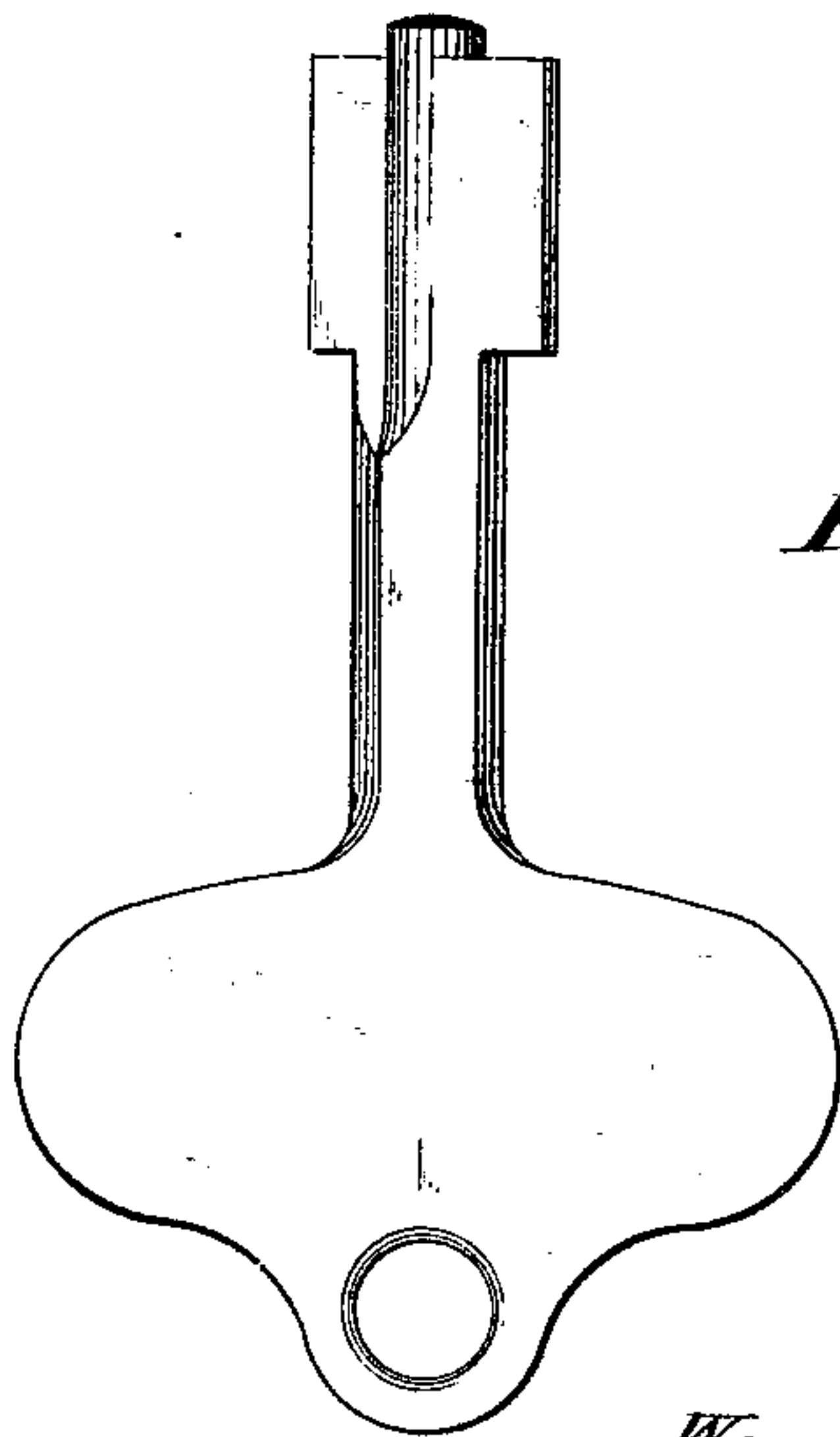


Fig. 12.

Fig. 11.



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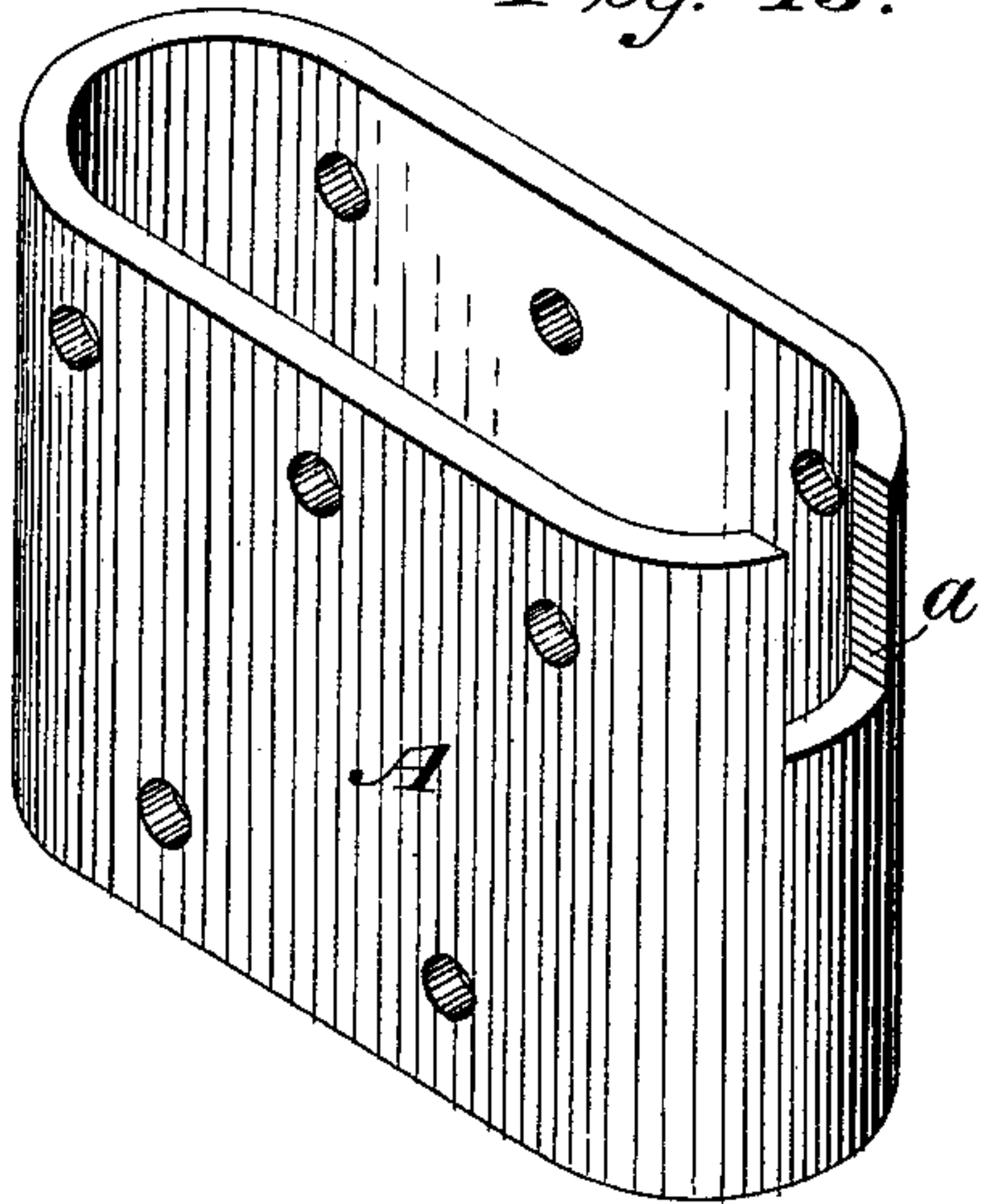
W. H. TAYLOR.  
Padlock.

3 Sheets—Sheet 3.

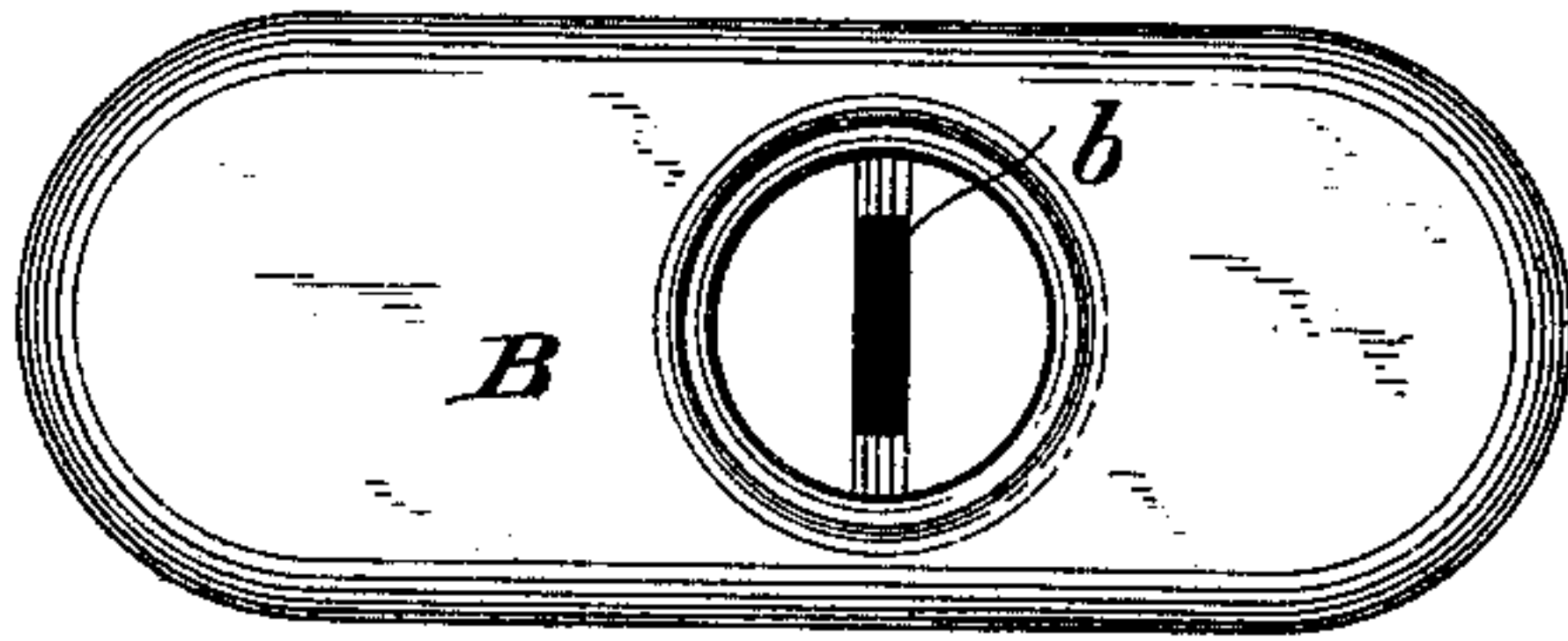
No. 218,200.

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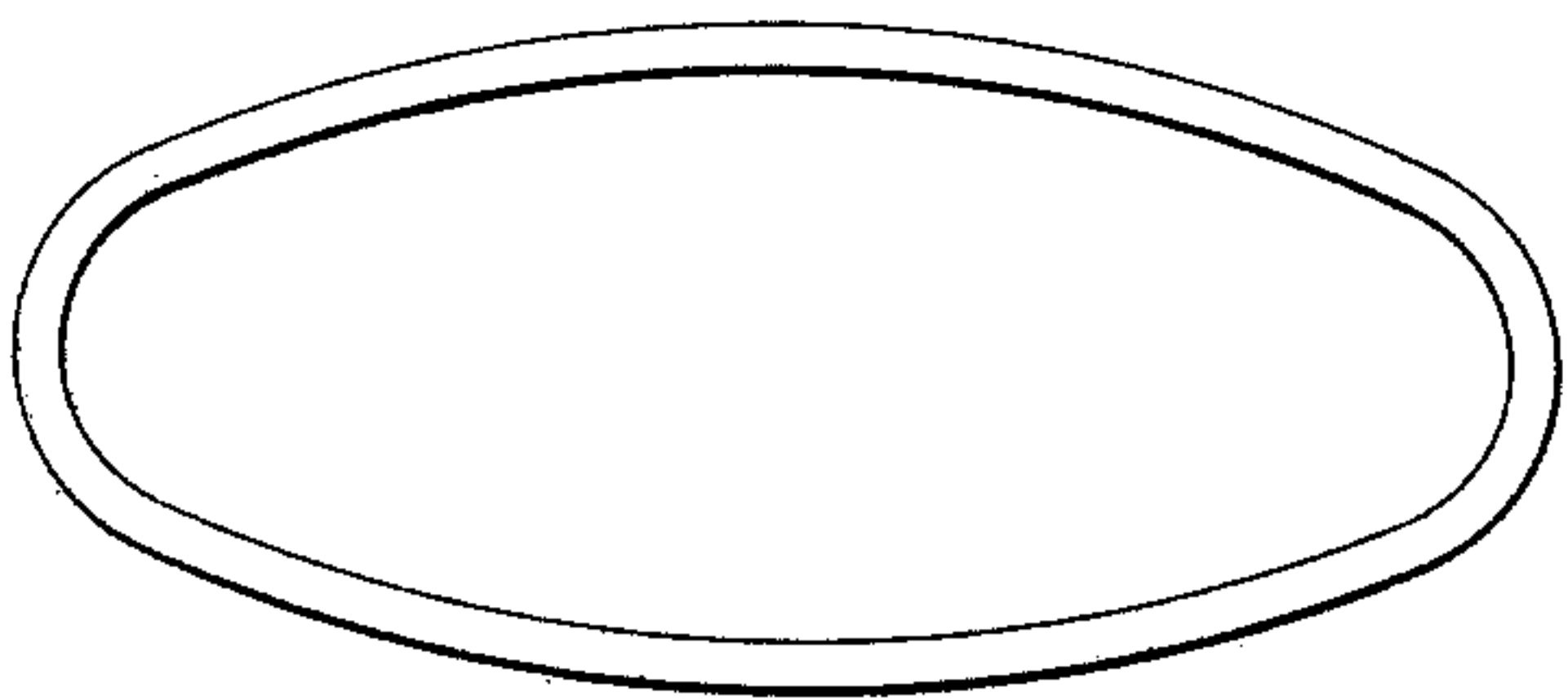
*Fig. 13.*



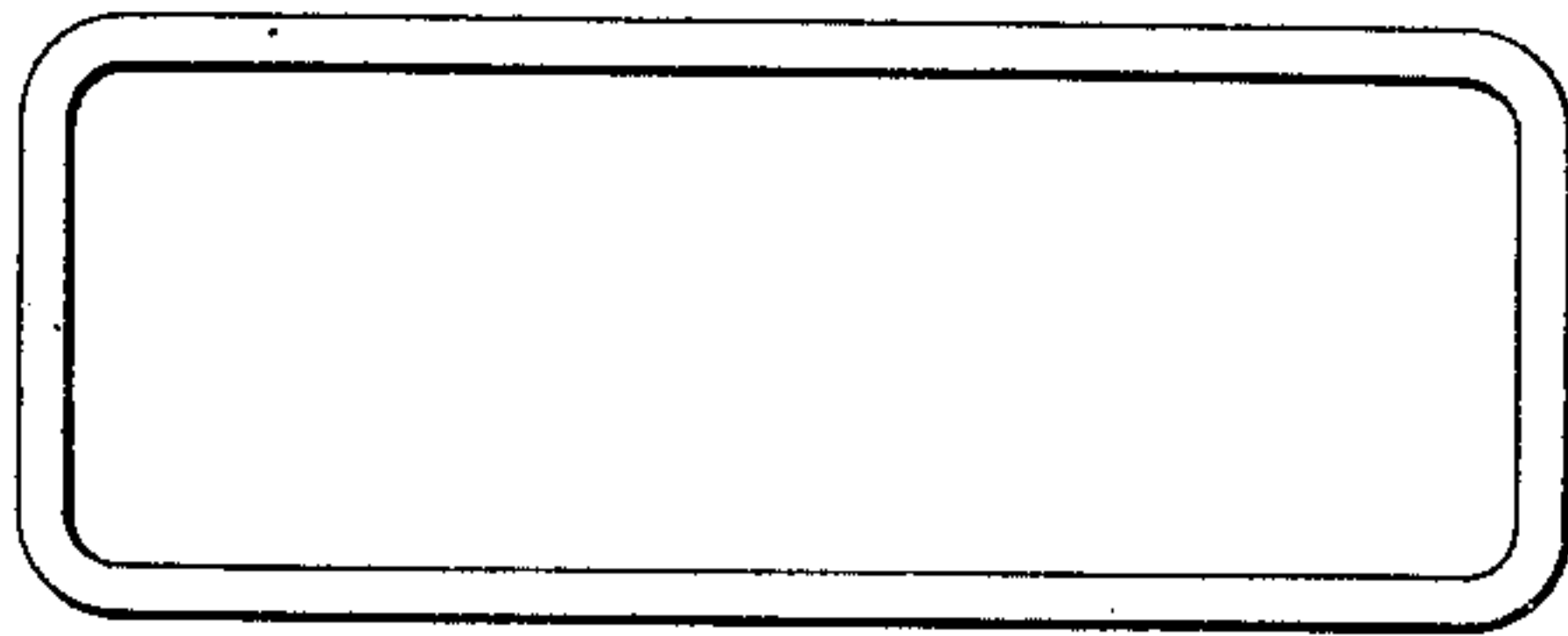
*Fig. 14.*



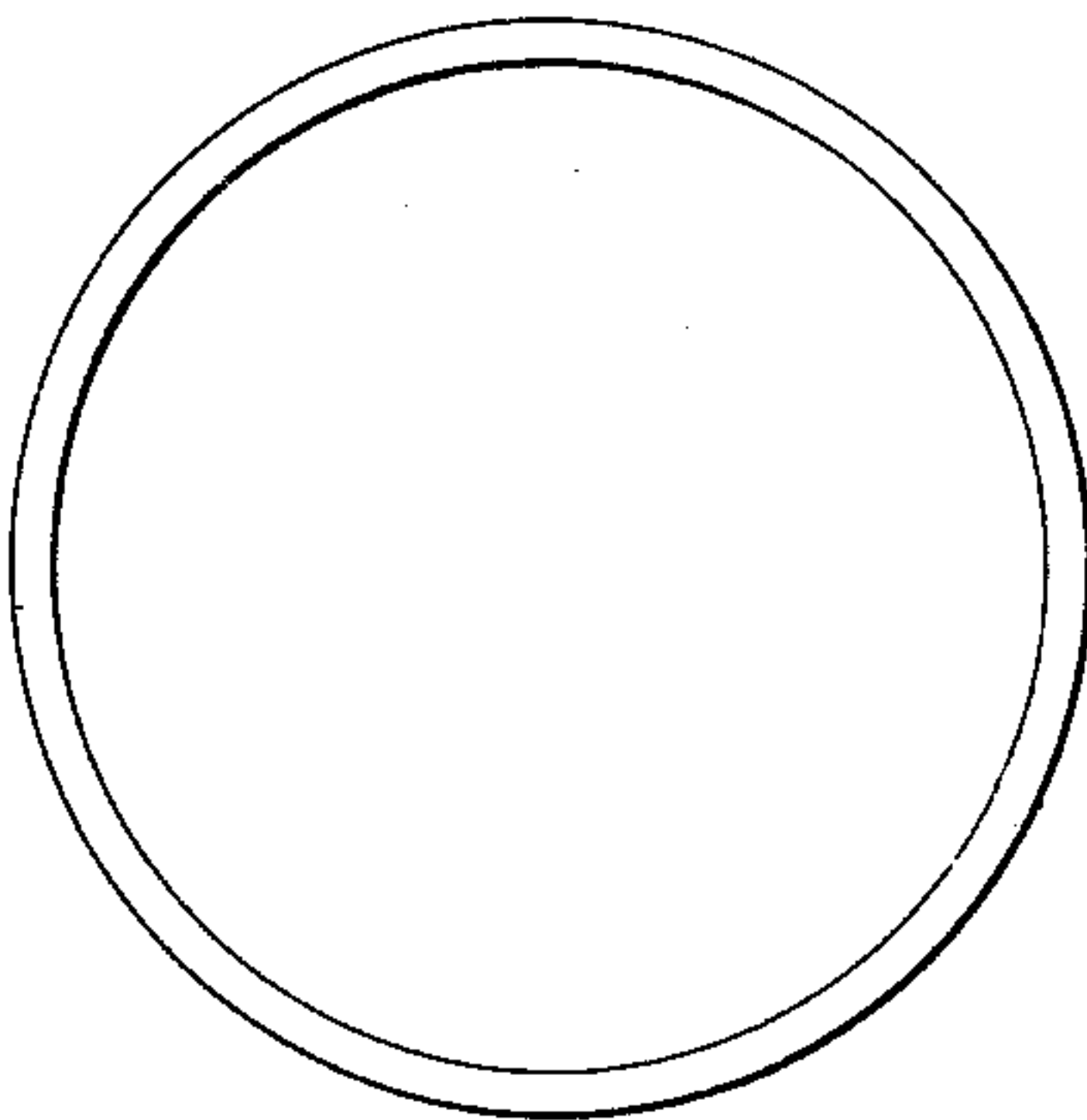
*Fig. 15.*



*Fig. 16.*



*Fig. 17.*



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# UNITED STATES PATENT OFFICE.

WARREN H. TAYLOR, OF STAMFORD, CONNECTICUT, ASSIGNOR TO THE YALE LOCK MANUFACTURING COMPANY, OF SAME PLACE.

## IMPROVEMENT IN PADLOCKS.

Specification forming part of Letters Patent No. **218,200**, dated August 5, 1879; application filed April 19, 1879.

*To all whom it may concern:*

Be it known that I, WARREN H. TAYLOR, of Stamford, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Padlocks, of which the following is a specification.

My invention relates to a padlock composed of an exterior metallic shell or case and an interior packing formed of two metal blocks, which are inserted from the opposite ends of the shell, and which pack it and carry and protect the working parts of the lock.

My improvements consist in certain novel features of a padlock, which are definitely set out in my claims. The most important feature is the shell or case, which consists of a tube open at both ends and of any desired section. It may be made of a piece of cylindrical wrought-iron tubing flattened more or less, or it may be formed by bending and then welding or riveting together the ends of a plate of wrought or sheet metal. The form in section that I prefer is shown in Fig. 4.

The advantages of my improved shell are that it makes a very neat, strong, and durable case for a padlock of uniform thickness, and it can be manufactured with ease and cheapness.

In the accompanying drawings, Figure 1 is a side elevation of my improved padlock complete. Fig. 2 is a similar elevation with one side of the shell removed to expose to view the internal mechanism. Fig. 3 is a vertical central section through the lock, showing the hasp closed and locked. Fig. 4 is a section through the line 4 4 of Fig. 2, showing the under side of the bolt in the locked position. Fig. 5 is a section similar to Fig. 4, with the bolt removed, so as to show the under side of the upper packing-block, being partly broken away to display one of the bolt spring-sockets. Fig. 6 is a section showing the tumblers in plan in the locked position. Fig. 7 is a section showing the upper face of the bottom packing-block with the tumblers removed. Fig. 8 is a section on an enlarged scale through the line 8 8 of Fig. 6. Fig. 9 is a section through the line 9 9 of Fig. 3. Fig. 10 is a section through the line 10 10 of Fig. 3. Fig. 11 is a side elevation, and Fig. 12 an end ele-

vation, of the key. Fig. 13 is a perspective view of the shell detached. Fig. 14 is a view of the bottom of the lower block, showing it provided with a rotating guide for the use of a flat key. Figs. 15, 16, and 17 show examples of shells of various shapes.

A indicates the case or shell of the lock, notched at *a* to accommodate the movement of the hasp. B indicates the bottom block, preferably flanged, so as to shoulder on the lower end of the shell when in place, and provided with a key-hole, *b*, a tumbler stud or pivot, *b*<sup>1</sup>, a plunger-socket, *b*<sup>2</sup>, a bolt-talon slot, *b*<sup>3</sup>, and a plunger-guide slot, *b*<sup>4</sup>.

C indicates the top block, preferably flanged, so as to shoulder on the upper end of the shell when in place, and provided with hasp-recesses *c* at its opposite ends, a key-end socket or bearing, *c*<sup>1</sup>, a bolt-guide slot, *c*<sup>2</sup>, and two sockets, *c*<sup>3</sup>, for the two bolt-locking springs, D D, either of which will shoot the bolt forward should the other break.

The tumbler and locking mechanism is substantially the same as that shown in my United States Patent No. 192,847, and need not be here particularly described. The only differences are of mere form, such as are necessary to adapt it to this particular construction.

The fence E serves as a guide for the bolt by extending into the guideways in the upper and lower blocks.

F indicates the hasp, of ordinary construction, having a bolt notch or recess, *f*, and it is hinged to the upper packing-block by a hollow pivot, *f*'. G indicates the hasp-plunger, of ordinary construction, provided with a guide-stud, *g*, and a double-coiled spring, one coil within the other, serving to throw out the free end of the hasp when it is unlocked.

All of the internal parts described are, as illustrated in the drawings, so contrived as to completely fill, so far as consistent with the necessary motions of the operating parts, the interior of the shell, and form a solid packing for it capable of resisting powerful blows or crushing strain, rendering the working mechanism practically invulnerable to such assaults. At the same time the arrangement is such that there is great simplicity, certainty, and accuracy of operation in the mechanism, great



strength and security in the fastening of the hasp, and the whole, including the solid packing, is brought within such small compass as to conveniently form a small padlock, not excessively heavy, and of maximum resisting capacity. The working parts being contained in and between the blocks, the latter are riveted to the shell in the usual way, except as to some points that I will now describe.

The rivet  $x^1$  passes through the hollow hasp-pivot  $f^1$ , serving to strengthen it and to secure the upper block in the case. The advantage of this plan is that, while the rivet  $x^1$  might be driven out with a punch, it would be impossible to drive out the hollow pivot  $f^1$ , for the reason that it is not accessible, and hence any attempt in that manner to remove the hasp would fail, and this construction is therefore of great practical importance.

The hollow pivot also serves a useful purpose as a stud or distance-post, to prevent the crushing of the cheeks of the case of the lock on either side of the pivoted end of the hasp, this liability to crushing at this point and tending to bind the hasp being a common weakness of ordinary padlocks. The short rivets  $x^2$  fasten the upper block and case together with great security, because they only penetrate to the interior of one of the hasp-recesses  $c$ , and hence when the lock is locked their inner ends abut against the hasp, and they cannot, therefore, be punched through. This arrangement, in connection with the concealed tubular hasp-pivot, renders any attempt to forcibly separate the hasp from the lock practically unavailing and harmless by the use of any ordinary appliances.

I may divide the ordinary rivets  $x$  so that they can only penetrate the packing-blocks a short distance from opposite sides, and thus offer greater resistance to being driven out with a punch.

In the drawings I show a blank key and blank tumblers; but in practice the key will of course be bitted, and any form of key or tumbler mechanism may be used without departing from my invention. For example, I might insert in the lower block, as shown in Fig. 14, a rotating guide, as exhibited in my Patent No. 192,847, and use a flat key.

It will be observed that the shell is quite distinct from all other parts of the lock, and may be manufactured as a separate article for sale. It envelops and protects all the working parts of the lock, but neither they nor the hasp are directly attached to it at any point.

Having thus described my new padlock, what I would designate and claim as of my invention, and what I desire to secure by Letters Patent, is—

1. A wrought or sheet metal tubular padlock-shell formed of a single piece and open at both ends, substantially as described.

2. A wrought or sheet metal tubular padlock-shell adapted to cover and protect the internal mechanism, but to which no part of said mechanism or the shackle is attached.

3. The combination of the upper packing-block, the hasp, and the tubular pivot connecting it to the block, substantially as described.

4. The combination of the upper block, the hasp, the hollow hasp-pivot, the shell, and the through-rivet  $x^1$ , substantially as described.

5. The combination of the shell, the upper block, the hasp, and the two short bolts  $x^2$ , the inner ends of which abut against and are backed up by the hasp when the lock is locked, substantially as described.

In testimony whereof I have hereunto subscribed my name.

WARREN H. TAYLOR.

Witnesses:

CHAS. E. VAIL,  
SCHUYLER MERRITT.