

C. E. JOHNSON.

PADLOCK.

APPLICATION FILED APR. 22, 1909.

928,201.

Patented July 13, 1909.

Fig. 1.

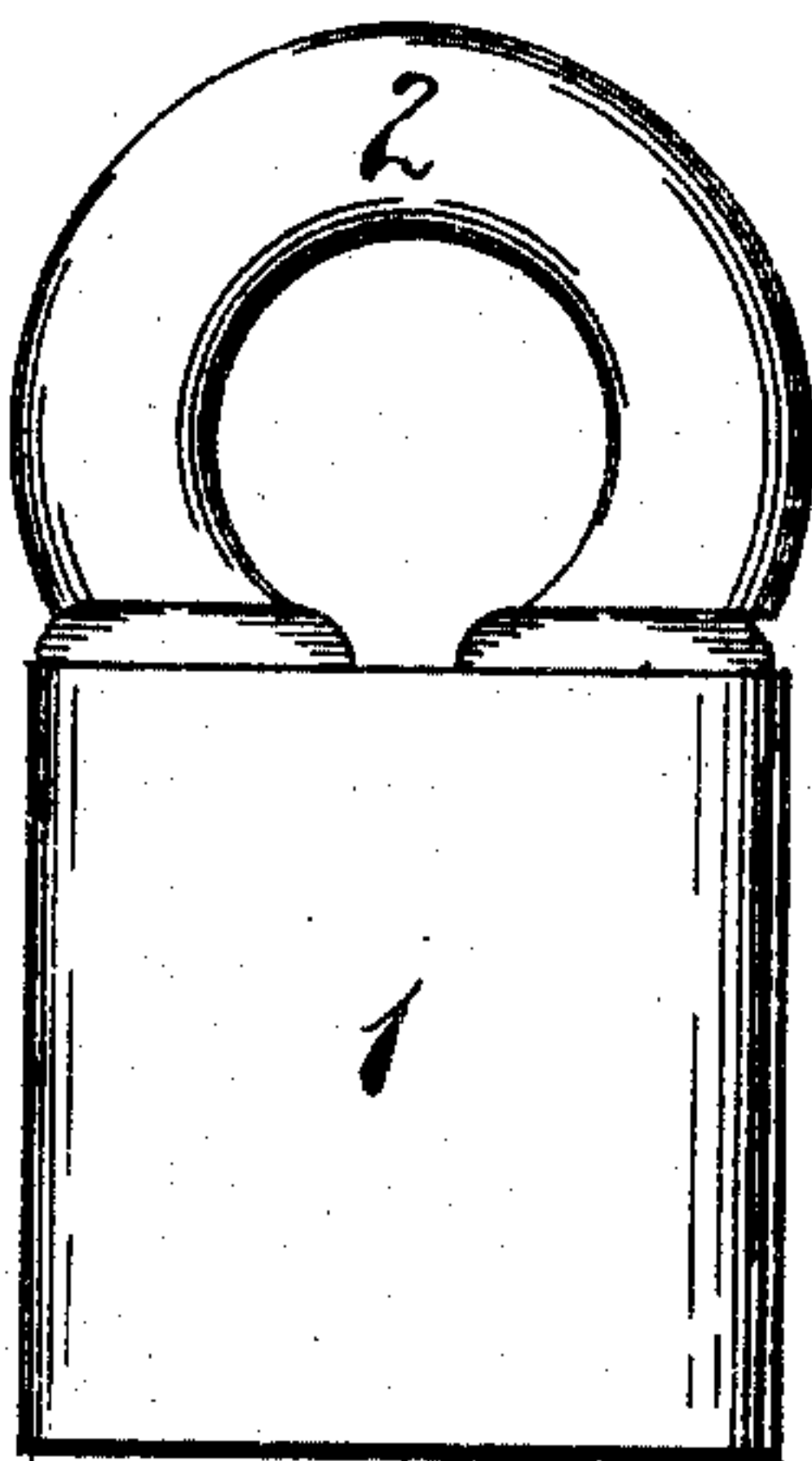


Fig. 2.

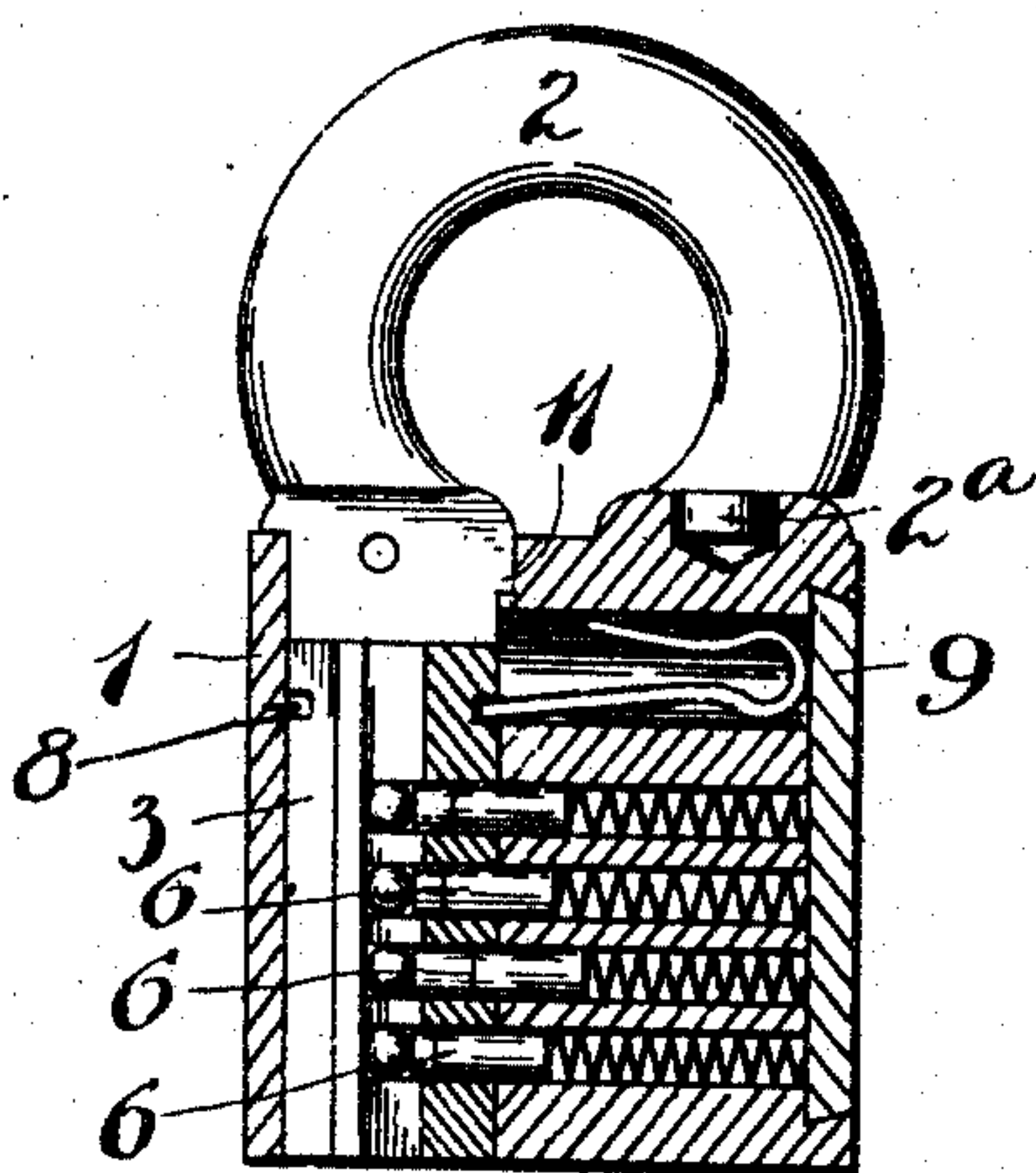


Fig. 3.

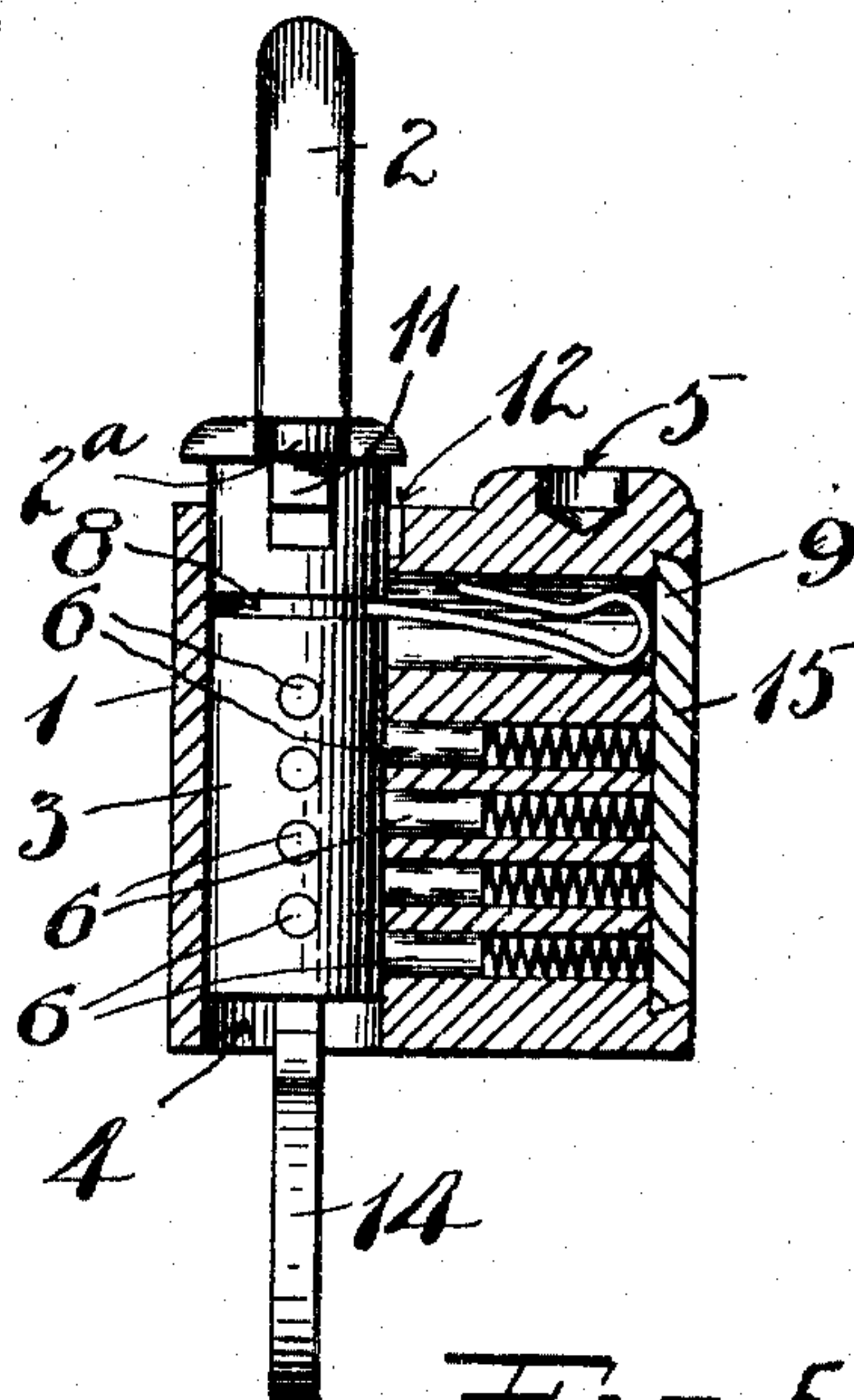


Fig. 4.

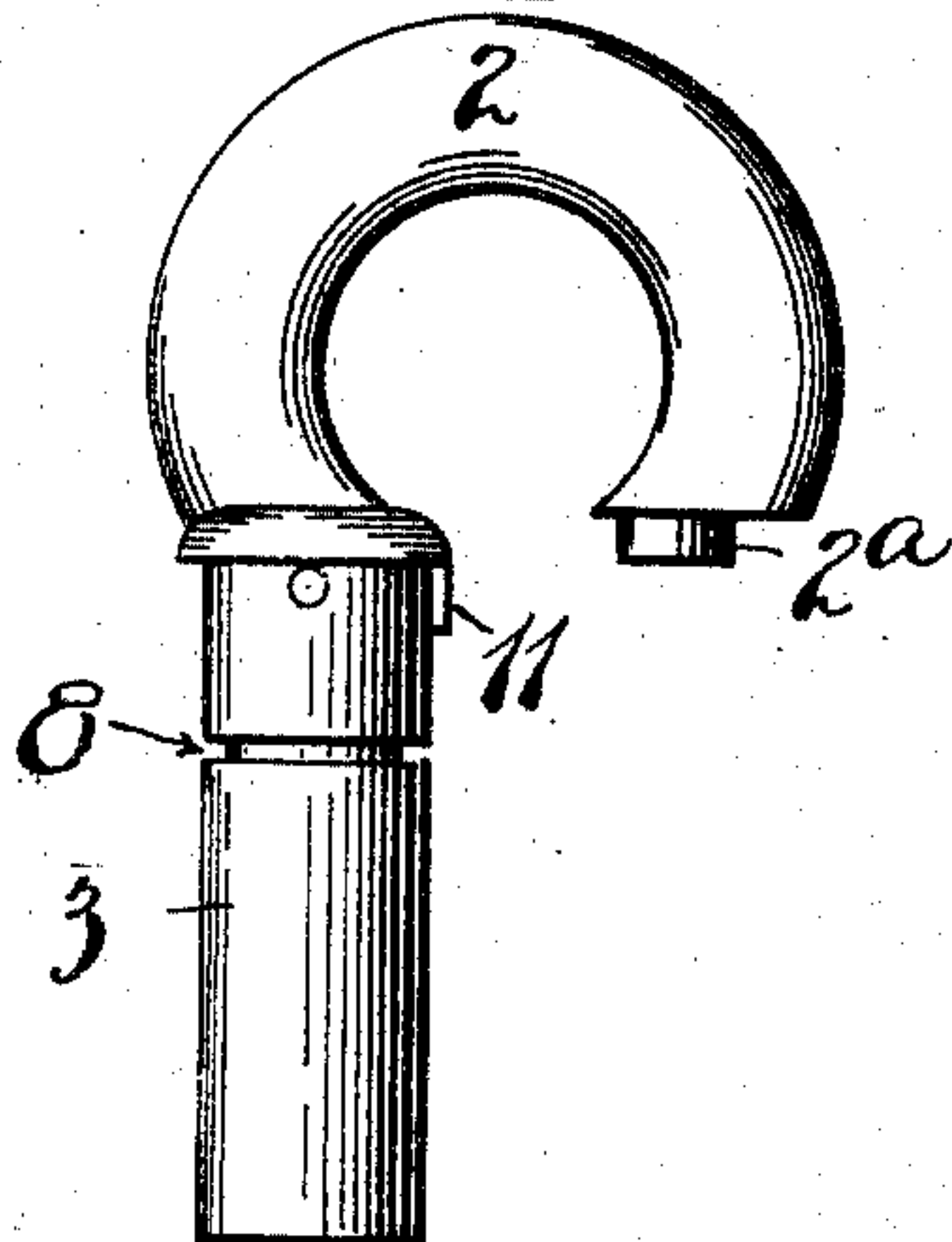
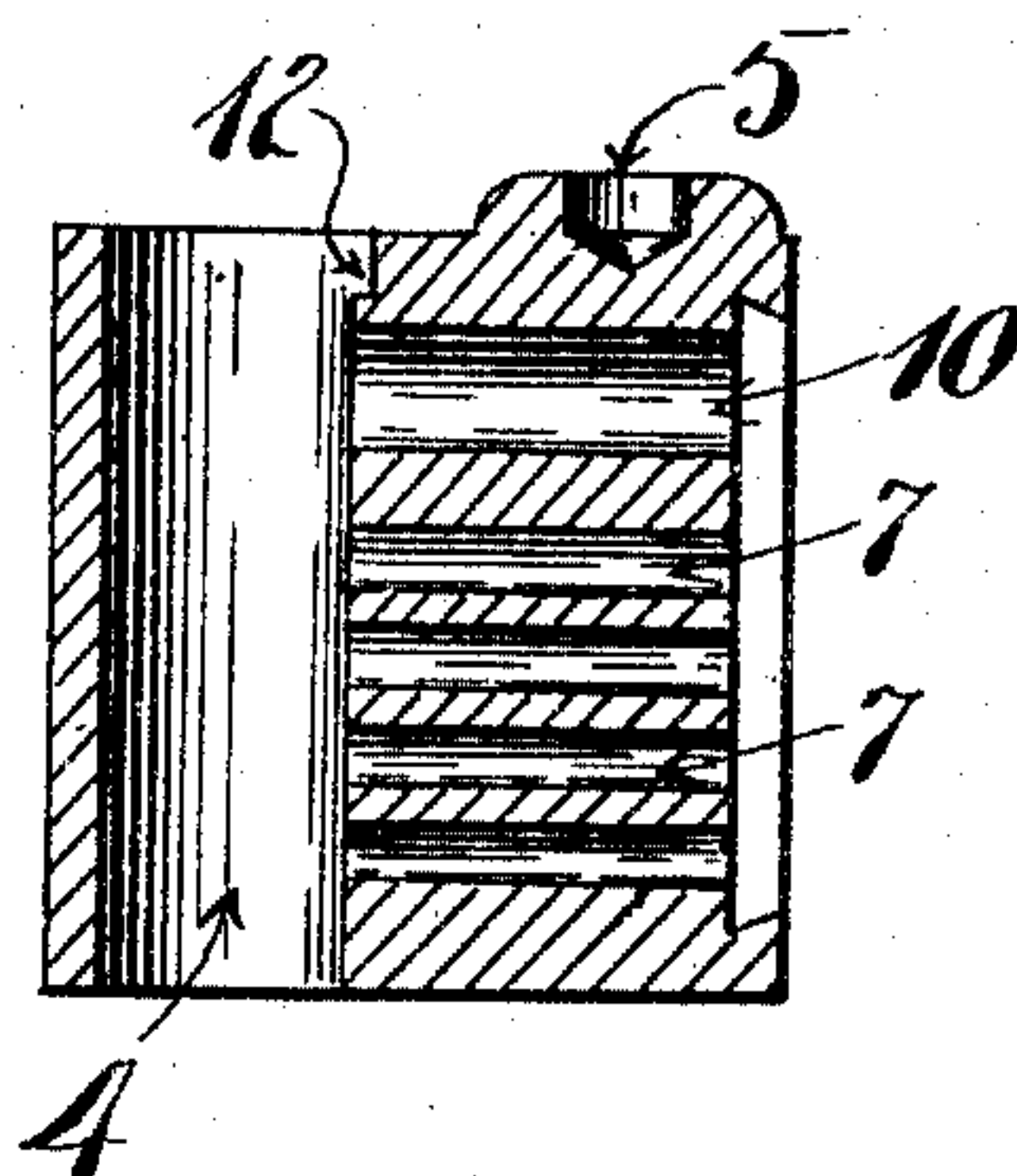


Fig. 5.



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UNITED STATES PATENT OFFICE.

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PADLOCK.

No. 928,201.

Specification of Letters Patent.

Patented July 13, 1909.

Application filed April 22, 1909. Serial No. 491,546.

To all whom it may concern:

Be it known that I CHARLES E. JOHNSON, a citizen of the United States, residing at New Britain, county of Hartford, State of Connecticut, have invented certain new and useful Improvements in Padlocks, of which the following is a full, clear, and exact description.

My invention relates to improvements in padlocks, the object being to provide a simple and inexpensive construction which shall be secure and durable and of attractive appearance.

The invention is of particular value in connection with padlocks of the pin tumbler type and in the drawings I have shown the same of that embodiment.

In the drawings, Figure 1 is a side elevation of the padlock closed and locked. Fig. 2 is a cross section through the lock case, the parts still being closed and locked. Fig. 3 is a similar view, the padlock being unlocked and open. Fig. 4 is a view of the hasp and carrier. Fig. 5 is a sectional view of the padlock case with all of the associated parts removed.

1 represents the case; 2 the hasp or shackle; 3 the hasp-carrier in the form of a key-actuated, rotatable and sliding plug. The plug 3 is mounted in a longitudinal bore in one side of said body 1, the bore for said hasp 3 being indicated at 4 (Fig. 4). The free end 2^a of the hasp is arranged to engage with the body 1 when the padlock is closed as by projecting into a shallow bore. The bore for the free end of the hasp 2 is shown at 5, Fig. 4.

In the lock shown, 6—6 represent pin-tumblers contained partly within the plug 3 and partly within transverse bores in the body 1. These bores in the body 1 for the pin-tumblers are indicated at 7—7, Fig. 4.

8 is a groove in the side of the plug 3 and preferably extending entirely around the same. This groove receives a plug retractor which is preferably in the form of a spring 9 located in a bore or cavity arranged transversely of the body 1. This bore or cavity for the spring 9 is indicated at 10, Fig. 4.

11 is a short spline or supplemental holding shoulder on the hasp 2 arranged to take into a recess 12 in the body 1 when the plug is retracted and the hasp 2 closed. For sake of economy the hasp 2 is preferably

made separately from the plug 3 and is firmly secured thereto in any desired manner. The tumblers may be of the conventional type and are operated by a suitable key 14.

15 is a closure of any suitable form for the outer ends of the transverse bores 7—7 and 10, said closure being permanently connected with the case 1, when all the parts have been assembled, as by engagement with the walls of an undercut recess.

The position of the parts when the padlock is closed and locked, is best seen in the sectional view, Fig. 2, wherein the plug stands in its retracted position and the hasp is closed down so that its end 2^a is in the bore 5 and the spline 11 is in the recess 12. In this position obviously the hasp can not be turned. In this position the tumblers lock the plug in such a manner that it cannot be turned or moved longitudinally. If a proper key is introduced, the tumblers 6—6 will be shifted to permit the plug to be pressed up by the forcing in of the key. As soon as the end 2^a is free of the recess 5, the turning of the key will swing the hasp 2 to the open position indicated in Fig. 3. In this position the spline 11 (when of the form shown) will perform a second function, namely, that of holding the plug in the open position shown in Fig. 3 against the action of spring 9. When it is desired to close the lock, the hasp 2 is swung directly by hand, or indirectly by the key 14, to a position in line with the bore 5, whereupon spline 11 will register with recess 12 and the plug retractor 9 will force the plug in and draw the hasp down into the closed position shown in Fig. 2. If the key is then removed, the tumblers 6—6 will again lock the plug (and thereby the hasp) securely in its closed position.

It will be seen that the body 1 may be made from solid stock and that all the cavities for working parts may be formed by a simple boring process, thus reducing cost to a minimum, without the slightest sacrifice of strength and durability.

What I claim is:

1. In a padlock, a solid case, a bore passing longitudinally through the same near one edge thereof, a plurality of transverse bores in said body intersecting the first mentioned bore at substantially right angles thereto and being formed from the edge of said body, closure means for the outer ends

of the last mentioned bores, a longitudinally movable and rotatable plug in the first mentioned bore, a key-actuated tumbler in one of the second mentioned bores for locking the plug, a plug retractor in the other of the second mentioned bores, a hasp carried by said plug, said retractor limiting the longitudinal movement of said plug in both directions.

2. In a padlock, a solid case, a bore passing longitudinally through the same near one edge thereof, a plurality of transverse bores or cavities in said body intersecting the first mentioned bore at substantially right angles and being formed from the opposite edge of said body, closure means for the outer ends of the last mentioned bores, a longitudinally movable and rotatable plug in the first mentioned bore, a key-actuated tumbler in one of the second mentioned bores for locking the plug, a plug retractor in the other of the second mentioned bores, a hasp carried by said plug, said retractor limiting the longitudinal movement of said plug in both directions.

3. In a padlock, a solid case, a bore passing longitudinally through the same near one edge thereof, a plug located in said bore to move longitudinally and to turn therein, means carried by the case to limit the longitudinal movement in both directions of said plug in said bore, means to engage the free end of the hasp when the lock is closed, a key-actuated tumbler to lock said plug against movement in any direction when the hasp is closed.

4. In a padlock, a solid case, a bore passing longitudinally through the same near one edge thereof, a plug located in said bore to move longitudinally and to turn therein, means to limit the longitudinal movement in both directions of said plug in said bore, means to engage the free end of the hasp when the lock is closed, a key-actuated means

to lock said plug against movement in any direction when the hasp is closed, and means carried by the plug to hold the plug and hasp extended when turned out of the plane of the locking position.

5. In a padlock, a solid case, a bore passing longitudinally through the same near one edge thereof, a plurality of transverse bores or cavities in said body entered from the edge of the body and intersecting the first mentioned bore, a plug shiftable in one of said bores, a tumbler in another of said bores, a hasp carried by said plug, and means to engage the parts at two separate points independently of the tumblers to prevent the rotation of the hasp and plug when the padlock is closed.

6. In a padlock, a solid case, a bore passing longitudinally through the same near one edge thereof, a slidable and rotatable plug in said bore, a second bore entered from the edge of said body and intersecting said plug bore, a device in said second bore arranged to engage said plug and move it in one direction and also operating to limit the longitudinal movement of said plug, a third bore or cavity and a key-actuated means therein for locking said plug against movement in any direction.

7. In a padlock, a solid case, a bore passing longitudinally through the same near one edge thereof, a rotatable and longitudinally movable plug therein, a hasp carried by said plug, a bore in one end of said body to receive the free end of said hasp, and means carried by said movable parts to hold said plug and hasp extended when said hasp is turned out of alinement with the body of the padlock.

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Witnesses:

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