

J. F. & H. M. HIRSH.
DOOR FASTENER.
APPLICATION FILED MAY 25, 1908.

898,650.

Patented Sept. 15, 1908.

Fig. 1.

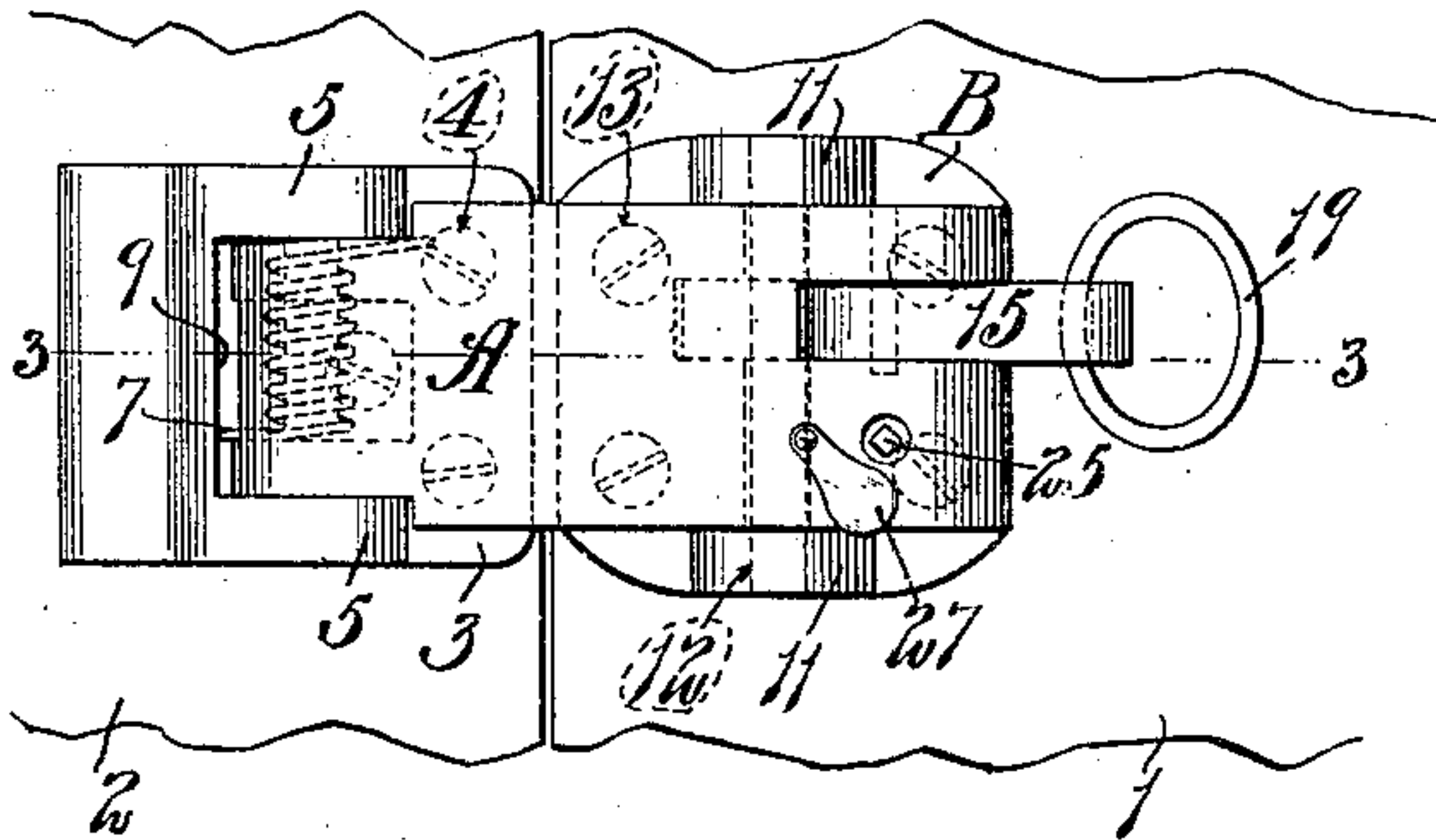


Fig. 2.

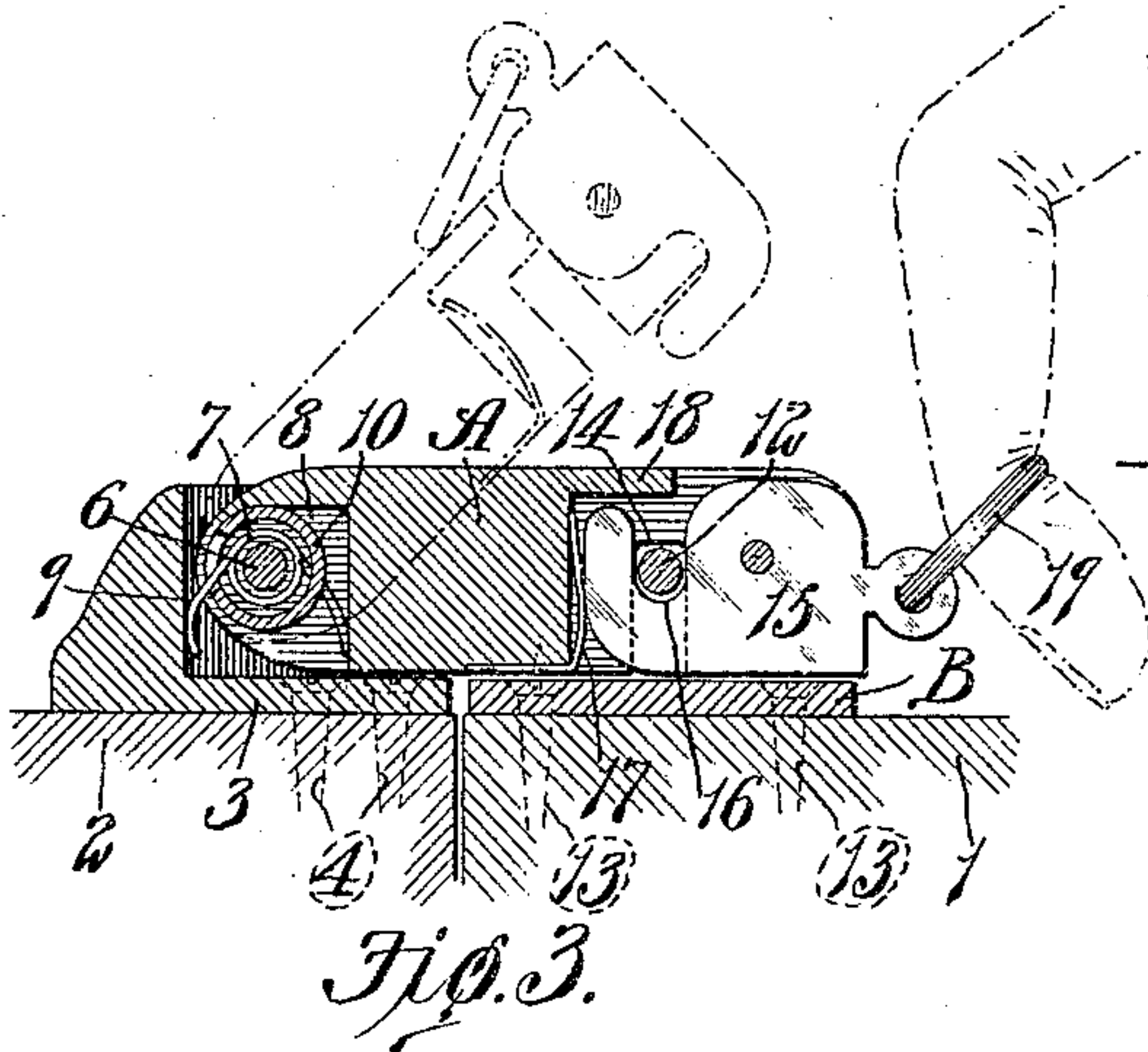
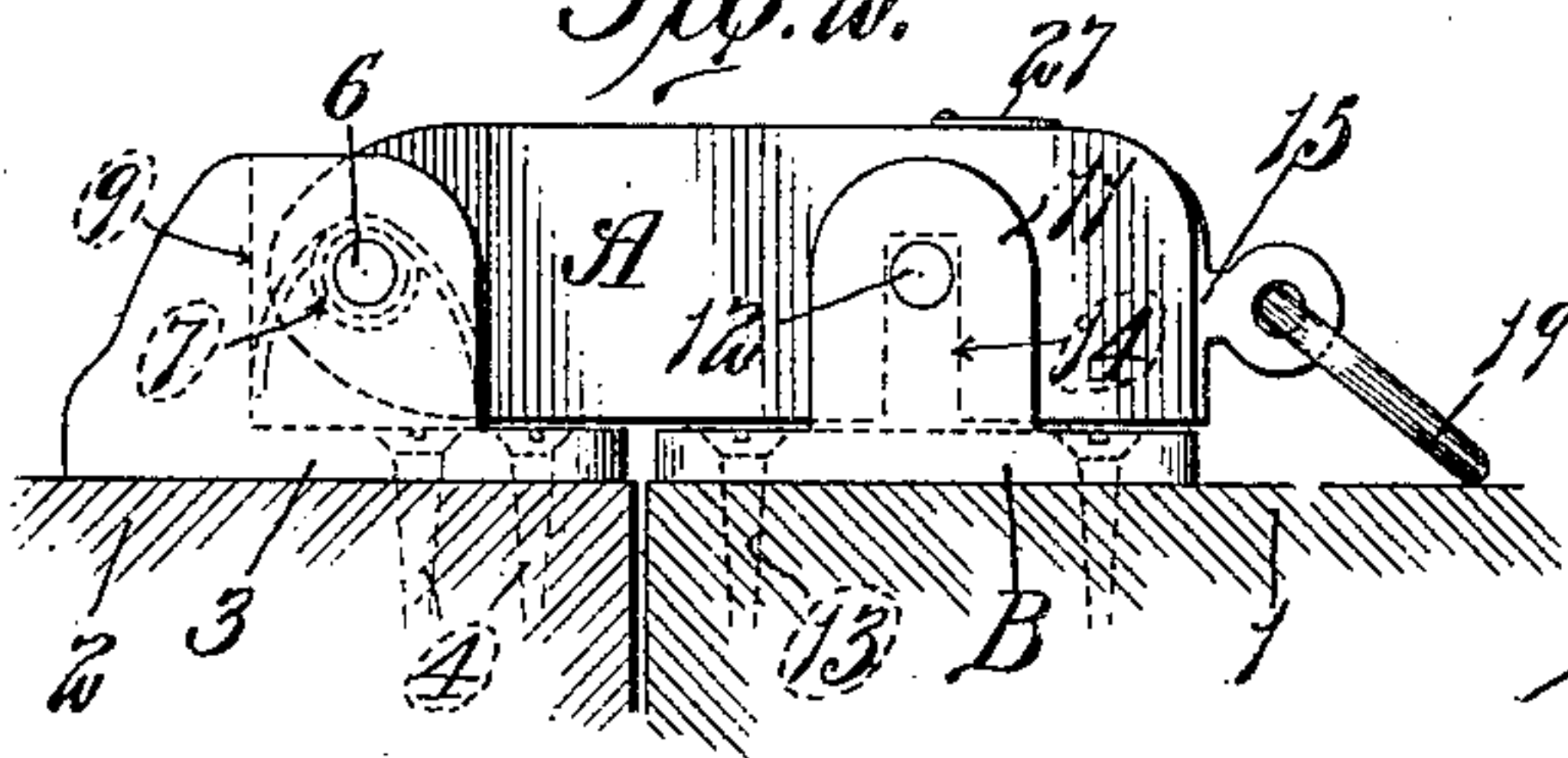


Fig. 3.

Fig. 4.

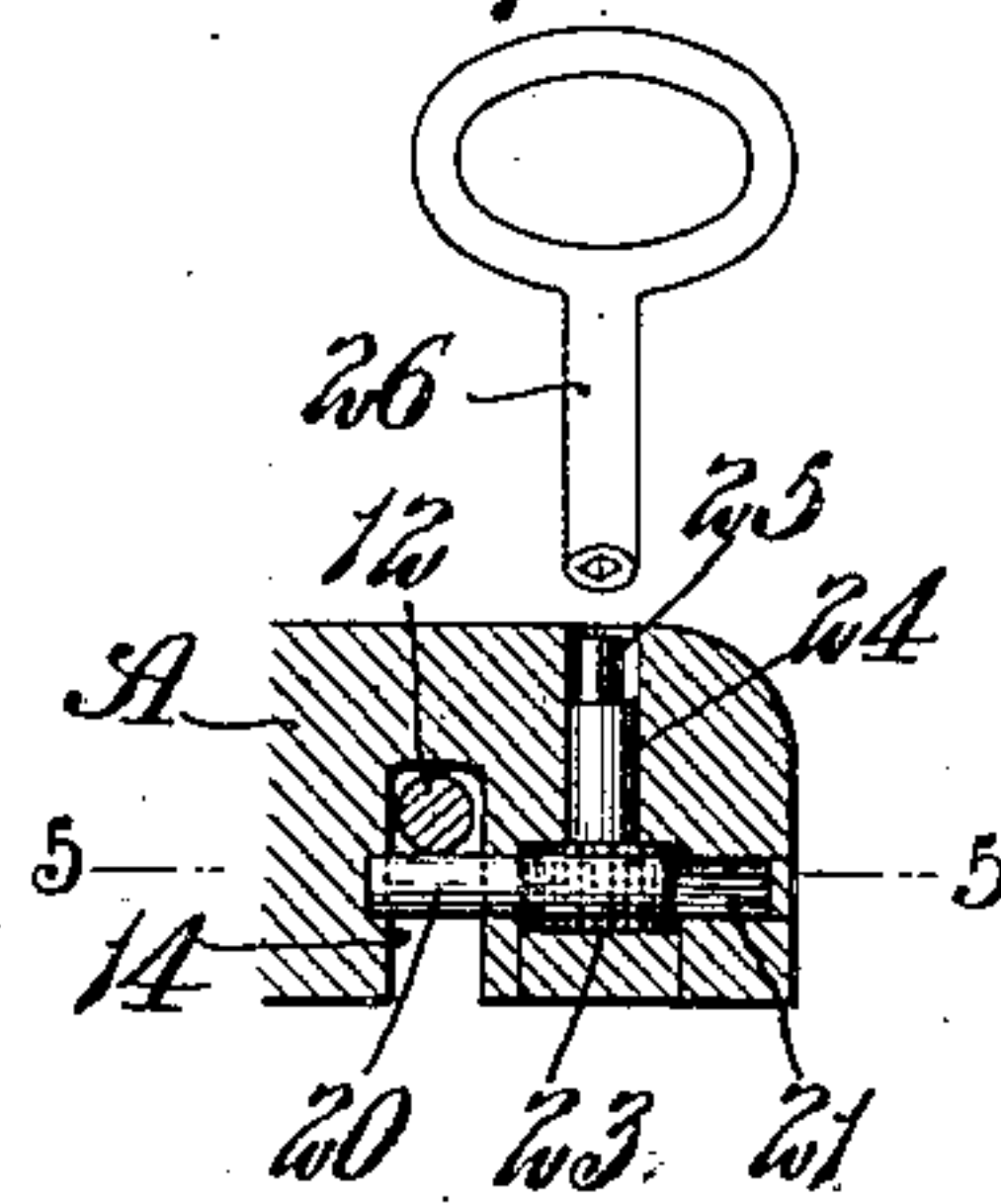


Fig. 5.

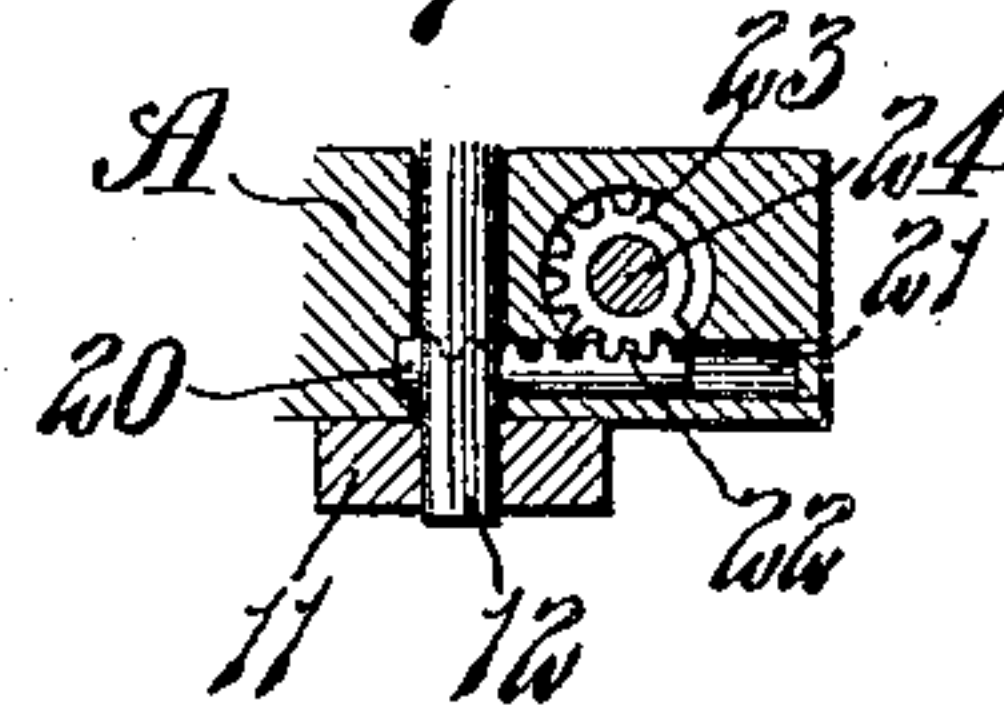


Fig. 6.

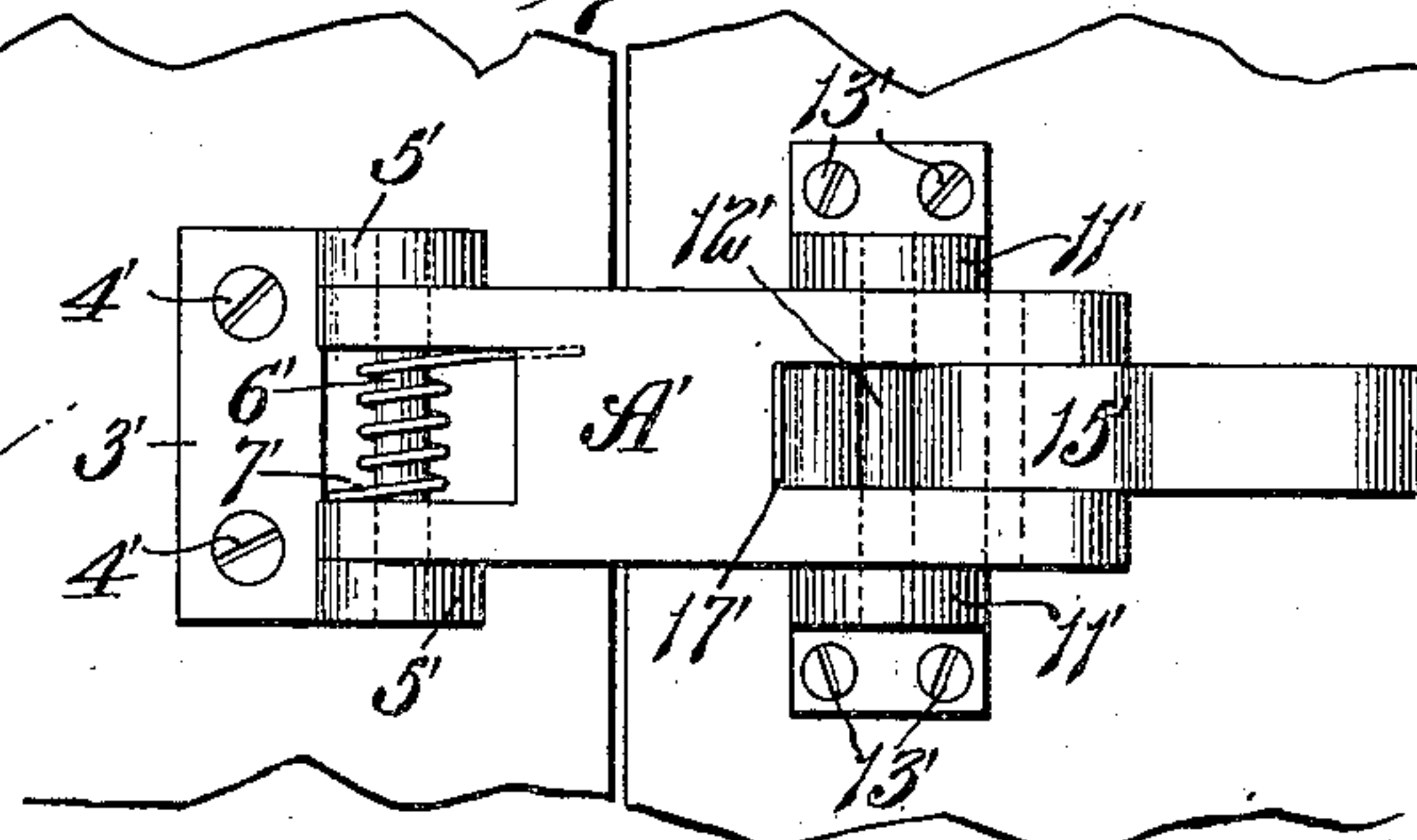
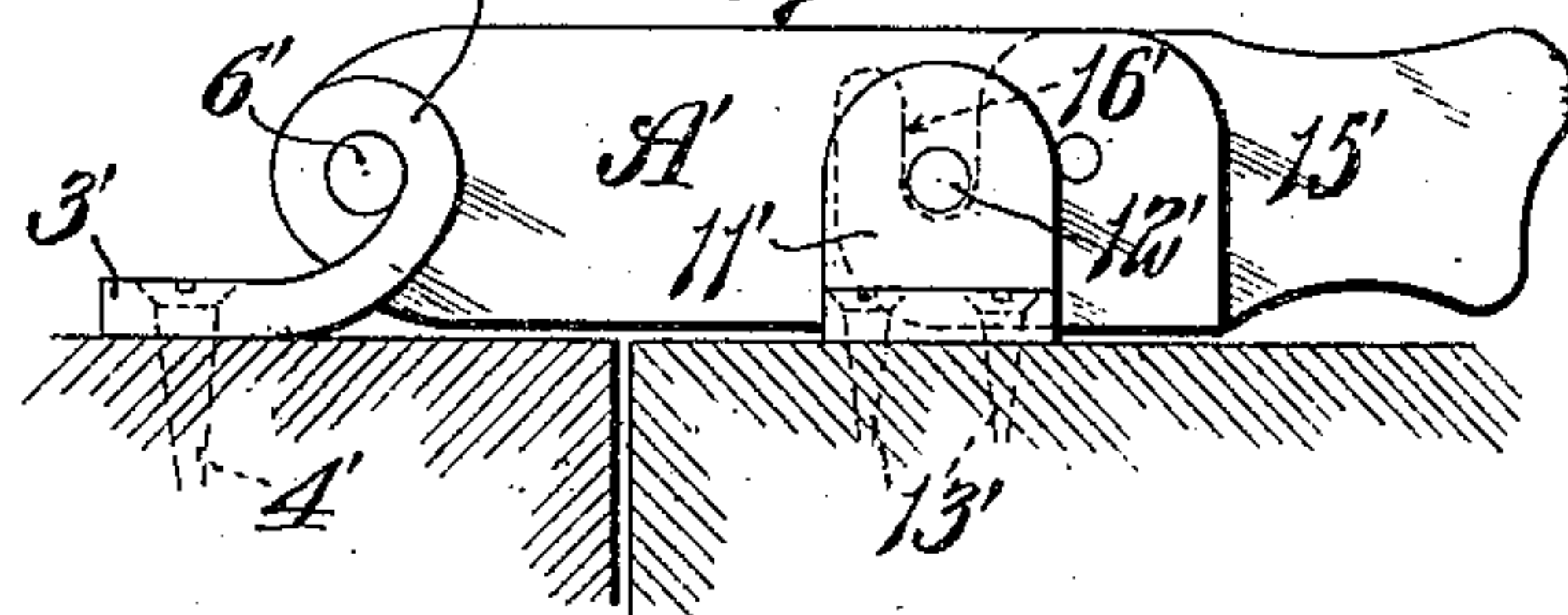


Fig. 7.



Witnesses:

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By Bakewell Cornwall Attys.

UNITED STATES PATENT OFFICE.

JOHN F. HIRSH AND HAROLD M. HIRSH, OF ST. LOUIS, MISSOURI.

DOOR-FASTENER.

No. 898,650.

Specification of Letters Patent.

Patented Sept. 15, 1908.

Application filed May 25, 1908. Serial No. 434,880.

To all whom it may concern:

Be it known that we, JOHN F. HIRSH and HAROLD M. HIRSH, both citizens of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Door-Fasteners, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top plan view of a device constructed in accordance with our invention; Fig. 2 is a side elevation of said device; Fig. 3 is a vertical sectional view taken on approximately the line 3—3 of Fig. 1; Fig. 4 is a detail vertical sectional view illustrating the key-operated member of the movable element; Fig. 5 is a horizontal sectional view taken on approximately the line 5—5 of Fig. 4; Fig. 6 is a top plan view of a modified form of our invention; and Fig. 7 is a side elevation of the construction illustrated in Fig. 6.

This invention relates to door fasteners.

The main object of our invention is to provide a fastener of simple construction that is provided with a key-operated member for securely locking the movable element of the fastener to the stationary element.

Another object of our invention is to provide a device of the character described in which the fastening devices that secure the movable and stationary elements in position are hidden from view.

Other objects and desirable features of our invention will be hereinafter pointed out.

Referring to Figs. 1 to 5 of the drawings which illustrate the preferred form of our invention, A designates the movable element of the fastener, and B designates the stationary element. One of these parts, preferably the stationary element B, is adapted to be connected to a support 1 such, for example, as the side of a building, and the movable element A is adapted to be connected to the object that is to be locked such, for example, as a door 2 which closes an opening in the side of the building. The movable element A is pivotally connected to a base plate 3 that is secured to the door by screws or fastening devices 4 which pass through holes in the base plate, said holes being so disposed relatively to the movable element A that the fastening devices 4 are hidden from view when said movable element is in

its operative position. The rear end of the movable element is reduced slightly in width, as shown in Fig. 1, and fits between ears or lugs 5 on the base plate 3, and a pin 6 passes through said reduced portion and ears to connect the movable element to the base plate. A coiled spring 7 which surrounds the pivot pin 6 and is arranged in a recess or chamber 8 formed in the reduced end of the movable element A, operates to move said movable element away from the stationary element into the position shown in dotted lines in Fig. 3 after it has been released, as hereinafter described, one end of said spring bearing upon a vertical wall 9 on the base plate 3 and the other end of the spring bearing upon a wall of the chamber 8 in the movable element, as shown in dotted lines in Fig. 2. If desired, a sleeve 10 can be placed over the coiled portion of the spring 7, as shown in Fig. 3. The stationary element consists of a base plate B provided with ears or lugs 11 that carry a retaining member herein shown as a transversely extending pin 12 which is arranged parallel to the pivot pin 6 of the movable element, said base plate B being connected to the support 1 by screws or fastening devices 13 which are so disposed relatively to the movable element A that said movable element covers said fastening devices and thus hides them from view when it is in its operative position.

The movable element A is provided on its underneath side adjacent its front end with a slot 14 into which the transversely extending pin 12 on the stationary element B projects when said movable element is moved into its operative position, and said movable element is also provided with a pivotally mounted dog 15 that is adapted to be moved into engagement with the transversely extending pin 12 to retain the movable element in its operative position, as shown in Fig. 3, and thus secure the door. The pivotally mounted dog 15 is arranged in a slot in the front end of the movable element A and said dog is provided with a notch 16 that receives the pin 12 on the stationary element when the dog is turned from the position shown in broken lines in Fig. 3 into the position shown in full lines in said figure.

A leaf spring 17 is secured to the underneath side of the movable element and projects into the slot in which the dog 15 is mounted so as to exert pressure on the end face of said dog and thus prevent it from

turning freely on its pivot. Preferably, the slot in the movable element in which the dog 15 is mounted is so formed that a wall 18 will project over the inner end of said dog when it is in its operative position, as shown in Fig. 3, and thus prevent said dog from being turned on its pivot by pressing downwardly on the inner end thereof. If desired, the dog can be provided with a ring 19 or finger piece that can be grasped to turn said dog and thus release the movable element A.

While we have herein described our improved device as being used for securing a door it will, of course, be obvious that it could be used for numerous other purposes without departing from the spirit of our invention. Furthermore, it is not necessary that the movable element be connected to the door and the stationary element connected to the support or side of the building for, if desired, these elements can be transposed.

In the preferred form of our invention, the movable element is provided with a key-operated member that is adapted to be moved underneath the transversely extending pin 12 on the stationary element after said movable element has been moved into its operative position, as shown in full lines in Fig. 3, and thus securely lock said movable element. Any suitable form of key-operated member can be used for this purpose and while we have herein illustrated the movable element as being provided with a reciprocating bolt 20 we do not wish it to be understood that our broad idea is limited to such a construction. The bolt 20 is reciprocatingly mounted in a bore or elongated hole 21 formed in the forward end of the movable element A, as shown in Fig. 4, and said bolt is provided with rack teeth 22 that mesh with a pinion 23 on the lower end of a shaft 24 arranged at approximately right angles to the bolt 20 in a hole formed in the forward end of the movable element, as shown clearly in Figs. 4 and 5. The shaft 24 is provided at its upper end with a non-circular portion 25 which fits a socket in a key 26, thereby enabling said shaft to be turned to move the bolt 20 underneath the transversely extending pin 12 on the stationary element to lock the movable element A. As shown in Fig. 1, the movable element is provided with a swinging plate 27 that can be turned so as to close the opening in which the key 26 is inserted.

Our improved device is of simple construction so that it can be manufactured at a low cost, and it forms a very efficient lock for a door or other object as the parts that are connected to the door and the side of the building are held in position by fastening devices that are hidden from view so that the door cannot be opened by removing said fastening devices. With a construction of this description the only way that the door

can be opened is by turning the key-operated shaft or by prying off either the movable element or the stationary element.

In Figs. 6 and 7 we have illustrated a construction in which the movable element is not provided with a key-operated member. In other respects the construction illustrated in Figs. 6 and 7 is practically the same as that illustrated in Figs. 1 to 5 except that the fastening devices which secure the movable and stationary elements in position are exposed to view, the construction shown in Figs. 6 and 7 being used principally as a latch instead of a positive locking device. As the construction shown in Figs. 6 and 7 is so similar to that illustrated in Figs. 1 to 5 we have not described it specifically but we have designated the parts of said construction by the same reference characters used on corresponding parts in Figs. 1 to 5 with a prime mark added.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is:

1. A device of the character described, comprising a stationary element provided with a retaining member, a movable element provided with a pivotally mounted dog that is adapted to engage said retaining member, a bolt carried by the movable element and cooperating with said retaining member for locking the movable element in position, and a key-controlled device for moving said bolt; substantially as described.
2. A device of the character described, comprising a stationary element provided with a retaining member, a movable element provided with a catch that is adapted to be moved into engagement with said retaining member, a device on the movable element that cooperates with said retaining member to lock said movable element, and key-operated means for moving said locking device; substantially as described.
3. A device of the character described, comprising a stationary element provided with a retaining member, a pivotally mounted movable element provided with a slot for receiving said retaining member, a dog on the movable element that is adapted to be moved underneath said retaining member, a locking device on the movable element, and key-operated means for moving said locking device underneath said retaining member; substantially as described.
4. A device of the character described, comprising a stationary element provided with a retaining member, a pivotally mounted movable element, a device on the movable element that is adapted to be moved underneath said retaining member, and a spring for moving the movable element away from the stationary element; substantially as described.
5. A device of the character described,

comprising a stationary element provided with a retaining element, a movable element provided with a pivotally mounted dog that is adapted to be moved underneath said retaining member, and a spring for engaging said dog to hold it in position; substantially as described.

6. A device of the character described, comprising a stationary element provided with a retaining member, a pivotally mounted movable element provided with a slot for receiving said retaining member, a dog pivotally connected to said movable element and adapted to be moved by said retaining member, a spring on the movable element that engages said dog and holds it in position, and a spring for moving the movable element away from the stationary element; substantially as described.

7. A device of the character described, comprising a stationary element provided with a retaining member, a movable element provided with a manually-operated device that is adapted to be moved into engagement with said retaining member, a base plate to which said movable element is pivotally connected, fastening devices for securing said base plate and stationary element in position and being so disposed relatively to the movable element that they are hidden from view when said movable element is in operative position, and a key-operated member for

locking the movable element in position, substantially as described.

8. A device of the character described, consisting of a base plate provided with ears which carry a transversely extending retaining member, a pivotally mounted movable element provided on its underneath side with a slot for receiving said retaining member, a base plate to which said movable element is pivotally connected, a coiled spring surrounding the pivot of said movable element for forcing said movable element away from the stationary element, a pivotally mounted dog arranged in a slot in the forward end of the movable element and adapted to be moved underneath the retaining member on the stationary element, a flat spring on the movable element which engages the end of said dog and holds it in position, a bolt reciprocatingly mounted in the movable element, and key-operated means on the movable element for forcing said bolt underneath the retaining member of the stationary element; substantially as described.

In testimony whereof, we hereunto affix our signatures, in the presence of two witnesses, this 20th day of May, 1908.

JOHN F. HIRSH.

HAROLD M. HIRSH.

Witnesses:

WELLS L. CHURCH,
GEORGE BAKEWELL.