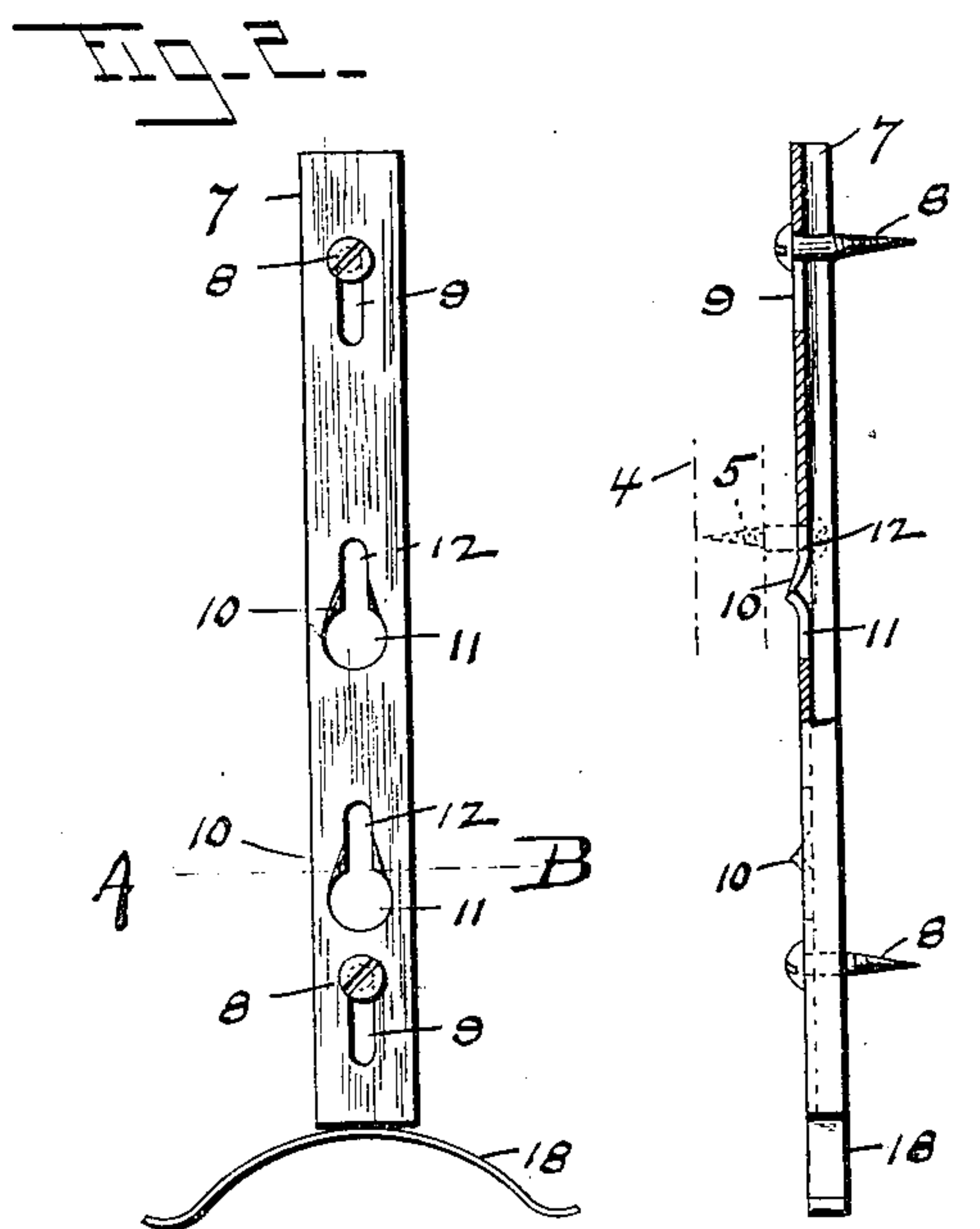
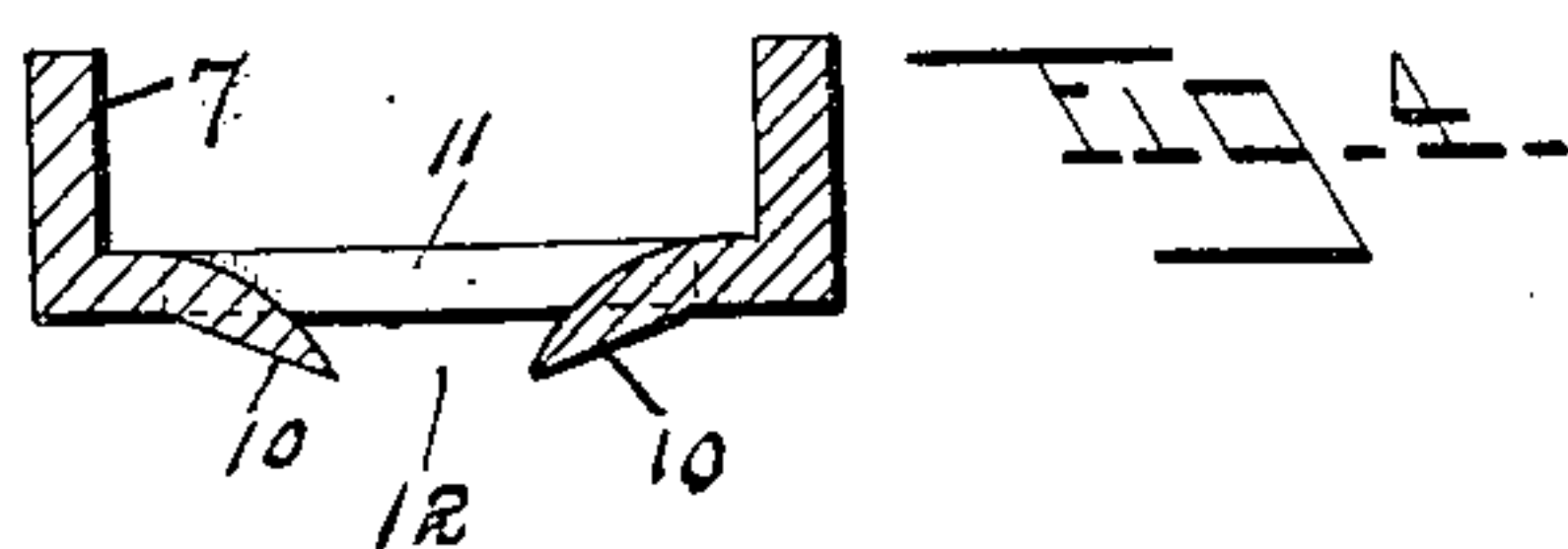
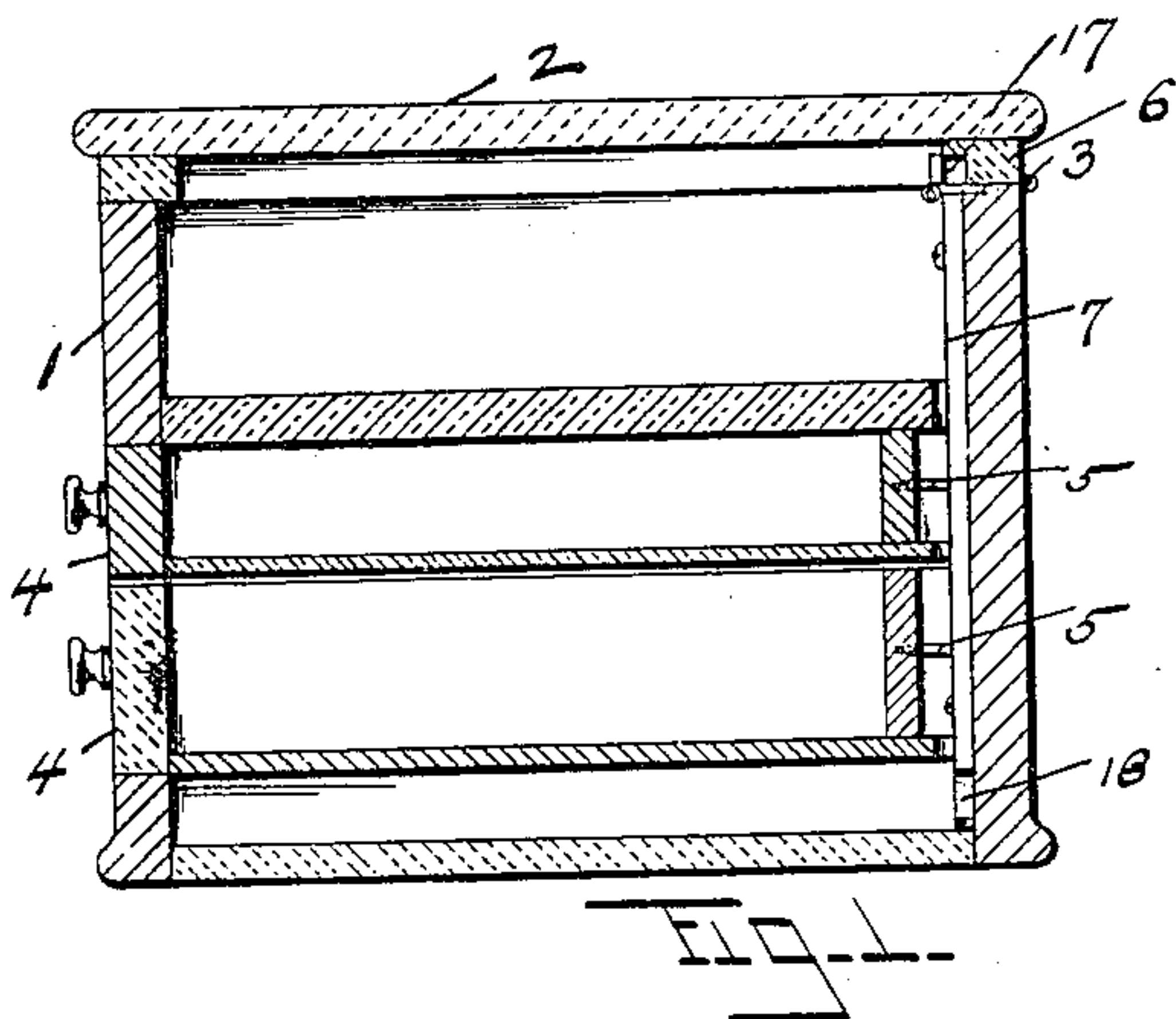


No. 663,589.

Patented Dec. 11, 1900.

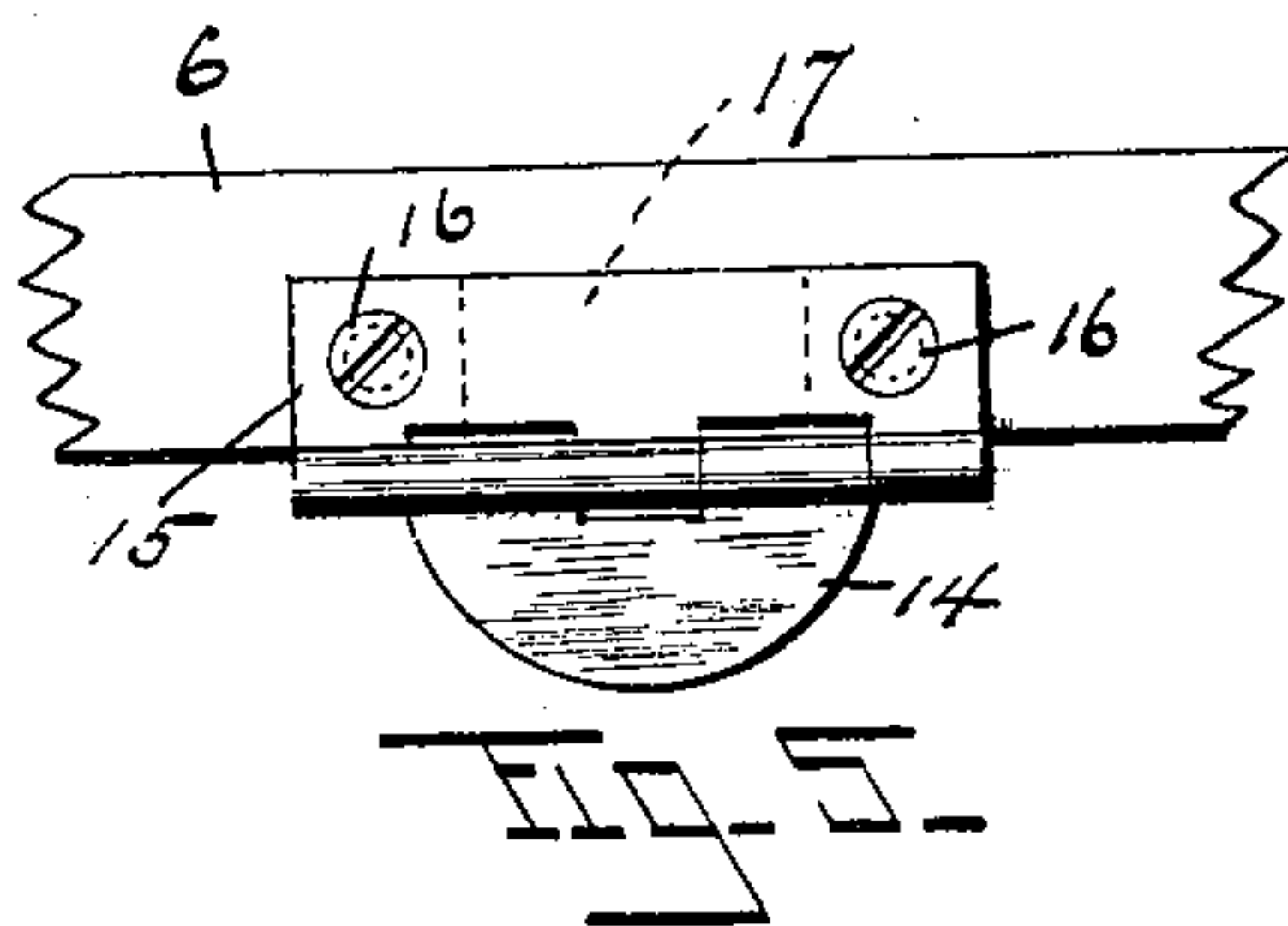
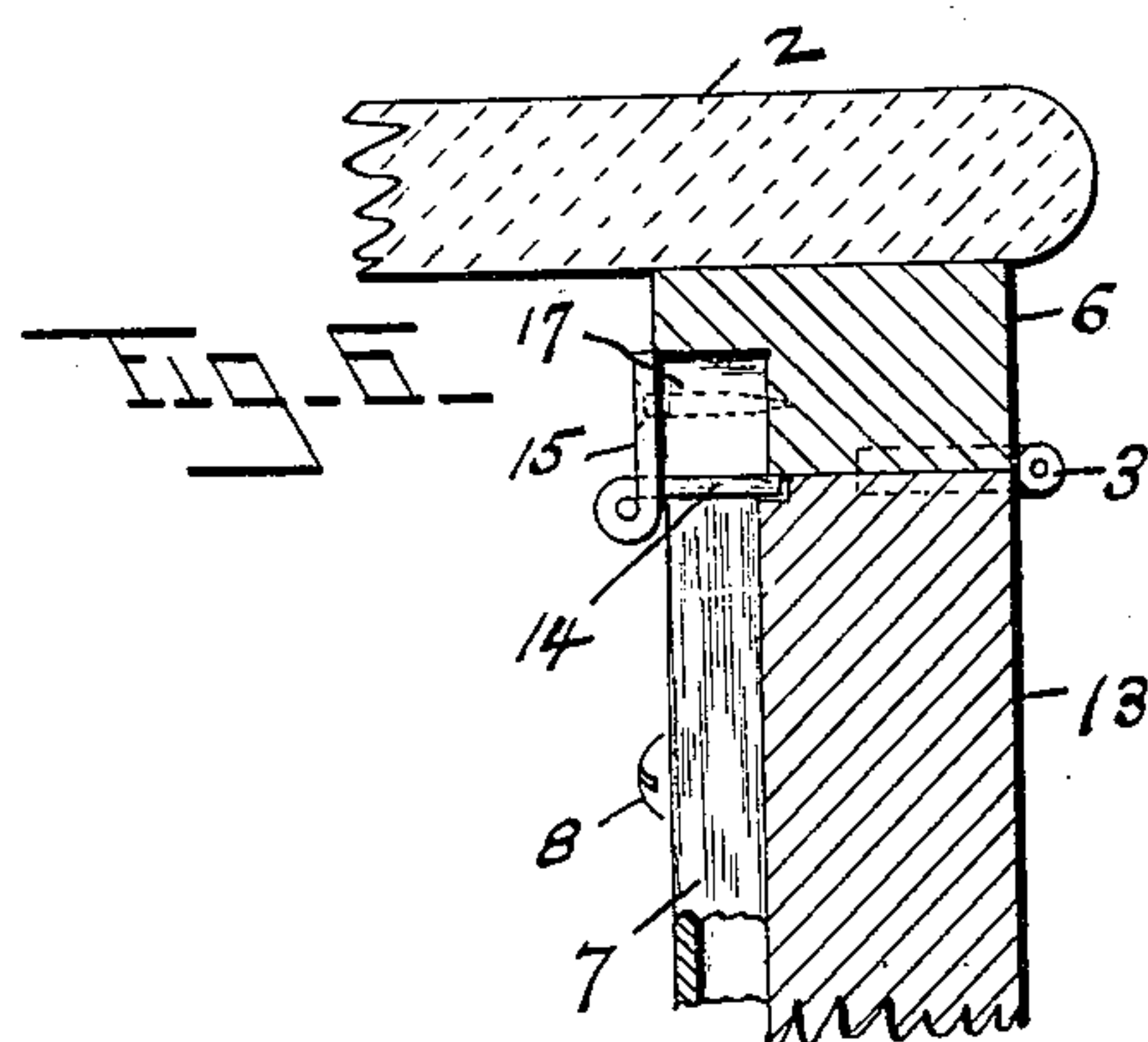
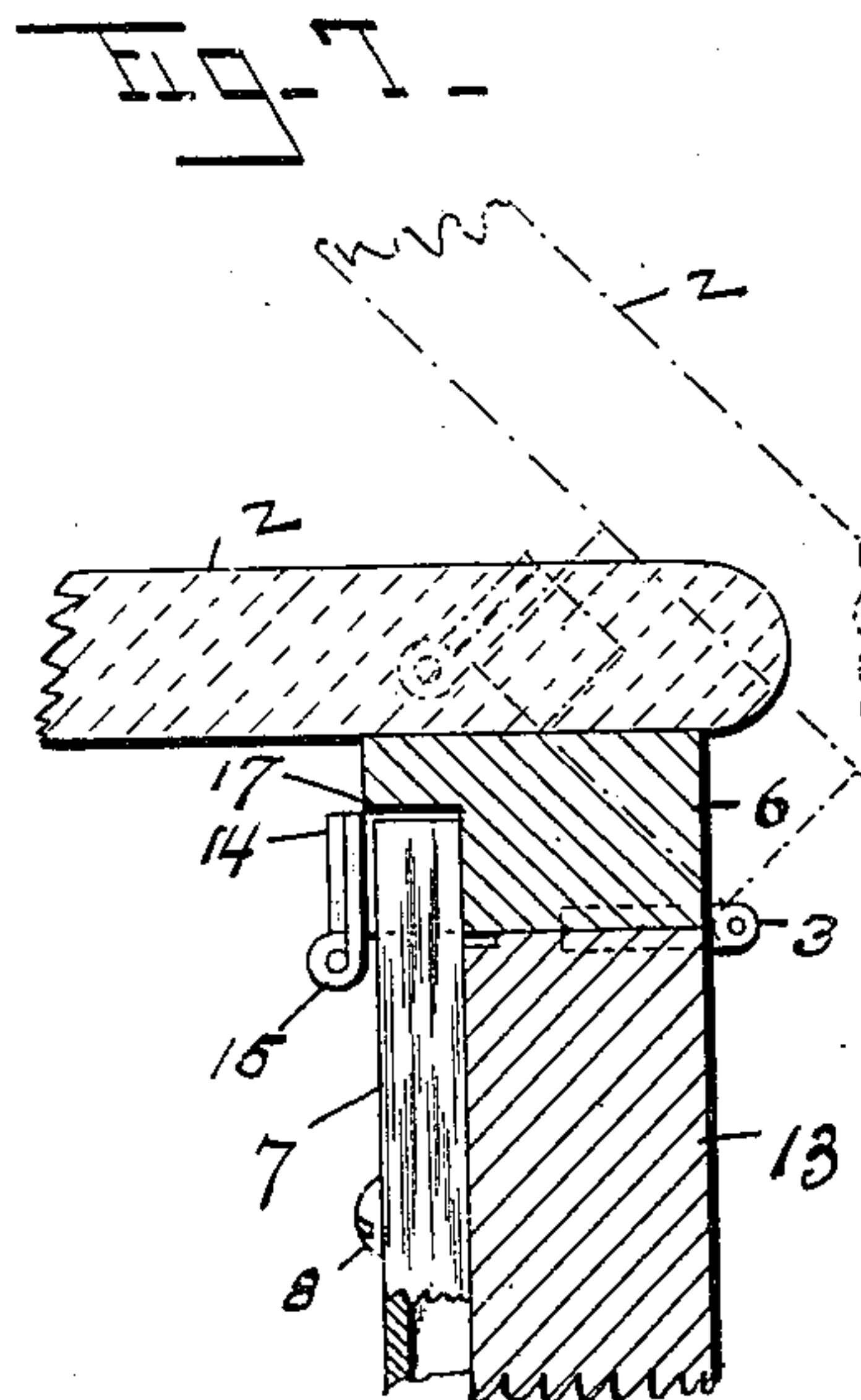
W. T. SMITH.  
AUTOMATIC LOCKING DEVICE.  
(Application filed Jan. 16, 1900.)

(No Model.)



Witnesses.

Jas. S. Faulkner  
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Inventor.

Wilbur T. Smith  
by George C. Hall  
Attorney.



# UNITED STATES PATENT OFFICE.

WILBUR T. SMITH, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE  
W. T. SMITH COMPANY, OF SAME PLACE.

## AUTOMATIC LOCKING DEVICE.

SPECIFICATION forming part of Letters Patent No. 663,589, dated December 11, 1900.

Application filed January 16, 1900. Serial No. 1,614. (No model.)

*To all whom it may concern:*

Be it known that I, WILBUR T. SMITH, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Automatic Locking Devices, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in automatic locking devices, and has reference more especially to that class of locking devices which are designed to automatically lock one or more drawers placed one above the other in a chest, desk, or any other like piece of furniture.

It is the object of my invention to provide a locking means which can be operated by the chest or box cover when desired and which will secure the drawers in a locked position even though the drawers are not pushed into their extreme inward positions.

To these ends my invention consists in the automatic locking device having certain details of construction and combination of parts, as will be hereinafter described, and more particularly pointed out in the claims.

Referring to the drawings, in which like numerals designate like parts in the several views, Figure 1 is a cross-section of a box containing two sliding drawers and provided with a hinged lid or cover. Fig. 2 is a front view of the locking-bar and spring. Fig. 3 is a fragmentary side view thereof. Fig. 4 is a plan section of the locking-bar, taken upon line A B of Fig. 2. Fig. 5 is a front view of the actuating-plate and its adjacent mechanism. Fig. 6 is a fragmentary section of the back and cover of the box with the actuating-plate in its operative position, and Fig. 7 is a similar view with the said actuating-plate in its inoperative position.

In the drawings the numeral 1 designates the body of the box or chest; 2, the cover, which is secured to the body by one or more hinges 3; 4, the sliding drawers, and 5 the locking-studs, which are fastened in the rear end of the sliding drawers and project rearwardly therefrom. In the drawings the studs are illustrated as wood-screws, which I prefer to use, but do not limit myself thereto, as any form of stud will operate equally as well.

The cover 2 has upon its under side a strip 6 (see Figs. 6 and 7) of greater width than the back of the body, which is provided with a recess 17, for a purpose hereinafter to be described.

The numeral 7 designates a locking-bar, which is formed preferably U shape in cross-section and is movably secured to the back 13 of the box by the screws 8 8, which pass through the slots 9 9. The locking-apertures in the body of the locking-bar comprise an enlarged portion 11, with a parallel-sided slotted portion 12 extending therefrom, the metal adjacent to the junction of the said slotted and enlarged portions being turned outward, as at 10, (Figs. 2, 3, and 4,) forming a rearwardly-inclined tapered throat for the slot 12, with the entrance to said throat in advance of the locking-bar body. As the drawers are pushed in the heads of the locking-studs 5 enter the locking apertures through the enlarged portion 11, and as the locking-bar is forced downward the bodies of the studs enter the slots 12, and the head of the locking-stud, which is of larger diameter than the width of the said slots, is in rear of the body portion, and thus prevents the drawers from being pulled outward until the locking-bar is released and moves upward again, when the head can be again drawn through the enlarged portion 11. If perchance the drawers are not pushed in as far as possible, the tapered-throat entrances of the slots 12 come into contact with the heads of the studs 5 as the locking-bar moves downwardly, the heads of the studs riding upon the inclined portions 10, and the drawers are pulled into their closed and locked positions. This feature of my invention enables me to overcome many objections in devices of this kind which are constructed so as to lock the drawers only when they are in their innermost positions, the mechanism being inoperative when any one of the drawers in the series is in any position other than the innermost or locked positions.

It will be noted that in my device the drawers need not necessarily be pushed into their innermost or locked positions, for if one or all of them are substantially in their locked positions the locking-bar through the tapered throat portions 10 will draw them in automatically to their closed and locked positions.



The locking-bar 7 is operated vertically by means of the cover 2 and the actuating-plate 14, which is hinged to a front plate 15, secured to the cover by the screws 16 16, and is adapted to be swung under the strip 6, so as to cover the aperture or recess 17, which recess is directly over the top of the locking-bar and of sufficient size to admit the same.

In Fig. 6 the plate 14 is swung under, so as to cover the recess 17, and when the cover 2 is closed the plate 14 is brought in contact with the top of the locking-bar (see Figs. 1 and 6) and forces it downwardly against the action of the spring 18, thereby locking all of the drawers, as above described. When the actuating-plate 14 is swung back to the position shown in Fig. 7, the recess 17 is uncovered and the top portion of the locking-bar 7 enters the said recess, when the cover is closed, the locking-bar then not being affected by the movement of the cover. It will thus be seen that the drawers can be locked or unlocked when the cover 2 is down by simply shifting the position of the actuating-plate 14 from that shown in Fig. 6 to that shown in Fig. 7.

Any mechanism—as a sliding cover, for example—can be used within my invention for covering the recess 17, and I do not therefore limit myself to the hinged actuating-plate, as shown.

There are many minor alterations and changes that can be made within my invention, and I would have it therefore understood that I do not limit myself to the exact construction herein shown and described, but claim all that falls fairly within the spirit and scope of my invention.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A locking device of the character described having locking-apertures therein, which apertures have an enlarged portion 11 and a slotted portion 12 extending therefrom, the said slot having a tapered throat, formed by turning the lower edges of said slot out-

ward, as at 10, all constructed and operating substantially as described.

2. In an article, substantially as described, having one or more drawer members and a cover member; the said drawer members being provided with locking-studs the combination therewith of a locking device having apertures therethrough, with outwardly-turned edges for locking said drawer members, the said locking device being adapted to pull said drawer members from a substantially-closed position to their completely-closed positions by the engagement of said locking-studs with the outwardly-turned edges of said apertures, substantially as described.

3. In a locking mechanism, a locking-bar for the purpose substantially as described, having a U-shaped body portion, and one or more locking-apertures therethrough, the said apertures having an enlarged portion and a slotted portion, the body of said locking-bar adjacent to the open end of said slot being turned outward, substantially as described.

4. In an article having body and lid members, the said lid member having a recess in one side thereof; the combination therewith of a locking-bar movably secured to said body member in line with said recess, and means for closing said recess, the said means consisting of a movable plate, substantially as described.

5. In an article having body and lid members, the said lid member being provided with a recess, as 17, the combination therewith of a locking mechanism, comprising a locking-bar 7 having locking-apertures therein, and means for actuating said locking-bar, said means consisting of a plate, as 14, movably secured to said lid, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILBUR T. SMITH.

Witnesses:

GEORGE E. HALL,  
JOSEPH B. FAULHABER.