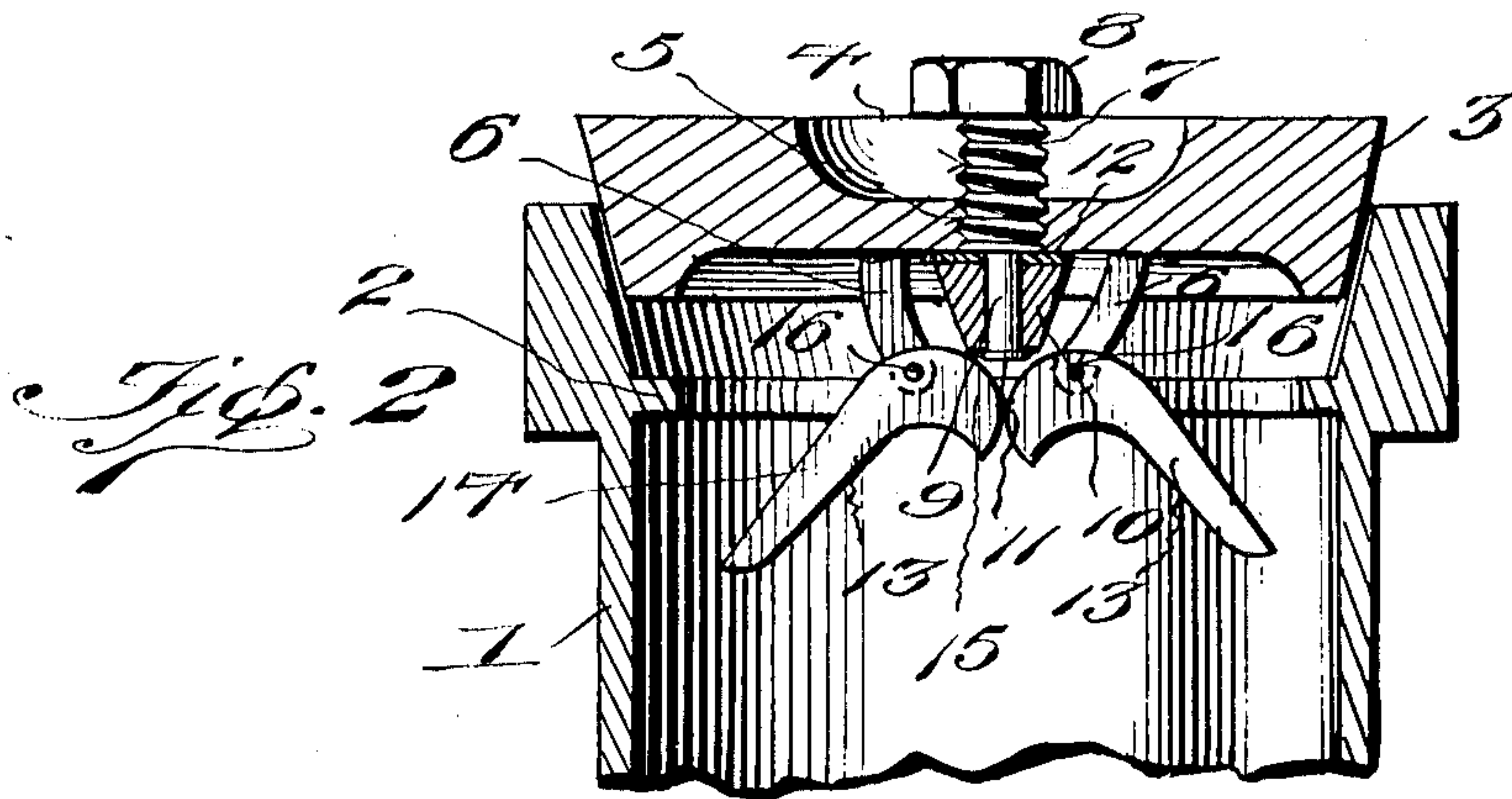
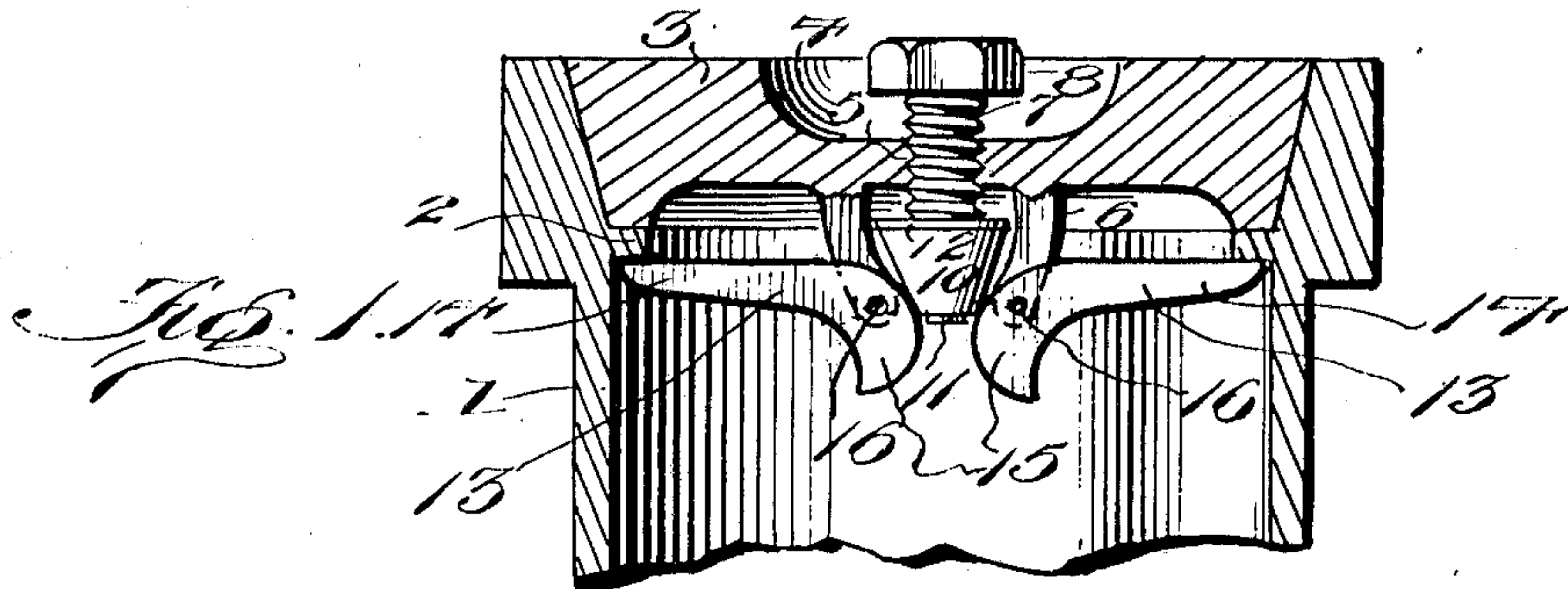


T. F. FOLEY.
FASTENER FOR CLOSURES.
APPLICATION FILED SEPT. 7, 1909.

969,776.

Patented Sept. 13, 1910.



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FASTENER FOR CLOSURES.

969,776.

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To all whom it may concern:

Be it known that I, THOMAS F. FOLEY, a citizen of the United States, residing at Washington, District of Columbia, have invented new and useful Improvements in Fasteners for Closures, of which the following is a specification.

This invention relates to improvements in locking devices for closures primarily intended for use in connection with service-boxes, vent boxes, or the like, but it is to be understood that I do not limit myself to any particular structure to which the closure may be applied, and the object of the invention is to provide a closure with a locking device comprising one or more dogs adapted to be contacted by an element provided by the closure, whereby the said dog or dogs may be brought into engagement with the bead or offset of the box or into contact with the sides of the box to prevent the accidental removal of the closure therefrom.

Another object of the invention is to provide a device of this character provided with a locking key having a loosely connected member, preferably of a cone-shaped formation normally lying above and in the path of pivoted locking dogs secured to the cover, and whereby upon the downward movement of the key the dogs will be caused to revolve upon their pivots and to contact with the bead of the box or the sides thereof, the said cone-shaped member being of a size larger than that of the opening for the key so that the same cannot be accidentally removed from the closures without the latter being removed from the box.

With these and other objects in view, the invention resides in the novel construction and arrangement of parts hereinafter fully described and claimed.

In the accompanying drawings I have illustrated a simple and preferred embodiment of the invention, but it is to be understood that I do not limit myself to the minor details of construction therein illustrated, as it is obvious that slight changes within the form and proportion of the device may be resorted to without departing from the spirit of the invention.

In the accompanying drawings, Figure 1

is a vertical longitudinal sectional view of the device, showing the closure in locked position upon the box. Fig. 2 is a similar view illustrating the locking member disengaged therefrom and the closure partly removed from the box.

In the accompanying drawings, the numeral 1 designates a box. In the present instance the box 1 is of that class used to protect street or water valves, but it is, of course, to be understood that the showing in the drawings is merely illustrative and that while I think it best, at the present time to illustrate the device in connection with this class of boxes it is, as heretofore stated, to be understood that the device may be applied to any structure of an entirely different nature. The box 1 in the present instance is provided with an internal bead 2 which is positioned a suitable distance away from the top of the box and which is of the ordinary formation. The portion of the box above the bead is beveled as clearly illustrated in the figures of the drawings, and said beveled portion is adapted for the reception of a closure 3 having its outer face beveled to correspond to the beveled portion of the box 1. The closure 3 is also, preferably, provided with a central depressed portion 4 and the lower wall of this depressed portion is centrally provided with a threaded opening 5. The closure is provided, adjacent the opening 5 with depending arms 6, which are preferably positioned adjacent each other.

Adapted to be positioned within the threaded opening 5 of the closure 3 is a threaded key member 7 having its upper extremity provided with a suitable head 8 adapted for the reception of a wrench or other instrument, whereby the said threaded key may be rotated within the threaded openings 5, and the lower portion of the key, adjacent its threaded portion, is reduced and extended as designated by the numeral 9.

The numeral 10 designates the cone-shaped member adapted to be loosely positioned upon the reduced extension 9 of the key member 7, and this cone member is retained upon the reduced extremity 9 through the medium of a suitable washer

11. It is to be understood that while I have illustrated and described the cone-member 10 connected with the reduced portion 9 of the key 7 through the medium of the washer 11, I do not limit myself to this precise mode of connection, as the said cone member may be connected through the medium of a pin, cotter-pin, or the said member may have its lower extremity bifurcated and bent over the said washer 11. The upper and larger portion of the cone-shaped member 10, adjacent its connection with the threaded extremity of the key 7 is also provided with a suitable washer 12, and the elements just described, including the key, the washers and the cone-shaped members are adapted to be constructed of suitable non-corrodible material, so that the key will be free to work within the opening 5 and the said washer may also at all times be free to rotate upon the reduced extension 9.

The depending fingers 6 of the closure 3 are adapted for the reception of one or more locking dogs 13. Each of these dogs 13 is provided with a substantially straightened body-portion 14 having rounded head 15, and the said dogs 13 are pivoted to the fingers 6 as designated at 16 so as to allow the rounded or arcuate faces of the dogs to be brought into contact with each other when out of engagement with the beads 2 of the box 1. The locking dogs 13 have their straightened body portions 14 of a length adapted to contact with the sides of the box directly beneath the internal bead 2 thereof.

From the above description, taken in connection with the accompanying drawings it will be noted that the cone-shaped member 10 is normally positioned directly above the arcuate faces of the dogs 13, and it will be further noted that the turning of the key 7, the threaded portion of the opening 5 of the closure 3 will force the cone downwardly into contact with the arcuate faces of the said dogs 13 and cause the same to rotate upon their pivots 16 so as to force the body portions 14 of the dogs into engagement with the underfaces of the beads 2 of the box 1, thus effectually and securely retaining the closure in proper position upon the box. It will be further noted that by thus arranging the cone-shaped member upon the reduced portion 9 of the key member 7 it is not absolutely necessary that the cone-shaped member should rotate with the key 7, as the same may remain stationary and at the same time contact the dogs 13 so as to bring the latter into locked position. It will be further noted that by constructing the cone-shaped member of a non-corrodible material and loosely positioning the same upon the reduced extension 9 of the key the same will contact the arcuate heads of the

dogs 13 and allow the threaded portion of the member 7 as well as the reduced extension 9 to rotate without rotating the said cone-shaped member, and as clearly illustrated in the drawings, it will further be noted that the upper extremity of said cone-shaped member 12 is larger than the area of the opening 5 which provides an effective means for sustaining the said cone-shaped member upon the closure and whereby the key 7 cannot be accidentally removed therefrom.

What is claimed is:—

1. The combination with a box, a closure for the box, said closure being provided with depending fingers, dogs being pivotally connected with the fingers, each of said dogs being provided with an arcuate inner face, the closure having a central threaded opening, a threaded key member engaging the opening, said key member being provided with a reduced extending portion, a cone-shaped member engaging this reduced extending portion, and means for sustaining the cone-shaped member upon the reduced portion and normally above the arcuate faces of the dogs, substantially as described.

2. The combination with a box provided with a bead, a closure adapted to normally rest upon the bead, locking dogs for the closure, said locking dogs being each provided with an arcuate face and being pivoted to the closure, the closure being centrally provided with a threaded opening, a threaded key member for the opening, said key having its upper portion provided with an enlarged head and being also provided with a downwardly extending reduced portion, a cone-shaped member upon the reduced portion, a washer between the upper face of the cone-shaped member and the threaded portion of the key, said washer being of a larger area than the threaded opening of the closure, means for securing the cone-shaped member to the reduced extension of the key, and said cone-shaped member adapted to normally lie directly above the central meeting portions of the arcuate faces of the dogs so as to contact and swing the dogs when the key is rotated to bring their ends into contact with the sides of the box.

3. In combination with a box, of a closure for the box, said closure being provided with an opening, a dog provided with an arcuate face and an extending arm pivotally connected adjacent its arcuate face to the closure, a key member for the opening of the closure, said key member having a cone-shaped end normally lying above the arcuate face of the dog substantially as described.

4. The combination with a box, of a closure for the box, said closure being provided with a threaded opening, the closure being further provided with a depending finger,

a dog pivotally connected with the depending finger, said dog being provided with an arcuate face and an extending portion, a threaded headed key member for the opening, said key member being provided with a reduced extension normally positioned directly above the arcuate face of the dog, and the key member being further provided with a washer member of a larger area than the

area of the threaded opening or the threaded portion of the key member. 10

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

THOMAS F. FOLEY.

Witnesses:

JOHN L. FLETCHER,
M. R. MULLEN.