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A. D. BENTLEY.

DEVICE FOR HOLDING THE LIDS OF BOXES, CASES, AND SIMILAR RECEPTACLES IN PLACE.

APPLICATION FILED FEB. 23, 1906.

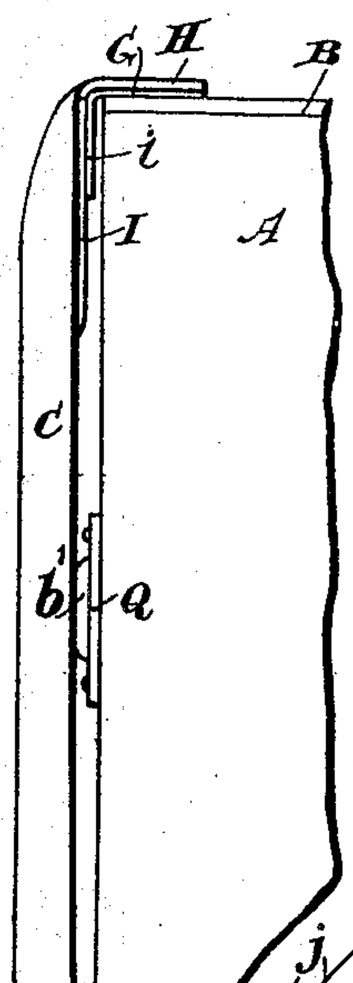

Fig. 6.

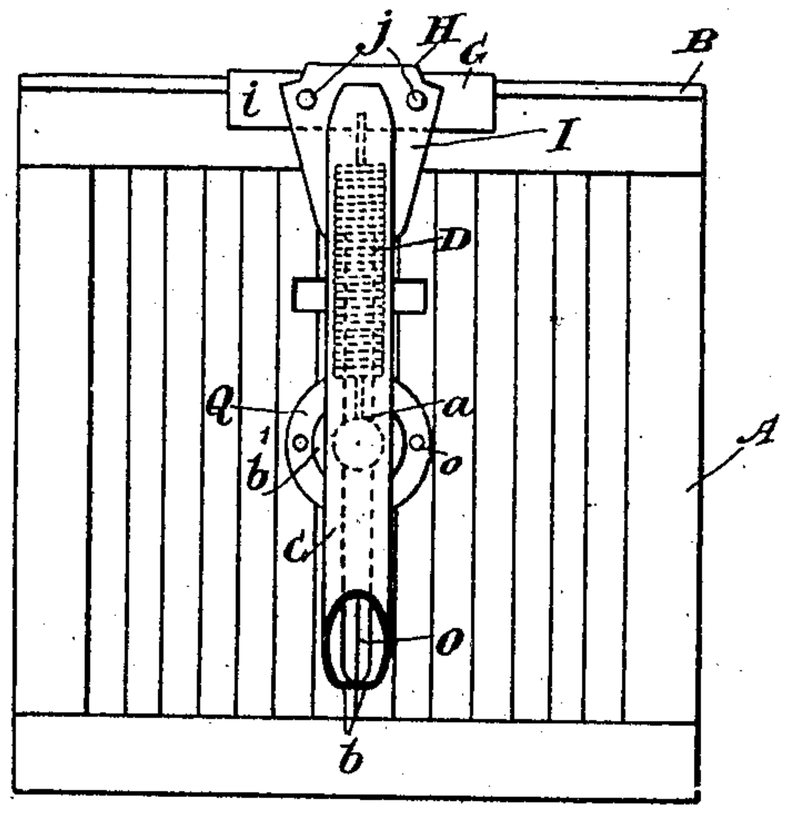

Fig. 1.

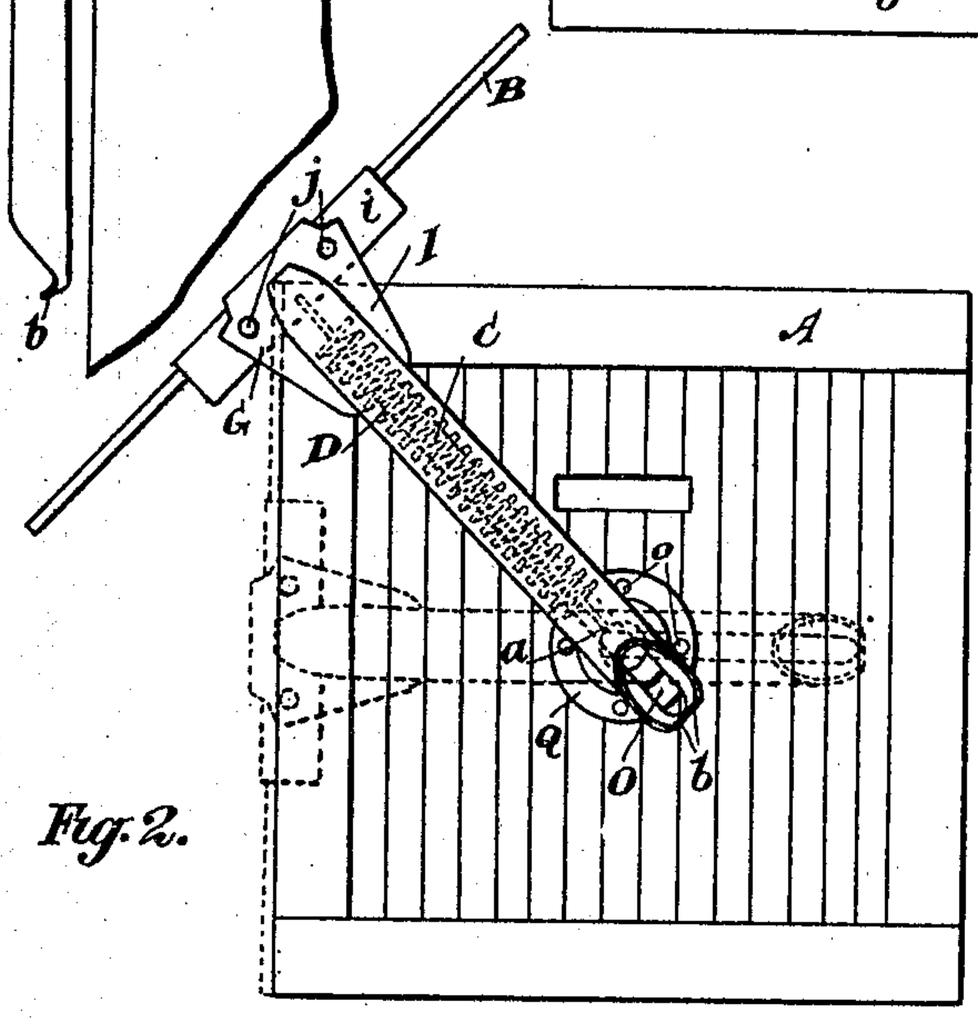

Fig. 2.

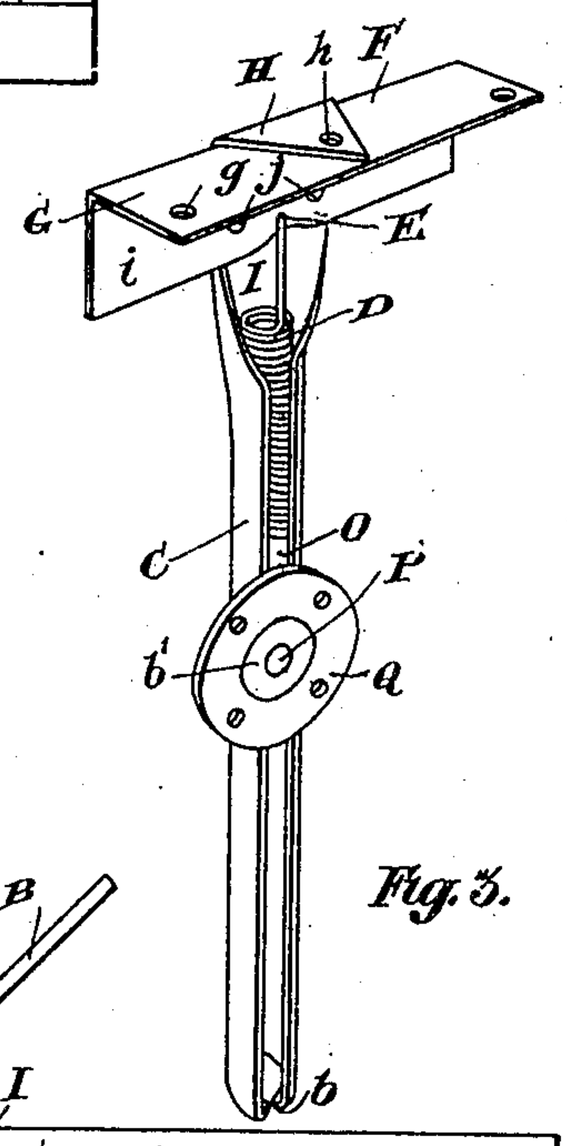

Fig. 3.

Fig. 5.

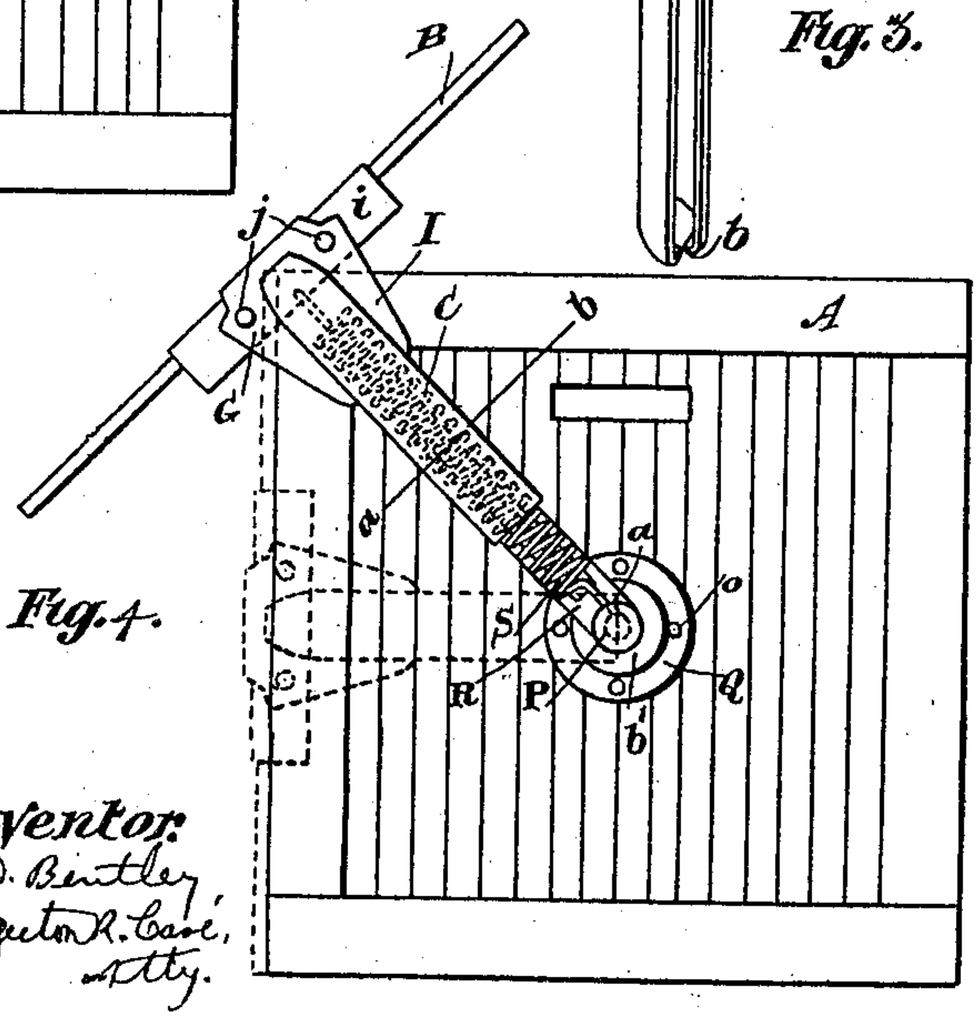

Fig. 4.

Witnesses.
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UNITED STATES PATENT OFFICE.

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DEVICE FOR HOLDING THE LIDS OF BOXES, CASES, AND SIMILAR RECEPTACLES IN PLACE.

No. 871,561. Specification of Letters Patent. Patented Nov. 19, 1907.

Application filed February 23, 1906. Serial No. 302,429.

To all whom it may concern:

Be it known that I, ALFRED DAVENPORT BENTLEY, a subject of the King of Great Britain, residing in the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Devices for Holding the Lids of Boxes, Cases, and Similar Receptacles in Place, of which the following is a specification.

My invention relates to improvements in devices for holding the lid of boxes, cases, and similar receptacles in place, and the objects of my invention are, firstly, to prevent the lid or cover of boxes, cases and other similar receptacles from being lost, by permanently attaching them to the receptacle of which they form a part in such a manner as to permit of the ready and easy opening and closing of the receptacle by the necessary moving of the lid, and secondly, in certain classes of receptacles of the before-described nature to do away with nails for attaching the lids thereto, and it preferably consists of the parts as hereinafter more particularly explained.

Figure 1 is an end elevation of a box and its lid showing my device attached thereto and keeping said lid closed. Fig. 2 is an end elevation of a box and its lid, showing my device attached thereto and in operation. Fig. 3 is an enlarged general perspective view of my device. Fig. 4 is an end elevation of a box, and its lid, showing an alternative form of my device attached thereto and in operation. Fig. 5 is an enlarged cross-section on the line *a*—*b*, Fig. 4, and Fig. 6 is a side elevation of my device and portion of the box same is attached to.

In the drawings like characters of reference indicate corresponding parts in each figure.

It is well known that in connection with boxes, cases, and similar receptacles, particularly those used in the produce trade, the lids become lost and broken by reason of their not being permanently attached to the receptacle itself. Now by providing a cheap yet thoroughly commercial article whereby the lids of these receptacles can be permanently attached thereto and in such a manner as to permit the easy opening and closing of the lid, I am enabled to increase the length of the life of the lid of the receptacle and reduce the cost of maintenance of said receptacles. My device can be attached to any shape of receptacle, but for the convenience of illustration I have shown same attached to a square receptacle.

A is any suitable box, case or receptacle and B lid or cover for same. Held within the sleeve C is a spring D which is secured at its upper end E to the head F of the sleeve C. I preferably construct this head of an angle-plate G provided with holes *g* by means of which fastening-devices, such as screws or nails, the said head is permanently attached to the lid or cover B.

I preferably flare the upper end of the sleeve C and bend it down over the top of the angle-plate G, as shown at H. By means of a hole *h* and a similar hole in the angle-plate G in alinement therewith, the head of said sleeve is additionally secured to the lid or cover B. The flared portion I of the casing C is suitably secured to the depending flange *i* of the angle-plate G as by rivets *j*. The sleeve C is provided on its inner side for the major portion of its length with a longitudinal slot O. By means of the stud P (around which is secured the lower end *a* of the spring D) operating in the longitudinal slot O and secured to the disk Q, which is suitably secured to the end of the box as by screws or nails *o*, the sleeve C is held in permanent relation to the disk Q and is capable of the necessary longitudinal and swinging movement in order to permit of the opening of the receptacle by the moving of the lid as will be clearly seen on reference to Fig. 2. By means of the bent portions *b* of the sleeve C or any other suitable construction, the sleeve C is prevented from being pulled too far so that said stud will be moved out of said sleeve. Upon inspecting the drawings it will be understood that the spring D is always exerting a force to keep the lid B against the receptacle. As soon as the lid and its device have been moved into the dotted position shown in Fig. 2, the box, case, or receptacle A is opened. From this description it will be understood that there will be no possible chance of losing the lid or cover, and that same will always be held snugly in place.

By the construction of my preferred form of my device shown in Figs. 1, 2 and 3, it will be understood that as the stud P is always within the sleeve C said sleeve will be always kept in permanent relation to the disk Q and thus prevent any binding of these parts.

In place of making the sleeve C long as shown in my preferred form of construction, I make same short after the alternative form shown in Fig. 4. However I prefer to make said sleeve long because the spring therewithin is always housed thereby and so prevented from being injured by blows exerted directly thereagainst. When the lid B is in the position shown in Fig. 4, it will be noticed that the lower portion of the spring is directly exposed. In order to keep the sleeve C in alinement with the stud P in the alternative form I pivot to said stud a plate R and provide it with a rib S which operates in the longitudinal slot O. The inner portion of this plate R always rests within the sleeve C, and consequently the free movement of the said sleeve during the opening and closing of the lid is assured. By providing the plate R it will be understood upon inspecting Figs. 4 and 5 that during the movement of the device around the stud P, or at any other time, the spring D is held out of contact with the box, case or receptacle.

Although I have only shown one device attached to the box, case, or receptacle, it will be understood that one of these devices must be attached to each end thereof, and to each end of the lid therefor.

I preferably stamp the center portion b^1 of the disk Q outward so that during the movement of the sleeve C same will not abut against the attaching-means for securing said disk to the receptacle. Furthermore, this construction of disk enables me to keep the said sleeve entirely free from engagement with the ends of the receptacle, as will be clearly seen in reference to Fig. 6.

Obvious changes may be made in the construction of my device without departing from the spirit of my invention.

What I claim as my invention is:

1. The combination with a receptacle, and the lid therefor, of a sleeve provided with a longitudinal slot, attached at its upper end to each end of said lid; a spring within said sleeve and attached thereto and to pivoting means attached to each end of said receptacle, and which pivoting means must operate in the longitudinal slot in said sleeve, and whereby said sleeve is pivoted to said receptacle and in such a manner that it may have a combined longitudinal and swinging movement, under the influence of said spring which exerts only a contracting force and so constantly dominates said lid so as to keep it close against the receptacle.

2. The combination with a receptacle, and the lid therefor, of a sleeve provided with a longitudinal slot, attached at its upper end to each end of said lid; a spring within said sleeve and attached thereto and to a disk attached to each end of said receptacle; a stud secured to said disk and operating in said longitudinal slot in said sleeve, whereby said sleeve is pivoted to said receptacle and in such a manner that it may have a combined longitudinal and swinging movement under the influence of said spring which exerts only a contracting force and so constantly dominates said lid so as to keep it close against the receptacle.

3. The combination with a receptacle, and the lid therefor, of a sleeve provided with a longitudinal slot, and having its lower end partially closed and having its upper end flared outward; an angle plate secured to each end of said lid and to which the upper end of said sleeve is secured; a spring within said sleeve and attached thereto and to a disk attached to each end of said receptacle; a stud secured to said disk and operating in said longitudinal slot in said sleeve, whereby said sleeve is pivoted to said receptacle and in such a manner that it may have a combined longitudinal and swinging movement under the influence of said spring which exerts only a contracting force and so constantly dominates said lid so as to keep it close against the receptacle.

4. A device of the class described, comprising a sleeve provided with a longitudinal slot and being constructed at its upper end with an attaching-portion or head; a disk; a stud secured thereto or formed a part thereof and operating in said longitudinal slot, and a spring within said sleeve and attached thereto and to said stud.

5. A device of the class described, comprising a sleeve provided with a flared upper end and also provided with a longitudinal slot throughout the major portion of its length; an angle-plate to which the upper end of said sleeve is secured; a disk; a stud secured thereto or formed a part thereof and operating in said longitudinal slot, and a spring within said sleeve and attached thereto and to said stud.

6. A device of the class described, comprising a sleeve provided with a flared upper end and also provided with a longitudinal slot, and having its lower end partly closed; an angle-plate to which the upper end of said sleeve is secured; a disk provided with a raised center portion; a stud secured to or formed part of said raised upper portion of said disk and operating in said longitudinal slot, and a spring within said sleeve and attached thereto and to said stud.

7. A device of the class described, comprising a sleeve provided with a longitudinal slot and being constructed at its upper end

with an attaching-portion or head; an attaching-member provided with a raised center portion adjacent said sleeve; a stud secured to or formed part of the raised portion of said attaching-member and operating in said longitudinal slot, and a spring within said sleeve attached thereto and to said stud.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses.

ALFRED DAVENPORT BENTLEY.

Witnesses:
L. G. SHARPE,
F. McDERMOTT.