No. 862,594. PATENTED AUG. 6, 1907.

E. STOOPS.

SEALED LOCK FOR MILK CANS.

APPLICATION FILED JAN. 11, 1906.

FIG. 1.

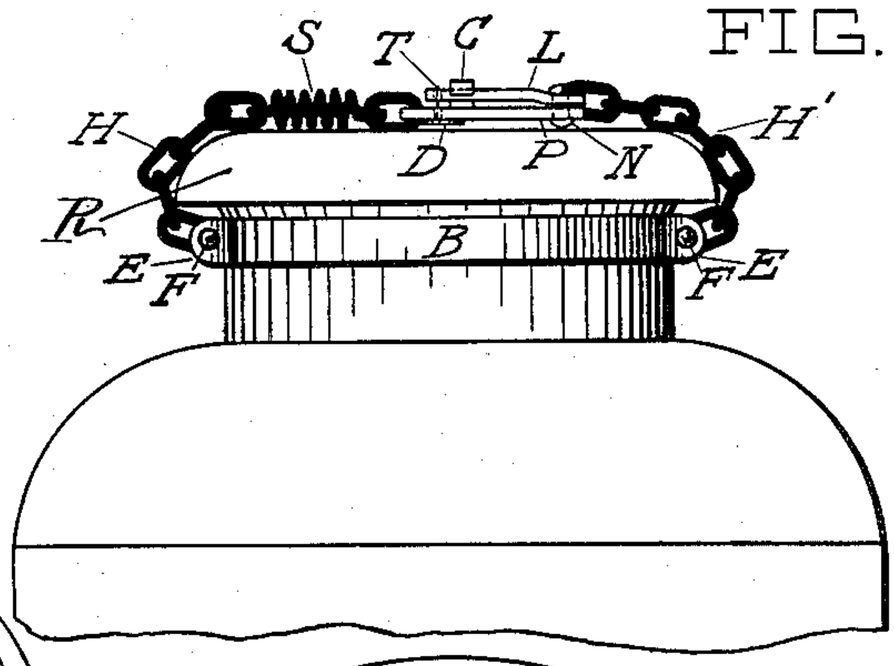


FIG. 5.

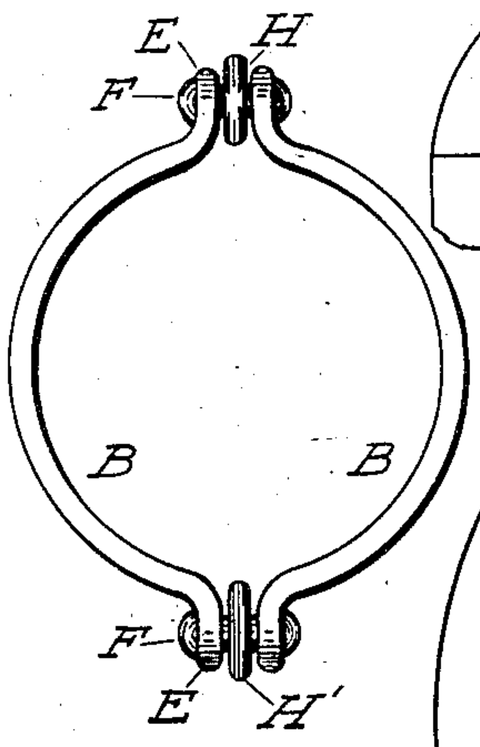


FIG. 2.

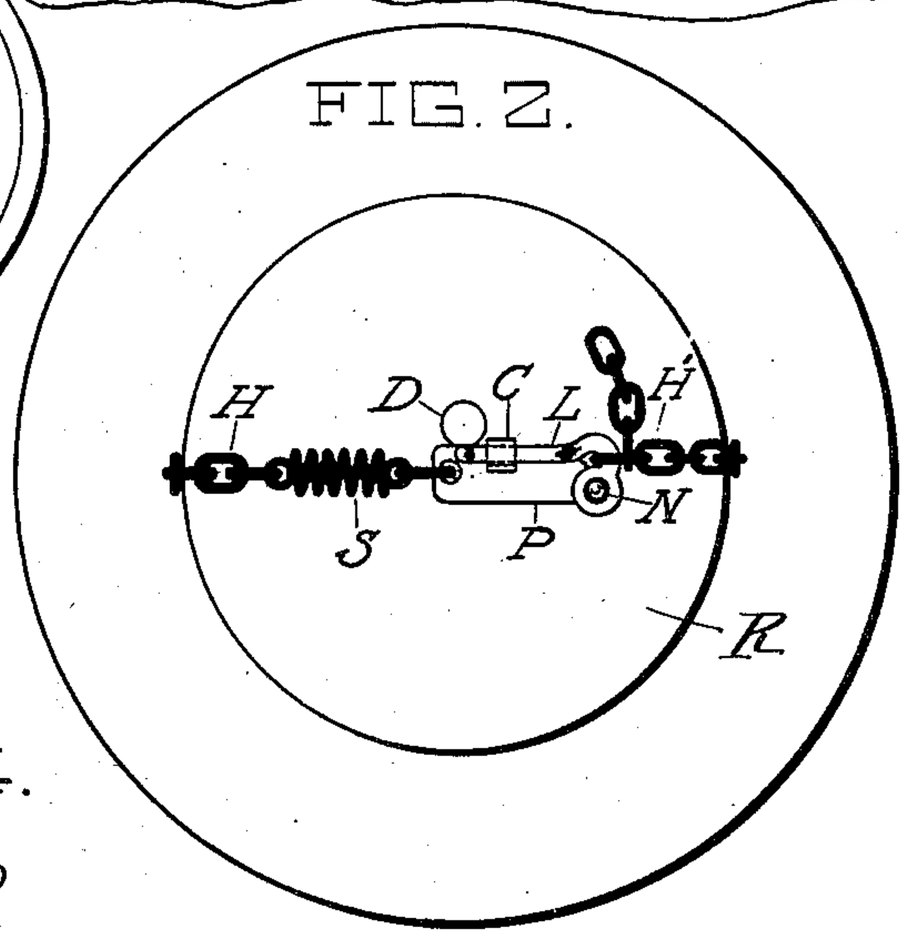


FIG. 6.

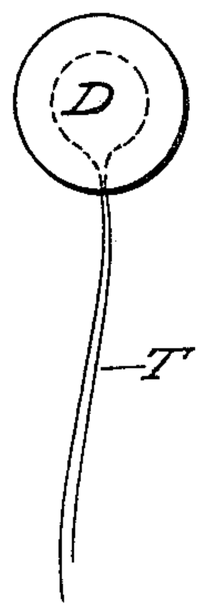


FIG. 4.

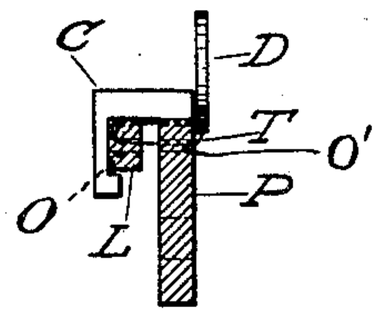
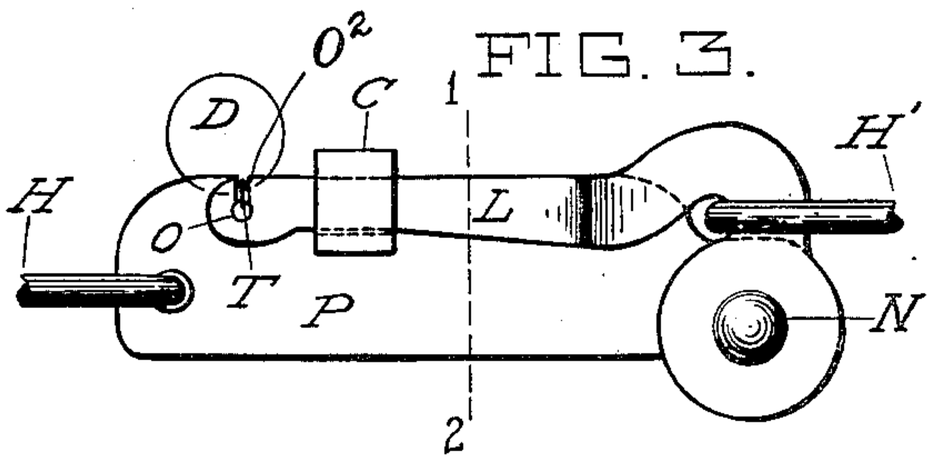


FIG. 3.



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SEALED LOCK FOR MILK-CANS.

No. 862,594. Specification of Letters Patent. Patented Aug. 6, 1907.

Application filed January 11, 1906. Serial No. 295,665.

To all whom it may concern:

Be it known that I, EDWARD STOOPS, a citizen of the United States, residing at Riverside, in the county of Burlington and State of New Jersey, have invented a new and useful Sealed Lock for Milk-Cans and Similar Containing Vessels, of which the following is a specification, to wit:

My invention has for its object the sealing of milk cans and other packages in process of transportation; and more specifically my object is to so form such lock that it may be readily adjusted and easily transferred from one can to another.

My object is also to make the lock in such manner that a key and extra lock may be dispensed with if desired; and while not forcibly stopping the breaking of the seal, yet preventing the lock being opened without detection.

My invention consists of movable parts attached to the body of the can or receptacle to be sealed and provided with a mechanical lock for uniting them over the lid or removable cover, when combined with a seal having flexible parts adapted to be closely tied about the lock and cut off close to the knot so as to be incapable of retying should they be untied.

My invention also comprehends many details which, taken in connection with the features above set forth, will be better understood by reference to the drawings, in which:

Figure 1, is an elevation of the can showing a view of the locking device attached to the can and locking the cover in place; Fig. 2, is a plan view showing the device locked and sealed; Fig. 3, is a plan view of the lock when sealed; Fig. 4, is a sectional view on line 1—2 of Fig. 3; Fig. 5, is a plan view of a band adapted to the neck of the can and to which the locking device is attached; and Fig. 6, is a plan view of the seal.

In the application of my invention I attach the parts constituting the locking device to the neck or body of the can and stretch them over the cover preliminary to locking said parts in position.

The band B is passed around the neck of the can and rivets F or other suitable fasteners are passed through the ears E, and links of the chains H and H′ which are between the said ears E. The ears E are preferably diametrically opposite each other, as shown.

While it is convenient to attach the chains to the ears of the two-part band B which fits around the neck of the can, it is evident that these two chains may be connected to the neck or body of the can or receptacle in any other convenient manner.

To chain H, the locking device is attached, as shown in Fig. 3. This locking device consists of a plate P, and pivoted lever-arm L; the pivoted lever arm L is curved, thus providing a recess or opening for a link of the free end of the opposite chain H′. This lever-arm is also provided with a slight offset, as shown, so that while the pull of the chain is close to the hinge, the free end of the arm is somewhat to one side of the plate P which would permit the passage of a knife in severing the seal. The recess for the link is so placed as to be preferably out of line or center with respect to the pivot N, thus exerting a tension on the chains H and H′ when the lever L is thrown into locking position and tightening said chains over the cover R of the can. The plate P is provided with a catch C under which the free end of the lever L is pressed when in locking position, which catch C holds the lever-arm L securely in position, as shown in Figs. 3 and 4, and prevents any strain coming upon the seal cords or wires T.

The free end of the chain H′ is provided with a few extra links by which to provide for varying sizes and fit of covers to cans.

The chain H, to which the plate P is attached, may have a stiff spring S in place of a few links to facilitate the throwing of the lever L under catch C to suit varying conditions, and to insure the lever L pressing against the catch C with continuous tension to prevent jarring strains coming upon the seal cords T. To prevent fatigue of the spring S, a wire guard may be provided which will limit the distance to which it may be stretched.

The plate P, and the lever-arm L are respectively provided with small holes O′ O in line with each other when the lever L is under catch C, as shown in Fig. 3. The seal, Fig. 6, consists of a disk D of pasteboard, wood, metal, or any suitable material to which is attached a stout cord, thong, wire or flexible parts T in such manner that the said parts T and disk D cannot be taken apart without mutilation and destruction of the said disk D. The hole O in the lever arm L is preferably provided with a lateral groove O^2 in its upper surface so that the cord or flexible tying strand may lie in it and be protected against accidental rupture by abrasion or otherwise.

The seal, while preferably in the form of a disk, may be made in any other manner or any other shape, the particular form being immaterial so long as it is provided with the tying parts T by which it is secured in place to the lock.

The operation of my improved locking-device is as follows: Assuming the cover R to be placed in position on the can, place the locking-device on top of the can with the lever-arm L revolved to open position and extended backward in line with the plate P sufficiently to admit a link of the free end of the chain H′ being passed on to the lever-arm L and into its recess adjacent to its pivot; revolve the lever L back into position under the catch C as shown in Fig. 3, and if the tension is right the cover of the can will be clamped firmly down on the can. The tension serves to hold the lever L pressed firmly against the catch C and bring the holes O O′ in the lever and plate always into

alinement. Next, pass one of the thongs or pliable parts T of the seal through the hole O, in the lever L and hole O′ in the plate P and pull till the disk D is close up; the thongs or pliable parts T are then tied or knotted close to the hole O, and then cut off sufficiently close to the knot that it cannot be untied and retied.

The disk D may be marked by the user in such manner that substitution without detection would be impossible. Cutting the thong or pliable tied parts T close to the knot makes retying impossible. Thus the cover is securely locked and sealed and access to the contents made impossible without detection, and thus the objects of my invention attained.

From the foregoing description, it will be observed that the greatest tension may be put upon the chains to clamp the lid down and yet no strain at all is put upon the seal D and its flexible strands T.

By employing the stiff spring S, it is evident that a greater capacity for adjustment will be had because there will be no slack in the chains even with links of considerable length. By using a chain H′ to connect with the lever L any length of chain may be employed to suit can lids of different shapes or different positions in the neck of the body in case of injury to the can or lid.

As far as I am aware, the use of the seal with flexible strands cut off close to the knot is new in the art as an adjunct or detector against opening the mechanical lock upon which the strain comes. The security is not against forcible opening of the lock, but to detect such opening, since it is impossible to apply the seal again after once being removed.

While I have shown my invention in the form I have found it excellently adapted for commercial purposes, I do not confine myself to the details as they may be modified without departing from the spirit of the invention.

Having fully described my invention and its mode of operation, what I claim as new and desire to secure by Letters Patent, is:—

1. A vessel having a removable lid, combined with a flexible part having one of its ends secured to the vessel at one side of the lid, a plate I secured to the free end of said flexible part and provided with a hole O′ through it near one end and also a rigid retaining catch C, a lever arm L hinged to the plate on an axis parallel to the hole O′ and at the end most distant from said hole and also provided with an aperture in its free end adapted to come into alinement with the said hole O′ in the plate when said lever is in engagement with the retaining catch C, and a second flexible part secured to the vessel at the other side of the lid and adapted to detachably engage the lever arm L.

2. A vessel having a removable lid, combined with a flexible part having one of its ends secured to the vessel at one side of the lid, a plate P secured to the free end of said flexible part and provided with a hole O′ through it near one end of also a rigid retaining catch C formed of an overhanging part having a retaining edge, a lever arm L hinged to the plate on an axis parallel to the hole O′ and at the end most distant from said hole adapted to snap under the overhanging part and back of the retaining edge of the catch C and also provided with an aperture in its free end adapted to come into alinement with the said hole O′ in the plate when said lever is in engagement with the said retaining catch C, and a second flexible part secured to the vessel at the other side of the lid and adapted to detachably engage the lever arm L.

3. A vessel having a removable lid, combined with a flexible part having one of its ends secured to the vessel at one side of the lid, a plate P′ secured to the free end of said flexible part and provided with a hole O′ through it near one end and also a rigid retaining catch C, a lever arm L hinged to the plate on an axis parallel to the hole O′ and at the end most distant from said hole and also provided with an aperture in its free end adapted to come into alinement with the said hole O′ in the plate when said lever is in engagement with the retaining catch C, a second flexible part secured to the vessel at the other side of the lid having a series of apertures and adapted to detachably engage the lever arm L, and a spring interposed in one of the flexible parts to compensate for differences in length in the last mentioned flexible part due to adjustment of the lever arm in different apertures thereof.

4. A vessel having a removable lid, combined with a plate having a seal strand aperture, a flexible connection between the plate and one side of the vessel below the lid, a hinged hook shaped lever arm hinged to the plate and having a seal strand aperture arranged to be brought into alinement with the aperture in the plate, and a flexible part connected to the other side of the vessel and having a series of apertures for engagement with the hook shaped lever arm.

5. A vessel having a removable lid, combined with a plate having a seal strand aperture, a flexible connection between the plate and one side of the vessel below the lid, a hinged hook shaped lever arm hinged to the plate and having a seal strand aperture provided with the groove O^2 and arranged to be brought into alinement with the aperture in the plate, a flexible part connected to the other side of the vessel and having a series of apertures for engagement with the hook shaped lever arm, and flexible tying means extending through the holes of the plate and lever arm and lying in the groove O^2 of the said arm.

6. A vessel having a removable lid, combined with a plate having a seal strand aperture, a flexible connection between the plate and one side of the vessel below the lid, a hinged hook shaped lever arm hinged to the plate and having a seal strand aperture provided with the groove O^2 and arranged to be brought into alinement with the aperture in the plate and also having its free end extended to one side of the plate so as to permit of easy access of a knife, a flexible part connected to the other side of the vessel and having a series of apertures for engagement with the hook shaped lever arm, and a mechanical connection for uniting the plate and arm consisting of a flexible strand extending through the apertures of said parts and bridging the space between them.

7. A vessel having a removable lid or cover, combined with a band for attachment to the vessel comprising two semi-circular parts, two chains respectively attached to the band at the junctures of the semi-circular parts and on opposite sides of the vessel, a mechanical locking device consisting of a plate P having a hole O′ and catch C connected to one of the chains and having an arm having a hole O hinged to it for detachable connection with the other chain above the lid or cover, and a detector having pliable parts extending through the holes O O′ and about the arm and plate of the locking device and united in a closely formed knot whereby said arm cannot be moved without untying the pliable parts and the latter cannot be retied by the fingers if once untied to again retain the arm in locked position.

8. Means for sealing milk cans during shipment consisting of two flexible parts connected by a neck band for the can, a plate connected to the free end of one of the flexible parts and provided with a hole and a catch, and a pivoted arm hinged to the plate adapted to form a locking engagement with the other of the flexible parts and also with the catch on the plate at the same time and further having its free end in close proximity to the hole in the plate when in its locking position.

9. Means for sealing milk cans during shipment consisting of two flexible parts connected by a neck band for the can, a plate connected to the free end of one of the flexible parts and provided with a hole and a catch, a pivoted arm hinged to the plate adapted to form a locking engagement with the other of the flexible parts and also with the catch on the plate at the same time and further having its

free end in close proximity to the hole in the plate when in its locking position, and a detector consisting of a flexible strand extending through the hole in the plate and over the pivoted arm and having its ends united in a knot and terminating close to the knot.

10. A vessel having a removable lid or cover, combined with a locking device consisting of two flexible parts connected to the vessel, a mechanical connecting device for connecting the flexible parts over the lid or cover and provided with a movable detaching part, and a detector consisting of a flexible strand extending about the mechanical connecting device and its movable detaching part and having its ends united in a knot and terminating close to the knot.

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

EDWARD STOOPS.

Witnesses:

JAMES STOOPS,

WM. H. STOOPS.