

H. MARKOVITZ.
MILK CAN LOCK.
APPLICATION FILED DEC. 24, 1910.

1,004,449.

Patented Sept. 26, 1911.

Fig. 1

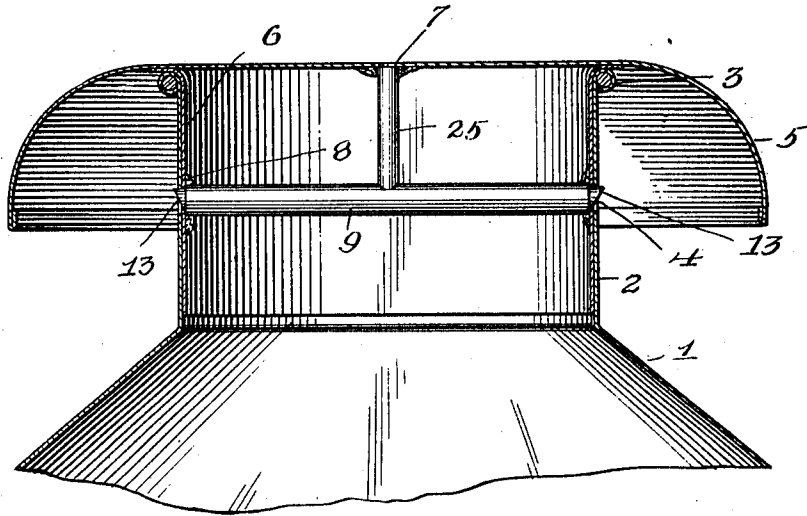


Fig. 2

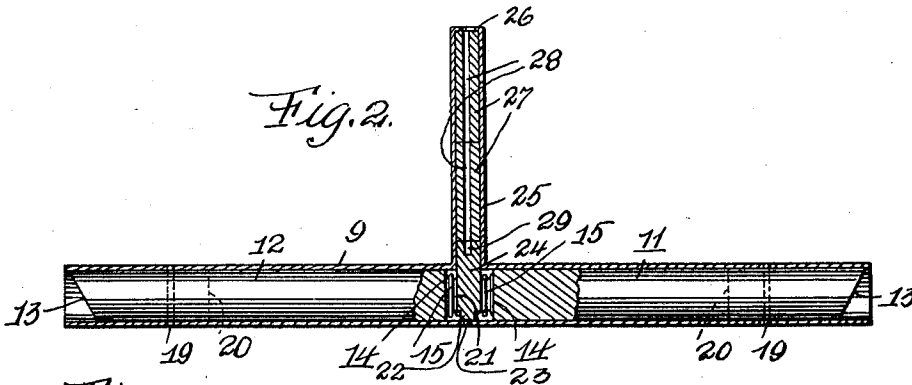


Fig. 3

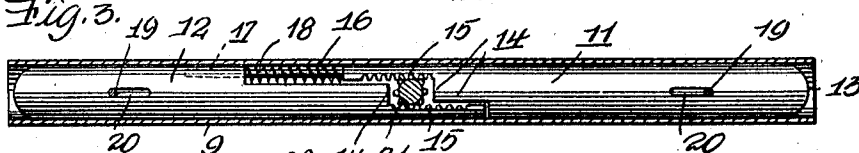


Fig. 4

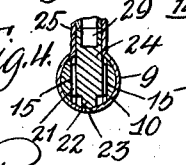
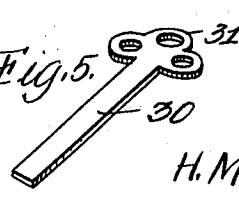


Fig. 5



WITNESSES

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HARRY MARKOVITZ, OF BRADDOCK, PENNSYLVANIA.

MILK-CAN LOCK.

1,004,449.

Specification of Letters Patent. Patented Sept. 26, 1911.

Application filed December 24, 1910. Serial No. 599,158.

To all whom it may concern:

Be it known that I, HARRY MARKOVITZ, a citizen of the United States of America, residing at Braddock, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Milk-Can Locks, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention is an improvement upon my Patent No. 975,880, granted November 15, 1910.

The object of the present invention is to provide a lock that can be advantageously used in connection with milk cans and other receptacles for retaining the lid thereon and preventing the contents of the can from being tampered with or surreptitiously removed.

20 Another object of the invention is to provide a lock consisting of comparatively few parts easily assembled and maintained in an operable condition, the lock being durable, inexpensive to manufacture and highly efficient for the purposes for which it is designed.

I attain the above objects by a mechanical construction that will be hereinafter specifically described and then claimed, and reference will now be had to the drawing, wherein:—

Figure 1 is vertical sectional view of a portion of a milk can provided with the lock, Fig. 2 is an enlarged longitudinal sectional view of the lock, Fig. 3 is a horizontal sectional view of the same, Fig. 4 is a cross sectional view of a portion of the lock, and Fig. 5 is a perspective view of a key designed to manipulate the lock.

40 The reference numeral 1 denotes a portion of a milk can having a neck 2 with the upper edge thereof rolled or reamed, as at 3. The neck 2 is provided with two diametrically opposed openings 4, these openings being located intermediate the upper and lower ends of the neck 2.

5 denotes a mushroom lid provided with a depending collar 6 adapted to fit in the neck 2 of the can, said lid having a central vertical keyhole 7.

Soldered or otherwise mounted within the collar 6 of the lid 5, as at 8 is a transverse tube or cylindrical housing, 9 having the open ends thereof registering with the openings 4 of the neck 2. The tube 9 is provided with oppositely disposed longitudinal guides

10 and slidably mounted between said guides are two locking bolts 11 and 12, said bolts having the outer ends thereof beveled or toothed, as at 13 to easily ride into the openings 4. The confronting ends of the bolts 11 and 12 are cut away, as at 14 and provided with confronting racks 15. The end of the bolt 11 is provided with a stem 16 adapted to enter a longitudinal bore or socket 17 provided therefor in the bolt 12. Encircling the stem 16 is a coiled compression spring 18, one end of said spring engaging the end of the bolt 11 and the opposite end of the spring the bolt 12, the tension of said spring tending to normally force the bolts outwardly into the openings 4. The movement of the bolts 11 and 12 is limited by vertical pins 19 mounted in the tube 9, said pins extending through longitudinal slots 20 provided therefor in the bolts 11 and 12. Meshing with the racks 15 of the bolts 11 and 12 is a pinion 21, said pinion having a depending bearing 22 rotatably mounted in the bottom of the tube 9, as at 23. The upper side of the pinion has a socket member 24 extending upwardly into a vertical tube 25 soldered or otherwise connected to the top of the tube 9 intermediate the ends thereof, the tube 25 having the open end flanged inwardly or reamed, as at 26 to register with the keyhole 7 of the lid 5. The tube 25 is of a sufficient depth to accommodate superimposed rotatable blocks 27 serving functionally as tumblers, and these blocks are provided with longitudinal openings 28 adapted to longitudinally align with a socket 29 provided therefor in the member 24, said socket and the longitudinal openings 28 being rectangular in cross section. The blocks 27 and the socket 29 are adapted to accommodate the flat shank 30 of a key 31.

The pins 19 prevent the locking bolts 11 and 12 from shifting farther than illustrated in Fig. 1 of the drawing, and the ends of the bolts 11 and 12 are beveled in a direction that will permit of the lid 5 being easily placed upon the can. When the beveled ends of the bolts 11 and 12 contact with the upper edges of the neck 2, the bolts 11 and 12 are carried inwardly as the collar 6 is pushed into the neck 2. Immediately upon the tube 9 registering with the openings 4, the bolts 11 and 12 are forced outwardly into said openings by the coiled compression spring 18.

To retract the bolts 11 and 12 whereby the

lid can be removed, it is necessary that the key 31 be inserted in the keyhole 7 and into the openings 28 of the blocks 27 whereby the lower end of the key can enter the socket 29. By rotating the key, the pinion 21 can be revolved to retract the locking bolts 11 and 12.

The rotatable blocks 27 prevent the locking member from being tampered with to a certain extent and it is necessary that these blocks be shifted whereby the openings 28 will aline before the end of the key can be inserted in the socket 29.

The lock in its entirety is made of light and durable metal and the working parts thereof protected from the contents of the can.

What I claim is:—

A lock comprising a cylindrical housing, a vertically-disposed tube communicating with said housing approximately centrally thereof, oppositely-disposed guides within said housing, oppositely-disposed locking

bolts slidably-mounted between said guides and having the confronting ends thereof cut-away, the cut-away portions of said bolts being toothed to provide racks, a stem projecting from the inner end of one of said bolts and extending into the other of said bolts, a spring surrounding said stem and interposed between the inner ends of the bolts, means for limiting the inward and outward movement of said bolts, a rotatable pinion interposed between said bolts and meshing with said racks and having a depending bearing rotatably-mounted in said housing and adapted when operated to shift the bolt, tumblers mounted in said tube and provided with openings for the passage of a key to rotate said pinion.

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

HARRY MARKOVITZ.

Witnesses:

MAX H. SROLOVITZ,
CRISSY T. HOOD.