P. LARSEN, J. M. TURNEY & F. S. OAKES.

MILK CAN.

APPLICATION FILED DEC. 23, 1910.

997,836. Patented July 11, 1911.

FIG. 1.

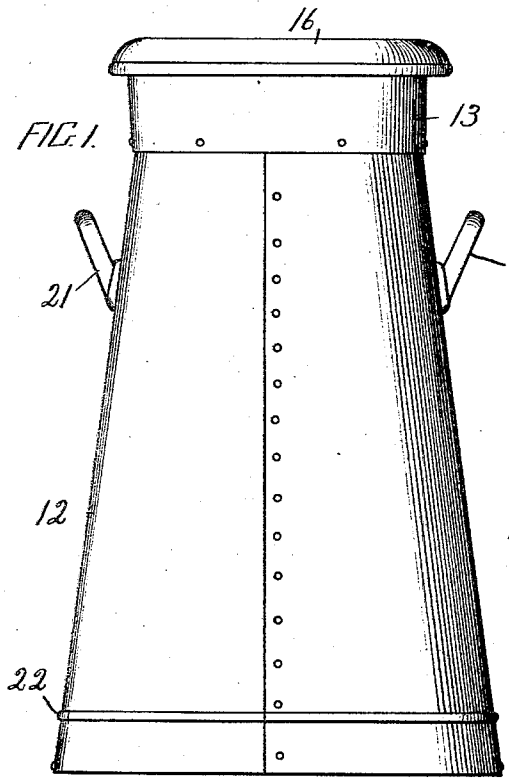


FIG. 2.

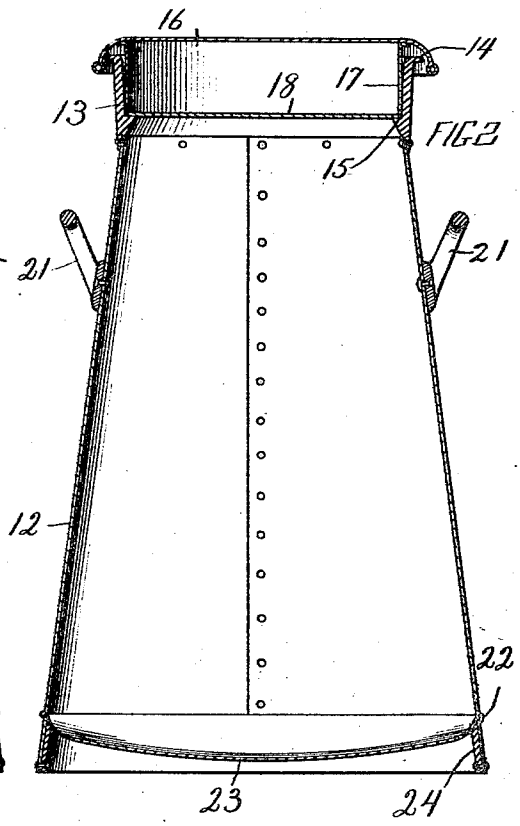


FIG. 3.

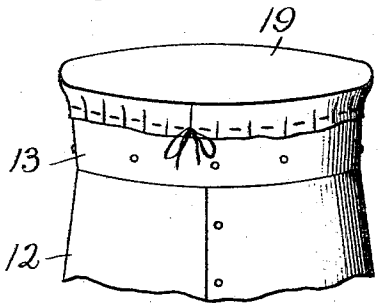
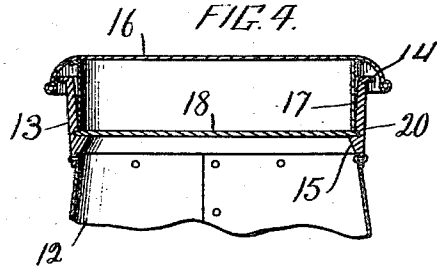


FIG. 4.



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UNITED STATES PATENT OFFICE.

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MILK-CAN.

997,836. Specification of Letters Patent. Patented July 11, 1911.

Application filed December 23, 1910. Serial No. 598,978.

To all whom it may concern:

Be it known that we, PETER LARSEN, JAMES M. TURNEY, and FRANK S. OAKES, citizens of the United States, residing at Cattaraugus, in the county of Cattaraugus and State of New York, have invented or discovered certain new and useful Improvements in Milk-Cans, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to cans for transporting milk, cream, and the like, and has for its object to produce a can of inexpensive construction, which may be readily cleaned, which may be tightly closed, and the entire interior of which may be visually inspected to determine whether or not it has been thoroughly cleaned.

To this end the invention comprises certain novel features as will hereinafter appear.

In the accompanying drawings Figure 1 is a side view of the improved can. Fig. 2 is a vertical section of the same. Fig. 3 is a perspective view of the top portion of the can illustrating a modified form of closure. Fig. 4 is a vertical sectional view of the top portion of the can illustrating a slightly modified construction.

Referring to the drawings, 12 denotes the body of the can which is of sheet metal (preferably tin-coated iron or steel) and which is tapered from its bottom to its top, so as to be of frusto-conical form. To the top of the said body is riveted or otherwise suitably attached what may be termed the neck 13 of the can, and which is preferably of malleabilized cast iron of suitable thickness, and preferably slightly upwardly flaring or downwardly tapering, with an outwardly projecting annular lip or flange 14 at its upper end. This malleable iron neck will preferably be tin-coated and being considerably thicker than the body part of the can will be strong and durable and will be so rigid that it will not be knocked out of shape by any rough handling to which it will be liable to be subjected.

At the top of the inwardly converging interior or upwardly tapering body portion of the can, and preferably located in the lower part of the neck 13, is an annular shelf 15 having an inwardly converging inner wall which is of a steeper angle than the inwardly converging wall of the body portion of the can. The top of said annular shelf serves, or may serve, as a stop or support for the cover or closure. The cover 16 of the can, which is, or may be, of any well-known or suitable form, but which will preferably comprise a flat top part with an outwardly and downwardly rounding peripheral portion, is provided with a depending flange 17 preferably cylindrical in form so as to present an annular vertical part fitting closely within the inner and slightly downwardly tapering wall of the neck 13. This cylindrical depending flange in the cover is of suitable size to fit properly within the downwardly tapering inner wall of the neck and which, in coöperation with the vertical or cylindrical outer wall of the said flange, will effect a wedging action when the cover is fitted to the can and the said depending flange is pressed downward within the neck thereof, so as to make a tight closure and securely retain the cover in place, owing to such wedging action, but permitting of an easy and ready removal of the cover when desired.

The upwardly tapering inner wall of the shelf 15 is within the flange 17 of the cover 16, so that liquid contained by the can and which may be splashed upward will be deflected inward away from the joint between the said depending flange 17 and the inner wall of the neck, thereby avoiding spilling the contents of the can in rough transportation. To insure an absolutely tight closure, however, a disk 18 of card-board or other suitable material and closely fitting within the lower portion of the downwardly tapering neck 13, is preferably interposed between the top of the shelf 15 and the lower edge of the depending flange 17 of the cover, said disk being frictionally held in place, and being also held down by said flange when the cover is on, as indicated in Fig. 2.

Instead of employing the metal cover 16 a can, provided with a tightly fitting disk 18, resting on the shelf 15, may be provided with a flexible cover 19 consisting of oil-cloth or similar material which will exclude dust and water and which is provided at its outer edge with a pucker-string by means of which it may be securely attached to the can with the pucker-string drawn in with

the outer edge of said cover beneath the outwardly projecting annular lip or flange 14 on the neck 13.

In transporting cream or milk in the shipping cans now generally in use more or less loss is liable to occur from the depredations of thievish persons who sometimes remove a quantity of cream or rich milk from a can and then fill up the can, to replace the loss, with water or milk. Sometimes the loss in quantity is not supplied, and there is then a shortage of the quantity which the can should contain. Of course under such circumstances a shipper cannot very well prove that the deteriorated or short contents of the can, as the same are found to be upon the arrival of the can at its destination, did not exist when the can was started on its travels; but by providing a can with a tightly fitting disk, as 18, which cannot be removed without being more or less mutilated, any tampering with the contents of the can by pilfering persons may thus readily be detected. If it be desired to render a disk 18 still more difficult to remove from the can, the neck of the latter may be provided with an interior groove 20, immediately above the shelf 15, as shown in Fig. 4, into which said disk may be forced or sprung in such a manner that it will be absolutely impossible to remove it without considerable mutilation.

In shipping cream in the cans now generally in use for such purpose considerable cream, which has been upwardly splashed in transportation, usually adheres to the inside faces of the covers of the cans, and as this adhering cream cannot be very easily removed more or less wastage is liable to result. But with the use of the detecting and closing disks 18 this trouble is avoided, as any cream adhering to the flat lower faces thereof may be readily scraped off, as will be understood.

The improved shipping can may be provided with handles 21 of any suitable construction and which may be either rigid, as shown in the drawings, or may be of the hinged or drop construction in common use, so that they will fall down by gravity. Where rigid handles are employed they should not project outward so far as not to be within a vertical plane extending from said handles to the base of the can, so that the cans may be packed as closely together in wagons or cars as their base areas permit.

The improved can is preferably constructed near its bottom with an outwardly projecting annular bead 22 the interior wall of which provides an annular groove receiving the peripheral edge portion of the concavo-convex sheet metal disk 23 forming the bottom of the can, and which is properly soldered in place to form a tight joint; the bottom of the can being strengthened by a metal ring 24 riveted to the bottom of the body of the can below the said bead. By springing the bottom of the disk forming the bottom of the can into the annular groove referred to a better and more secure joint is provided than would otherwise be the case.

From the foregoing it will be apparent that the improved upwardly tapering breastless can is of such construction that its entire interior may be visually inspected to ascertain whether or not it has been thoroughly cleaned, while its relatively wide mouth affords convenient access for the purpose of cleaning, thereby avoiding the objection, in this regard to cans having breast portions and relatively small necks which do not permit the entire interiors of the cans to be visually inspected, and which do not afford such convenient access for cleaning as is afforded by a can constructed in accordance with this invention. Moreover the closure of the present improved can is an absolutely secure one affording a tight seal; and, in case a closing disk is employed in coöperation with the flanged cover, pilfering and consequent loss of the contents of the can cannot be effected without detection. Also owing to its breastless shape the improved can may be more readily made in jacketed form, in case it be desired to make it in such form.

The malleable iron neck 13 will preferably, in practice, be cold-pressed by a suitable die so as to make it accurately circular and even, and thus adapt different covers to be interchangeably used with any cans. This cannot usually be done with cans having sheet metal necks, particularly when the necks are of large size; as it is difficult to make such necks accurately circular, and they are moreover liable to be battered or bent out of shape in use, while the strength of the cast-metal neck of the present improved can is sufficient to resist such injury. The interior shelf or annular rib 15, which is preferably formed integral with the neck 13, strengthens the said neck so as to increase its capacity to resist injury by rough handling, as will be obvious. This feature of providing a neck with an interior supporting and deflecting shelf or rib might be used in a sheet metal neck. Also the relatively thick cast-metal neck, either with or without the strengthening rib or shelf, might be used in a breasted can without departing from the present invention which is not to be understood as being limited to all of the details herein shown and described.

Having thus described our invention we claim and desire to secure by Letters Patent:—

1. A milk can comprising an upwardly tapering body portion of sheet metal sur-

mounted by a relatively thick downwardly tapering neck portion the base of which is of a diameter approximately equal to the top of the body portion of the can, combined with a cover provided with a depending cylindrical flange wedging tightly in the said downwardly tapering neck portion.

2. A milk can comprising an upwardly tapering body portion of sheet metal surmounted by a relatively thick, downwardly tapering neck portion the base of which is of a diameter approximately equal to the top of the body portion of the can, combined with a cover provided with a depending cylindrical flange wedging tightly in the said downwardly tapering neck portion, said can being provided near its top with an interior annular shelf having an inwardly and upwardly converging inner wall of a steeper angle than the inwardly and upwardly interior converging wall of the body of the can.

3. A milk can comprising an upwardly tapering body portion of sheet metal surmounted by a relatively thick, downwardly tapering neck portion the base of which is of a diameter approximately equal to the top of the body portion of the can, combined with a cover provided with a depending cylindrical flange wedging tightly in the said downwardly tapering neck portion, said can being provided near its top with an interior annular shelf having an inwardly and upwardly converging inner wall of a steeper angle than the inwardly and upwardly interior converging wall of the body of the can, and a tightly fitting disk resting on said shelf.

4. A milk can consisting of a frusto-conical body portion, a neck portion tapering downward internally and provided with an interior annular shelf, combined with a closing disk tightly fitting the lower or smaller part of said neck portion and resting on said shelf, and a cover fitted to said neck and having a depending flange above said disk, and which flange will wedge tightly in said downwardly tapering neck portion.

5. A milk can consisting of a frusto-conical body portion and an internal downwardly tapering neck portion provided with an interior annular shelf, combined with a closing disk tightly fitting the lower or smaller part of said neck portion and resting on said shelf, and a cover fitted to said neck.

6. A milk can comprising an upwardly tapering body portion of sheet metal and a relatively thick, downwardly tapering neck portion of cast metal attached to the top of the said body portion of the can, combined with a cover provided with a depending cylindrical flange wedging tightly in the said downwardly tapering neck portion.

7. A milk can comprising an upwardly tapering body portion of sheet metal and a relatively thick, downwardly tapering neck portion of cast metal attached to the top of the said body portion of the can, combined with a cover provided with a depending cylindrical flange wedging tightly in the said downwardly tapering neck portion, said can being provided near its top with an interior annular shelf having an inwardly and upwardly converging inner wall of a steeper angle than the interior inwardly and upwardly converging wall of the body of the can.

8. A milk can comprising an upwardly tapering body portion of sheet metal and a relatively thick, downwardly tapering neck portion of cast metal attached to the top of the said body portion of the can, combined with a cover provided with a depending cylindrical flange wedging tightly in the said downwardly tapering neck portion, said can being provided near its top with an interior annular shelf having an inwardly and upwardly converging inner wall of a steeper angle than the interior inwardly and upwardly converging wall of the body of the can, and a tightly fitting disk resting on said shelf.

In testimony whereof we affix our signatures, in presence of two witnesses.

PETER LARSEN.
JAMES M. TURNEY.
FRANK S. OAKES.

Witnesses.
EDITH C. SCHAFER,
LEE A. BABCOCK.