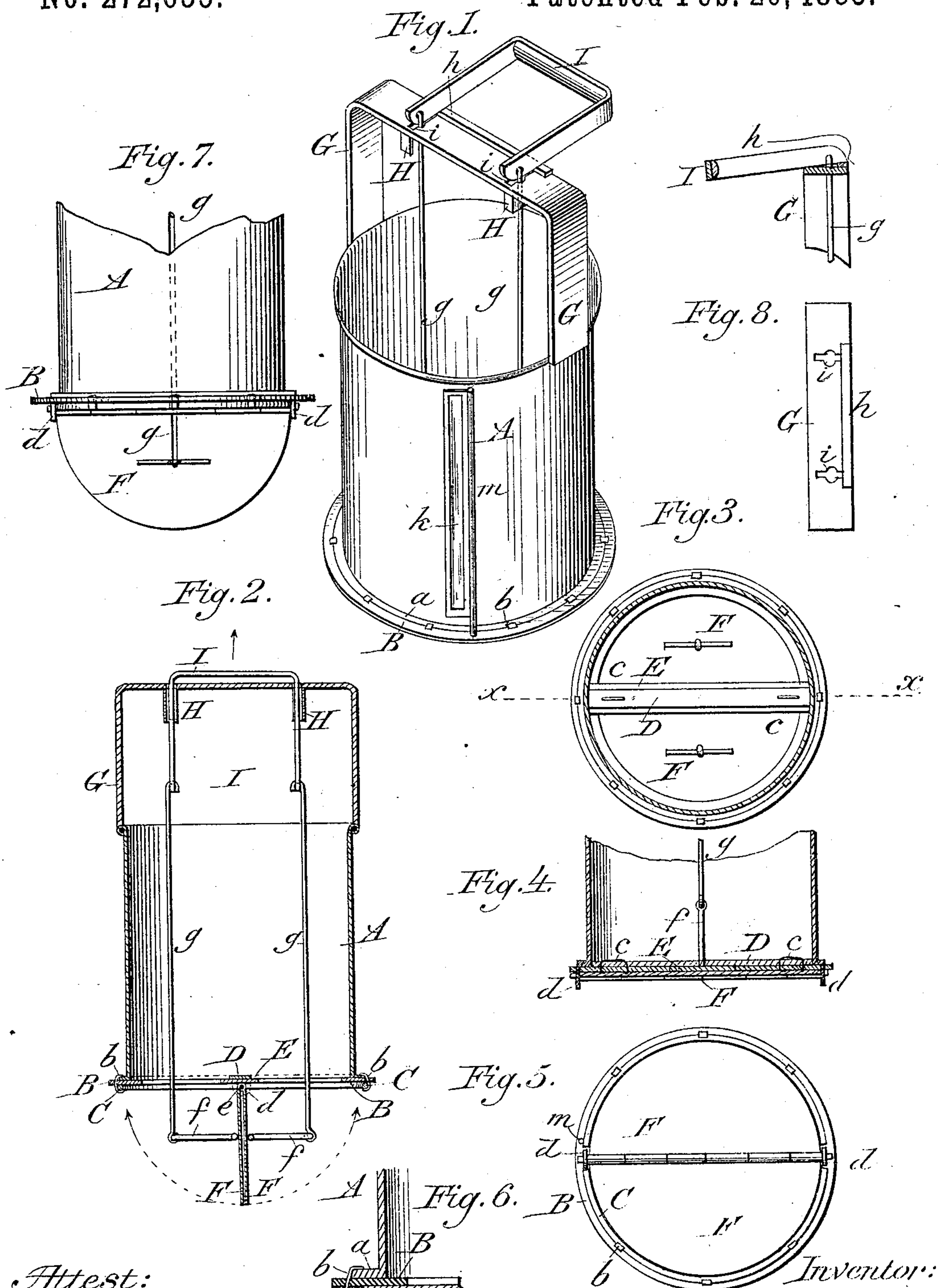


(No Model.)

W. COLDITZ.  
MILK SKIMMING DEVICE.

No. 272,655.

Patented Feb. 20, 1883.



Attest:

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# UNITED STATES PATENT OFFICE.

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## MILK-SKIMMING DEVICE.

SPECIFICATION forming part of Letters Patent No. 272,655, dated February 20, 1883.

Application filed November 7, 1882. (No model.)

*To all whom it may concern :*

Be it known that I, WILLIAM COLDITZ, a citizen of the United States, residing at Rochelle, in the county of Ogle and State of Illinois, have invented certain new and useful Improvements in Devices for Skimming Milk; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to devices for skimming or removing cream from the surface of milk in cans, coolers, and like vessels; and it consists of a cream-receptacle or skimming-vessel having a shape conforming to that of the milk-vessel into which it is capable of being dipped, and provided with a movable bottom, consisting of centrally-hinged flaps that are connected by means of jointed rods to an operating-handle; and, further, in certain details of construction, as hereinafter more fully set forth.

In the annexed drawings, illustrating the invention, Figure 1 is a perspective view of my improved skimming device. Fig. 2 is a sectional elevation, showing the hinged flaps lowered, so as to open the bottom of the vessel. Fig. 3 is a transverse section near the lower end of the vessel with the bottom closed. Fig. 4 is a section on the line *x x* of Fig. 3. Fig. 5 is a bottom view. Fig. 6 is a sectional detail. Fig. 7 is a partial side elevation of the skimming-vessel with the bottom open. Fig. 8 is a detail.

Like letters of reference are used to designate the same parts in the several views.

The skimming-vessel A, which is composed of tin or other suitable material, is preferably cylindrical in shape, and may be of such dimensions as will cause it to conform more readily to the ordinary cylindrical form of milk-setting vessels. If desired, however, a rectangular or other form may be employed. At the lower end of the vessel is a flange, *a*, provided with lugs *b*, that are passed through an annular strip, B, composed of rubber, cloth, or other elastic, pliable, or flexible material. These lugs *b b* are clunched around a binding-wire,

C, as shown in Fig. 6, the packing ring or strip B being thus held tightly against the flanged end of the vessel.

Instead of providing the flange *a* with lugs *b*, said lugs may be formed on the wire C and made to clinch over the flange, or the lugs and wire may be dispensed with and the packing ring be cemented to the flange or otherwise secured. The packing strip or ring B may be of any suitable width, preferably sufficient to project both outward and inward for some distance beyond the walls of the vessel.

D is a central transverse bar or cross-piece at the lower end of the vessel, and to the under side of which is attached a packing-strip, E, by means of fastenings *c c*, as shown in Figs. 3 and 4. At the ends of the bar D are lugs *d d*, that form seats or bearings for a rod or wire, *e*, to which are hinged a pair of flaps, F F, that have a semicircular shape, conforming, when closed, to the shape of the cylindrical vessel. These flaps are connected by jointed rods *f g* to a movable operating bail or handle, I, that is supported by a stationary handle or bail, G, of any suitable or ordinary construction. The lower portions, *f f*, of the jointed operating-rods are rigidly attached to the inner sides of the centrally-hinged flaps in any suitable manner, while the upper rods, *g g*, are loosely connected to the lower rods, *f f*, and to the ends of the movable bail I, which latter is passed through openings *i i* in the stationary bail G. On the under side of the stationary bail G are guides H H, in which the bail I moves when operating the hinged flaps.

It will be seen that by forcing the movable bail I downward through the openings in the stationary bail G and in the guides H H, the rods *f g* will be caused to lower the hinged flaps F F into the position shown in Figs. 2 and 7 when the skimming-vessel will be ready to be dipped into the milk-setting vessel. The skimming-vessel having been thus lowered to a point slightly below the cream-line, the bail I may be raised so as to close the flaps F F, and thus confine the cream within the skimming-vessel.

In order to lock the movable bail in its raised position, and thus hold the flaps F F tightly against the bottom of the vessel, so as to prevent the escape of its contents, a ridge or bar, *h*, is formed on the upper portion of the sta-



tionary bail G at or near one edge, as shown in Figs. 1 and 8. The bail I, when raised, may be thrown to one side, so that its ends below the point of connection with the rods *g g* will rest on the bar *h*, as shown in Fig. 8, thus securely locking the parts and preventing the bottom of the vessel from falling open when the vessel is removed and carried by means of the stationary bail.

10 Instead of the bar *h*, other suitable locking devices may be used, or the rods *g g* may be locked by means of the openings *i i*, through which the bail I moves. These openings, as shown in Figs. 1 and 8, are elongated in form, with a central enlarged portion, through which the rods *g g* readily pass; but when said rods, after being raised, are moved into either end of the slot or opening *i*, their enlarged or bent ends, by which they are connected to the bail I, will be sufficient to hold them in a raised position without slipping.

In one side of the vessel A is a transparent panel, *k*, through which the contents of the vessel may be seen and measured. A vertical vent-tube, *m*, is arranged on the outer side of the vessel at any desired point, and extends downward from near the top and through the packing-ring B, so as to permit the escape of air and facilitate the removal of cream.

30 The operation of the skimmer will be readily understood. When the hinged flaps FF, forming the bottom of the vessel, are lowered or opened, as before described, the skimmer may be lowered into the milk-setting can, and will present such little surface as to hardly disturb the cream through which it is passed. In the downward passage of the vessel the projecting edge of the packing-ring B will scrape the inside of the milk-can and effectually disengage the cream therefrom. After having been lowered beneath the cream-line the movable bail will be raised so as to close the bottom of the vessel, thus inclosing the entire body of cream, together with a small quantity of milk, sufficient to facilitate churning. The movable bail having been securely locked, as before explained, the skimming-vessel may be removed by means of the stationary bail, and

being held over a suitable receptacle, the cream may be emptied therein by simply unlocking and depressing the movable bail, which brings the hinged flaps or movable bottom into proper position for permitting the skimmer to be passed into another milk-setting vessel.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a skimming device, the combination of an open-ended cylindrical vessel or similar vessel of other suitable form, a bottom therefor, composed of hinged flaps, a movable bail, and jointed rods connecting said bail and bottom, substantially as described.

2. The combination of the cylindrical body or vessel A, having flange *a*, cross-piece D, and stationary bail G, the packing-ring B, packing-strip E, centrally-hinged flaps FF, movable bail I, and the jointed connecting-rods *f g*, substantially as shown and described.

3. The combination of the vessel A, centrally-hinged flaps FF, stationary bail G, having openings *i i* and bars or ridge *h*, the movable bail I, and the connecting-rods *f g*, substantially as shown and described.

4. In a skimming device, the combination, with the vessel A, having a movable bottom, of the vent-tube *m*, substantially as shown and described.

5. A skimming device consisting of a cylindrical body, having a bottom composed of hinged flaps or sections, a transparent panel and a vertical vent-tube at the side of the vessel, a stationary bail at the upper end, a movable bail supported in said stationary bail and adapted to be locked in a raised position, and jointed rods connecting the movable bail with the hinged flaps at the bottom of the vessel, whereby said flaps may be opened and closed and be securely locked, substantially as described.

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

WILLIAM COLDITZ.

Witnesses:

LINCOLN COLDITZ,  
W. F. CLARK.