

(Model.)

J. M. BAKER.  
MILK SKIMMING APPARATUS.

No. 261,124.

Patented July 18, 1882.

Fig. 5.

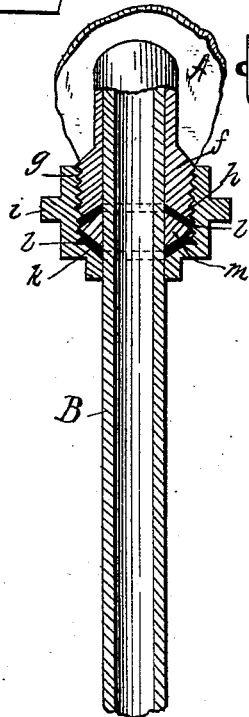


Fig. 1.

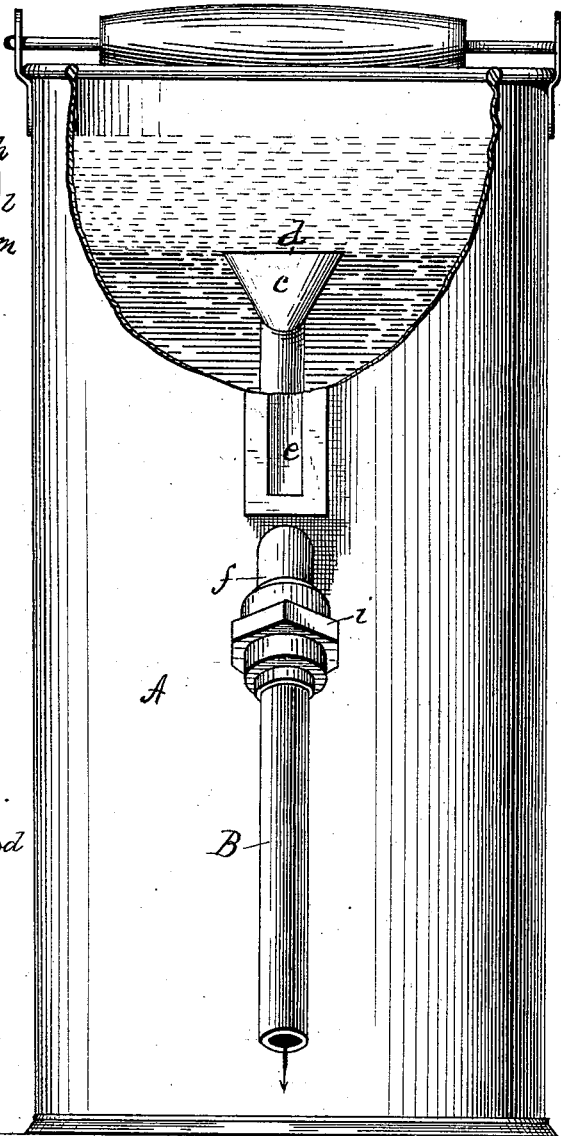


Fig. 3.

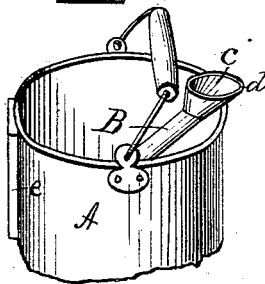


Fig. 4.

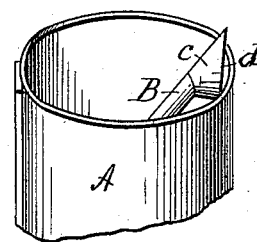
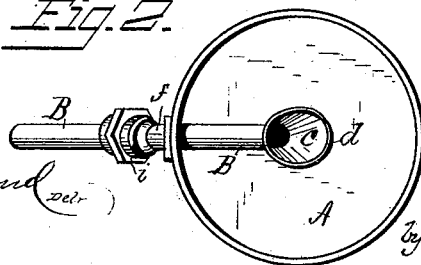


Fig. 2.



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# UNITED STATES PATENT OFFICE.

JAMES M. BAKER, OF AURORA, ILLINOIS.

## MILK-SKIMMING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 261,124, dated July 18, 1882.

Application filed April 6, 1882. (Model.)

*To all whom it may concern:*

Be it known that I, JAMES MADISON BAKER, of the city of Aurora, in the county of Kane and State of Illinois, have invented certain new and useful Improvements in Milk-Skimming Apparatus; and I do hereby declare that the following is a full, clear, and exact description of the invention, which 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 letters of reference marked thereon, which form a part of this specification.

The object of my invention is not only to rapidly and effectively draw the cream off from the milk, but also so to construct and apply the skimming-tube or cream-and-milk-separating device to the can that it may be easily removed therefrom to be cleansed and easily replaced, and that when in place it shall stand at an angle to the can, so that by being properly turned upon its axial line its receiving-mouth will be in such position that milk being poured into the can will not enter the tube, and being turned to another position and adjusted or lowered in an inclined direction the receiving-mouth may be ready to receive the cream at the cream-line and cause its discharge from the can.

Figure 1 is an elevation of a can with my improvements applied thereto, a part of the can being broken away and the mouth of the tube lowered to the cream-line. Fig. 2 is a plan view on a reduced scale, showing the flaring mouth of the tube at the center of the can. Fig. 3 shows the tube raised and turned to a position to be withdrawn or removed from the can. Fig. 4 shows the tube with its funnel-mouth in the position desired when the milk is to be poured into the can, and Fig. 5 a detail of the pipe and its connections.

A is a can, which may be of any desired size or form, and having in its side a transparent pane, through which the depth of cream raised upon the milk may be readily ascertained by inspection.

B is a rigid skimming-tube, inserted through the side of the can at an angle of about forty-five (45) degrees to its sides, the tube being adapted to slide readily in a water-tight stuffing box or coupling to permit its funnel-mouth *c* to be raised to any desired height to permit

the tube to be turned on its axis, and also to allow of its being readily withdrawn from the can to be cleaned, &c. This tube is a simple straight tube having at its upper or cream-receiving end a flaring funnel-mouth, *c*, the top line, *d*, of which is made at about an angle of forty-five degrees with the axis of the tube, and whereby when the tube is inserted in the side of the can, as shown, with the flaring mouth *c* inside of the can and at a proper height therein, and the milk is about to be poured into the can, the tube may be turned in its bearing or support so as to bring the top line, *d*, into a vertical instead of a horizontal position, and thus prevent the inpouring milk from accidentally entering the mouth of the tube, the mouth acting as a deflector; but when the cream shall have been raised and its height upon the milk ascertained by inspection through the pane *e*, and it is ready to be separated and drawn off from the surface of the milk beneath it, the tube is turned in its bearings and line *d* of the funnel brought to a horizontal position, and then the tube is drawn or pushed downward until such line *d* reaches and coincides substantially with what is called the "cream-line"—that is, the line of separation between the bottom of the cream and the top of the milk—and so that the cream may automatically discharge itself by its own gravity through the tube into any appropriate vessel placed outside the can, leaving all the skimmed milk within the can, and which may either be then poured out at the top or discharged at or near the bottom of the can by any suitable outlet or faucet. It will be seen that the sliding tube may be set with the greatest ease and nicety, and if found to be adjusted a little too high at first can instantly be lowered again to discharge any balance of cream found remaining.

Another advantage in my construction, as distinguished from cans having a vertical tube or tubes located near the inner wall of the can, is that the receiving-mouth *c* may be located nearer to the center of the can, (dependent upon the quantity of milk therein,) and therefore it draws the cream more uniformly from all points, thus facilitating a more complete discharge. By passing the tube through the side of the can instead of through its bottom, I also avoid the need of having legs or some elevating-sup-

port beneath the can, and my device can be easily and cheaply applied to any cans now in use. I prefer to insert the tube through the can at such a distance from its top that the same may be withdrawn, funnel end first, without any obstruction.

The bearing, stuffing-box, or socket through which the tube slides may be made close and water-tight in many ways. I have, however, devised the following, which I find very efficient: The inclined socket or bearing *f* has an exterior thread, *g*, and an interior countersink or bevel, *h*, as shown. The interiorly-threaded cap or union-coupling *i* has also an interior bevel, *k*, each of these bevels having an annular packing-piece, *l*, of leather or other appropriate material; and *m* is a ring beveled, as shown, at both sides correspondingly with the bevels *i* and *k*. The ring *m* is first placed within the cap *i* against the annular packing placed on the bevel *k*. The other packing, *l*, is then placed either on the bevel *h* or on the other bevel of ring *m*, and the cap or coupling *i* is then screwed to place upon the bearing-tube *f*, tight enough to properly compress the packings and make a good tight fit for the sliding tube, which may be inserted either before or after the packing devices have been put together. A slight turn of the coupling *i* will at any time make the joint close, if needed.

The leather packings, it will be observed, form two conical or funnel-shaped pieces flaring in opposite directions, and the double bevels of ring *m*, upon tightening the screw, crowd

the packings in opposite directions, and press them toward a common center and around the tube, and yet they allow the tube to be drawn up or down without causing a leak, and also to be entirely drawn out of the coupling without disturbing the packings.

The tube and coupling may be made of tin, copper, brass, cast-iron, or composition metal.

A single packing-piece *l* may be used; but by placing one on each side of the ring *m* the tube, when slid, draws both ways alike on the packing.

The discharging-mouth of the tube may, if desired, be closed at times by any suitable device.

I claim—

1. A rigid skimming-tube inserted at an angle of about forty-five degrees through the side of the milk-can, and adapted to be adjusted lengthwise therein, and to be readily withdrawn therefrom, substantially as shown and described.

2. In combination with a can, the inclined skimming-tube B, made with the flaring mouth *c*, having its top line, *d*, at an angle to its length, as described, and whereby such line may be brought into a horizontal or a vertical position, as desired, by turning the tube in its bearing or support.

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Witnesses:

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