

J. F. HAWKINS.
Milk-Coolers.

No. 140,919.

Patented July 15, 1873.

Fig. 1.

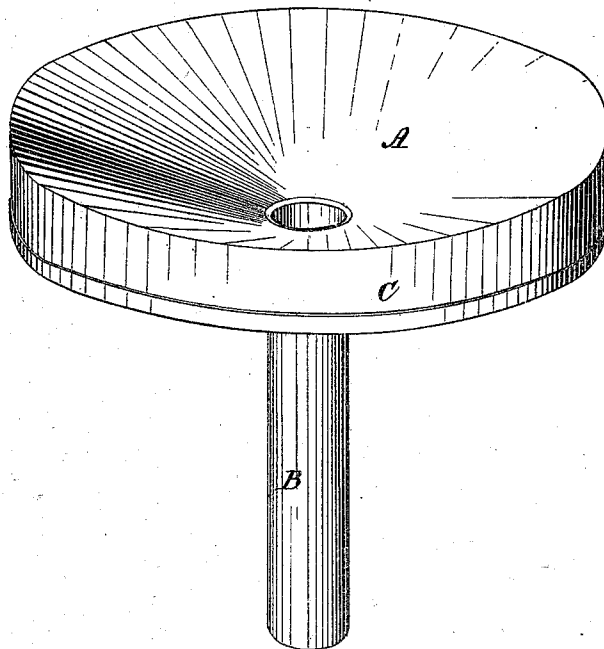
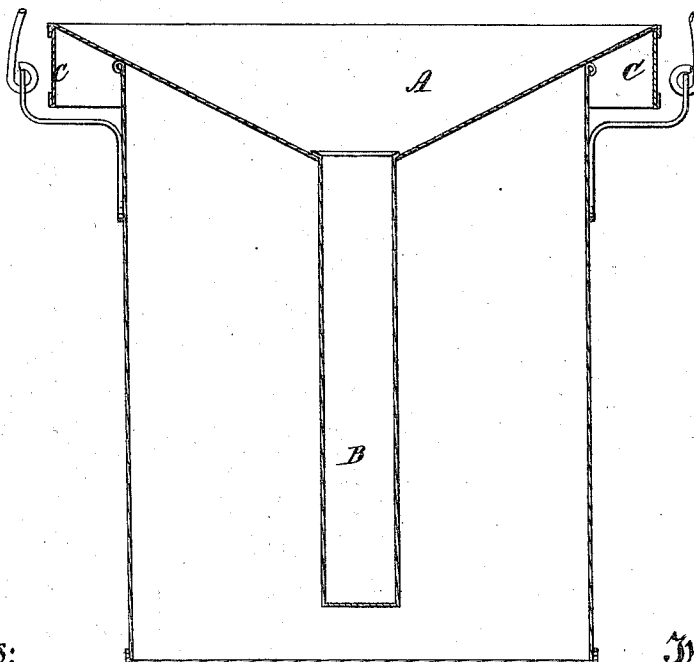


Fig. 2.



Witnesses:
West Wagner,
J. M. Pool

Inventor:
Jameson F. Hawkins.
By Johnson, Maudsley & Co.,
his Attorneys.

UNITED STATES PATENT OFFICE.

JAMESON F. HAWKINS, OF HANNIBAL, MISSOURI.

IMPROVEMENT IN MILK-COOLERS.

Specification forming part of Letters Patent No. **140,919**, dated July 15, 1873; application filed April 22, 1873.

To all whom it may concern:

Be it known that I, JAMESON F. HAWKINS, of Hannibal, in the county of Marion and State of Missouri, have invented a new and useful Improvement in Milk-Coolers, of which the following is a specification:

My invention relates to cans or vessels for cooling milk; and the improvement which I have made therein consists of a can top or cover having a funnel-shape or concave surface to hold the ice and water, and project within and below the top of the can to afford a varying increased cooling top surface; a central vertical tube, and a water-shed or guard, the combination of which in a top and with a can serves to form a complete cooling device, adaptable for cans of different diameters, to shed the water and keep it from entering the can, so that the top may be filled with ice or placed beneath a running stream, and requires no attention whatever, thereby making a highly-convenient, useful, and cheap cooler and market-vessel, as shown in perspective view, Figure 1, of the conical cover, and the section, Fig. 2, as applied to a can.

The milk-receiver may be an ordinary tin, wooden, or earthenware vessel, and the tin cover may or may not fit closely the vessel, as the peculiar construction of the cover adapts itself to vessels of diminishing diameters. The cover is complete in itself, combining, as it does, the functions of a cap, a water or ice holder, a varying top cooling-surface, and a central radiating-surface, so that whether it fits the top of the vessel or not the interior conical projecting cover will always form a seat upon the top of the vessel, as shown in Fig. 2.

The top surface A of the cover is conical or funnel-shaped for two purposes—to form a receptacle for the ice or water, and an inclined surface within the vessel to give the greatest

cooling-surface to the varying heights of the milk, which produces a rapid circulation, as the top surface, by being cooled, has its specific gravity increased, thereby descending, is re-supplied by a warmer ascending strand, and so on until the whole mass is reduced to a uniform temperature. In connection with the funnel-shaped cooling-top a central tube, B, closed at the lower end, extends therefrom into the vessel, thereby dividing the diameter of the vessel and increasing the radiating-surface, and at the same time placing the coldest temperature, by its central position, furthest from the external heat. The conical cap has a water-shed or guard, C, to keep the water flowing over and from the open conical surface from passing into the vessel, and whether it fits the sides of the vessel or not its function in this respect is always a safeguard, for when the cone itself rests upon the vessel the guard overhangs it, and will shed the water entirely, so that it may flow over from a running stream or large masses of melting ice, and in this particular it needs no attention. The concave receptacle needs no fixed cover, and constitutes a basin, over which a blanket may be thrown if necessary.

Having described my invention, I claim—

A milk-cooling-vessel cover, having an inclined varying cooling-surface, A, within the vessel, a vertical central tube attachment, B, and a circumferential water-shed or guard, C, and adaptable to vessels of varying lesser diameters, as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses this 21st day of April, 1873.

JAMESON F. HAWKINS.

Witnesses:

A. E. H. JOHNSON,
J. W. HAMILTON JOHNSON.

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