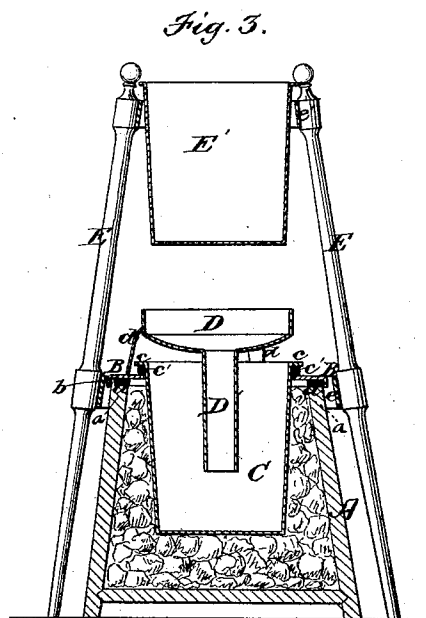
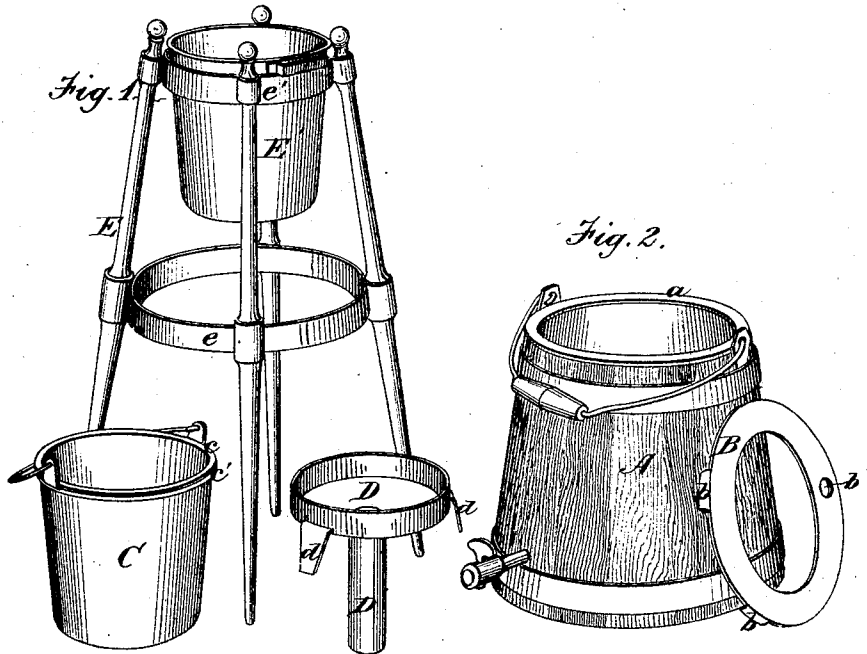


S. SPENCER.
Milk-Coolers.

No. 135,169.

Patented Jan. 21, 1873.



Witnesses—
A. T. Brown
Melville Leitch.

Inventor.
Smith Spencer
by his Attys.
Hill & Ellsworth.

UNITED STATES PATENT OFFICE.

SMITH SPENCER, OF Kiantone, NEW YORK.

IMPROVEMENT IN MILK-COOLERS.

Specification forming part of Letters Patent No. 135,169, dated January 21, 1873.

To all whom it may concern:

Be it known that I, SMITH SPENCER, of Kiantone, in the county of Chautauqua and State of New York, have invented a new and useful Improved Milk-Cooler; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 includes separate perspective views of the frame, pail, can, and tunnel. Fig. 2 includes separate perspective views of the bucket and flanged rings, and Fig. 3 is a transverse vertical section of all these parts properly put together.

Similar letters of reference in the accompanying drawing indicate the same parts.

This invention has for its object to improve the construction of milk-coolers in such manner, first, that an air-tight vessel may be formed for refrigerating purposes; second, that it may be cooled and aired during the process of pouring it into the receiving-can; and, third, to facilitate the straining operation. To this end the invention consists, first, in combining an outer bucket with an inner receiving-can in such manner as to form an air-tight space between the bucket and can; second, in combining a tunnel with said bucket and can in such manner as to cause the milk while being poured into the can to pass first to the bottom, and then rise to the top; and, third, in combining a straining-pail set in a frame with said bucket and can, all which I will now proceed to describe.

In the drawing, A is the bucket aforesaid, the same being of ordinary construction, and having a packing, *a*, of soft odorless rubber, attached to its top, in which is placed a metal ring, B, having flanges *b*, by which it is kept on the pail. This ring projects a suitable distance within the bucket and supports a can, C, which extends down into the bucket and has flange *c* projecting outward from its top, beneath which, and encircling the can, is a packing, *c'*. The bucket, ring, can, and packing together form an air-tight space inside the bucket, which may be filled with ice or cold water so as to make a refrigerating-chamber,

or with warm water so as to make a heating-chamber. D is the tunnel having legs *d*, which rest on the ring B and hold the tunnel at a suitable distance above the can for the admission of air. The tube D' of the tunnel extends nearly to the bottom of the can. E is a frame, which may be placed over the bucket and can, and has a ring, *e*, which surrounds the bucket and a ring, *e'*, which supports the straining-pail E'.

Milk strained through the pail falls whatever distance the pail may be placed above the can, and, entering the tunnel, passes first to the cold bottom of the can, and thence rises to the top, thereby cooling and airing the milk.

On moving the frame and tunnel, and covering the can, the bucket and can may be used for carrying milk to market or the factory and for other refrigerative purposes. In this case a wooden cover is placed on the can and held down by means of loops fastened to the bucket, a bar of wood passing over the cover and through these loops. A thumb-screw placed in the middle of this bar and turned down on the cover makes the can air-tight.

There is a hole, *b*, in the ring B to receive a tunnel for filling the bucket with warm or cold water, and to allow of the insertion of a cylindrical thermometer for the testing the temperature of the water.

Having thus described my invention, what I claim is—

1. The combination of the bucket A, flanged ring B, can C, and packings *a c'*, all arranged as described.

2. The combination of the bucket A, flanged ring B, can C, and packings *a c'* with the tunnel D having legs *d*, all arranged as specified.

3. The combination of the bucket A, flanged ring B, can C, packings *a c'*, and tunnel D with the frame E and strainer-pail E', all arranged as set forth.

SMITH SPENCER.

Witnesses:

F. H. JONES,
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