

(No Model.)

B. C. RICHARDSON.

MILK COOLER.

No. 286,331.

Patented Oct. 9, 1883.

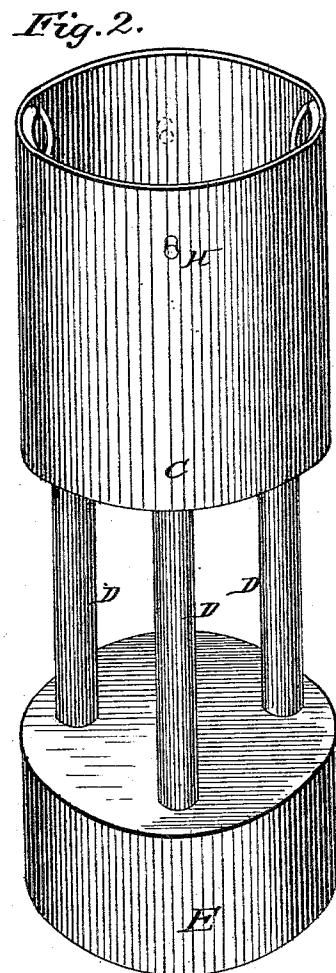
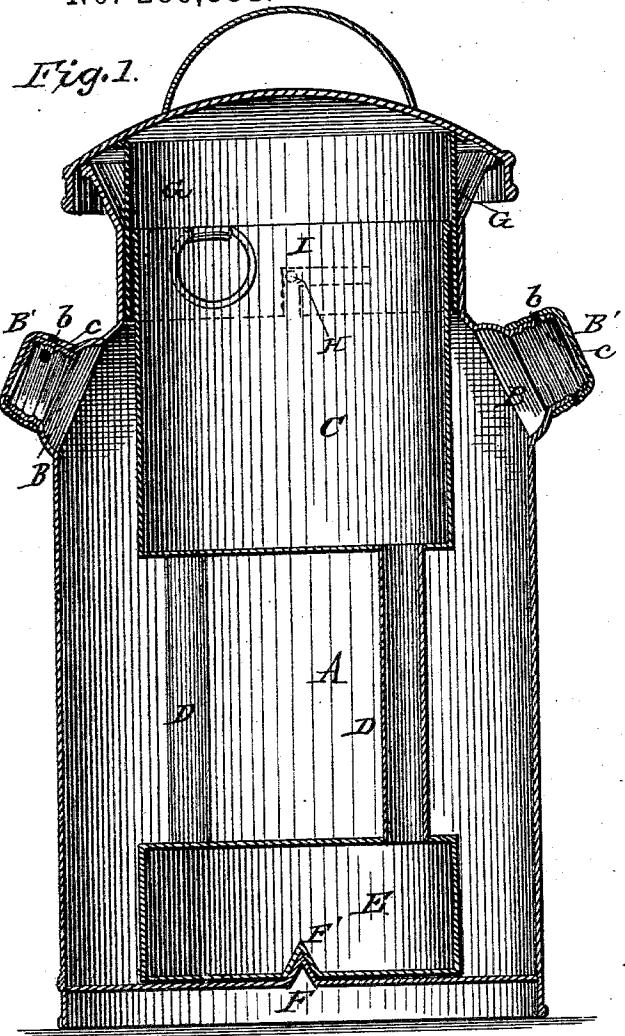
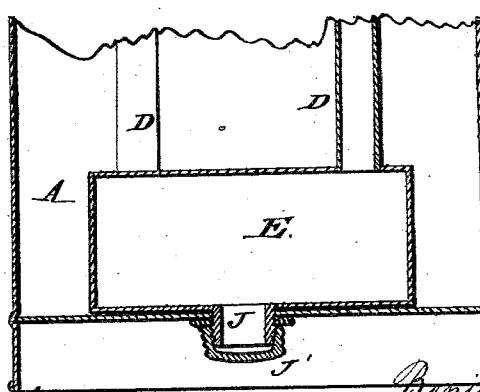


Fig. 3.



WITNESSES:

David G. Dieterich  
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# UNITED STATES PATENT OFFICE.

BENJAMIN C. RICHARDSON, OF DETROIT, MICHIGAN.

## MILK-COOLER.

SPECIFICATION forming part of Letters Patent No. 286,331, dated October 9, 1883.

Application filed May 23, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, BENJAMIN C. RICHARDSON, of Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Milk-Coolers; 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, which form a part of this specification, and in which—

Figure 1 is a vertical section of my improved creaming-can. Fig. 2 is a perspective view of the refrigerating attachment removed from the milk-can, and Fig. 3 is a vertical section of a modification of my invention.

Similar letters of reference indicate corresponding parts in all the figures.

20 My invention has relation to that class of milk-coolers in which the ice-receptacle is placed inside of the milk-can; and it consists in the improved construction and combination of parts of the same, as hereinafter more fully described and claimed.

25 In the accompanying drawings, A represents the body of the milk-can, inside of which the refrigerating attachment is placed. The can is provided at its upper part, near the neck, with two or more air-tubes, B B, for allowing the animal heat and gases arising from the milk to escape from the can, the outer ends of the air-tubes being covered by screw-threaded caps B'. A number of holes (shown 30 at b) are pierced through the sides of the screw-caps and the sides of the air-tubes, so that by turning the screw-threaded caps until the holes b in the caps and the holes c in the air-tubes register the animal heat and gases arising from the milk may escape from the can without removing the caps entirely from the air-tubes.

35 C is the ice-chamber of the removable cooling attachment, and is connected by three or more tubes, D D D, to the drip-pan E. As the ice in the chamber C gradually melts, the water runs down through the tubes D into the drip-pan E, where it is collected. By this arrangement I keep the ice dry, so that it will 40 last twice as long as it would if the water were allowed to remain in the same chamber with the ice. By constructing the cooling attach-

ment in the manner described, I succeed in cooling the milk in an exceedingly short period of time. A cone-shaped stud, F, is attached to the inner surface of the bottom of the milk-can, and fits into a conical recess, F', in the bottom of the drip-pan, thereby holding the lower part of the cooling attachment firmly in position. The cover of the milk-can has an annular metal strip or flange, G, soldered or otherwise fastened to the inner surface of the cover, so that when the cover is placed upon the can the annular strip or flange G will fit tightly between the outer 55 surface of the ice-chamber and the neck of the can, which arrangement, together with the cone-shaped stud F, fitting into the conical recess in the bottom of the drip-pan, will serve to hold the cooling attachment firmly in 60 position and prevent any displacement of the said cooler when the can is being roughly handled. On the outside of the ice-chamber, near its top, are two lugs or projecting pins, H H, adapted to fit into slots I I in the annular strip G. When it is desired to remove the cooling attachment from the can, the cover is turned or rotated to the left, when the lugs or projecting pins H H will enter the slots I I in the annular strip G, when the cooling attachment can be lifted out of the can by the 65 handle of the cover.

If desired, a small tube, J, may be inserted into the bottom of the drip-pan, the free end of the said tube passing through an opening 70 in the bottom of the can, said opening being provided with a washer of suitable material, in order to make the opening water-tight when the tube J is passed through it. The free end of the tube J is closed by a screw-threaded 75 cap, J', so that by removing the said cap the water in the drip-pan can be drawn off without removing the cooling attachment from the pan. The above construction is clearly illustrated in Fig. 3 of the drawings. When the 80 tube J is used with my improved milk-cooler, the lower rim of the can, on which the weight of the can rests, is made of a sufficient depth to keep the screw-cap on the tube from coming in contact with the ground.

85 From the foregoing description, taken in connection with the accompanying drawings, the construction of my improved milk-cooler will readily be understood without requiring

extended explanation. It will be seen that my improved milk-cooler is simple in construction, and is very convenient to handle in removing the water from the cooler.

5 Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

In a milk-cooler, the combination of the receptacle A, provided with suitably-constructed 10 vent-tubes and caps covering the same, conical stud or projection F, located centrally in the bottom of the can, removable refrigerating attachment composed of the ice-receptacle C, drain-tubes D, and closed drip-pan E, having

conical recess F', adapted to fit the stud F, 15 and cover having a downwardly-projecting flange, G, adapted to fit between the outside of the ice-receptacle and the neck of the can, the whole constructed and combined substantially as and for the purpose shown and described. 20

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

BENJAMIN CLARK RICHARDSON.

Witnesses:

JOHN C. GOODRICH,  
JOSEPH P. GOODRICH.