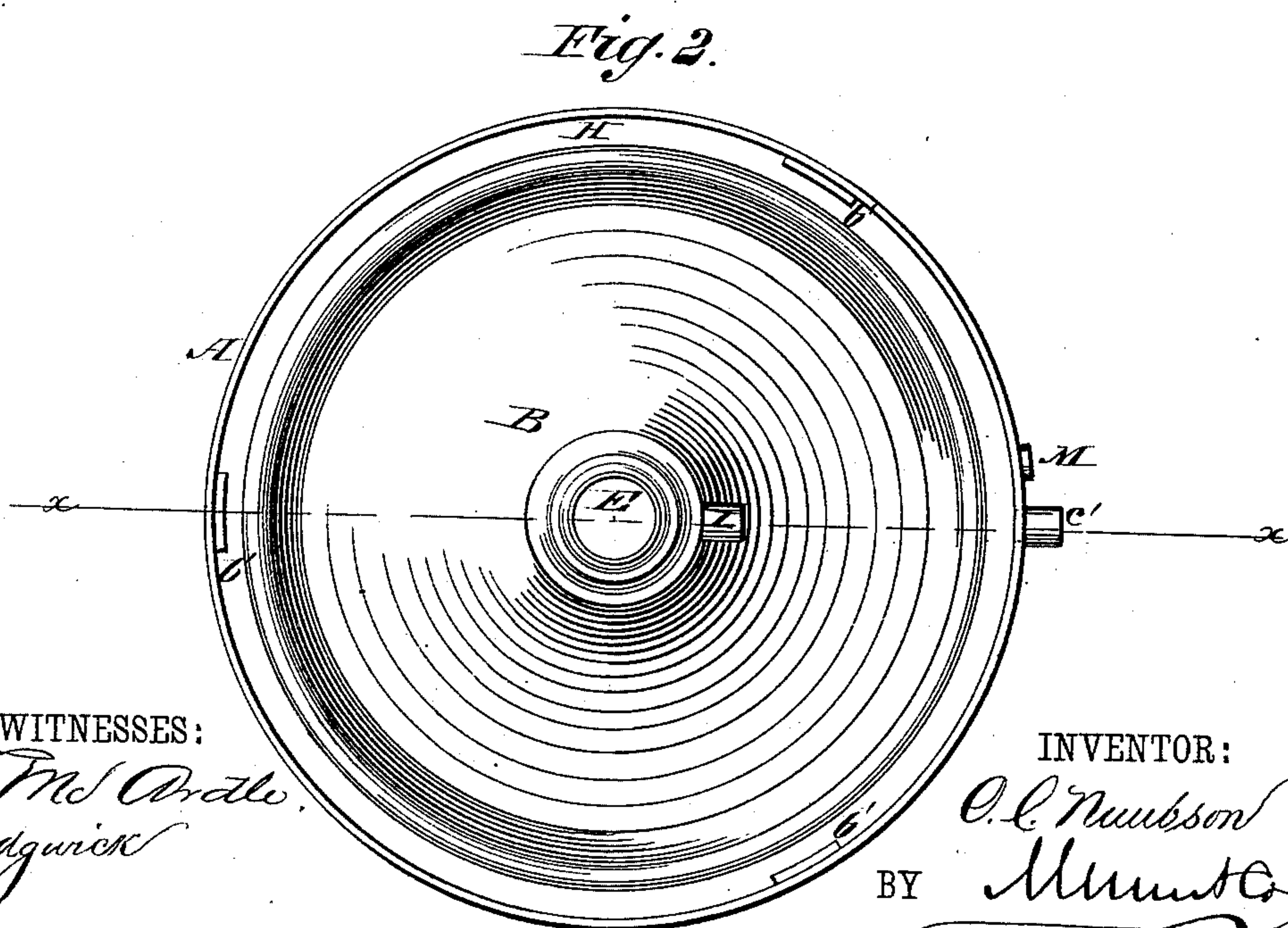
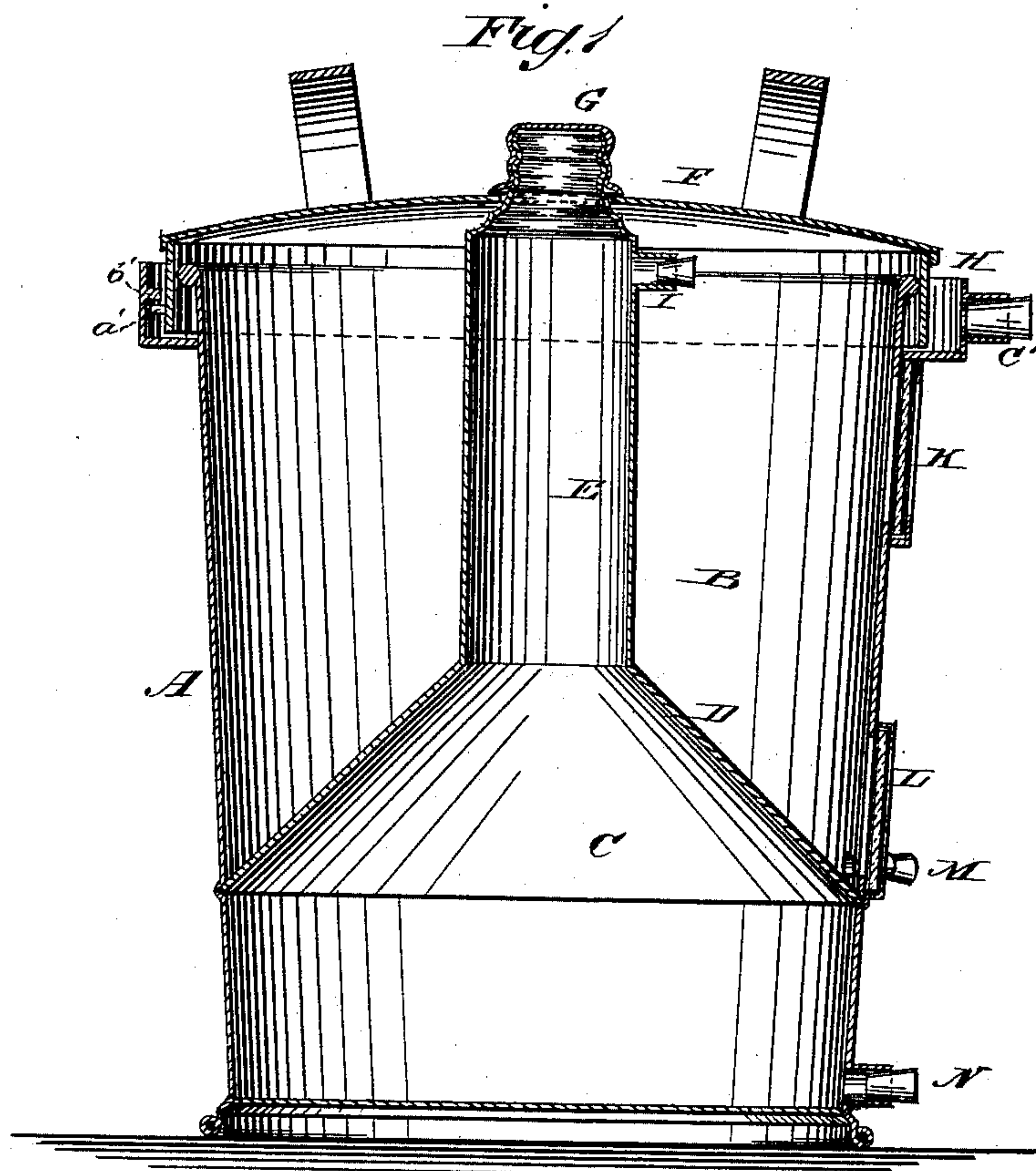


O. C. NUUBSON.  
Milk-Cooler.

No. 223,162.

Patented Dec. 30, 1879.



WITNESSES:

*J. M. Apple*  
*C. Sedgwick*

INVENTOR:

*O. C. Nuubson*

BY

*Munroe*

ATTORNEYS.



# UNITED STATES PATENT OFFICE.

OLE C. NUUBSON, OF MOUNT HOREB, WISCONSIN.

## IMPROVEMENT IN MILK-COOLERS.

Specification forming part of Letters Patent No. **223,162**, dated December 30, 1878; application filed May 26, 1879.

*To all whom it may concern:*

Be it known that I, OLE C. NUUBSON, of Mount Horeb, in the county of Dane and State of Wisconsin, have invented a new and Improved Milk-Cooler, of which the following is a specification.

Figure 1 is a sectional elevation of the cooler on line *xx*, Fig. 2. Fig. 2 is a plan of the same with the cover removed.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish a more efficient device than any now in use for cooling and preserving milk, and for raising cream.

The invention consists in a milk-cooler with trough, gages, and faucets, and divided into separate chambers by a diaphragm whose central tube extends through the cover.

A represents a can tapering from top to bottom, which is divided into two chambers or receivers, B and C, respectively, by the conical diaphragm D and its vertical tubular prolongation E. The receiver B is designed to hold milk, and the receiver C to hold water or ice, or both, for cooling the milk.

The tube E extends upward, so as to project through a hole made in the center of the cover F, and near its top it is contracted in diameter, so that a shoulder is formed, upon which the central part of the cover rests. A cap, G, screws on the projecting tube above the cover, and serves the double purpose of closing the tube and assisting in securing the cover in place. The cover shuts down on the outside of the can into the encircling rim H, into which water or other liquid is to be placed to seal the joint and prevent access of air to the interior of the can. When the cover is down it is tightly secured by turning it, so that its pins *a' a'* shall engage under the shoulders *b' b'* of the rim. Whenever desired, the liquid contained within the rim may be run out through hole C', which is otherwise closed with a plug.

Near its top the tube E is tapped by a short tube, I, by which a connection is established between the chambers B and the outer air when the cover F and cap G are removed from the tube E. By this means the vapors that may arise from the milk when cooling are enabled to pass out of the can.

A strip of clear glass or mica set in a side of the chamber B is termed the "cream-gage," K, and enables one to observe through it the depth of cream formed on the milk. A like strip, L, set lower in the side of the same chamber, enables one to see how to regulate the drawing off the milk through the faucet M.

N is the faucet for drawing off the cooling-water from chamber C.

When the chamber B is filled with milk and chamber C and tube E with cooling-water a great extent of cooling-surface is presented to the milk to reduce its temperature, and, as this cooling-surface is central to the body of milk, the cooling or refrigerating process is much more rapid than if the cooling-surface were outside the body of milk; hence the cooling process can be conducted in much less time and with the use of less water or ice than is possible by the methods now practiced.

The water-seal for the cover obviates the use of rubber or other packing for the joint, and is cleaner and much more effective than are any of them.

The water or other refrigerating-liquid is introduced into chamber C through the tube E when the cap is removed.

The can may be thoroughly ventilated at any time by removing the cover and cap and withdrawing the plugs from the faucets M and N.

Being so thoroughly sealed, and having such effective cooling arrangements, the can does not require any special place of deposit for the preservation of the milk. Neither cellar nor tank is needed, for if placed anywhere in the shade it will keep its contents sweet, even in warm weather.

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

The within-described milk-cooler, consisting of a can, A, tapering from top to bottom, and divided into two chambers by diaphragm D and tube E, and provided with cover F, cap G, rim H, tube I, gages K and L, and faucets M and N, substantially as herein shown and described.

OLE C. NUUBSON.

Witnesses:

ALLAN O. RUSTE,  
CHAS. COREY.