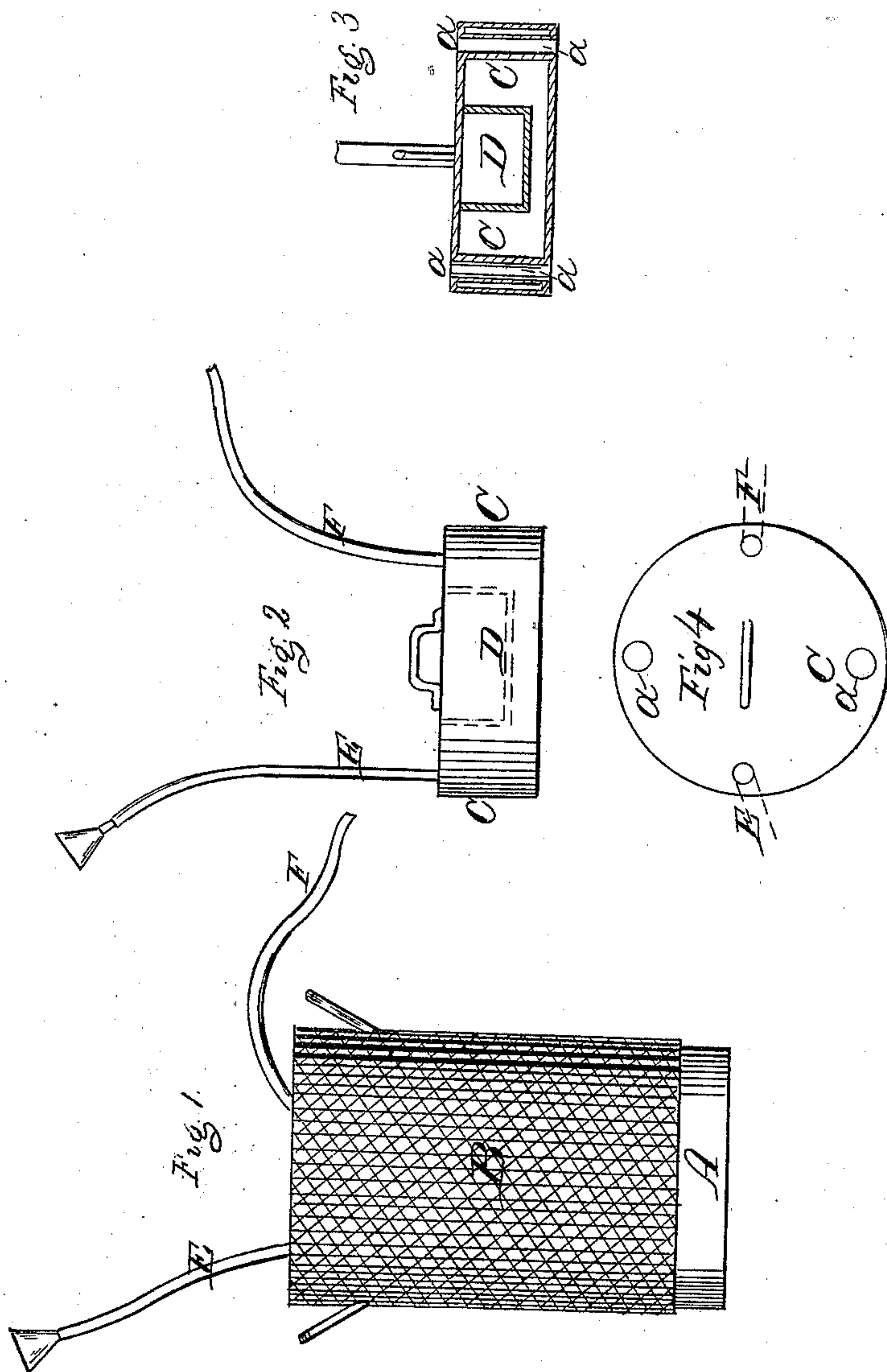


L. T. Hawley,

Milk Cooler.

No. 88,476.

Patented Mar. 30. 1869.



Witnesses.
C. H. Clausen
A. Ruppert.

L. T. Hawley
Inventor.
D. P. Holloway & Co
Attys

United States Patent Office.

LEWIS T. HAWLEY, OF SALINA, NEW YORK.

Letters Patent No. 88,476, dated March 30, 1869.

IMPROVEMENT IN MILK-COOLERS.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, LEWIS T. HAWLEY, of Salina, in the county of Onondaga, and State of New York, have invented a new and useful Improvement in Milk-Coolers; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is an elevation of my improved cooler;

Figure 2 is an elevation of the float containing the air-chamber, showing the tubes for the induction and eduction of the air thereto;

Figure 3 is a sectional elevation of the buoy, showing the tubes which pass through it; and

Figure 4 is a plan view of the same.

Corresponding letters in the several figures refer to corresponding parts.

This invention relates to that class of devices which are termed milk-coolers; and

It consists in the construction, combination, and arrangement of its parts, as will be more fully described hereinafter.

A, in the drawings, represents a can, which may be cylindrical in form, and of any size to suit the views of the owner. This can, or vessel, may be made of tin, or any other suitable sheet-metal, and its lower end may be supplied with a head of the same or any other suitable material, while its upper end is to be open, to receive its contents, and also to receive the buoy, which acts as a cooler to such contents.

B represents a covering, of felt or other suitable material, which is to surround the can, and may be secured thereto by sewing the ends firmly together, and by cutting a slit for the passage of the handles of the can, and then sewing the slit up tightly around such handles.

It will be apparent that by keeping this covering wet with cool water during the time that the milk remains in the can, the evaporation of the water will take up the heat from the contents of the can, and thereby reduce the temperature of the milk, and the atmosphere will, to a great extent, be excluded from contact with the surface of the can, and that thus the contents thereof will be much more readily cooled, and much more easily maintained in their cooled condition, than would be possible without such covering.

C represents a short cylindrical vessel, closed air-tight at both of its ends, which is to be so constructed as to fit snugly, and yet move freely in the can B.

It will be seen, that as a consequence of the construction of this vessel, it forms an air-chamber, into which air may be forced through the induction-pipe, and out of which it may pass through the pipe F, and that thus, by means of any suitable air-compressor, a current of cool air may be made to pass through such

vessel, and thus carry off the heat imparted thereto by the contents of the can.

I have shown, in dotted lines, in figs. 2 and 3, an air-chamber, D, which may be used, if found desirable, as an additional air-chamber, to serve as a buoy for the vessel C, when the air has been allowed to escape from the other portion of such vessel.

The vessel C is to be provided with tubes *a a*, of which there may be any required number, which serve as conduits for the escape of the air, as the vessel is being lowered into the can, and also as additional cooling-surface to the contents of such can. These tubes, it will be seen, are to pass entirely through the heads of vessel C, and thus communicate with the space above and below such vessel.

E represents a pipe, through which air may be forced, or allowed to pass to the interior of vessel C. In the present instance, it is made to enter near the outer edge of such vessel, and extends downward to near the bottom thereof, so that, as the air enters, the coolest strata thereof will be in contact with the lower head of the vessel, while the warmer portions are being discharged from the top.

It is apparent that air may be forced into the vessel C, through this pipe, continuously, or that it may be allowed to circulate through the same without force, or that it may be forced into the vessel, and retained therein, by stopping the induction-passage after it has been filled, the eduction-passage having been previously closed.

F represents the eduction-pipe, which, with the induction-pipe, is to be of some flexible or elastic material, and so connected with the vessel that it may be readily removed when it becomes necessary to transport the cans from place to place.

One of the advantages due to my invention is, that the vessel C may be applied to any of the cylindrical cans now in use, and thus a great saving be made.

Having thus described my invention,

What I claim, and desire to secure by Letters Patent, is—

1. The vessel C, having the air-chamber D and cooling-tubes *a a* formed within it, substantially as and for the purpose set forth.

2. The combination of the vessel C with a clothed, or covered can, or vessel, substantially as and for the purpose described.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

LEWIS T. HAWLEY.

Witnesses:

A. WESTCOTT,
E. N. WESTCOTT.