(No Model.)

H. M. BURT.

REFRIGERATOR OR COOLER.

No. 582,037. Patented May 4, 1897.

Fig. 1.

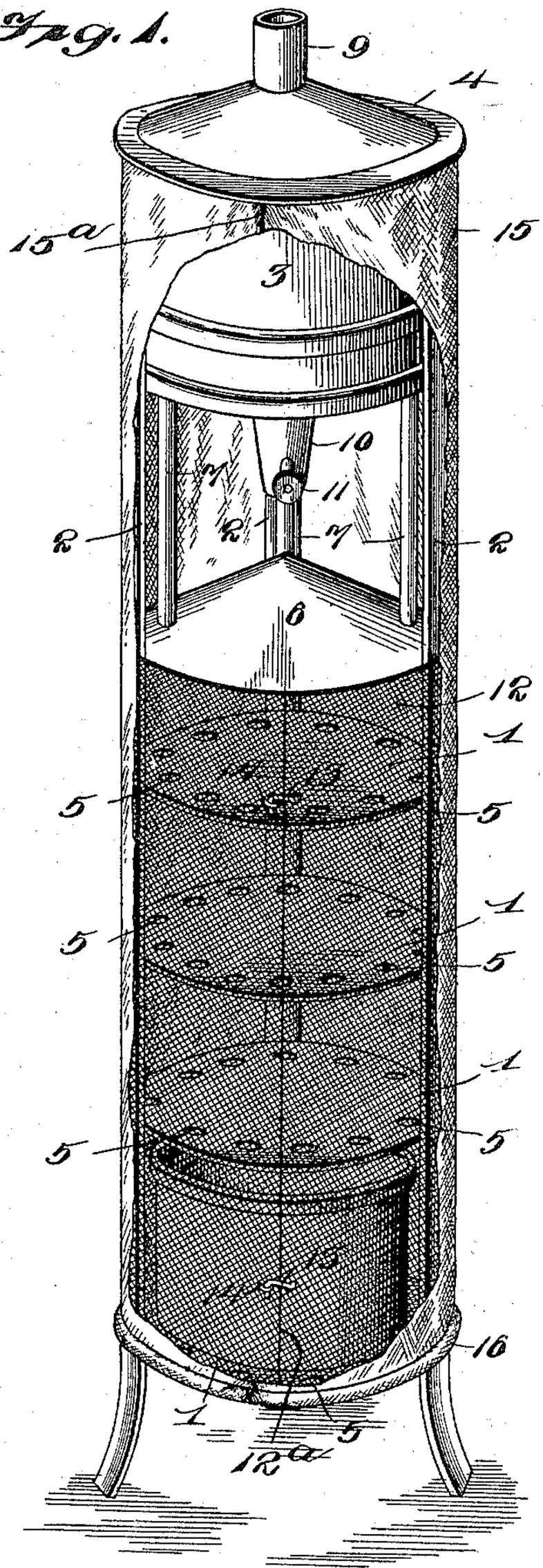
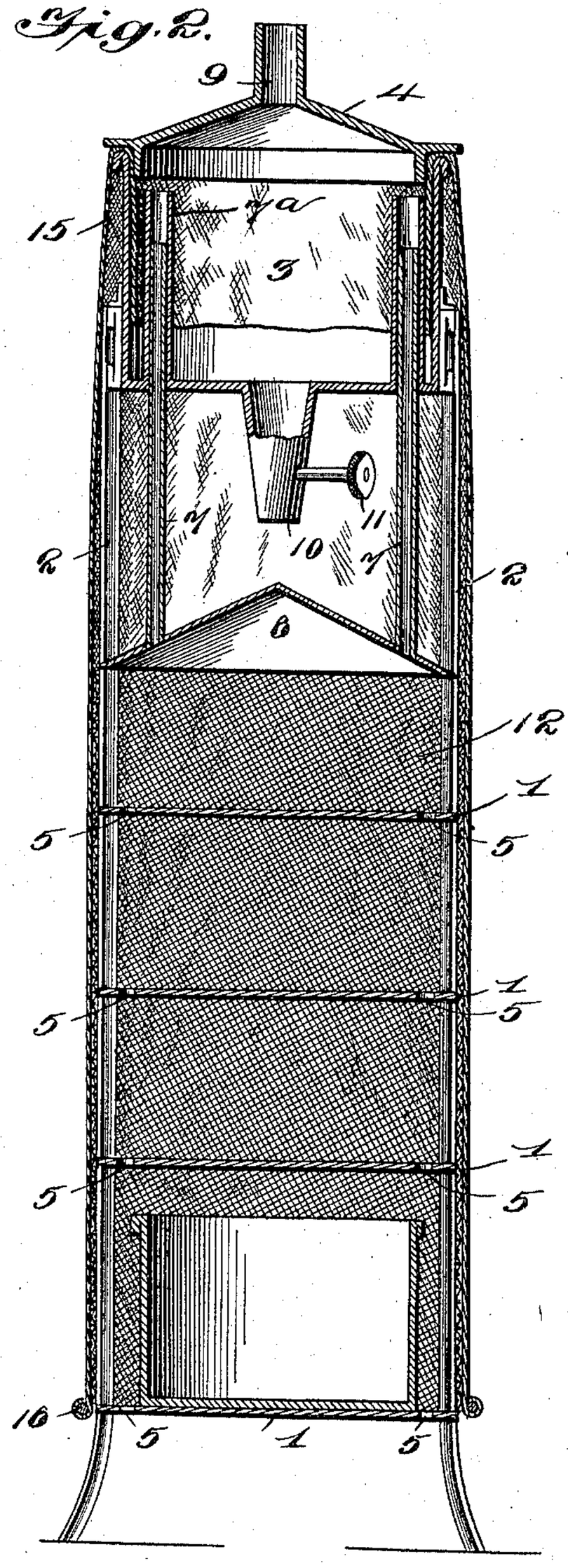


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

HENRY M. BURT, OF TEMPLE, TEXAS.

REFRIGERATOR OR COOLER.

SPECIFICATION forming part of Letters Patent No. 582,037, dated May 4, 1897.

Application filed June 18, 1896. Serial No. 596,049. (No model.)

To all whom it may concern:

Be it known that I, HENRY M. BURT, a citizen of the United States, residing at Temple, in the county of Bell and State of Texas, have invented a new and useful Milk-Cooler, of which the following is a specification.

My invention relates to cooling or refrigerating devices designed for milk, vegetables, and the like, and has for its object to provide a simple and efficient construction and arrangement of parts whereby the articles to be cooled are protected from moisture while the space in which said articles are arranged is inclosed by a film of moisture, which is designed to cool the inclosed atmosphere by evaporation.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a cooling or refrigerating device constructed in accordance with my invention. Fig. 2 is a central vertical section of the same.

Similar numerals of reference indicate corresponding parts in both figures of the drawings.

The device embodying my invention is preferably of cylindrical construction and consists of a series of circular shelves or platforms 1, connected by vertical side bars 2, a tank or reservoir 3 for a cooling agent, such as water, being removably attached to the upper ends of said side bars and provided with a removable cover 4. Each of the shelves or platforms is provided contiguous to its periphery with a series of perforations or draft-openings 5, which encircles the space in which the article to be cooled is to be arranged, and arranged above the uppermost shelf or platform is a conical deflector 6, having perforations in which are arranged fixed draft-tubes 7, which extend vertically upward through the bottom of the tank or reservoir and terminate in a plane near the top or cover of the tank and above the surface of the cooling agent arranged in said tank. Said draft-tubes preferably terminate in sleeves 7^a, carried by the tank and extending upward to points near the top of the same. The cover of the tank is also provided with a draft-outlet 9, and inasmuch as the draft-tubes communicate with the space below the deflector it will be seen that heated air contained in the spaces between the shelves or platforms will rise through the draft-openings and tubes to the space above the refrigerating material and from thence will escape through the draft-outlet. The liquid-distributing device consists of a nozzle 10, communicating with the tank or reservoir at its bottom, provided with a controlling-valve 11 and which is adapted to discharge upon the apex of the deflecting-plate above described.

The side bars above described form a skeleton frame, around which is arranged a removable jacket 12, of wire-cloth, the extremities of said jacket being connected, when in operative position, by means of suitable fastening devices. The form of fastening device illustrated in the drawings embodies a hook 13 for engagement with an eye 14.

Inasmuch as the jacket closely embraces the frame formed by the side bars, and hence is approximately in contact with the peripheries of the shelves or platforms, and inasmuch as the periphery of the conical deflecting-plate projects out into contact with the jacket, it will be seen that the cooling agent which is deposited upon the deflecting-plate will flow outwardly to and be received by the wire-cloth and will fill the spaces or interstices thereof to form a complete aqueous wall or film around the spaces between the shelves or platforms.

In addition to this construction I employ a covering 15, of cheese-cloth or other textile absorbent fabric, fitted at its lower end with a stretching-ring 16 and inserted at its upper end in the liquid in the tank or reservoir. Said covering is designed to entirely inclose the wire-cloth jacket, and it may, and preferably does, become saturated with liquid by absorption, the liquid being carried over the upper edge of the tank by capillary attraction.

By having both the wire-cloth jacket and the absorbent covering open longitudinally at the side of the cooling device access is given to the interior of the latter, and to prevent the interval 12^a between the edges of said jacket and the interval 15^a between the edges of the covering from admitting warm air, and

thus defeating the object of the invention, said openings may be, and preferably are, arranged out of alinement, as shown in the drawings.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having described my invention, what I claim is—

1. A cooling apparatus having its interior surrounded by an absorbent covering and including a supporting-frame to hold the covering distended, a tank removably seated in the top of the frame and having the absorbent covering arranged with its upper edge immersed in the contents thereof, the tank being provided with vertical open-ended sleeves which are located at their upper ends above the level of the contents of the tank, a fixed distributer arranged below the plane of the tank with its periphery contiguous to the absorbent covering and provided with vertical ventilating-tubes, communicating with the space below the distributer and adapted to extend into said sleeves when the tank is in its operative position and means for discharging a refrigerating liquid from the tank upon the distributer, substantially as specified.

2. A cooling apparatus having a skeleton frame comprising parallel side bars, spaced shelves, and an upper terminal ring or tank-seat, a tank removably fitted in said seat, a conical distributer arranged below the plane of the tank-seat and fixed to the side bars of the frame, the shelves being provided with perforations and the distributer with ventilating-tubes communicating with the space below the distributer and with the space outside of the apparatus, means for discharging a refrigerating liquid from the tank upon the distributer, a removable reticulated jacket surrounding the frame from and below the plane of the distributer and provided at its vertical meeting edges with securing devices, and an absorbent covering arranged at its upper edge in the tank, surrounding the entire frame and tank, including said jacket, and having its vertical meeting edges arranged in a different plane from, to break joint with, the meeting edges of the jacket, substantially as specified.

3. A cooling apparatus having a series of perforated shelves, a fixed conical distributing-plate arranged above the uppermost shelf, a tank removably arranged above the distributer and provided with means for discharging liquid upon the latter, the cover and the tank having a draft-outlet, a jacket inclosing the shelves and the spaces therebetween and arranged in contact with the periphery of the distributer, open-ended sleeves arranged vertically in and carried by the tank and draft-tubes extending through the distributer and the bottom of the tank and terminating in said sleeves, the draft-tubes being fixed to the distributer, substantially as specified.

4. A cooling apparatus having a series of shelves, a conical distributer arranged above the uppermost shelf, a superposed tank provided with means for discharging a cooling agent upon the distributer, said tank having a removable cover, a jacket inclosing the shelves and the spaces therebetween and arranged in contact with the periphery of the distributer, and an absorbent textile covering dipping at its upper end in the contents of the tank and provided at its lower end with a stretching-ring, said covering inclosing the jacket, and both the covering and the jacket being divided longitudinally to give lateral access to the spaces between the shelves, substantially as specified.

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

HENRY M. BURT.

Witnesses:

G. W. ROWLAND,

ENOCH M. JONES.