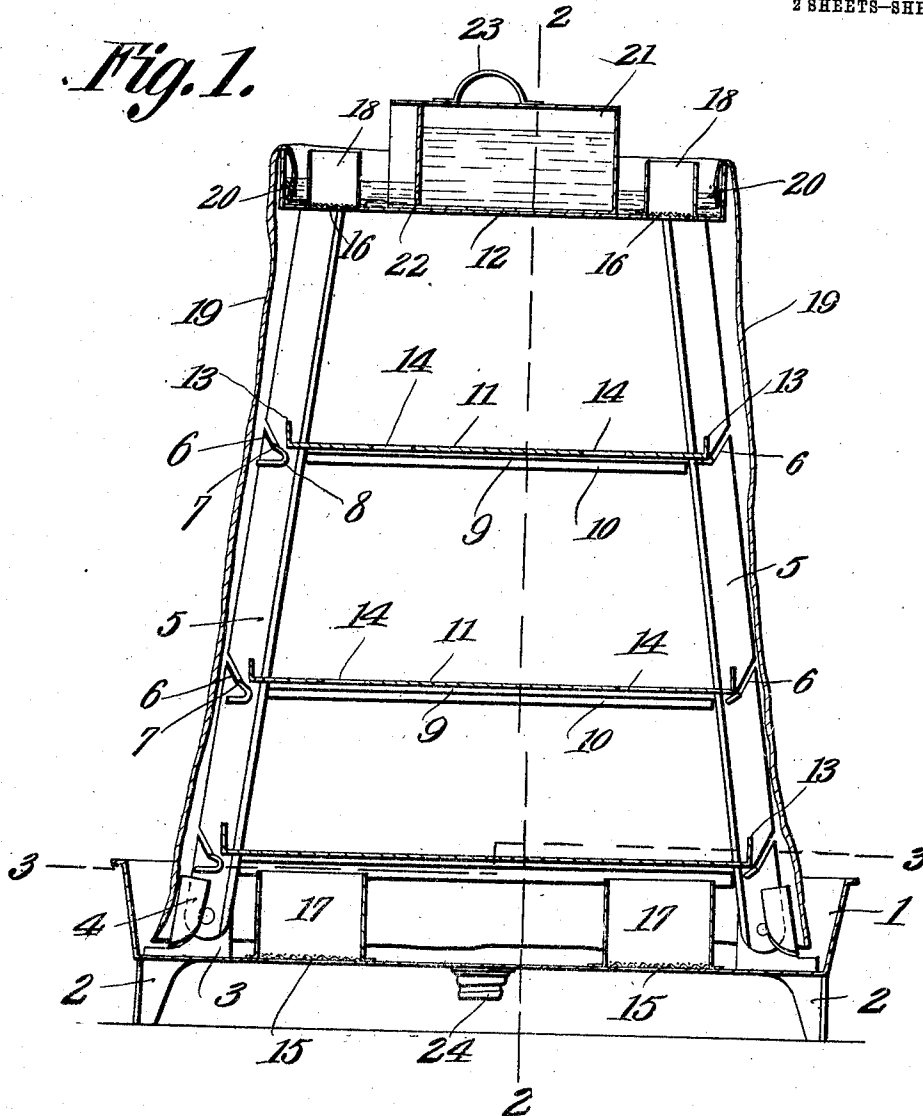


M. W. BURKHALTER.
COOLING DEVICE.
APPLICATION FILED OCT. 17, 1910.

1,006,463.

Patented Oct. 24, 1911.
2 SHEETS—SHEET 1.

Fig. 1.



Witnesses

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2 SHEETS-SHEET 2.

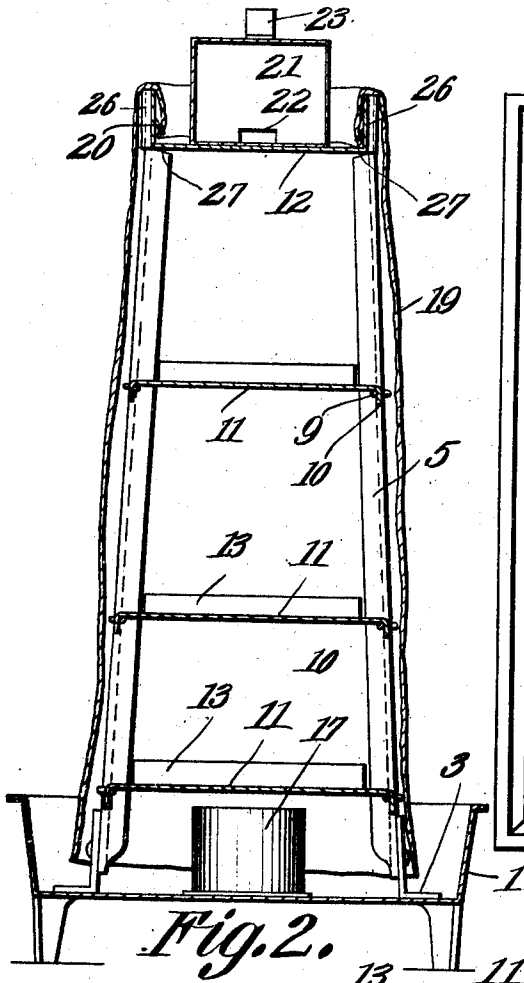


Fig. 2.

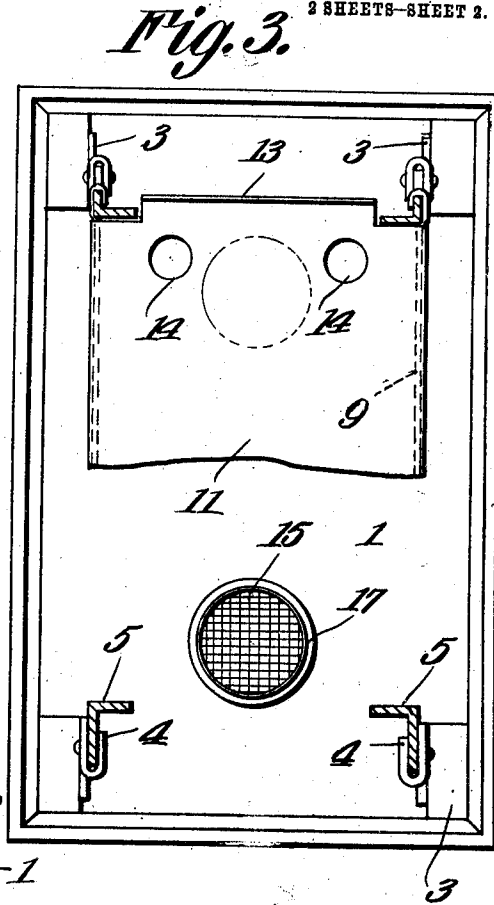


Fig. 3.

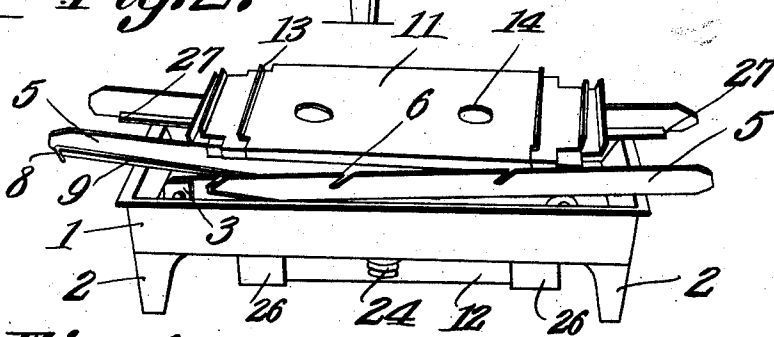


Fig. 4.

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UNITED STATES PATENT OFFICE.

MILO W. BURKHALTER, OF KERENS, TEXAS.

COOLING DEVICE.

1,006,463.

Specification of Letters Patent.

Patented Oct. 24, 1911.

Application filed October 17, 1910. Serial No. 587,455.

To all whom it may concern:

Be it known that I, MILO W. BURKHALTER, a citizen of the United States, residing at Kerens, in the county of Navarro and State of Texas, have invented a new and useful Cooling Device, of which the following is a specification.

Generally speaking, this invention belongs to the art of refrigeration, and it more particularly pertains to that class of devices of the above art, which employ an absorbent surface for absorbing and conveying a cooling fluid from an upper level or strata to a lower one. While this process is being carried out, the warm air draft which enters below the device, is cooled as it ascends.

The primary object of the invention is to provide a device embodying the above method for cooling milk, cream or the like.

A further object of the invention is to provide a collapsible or knock-down structure, which when erected and supplied with an absorbent surface, as shown in Figure 1 of the drawings, permits the above method to be successfully carried out. However, when in a knocked down or collapsed state, the parts thereof can be arranged in a very small compass, in order to be shipped.

This device not only consists of the above principles, but also includes the characteristics of a refrigerator.

Other articles may be arranged in the refrigerator or cooling device, than milk, cream and the like, for instance, meats, vegetables, and similar articles. In the drawings, however, there is disclosed but one particular form of the invention, but in practical fields this form may require slight alterations, to which the applicant is entitled, provided the alterations are comprehended in the appended claim.

Other features and combinations of parts will hereinafter be set forth, shown in the drawings, and claimed.

In the drawings, Fig. 1 is a vertical sectional view through the cooling device or refrigerator, showing the various features of the invention. Fig. 2 is a sectional view on line 2—2 of Fig. 1. Fig. 3 is a horizontal sectional view on line 3—3 of Fig. 1, with parts broken away in order to show further features in elevation. Fig. 4 is a view in perspective, showing the various parts of the cooling device or refrigerator in a knock-down or collapsed state, and arranged

in a small compass, in such wise as to permit the same to be properly tied or secured together for the purpose of shipping.

Attention is directed to the annexed drawings, in which the preferred form of the invention is disclosed.

1 denotes the bottom supporting or base pan, from the four corners of which suitable legs 2 depend. Arranged within the pan adjacent the four corners thereof are sheet metal lugs 3. These lugs 3 are formed with extensions 4, which are folded parallel with the body of the said lugs. Between the extensions 4 and the body of the lugs the inclined uprights 5 of a frame are pivoted, which in Fig. 4, however, are shown collapsed and extended in opposite directions across the said bottom pan. These inclined uprights are approximately L-shaped in cross section and are supplied with obliquely arranged slots 6, the lower portions of which merge into the semicircular apertures 7. Extending across the frame and arranged in the said apertures and connecting the said angularly arranged uprights, are the ends 8 of the horizontal supports 9, which are in the form of wires. The wire supports are engaged by the flanges 10 of the shelves 11 of the structure. These shelves 11 are interposed between the base pan 1 and the upper pan 12, as shown in Figs. 1 and 2. The end portions of the shelves are formed with up-turned flanges 13, which are for the purpose of holding the contents of the shelves in place. The shelves 11 are supplied with apertures 14, through which passes the air, which enters the screened openings 15 of the base pan 1, and finds its exit through the screened openings 16 of the upper pan 12. The screened openings 15 are surrounded by cylindrical sleeves or flanges 17, as shown in Figs. 2 and 3. The openings 16 are also surrounded by cylindrical sleeves or flanges, as shown at 18. The air which enters the openings 15 is considerably cooled as it ascends through the structure by way of the apertures 14, when the cooling fluid is descending by virtue of the fabric cloth or curtain 19, through the medium of capillary attraction. This fabric cloth or curtain surrounds the entire structure, and has its upper portion extending over the edge of the upper pan 12 and into the cooling fluid or liquid therein, as shown in Fig. 1. The cloth or fabric is secured in this position by means

of small hooks 20 which extend through the curtain or cloth.

The cooling device or refrigerator is provided with an automatic feed for supplying the upper pan 12 with water, which consists of a removably arranged tank 21 carried in the upper pan 12. The tank in the present invention is shown as being rectangular in contour, and is formed with an opening 22 near its bottom and a handle 23 at its top. This tank may be arranged in any desired position in the upper pan 12 with the opening 22 adjacent the bottom thereof in such a manner as to allow the cooling fluid or liquid to gradually flow from the tank. This it will do until the depth thereof reaches a level even with the top of the opening 22, when the flow of liquid from the tank 12 is cut off. However, as soon as the cooling liquid or fluid is absorbed by the curtain or cloth, the depth of the fluid in the pan 12 diminishes, and as this occurs the fluid within the tank 21 replenishes the pan 12. When the base pan 1 becomes filled, the same may be emptied very easily by removing the screw plug 24 shown in Figs. 1 and 4. By placing a receptacle beneath or connecting a tube or hose to the flange opening, (with which the cap or plug 24 engages) the contents of the pan 1 may be drawn off and disposed of in any suitable manner. When the cooling fluid or liquid in the tank is utilized or consumed, the same may be again supplied by removing the tank and allowing the fluid to pass thereinto by way of the opening 22. The tank is again arranged in position as shown in Fig. 1, and the absorption of the fluid is repeated by virtue of the cloth or curtain. As the cooling fluid or liquid descends by way of the curtain or cloth, the ascending air is not only cooled but is to a certain extent moistened; and as the liquid is descending there is a very slight suction caused, which tends to draw the warm air

through the screened openings 15, from below the pan 1.

By examining the annexed drawings, in connection with the above description, one may observe that there has been provided a novel form of cooling device or refrigerator, and one which may be quickly erected, or knocked down or collapsed. It will be observed that a device constructed along these lines will fulfil the various requirements and practical demands.

The upper pan 12 upon its longitudinal sides is provided with elongated sockets 26, which receive the upper ends of the said angularly arranged uprights. In order to permit the ends of the uprights to be received by said sockets one side of the L-shaped uprights are cut away, as shown in Fig. 4, as at 27.

The invention having been set forth, what is claimed as new and useful is:

In a cooling device, the combination with a base pan, lugs secured within its corners and each having an extension folded parallel with the body of the lugs, uprights of L-shaped cross section whose lower extremities are pivoted to said lugs and whose upper extremities have one side of the L cut away, and an upper pan having sockets at its corners to receive said cut away portions, said uprights having obliquely arranged slots between said pans; of wires engaging said slots removably, shelves having downturned flanges removably engaging said wires, and an absorbent member surrounding said shelves and upper pan and continued over the edge of the latter into it.

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

MILO W. BURKHALTER.

Witnesses:

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