(No Model.) 2 Sheets—Sheet 1.

L. J. COBB.

REFRIGERATOR CAN.

No. 386,769. Patented July 24, 1888.

Fig. 1.

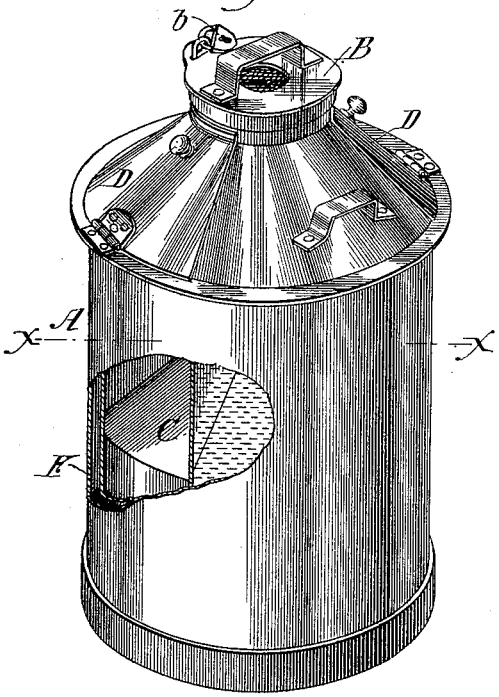


Fig. 2.

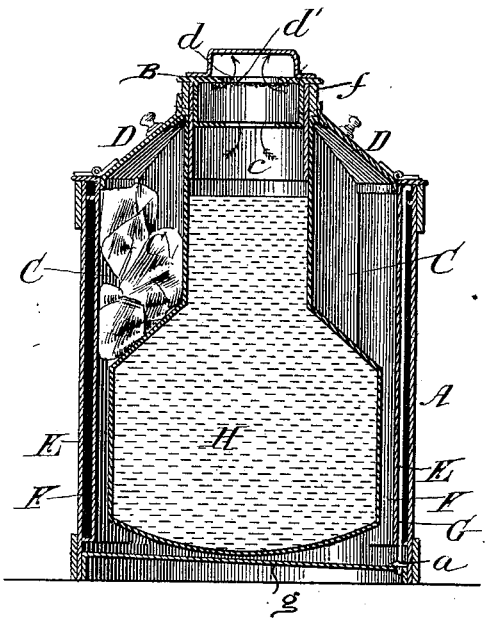


Fig. 4.

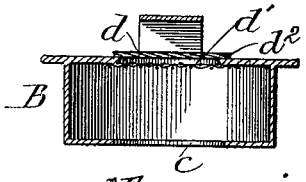


Fig. 3.

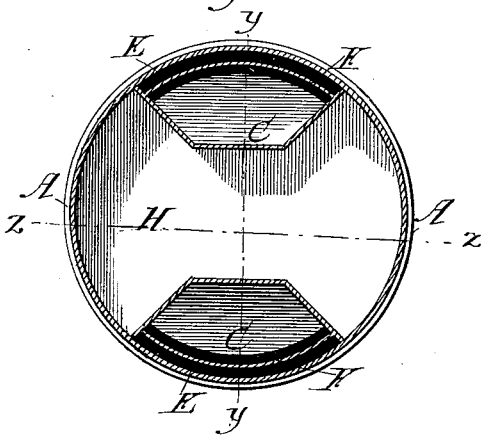
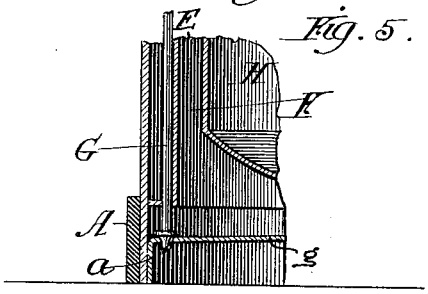


Fig. 5.



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(No Model.) 2 Sheets—Sheet 2.

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REFRIGERATOR CAN.

No. 386,769. Patented July 24, 1888.

Fig. 6.

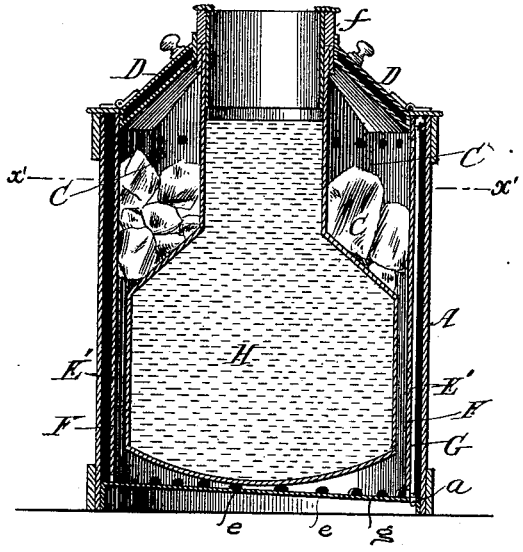


Fig. 7.

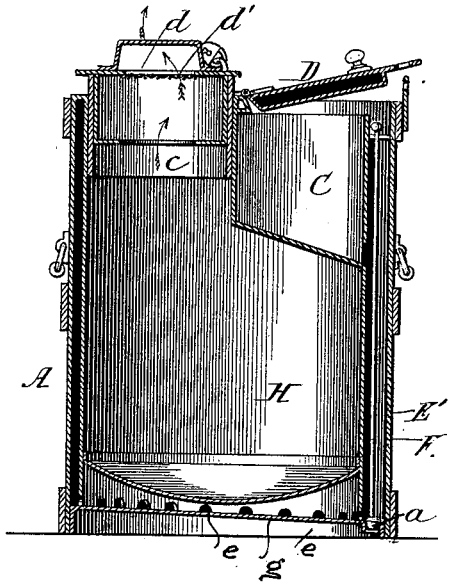


Fig. 8.

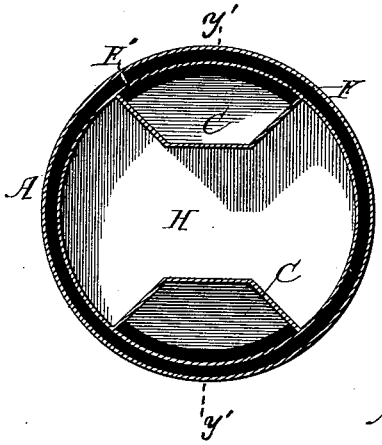
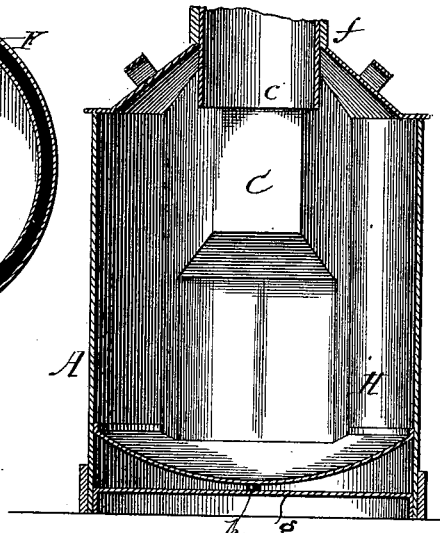


Fig. 9.



Witnesses
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UNITED STATES PATENT OFFICE.

LUCIUS J. COBB, OF CHICAGO, ILLINOIS, ASSIGNOR TO HIMSELF, SAMUEL K. DOW, AND CHARLES G. COBB, ALL OF SAME PLACE.

REFRIGERATOR-CAN.

SPECIFICATION forming part of Letters Patent No. 386,769, dated July 24, 1888.

Application filed March 14, 1887. Serial No. 230,690. (No model.)

To all whom it may concern:

Be it known that I, LUCIUS J. COBB, residing at Chicago, in the county of Cook and State of Illinois, and a citizen of the United States, have invented certain new and useful Improvements in Refrigerator-Cans, of which the following is a full description, reference being had to the accompanying drawings.

The object of my invention is to provide a simple, effective, and inexpensive refrigerator-can for the storage or transportation of milk, oysters, and other fluids, or articles proper to be kept in cans, and which are liable to be injured or destroyed by standing; and the invention consists in the several parts and combinations of parts hereinafter described and claimed.

In the accompanying drawings, Figure 1 is an elevation of my improved refrigerator-can, partly broken away, to show its interior. Fig. 2 is a vertical section on the line *y y* of Fig. 3, illustrating the same form of can. Fig. 3 is a horizontal section on the line *x x* of Fig. 1, also showing the same form of can. Fig. 4 is an enlarged vertical section of the cap or stopper. Fig. 5 is an enlarged sectional detail view showing the drip-valve. Fig. 6 is a vertical section on the line *y' y'*, Fig. 8, of a modified form of can. Fig. 7 is a vertical section of another modified form of can having but one ice-chamber. Fig. 8 is a horizontal section on the line *x' x'* of Fig. 6. Fig. 9 is a vertical section on the line *z z* of Fig. 3.

In order that those skilled in the art may readily make and use my improved refrigerator-can, I will first describe the construction illustrated in Figs. 1, 2, 3, 4, 5, and 9, which show one form of the invention, and will afterward explain the differences in construction shown in Figs. 6 and 8 and in Fig. 7.

The letter A designates the exterior shell or body of the can, which is preferably cylindrical. It may be made of metal or other suitable material, and, if preferred, it can be inclosed in an outer covering of wood, pasteboard, or other material.

Within the outer shell, A, as shown in Figs. 1, 2, and 3, is formed an inner chamber or receptacle, H, for receiving the articles to be stored or transported. Two opposite sides of the chamber H, as shown in Figs. 3 and 9, are integral with the outer shell, A, while the two alternate sides at right angles are retracted within the outer shell, so that at these points a space, F, is left between the inner chamber and outer shell. The upper portion of the inner can or chamber, H, at the upper part of the spaces F, is still further retracted or drawn inward to form refrigerating-chambers or ice-chambers C, which thus project into the upper part of the storage-chamber.

It will be seen that the greater part of each ice-chamber, including its inner and side walls and bottom, is formed integral with the storage-chamber or inner can. The outer wall or side of each ice-chamber is formed by a vertical plate, E, which is segmental in horizontal section. These plates, as shown in Fig. 3, are fitted between the side walls of the ice-chambers within the periphery of the chamber C, and are so arranged as to leave an opening or space at the lower outer part of each ice chamber for the escape of drip. As shown in Fig. 2, the segmental plates E extend vertically nearly the entire height of the outer shell, A, and are secured thereto at top and bottom. The plates E thus serve not only as outer walls for the ice-chamber C, but by extending down between the inner chamber, H, and outer shell, A, they assist in forming a drip-space, F, next the inner chamber and an air-space next the outer shell.

As shown in Figs. 1 and 2, the inner chamber, H, is extended centrally above the outer shell, A, and is provided with a hollow cap, B, made in the form of a stopper, which may be furnished with a lock, *b*, or other suitable fastening. This cap or stopper, as shown in Fig. 4, is formed with perforated plates *c d*, to permit the escape of heat and vapors from the inner chamber, H; but when this is not desired the opening in plate *d* may be closed by a slide or cover, d^2, to exclude dust and entirely inclose the contents of the can.

If desired, a wire-gauze screen or strainer, *d'*, may be attached to the plate *d*, to exclude insects when the slide or cover d^2 is open.

The upper portion of the outer shell, A, is preferably conical and formed at the top with a neck or collar, *f*, that surrounds the neck of

the inner can or chamber. In this conical top of the shell A are openings that are closed by the doors or covers D of the ice-chambers.

The bottom of the inner can or chamber, H, is preferably rounded or concavo-convex, and does not extend quite to the false bottom *g* of the outer shell, a space being thus left for the free passage of the cold water or air beneath and around the inner chamber. In this false bottom *g* is an opening controlled by a drip-valve, *a*, at the lower end of a vertical valve-rod, G, which is preferably concealed, as shown; but, if desired, this rod may be extended through the can-top, so as to enable the valve *a* to be operated for discharging the drip without uncovering the ice-chambers. In large storage-cans a central support or rod, *h*, Fig. 9, may be inserted beneath the chamber H, if desired.

Instead of making the inner can or chamber, H, as shown in Figs. 3 and 9, practically integral with the outer shell, A, said inner can or chamber, H, may be formed integral with an inner cylindrical shell, E′, as shown in Figs. 6, 7, and 8. This inner shell, E′, forms the outer wall of the can H and the outer walls of the ice-chambers C, thus taking the place of the segmental plates E, hereinbefore described. The inner shell, E′, and connected inner can or chamber, H, are placed in the outer can or shell, A, which is of such diameter as to afford an intervening air or water space, and a series of perforations, *e*, are provided in the lower part of the inner shell, E′, to promote a circulation of air or water between the inner and outer shells and beneath the inner storage-chamber. In this construction, also, a drip-space, F, is afforded for the escape of water from the ice-chambers. In its best form I prefer to provide the can with two ice-chambers C; but a cheaper and serviceable can may be made with a single ice-chamber, C′, located in one side, as shown in Fig. 7, in which case the opening for gaining access to the chamber H will occupy the other side of the can-top, thus enabling the single ice-chamber to be made sufficiently large to give good results.

The ice-chambers in each form of construction are preferably made with inclined bottoms, so that as the ice melts the drip will flow down into the space beneath the chamber H, as shown in Fig. 2, or into the space beneath and around the can or chamber H, as shown in Figs. 6 and 7, and as the water accumulates and becomes warmed it may be let off by means of the valve *a* and valve-rod G. In the forms of construction shown in Figs. 6 and 7, by frequently operating the valve *a*, the space between the inner and outer cylindrical shells may be used for circulating cold air, while in the form shown in Fig. 2 the spaces between the shell A and plates E contain only dead air, which is preferable where cans are to be shipped any considerable distance or where they are liable to be left without much care, while for the more complete operation and the full use of the ice the circulating-air space is preferable.

With either form of construction, milk, oysters, and other perishable materials can be kept in warm weather for long periods and the ice can be renewed without exposing the contents of the can to the air.

What I claim as my invention is—

1. A refrigerator-can comprising the outer shell, A, having the inner storage-chamber, H, provided with a refrigerating-chamber projecting laterally into its upper part, and a vertical plate, E, forming on one side an air-space between the shell and storage chamber and on the other side a drip-space leading from the refrigerating-chamber, substantially as described.

2. A refrigerating-can comprising the outer shell, A, the inner storage-chamber, H, with its bottom located above the bottom of the outer shell to form a water-space, and a refrigerating-chamber projecting laterally into the upper part of the storage-chamber, the can being provided with air and drip spaces, as described, and with the drip-valve *a*, as set forth.

3. The combination, with the outer shell, A, and inner storage-chamber, H, of the hollow cover B, having the perforated plates *c d*, strainer *d′*, and slide *d²*, substantially as described.

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Witnesses:
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