No. 765,091. PATENTED JULY 12, 1904.

H. M. LOURIE.

CREAM SEPARATOR.

APPLICATION FILED JULY 10, 1901.

NO MODEL.

Fig. 1.

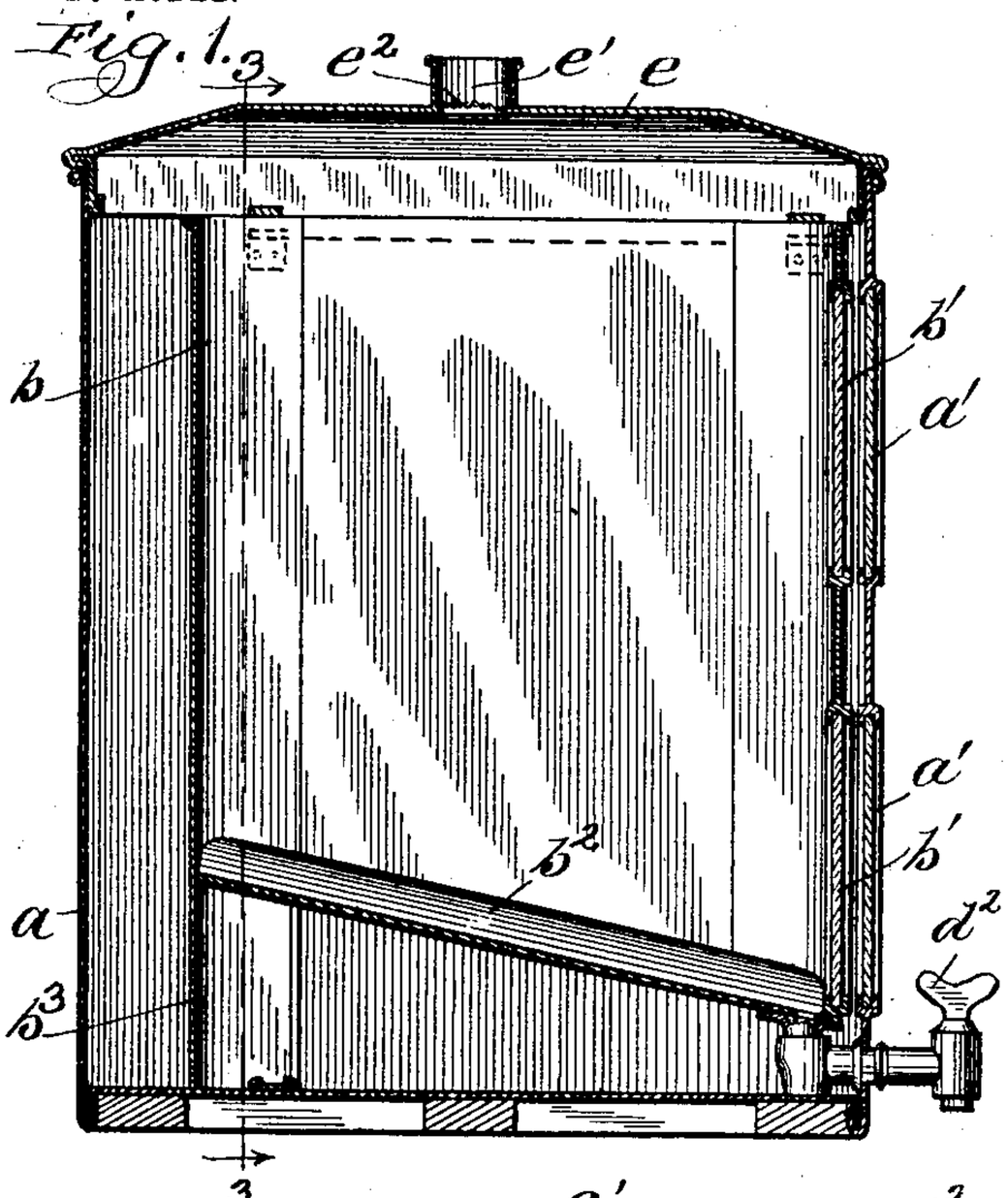


Fig. 2.

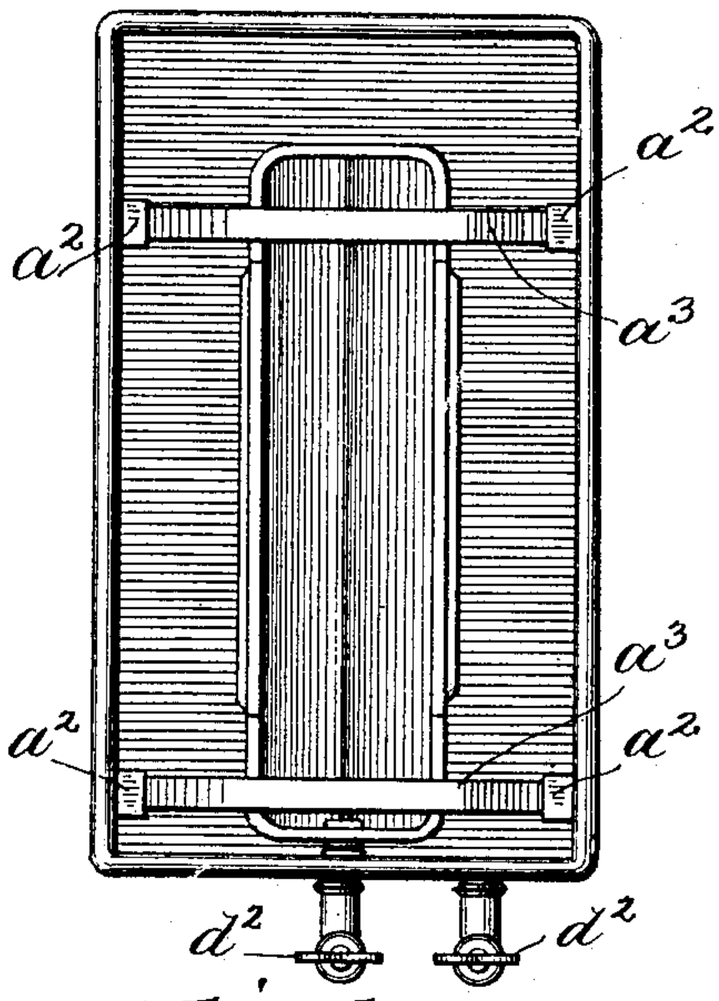


Fig. 3.

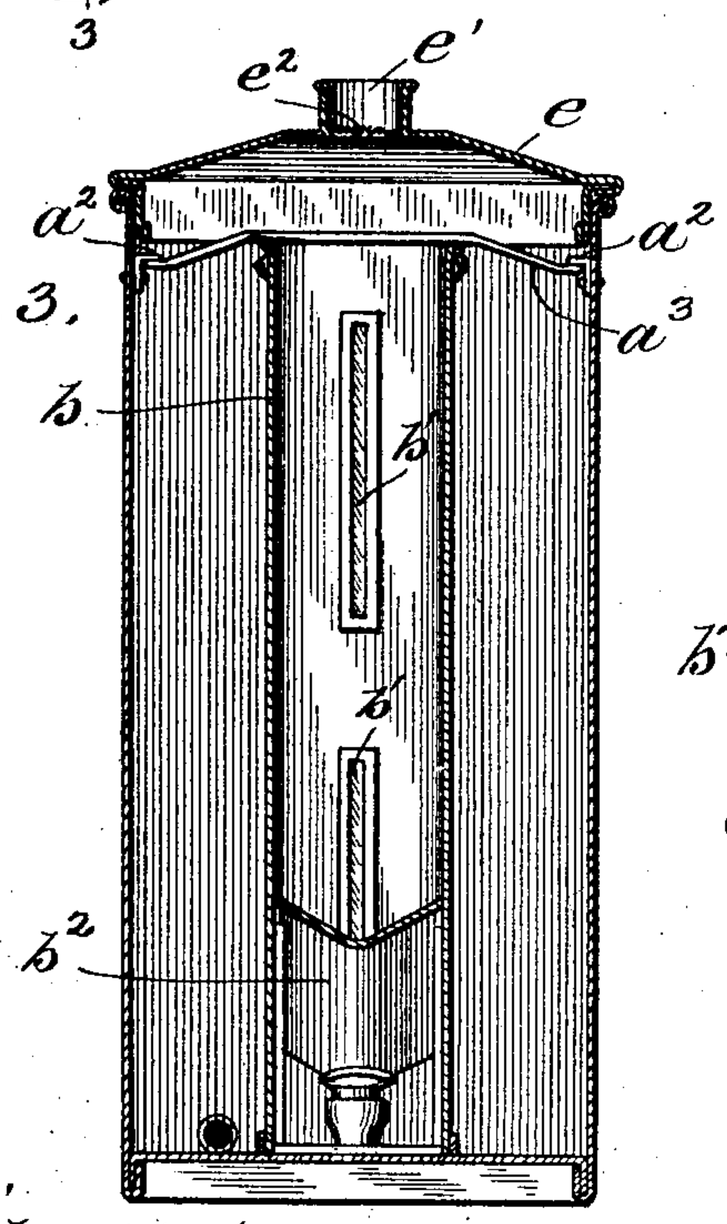


Fig. 4.

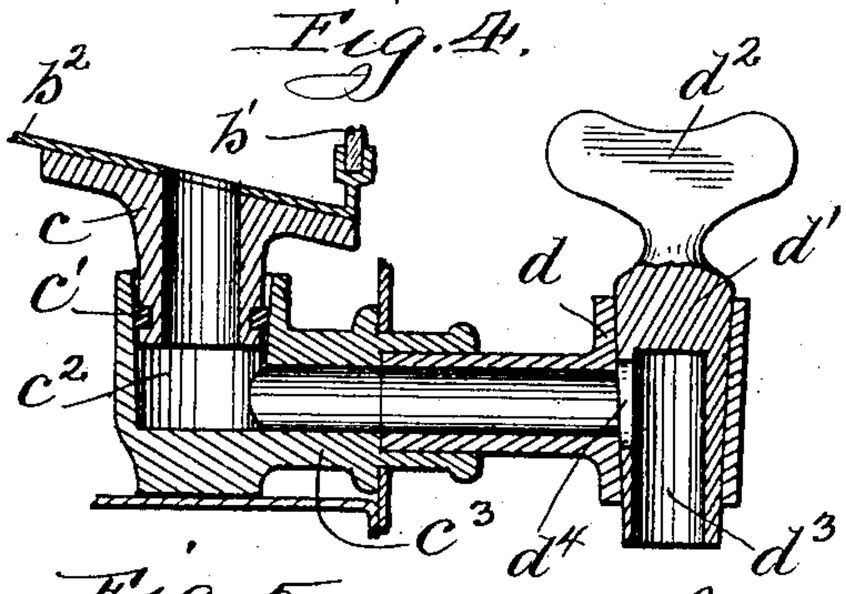
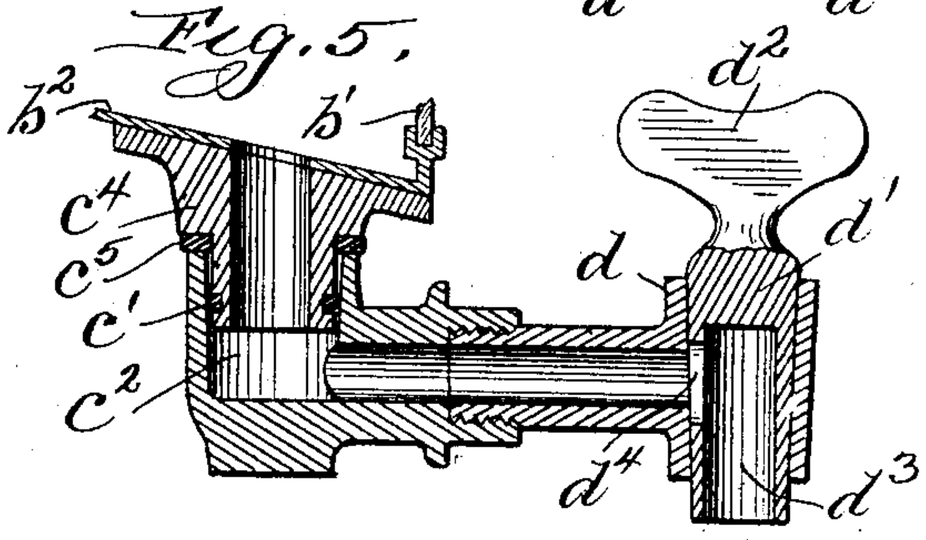


Fig. 5.



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UNITED STATES PATENT OFFICE.

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CREAM-SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 765,091, dated July 12, 1904.

Application filed July 10, 1901. Serial No. 67,791. (No model.)

To all whom it may concern:

Be it known that I, HERBERT M. LOURIE, a citizen of the United States, residing at Keokuk, in the county of Lee and State of Iowa, have invented a certain new and useful Improvement in Cream-Separators, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to a cream-separator, my object being to provide an improved construction of cream-separators of that class in which a milk-reservoir is adapted to be immersed in a reservoir containing cold water or ice whereby, due to the chilling effect, the cream is caused to separate from the milk and to accumulate at the upper end of the milk-reservoir. In cream-separators of this class it is usually desirable to have the milk-reservoir so constructed that the same can be lifted out of the water-reservoir, in which it is adapted to normally rest. This removal is desirable in order that the reservoirs may be thoroughly washed and cleansed. In milk-separators as commonly constructed heretofore the exit-pipe of the milk-reservoir is provided at one of the lower corners thereof and is adapted to extend vertically downward, passing through a suitable opening in the bottom of the water-reservoir, a faucet being attached to the lower end of the exit-pipe beneath the bottom of the water-reservoir. In order to remove the milk-reservoir, it is necessary to detach the faucet, and the milk-reservoir may then be withdrawn, the exit-pipe thereof being withdrawn from the opening extending through the bottom of the water-reservoir. This construction is objectionable, since it necessitates the detaching of the faucet from the exit-pipe when it is desired to remove the milk-reservoir. Moreover, the withdrawal of the exit-pipe from the opening in the bottom of the water-reservoir permits the water therein to escape. Again, since the exit-pipe passes through the bottom of the water-reservoir it is necessary to provide a special support for the structure permitting the placing of the receptacles into which the milk and cream are discharged beneath the bottom of the water-reservoir.

It is the object of the present invention to provide a structure which will overcome these various objections, and in accordance with the present invention I provide a separable exit pipe or duct, one part thereof being carried upon the milk-reservoir and the other part upon the water-reservoir, whereby the milk-reservoir may be readily lifted from the water-reservoir and the parts of the separable exit-pipe thereby separated without other manual manipulation.

In the preferred form of my invention I mount the portion of the exit-pipe carried upon the water-reservoir so that the same will extend through the side wall of the water-reservoir. All of the pipe is thus above the bottom of the water-reservoir, and the structure may thus be set upon any structure, and it is not necessary to provide means for placing the receptacles for the milk and cream beneath the bottom of the structure. In producing the separable connection I preferably provide a nozzle at the lower end of the milk-reservoir adapted to fit in a socket provided in connection with the portion of the exit-pipe mounted upon the water-reservoir.

I have illustrated my invention in the accompanying drawings, in which—

Figure 1 is a sectional view of a cream-separator embodying my invention. Fig. 2 is a plan view thereof. Fig. 3 is a sectional view on line 3 3, Fig. 1. Fig. 4 is a sectional view of the separable connection. Fig. 5 is a sectional view of a modified form of the separable connection.

Like letters refer to like parts in the several figures.

The water-reservoir *a* may be constructed in any desired manner and is preferably formed with windows or panes *a' a'*, of glass or mica, at one end in order that a view may be had of the interior. Within the reservoir *a* the milk-reservoir *b* is adapted to rest, this

reservoir having similar panes b' b' at one end registering with the panes a' a'. The milk-reservoir is oblong and hollow in order that the chilling effect of the ice or water in the water-reservoir may readily penetrate all portions of the contents of the milk-reservoir. The bottom b^2 of the milk-reservoir is of V shape in cross-section and slants toward the forward end. A leg b^3 supports the rear end of the milk-reservoir.

Secured to the bottom of the milk-reservoir at the forward end is a nozzle c, secured to the bottom of the reservoir by solder or in any preferred manner. The nozzle carries near the end a peripheral channel, in which fits a packing-ring c', of rubber or similar material. The nozzle is adapted to enter a tapered recess c^2, formed in the end of the pipe c^3. When the nozzle is inserted in the recess, the packing-ring is compressed, and thus serves to effectually prevent the passage of the water in the water-reservoir to the interior of the exit-pipe. The faucet d is secured to the end of the pipe c^3 in any preferred manner—as, for instance, by threads or by solder. The faucet may be of any preferred form, and I have shown a form which is commonly used for this purpose in which a tapered stem d', carrying at the end a handle d^2, fits in a correspondingly-tapered bore. The stem d' carries in the end a bore d^3, communicating with a port d^4. When the stem d' is rotated into one position, the port d^4 affords a communication between the bore d^3 and the opening through the exit-pipe, while when the stem d' is partially rotated the port d^4 is carried out of communication with the opening through the exit-pipe, and the exit-pipe is thus sealed. The separable exit-pipe as thus constructed consists of but a few simple parts, which may be readily cleansed. It is of the utmost importance that the structure be such that there will be no corners or crevices in which dirt may lodge, and the structure herein described has been found in practice to afford no opportunity for the accumulation of dirt, if frequently cleansed.

Near the upper end of the water-reservoir a number of inwardly-extending lugs a^2 a^2 are provided, and the cross-pieces a^3 are adapted to rest upon the top of the milk-reservoir, with the ends thereof beneath the lugs a^2 a^2 to thereby secure the milk-reservoir firmly in position. When it is desired to remove the milk-reservoir, the cross-pieces a^3 a^3 are removed, and the milk-reservoir may then be lifted out of the water-reservoir, the nozzle c readily withdrawing from the socket c^2. When it is desired to replace the milk-reservoir, the same is inserted in position, so that the nozzle will enter its socket, and the pressure exerted by the cross-pieces a^3 a^3 when placed in position will force the nozzle firmly into the socket.

A cover e is adapted to rest upon the top of the water-reservoir. This cover is preferably made funnel-shaped and provided with an opening e' at the center, across which is stretched a sieve e^2. The opening e' affords ventilation when the cover is in position, and by turning the cover upside down the same may be used as a strainer, and the milk may be poured into the cover, thus acting as a funnel, and is thus directed through the sieve e^2 into the milk-reservoir.

In Fig. 5 I have illustrated a modification in which a shoulder c^4 is provided upon the nozzle c, against which a second packing-ring c^5 is adapted to rest, and when the nozzle is inserted in the socket c^2 the packing-ring c^5 is compressed between the shoulder c^4 and the end of the wall surrounding the socket c^2. A double surety against the leakage of the water or the milk is thus provided. Instead, however, of providing both packing-rings either of the packing-rings may be omitted and the other depended upon for producing the water-tight joint. By extending the exit-pipe c^3 through the side wall of the can the can may be seated upon any flat surface, such as a bench or floor, and does not require an especially built-up support, as where the outlet is in the bottom of the can.

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

1. In a cream-separator, the combination with an outer water-can, of a can for milk arranged within said outer can and having a sloping bottom, a socket within said outer can, a faucet arranged exteriorly of said outer can and connected with said socket, a nozzle carried at one end of said inner can, said nozzle being detachably connected to said socket and forming a support for one end of said inner can, a leg supporting the other end of said inner can and coacting with said socket to maintain said inner can in an upright position in said outer can, and means to hold said inner can in said outer can and retain said nozzle in said socket whereby said inner can is held against being raised by the water in said outer can and a tight connection is maintained between said nozzle and said socket.

2. In a cream-separator, the combination with an outer water-can, of a can for milk arranged within said outer can and having a sloping bottom, a socket within said outer can, a faucet arranged exteriorly of said outer can and connected with said socket, a nozzle carried at one end of said inner can, said nozzle being detachably connected to said socket and forming a support for one end of said inner can, suitable means for supporting said inner

can in an upright position in said outer can, and means to hold said inner can in said outer can and retain said nozzle in said socket whereby said inner can is held against being raised by the water in said outer can and a tight connection is maintained between said nozzle and said socket.

In witness whereof I have hereunto subscribed my name in the presence of two witnesses.

HERBERT M. LOURIE.

Witnesses:
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G. NICHOLS.