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F. L. MARSHALL

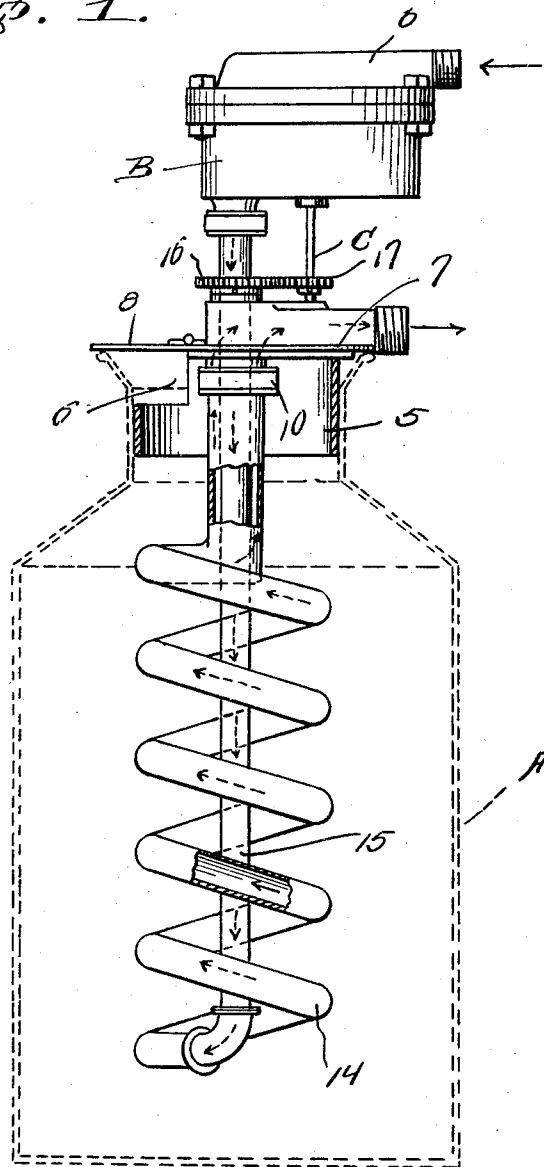
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CREAM COOLING OR PASTEURIZING DEVICE

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2 Sheets-Sheet 1

Fig. 1.



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CREAM-COOLING OR PASTEURIZING DEVICE

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This invention relates to new and useful improvements in devices for use in the cooling or pasteurizing of cream after the same has been disposed within the conventional cream can.

A most important object of this invention resides in the provision of such a device that may be arranged within the conventional cream can or any receptacle, and that includes as one of its elements the motor of a water or steam meter now in general use, and without the outlet of which is associated a coil adapted to be arranged perpendicularly within the can so that water or steam will be conveyed from the motor to the coil, resulting in the cooling or pasteurizing of the cream. Furthermore, the meter rotating stem of the water or steam motor is operatively associated with the coil so as to cause the slow rotation of the coil during the passage of water or steam therethrough.

In the drawings wherein like reference characters indicate corresponding parts throughout the several views:

Figure 1 is a view mainly in side elevation and partially in cross section of my improved cream cooling and pasteurizing device as associated with a cream can disclosed in dotted lines.

Figure 2 is a top plan view of the device, and

Figure 3 is a somewhat enlarged fragmentary longitudinal section taken through the lower end of the motor of the conventional meter and the upper end of the coil arranged within the cream can.

Now having particular reference to the drawing, my novel invention consists of a circular metallic neck 5 adapted for arrangement within the neck of a conventional cream can disclosed by dotted lines in Figure 1 as designated by the reference character A. At its upper edge this neck 5 is formed with a cut out 6, while arranged upon the top of this neck member is a plate 7 of greater area than the upper end of the neck of the can A for providing a closure therefor when the neck member is arranged therein. This plate 7 is provided with a hinged section 8 above the neck cut out 6 so that

when the section is raised cream may be poured into the can A without requiring the removal of the device from the can.

Arranged through an opening in the center of the closure plate 7 of the neck 5 in the short end of an L-shaped pipe 9, the longer end of which extends horizontally above the plate 7 and beyond the edge thereof and being externally threaded at its end to receive a flexible hose of predetermined length. The end of this L-shaped pipe 9 within the neck 5 is also externally threaded for receiving a coupling collar 10, the lower end of which is formed with an inwardly extending flange 11 engageable beneath a flange 12 formed adjacent the inner end of a short length of piping 13, which inner end is rotatable within the L-shaped pipe 9 as clearly disclosed. Merging from the side of this length of pipe 13 at its lower end is a longitudinally extending coil 14 of less length than the body of the can A, the lower convolute of this coil merging into or having communication with a coil supply pipe 15 arranged concentrically through the coil 14 and through a packed opening within the lower end of the section of piping 13. This coil supply pipe 15 extends completely through the L-shaped pipe 9 and has communication at its upper end with the outlet of the motor of a conventional water or steam motor operated meter to the inlet of which is to be attached a water or steam conducting hose (not shown).

I prefer to use for the motor a generally conventional steam or water motor operated meter with the meter portion thereof removed with the exception of the usual rotary spindle that is rotated by the steam or water disc within the motor for operating the meter. This motor is designated generally by the reference character B, and in practice this motor is reversed from its usual position so that the usual water or steam outlet *b* becomes the inlet for the water or steam passing through the motor and during its passage slowly rotating the usual meter actuating pin *c* that depends from the motor casing. The casing of the motor is formed or constructed in this instance with the out-

let unit upon the bottom wall thereof and adjacent the edge of the casing as disclosed in Figure 1.

The upper end of the coil feed pipe 15 passing through the L-shaped pipe 9 is rotatable within this L-shaped pipe and is equipped at a point directly above the pipe with a large spur gear 16 having mesh with a smaller gear 17 upon the said stem C that is journaled at its lower end within a socket formed in the L-shaped pipe 9, see Figure 3.

Obviously when the device is arranged in association with the cream can A as disclosed in Figure 1 and cream is arranged within the can, water or steam passing through the said motor B will travel downwardly through the pipe 15 and thence upwardly through the coil 14 discharging through the L-shaped pipe 9. When water is passed through the motor the device will provide a cream cooling and aerating means, the aerating by reason of the stirring of the cream due to the rotation of the coil 14. Obviously when steam is passed through the motor and coil the pasteurizing process is presented.

It will thus be seen that I have provided a highly novel, simple and extremely useful cream cooling or pasteurizing device that is well adapted for all the purposes heretofore designated, even though I have herein shown and described the invention as consisting of certain detail structural elements it is nevertheless to be understood that some changes may be made therein without affecting the spirit and scope of the appended claim.

Having thus described the invention, what I claim as new is:—

In a heating device adapted for arrangement within a cream can, a ring like member constructed for engagement within the neck of a conventional can, a closure for the upper end of the ring having means whereby to facilitate the pouring of the cream through the ring and into the can, an L-shaped pipe arranged at the upper end of the ring and having one end extending into the ring, a pipe section rotatably mounted within the end of the L-shaped pipe within said ring, a coil depending from said pipe section and communicating at its lower end with a pipe arranged concentrically within said coil and extending at its upper end through said pipe section, a motor having an inlet and a discharge, and also a rotating pin depending from the motor and operable by the fluid passing through said motor, a rotary connection between the discharge of the motor and the upper end of the pipe arranged concentrically within the coil, and means between said motor pin and the upper end of said pipe whereby to cause the rotation of the pipe and its associated coil.

In testimony whereof, I affix my signature.