March 28, 1944. R. EDWARDS 2,345,470

CREAM EXTRACTOR

Filed Jan. 8, 1943

Fig. 1

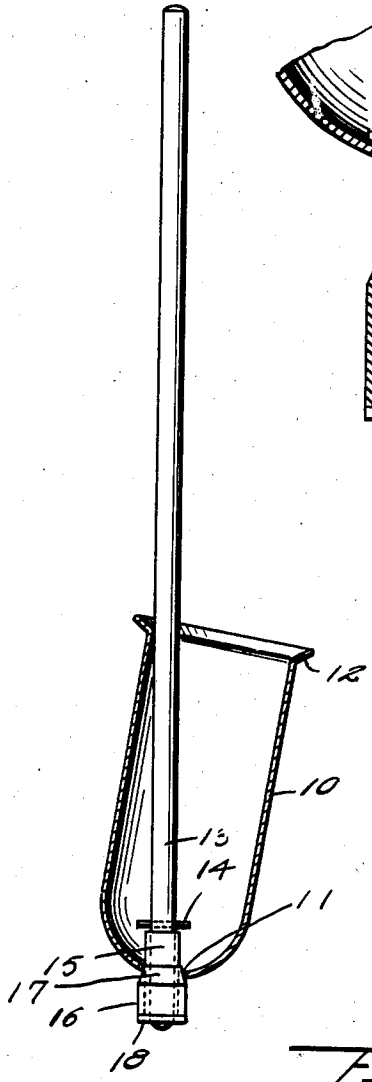


Fig. 4

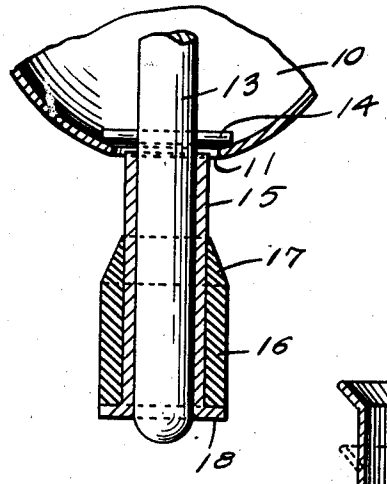


Fig. 2

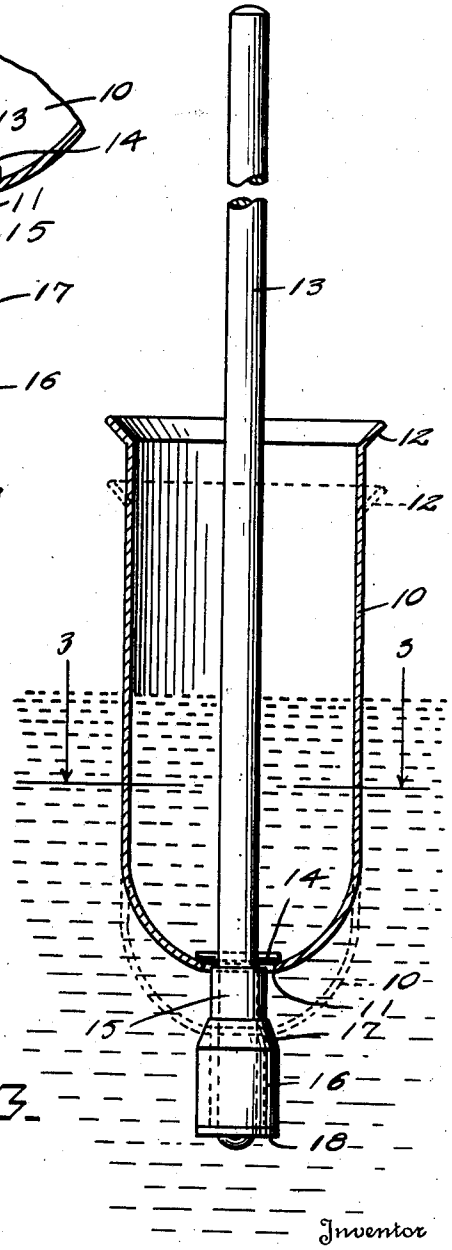
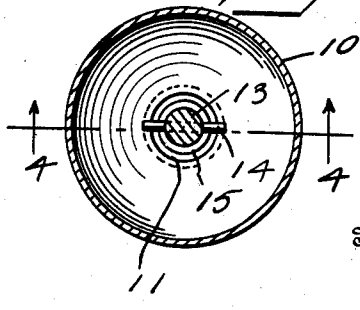


Fig. 3



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CREAM EXTRACTOR

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Application January 8, 1943, Serial No. 471,751

4 Claims. (Cl. 210—51.5)

This invention relates to a cream extractor.

It is particularly aimed to provide a construction which is exceedingly simple, wherein the parts are readily separable for cleaning so as to be maintained in a sanitary condition, and wherein the parts are held together frictionally, permitting ready separation.

The more specific objects and advantages in part will be pointed out and will otherwise become apparent from a consideration of the description following taken in connection with the accompanying drawing illustrating an operative embodiment.

In said drawing:

Figure 1 is a view of the device showing the cup or receptacle in central longitudinal section and the remaining parts in elevation;

Figure 2 is an enlarged view generally similar to Figure 1, with parts broken away, and with the closed position of the cup suggested in dotted lines;

Figure 3 is a cross-sectional view taken on the line 3—3 of Figure 2; and

Figure 4 is a detail vertical section taken approximately on the line 4—4 of Figure 3.

Referring specifically to the drawing wherein like reference characters designate like or similar parts, a cup or receptacle is provided at 10 which may be made of any suitable material such as metal or plastic. Centrally of the bottom, cup 10 has an opening 11, and at the upper edge such cup is preferably provided with outwardly extending marginal flange 12.

Loose with respect to the cup 10 and extending through the opening 11 is an operating rod or staff 13, of metal, wood, plastic, or other suitable material. A pin or abutment 14 is carried by the rod 13 and is adapted to engage the inner surface of the bottom wall of the cup in order to depress the latter into cream, to overcome the tendency of the cup to float on the latter.

Removably and frictionally fitted on the lower end of the rod 13 below the cup is a metallic or other sleeve 15, the diameter of which is less than the diameter of the opening 11. Surrounding and seated on the sleeve 15 is a tubular stopper 16, whose upper edge preferably is beveled as shown at 17. Said sleeve has an outwardly extending basal flange at 18, on which the stopper or valve 16 seats. The stopper or valve 16 is of rubber or other elastic material and it will be noted that the stopper is of greater diameter than the opening 11, so that the cup may seat thereon and at the edge of said opening 11 may engage surface 17 to close the cup.

It will be realized that to separate the staff or rod 13 from the cup a unitary sleeve 15 and stopper 16 are disengaged by sliding the same off of the lower end of the rod. In this condition all parts effectively may be washed or cleaned, following which they are reassembled as shown in the drawing with sufficient friction existing between the tube 15 and the stem, to hold the former onto the latter.

The device may be made in sizes for extracting cream at the top of milk bottles or in any desired size according to the size of the container from which the cream is to be extracted. It will be realized that the device is lowered into the cream while the rod 13 is manually held, the pin or abutment 14 engaging the cup to depress it forcibly, since its tendency is to float. Under such conditions cream enters the cup through the opening 11 and when the latter is sufficiently filled till the skimmed milk line has been reached, the rod 13 is lifted, which results in its moving relatively to the cup and engaging the stopper 16 at surface 17 in the opening 11 thus closing the cup against escape of cream and in such condition lifting it from the bottle or container, following which the cream in the cup 10 may be emptied therefrom by holding the flange 12 or other portion of the cup and lowering the rod 13 relatively thereto to uncover the opening 11 through which the cream flows to any desired receptacle or container. The foregoing operation will empty the topmost cream. To dip out the remaining portion of the cream it is necessary that the stopper 16 be pulled up into the opening 11 in the cup 10 so that when the cup is inserted into the bottle, the opening 11 will remain closed.

In this case, the cup 10 may be dipped down into the milk which is just below the cream and the remaining cream flows into the cup over its top edge thereby skimming off the balance of the cream. In this instance, neither the milk nor the cream can enter the cup through the opening 11 from below.

Various changes may be resorted to provided that they fall within the spirit and scope of the invention, for instance the sleeve or thimble may be dispensed with and the tubular stopper, placed directly on the lower end of the rod 13.

I claim as my invention:

1. A cream extractor comprising a receptacle having an opening in its bottom wall, a rod passing through said opening, a sleeve surrounding the rod and of less diameter than said opening and removable exteriorly of the receptacle over

the lower end of the rod, a stopper on the sleeve below the opening to coact therewith at times to close the opening, and abutment means on the rod spaced from the stopper arranged to contact the interior surface of said bottom wall on depression relatively thereto, said sleeve having an outwardly extending flange supporting said stopper.

2. A cream extractor comprising a receptacle having an opening in its bottom wall, a rod passing through said opening, a sleeve surrounding the rod and of less diameter than said opening, a stopper on the sleeve below the opening to coact therewith at times to close the opening, and abutment means on the rod spaced from the stopper arranged to contact the interior surface of said bottom wall on depression relatively thereto, said sleeve being in frictional engagement with the rod for removal exteriorly of the receptacle from the lower end of the rod.

3. A cream extractor comprising a receptacle having an opening in its bottom wall, a rod passing through said opening, a sleeve surrounding the rod and of less diameter than said opening, a stopper on the sleeve below the opening to coact therewith at times to close the opening, and abutment means on the rod spaced from the stopper arranged to contact the interior surface of said bottom wall on depression relatively thereto, said sleeve being in frictional engagement with the rod for removal exteriorly of the receptacle from the lower end of the rod, and said stopper being of elastic material frictionally gripping the thimble against movement relatively thereto.

4. A separator of the class described comprising a receptacle having an opening in its bottom wall, a rod passing through said opening, abutment means on the rod to engage the interior surface of the bottom wall of the receptacle, and closure means spaced from the abutment means and located exteriorly of the receptacle for engagement in said opening to close the same, the closure means being removable exteriorly of the receptacle over the lower end of the rod and held in place thereon by frictional engagement therewith.

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