

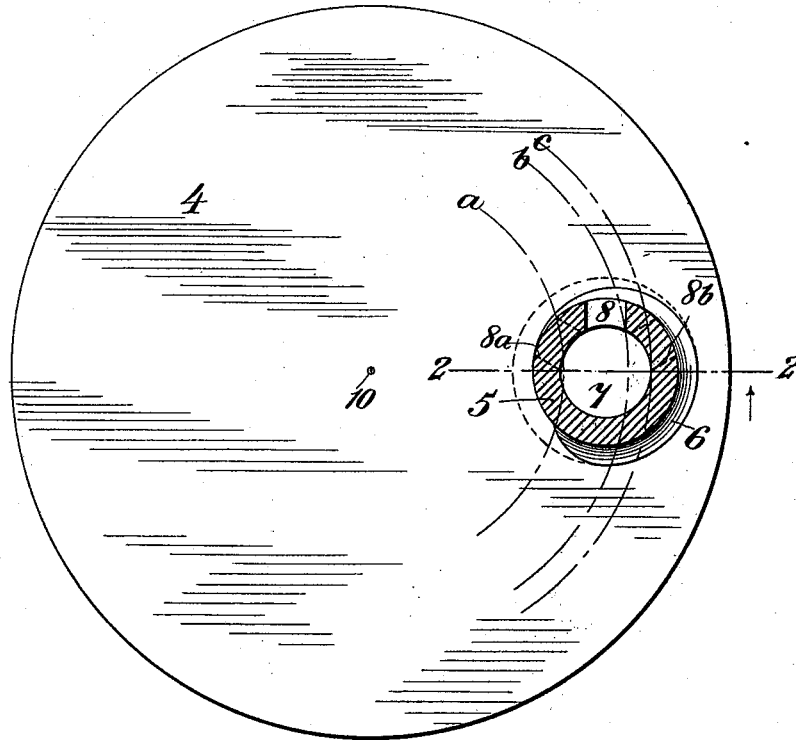
(No Model.)

G. M. ANDERSSON.  
CENTRIFUGAL CREAM SEPARATOR.

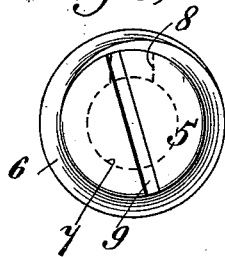
No. 522,281.

Patented July 3, 1894.

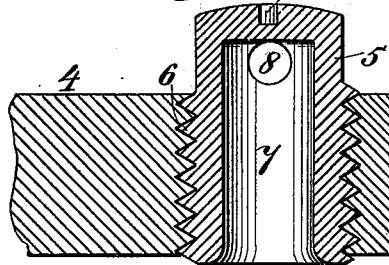
*Fig. 1,*



*Fig. 3,*



*Fig. 2,*



*Witnesses:-*

*D. H. Maynard*  
*Edwin Seger.*

*Inventor:-*

*Gustaf M. Andersson*  
*by Witter & Kenyon*  
*his Attys*

# UNITED STATES PATENT OFFICE.

GUSTAF M. ANDERSSON, OF NEWARK, NEW JERSEY, ASSIGNOR TO THE  
UNITED STATES BUTTER EXTRACTOR COMPANY, OF SAME PLACE.

## CENTRIFUGAL CREAM-SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 522,281, dated July 3, 1894.

Application filed January 5, 1894. Serial No. 495,795. (No model.)

*To all whom it may concern:*

Be it known that I, GUSTAF M. ANDERSSON, a subject of the King of Sweden and Norway, and a resident of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Cream-Outlets for Centrifugal Separating-Machines, of which the following is a specification, reference being had therein to the accompanying drawings, which form a part hereof.

My invention relates to centrifugal cream separating machines, and particularly to outlets for the cream in such machines.

It has for its object to provide an adjustable cream outlet adapted to be shifted nearer to or farther from the center of the bowl of the machine, so as to vary the density of the cream discharged from the separator which will have a wide range of movement and which will not agitate or churn the cream, and it consists of the devices hereinafter described and claimed in the claims of this specification.

Figure 1 is a plan of the cover or upper wall of the separator showing my improved plug mounted therein. Fig. 2 is a vertical section on the lines 2—2 of Fig. 1. Fig. 3 is a top view of my improved plug.

Like letters and numerals indicate corresponding parts in the different figures.

5 is a hollow plug, preferably screw-threaded. It is mounted in one of the walls of the separator bowl. The inner end of this plug is made flush or substantially so with the inner edge of the separator wall, but the outer end of the plug projects slightly outward from the outer surface of the separator wall. As shown in the drawings it is screw-threaded and is mounted in a screw-threaded orifice 6 in the cover or upper wall 4 of the separator. This plug could, if desired, be mounted in other walls of the bowl.

7 is the central hollowed-out portion of the plug, and as shown in the drawings it extends to the lower end of the plug so as to communicate with the interior of the bowl of the separator, but terminates near the upper end of the plug, this portion of the plug being closed. 7 therefore forms a hollow tube closed at one end within the plug 5. Near the upper end of the hollow tube 7 an opening 8,

preferably at right angles to the line of the tube 7, extends from the tube 7 through the wall of the plug 5, furnishing an outlet for the discharge of cream from the bowl. The plug 5 is made so as to be capable of rotating on its axis. This can be accomplished in any suitable manner as by means of a screw driver and slit 9 as shown in the drawings. As the plug 5 is rotated on its axis, the position of the opening 8 is shifted either toward or away from the center of the separator bowl 10. Three different positions of this opening 8 are shown in Fig. 1, represented by the numerals 8<sup>a</sup>, 8<sup>b</sup>, the two latter positions being indicated by dotted lines. Accordingly, the opening 8 as it shifts toward or away from the center, will discharge the cream from the separator bowls at points varying in distance from the center of the bowl, and the cream will accordingly be varied in density as it is discharged from the different points, being thicker when discharged at a point nearer the center, and thinner when discharged from a point farther away from the center. The concentric arcs of circles *a*, *b*, *c* shown in Fig. 1 (having the center 10 as their common center) represent substantially the position of the cream while in the three different positions of the opening 8 represented by the numerals 8<sup>a</sup>, 8 and 8<sup>b</sup> respectively.

As no part of my improved plug projects into the space within the separator drum, there is no tendency to agitate or churn the cream. This construction also permits of the use of tubes of greater diameter than can be employed where the cream outlet tube projects within the periphery of the bowl or drum of the separator, as in my device there is no impingement of the cream against the sides of the plug. A greater range of movement of the opening 8 nearer to or farther from the bowl is thus permitted.

My improved device is an improvement upon an adjustable cream outlet for centrifugal separating machines invented by me, and for which simultaneously herewith I have made another application which application was filed January 5, 1894, and is known by the Serial No. 495,794.

My improved device described in this application has certain advantages over the de-

vice shown and described in my said application, among which are the following: The opening 8 being preferably horizontal or substantially so, delivers the cream more readily and in better condition into the cream receiving pan; moreover, my improved device not having any opening cut through the threads of the plug or the bowl, or through the side of the plug, is not as liable to occasion leaks, and a better and tighter joint is formed between the plug and the wall of the bowl in which it is mounted.

The drawings in the above description represent the preferred form of my device, but my improvement may be varied in its details without departing from my invention. Thus the plug 5 and the orifice 6 instead of being threaded could be made without threads.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a centrifugal cream separator a rotatable plug mounted in the wall of the bowl, having its inner end within the wall of the bowl and its outer end projecting outside the separator wall, a hollowed out portion within said plug communicating at its inner end with the interior of the bowl of the separator and closed at the outer end, and a horizontal opening in the wall of the outer end of the plug, communicating with the hollowed out portion of the plug for the discharge of the cream, whereby when the plug is rotated the opening for the discharge of cream will be

35 moved farther from or nearer to the center of the bowl, substantially as set forth.

2. In a centrifugal cream separator a rotatable screw-threaded plug mounted in a screw-threaded orifice in a wall of the bowl, having its inner end within the wall of the bowl and its outer end projecting outside the separator wall, a hollowed out portion within said plug communicating at its inner end with the interior of the bowl of the separator and closed at the outer end, and a horizontal opening in the wall of the outer end of the plug, communicating with the hollowed out portion of the plug for the discharge of the cream, whereby when the plug is rotated the opening for the discharge of the cream will be moved farther from or nearer to the center of the bowl, substantially as set forth.

3. In a centrifugal cream separator a rotatable plug 5, mounted in the wall 4, of the bowl, and having its inner edge flush with the inner edge of the wall 4 and its outer edge projecting outward beyond the outer surface of the wall 4, a hollowed out portion 7 closed at its upper end and communicating at its lower end with the interior of the bowl, and an opening 8 through the projecting portion of the plug 5 for the discharge of the cream, substantially as set forth.

GUSTAF M. ANDERSSON.

Witnesses:

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ASHER MAYER.