

No. 892,913.

PATENTED JULY 7, 1908.

P. T. SUNDBERG.
CENTRIFUGAL CREAM SEPARATOR.
APPLICATION FILED AUG. 14, 1906.

2 SHEETS—SHEET 1.

FIG. 1.

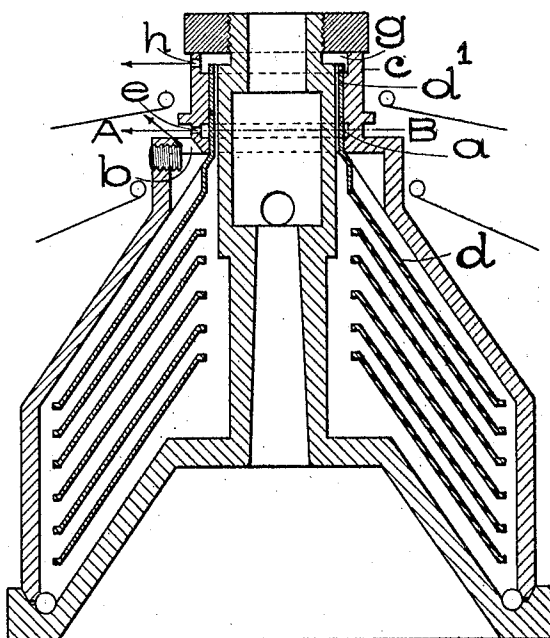
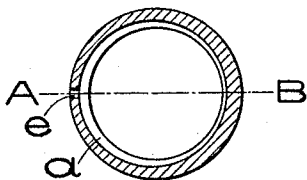


FIG. 2.



Witnesses:
L. H. Hennicke
J. Dittmar

Inventor
P. T. Sundberg
by G. Littman
Attorney.

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2 SHEETS—SHEET 2

Fig. 3.

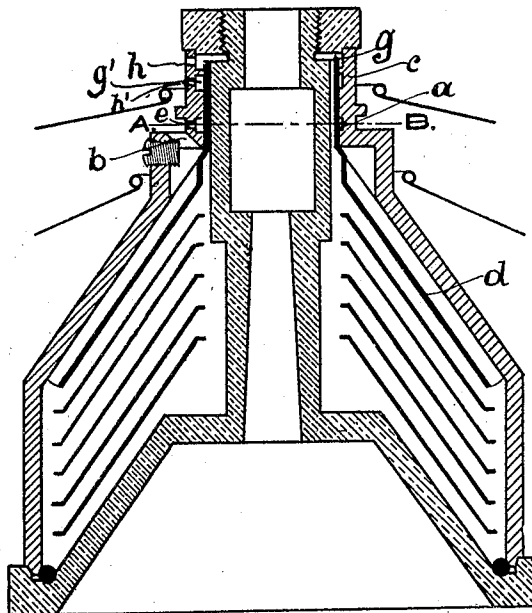


Fig. 4.

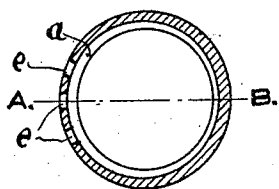
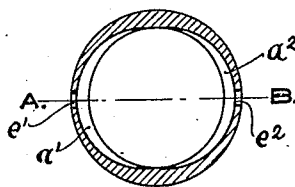


Fig. 5.



Witnesses:
Gen. Heinicke
F. Dümmar

Inventor
P. T. Sundberg
by G. Dittmar,
attorney.

UNITED STATES PATENT OFFICE.

PER TEODOR SUNDBERG, OF STOCKHOLM, SWEDEN, ASSIGNOR TO EXPRESS SEPARATO
EMIL G. LIND & CO., OF STOCKHOLM, SWEDEN.

CENTRIFUGAL CREAM-SEPARATOR.

No. 892,913.

Specification of Letters Patent.

Patented July 7, 1908.

Application filed August 14, 1906. Serial No. 330,573.

To all whom it may concern:

Be it known that I, PER TEODOR SUNDBERG, a citizen of the Kingdom of Sweden, residing at Sibyllegatan 46-48, in the city of Stockholm, Sweden, have invented a new and useful Improvement in Centrifugal Cream-Separators, of which the following is a specification.

My invention relates to improvements in centrifugal cream separators, and the object of my improvement is to facilitate the escape of the separated fluids so as to prevent their leaking and mixing within the bowl. I attain this by using outlet or outlets placed at the deepest point in one or more eccentric grooves or in one or more eccentric parts of a groove or grooves.

In the accompanying drawings Figure 1 is a vertical section of a centrifugal machine constructed according to this invention. Fig. 2 is a horizontal section on the line A-B, Fig. 1. Fig. 3 is a similar section as shown by Fig. 1 but illustrates an additional eccentric groove g' with outlets h' for the cream. Fig. 4 shows in cross-section the part of the neck provided with an eccentric groove having more than one outlet. Fig. 5 shows a section with a groove having two eccentric parts with outlet at the deepest point is to say the most eccentric point in each part.

The heavy fluid arises outside the cover-plate d and escapes through the hole b . The light fluid arises inside the neck d' of the cover-plate d and is above the upper edge of said neck thrown outwards into an eccentric groove g , formed on the inside of the neck c of the bowl. At the deepest point of this groove one or more outlets h are formed. Owing to the high speed of the bowl the cream will gather in the deepest part of the groove, where the outlet or outlets are situated and thus be caused to escape quickly, so as to not fill the groove and leak down inside the neck c , that is to say through the joint between the parts c and d' . These parts are not tightened by gaskets the joint is merely formed by closely fitting metal against metal so that when the separator is

at rest liquid matter might settle in between the parts. To avoid effectively a mixing of the cream with the milk a second groove a is provided on the inside of the neck c close above the skim-milk outlet b having one or more outlets e at the deepest point. If the skim-milk should under the pressure of the high speed arise inside the neck c it will enter the groove a and flow towards the deepest point of it, where it is thrown out through the hole or holes e and cannot rise up to the groove g so as to mix with the cream.

Instead of using grooves of the form shown in Fig. 2 I can use concentric grooves having one or two or more eccentric parts with outlet or outlets at the deepest point of each such part. This is illustrated in Fig. 5 which shows two eccentric parts a' a'' with outlets e' e'' . I can also arrange the main skim-milk outlet in an eccentric groove or in an eccentric part of a groove. And I can use one or more grooves between the skim-milk outlet end of the cream-outlet with additional outlet or outlets in said groove or grooves. Thus in Fig. 3 an additional eccentric groove g' with outlet h' is shown situate between the grooves a and g .

It is obvious that this invention may be applied to all kinds of centrifugal cream separators. The construction shown in the drawing should be considered only as an example.

Having thus described my invention, what I claim is:

In a centrifugal cream separator, a bowl having its neck provided with collecting grooves for the cream and milk in the inner walls of said neck, said collecting grooves being eccentric to the axis of rotation and having outlets at the deepest, that is to say, the most eccentric point, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

PER TEODOR. SUNDBERG.

Witnesses:

CARL FRIBERG.

L. ROWELL.