No. 656,423. Patented Aug. 21, 1900.

E. G. N. SALENIUS.

CENTRIFUGAL CREAM SEPARATOR.

(Application filed Dec. 29, 1897.)

(No Model.)

Fig: 1.

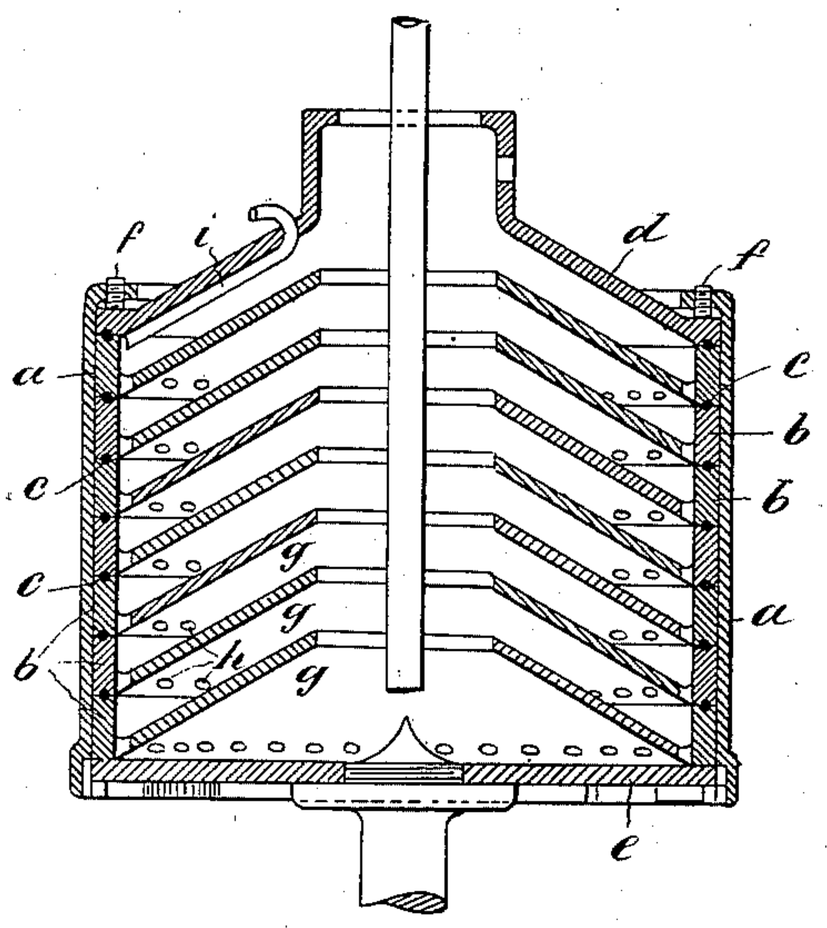


Fig: 3.

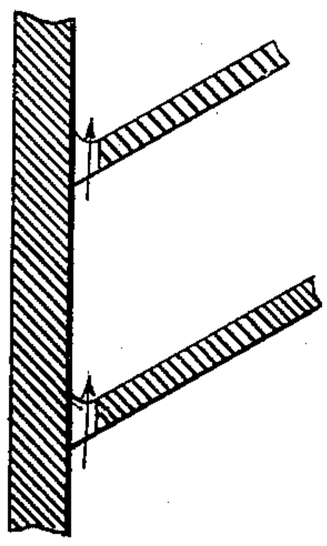
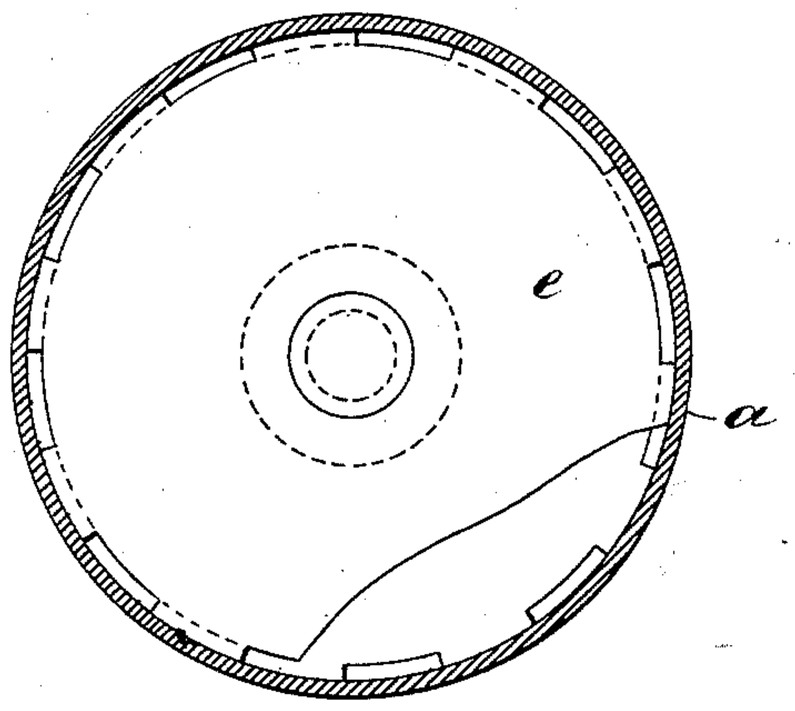


Fig: 2.



WITNESSES:

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ERIK GUSTAF NICOLAUS SALENIUS, OF ALBANO, SWEDEN, ASSIGNOR TO THE AKTIEBOLAGET RADIATOR, OF SAME PLACE.

CENTRIFUGAL CREAM-SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 656,423, dated August 21, 1900.

Application filed December 29, 1897. Serial No. 664,420. (No model.)

To all whom it may concern:

Be it known that I, ERIK GUSTAF NICOLAUS SALENIUS, a subject of the King of Sweden and Norway, and a resident of Albano, in the Kingdom of Sweden, have invented certain new and useful Improvements in Centrifugal Vessels or Drums, of which the following is a specification.

This invention relates to the drums or vessels used in centrifugal machines; and the object of the invention is to improve the construction of vessels of this class which have interiorly-arranged rings carrying conical deflecting-plates.

An embodiment of the invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a vertical axial section of a centrifugal vessel embodying my improvements; and Fig. 2 is a horizontal section of the same, taken just above the bottom thereof. Fig. 3 is an enlarged sectional detail view of one of the rings, illustrating the manner of supplying one ring with more than one conical plate.

In carrying out my invention in its preferred form I employ a cylinder or drum *a*, which is relatively thin and of substantially-uniform thickness from bottom to top, said drum having at its top an inturned flange or lug to receive screws *f* and a bayonet-fastening at the bottom, Fig. 2, for securing in it the removable bottom *e*. This drum has a cover *d*, the ring-flange of which takes under the top flange on the drum *a*. The drum *a* may be inverted, the cover *d* put in place, then a series of rings *b* put in place, which extend the entire depth of the drum from cover to bottom, then the bottom *e* put in place and secured, and finally the screws *f* may be driven down or in upon the ring-flange of the cover *d*, so as to press the rings *b* tightly together. The superposed rings *b* fit snugly within the drum *a* and have between them, as also between the terminal rings and the bottom *e* and cover *d*, packing-rings *c*, of suitable material to form tight joints. On each ring *b* is a deflecting-plate *g* of a known conical form, and in the plate *g*, adjacent to the point where it springs from the ring *b*, are apertures *h* for the upward flow of the skim-milk to the outlet-pipe *i*. Obviously each ring *b* may carry more than one plate *g*, as seen in Fig. 3, which shows two concavo-convex plates on one ring. This construction provides an inner wall to the drum *a* made up of the rings *b* and reinforcing the outer wall of the drum, which may be relatively quite thin. The advantage of the construction resides in the fact that the inner wall of rings resists the internal pressure and is economical to construct, while the wall of the drum proper, *a*, may be made much thinner than usual, and consequently at much less cost.

Having thus described my invention, I claim—

1. In a centrifugal vessel, the combination with a relatively-thin outer drum *a*, of uniform thickness from top to bottom, of a series of rings *b* which fit into said drum and are superposed, extending from the bottom to the cover of the drum and forming an inner reinforcing-wall therefor, the plates *g* on said rings, packing between said rings, and means for pressing the rings *b* firmly together, substantially as set forth.

2. In a centrifugal vessel, the combination with the relatively-thin drum *a*, having a wall of substantially-uniform thickness from top to bottom, of the rings *b*, fitting into said drum and superposed, the plates *g* on said rings, the packing *c* between said rings, the cover *d*, having a ring-flange which rests on the top ring *b*, and the clamping-screws *f*, which are driven down through inturned flanges on the drum onto said ring-flange of the cover, substantially as set forth.

3. In a centrifugal vessel, the combination with a relatively-thin drum *a*, of substantially-uniform thickness from top to bottom, and having inturned flanges at its top to receive the screws *f*, the said screws, the cover *d*, and the removable bottom *e*, of the series of rings *b*, superposed within the drum and extending therein from the bottom to the cover so as to form a reinforcing-wall for the drum, and the plates *g*, carried by said rings, substantially as set forth.

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

ERIK GUSTAF NICOLAUS SALENIUS.

Witnesses:
ERNST T. SVANQVIST,
E. HERMANSSON.