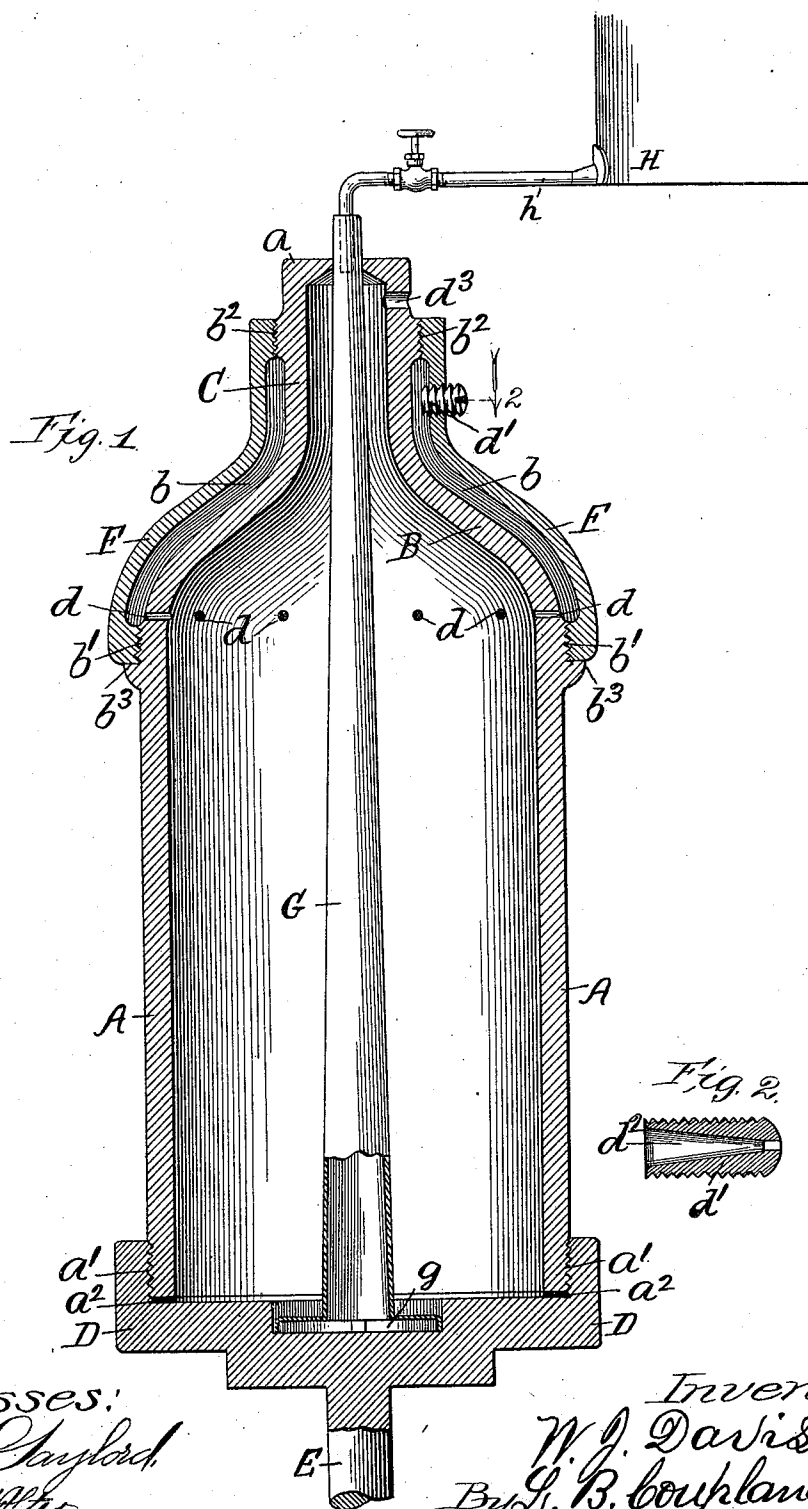


(No Model.)

W. J. DAVIS.
CENTRIFUGAL CREAM SEPARATOR.

No. 574,888.

Patented Jan. 12, 1897.



Witnesses:
Chas. E. Clifford,
Lute J. Allen

Inventor:
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By L. B. Coupland & Co.
Attys

UNITED STATES PATENT OFFICE.

WILLIAM J. DAVIS, OF CHICAGO, ILLINOIS.

CENTRIFUGAL CREAM-SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 574,888, dated January 12, 1897.

Application filed June 19, 1895. Serial No. 553,308. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. DAVIS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Centrifugal Cream-Separators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in that class of devices used in the process of mechanically creaming milk, and has for its object to provide a creaming bowl or vessel embodying features that will increase the creaming capacity without proportionately enlarging the dimensions thereof, and also greatly facilitate the process of cleaning.

In the drawings, Figure 1 is a vertical section of a separator-bowl embodying my improved features, and Fig. 2 a longitudinal section of a plug having a milk-escape passage therethrough.

A represents a separator-bowl, which is preferably of a cylindrical form from the lower end upwardly for a greater proportion of its length, as shown, then gradually contracting, so as to present a sloping breast-wall B, and finally terminating in a neck part C of a uniform diameter having an integral cap end *a*. Thus the bowl proper is formed in a single piece excepting the bottom D, which is detachably secured to the lower end thereof. The driving-spindle E (shown broken away) may or may not form an integral part of the bottom. The bottom is secured to the bowl by a threaded connection *a'*, but it is obvious that it may be removably attached in any suitable manner. One of the objects in having the bowl and its bottom separable is to facilitate the process of cleaning, for it will readily be seen that free access may be had to the interior of the bowl by detaching the same from its bottom. A flexible packing-ring or gasket *a''* insures a tight joint.

The upper part of the bowl is inclosed by a detachable jacket F of a greater diameter and forming an annular space or chamber *b* between the interior wall of the jacket and the exterior surface of the bowl covered thereby. The lower end of the jacket has a threaded

engagement with the bowl, as at *b'*, and the upper end with the exterior neck part, as at *b''*. The bowl is provided with an annular exterior shoulder *b''*, forming a close bearing or joint for the abutting surface of the removable jacket.

The bowl is provided with a number of perforations *d*, disposed at intervals around the circumference of the same and which open out into the chamber between the exterior surface thereof and the interior wall of the inclosing jacket and provide for the outflow of the blue milk into said chamber, from which it is discharged through the screw-plug *d'*, having a passage *d''* longitudinally therethrough. This screw-plug is inserted through the wall of the jacket and stops short in the blue-milk chamber. The working capacity of the bowl may be varied and regulated by turning the screw-plug in or out, so as to diminish or increase the distance between the receiving end thereof and the adjacent neck-wall of the bowl.

The cream separated from the milk flows to the center and rises up into the neck part and is discharged therefrom through an orifice *d''*, opening out from the upper end of the bowl. This jacket is of a contour corresponding to that part of the bowl which it incloses, and may be conveniently disengaged therefrom for cleaning or other purposes. A milk-tube G is inserted longitudinally in the bowl, the upper (receiving) end projecting through an aperture in the top and the lower (discharge) end opening into an annular recess *g* in the bottom, so that the milk is uniformly distributed to the creaming-surface.

It may represent a reservoir or receptacle from which the full milk is conducted through a pipe *h* into the receiving-tube. This arrangement presents a bowl that is simple in construction and which can be conveniently taken apart or put together without the possibility of getting the same out of balance.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a separator-bowl, having an integral upper closed end perforated for the insertion of a milk-receiving tube, of a jacket, detachably secured to and inclosing the upper end of said bowl and pro-

viding an annular space or chamber between the adjacent surfaces, and the series of apertures, opening into said space through the wall of the bowl, substantially as described.

- 5 2. The combination with a separator-bowl, having an integral contracted upper end, of a jacket, detachably secured to and inclosing the contracted upper end of said bowl with an annular chamber therebetween, a series
10 of apertures, leading from the bowl into said chamber, and a regulating screw-plug, in-

serted through said jacket and stopping short in said chamber and having a passage there-through for the escape of the blue milk, substantially as described.

In testimony whereof I affix my signature
15 in presence of two witnesses.

WILLIAM J. DAVIS.

Witnesses:

L. M. FREEMAN,
L. B. COUPLAND.