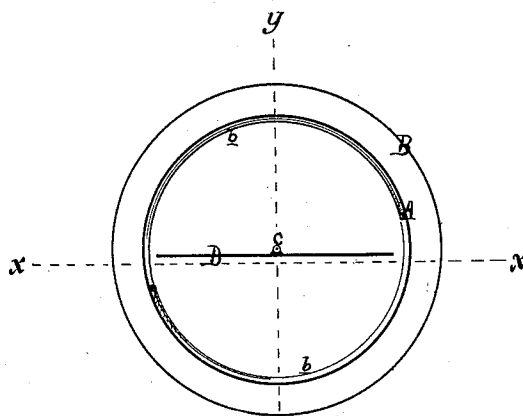
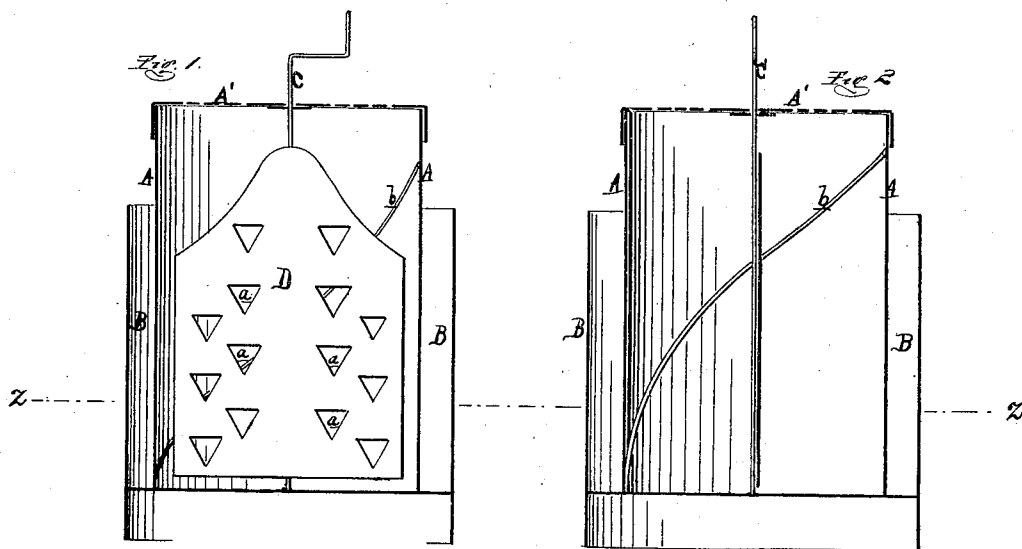


J. SPRINGER.

Improvement in Churns.

No. 128,512.

Patented July 2, 1872.



ATTEST:
H. S. Sprague
Oliver J. Smith

INVENTOR:
John Springer
Per Atty-
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UNITED STATES PATENT OFFICE.

JOHN SPRINGER, OF CLINTON, WISCONSIN.

IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. 128,512, dated July 2, 1872.

To whom it may concern:

Be it known that I, JOHN SPRINGER, of Clinton, in the county of Rock and State of Wisconsin, have invented a new and useful Improvement in Churns; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon and being a part of this specification, in which—

Figure 1 is a vertical section of my churn, showing the dash in side elevation on the line *xx* in Fig. 3. Fig. 2 is a similar section on the line *yy* in Fig. 3, showing the dash in cross-section; and Fig. 3 is a horizontal section on the plane *zz* in Figs. 1 and 2.

Similar letters of reference indicate corresponding parts in the several figures.

The nature of this invention relates to an improvement in that class of churns which are provided with rotary dashers for breaking up the fatty globules of the cream and effecting the separation of the butter; and has for its object the speedy completion of the process by the means employed for that purpose. The invention consists in the peculiar construction of the rotary dash, and in connection therewith the arrangement, within the churn, of two spiral cream-breakers.

In the drawing, A represents the body of the churn, closed at the top by a cover, A', and surrounded with a water-jacket, B. C is a dash-shaft, its lower end journaled in a step at the bottom of the churn-body, while its upper end rotates in a bearing in the cover, through

which it projects, and is provided with a crank by which it may be rotated; or by suitable gearing it may be rotated at a higher velocity. D is the dash, being a plate of wood or metal, whose breadth is a little less than the diameter of the churn, and is perforated with numerous triangular apertures, *a*. To the interior of the churn are secured two spiral cream-breakers, *b*, each making a half convolution, but in opposite directions.

When the cream is placed in the churn, if, on examination or test by the thermometer, it should not be of the proper temperature, the jacket may be filled with warm or cold water to raise or lower its temperature to the proper point. As the dash is revolved through the cream the latter is violently agitated, and deflected in opposite directions at the periphery, by the breakers *b*, and broken up by passing through the openings in the dash, so that the process of separating the fatty matters is very much expedited.

It will be noticed that every part of the churn is accessible for cleansing after use.

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

The construction and arrangement, with relation to the churn A and cover A', of the spiral cream-breakers *b* and the shaft C carrying the perforated dash D, in the manner and for the purpose set forth.

JOHN SPRINGER.

Witnesses:

D. G. CHEEVER,
R. W. CHEEVER.