(No Model.)

S. D. FRY & J. R. HAMILTON.

CHURN.

No. 525,980. Patented Sept. 11, 1894.

Fig. 1.

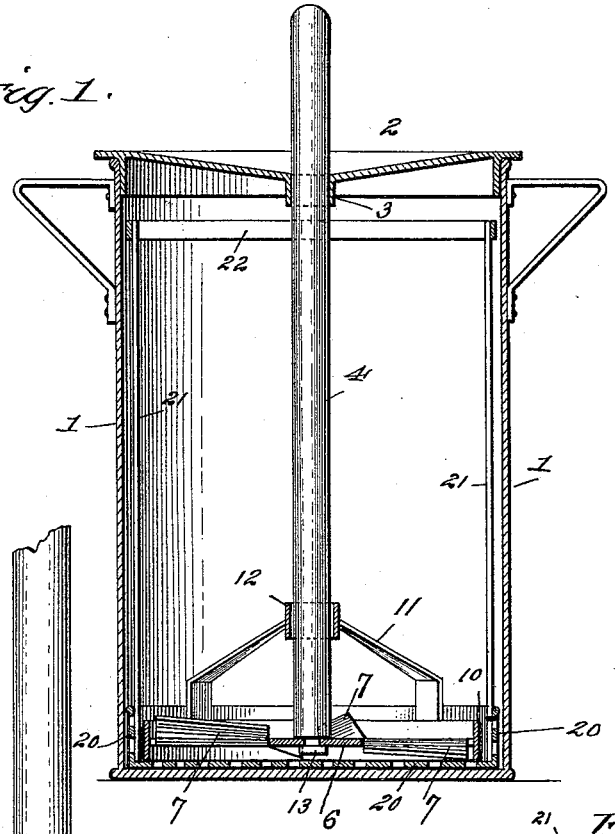


Fig. 2.

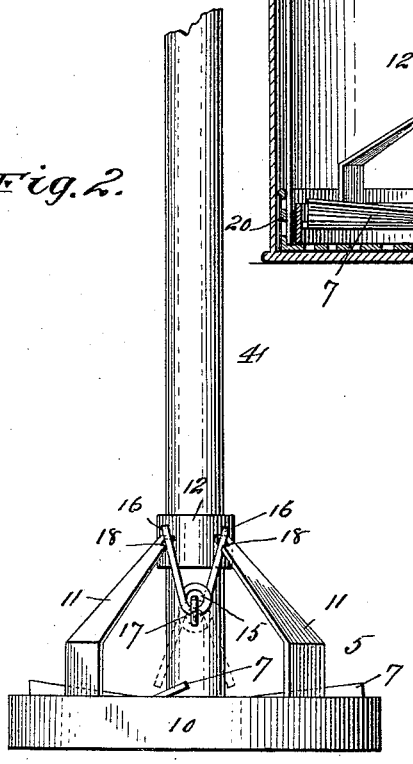
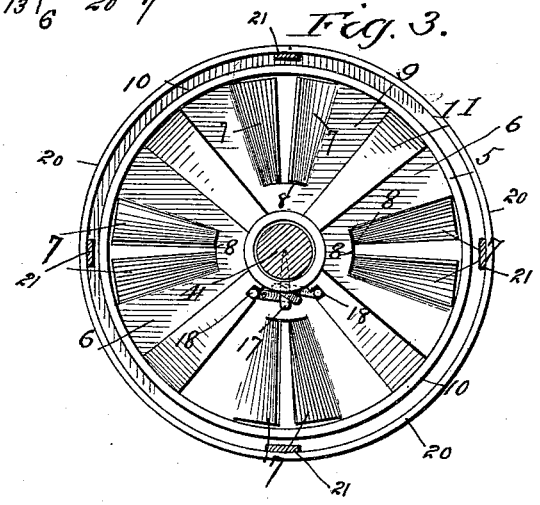


Fig. 3.



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UNITED STATES PATENT OFFICE.

STEPHEN D. FRY AND JOHN R. HAMILTON, OF ATTICA, INDIANA.

CHURN.

SPECIFICATION forming part of Letters Patent No. 525,980, dated September 11, 1894.

Application filed March 8, 1894. Serial No. 503,212. (No model.)

To all whom it may concern:

Be it known that we, STEPHEN D. FRY and JOHN R. HAMILTON, citizens of the United States, residing at Attica, in the county of Fountain and State of Indiana, have invented certain new and useful Improvements in Churns, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to a new and improved churn, and it has for its objects to provide a simple and efficient means for producing the butter from the cream; for collecting the butter when formed; and for raising it out of the churn when collected.

The invention consists of the novel combination and arrangement of parts hereinafter described and particularly set forth in the claims appended.

In the drawings:—Figure 1 is a vertical sectional view of the churn. Fig. 2 is a side elevation of the churn dasher; and Fig. 3 is a plan view thereof.

Referring to the various parts by numerals, 1 designates the churn-body, which is cylindrical, and is formed of suitable metal such as tin or other sheet metal. 2 is the cover therefor, which is dished or concave on its upper surface and is provided at its center with a short depending tube 3 through which the vertical dasher-shaft 4 passes. The upper end of this dasher-shaft extends a suitable distance above the cover 4 to provide a suitable hand-hold, and at its lower end it carries the dasher-head 5. This dasher-head consists of a horizontal disk 6 of sheet metal which is formed with a suitable number of radial cuts that extend from its outer edge inwardly a suitable distance, said cuts terminating short of the center of said disk. The metal on one side of each of these radial cuts is bent upwardly, while the metal on the other side of each of said cuts is bent downwardly, thus forming a series of alternating wings 7. As is manifest, as many of these cuts as are desired may be formed in said disk.

At the inner ends of the radial cuts in the disk 6 suitable cuts 8 are made to form the inner ends of the wings 7; and a flat horizontal portion is left between each pair of wings, as shown at 9.

A rim 10 is secured around the outer circular edge of the disk 6, the lower edge of said rim or ring extending slightly below the lower edge of the depending wings 7 in order to protect said wings from injury by preventing them coming into contact with the bottom of the churn. Extending upwardly from this ring and being suitably disposed around it, are a suitable number of braces 11. These braces converge at their upper ends and support between them, centrally over the disk 6, a short vertical tube 12, to the outer side of which said upper ends are rigidly secured. The dasher-shaft 4 passes loosely through this tube 12 and is loosely secured to the disk 6 by a headed bolt 13 which passes through a central aperture in said disk and upwardly into the lower end of the said shaft. By reason of this loose connection of the dasher-head 5 with the shaft 4, and the alternating wings 7, said dasher-head will revolve in one direction when it is being raised, and in the opposite direction when being forced down through the cream and will thereby produce a great agitation of the cream which will produce the butter in a very short time.

As it is desirable to lock a revoluble dasher against rotation in order to collect the butter before raising it out of the churn we have provided a simple and efficient lock which consists of a piece of spring wire bent to form the eye 15 and two diverging spring arms 16. A staple 17 loosely secures the lock to the dasher-shaft by passing through the eye 15 and into the dasher-shaft close to the short tube 12, and preferably below said tube, and in such a position that the arms of the lock may be sprung into notches 18 formed in the adjacent edges of two adjoining braces 11. When said arms are sprung into the notches 18, the dasher-head will be securely locked against rotation.

In order to raise the butter from the churn we provide a shallow perforated receptacle 20, which fits the interior of the churn and rests on the bottom thereof. Extending upwardly from this receptacle, and by means of which the receptacle is raised, are a suitable number of bars 21, and these bars are connected at their upper ends by a ring 22. These bars also form guards which prevent the dasher-head from striking the sides of the churn when in operation.

Having thus fully described our invention, what we claim is—

1. A churn-dasher consisting of a shaft, a rotatable dasher-head secured to the lower end thereof, and a spring-catch secured to the dasher-shaft and adapted to engage the dasher-head and temporarily lock it against rotation on the shaft, substantially as described.

2. A churn-dasher consisting of a shaft, a rotatable dasher-head secured to its lower end, upwardly extending braces secured to said dasher head, a tube 12 supported by said braces and through which the dasher shaft passes, and a spring catch secured to the dasher-shaft and adapted to engage the braces of the dasher-head, substantially as described.

3. A churn-dasher consisting of a shaft, a rotatable dasher-head secured to its lower end, upwardly extending braces secured to said dasher-head, a tube 12 supported by said braces and through which the dasher shaft passes, and a spring catch secured to the dasher-shaft and adapted to engage the braces of the dasher-head, said catch consisting of spring-wire bent to form the spring-arms 16 and the eye 15, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

STEPHEN D. FRY.
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Witnesses:
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