J. S. Lewis,

Churn.

No. 103898. Patented June 7. 1870.

FIG. 2.

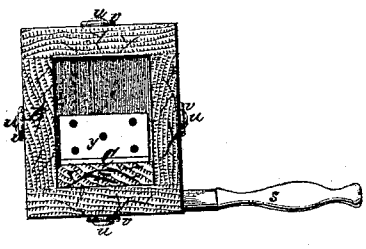
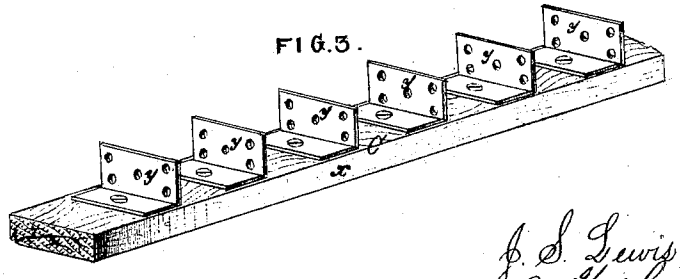


FIG. 1.

FIG. 3.



Witnesses
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JOHN S. LEWIS, OF ELKPORT, IOWA.

Letters Patent No. 103,898, *dated June 7,* 1870.

IMPROVEMENT IN CHURNS.

The Schedule referred to in these Letters Patent and making part of the same.

I, JOHN S. LEWIS, of Elkport, in the county of Clayton and State of Iowa, have invented an Improved Churn, which is described as follows—

Nature and Objects of the Invention.

My improved churn consists of a long tubular receptacle provided with one or more removable ends, and a "rifle" or agitator of peculiar construction, and a central, pivotal support for such receptacle. It operates by said receptacle being rocked on its pivots, causing the cream to rush from end to end through the rifle or agitator.

The improvements consist in the employment or use of a novel form of agitator, adapted to be readily removed, and in a superior construction of the receptacle proper, securing greater efficiency.

General Description.

In the accompanying drawing—

Figure 1 is a sectional perspective view of my improved churn.

Figure 2, a transverse section, on an enlarged scale, of the receptacle thereof.

Figure 3, a perspective view, on the same scale as fig. 2, of a portion of the agitator detached.

A, in fig. 1, may represent a frame of suitable form.

B is a tubular box, pivoted centrally, *z*, in the frame A, and forming the receptacle of the apparatus.

C is an agitator or rifle for arrangement in the receptacle B, as represented in figs. 1 and 2, to break the globules of the cream and collect the butter, being composed of a number of perforated plates, *y*, attached to a base, *x*, which is adapted to extend from end to end of the receptacle, and be secured thereat, said plates being so disposed as to extend across the receptacle, and to project half way, more or less, to its top.

The receptacle B is made of about sixteen times its width in length, and is preferably rectangular in form, as shown, to facilitate its construction and the application of the proposed form of agitator. Its great length relatively to its width enables this construction, and is found further to improve the operation of the churn.

One or both of the ends or heads *w w* of the receptacle B are made removable, as represented, to give access to its interior, being secured in place by hooks *v* and studs *u*, or their equivalents; both being removable, as shown, greater facility for cleaning is afforded. They may preferably be hinged.

Pins *t* or their equivalent, on the inner sides of the ends *w* of the receptacle, may hold the agitator C down.

A pair of handles, *s s*, on one side of the receptacle, enables its oscillation. A central perforation or mouth, *r*, in the top of the receptacle, furnishes means for introducing the cream and for the admission of air, being provided with a suitable plug or valve, if necessary.

The proposed dimensions of the apparatus are as follows: height of frame A, three feet; distance of handles *s* apart, three feet, each being eighteen inches from the pivot *z* of the receptacle; receptacle, four feet by three inches, or eight feet by six inches.

Wood is preferably employed, as far as applicable, in the manufacture. The remaining parts may be made of any suitable material.

Operation.

The operation of the churn is as follows:

The parts all being in position, the cream is introduced into the receptacle through the mouth *r*, by means of a funnel. The receptacle may be filled about half full. The operator then takes his position behind the apparatus, taking one of the handles *s* in each hand, and slowly oscillating the receptacle by pressing down and lifting, alternately, with his respective hands. As the respective ends of the receptacle are elevated the cream is made to rush into the other, over and through the beaters *y*, and is thus most rapidly and effectively agitated, and the deposit of the butter secured.

On the operation being finished, which may be ascertained by test, one of the ends *w* is removed, and the milk poured off. The agitator C is then withdrawn, bringing out the butter, which is removed from its plates in usual manner. The remaining end *w* may then be removed, and the interior of the receptacle scalded and cleansed.

Claim.

I claim as new—

The combination of the tubular receptacle B *r s t w* and the rifle or agitator C *y x* with each other and with the pivotal frame A, and the construction and arrangement of the said receptacle and rifle, as herein represented and described, for the purposes set forth.

J. S. LEWIS.

Witnesses:

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