O. B. LOOMIS.

Churn.

No. 7,247. Patented April 2, 1850.

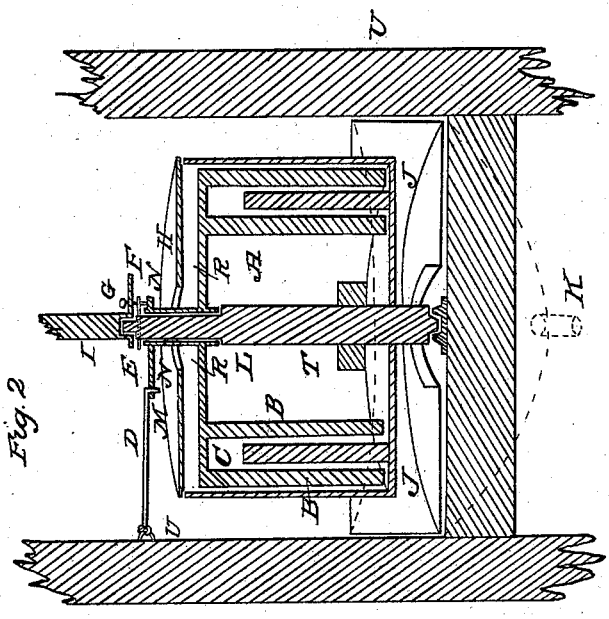

Fig. 2

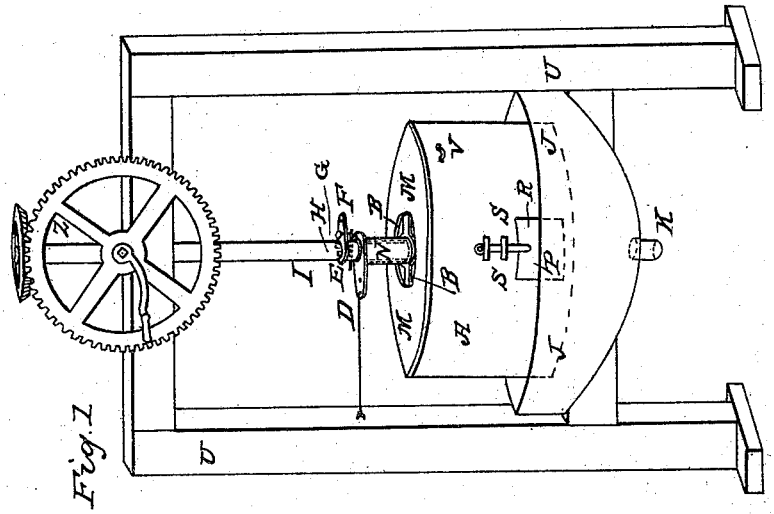

Fig. 1

Inventor
Obrit B Looms

UNITED STATES PATENT OFFICE.

OSBERT B. LOOMIS, OF WINDSOR, CONNECTICUT.

ROTARY CHURN.

Specification of Letters Patent No. 7,247, dated April 2, 1850.

To all whom it may concern:

Be it known that I, OSBERT B. LOOMIS, of Windsor, in the county of Hartford and State of Connecticut, have invented a new and useful Machine, called "Centrifugal Churn and Buttermilk-Extractor," for the purpose, first, of producing butter from milk or cream; second, of separating the buttermilk and extracting it from the butter; third, of salting the butter and also for cleansing rancid butter; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a perspective view of the churn as when ready for use. Fig. 2, is a sectional plan, showing the internal arrangement.

Fig. 1, letter A represents the churn closed ready to be set in motion by the power applied to the gearing 2. J, the outside casing or dripping-pan to receive the buttermilk and discharge it at an aperture K. The outside of this dripping-pan J, comes above the top of the doors P, its bottom runs obliquely down to convey the buttermilk to the aperture K, where it runs out into anything placed to catch it.

M, is the cover, which may be cut in half to be easily taken off and put on. N, the part of the arms B, (to be described under letter B, Fig. 2,) which encircles the shaft L, on which the arms B, revolve while the shaft L, turns the churn A.

E, is a reach from the end of the part N, with holes so that the arms can be held still, by means of the hook D, attached to the frame U, while the churn A, revolves.

V, is a staple on the side of the churn A, so that the hook D, may be transferred from the reach E, to the staple V, to stop the churn A, and leave the arms B, to revolve by changing the pin G, from the inner to the outer hole in the reach F, of the shaft I, which comes down from the gearing Z, and communicates motion to the churn or any of its parts. These shafts I, and L, are joined or connected as described under letter H, Fig. 2, so that by raising the pinion on the shaft I, out of gear, the connection is broken and the churn A, may be taken out, separate from the rest of the machine to wash it.

U, is the frame with top and bottom girt.

P, is the door or cover to stop the openings (for the removal of the buttermilk to be described at letter T, Fig. 2,) and make the churn water tight during the operation of churning. R, the bolt which when pushed down shuts and when pulled up admits the door P, to open enough for the escape of the buttermilk. S, the hinges so made that the doors P, can be easily taken off to wash them, and Z, is any combination of gearing by which the required motion is given to the churn and all its parts, and it is all the same at what angle the axis of the churn may be placed, or if the churn A, stands still and the arms B move or vice versa, the same will be the result and the same the invention. The cover M, is left with a large hole, to pour in water when it is necessary to use it to wash butter made of sour cream, or other use requiring water.

Fig. 2, the same letters represent the same things as in Fig. 1, and in addition B, represents the arms which revolve upon the shaft L. C, the projections attached to the inner surface of the churn A. T, the opening or openings to remove the buttermilk from and retain the butter in the churn A. The arms B, and projections C, are indefinite as to number, size, shape, and place, and length, that is the arms B, may be made as in the drawing to operate between and contrary to or against the projections C, which are attached to the bottom of the churn A, or may be made straight out from the shaft, and the projections C, may be attached to and stand at right angles in from the inner surface of the circumference or periphery of the churn A, since it is the idea of arms and projections working between and contrary to or against each other, which constitutes the invention. Also the opening or openings T, are indefinite as to number, manner, shape, size, place and substance of which they are made, it being the object of the invention to make, to have, and to use them as openings or places, to remove the buttermilk from and retain the butter in the churn.

O, is the pivot on which the churn moves on the girt of the frame U. H, the point of the shaft L, which forms the connection, at will, with the shaft I, by which motion is given to the churn A, or arms B, or both at pleasure, by the changing of the pin G, and the hook D, as above stated. This churn or any of its parts may be made and constructed of any kind of materials.

The operation of this machine is that when the hook D, is put into the hole in the reach E, of the arms B, to hold them still, by the revolution of the churn A, the centrifugal force drives the milk or cream from the center to the inner surface of the circumference or periphery of the churn A, where it is exposed to that amount of air, and acted upon by the arms B, and the projections C, in the manner required to produce butter in the shortest time. After the butter has come or is separated from the buttermilk, we pull up the bolt R, to open the doors P, of the openings T, and continuing the revolution of the churn A, we throw off the buttermilk by the openings T, from the churn A, into the dripping-pan J, to be discharged at the aperture K, while the butter is retained in the churn A, where by the continued revolution it is brought between the arms B, and projections C, and worked until there does not remain any buttermilk whatsoever. Salt being added is at the same time worked thoroughly into the butter. The same motion cleanses rancid butter, by pouring lime water into the churn A, during the operation. This churn may be worked by any combination of gearing, moved by any motive power. It may move upon a horizontal or vertical axis, or an axis at any angle whatsoever. A vibratory motion may be given it by moving forward and backward the crank of the gearing Z, which motion is useful to remove any butter which may stick to the churn, to the arms or to the projections.

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

The devices of gearing as described by which I change the motions of the churn box and dasher with regard to each other so that while one is stationary the other shall rotate and vice versa.

Windsor, in the county of Hartford and State of Connecticut this twenty-ninth day of October eighteen hundred and forty-nine.

OSBERT B. LOOMIS.

Witnesses:

ANSON G. BOWER,

SIDNEY BOWER.