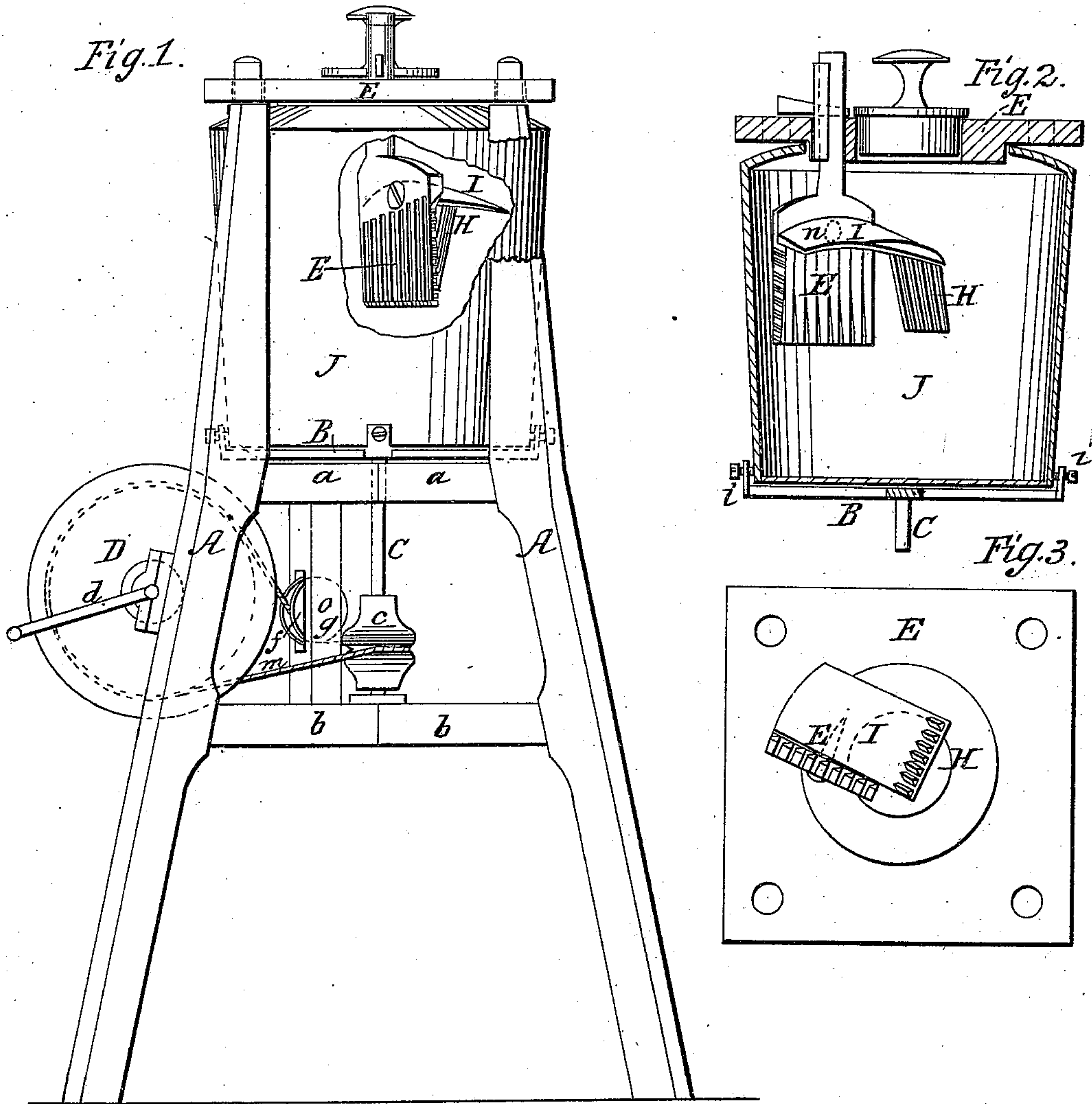


VINCENT & LESLIE.

Churn.

No. 34,383.

Patented Feb. 11, 1862.



Witnesses

J. W. Coombs
G. W. Reed.

Inventors.

J. Vincent & S. Leslie
per Munroe & Co.
Attys.

UNITED STATES PATENT OFFICE.

JAMES VINCENT AND SAMUEL LESLIE, OF QUASQUETON, IOWA.

IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. 34,383, dated February 11, 1862.

To all whom it may concern:

Be it known that we, JAMES VINCENT and SAMUEL LESLIE, of Quasqueton, in the county of Buchanan and State of Iowa, have invented a new and Improved Churn; and we do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side elevation of our improved churn with a portion of the vessel broken away to show the breaker. Fig. 2 is an axial section of the tub. Fig. 3 is a plan of the cap and breaker.

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

This invention consists in a simple arrangement of revolving table and actuating mechanism in a frame of peculiar construction, whereby the process of churning is performed in a common water-pail or other similar vessel by the centrifugal action of the cream.

To enable others skilled in the art to fully understand and construct our invention, we will proceed to describe it.

A A A A represent four upright standards framed together, so as to converge at top, by two sets of bars *a a* and *b b* crossing each other at right angles and placed one set above the other.

B is a revolving table or platform supported upon the upper end of the vertical shaft C, and furnished on its periphery with four ears *i*, placed equidistant apart, in which set-screws are fitted for the purpose of securing the pail or vessel J containing the cream upon the platform and thus prevent it from being displaced by the centrifugal force. The vertical shaft is journaled near its upper end in the upper set of cross-bars *a a* at the point of crossing and is stepped at its lower end into a box immediately over the crossing of the lower set of bars, and is provided between its bearings with a score-pulley *c*, around which a band from the larger or driving pulley passes to impart motion to the platform.

D is a driving-pulley secured upon a crank-shaft *d*, which is journaled horizontally in boxes *e e*, attached on the outside of the standards. *f* is an intermediate guide-pulley journaled in the oblong opening in the standard *g*, which is attached at top and bottom, re-

spectively, to the upper and lower cross-bars of the framing. The band *m*, passing over the driving-pulley, passes first under the intermediate pulley, which revolves in the same plane therewith, thence around the pulley *c*, revolving in a plane at right angles to the intermediate pulley, and thence outside of the standard to the driving-pulley.

E is a cap or cover secured upon the upper extremities of the upright standards of the frame by mortise-and-tenon joints, and has depending from the under side thereof a double comb-breaker, to be hereinafter fully described, which double comb-breaker is placed in close proximity with the inner periphery of the vessel, and secured to the cap or cover by means of its shank passing through the cover and fastened on the upper side by a wedge and key, the latter of which passes laterally through the wedge and shank. The double comb-breaker consists of two combs placed at right angles to each other and attached together. The outer tooth of the main comb F is grooved horizontally and all the teeth of the same are beveled from the inner side toward the outer tooth.

The teeth of the second comb H are beveled both ways from the inner side and are set in the end of a shield I, which is secured to the inner face of the main comb by a pivot-screw *n*, (shown in dotted lines in Fig. 2,) which admits of the comb being inclined from a horizontal position a greater or less degree, according to the quantity of cream to be churned.

The rotation of the churn gives the cream two motions, one centrifugal and the other vertical, throwing the cream as it rises forcibly against the main comb, a portion passing through the interstices thereof, while the larger portion is broken and descends to the bottom of the vessel. The horizontal grooves on the outer tooth of the main comb gather and convey the cream from the side of the churn across the series of teeth toward the center, allowing a portion of the cream to pass between the teeth thereof.

It is not necessary that the vessel have a cover, the shield I preventing the cream from being thrown over the top. Hence any vessel sufficiently large to admit the double comb-breaker can be used for churning butter.

The above-described churn is simple in its

construction, very easily operated, perfectly efficient, readily cleansed, and can be made by any farmer at a small cost.

Having thus described our invention, what we claim as new herein, and desire to secure by Letters Patent, is—

The double comb-breaker F H and cap E, with the vessel J and revolving platform B,

combined and operating in the manner substantially as described.

JAMES VINCENT.
SAMUEL LESLIE.

Witnesses:

JAMES JAMISON,
R. M. CHESLY.