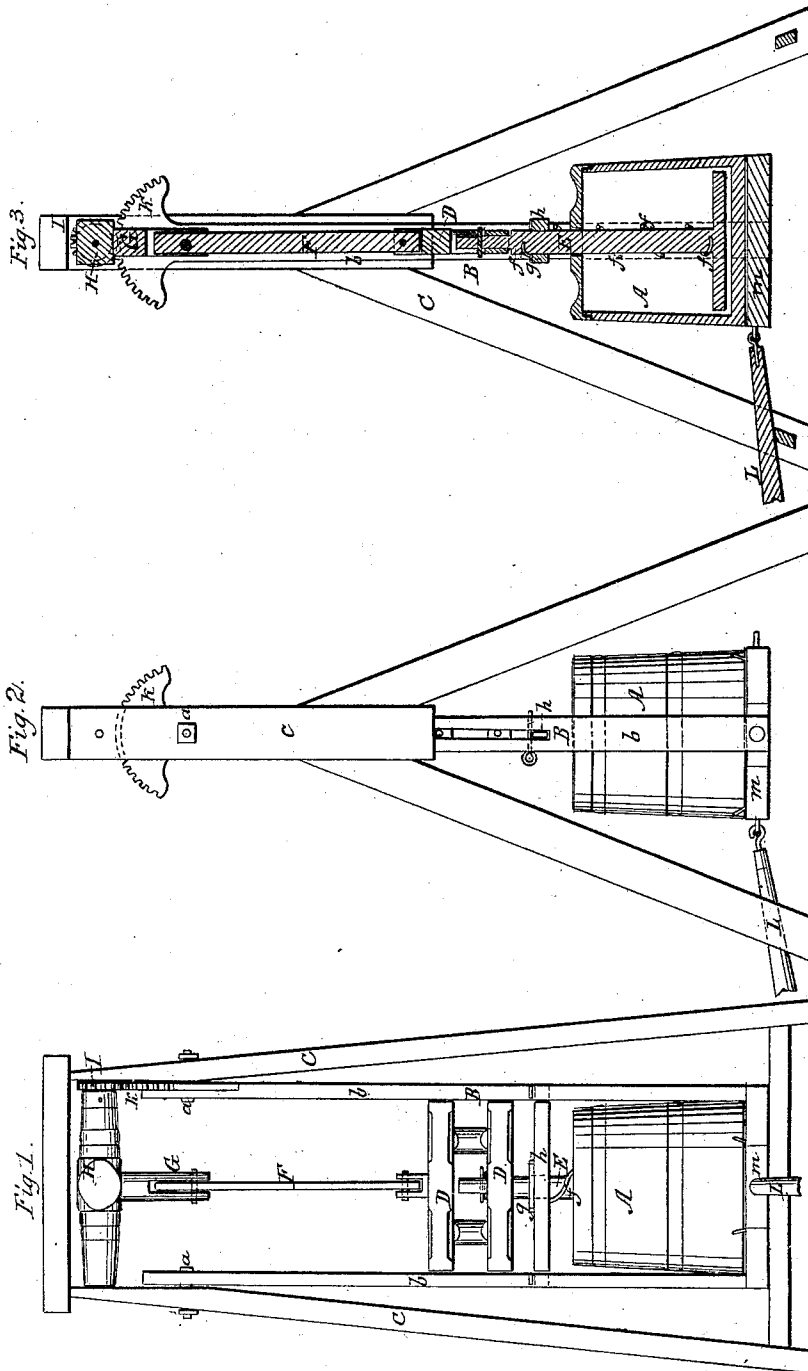


C. A. SHAW.
Churn.

No. 16,193.

Patented Dec. 9, 1856.



UNITED STATES PATENT OFFICE.

CHARLES A. SHAW, OF BIDDEFORD, MAINE.

CHURN.

Specification of Letters Patent No. 16,193, dated December 9, 1856.

To all whom it may concern:

Be it known that I, CHARLES A. SHAW, of Biddeford, in the county of York and State of Maine, have invented an Improvement in the Swinging or Pendulum Churn; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, of which—

10 Figure 1, is a front elevation of my improved churn. Fig. 2, a side elevation of it. Fig. 3, a vertical section taken transversely through the rocker shaft to be hereinafter described.

15 In such drawings, A, exhibits the tank or churn reservoir, as arranged within and supported on the bottom, *m*, of a pendulous frame, B, sustained within a standing frame, C, and so as to be capable of being
20 oscillated on journals arranged as seen at *a, a*, in Figs. 1 and 2. Within the said pendulous frame, there is placed a gate or slider, D, so applied to the upright bars, *b, b*, of such frame as to be guided by them
25 in its movements up and down, the said slider or gate, D, being connected or jointed to the dasher rod, E, in such manner as to enable the dasher rod to rotate freely in the gate, while it is being raised or depressed
30 by the said gate.

A pitman, F, is jointed to the gate, D, and, to an arm, G, extending from a rocker shaft, H, disposed in the upper part of the standing frame, C, and having a gear or
35 pinion, I, fixed upon it as seen in the drawings. Such gear or pinion is made to engage with a sectoral rack or gear K, projecting from one of the bars, *b*, and above its journal, *a*, as seen in the drawings. A
40 handle, L, is jointed to the lower part of the swinging frame, B, and is for the purpose of enabling a person to put such frame in oscillation on its journals, *a, a*. When the said frame has a reciprocating motion
45 imparted to it, a reciprocating vibratory or partially rotary movement will be given to the rocker shaft, such as will cause the dasher to be elevated and depressed during

each vibratory movement of the pendulous frame B.

50 The dasher rod, E, is provided with a helical or screw thread, *f*, extending around it, and made to enter or work in a corresponding female screw, *g*, arranged in or applied to a cross bar, *h*, arranged between
55 and fastened to the bars, *b, b*, and within the gate as shown in the drawings. From this it will be seen that during the longitudinal movements of the dasher, it will also have reciprocating, rotary movements
60 on its axis, so that a compound motion of the dasher will be obtained during each oscillation of the pendulous frame, the same serving to greatly facilitate the operation of churning cream, or producing butter
65 therefrom.

I do not claim combining with the dasher and pendulous frame, a mechanism by which and the pendulous frame, the dasher will have a rotary motion on its axis when
70 the pendulous frame is put in motion. Nor do I claim separate from the same, combining with the dasher and the pendulous frame a mechanism by which and the pendulous frame such dasher will have im-
75 parted to it, upward and downward motions when the pendulous frame is set in motion, but

What I do claim is,

Combining with the pendulous frame and
80 the mechanism connected therewith for imparting to the dasher up and down motions, a mechanism which at the same time will rotate the dasher on its axis, the dasher thus having at one and the same time a com-
85 pound movement, consisting of one in line of its axis and one of rotation on its axis, whereby the operation of churning is greatly improved and facilitated.

In testimony whereof I have hereunto set
90 my signature this twenty-seventh day of October, A. D. 1856.

CHARLES A. SHAW.

Witnesses:

BENJAMIN PRIEST,
S. L. SHAW.