

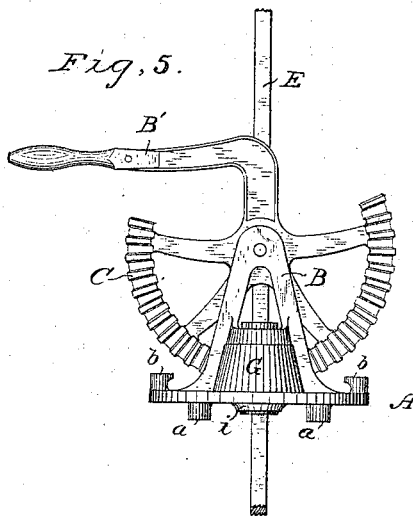
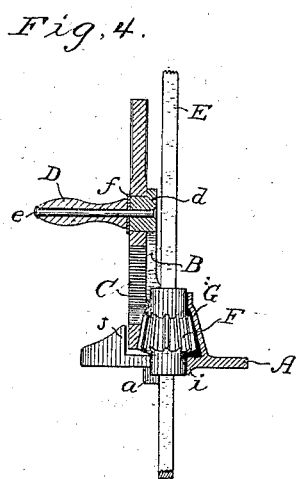
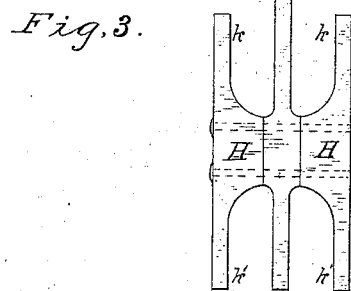
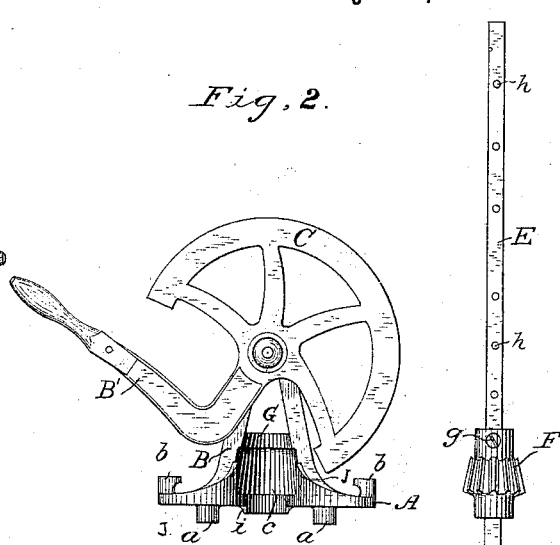
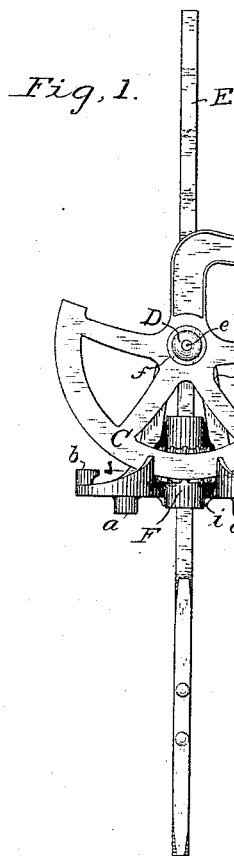
(No Model.)

E. C. TAYLOR.

CHURN.

No. 302,794.

Patented July 29, 1884.



WITNESSES

Wm A. Shinkle  
Henry A. Lamb.

INVENTOR

E. C. Taylor.  
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# UNITED STATES PATENT OFFICE.

ELBERT C. TAYLOR, OF STOCKTON, MISSOURI, ASSIGNOR OF ONE-HALF TO  
ELIJAH A. HENDERSON, OF SAME PLACE.

## CHURN.

SPECIFICATION forming part of Letters Patent No. 302,794, dated July 29, 1884.

Application filed October 25, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, ELBERT C. TAYLOR, of Stockton, Cedar county, Missouri, have invented certain new and useful Improvements in Churns, of which the following is a specification.

My invention relates to that class of churns known as "vibrating" churns; and it consists in a novel organization of mechanism for operating the dasher.

In the accompanying drawings, Figure 1 is an elevation of my improved mechanism for operating the dasher, the dasher being shown in position for operation. Fig. 2 is a similar view, the parts being in a different position and the dasher removed. Fig. 3 is an elevation of the dasher which I prefer to employ. Fig. 4 is a side view, partly in section, showing certain details of construction; and Fig. 5 is an opposite view of the dasher-operating mechanism from that shown in Figs. 1 and 2.

The bed-plate *a* is formed on its under side with studs or feet *a*, which rest on the top of the body of the churn, or extend into it, so as to hold the plate firmly in place. On the upper face of the plate are formed knobs or studs *b*, around which straps or cords may be fastened for securing the plate to the churn. This may be conveniently effected by looping one end of the cord, securing it to one of the knobs, passing the cord under the bottom of the body of the churn, and securing it to the opposite knob. The plate *A* is bifurcated, as shown, the opening *c* extending from near the center of the plate to its outer edge, and preferably increasing in width outward. The standard *B* is formed on the top of the bed-plate, and supports a toothed segment, *C*, which is provided with an operating-lever, *B'*, and which is free to rock on its bearing. Preferably this bearing consists of a stud, *d*, formed on the standard *B*. A handle, *D*, is secured to the stud *d*, preferably by means of a bolt, *e*, which extends through the handle and the stud. A washer, *f*, of somewhat greater diameter than the stud *d*, is interposed between the handle and the stud and serves to keep the toothed segment in position.

To the dasher-shaft *E*, which extends through the opening *c*, is secured a pinion, *F*, which

is vertically adjustable on the shaft by means of a set-screw, *g*, which may fit into any one of the series of apertures *h*, or the pinion may be held in place by a clamping set-screw. The pinion rests upon the bed-plate at the inner edge of the opening *c*, and is partly surrounded by a flange or fence, *i*, on the under side of the plate, and by a casing or box, *G*, on the upper side. This arrangement keeps the pinion clear of clogging matter, and also prevents the clothes or hands of the operator or others from being drawn in by the pinion. Lugs or flanges *J* are formed on the plate a short distance from the standard, which serve to guide the segment and keep it in a true vertical plane while rocking. The toothed segment gears with the pinion on the dasher-shaft, and as the segment is rocked the dasher is vibrated.

The handle *D* enables the operator to steady the apparatus while at work, and also to lift it out of the churn-body.

My improved dasher is shown clearly in Fig. 3. It consists of a shaft, *E*, to which are secured wings *H*, having vertical arms *k k'*. Each wing and its arms are made from one piece of material, so as to make as few joints as possible in which the cream would enter, remain, and sour. The ends of the lower arms, *k'*, are preferably on the same plane with the lower end of the shaft *E*. By this form of dasher the milk or cream is thoroughly agitated, a separate current or eddy being established between the arms and the shaft, as well as outside the arms.

The dasher-shaft with the pinion may be readily removed from the plate by turning the segment into the position indicated in Fig. 2, slightly tilting the shaft, and then drawing it out through the opening *c*, or when the dasher is in place in the churn the bed-plate is turned and removed from the shaft in a similar manner. By this arrangement the pinion need not be removed from the dasher-shaft nor the segment from its bearing.

I claim as my invention—

1. The combination, substantially as set forth, of the bifurcated bed-plate, the standards mounted thereon, which straddle the bifurcation, the dasher-shaft, the pinion carried

by the dasher-shaft which has its bearing in the inner end of the bifurcation, and the rocking segment mounted on the standard which gears with the pinion.

5 2. The combination, substantially as set forth, of the bifurcated bed-plate provided with a casing around the inner end of the bifurcation, the dasher-shaft, its pinion, which is partially surrounded by the casing, and the  
10 toothed segment which gears with the pinion for operating the dasher.

3. The combination, substantially as set forth, of the bifurcated bed-plate provided with a casing around the inner end of the bi-  
15 furcation on both the lower and upper sides of the bed-plate, the dasher-shaft, its pinion, which is partially surrounded by the casing, and the toothed segment which gears with the pinion for operating the dasher.

4. The combination, substantially as set forth, of the bifurcated bed-plate, the standards mounted thereon, the dasher-shaft, the pinion carried by the dasher-shaft, which has its bearing in the inner end of the bifurcation, the rocking segment mounted on the standard  
25 which gears with the pinion, and the lugs or flanges which guide the rocking segment and keep it in a true vertical plane.

In testimony whereof I have hereunto subscribed my name this 20th day of October, A.  
D. 1883. 30

ELBERT C. TAYLOR.

Witnesses:

M. D. BRISCOE,  
SAMUEL L. KERR.