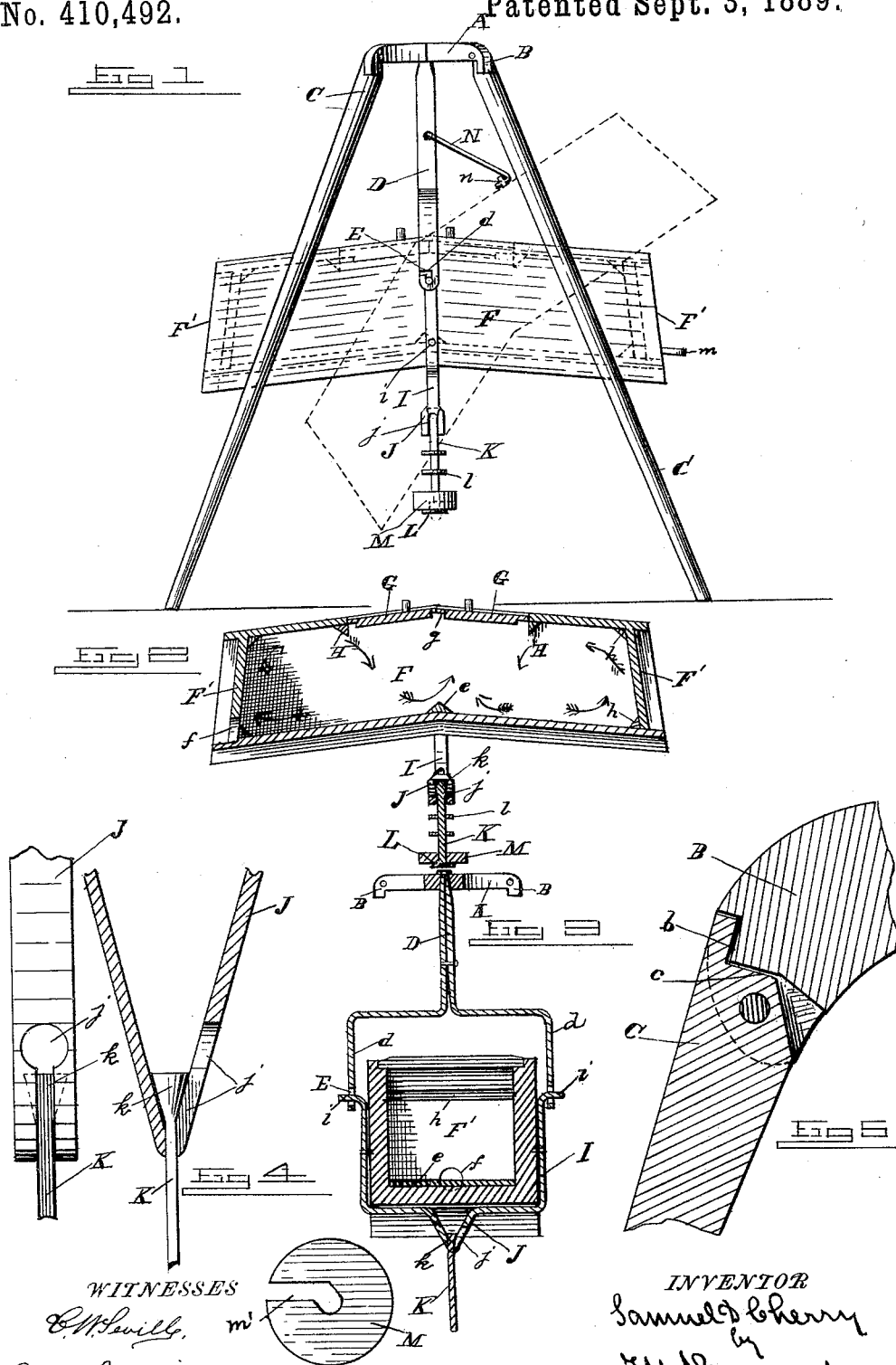


(No Model.)

S. D. CHERRY.  
CHURN.

No. 410,492.

Patented Sept. 3, 1889.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

SAMUEL D. CHERRY, OF SENECA, SOUTH CAROLINA.

## CHURN.

SPECIFICATION forming part of Letters Patent No. 410,492, dated September 3, 1889.

Application filed May 4, 1889. Serial No. 309,622. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL D. CHERRY, of Seneca, in the county of Oconee and State of South Carolina, have invented certain new and useful Improvements in Churns; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification, in which—

Figure 1 is a side elevation of my improved churn. Fig. 2 is a central longitudinal vertical section through the churn-body. Fig. 3 is a transverse sectional view. Figs. 4 and 5 are details.

This invention is an improvement in churns; and it consists, essentially, in a novel construction of a swinging-body churn and novel devices for hanging the same and regulating its vibration or oscillation, all of which will be fully understood from the following description and claims.

Referring to the drawings by letter, A designates a folding support for the churn-hanger, consisting of a four-armed metal casting, the arms B of which are bent downward at their lower ends and socketed, as at *b*, and in these sockets are hinged the upper ends of legs C, which are also shouldered, as at *c*, the shoulders abutting against the ends of the arms when the legs are properly distended to prevent further spreading thereof and collapse of the support. The legs can be readily folded together for transportation.

From the center of the casting depends a hanger D, having its lower end bifurcated into two angular arms *d d*, the lower portions of which are adapted to span the churn-body. In the lower ends of arms *d* are formed L-shaped key-slots E E, in which are received the trunnions or supporting-lugs of the body.

F designates the churn-body, which is of general rectangular form. Its sides are vertical; but its top and bottom incline upwardly from ends to center, as shown, so that the center of the bottom is highest, and at this point is secured interiorly a transverse angular rib *e*. The ends F' of the churn incline upwardly and inwardly, as shown, and in one end is an opening *f*, by which the milk can

be drained from the body. At the center of the top is an opening closed by doors G G, as shown, which prevent splashing out of the milk. These doors are provided with notches *g g* at their meeting edges, through which ventilation of the interior of the body is obtained.

H H are angular ribs secured transversely to the top at the edges of the door-opening, and *h h* are angular ribs secured in the body at the corners formed at the meeting-points of the end, bottom, and top pieces, as shown.

N designates a hook attached to hanger D and adapted to engage an eye *n* on the top of the body, so that it can be held in the position indicated in dotted lines, Fig. 1, for filling or emptying, and by this arrangement overloading or overfilling of the body is prevented.

I designates a U-shaped iron embracing the body and depending centrally therefrom and rigidly connected thereto. The upper ends of this iron are turned outwardly and form the trunnions *i i*, by which the body is suspended from hanger D, as shown. Underneath the body the iron has a depending loop J, which is slotted to engage the head *k* of a pendulum-rod K. This head is flattened, so as to tightly engage the loop and prevent vibration of the pendulum longitudinally beneath the body. This rod is provided with a weight-catch L at the bottom and one or more catches or enlargements *l* above catch L, by which weights M, provided with key-slots *m'*, can be suspended at different heights on the rod. By this arrangement for adjusting the weights I can evenly balance the amount or weight of fluid in the body, so as to make the oscillations thereof uniform and regular. A handle *m* is attached to one end of the body for imparting movement thereto.

When properly suspended, as indicated in Fig. 1, the milk to be churned is placed in the body and the weights adjusted on rod K to balance the same. The body is then oscillated on its trunnions, and the pendulum gives a steady and even movement thereto. The inclined bottom of the churn causes the milk to be dashed suddenly and violently downward at certain points in the oscillations of the body, and the angular ribs *h* at

the corners of the churn cause the milk to turn backward upon itself and up toward the center of the churn, where it strikes ribs H and is directed down upon the bottom, and rib *e* directs it violently upward, as indicated by the arrows in Fig. 2, thus thoroughly agitating the milk and causing the rapid breaking of the butter-globules and formation of butter.

No dasher being necessary, and there being no corners or places in which the butter or milk can collect, the body can be quickly cleaned of its contents.

When not in use, the churn can be lifted out of hanger D and the support folded up. The pendulum and its rod can also be detached and laid away until it is again desired to churn.

Having thus described the invention, I claim—

1. The combination, with a hanger having depending arms embracing the churn-body and the body having top and bottom inclined downwardly from center to ends and inwardly-inclined ends and the transverse angular ribs therein, of the pendulum-rod removably connected to the body and having adjustable weights, substantially as specified.

2. The combination of the body having its top and bottom inclined upwardly from both ends to the center and inwardly-inclined ends, the transverse angular ribs at the corners thereof, the central angular rib on its bottom, and the two angular ribs on its top at each side of the door-opening, with the pendulum removably connected to the bottom of the body having bottom and intermediate weight-catches and the weights thereon, all substantially as specified.

3. The combination of the body F, having its bottom and top inclined upwardly from ends to center, the transverse ribs *e*, *h*, and H therein, and the door thereof, with the U-shaped iron I secured thereto, the pendulum-rod connected to said iron, the weights thereon, and the hanger D, having arms *d d*, provided with key-slots, all substantially as described.

4. The combination of the folding support A and hanger D, suspended therefrom, with the body F, having inclined top and bottom, the angular ribs *h h* and H H, secured transversely therein, the iron I, embracing the body and having trunnions on its ends engaging the hanger, and a depending loop, and the pendulum loosely engaging said loop, all substantially as and for the purpose specified.

5. The combination of the support A, composed of arms B and hinged legs C, and the hanger D, suspended therefrom, having arms *d d*, provided with key-slots *e e*, and the body F, having its top and bottom inclined upwardly from ends to center, the transverse angular ribs *e h h H H* therein, and inclined ends *F'*, with the iron I, embracing the body, having trunnions *i*, depending loop J, the pendulum-rod K, engaging said loop and having weight-catches L and *l*, and the weights on said rod, all substantially as and for the purpose specified.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

SAMUEL D. CHERRY.

Witnesses:

T. H. ALEXANDER,  
M. P. CALLAN.