

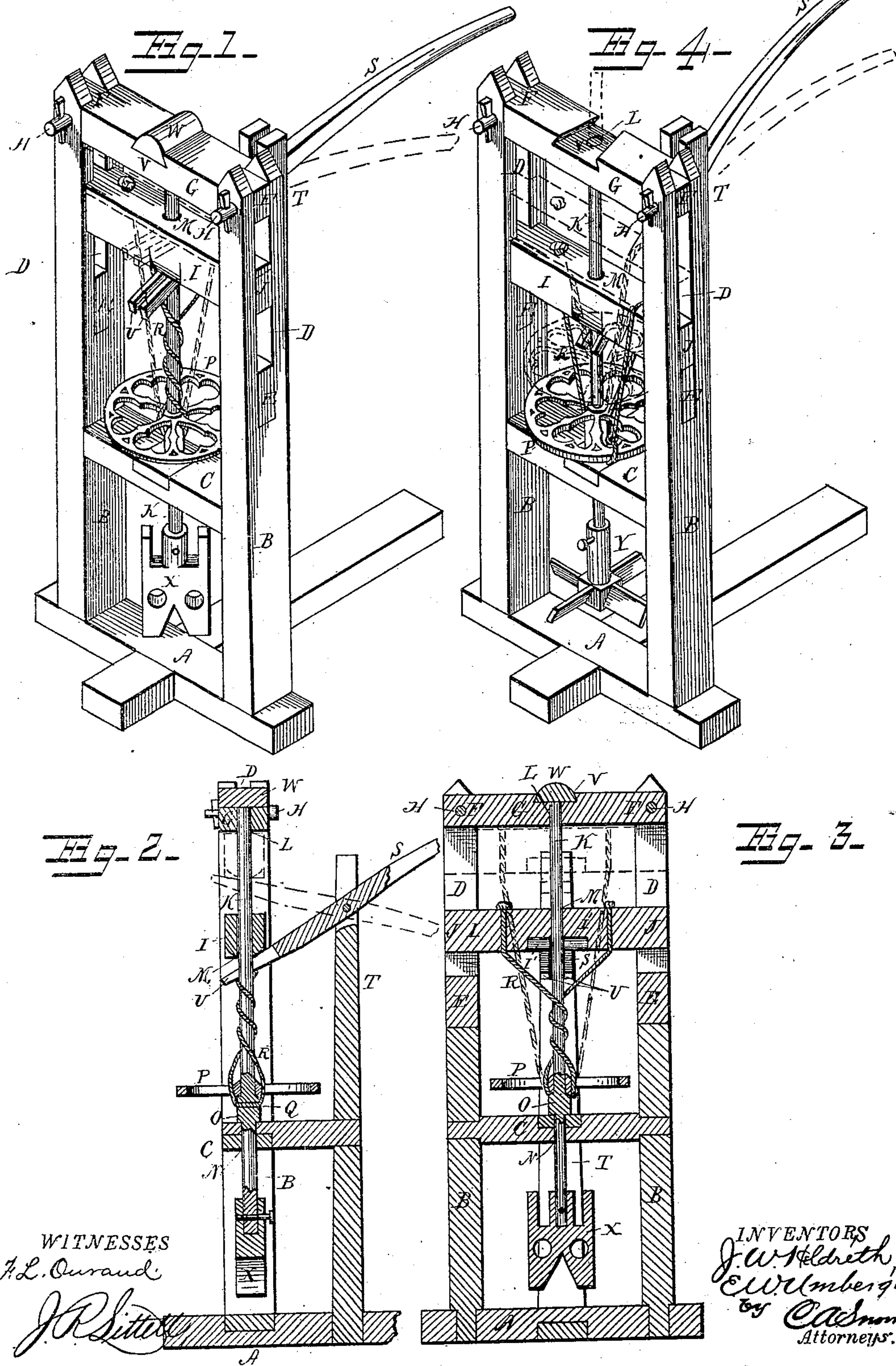
(No Model.)

J. W. HELDRETH & E. W. UMBERGER.

CHURN MECHANISM.

No. 271,705.

Patented Feb. 6, 1883.



UNITED STATES PATENT OFFICE.

JOSEPH W. HELDRETH AND EVERETT W. UMBERGER, OF WYTHEVILLE, VA.

CHURN MECHANISM.

SPECIFICATION forming part of Letters Patent No. 271,705, dated February 6, 1883.

Application filed September 27, 1882. (No model.)

To all whom it may concern :

Be it known that we, JOSEPH W. HELDRETH and EVERETT W. UMBERGER, citizens of the United States, residing at Wytheville, in the county of Wythe and State of Virginia, have invented a new and useful Churn, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to churn-motors or devices and mechanism for operating churns, and has for its object to provide a simple and efficient device that will readily impart either a rotary or vertically reciprocating motion to the dasher-staff of the churn.

In the drawings, Figure 1 is a perspective view; Fig. 2, a vertical longitudinal sectional view; Fig. 3, a like transverse view; Fig. 4, a perspective view of the device prepared for reciprocating motion.

Referring to the drawings, A designates the base, which is provided with two parallel perpendicular uprights, B B, provided with an intermediate cross-piece, C, about midway, and having their top ends bifurcated, or formed with open slots D. The bottoms of slots D D may be provided with cushions E, and their tops receive the end tongues F of a removable cross top piece, G, said tongues F F being held in place by transverse pins or bolts H, passing through perforations in uprights B B.

I is a transverse block, having end tongues J J, which work in slots D D.

K is the cylindrical dasher-staff, which has a bearing, L, in top piece, G, bearing M in cross-block I, and bearing N in cross-piece C, and is provided above the latter with a shoulder, O, on which rests a horizontal balance-wheel, P. In shoulder O is arranged a perforation, Q, through which passes a cord, R, the ends thereof being passed up and through wheel P and secured in or to vertically-moving block I. The cross-block I is operated by a lever, S, pivoted to a standard, T, in rear of the uprights B B. The end of lever S is bifurcated, and the arms U U thus formed embrace staff K under block I. The top block, G, has a dovetailed groove, V, arranged over the perforation L, in which works a dove-

tailed plate, W, to prevent lateral displacement of the staff K. Groove V and plate W are preferably wedge-shaped to enable the latter to firmly bind in the groove.

To the lower end of rod K is secured the churn-dasher X, a rotary wheel-dasher, Y, such as shown in Fig. 4, being preferred when a reciprocating motion is used.

The operation and advantages of my invention will be readily understood. When block I is down the cord R will be wound spirally around rod K in one direction. Then, by lowering lever S, the block I is elevated, which causes the cord to unwind, thus rotating the balance-wheel and dasher rod or staff. The momentum thereof serves, when the cord is unwound, to wind it round the staff again in the contrary direction to what it was before, and thus bring down block I ready for the next stroke of the lever. By this means the dasher-staff is alternately revolved in both directions. For a reciprocating motion the plate W is removed and the cord R is drawn taut to secure the block I down as close as possible to the balance-wheel. Then, when lever S is raised to elevate block I, the said block lifts the balance-wheel and dasher-staff. As soon as the hold on lever S is released the weight of the balance-wheel causes the staff to fall.

We claim as new—

The combination of the uprights, the vertically-moving block I, the dasher-staff having a horizontal balance-wheel, the connecting-cord extending down from block I, and the cross top piece, G, having central vertical bearing, L, for the dasher-rod, over which bearing L is formed a groove, V, covered by a removable plate, W, as set forth.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

JOSEPH WINTON ^{his} X HELDRETH.
EVERETT WATSON UMBERGER. ^{mark.}

Witnesses:

W. B. CLEMMONS,
R. G. BAUMGARDNER.