(No Model.)

D. T. WARD.

Churn.

No. 239,580. Patented March 29, 1881.

Fig 1.

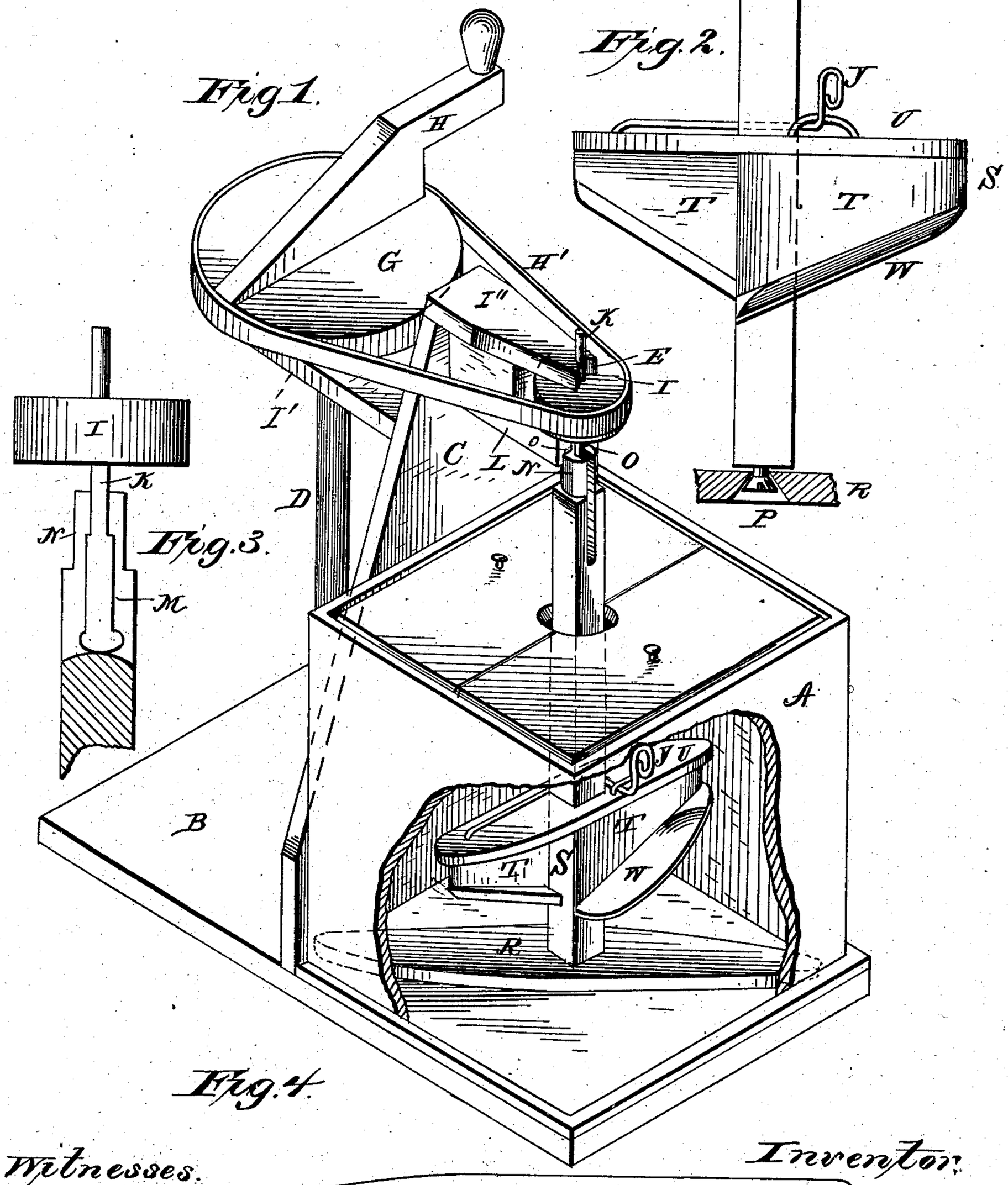

Fig. 2.

Fig. 3.

Fig. 4.

Witnesses.

Franck L. Durand.

H. Aubrey Faubrin.

Inventor.

D. T. Ward.

By Alexander Mason

Atty.

UNITED STATES PATENT OFFICE.

DANIEL T. WARD, OF IRVING, KANSAS, ASSIGNOR OF ONE-HALF TO WILLIAM H. GIBBS, OF SAME PLACE.

CHURN.

SPECIFICATION forming part of Letters Patent No. 239,580, dated March 29, 1881.

Application filed December 21, 1880. (No model.)

To all whom it may concern:

Be it known that I, DANIEL T. WARD, of Irving, in the county of Marshall, and in the State of Kansas, 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, making a part of this specification.

This invention relates to certain improvements in mechanism for driving churn-dashers, the peculiarities of construction of which will be hereinafter more fully set forth, and pointed out in the claim. These objects I attain by the apparatus and mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my improved churn with a portion of the wall of the churn-vessel broken away, showing the interior mechanism. Fig. 2 is a detached view of the dasher-rod and dasher. Fig. 3 is a detached view of the upper part of dasher-shaft and the driving-shaft, showing the detachable connection by which the two are secured together; and Fig. 4 is a detached view of the bearing in which the lower end of the dasher-shaft is journaled.

The letter A indicates the churn-vessel, which, in the present instance, is rectangular in shape, although it may be of any other desired configuration. The said vessel is mounted on a suitable base, B, which also supports a standard, C, which carries, in part, the working mechanism of the churn.

The letter D indicates the main shaft of the apparatus, which is stepped at its lower end in a suitable bearing in the base, and near its upper end is journaled in a bearing on an arm, I′, extending horizontally from the standard C to the rear thereof. The said shaft D, at its upper end, is provided with a driving-wheel, G, which is provided with a suitable crank, H, by means of which it may be put in motion. The said wheel G connects, by means of a band or belt, H′, with a driving-pulley, I, on a short driving-shaft, K. The said shaft is journaled in half-bearings E at the extremity of a forwardly-projecting arm, I″, extending from the standard C, and is held to its bearings by the band passing around the pulley. The lower end of the said shaft is adapted to set in a longitudinal groove, M, at the upper end of the dasher-shaft, the said shaft at the upper extremity being formed with a journal, N, adapted to set and rotate in a half-bearing, O, in the forward end of the arm L, the said half-bearing being formed with a shoulder, *o*, at its upper part, and constituting a seat, which holds the shaft K and journal N in position without other fastening devices. The lower end of the dasher-shaft is provided with a screw-journal, P, having a bearing in a bar, R, which is adapted to set on the bottom of the churn-vessel and extend diagonally across the same, being confined against rotation by the opposite corners of the vessel. The said driving-shaft is rectangular in cross-section, and is provided with a dasher-blade, S, which is capable of a longitudinal movement thereon, but which turns with the shaft when the same is rotated. The said dasher-blade is composed of two lateral wings, T, secured to a cross-bar, U, at their upper edges and provided at their lower edges with the inclined blades W, which serve to carry the cream upward from the center as the dasher-blade is rotated.

The letter Y indicates a spring secured to the cross-bar, which is adapted to bear against one side of the dasher-shaft and hold the dasher-blade on the same in any position to which it may be adjusted vertically.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

In combination with the driving-shaft K and its pulley and driving mechanism, the dasher-shaft, slotted, as described, for the reception of the driving-shaft, and the half-bearings for the respective shafts, the lower one formed, as shown, to receive a journal on the upper end of the dasher-shaft, as well as the driving-shaft, and to support the two in proper relative operating positions, substantially as and for the purposes specified.

In testimony that I claim the foregoing I have hereunto set my hand this 29th day of November, 1880.

D. T. WARD.

Witnesses:

H. AUBREY TOULMIN,

J. M. CLARK.