(No Model.)

L. DOELL.

CHchurn.

No. 343,016. Patented June 1, 1886.

Fig. 1.

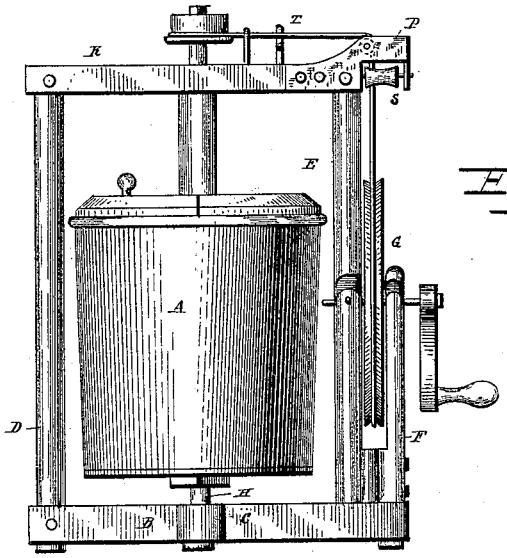


Fig. 2.

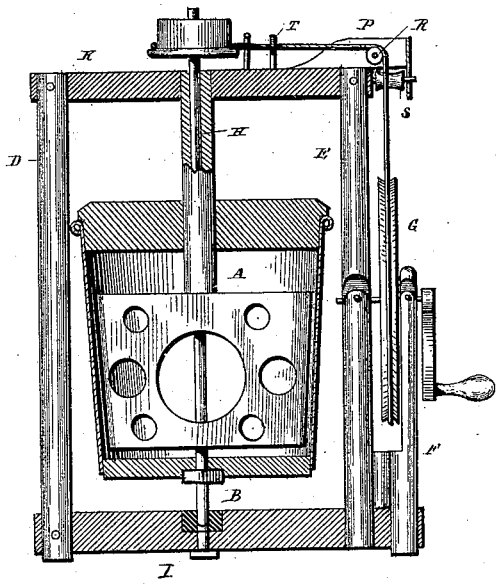
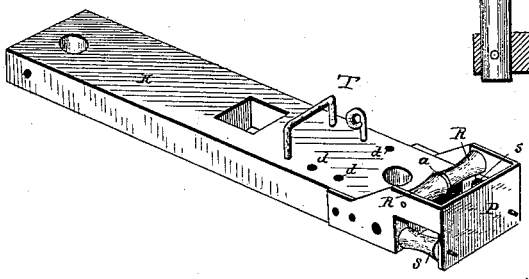


Fig. 3.



WITNESSES

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LORENZ DOELL, OF LUTESVILLE, MISSOURI.

CHURN.

SPECIFICATION forming part of Letters Patent No. 343,016, dated June 1, 1886.

Application filed November 19, 1885. Serial No. 183,258. (No model.)

To all whom it may concern:

Be it known that I, LORENZ DOELL, a citizen of the United States, residing at Lutesville, in the county of Bollinger and State of Missouri, have invented certain new and useful Improvements in Churns; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention has relation to improvements in that class of churns known as "rotary-body churns;" and it consists in the construction, novel arrangement, and adaptation of devices as will be hereinafter more fully set forth, and particularly pointed out in the claims appended.

In the accompanying drawings, similar letters of reference indicate corresponding parts in the several figures.

Figure 1 is a side elevation. Fig. 2 is a vertical sectional view, and Fig. 3 is a perspective view of the head-beam.

Referring by letter to the said drawings, A indicates the churn-body, which may be formed of sheet metal or suitable material. This body is pivotally supported in a frame composed of two base-bars, B and C, which are rigidly secured together and cross each other at right angles about midway of their length, so as to form a substantial bearing for the churn and operating mechanism. From opposite ends of the horizontal cross-bar B rise two parallel vertical standards, D E. In one of these standards and a parallel standard, F, is journaled a drive-wheel, G, having a peripheral groove to receive the driving belt or cord, as shown, and the bearings for the shaft of this wheel are formed of vertical slots having lateral openings provided with closing-pins, so that the said wheel may be easily and quickly removed when desired. At the bisection of the cross-bars B and C, or at any suitable point, is a vertical socket-recess, I, which may be lined with metal, or the like, to form a bearing for the body-rod H. This rod H passes vertically through the body A, and is fixed to its bottom with an under vertical extension to enter the said socket-recess I.

I do not wish to confine myself to any manner of securing the rod to the bottom of the churn, as various mechanical means may be employed. The axle of the drive-shaft may be provided with a crank-handle for turning the drive-wheel.

K indicates the cross-head, which is provided at opposite ends with vertical apertures to receive the upper ends of the standards D E, and this cross-head may be provided with transverse perforations crossing the vertical apertures, to receive pins or the like to removably secure the said cross-head to the standards. This cross-head is provided with a central vertical rectangular aperture, to receive the upper squared end of the dasher-rod H, whereby the dasher may be held in a fixed position with relation to the main frame.

The dasher-shaft is provided with a longitudinal central aperture for the passage of the body-rod H, which extends above the upper end of the said shaft, to receive a pulley which is fixed thereto and receives the belt or cord from the drive-wheel.

The cross-head is provided at its end adjacent to the drive-wheel with an extended bracket, P, carrying a set of horizontal pulleys, R, transverse of said cross-head, and a set of horizontal pulleys, S, at right angles thereto, the pulleys R being journaled in the walls of the bracket on a longitudinal plane coincident with that of the pulley fixed to the upper end of the body-rod, and may be separated by a washer, *a*, so as to allow them to rotate in opposite directions.

S S indicate pulleys, which are arranged relatively at right angles and approximately above the drive-wheel, and are designed to guide the drive-belt over the pulleys R R, the cross-head being provided with guide eyes or loops for carrying the said belt or rope to the pulley of the body-rod. The guides T may be composed of rods having eyes at their upper ends and placed in vertical perforations *d* of the said head.

Having described this invention, what I claim is—

1. The combination, with the main frame, of the central vertical rod, H, fixed to the churn-body and passing through the dasher-stem, and provided at its upper end with a fixed pulley, the cross-head having a vertical rectangular aperture to receive the upper end

of the dasher-stem, and the bracket secured to the cross-head and carrying the rollers R and S, to guide the operating-rope and the drive-wheel, substantially as specified.

2. The combination, with the main frame having the removable cross-head, of the dasher having its stem secured to the said cross-head and provided with a longitudinal hollow center, and the vertical rod H, passing through the dasher-stem and fixed to the bottom of the churn-body, and provided at its upper end with a fixed pulley, substantially as specified.

3. The combination, with a rotative churn-body and frame supporting the same, of the removable cross-head, the dasher having its stem removably secured to the said cross-head, and the bracket P, secured to one end of the said head and provided with rollers R and S, to guide the operating-rope, the rope, and means for driving the same, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

LORENZ DOELL.

Witnesses:
TOM MARTYN,
E. J. CARANETT.