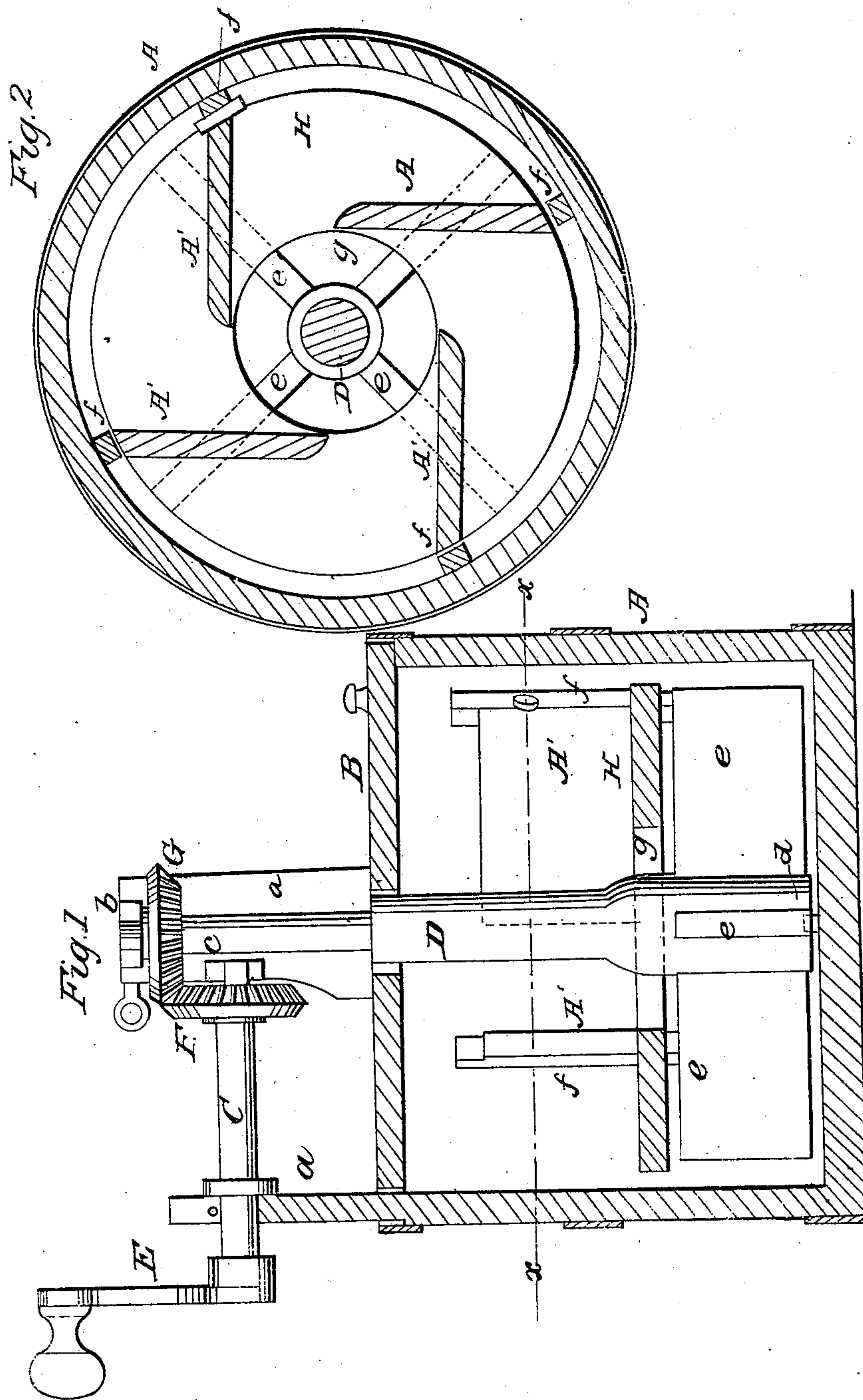


I. M. WADE.

Churn.

No. 13,133.

Patented June 26, 1855.



UNITED STATES PATENT OFFICE.

ISAAC M. WADE, OF CLINTON, MICHIGAN.

CHURN.

Specification of Letters Patent No. 13,133, dated June 26, 1855.

To all whom it may concern:

Be it known that I, ISAAC M. WADE, of Clinton, in the county of Lenawee and State of Michigan, have invented a new and Improved Churn; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a vertical section of my improvement the plane of section being through the center. Fig. 2, is a horizontal section of ditto, (*x*), (*x*), Fig. 1, showing the plane of section.

Similar letters of reference indicate corresponding parts in the two figures.

The nature of my invention consists in the peculiar construction and arrangement of a rotary dasher, stationary heads attached to a horizontal disk and vertical slats arranged within a cylindrical case and operating as will be presently shown and described.

To enable others skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A, represents a cylindrical case or tub constructed in any proper manner and provided with a lid or cover B. To the upper or top part of the case or tub there are attached uprights (*a*), two of which are connected by cross pieces (*b*), (*c*). The uprights and cross pieces support the shafts C, D. The shaft D, is a vertical one and its lower end is stepped at the bottom of the case or tub A, as shown at (*d*) Fig. 1. The upper end of the shaft D, has its bearing at the center of the cross piece (*b*).

The shaft C, is in a horizontal position and has its bearings in one of the uprights (*a*) and in the cross piece (*c*). To the outer end of the shaft C, a crank E, is attached and to the opposite end there is hung a beveled toothed wheel F, which gears into a corresponding wheel G, on the upper end of the shaft D.

To the lower end of the shaft D, there are attached radial wings or beaters (*e*), four are represented in the drawings but more may be used if desired. The outer edges of these wings or beaters do not quite extend to the inner sides of the case or tub, a space being allowed to attach vertical slats (*f*), four are represented. The edges of the wings or beaters just clear the edges of the slats, see Fig. 2.

The slats (*f*) just above the wings or beaters (*e*) have shoulders formed on them in consequence of the upper parts of the slats being reduced in width and upon these shoulders a circular disk H, rests, said disk having a circular aperture (*g*), at its center somewhat larger in diameter than the shaft D, which passes through said aperture. The slats (*f*) of course allow a space between the inner side of the case or tub.

On the upper surface of the disk H, are attached four brakes A¹. These brakes are formed of flat wooden strips secured edgewise on the disk and extend upward nearly as high as the slats (*f*). The brakes are placed tangentially with the circular aperture (*g*), at the center of the disk H, and extend to the edge of the disk, see Fig. 2. The disk and brakes are prevented from moving while the churn is operated by means of a pin (*h*) inserted between one of the slats and brakes.

The churn is operated by turning the crank E, and the cream by the rotation of the wings or beaters (*e*) is forced upward between the slats (*f*) and thrown against the brakes A¹, which direct it to the aperture (*g*) in the disk H. The slats (*f*), in conjunction with the brakes A¹, prevent the cream from rotating. The cream is forced upward between the slats (*f*) with great velocity and passes down through the aperture (*g*) with increased speed owing to its gravity and suction caused by the aperture (*g*) being smaller than the spaces between the slats (*f*) and the edge of the disk H.

The above churn operates well and with but a small expenditure of power even when a large quantity of cream is placed in the case or tub and butter is produced in a short time.

What I claim as new and desire to secure by Letters Patent, is—

I claim the construction and arrangement of the wings or beaters (*e*) attached to the lower end of the shaft D, slats (*f*) attached to the inner side of the case or tub A, and the brakes A¹, attached to the disk H, as herein shown and for the purpose as set forth.

ISAAC M. WADE.

Witnesses:

D. C. WADE,
P. M. BROWN.