A. JOHNSON.
Churn.

No. 213,287. Patented Mar. 18, 1879.

Fig. 1.

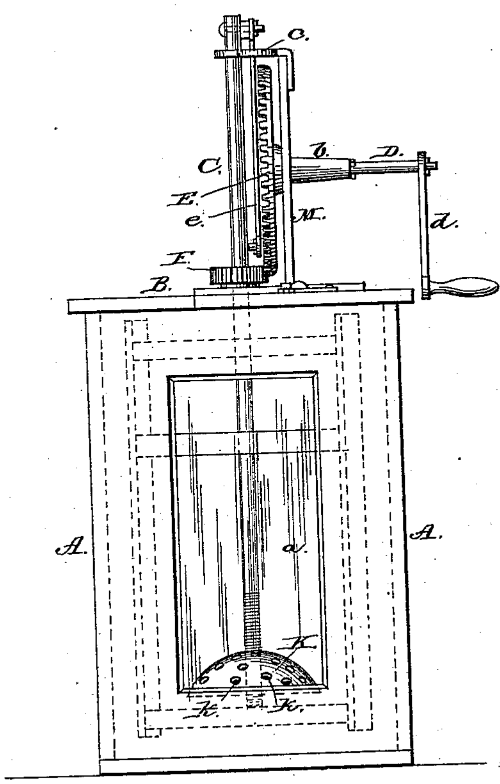
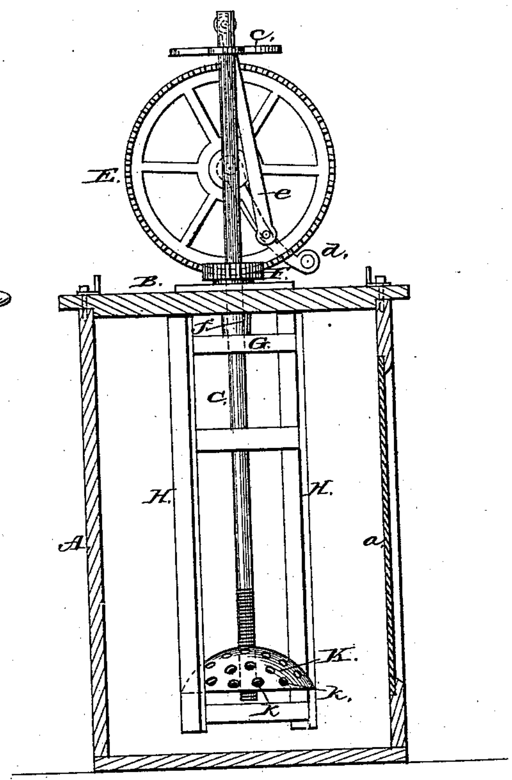


Fig. 2.



WITNESSES
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UNITED STATES PATENT OFFICE.

ABIJAH JOHNSON, OF RINGGOLD, GEORGIA.

IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. **213,287**, dated March 18, 1879; application filed December 7, 1878.

To all whom it may concern:

Be it known that I, ABIJAH JOHNSON, of Ringgold, in the county of Catoosa and State of Georgia, have invented certain new and useful Improvements in Churns; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 is a sectional side elevation of a churn embodying the improvements in my invention. Fig. 2 is a front elevation of the same with front removed.

This invention has relation to churns; and consists of the improvements in the construction of the same, hereinafter more fully described, and particularly pointed out in the claim.

In the accompanying drawings similar letters of reference indicate like parts of the invention.

A is the body of the churn, provided with the glass *a*, to allow inspection of the state of the contents of churn without removing the cover B or stopping the operation of churning. M is a standard, secured to the top or cover B, provided about the center of its length with the sleeve *b* and at its top with guide *c*, in which works the dasher-rod C.

The sleeve *b* furnishes a bearing for the shaft D, provided at its outer end with a crank, *d*, through which means motion is given to the dash. At the inner end of the shaft D is secured an angular gear, E, one of the radial arms of which is connected by a pitman or connecting-rod, *e*, to the extreme upper end of the dasher-rod C.

The teeth of the angular gear E mesh in a smaller gear-wheel, F, having its bearing in the cover B. The gear-wheel F also forms a guide for the dasher-rod C, the rod C passing through it for that purpose. The smaller gear F has a hollow shaft, *f*, projecting down into the churn, the lower end of which is screw-threaded, and by that means the cross-head G is attached to it. Said cross-head is provided with a rectangular revolving frame, H, which extends nearly to the bottom of the churn.

The dasher-rod C passes through the hollow shaft *f* and down through the center of the rectangular frame H.

The lower end of the rod C is screw-threaded, and the same thread is cut in the center of the dasher K, so that the dasher may be easily and simply adjusted to that position in the churn which will produce the best effect. The dasher K itself is of peculiar construction, being semispherical in form and provided with holes *k*, drilled in radial lines with the center of a sphere, of which the dasher forms a part.

The operation of this construction is as follows: As the dasher K descends, its semispherical shape forces the milk or cream into the center, when it is forced outward through the holes *k*, where it comes in contact with the revolving rectangular frame H. When the crank *d* is turned the angle-gear E revolves, which, in turn, operates the smaller gear F, thereby revolving the rectangular frame H. At the same time the radial arm of the gear E, to which is attached the pitman *e*, connecting the dash-rod C, is operated, and a reciprocating motion is given to the dasher K.

It will thus be seen that in a very simple and effective manner the contents of the churn are thoroughly agitated, no part of the contents being for a moment at rest, and consequently the butter is produced in the shortest possible time.

Having thus described my invention and the manner of operating the same, what I claim as new and useful, and desire to secure by Letters Patent of the United States, is—

In a churn, the semispherical dasher K, radially perforated and made of material of sufficient thickness, so that the perforations will cause the currents passing through them to be directed outward, in combination with the revolving rectangular frame H, constructed and operating substantially as and for the purpose set forth.

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

ABIJAH JOHNSON.

Witnesses:
W. L. WHITMAN,
WM. S. INMAN.