C. W. GAGE.

Churn.

No. 45,033. Patented Nov. 15, 1864.

Fig. 1.

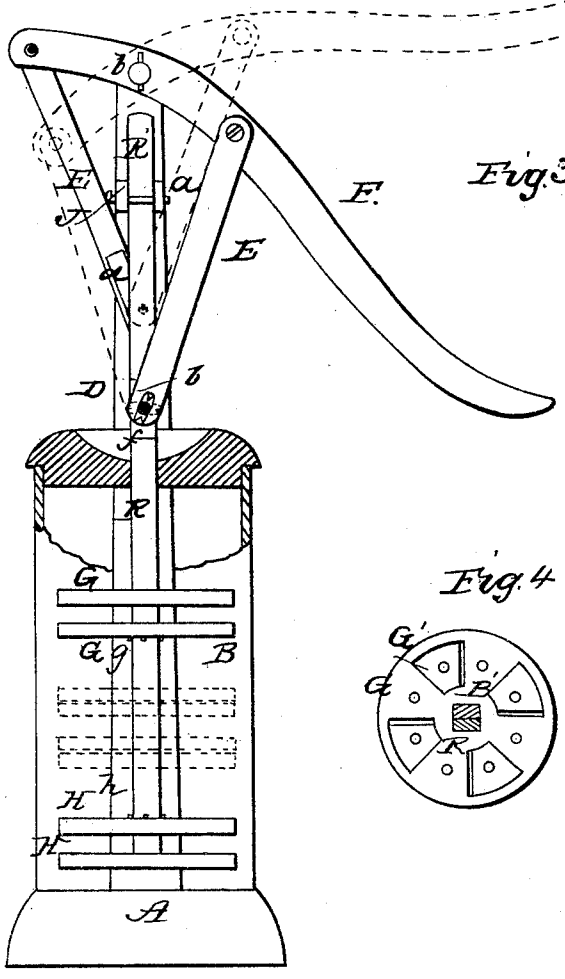


Fig. 3

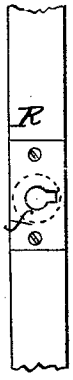


Fig. 2

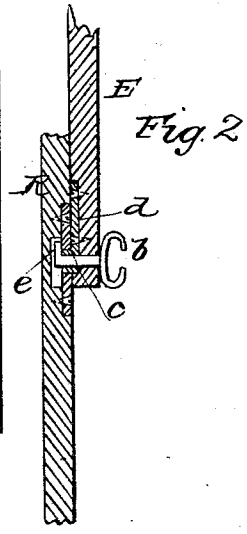
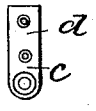


Fig. 4

Fig.



WITNESSES

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INVENTOR

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UNITED STATES PATENT OFFICE.

C. W. GAGE, OF HOMER, NEW YORK.

IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. **45,033**, dated November 15, 1864.

To all whom it may concern:

Be it known that I, C. W. GAGE, of Homer, in the county of Cortland and State of New York, 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, making a part of this specification, in which—

Figure 1 is a side elevation of the machine, having a portion of the barrel B broken away, and showing the lid C in section. Fig. 2 is a transverse vertical section of a portion of the dasher-rod R and connecting-rod E. Fig. 3 is a face view of the same portion of R. Fig. 4 is a top view of the dasher heads G and G′. Fig. 5 is a detached view of the coupling-plate *d*. Figs. 2, 3, and 5 show the parts enlarged.

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

This invention relates to that class of churns having double dashers; and it consists in arranging the two reciprocating dasher-rods to operate through one central opening in the lid, and in the employment of double heads of peculiar construction to each dasher-rod and also in a simple and convenient method of attaching the connecting-rod to the dasher-rods.

To enable others to work my invention, I will describe its construction and operation.

A in the drawings represents the base into which the barrel B is fitted, and the standard D is attached to one side of it by screws or otherwise. The top of this standard is bent forward and terminates in the pivot *p*, directly over the center of the lid. The projecting arm J, in which the upper ends of the rods R and R′ move, is framed to the standard. The heads H and H′ are attached to the rod R, which passes loosely through the heads G and G′, they being attached to and operated by the rod R′, which is arranged behind R. The head G′ is attached loosely to the rod, so as to have a little vertical play, but is prevented from detachment by the pin *g*. The head H is also loosely fitted to the rod R, and its movement upon it is limited by the pin *h*. Each pair of heads is constructed, and those of each pair arranged, upon the dasher-rods, relatively to each other, as shown in Fig. 4, the open spaces of G being nearly covered by the remaining webs of G′. Each connecting-rod is provided with a plate, *d*, having a hollow projecting journal, *c*, Figs. 2 and 3, through which the shank of the key *b* operates. The nick in the side of the opening in the plate *f*, Fig. 3, is to receive the clamp *e* of the key.

It will be seen that the journal *c* and plate *f* sustain the labor, the key only keeping the parts coupled. They may be detached simply by a partial turn of the key. When the upper and lower dashers are receding from each other they assume the position shown in Fig. 1, which permits them to pass through the cream very freely, but when their motion is reversed the double heads close together, as indicated by the red lines, which produces a compression of the cream between them, owing to there being so little opening for its escape through the heads.

That portion of the cream which is forced through the narrow spaces partakes of a spiral motion, while that forced through the round openings is driven through the other. The effect of these peculiar currents, it is thought, will greatly facilitate and shorten the operation of churning.

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

1. The employment of two double-headed reciprocating dashers, constructed, arranged, and operating in the manner and for the purposes specified.

2. In combination, the lever F, connecting-rods E E′, hollow journal *c*, key *b*, and dasher-rods R R′, when the several parts are arranged as and for the purposes set forth.

C. W. GAGE.

Witnesses:

WM. S. LOUGHBOROUGH,
ASA H. BILLINGS.