

B. C. & J. T. SPRAGUE.
CHURNS.

No. 194,623.

Patented Aug. 28, 1877.

Fig. 1.

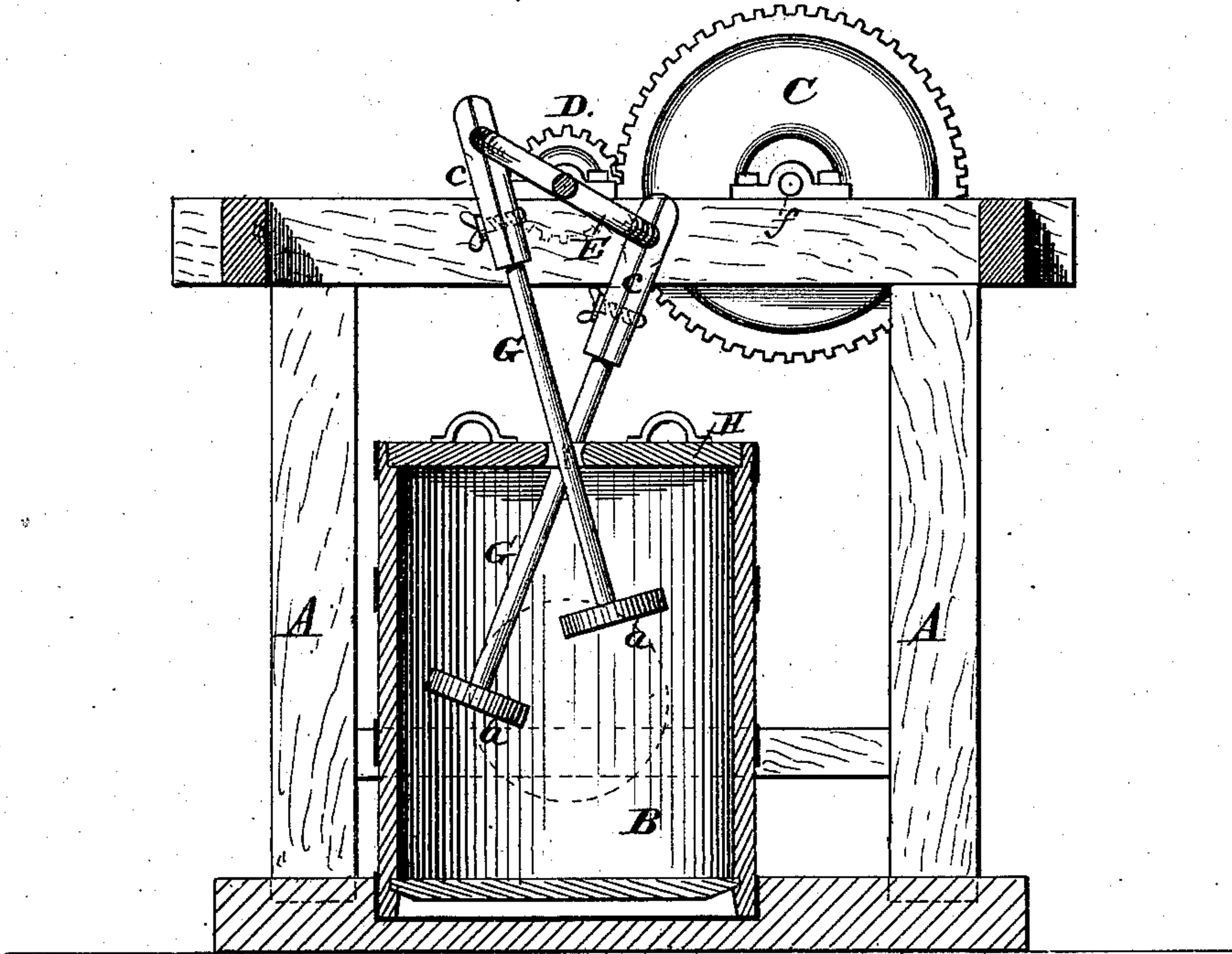


Fig. 2.

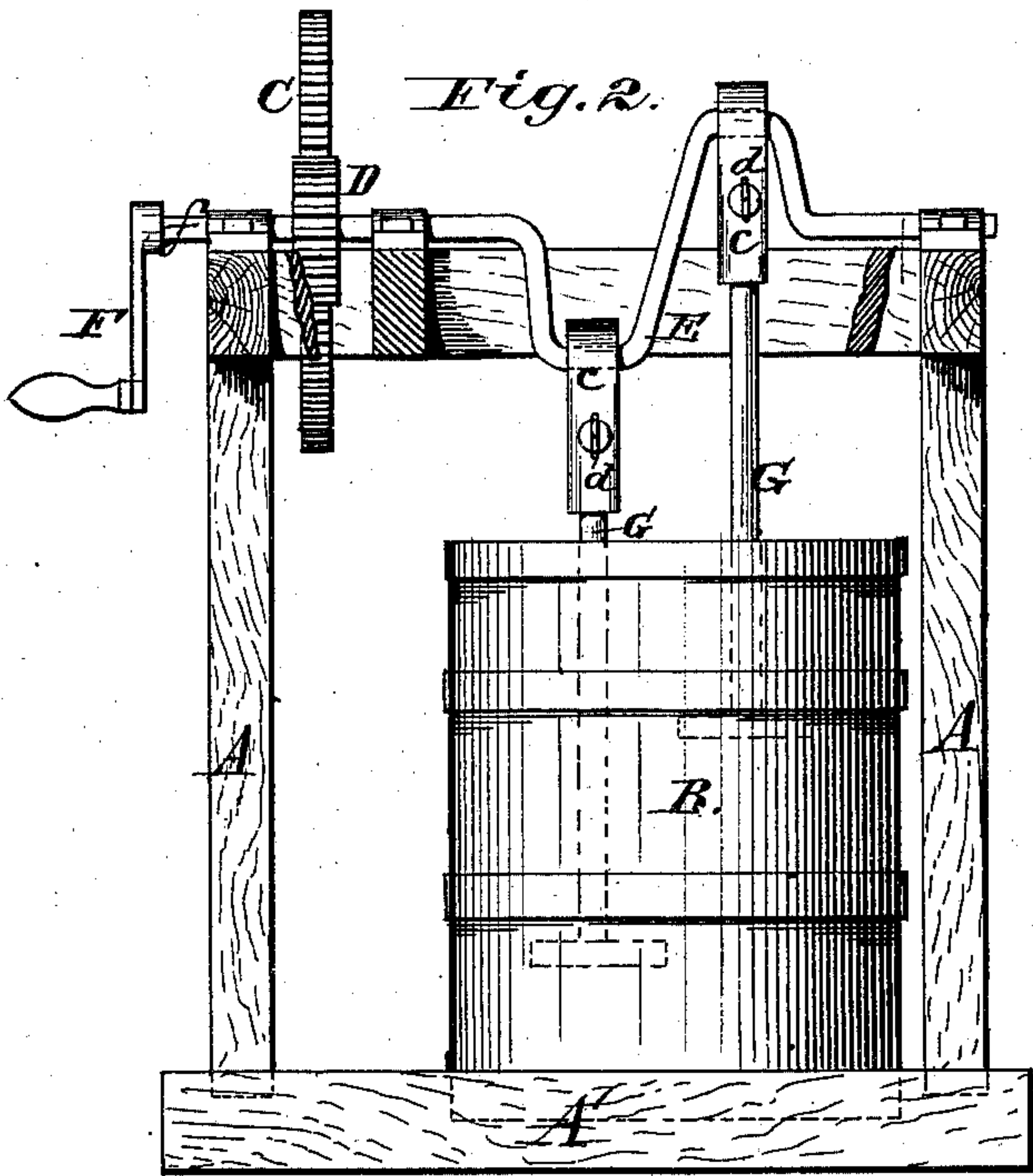


Fig. 3.

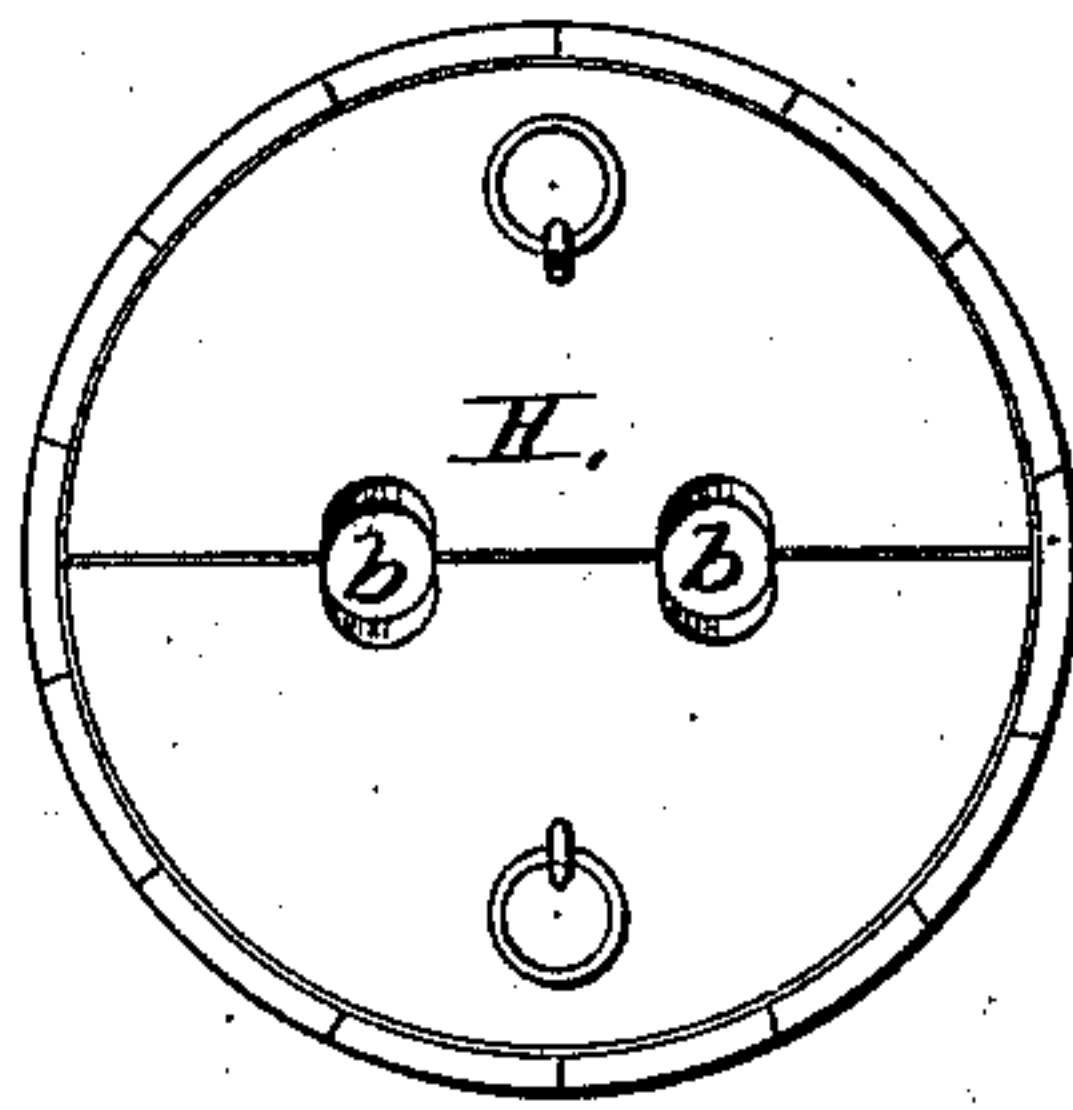
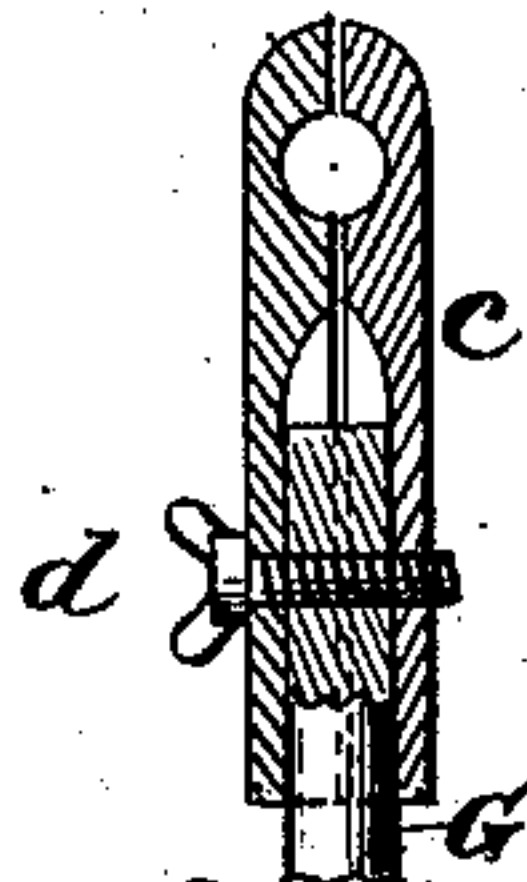


Fig. 4.



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UNITED STATES PATENT OFFICE.

BARZILLAI C. SPRAGUE AND JOHN T. SPRAGUE, OF CLINTON, ILLINOIS.

IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. 194,623, dated August 28, 1877; application filed July 6, 1877.

To all whom it may concern:

Be it known that we, BARZILLAI C. SPRAGUE and JOHN T. SPRAGUE, both of Clinton, in the county of De Witt and State of Illinois, have invented certain new and useful Improvements in Reciprocating Churns; and we do hereby declare that the following is a full, clear, and exact description thereof, 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.

Our invention relates to reciprocating churns in which are employed two or more reciprocating dashers having rigid or jointless dasher-rods, directly connected to the crank-arm and moving on fulcrums, whereby a lateral or rotary motion is imparted to the vertically-reciprocating dashers; and it consists in the peculiar construction and application of double-acting clamps, by means of which the dashers are readily attached or detached, and likewise adjusted to any length, as hereinafter described.

Figure 1 is a vertical section of our improved churn. Fig. 2 is an elevation thereof. Fig. 3 is a top view of the tub, showing the cover with the openings for the dasher-rods to pass through. Fig. 4 is a section through the upper end of dasher-rods, showing manner of attachment to crank-arm.

A represents the frame, resting in a base, A'. B is the tub for containing the cream, of ordinary form, either round, square, or otherwise. Said tub rests upon the base A', and is removable therefrom. E is the crank-shaft, to which the dasher-rods are attached, having its bearings on the frame, and provided with pinion D, which meshes with gear C on the short shaft *f*, to which the crank F is applied. G are the dasher-rods, provided with dashers

a. These rods are jointless, and rigidly or directly connected to the crank-shaft, and pass through opening *b* in the cover H, which serves as a fulcrum or guide in the movement of the churn.

The dashers are adjustable, being attached to the crank-shaft by means of vertically and horizontally grooved clamps *c*, which are provided with set-screws *d*. The dashers may thus be readily removed and replaced without difficulty, and may be adjusted to suit circumstances.

The cover H is made in sections, being divided through the openings *b*, and each section provided with a ring, as seen in Fig. 3.

The crank-shaft E is designed to be provided with a balance-wheel.

The jointless dasher-rods, directly connected to the cranks of the crank-shaft and moving upon fulcrums, impart a lateral motion in addition to the vertical movement of the dashers, which thoroughly agitates the cream.

What is claimed as the invention is—

In a reciprocating churn, the combination of a crank-shaft, a dasher-rod, and a double-acting clamp, formed in two parts, each part having a vertical groove for receiving the dasher-rod, and also a horizontal groove at right angles to the latter for receiving the crank-shaft, said clamp being provided with a set-screw, and operating to clamp the dasher-rod and crank-shaft simultaneously, substantially as described.

In testimony that we claim the foregoing as our own we affix our signature in presence of two witnesses.

BARZILLAI C. SPRAGUE.
JOHN T. SPRAGUE.

Witnesses:

WM. H. SMITH,
WM. MONSON.