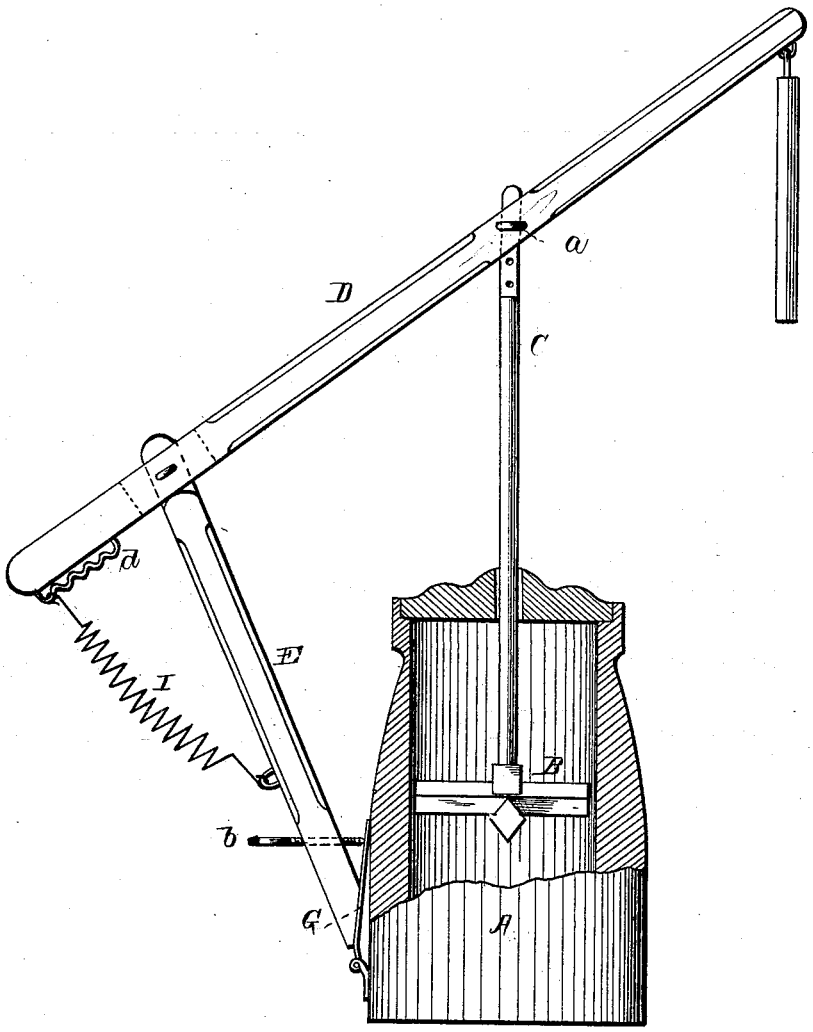
J. H. LAWRENCE.

Device for Operating Reciprocating Churn-Dashers.

No. 199,836. Patented Jan. 29, 1878.



WITNESSES

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JACOB H. LAWRENCE, OF SCHENECTADY, NEW YORK.

IMPROVEMENT IN DEVICES FOR OPERATING RECIPROCATING CHURN-DASHERS.

Specification forming part of Letters Patent No. **199,836,** dated January 29, 1878; application filed December 18, 1877.

To all whom it may concern:

Be it known that I, JACOB H. LAWRENCE, of Schenectady, in the county of Schenectady, and in the State of New York, have invented certain new and useful Improvements in Churn-Powers; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a simple and effective apparatus for attachment to any common churn, for the purpose of lessening the labor of churning, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, which represents a vertical section of a churn with a side elevation of my invention attached thereto.

A represents an ordinary churn, with dasher B, having the usual rod or handle C extending upward through the top of the churn. The upper end of the rod C passes through a mortise in a lever, D, and is connected to the same by a pin, *a*, passing through the parts. The rod C has a series of holes for the passage of said pin, so that the rod can be adjusted up and down, as desired. The lever D is, near one end, connected to the upper end of a vibrating arm, E, the lower end of which is beveled, and connected to the churn A by means of a hinge, G. The leaf of this hinge, which is attached to the end of the arm E, extends above the beveled portion thereof, and a set-screw, *b*, is passed through the arm, and bears against said projecting part of the hinge-leaf, whereby the inward movement of the vibrating arm is regulated—that is, if the hinge-leaf be sufficiently flexible to bend to the screw; otherwise the end of the screw will abut directly against the body of the churn. To the end of the lever D, on the under side, is attached a notched or corrugated rack, *d*, to which is connected one end of a spiral spring, I, the other end being attached to the vibrating arm E. By means of the rack *d* the spring I may be adjusted to regulate its tension.

The lever D, being depressed, carries the dasher down, and the spring returns the dasher to its original position, greatly facilitating the operation. If the tension of the spring I be not sufficient, move the same nearer the end of the lever from notch to notch in the rack *d* until the desired tension is obtained, or vice versa.

In changing from a large churn to a small one, or the reverse, the stroke is rendered longer or shorter by the adjusting-screw *b* in the vibrating arm, which throws it farther from or nearer to the body of the churn, as may be desired.

I am aware that spring-power has heretofore been used in attachments for churns, and also that a vibrating arm with pivoted lever is not new; and I do not therefore claim such, broadly, as my invention.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. The rack *d*, in combination with the lever D, spring I, and arm E, for the purposes herein set forth.

2. In combination with the vibrating arm E and its lever D, with churn-dasher suspended therefrom, and the churn A, the adjusting-screw *b*, for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 12th day of November, 1877.

JACOB H. LAWRENCE.

Witnesses:

T. C. HARGRAVE,

FREDRIC VEDDER.