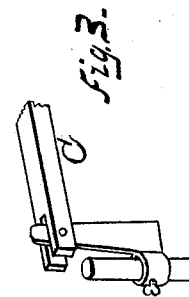
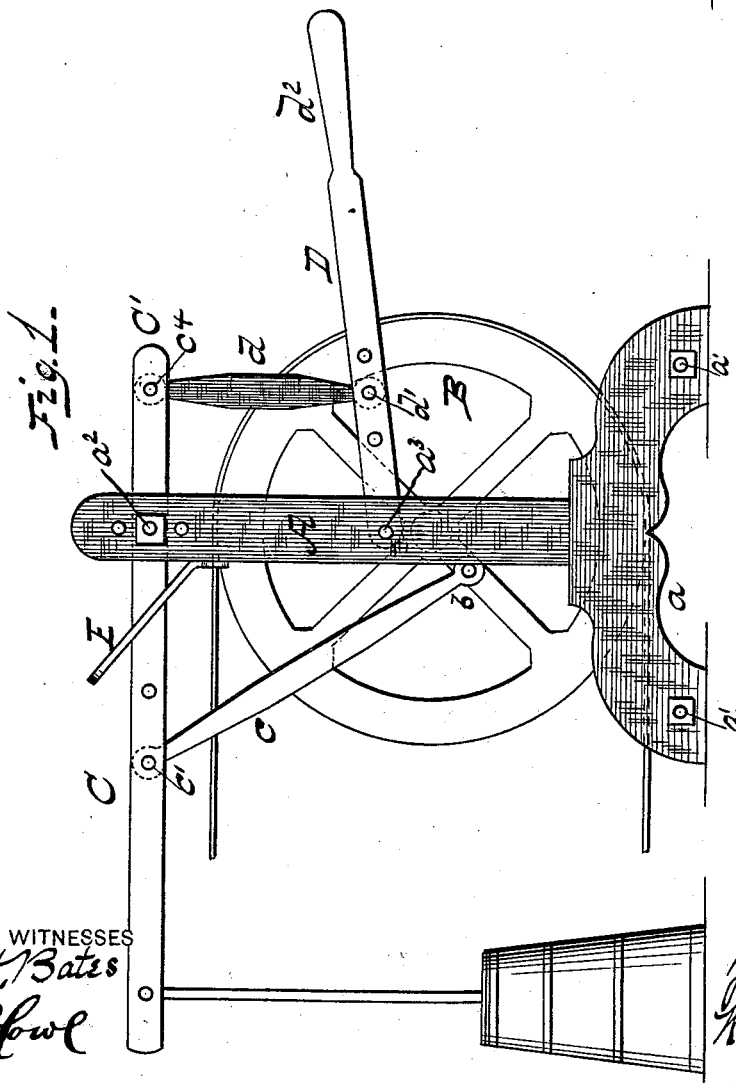
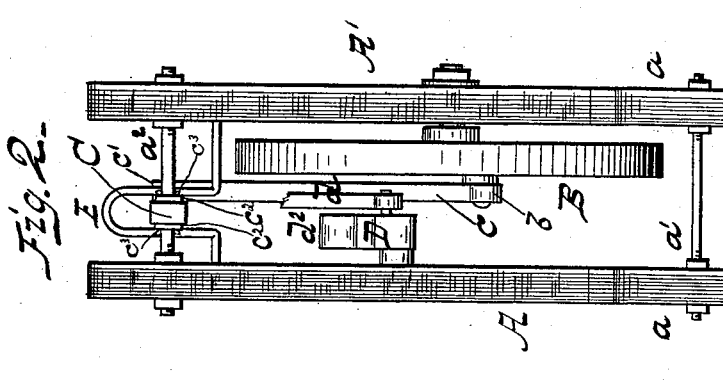


J. W. MILLER.
Hand-Power for Operating Churns, &c.
No. 217,892. Patented July 29, 1879.



WITNESSES
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JAMES W. MILLER, OF NEW CASTLE, PENNSYLVANIA.

IMPROVEMENT IN HAND-POWERS FOR OPERATING CHURNS, &c.

Specification forming part of Letters Patent No. **217,892**, dated July 29, 1879; application filed June 10, 1879.

To all whom it may concern:

Be it known that I, JAMES W. MILLER, of New Castle, in the county of Lawrence and State of Pennsylvania, have invented certain new and useful Improvements in Hand-Powers for Operating Churns, &c.; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as 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.

My invention relates to improvements in hand-powers for operating churns, &c.; and it consists in the novel construction and arrangement of the various parts, all of which will be hereinafter more fully described.

The annexed drawings, to which reference is made, fully illustrate my invention, in which Figure 1 represents a side view of my improved hand-power applied to a churn. Fig. 2 represents an end view of the same. Fig. 3 is a detail view.

A A' represent vertical standards, having a base or feet, *a a*, upon which the same is supported. Said standards are connected to one another by means of bolts *a' a'* and a bolt, *a²*, in the upper end of the standards A A'.

B represents a fly-wheel, journaled to the standard A', and between said standard and the opposite standard, A, and is connected to a horizontal lever, C, by a rod or pitman, *c*, one end of which is pivoted to the fly-wheel B at *b*, and the upper end thereof is pivoted to the lever C at *c'*. Said lever C is provided with a perforation, through which passes the bolt *a²*, and has on each side thereof washers *c² c²* and pins *c³ c³*, for keeping the lever C in place. The short arm C' of said lever is connected to a hand-lever, D, by means of a rod, *d*, pivoted to said arm C at *c⁴* and the hand-lever D at *d'*. The lever D is pivoted at its inner end to the inside of the standard A at *a³*, and has on its opposite end a handle, *d²*, by which the same is operated.

A guide, E, in the form of the letter U, is fixed to the standards A A', through which the lever C moves and the latter is guided and kept from lateral motion.

The forward end of the lever C may be constructed with a vertical slot, in which is pivoted at its upper end a swinging arm, the lower end of which is provided with an eye, for the purpose of receiving the upper portion

of a dash-rod, and the same being secured thereto by means of a pin running crosswise the same, or a thumb-screw, as shown in Fig. 3 of the drawings.

Having described the different parts of which my churn-power is constructed, I will now proceed and give the mode in which it is operated.

Operation: The handle *d²* on the lever D is given a vertical movement by the operator, and turns on its pivoted end *a³*, thus communicating motion to the lever C by the rod *d*, pivoted to the same and the hand-lever D. Motion is then given to the fly-wheel B through the medium of the pitman-rod *c*, connected to said lever C and the fly-wheel B. The forward end of the lever C is thus given an up-and-down or vertical movement, by means of which a churn or other like article can be operated.

In the drawings I have shown the levers C D, rod *d*, and pitman-rod *c* connected to one another, as well as the fly-wheel, by holes or perforations, for regulating the length of the stroke and the speed of the fly-wheel, but reserve the right to connect the various parts together by means of sliding bolts passing through slots made in the standards A A', fly-wheel B, and levers C, and D, by means of which the revolution of the fly-wheel B can be regulated to a desired speed; also, I construct the fly-wheel B with one side somewhat heavier than the other, in order to overcome a dead-center, to which the same is liable otherwise.

Furthermore, a belt may be applied to the fly-wheel B, as shown in Fig. 1 of the drawings, for operating fly-fans and other light machinery.

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

The churn-power constructed as herein described, consisting of the main standards A A', base *a a*, and bolts *a' a²*, the hand-lever D, lever C, pitmen *c d*, guide E, and fly-wheel B, as and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 7th day of June, 1879.

JAMES W. MILLER.

Witnesses:

I. M. CRAIG,
GEO. BRYAN.