

PHILIP NICHOLS & ALVAH TRAVER.

Improvement in Churns.

No. 119,898.

Patented Oct. 10, 1871.

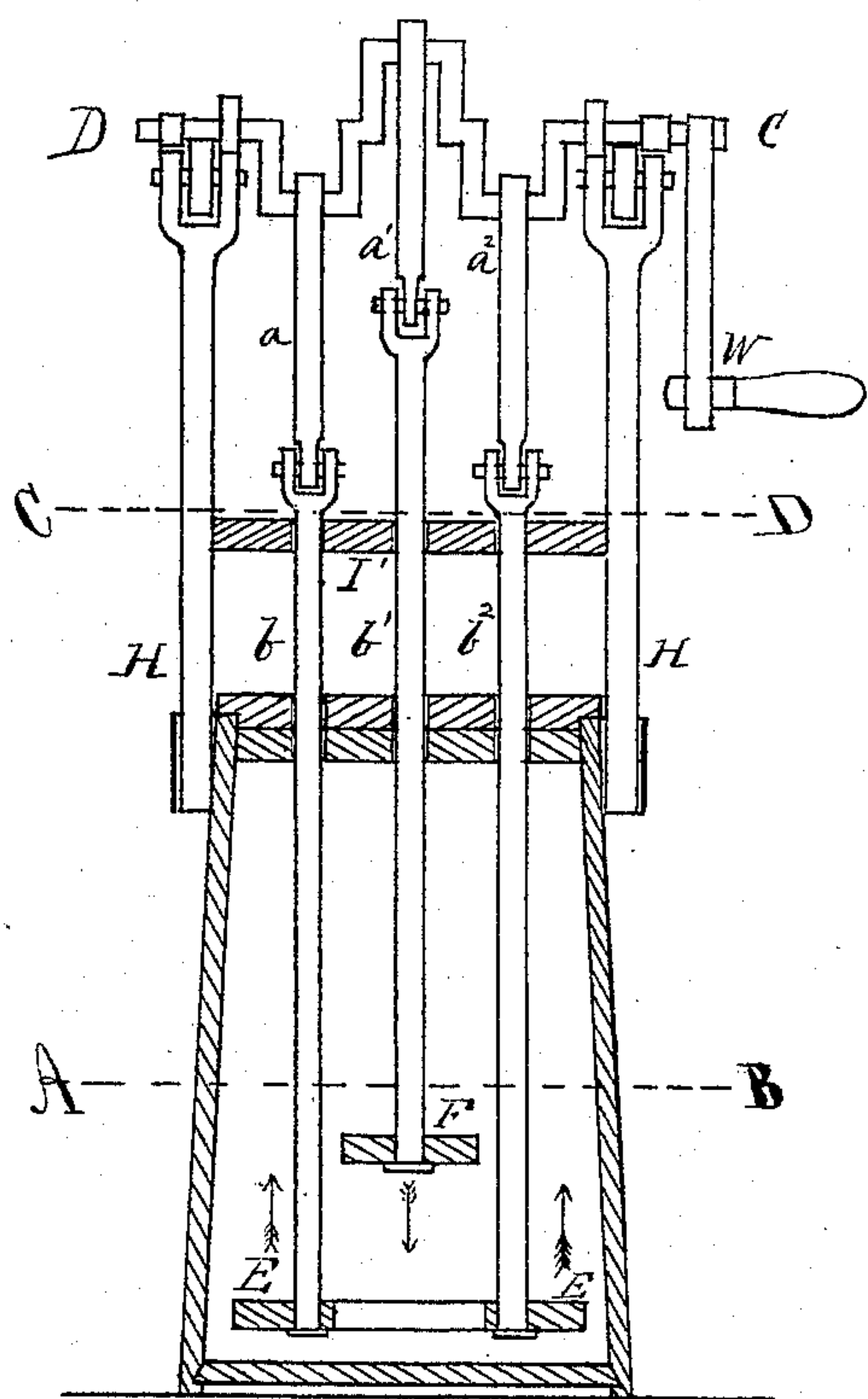


Fig. 1.

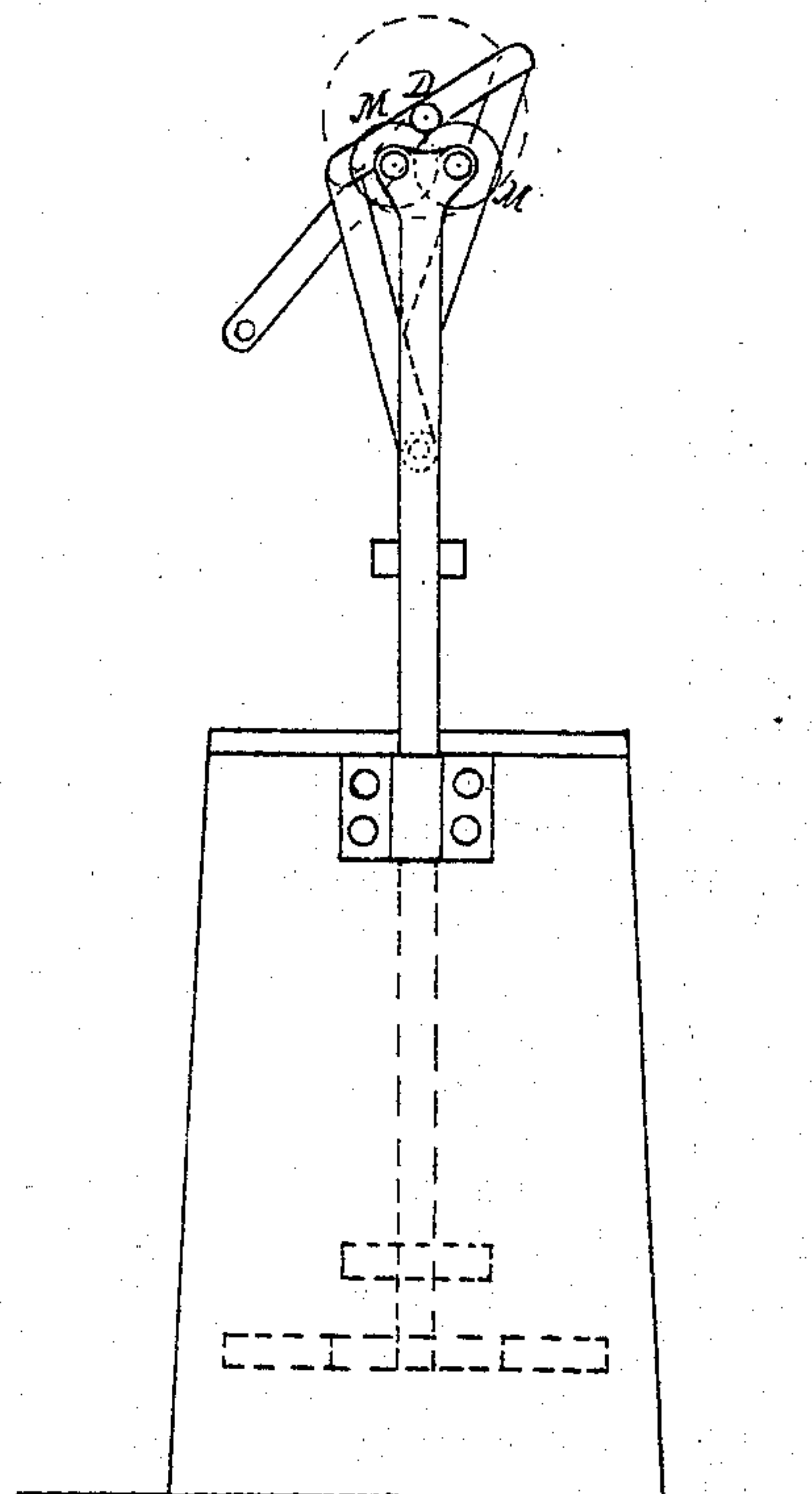


Fig. 4.

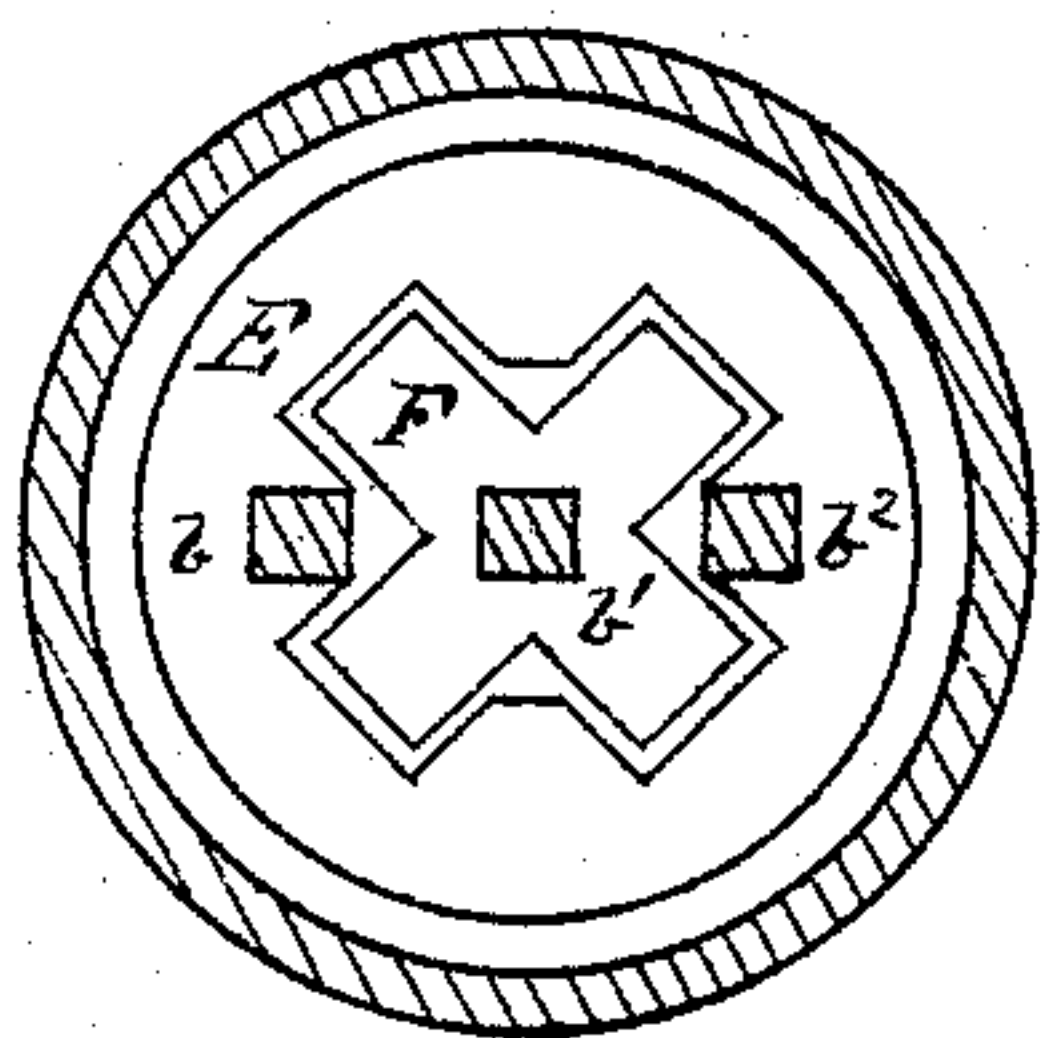


Fig. 2.

A---B

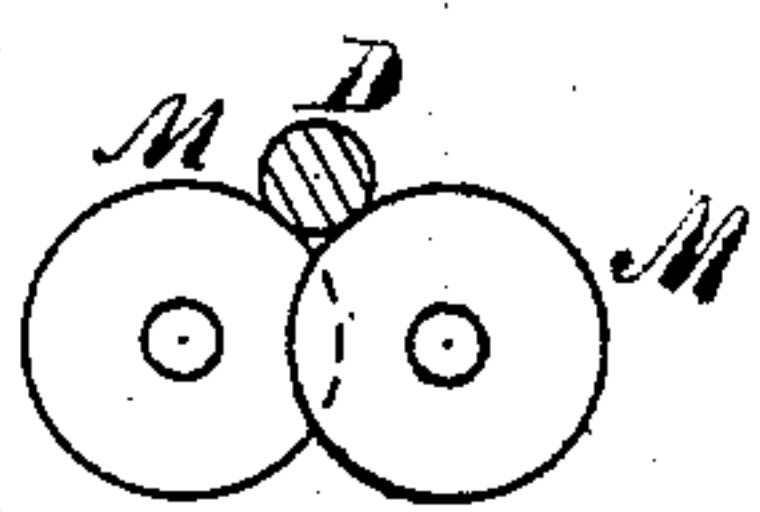


Fig. 5.

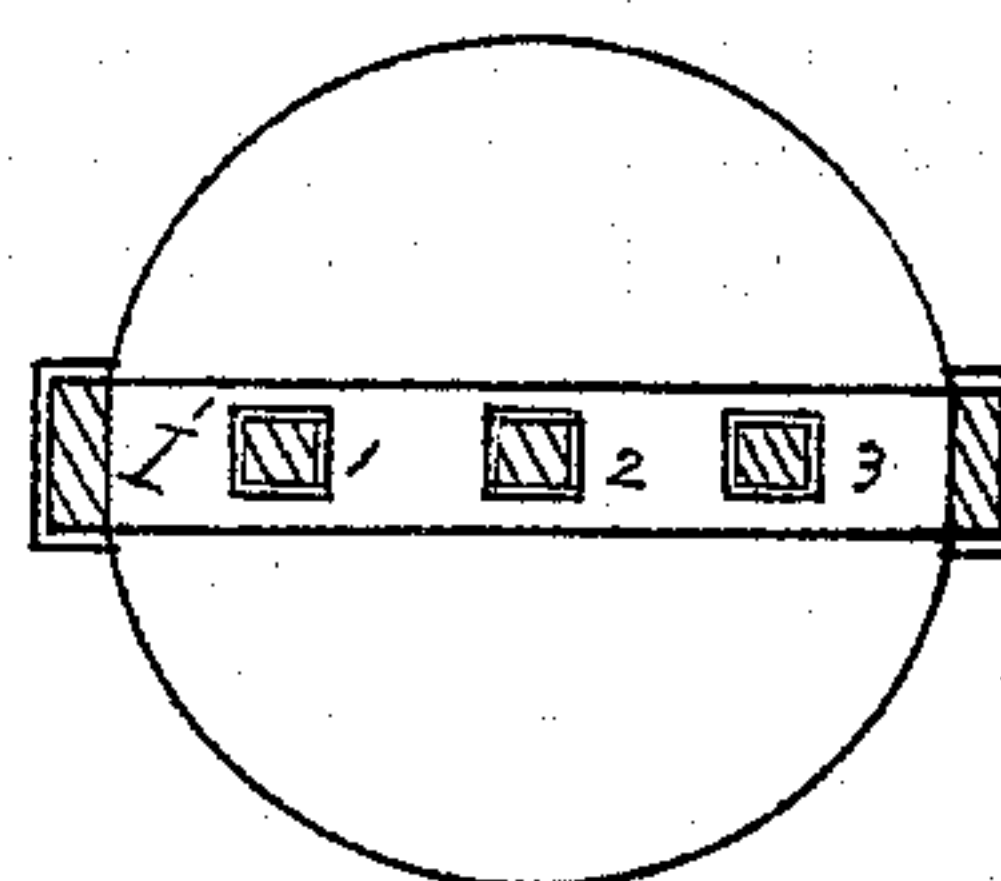


Fig. 3.

C---D

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ALVAH TRAVER AND PHILIP NICHOLS, OF TROY, NEW YORK.

IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. 119,898, dated October 10, 1871.

To all whom it may concern:

Be it known that we, ALVAH TRAVER and PHILIP NICHOLS, of the city of Troy, in the county of Rensselaer and State of New York, have invented a Double-Dash-Power Churn, of which the following is a specification:

The nature of my invention consists in the construction and general arrangement of the parts of a churn, as hereinafter more fully set forth.

Figure 1 is a plan or vertical section. Fig. 2 is a horizontal section on line A B, Fig. 1, and showing the outline of the dashers. Fig. 3 is a horizontal section on line C D, Fig. 1, and showing openings in cross-blocks for handles of dashers. Fig. 4 is a side elevation. Fig. 5 is an end elevation of the friction-rollers and shaft.

H H are the two sides of the upright frame, which are clamped or fastened to the outside of the churn or vessel; I, the cross-block to the same; M M, the frictional bearing-wheels; D, the shaft; C D, the looped axis or spindle; W, the crank or winch; $a a^1 a^2$, the connecting-rods or links; $b b^1 b^2$, the dasher-handles; E, the exterior dasher; F, the interior dasher. Numbers 1 2 3, Fig. 3, represent the openings in the cross-bar and corresponding apertures in the lids. The upright frame H is substantially constructed, and adjusted and fastened, by a thumb-screw or other suitable means, in a chute or pocket on opposite sides of the churn and near the top. The upper and outer extremities of the frame have shoulders or bearings, in which revolve the axis of the two friction-wheels. Partially between, and held in position in contact with, the circumference of these wheels is the spindle or looped axis C D, which, in its parts in contact with the friction-wheel and clamping-rods is rounded, so as to promote easy rotation. The lower ends of the connecting-rods are jointed with the dasher-rods. The latter pass down through apertures in the cross-blocks and covers into and are securely fastened to the dashers. The brace-blocks under-

neath may be dispensed with or fastened to the covers. The two outside handles $b b^2$ are securely fastened in the exterior dasher, the handle b^1 in the interior one. The winch or crank may be adjusted to either end of the spindle, or in place of the crank the motive power may be, by an endless band on the end of the spindle, or by other suitable gearing, when operating on the same principle, as set forth. The height of the frame, the length of the connecting-rod and loops and spindle should be adjusted to the depth and width of the churn, so as to give the necessary rise and fall of the dashers. The cover of the churn may be made in two parts, and the materials used in construction of the different parts those best adapted to the use and purpose required.

The device having been adjusted to the churn and the cream poured in the same, then, by the revolution of the spindle and operation of the linked dasher-rods and looped connections, a rapid and continuous reciprocating motion to the dashers is obtained, the smaller one rising while the larger one is descending, and vice versa, and active agitation of the cream is had until the butter is gathered. The motion of the dashers is made slow or fast, as different stages of the process require.

We claim—

The combination of the box A, uprights H H, cross-bar I, crank-shaft C D resting on the friction-wheels M M, the connecting-rods $a a^1 a^2$, dasher-rods $b b^2$ connected to the dasher E provided with a crucial slot in its center, and the dasher-rod b^1 provided with the crucial-cross dasher F, which operates through the dasher E, all constructed as set forth.

PHILIP NICHOLS.
ALVAH TRAVER.

Witnesses:

H. McCORMICK,
SAMUEL FOSTER.

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