A. W. DECKER.
Churn-Power.

No. 200,988. Patented March 5, 1878.

Fig. 1.

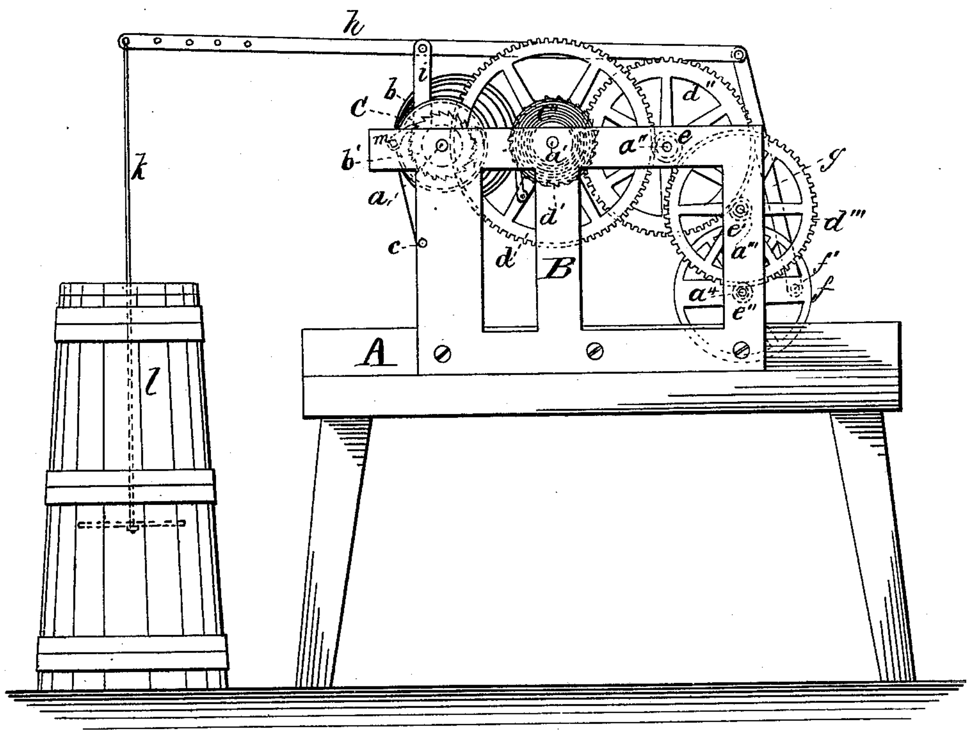
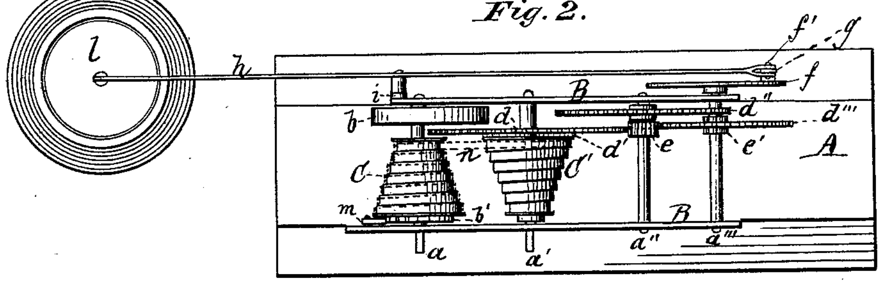


Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

ANSIL W. DECKER, OF NIVEN, PENNSYLVANIA.

IMPROVEMENT IN CHURN-POWERS.

Specification forming part of Letters Patent No. **200,988**, dated March 5, 1878; application filed August 7, 1877.

To all whom it may concern:

Be it known that I, ANSIL W. DECKER, of Niven, Susquehanna county, State of Pennsylvania, have invented certain Improvements in Churn-Powers, of which the following is a specification, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

The invention is designed to be a simple, reliable, and cheap machine for the use of dairymen; and it consists of the combination of parts hereinafter described.

In the accompanying drawing, forming a part hereof, Figure 1 is a side elevation of the invention as employed in working the churn-dasher. Fig. 2 is a plan view of the same.

Similar letters of reference indicate like parts of the invention in all the views.

A is the bed-plate of the machine. B B are the side frames thereof. A shaft, *a*, having attached thereto one end of a volute spring, *b*, is provided with a cone, C, having a spiral or flat screw-surface, as shown, the other end of the spring being secured to the bolt *c*. The shaft has also a ratchet-wheel, *b'*.

A second cone, C', similar to C, is placed upon a second shaft, *a'*, which also carries the spur-wheel *d* and the ratchet-wheel *d'*. The cone and ratchet move together, being secured to the shaft; but the wheel is on a sleeve and moves independently, unless the pawl of the ratchet is in use. This arrangement allows the belt to be tightened by turning the cone C' from C, which may be done while the machine is in operation.

The spur-wheel *d* engages with a pinion, *e*, on a third shaft, *a''*, which also carries a spur-wheel, *d''*. This wheel engages with the pinion *e'* on the fourth shaft *a'''*, carrying the spur-wheel *d'''*. This wheel, in turn, engages with the pinion *e''* on the fifth shaft a^4, which carries the crank-wheel *f*.

To the pin *f'* of the crank-wheel is attached the connecting-rod *g*, which is pivoted to the lever *h*, having its fulcrum on the standard *i*, extending from the frame of the machine. To the lever *h* is attached the dasher-rod *k* of the churn *l*, as shown.

The ratchet-wheel *b'* of the first shaft *a* is provided with a pawl, *m*, pivoted to the frame, as shown, which pawl is caused to engage with the ratchet-wheel to stop the machine when the spring is wound.

The operation of the machine is as follows: The spring being wound, the pawl free from the ratchet-wheel *b'* on the shaft *a*, and the ratchet-wheel of the second cone placed so as to unite said cone and the wheel *d*, the strap *n* on the second cone begins to unwind to the first cone, the differential character of the cones equalizing the power exerted, and governing the motion and speed.

I prefer flat screw-surfaced cones, as they are adapted to the use of straps or belts, which are less liable to stretch, and are also more readily procurable in the rural districts.

A cord can, however, be used on cones thus constructed, whereas straps could not be used on cones constructed specially for the use of cords.

The equalizing effect of the cones causes the movement imparted to the dasher to be regular, which is known to be an important consideration.

The means hereinbefore described, whereby the belt can be tightened, distinguish this machine from similar machines for the purpose.

Having described my invention, what I claim as new, and wish to secure by Letters Patent of the United States, is—

In a churn-power having the volute spring *b* and flat-surfaced screw-cones C and C', with their shafts and gearings, the means for tightening the belt, consisting of the wheel *d*, loose upon the shaft *a'*, and carrying a pawl, and the ratchet-wheel *d*, tight upon said shaft, and attached to the cone C', combined as specified.

In testimony whereof I have hereto subscribed my name in the presence of two subscribing witnesses this 7th day of August, A. D. 1877.

ANSIL W. DECKER.

Witnesses:

GEO. H. HOWARD,

THEODORE MUNGEN.