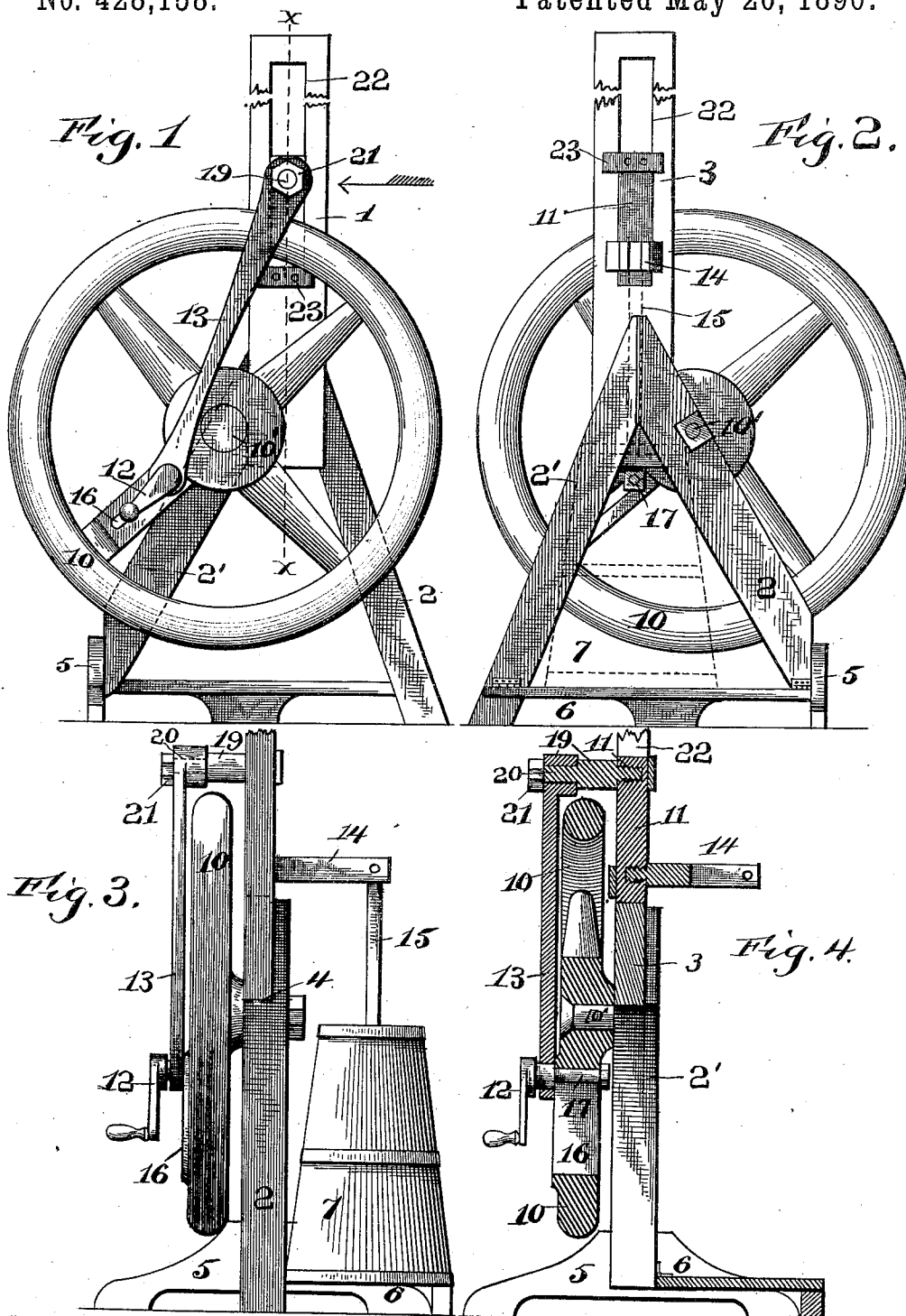


(No Model.)

W. H. SWOGGER.  
CHURN POWER.

No. 428,158.

Patented May 20, 1890.



Witnesses  
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H. D. Phelps.

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# UNITED STATES PATENT OFFICE.

WILLIAM H. SWOGGER, OF NEW WILMINGTON, PENNSYLVANIA.

## CHURN-POWER.

SPECIFICATION forming part of Letters Patent No. 428,158, dated May 20, 1890.

Application filed February 28, 1890. Serial No. 342,075. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. SWOGGER, a citizen of the United States, residing at New Wilmington, in the county of Lawrence and State of Pennsylvania, have invented certain new and useful Improvements in Churn-Powers; 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.

My invention relates to improvements in churn-powers of that class which employ a vertically-reciprocating dasher; and the object of my invention is to provide a simple, cheap, and light-running power, which can be operated with great ease.

With these ends in view my invention consists in the peculiar construction and arrangement of parts, as will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a churn-power constructed in accordance with my invention. Fig. 2 is a similar view looking at the reverse side of the power. Fig. 3 is an end elevation, and Fig. 4 is a vertical sectional view on the line *x x* of Fig. 2.

Like numerals of reference denote corresponding parts in all the figures of the drawings, referring to which—

1 designates the supporting-frame of my improved churn-power, which frame consists of the oppositely-inclined legs 2 2' and the vertical standard 3, which is secured to the legs at the apex formed by the same, the upper ends of the legs being recessed, as at 4, to receive the lower end of the standard, which is thus arranged substantially in the vertical plane of the legs, whereby the parts are firmly united together, and a simple, strong, and cheap frame for the power is provided. The frame is steadied and braced when the power is in use by a transverse foot-piece 5, which extends at right angles to the frame and is secured to one of the legs of the same, as shown.

On one side of the frame, near the lower end of the same, I provide a horizontal platform or leaf 6, which is hinged to the legs of the frame so that said platform can be folded

into a vertical position close against the frame, and when the platform is unfolded a churn body or receptacle 7 is placed thereon.

The operating or driving mechanism of the churn-power is situated on the opposite side of the frame from the churn-body, in order that the parts may be equally distributed to insure steadiness of the motor, and this operating mechanism comprises a balance or fly wheel 10, a head-block 11, a crank 12, connected by a link 13 to the head-block, and a vertically-reciprocating dasher 15, operating in the churn-body and connected to the head-block. The balance fly-wheel 10 is journaled or carried on a shaft 10', which is suitably supported on the frame, preferably at a point just below the apex formed by the inclined legs, and in one of the radial arms of this wheel is provided a longitudinal slot 16, which receives the squared or angular-shaped pin 17 of the operating-crank 12, whereby this crank can be adjusted in the slot of the arm toward or from the axis of the wheel, in order to vary the length of the stroke of the pitman or link 13. This pitman is fitted on the rounded part of pin 17 of the crank to permit the latter to turn in the pitman, and the upper end of the pitman is connected to a pin 19, which is carried by the head-block 11. This pin projects outwardly from the head-block above the balance-wheel and across the same, and the balance-wheel is thus located between the frame, the link, and the pin, thus providing a compact and simple arrangement of the power. The pin 19 is provided with a threaded and rounded portion 20, to receive the eye formed in the upper end of the pitman, and with a reduced threaded end (not shown) to receive a nut 21, which confines the pitman in place. From the opposite side of the head-block projects an arm 14, which is fixed to the block to reciprocate vertically with the same, and this arm is bifurcated or slotted to receive the dasher-staff 15, the connection being effected by a transverse bolt or pin, as shown. The upright standard of the frame is provided with a longitudinal slot 22, in which the head-block is fitted, and this block is prevented from displacement in the slot by means of guide-pieces 23, which are secured to opposite faces of the block to move there-

with and slide against the standard, or by ways or grooves which may be formed on the standard, as is obvious.

In operation the crank is turned by hand to rotate the balance-wheel and reciprocate the pitman, which causes the head-block to move vertically in the slot and thus reciprocate the dasher to effect churning of the cream in the receptacle or body. The power is exceedingly light-running and can be manipulated with ease, and said power runs very steadily and smoothly, owing to the use of the balance-wheel and the distribution or arrangement of parts.

The whole device is very simple and cheap, and it is efficient in operation and not liable to get out of order.

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

1. In a churn-power, a frame comprising the oppositely-inclined legs, the vertical slotted standard secured to the legs at the apex thereof and extending upwardly above the same, and a foot-piece, in combination with a head-block fitted in the slot of said standard and having the pin and the slotted arm extending from opposite sides of the same, a balance-wheel mounted on the frame below

the slot in the standard thereof, a crank connected to the wheel, a pitman arranged laterally of the balance-wheel and connected to the crank-pin and the pin 19 of the head-block, and a dasher arranged on the opposite side of the frame to the balance-wheel and connected to the arm of the head-block, substantially as described.

2. A churn-power comprising a frame having the vertical guide-slot, a head-block fitted in the slot and having the contact-pieces for holding the same against displacement, an arm extending from one side of the head-block a dasher-staff connected to said arm, a pin projecting from the opposite side of the head-block, a balance-wheel journaled on the frame below the head-block and the crank-pin thereof and having the radially-slotted arm, a crank having its pin fitted in said slot, and a pitman arranged laterally of the balance-wheel and connected to the pin 19 and to the crank-pin, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. SWOGGER.

Witnesses:

J. A. LININGER,  
S. S. LININGER.