

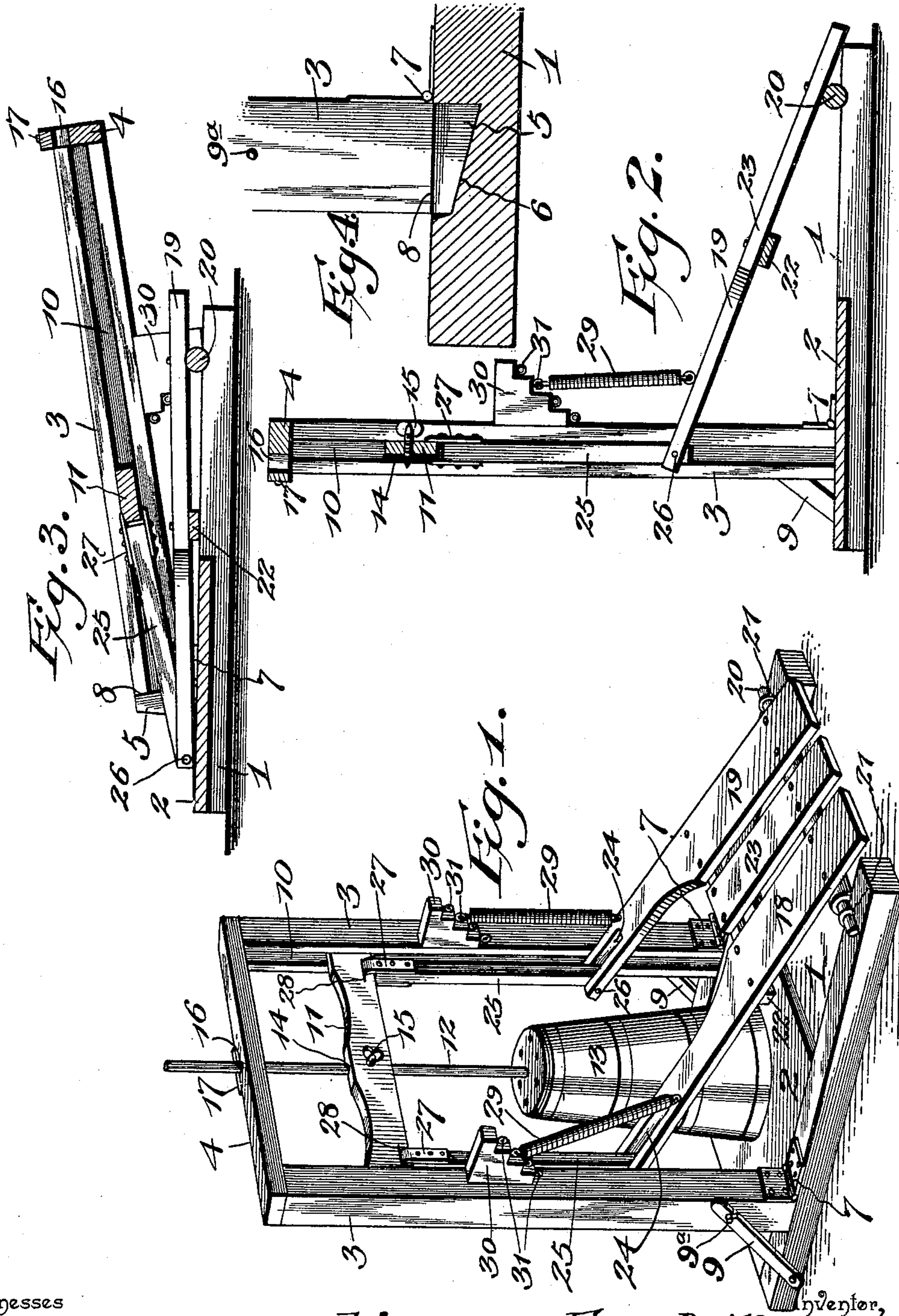
No. 629,588.

Patented July 25, 1899.

F. B. MCKENNEY.  
CHURN.

(Application filed Nov. 21, 1898.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

FRANK B. MCKENNEY, OF WESTON, WEST VIRGINIA.

## CHURN.

SPECIFICATION forming part of Letters Patent No. 629,588, dated July 25, 1899.

Application filed November 21, 1898. Serial No. 697,053. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK B. MCKENNEY, a citizen of the United States, residing at Weston, in the county of Lewis and State of West Virginia, have invented a new and useful Churn-Power, of which the following is a specification.

This invention relates to improvements in churn-powers, and has for its object to provide a framework and operating mechanism carried thereby which may be folded together when not in use.

To this end the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, and particularly pointed out in the claims.

In the drawings, Figure 1 is a perspective view of the device. Fig. 2 is a vertical longitudinal sectional view thereof. Fig. 3 is a longitudinal sectional view in folded position. Fig. 4 is a detail sectional view illustrating the hinged connection of the upright frame with the base.

Corresponding parts are denoted by like reference characters in all the figures of the drawings.

Referring to the drawings, the base comprises a rectangular frame 1, having a platform 2 provided at the forward end thereof. A vertical frame extends above the platform 2 and comprises a pair of uprights 3 upon opposite sides of the base and a transverse beam 4, connecting the upper ends of the upright. As indicated in Fig. 4, the lower end of each of these uprights is provided with a tongue or tenon 5, which is adapted to fit within a recess or mortise 6, formed in the respective longitudinal sides of the base. Hinges 7 connect the uprights with the base, and the tongues 5, fitting within the recesses 6, form a substantial mounting of the upright frame upon the base. The shoulders 8 at each side of the tongues engage the upper face of the sides of the base and form a stop to limit the movement of the upright frame, and suitable pivoted catches or hooks 9 are adapted to engage the pins or eyes 9<sup>a</sup>, provided upon the outer faces of the uprights to brace the frame in its upright operative position. The inner faces of the uprights are each provided with a groove 10, and a transverse head 11 has its respective ends slidably mounted in the grooves.

This head is adapted to operate the dasher-rod 12 of an ordinary hand-churn 13, placed upon the platform directly under the head 11 and between the uprights. The dasher-rod rests centrally across the head in a groove 14, formed in the outer face thereof, and a suitable set-screw 15 is carried by the head and is adapted to be engaged with the dasher-rod to connect the same with the head and to adjust the length of the stroke of the dasher for different quantities of cream, as will be understood. The upper end of the rod passes through a notch 16, formed in the top beam, and is retained therein by a button 17, whereby a guide is provided for the dasher-rod.

The means for reciprocating the sliding head in the grooves 10 comprise a pedal mechanism consisting of a pair of spaced pedals 18 and 19, connected to a rock-bar 20, which is journaled at its ends to the longitudinal side pieces of the frame by means of eyes or straps 21. These pedals are braced by means of a transverse bar 22, and a single pedal 23 is provided between the pair of pedals, being mounted upon the rock-bar and transverse bar 22, as described for the other pedals. The forward ends of the pedals 18 and 19 are reduced in width or cut away upon their inner faces, as shown, to accommodate the churn-body, and each is provided with a longitudinal slot 24. Each of these pedals is connected to the head 11 by means of a link or rod 25. This connecting-rod is pivoted at one end, as at 26, in the slot 24 and is connected to the head by means of a looped strap 27, which embraces the end of the rod and passes loosely through a transverse opening 28 and forms a hinge connection between the head and the connecting-rod. By this construction and arrangement the pedals are operated to reciprocate the head 11 and operate the churn-dasher in a convenient and effective manner.

To aid in lifting the dasher, each pedal is provided with a coiled spring 29, one end thereof being connected to the pedal near its forward end and to the respective upright 3, whereby when the pedals are pressed downward the tension of the spring will act to draw the dasher upward. Each upright is provided with an inverted stepped bracket 30, having any desired number of steps, which



are each provided with a pendent hook or eye 31. The upper end of each spring is adapted to be engaged with any one of the hooks upon its respective bracket, whereby the tension of the spring may be adjusted to suit the quantity of cream used in the churn. By this stepped arrangement or disposition of the eyes 30 one beyond the other the spring may be engaged with any eye, and the other eyes will not interfere with the operation thereof.

In the operation of the device the uprights are set up and braced by the hooks 9, the churn 13 is placed upon the platform 2, the dasher-rod 12 passed through the notch 16 and confined therein by the button 17, and the set-screw 15 is set against the dasher-rod to adjust the movement thereof and to connect it to the head 11. The power is then operated by both feet upon the respective pedals 18 and 19 or by one foot upon the intermediate pedal 23, and through the connecting rods or links 25 the head and the dasher-rod are reciprocated in an effective manner.

When it is desired to fold the device, the hooks 9 are disengaged from the uprights, and the latter are folded downward toward the pedals upon the hinges 7, the head 11 slides downward in the grooves 10, thereby permitting of the pedals remaining horizontal, and the connecting-rods 25 fold down upon their pivots 26, accommodated by the slots 24, whereby the device is folded together into compact form for transportation, &c. In this position the springs 29 are disconnected to accommodate the folding of the device.

The combination and arrangement as herein set forth provides an improved and useful churn-power adapted for use with any ordinary form of churn having a vertical reciprocating dasher, is capable of adjusting the upward throw of the dasher, and may be folded together into a compact form when not in use.

Changes in the form, proportion, and minor details of construction and arrangement may be made without departing from the spirit and scope or sacrificing any of the advantages of the present invention.

Having thus described my invention, what is claimed is—

1. In a vertically-reciprocating churn, the combination with a base having a pedal mechanism, of an upright frame foldable upon the base, a reciprocating head having its ends slidably mounted upon the upright frame, and an operative connection pivotally attached to the pedal mechanism and the reciprocating head, the latter being capable of a movement greater than that imparted by the pedal mechanism, whereby the upright

frame carrying the head and operative connection may be folded upon the base, substantially as shown and described.

2. In a vertically-reciprocating churn, the combination of a base having operating-pedals provided with longitudinal slots at their free ends, an upright frame foldable upon the base and having opposite grooves extending substantially the entire length thereof, a reciprocating head having its ends slidably mounted in the respective grooves, and operative connections having their ends pivoted or hinged to the head and in the slots of the pedals, respectively, whereby the upright frame carrying the head and operative connections may be folded upon the base, substantially as shown and described.

3. In a vertically-reciprocating churn, the combination with a base having pedal mechanism, of an upright frame, an operative connection between the pedal mechanism and the churn-dasher, a spring connected at one end to the pedal mechanism, and an adjustable connection for the other end of the spring, said connection being carried by the upright frame, substantially as shown and described.

4. In a vertically-reciprocating churn, the combination with a base having pedal mechanism, an upright frame, and an operative connection between the pedal mechanism and the churn-dasher, of a spring connected at one end to the pedal mechanism, and an adjustable connection for the other end of the spring, said connection comprising a bracket carried by the upright frame and provided with a plurality of spring-engaging devices arranged at successively-increasing distances from the upright frame, substantially as and for the purpose set forth.

5. In a vertically-reciprocating churn, the combination with a base having a pedal mechanism, an upright frame and an operative connection between the pedal mechanism and the churn-dasher, of springs connected at their lower ends to the pedal mechanism, inverted stepped bracket carried by the upright frame, and a spring-engaging device upon each of the several steps, said devices being arranged at successively-increasing distances from the upright frame, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

FRANK B. MCKENNEY.

Witnesses:

A. FURBER,  
JOHN L. GASTON.