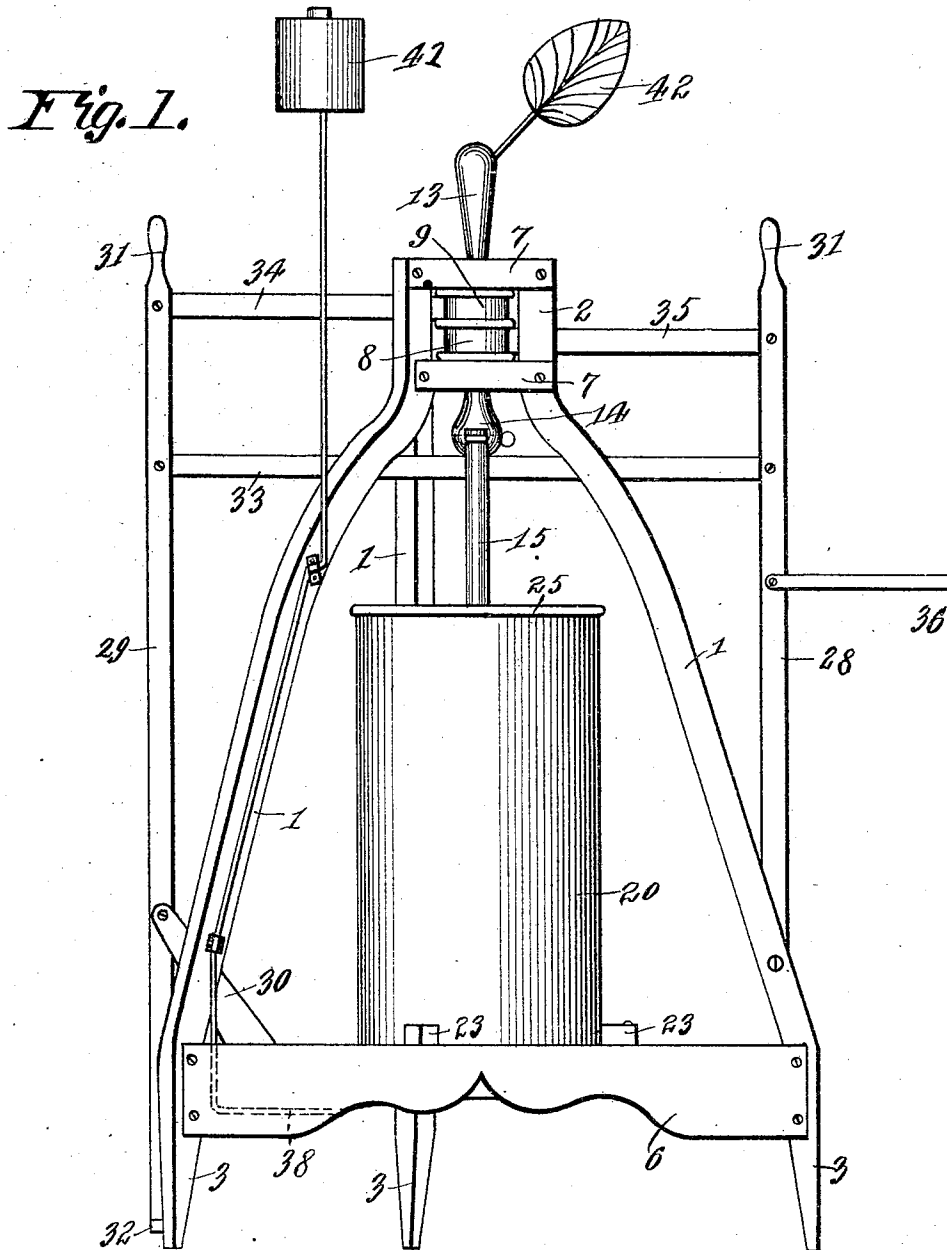


J. T. WALSTON.
CHURN MOTOR.
APPLICATION FILED JAN. 29, 1909.

943,580.

Patented Dec. 14, 1909.
2 SHEETS—SHEET 1.



Inventor
John T. Walston

Witnesses
William C. Linton.
J. F. Byrne.

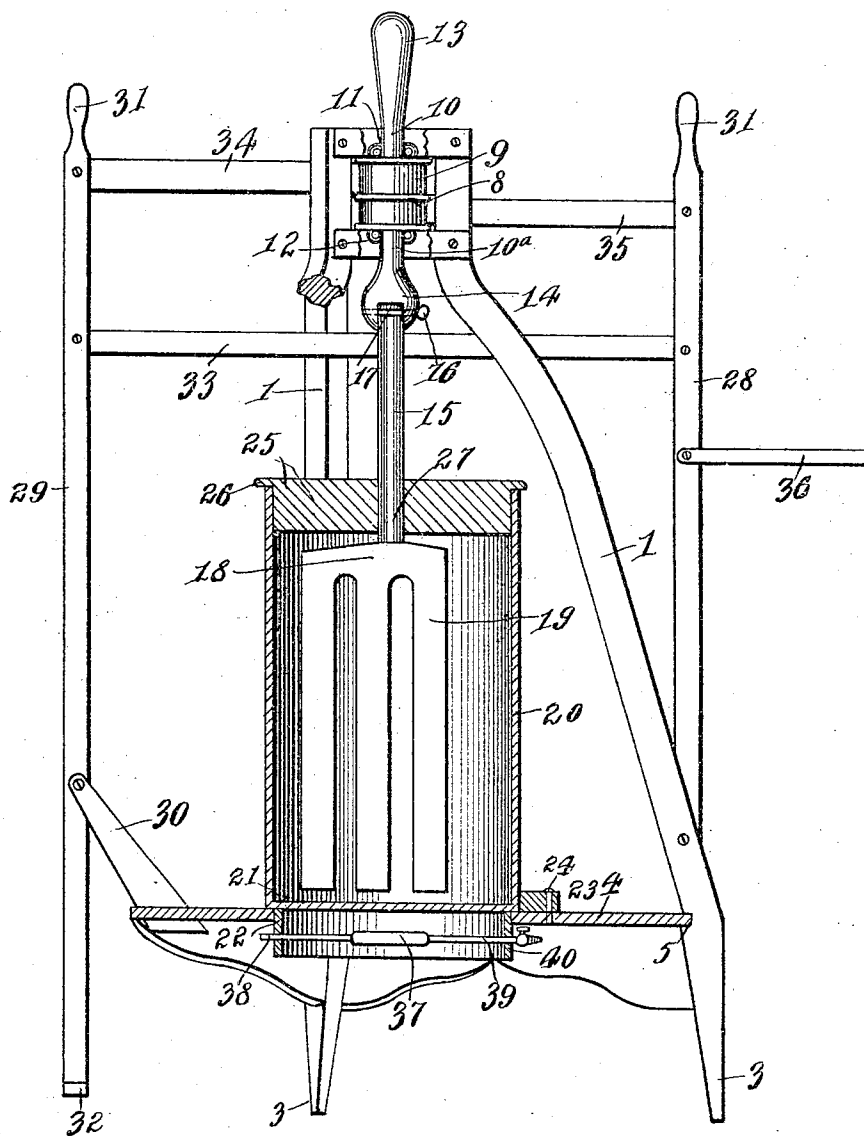
By *Victor J. Evans*
Attorney

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Fig. 2.



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UNITED STATES PATENT OFFICE.

JOHN T. WALSTON, OF ASHEVILLE, NORTH CAROLINA.

CHURN-MOTOR.

943,580.

Specification of Letters Patent.

Patented Dec. 14, 1909.

Application filed January 29, 1909. Serial No. 474,922.

To all whom it may concern:

Be it known that I, JOHN T. WALSTON, a citizen of the United States, residing at Asheville, in the county of Buncombe and State of North Carolina, have invented new and useful Improvements in Churn-Motors, of which the following is a specification.

My invention relates to improvements in motors for operating churns, clothes washers, dish washers, and ice cream freezers.

The primary object of my invention is the provision of a motor of the above referred to type which may be operated manually or through the medium of an electric, hydraulic, or other motor, or through the medium of a rocking chair.

A further object of my invention is the provision of a motor of the above referred to type which shall be simple, durable and efficient, and which may be manufactured and sold at a comparatively low cost.

With the above and other objects in view, the invention consists in the novel construction, combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawing, wherein:—

Figure 1 is a view in side elevation of my improved motor, a churn being shown in position for operation by the motor, and Fig. 2 is a sectional view taken on a vertical plane extending centrally through the motor and churn.

Referring to the drawings by reference numerals, 1 designates a triangular series of standards which are inclined upon each other. At their upper ends the standards terminate in vertically disposed extensions 2, and at their lower ends in vertically disposed supporting legs 3. A horizontally disposed triangular shelf 4 is secured at its corners to the upper ends of the legs 3 said legs being provided with horizontally disposed shoulders 5 upon which the shelf rests. Vertically disposed side boards 6 which are secured at their ends to the legs 3, prevent the legs from having any relative movements. Horizontally disposed bearing blocks 7 are secured to the vertical extensions 2 and are arranged in relatively spaced relation, said blocks preventing the extensions from having any relative movements. A vertically disposed drum 8, which is provided in its circumference with a plurality of annular strap grooves 9, is journaled in

the bearing blocks 7 through the medium of its journals 10 and 10^a, said journals being disposed in bearings 11 formed in the blocks 7. To reduce the friction between the journals 10 and 10^a and the bearing blocks 7 to the minimum, ball bearings 12 are mounted in race ways formed in the blocks and drum 8. The journal 10 terminates in an upwardly extending handle 13 and the journal 10^a terminates in a downwardly extending socketed head 14, the socket opening out through one side of the head to permit the upper end of a dasher rod 15 to be inserted into and removed therefrom. The dasher rod 15 is detachably connected with the head 14 by means of a pin 16 which is carried by the head and which engages in a horizontal slot 17 formed in the dasher rod. The rod 15 extends upwardly from the upper end of a vertically disposed rotary dasher 18 of the churn, the dasher comprising a plurality of relatively spaced blades 19. The churn also comprises a cylindrical casing 20 in which the dasher 18 is located. The upper end of the casing is fully open and the lower end thereof is closed by an integral bottom 21. The bottom 21 of the casing 20 fits over an opening 22 in the shelf 4. The casing 20 is held against accidental movement on the shelf 4 by blocks 23, one of the blocks being pivoted as at 24 to permit the application and removal of the casing. The upper end of the churn casing 20 is closed by a removable cover 25 which is supported in applied position by means of a horizontally disposed flange 26 which engages the upper edge of the casing, the dasher rod 15 passing through an opening 27 centrally located in the cover. The blades 19 of the dasher 18 are so related to the rod 15 that they travel during the rotation of the dasher in concentrically related vertical planes which are eccentrically related to the churn casing 20 whereby to produce the best possible results.

A vertically disposed hand lever 28 is pivotally secured at its lower end to the lower end of one of the standards 1, and a similarly disposed combined hand and foot lever 29 is pivotally secured at a point between its ends to the outer upper end of a bracket arm 30, the bracket arm being secured to and rising from the shelf 4 at a point directly opposite the standard to which the lever 28 is

secured. The upper end of the levers are formed to provide handles 31. At its lower end the lever 29 is provided with a horizontally disposed pedal extension 32. The levers are connected together for simultaneous movements by a bar 33. A strap 34 is secured at one end to the upper end of the lever 29 and at its opposite end in one of the grooves 9 of the drum 8. A strap 35 is secured at one of its ends to the upper end of the lever 28 and at its opposite end to the other groove of the drum 8. The straps 34 and 35 are wound about the drum 8 in opposite directions, whereby, during the operation of the levers 28 and 29, the straps 34 and 35 are alternately wound upon and unwound from the drum 8, imparting alternately reverse rotary movements to the churn dasher 18. A pitman rod 36 is pivotally secured to the lever 28 to permit said lever to be connected to a rocking chair, an electric, hydraulic, or other motor.

A burner 37, which may be supplied with liquid fuel through the medium of a pipe 38 or with gaseous fuel through the medium of a pipe 39, is secured to an annular flame guard 40. This is secured to and depends from the shelf 4 and surrounds the burner. The pipe 39 communicates with and supports a reservoir 41.

To prevent insects from alighting on the churn, and to keep the operator comfortable during the churning operation, a fan 42 is secured to the handle 13.

While I have described the method of operation of the invention, together with the apparatus which I now consider to be the best embodiment thereof, I desire to have it understood that the apparatus shown is merely illustrative, and that such changes

may be made when desired as are within the scope of the claim.

Having thus described the invention, what is claimed as new is:—

A motor of the character set forth comprising a triangular series of standards inclined upon each other, the lower ends of the standards terminating in supporting legs having horizontally disposed shoulders, the upper ends of the standards terminating in vertically disposed and relatively spaced extensions, a triangular shelf secured at its corners to the legs and resting upon the shoulders, a pair of relatively spaced bearing blocks secured to the vertical extensions, a vertically disposed drum provided at its upper and lower ends with journals mounted in the bearings of the blocks, the upper journal terminating in an upwardly extending handle, the lower journal terminating in a downwardly extending socketed head, a hand lever pivotally secured at its lower end to one of the standards, a bracket arm secured at its lower end to and rising vertically from the shelf, another lever pivotally secured at a point between its ends to the upper end of the bracket arm, said other lever extending below the shelf and provided with a horizontally disposed pedal extension, a rod secured at its ends to the levers, and straps secured to and wound in opposite directions about the drum, said straps being also secured to the levers.

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

JOHN T. WALSTON.

Witnesses:

JOHN L. FLETCHER,
JOHN F. BYRNE.