(No Model.)

C. W. PATTON.

CHURN POWER.

No. 493,288. Patented Mar. 14, 1893.

FIG. 1.

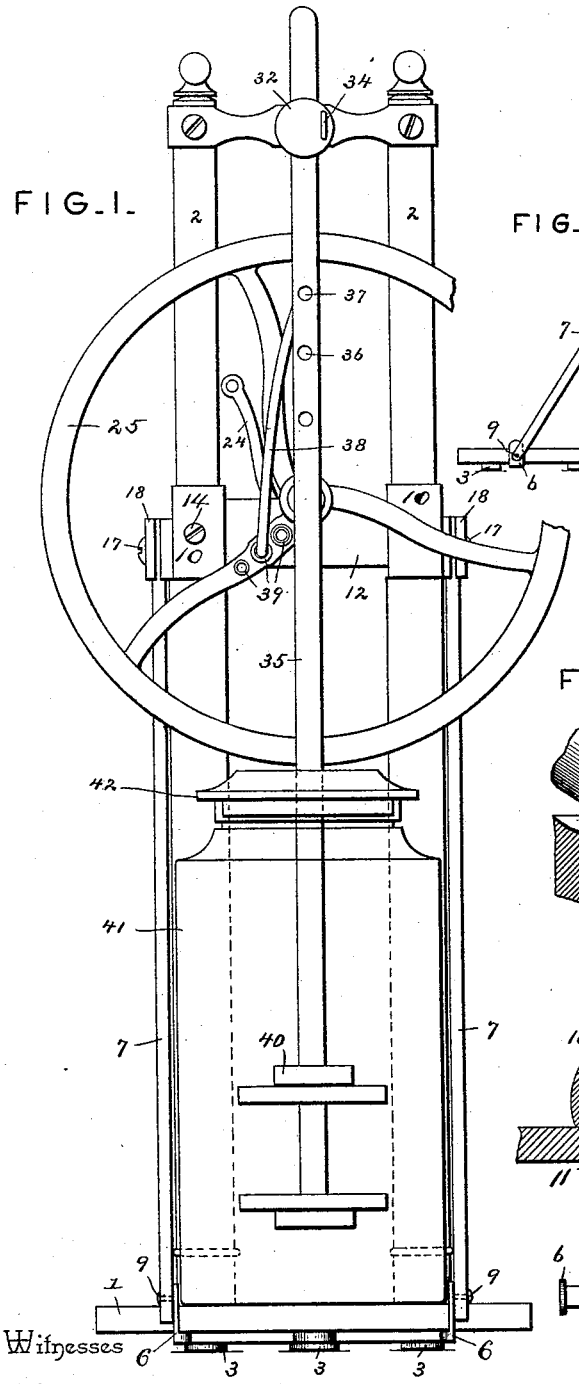


FIG. 7.

FIG. 2.

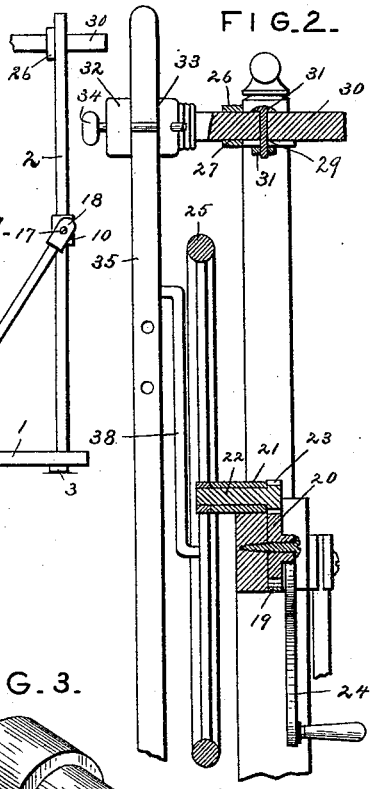


FIG. 3.

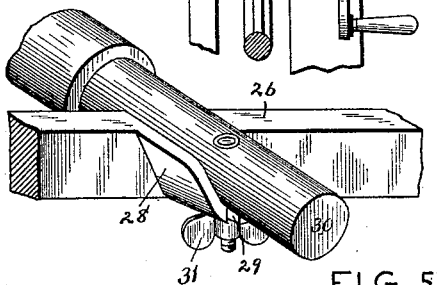


FIG. 4.

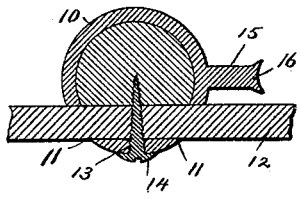


FIG. 5.

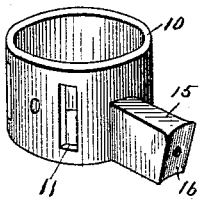
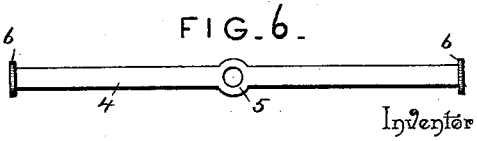


FIG. 6.



Witnesses

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CHARLES W. PATTON, OF CLARKSVILLE, INDIANA.

CHURN-POWER.

SPECIFICATION forming part of Letters Patent No. 493,288, dated March 14, 1893.

Application filed May 11, 1892. Serial No. 432,644. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. PATTON, a citizen of the United States, residing at Clarksville, in the county of Hamilton and State of Indiana, have invented a new and useful Improvement in Churn-Powers, of which the following is a specification.

My invention relates to churn-motors; and has for its objects to produce a motor and stand for supporting the churn-body, said motor and stand by its construction being arranged solid and stable and adapted to withstand the severe strains to which it is subjected; which is capable of being packed economically for shipment and storage; and which may be adjusted so as to adapt it for churns, the diameters of the bodies of which may vary.

Other minor objects and advantages of the invention will appear in the following description and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings—Figure 1 is a front elevation of a churn-motor and stand embodying my invention. Fig. 2 is a vertical transverse section of the upper portion of the same. Fig. 3 is a detail in perspective of the upper cross-bar and the guide for the dasher. Fig. 4 is a transverse section through one of the standards, its casting, and cross-bar. Fig. 5 is a detail in perspective of one of the standard castings. Fig. 6 is a detail in plan of the brace casting. Fig. 7 is a side elevation of the frame.

Like numerals of reference indicate like parts in all the figures of the drawings.

In a circular or other shaped base 1, near the rear side of the same, openings are formed, and the same accommodate the lower ends of loosely inserted vertical standards 2, which standards are preferably cylindrical and projecting beyond the base to form feet 3 whereby said base is supported a short distance above the ground or floor. A transverse metal brace 4, shown in detail in Fig. 6, and visible also in Fig. 1, is secured to the under side of the base 1 and is provided at its center with an opening, and in the same is inserted a plug 5, forming a short foot for the base. The extremities of the casting 4 are upturned or provided with vertical flanges 6, and the same have screw-openings formed between their ends.

7 designates a pair of inclined brace-rods whose lower ends are pivoted by screws 9 to the outer sides or faces of the upturned flanges 6 of the transverse metal brace 4. Metal collars 10, encircle the standards 2 at points above their centers and transversely opposite each other these metal collars have their front faces provided with transverse slots 11, and the same receive the opposite ends of a transverse connecting bar 12. Screw-holes 13 are formed in the collars between the front edges of the slots and through the same screws 14 are passed the inner ends of the screws passing through the material of the collar the transverse bar 12 and into the standards 2, so that as will be obvious, the standards, bar, and cast metal collars are all snugly bound in position by means of a pair of bolts or screws. Each collar is provided at its outer side with a rearwardly and laterally disposed arm 15, the end of which is slightly flared and concaved to form a rest 16, which is perforated or provided with a threaded-aperture. In these concavities at the ends of the arms 15 rest the upper ends of the brace-rods 7 and are secured in position and clamped to the concavities by means of a pair of screws 17, which are passed through transverse curved clamping plates 18 and into the threaded-apertures of the arms 15. It will be observed that by removing the screws 17 and plates 18 the rods working loose upon the screws 9 a withdrawal of the lower ends of the standards from the openings in the base will permit the standards and the mechanism carried thereby and hereinafter described, to be swung down upon the base in a substantially flat manner so that space is economized during storage or transportation.

A gear-case 19, supports the master spur-gear 20, and is secured to the rear side of the cross-bar 12. The upper end of the case is provided with a transverse or horizontal bearing 21, and in the same a transverse-shaft 22 is journaled. The shaft 22 carries at its rear end a small pinion 23, which is engaged with and driven by the master-gear 20, which in turn is operated through the medium of a crank-handle 24. Upon the front end of the

shaft 22, a fly-wheel 25, is mounted and adapted to be rotated with the shaft 22.

A cross-bar 26 connects the upper ends of the standards 2 and is provided at its center upon its upper side with a semicircular opening 27, best shown in Fig. 3, the rear side of the opening being extended by means of a lip 28 semicircular in cross-section and having a longitudinal slot 29 formed centrally therein. A cylindrical arm 30, is mounted in the bearing opening and lip, and through a perforation formed in the arm a bolt 31 depends, the lower end of the bolt projecting through the slot 29 in the lip and there provided with a clamping nut 31. The front end of the arm 30 terminates in a cylindrical head 32, which has a tranverse recess 33 formed in one side. The head is perforated longitudinally and has passed through its perforations a pin 34 which closes the entrance to the recess and forms a retaining means for the dasher-staff 35, which is designed to slide vertically and move freely within the recess 33, and is capable of being removed at any time by a removal of the pin. The dasher-staff is provided with a series of promiscuously arranged perforations 36, and in any one of these may be engaged the bearing end 37 of a pitman or connecting-rod 38, the inner end of the rod being designed to be engaged in any one of a series of perforations 39 with which one of the spokes of the fly-wheel 35 is provided. To the lower end of the dasher-staff is affixed the dasher-head or dasher proper 40, and the same may be of any desired construction best adapted for breaking the globules of cream subjected to its action.

41 designates an ordinary churn-body, which is provided with a removable cover 42, having a central opening through which depends the dasher-staff, said churn-body resting upon the base 1.

The device is intended to be employed in connection with various sized churn bodies, or in other words with churn bodies whose diameters vary, and consequently the central opening in the cover through which the dasher-staff is intended to pass will require the dasher-staff to be set at various distances from the frame, and it is for the accommodation of such various sized churn bodies that the arm 30 is made adjustable. By such a construction it will be obvious that the arm may be set in or out, and hence bring the guide recess 33 vertically above the opening in the churn body regardless of the size of said body. By removing the pin 34 the staff may be drawn laterally from the recess 33 and the churn removed from its position.

From the foregoing description, in connection with the accompanying drawings it will be seen that I have provided a churn motor and frame adapted to accommodate churn bodies of various diameters, which frame is constructed so as to be very rigid and capable of withstanding the severe strain and jar to which it is subjected; and furthermore may be folded or packed practically flat and hence occupy but little room when being stored or shipped and may be set up with the employment of a screw-driver by any person having ordinary intelligence.

Having described my invention, what I claim is—

1. In a churn-motor frame, the combination with the base provided with openings, standards rising from the openings and removably seated therein, and connecting-bars between the standards, of a pair of inclined braces pivoted at their lower ends to the base and at their upper ends connected to the standards in a detachable manner, said braces being adapted to fold upon the base, and a reciprocating dasher supported by the frame, substantially as specified.

2. In a churn-motor frame, the combination with the base, having the openings, the standards having their lower ends removably mounted in the openings, the transverse cast-metal bar 4, secured to the under side of the base having a central opening and a plug therein which co-acts with the lower ends of the standards to form feet, said casting being further provided at its ends with upturned flanges, of inclined brace-rods pivoted at their lower ends to the upturned flanges and at their upper ends removably connected to the standards, the lower ends of the latter being removably inserted in the openings of the base and a reciprocating dasher supported by the frame, substantially as specified.

3. In a churn-motor frame the combination with the base, the opposite standards, the metal casting 4 having the upturned flanges 6, of the cylindrical castings 10 mounted on the standards and provided at their fronts with transverse openings 11 and between the same with screw-holes, and in rear of said openings, and at their outer sides with lateral arms 15, having concaved faces or ends 16, provided with threaded openings, the transverse bar 12, passed through the transverse openings, the screws 14, passed through the perforation between the same, through the bar, and into the standards, the brace-rods 7, pivoted at their lower ends to the upturned flanges 6, and resting against the concaved faces of the arms 15, and the curved clamping-plates 18, and their screws 17, the plates embracing the outer sides of the rods and the screws passed through the plates and rods and into the arms, substantially as specified.

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

CHARLES W. PATTON.

Witnesses:
JOHN H. SIGGERS,
BERNICE A. WOOD.