No. 646,430. Patented Apr. 3, 1900.

K. W. HARGROVE.

CHURN.

(Application filed Sept. 1, 1898.)

(No Model.)

Fig. 1.

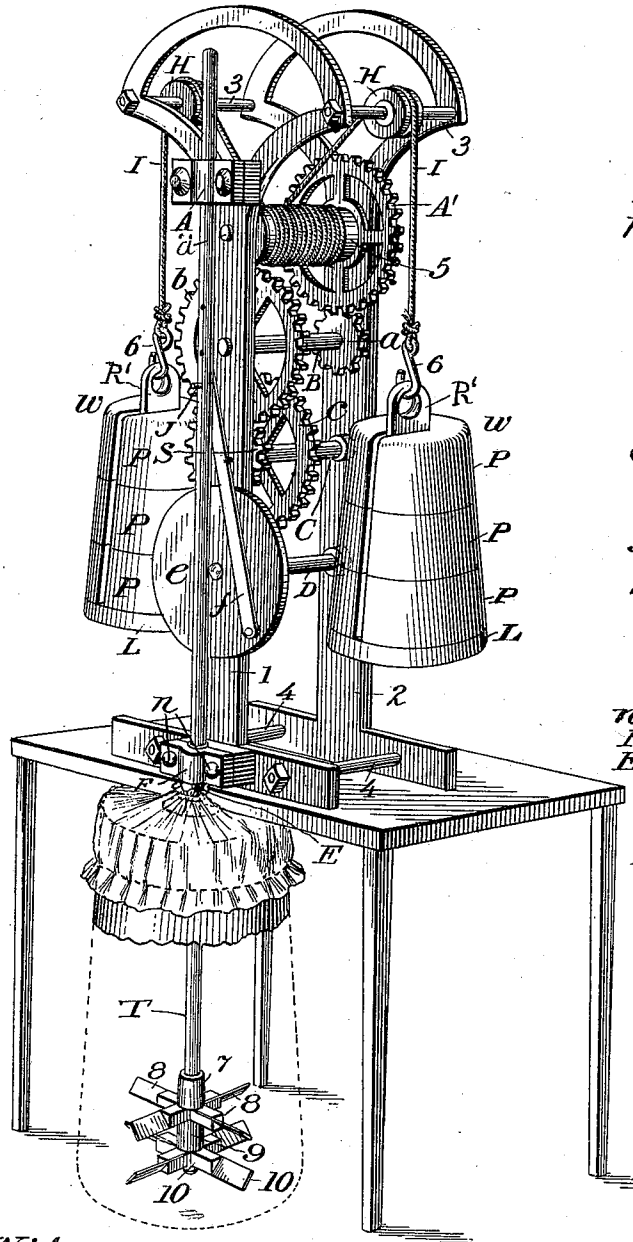
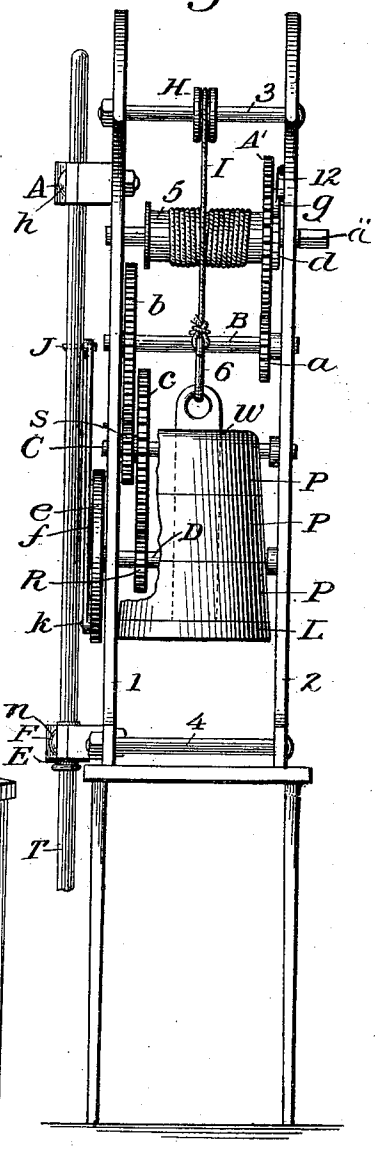


Fig. 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

KINCHEON W. HARGROVE, OF BRECKENRIDGE, TEXAS.

CHURN.

SPECIFICATION forming part of Letters Patent No. 646,430, dated April 3, 1900.

Application filed September 1, 1898. Serial No. 690,060. (No model.)

To all whom it may concern:

Be it known that I, KINCHEON W. HARGROVE, of the town of Breckenridge, in the county of Stephens and State of Texas, have invented certain new and useful Improvements in Churns, of which the following is a specification.

This invention relates to churns in general, and more particularly to that class comprising a body portion having a reciprocatory dasher and provided with means for automatically operating the dasher, the object of the invention being to provide a construction in which access of objectionable matter to the churn-body will be prevented.

In the drawings, Figure 1 is a perspective view of a churn-motor constructed in accordance with this invention. Fig. 2 is a side elevation of the same.

Like numerals and letters of reference designate corresponding parts in both figures of the drawings.

The churn in the present instance comprises a body portion (shown partially in full lines and partially in dotted lines in Fig. 1 of the drawings) and which churn-body has an opening in its top. Within the body portion is disposed a dasher, comprising a rod T, upon which are mounted upper and lower dashers 8 and 9, provided with reversely-inclined blades and adapted for rotation upon the rod in opposite directions, whereby the contents of the churn-body will be thoroughly agitated. The dashers are spaced apart by a sleeve 9, and a sleeve or collar 7 is located above the upper dasher to hold it against upward movement.

In connection with the churn above described there is employed an operating mechanism, as follows:

1 and 2 designate front and rear sides of a supporting-frame which is designed to be mounted on a table or other elevated support, as clearly illustrated in Fig. 1 of the accompanying drawings. The sides 1 and 2, which are provided at their lower ends with horizontal arms or base portions, are connected at that point by oppositely-disposed lower rods 4, and the upper ends of the sides, which are provided with substantially-semicircular heads, are connected at opposite sides by upper transverse rods 3, the terminals of the rods 3 and 4 being threaded and provided with nuts. The substantially-semicircular top portions of the sides of the frame consist of upwardly-diverging arms and a curved connecting portion, which is arched over the space between the arms.

Between the sides of the frame is journaled a winding-shaft a'', which has keyed or otherwise secured to it a drum 5, and wound around the drum 5 is a pair of cords or ropes having weights w attached to their outer ends. The cords or ropes diverge upwardly from the drum and pass over pulleys H, mounted on the upper rods 3 of the supporting-frame, and the outer portions of the cords or ropes depend from these pulleys and are provided with hooks 6. The weights w are made up of sections P, so that the desired weight may be employed to cause the motor to churn either fast or slow. The hooks 6 engage eyes or openings of vertical bars R', which are provided with supporting-plates L at their lower ends, and the weight-sections P, which are slotted to receive the bar R', are arranged on the supporting-plate L, as clearly illustrated in Fig. 1 of the accompanying drawings.

A gear-wheel A' is mounted on the horizontal winding-shaft and is connected with the same by a clutch, consisting of a pawl g and a ratchet-wheel d, the ratchet-wheel d being fixed to the winding-shaft and the pawl, which is engaged by a spring 12, being carried by the gear-wheel A'. The gear-wheel A' meshes with a pinion a of a train of gears which connect the winding-shaft with the drive-shaft D. The pinion a is keyed or otherwise secured to a horizontal shaft B, which carries a gear-wheel b. The said pinion a is located at the rear of the frame, and the gear-wheel b, which is arranged at the front of the frame, meshes with a pinion S of a counter-shaft C. The counter-shaft C is connected with the drive-shaft by means of a gear-wheel c and a pinion R, arranged as clearly illustrated in Fig. 2 of the accompanying drawings.

The drive-shaft D carries a crank-wheel e, provided with a wrist-pin and connected to the lower end of a pitman f. The upper end

of the pitman *f* is adjustably connected by means of a series of perforations and a pin J with the vertically-reciprocating dasher-rod T. The dasher-rod T is mounted in upper and lower guides. The upper guide A is composed of sections and is secured by bolts *h* or other suitable fastening devices to the front of the frame. The lower guide F, which is provided with a sleeve E, is composed of separable sections bolted to the bottom of the front side of the frame by fastening devices *n*. The sleeve E is designed to support a suitable screen to exclude flies and dust from the contents of a churn-body. This screen, as shown, is drawn tightly around the sleeve adjacent its lower end and is then taken over the upper end of the churn and is fixed thereon, so that access to the churn cannot be had.

What is claimed is—

The combination with a base, of bearings connected therewith, a sleeve in one of said bearings, a dasher-rod operatively mounted in said bearings, a churn-body disposed to receive one end of the dasher-rod, and a screen depending from said sleeve and over the churn-body.

In testimony whereof I have attached my signature.

KINCHEON W. HARGROVE.

Witnesses:

J. W. CRUDGINGTON,

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