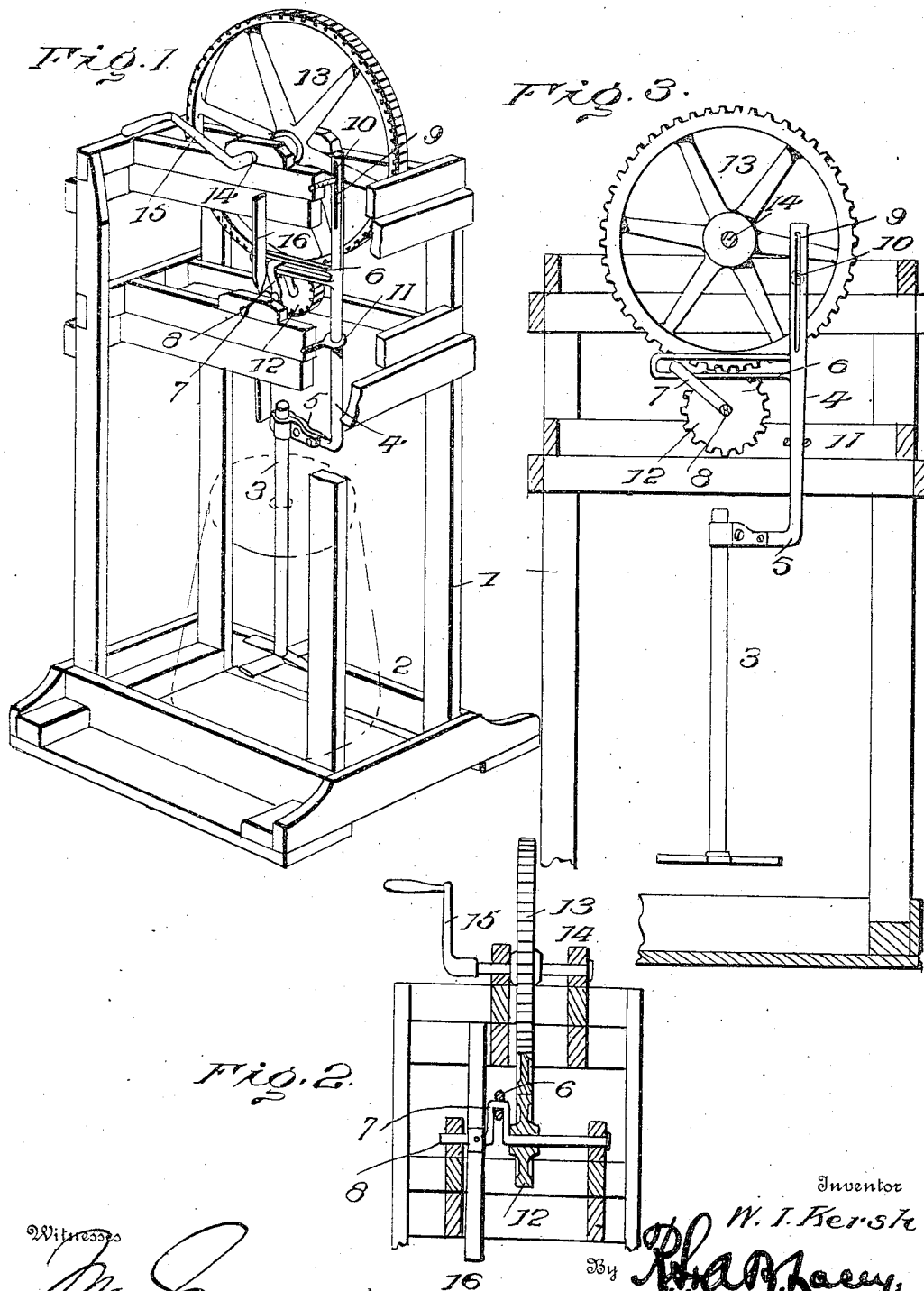


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PATENTED FEB. 12, 1907.

W. I. KERSH.
CHURN OPERATING MECHANISM.
APPLICATION FILED NOV. 19, 1906.



Witnesses

W. I. Kersh
W. I. Woodson

Inventor

W. I. Kersh

By

Phar. Macy

Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM I. KERSH, OF CHAPMAN, MISSISSIPPI.

CHURN-OPERATING MECHANISM.

No. 843,751.

Specification of Letters Patent.

Patented Feb. 12, 1907.

Application filed November 19, 1906. Serial No. 344,089.

To all whom it may concern:

Be it known that I, WILLIAM I. KERSH, a citizen of the United States, residing at Chapman, in the county of Rankin and State of Mississippi, have invented certain new and useful Improvements in Churn-Operating Mechanisms, of which the following is a specification.

This invention aims to provide a novel mechanism for operating churn-dashers of the type receiving a reciprocating movement and combines with said mechanism a fan for creating a current of air for cooling the surrounding atmosphere, so as to be of advantage both to the operator and to the churning operation.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, still the preferred embodiment is shown in the accompanying drawings, in which—

Figure 1 is a perspective view of a churn embodying the invention, the receptacle for holding the cream being omitted. Fig. 2 is a transverse section of the operating mechanism, showing the gearing in full lines. Fig. 3 is a vertical longitudinal section of the upper portion of the frame, showing the gearing in full.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The framework of the churn comprises uprights or corner-posts 1, a platform 2, and upper longitudinal and transverse bars connecting the upper portions of the uprights or corner-posts 1, so as to provide a substantial structure. The receptacle (not shown) for containing the cream to be churned is supported upon the platform 2, and the dasher 3 is adapted to operate therein by a reciprocating movement. An operating rod or bar 4 has its lower end offset or bent at about a right angle, as shown at 5; and clamped or otherwise secured to the dasher-shaft. The operating rod or bar 4 is mounted so as to receive a reciprocating rectilinear movement and is

provided intermediate of its ends with a horizontal arm 6, which is slotted to receive the crank portion 7 of a shaft 8, mounted at its ends in bearings applied to longitudinal bars of the framework. Any suitable means may be employed for securing the operating rod or bar to the framework and directing it in its reciprocating movements. As shown, the upper portion of the rod or bar 4 is provided with a vertical slot 9 to receive a headed pin or fastening 10, and a screw-eye 11 or like confining means coöperates with the lower portion of said rod or bar 4 below the slotted arm 6. By having the horizontal arm 6 arranged between the upper and lower guide means for the operating rod or bar the latter is prevented from binding, and the strain is about equalized upon said guide and confining means.

The shaft 8 is provided with a pinion 12 and is in mesh with a gear-wheel 13, fast upon a drive-shaft 14, mounted in bearings applied to the upper longitudinal bars of the framework. The drive-shaft 14 and the crank-handle 15 being in parallel relation, the drive-shaft 14 is adapted to be actuated by suitable power, and in the event of the mechanism being designed for manual operation a crank-handle 15 is fitted to or formed with an end shaft of the drive-shaft 14. A fan 16 is fast to the crank-shaft 8, so as to rotate therewith, and may be of any construction.

The milk or cream to be churned is placed in a vessel or suitable receptacle in the accustomed way, after which the dasher is placed in said vessel and the latter arranged upon the platform 2, the dasher being attached at its upper end of the operating rod or bar 4. Upon operating the drive-shaft 14 by means of the crank-handle 15 or in any determinate way motion is imparted to the crank-shaft 8 by means of the gearing, the dasher in turn having a vertical reciprocal movement imparted thereto by the action of the crank 7 operating in the slot of the arm 6. Simultaneously with the churning operation a circulation of air is created by the action of the fan, which is both cooling and serves to drive away insects and carry off noxious odors, as will be readily comprehended.

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

In combination, a framework, a shaft journaled thereto and having a crank portion, a fan, and a pinion secured to said shaft upon opposite sides of the crank portion thereof, a

drive-shaft, a gear-wheel fast to said drive-shaft and in mesh with the aforesaid pinion, an operating-rod having its lower end bent laterally and its upper portion longitudinally
5 slotted, a headed fastening passed through the slot of the operating-rod to hold the same to the framework and assist in directing the rod in its reciprocating movements, other means connecting the lower portion of the
10 operating-rod to the framework and acting jointly with the headed fastening to give

proper direction thereto, an arm projected from the operating-rod and having a slot to receive the crank portion of the aforementioned shaft, and a dasher secured to the lower bent portion of the said operating-rod.

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

WILLIAM I. KERSH. [L. s.]

Witnesses:

R. V. SHIELDS,
W. J. STINGLY.