

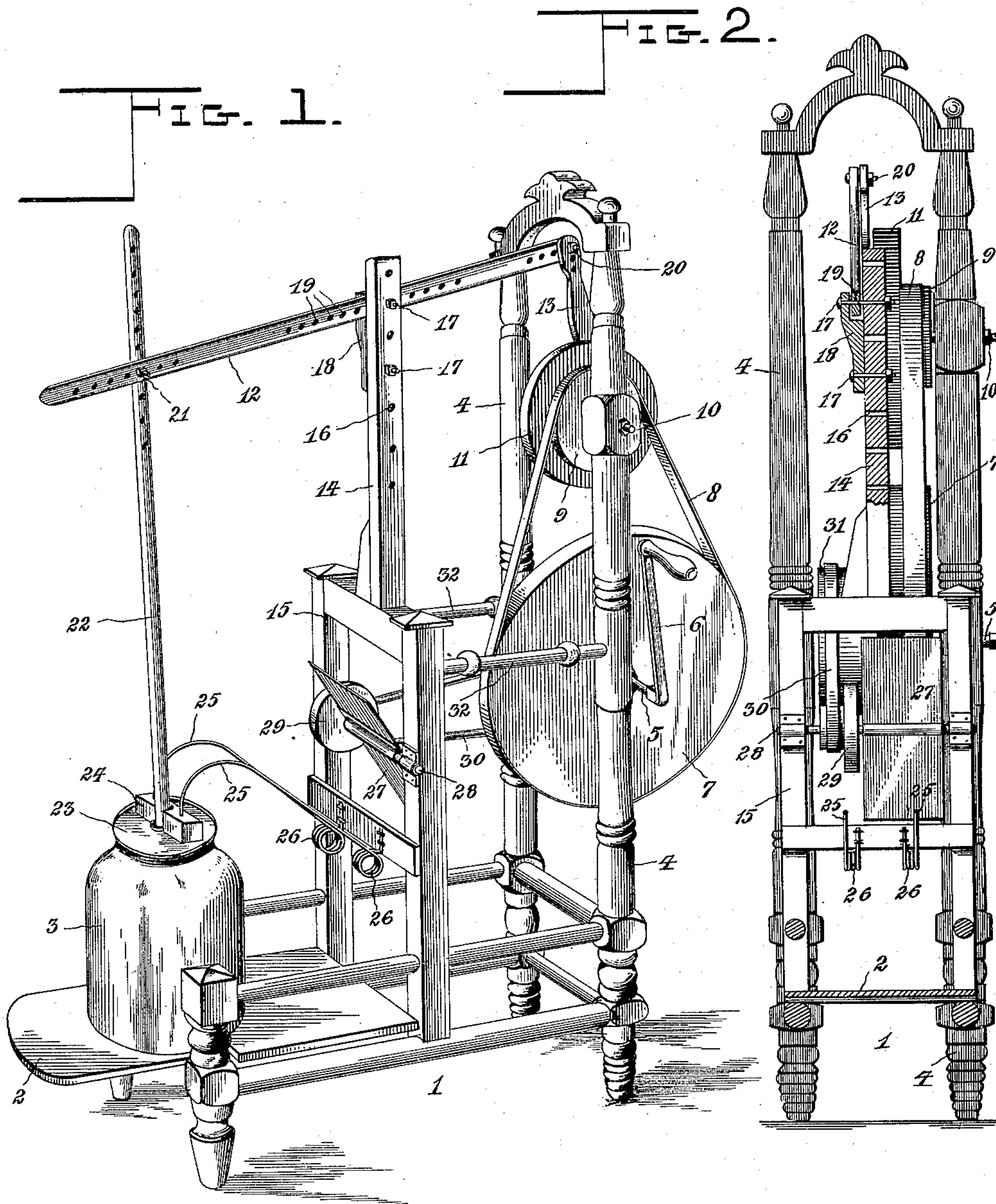
No. 639,061.

Patented Dec. 12, 1899.

F. C. KIRKPATRICK.
CHURN.

(Application filed July 8, 1898.)

(No Model.)



Witnesses

John F. Seufferweil

[Signature]

By his Attorneys.

Frank C. Kirkpatrick, Inventor

[Signature]

UNITED STATES PATENT OFFICE.

FRANK CORNELIUS KIRKPATRICK, OF SMITHVILLE, MISSISSIPPI.

CHURN.

SPECIFICATION forming part of Letters Patent No. 639,061, dated December 12, 1899.

Application filed July 6, 1898. Serial No. 685,271. (No model.)

To all whom it may concern:

Be it known that I, FRANK CORNELIUS KIRKPATRICK, a citizen of the United States, residing at Smithville, in the county of Monroe and State of Mississippi, have invented a new and useful Churn, of which the following is a specification.

My invention relates to churns, and has for its object to provide a simple, compact, and efficient construction and arrangement of parts adapted for churning and provided with auxiliary means for maintaining the cooperating parts of the structure in their proper relative positions.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claim.

In the drawings, Figure 1 is a perspective view of a churn mechanism constructed in accordance with my invention. Fig. 2 is a vertical section taken in rear of the plane of the churn-receptacle to show the fan mechanism.

Similar numerals of reference indicate corresponding parts in both figures of the drawings.

1 designates a supporting-frame, including a platform 2 to receive a churn-receptacle 3, the rear standards of the supporting-frame being extended to form uprights 4, which are connected at their upper ends and are provided with bearings for a driving-shaft 5, having a crank 6. This driving-shaft carries a main belt-pulley 7, traversed by a belt 8, which also extends around a pulley 9, mounted upon a counter-shaft 10, extending transversely from one of the uprights 4. The belt-pulley 9 carries a crank-disk 11, from a wrist-pin of which to the rear end of a rocking lever 12 extends a pitman 13, said rocking lever being fulcrumed at an intermediate point upon an auxiliary upright or standard 14, rising from an intermediate frame 15. This intermediate frame consists of a pair of parallel standards rising from the main or supporting frame between the planes of the main uprights or standards 4 and the churn-receptacle, and the said auxiliary upright 14 is provided with a plurality of openings 16 for engagement by bolts 17 to secure a bearing-

bracket 18 to the upright, said bracket being the means whereby the rocking lever 12 is supported, and the upper bolt 17 forming the fulcrum of said lever. It will be seen that the bracket is capable of vertical adjustment by reason of the plurality of openings formed in the upright 14, and in order to vary the relative length of the arms of the lever 12 it is provided with a plurality of openings 19 for engagement by the said upper or fulcrum bolt 17. Also the pitman 13 and the adjacent arm of the lever 12 are provided each with a plurality of openings for engagement by a pivot-bolt 20. The forward arm of the lever 12 is connected by means of a pivot-bolt 21 to the dasher-staff 22, and said staff and lever-arm are provided with a series of spaced openings for engagement by said pivot-bolt to vary the relative adjustment of the parts, particularly to suit different depths of the contents of the receptacle 3. The receptacle is provided with a lid 23, and in order to hold the same in place I have provided a bearing-block 24, to which are attached the front ends of a pair of spring-arms 25, having coils 26 and being secured to a cross-bar of the auxiliary frame 15. This holder exerts a yielding pressure downwardly upon the churn top or cover to hold it in place during the churning operation.

In addition to the above construction I employ a fly-fan 27, having a spindle 28, which is mounted in suitable bearings in the auxiliary frame 15, said spindle also carrying a belt-pulley 29, traversed by a belt 30, which extends rearwardly and traverses an auxiliary belt-pulley 31, carried by the main or driving pulley 7, whereby both the fly-fan and the churn-dasher are driven from the main shaft by pulleys 7 and 31 of different diameters attached to said shaft. Also it will be seen that both the rocking lever by which motion is communicated to the dasher-staff and the fly-fan are carried by the intermediate or auxiliary frame, and in order to prevent vibration of the latter intermediate braces 32 may be employed, extending rearwardly to the main uprights or standards 4.

This provides a compact arrangement of parts capable of accomplishing the described functions with facility and efficiency, and it will be seen that the means of adjustment provided with a plurality of openings for en-

gagement by the pivot-bolts adapt the mechanism to be used in connection with churn-receptacles of different sizes and to be used effectively in connection with either large or
5 small quantities of liquid in the receptacle.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this
10 invention.

Having described my invention, what I claim is—

In a churn, the combination with a supporting-framework having a receptacle-platform
15 and a contiguous upright frame, and dasher-operating mechanism mounted upon said

framework, of a churn-receptacle supported by the platform and having a removable lid or cover, spring-arms extending forwardly from said upright frame and provided at intermediate points with coils, and a bearing-block connecting the front extremities of said arms and held thereby in contact with and disposed transversely to the receptacle lid or cover, substantially as specified. 20 25

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

FRANK CORNELIUS KIRKPATRICK.

Witnesses:

R. B. GODDARD,

C. E. HALTSCROCK.