

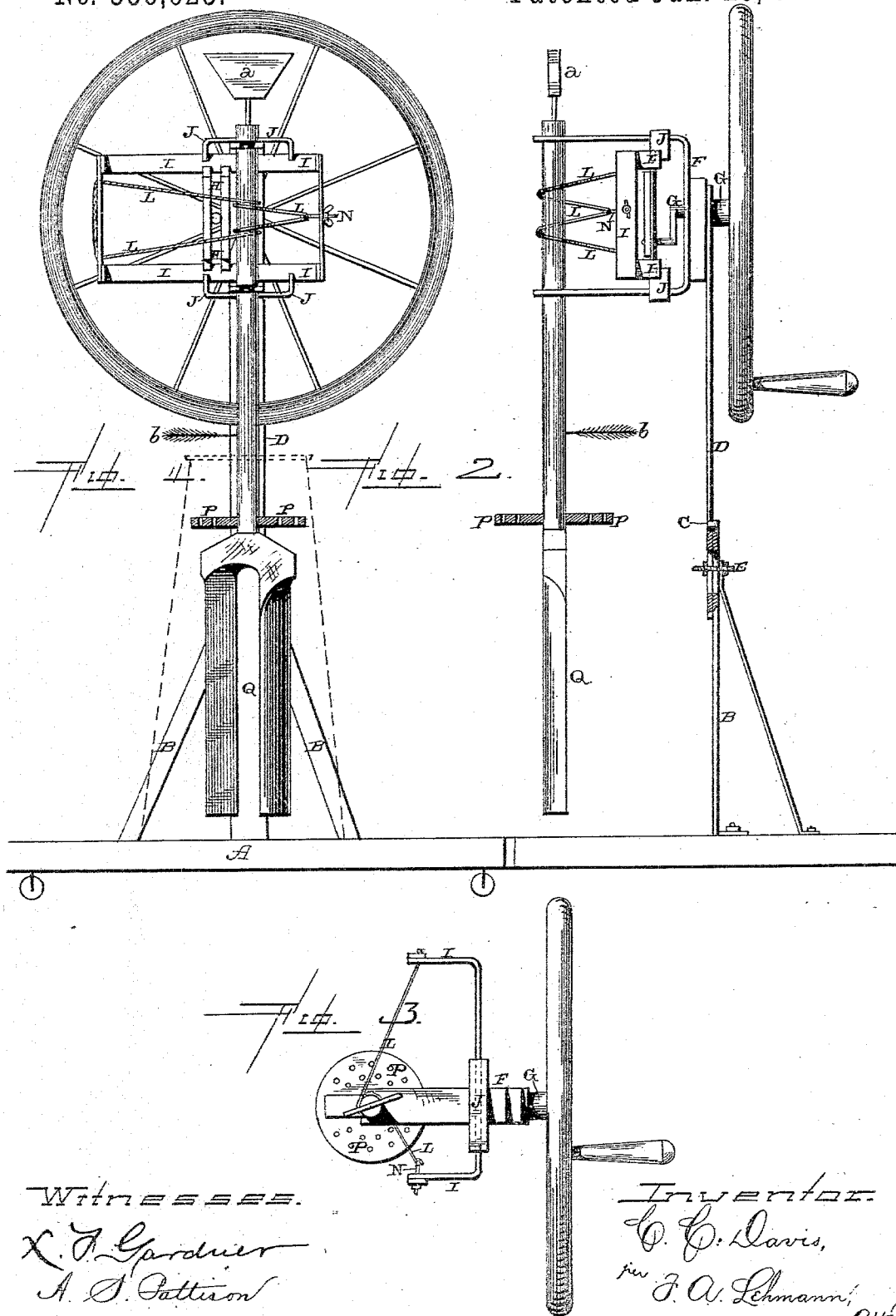
(No Model.)

C. C. DAVIS.

CHURN.

No. 356,625.

Patented Jan. 25, 1887.



Witnesses.

X. T. Gardner
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UNITED STATES PATENT OFFICE.

CHARLES CHRISTOPHER DAVIS, OF MERCER, SOUTH CAROLINA.

CHURN.

SPECIFICATION forming part of Letters Patent No. 356,625, dated January 25, 1887.

Application filed February 9, 1886. Serial No. 191,297. (No model.)

To all whom it may concern:

Be it known that I, CHARLES CHRISTOPHER DAVIS, of Mercer, in the county of Union and State of South Carolina, have invented certain
5 new and useful Improvements in Churns; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference
10 being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in vibrating churns; and it consists in the combination of a suitable base, a standard mounted
15 thereon and having a suitable bearing attached to its upper end, an operating-shaft with a fly-wheel at one end and a crank at the other, a slotted reciprocating carriage or frame which moves horizontally in suitable guides,
20 and the straps connected to opposite ends of the carriage and the dasher, as will be more fully described hereinafter.

The object of my invention is to produce a vibrating churn in which the carriage is moved
25 back and forth by means of a crank, which is of such a length that the carriage is allowed to come to a dead stop for an instant before it reverses its movement, and thus cause the dasher to turn in the opposite direction.

30 Figure 1 is a front elevation of a churn mechanism embodying my invention. Fig. 2 is a side elevation. Fig. 3 is a plan view.

A represents a suitable base, upon which the mechanism is mounted and upon which
35 the churn is placed. This base may be provided with suitable rollers, so that the machine can be moved freely around from place to place whenever so desired. Mounted upon this base A is the vertical support B, which is
40 suitably braced in position, and which has the ears C upon opposite corners of its upper end for the purpose of holding the standard D in a vertical position. The standard D is provided with a slot, so that it can be adjusted
45 vertically at will, and through which the clamping-bolt E is passed.

Rigidly secured to the upper end of the standard is a suitable bearing-frame, F, through
50 which the operating crank-shaft G passes. On the outer end of this shaft G is secured a fly-wheel, which is provided with a handle, by

means of which the other parts of the machine are operated. The end of the crank passes into or through the slot H in the carriage I, which moves horizontally in suitable guides,
55 J. These guides consist of flat bars having their ends bent at an angle and suitable recesses made in their ends so as to catch over opposite edges of the carriage. This carriage has the slot made through its center, and has
60 its two ends turned at an angle and projecting outward toward the dasher. A single operating strap or cord, L, is used, and which is connected to opposite ends of the carriage, and which strap is made to pass around the handle
65 of the dasher, as shown. The strap is connected to one end of the carriage by means of an adjustable hook, N, and at the other end of the carriage the straps are fastened by being
70 passed through holes and tied, or in any other way that may be preferred.

As the crank-shaft is made to revolve the carriage moves horizontally, first in one direction and then in the other. Just as the carriage reaches the end of its stroke, and before
75 the reverse motion takes place, it is brought to a momentary halt in its movement, so as to allow the dasher to stop just before the reverse movement takes place. When the carriage is
80 moved in one direction, the movements of the straps around the handle of the dasher cause the dasher to revolve first in one direction and then in the other.

The handle of the dasher is held in suitable guides upon the frame, and to the upper end
85 of the handle of the dasher is attached a fan, a, for the purpose of fanning the operator, and to the handle of the dasher, just above the top of the churn, may be connected a feather or
90 brush, b, of any kind, to keep the flies away.

Placed loosely upon the handle of the dasher is a perforated float, P, which floats upon the
95 top of the cream, and which serves both to prevent the splashing of the cream through the lid of the churn and to show when the butter is formed. The particles of butter rise
100 through the perforations in the float, and thus make themselves visible more readily and quickly than they would if no indicator of this kind were used. This float also helps to gather
together the butter by causing the particles to adhere together as they rise upward.

The dasher Q is provided with two prongs, each one of which is beveled upon its inner face and made rounding upon its outer face. The flat inner surface throws the cream toward
5 the center of the churn, while the rounding of the outer surface throws it outward against the sides of the churn.

The rapid rotary motions, first in one direction and then in the other, not only agitate the
10 cream, but cause all air to pass down into and through the cream in such a manner as to assist in breaking the globules in which the butter is held.

I am aware that endwise-moving carriages having operating straps connected thereto, have
15 heretofore been used, and these I disclaim. My invention differs from these in driving the carriage by means of a crank instead of by

hand, and in the construction of the guides which support the carriage in position. 20

Having thus described my invention, I claim—

The combination of the standard, the operating-shaft provided with a fly-wheel at one end and a crank at the other, the endwise
25 sliding carriage, the strap connected thereto, the guides secured to the frame-work at the top of the standard and between which the carriage is held, and the churn-dasher, substantially as shown. 30

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

CHARLES CHRISTOPHER DAVIS.

Witnesses:

A. S. PATTISON,

J. W. HAMILTON JOHNSON.