

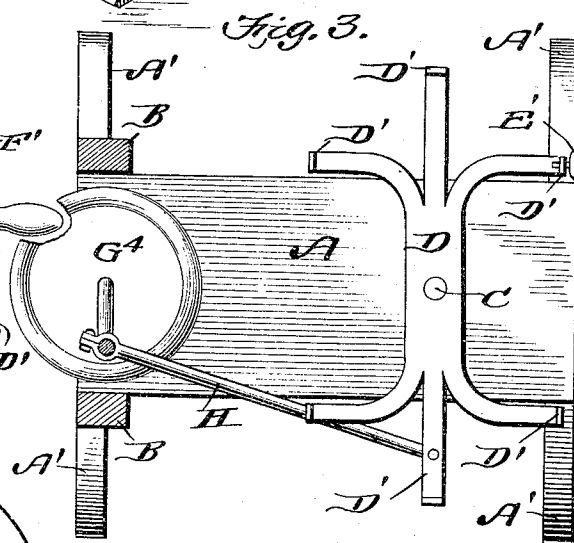
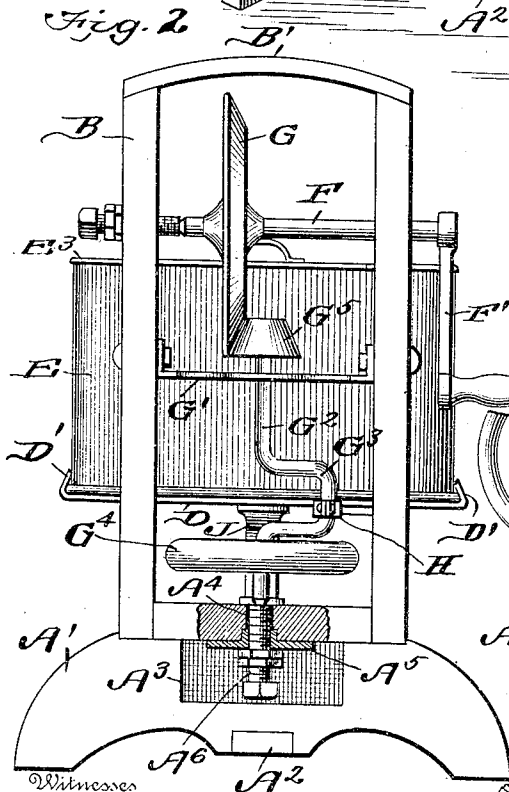
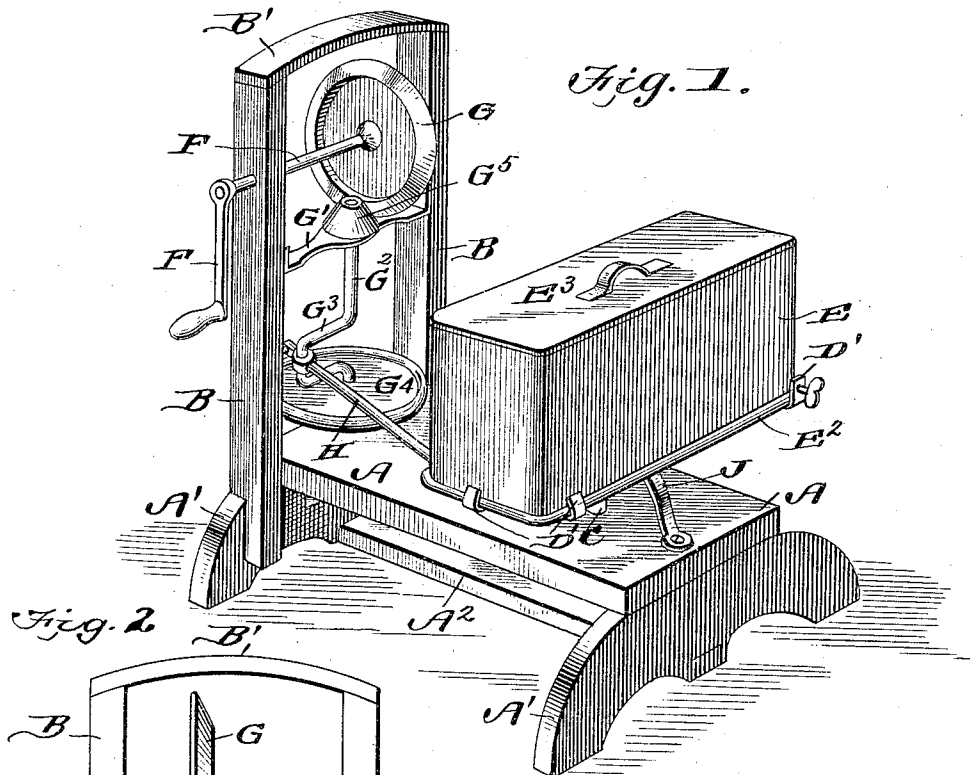
No. 768,956.

PATENTED AUG. 30, 1904.

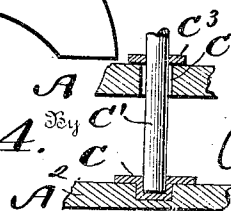
A. M. SMITHLEY.
CHURN.

APPLICATION FILED MAY 23, 1903.

NO MODEL.



Witnesses
M. J. Blondel
Charles Shaw



Inventor
A. M. Smithley.

By
Oscar A. Brock
Attorneys

UNITED STATES PATENT OFFICE.

ALFRED M. SMITHLEY, OF MIAMI, INDIAN TERRITORY, ASSIGNOR OF
TWO-THIRDS TO R. M. PECK, OF MIAMI, INDIAN TERRITORY.

CHURN.

SPECIFICATION forming part of Letters Patent No. 768,956, dated August 30, 1904.

Application filed May 23, 1903. Serial No. 158,521. (No model.)

To all whom it may concern:

Be it known that I, ALFRED M. SMITHLEY, a citizen of the United States, residing at Miami, Peoria Nation, Indian Territory, have invented a new and useful Churn, of which the following is a specification.

My invention is an improvement in churns, and relates especially to means for giving a reciprocating movement to the churn-body; and the object of the invention is to provide a mechanism which will be simple in construction, light running, and practically noiseless; and a further object is to do away with the dasher common in churns and also with the vertical movement given frequently to churns, as both the dasher and vertical movement tend to splash the cream and throw it out of the churn.

Another object is to provide a churn in which all of the churning mechanism will be exterior of the churn, thereby rendering it easier to clean the churn and reducing the number of parts to be cleaned after each churning.

My invention consists in the novel features of construction and in the combination of parts described hereinafter, particularly pointed out in the claims, and shown in the accompanying drawings, in which—

Figure 1 is a perspective view of my churn and the means for reciprocating it. Fig. 2 is an end elevation. Fig. 3 is a plan view, the churn proper being removed. Fig. 4 is a detail view, partly in section, showing the lower end of the standard supporting the churn-frame.

In the drawings above described, A represents a platform raised slightly and supported by the end pieces A'. A cross-piece A², parallel with and below the platform A, connects the end pieces. From one of the end pieces on each side of the platform rise standards B, connected at the top by a suitable cross-piece B'. Adjacent the end of the piece A², opposite the standards, a recess is formed in the upper surface of the cross-piece A² and a metal socket C secured therein, in which is journaled the lower end of a revoluble standard C', the standard passing through an opening C² in the platform and through a guide-

plate C³. Mounted on and rigid with this standard is a spider D, having a plurality of arms, the outer ends of which are bent upward, as shown at D'. A rectangular churn-body E rests on the spider, being held in place by the upturned ends of the arms and by a set-screw E', which works in one of the upturned ends D' and bears against the churn-body immediately above the outwardly-extending flange E², which extends around the bottom of the churn. A cover E³ of the usual construction fits over the churn.

In the standards B is revolubly journaled a shaft F, to one end of which is attached the usual handle-crank F', and on the shaft between the standards is rigidly mounted a beveled friction-gear G. The end piece A' at that end of the platform where the standards are is cut out intermediate the standards, as at A³. An aperture A⁴ is formed in the platform, and a metal plate A⁵ is secured to the under side of the platform, said plate having a perforated threaded boss extending upward into the aperture A⁴, and a threaded bolt A⁶ works in the perforated boss and extends through the aperture A⁴. A bracket G' is angled at each end, and each angled portion is bolted to the inner end of one of the standards, and in this bracket is revolubly journaled a vertical shaft G², the lower end of which bears on the upper end of the bolt A⁶. This shaft has a cranked portion G³ in the horizontal plane of the spider, and below the cranked portion is a balance-wheel G⁴. On the upper end of the shaft G² is a friction cone-gear G⁵, the beveled face of which bears on the beveled face of the gear G. A pitman H is connected at one end to the cranked portion G³ and at the opposite end to one of the spider-arms.

The operation of my device will be obvious. By turning the handle the rotation of the cranked portion of the shaft G² will reciprocate the pitman and spider. The churn-body can be removed from the spider for purposes of cleaning by loosening the set-screw and without disturbing in any way the operating mechanism. The pressure of the two gears upon each other can be regulated by the

threaded bolt A⁶. A bow-shaped guide-bracket J is secured on the platform, through which the upper portion of the standards C' passes and serves to steady the standard and prevent lateral bending of the standard adjacent its upper end, where the weight of the spider and churn come on it.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a suitable platform, standards at one end of the platform, a revoluble standard adjacent the opposite end, a spider secured on the revoluble standard, a churn-body having a flange around its lower edge resting on said spider, a set-screw adapted to bear on the churn above the flange, a shaft revolubly journaled in the standards, a beveled friction-gear on said shaft, a vertical shaft having a cranked portion, a cone friction on the vertical shaft engaging the first-mentioned friction-gear, a pitman connected at one end to the cranked portion of the vertical shaft and at the opposite end to the spider, and means for rotating the shaft journaled in the standards.

2. The combination with a platform, a spider revolubly mounted above same, a churn removably carried by the spider, vertical standards at one end of the platform, a horizontal shaft journaled in said standards, a handle on one end of the shaft, a beveled friction-gear on the shaft, a vertical shaft journaled between the standards and having a cranked portion in the plane of the spider, a cone friction-gear

on the upper end of the vertical shaft engaging the friction-gear on the horizontal shaft, a pitman connecting the cranked portion of the shaft and the spider, and means for raising and lowering the vertical shaft.

3. In a churn of the kind described, a platform, a reciprocating spider on the platform, a screw adapted to work vertically through said platform, a cranked shaft arranged vertically on the platform, the lower end of said shaft rotating on the upper end of the screw, a friction-cone on the upper end of the shaft, a friction-gear adapted to engage the cone, a pitman connecting the cranked portion of the shaft and the spider, and means for driving the friction-gear.

4. A device of the kind described comprising an elevated platform, a cross-piece below and parallel with the platform, a metal socket arranged on said cross-piece, a standard having its lower end loosely resting in said socket, a bow-shaped member arranged on the platform the upper portion of the standard passing loosely through said member, a spider secured on the upper end of the standard said spider comprising arms having upturned ends, a churn-body adapted to rest on the spider between the upturned ends of the arms, set-screws adapted to work through said upturned ends and to bear on the churn-body, and means for reciprocating the spider.

ALFRED M. SMITHLEY.

Witnesses:

D. O. KNEELAND,
WM. B. POTEET.