(No Model.)

C. M. ROARK.

CHURN.

No. 528,030. Patented Oct. 23, 1894.

Fig. 1

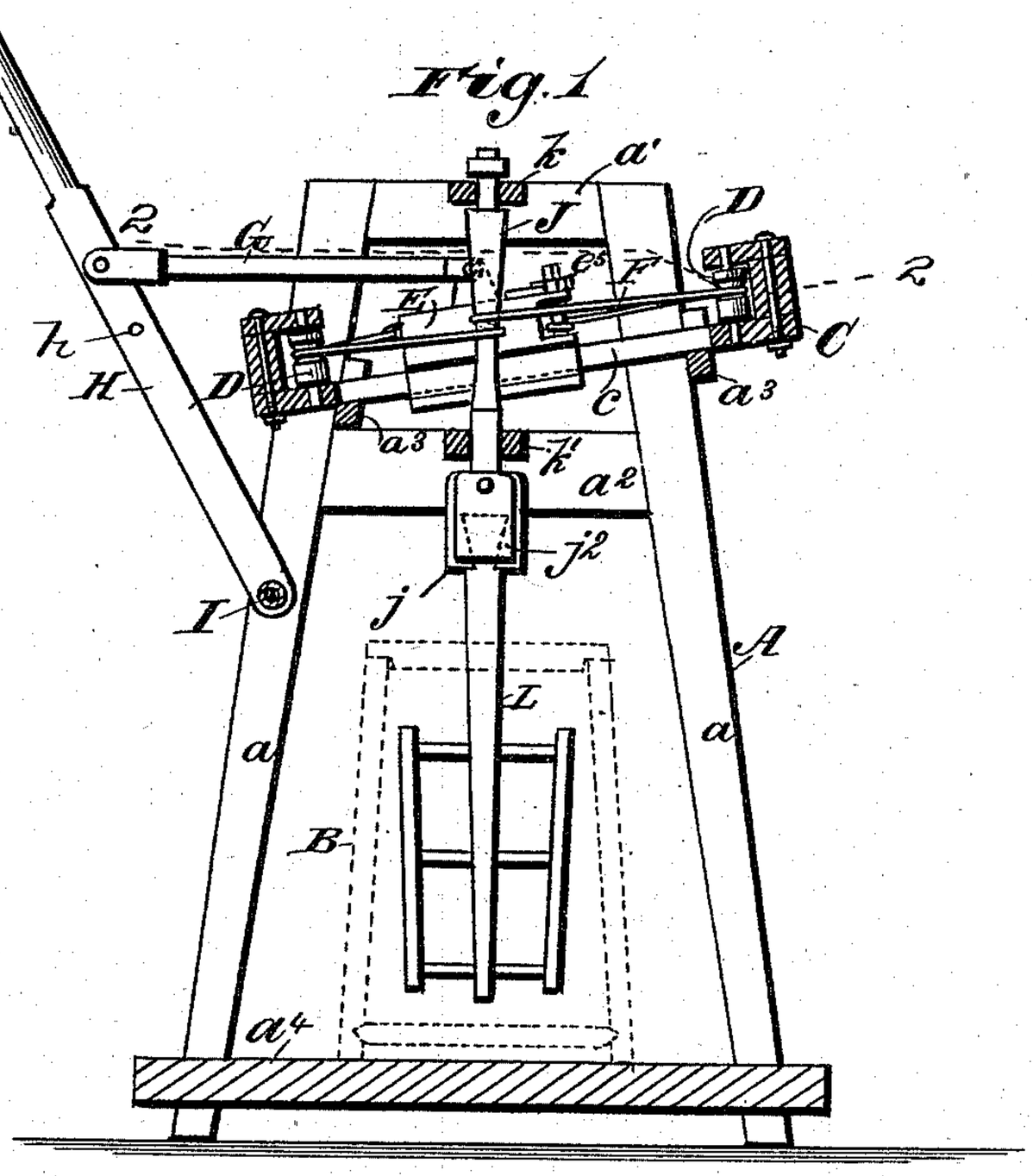


Fig. 2.

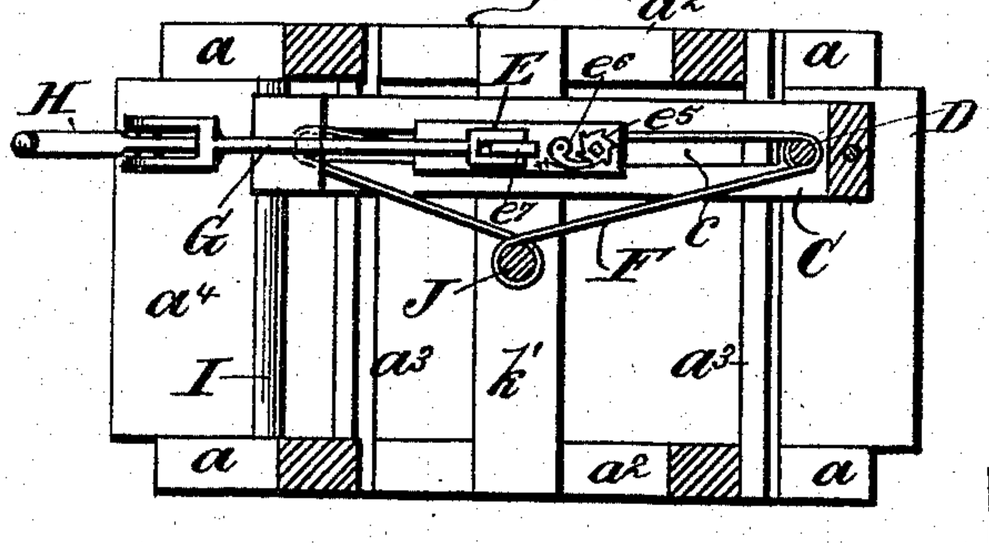


Fig. 3

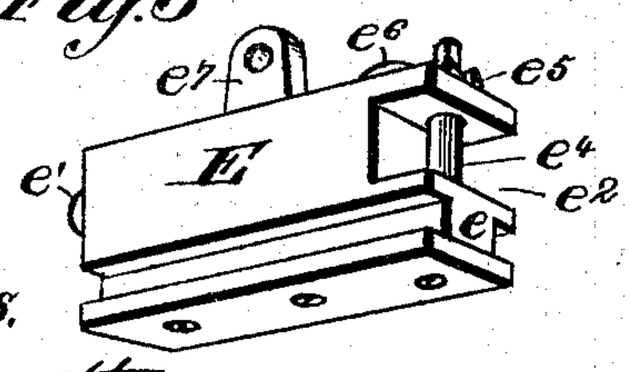
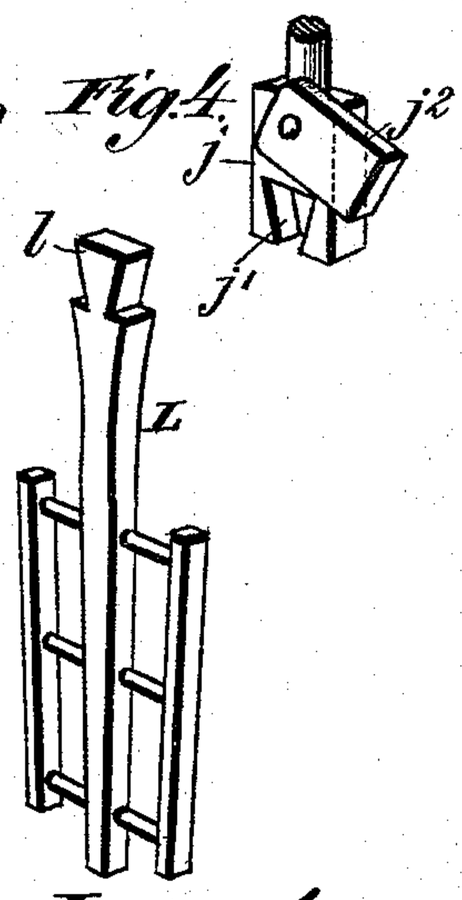


Fig. 4.



Witnesses.
Robert Everett.
G. W. Rea.

Inventor.
Calvin M. Roark.
By James L. Norris.
Atty.

UNITED STATES PATENT OFFICE.

CALVIN M. ROARK, OF ALTO, TEXAS, ASSIGNOR OF ONE-HALF TO ANDREW J. McCUISTION, OF SAME PLACE.

CHURN.

SPECIFICATION forming part of Letters Patent No. 528,030, dated October 23, 1894.

Application filed July 10, 1894. Serial No. 517,110. (No model.)

To all whom it may concern:

Be it known that I, CALVIN M. ROARK, a citizen of the United States, residing at Alto, in the county of Cherokee and State of Texas, have invented new and useful Improvements in Churns, of which the following is a specification.

My invention relates to improvements in churns and has for its object to provide a strong, durable and simple churn by means of which the butter may be very quickly produced with the expenditure of but slight power.

To these ends my invention consists in the construction, combination and arrangement of parts hereinafter fully described and afterward definitely set forth in the claim following the description, due reference being had to the accompanying drawings forming a part of this specification, wherein—

Figure 1, is a vertical section on the line 1—1, of Fig. 2; Fig. 2, a horizontal section on the line 2—2, of Fig. 1; Fig. 3, a detail perspective view of the slide-block, and Fig. 4, a similar view of the means for securing the dasher shaft to the operating spindle.

Referring to the drawings the letter A indicates the frame of the churn consisting of four uprights a, secured together at and near their upper ends by cross bars a', a^2, a^3, and having secured to their lower ends a shelf a^4, upon which rests the churn B. (Shown in dotted lines.)

Secured to the cross bars a^3, is an inclined slide rest C slotted longitudinally as at c, and provided at its opposite ends with pulleys or guide rollers D, D, journaled in suitable bearings thereon. Arranged and adapted to slide on said slide rest is a slide-block E which is provided with a T-headed base e that passes through the slot c, and serves to guide the slide-block and retain it in place on the slide rest.

In one end of the slide block is driven a staple e' to which is secured one end of a cord or belt F, which passes around the guide rollers D, D, and is secured at its opposite end to a turning peg e^4, journaled in the end of said block and passing through a recess e^2, formed therein. By turning said pin in the proper direction the tension of the cord or belt F may be adjusted as occasion may require, and in order to maintain the cord or belt in its adjustment I provide the peg e^4, with a toothed or ratchet head e^5, which is engaged by a pawl e^6, pivoted to the upper side of the slide block E. From the upper side of said slide block projects a lug e^7, to which is pivotally secured one end of a pitman G, the other end of which is pivotally secured to a lever H pivoted at its lower end to a cross-rod I of the frame A. By providing two or more perforations h, in the lever H the pitman G is adjustably secured to the said lever so that the throw of the slide-block may be altered at the will of the operator.

J indicates the driving spindle journaled in cross bars k, k', secured to the frame and provided at its lower end with a head j, provided with a dovetailed recess j', in which is adapted to be fitted a dovetail shaped tenon l, formed on the upper end of the dasher shaft L, a pivoted latch j^2, serving to keep said tenon in place in the recessed head.

If desired the head j, may be provided with a dovetailed slot extending from side to side of the head block and a pivoted latch be arranged on each side thereof. By this construction the dasher may very quickly be detached from the driving spindle for removing the churn. The cord or belt F is wound one or more times around the spindle J and after passing around the pulleys or guide rollers D, D, is secured at its opposite ends to the slide-block E, as before described.

The operation of my improved churn will be readily understood. The parts having been properly adjusted in the manner and by the means above described, and the churn having been placed in position and its shaft connected to the driving spindle, the lever H is oscillated back and forth about its pivot and by means of the pitman G communicates a reciprocating movement to the slide-block E which latter, through the medium of the cord or belt F rotates the driving spindle J alternately in opposite directions which causes the dasher to thoroughly agitate the

cream and break up the globules, producing the butter very quickly with the expenditure of but little exertion or power on the part of the operator. Heretofore, in devices of this nature a serious disadvantage has consisted in the binding or rubbing action of the convolutions of the cord one upon the other as they are wound and unwound about the spindle, resulting in producing great wear upon the cord and requiring an unnecessary expenditure of power. To avoid this objectionable action of the cord I cause the cord to be wound and unwound about the spindle at an angle inclined relatively to the axis of said spindle, and this I accomplish by inclining the slide rest as shown, so that as the slide-block E is reciprocated back and forth the cord F as it is wound and unwound about the spindle is caused to travel up and down the spindle slightly which has a tendency to keep the convolutions of the cord separated and prevents them from rubbing or binding one on the other. By this means the wear on the cord is reduced to a minimum and at the same time the power necessary to operate the churn is very materially decreased.

Having described my invention, what I claim is—

In a churn, the combination with the rotary driving spindle J, of the slide rest C, the guide pulleys D, D, journaled in the opposite ends of said slide rest, the slide-block E seated and adapted to slide on said slide rest and provided with a turn peg e^4, having a ratchet head e^5, a pawl e^6, engaging said head, a cord wound about said spindle and passing around said pulleys, one end of said cord being fastened to said slide block and the other end fastened to said turn peg, a hand lever H, and a pitman G, pivotally secured to said lever and slide-block, substantially as described.

In testimony whereof I have hereunto set my hand and affixed my seal in presence of two subscribing witnesses.

CALVIN M. ROARK. [L. S.]

Witnesses:

J. A. COLLIER,

L. B. MOORE.