(No Model.)

2 Sheets—Sheet 1.

A. B. LANG.

CHURN.

No. 422,950. Patented Mar. 11, 1890.

Fig. 1.

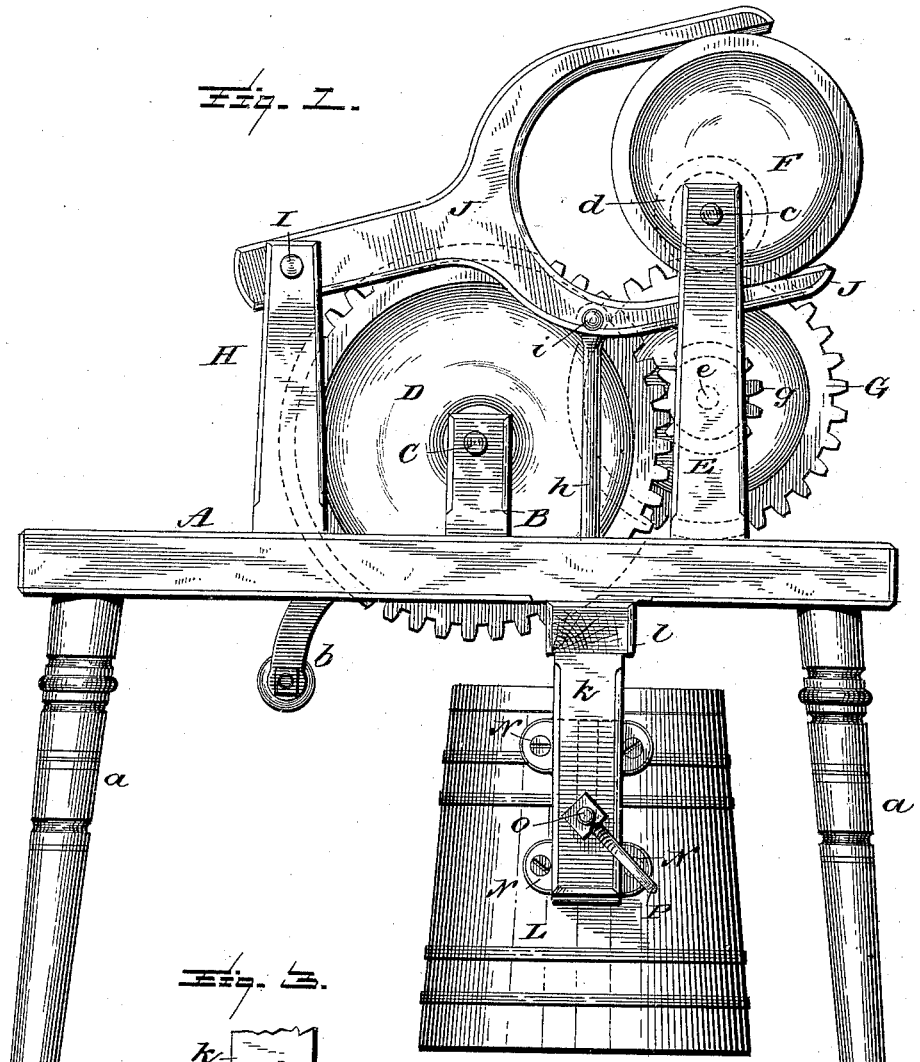
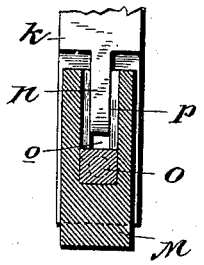


Fig. 2.



Witnesses

L. C. Hills.

E. A. Bond.

Inventor

Albert B. Lang,

By his Attorney

Chas. H. Fowler,

(No Model.) 2 Sheets—Sheet 2.

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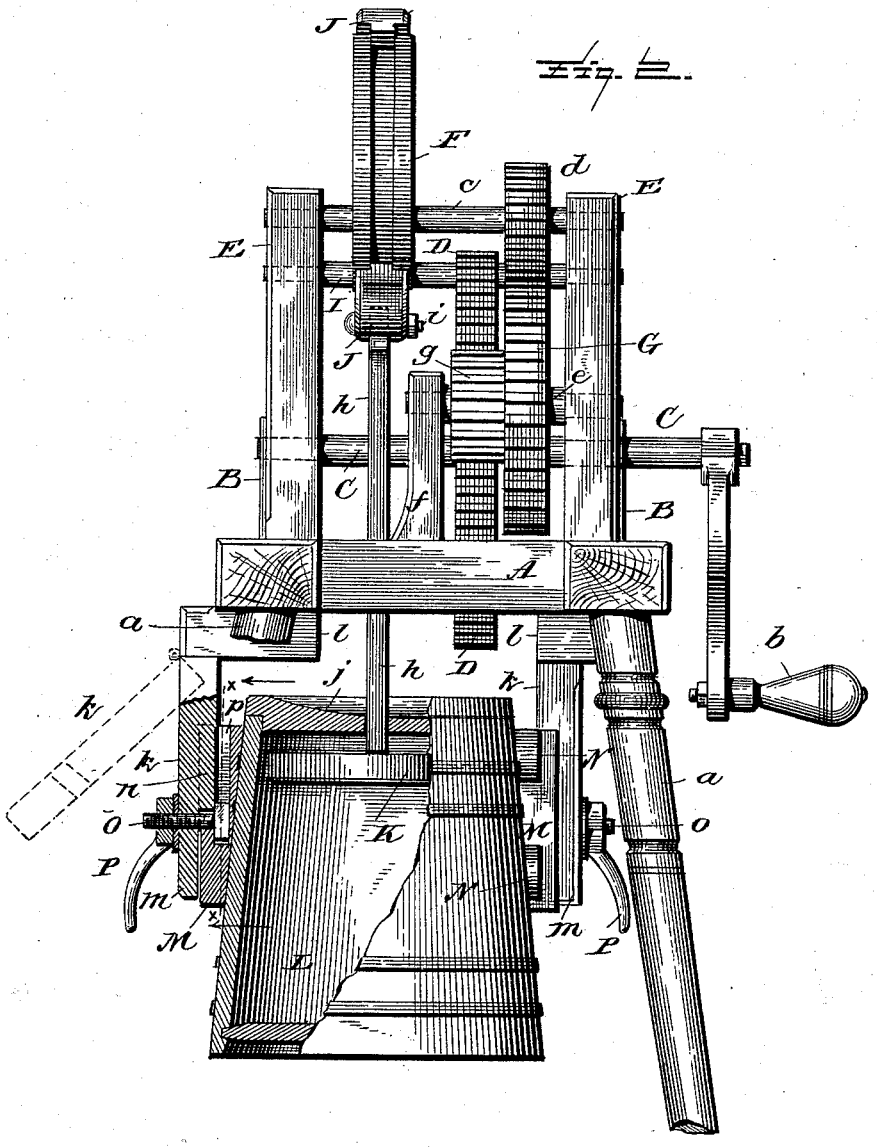
Fig. 2.



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E A Bond

Inventor
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By his Attorney
Chas. N. Fowler.

UNITED STATES PATENT OFFICE.

ALBERT BENJAMIN LANG, OF PIERRON, ILLINOIS.

CHURN.

SPECIFICATION forming part of Letters Patent No. 422,950, dated March 11, 1890.

Application filed October 28, 1889. Serial No. 328,380. (No model.)

To all whom it may concern:

Be it known that I, ALBERT BENJAMIN LANG, a citizen of the United States, residing at Pierron, in the county of Bond and State of Illinois, have invented certain new and useful Improvements in Churns; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

This invention relates to certain new and useful improvements in churns; and it has for its object to provide an improved device of this character wherein are provisions for readily removing or attaching the churn and for securing the same when in place. Improved means are also provided for imparting motion to the churn-dasher.

The invention consists in the peculiar and novel combinations, construction, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the drawings, and then particularly pointed out in the appended claim.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a side elevation of a churn embodying my invention. Fig. 2 is a view at right angles to Fig. 1, with parts in section and with parts broken away. Fig. 3 is a vertical section on the line *x x* of Fig. 2.

Like letters of reference indicate like parts in all the views.

Referring now to the details of the drawings by letter, A designates a suitable frame adapted to support the churn and its operating mechanism, and supported upon suitable legs *a*, as shown.

Rising from the frame A, near the center of the length thereof, are the uprights or standards B, in which is suitably journaled the main shaft C, one end of which is extended and is provided with a crank and handle *b*, as shown more clearly in Fig. 2. Fast upon this shaft is the large gear-wheel D.

Rising from the frame A, near one end thereof, are the standards or uprights E, in the upper ends of which is journaled the haft *c*, which carries near one end a gear-wheel *d* and near the other end a cam-disk F, or, rather, a disk F, eccentrically journaled or fastened on said shaft, as seen more clearly in Fig. 1.

f is a short upright arranged substantially centrally between the uprights E at the same end of the frame, and journaled in the upper end of this short upright and at the other end in one of the standards E is a short shaft *e*, arranged beneath and parallel with the shaft *c*. Fast on this shaft are two pinions, one a small one *g*, meshing with the large pinion D on the shaft C, and the other a larger one G, meshing with the pinion *d* on the shaft *c*, so that as the shaft C is revolved through the medium of the crank and handle *b*, either by hand or other power, the shaft *c* will be rotated through the medium of the gear-wheels above described. The relative sizes of the gear-wheels is such that one revolution of the pinion D will cause the gear-wheel *d* to revolve several times, as will be readily understood.

At the end of the frame A opposite the standards E are the uprights or standards H, in the upper ends of which is journaled the shaft I, carrying the forked or bifurcated arm J, between the jaws or forks of which the disk F is designed to operate in such a manner that as the disk is revolved it will actuate the said forked arm up and down on its pivot, and thus give a reciprocating motion to the dasher-shaft *h*, which is pivotally connected, as at *i*, with the lower fork of said arm and carries a dasher K of any known form of construction. The pivot connecting the dasher-shaft with the fork of the arm is removable, in order to allow of the removal of the dasher-shaft when desired.

L is the churn-body, which may be of any desired known construction and size, provided with a removable cover or lid *j*, provided centrally with a hole for the passage of the dasher-shaft and to allow free movement thereof up and down.

The churn-body L is held to the frame in the following manner: Depending from the under side of the frame A, between the legs thereof, are the arms *k*, supported by the short horizontal pieces *l*, and one of which is preferably hinged, as shown at the left-hand side of Fig. 2, so as to be thrown up out of

the way when it is desired to remove the churn-body. The inner adjacent faces of these arms *k* are formed as shown more clearly in Fig. 3—that is, with a reduced or halved-out portion, as shown at *m* in Figs. 2 and 3, and with a central vertical rib or tongue *n*, as shown more clearly in Fig. 3. Upon the opposite sides of the churn-body are secured the plates or castings M, provided with suitable ears for this purpose, through which pass the screws or other securing means N. These plates are formed with a vertical slot or passage *o* for the passage of the rib *n* of the arm *k* and with an undercut passage *p* for the head of the bolts O, which pass through the slot *o* with their heads in the undercut channel, as shown in Figs. 2 and 3, and upon their other ends are threaded to receive the jam-nuts P, by means of which they are tightened to hold the churn-body in its adjusted position. By loosening the nuts the churn-body may be easily removed by allowing it to drop the bolts remaining in the arms *k* ready to receive the body when it is desired to replace it, the heads of the bolts fitting in the undercut channels and the bolts working in the slots *o* in the castings or plates M.

What I claim as new is—

In a churn, the combination, with the frame and the dasher and its operating mechanism, of the churn-body, the plates upon opposite sides thereof and formed with vertical slot and undercut channels, and the arms depending from the frame and provided with vertical rib, and the bolts having their heads working in the undercut channels and the bolts passed through the vertical slots and provided with jam-nuts, substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ALBERT BENJAMIN LANG.

Witnesses:
OTTO HOEFLE,
JOE ZIMMERMANN.