

(No Model.)

N. BARNESLEY.

CHURN.

No. 376,625.

Patented Jan. 17, 1888.

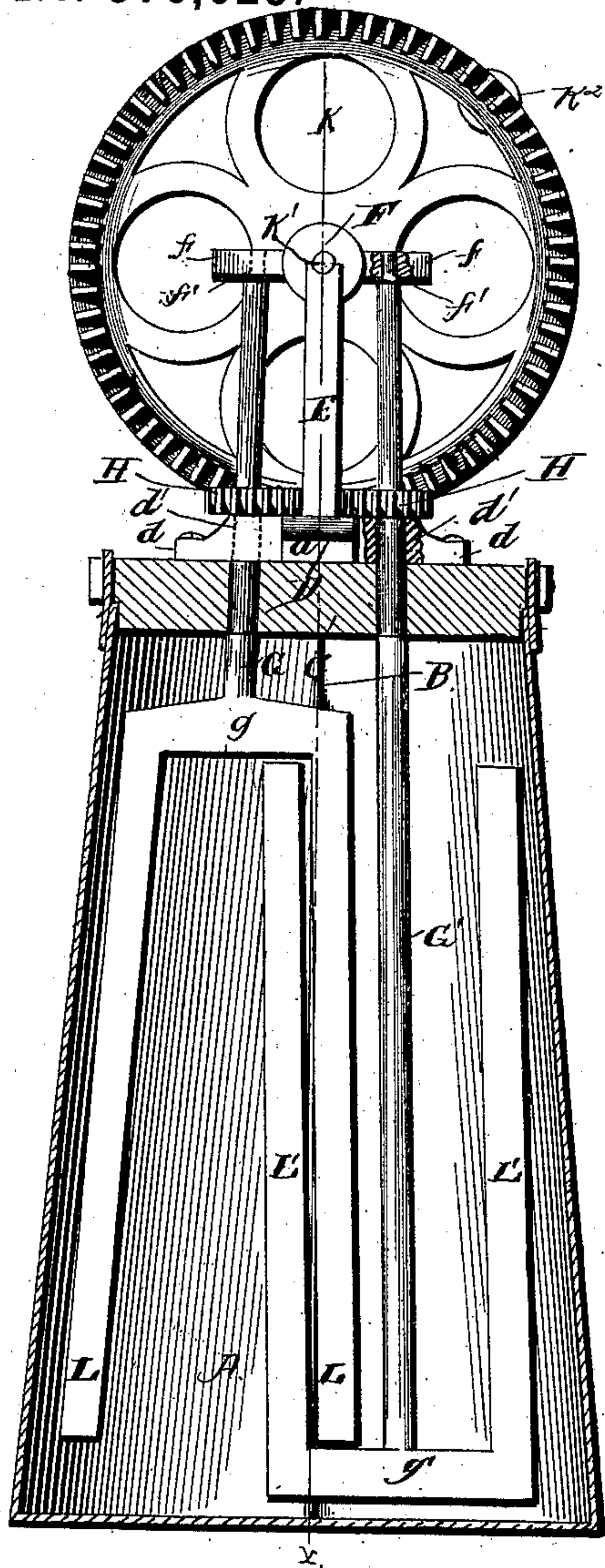


Fig. 1.

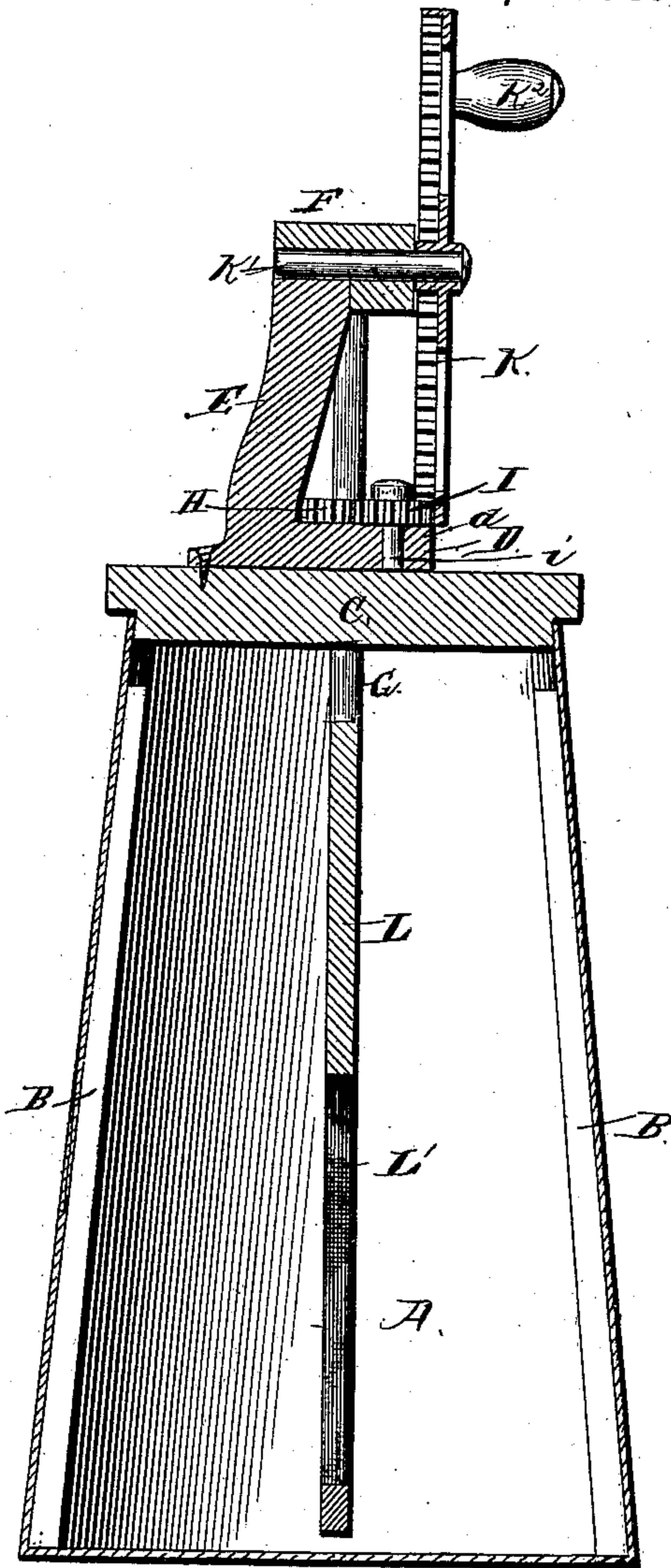


Fig. 2.

Witnesses

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CHURN.

SPECIFICATION forming part of Letters Patent No. 376,625, dated January 17, 1888.

Application filed August 23, 1887. Serial No. 247,680. (No model.)

To all whom it may concern:

Be it known that I, NELSON BARNESLEY, a citizen of the United States, residing at Esrom, in the county of Barton and State of Missouri, have invented a new and useful Improvement in Churns, of which the following is a specification.

My invention relates to improvements in churns, and has especial reference to improvements on the churn for which Letters Patent No. 347,312 were granted to me August 17, 1886; and it consists in a certain novel construction and arrangement of parts, fully set forth hereinafter, and specifically pointed out in the claim.

In the accompanying drawings, Figure 1 is a central sectional view of a churn-body, showing a rear view of the churn mechanism and the dashers. Fig. 2 is a section of the churn mechanism on the line *x x* of Fig. 1.

Referring by letter to the drawings, A designates the body of the churn, having the breaker strips or ribs B B arranged vertically on the sides thereof at diametrically-opposite points, and C represents the lid of the churn, adapted to fit the upper end of the body tightly. On the upper side of the lid I secure a plate, D, having the lateral arms *d*, and a standard, E, formed integrally with said plate, rises from its upper surface, the said standard being provided at its upper end with a bearing-plate, F.

f f are ears projecting laterally from the sides of the bearing F, in which are formed bearings *f' f'*, to align with bearings *d' d'* in the lateral arms *d d*. Similar bearings or openings are also formed in the lid of the churn to align with the bearings *f'* and *d'*.

G G' are parallel vertical dasher-shafts journaled in the aligned bearings *f' d'* and extending through the lid of the churn, the shaft G extending only a short distance below the said lid, while the shaft G' extends nearly to the bottom of the body.

H H are pinions secured to the shafts G G' and bearing on the upper side of the arms *d d*, thus supporting the dasher-shafts in the churn-body.

It will be observed that the dashers of my churn are arranged parallel to each other and are rotated in the same direction, the result

being that they have a centripetal action on the cream, drawing it toward the center of the churn-body at the points of interception of the circles traversed by the dashers. The body of the cream is thus drawn to the point where it will be most thoroughly and efficiently acted upon, the dashers thus effecting an economy of the time required for successful churning.

In my former patent, hereinbefore referred to, the operating-gearing was supported by a bridge-plate inserted between the branches of a forked standard. This construction proved to be inefficient, for the reason that the bridge-plate could not be made sufficiently strong to hold the gearing firmly in place, and the several parts would soon become so loose that the operation of the machine was rendered difficult and uneven. The cost of the former construction also was so large as to be objectionable, for the reason that the standard could not be made as easily as that employed in my present device, and the several parts could not be so readily fitted together.

In my present device the standard is in a single piece, and is made integral with and rises from a plate secured to the lid of the churn, and the gearing is mounted on the said plate. The time required to fit the parts together is thus reduced to a minimum, and the said parts are so arranged as to be held solidly in place.

On a small vertical spindle, *i*, secured to the forwardly-projecting arm *d* of the plate D, on the upper side, is journaled the pinion or gear-wheel I, which meshes with the pinions or gear-wheels H H.

K' represents a horizontal shaft journaled in the bearing F at the upper end of the standard, and to the front end of the said shaft is secured the gear-wheel K, which meshes with the pinion I and through the agency of the same rotates the gear-wheels H H in the same direction. The gear-wheel K is provided with a handle, K², to enable the same to be rotated.

To the lower end of the dasher-shaft G is secured the cross-bar *g*, and to the ends of the latter are secured the depending arms or blades L, adapted, when the machine is in operation, to describe a circle around the shaft G as a

center. To the lower end of the shaft G' is secured a similar cross-bar, g' , to the ends of which are secured the upwardly-extending arms L' , also adapted to describe a circle 5 around the shaft G' as a center.

The circle described by each of the dashers is adapted to intercept that described by the other, so that the depending arms of the dasher G continually pass between the upwardly-extending arms of the dasher G' and the dasher-shaft. These arms, however, are so arranged as not to come in contact with each other, as the friction thus caused darkens the color of the butter produced by the operation.

15 It will be seen from the above description that my device is very simple and easily operated.

Having thus described my invention, I claim—

20 In a churn, the combination, with the body having the diametrically-opposite breaker-strips $B B$ on its inner side, of the lid having vertical openings, the plate D , secured upon the lid and having the lateral arms $d d$, provided with bearings $d' d'$, aligning with the 25 vertical openings in the lid, the standard E , rising from the plate D and formed integrally

therewith, the bearing-plate F at the upper end of the standard E , the ears $f f$, projecting laterally from the bearing F and having bearings $f' f'$ in alignment with the bearings $d' d'$ in the arms $d d$, the parallel dasher-shafts $G G$, mounted in the bearings d' and f' and passing through the vertical openings in the lid, the dashers secured to the lower ends of the said 35 shafts and forming intercepting circles when the shafts are rotated, the pinions $H H$, mounted on the dasher-shafts and resting on the side arms, d , of the plate D , the spindle i , secured on the forwardly-projecting arm d of said plate, 40 the pinion I , journaled on the said spindle and meshing with the pinions $H H$, the shaft K' , journaled in the bearing-plate F , and the master gear-wheel K , mounted on the end of the shaft K' and meshing with the pinion I , substantially as described and shown. 45

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

NELSON BARNESLEY.

Witnesses:

H. SCOTT,

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