

(No Model.)

3 Sheets—Sheet 1.

L. D. BUNCE.

CHURN.

No. 337,238.

Patented Mar. 2, 1886.

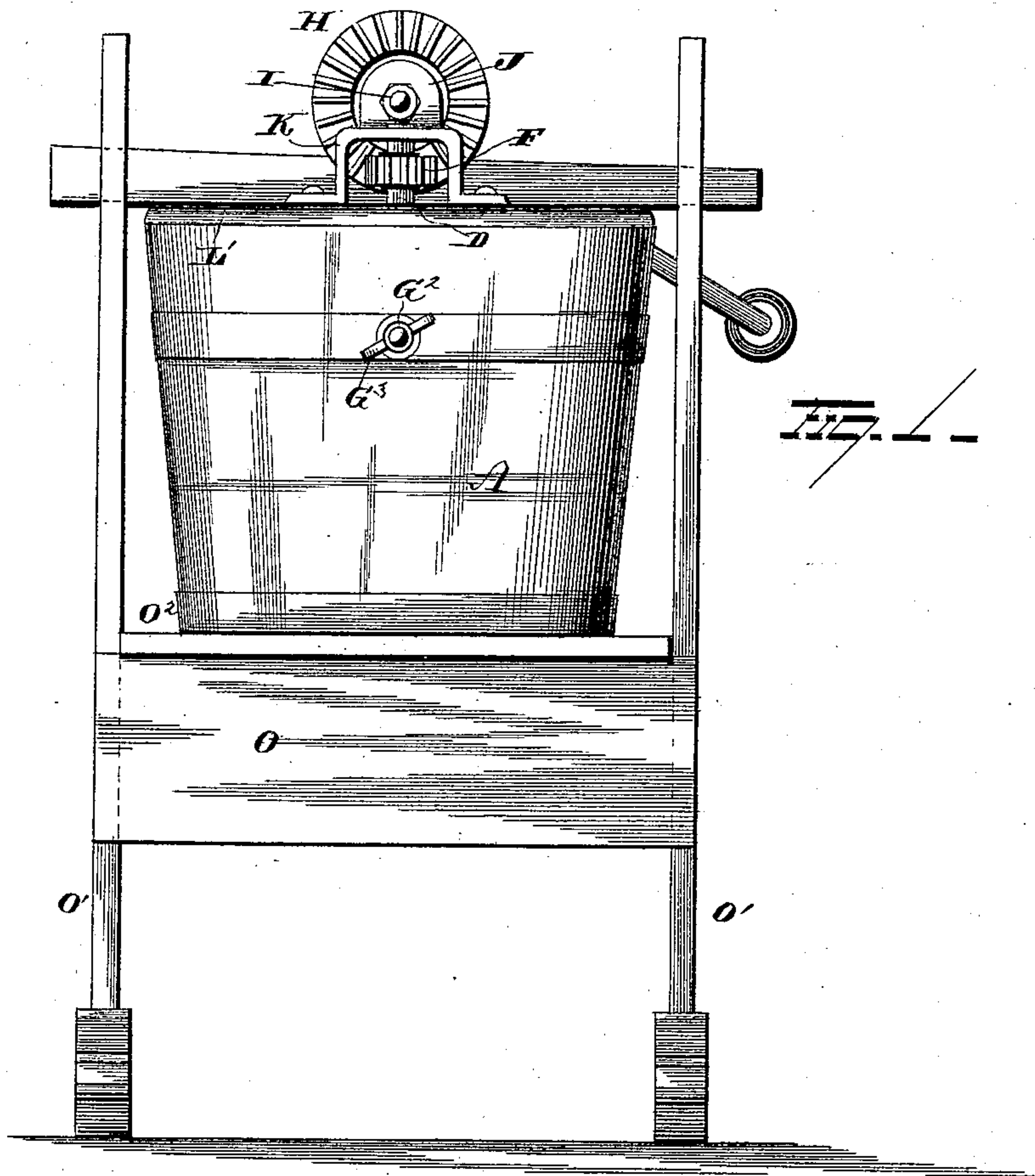
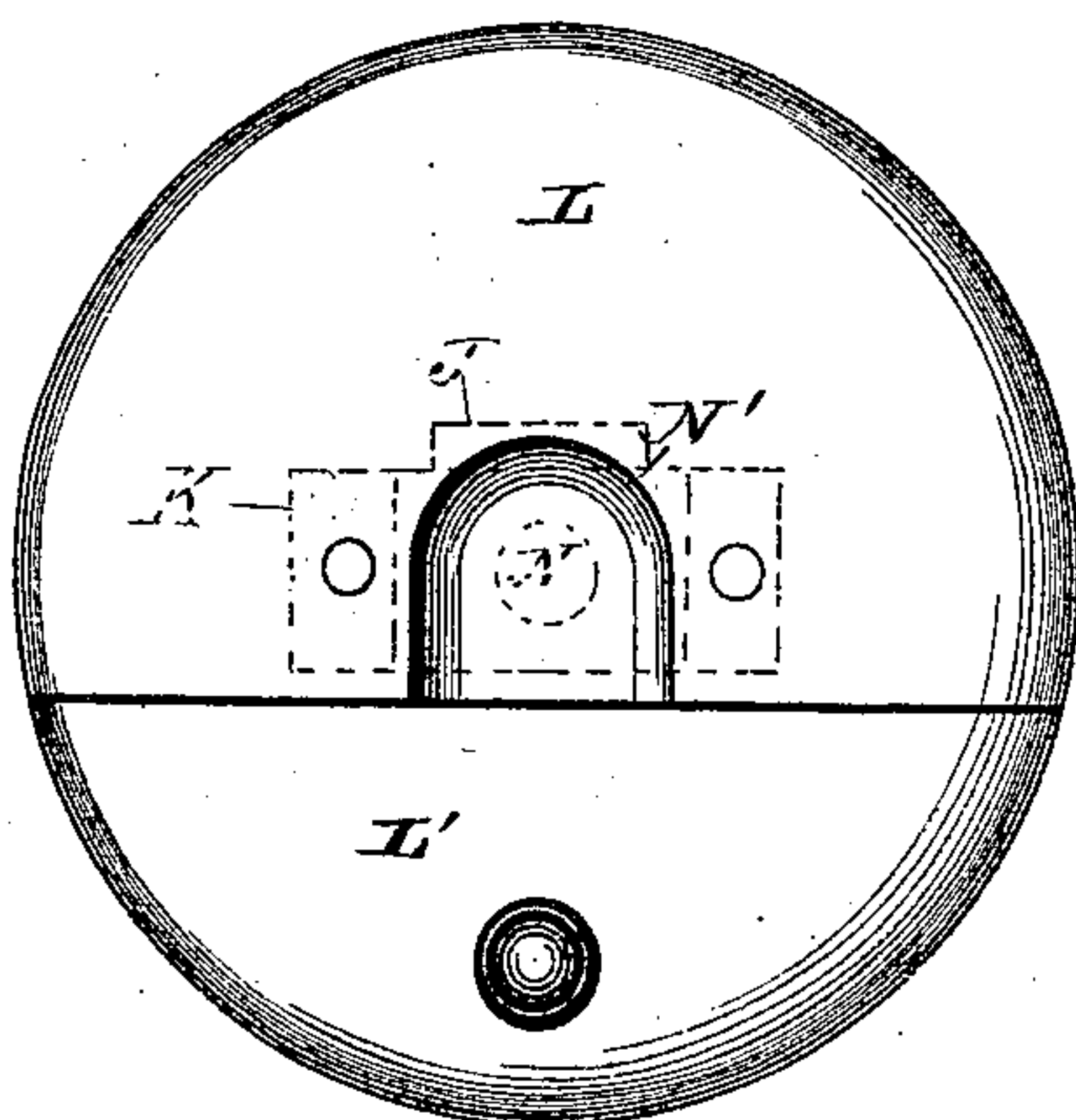


Fig. 5.



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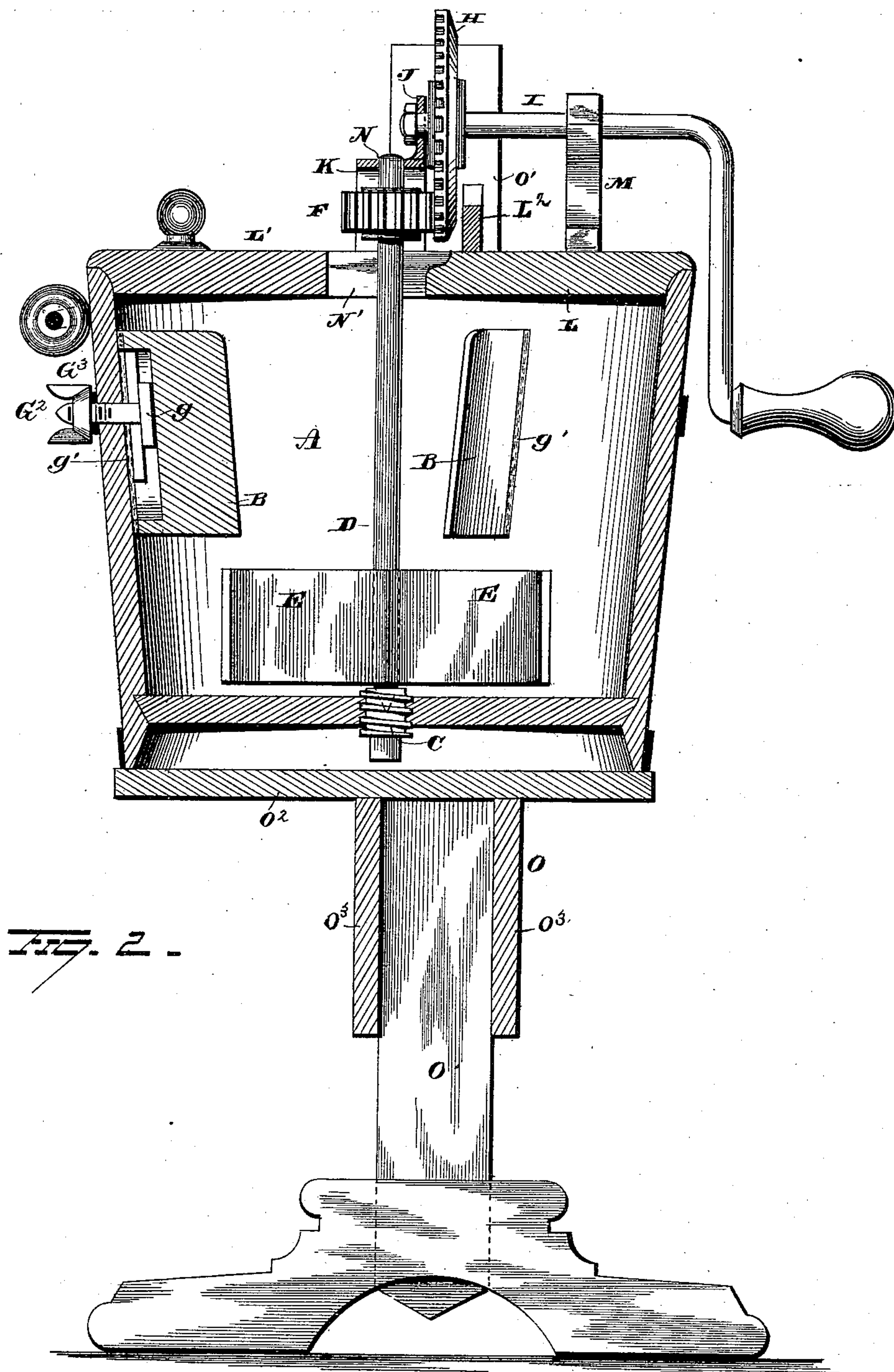


Fig. 2.

WITNESSES

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Fig. 3

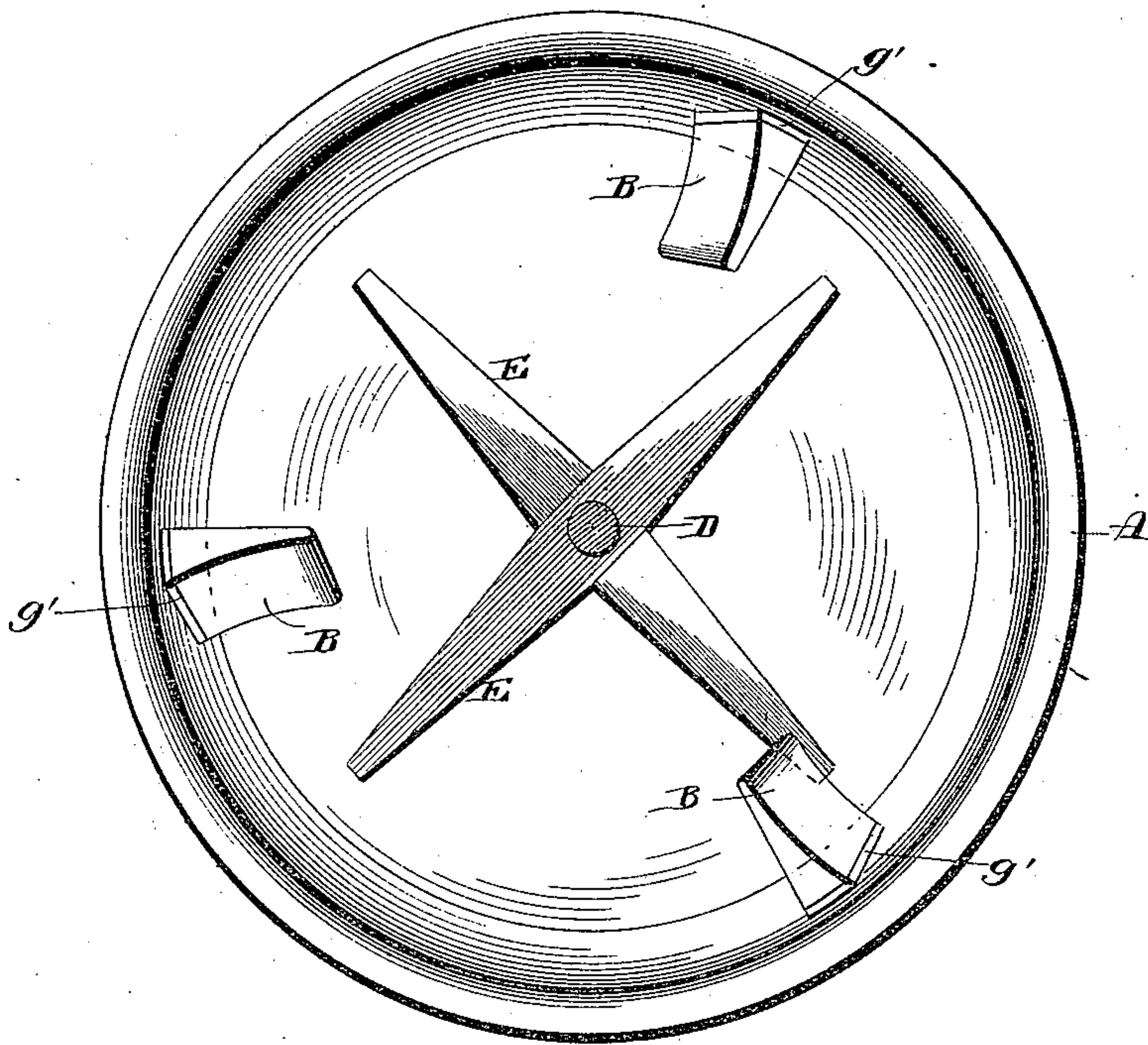
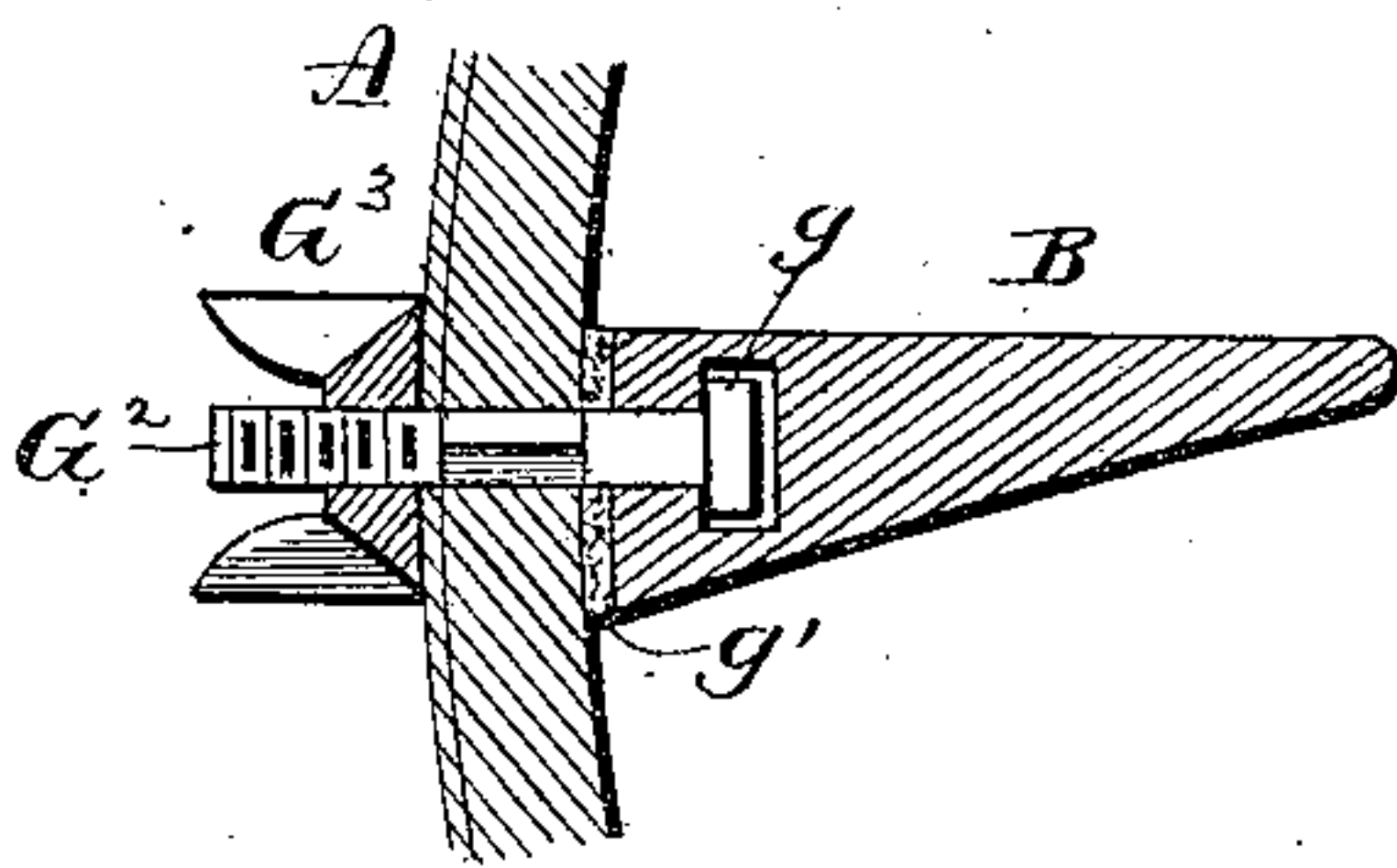


Fig. 4



WITNESSES

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UNITED STATES PATENT OFFICE.

LEWIS D. BUNCE, OF SALT LAKE CITY, UTAH TERRITORY, ASSIGNOR TO HIMSELF, CHARLES F. DECKER, AND CHARLES M. DONELSON, ALL OF SAME PLACE.

CHURN.

SPECIFICATION forming part of Letters Patent No. 337,238, dated March 2, 1886.

Application filed January 6, 1886. Serial No. 187,795. (No model.)

To all whom it may concern:

Be it known that I, LEWIS D. BUNCE, of Salt Lake City, in the county of Salt Lake and Territory of Utah, have invented certain 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 appertains to make and use the same.

My invention relates to an improvement in churns, the object of the same being to provide a churn in which the dasher and dasher-operating mechanism, either or both, can be readily removed from the churn-body when it is desired to cleanse the parts or remove the butter.

A further object is to provide a churn in which the motion of the cream while being agitated will be steady and regular, which will permit a section of the cover to be left off while churning without danger of throwing a portion of cream out of the churn.

A further object is to provide a churn with side wings and dasher adapted to be adjusted vertically to accommodate them to varying quantities of cream in the churn.

With these ends in view my invention consists in the parts and combinations of parts, as will be more fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in elevation of my improved churn. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a plan view of the churn-body with the cover removed. Fig. 4 is a detached view showing the manner of securing the wings to the body, and Fig. 5 is a detached view of the cover.

A represents the churn-body, having outward inclined sides, and provided at or approximately at the center of the bottom with the step C, which latter forms a bearing for the lower end of the dasher-shaft D. This body is also provided on its inner face with the inwardly-projecting wings B, which latter project therefrom in planes obliquely to radial planes passing through the shaft and at the same time oblique to a horizontal plane passing through the shaft and slightly

dished transversely for the purpose of directing the cream as it rides up the wings inwardly or away from the sides of the churn-body. These wings are located in the upper portion of the body, and are adjustably secured to the body for the purpose of permitting them to be moved vertically. If a small quantity of cream is to be churned, the wings are lowered, and for a greater quantity the wings would be elevated. Each wing is provided on its outer edge with a T-shaped slot, substantially as shown, which latter starts from a point above the lower end of the wing and terminates at a point below the upper end of the same. The heads g of the bolts G^2 rest in the slot, with the shanks of the bolts projecting through the body of the churn and secured by thumb-nuts G^3 . Between the wings and churn-body are interposed rubber or other yielding gaskets g' , which prevent the cream from entering the slots in the wings. By loosening the thumb-nuts the wings can be moved up and down on the screws as necessity demands.

The cover is made of two sections, a greater section, L, carrying the dasher-operating mechanism, and a lesser section, L', which latter can be removed from the body for the purpose of filling or emptying the churn and for supplying air to the cream during the process of churning without disturbing the dasher or the dasher-operating mechanism. The dasher-operating mechanism consists simply of a horizontal shaft, I, supported near its outer end by a bearing in the standard M, rigidly secured to the section L of the cover, and at its other end by a bearing in the upwardly-projecting arm J of the yoke K. The yoke is constructed to span the pinion F on the upper end of the dasher-shaft, and is secured at its opposite ends to the upper surface of the section L of the cover. This yoke is centrally provided with an opening, N, for loosely supporting the upper end of the dasher-shaft, and the section L of the cover is provided at a point immediately below said opening N with an open slot, N', through which the dasher-shaft passes.

The shaft I is provided at one end with a crank, by which it is operated, and near its opposite end with a pinion, H, which latter

engages the pinion F of the dasher-shaft D. This shaft D is, as before stated, loosely supported at its lower end on the step C and loosely supported at its upper end in the bearing N of the yoke K, and is provided at its lower end with the dasher or blades E.

The step C consists of a block, preferably of wood, screwed into the bottom of the churn-body. By turning the block the latter can be elevated for elevating or lowering the dasher-blades as necessity demands.

The blades have parallel sides, which latter rest respectively in close proximity to the bottom of the body and lower edges of the wings, and the ends thereof are constructed to rest in close relation with the inner face of the flaring sides of the body, so that when they are in motion the entire body of cream below the lower edges of the wings is agitated and thrown violently against the inclined wings.

By constructing the cover of two parts, one of which carries the dasher-operating mechanism, and connecting the dasher-shaft thereto, as described, both sections of the cover can be removed without disturbing the dasher, and one section of the cover can be left off entirely during the operation of churning.

O is the stand or support on which the churn rests. This stand consists, essentially, of two uprights, O', provided at their lower ends with enlarged bases connected at a point above their bases by the platform O² on which the churn rests. The uprights O' extend up above the churn-body, and are each provided with an opening, into which the bar, which is wedge shape for the purpose of preventing it from passing through the holes in the uprights O', and also for the purpose of pressing or

holding down the greater section L of the cover, is passed. This bar passes over the top of the greater section of the cover under the operating-shaft, and locks said section of the cover to the churn and the churn to the stand.

I am aware that it is old to secure wings to the inner face of a churn-body, and also that it is not new to secure the dasher-operating mechanism to the cover of the churn; hence I make no broad claim to these parts, *per se*; but,

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

1. In combination with a churn-body and the rotary dasher, the laterally-projecting wings, each having a T-shaped slot therein, bolts passing through the sides of the body and provided with heads which rest in the slots of the wings; and thumb nuts for locking the bolts to the churn-body, substantially as set forth.

2. The combination, with the churn body, the wings having T-shaped slots therein, and headed bolts for securing the wings to the body, of the two-part cover, the driving mechanism secured to one part of said cover, and the dasher-shaft having a pinion thereon engaging the driving mechanism, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

LEWIS D. BUNCE.

Witnesses:

A. W. BRIGHT,
J. E. JONES.