

No. 641,835.

Patented Jan. 23, 1900.

E. BÜRK.
CHURN.

(Application filed May 17, 1899.)

(No Model.)

Fig 1:

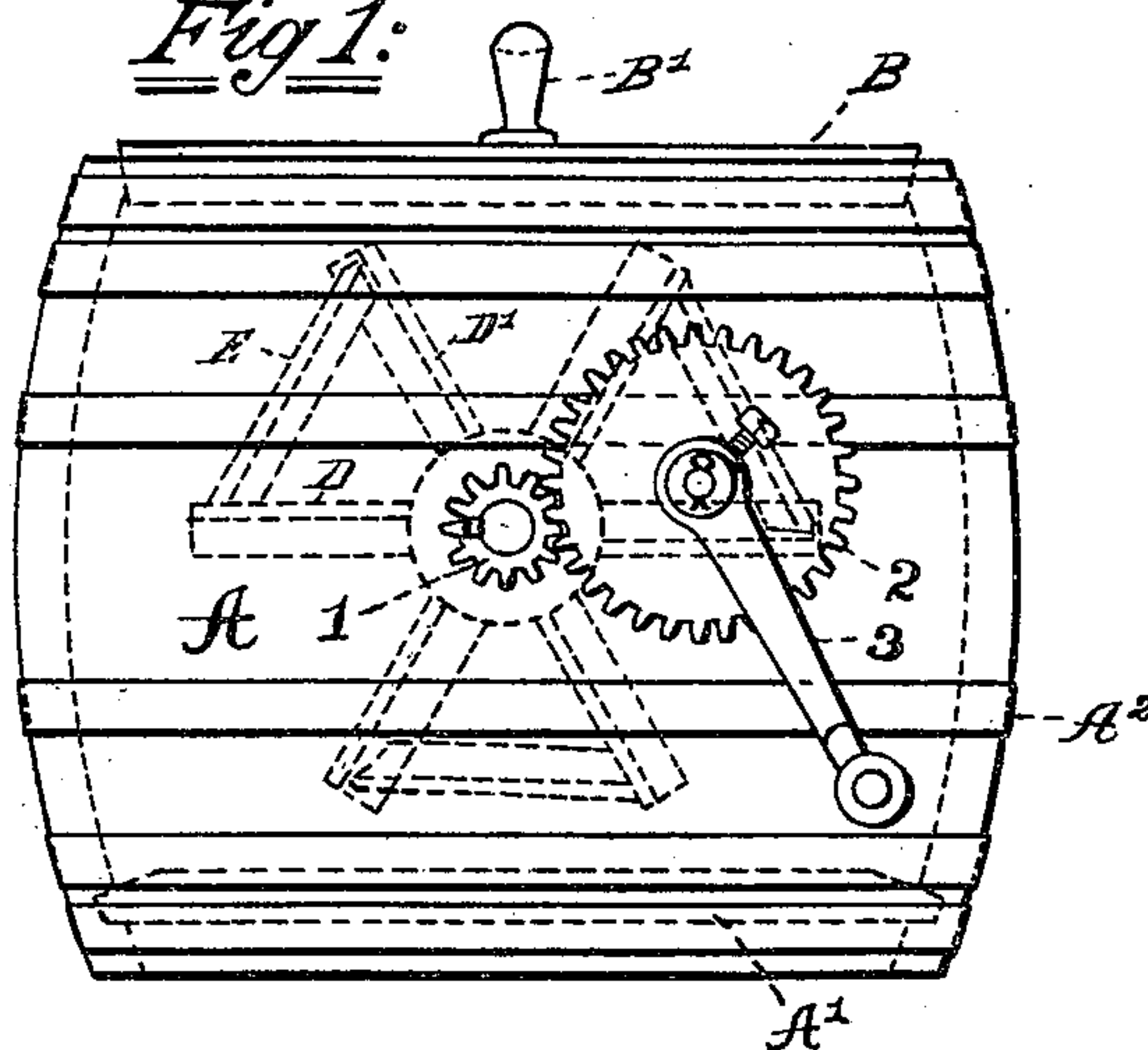


Fig 2:

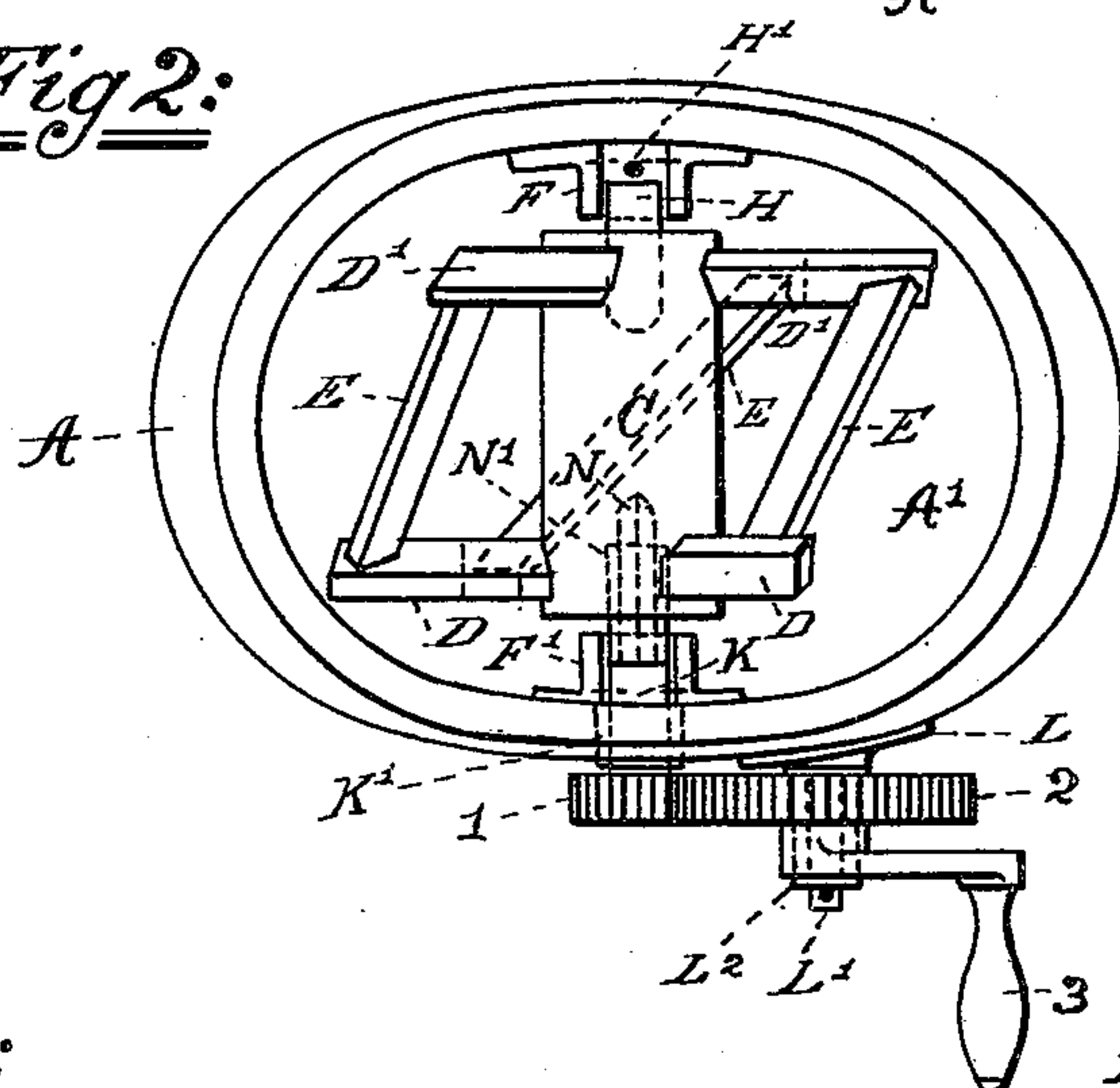


Fig 3:

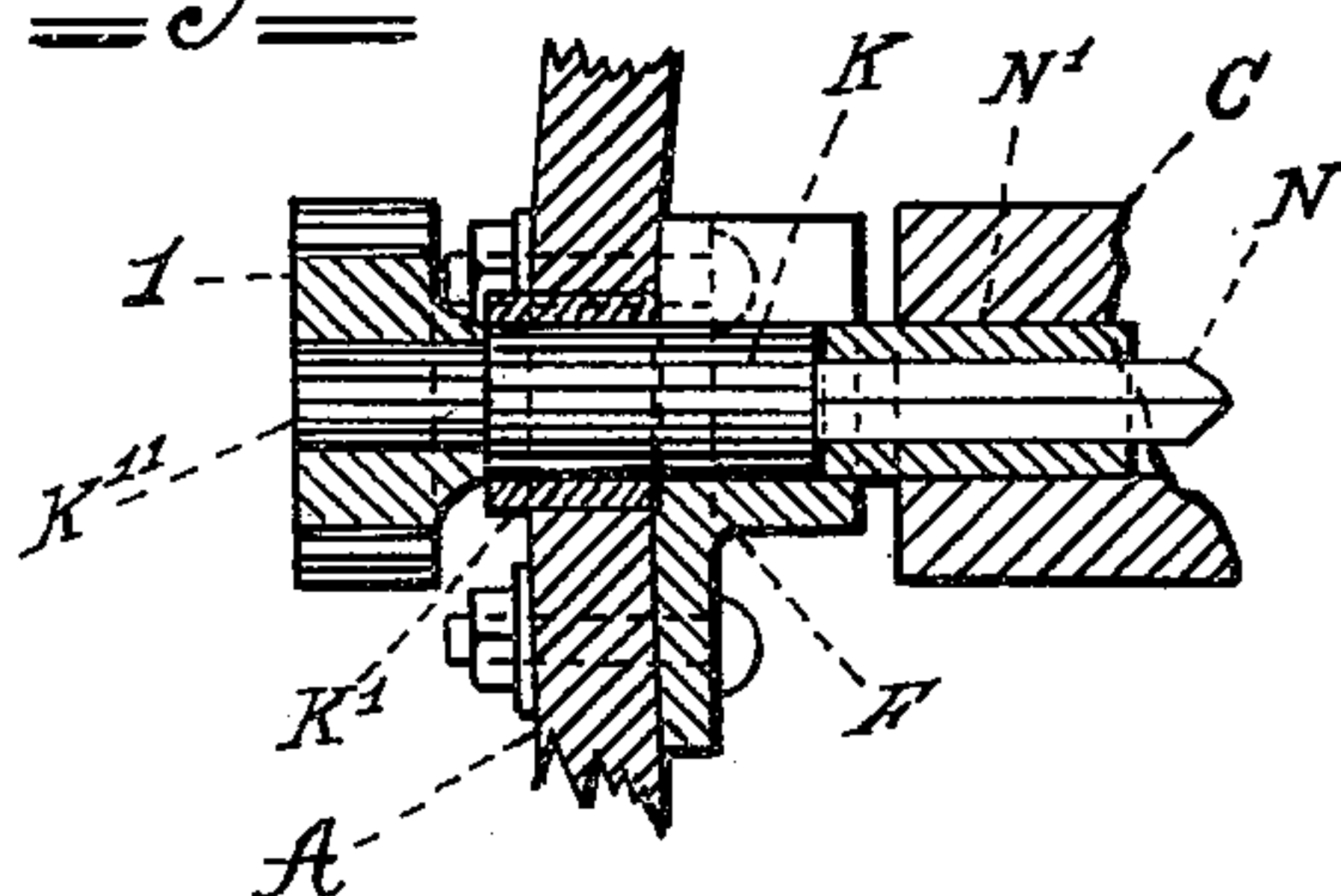
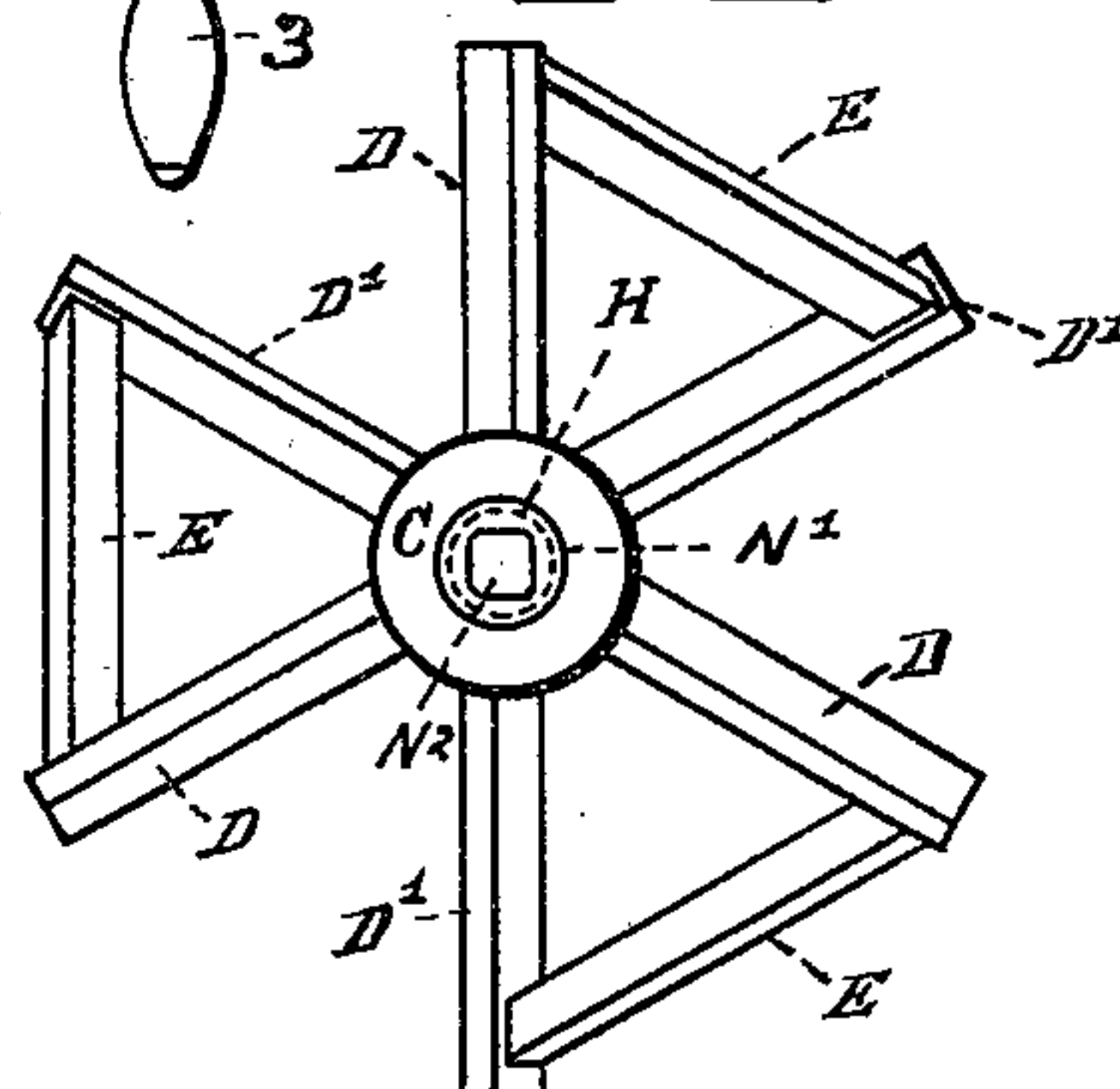


Fig 4:



WITNESSES:

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CHURN.

SPECIFICATION forming part of Letters Patent No. 641,835, dated January 23, 1900.

Application filed May 17, 1899. Serial No. 717,158. (No model.)

To all whom it may concern:

Be it known that I, EMIL BÜRK, a citizen of the United States, residing at Paterson, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Churns; of which the following is a specification, reference being had therein to the accompanying drawings.

The object of my invention is to provide a churn for the making of butter which from its simplicity of construction and ease of operation will greatly facilitate the production of butter and which will be durable and strong and easily kept clean.

The invention consists of an oblong-shaped box or barrel of wood or metal or other suitable material having bearings secured to the inner walls in which a dasher of peculiar construction is mounted to rotate. A trunnion is secured in the back end of the hub of the dasher, and in the other end of the said hub is secured a collar having a square hole adapted to receive the square end of a trunnion the other end of which is secured in a pinion-wheel. The square end of this front trunnion is passed through a collar in the side of the box or barrel and into the hole in the collar in the front of the hub of the dasher. Another gear-wheel, which meshes with the pinion-wheel above mentioned, is loosely mounted to rotate on a stud secured to the outside of the box or barrel and may be rotated by hand or other power.

In the drawings, in which similar letters and numerals indicate like parts, Figure 1 is a side view of my churn, the dasher being indicated by dotted lines. Fig. 2 is a plan view thereof, the cover being removed. Fig. 3 is a detail view of trunnion arrangement for driving the dasher; and Fig. 4 is a detail of dasher, showing the arrangement of the arms and beater-blades thereof.

In the drawings, A is the oblong-shaped box or barrel, having the bottom A', hoops A², cover B, and handle B'.

The dasher consists of the hub C, which is provided with the front arms D and the back arms D' and beater-blades E. Both the front and back arms D and D' are secured to the hub C, as shown in the drawings, adjacent to the front and back ends, respectively, of the hub, the broad sides of the arms not being

parallel to the plane of the ends of the hub; but are turned in a direction oblique to the plane of the ends of the hub and are inclined outwardly, so that the distance is greater between the outer ends of the arms where connected by the beater-blades E than where they are secured to the hub. The front arms are secured to the hub at regular intervals and the rear or back arms are secured to the hub at regular intervals also; but the back arms are not directly opposite the front arms. The back arms are set opposite the intervening spaces between the front arms and not opposite the front arms. The beater-blades E connect the obliquely-opposite front and back arms in pairs, which form an agitating device that greatly facilitates the operation of churning.

The device may be operated by hand and work a saving in time and labor, or it may in the case of a large plant be driven by steam, electricity, or water power.

The oval or oblong-shaped receptacle is peculiarly adapted for the purpose and aids materially the agitating device in accomplishing the objects of my invention.

F and F' are the bearings for the trunnions H and K, respectively.

H' is a stop-pin which I place in the bearing F, back of the trunnion H, to prevent lateral movement of the dasher and make it fit snugly.

The trunnion K has the square end N and passes through the collar K' in the side of the box or barrel and into the square hole N² in the collar N' in the hub C.

On the end K'' of the trunnion K is secured the pinion-wheel 1, which meshes with the gear-wheel 2, loosely mounted on the stud L' on the stud-plate L, which is secured to the outside of the box or barrel.

A working handle is secured to the hub L² of the gear-wheel 2 to operate the dasher.

By regulating the size of the gears the speed or revolution of the dasher may be changed, if desired. As stated, however, the dasher may be driven by any power suitably applied.

With this description of my invention, what I claim is—

In a churn, the combination with the body portion, being elliptical in cross-section, of a horizontal dasher consisting of the arms D

and D' secured to the horizontal hub C, adjacent to the front and back ends respectively of the hub, the broad sides of the arms being out of parallel to the plane of the ends of the
5 hub, turned in a direction oblique to the plane of the ends of the hub, and the beater-blades E secured to the outer ends of the side arms, connecting the obliquely-opposite front and back arms in pairs, said hub being provided
10 with a collar having a square hole, a square-ended trunnion K adapted to pass through the body of the churn and into the square hole in the collar of the hub on one end thereof, a trunnion H secured in the other end of the

hub and bearings F and F' secured on the in- 15 side of the body of the churn on the longer sides thereof, on and in which trunnions H and K rest and rotate, to permit the dasher to rotate lengthwise in said body, and means for operating or turning said dasher, substan- 20 tially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

EMIL BÜRK.

Witnesses:

FLORENCE M. WESTHOVEN,
JOHN F. KERR.