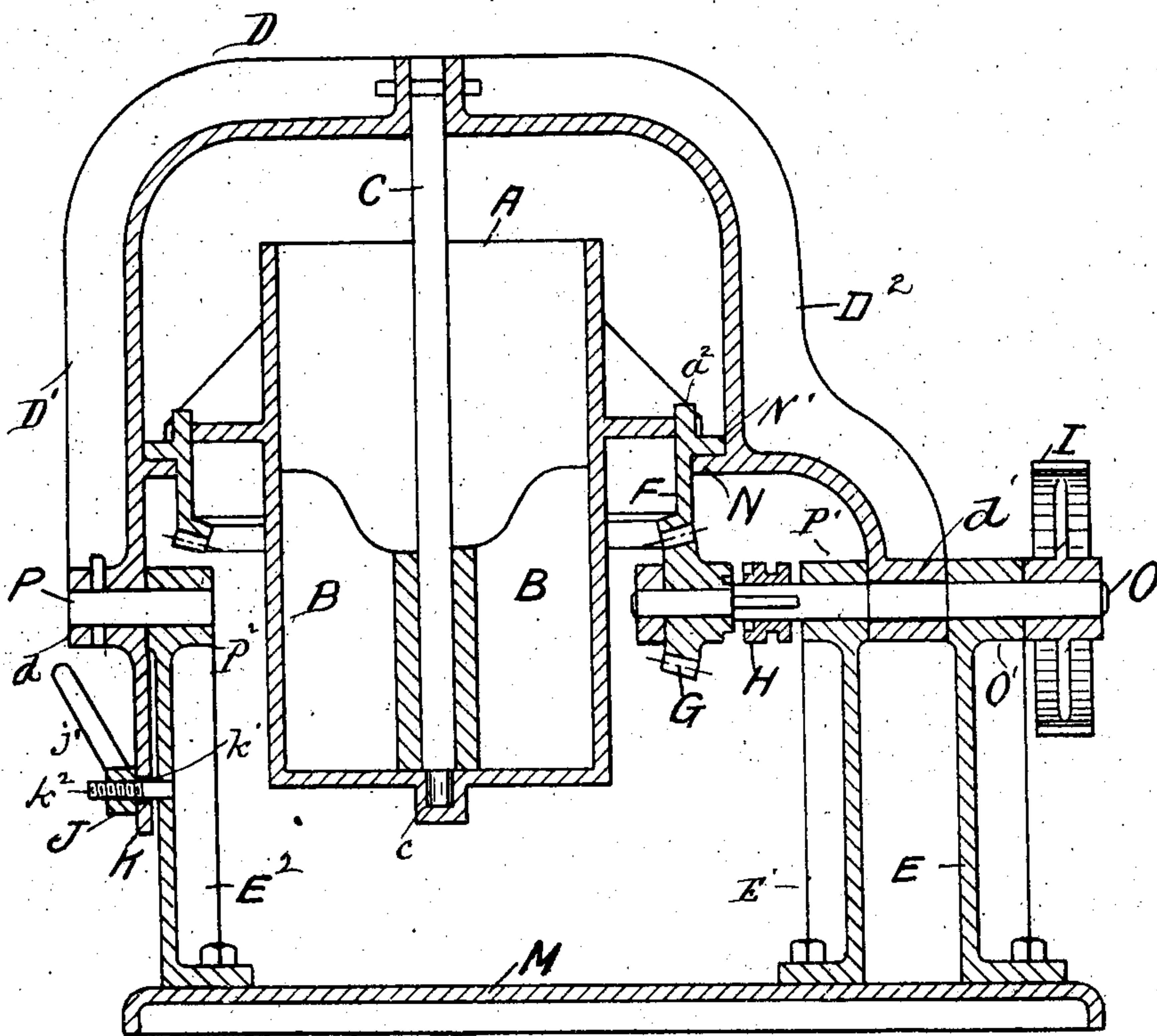
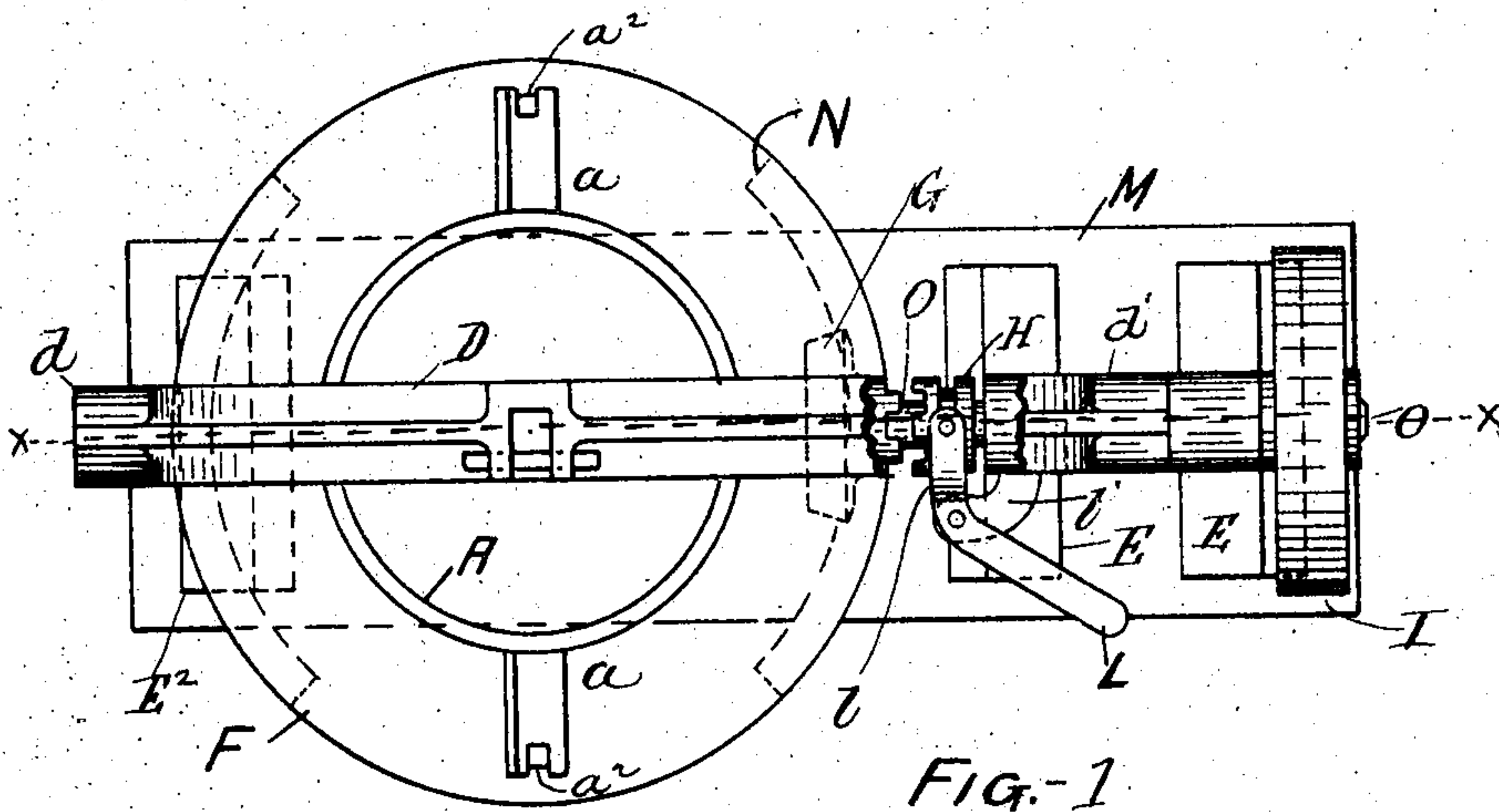


No. 835,107.

PATENTED NOV. 6, 1906.

R. HOHNBACH.  
DOUGH MIXING MACHINE.  
APPLICATION FILED MAR. 8, 1906.

2 SHEETS—SHEET 1.



Witnesses  
James Walter Martin  
Stephen A. Woodford

Inventor  
Robert Hohnbach

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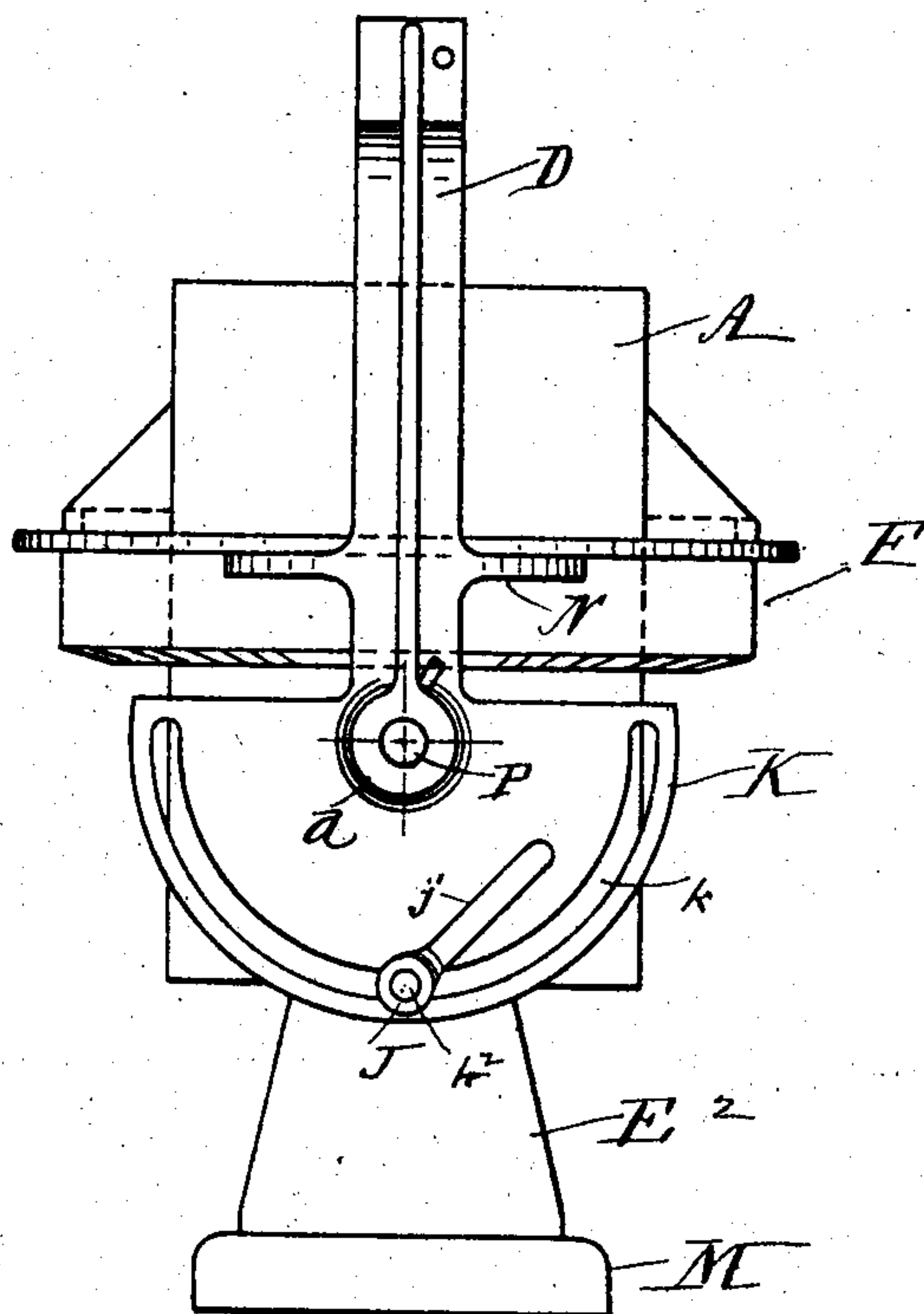


Fig-3.

Witnesses  
James Walter Martin  
Stephen A. Goodspeed

Inventor  
Robert Hohnbach



# UNITED STATES PATENT OFFICE.

ROBERT HOHNBACH, OF JOLIET, ILLINOIS.

## DOUGH-MIXING MACHINE.

No. 835,107.

Specification of Letters Patent.

Patented Nov. 6, 1906.

Application filed March 8, 1906. Serial No. 304,877.

*To all whom it may concern:*

Be it known that I, ROBERT HOHNBACH, a citizen of the United States, residing at Joliet, in the county of Will and State of Illinois, have invented certain new and useful Improvements in Dough-Mixing Machines, of which the following is a specification.

This invention has relation to machines for mixing different kinds of dough for bread and cakes, and has for its objects, first, the provision of novel means for imparting to the mixing-tank a rotary motion around an axial center through which passes a shaft carrying suitable mixing-blades or agitators; second, the provision of means for tilting the mixing-tank for the purpose of emptying it while it is being axially rotated; third, the provision of novel details of structure and arrangement in a dough-mixing machine whereby the efficiency of the latter is increased and economy, cleanliness, and convenience secured.

The invention consists in the novel construction, combination, and arrangement of parts hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a plan view of a dough-mixing machine embodying my invention. Fig. 2 is a vertical central sectional view on the line X X of Fig. 1. Fig. 3 is an end elevation.

A designates a cylindrical cast-iron mixing-tank arranged and adapted to occupy a vertical axial position, and B B are radially-arranged mixing-blades attached to an axial shaft C, which is journaled at its lower end in a recess *c* in the bottom of the tank, its upper end being securely fastened to a cast-iron yoke D, which opens the upper end of the tank. This yoke is formed at the lower end of its limbs D' D<sup>2</sup>, respectively, with boxes or bearings *d d'*, through which pass the horizontal axially-aligned shafts O P, mounted and turning in bearings O' P' P<sup>2</sup>, formed on the vertical standards E E' E<sup>2</sup>, bolted to the base-plate M.

The limb D' of the yoke is keyed to and turns with the shaft P, while the limb D<sup>2</sup> turns loosely upon the shaft O. The shaft O is the power-shaft of the machine and has keyed to its outer end the driving-pulley I and to its inner end the beveled pinion G. Between the pinion G and the standard E' is located a splined sliding clutch member H, with which engages a clutch-yoke *l*, provided with a hand-lever L, pivotally mounted on an arm *l'*, projecting from the standard E'.

The pinion G engages with a toothed annu-

lar gear F, having an external horizontal flange N', which is supported by and turns upon segmental flanges N, formed on the limbs of the yoke D, the gear F rotating about the axial center of the tank and mixing-shaft.

The tank is provided with diametrically-aligned arms *a a*, slotted at their ends to receive studs *a<sup>2</sup> a<sup>2</sup>* on the upper edge of the annulus F, so that the tank will revolve with the latter, rotary motion of the same being produced through the medium of the shaft O, clutch H, and pinion G.

The yoke-limb D' is provided at its lower end below the shaft P with a plate K, having a segmental slot *k'*, through which latter passes a threaded pin *k<sup>2</sup>*, projecting from the standard E'. A nut J, having an operating-handle *j'*, is screwed onto the pin *k<sup>2</sup>*, and by tightening up the nut the yoke is secured in any position to which it may be moved upon the shafts O P. When the yoke is thus secured in an upright position, the tank will be constantly rotated in a vertical position; but upon releasing the nut the thrust of the gears G F will overcome the weight of the tank-yoke and attached parts, and these will be tilted, while at the same time the tank is kept rotating, the tilting being arrested as soon as the end of the segmental slot *k'* comes in contact with the pin *k<sup>2</sup>*.

The center of gravity of the parts A, B, C, D, and F is near the bottom of the tank, just sufficiently low to hold these parts in a vertical position when the clutch H is disengaged from the gear G, but not sufficient when the clutch engages with the gear and the nut *j* is loosened to prevent the parts from being tilted. The clutch serves as a means for disengaging the gears from the power-shaft at any time that it is desired to arrest the rotation of the tank without stopping the power.

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

1. In a mixing-machine, the combination with the supporting-frame, of a rotatable mixing-tank having its axes vertical, a driving-shaft and means for rotating the tank around an axial center and tilting it through the rotation of the shaft and while the tank is rotating.

2. In a mixing-machine, the combination of the supporting-frame, the mixing-tank and power-shaft, of means including said power-shaft for imparting to the tank a ro-

tary axial motion and automatically tilting it while it is rotating and of means for adjusting and maintaining it in different positions during such motion.

5 3. In a mixing-machine, the combination with an axially-rotatable mixing-tank, of means for simultaneously rotating and automatically tilting the same.

10 4. In a mixing-machine, the combination with a horizontal power-shaft and a toothed pinion carried thereon, of a yoke mounted

and adapted to turn or tilt on the axis of said shaft means for securing the yoke in different positions, a mixing-tank and a gear attached to and surrounding the latter and engaging 15 said pinion.

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

ROBERT HOHNBACH.

Witnesses:

JAMES WALTER MARTIN,  
STEPHEN A. GOODSPEED.