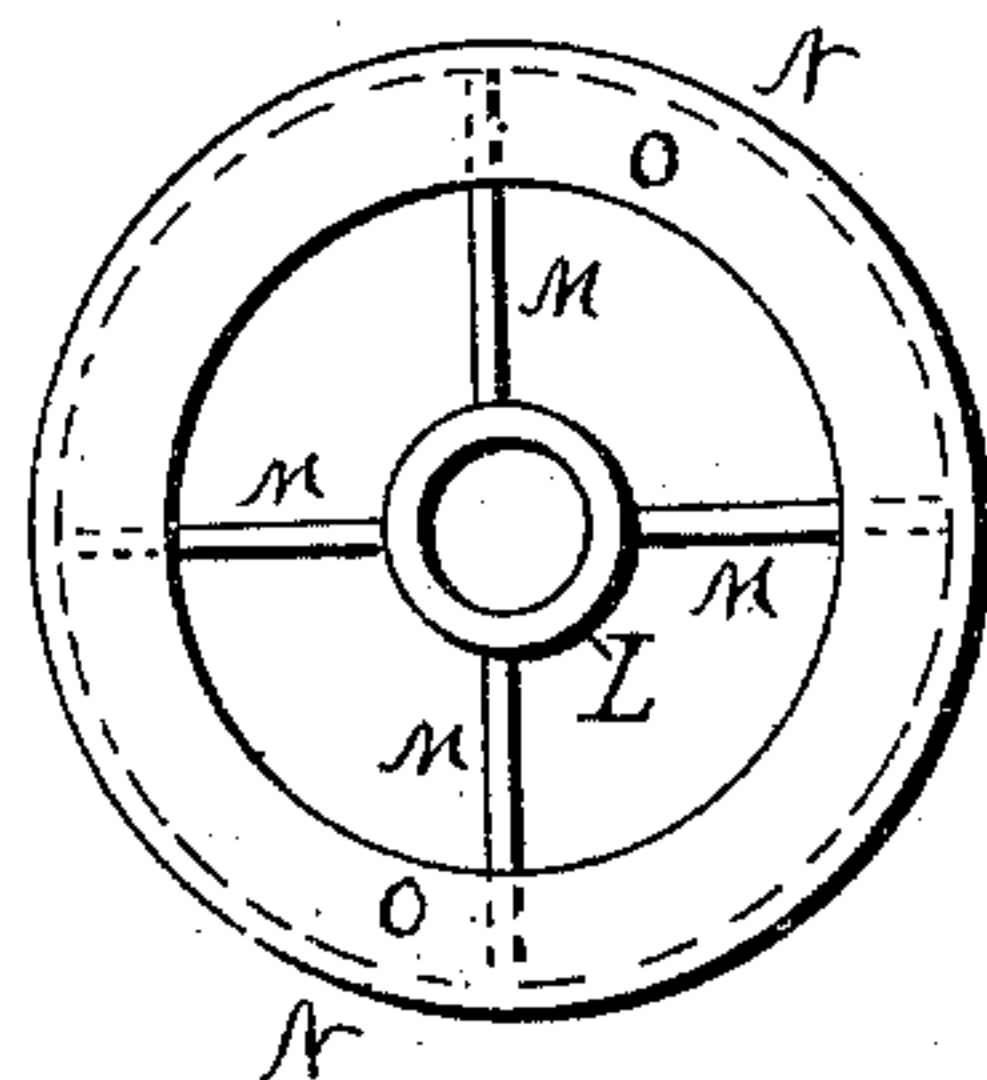
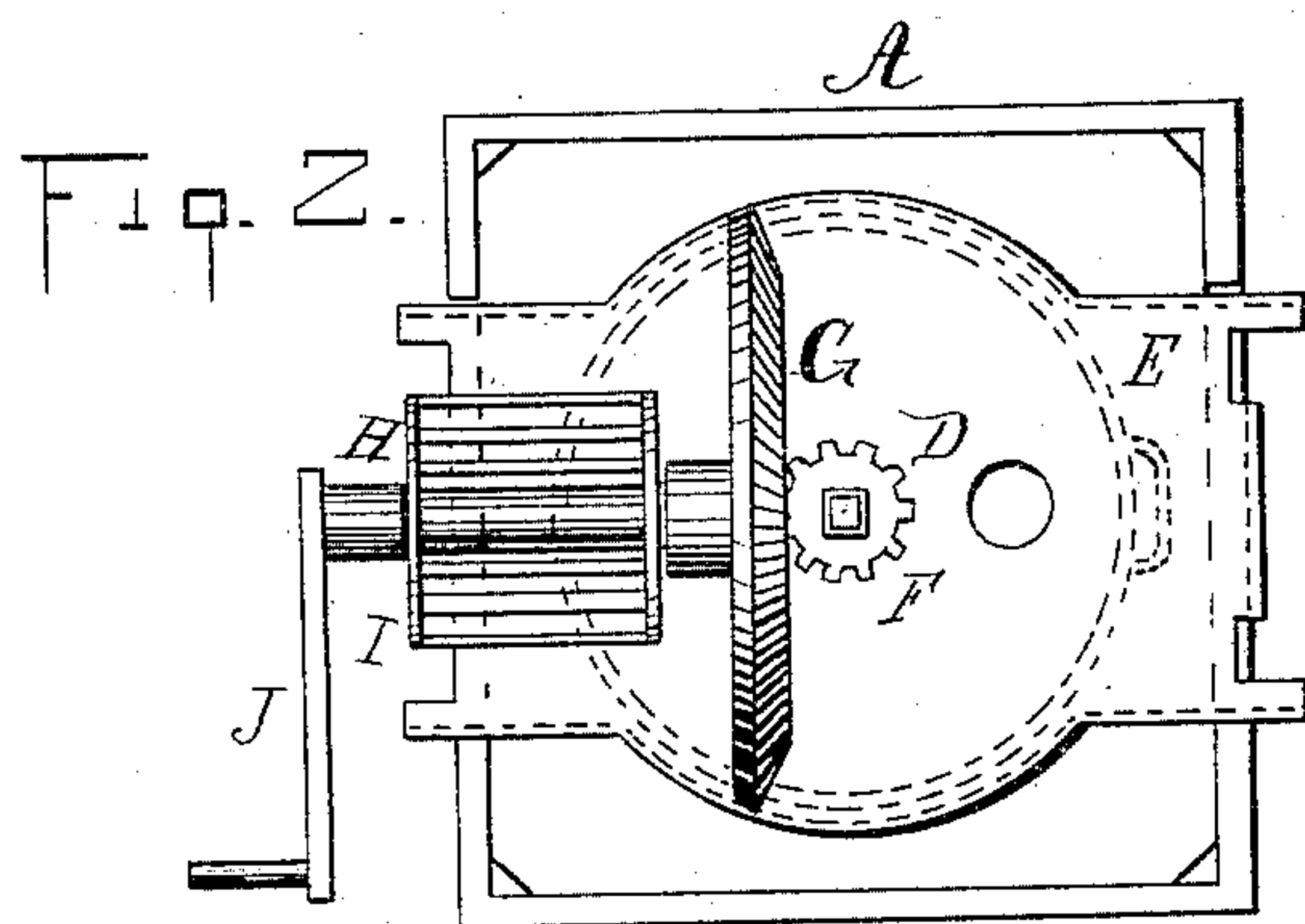
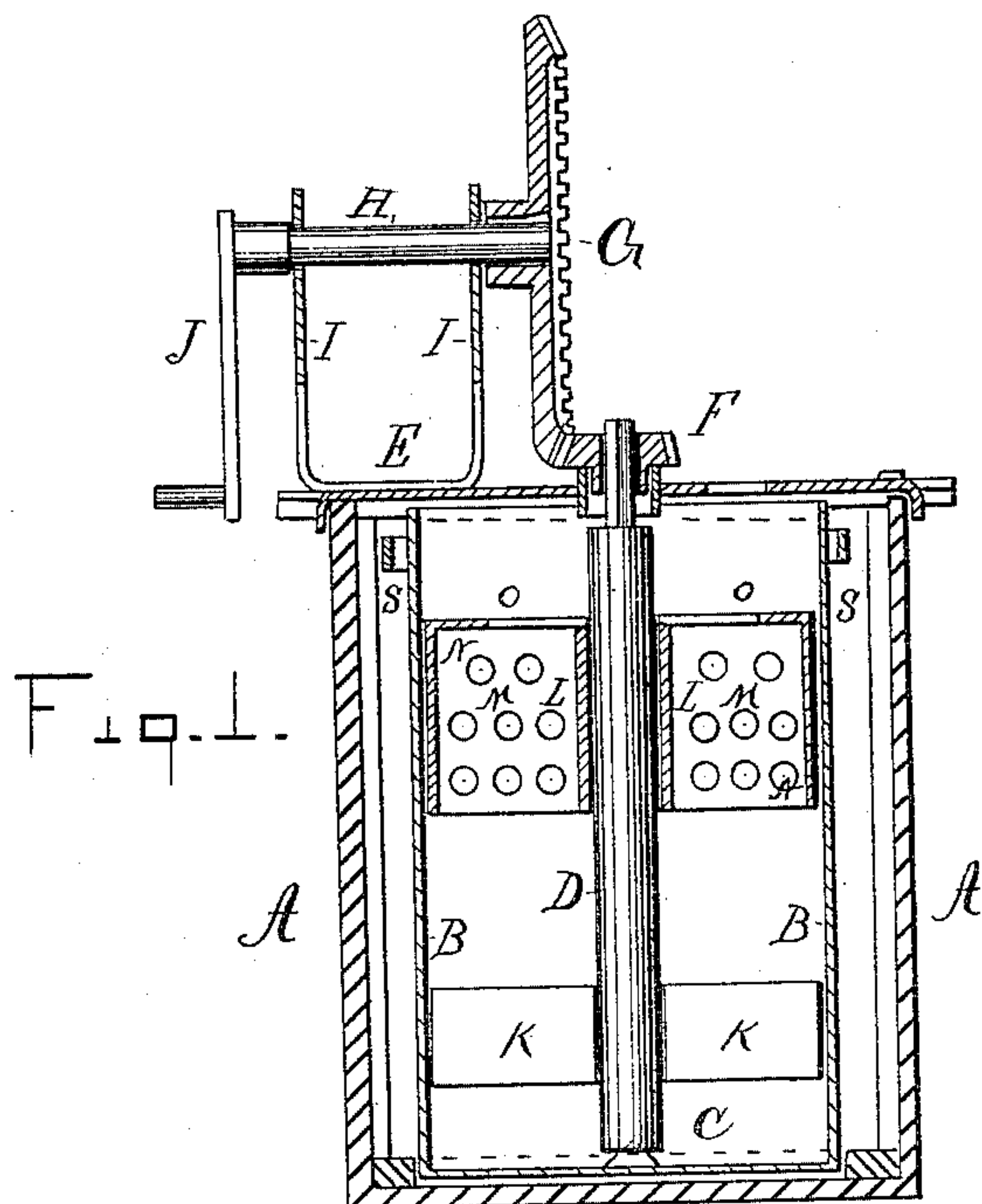


(No Model.)

J. H. HOLMES.
Churn.

No. 232,717.

Patented Sept. 28, 1880.



WITNESSES:
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John C. Kemm

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UNITED STATES PATENT OFFICE.

JOHN H. HOLMES, OF CHARLESTON, KANSAS.

CHURN.

SPECIFICATION forming part of Letters Patent No. 232,717, dated September 28, 1880.

Application filed May 26, 1880 (No model.)

To all whom it may concern:

Be it known that I, JOHN H. HOLMES, of Charleston, in the county of Greenwood and State of Kansas, have invented a new and useful Improvement in Churns, of which the following is a specification.

Figure 1 is a vertical section of my improved machine. Fig. 2 is a plan view of the same. Fig. 3 is a plan view of the breaker employed in the churn.

My invention relates to an improved rotary dasher or breaker for employment in vertical churns.

A represents a box or case, which is made water-tight and of such a size as to receive the can B within it and leave a space between its walls and the said can. To the center of the bottom of the can B is attached a pivot, C, upon which revolves the lower end of the shaft D. The upper end of the shaft D passes through a hole in the center of the cover E, and is squared to fit into the square hole through the hub of the small bevel-gear wheel F, so that the shaft D may be revolved by and with the gear-wheel F. The teeth of the bevel-gear wheel F mesh into the teeth of the larger bevel-gear wheel G, attached to the end of the shaft H, which revolves in bearings in standards I, attached to the cover E. To the outer end of the shaft H is attached the crank J, by means of which the machine is operated.

The middle part of the cover E is made of such a size as to cover the top of the can B, and its end parts project to rest in notches in the upper edges of the box A, to prevent the said cover from having a lateral movement. The middle part of the ends of the cover E have flanges formed upon or attached to them, to rest against the sides of the box A, to prevent the cover E from having a longitudinal movement.

To the lower part of the shaft D are attached two or more wings, beaters, or paddles, K, to serve as a dasher to agitate the milk.

L is a band which fits loosely upon the shaft D, and to which are attached the inner ends of four (more or less) radial plates, M. The plates M are perforated with numerous small holes, and to the outer ends of the said plates is attached a band, N, of such a size as to fit snugly against the inner surface of the can B, so that the said band will remain in any position into which it may be adjusted. Upon the upper edge of the band N is formed a ring-flange, O, as shown in Figs. 1 and 3.

In using the machine the device L M N O is adjusted at the top of the milk and the shaft D is revolved by turning the crank J, so that the beaters K will throw the milk into currents, which currents strike against the radial perforated plates M and the flange O and are broken up, so that the milk will be thrown into violent agitation, bringing the butter in a very short time.

The annular space between the can B and box A serves to receive hot or cold water, as required, for tempering the cream to be churned.

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

The combination, with the shaft D, having beaters K, the can B, and suitable driving mechanism, of the breaker L M N O, substantially as herein shown and described, whereby the currents formed in the milk by the beaters K are broken up and the milk thrown into violent agitation, as set forth.

JOHN HODGEN HOLMES.

Witnesses:

G. B. MCCLERAN,
M. L. EDWARDS.