

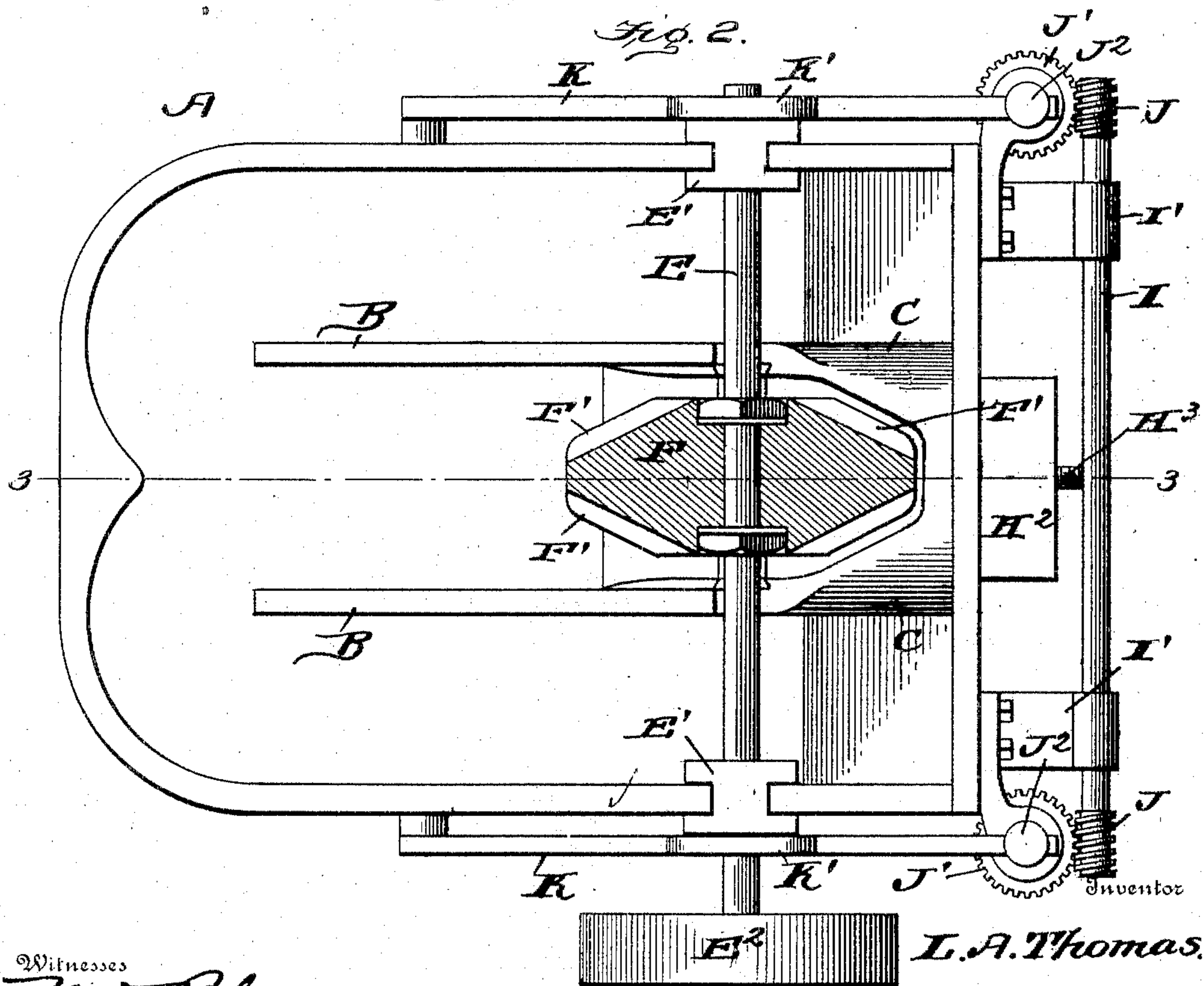
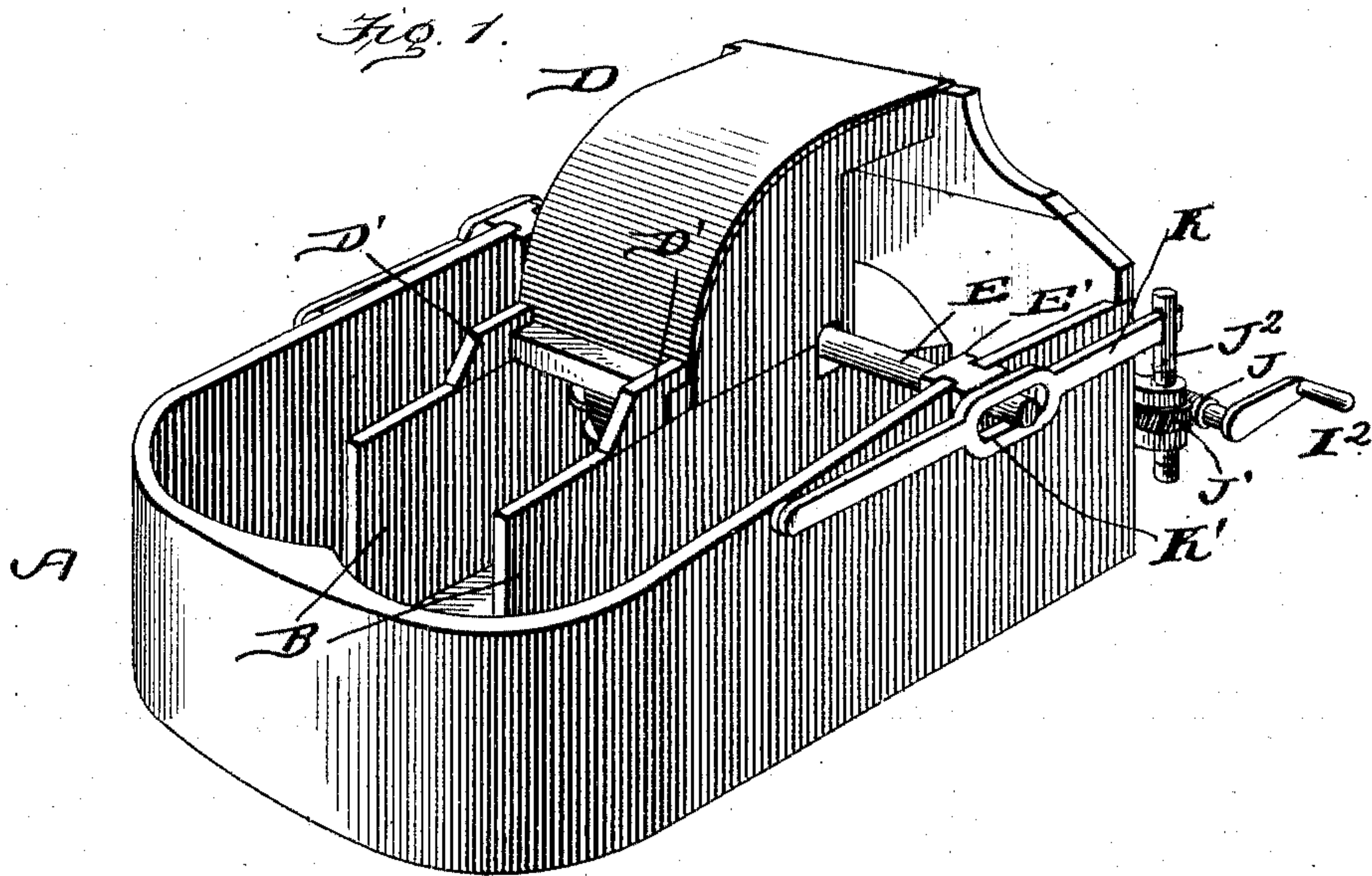
No. 775,873.

PATENTED NOV. 22, 1904.

L. A. THOMAS.
PULP BEATING MACHINE.
APPLICATION FILED MAR. 30, 1904.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses
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Edgar B. M. Bath

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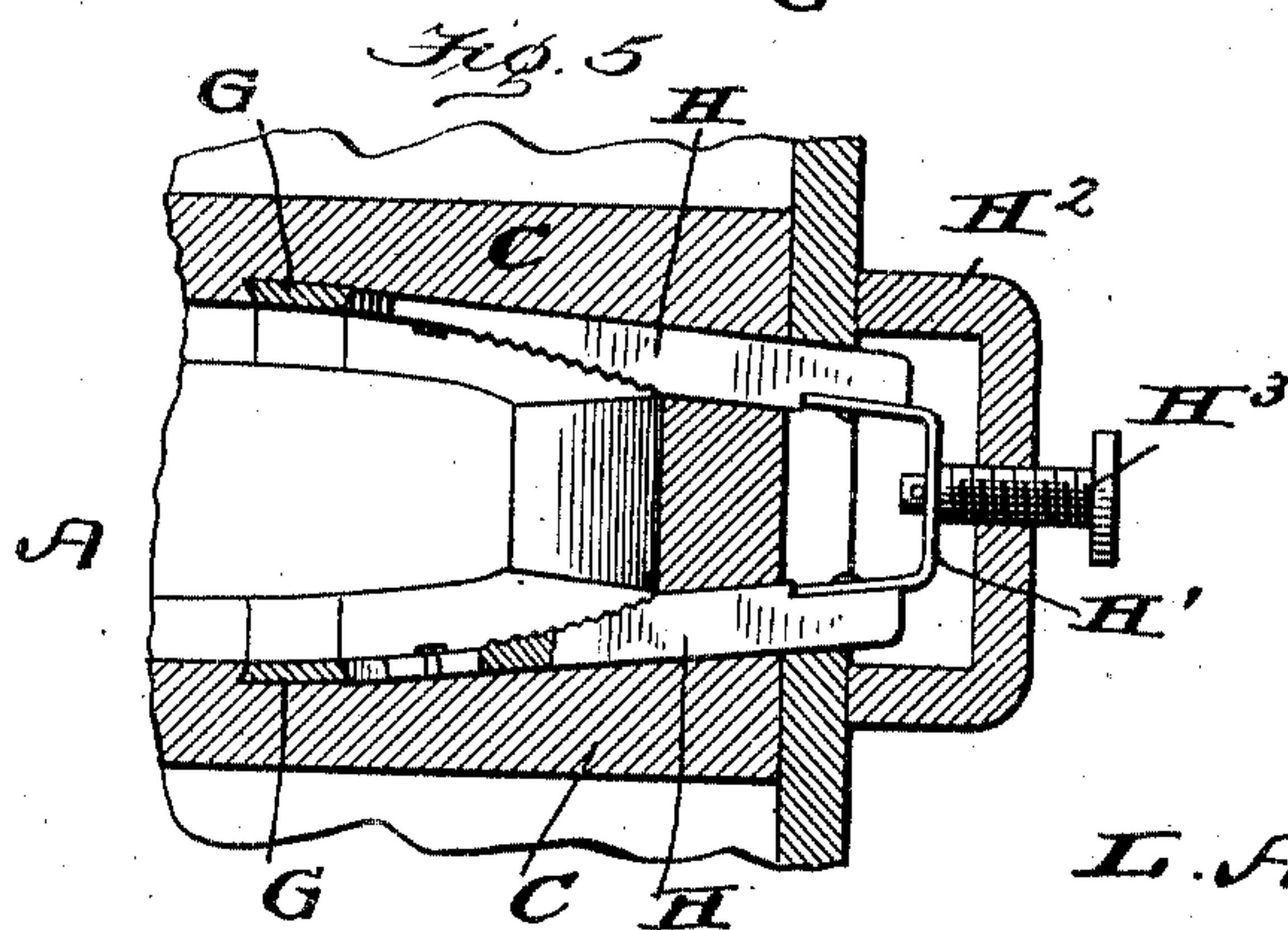
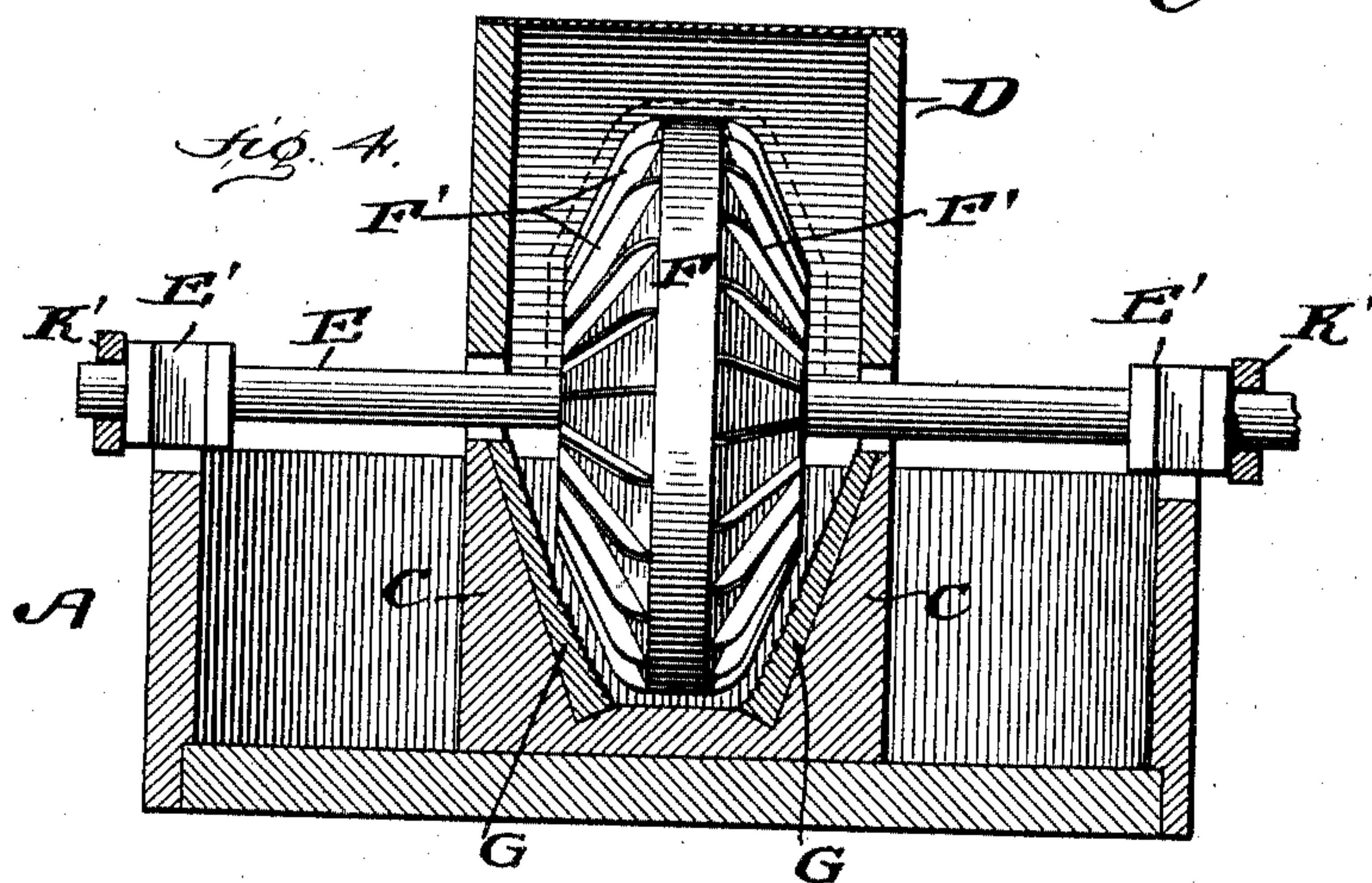
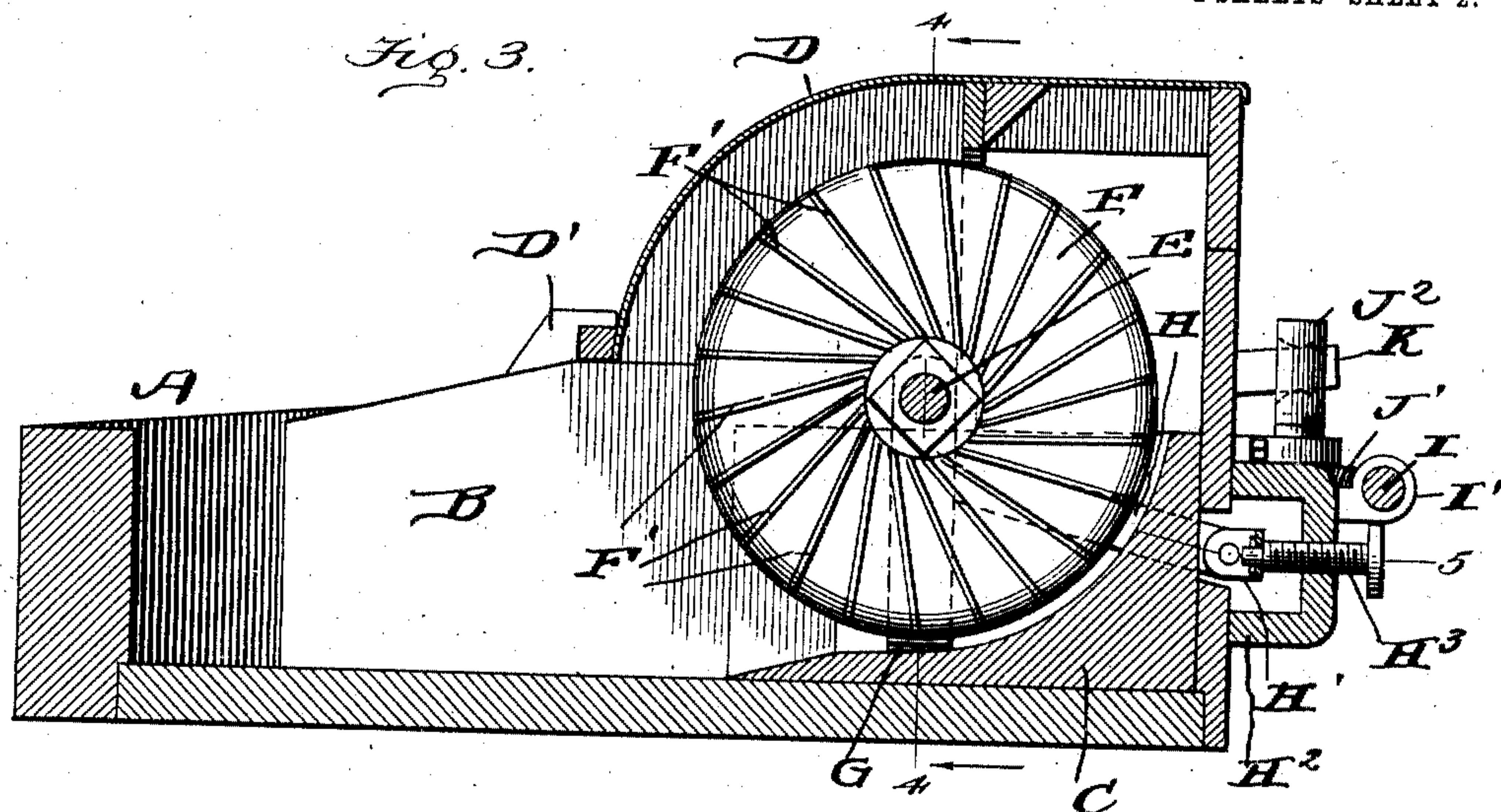
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2 SHEETS—SHEET 2.



Inventor

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Witnesses

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UNITED STATES PATENT OFFICE.

LARKIN A. THOMAS, OF CONSTITUTION, GEORGIA, ASSIGNOR OF ONE-HALF TO ISAAC LIEBMAN AND LEWIS TROUNSTINE, OF ATLANTA, GEORGIA.

PULP-BEATING MACHINE.

SPECIFICATION forming part of Letters Patent No. 775,873, dated November 22, 1904.

Application filed March 30, 1904. Serial No. 200,763. (No model.)

To all whom it may concern:

Be it known that I, LARKIN A. THOMAS, a citizen of the United States, residing at Constitution, in the county of Dekalb and State of Georgia, have invented a new and useful Improvement in Pulp-Beating Machines, of which the following is a specification.

This invention relates to a device for beating paper-stock; and the object of the invention is a beating-machine adapted to work paper-stock of any kind and of any lengths from the long rags from a rag-cutter to the shortest lengths of a chemical fiber stock and to work same rapidly, so as to produce a pulp of uniform consistency.

A further object of my invention is to provide means for adjusting the beating-disk and bed-plates to adapt them for use with stocks of varying kinds and lengths.

My invention also consists in the novel features of construction and combination of parts hereinafter described, particularly pointed out in the claims, and shown in the accompanying drawings, in which—

Figure 1 is a perspective view of my machine. Fig. 2 is a plan view of the machine, the cap being removed and the beating-disk being shown in section. Fig. 3 is a vertical section on the line 3 3 of Fig. 2. Fig. 4 is a vertical transverse section on the line 4 4 of Fig. 3. Fig. 5 is a detail horizontal section showing the construction of the bed-plates and means of moving the same.

In the drawings, A represents a suitable vat of any desired size, and in this vat and parallel to the sides of the vat are the mid-feather walls B. Between the rear end of the mid-feather walls and the rear end of the vat A are arranged the backfall-blocks C, and resting upon the mid-feather walls B and arching rearwardly over the said walls and over the backfall-block is the cap or hood D, which cap or hood D is detachably secured to the mid-feather walls B by the buttons D'. Adjacent the backfall-blocks C the cap D is cut out adjacent the lower edges of its side members, and through these cut-out portions passes a shaft E, journaled in blocks E', which blocks are flanged and fitted in cut-out portions of

the sides of the vat A, the flanges serving as guides and the blocks being adapted for vertical movement with reference to the vat A. A suitable drive-wheel E² is arranged at one end of the shaft E, over which a suitable belt- ing may be run. On this shaft is rigidly secured the beating-disk F, which is arranged on the shaft E between the mid-feather walls B, between the backfall-blocks C, and beneath the cap or hood D. On this disk are arranged a plurality of blades F', each face of the disk being provided with such blades. These blades F' are arranged at an angle to the radial lines of the disk, and the opposite faces of the disk are inclined toward each other as they approach the periphery of the disk. The blades F' on one face of the disk are offset with reference to those of the opposite face.

The inner walls of the backfall-blocks C are downwardly-converging, and supported by these walls are oppositely-arranged bed-plates G. These bed-plates are stationary; but as the shaft E is adapted for vertical movement the disk may be moved toward and away from the bed-plates G. Arranged on each side of the disk F and extending to the rear of same are two wedge-shaped bed-plates H, connected at their rear end by a yoke H' and movable. This yoke H' works through a suitable opening in the rear end of the vat A and between the backfalls C and extends into a box H², carried by the rear end wall of the vat. A suitable screw H³ works through the rear wall of the box H² and bears on the yoke H', a reduced end of the screw fitting in an aperture of the yoke-bow and being secured in place by a pin. The bed-plates H are pivotally secured to the side members of the yoke H', and inward or outward movement of the screw H³ moves the yoke and bed-plates H toward or away from the disk, thus regulating the degree of fineness to which the stock is ground.

To vertically adjust the shaft E, I provide a shaft I, journaled in bearings I', carried by the rear wall of the vat A and arranged transverse to the vat. Adjacent each end of the shaft there is arranged upon it worm-gears J, meshing with horizontally-arranged pinions

J', which pinions have threaded bores and rotate upon threaded rods J², arranged vertically, and which are raised when the pinions J are rotated in one direction and lowered when the pinions are rotated in the opposite direction. Bars K are pivoted at their forward ends to the sides of the vat A and at their rear ends extend through slots formed in the upper portions of the rods J². The bars K have each a link or slotted portion K', through which the shaft E passes. Movement of the rods J² is imparted to the bars K and thence to the shaft E, raising or lowering the shaft and its journal-blocks E', as may be desired. A suitable handle I² is provided for the purpose of rotating the shaft I.

The operation of the beater will be readily understood by those skilled in the art to which it relates.

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

1. In combination with the cutting-disk and the backfall-blocks, bed-plates arranged on each side of the disk and adapted to move between the disk and the backfall-blocks, a yoke connecting the rear ends of the bed-plates, and a screw adapted to move the yoke forward and rearward.

2. The combination with the mid-feather walls and the backfall-blocks, of a vertically-movable shaft arranged transversely to same,

a disk having blades on its opposite faces and arranged on the shaft between the mid-feather walls and backfall-blocks, stationary bed-plates arranged adjacent each side of the disk and below the shaft, movable bed-plates arranged on opposite sides of the disk and extending to the rear of the same, a yoke connecting the rear ends of the movable bed-plates, means for moving the yoke toward or away from the disk, and means for vertically moving the shaft and disk with reference to the stationary bed-plates.

3. In a device of the kind described, a vat, mid-feather walls arranged in the vat, backfall-blocks arranged between the mid-feather walls and the rear end wall of the vat, a detachable hood covering the backfall-blocks and mid-feather walls and cut away on opposite sides adjacent the lower edges of its side walls, vertically-movable journal-blocks carried by the side walls of the vat, a shaft journaled in said blocks and passing through the cut-away portions of the hood, a cutting-disk secured on said shaft and adapted to rotate within the hood, bed-plates adapted to coact with said disk, and means for raising and lowering the journal-blocks, as and for the purpose set forth.

LARKIN A. THOMAS.

Witnesses:

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