

(No Model.)

2 Sheets—Sheet 1.

F. P. BEISEL.
WASHING MACHINE.

No. 379,357.

Patented Mar. 13, 1888.

Fig. 1.

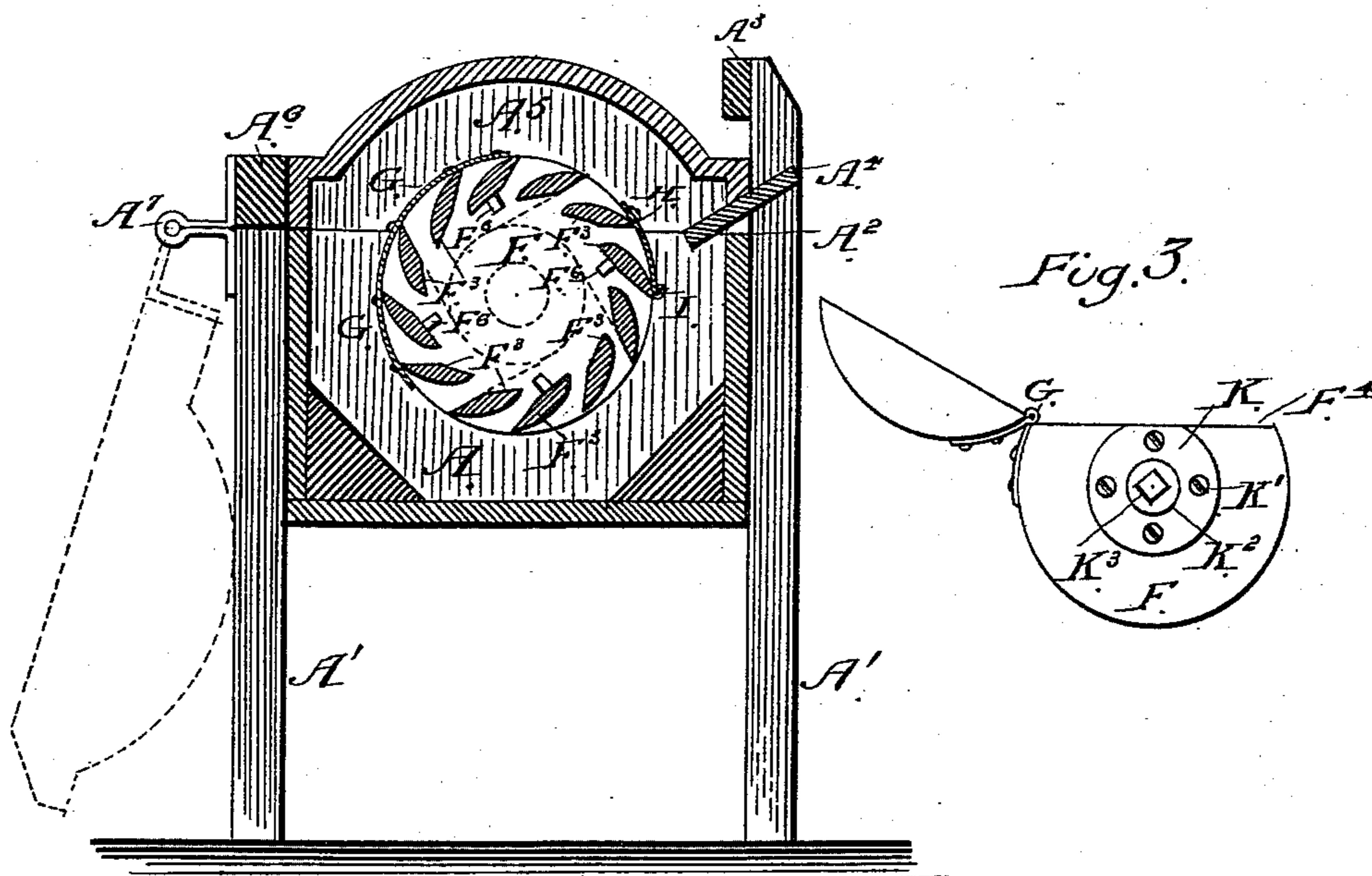
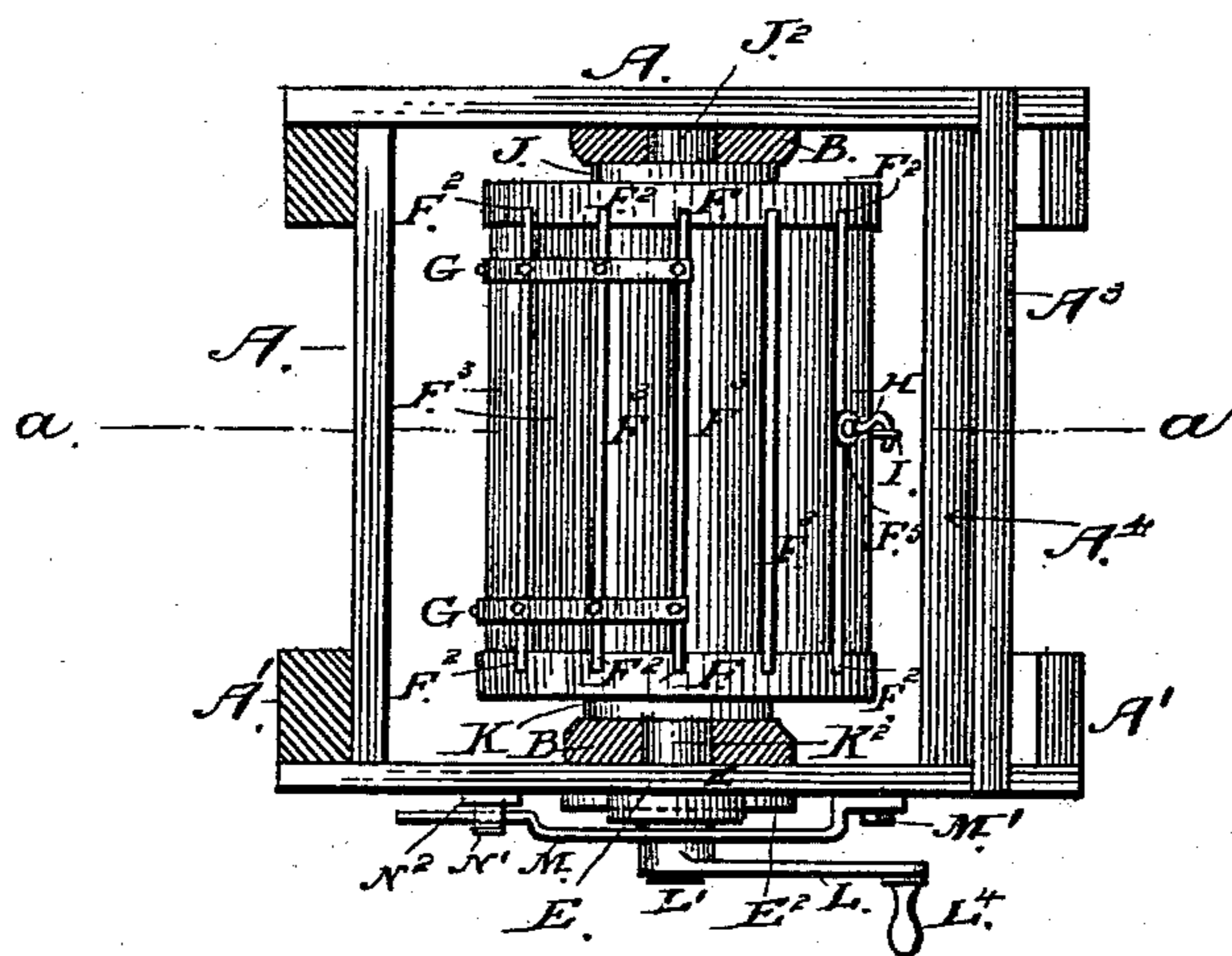


Fig. 2.



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Fig. 4.

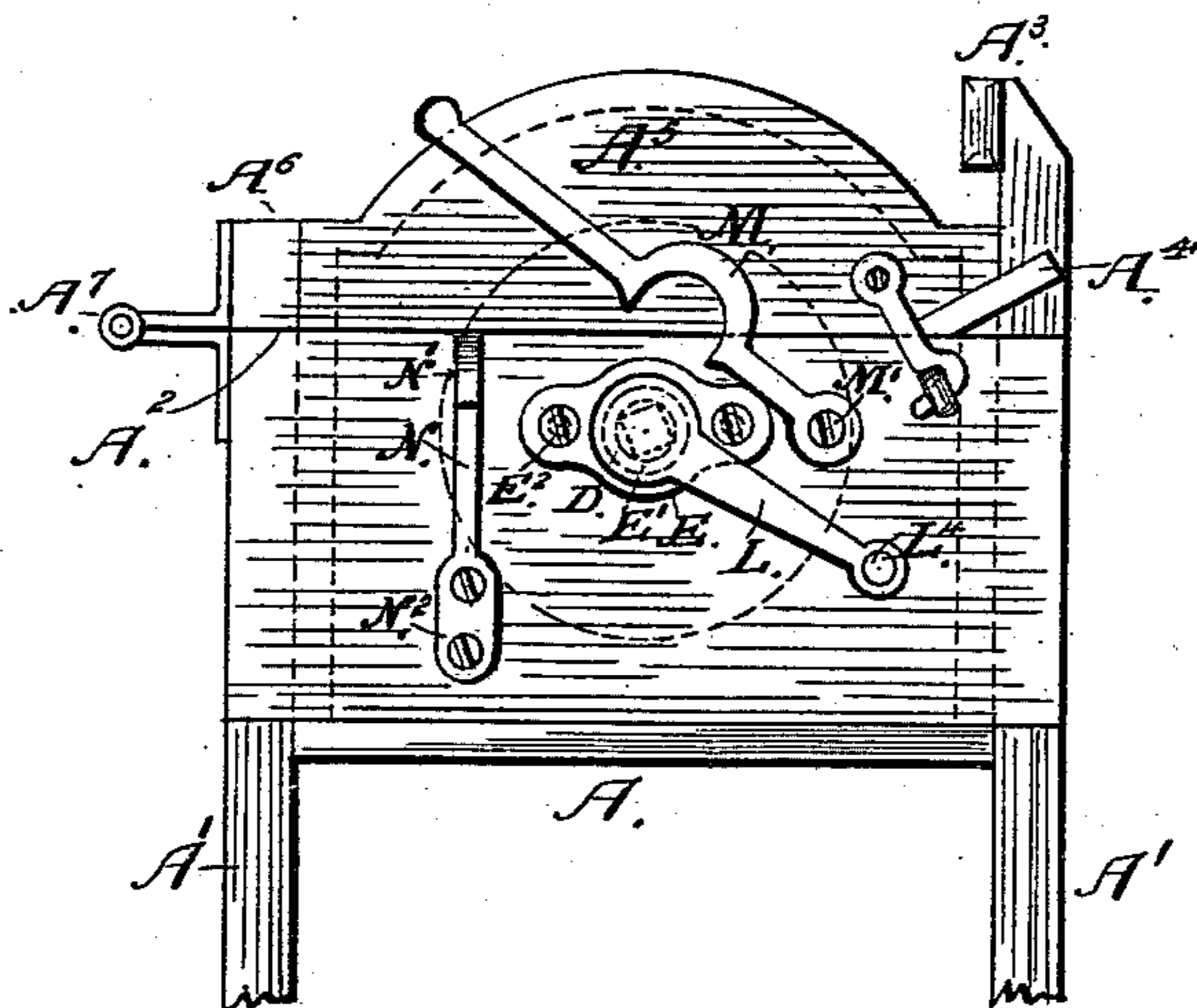


Fig. 5.

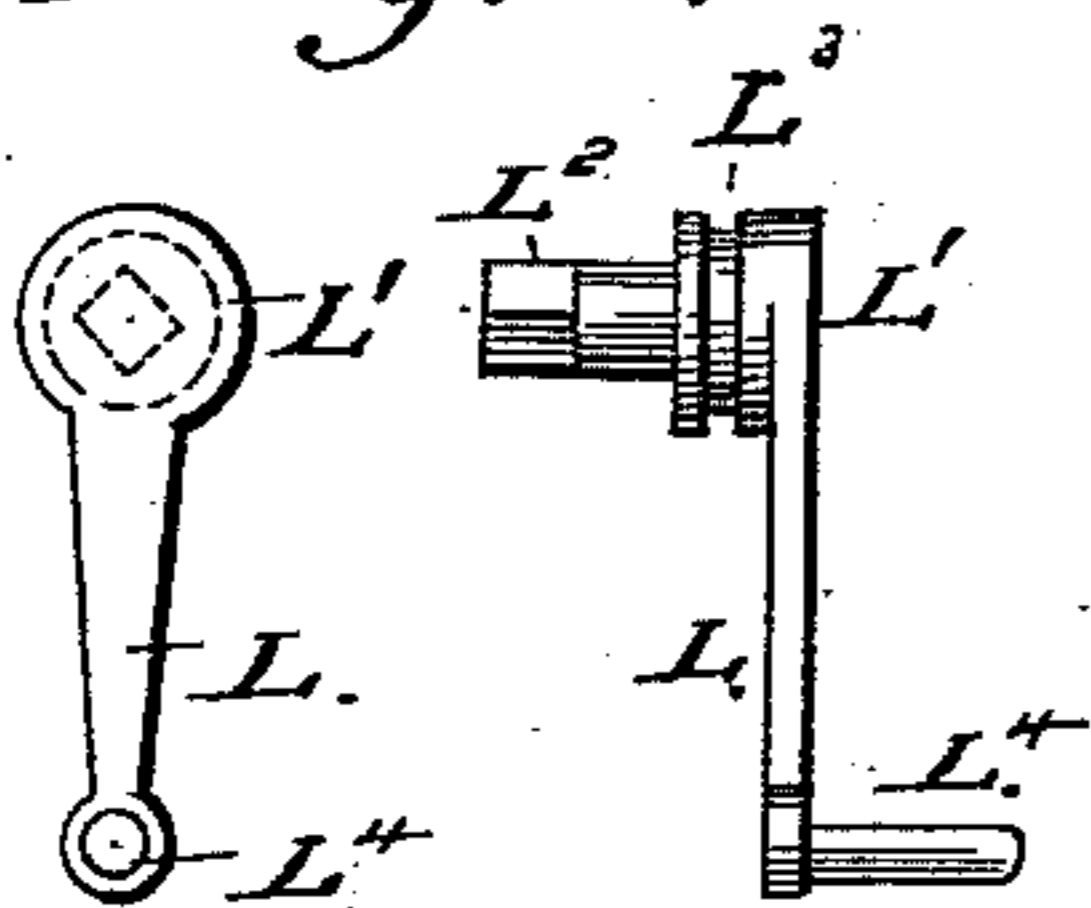


Fig. 6.

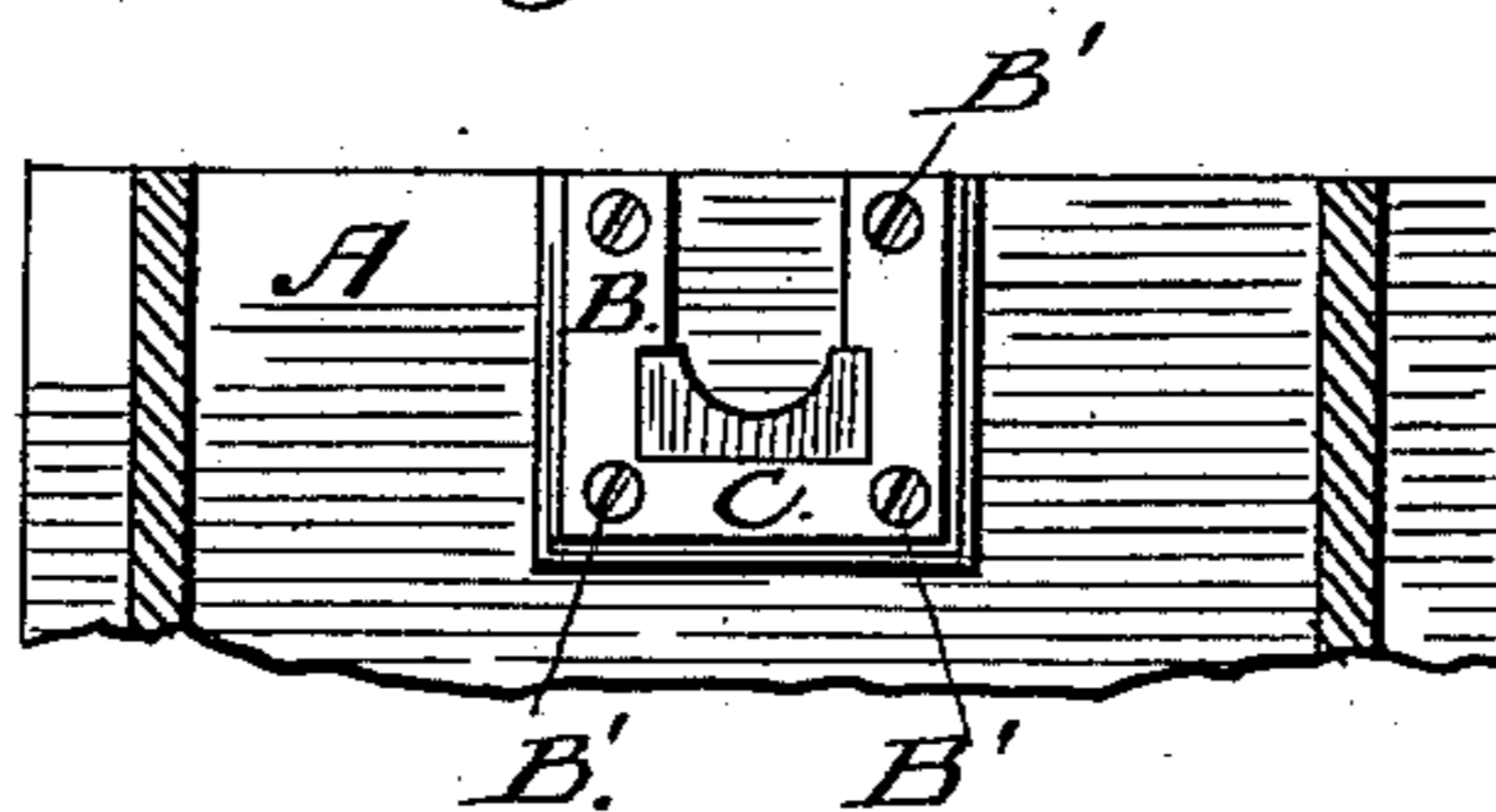


Fig. 7. Fig. 8.

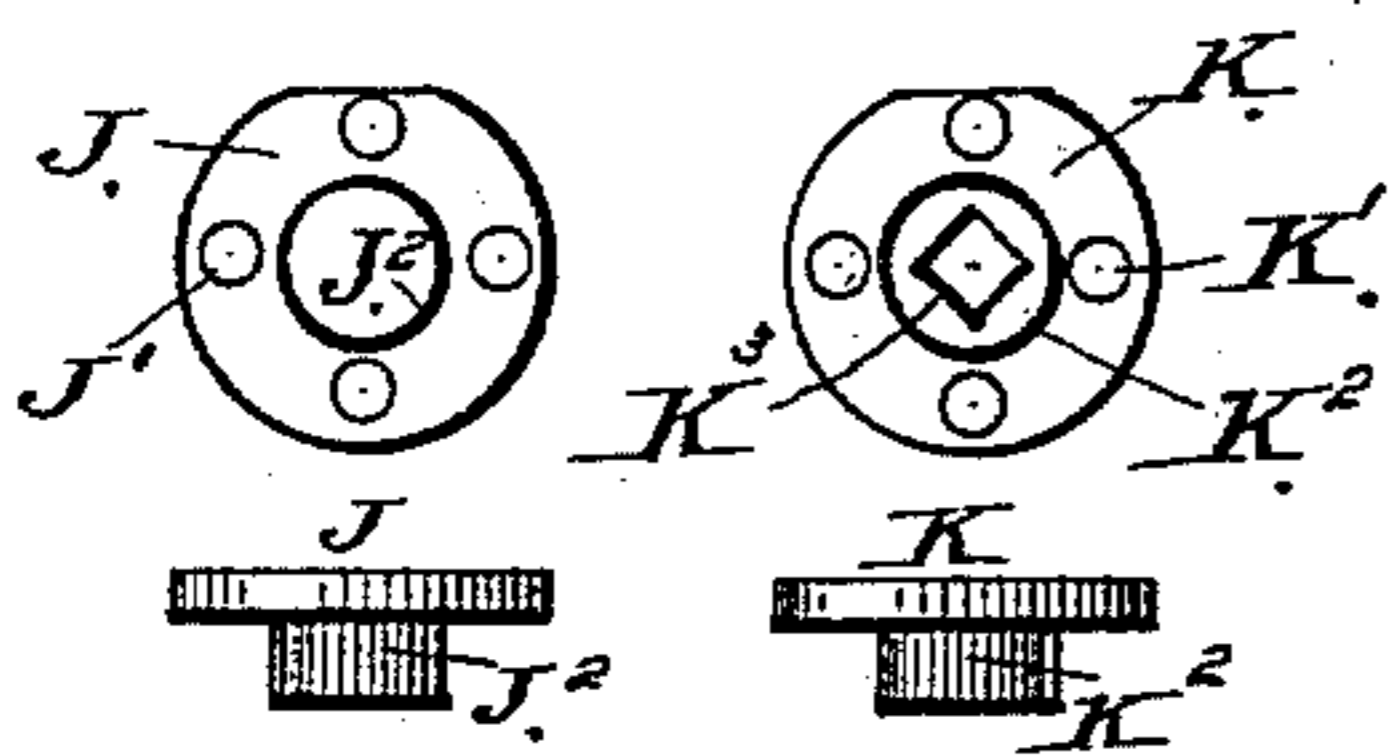
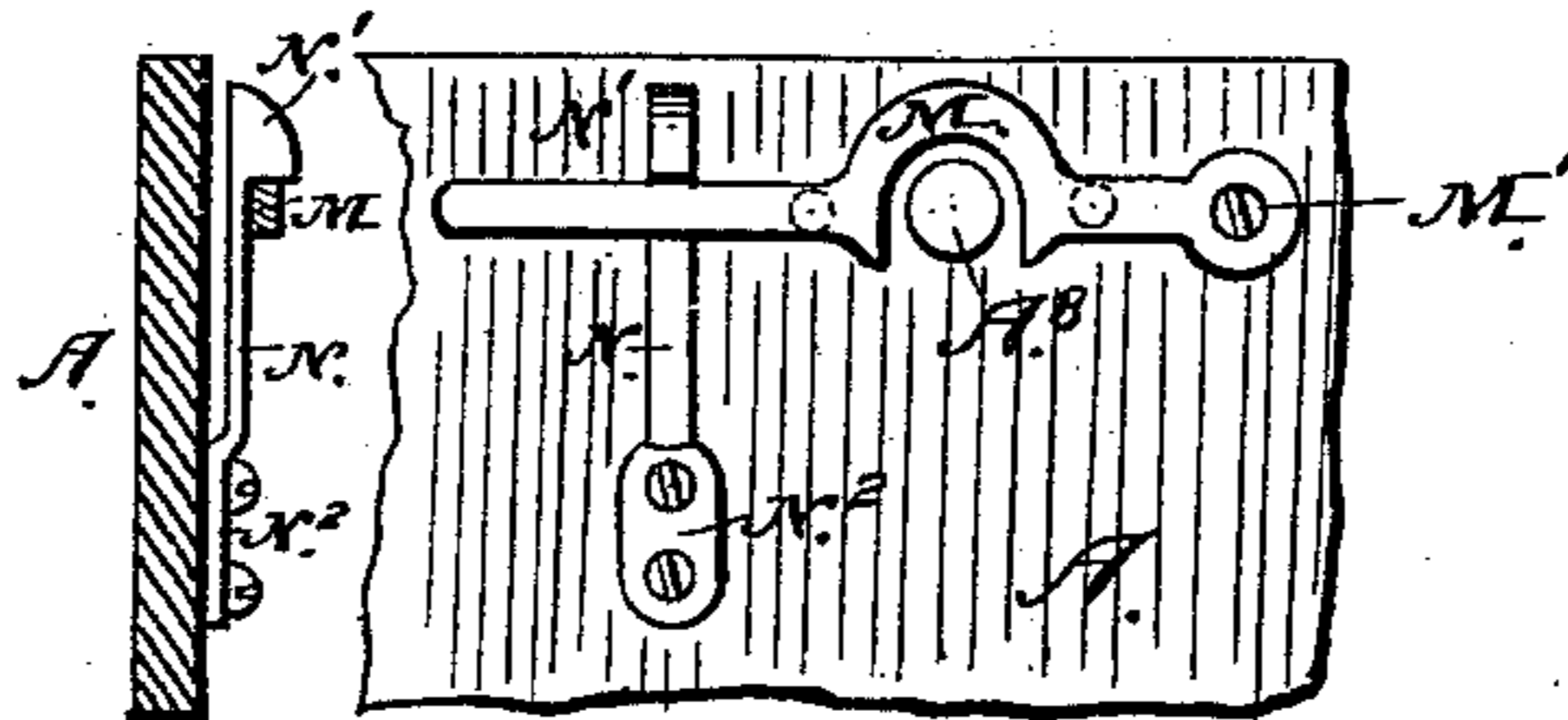


Fig. 9.



Witnesses.

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UNITED STATES PATENT OFFICE.

FRANKLIN P. BEISEL, OF POTTSTOWN, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO GEORGE KNAPP AND CHARLES SAYBOLD, BOTH OF SAME PLACE.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 379,357, dated March 13, 1888.

Application filed August 26, 1886. Serial No. 211,893. (No model.)

To all whom it may concern:

Be it known that I, FRANKLIN P. BEISEL, a citizen of the United States, residing at Pottstown, county of Montgomery, State of Pennsylvania, have invented a new and useful Improvement in Washing-Machines, of which the following is a specification.

This improvement is related to the class of rotary cylindrical washing-machines in which the clothing to be washed is placed within the cylinder, and the same revolved in the suds contained in a suitable tub or reservoir in which the cylinder is removably secured.

The object of the improvement is to secure a more effective washer by a new arrangement of the cylinder-slats, whereby the water is more effectually brought in contact with the clothing, and while easily operated to make its release from and suspension within the tub or reservoir both rapid and secure.

Referring to the drawings herewith, in which corresponding letters of reference indicate similar parts, the nature of my improvements will be shown.

Figure 1 represents, in vertical section on the line *a a* of Fig. 2, the construction and arrangement of the complete washer; Fig. 2, a plan of the same with the top portion or cap removed, showing crank and cylinder locked in place; Fig. 3, an end view of the washing-cylinder detached from the machine and thrown open to receive the clothing or to have the same removed therefrom; Fig. 4, a partial end elevation of the tub of the machine, showing the top closed and locked, the crank in place with the locking-gab released therefrom, also the barbed spring to retain the gab in lock with the crank while the cylinder is being revolved; Fig. 5, a detached front and side elevation of the crank, showing the detail construction of the same; Fig. 6, an elevation of a portion of the tub, showing more particularly the bifurcated guide and seat for the rear journal of the cylinder; Fig. 7, a front elevation and plan of the cylinder rear gudgeon-plate; Fig. 8, a front elevation and plan of the cylinder front gudgeon-plate, showing the perforation to receive the stem end of the crank whereby the cylinder is revolved; Fig. 9, a partial end elevation of the crank side of the tub, showing the perforation therein for the admis-

sion of the crank-stem, with the locking-gab in place, retained by the barbed spring secured to the face of the tub.

In the drawings, A represents the reservoir or tub mounted upon legs A', extended above the parting A², to form a support to the cross-bar A³ for the attachment of the wringer, a drip-board, A⁴, being provided to carry back to the tub the water squeezed from the clothes by the wringer.

A⁵ represents the cap of the reservoir, A⁶ a re-enforce hinge-piece, A⁷ door-hinges, and A⁸ aperture for the admission of the crank-stem, all of which differ in no great degree from the modern rotary washing-machine.

My improvements consist in providing within the tub at its opposite sides bifurcated (preferably) hard-wood pad-guides B, having at the base of the bifurcation metal seats C for journal-bearings suitably secured therein, the pads secured in place by screws B', the side of the tub upon which the crank will project being perforated at A⁸ coincident with the center of said bearing C, and provided upon the outer face of the tub with an elastic packing-washer, D, held in place upon the tub by a dished cap, E, adapted to receive the stem of the crank at E' and secured to the tub by screws E².

The washing-cylinder is provided with end heads, F, having upon their inner peripheral edges sunken recesses F², within which are inserted and suitably secured lozenge-shaped slats F³, of the cross-sectional form shown in Fig. 1, or their equivalent, their operative faces being a tangent to a circle struck upon the heads of a diameter equal to about one-half of the same, as shown in Fig. 1. The cylinder has a segment of about one-fourth of its diameter, separated from the balance by a line, F⁴, said separated portion being hinged at one edge by strap-hinges G, the opposite edge being secured when closed by a hook, H, and staple I, or their equivalent, the slats F³ at the point of attachment for their hinges, hook, and staple being formed with seats F⁵ to receive the same. Studs or pins F⁶ in one or more series of rows project within the cylinder, are secured in the slats F³, and serve to carry the clothes up out of the water, which, on arriving vertically above the same, again drop therein, thus hastening the cleansing operation. The

slats F^3 are so arranged that the tangent face has its extreme outer point on a line with the foot of the preceding slat (relative to the direction of rotation, as shown by the arrows) and projecting upon the interior of the cylinder beyond said tangent face, thus forming a corrugated interior surface for the more thorough agitation of the clothes in process of washing. In revolving, the water is caught and directed in such a manner as to thoroughly permeate the mass of clothing and tend to revolve the clothing within the cylinder in direct opposition to the motion of the same.

At one end of the cylinder a plain gudgeon-plate, J , is secured by screws J' to the same, and has a projected portion, J^2 , adapted to revolve in the bearing C , provided therefor. At the opposite end a similar gudgeon-plate, K , secured thereto by screws K' , has a projected portion, K^2 , adapted to its bearing C , said projected portion having an aperture, K^3 , of a square or polygonal cross-section, adapted to receive the stem end of the crank and to be operated thereby.

The crank L is provided with a head, L' , grooved at L^3 , and having a cylindrical and square or polygonal cross-sectioned stem, L^2 , with a handle, L^4 . A locking-gab, M , is pivoted at M' to the tub A , and is held in a locked position with the groove L^3 of the crank by a spring, N , with a barbed head, N' , secured at N^2 to the tub.

The operation of the device is as follows: The cylinder being dropped within its bearings in the tub and the latter about two-thirds filled with water or suds, the cylinder is opened

by releasing the hook H , and the top is thrown back, as shown in Fig. 3. The clothes, properly soaped, are then placed within the cylinder, the same closed, and secured by the hook H . The crank L is then pushed through the aperture in the plate E , washer D , and in the tub at A^8 , when the squared or polygonal stem L^2 of the crank enters the aperture K^3 in the gudgeon-plate K , which brings the groove L^3 in line with the locking-gab M , which is drawn down past the barb-head N' of the spring N , when the bifurcation M of the gab drops within the crank-grooves L^3 and releasably locks the crank and cylinder in place. The top is then closed, and, revolving the crank a few minutes, the wash contained in the cylinder is cleansed from all dirt. The gum or elastic washer D prevents the water in the tub from weeping out around the crank-stem. A cock will be provided for the emptying of the tub.

Having shown the construction and advantages of my improved washer, I desire to claim as follows:

The combination, with a box or casing and a rotary cylinder having a gudgeon projecting through said box and provided with a rectangular recess, a handle to engage said recess, said handle having a groove, a gab pivoted to the side of the box and engaging the groove, and a spring provided with a barbed head to engage the gab, substantially as shown and described.

FRANKLIN P. BEISEL.

Witnesses:

J. H. BINDER,
L. H. DAVIS.