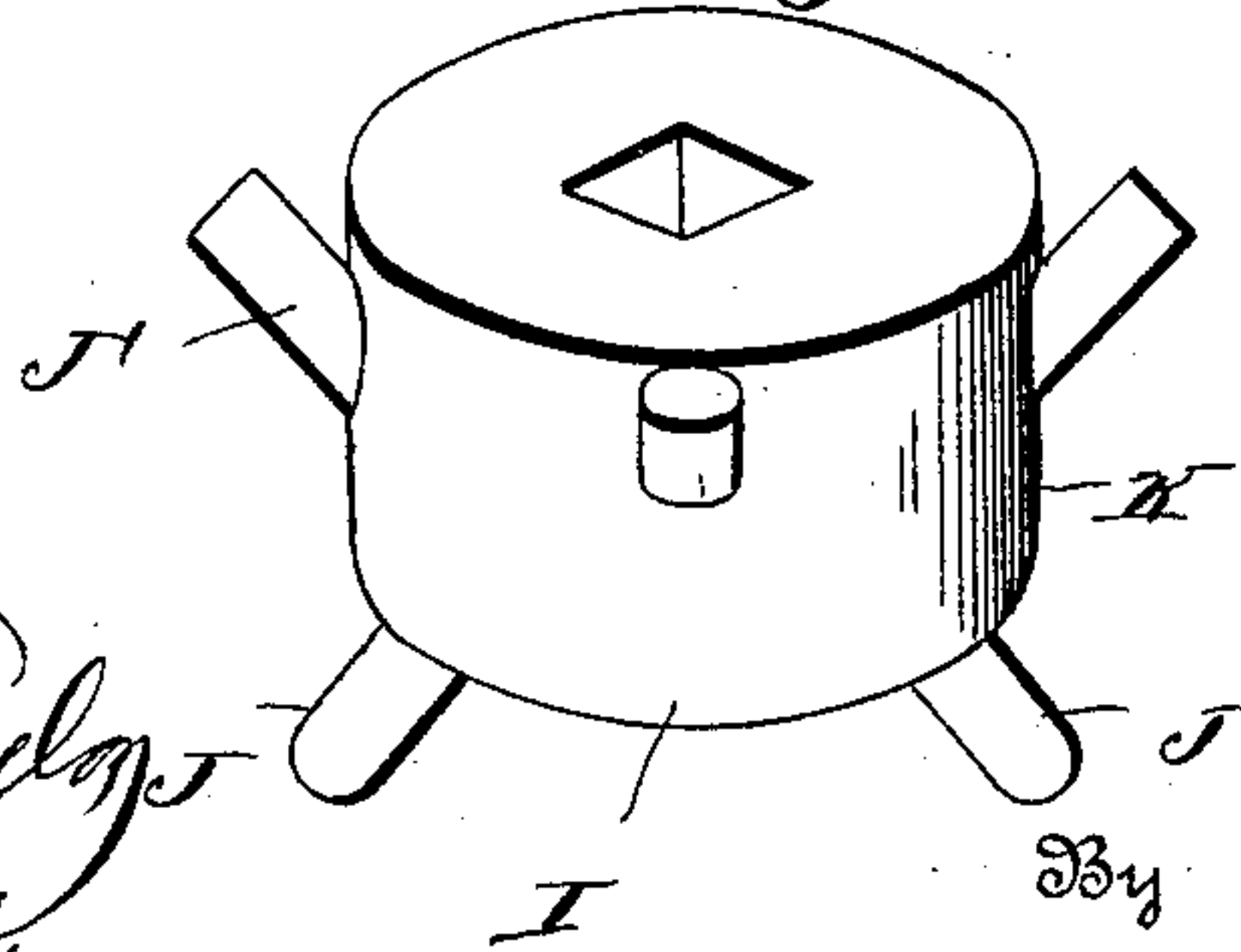
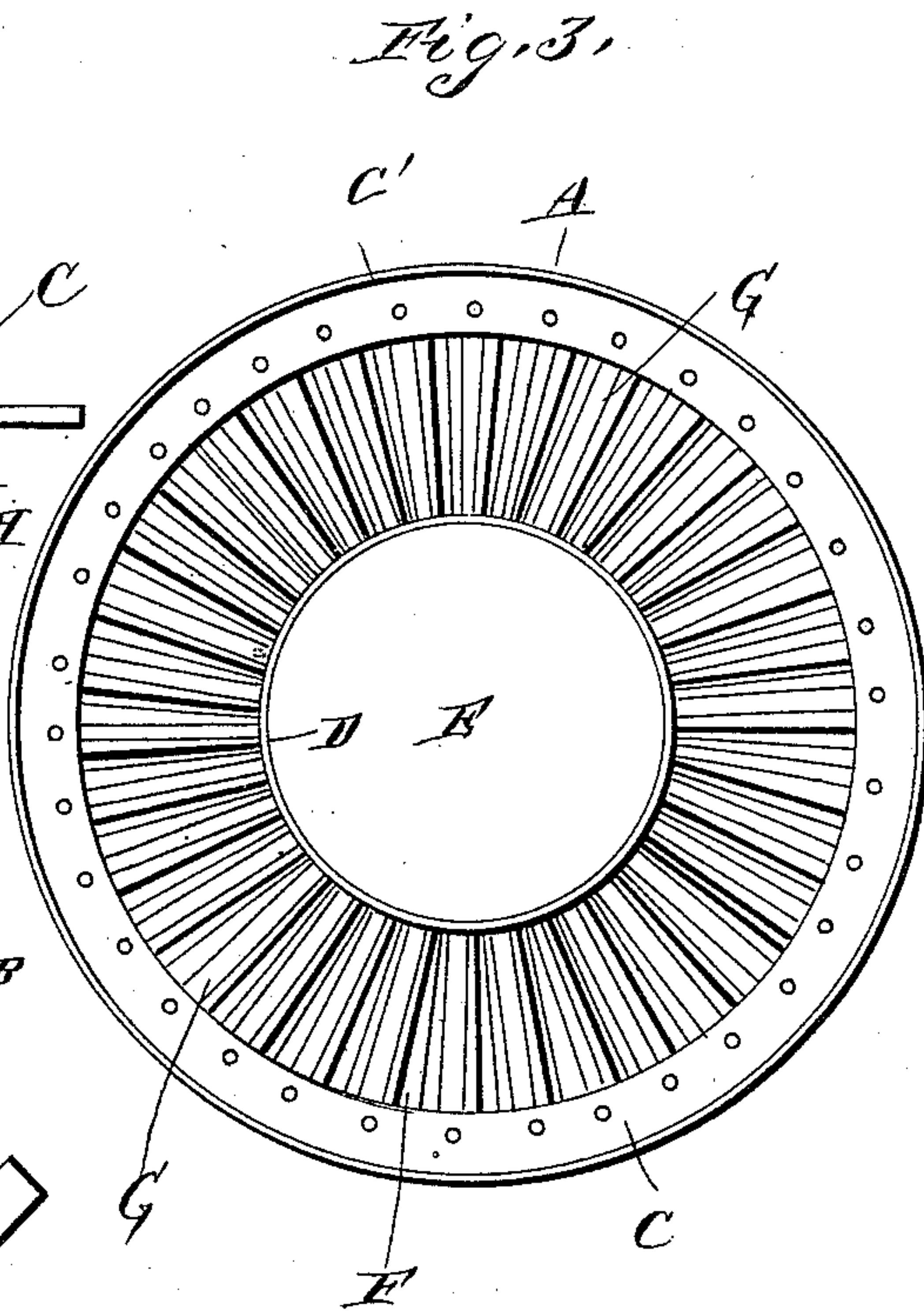
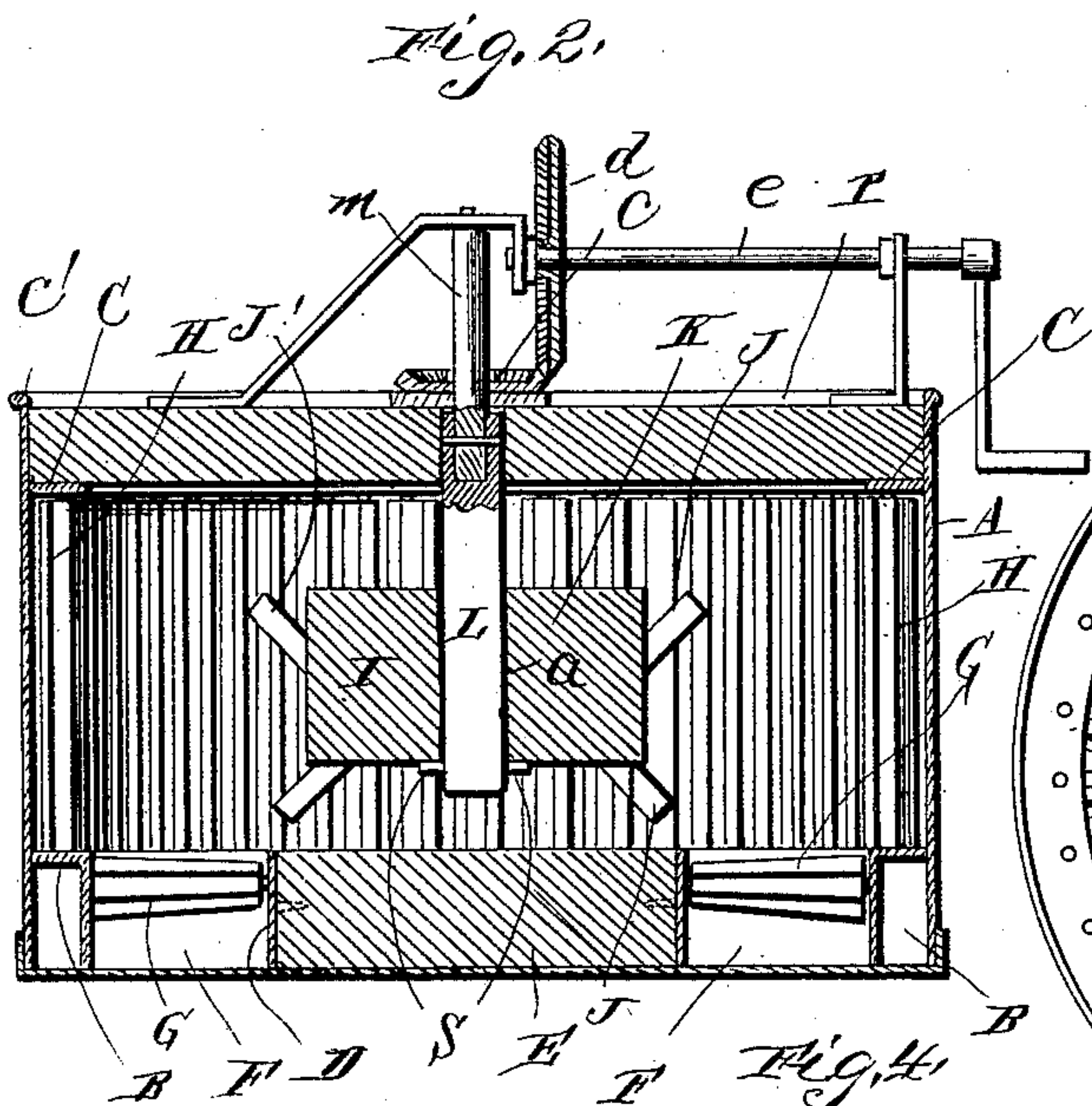
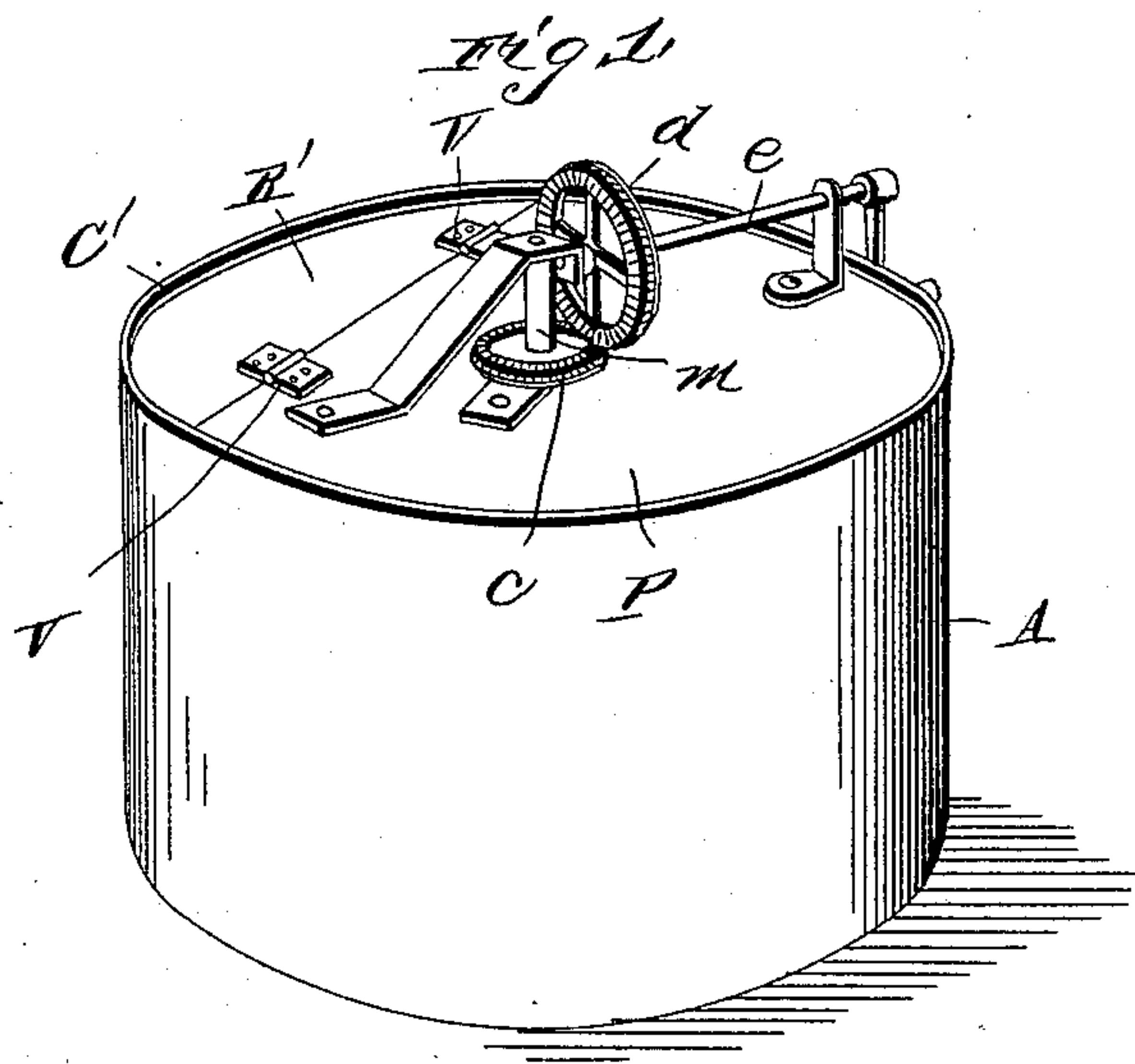


J. ANDERSON.
WASHING MACHINE.

Patented May 27, 1890.



Witnesses

C. L. Taylor
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Inventor

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By her Attorney

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UNITED STATES PATENT OFFICE.

JOHANNA ANDERSON, OF BRACEVILLE, ILLINOIS.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 428,996, dated May 27, 1890.

Application filed August 1, 1889. Serial No. 319,395. (No model.)

To all whom it may concern:

Be it known that I, JOHANNA ANDERSON, a citizen of the United States, residing at Braceville, in the county of Grundy and State of Illinois, have invented certain new and useful Improvements in Washing-Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it ap-
10 pertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a perspective view. Fig. 2 is a vertical central section. Fig. 3 is a top plan view of the bottom, and Fig. 4 is a detail view of the beater.

This invention has relation to washing-machines in which the beater rotates horizontally; and it consists in the construction and novel combinations of devices, all as hereinafter set forth, and pointed out in the appended claims.

In the accompanying drawings, the letter A designates the cylindrical vessel or tub, in which the clothes are placed for washing. This tub or tank is formed with an interior annular shoulder around its bottom, as indicated at B, and above the same with an interior annular ledge or shelf bearing C, parallel to the annular shoulder B. Concentric to the annular shoulder B, and rising from the bottom, is the central seat-wall D, which receives the wash-board E, which is designed to be held in fixed position in said seat. The diameter of this corrugated wash-board is about equal to that of the rotary beater. Between this wash-board and the annular bearing-shoulder B is an annular interval or recess
40 F, in which are located the rotary rollers G, which are radially disposed between the shoulder B and inner seat-wall D, the journals of the rollers being seated in bearings of said shoulder and seat-wall, as indicated. These
45 rollers are slightly tapering, preferably from their outer ends inward, and their upper surfaces are nearly on a level with the wash-board E.

Between the lower shoulder B and the upper ledge C are the vertical rollers H, which

extend in series around the tub, forming a roller-lining to its side wall. The journals of these rollers have their bearings in the upper face of the shoulder B and in the ledge C, and they, as well as the radial rollers of the bottom, are preferably made with angular faces, so that they will readily turn when the clothes are moved around in the tub by the rotation of the beater.

The beater K consists of a block I, preferably of cylindrical form, having secured to its bottom the downward and outward inclined feet J and to its sides the upward and outward inclined arms J', which are designed to engage the mass of clothes in the tub and pull the same around when the beater is rotated. The beater is a solid block of some weight, and is substantially adjustable on the squared stem L of the rotary shaft *m*, said beater having a loose squared bearing *a*, through which the squared stem passes. The length of the squared stem is made greater than the vertical thickness of the block to provide play for the latter, which can move up and down on the squared stem as the mass of clothes may press it up or allow it to fall. At the same time, on account of the engagement of its squared bearing with the squared stem of the rotary shaft, the block is made to receive positive rotary motion, whatever be its position on the stem. The lower end of this stem is provided with stops S to prevent the block from descending below a certain level.

The rotary shaft is seated in a bearing in the larger portion P of the cover or lid R, which is connected to the smaller section R' by the hinges *v v*. The section R' is securely fastened to the ledge C of the tub, and the section P when depressed rests on said ledge. When the section P is raised, the beater is lifted out of the tub. The section P carries the gearing *c d* and the shaft *e*, which may be turned by means of a crank or other suitable device.

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

1. In a washing-machine, the cylindrical tub having the annular bottom shoulder B and above it the annular bearing-ledge C, the bot-

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tom seat-wall D, concentric with the annular shoulder, the central wash-board, the series of radial rollers journaled on the shoulder B and the seat-wall D, and the series of vertical rollers around the wall journaled on the shoulder B and the ledge C, substantially as specified.

2. In a rotary washing-machine, the combination, with a tub having rollers on its bottom and side wall, of the squared rotary stem having stops at its lower end, and the auto-

matically-adjustable beater-block having a loose square bearing on said stem and provided with oblique side arms and the oblique projecting feet, substantially as specified.

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

JOHANNA ANDERSON.

Witnesses:

WM. HESS,

JAMES MCGAHEY.