

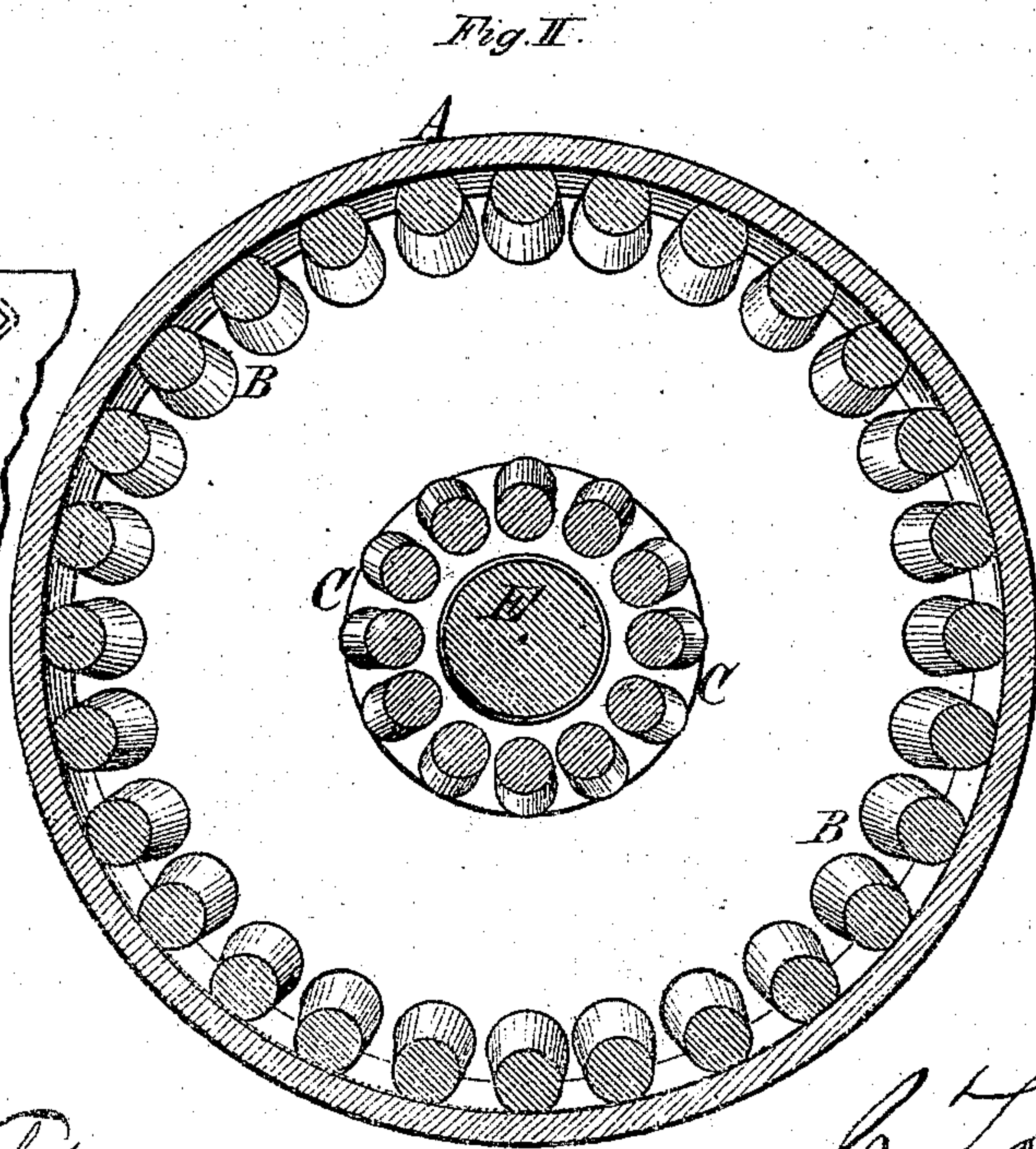
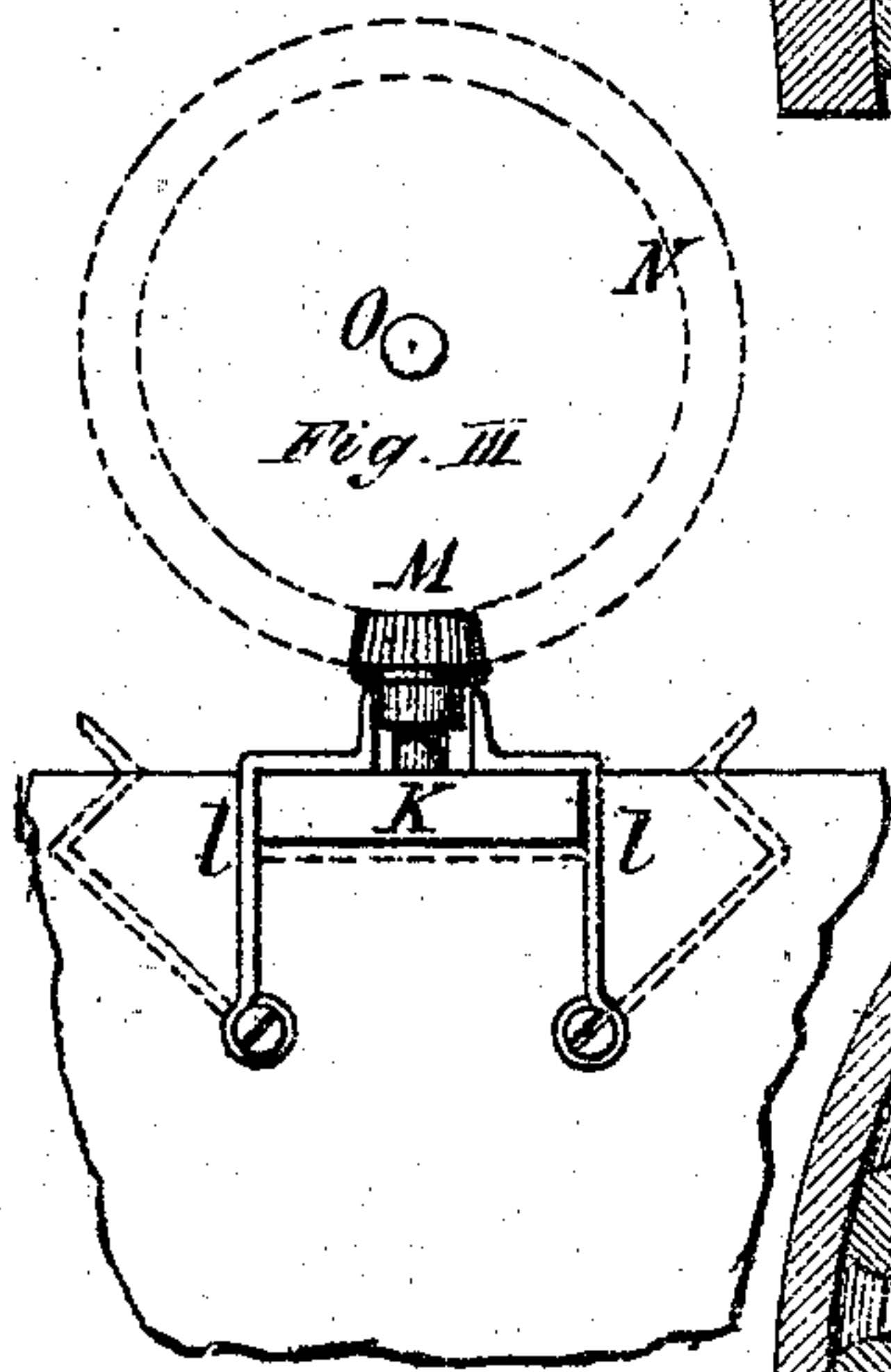
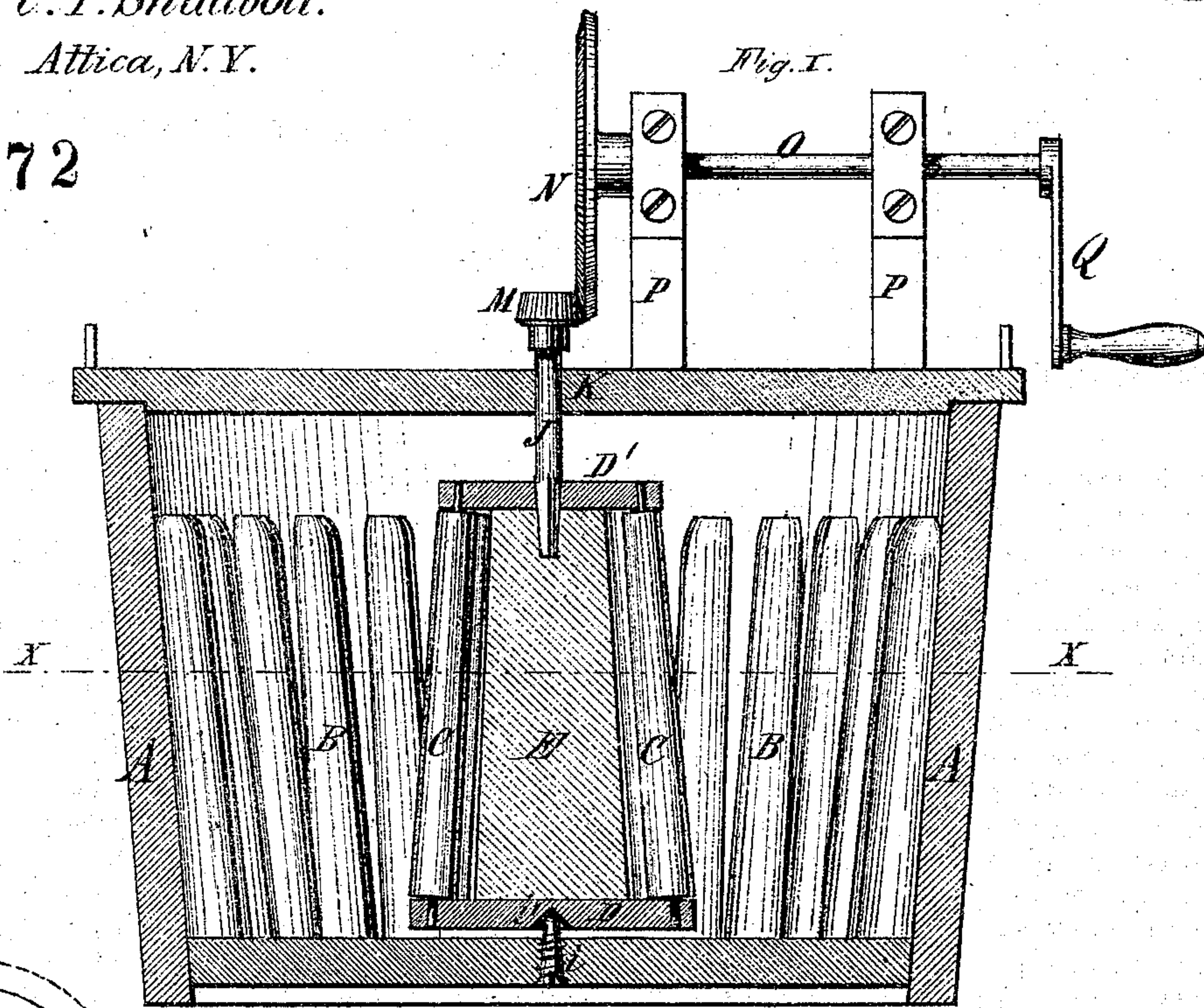
# Imp'd Washing Machine.

C. T. Shadbolt.

Attica, N. Y.

PATENTED JUL 25 1871

117472



Edward Wilhelm  
W. H. Sheridan *Witnesses*

C. T. Shadbolt *Inventor*  
by Forbush & Spaulding



# UNITED STATES PATENT OFFICE.

CHARLES T. SHADBOLT, OF ATTICA, NEW YORK.

## IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. 117,472, dated July 25, 1871; antedated July 18, 1871.

*To all whom it may concern:*

Be it known that I, CHARLES T. SHADBOLT, of Attica, in the county of Wyoming and State of New York, have invented a certain Improvement in Washing-Machines, of which the following is a specification:

My invention relates to the arrangement, within a circular tub provided on its inner surface with vertical ribs, of a series of rollers arranged concentrically, and rotating between two disk-bearings which are arranged one above the other and supported so as to revolve around a vertical axis—the resistance opposed by the ribbed surface of the tub and the action of the revolving concentric arrangement of rollers at the center of the tub causing the clothes to rotate and roll therein.

In the accompanying drawing, Figure I is a vertical section, Fig. II is a horizontal section, and Fig. III a diagram, showing the end of the cross-bearing piece at the top of the tub and the manner of securing it in place.

Like letters refer to like parts in each of the figures.

A is a tub of any ordinary and suitable construction, with its sides preferably slightly flaring or widening toward the top. B B are the vertical ribs formed with the sides of the vessel, or secured to the inner surface thereof, as shown. C C C are rods, preferably of wood, arranged concentrically so as to revolve between two circular heads or bearings, D D', placed one above the other. E is a cylindrical block arranged vertically within the circular arrangement of rollers so as to form a support for the disk-heads D D' which are attached to its ends. Any other suitable means for supporting the bearings D may be used instead of this block E. The upper head D' is preferably made a little smaller than the lower one, so as to cause the rollers C to slightly converge toward the top in order to reduce the width of the annular space G surrounding them, which permits the clothes to partially wedge or fit more snugly therein. The lower disk or head D may be provided with a bearing-point to fit in a step in the bottom of the tub, or the pivot *i* may be made to project upward from the bottom

of the tub into a socket, *i'*, in the under side of the head. From the upper head D a rod or shaft, J, extends vertically upward through a bearing, K, formed by a cross-piece which extends across the top of the tub with its ends fitted in notches in the edge thereof, in which it is secured so as to be readily removable by hooks *l l*, as shown in Fig. III. Above this cross-piece, on the end of the shaft J, is mounted a bevel-pinion, M, which engages with a bevel-wheel, N, on the end of a horizontal shaft, O, which is supported in suitable standard-bearing P P projecting from and supported by the cross-piece K. The machine is operated by a winch, Q, at the end of the shaft O in an obvious manner, which causes the circular disks or heads D D' and the rollers arranged between them to revolve within the tub. The garments or clothes to be washed are placed in the annular space in sufficient quantity to slightly wedge therein, when, by turning the winch or crank, they are rolled around in said annular space. This rotation is induced by a difference in the friction between the two surfaces in contact therewith—the rigid vertical ribs with the increased surface which they present opposing a much greater resistance than the reduced surface of the rollers C, which freely revolve between the disk-bearings D D'. Small articles and those portions of the garments most soiled can be readily washed, or subjected to an increased rubbing, by holding them in contact with the outer surface of the rotating-rollers of the revolving cylinder.

I do not claim, broadly, the arrangement, within a tub vertically ribbed on its inner surface, of a revolving ribbed or corrugated cylinder.

I claim as my invention—

The arrangement of the vertically-ribbed inner surface B B of the tub, the actuating mechanism J M N O Q, the revolving bearings D D', and independently rotating rollers C C, as hereinbefore set forth.

CHARLES T. SHADBOLT.

Witnesses:

JAY HYATT,  
A. D. LORD.