

(No Model.)

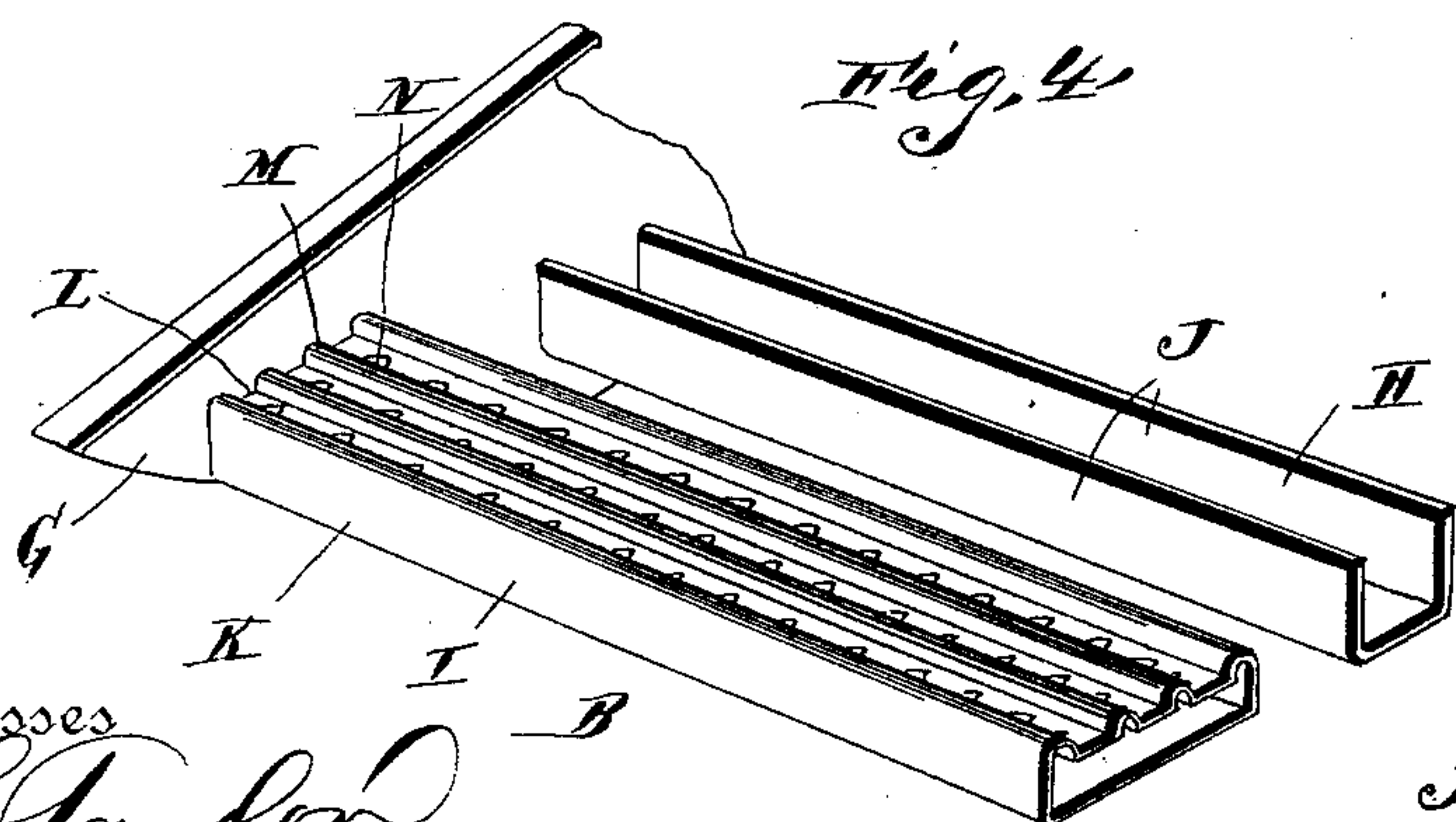
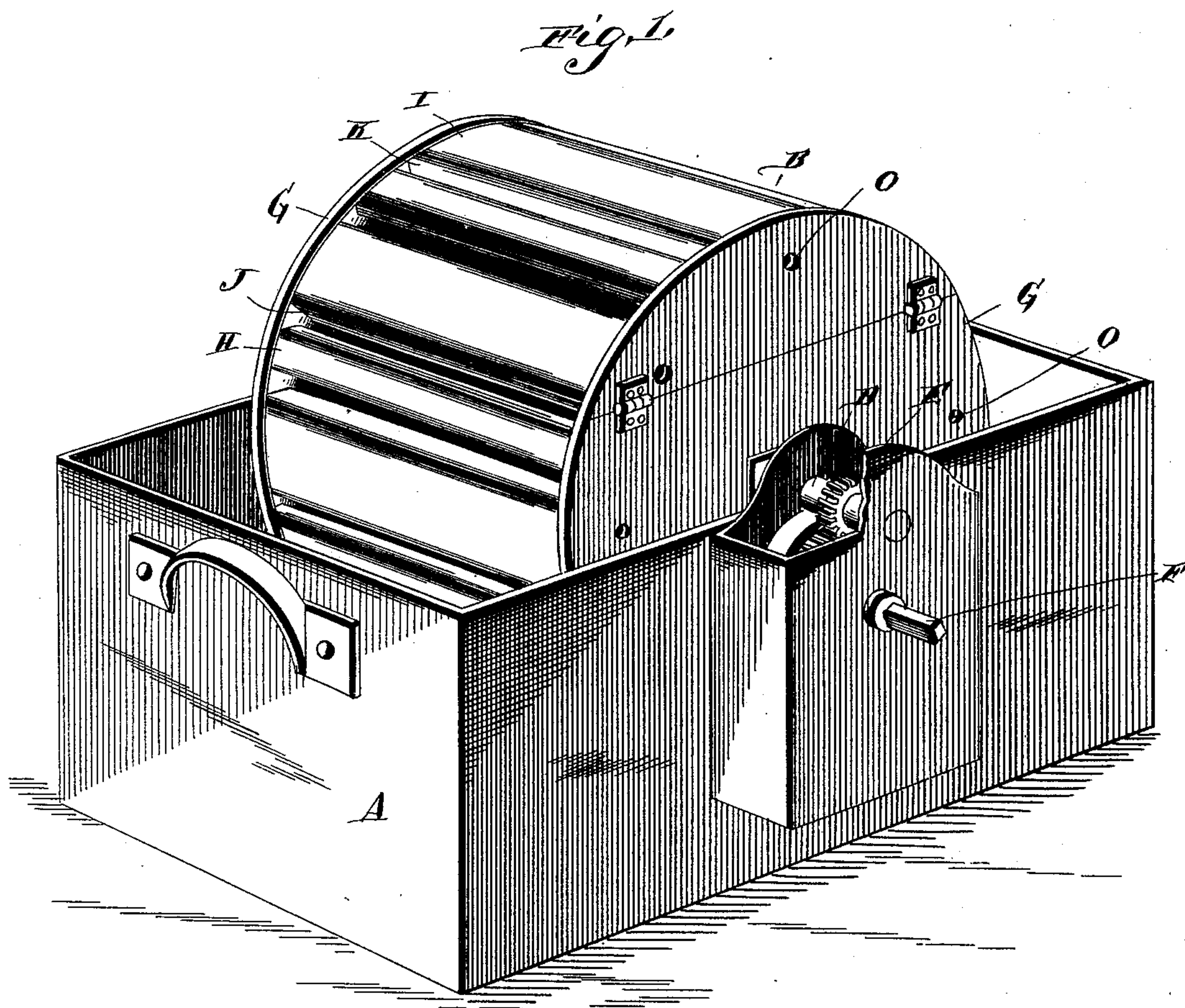
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J. W. HART & H. BARTHOLOMEW.

WASHING MACHINE.

No. 415,247.

Patented Nov. 19, 1889.



Witnesses

D. Taylor,
R. W. Bishop.

Inventors

John W. Hart,
Henry Bartholomew.

By their Attorneys

C. Snowley

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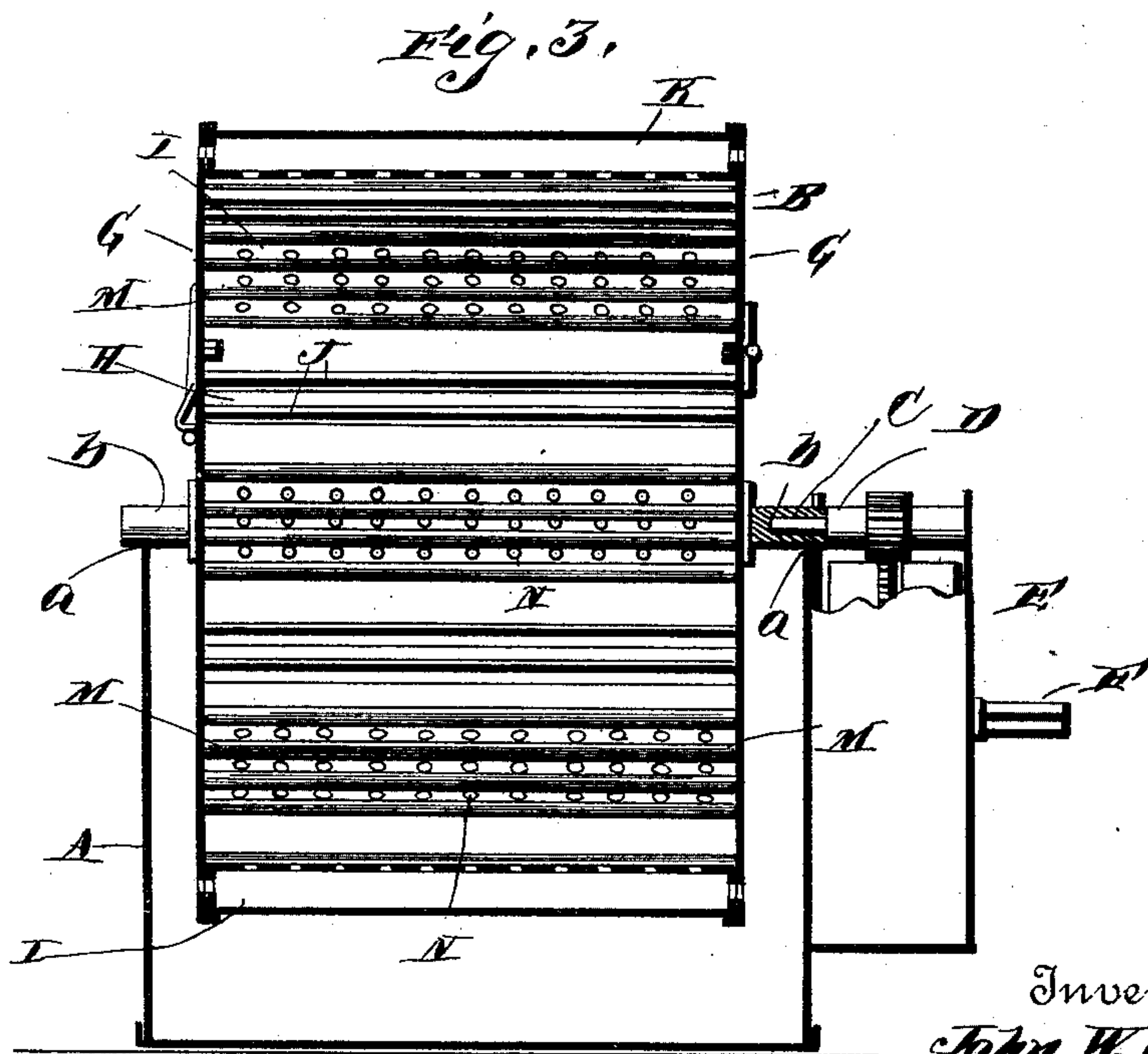
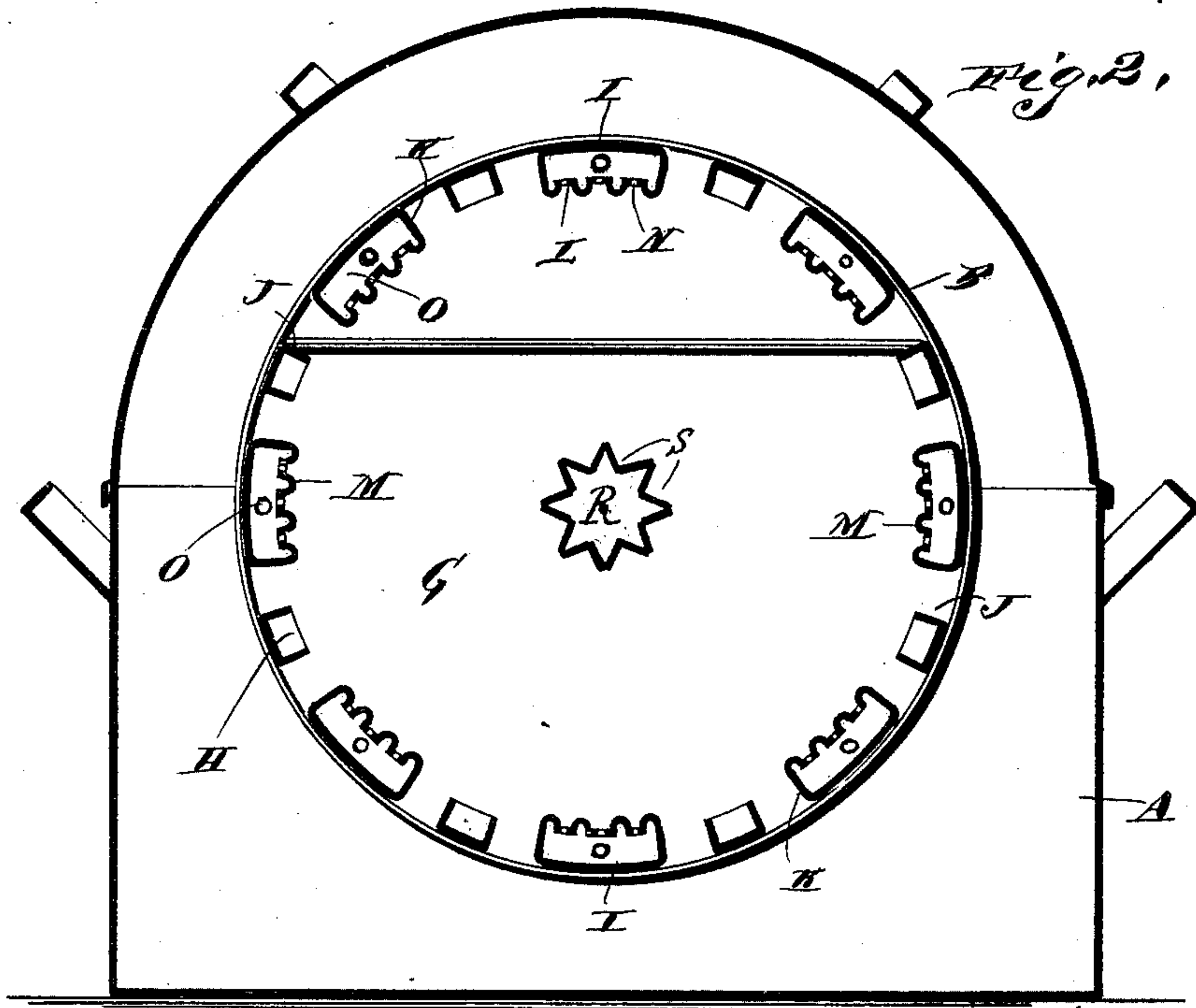
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UNITED STATES PATENT OFFICE.

JOHN W. HART AND HENRY BARTHOLOMEW, OF IOLA, KANSAS.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 415,247, dated November 19, 1889.

Application filed August 3, 1888. Serial No. 281,870. (No model.)

To all whom it may concern:

Be it known that we, JOHN W. HART and HENRY BARTHOLOMEW, citizens of the United States, residing at Iola, in the county of Allen and State of Kansas, have invented new and useful Improvements in Washing-Machines, of which the following is a specification.

Our invention relates to improvements in washing-machines; and it consists in certain novel features hereinafter described and claimed.

In the accompanying drawings, which fully illustrate our invention, Figure 1 is a perspective view of a washing-machine embodying our improvements, the cover being removed. Fig. 2 is a longitudinal section of the same, the cover being shown in its place. Fig. 3 is a central transverse vertical section of the same, and Fig. 4 is a detail view of a portion of the cylinder.

Referring to the drawings by letter, A designates the suds-box, of the usual construction, having notches *a a* in its upper side edges at the centers of the same, in which the shaft *b* of the cylinder B rests and turns. One end of this shaft is provided with an angular recess C, which is engaged by the end of a driving-shaft D, which is actuated by a spring-motor E, secured to the side of the boiler and inclosed by a suitable casing, as shown. The spring-motor is provided with a winding-arbor F, which projects to one side, and is adapted to be engaged by a suitable key to wind up the spring, so that the tension of the same will actuate the motor and drive the cylinder of the washing-machine.

The cylinder B is composed of two circular disks G G, having segmental portions cut off to form a lid, one of said segmental portions being hinged and the other provided with a spring-latch, as will be readily understood. The periphery of the cylinder is composed of a series of transverse buckets H, secured between the edges of the circular disks forming the sides of the cylinder, and the rubbing-bars I, secured between the edges of the disks and alternating with the buckets. The buckets consist of transverse plates having inwardly-projecting flanges J at their edges, as clearly shown. The rubbing-bars

are composed of transverse plates having flanges K at their edges and plates L, secured to and between the inner edges of said flanges, the said plates being longitudinally corrugated, as shown at M, and provided with a number of perforations N, as shown. Perforations or apertures O are formed in the sides of the cylinder at the ends of the rubbing-bars to form a communication between the interior of said bars and the space surrounding the cylinder.

The heads or ends of the drum or cylinder are connected by a centrally-located bar R, which may consist of a sheet-metal tube, and which is fluted or grooved longitudinally, as shown at S S, so as to make it star-shaped in cross-section, as will be seen in Fig. 2 of the drawings. When, in operation, the drum or cylinder is revolved, the clothes contained therein will be raised by the flanged buckets and the rubbing-bars which compose the periphery of the drum and be dropped upon the said star-shaped bar, which will break the fall of the clothes, disentangle them, and prevent them from rolling or working together into a compact mass, when they would be only partially exposed to the action of the various cleansing agencies.

In operation water is placed in the boiler to the desired depth and the clothes placed in the cylinder. The clothes may be rubbed with soap before being placed in the cylinder, or the water may contain a small quantity of soap or bleaching material, as may be preferred by the operator. The spring-motor is then wound up and the boiler placed over a fire. The cylinder will then be caused to revolve and carry the clothes rapidly through the water, and the steam generated therefrom by the fire will rise through the cylinder and the clothes, so that the clothes will be completely saturated with the moisture and the dirt loosened and removed therefrom. As the clothes are carried around by the cylinder they will be caused to fall forcibly against the rubbing-bars, and thereby produce a rubbing action against the same, effectively loosening all the harder particles, so that the clothes will be effectually cleansed. The perforated construction of the rubbing-bars causes them to contain more or less air, which will be expelled by the clothes falling

upon the bars, and which in turn acts on the clothes to prevent them collecting in a mass, so that the cleansing will be but partially performed.

5 It will thus be seen that we have provided a very simple and efficient washing-machine, which is automatic in its operation, and by which the clothes are thoroughly cleansed.

10 Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

15 In a washing-machine, the revoluble cylinder or drum composed of the heads or ends, the hinged cover, the flanged buckets connecting said head or ends, and the tubular

rubbing-bars secured to the heads or ends alternately between the buckets and having open ends registering with perforations in the said heads or ends, the inner sides or faces of said rubbing-bars being longitudinally corrugated and provided with perforations, substantially as and for the purpose set forth. 20

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

JOHN W. HART.

HENRY BARTHOLOMEW.

Witnesses:

C. L. WHITAKER,

E. M. WHITAKER.