

(No Model.)

G. P. FULLER.
WASHING MACHINE.

No. 284,622.

Patented Sept. 11, 1883.

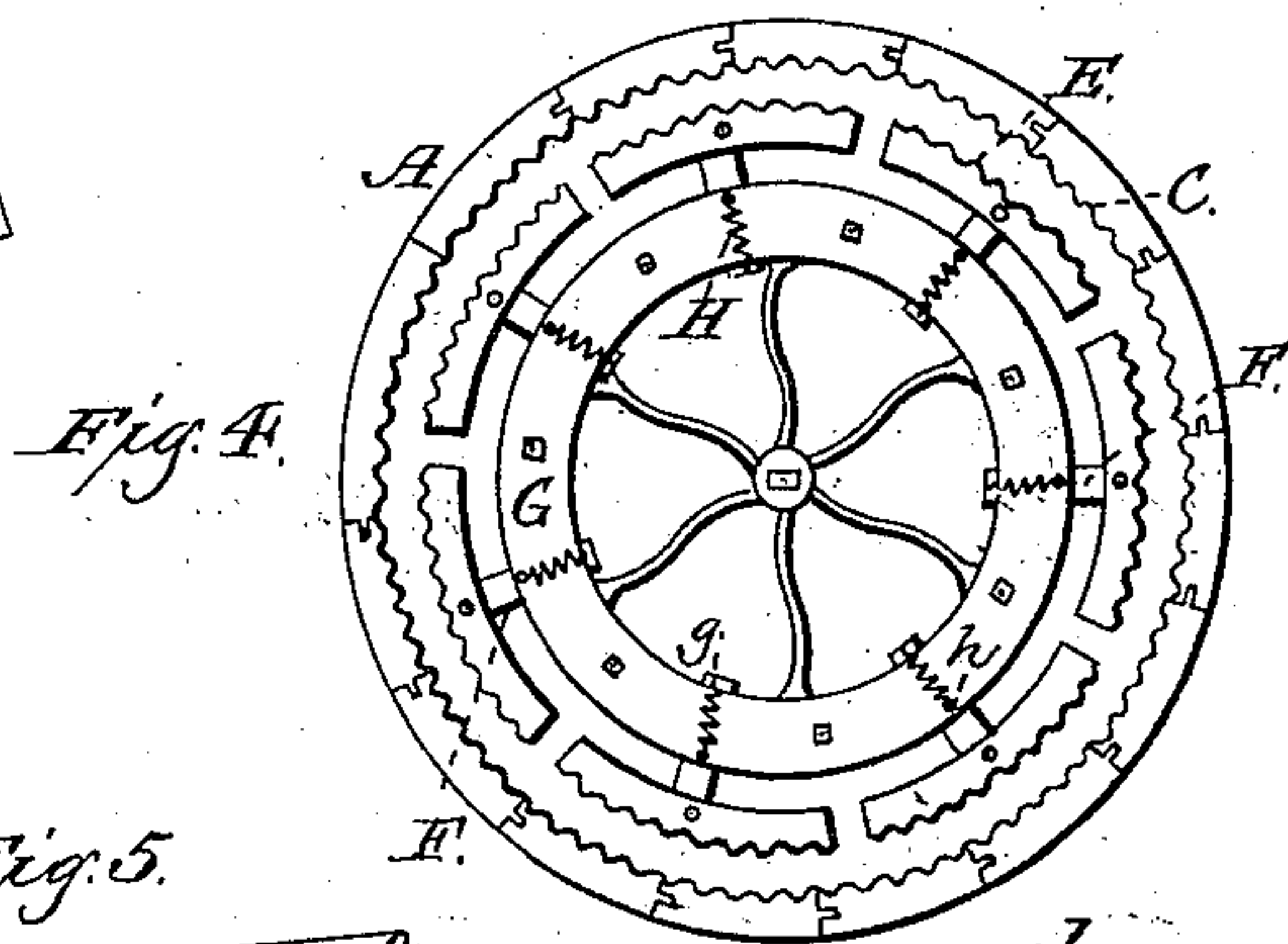
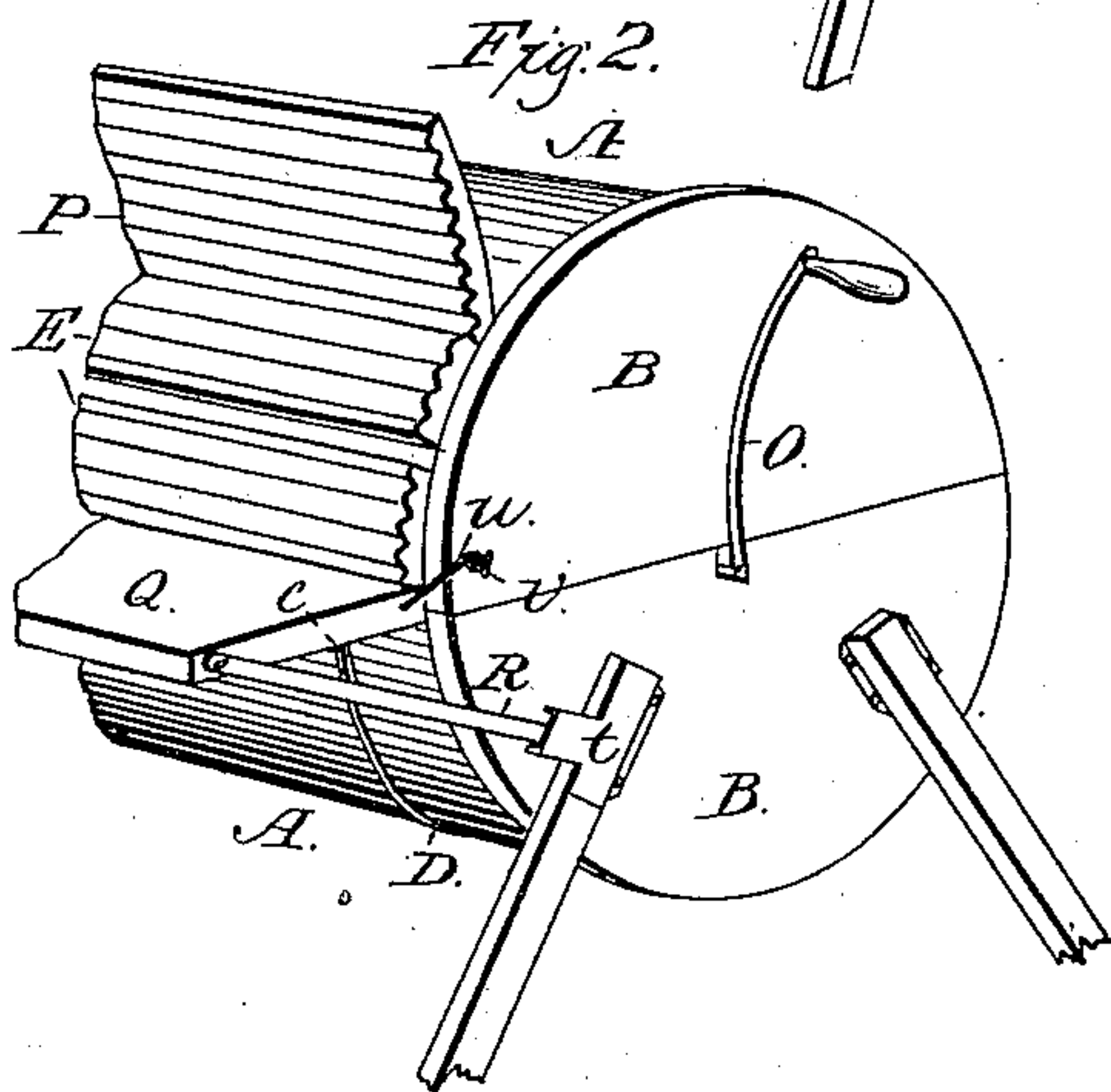
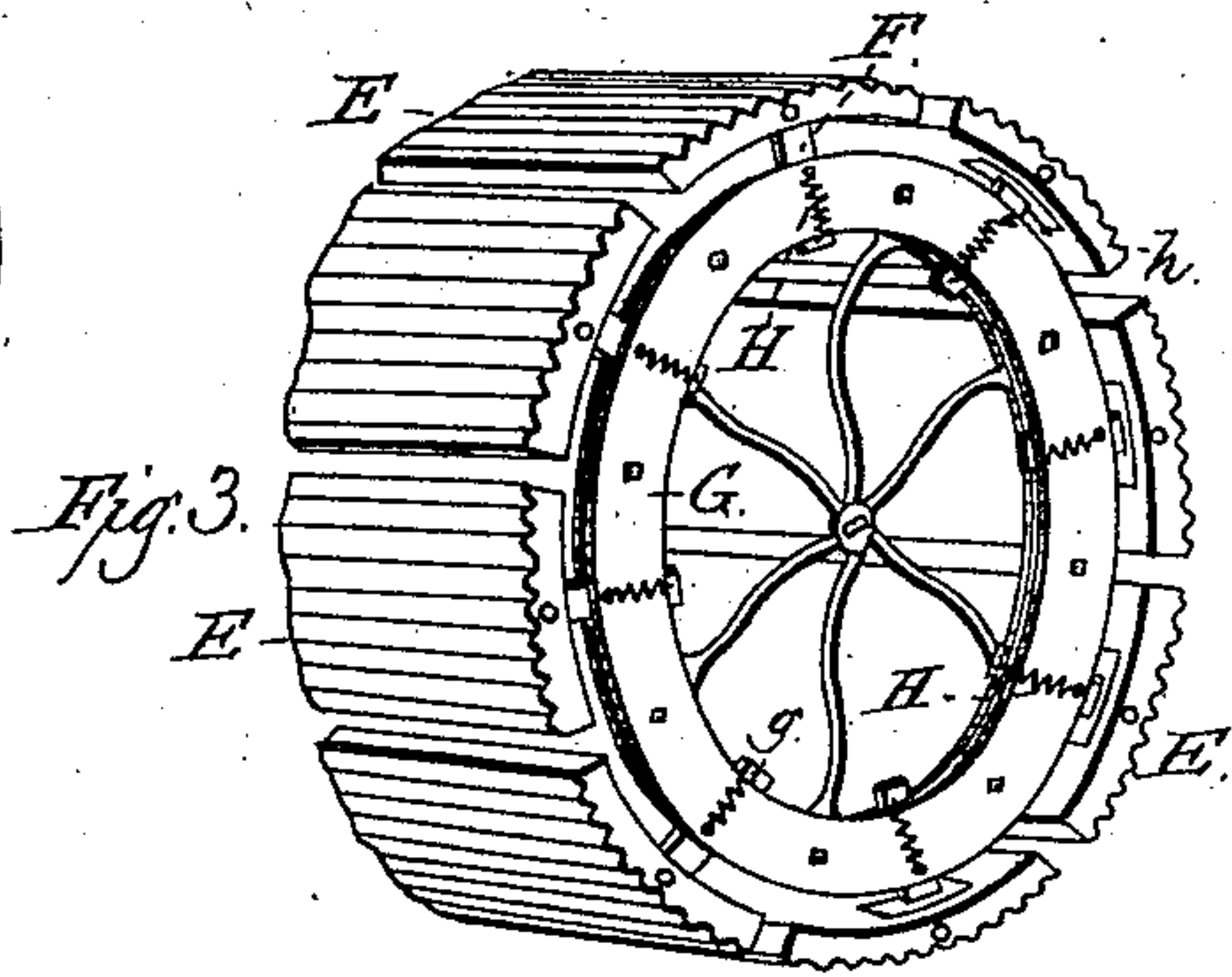
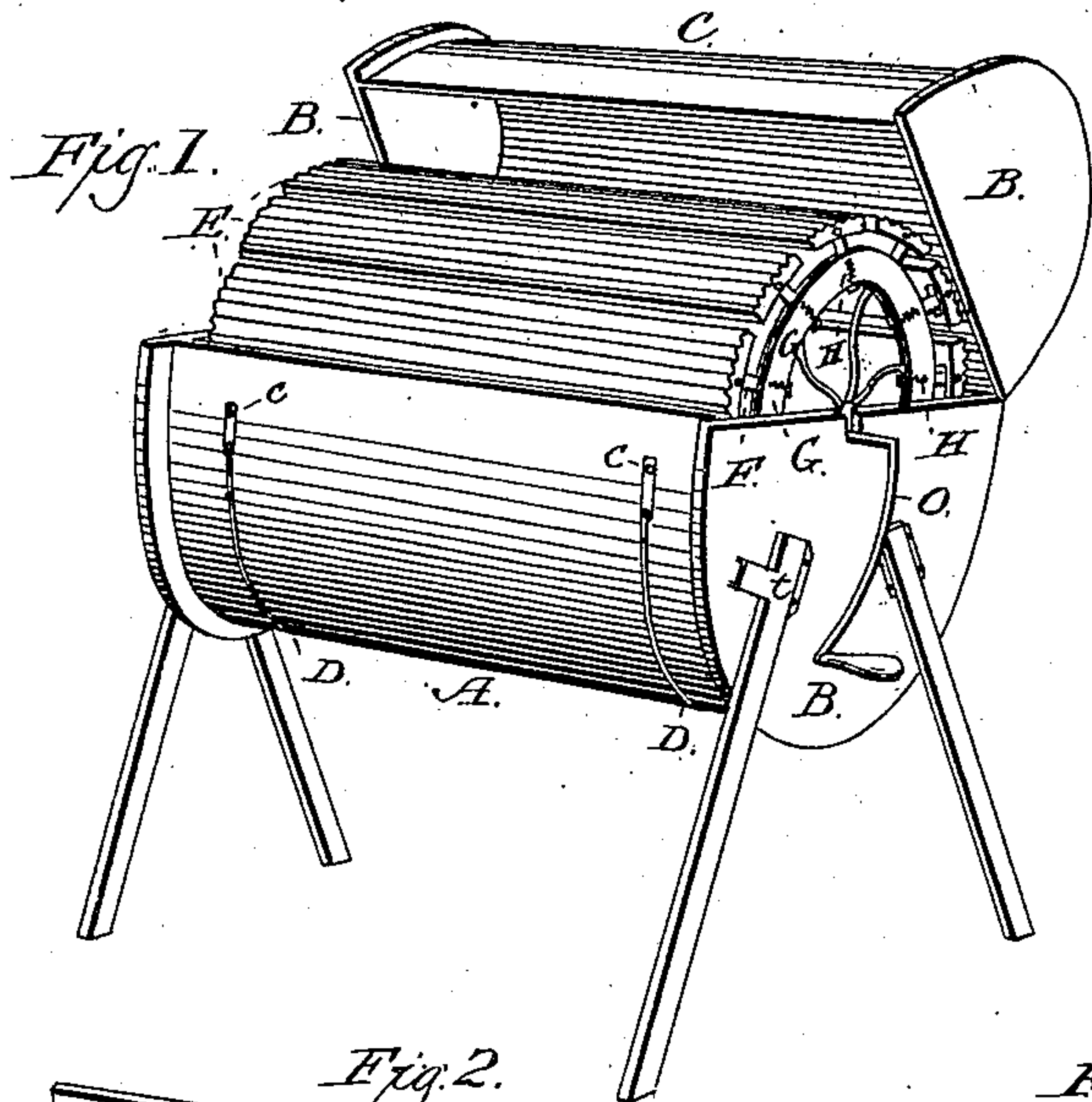
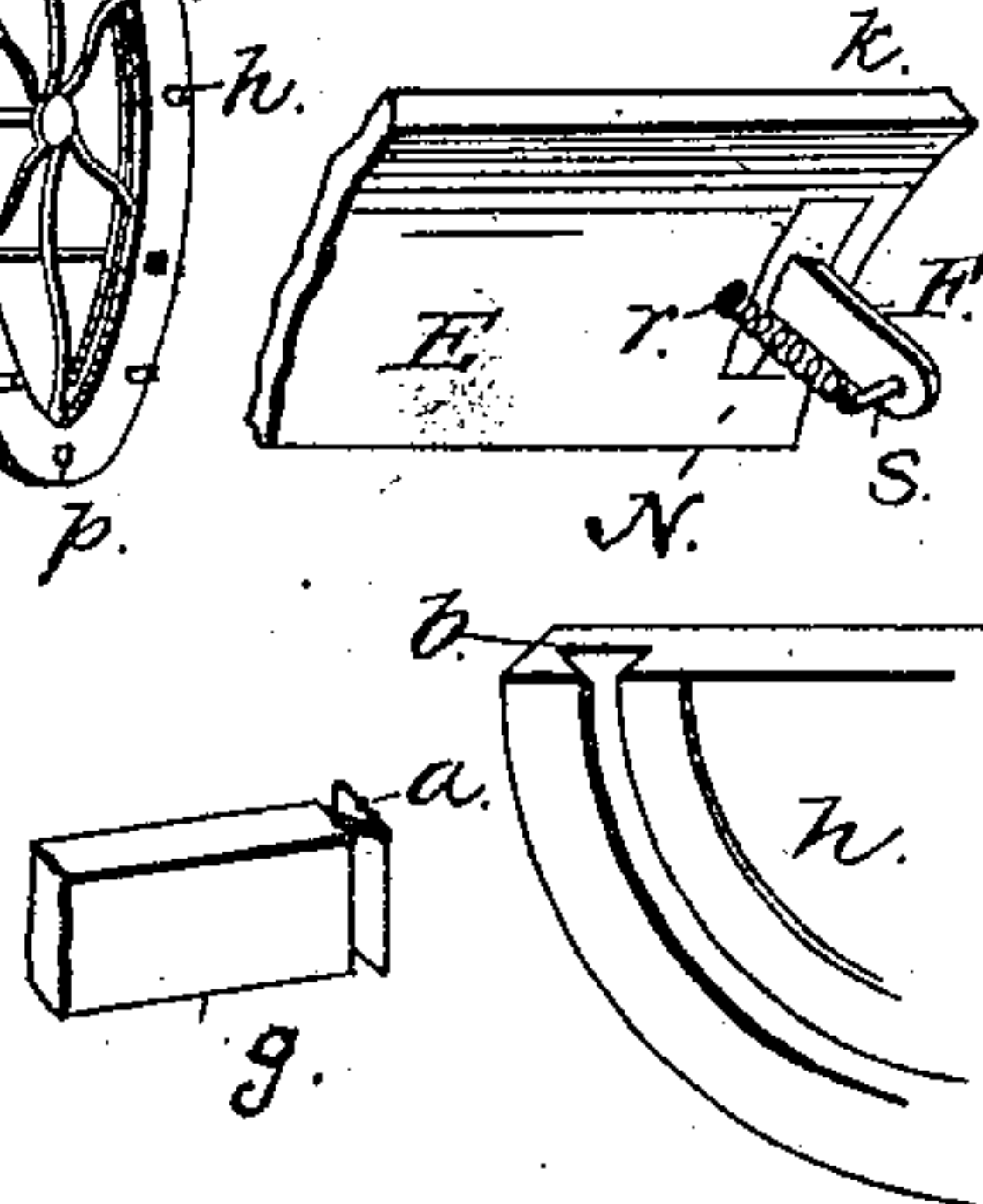
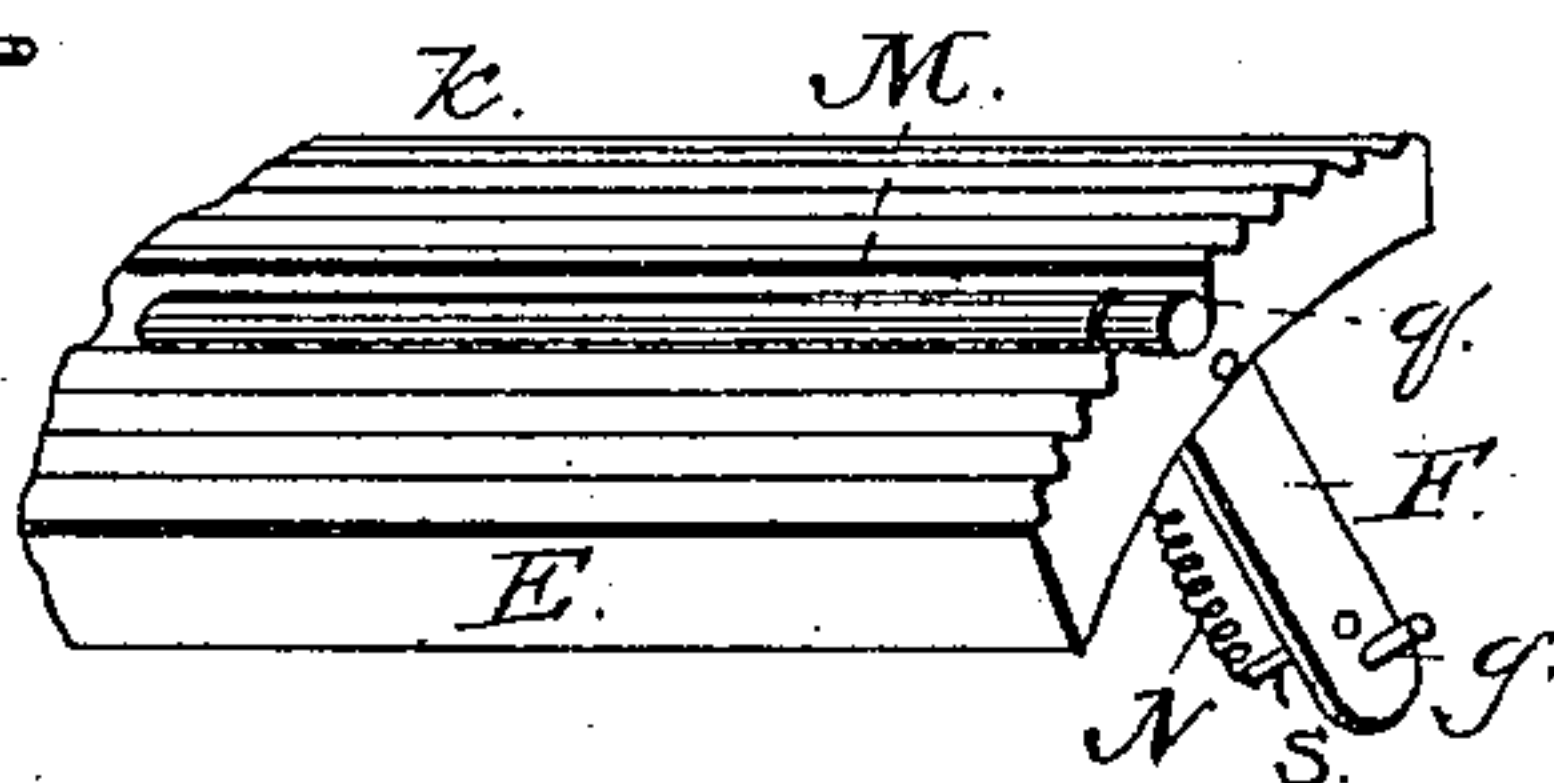
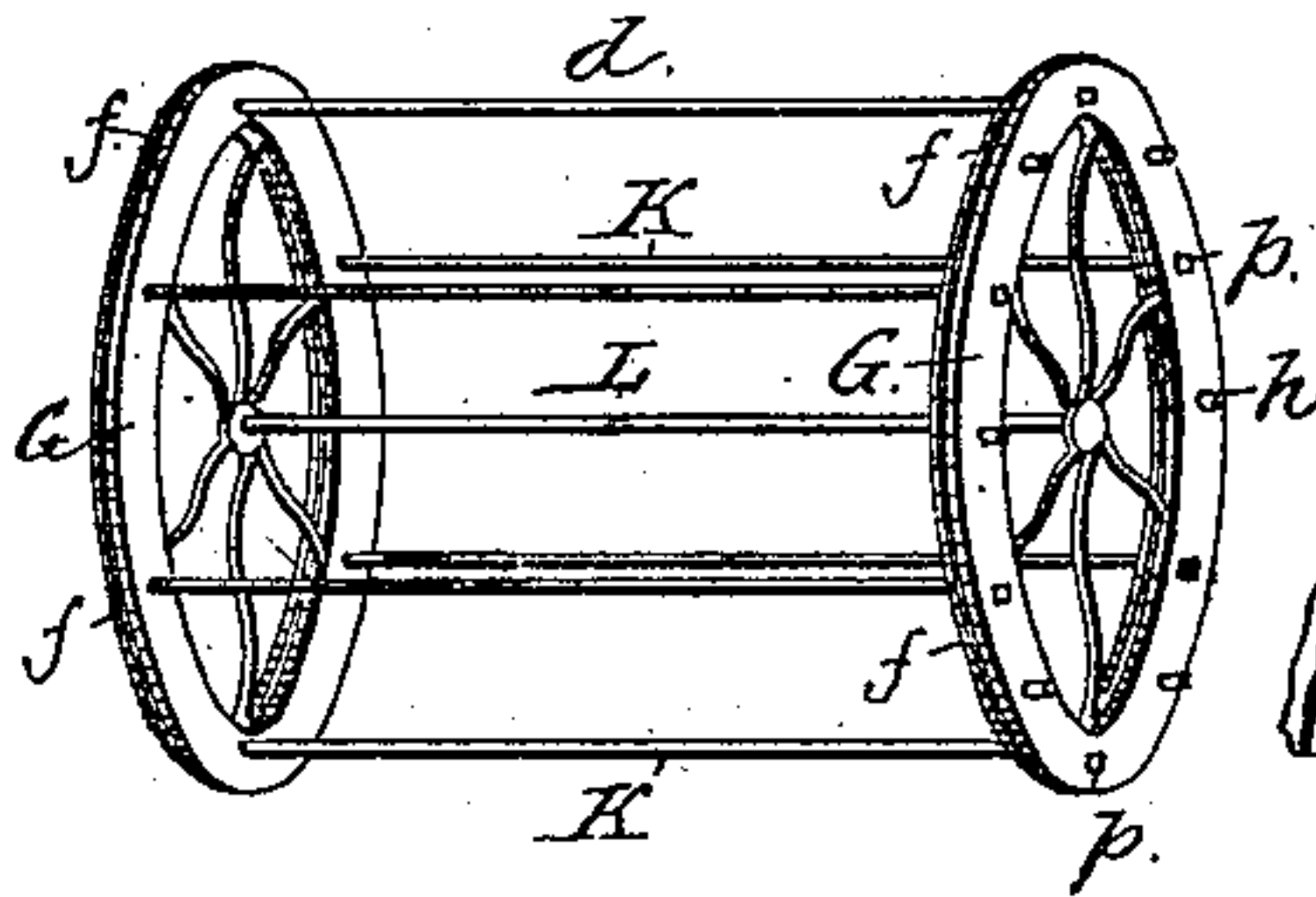
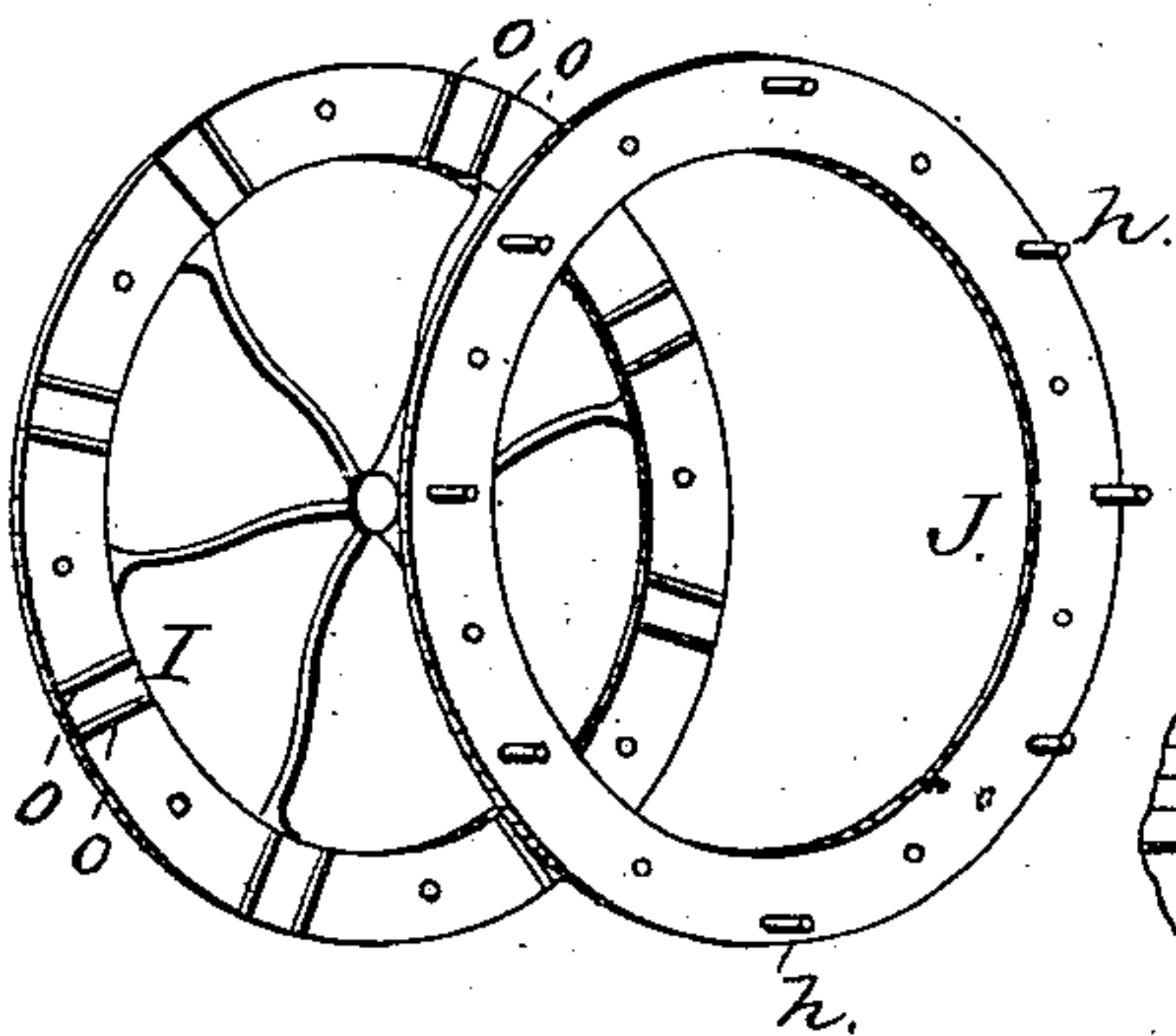
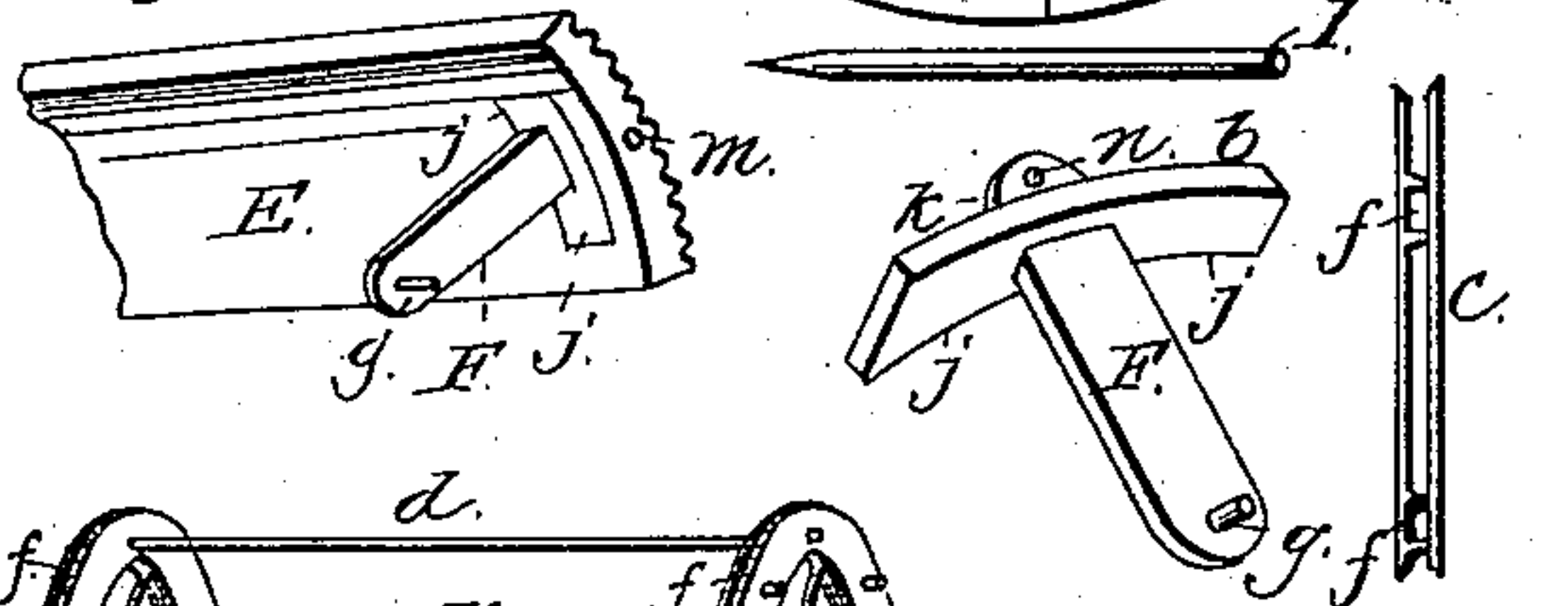
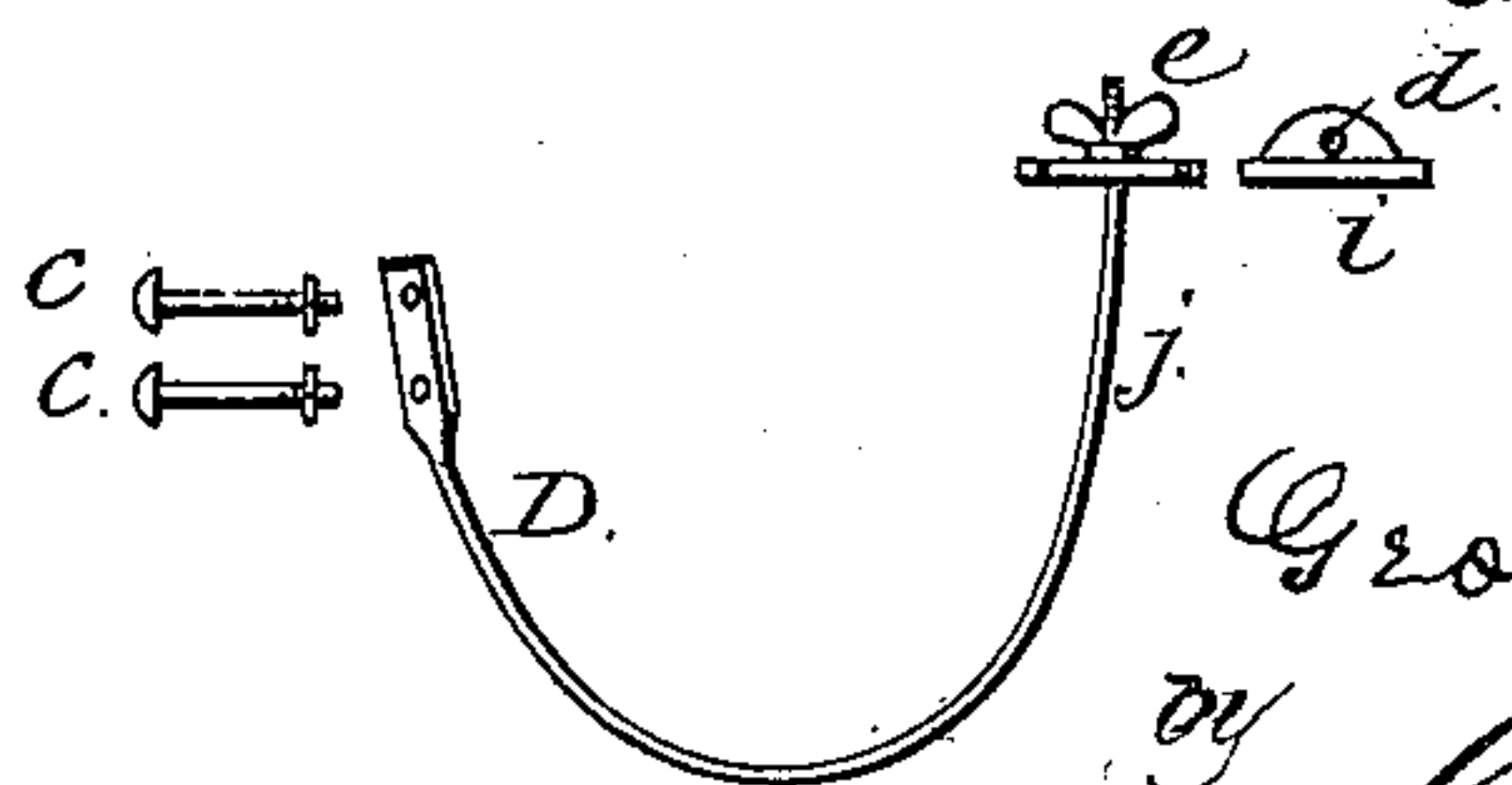


Fig. 5.



Witnesses;
E. Chittenden
Jno. Haw.



Inventor;
George P. Fuller.
by A. Snow & Co. Attys

UNITED STATES PATENT OFFICE.

GEORGE P. FULLER, OF NEW RICHMOND, WISCONSIN.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 284,622, dated September 11, 1883.

Application filed October 16, 1882. (No model.)

To all whom it may concern:

Be it known that I, GEORGE P. FULLER, a citizen of the United States, residing at New Richmond, in the county of St. Croix and State of Wisconsin, have invented a new and Improved Rotary and Double Cylindrical Washing-Machine, of which the following is a specification.

My invention relates to washing-machines; and it has for its object to render the process of washing clothes more easy and rapid than by other methods in use.

The construction and arrangement of all the parts will be understood by the following description.

In the accompanying drawings, which make a part of this specification, Figure 1 is a front elevation of the machine with the upper section of the frame and outer cylinder of wash-boards thrown back, and exposing to view a part of the convex cylinder in position for use. Fig. 2 is a plan view of a front and end section of the machine, closed except the entrance, and showing also a section of the table and its supports. Fig. 3 is a perspective view of an end and side section of the convex cylinder described. Fig. 4 is an end view of the machine with the frame-head removed. Fig. 5 is a perspective view of separate parts, and embracing all the parts indicated by the written letters *a b c*, &c.

Like letters in all the figures indicate the same parts.

A A is the cylindrical portion of the frame; B B, the ends or heads of the frame-cylinder A. C C is a zinc wash-board resting upon the inner surface of the frame-cylinder A, each being divided in halves, with the heads B, which are provided with hinges and fastenings. The frame-cylinder A is joined to the heads B B by means of the dovetailed tenon *a* upon the staves of the frame-cylinder, and by the dovetailed mortise *b* in the frame-heads B B, as shown by sections of each in Fig. 5, *g* and *h*, causing a water-tight joint.

D D are hoops attached to either half-section of the frame-cylinder A by the bolts *c c*, the metallic eyes *d* and the thumb-nuts *e* turned upon the screw-threaded end of the hoop D, Fig. 1, and *i* and *j*, Fig. 5, to keep the frame-cylinder water-tight.

E E are sectional wash-boards forming the convex surface of the inner wash-board cylinder described, Figs. 1, 3, and 5. F F are metallic arms upon the inner surface of the boards E, near either end, and vertical to them. The arms F operate in the vertical grooves *f f* provided for them in the metallic rolling heads G, Figs. 1, 3, and 4, and *c* and *d*, Fig. 5.

H H are coil-springs, their looped ends connecting with the pins *g* and *h* upon the arms F and upon the rolling heads G, and operate to hold the wash-board sections E upon a circle adjusted at their outer surfaces to that of the concave cylinder of wash-boards C C, yielding to pressure also, which is brought upon the boards E by the passage of the wash-clothes between the two wash-board cylinders described. Each of the sectional boards E may be thus depressed to the distance of one inch, if required, for the passage of the clothes, until the board E rests upon the rolling heads G. Released from pressure, the springs H will return the boards E to their former position upon the circle above named. The pins *g* upon the arms F, coming in contact with the inner edge of the rims of the rolling heads G, keep the boards E at all times within the circle described. The metallic arms F, at their junction with the wash-boards E, are each provided with transverse braces *j j*, *a*, and *b*, Fig. 5, that press the boards E as the crowning projection K enters a recess provided for it in the board E, and receives the pin *l* from the aperture *m* in the board E through the opening *n*. The arms F are thus secured to the boards E and vertical to the grooves *f* in the rolling heads G.

The rolling heads G G each consist of two metallic sections, I and J, Fig. 5, the rim-section J being attached to form the outer surface against the transverse ribs *o o* upon the rim of the main section I by the rods K K, provided with shoulders at their junction with the inner rim-surface of the sections I and with the nuts *p p d*, Fig. 5. So attached, the sections I and J form the grooves *f* in the rolling heads G, for the purpose shown. The rods K, of equal length, keep the rolling heads G equidistant from each other around their convex edges, as they are held to the shafts L by keys or other device.

M, Fig. 5, is a sectional view of a metallic rod longitudinally arranged in the deep groove *q* of the inner wash-board section, E.

N is a closely-coiled spring looped around the rod M, and, passing through the vertical opening *r* in the board E, likewise connects with the pin *s* upon the inner surface of the arm F. The spring N is so arranged at either end of the rod M, as to confine it to the groove *q*. A tape or string attached to the rod M enables the operator to withdraw it and pass under it a corner of the fabric to be washed, and, releasing it, the springs N return it to the groove *q*, and the bunching up of the wash-clothes is thus prevented in the process of washing, which is performed by the continuous forward rotary motion of the convex cylinder of wash-boards by means of the crank O, Figs. 1 and 2. The rods M are arranged in the manner shown upon several of the sectional boards E of the convex cylinder described, and at convenient distances from each other, for the purpose named. A band of rubber in place of the rod M and the springs N, though less durable, would serve the purpose indicated.

P is a section of the door, Fig. 2, for the admission and discharge of the wash-clothes, closed while washing.

Q is a section of an adjustable table and water-shelf for the clothes, Fig. 2; R, a support resting in the double socket *t* at either end of the machine, together with the hook *u* and staple *v*, which confine the table Q to the machine, to return to the machine all water-drippings from the clothes. The table and supports may be thus readily attached or removed

for better convenience in using or in shipping whenever desired.

I do not confine myself to the exclusive use of a zinc wash-board for the concave wash-board C herein described, as the concave surface of the frame A may be a corrugated wash-board in place of the zinc wash-board herein shown. I also cover the sectional wash-boards of the convex cylinder described with zinc, if required by purchasers.

All the springs herein described may be of rubber; but I commonly use springs constructed of brass wire, as they are more durable. The metallic rolling heads G and arms F, I usually construct of brass.

What I claim, and desire to secure by Letters Patent, is—

As an improvement in washing-machines, the combination of the outside cylinder, A, having an interior rubbing-surface, the interior rotary rubbing-cylinder having the heads G, formed with radially-disposed slots *f f*, the segmental rubbing-sections E, provided with inwardly-projecting arms F, that are arranged in the slots *f*, the springs H, secured to the heads G and end of the arms F, and the spring-actuated rods M, arranged on the sections E, as set forth.

In testimony that the above is my invention I have hereunto set my hand this 11th day of October, A. D. 1882.

GEORGE P. FULLER.

Witnesses:

FRANK D. FULLER,
FRANK P. CHAPMAN.