

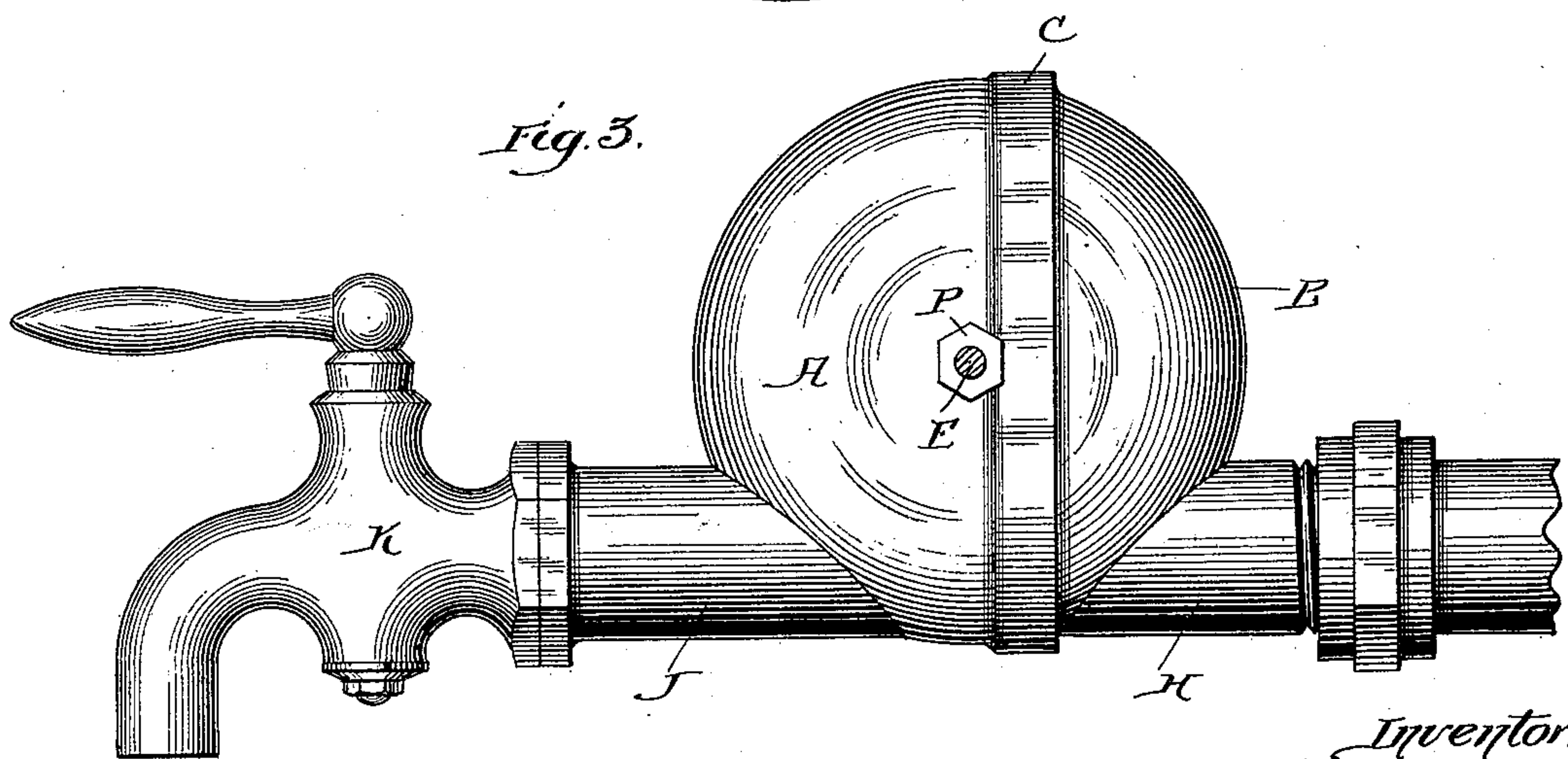
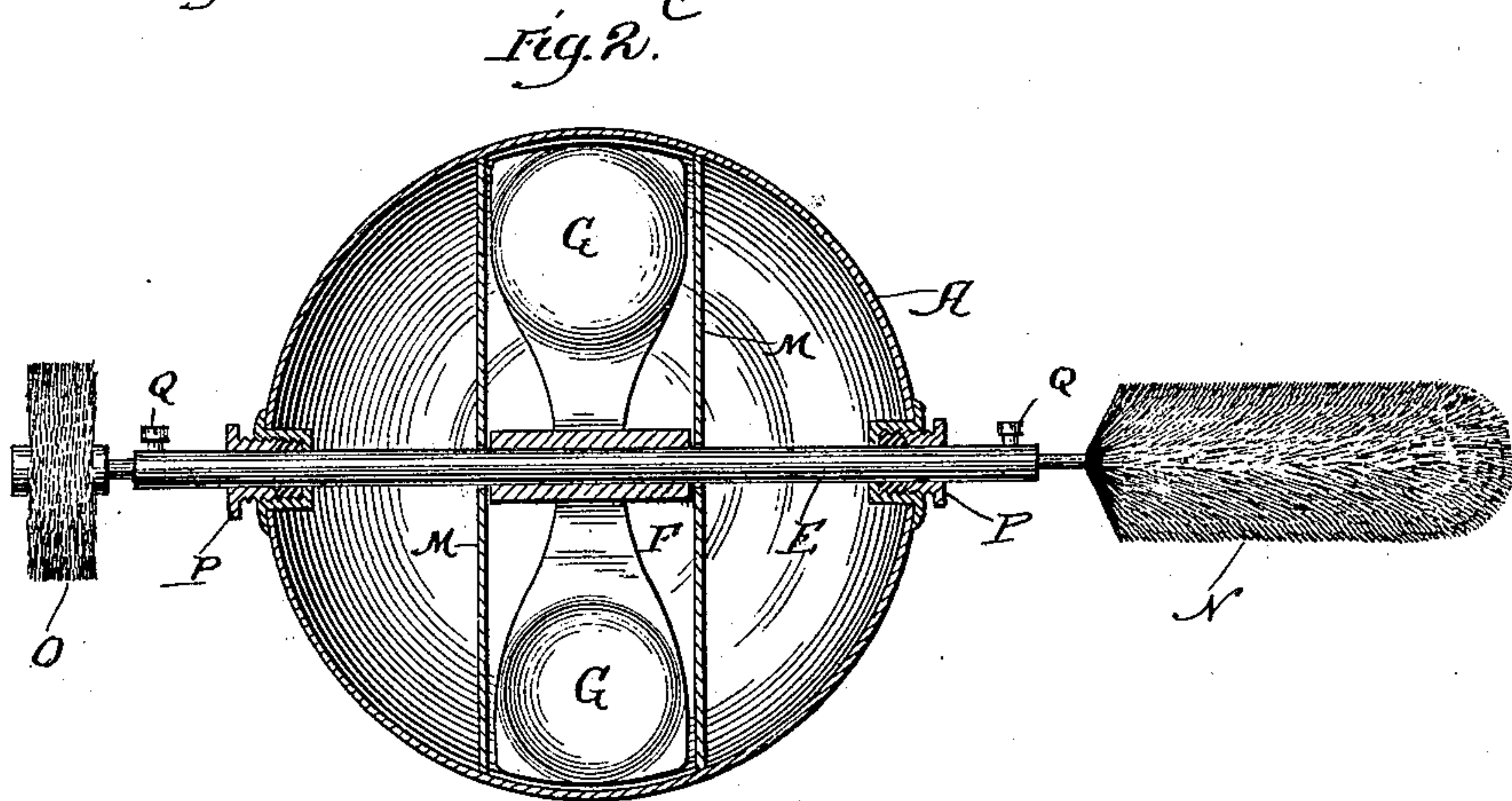
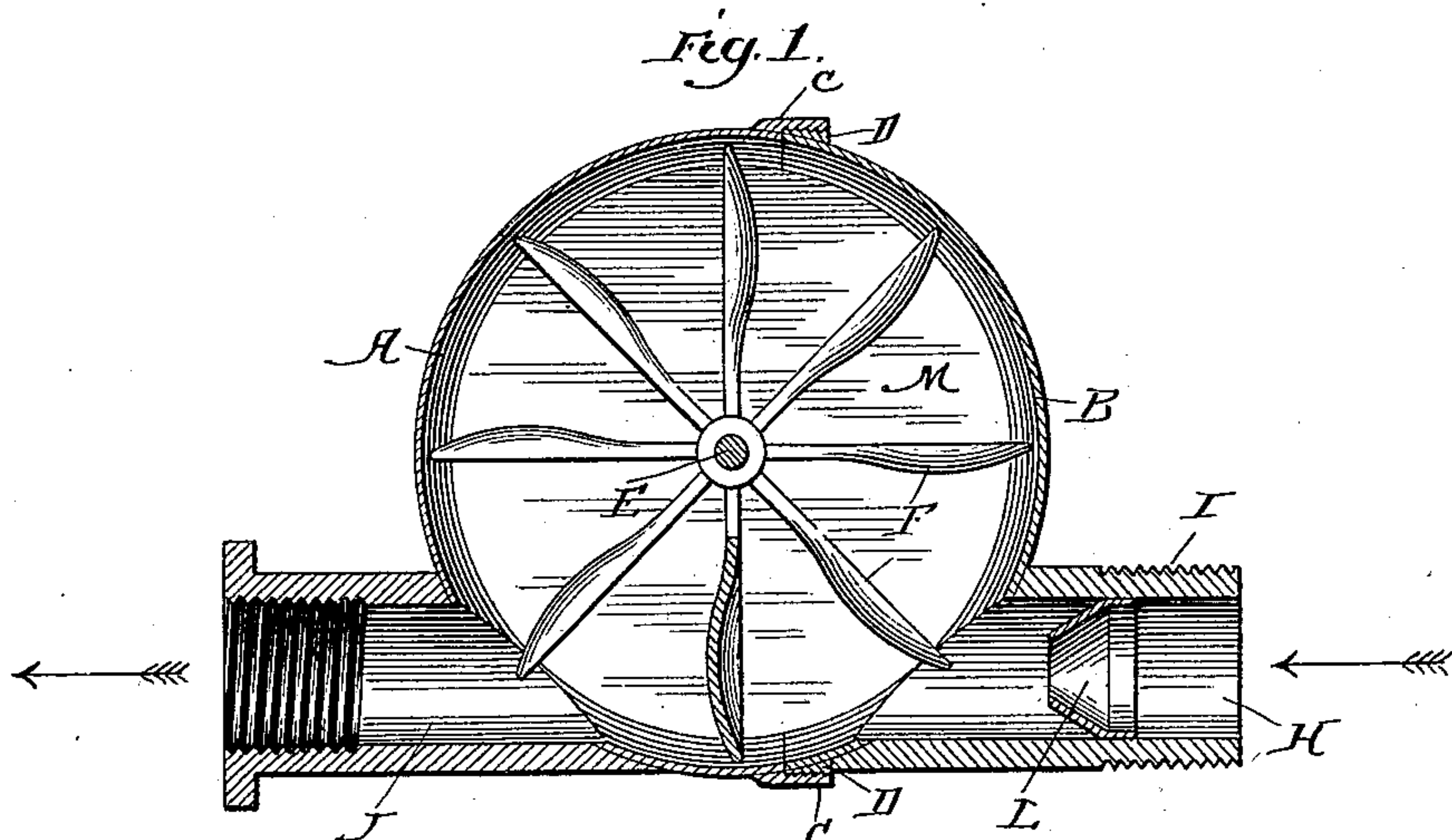
No. 621,036.

Patented Mar. 14, 1899.

J. F. CURRY.
WATER MOTOR.

(Application filed Mar. 22, 1898. Renewed Jan. 24, 1899.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN FRANKLIN CURRY, OF WILMINGTON, DELAWARE, ASSIGNOR OF ONE-FIFTH TO EUGENE M. SAYERS AND J. FRANK BALL, OF SAME PLACE.

WATER-MOTOR.

SPECIFICATION forming part of Letters Patent No. 621,036, dated March 14, 1899.

Application filed March 22, 1898. Renewed January 24, 1899. Serial No. 703,294. (No model.)

To all whom it may concern:

Be it known that I, JOHN FRANKLIN CURRY, a citizen of the United States, residing at Wilmington, county of New Castle, and State of Delaware, have invented a certain new and useful Improvement in Water-Motors, of which the following is a specification.

My invention relates to a new and useful improvement in water-motors, and has for its object to provide an exceedingly simple and effective device of this description which may be utilized for a variety of purposes, such as the washing of glasses, buffing, polishing, &c.; and a further object thereof is to retard to a certain extent the flow of water from the service-pipe when pressures are used, thus reducing the quantity of water utilized.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claim.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, the construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a longitudinal section of my improved motor, showing the wheel in elevation, with the exception of one blade thereof. Fig. 2 is a cross-section of the motor, showing a brush upon one end of the spindle and a buffing-wheel upon the other end thereof. Fig. 3 is a side elevation showing the motor applied to a service-pipe and a faucet thereon for drawing the water therefrom, which puts in motion the current for driving the wheel.

In carrying out my invention as here embodied I form a spherical casing, which is made of two sections A and B, the former having internal threads formed therein, while the latter has external threads adapted to engage the first-named threads and thus provide the opening and closing of the casing as desired, and in practice I prefer that this casing shall be made of sheet metal, stamped and drawn into shape, and that a reinforcing band C be placed around the edges of the section A, while a similar band D is placed

around the section B. It is to be noted that the section A is more than half of the sphere, while the section B is proportioned less than half in order that a division-line of the two sections shall be to one side of the center thereof, for the purpose set forth.

The section A has journaled therein a spindle E, which is adapted to revolve at a high rate of speed, and upon this spindle is secured the water-wheel F, the blades of which are spoon-shaped, as clearly indicated at G in Fig. 2.

An inlet H is formed with or secured to the section B and has external screw-threads I formed thereon for attachment to the coupling of the service-pipe, while the section A has an outlet J formed therewith or attached thereto, which is threaded internally for the reception of the faucet K. Both of these sections should be of greater thickness than the casing in order that the screw-threads may be properly formed thereon.

A reducer or nozzle L is placed within the inlet and so located that the water after passing therethrough will be projected in a stream of great force after the manner of a hose-nozzle, and the line of this stream is directed against the lower portion of the blades, which, as before stated, are spoon-shaped, and thereby causes the wheel to revolve at a high rate of speed and with considerable power, while the water when elevating the blades passes through the outlet to the faucet and may be then utilized for the ordinary purposes. The result of the reducer is to hold back upon this water within the service-pipe and cause a less amount to flow through the faucet, but at an increased pressure, and in cases where water-meters are used for the registering of the amount of water passing through the service-pipe it has been found that a considerable saving is effected without in any wise interfering with the purposes for which the water-flow of the faucet is utilized.

In order to prevent counteraction upon the blades of the wheel from eddying currents within the casing, partitions M are secured within said casing upon each side of the wheel and thus confine the water to a comparatively small space, and this has the further advantage—

tage of causing the motor to start more readily when the faucet is opened, since the least amount of water will remain in the casing and therefore be more quickly set in motion.

5 Each end of the spindle E projects through the casing to some distance and is provided with means for the securement of the brush N or buffing or polishing wheel O or other
10 suitable implement for performing the desired work. The means here shown for the securement of the brush and buffing-wheel is to make the spindle E hollow at each end for the insertion of the shanks of said implement, whereby the set-screws Q may be utilized for
15 holding said shanks in place.

The advantage of forming the casing in a spherical shape is that the sections of the same may be easily coupled together, and this greatly facilitates the assembling of the
20 motor or repairing thereof when occasion requires.

In practice the inlet H is attached to the service-pipe, while the faucet, as shown, is attached to the outlet, and when said faucet is
25 closed, the flow of water thereby being cut off, the wheel will remain stationary; but upon the opening of the faucet the water-flow will be started and, as before described, the wheel thereby put in motion with considerable force, and the speed at which the motor
30 runs may be determined by the extent to which the faucet is opened.

Of course I do not wish to be limited to any

particular use to which this motor may be put, since it is well adapted for a variety of
35 purposes, and as it is comparatively small for the power generated thereby it may be so placed as not to interfere with surrounding objects, and when used for washing glasses the latter are placed upon the brush N and
40 so manipulated as to bring said brush in contact with the surfaces desired to be cleaned, and the high speed at which said brushes rotate will quickly and thoroughly accomplish the result desired.

Suitable stuffing-boxes P are provided for packing of the spindle, so as to prevent leakage at the journaled points.

Having thus fully described my invention, what I claim as new and useful is—

In combination, two sections connected together by screw-threads formed thereon after the manner of a pipe-joint forming a completed casing, an inlet formed with one of the
55 sections, and an outlet formed with the opposite section, partitions secured within the casing to prevent the backlash of the water and a suitable wheel journaled within one of the sections, as and for the purpose set forth.

In testimony whereof I have hereunto affixed my signature in the presence of two
60 subscribing witnesses.

JOHN FRANKLIN CURRY.

Witnesses:

R. M. PIERCE,

H. B. HALLOCK.