

No. 606,757.

W. J. CUNNINGHAM.

Patented July 5, 1898.

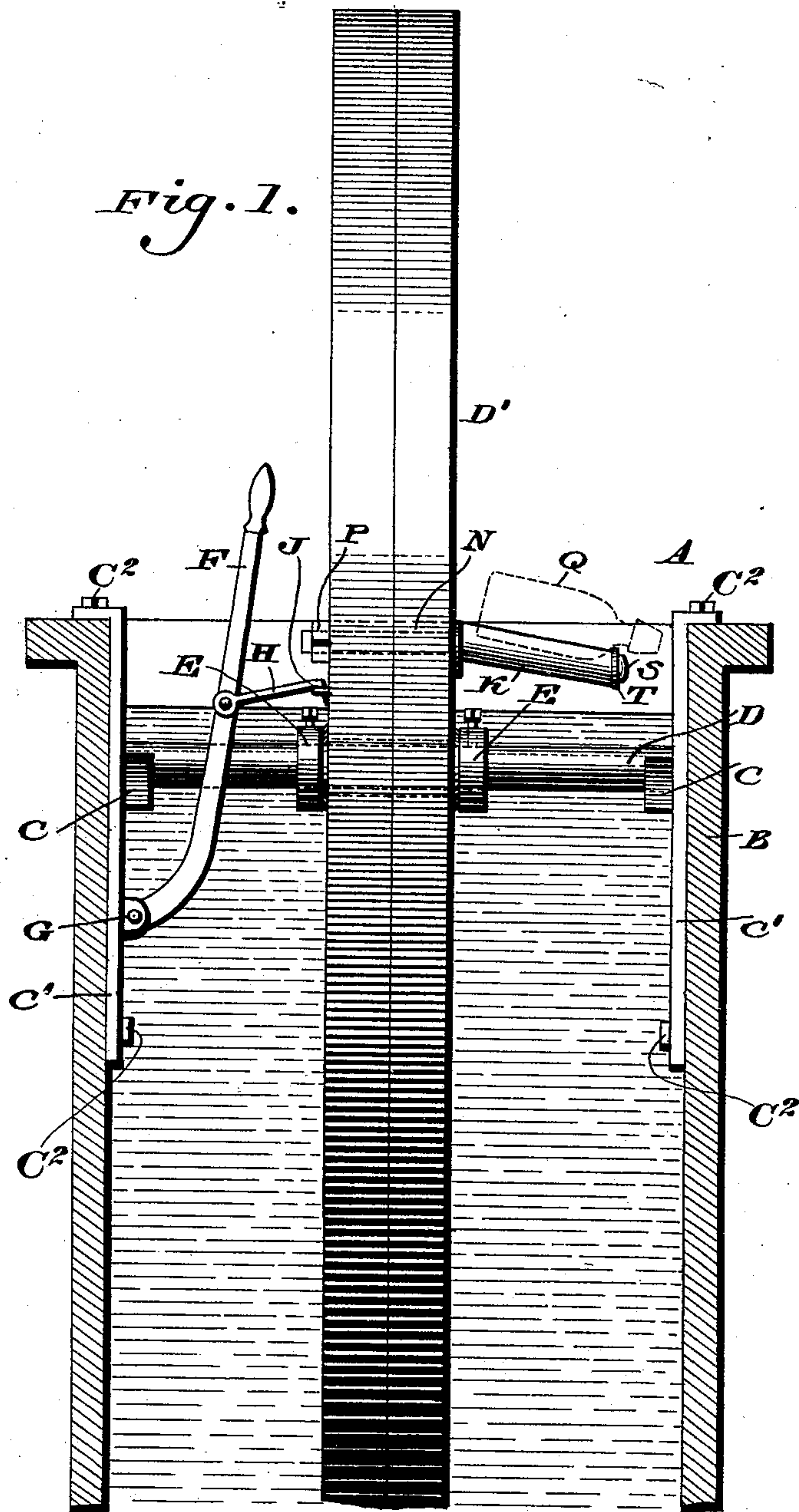
BOTTLE WASHER.

(Application filed Sept. 20, 1897.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.



WITNESSES

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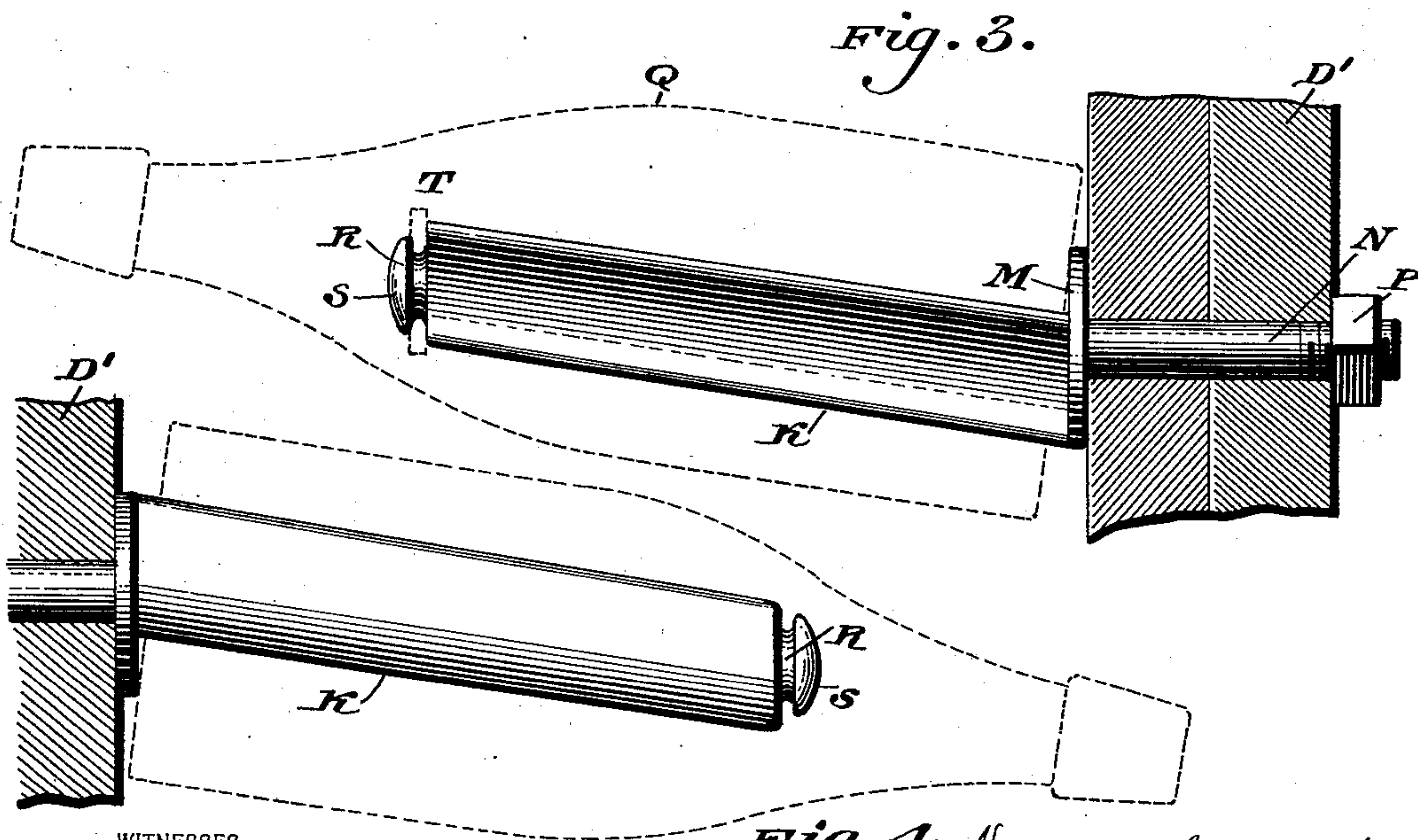
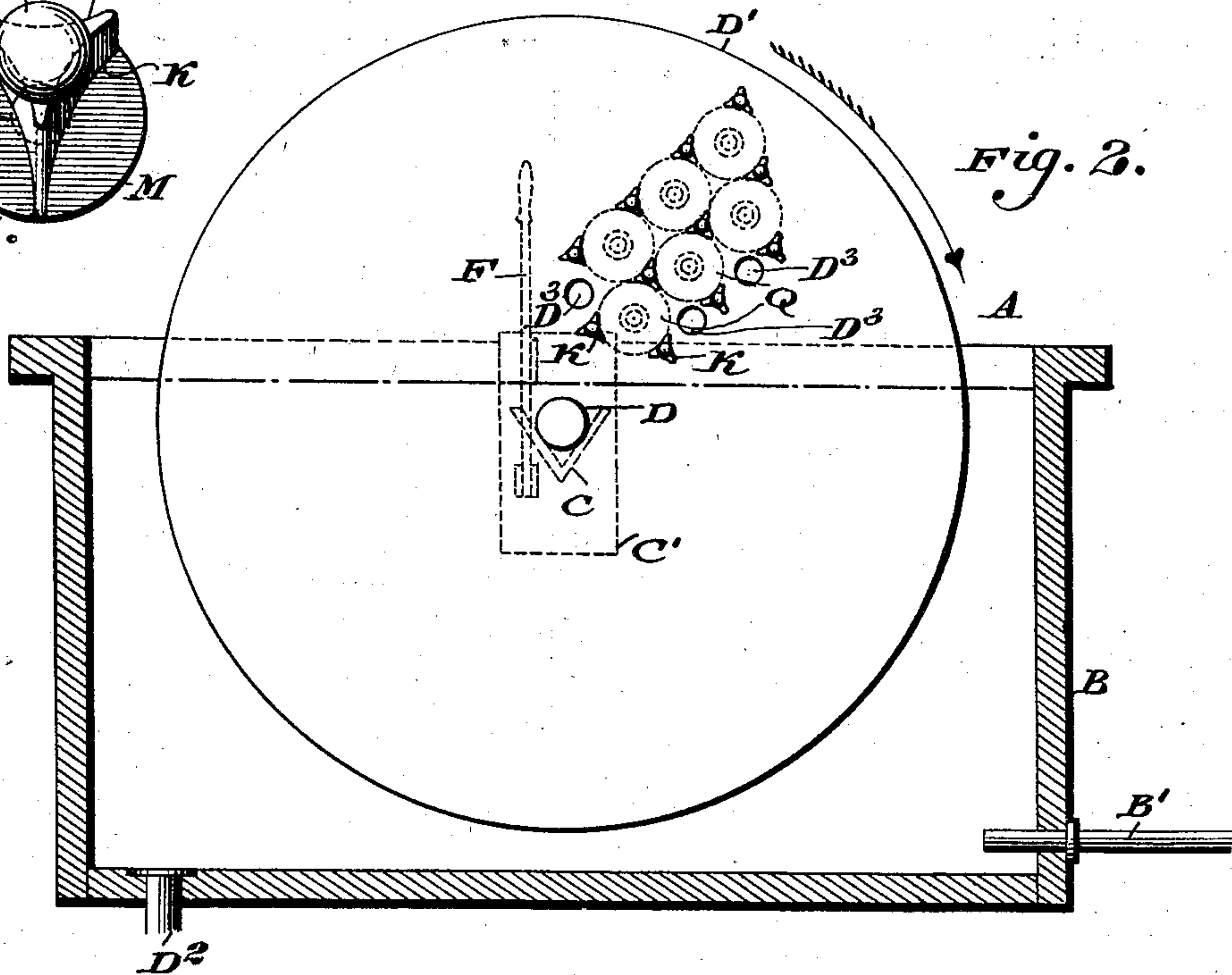
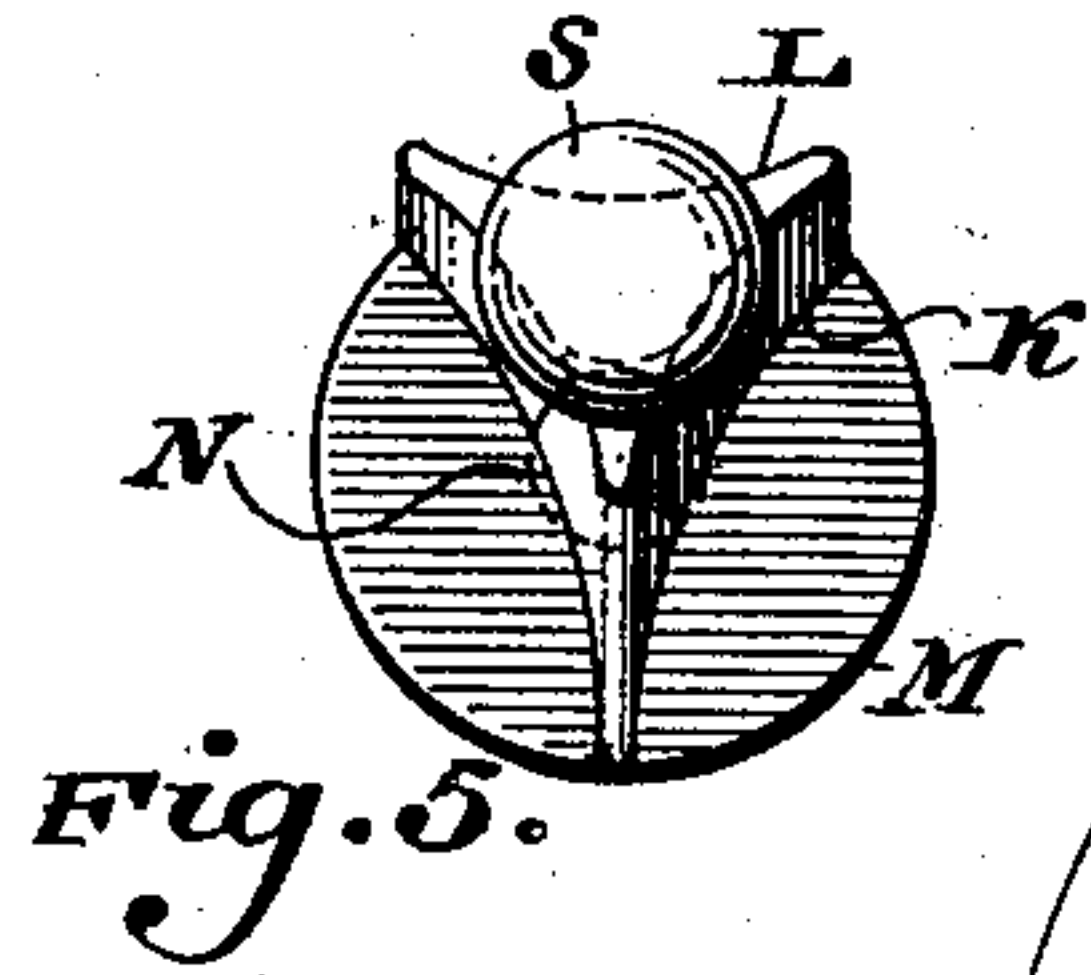
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2 Sheets—Sheet 2.



WITNESSES

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Fig. 4.

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# UNITED STATES PATENT OFFICE.

WILLIAM J. CUNNINGHAM, OF PHILADELPHIA, PENNSYLVANIA.

## BOTTLE-WASHER.

SPECIFICATION forming part of Letters Patent No. 606,757, dated July 5, 1898.

Application filed September 20, 1897. Serial No. 652,272. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM J. CUNNINGHAM, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Bottle-Washing Machine, of which the following is a specification.

My invention consists of an improved construction of bottle-washing machine which is adjustable to different sizes of bottles, the novel features being hereinafter fully set forth, and particularly pointed out in the claims. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 represents a front elevation of a bottle-washing machine embodying my invention, the tank thereof being shown in section. Fig. 2 represents a side elevation of Fig. 1, showing the tank in section. Figs. 3 and 4 represent, on an enlarged scale, sectional views of a portion of the device viewed from the right and left of Fig. 1, respectively, showing the supports for the bottles during the act of washing the same and the different positions said supports assume. Fig. 5 represents an end view of Fig. 4.

Similar letters refer to similar parts throughout the several views.

Referring to the drawings, A designates a bottle-washing machine, the same consisting of a tank B, which is adapted for the reception of the liquid employed for washing the bottles, said tank being provided with an inlet B' and outlet D<sup>2</sup>.

D designates a shaft engaging V or other suitably shaped bearings C upon the plate C', secured to the sides of the tank by bolts C<sup>2</sup> or other suitable means, which serve the additional purpose of preventing the said tank from bulging or collapsing. Upon this shaft is mounted the wheel or disk D', preferably so arranged that it will revolve independent of its shaft and be longitudinally movable thereon for the purpose of placing said wheel at any desired point on the shaft to accommodate the different lengths of bottles. The wheel can be made in one or more sections and of any suitable material. As shown, it is constructed in two sections and of wood, the grain of which runs in opposite directions to prevent warping.

The shaft-bearings C are so located as to allow of the greater portion of the wheel being submerged, thereby allowing the bottle to be longer immersed during the revolutions of the disk.

E designates collars mounted on the shaft D on either side of the disk D', said collars being adjustable on said shaft and held in position by means of set-screws or similar fastening devices for the purpose of keeping the wheel in place when set for the particular size bottle.

F designates a lever which is fulcrumed to any suitably-fixed point G and has a latch or hook H pivotally attached thereto, said hook engaging an eye J, attached to the wheel B'.

K designates the supports or holders for the bottles, the same having a suitable body portion which is provided with the concave or trough-shaped recess L, which is adapted to contact with the bottle, said supports or holders having the flange M, from which projects the threaded stem N, the latter passing through the wheel D' and being held in proper position by means of the nut P or similar device, said stem being offset and out of alignment with the holder K. They are so arranged that said bottles are kept from coming in contact with each other, thus preventing breakage.

S designates a head on the extremity of the holder K, the same being separated from the body of the latter by means of a reduced neck carrying the washer T.

The wheel D' has in it the openings D<sup>3</sup>, between the holders K thereon, to allow the neck of the respective bottles to pass through and present their mouths to the opposite side thereof in order to enable, as the bottles emerge from the bath, the insertion in said bottles while they are discharging the water of a revolving brush on a flexible shaft, (not shown,) thereby more thoroughly cleansing the said bottles.

The general arrangement and location of the holders K will be understood from Fig. 2, in which it will be seen that said holders are preferably arranged in groups of three, which hold a single bottle, only one holder being shown in Fig. 1 for the sake of clearness of illustration, although it will of course be apparent that the entire surface of the disk can



be provided with the holders, arranged substantially as indicated in Fig. 2.

The operation is as follows: The disk D' can be shifted longitudinally upon the shaft B after loosening the collars E by properly manipulating the lever F, this adjustment being necessary in adapting the device for bottles of different lengths. When the disk D' has reached the desired position, the hook H is disengaged therefrom and the collars E tightened. The bottles are placed in position on their holders in the manner indicated in Fig. 2, and upon the disk being rotated it will be seen that by reason of the inclination of the bottles their interior will be thoroughly washed and substantially every portion of both the exterior and interior will be subjected to the action of the fluid in the tank D.

By arranging the holders at an angle to the disk, as illustrated in the detailed views in Figs. 3 and 4, which it will be understood are viewed from the right and left of Fig. 2, respectively, it will be apparent that every portion of the bottle will be effectively washed, since by reason of the inclination given to the holders the bottle will automatically be filled when placed upon the former, and as the wheel revolves, carrying the latter to the opposite side of the tank, the inclination of the bottle is reversed, allowing the water to run therefrom. The bottles having been placed on the holders with their necks inserted in the openings D<sup>3</sup>, when they emerge from the tank brushes can be readily introduced through said openings into the bottle and the inside thereof properly cleansed.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

40 1. A bottle-washing machine consisting of a tank, a wheel or disk rotatably mounted therein and holders projecting at an angle from a side of said wheel, said holders being

adapted to retain the bottles in position and said wheel having openings therein between 45 said holders.

2. A bottle-washing machine consisting of a tank, a shaft mounted therein, a wheel mounted on said shaft, a lever suitably fulcrumed, connections from said lever to said 50 wheel for shifting the latter longitudinally on said shaft, means for holding said wheel in the desired position and holders mounted in said wheel and projecting at an acute angle therefrom. 55

3. A bottle-washing machine consisting of a tank and a shaft rotatably mounted therein, a wheel supported on said shaft and holders carried by said wheel, said holders having a trough-shaped body portion, a flange at 60 one extremity thereof, and a threaded stem projecting from said flange out of an alignment with said body, the other extremity of said holder having a head projecting therefrom and a washer supported adjacent to said 65 head.

4. In a bottle-washing machine, a tank, a disk or wheel rotatably supported therein, and holders supported on said wheel and inclined at an angle thereto, said holders being 70 arranged in groups of three which are adapted to support a single bottle, and said wheel having openings therein intermediate said holders.

5. A bottle-washing machine consisting of 75 a tank, a shaft mounted thereon, a wheel adjustable longitudinally on said shaft and inclined holders secured to said wheel, the latter having openings therein permitting the insertion of the necks of the bottles on said 80 holders.

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Witnesses:

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