

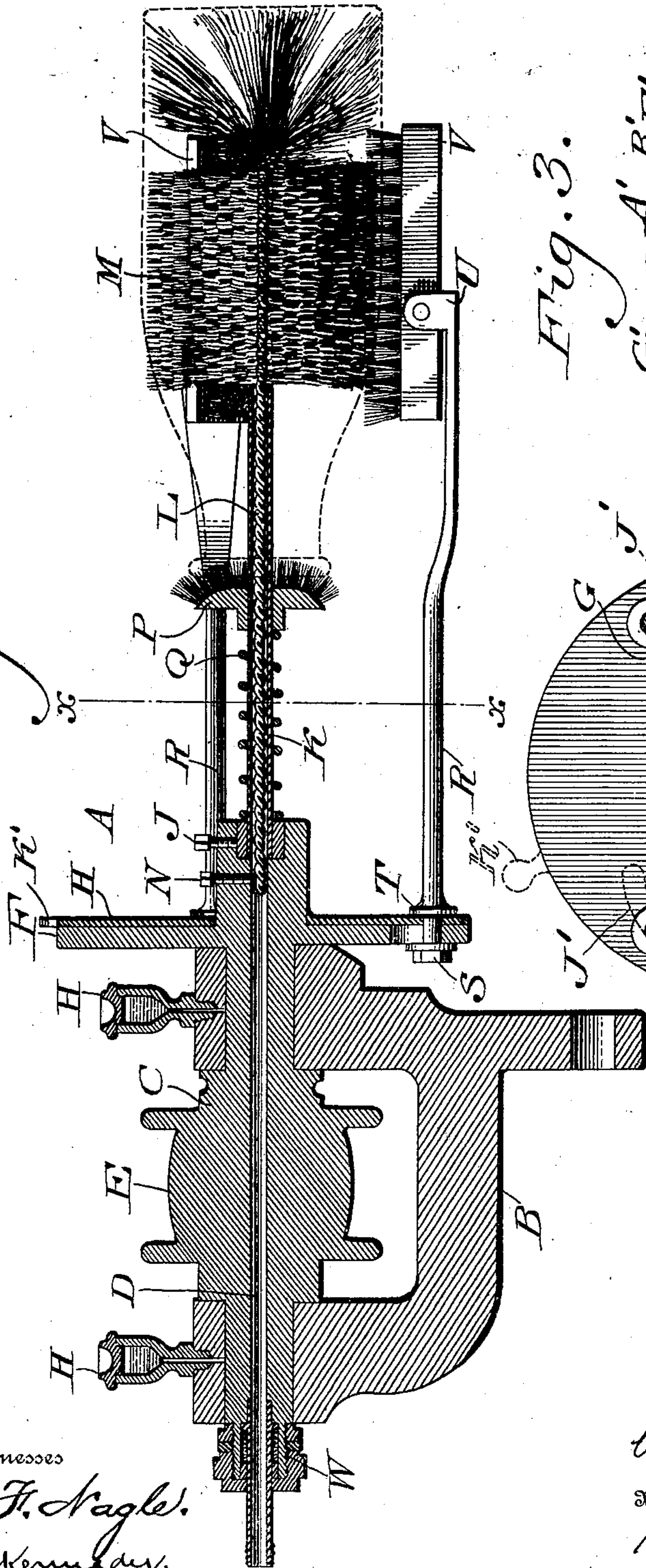
No. 712,265.

Patented Oct. 28, 1902.

W. J. CUNNINGHAM.  
BOTTLE WASHER.  
(Application filed Dec. 21, 1901.)

(No Model.)

Fig. 1.



Witnesses  
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Fig. 3.

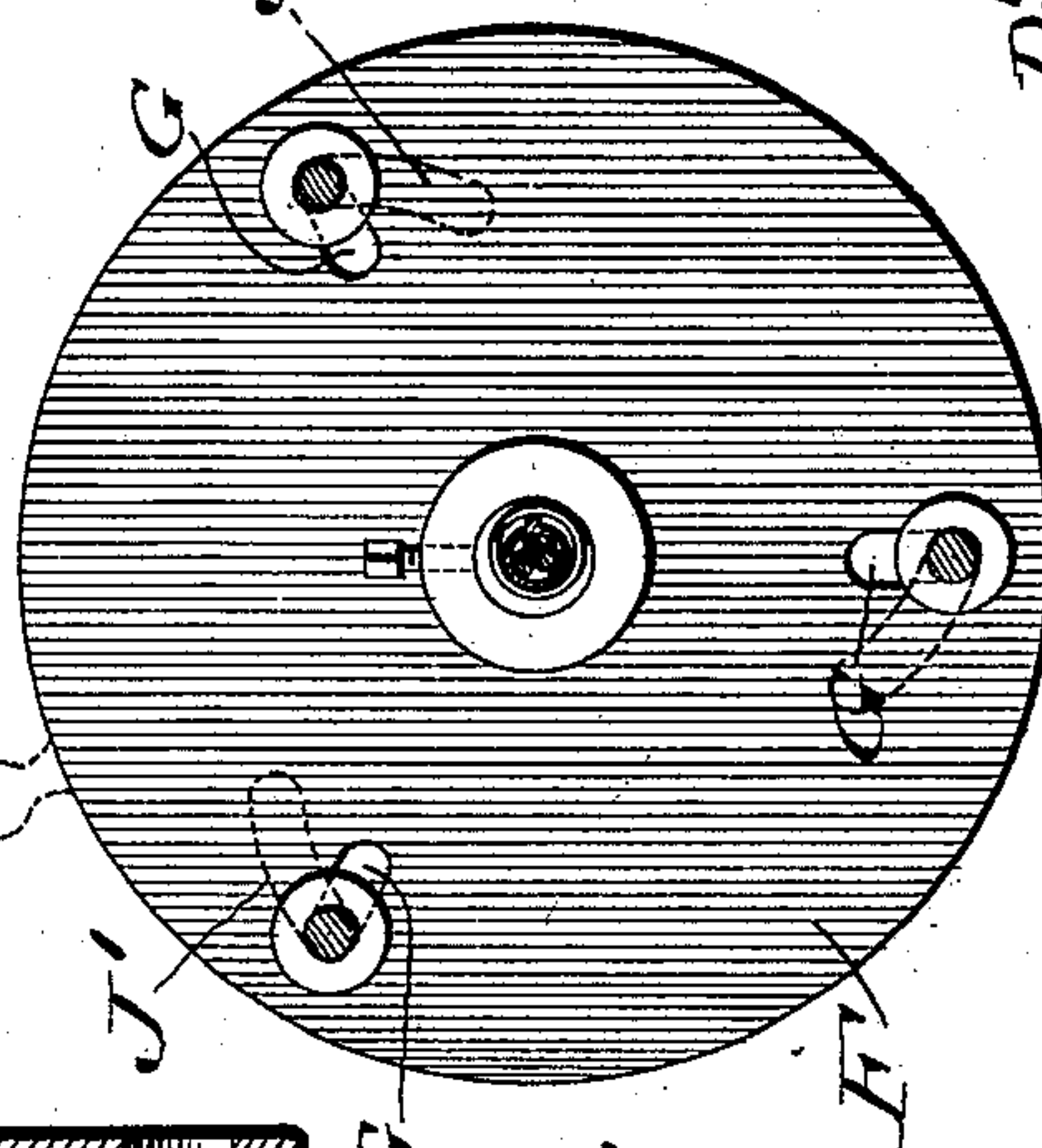
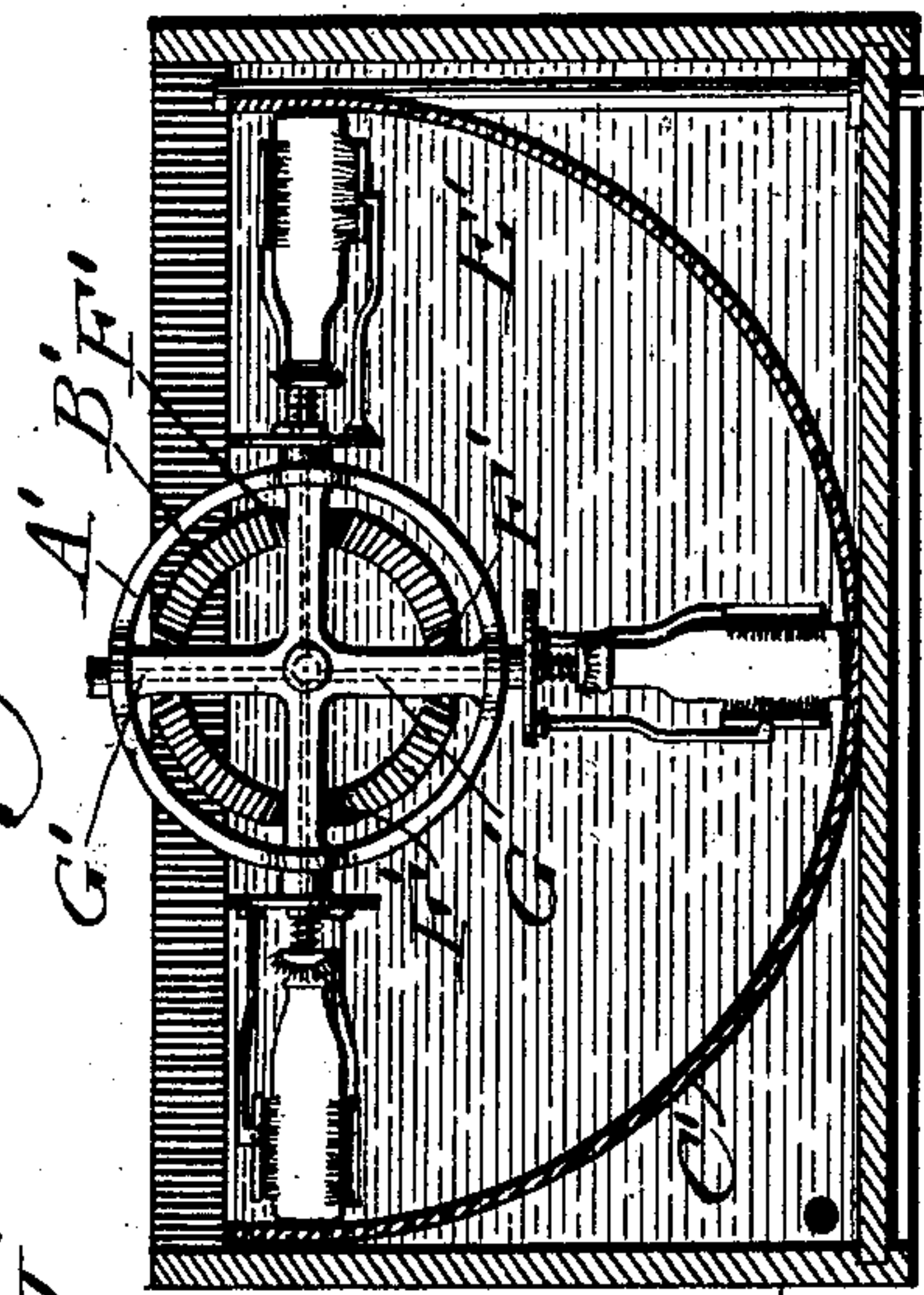


Fig. 2.

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# UNITED STATES PATENT OFFICE.

WILLIAM J. CUNNINGHAM, OF PHILADELPHIA, PENNSYLVANIA.

## BOTTLE-WASHER.

SPECIFICATION forming part of Letters Patent No. 712,265, dated October 28, 1902.

Application filed December 21, 1901. Serial No. 86,770. (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 Improvement in Bottle-Washers, of which the following is a specification.

My invention consists of an improvement in bottle-washing machines wherein I provide brushes for washing the interior and exterior of the bottle and means for imparting rotary motion to the washing devices.

It further consists in novel details of construction, all as will be hereinafter set forth.

Figure 1 represents a horizontal sectional view of a bottle-washing device, showing the same on a large scale. Fig. 2 represents a sectional view on line *xx* of Fig. 1. Fig. 3 represents a vertical sectional view of a bottle-washer embodying my invention, showing the washing devices in position.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates a bottle-washing device having the supporting-yoke B, in which is mounted the spindle C, which is provided with a bore D and is provided with a pulley E and at one end with a frame or plate F, having slots G therein. Suitable oil-cups H are supported in the yoke B for lubricating the journals.

Secured to the spindle C by the screw J is the tube K, which communicates with the bore D of said spindle and which is adapted to receive the stem L of the brush M, said brush being locked to the spindle C by the screw N, while mounted on said pipe K is a brush P, which is held in operative position by the spring Q around said tube K. R designates spring-arms which are suitably secured in the slots G by nuts S, said arms having the enlarged portions T, which engage with said plate F. U designates ears or projections on said arm R, to which are pivoted the brushes V, it being noted that the said brushes are pivoted at a point between the center thereof and the end toward the plate F. A suitable stuffing-box W is connected with the other end of the spindle C for evident purposes. The bottle-washing device which I have just described and which is shown on an enlarged scale in Fig. 1 is mount-

ed in a tank D' on a suitable wheel or frame A', to which motion is imparted in any suitable manner, and adjacent the frame is a gear B', which meshes with gears F', which are suitably connected with the washing devices A, so that when said frame A' is revolved the washing devices are adapted to be operated in order to revolve, as above described, it being noted that any number of washing devices are mounted upon the wheel or frame A'. G' (shown in dotted lines) designates pipes or connections which may be made either in the wheel or connected thereto and are adapted to conduct the cleansing material from any suitable source of supply into the said bottles, as said pipes or connections communicating with the said tube K.

C' designates a track upon which may be mounted suitable cleansing material and on which the bottom of the bottle is adapted to travel, whereby the same is prevented from leaving the washing devices A, it being further noted that the parts are so mounted in the tank D', which contains suitable cleansing material, that as the bottles revolve they are subjected to the action of the cleansing material.

The operation is as follows: The bottles are inserted in the washing devices A and motion is imparted to the frame A', which causes the spindle C of the washing devices to revolve, and water or other suitable material is conducted through the pipes G' into the tube K, and thus into the interior of the bottles, which are between the brushes V, and with the brush M on the interior and the brush P contacting with the mouth of the bottle, it being seen that in this manner the brushes on the interior and exterior of the bottles are revolved, thus cleansing the same, while the bottom of the bottle is cleansed by the material on the track C', while at the same time cleansing material which is within the tank D' contacts with the outside of the bottle. It will be noted that the arms R can be adjusted in the slots G, and thus the adjustment of the brushes V, and that owing to the construction of the arms R a certain movement of the brushes is permitted, so that the parts will not be broken.

In Fig. 1 I have shown a disk H' suitably connected with the plate F and having the



slots J' at an angle to the slots G in said plate F, a suitable handle K' projecting beyond the circumference of the plate F, the operation being readily shown. By moving the handle  
 5 K' in the proper direction the arms R will be simultaneously adjusted in the slots G, whereby it will be seen that various-sized bottles can be inserted in the machine and the brushes V, by reason of their connection with  
 10 the said arms R, be adjusted therefor.

It will be evident that changes may be made by those skilled in the art which will come within the scope of my invention, and I do not, therefore, desire to be limited in every instance  
 15 to the exact construction herein shown and described.

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

20 1. In a bottle - washing device, a tank, brushes adapted to receive and support a bottle, means for revolving said brushes with respect to said tank and means for revolving said brushes with respect to said bottle.

25 2. In a bottle - washing device, a tank, brushes suitably supported therein and adapted to receive and hold a bottle, means for conducting cleansing material into said bottle, means for revolving said bottle with  
 30 respect to the tank, and means for revolving said brushes with respect to said bottle.

3. In a bottle - washing device, a tank, brushes suitably supported therein and adapted to receive and hold a bottle, means for conducting cleansing material into said bottle,  
 35 means for revolving said bottle with respect to the tank, means for revolving said brushes with respect to said bottle, and means for holding the bottle between said brushes.

40 4. In a bottle - washing device, a tank, brushes suitably supported therein and adapted to receive and hold a bottle, means for conducting cleansing material into said bottle, means for revolving said bottle with respect

to the tank, means for revolving said brushes 45 with respect to said bottle, and a track for holding said bottle between said brushes.

5. In a bottle - washing device, a tank, a wheel, means for turning the same, a frame on said wheel, brushes carried by said frame 50 and adapted to receive and hold a bottle and means for revolving said brushes.

6. In a bottle-washing device, a tank, a wheel, means for turning the same, a frame carried by said wheel, a gear suitably supported, a gear on said frame meshing with  
 55 said first-mentioned gear, whereby said frame is revolved and brushes carried by said frame.

7. In a bottle-washing device, a tank, a cleansing material therein, brushes suitably 60 supported therein and adapted to contact with the exterior of the bottle, a brush adapted to be inserted in a bottle, means for revolving said brushes with respect to said tank, and  
 65 means for revolving said brushes with respect to said bottle.

8. In a bottle-washing device, a tank, a wheel, means for turning the same, a frame carried on said wheel, a gear suitably supported, a gear on said frame meshing with 70 said first-mentioned gear, whereby said frame is revolved, brushes carried by said frame, and a track for holding said bottles between said brushes.

9. In a bottle-washing device, a tank, a 75 cleansing material therein, brushes suitably supported therein and adapted to contact with the exterior of the bottle, a brush adapted to be inserted in a bottle, means for revolving said brushes with respect to said tank, means 80 for revolving said brushes with respect to said bottle, and a track upon which said bottles travel whereby the latter are prevented from leaving the washing device.

WILLIAM J. CUNNINGHAM.

Witnesses:

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