

No. 728,754.

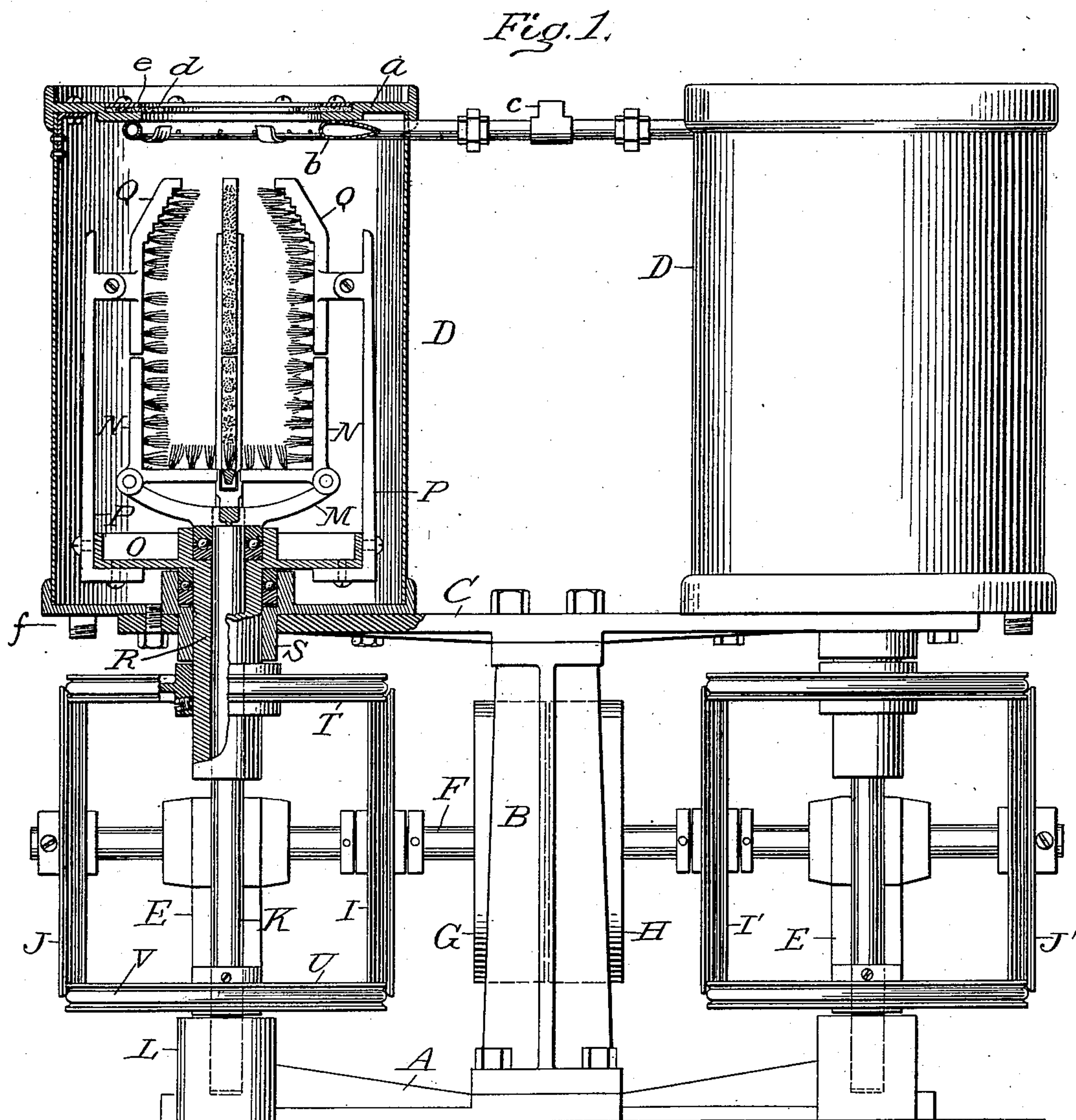
PATENTED MAY 19, 1903.

A. B. PARK.  
BOTTLE WASHING MACHINE.

APPLICATION FILED JULY 8, 1902.

NO MODEL.

3 SHEETS—SHEET 1.



Witnesses  
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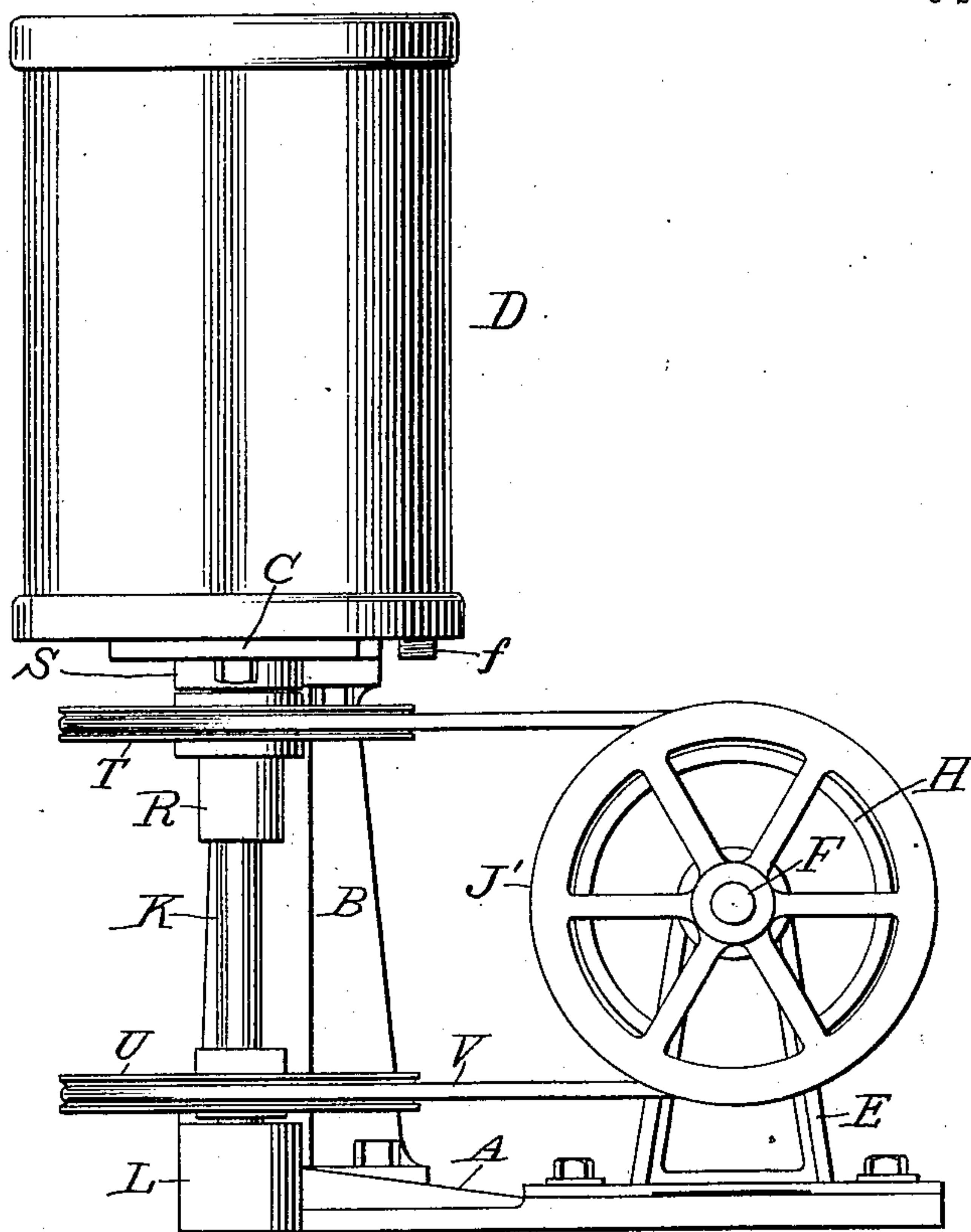
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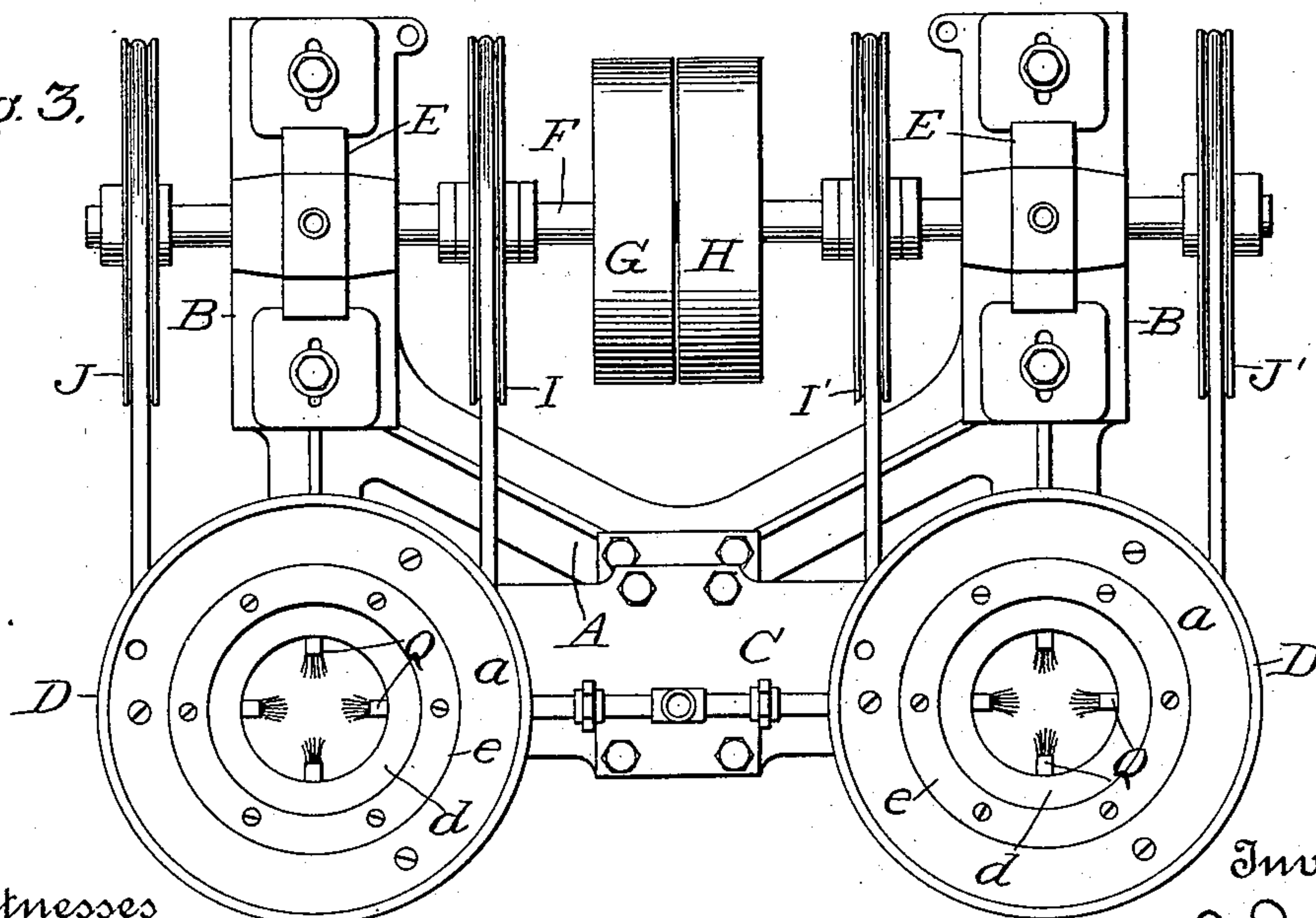
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3 SHEETS—SHEET 2.

*Fig. 2*



*Fig. 3.*



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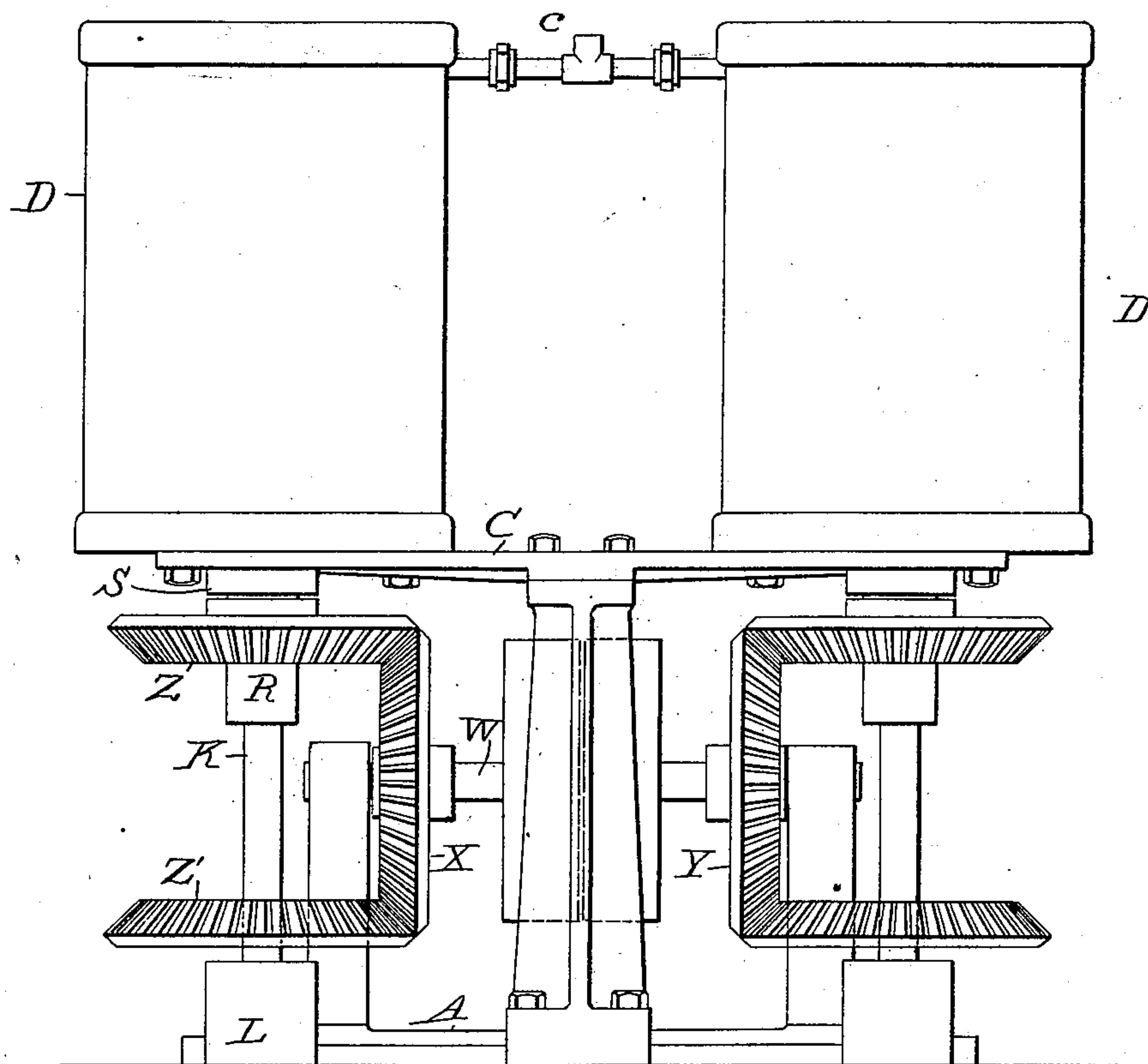
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3 SHEETS—SHEET 3.

*Fig. 4.*



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# UNITED STATES PATENT OFFICE.

ARTHUR B. PARK, OF NEW YORK, N. Y.

## BOTTLE-WASHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 728,754, dated May 19, 1903.

Application filed July 8, 1902. Serial No. 114,803. (No model.)

*To all whom it may concern:*

Be it known that I, ARTHUR B. PARK, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Bottle-Washing Machines, of which the following is a specification.

My present invention pertains to improvements in machines for washing siphon-bottles and the like, the construction and advantages of which will be hereinafter set forth, reference being had to the annexed drawings, wherein—

Figure 1 is a front elevation, partly in section, of the apparatus; Fig. 2, a side elevation; Fig. 3, a top plan view, and Fig. 4 a view illustrating a modified form of driving mechanism.

One object of my invention is to provide a simple and efficient machine for washing siphon-bottles and the like in which the strain to which the bottle is subjected on account of the action of the brushes will be evenly distributed by reason of the movement of the brushes or brush-sections in opposition to each other.

A further object of the invention is to provide means for drying or wiping the bottle as it is withdrawn from the apparatus.

Other advantages than those incident to the construction just referred to will hereinafter appear.

The same reference-letters will be applied to corresponding parts throughout the following description.

Referring to the drawings, A denotes the base, which may be of any suitable form and from which extends upwardly a suitable support or column B. Secured to the upper end of the column is a two-armed bracket C, which forms a support for the cylindrical shells or casings D, two being shown in the present instance. Extending upwardly from the base are columns or supports E, in which is journaled a shaft F. Said shaft carries fast and loose pulleys G H and also has mounted upon it a pair of loose band or belt wheels I I'. A second pair of band-wheels J J' is likewise secured to the shaft. The cylindrical casings and the mechanism mounted therein are duplicates, and consequently a description of one will suffice for both.

A shaft K, having its lower end mounted in a bearing-block L, formed in or secured upon the base, extends up into the cylindrical casing, as best shown at the left in Fig. 1. The shaft has secured to its upper end a spider or frame M, to which are pivotally connected brush-sections N, four being employed in the construction shown. Each brush-section is arranged in the form of a bell-crank or L, with the bristles extending inwardly toward each other, as will be clearly seen upon reference to Fig. 1. A second spider O is mounted within the cylindrical casing and carries a series of upwardly-extending arms P, to which are pivoted the brush-sections Q, the lower ends of the sections standing in alignment with the upper ends of the lowermost brush-sections N, while the upper ends of said sections Q are inclined inwardly toward each other, so that the brush-sections N and Q, considered as a whole, take the general outline of a siphon-bottle or the like. The spider O is provided with a downwardly-extending sleeve or collar R, which encircles the shaft K and passes through a downwardly-projecting sleeve S, formed upon the bottom of the cylindrical casing. Suitable ball-bearings—such, for instance, as shown in Fig. 1—will be employed intermediate the parts in order to render the machine light running and to take up the thrust and wear of the bearings. Sleeve R has secured to it a band wheel or pulley T, while shaft K has likewise secured to it, near its lower end, a similar band wheel or pulley U. A band or belt V is passed about the wheels I I' J J' and the corresponding pulleys T and U, and by reason of their location, as shown, the spiders M and O will be rotated in reverse or opposite directions, so that the lowermost brush-sections N will travel in a direction in opposition to that taken by the other sections Q. From this it will be seen that when a bottle is in place between the brush-sections the action of one set of brushes tending to rotate the bottle in one direction will be offset by the action of the second set of brushes which tends to rotate it in a reverse direction. The pivoting of the brushes permits them to fit closely to the outer face of the bottle being cleansed and likewise permits the ready insertion and withdrawal of the bottle from between the



brushes. It is manifest, of course, that any form of driving mechanism which will accomplish the same result may be employed—as, for instance, that shown in Fig. 4, wherein a shaft W, provided with fast and loose pulleys, carries bevel-gears X and Y, which mesh with corresponding bevel-gears Z Z', carried, respectively, by the shaft K and sleeve R.

Mounted within the upper end of the cylindrical casing and carried by the top plate or cover *a* thereof is a perforated pipe *b*. The perforations in the pipe are directed downwardly, so as to supply water to the brushes and against the bottle being operated upon. The pipes of the various casings will be connected to a common supply, as *c*.

Secured to the cover *a* and projecting inwardly from the walls of the opening formed therein is a rubber ring *d*, which serves to wipe and dry the bottle as it is withdrawn from the cylindrical casing. This ring is held in place by a ring or washer *e*, which permits the ready removal and replacement of the rubber ring when necessary.

A suitable drain *f* is provided at the lower end of each of the cylindrical casings D, which, if desired, may be connected with a common discharge-pipe.

It is manifest that in so far as the details of construction are concerned the invention may be modified without departing from the spirit thereof. One cylindrical casing may be used alone, though it is preferable to employ two, for the reason that an attendant can be withdrawing a cleansed bottle and replacing it by one which requires washing while the brushes in the other casing may be operating upon another bottle.

Having thus described my invention, what I claim is—

1. In an apparatus of the character described, the combination of two series of brushes adapted and arranged to act upon different portions of the same face of a siphon-bottle or the like; and means for imparting reverse movements to said series of brushes.

2. In an apparatus of the character described, the combination of two series of brushes adapted and arranged to act upon different portions of the same face of a siphon-bottle or the like; means for causing said brushes to move in opposition to each other; and means for supplying water thereto.

3. In an apparatus of the character described, the combination of two series of pivoted brushes; and means for causing the brushes of one series to rotate in opposition to those of the other series.

4. In an apparatus of the character described, the combination of two series of pivoted brushes; means for causing the brushes of one series to rotate in opposition to those of the other series; means for supplying water to the brushes; an inclosing shell or casing having an opening therein; and a wiping device carried by said casing in the opening

therein; through which the siphon-bottle or the like is withdrawn.

5. In an apparatus of the character described, the combination of a suitable shell or casing having an opening in one wall thereof; a rotary brush mounted therein; means for supplying water to said brush; and a flexible wiping device carried by the shell in the opening therein through which the siphon-bottle or the like is withdrawn.

6. In an apparatus of the character described, the combination of two series of pivoted brushes, each series comprising a plurality of separate sections with the bristles extending inwardly toward a common center and forming in general outline the shape or contour of the bottle to be cleansed; and means for rotating the brushes of one series in opposition to those of the other.

7. In an apparatus of the character described, the combination of two series of pivoted brushes; means for rotating the brushes of one series in opposition to those of the other; an inclosing shell or casing having an opening in one wall thereof; means for directing water onto said brushes; and a flexible wiping-ring secured to the casing in the opening therein through which the bottle is withdrawn.

8. In an apparatus of the character described, the combination of a suitable shell or casing; two series of brushes mounted therein, one series having the general shape and contour of the lower portion of the bottle to be washed, and the other series the contour of the upper portion thereof; means for rotating said series in opposite directions; means for directing water onto the article being washed; and a wiping device carried by the shell.

9. In an apparatus of the character described, the combination of a base; a shell or casing supported thereby; a shaft extending up into the casing; a spider secured to said shaft; a series of L-shaped brush-sections pivoted to said spider; a second spider mounted within the shell; a series of arms extending upwardly therefrom; a brush-section pivoted to each of said arms, the brushes converging toward each other at their upper ends; and means for imparting reverse rotary motion to the shaft and the second spider.

10. In an apparatus of the character described, the combination of a base; a shell or casing supported thereon and formed with an opening at its upper end; a shaft extending up into the casing; a spider carried thereby; a series of L-shaped brushes carried by the spider; a second spider sleeved upon the shaft and supported within the casing; arms extending upwardly therefrom; a pivoted brush carried by each of the arms, the upper ends of the brushes converging toward each other; means for imparting reverse rotary motion to the shaft and the second spider; means for directing water onto the brushes and bottle



being washed; and a flexible wiper extending into the opening through which the washed bottle is withdrawn.

11. In an apparatus of the character described, the combination of a base; a pair of shells or casings supported thereon; a shaft extending up into each of the shells; a spider mounted in each shell; independent brush-sections carried by each of the shafts and spiders; a driving-shaft; and connections intermediate said shaft, the spiders and first-

mentioned shafts for driving the two series of brushes within each shell in opposition to each other.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ARTHUR B. PARK.

Witnesses:

J. GILE FOREST, Jr.,  
F. F. JACOBS.