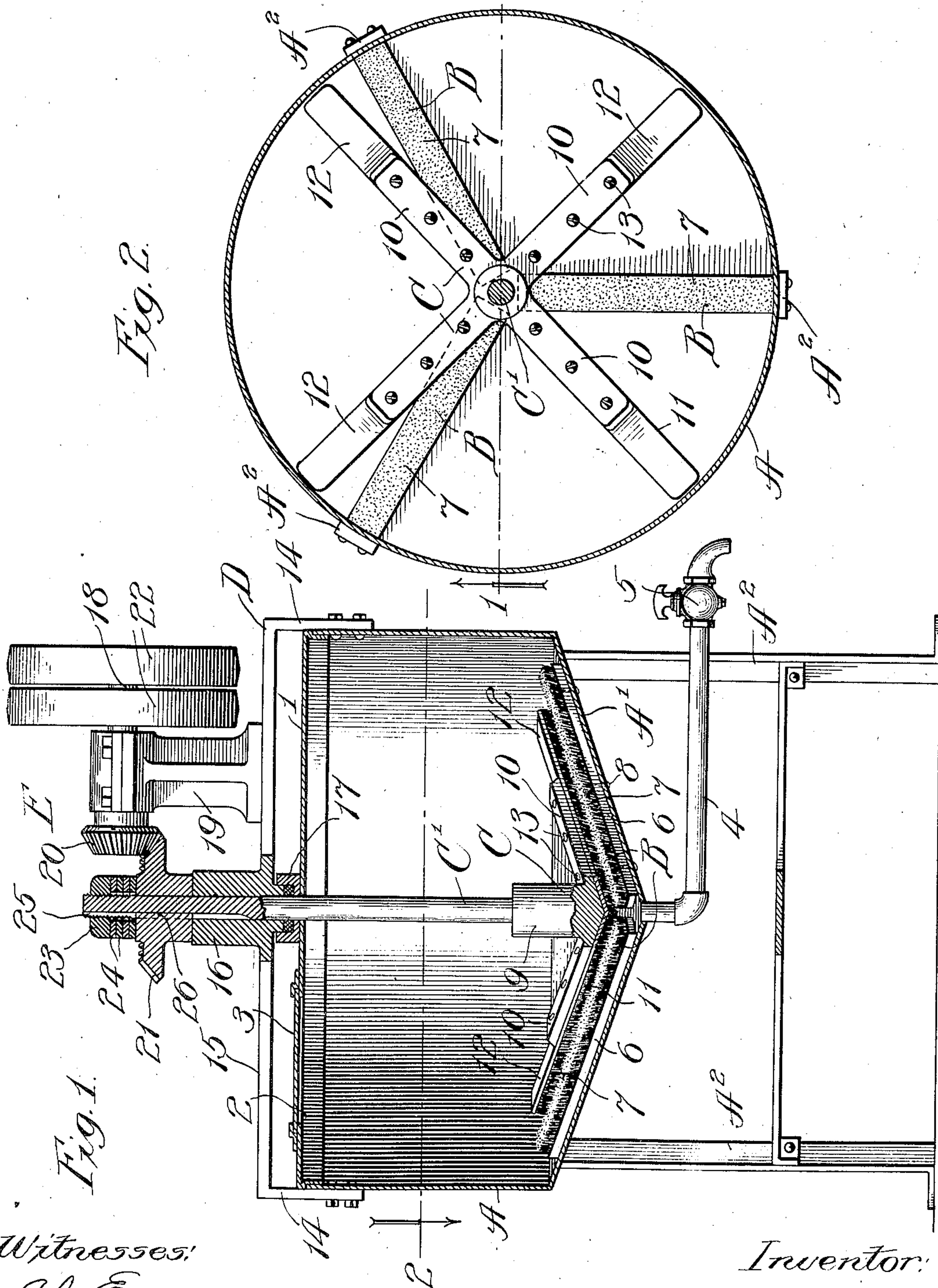


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WASHING MACHINE.  
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966,080.

Patented Aug. 2, 1910.



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# UNITED STATES PATENT OFFICE.

DONALD CAMERON, OF CHICAGO, ILLINOIS.

WASHING-MACHINE.

966,080.

Specification of Letters Patent.

Patented Aug. 2, 1910.

Application filed April 12, 1909. Serial No. 489,454.

*To all whom it may concern:*

Be it known that I, DONALD CAMERON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Washing-Machines, of which the following is a specification.

My invention relates particularly to machines adapted for use in cleansing gloves and other small articles of personal wear; and my primary object is to provide a machine of simple construction and cheap cost, which operates in an improved manner for the purpose indicated.

The invention is illustrated in its preferred embodiment in the accompanying drawing, in which—

Figure 1 represents a central vertical sectional view of a cleansing machine constructed in accordance with my invention, the section being taken as indicated at line 1 of Fig. 2; and Fig. 2, a horizontal section taken as indicated at line 2 of Fig. 1.

In the construction illustrated, A represents the body, which is of cylindrical form and provided with a conical bottom A<sup>1</sup>; B, stationary, upturned brushes applied to the bottom A<sup>1</sup>; C, a rotary agitator, or stirrer, carried by a shaft C<sup>1</sup>; D, a bracket through which the shaft extends; and E, driving means for imparting continuous rotary movement to the shaft C<sup>1</sup>.

The casing, or body, A may be of any suitable construction. As shown, it is formed of sheet metal, and is provided with a removable top 1, which has a hand-opening 2 equipped with a closure 3. The bottom A<sup>1</sup> of the casing is dished, or conical, and has connected with its central portion an outlet 4 equipped with a stop-cock 5. The casing, or body, A is supported on legs A<sup>2</sup>.

The stationary brushes B may be of any desired number. As shown, there are 3 of the stationary brushes separated from each other by an angle of 120 degrees. Each brush comprises a back 6 and bristles 7, the back being secured to the bottom of the casing in any suitable manner, as by screws 8. The rotary agitator C preferably comprises a hub 9 having arms 10; and downturned brushes 11, whose backs 12 are secured to the arms 10, as by screws 13. The arms 10 and brushes carried thereby are shown as four in number, the brushes being arranged in the form of a cross. The brushes B incline, according to the slope of the bottom of

the casing; and the brushes carried by the arms 10 of the rotary agitator C have the same inclination.

The bracket D is carried by the upper portion of the body, or casing, A in any suitable manner. As shown, the bracket has vertical arms 14 and a cross-member 15 located a short distance from the top 1. The member 15 is provided with a central bearing 16 through which the shaft C<sup>1</sup> extends. Connected with the lower portion of the bearing 16 is a stuffing-box, or waste-box, 17, which serves to prevent any lubricating oil from reaching the interior of the casing. As shown, the top 1 has a perforation directly beneath the waste-gland 17 through which the shaft C<sup>1</sup> extends.

The driving mechanism E comprises a horizontal shaft 18 journaled in a standard 19 mounted on the bracket D; and a pinion 20 secured to said shaft and meshing with a gear 21 connected with the upper end of the shaft C<sup>1</sup>. The shaft 18 is equipped with tight and loose pulleys 22. The shaft C<sup>1</sup> is slidable through the gear 21 to enable the agitator C to rise when necessary in the operation of the machine. The agitator C is suspended through the medium of the shaft C<sup>1</sup>, said shaft being equipped at its upper end with a nut 23 and washers 24. The shaft is provided at its upper end with a longitudinal groove 25 which receives a spline 26 with which the gear 21 is provided.

The operation will be understood from the foregoing description. Benzin, or other cleansing fluid, may be introduced through the hand-opening 2. Gloves, or other small articles of wear, also may be introduced through the hand-opening 2. The washing fluid preferably is maintained at approximately the level of the upper outer end of the brushes, or perhaps a little below the same. Continuous rotary motion is imparted to the agitator C through the medium of the driving mechanism E. As the agitator revolves, the fluid is given a rotary movement, as well as a movement of circulation from center to circumference and back, and the articles to be cleansed are carried between the brushes, and a thorough cleansing is effected. Owing to the inclination of the brushes the small articles are caused to pass with certainty between the brushes, since the spaces between the brushes will be encountered by the articles being cleansed regardless of the distances of the articles from the



center of the machine. On the other hand, the inclination of the bottom of the machine and the brushes tends to keep the articles being washed from being thrown wholly to the circumferential wall of the casing; and, in practice, the rate of rotation of the agitator C is regulated according to the slope of the bottom A<sup>1</sup>, it being possible to increase the rate of rotation as the inclination of the bottom is increased, within reasonable limits.

When desired, the benzine may be removed from the casing by opening the stop-cock 5, and the benzine may then be passed to a settling tank, so that the benzine may be used again after the impurities have settled.

The machine is primarily designed for cleansing gloves and other small articles of personal wear in which it is desired that the entire surface of such articles be exposed to the frictional action of the brushes. By means of the lower brushes arranged as shown the article being cleansed will lie flat, or substantially so, and the upper and lower series of brushes brought into frictional contact with the upper and lower surfaces of the article being cleansed, thus producing a thorough cleaning of the same in a short period of time.

The construction described is simple, and may be cheaply manufactured. It is durable, and practical use has demonstrated the effectiveness of the machine for the purpose of cleansing gloves and other small articles of like nature. It will be appreciated therefore, by those familiar with the situation, that the machine herein described is a particularly valuable one and adapted to perform work which can not be done by ordinary washing machines.

The foregoing detailed description has been given for clearness of understanding

only. Hence no undue limitation should be understood therefrom, but the appended claims should be construed as broadly as permissible in view of the prior art.

What I regard as new, and desire to secure by Letters Patent, is—

1. In a machine of the character set forth, the combination with a casing having a conical bottom, a series of radially extending upturned stationary brushes mounted on said bottom, a spider equipped with downturned inclined brushes, a shaft connected with said spider, a bearing for the upper end of said shaft, a gear on said shaft meshing with a pinion carried by the driving shaft, a nut on the end of said shaft, and removable washers interposed between the shaft bearing and nut, whereby the depth to which the shaft extends within the casing may be adjusted and the distance between the revolving brushes carried thereby and the stationary brushes on the bottom of the casing regulated, as set forth.

2. In a machine of the class described, the combination with a casing having a conical bottom equipped with a series of stationary radially extending upturned brushes, of a spider equipped with downturned radially extending inclined brushes, a shaft for said spider, a bracket on the casing for supporting the bearing and operating gear for revolving said shaft, and a series of removable washers on the upper end of said shaft, whereby the depth to which said shaft extends into the casing and the distance between the opposing faces of the sets of brushes may be adjusted, as set forth.

DONALD CAMERON.

In presence of—

K. M. CORNWALL,  
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