J. H. VANDER KOLK & J. BRINK.

WASHING MACHINE.

APPLICATION FILED APR. 7, 1917.

1,284,949. Patented Nov. 12, 1918.

Fig. 1.

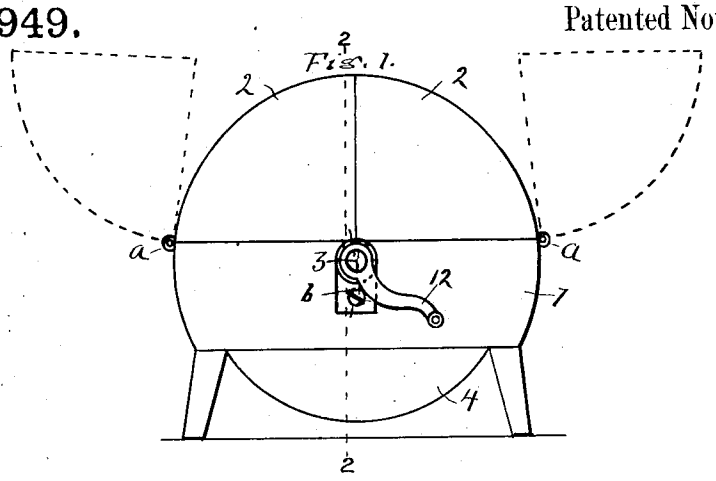


Fig. 2.

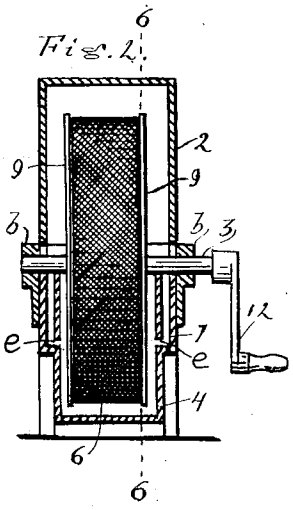


Fig. 3.

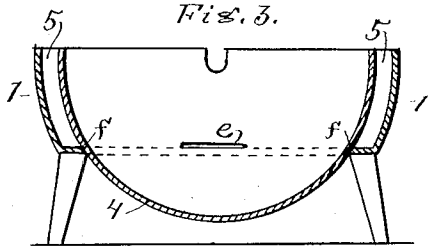


Fig. 5.

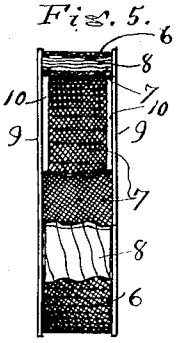


Fig. 4.

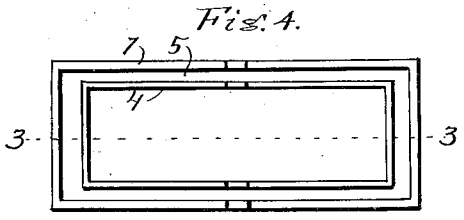


Fig. 7.

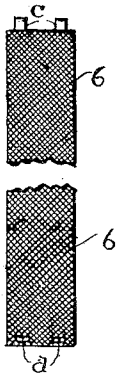
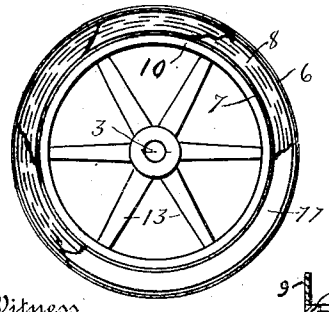


Fig. 6.



Witness

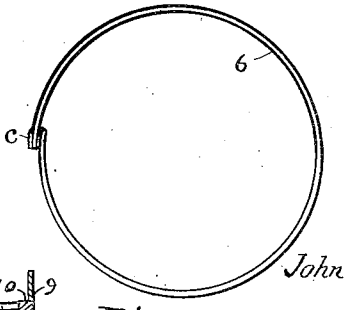


Fig. 8.

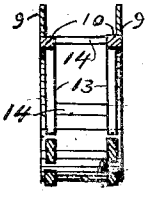


Fig. 9.

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UNITED STATES PATENT OFFICE.

JOHN H. VANDER KOLK AND JOHN BRINK, OF HAMILTON, MICHIGAN.

WASHING-MACHINE.

1,284,949. Specification of Letters Patent. Patented Nov. 12, 1918.

Application filed April 7, 1917. Serial No. 160,563.

To all whom it may concern:

Be it known that we, JOHN H. VANDER KOLK and JOHN BRINK, citizens of the United States, residing at Hamilton, in the county of Allegan and State of Michigan, have invented certain new and useful Improvements in Washing-Machines, of which the following is a specification.

Our invention relates to improvements in washing machines, and more particularly in rotary washing machines, and its objects are: first, to provide a means whereby water and suds will be forced through the clothes by centrifugal action of the machine cylinder; second, to provide storage for a sufficient amount of water, in reserve, to wash a machine full of clothes, and at the same time to provide means whereby said reserve water may be made to flow into the washing cylinder in proper quantities to thoroughly cleanse the clothes as it is forced through them, and, third, to provide a ready means for placing and securing the clothes in the washing cylinder.

We attain these objects by the mechanism illustrated in the accompanying drawing, in which Figure 1 is a side elevation of the machine. Fig. 2 is a transverse section of the same on the line 2—2 of Fig. 1; Fig. 3, is a longitudinal section of the water tank, or tub, on the line 3—3 of Fig. 4. Fig. 4 is a plan of the water tank. Fig. 5 is an elevation of the washing cylinder with parts cut away to show the distribution of the screens and the clothes when in position for washing. Fig. 6 is an elevation of the washing cylinder with one side removed and looking to the left from the lines 6—6 on Fig. 2. Fig. 7 is an extended plan of the outer screen indicating how the ends may be connected together. Fig. 8 is a side elevation of the outer screen showing how the ends are connected to confine the clothes in the cylinder, and, Fig. 9 is a sectional view of one side of the cylinder indicating how the arms or spokes that support the cylinder are distributed.

Similar reference characters represent similar parts throughout the several views.

In the construction of this washing machine we make an outer water tank 1, that is designed to be nearly filled with the necessary sudsy water, or other water for properly washing or rinsing the clothes. This tank is divided with a wall 4 to form an inner tank and an outer tank, (as indicated in Figs. 2, 3 and 4,) in which the cylinder 9 is made to revolve. The walls of these tanks are connected to form a water tight connection, at *f*, *f*, and a small aperture, as *e*, is made through the walls 4 so water that is stored in the outer tank may flow through these apertures from the outer tank into the inner tank at a height sufficient so that the adjacent part of the rim of the cylinder will be wholly immersed to a given depth above the clothes, 8, contained in the cylinder.

The washing cylinder is made up of the flanges, or sides 9, 9, which are mounted on the shaft 3 by means of the hub and arms, or spokes, 13. We find it advisable to make use of two sets of these spokes; one set radiating from each end of the hub, as indicated in Fig. 9, and extending directly outward to the bearing rims 10 so water may be readily carried around with the cylinder between these spokes without meeting any retarding obstacle. We provide for holding the bearing rims 10 firmly in position by means of connecting rods, or ribs 14, which also act as supports for the inner screen 7, which screen is clamped around the bearings 10, 10 and the arms or connecting bars 14, when the clothes, 8, are properly placed over the said screen until the cylinder is sufficiently well filled, when the screen 6 is passed around them and firmly secured in place and the water, or suds, is placed into the outer tank and the cylinder is made to revolve, rapidly by any of the well known means of revolving a cylinder as, for instance, by the use of a crank 12, indicated in Figs. 1 and 2. This cylinder is properly mounted upon a suitable shaft, as indicated at 3 in Figs. 2 and 6, which shaft should be mounted in suitable boxes or bearings, as indicated at *b*, *b* in Figs. 1 and 2. The covers 2 are pivotally mounted on the tank 1, as at *a*, *a* and are designed to be opened, as indicated by their dotted lines in Fig. 1, to reach the cylinder as desired.

When the clothes are properly stored in the cylinder the doors 2, 2 are closed as in Fig. 1, and the cylinder is made to revolve very rapidly, which will take up the water from the inner tank and force it through the screens 7 and 8 and the clothes, with sufficient velocity to carry dirt from the clothes continually, and the current of water, or suds, will be forced against the doors

2, and will flow back through the openings 5, 5 into the outer tank, whence it will flow through the openings *e* back into the inner tank, thus keeping up a continual current of water through the clothes as long as the cylinder is made to revolve.

The outer screen 6, is secured at the ends by passing the hooks *c* through the loops *d*, (or by any other available means) as indicated in Fig. 8.

It will be readily understood that with the proper construction and assembling of the parts 6, 7 and 9, an annular chamber 11 will be formed for the reception of the clothes while they are being washed, as hereinbefore described.

What we claim as new, and desire to secure by Letters Patent of the United States, is:

In a washing machine the combination of an outer tank provided with a closure, an inner tank made to extend above and below the bottom of the outer tank and to form a water receptacle between its walls and the walls of the outer tank, and having openings at the surface of the floor of the outer tank for the flow of water from the outer tank into the inner tank, and a revoluble annular foraminated clothes receptacle mounted within said inner tank.

Signed at Grand Rapids, Michigan, March 28, 1917.

JOHN H. VANDER KOLK.
JOHN BRINK.