

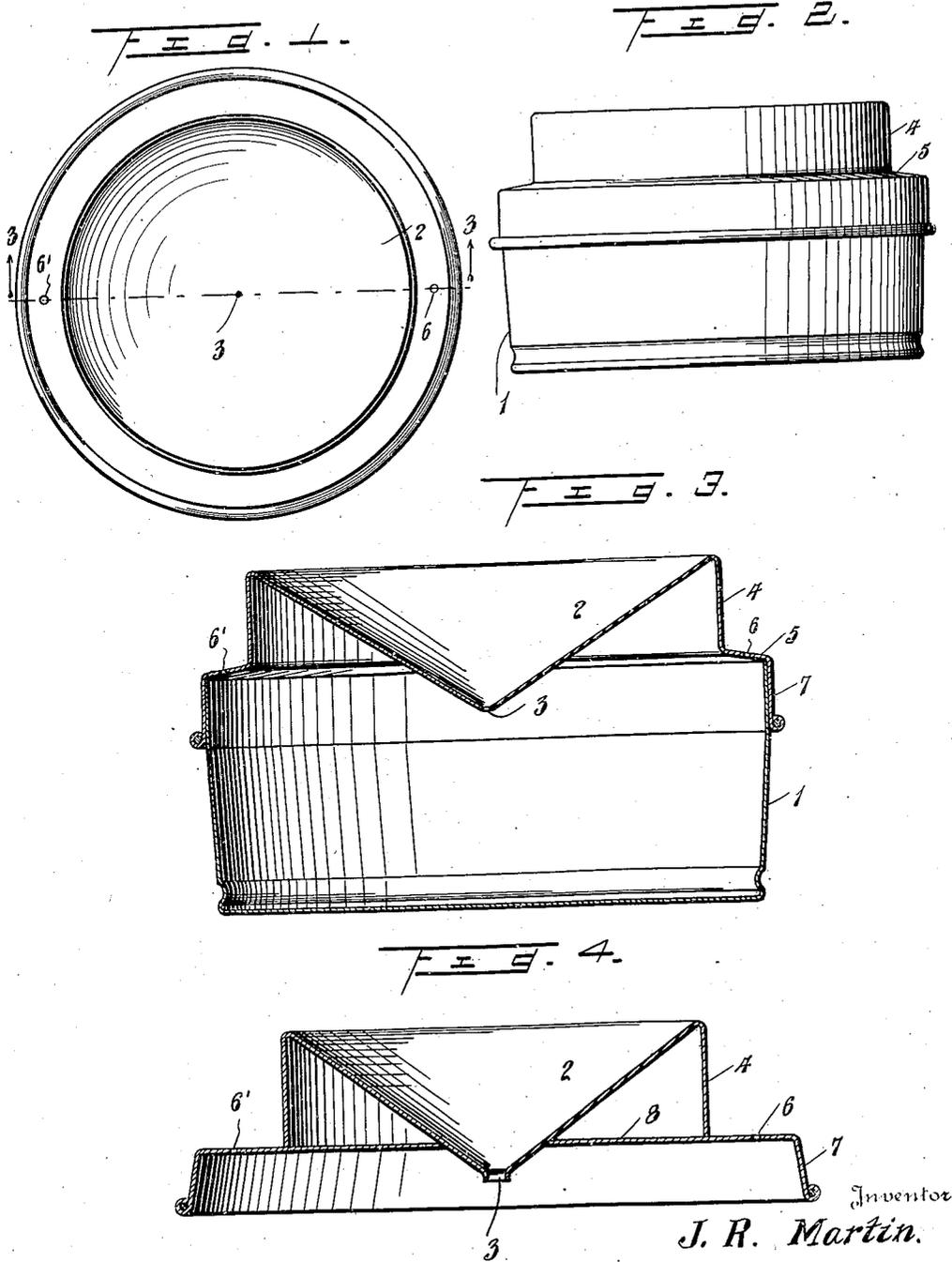
April 18, 1933.

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1,904,157

DETERGENT DISPENSING DEVICE

Filed May 13, 1931



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DETERGENT DISPENSING DEVICE

Application filed May 13, 1931. Serial No. 537,138.

This invention relates to new and useful improvements in a detergent dispensing device particularly adapted for use with dish washing machines wherein water in a spray or other form is fed to the device.

The primary object of my invention is to provide a detergent dispensing device wherein a constant and uniform quantity of detergent solution is fed to the wash water in direct relation to the amount of water fed to the dispensing device.

Other purposes, advantages and characteristic features of the invention as well as the details of construction constituting the preferred embodiment herein disclosed will be more readily understood from the following description taken in connection with the accompanying drawing, in which:

Figure 1 is a top plan view of my invention.

Figure 2 is a side elevation of my invention.

Figure 3 is a vertical sectional view taken on the line 3—3 of Figure 1.

Figure 4 is a vertical sectional view embodying a modification of my invention.

Referring more particularly to the drawing: The detergent container which is of a substantially cylindrical form and is made of a non-corrosive material is designated 1. The cover for the container includes an inverted conical portion 2 having an opening 3 formed in the lower central portion thereof. The other edge of the conical portion forms a vertical wall 4 having a horizontally extending rim member 5 provided with openings 6 and 6' formed in diametrically opposite sides of the conical member. A flange 7 extends from the rim and is adapted to snugly engage the side wall of the container 1. Particular attention is directed to the fact that the size of the conical member is dependent on the manner in which the clear water is furnished, a larger area being necessary when same is provided in spray form rather than a steady stream. The opening in the conical member is dependent on the character of the detergent used, that is, the stronger the detergent and more soluble, the less water will be necessary to pass

through the dispensing device to furnish the necessary detergent solution. The only difference existing in the modification shown is the provision of the wall 8 which does not in any way materially affect the operation of the device. It merely limits and in fact eliminates all air space within the container when the device is in operation. Attention is directed to the fact that the lowermost portion of the cone extends below the rim portion of the cover provided with the outlet openings 6 and 6'.

Further, in the detergent devices previously known the flow of liquid charged with a detergent continued until the device emptied itself of all liquid and in view of this fact that all the detergent in the dispensing device became entirely dissolved shortly after the machine started operation all of the detergent would needlessly be exhausted.

In my invention this waste is completely eliminated in that the flow of liquid charged with the detergent stops simultaneously with the stopping of the operation of the washing machine.

The flow of fresh water to the dispensing device controls the feed of the liquid detergent and it is obvious that irrespective of the number of times the machine is stopped and started or the intervals between stopping and starting the strength of the detergent liquid fed would at all times be substantially uniform.

In operation, the device is placed in some convenient location within the washer to receive fresh water in spray or other form which is collected on the inverted conical member 2 and fed within the container 1 through the opening 3 and after the water has become charged through mixture with the detergent, same is forced out through the openings 6 and 6' formed in the rim of the cover. It is obvious that any number of outlets could be formed in the rim portion 5 but it has been found from actual practice that two openings work satisfactorily and the device gives the best results.

Having thus described my invention, I claim:

1. A detergent dispenser comprising a cy-

lindrical container, an inverted conical member having an opening in the central portion thereof, a vertical wall extending downwardly from the outer edge of said conical member, a horizontally extending rim projecting outwardly from the vertical wall and having openings on diametrically opposite sides of the conical member and a flange projecting from the rim to engage the outer side wall of the container.

2. A detergent receptacle including a container, a hollow inverted conical member having an inlet opening, a projection extending from the outer edge of said conical member engaging the outer edge of the container, forming in conjunction with the conical member, a cover for the container, said projection having openings formed therein, and the upper outer edge of the inverted conical member being at a higher level than the outer edge of the projection and also at a higher level than the openings in said projection.

In testimony whereof I affix my signature.
J. RAY MARTIN.

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