

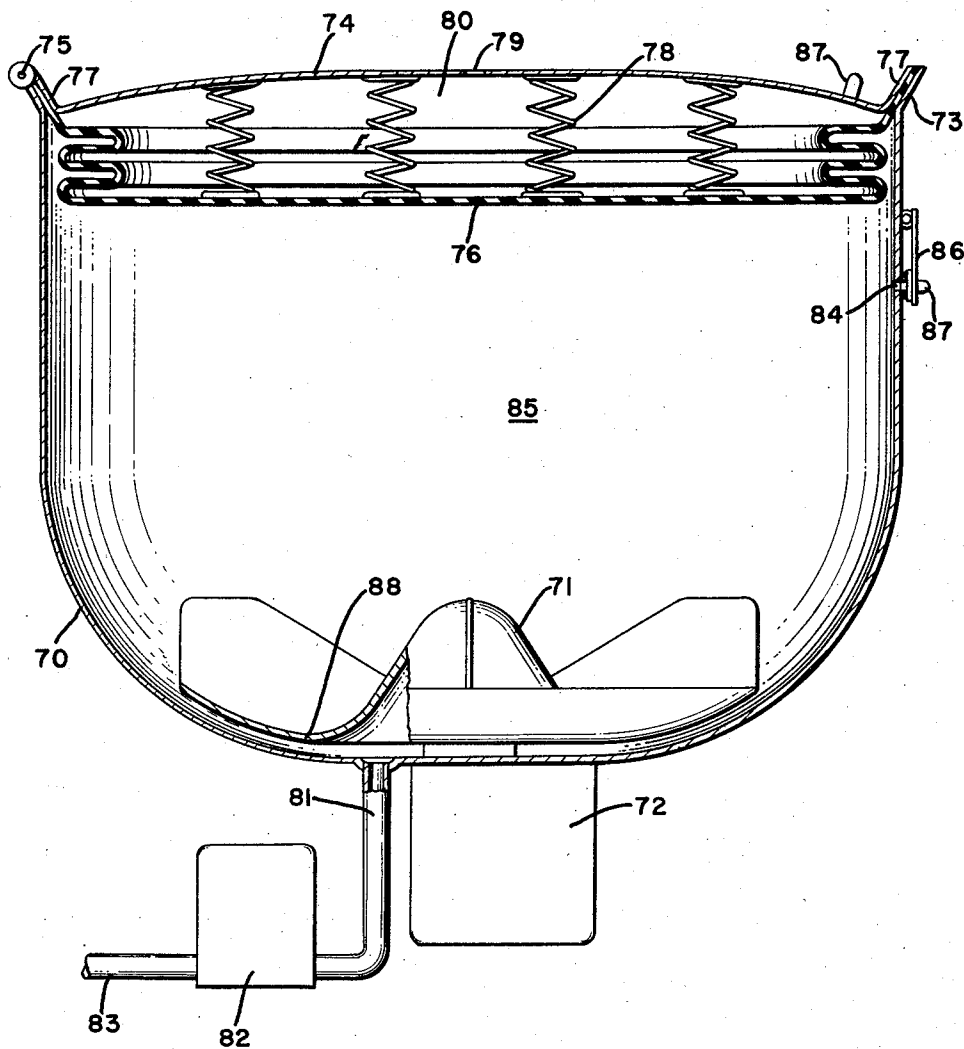
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R. R. CANDOR

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WASHING MACHINE WITH FLEXIBLE DIAPHRAGM WRINGER

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Robert R. Candor
Inventor

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WASHING MACHINE WITH FLEXIBLE DIAPHRAGM WRINGER

Robert R. Candor, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Original application January 30, 1948, Serial No. 5,320, now Patent No. 2,647,385, dated August 4, 1953. Divided and this application May 21, 1953, Serial No. 356,443

2 Claims. (Cl. 68—21)

This invention relates to domestic appliances, and more particularly to washing machines.

This application is a division of my copending application S. N. 5,320, filed January 30, 1948, Patent No. 2,647,385, granted August 4, 1953, for domestic appliance.

An object of this invention is to provide a washing machine of an improved character in which flexible sheeting is used to wring the clothes by applied pressure, such as obtained by the application of a vacuum.

Another object of this invention is to provide a washing machine of the character having a flexible sheeting member for the wringing of clothes, in which means are provided for maintaining the sheeting member in proper position while the machine is being filled and/or is performing a washing operation.

Further objects and advantages of the present invention will be apparent from the following description, reference being had to the accompanying drawings wherein a preferred form of the present invention is clearly shown.

In the drawing:

The drawing illustrates in vertical cross-section a washing machine made in accordance with this invention.

Referring now to the drawing, the washing machine of this invention includes a tub 70 that is provided with an agitator 71. The tub 70 is provided with an opening 73 which is outwardly flanged as indicated. A cover 74 is hinged at 75. It carries a flexible sheeting bag 76, which is vulcanized or otherwise secured to the flange 77 of the cover 74. Tension springs 78 are provided to maintain the bag 76 upwardly while agitation is taking place. An opening 79 is provided to maintain atmospheric pressure within the space 80. A pipe 81 is connected to a vacuum pump 82, which discharges through pipe 83. The opening 84 is provided in the tub 70 for the breaking of the vacuum in space 85. The opening 84 is covered by a hinged cover 86 which may be opened by pulling the handle 87. The agitator 71 is driven by a transmission 72. Both the transmission 72 and the

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pump 82 are driven by a suitable electric motor (not shown).

In the operation of the device shown, the cover 74 is lifted by the handle 87 and clothes and water are placed in the space 85, together with detergent. The cover 87 is then lowered in place, and the transmission 72 is operated to cause oscillation of the agitator 71. Thereafter, the agitator is stopped, and the vacuum pump 82 is started. The liquid is then withdrawn from the space 85, draining if necessary, through openings 88 in the agitator 71. After a certain length of time, a vacuum is produced in space 85 of sufficient intensity to cause downward movement of the bag 76 in response to atmospheric pressure in space 80. This wrings the clothes and causes the water thus wrung from them to flow into the pipe 81 from whence it is discharged by the vacuum pump 82 through the pipe 83.

Instead of using springs 78 to hold the bag 76 in a retracted position, the space 80 may be connected to the vacuum pump by a flexible pipe, in which case the opening 79 would be closed. The vacuum in space 80 is maintained while filling and washing and would then be broken while wringing.

While the form of embodiment of the invention as herein disclosed, constitutes a preferred form, it is to be understood that other forms might be adopted, as may come within the scope of the claims which follow.

What is claimed is as follows:

1. In a washing machine, a substantially solid tub having an opening in its top wall for introduction of articles to be washed, cover means for said opening, agitating means for said articles to be washed and including actuating means passing through the bottom wall of said tub, flexible sheeting carried by said cover means, means to apply a vacuum to the space between said tub and sheeting, and resilient means holding said sheeting in raised position when a vacuum is not applied.

2. In a washing machine, a substantially solid tub having an opening for introduction of articles to be washed, cover means for said opening, agitating means for said articles to be washed, flexible sheeting carried by said cover means, means to apply a vacuum to the space between said tub and sheeting, and resilient means to maintain said sheeting in retracted position when vacuum is not applied to said space.

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