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METHOD AND DEVICE FOR LOADING WASHING MACHINES

Filed Dec. 18, 1964

FIG.1.

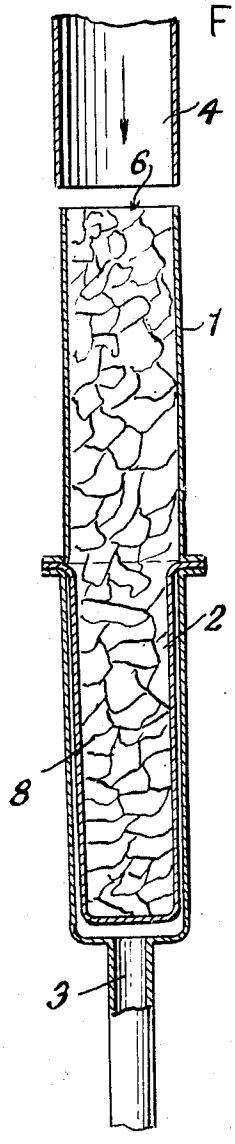


FIG.2.

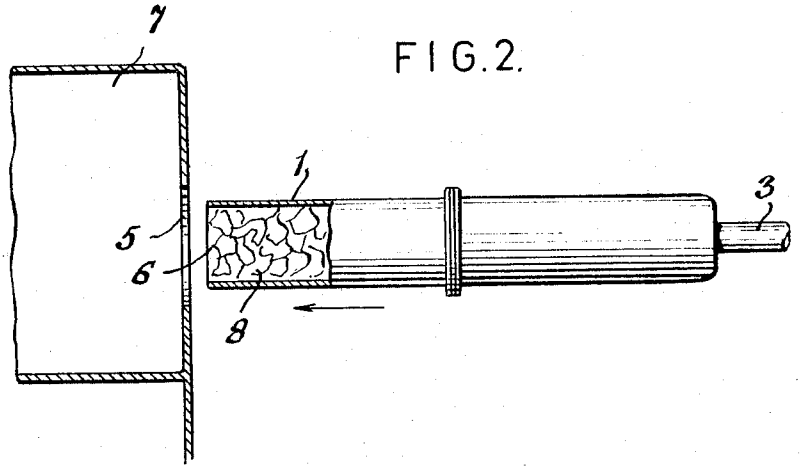
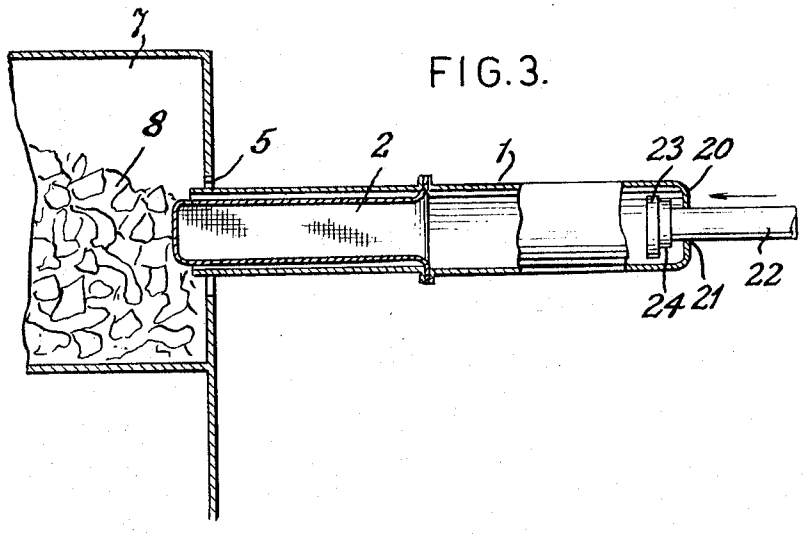


FIG.3.



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METHOD AND DEVICE FOR LOADING WASHING MACHINES

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7 Claims. (Cl. 214—17)

This invention relates to a method and device for loading washing machines with clothing to be washed, and particularly in machines in which the filling hole of the washing machine is laterally directed.

When a considerable amount of clothes to be washed is to be put into a washing machine having a filling hole of almost 45-degree inclination relative to the ground plane, the clothes usually fall through a vertical shaft directly into the machine. For washing machines provided with a vertical, that is a laterally-directed, filling hole such a method cannot be used. Therefore, it has been necessary to fill such machines with clothes by hand, which in large plants is difficult and time-consuming. Such method also involves the risk of infection as the clothes to be washed might be infectious and since the person who fills the machine will come into direct contact with the infectious clothes in the wash as well as with clean clothes, he or she is likely to transmit infection from the soiled clothes to the clean clothes.

The present invention has in view a method and a device which will eliminate the above and other disadvantages. By means of a device constructed according to the invention, clothes to be washed can be placed in a washing machine having a laterally-directed filling hole in a very speedy and easy manner. In addition, the risk of the transmission of infection is almost completely eliminated, as the person who loads the washing machine with the soiled clothes will never come into contact with them.

With these and other objects to be hereinafter set forth in view, I have devised the arrangement of parts to be described and more particularly pointed out in the claims appended hereto.

In the accompanying drawing, wherein an illustrative embodiment of the invention is disclosed,

FIG. 1 shows a device constructed according to the invention as it appears in its vertical or upright position while being filled with the clothes to be washed;

FIG. 2 shows the device in its horizontal position preparatory to being inserted in the washing machine, and

FIG. 3 shows the device after the washing machine has been loaded with the clothes to be washed.

The improved method primarily consists in arranging for the clothes to be washed, to be put into the washing machine by means of an elongated tube or tubular loading container **1** with an open end **6** and a cross section somewhat smaller than the filling hole **5** of the washing machine **7**. The clothes to be washed, and shown at **8**, are put into the container **1** by arranging the container in a vertical position under the loading shaft **4** for the clothes. When the clothes fall through the loading shaft **4** they will drop into the lower part of the container **1**. When such an amount of clothes has fallen into the container so as to fill it, the container is then tilted 90° and then so operated that the previous upper open end **6** of the container will be placed directly in front of the filling hole **5** of the washing machine **7** as shown in FIG. 2 after which this open end **6** of the container **1** will be inserted in said filling hole. By a subsequent application of pressure from behind, in the rear part of the container, the clothes **8** in the container will be pushed into the washing machine.

A device for accomplishing said method, and one which has proved very satisfactory is so arranged that on the inside of the container **1** and attached at a central point therein, is a flexible sack or bag **2**. The volume of this sack or bag **2** is essentially equal to that of half of the volume of the container **1**. The container **1** is provided at its rear end with an inlet **3** for a pressure medium such as air or water, and the front end of the container is, as previously stated open at **6** so that it is possible to easily fill and empty the container.

A tilting device, not shown in the drawing, is usually disposed on the outside of the container **1** and located substantially at its middle or center of gravity, for turning or swinging the container to the vertical position of FIG. 1 in which position the upper or open end of the container is so disposed relative to the loading shaft **4** that the clothes may fall therefrom into the container **1** to fill the same. The container is then swung to a horizontal position as shown in FIG. 2 and its open end **6** inserted into the filling opening of the washing machine. Pressure of the fluid medium is then imposed on the clothes and rear closed end of the sack **2** and the sack will be forced to an inside-out position as in FIG. 3 and all of the clothes ejected from the sack and container **1** and pushed into the washing machine. The sack or bag **2** in the container **1** suitably consists of a not altogether airtight fabric composed of nylon or of other suitable strong and flexible material. The container **1** may be transversely divided at its middle and the two parts of the container are, at the parting, formed with flanges **9** for assembling the parts. The sack or bag **2** in the container **1** is held in its proper position within the container by folding out and clamping the marginal edge of the open end of the sack between the flanges.

When the container is filled with the clothes to be washed and is then placed horizontally in front of the washing machine, the pressure medium, which as heretofore stated, may be air or water, is supplied through the inlet **3**, whereby the pressure medium will press against the rear closed end of the sack **2** with the result that the clothes which have filled the container and are located in the sack, will be pushed into the washing machine by the sack **2** which becomes turned inside out to bring it into the position shown in FIG. 3. After that, the container **1** is taken from the washing machine and is ready to be refilled.

A modification for the container **1**, which can be used for the above described means and method, may consist of an elongated tube having a closed end or bottom **20** provided with a central hole **21** for a through rod **22**. In the tube or container forwardly of the bottom thereof, is arranged a movable piston **23** provided with a fitting **24** engaging the front end of the rod.

The invention is not necessarily limited to a device used for putting clothes to be washed into a washing machine but can be used wherever it may be found desirable to put a compressible, fibrous material into a container.

What we claim is:

1. A method for loading washing machines with clothing to be washed and where the filling hole of the washing machine is laterally directed, consisting of placing the clothes to be washed into a relatively long tubular container while the container is positioned substantially vertically open at one end and having a cross section smaller than the filling hole of the machine, swinging the filled container to a substantially horizontal position inserting the open end of the clothes-filled container into the filling hole of the washing machine and applying pressure within the container behind the clothes therein to thereby force the clothes out of the container and into the washing machine.

2. A method as provided for in claim 1, wherein the container is positioned vertically while being filled with the clothes to be washed, tilting the tube from said vertical position to a horizontal position when inserting the open end of it into the washing machine, and wherein the pressure imposed on the clothes shall be that of air or water.

3. A device for loading a washing machine comprising a tube open at one end for insertion into the filling hole of a washing machine, a sack secured inside of the tube, said sack having an open end facing the open end of the tube and being closed at its opposite end, the tube having a fluid inlet at its rear end behind the closed end of the sack and through which inlet air or water under pressure is forced to thereby exert pressure on the closed end of the sack and on the clothes therein to consequently turn the sack inside out and cause the clothes to be ejected out of the sack and out of the tube and into the washing machine.

4. A device according to claim 3 and characterized in that the sack consists of a not completely airtight fabric composed of nylon.

5. A device according to claim 3, thereby characterized that the tube is transversely divided at its center to form it into two parts and that the resultant halves of the tube are formed with flanges in abutment at the center of the tube, the sack having outwardly-extended marginal edge around its mouth, said edge being clampingly held between the flanges.

6. A device for loading a washing machine comprising, a tube having an open end adapted to be inserted through the filling opening of a washing machine, a flexible sack located within the tube and conforming in shape to the internal shape of the tube, said sack being of a length of approximately one half of the length of the tube, the sack having an open end attached to the tube at the central point of the tube, the sack having a closed end normally situated near one end of the tube, said end of the tube having an inlet for fluid under pressure.

7. A device for loading a washing machine with clothes to be washed comprising, a tube having a forward open end for insertion into the filling hole of a washing machine, the tube being closed at its opposite end, a flexible sack in the tube for receiving clothes, said closed end having a central opening, a piston rod slidable therein, a piston secured on the rod within the tube so that pressure exerted on the rod will cause the piston to push the sack and clothes therein forwardly toward the open end of the tube to bring the clothes into the machine through the filling opening.

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