

[54] **PRECLEANING A LAUNDRY WASHING MACHINE**

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3,324,689 6/1967 Bergman ..... 68/12 R

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[51] Int. Cl. .... D06f 33/02

[58] Field of Search ..... 68/12 R, 13 R, 23.5, 184, 68/207, 208, 181 R; 134/57 D, 58 D, 186

[56] **References Cited**

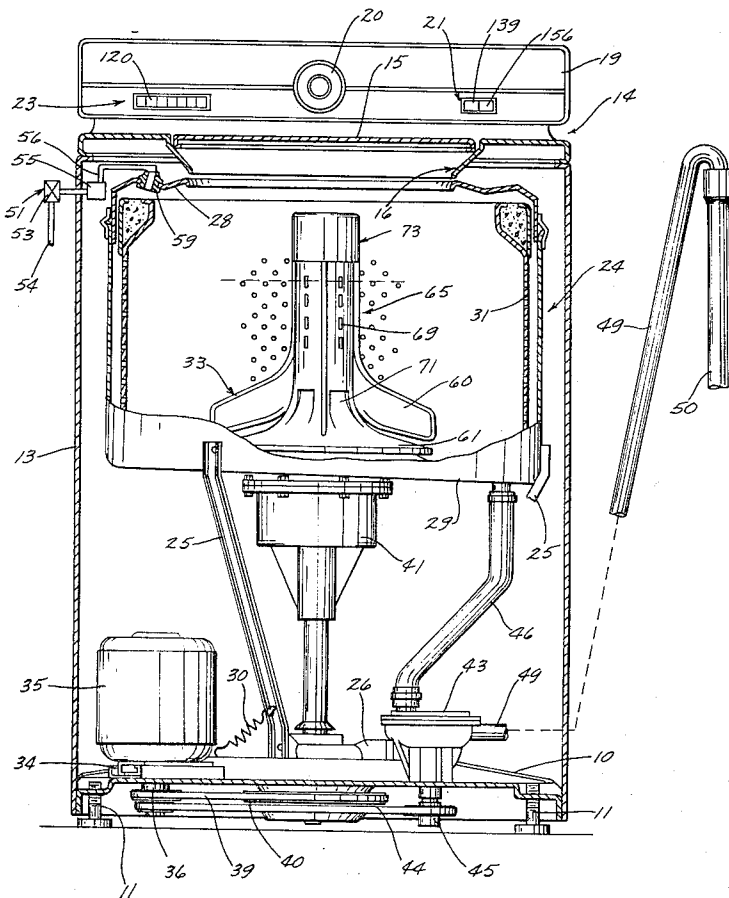
**UNITED STATES PATENTS**

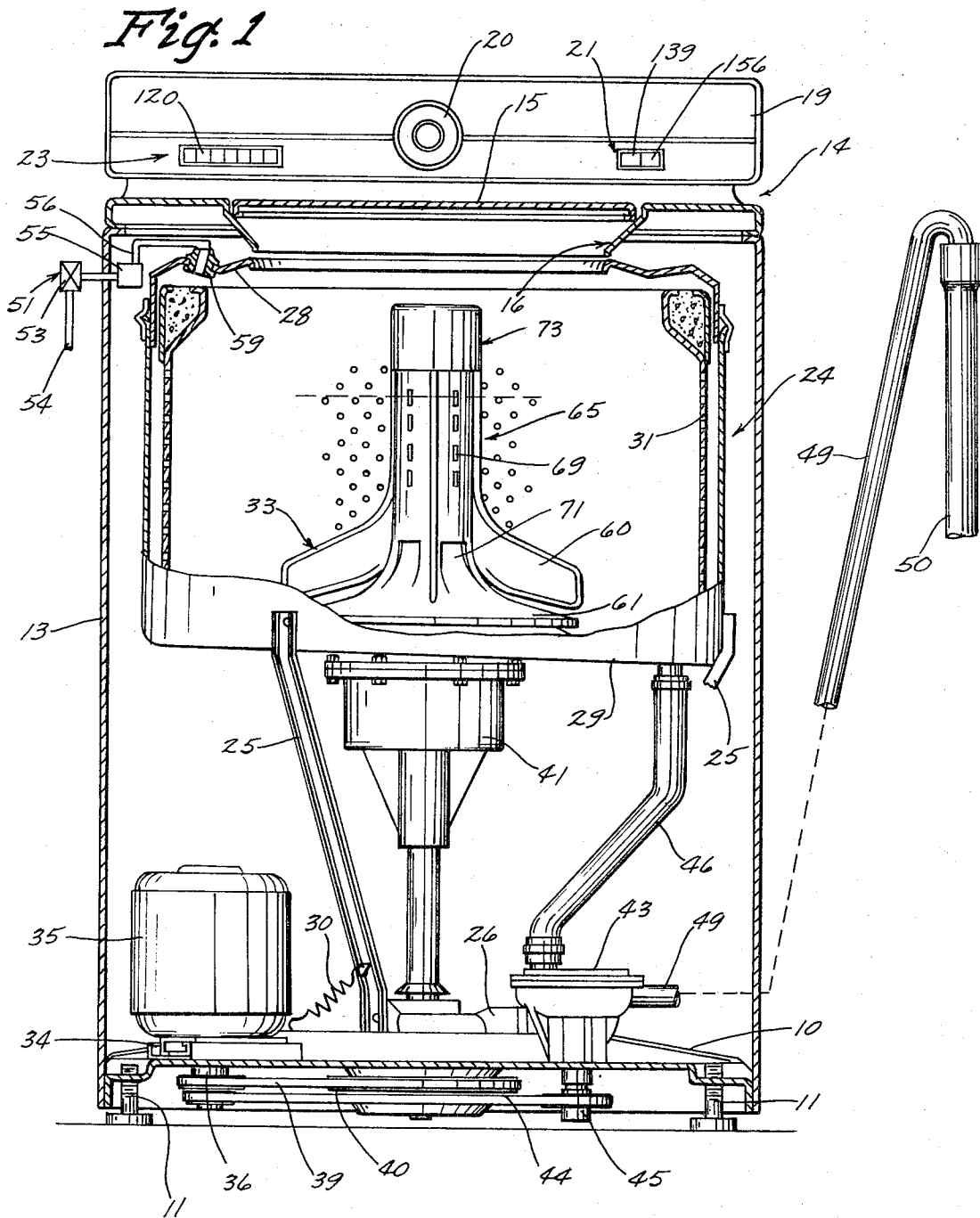
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[57] **ABSTRACT**

An optional preliminary operation in a laundry washing machine effects a precleaning or flushing of the fluid system including the fluid container, the pump, and the drain conduits to effectively remove residual vitiated fluid from the washing machine and thereby avoid intermixing of the residual fluid with the washing fluid for the succeeding washing operation.

**7 Claims, 5 Drawing Figures**

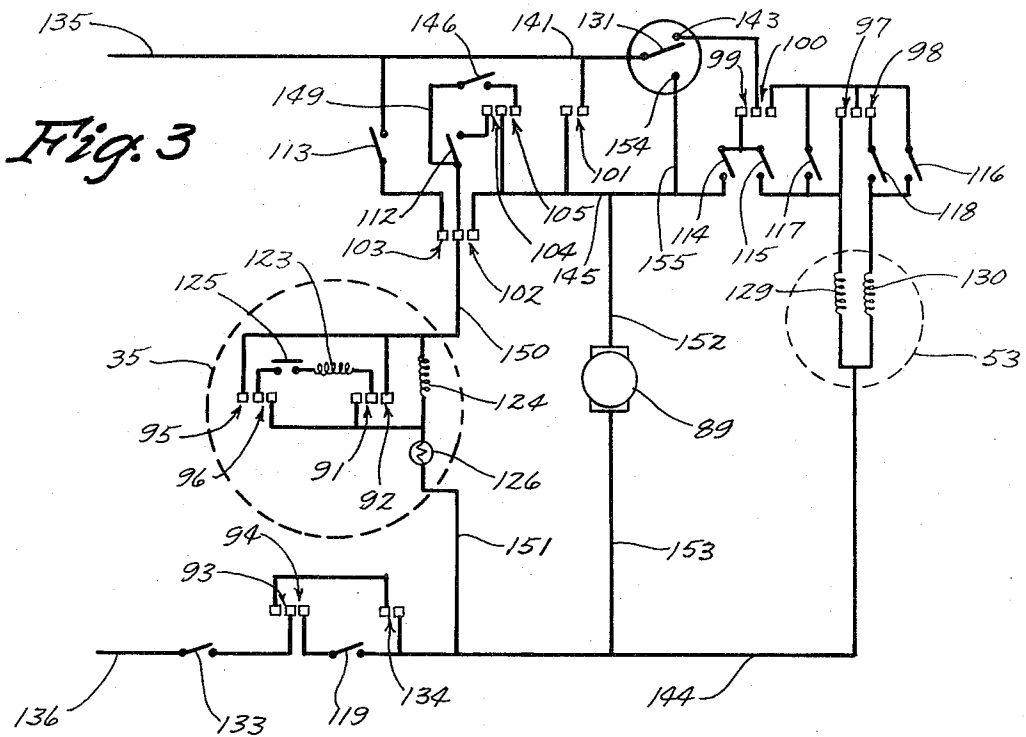




*Fig. 5*

SELECTION	SWITCH	112	113	114	115	116	117	118	119
WHITE		x	o	x	o	x	o	x	x
COLOR		x	o	x	o	o	x	x	x
BRIGHT COLORS		x	o	x	o	o	x	o	x
DELICATES		o	x	x	o	o	x	x	x
WOOL		o	x	x	o	o	x	x	x
PERM PRESS		x	o	o	x	o	x	x	x
OFF		o	o	o	x	o	o	o	o

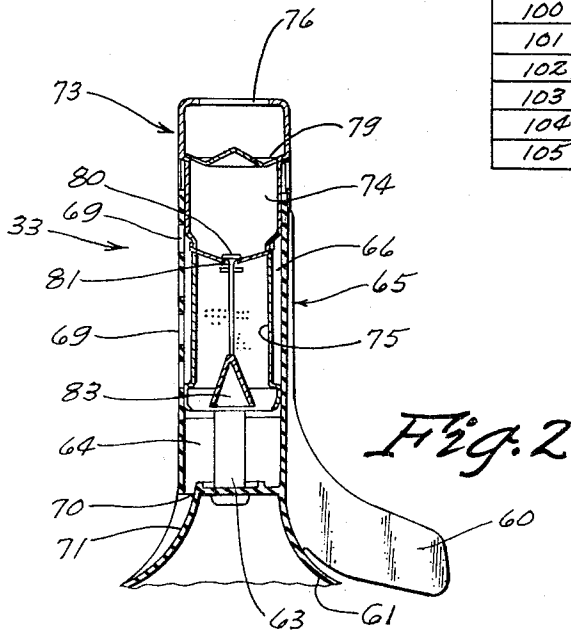
X SWITCH CLOSED    O SWITCH OPEN



*Fig. 4*

TIMER CAM CHART 7.2°-30 SECOND INTERVAL

SWITCH	INTERVAL	10	20	30	40
91		ON	ON	ON	ON
92		OFF	OFF	ON	ON
93		OFF	OFF	OFF	OFF
94		ON	ON	ON	ON
95		ON	ON	ON	ON
96		OFF	OFF	ON	ON
97		OFF	OFF	ON	ON
98		OFF	OFF	ON	ON
99		OFF	OFF	ON	ON
100		ON	ON	ON	ON
101		ON	ON	ON	ON
102		OFF	OFF	ON	ON
103		OFF	OFF	ON	ON
104		ON	ON	ON	ON
105		ON	ON	ON	ON



## PRECLEANING A LAUNDRY WASHING MACHINE

## BACKGROUND OF THE INVENTION

## 1. Field of the Invention

This invention relates to fabric washing machines and more particularly to a preliminary precleaning of a fabric washing machine.

## 2. Description of the Prior Art

Because the fabric washing machine per se is effectively cleaned during the washing and rinsing operations occurring therein, there has been little attention given to the specific cleaning of the apparatus over and above that inherent in the normal operation. One patent, U.S. Pat. No. 2,611,256, discloses the dispensing of a disinfectant into the fluid at the end of the cycle. Another patent, U.S. Pat. No. 2,322,559, suggests that the tub may be cleaned at the end of the washing operation by a spray directed into the rotating tub. Neither of these prior art disclosures, however, insures a clean washing machine at the beginning of a washing operation since the machine may have set for some time since the previous use.

## SUMMARY OF THE INVENTION

It is an object of the instant invention to provide an improved precleaning of a fabric washing machine.

It is a further object of the invention to provide a flushing of the fluid system of a fabric washing machine immediately prior to use of the machine for a washing operation.

It is a still further object of the invention to provide a fabric washing machine selectively operable for effecting an optional flushing of the fluid system prior to the washing operation.

The instant invention achieves these objects in a fabric washing machine having means for effecting fluid supply and fluid removal concurrently for a precleaning operation preceding a washing operation to flush the container, pump, and drain conduit.

Operation of the device and further objects and advantages thereof will become evident as the description proceeds and from an examination of the accompanying two pages of drawings.

## BRIEF DESCRIPTION OF THE DRAWINGS

The drawings illustrate a preferred embodiment of the invention with similar numerals referring to similar parts throughout the several views wherein:

FIG. 1 is an overall view of an automatic washing machine partially cut away and sectioned to more clearly show elements of the instant invention;

FIG. 2, disposed below FIG. 4 on the second sheet of drawings, is a fragmentary sectional view of the agitator shown in the washing machine in FIG. 1;

FIG. 3, disposed at the top of the second sheet of drawings, is a schematic electrical circuit showing operational and control components of the washing machine of FIG. 1;

FIG. 4 is a chart showing the sequential switching of the cam-operated switches of the electrical circuit of FIG. 3; and

FIG. 5, shown on the sheet of drawings with and positioned below FIG. 1, is a chart showing the condition of the preselection switches of FIG. 3 for representative selectable cycles of operations of the washing machine.

## DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to FIG. 1 there is shown an automatic fabric washing machine including a base frame 10 supported on a plurality of adjustable legs 11 and mounting a cabinet comprising a sidewall portion 13 and a top cover portion 14. The top cover portion 14 includes a hinged door panel 15 normally covering a recessed loading opening 16 and further includes an upwardly extending housing 19 for accommodating various control members such as programmed sequence control means actuatable by the dial 20 and cycle selection switches actuatable by the push button selectors 21 and 23.

Mounted within the cabinet is a tub assembly 24 rotationally supported on the base frame 10 by an inverted tripod arrangement including tub braces 25 which are connected at the lower end to a support member 26 positioned on the base frame 10. The tub braces 25 are connected at their upper ends to a generally imperforate liquid container or outer tub 29 including tub cover 28. The tub braces 25 are also resiliently connected to the base frame 10 by means of centering springs 30 which resist rotation of the support member 26 relative to the base frame 10 but permit nutational movement of the tub assembly 24 relative to the base frame 10.

Revolubly mounted in the imperforate outer tub 29 is a perforate clothes basket or inner tub 31 in which is positioned an oscillatable agitator 33 for effecting movement of fabrics and washing fluid within the tub assembly 24. The imperforate outer tub 29 and the perforate inner tub 31 are substantially aligned with the loading opening 16 in the top cover 14 for permitting the operator to place fabrics within the inner tub 31 and to remove them upon completion of the cycle.

The base frame 11 also supports, through a movable motor mount 34, a reversible drive motor 35 operable in a bidirectional drive system for selectively effecting oscillation of the agitator 33 or centrifugal rotation of the inner tub 31. The drive system for selectively effecting operation of the agitator 33 and rotation of the inner tub 31 includes a double groove pulley 36 fixed to the shaft of the motor 35 and drivingly engaged with a main drive belt 39 which in turn is drivingly engaged with the main drive pulley 40. The main drive pulley 40 is drivingly connected to either the agitator 33 through a drive shaft (not shown) and the gearing of a transmission 41 or to the inner tub 31 through the housing of the transmission 41 and a clutch (not shown).

Operation of the motor 35 in a first direction effects rotation of the main drive pulley 40 for effecting oscillation of the agitator 33 through the drive shaft (not shown) and transmission gearing. Operation of the motor 35 in the opposite direction effects rotation of the drive pulley 40 and the transmission 41 through the clutch (not shown) for rotating the inner tub 31 to effect centrifugal extraction of liquid from fabrics within the inner tub.

As will be more fully shown hereinbelow the washing machine is provided with controls for programming the machine through a sequence of operations including energization of the motor 35 for operation in a first direction to effect a washing and/or rinsing function followed, at a later point in a normal cycle of operations, by energization of the motor 35 in a second direction

to effect a liquid extraction and liquid pumping function.

The construction and mounting of the tub assembly 24 and the operation of the inner tub 31 and agitator 33 are more clearly and specifically shown in the following patents, each of which is assigned to the assignee of the instant invention: Scott et al. U.S. Pat. No. 2,854,297; Smith et al. U.S. Pat. No. 2,926,136; Burkland U.S. Reissue Pat. No. Re. 25,157; and Goodlaxson U.S. Pat. No. 3,013,645.

The base frame 10 also supports a pump 43 that is driven by the bidirectional motor 35 through the motor mounted pulley 36, the pump drive belt 44, and the pump mounted pulley 45. The pump 43 communicates with the outer tub 29 through a drain conduit 46 and is operable for carrying liquids from the outer tub 29 and pumping them toward an external drain through a drain hose 49 and standpipe 50 when the motor 35 is operated in the direction for effecting centrifugal rotation of the inner tub 31. Since the pump 43 is drivably connected to the bidirectional motor 35 and is operable in the first and second directions with the motor 35, the pump 43 will tend to pump liquids toward the outer tub 29 through the conduit 46 when the motor 35 is operating in the direction for effecting agitation of the fabrics during the washing portion of the cycle.

Furthermore, in installations of the washing apparatus wherein a relatively long or elevated drain hose, such as 49, is provided or wherein a standpipe drain is utilized as in FIG. 1, the drain hose is capable of retaining a significant quantity of liquid at the termination of the pump-out or extraction period. This retained vitiated liquid, in the absence of provisions for effecting otherwise, tends to flow toward the outer tub 29 as the liquid seeks a stabilized level after termination of the pumping. There may be intermixing of the residual vitiated washing liquid with the washing liquid for the succeeding cycle and it is therefore preferred that the intermixing be prevented as will be effected by the instant invention to be more fully described hereinafter.

Also shown in FIG. 1 is fluid supply means 51 for delivering fresh water to the washing apparatus. The fluid supply means 51 includes an electrically energized valve 53 disposed between the machine and the incoming water line 54. The valve 53 upon being energized permits water to flow to an air gap device 55 and through a flexible conduit 56 to the inlet 59 connected to the tub cover 28. The fresh water is thus directed into an upper portion of the fluid container or outer tub 29 upon energization of the water valve 53.

Referring to FIG. 2, there is shown a sectional view of the agitator 33 of FIG. 1 as used in one embodiment of the instant invention. FIG. 2 shows one vane 60 representative of the plurality of vanes mounted on and forming part of the agitator 33 and also shows a fragmentary portion of the flared base 61. The agitator 33 includes a lower hub 63 connected to the center post by a plurality of ribs 64 and driving engageable with an output shaft (not shown) of the drive system for effecting the oscillation of the agitator 33 within the washing fluid.

The upstanding center post 65 is hollow and defines an open top cavity 66 and a plurality of fluid ingress openings 69 into the cavity 66. Adjacent the bottom portion of the hollow center post is a plurality of fluid egress openings 70 extending from the cavity 66 and

aligned with chutes 71 formed in the upper surface of the flared base 61.

A filter-dispenser assembly 73 telescopes at least partially into the hollow center post 65 of the agitator 33 for frictional engagement therewith and is removable therefrom by the operator. The filter-dispenser assembly 73 includes a washing additive reservoir 74 and generally cylindrical filter screen member 75 extending axially downwardly from the fluid reservoir 74. The perforate screen member 75 is disposed in the fluid flow path to remove lint and other particles from the washing fluid as the fluid flows through the agitator center post 65.

The filter-dispenser assembly 73 may best be understood by considering the operation of the device. As previously indicated, a fluid flow path is set up through the agitator center post 65 from the ingress openings 69 to the egress openings 70 near the lower portion of the agitator center post 65. As the agitator 33 oscillates, the fluid is forced outwardly at the vanes 60 and drawn inwardly at the upper portion of the agitator so as to set up a fluid flow inwardly through the ingress openings 69 and outwardly from the egress openings 70 and chutes 71 during movement of the agitator 33.

To use the dispenser, the operator pours a liquid additive into the inlet 76 which flows by gravity through the strainer opening 79 into the reservoir 74. The fluid is retained in the reservoir 74 since the valve 80 closes the outlet 81 when the outer tub 29 is empty or filled less than a predetermined amount. The operator may then start the machine for a cycle of operation including a precleaning operation, as will be discussed hereinafter, and an initial filling operation. As the machine fills with fluid for the washing operation, the fluid rises up into the hollow center post 65 of the agitator 33 and the actuator 83 operates as an air bell. Specifically, as the water rises to a point approximately halfway up the cone-like actuator 83, the actuator is forced up by buoyancy of the trapped air to open the valve 80 and permits the additive to feed by gravity into the washing fluid for dilution and distribution throughout the outer tub 29. It is thus seen that the washing additive is retained isolated from the fabrics and from the rest of the fluid container until the washing machine has filled with sufficient washing fluid to effect a washing operation. Further explanation of the agitator 33 and filter-dispenser assembly 73 is included in U.S. Pat. No. 3,724,242 issued Apr. 3, 1973 and assigned to the assignee of the instant application.

Referring to FIGS. 3 through 5 there is shown an electrical schematic circuit and related charts showing specific operation of switch members of the circuit. The circuit of FIG. 3 includes a plurality of contact pairs operable between open and closed positions by a set of cams under the control of a timing motor 89. The contact pairs function as switching means and are referred to as timer switches 91-105 whose opening and closing is shown by the cam chart of FIG. 4. The circuit also includes a plurality of selectively actuated switches 112-119 comprising a portion of preselection means 23 responsive to manual actuation of a push button, such as button 120 for example, to operate between open and closed positions. Preselection switches 112-119 assume a predetermined condition upon selection of a particular cycle of operation as shown in FIG. 5. In place of the push button type selector 23

shown in FIG. 1, the switches 112-119 could instead be operated by a rotary selector.

The circuit of FIG. 3 also includes the motor 35 comprising a start winding 123, run winding 124, centrifugal switch 125, and fuse 126. Also shown diagrammatically in FIG. 3 is the water valve 53 including a first solenoid 129 for effecting flow of cold water and a second solenoid 130 for effecting flow of hot water. The circuit still further includes a pressure switch 131, a lid-operated switch 133 and a line switch 134 to initiate operation such as may be operated to the closed position by the operator axially moving the timer dial. The circuit may be connected to a conventional 110 volt 60 hertz power supply by the conductors 135 and 136.

As previously indicated the instant invention is directed to the object of providing a precleaning of a washing machine including a rinsing of the fluid container and a flushing of residual vitiated water from the fluid circuit. It is most desirable that this operation be prior to a washing operation and be optionally selectable by the operator. It is further desirable that such an operation be selectable along with the desired cycle of operations and that the machine be operable through the precleaning portion and the regular washing cycle without further attention by the operator.

The normal washing cycle of operations of an automatic washing machine includes, in sequence, an initial liquid filling of the machine; agitation to effect washing of the fabrics; removal of the washing fluid; a refilling of the apparatus with rinse water; agitation to effect rinsing of the fabrics; and removal of the rinse water from the machine. The instant invention adds an optional apparatus precleaning operation associated with the initial liquid filling operation to effect a rinsing and flushing of the apparatus.

To more fully explain the operation of the circuit a specific cycle selection will be assumed. First, operation will be described when the precleaning flush is selected in conjunction with a regular cycle and, secondly, operation of the same cycle will be described when no precleaning is selected. The two alternatives will show the operability of the control circuit for providing a complete cycle of operations with and without the selection of a precleaning operation to demonstrate the optional characteristics of the instant invention. It is thus assumed on the first hand that a regular "White" cycle of operations is desired and that the apparatus precleaning option is selected. It is further noted that as part of the completion of the previous cycle of operations, the timer motor 89 advanced the cam stack into the first interval of operation to deenergize the apparatus.

The regular "White" cycle of operation is selected by depressing the proper button 120 and an apparatus precleaning operation is selected by actuating a designated push button 139 to close the precleaning switch 146 in the circuit of FIG. 3. With the selection of the "White" cycle of operation, selection switches 112, 114, 116, 118, and 119 will be closed while switches 113, 115, and 117 will be open. Similarly, with the timer mechanism positioned in the first interval, timer switches 92, 93, 96, 98, 100, 101, and 105 will be closed. Upon the operator closing the line switch 134, as by axially moving the timer dial 20, the machine will be energized for initiating the precleaning operation. More specifically, the water valve 53 and drive motor 35 will be concurrently energized to effect injection of water into the

outer tub 29, and to operate the pump 43 for effectively flushing the apparatus and removing residual vitiated fluid from the pump 43 and drain conduits 46 and 49.

The circuit for energizing the water valve 53 extends from line 135 through conductor 141, the pressure switch 131 made to the "empty" contact 143, closed timer switch 100, and selection switch 116 to one side of the hot water solenoid 130. The other side of the hot water solenoid 130 is connected to line 136 through conductor 144, closed line switch 134, closed timer switch 93, and through closed lid switch 133. Concurrently with energization of the hot water valve 130, the drive motor 35 is energized by a circuit extending from line 135 through conductor 141, timer switch 101, conductor 145, timer switch 105, selectable switch 146, conductor 149, and conductor 150 to one side of the motor 35. A circuit will be completed through the motor 35 for energization thereof since timer switches 96 and 92 are closed and since the other side of the motor 35 is connected to line 136 through conductor 151, closed line switch 134, timer switch 93, and lid switch 133.

This concurrent energization of the valve 53 for injecting water into the container and energization of the motor 35 for operating the pump 43 to remove fluid from the apparatus will continue for a predetermined period. The cam chart of FIG. 4 provides one timer increment or approximately 30 seconds to effect a rinsing of the inner and outer tubs 31 and 29 and a flushing of vitiated residual fluid from the pump 43 and drain conduits 46 and 49.

During this precleaning increment, the timer motor 89 is energized by a circuit that extends from conductor 135 through timer switch 101, conductor 152, the timer motor 89, and conductor 153 connected to conductor 144. Upon advancing into the second increment, cam-operated switch 105 is opened for interrupting the circuit to the motor 35 and terminating the apparatus precleaning operation.

As previously indicated, however, the regular "White" cycle of operations was selected along with the precleaning operation and thus the circuit is operable for proceeding into the selected "White" cycle of operations. More specifically, a circuit is made to the water valve 53 as previously noted except that conductor 144 is connected to line 136 through selector switch 119 and timer switch 94. The motor 35 is deenergized and thus the pump 43 is not operating so that the container 29 will fill with washing fluid. During at least a portion of the filling operation, the timer motor 89 remains energized for advancing the cam stack through four increments after which the timer switch 101 will open to deenergize the timer motor 89 for the balance of the filling operation which will be controlled by the pressure switch 131. The timer cam stack will remain in the fifth increment until the pressure switch 131 indicates that the proper water level is in the outer tub 29. The actuator 83 of the detergent dispenser disposed within the agitator 33 will have operated responsive to the rising fluid level to dispense the detergent into the washing fluid.

Upon operation of the pressure switch 131 from the "empty" contact 143 to the "full" contact 154 a circuit will be again completed to the timer motor 89 through conductors 155 and 152 for energizing the timer motor. The circuit to the water valve 53 is interrupted by

the operation of the pressure switch 131 from contact 143 to contact 154. The motor 35 is energized to initiate agitation of the fluid and fabrics within the outer tub 29. The motor circuit extends from conductor 135 through conductor 141, pressure switch 131 made to contact 154, conductor 155, conductor 145, timer switch 104, selection switch 112 and conductor 150 to one side of the motor 35. The other side of the motor 35 is connected to conductor 136 through conductor 151, selector switch 119, timer switch 94, and the lid switch 133. Beginning in the fifth increment, the apparatus will proceed through a generally conventional series of operations comprising a washing and rinsing function under control of the sequence control mechanism.

If, however, the operator desires to omit the initial apparatus prewashing operation, the push button 156 will be depressed to open switch 146. As previously indicated, the motor 35 was energized for the apparatus precleaning operation during the first increment through a circuit that included closed timer switch 105 in series with the selector switch 146. With the selector switch 146 in the open condition there will be no circuit completed to the drive motor 35. The water valve 53, however, will be energized in the first increment for injecting fluid into the container 29. The timer 89 will be energized in the first increment but will be deenergized by the opening of the timer switch 101 in the fifth increment. The water valve 53 will remain energized until the pressure switch 131 indicates that the apparatus has reached the desired liquid level. If the machine becomes filled to the desired level prior to expiration of the four increments of time, the water valve 53 will be deenergized by operation of the pressure switch 131 from the "empty" contact 143 to the "full" contact 154 and the apparatus will pause until advancement of the sequence control mechanism into the fifth increment for energizing the motor 35 and continuing through the cycle of operations as previously explained.

Thus it is clear that the operator may omit the apparatus prewashing operation simply by actuating the precleaning operation selector 21 to operate switch 146 to the open condition and by selecting the desired cycle of operations.

The operator may also elect to effect a prewashing of the machine before placing articles to be washed in the fabric basket 31 by pressing the "precleaning" button 139 and the button 120 indicating the desired cycle of operations and then closing the lid 15 and actuating the line switch 134. The precleaning operation will then be effected through the first increment and upon deenergization of the motor 35 the operator may raise the lid 15 for interrupting apparatus operation and for placing articles to be washed and detergent in the basket. Upon reclosing the lid 15, the machine will fill with washing fluid and proceed through the selected cycle of operations without further attention by the operator.

This application thus describes a system for achieving a precleaning of a washing machine apparatus to remove residual vitiated fluid from the machine, on an optional basis as needed or as desired by the operator, without including rapid advance systems to skip portions of the cycle or without including expensive relays to effect the necessary switching. It is further noted that the system of the instant invention desirably effects a precleaning immediately prior to the filling for the

washing operation rather than at the end of a cycle so that the machine is properly cleaned for the washing cycle regardless of how long it has remained idle since its last use.

In the drawings and specification there is set forth a preferred embodiment of the invention and though specific terms are employed these are used in a generic and descriptive sense only and not for purposes of limitation. Changes in form and the proportion of parts as well as the substitution of equivalents are contemplated as circumstances may suggest or render expedient without departing from the spirit or scope of this invention as defined in the following claims.

I claim:

1. In a laundry apparatus, the combination comprising: a container for receiving and containing washing fluid, a basket disposed within said container for receiving fabrics to be washed and centrifugally rotatable for removing fluids from said fabrics; means for washing fabrics in said basket; pump means communicating with said container and operable for pumping vitiated washing fluid from said container; pump drive means energizable for operating said pump means; conduit means effectively connected to said container and communicating with said pump means for conducting said vitiated fluid from said container toward an external drain; fluid supply means for directing water into said apparatus; a sequence control circuit for programming said apparatus through a plurality of operations including an optional preliminary apparatus flushing operation and other operations selectable as a group to comprise a primary cycle of operations; and control means including preselection means for selecting a primary cycle of operations and for optionally selecting said flushing operation, said control means being operable in cooperation with said sequence control circuit for initiating said flushing operation including energizing said fluid supply means and said pump drive means to effect flow of water into said apparatus and through said pump means and said conduit means toward said external drain and being further operable for initiating said primary cycle of operations at completion of said flushing operation, said sequence control circuit being cooperable with said control means responsive to selection of said primary cycle of operations and nonselection of said flushing operation for initiating said selected primary cycle of operations.

2. In a laundry apparatus as defined in claim 1 wherein said preselection means are manually actuated at the option of the operator of said laundry apparatus.

3. In a laundry apparatus, the combination comprising: a container for receiving and containing washing fluid; a perforate basket disposed within said container for receiving fabrics to be washed and centrifugally rotatable for removing fluids from said fabrics; means for washing fabrics in said basket; pump means communicating with said container and operable for pumping vitiated washing fluid from said container; pump drive means energizable for operating said pump means; conduit means effectively connected to said container and communicating with said pump means for conducting said vitiated fluid from said container toward an external drain and including a portion elevated above said pump means whereby residual fluid remains in said apparatus upon interruption of operation of said pump means; fluid supply means for effecting flow of water

into said container; a sequence control circuit for programming said apparatus through a plurality of operations including an optional preliminary apparatus flushing operation and other operations selectable as a group to comprise a primary cycle of operations; a control means including a first preselection switch for selecting a primary cycle of operations and an optionally actuable second preselection switch for selecting said flushing operation, said control means being operable in cooperation with said sequence control circuit for initiating said flushing operation including concurrently energizing said fluid supply means and said pump drive means to effect flow of water into said container and through said pump means and said conduit means toward said external drain for rinsing said container and flushing residual vitiated fluid from said pump means and from said conduit means and being further operable for initiating said primary cycle of operations at completion of said flushing operation, said sequence control circuit being cooperable with said control means responsive to actuation of said first preselection switch and nonactuation of said second preselection switch for initiating and effecting control of said laundry apparatus through said primary cycle of operations.

4. In a laundry apparatus as defined in claim 3 wherein said sequence control circuit includes circuit means operable for maintaining said fluid supply means and said pump drive means energized for a predetermined period of time and then for effecting deenergization of said pump drive means to initiate said primary cycle of operations.

5. In a laundry apparatus, the combination comprising: a container for receiving and containing washing fluid; a perforate basket disposed within said container for receiving fabrics to be washed and centrifugally rotatable for removing fluids from said fabrics; means for washing fabrics in said basket; pump means communicating with said container and operable for pumping vitiated washing fluid from said container; pump drive means energizable for operating said pump means; conduit means effectively connected to said container and communicating with said pump means for conducting said vitiated fluid from said container; fluid supply

means for effecting flow of water into said container; and a sequence control circuit including a sequence control timing mechanism having a first increment of control and a last increment of control, said sequence control circuit being operable for programming said apparatus through a plurality of operations beginning in said first increment and including an optional preliminary apparatus flushing operation and followed by other operations selectable as a group to comprise a primary cycle of operations terminating in said last increment; and control means including preselection means for selecting a primary cycle of operations and for optionally selecting said flushing operation, said control means being cooperable with said sequence control circuit for initiating said flushing operation including concurrently energizing said fluid supply means and said pump drive means in said first increment to effect flow of water into said container and through said pump means and said conduit means to an external drain to rinse said container and to flush residual vitiated fluid from said pump means and from said conduit means and to deenergize said pump drive means after a predetermined time while maintaining said fluid supply means energized to initiate said primary cycle of operations, said sequence control circuit being cooperable with said control means responsive to selection of said primary cycle of operations and nonselection of said flushing operation for initiating said selected primary cycle of operations in said first increment.

6. In a laundry apparatus as defined in claim 5 wherein said apparatus further includes means for dispensing detergent into said washing fluid for said primary cycle of operations.

7. In a laundry apparatus as defined in claim 5 wherein said fluid supply means is energized in said first increment for effecting flow of water into said container and wherein said control means responsive to selection of said flushing operation is operable for concurrently energizing said pump drive means in said first increment to prevent the filling of said container whereby flushing of said apparatus is achieved and initiation of said primary cycle of operations is effectively delayed.

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