

June 13, 1961

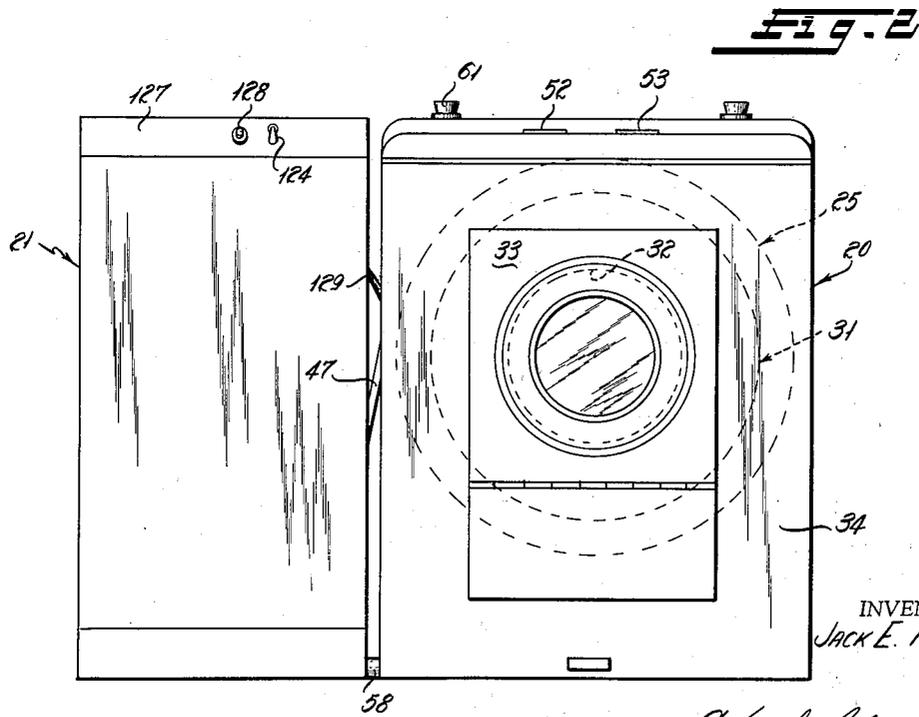
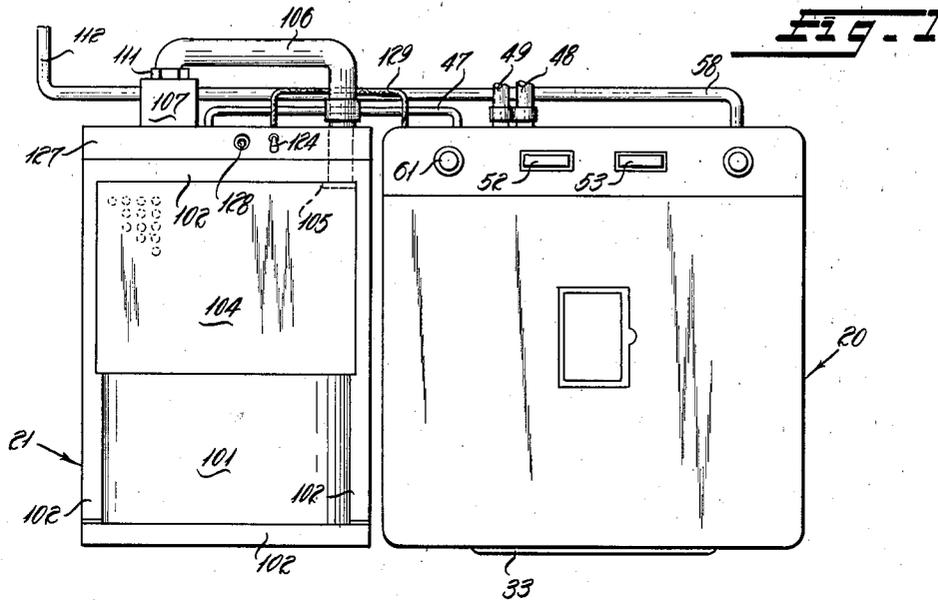
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2,987,902

AUTOMATIC HOME WASHING AND DRY CLEANING MECHANISM

Filed Nov. 12, 1958

3 Sheets-Sheet 1



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FIG. 3

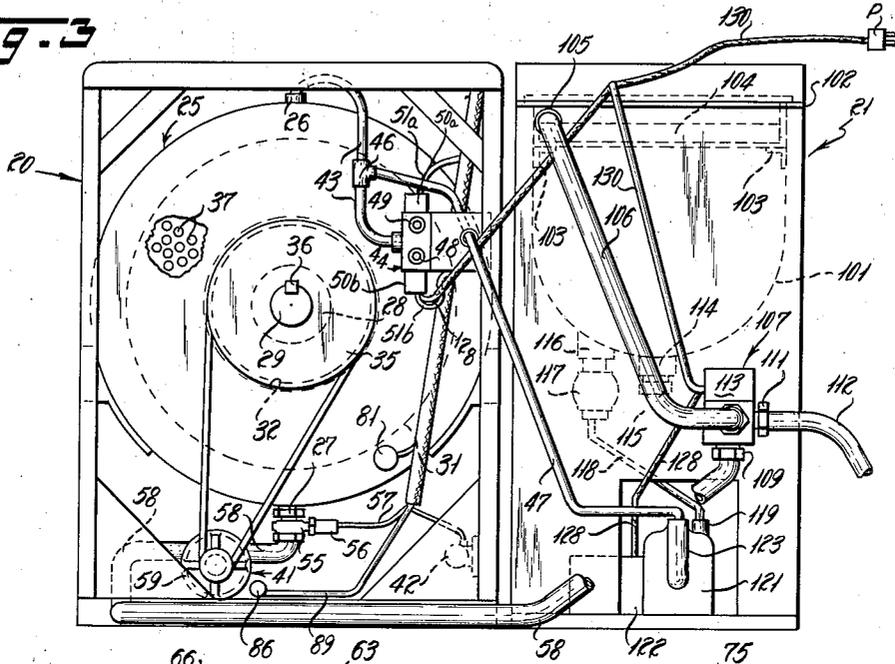


FIG. 4

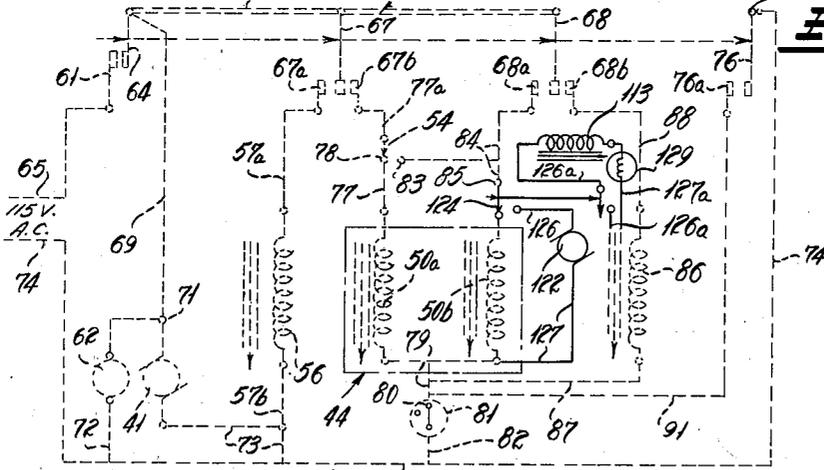
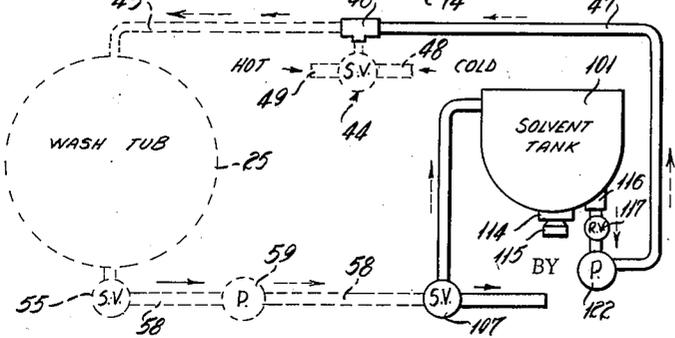


FIG. 5



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3 Sheets-Sheet 3

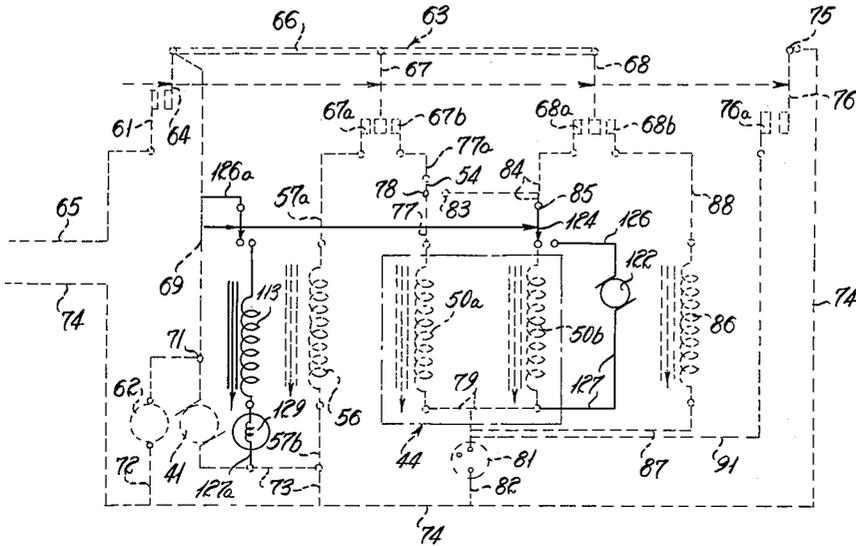


Fig. 6

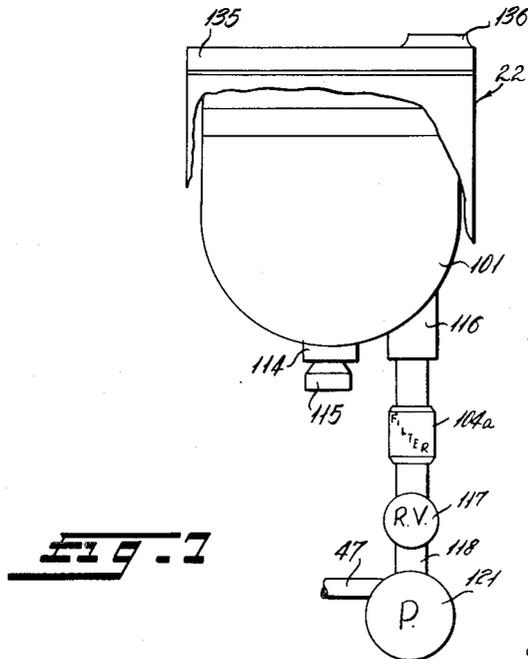


Fig. 7

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**AUTOMATIC HOME WASHING AND DRY
CLEANING MECHANISM**

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16 Claims. (Cl. 68-4)

The present invention relates to a combined wash-
ing and dry cleaning mechanism and more particularly
to automatic cycling home washing and dry cleaning
mechanism.

It is well known in the prior art to provide automatic
cycling washing machines for home and commercial
usage and automatic dry cleaning machines for com-
mercial usage. So far as is known, however, no one
has devised a combined automatic cycling washing and
dry cleaning machine for home usage or for neighbor-
hood rental to the home or apartment dwellers.

It, accordingly, is a primary object of this invention
to provide a combined washing and dry cleaning machine
for use by housewives.

A further important object of the present invention
resides in the provision of an attachment that may be
readily connected to an existing cycling home washer
and dryer to provide the housewife with facilities for
home dry cleaning of suits, draperies, and like articles
used in and around the home now normally sent out
to commercial dry cleaning establishments.

Still another object of the present invention is to pro-
vide simple dry cleaning fluid reservoir means having
fluid connections and pump and control means adapted
for inclusion in the fluid and electrical circuitry of a
conventional cycling home washer to adapt the home
washer for use as an automatic cycling dry cleaning plant
for effectively dry cleaning, rinsing and drying clothes
and fabrics now generally sent out by home owners to
commercial dry cleaning establishments.

A further object of the present invention is to pro-
vide a conventional cycling home washer having a sole-
noid controlled water supply valve for supplying hot or
a mixture of hot and cold water, a selectively operable
drain pump, timer means, a motor driven wash tub and
a shifter solenoid for selectively effecting low and high
speed drive of the wash tub to effect a cycled water
cleansing, rinsing and drying of fabrics with fluid means
and electrical control circuitry for selectively by-pass-
ing the water supply valve and substituting therefor a
supply of dry cleaning fluid to effect a cycled dry clean-
ing fluid cleansing, rinsing and drying of fabrics.

Further objects will appear from the following de-
scription and appended claims when read in conjunc-
tion with the accompanying drawings wherein:

FIGURE 1 is a top plan view illustrating the present
invention in the form of a dry cleaning attachment unit
adapted for converting an existing cycling home wash-
ing machine for use as a dry cleaning unit;

FIGURE 2 is a front elevational view of the washer
and dry cleaning attachment unit of FIGURE 1;

FIGURE 3 is a rear elevational view of the washer
and dry cleaning attachment unit of FIGURE 1 with
the rear cover plate of the washer removed to illustrate
the simplicity of the connection of the dry cleaning at-
tachment unit to an existing washing machine;

FIGURE 4 is a circuit diagram illustrating in dotted
lines the control circuitry required for controlling the
cycling operations of one conventional type of washer
and illustrating in solid lines the additional circuitry for
adapting the machine for selective dry cleaning usage;

FIGURE 5 is a piping diagram illustrating in dotted
lines the conventional piping and valving provided for

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the washer of FIGURE 1 and in solid lines the addition-
al piping and valving for adapting the machine for selec-
tive dry cleaning usage in solid lines;

FIGURE 6 is a circuit diagram illustrating in dotted
lines the control circuitry required for controlling the
cycling operations of one conventional type of washer
and illustrating in solid lines additional circuitry for
converting the control circuitry of the aforesaid washer
for combined washer and dry cleaning control; and

FIGURE 7 is a fragmental view of the piping diagram
of FIGURE 5 illustrating a modified location of the
solvent filter provided for the dry cleaning mechanism
of the present invention.

With continued reference to the drawings wherein like
reference numerals are employed throughout to indicate
the same parts, the present invention contemplates either
a pair of housing structures 20 and 21 (FIGURES 1-3)
respectively comprising a conventional motor driven
cycling home washing machine adapted to be plugged
into a home wall receptacle and a dry cleaning fluid
reservoir means, pump and filter unit or a single housing
structure 22 (FIGURE 7) adapted to house both a
cycling home washer and a dry cleaning fluid reservoir
means and the necessary motors, piping, pumps, filters,
etc. required to provide a combined cycling washing
and dry cleaning machine as contemplated by this in-
vention. It will be clear from the following descrip-
tion, that a combined unit such as disclosed in FIGURE
7 can be effectively produced merely by an increase in
the lateral dimension of the housing structure 20 of
FIGS. 1 to 3 to accommodatæ the dry cleaning fluid
reservoir means, pump and filter unit to be presently
described in detail. It is to be understood, therefore,
that the following detailed description applies with equal
accuracy to the structure required to provide either an
attachment unit or a combined washer and dry cleaning
machine of initial production.

Referring for the moment to FIGURES 1 through 3,
the present invention contemplates an automatic washer
such as the Bendix "Gyramatic" #312 washer although
any other suitable automatic washer would, by appropri-
ate by-passing of the water supply valve control circuitry
to introduce dry cleaning fluid in place of water, work
equally well. The illustrated washer comprises an im-
perforate walled chamber 25 of any conventional home
washer construction having a fluid inlet connection 26
and a fluid drain connection 27 and a back wall having a
centered boss 28 adapted to journal the stub support shaft
29 of a generally conically shaped clothes receiving cham-
ber or tub 31 (FIGURE 3). Conical tub 31 converges
toward the front face of housing 20 where it terminates
in a filler opening 32 opposite a similar opening in the
front wall of chamber 25 adapted to be sealingly closed
in conventional manner by a hinged door 33 mounted on
an elongated hinge pin supported conventionally on the
front wall 34 of housing 20.

As best seen in FIGURE 3, stub support shaft 29
protrudes rearwardly from boss 28 and mounts a pulley
wheel 35 which is non-rotatably secured to shaft 29 by a
key 36 or other suitable means. The conical receiving
chamber or tub 31 is non-rotatably supported on the for-
ward end of shaft 29 in conventional manner and its de-
fining wall is perforated throughout as indicated at 37 to
permit free fluid flow into and out of the receiving cham-
ber in well known manner. A conventional drive motor
and transmission mechanism 41 is supported in the lower
portion of housing 20 for driving tub 31 at a low washing
or tumbling speed or high spin drying speed under con-
trol of a timer motor and time control switch assembly
42 of conventional construction.

Admission of washing or cleaning fluid to chamber 25
is provided by an inlet hose 43 conventionally directly

connected to the single outlet connection of a solenoid controlled water supply valve 44. In practicing the present invention, hose 43 is connected to valve 44 through a T connection 46 the second supply branch of which is adapted through a hose 47 to be connected to a supply of dry cleaning fluid in a manner to be presently pointed out.

As clearly shown in FIGURE 3, valve 44 is provided with a hot water connection 48 and cold water connection 49 and its respective control solenoids 50a and 50b are connected by lead cables 51a and 51b into the conventional cycling washing circuitry provided in the automatic home washing machine and controlled conventionally by respective selector buttons 52 and 53 of a main double throw selector switch 54 to provide either a cycling operation utilizing straight hot wash water or a mix of hot and cold water at all times according to the fabrics to be cleaned.

As is customary in such automatic washing machines the removal and resupply of the fluid contents of chamber 25 after set periods of operation is effected automatically. To accomplish this, a solenoid actuated drain valve 55 having its solenoid 56 connected through lead cable 57 into the conventional cycling washing circuitry is connected to drain connection 27 and to an outlet pipeline 58 containing a fluid pump 59 (FIGURE 3) driven by motor and transmission mechanism 41 to effect rapid removal of the fluid contents as required during the operating cycles. The main power switch 61 of the basic washer is shown to the left in FIGURES 1 and 2.

The structure so far described, except for the T-connection and its second branch supply hose 47 is conventional and may be found in various forms in all conventional automatic cycling home washers. All such washers also contain control circuitry for automatically effecting the cleaning and drying of the fabrics in a desired manner. The control circuitry of the Bendix "Gyramatic" #312 is typical and is disclosed here merely to illustrate how the dry cleaning operation contemplated by this invention can be incorporated either as an attachment device for existing machines or as an integral part of a combined factory built machine.

As clearly seen from FIGURE 4, wherein the conventional circuitry of the illustrated Bendix washer is shown in dotted lines, the timer motor and time control switch assembly 42 includes a motor 62 and the motor driven cam switch 63, one cam contact 64 of which is disposed to cooperate with the movable contact of main power switch 61 upon actuation of switch 61 to connect main power lead 65 to cam switch 63 and initiate cycling operation of the washer. Contact 64 is carried by a common bus bar connecting cam contacts 67 and 68 with contact 64 and also to a common lead 69 connected at 71 to one lead of timer motor 62 and one lead of the motor of drive motor and transmission mechanism 41. The opposite leads of these motors are connected by respective leads 72 and 73 directly to the other A.C. power line 74 extending to one contact of double terminal 75 of switch contact 76 of switch 63.

The conventional Bendix washer circuitry gangs the switch contacts 64, 67, 68 and 76 for unitary cammed operation and also includes a pair of opposed contacts 67a and 67b cooperating with contact 67, a pair of opposed contacts 68a and 68b cooperating with contact 68 and a single contact 76a cooperating with contact 76. The opposite terminals of drain solenoid 56 are connected by the lead wires 57a and 57b respectively to contact 67a and lead 73.

The supply water solenoid valve 44 is spring biased to an intermediate shut-off position between inlets 48 and 49 and the terminals of its hot water solenoid 50a are respectively connected by lead line 77 to one contact terminal 78 of selector switch 54 and by lead 79 to terminal 80 of a normally closed pressure switch 81 the opposite terminal of which is connected to power lead 74 by a lead 82. A second contact terminal 83 of switch 54 is connected to a multi-branch lead 84 leading respectively

to contact 68a of time control switch and a terminal contact 85 normally connected to one lead of cold water solenoid 50b the other lead of which is connected by lead 79 to terminal 80 of normally closed pressure switch 81.

The switch terminal of switch 54 is directly connected to switch contact 67b of time control switch 63 by lead 77a. The opposite leads of a shifter solenoid 86 associated with the transmission of motor and transmission mechanism 41 are connected by leads 87 and 88 of cable 89, also carrying motor leads 69 and 73, to switch contact 68b of time control switch 63 and lead 79. A by-pass circuit between lead 79 and power lead terminal 75 bypassing pressure switch 81 is provided by lead 91 interconnecting lead 79 and switch contact 76 of time control switch 63.

To adapt such an automatic washer for service also as a home dry cleaner, this invention contemplates a storage chamber 101 for dry cleaning fluid, preferably a high flash point dry cleaning solvent, such as "Dowper," a perchloroethylene marketed by Dow Chemical Co., having soap emulsifier agents incorporated therein. Such fluids are obtainable on the commercial market, present no dangerous fire hazards and may be reused for extended periods of time if filtered promptly to remove dirt and foreign matter removed from fabrics during the cleaning operation. Chamber 101 may be mounted either in an attachment housing 21 as shown in FIGURES 1 through 3 or formed with washer chamber 25 as an assembly unit using rigid piping as shown diagrammatically in FIGURE 5 for factory incorporation into a single housing. In either case, the side walls of chamber 101 at a point spaced downwardly from the upper out-turned support flanges 102 are provided with any suitable filter support means such as lugs 103 (FIGURE 3) to support a filter unit 104 comprising a flanged, perforated, covered tray containing activated carbon or other fluid filtering matter adapted to remove dirt and other foreign matter that might discolor the fluid or otherwise render the fluid unsuitable for use. Alternatively a filter unit 104a as shown in FIGURE 7 could be inserted in the outlet from chamber 101 to filter the solvent as it leaves the storage chamber.

As best shown in FIGURES 1 and 3, chamber 101 at its upper rear edge preferably at the corner nearest washer chamber 25 is provided with a fluid inlet fitting 105 extending into filter unit 104 and adapted for connection through a supply tube or pipe 106 to an outlet of three port solenoid operated routing valve 107 the inlet port 109 of which is connected to the discharge end of outlet pipeline 58 leading from washer drain pump 59. The third port 111 of routing valve 107 has a discharge hose 112 connected to it for a purpose to be hereinafter pointed out. The valve element (not shown) of routing valve 107 is of conventional construction and is preferably biased to normally connect inlet port 109 to outlet port 111 and is adapted, upon energization of its solenoid 113, to connect inlet port 109 with the outlet connected to supply tube or pipe 106.

At its lowermost point, chamber 101 is preferably provided with a dirt sump 114 normally closed by a removable plug 115 designed for periodic removal to drain chamber 101 and permit removal of accumulations of dirt and foreign matter that may get past filter 104 during long usage or in event of the cleaning of unusually dirty or greasy fabrics. Adjacent sump 114 and at a higher point in the bottom wall of chamber 101, chamber 101 is provided with an outlet fitting 116 provided with a one way reducer check valve 117 of any suitable construction or alternately with filter unit 104a and valve 117. The outlet of valve 117 is connected by pipe line 118 to the inlet 119 of a centrifugal pump or other suitable fluid pump 121 driven by a motor 122 and adapted to pump dry cleaning fluid from chamber 101 through pump outlet 123 connected to dry cleaning fluid supply hose 47. Pump motor 122 is shunt connected into

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the conventional washer circuitry heretofore described through a double pole, double throw selector switch 124 having one of its pole contacts connected to lead contact 85 and its two related fixed contacts respectively connected to one lead of cold water solenoid 50b and to motor lead 126. The other motor lead 127 is in turn connected to the other lead of cold water solenoid 50b so that motor 122 is shunt connected around cold water solenoid 50b to replace solenoid 50b in the circuitry upon actuating switch 124 to its dry cleaning position.

Since solenoid 113 of routing valve 107 should be energized at all times that tub chamber 25 is being drained during the dry cleaning operation, it can be shunt connected into the circuit controlled by contacts 61-64 as illustrated in FIGURE 6, with lead 126a connected between lead 69 and the other pole contact of switch 124 and lead 127a, including solenoid 113 and indicator or tell-tale light 128 mounted on the switch panel adjacent selector switch 124, connected to the appropriately related fixed contact of switch 124 and lead 73. Such a circuit arrangement would be particularly appropriate for a factory built combination with the selector switch 124 located on the single control panel containing the buttons 52 and 53 for selector switch 54.

To simplify the connections in a construction wherein the dry cleaning mechanism is sold as an attachment unit in a separate housing 21, the additional control circuitry preferably takes the form shown in FIGURE 4. In this figure, motor 122 is shunt connected by leads 126 and 127 into the conventional washer circuitry in the manner heretofore described in connection with FIGURE 6. This is accomplished by disconnecting lead connection 85 from the cold water solenoid contact and connecting it directly to the first pole contact of switch 124 and connecting the related fixed pole contact to the disconnected cold water solenoid contact. This can be readily accomplished through a two wire cable 128 shown best in FIGURE 3, connected between its ends to switch 124 and having the leads at one end connected to the contacts of motor 122 at the factory.

A similar cable 130 (FIGURE 3) is employed to connect solenoid 113 and tell-tale light 128 in series with the second pole and fixed contact of selector switch 124, the respective leads 126a and 127a being extended beyond switch 124 to a conventional plug P adapted for plugged connection in a 115 volt wall receptacle of the user's home. In this way the added circuit for energizing solenoid 113 and tell-tale light 128 will be a completely separate circuit under control of selector switch 124 and a simple two point connection to the existing washer circuitry only will be required.

It will be appreciated, therefore, that the pump and valve control circuitry for initiating and maintaining cycling operation for dry cleaning fabrics are merely imposed on the existing washer control circuitry to selectively substitute solvent pump 122 for cold water supply solenoid 50b and to continuously energize routing valve solenoid 113 and tell-tale light 126 when the dry cleaning operation is desired. Furthermore, since the cycling controls of the illustrated washer control circuit are set up so that the hot water solenoid 50a is energized when selector switch 54 is in the position illustrated in FIGURE 4 and then only during the wash cycle, the motor control contacts of switch 124 of the attachment unit are intentionally interposed in the place of the cold water solenoid circuitry to assure proper sequential operation of motor 122. Switch 124, however, could be incorporated in a combined factory built machine in any other suitable way that the basic cycling circuitry may require to assure a dry cleaning fluid supply and return flow when required.

To fully understand the cycling system herein illustrated, it should be understood that the contacts of time control switch 63, assuming proper actuation of selector

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switches 54 and 124, are closed in the following sequential order to complete a cleaning cycle:

	Contacts Closed	Washing Operation	Dry Cleaning Operation
5	61-64 and 68-68a.....	Soak (cold water).	Soak (solvent).
	61-64 and 67-67b.....	Wash (hot water).	Wash (solvent).
	61-64 and 67-67a, 76-76a, 68-68a...	Spray rinse (cold water).	Spray rinse (solvent).
10	61-64 and 68-68a.....	1st deep rinse (cold water).	1st deep rinse (solvent).
	61-64 and 68-68a.....	2nd deep rinse (cold water).	2nd deep rinse (solvent).
	61-64 and 67-67a, 68-68b.....	Extract (spin drying).	Extract (spin drying).
	61-64 and 67-67a.....	Drain (final).	Drain (final).

15 Due to the fact that motor 122 is energized in the dry cleaning operation whenever contacts 67-67b or 68-68a are closed, it will be seen that solvent will be pumped under pressure to tub chamber 25 during the soak, wash, 1st deep rinse and 2nd deep rinse operation, unless the circuit is interrupted by opening of pressure switch 81 indicating a sufficient level of solvent in tub chamber 25. Solvent will also be pumped continuously during the spray rinse operation since the circuit including contacts 76-76a by-passes pressure switch 81 to maintain motor 122 energized. During all dry cleaning operations washer motor 41, timer motor 62 and routing valve 107 will be continuously energized irrespective of which of the two disclosed circuits is used. As a result, return of solvent discharged or draining from tub enclosure 25 to storage chamber 101 will be assured yet discharge of wash and rinse water through discharge or waste hose 112 will likewise be assured during normal washing operations. Therefore, a constant supply of clean solvent is assured at all times during dry cleaning operation and loss of dry cleaning fluid and objectionable water dilution of the solvent is avoided.

Since certain of the dry cleaning fluids have toxic effects chamber 101 is preferably provided with an airtight cover 135 (FIGURE 7) and a vent tube 136 adapted to receive suitable lengths of vent pipe (not shown) to vent the dry cleaning fluid storage area to the outside atmosphere.

The invention may be embodied in other specific forms without departing from the spirit or essential characteristics thereof. The present embodiments are therefore to be considered in all respects as illustrative and not restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description, and all changes which come within the meaning and range of equivalency of the claims are therefore intended to be embraced therein.

What is claimed and desired to be secured by United States Letters Patent is:

55 1. A combined automatic home washer and dry cleaner comprising a rotary receiving chamber comprising a perforated bottom wall and a side wall defining a filling end opening for introducing fabrics to be cleaned into said receiving chamber; an imperforate walled chamber surrounding said receiving chamber and having a closure member providing access to said end opening of said receiving chamber, a fluid inlet connection and a fluid drain connection; a drain pump operatively associated with said fluid drain connection; motor means for driving said receiving chamber including controlled means for selectively driving said receiving chamber at a low speed for washing and rinsing of said fabrics and at a higher speed to effect a spin drying of said washed and rinsed fabrics; reservoir means for storing dry cleaning fluid having an outlet connection and an inlet connection; a fluid pump and motor assembly operatively connected to said outlet connection of said reservoir means; a solenoid controlled water supply valve having wash and rinse water inlet connections and outlet connection means and adapted to supply wash water and rinse water respectively during

washing and rinsing operations of said receiving chamber; a fluid inlet line connected to said fluid inlet connection of said imperforate walled chamber and having a pair of branch supply lines connected respectively to said fluid pump of said fluid pump and motor assembly and to said outlet connection means of said water supply valve; a routing valve connected to said fluid drain connection and having a normally closed by-pass discharge port connected to said inlet connection of said reservoir means in one position of said routing valve; electrical control circuitry including a time control switch, a timer motor and selector switch means for selectively energizing said motor means, said water supply valve, said drain pump and said controlled means when said routing valve is in said one position to sequentially supply wash water and rinse water to said imperforate walled chamber only during the low speed wash and rinse cycles of said receiving chamber to effect a cycled washing and drying of washable fabrics or by-passing said water supply valve and energizing said motor means, said drain pump, said controlled means; and said fluid pump and motor assembly when said routing valve moves from its said one position to interconnect said drain connection and said inlet connection of said reservoir means to establish a closed fluid circuit including said reservoir means and sequentially supply dry cleaning fluid to said imperforate walled chamber only during the low speed wash and rinse cycles of said receiving chamber to effect a cycled dry cleaning and drying of dry cleanable fabrics.

2. The combined automatic home washer and dry cleaner of claim 1 wherein said storage reservoir means, said fluid pump and motor assembly and said routing valve constitute an attachment assembly adapted for connection to a conventional cycling home washing machine and said electrical control circuitry comprises the conventional cycling home washing machine circuitry and selector switch energized by-pass circuitry containing said fluid pump and motor assembly and said routing valve and including switch leads connectable to said conventional cycling home washing machine circuitry to substitute said fluid pump and motor assembly for the water supply valve of said conventional home washing machine and to continuously energize said routing valve to provide a dry cleaning fluid return passage to said reservoir means.

3. The combined automatic home washer and dry cleaner of claim 1 wherein said electrical control circuitry includes signalling means energized upon selection of said dry cleaning cycling operation to indicate to an operator that the dry cleaning circuitry has been established.

4. An attachment unit adapting an electrically controlled automatic cycling home washer having a tub chamber provided with fluid inlet and drain connections for use as an automatic cycling home dry cleaner comprising a housing structure including a storage chamber for dry cleaning fluid; an outlet connection in said storage chamber; an inlet connection in said storage chamber; a motor driven fluid pump having its inlet connected to said storage chamber outlet connection and an outlet adapted for connection to said inlet connection of said tub chamber; a solenoid operated routing valve having an inlet adapted for connection to said tub chamber drain connection and a pair of discharge outlets one of which is normally closed and connected to the inlet connection of said storage chamber; and electrical circuitry including said pump motor, the solenoid of said routing valve and selector switch means including switch contacts adapted for connection into the electrical controls of said automatic cycling home washer whereby said attachment unit may be connected into said electrical controls to selectively supply dry cleaning fluid in place of water and thereby sequentially dry clean, rinse and dry fabrics required to be dry cleaned using the cycling controls of the home washer.

5. The attachment unit of claim 4 wherein the solenoid operated routing valve is connected through said selector switch means directly to an alternating current supply source upon selection of circuitry to supply dry cleaning fluid to said tub chamber whereby said solenoid will be energized to shift said routing valve to open said normally closed discharge outlet and establish a fluid return path to said storage chamber.

6. The attachment unit of claim 5 wherein the storage chamber adjacent the inlet connection supports a filter unit adapted to remove dirt and discoloring matter present in the returning cleaning fluid.

7. The attachment unit of claim 5 wherein the storage chamber outlet connection is provided with a filter element adapted to remove dirt and discoloring matter from the recirculated cleaning fluid.

8. The attachment unit of claim 4 wherein the solenoid operated routing valve is connected through said selector switch means to the alternating current leads of said automatic cycling home washer upon selection of circuitry to supply dry cleaning fluid to said tub chamber whereby said solenoid will be energized to shift said routing valve to open said normally closed discharge outlet and establish a fluid return path to said storage chamber.

9. A combined home washing and dry cleaning mechanism comprising a housed motor driven rotary washer and drying tub having a tub drain means; inlet means for supplying a fluid cleaning medium to said tub; motor pump means for removing fluid cleaning medium from said tub; solenoid controlled valve means for supplying wash water to said tub inlet means to form a water base fluid cleaning medium; a dry cleaning solvent supply means; motor driven solvent pump means for supplying dry cleaning solvent to said tub inlet means to form a solvent base fluid cleaning medium; a solenoid operated routing valve connected to said tub drain means and having a first discharge outlet and a second discharge outlet connected to said dry cleaning solvent supply means; a motor driven tub drive mechanism for driving said tub selectively at washing and rinsing speed and spin drying speed; and control circuitry including selector switch means, a timer motor, a time control switch and solenoid controlled shifter mechanism for said motor driven tub drive mechanism for selectively energizing said solenoid controlled valve means or energizing said motor driven solvent pump means and said solenoid operated routing valve whereby cycling soak, wash, spray rinse, deep rinse, drying and tub draining operations may be selectively effected utilizing water and dry cleaning fluid.

10. The mechanism of claim 9 wherein said dry cleaning solvent supply means comprises a solvent storage tank having an outlet connection and an inlet connection communicating with said motor pump means upon establishment of said dry cleaning cycling operation of said wash tub to return used solvent to said storage tank and said outlet connection is connected in solvent supply relation to said motor driven solvent pump means.

11. The mechanism of claim 10 wherein said outlet connection includes a one way check valve arranged to prevent reverse flow of solvent or water from said tub to said solvent storage tank.

12. The mechanism of claim 9 wherein said control circuitry includes signalling means energized upon selection of said dry cleaning cycling operation to warn the user that the mechanism is conditioned for dry cleaning.

13. The mechanism of claim 9 wherein said selector switch means comprises a pair of selector switches both of which must be actuated to select the dry cleaning cycling operation of said wash tub and drier.

14. The mechanism of claim 9 wherein said solenoid controlled valve means for supplying wash water comprises a valve having a single outlet, a hot water inlet, cold water inlet and respective hot and cold water solenoids connected for independent energization to shift said valve to supply either hot or cold water to said tub

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and said selector switch means comprises a primary selector switch for selectively cutting said hot water solenoid out of said control circuitry and a secondary selector switch for selectively cutting said cold water solenoid out of said control circuitry and cutting said motor driven solvent pump means into said control circuitry to condition said mechanism for supplying dry cleaning fluid to said tub.

15. The mechanism of claim 14 wherein said secondary switch upon actuation to condition said mechanism for supplying dry cleaning fluid to said tub simultaneously energizes said solenoid operated routing valve to shift said routing valve and establish a fluid return path to said dry cleaning solvent supply means thereby assuring

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a closed recirculating path for said dry cleaning solvent.

16. The mechanism of claim 15 wherein said dry cleaning solvent supply means comprises an airtight storage chamber and vent means is provided for said storage chamber to vent said storage chamber to the outside atmosphere.

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Notice of Adverse Decision in Interference

In Interference No. 93,843 involving Patent No. 2,987,902, J. E. Mack, AUTOMATIC HOME WASHING AND DRY CLEANING MECHANISM, final judgment adverse to the patentee was rendered Oct. 23, 1964, as to claims 9, 10, 11 and 13.

[*Official Gazette March 30, 1965.*]