

May 30, 1967

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3,321,843

LAUNDERING MACHINES

Filed July 10, 1964

4 Sheets-Sheet 1

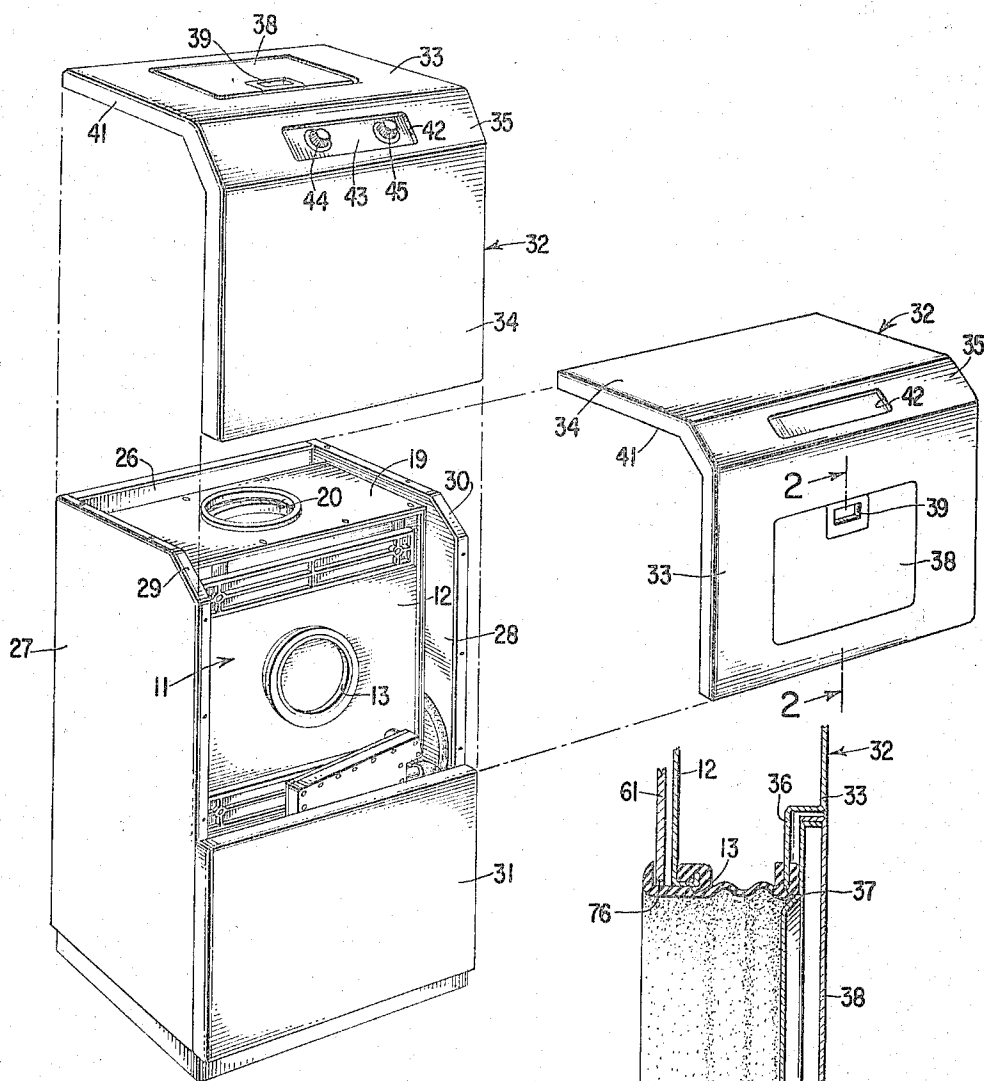


Fig. 1

Fig. 2

WITNESS

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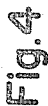
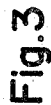
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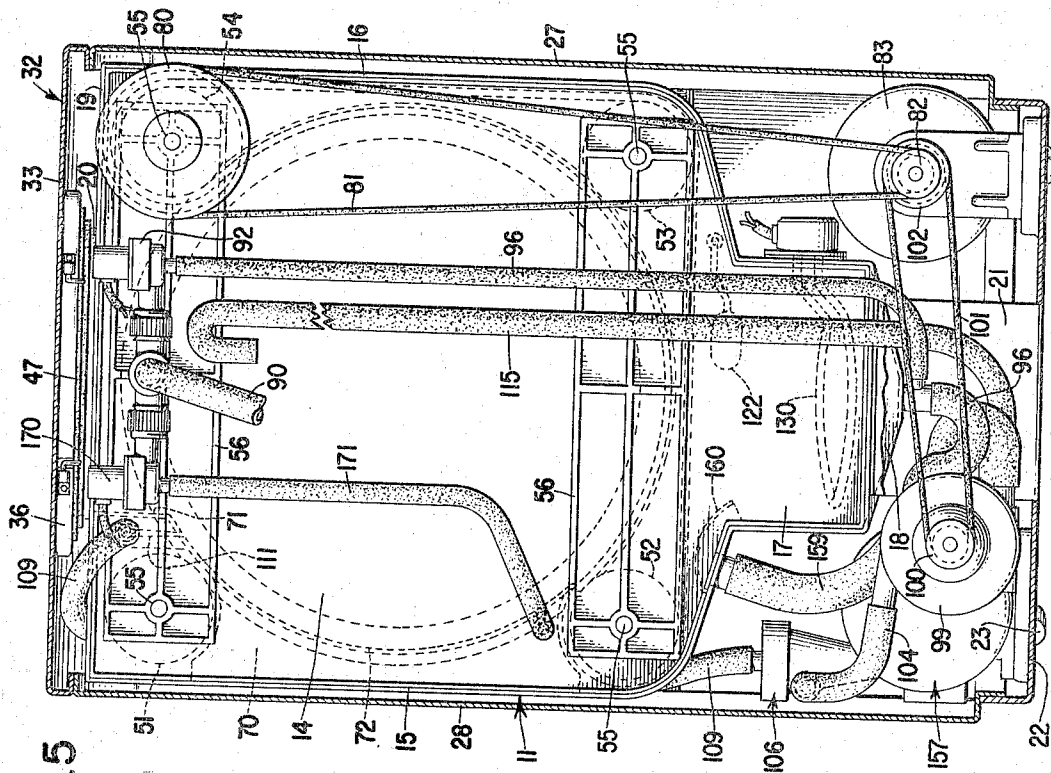


Fig. 5

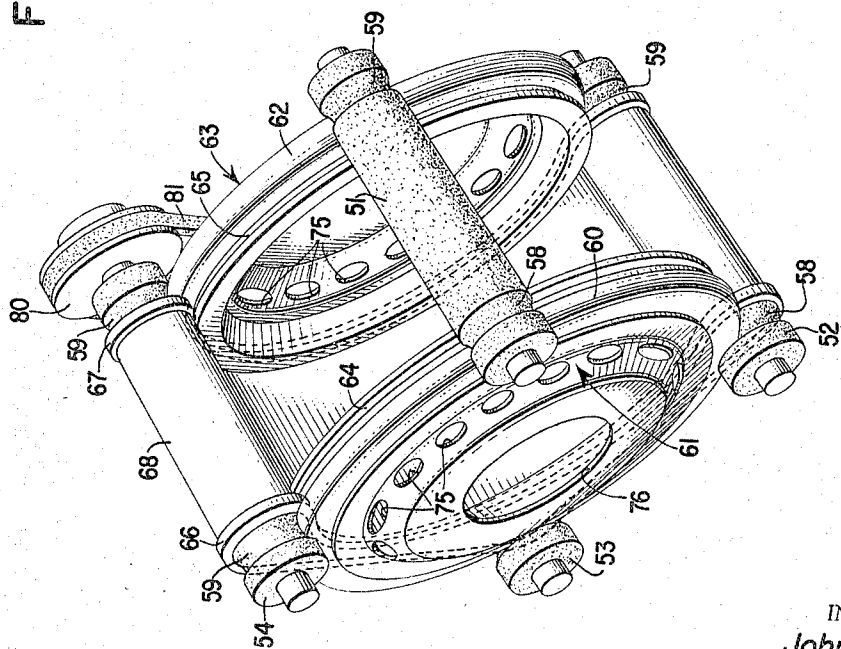


Fig. 6

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Fig. 7

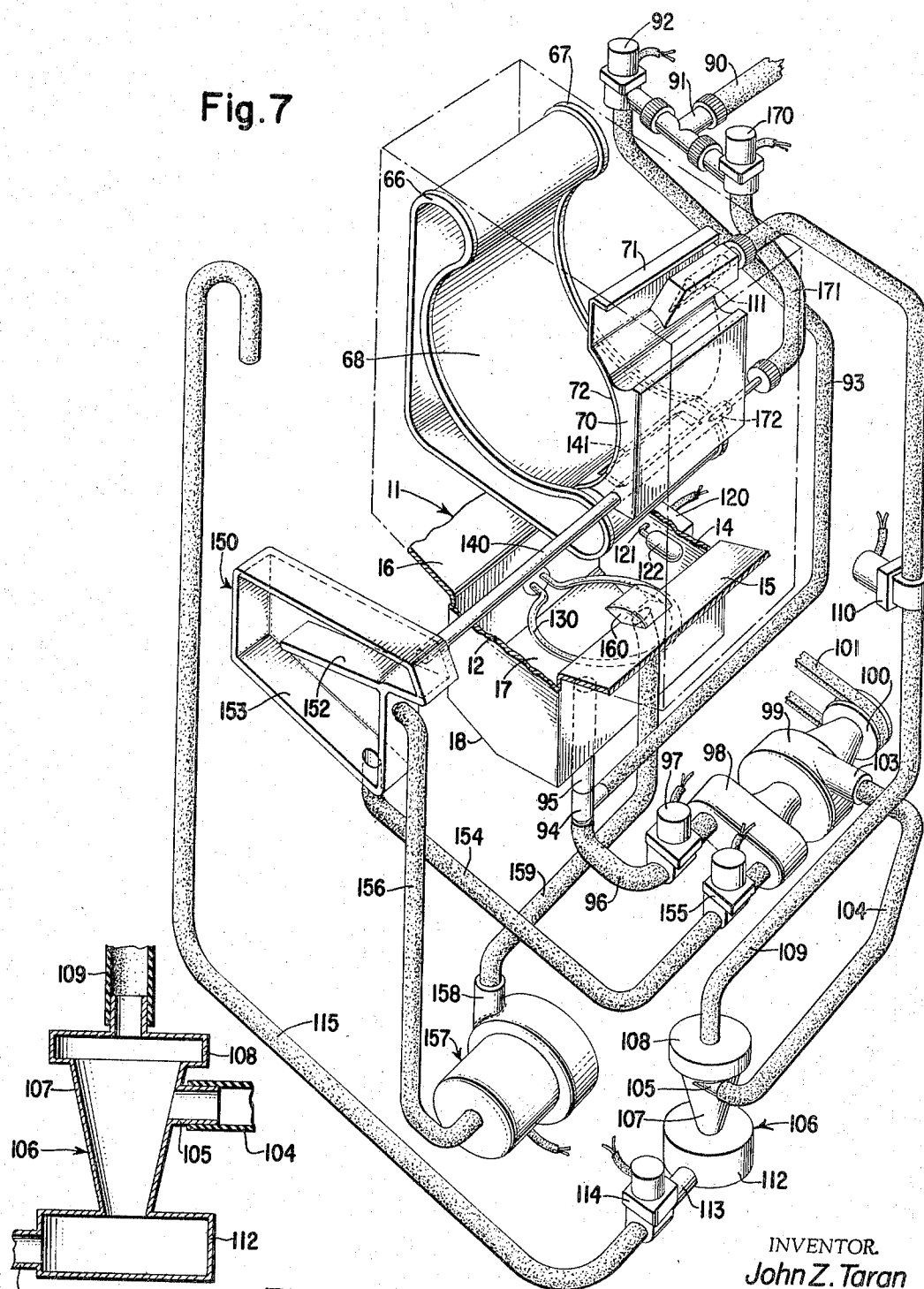
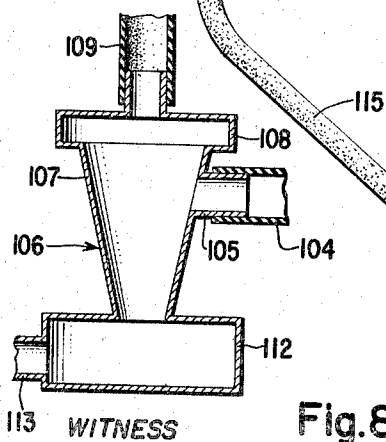


Fig. 8



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LAUNDERING MACHINES

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8 Claims. (Cl. 34-133)

This invention relates to domestic laundering machines, and more particularly, to a machine for washing and selectively extracting moisture from the laundry to a drip-free condition or completely drying the laundry.

It is an object of this invention to provide a novel arrangement in a laundering machine for supporting and agitating laundry which is suitable without variation of speed or other laundry manipulation for washing, moisture extraction, and drying.

Another object of this invention is to provide a novel laundry supporting and agitating mechanism so arranged in a cabinet as to be convertible between top and front loading by a simple rearrangement of parts.

Still another object of this invention is to provide in a laundering apparatus of the above character, a novel means for rapidly and efficiently extracting free moisture from the washed laundry to a drip-free condition.

It is also an object of this invention to provide a novel means for completely drying the laundry in the laundering machine after the washing has been completed.

With the above and additional objects and advantages in view as will hereinafter appear, this invention comprises the devices, combinations, and arrangements of parts hereinafter described and illustrated in the accompanying drawings of a preferred embodiment in which:

FIG. 1 represents a front perspective view of the laundering machine of this invention with the top and front panel illustrated in one position raised vertically above the cabinet in an arrangement suitable for top loading of laundry and illustrated in another position at one side of the cabinet in an arrangement suitable for front loading of laundry,

FIG. 2 represents a vertical cross sectional view taken substantially along line 2-2 of FIG. 1 illustrating the flexible boot construction to prevent water seepage in the front loading arrangement,

FIG. 3 represents a front elevational view of the laundering machine of this invention in the top loading arrangement of the top and front cabinet panel and with the front portion of the cabinet broken away,

FIG. 4 is a vertical cross sectional view of the laundering machine taken substantially along line 4-4 of FIG. 3,

FIG. 5 is a rear elevational view of the laundering machine of FIG. 3 with the rear portion of the cabinet broken away,

FIG. 6 is a perspective view of those portions of the laundering machine which constitute the movable laundering compartment,

FIG. 7 represents a diagrammatic perspective view of the laundering machine of this invention particularly illustrating the arrangement of the air and water conduits, and

FIG. 8 is a vertical cross sectional view of the soil separating device.

Referring particularly to FIGS. 1, 3, 4, and 5, the laundering machine of this invention comprises a substantially rectangular container or tub 11 including a front wall 12 formed with a flanged circular aperture 13 and with a plain rear wall 14. The plain sidewalls 15 and 16 of the container 11 converge at the bottom to define with the front and rear walls 12 and 14 a sump 17 provided with a dished bottom 18 for the collection of water.

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The container 11 is fitted with a top covering member 19 formed with a flanged circular aperture 20.

Extending from the front and rear walls 12 and 14 of the container beneath the sump 17 are a pair of upright support panels 21 which extend upwardly from a frame 22 which defines the bottom of the laundering machine providing a base to which is secured four casters 23 so that the laundering machine may be moved readily for use and storage. The frame 22 is preferably formed at the sides with an upturned flange 24 which accommodates in nested relation downturned flanges 25 formed on an exterior cabinet or casing. The casing is formed with a plain rear wall 26 which extends substantially the full height of the laundering machine and with plain sidewalls 27 and 28 which extend similarly to the full height of the laundering machine with the exception of the upper front corners 29 and 30, respectively, which are formed at a 45° angle across the top and front edges of the sidewalls 27 and 28. The front wall 31 of the casing extends upwardly only part way of the height of the laundering machine, so that the top of the casing and the upper front portion thereof are open. The distance from the top of the front wall 31 to the top of the laundering machine is substantially identical to the depth of the laundering machine measured across the top thereof so that the top and front openings of the casing are substantially identical in size and shape.

As illustrated in FIG. 1, the casing is completed by a top and front cover member indicated generally at 32 which is formed with substantially flat panels 33 and 34 of identical dimensions which extend in mutually perpendicular relation from a central portion 35 which is disposed at an inclination of 45° to the panels 33 and 34. The panel 33 of the top and front cover member is formed with a generally rectangular depression 36 which is centrally located in the panel 33 and which is preferably formed with a central circular hatch 37. The rectangular depression 36 is fitted with a lid 38 covering the hatch 37 which lid may include a finger grip 39 and hinges 40 which as illustrated in FIGS. 2 and 4 pivotally support the lid relatively to the top and front cover member 32 in place in the rectangular depression 36. Since the panels 33 and 34 are identical in size, the top and front cover member 32 may be positioned on the cabinet with the panel 33 having the lid 38 thereon disposed on the top surface of the cabinet overlying the aperture 20 in the top covering member 19 of the container 11, or the panel 33 may be arranged on the front wall of the casing 25 with the lid 38 disposed in registry with the aperture 13 in the front wall of the container. The top and front cover member 32 is formed with a lip 41 at each side adapted to overlie the casing sidewalls 27 and 28 to facilitate fastening of the top and front cover member in place. The central portion 35 of the top and front cover member 32 may be formed with a rectangular opening 42 through which extends a conventional timing and control device 43 and the operating handles 44 and 45 thereof. Since the rectangular opening 42 is symmetrically arranged in the central portion 35, the timing and control device may be accommodated on the top and front cover member with equal facility regardless of the arrangement of the cover member on the casing.

Referring to FIG. 4, a closure member 46 is illustrated in place in the flanged circular aperture 13 of the front wall 12 of the container 11. Such a closure member is used to close that one of the container apertures 13 or 20 which is not chosen for loading of laundry therethrough. As illustrated in FIG. 4, when the casing is arranged for top loading of the laundry, the flange circular aperture 20 in the top covering member of the container accommodates an annular rubber gasket 47 which in addition to em-

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bracing the flange of the circular aperture 20 also embraces the circular opening 36 in the top and front cover member 32 and cooperates with the lid 38 to deter seepage of water out of the casing during the laundering process. When the top and front covering member 32 is arranged to provide for front loading of laundry, the closure member 46 is fastened in the circular aperture 20 in the top covering member, and as illustrated in FIG. 2, a gasket 48 formed of rubber or other flexible material is applied to the flanged circular aperture 13 in the front wall of the container 11. The gasket 48 is preferably formed with an accordioned central portion and with an outer rim 49 adapted to embrace the circular aperture 37 in the top and front cover member 32 so as to deter seepage of water through the lid during the washing operations. The gasket 48 which is used when the machine is to be front loaded is also formed with an inwardly extending rim portion 50 which is adapted to embrace the flanged aperture 13 and is also outwardly flared as illustrated in FIG. 2 to cooperate, as will be described hereinbelow, with the moving laundry compartment of the laundering machine.

FIG. 6 illustrates in perspective the moving components which define the chamber within which the laundry is supported and agitated during the operation of this laundering machine. These moving components comprise four substantially identical rollers 51, 52, 53, and 54. Each roller being journaled in bearings 55 between the front and rear walls 12 and 14 of the container 11. The bearings 55 may preferably be formed as part of reinforcing plates 56 which are secured outside the front and rear walls of the container. The rollers 51-54 are journaled on axes spaced equally distant from a common center 57, FIG. 3, and each roller is formed with a pair of spaced annular grooves 58, 59. The grooves 58 in the rollers each embrace the beaded periphery 60 of a front disk 61 adjacent to the front wall 12 of the container while the grooves 59 of the rollers each embrace the beaded periphery 62 of rear disk 63 adjacent the rear wall 14 of the container. The rollers 51-54 thus support and constrain the disks 61 and 63 in spaced relationship for turning movement about the central axis 57. Each of the disks 61 and 63 is formed inwardly of the beaded peripheral portions 60 and 62 with an annular groove 64 and 65, respectively. The grooves 64 and 65 accommodate outwardly extending marginal ribs 66 and 67 formed on an endless belt 68 which is entrained about rollers 52, 53, and 54. The belt 68, therefore, assumes a general "C" shaped configuration in engagement with the annular disk grooves 64 and 65 where the belt is in engagement with the disks 61 and 63, and a substantially "L" shaped path over those portions in which the belt extends between the rollers 52, 53, and 54. The disks 61 and 63 together with the belt 68, as illustrated in FIGS. 3, 5, 6, and 7, thus define the bottom and three sides of a chamber which is adapted to support and contain the laundry. The remaining side of the laundry chamber is provided by a stationary partition 70. As illustrated in FIGS. 3, 4, and 7, the partition 70 is formed at the top with a flanged bracket 71 adapted to be secured beneath the top covering member 19 of the container 11. The partition 70 extends downwardly and overlies the roller 52 within the space between the disks 61 and 62 so as to close the space therebetween to prevent the laundry from moving out of the chamber which the partition, the disks 61 and 63, and the belt 68 thus provide. The inner surface 72 of the partition 70 is preferably formed with a concave configuration to conform generally to the circular shape of the laundry compartment.

Referring particularly to FIG. 6, each of the disks 61, 62 of the laundry chamber is preferably formed with an annular series of openings 75 permitting ready drainage of water from the laundry compartment into the container 11. The front disk 61, in addition, may be formed with a central aperture 76 to facilitate front loading. Referring to FIG. 2, the inwardly extending portion 50 of the flexi-

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ble gasket 47 extends within the central aperture 76 when the laundering machine is arranged for front loading.

The roller 54 exteriorly of the rear wall 14 of the container 11 has secured to it a pulley 80 which is drivingly engaged by a belt 81 driven by a pulley 82 fast on the shaft of a motor 83 carried on the frame 22. As viewed in FIGS. 3 and 6, the direction of rotation of the motor 83 is preferably clockwise so as to drive the belt 68 and the disks 61 and 63 similarly in a clockwise direction as viewed in FIGS. 3 and 6. The action of the above described laundry chamber is thus to elevate the laundry from the belt 68 at the level of the rollers 52 and 53 upwardly toward the roller 54 and in a generally circular path so as to cast the laundry against the stationary partition 70 downwardly along which the laundry will fall into engagement with the belt at the level of the rollers 52 and 53. The laundry will thus be given a tumbling action and in addition will be repeatedly cast against the stationary inner surface 72 of partition 70 which serves as a scrub-board to aid in dislodging soil from the laundry.

This tumbling and washboard effect also serves an important function in the water extraction and drying aspects of this invention as will be described hereinbelow.

Laundering

Referring to FIGS. 3, 4, and 5 and as indicated diagrammatically in FIG. 7, the arrangement of parts and devices and the operation thereof for laundering will now be described.

Indicated at 90 is a water inlet which may be directed from any source of unheated water and connects to a T 91 of which one branch leads to a solenoid operated valve 92. From the valve 92, a pipe 93, which may preferably be of flexible tubing, leads to a T 94 of which one branch connects to a tail pipe 95 depending from the container sump 17. The other branch of the T 94 connects to a pipe 96 directed to a solenoid valve 97 which provides one inlet to a manifold 98 of a conventional centrifugal water pump 99. The water pump 99 is carried on the machine frame 22 and is provided with a belt pulley 100 driven by a belt 101 from a drive pulley 102 on the motor 83.

The outlet 103 of the centrifugal pump is connected by a flexible pipe 104 to the inlet 105 of a soil separating unit 106 which is illustrated in detail in FIG. 8. The inlet 105 enters at one side of a conical upper chamber 107 from the enlarged top portion 108 of which extends a flexible pipe 109 in which a solenoid operated valve 110 is arranged. The pipe 109 beyond the valve 110 is directed to a nozzle 111 which is constructed on the upper portion of the partition 70 to direct a stream of water into the laundry chamber.

Beneath the conical upper chamber 107 of the soil separator and in communication therewith is an enlarged sediment tank 112 from the bottom of which extends a waste outlet 113 which leads to a solenoid operated valve 114 from which extends a flexible waste pipe 115.

Situated near the upper level of the sump 17 outside the front wall 12 of the container 11 is an electrical switch 120 operated by a rod 121 which extends into the sump and terminates in a float 122 responsive to the level of water in the sump 17. The switch 120, which is constructed so as to open when the water level raises the float 122, is connected electrically with the solenoid operated valve 92 at the water inlet to close the valve 92 when the water has filled the sump 17.

Arranged in the sump 17 below the level of the float 122 is an electrical heating element 130 of a conventional type adapted to heat either water in the sump or air in the absence of water. Preferably the heating element 130 is thermostatically controlled in response to a preselected ambient temperature of the air or water in the sump 17.

In the operation of the parts and devices thus far described for laundering, draining of free moisture and rinsing, the timing and control device 43 is utilized and particularly the operating handle 44. The timing and con-

control device 43 which may be of conventional construction, and therefore is not illustrated herein in detail, is preferably of the type which upon manual initiation by the handle 44 will be driven slowly by an electrical clock mechanism in a cycle to provide for a predetermined timed series of electrical contact manipulations. The cycle of the control device 43 initiated by the handle 44 terminates either in a complete opening of the electrical circuit of the laundering machine or in the automatic initiation of movement of the operating handle 45 to initiate operation of the control device 43 for water extraction and/or complete drying as will be explained hereinbelow.

Upon initiation of the control cycle of the control device 43 by operator manipulation of the control handle 44, the motor 83 will be energized thus driving the belt 68 to tumble the laundry and operating the centrifugal water pump 99. In addition, initiation of the control cycle will energize the heater 130 and the solenoid operated valves, 92, 97, and 110 each of said valves being held open while energized. Laundering will thus begin with the water being delivered through the pipes 93 and 96 to the pump 99 and from the pump through the separator 106 through the pipe 109 to the nozzle 111.

As the laundry is elevated and turned by the belt 68 so as to be repeatedly tumbled piece-by-piece against the partition 70, the nozzle 111 will subject the thus agitated laundry along with soap, detergent, or the like which the user may load with the laundry, to a stream of water. The water is free to drain from the laundry into the sump 17 either around the partition 70 which does not make a water tight seal with the belt 68 and the disks 61 and 63 or through the disk apertures 75, 76. The water collected in the sump 17 will be heated and reheated by the heater 130 and recirculated through the tail pipe 95 together with fresh water from the inlet valve 92 to the pump 99 and thence to the nozzle 111.

When the water level in the sump reaches the level of the float 122, the switch 120 will be closed de-energizing the water inlet valve 92 after which the laundering cycle may continue recirculating the wash water from the sump 17 to the nozzle 111.

During laundering all of the wash water which is circulated to the nozzle 111 passes through the soil separator 106. In the conical upper portion of the soil separator, the centrifugal action of the water casts the foreign particles which are heavier than water outwardly and thus separates these foreign particles from the water which is forced upwardly through the pipe 109 to the nozzle 111. The separated particles fall downwardly along the sides of the conical portion 107 and into the sediment tank 112. The laundry is thus washed continuously in relatively clean wash water.

When as determined by the timing and control device 43, the laundering operation is to be terminated, the wash water is withdrawn from the sump 17. This drainage of the free water is accomplished by operation of the control device 43 to de-energize and close the solenoid operated valve 110 in the line to the nozzle 111 and simultaneously to energize the solenoid operated valve 114 into opened position while maintaining the solenoid operated valve 97 energized and in the opened position. The pump 99 will thus evacuate the sump 17 and expel the wash water out through the waste line 115.

For a rinse cycle, the timing and control device 43 operates to close the solenoid operated waste valve 114 and to open the solenoid operated valves 110 and 92 while maintaining open the solenoid operated valve 97 at the inlet of the centrifugal pump 99. The fresh water thus admitted is circulated through the nozzle 111 to rinse the laundry. The heater 130 may be maintained in operation during the rinse cycle if desired and as many alternating rinse and drainage cycles as are deemed desirable may be programmed into the control device 43. Preferably the conclusion of the predetermined laundering, rinsing, and drainage cycle dictated by the control handle 44 terminates with a drainage operation as described above.

Referring to FIGS. 3, 4, 5 and to the diagrammatic perspective view of FIG. 7, the provision in the laundering machine of this invention for extracting free moisture from the laundry after the washing and rinsing cycles have been completed will now be described. By free moisture is meant that which may be extracted as water, in distinction from drying by conversion of the water to vapor.

Indicated at 140 is a tube which extends laterally from the partition 70. Within the partition 70 to the tube 140 communicates with a narrow orifice 141 which opens onto the inner surface 72 of the partition 70 and preferably extends substantially completely across the partition 70 near the bottom edge thereof. The tube 140 communicates with a closed water and air separating compartment 150 which is secured exteriorly of the front wall 12 of the container 11. The water and air separating compartment 150 includes a downwardly inclined partition 152 above which the tube 140 enters the compartment. The compartment 150 is also preferably formed with an inclined bottom wall 153 from substantially the lowest point of which enters a water drainage pipe 154 which is connected to a solenoid operated valve 155 leading to the manifold 98 of the pump 99.

Entering the water and air separation compartment 150 immediately beneath the partition 152 and well above the level of the bottom wall 153 is a flexible tube 156 which leads to the inlet of an air blower 157 mounted on the frame 22. The outlet 158 of the blower 157 is connected by a flexible tube 159 to a downturned metal air deflector 160 formed in the sidewall 15 of the container immediately above the sump 17.

The blower 157 is preferably driven by an electric motor, the operation of which is influenced by the timing and control device 43 in response to operation of the control handle 45. As discussed above, motion of the control handle 45 may be initiated automatically at the conclusion of the cycle of control operations influenced by the control handle 44 for laundering, rinsing, and draining, or the operation of moisture extraction and subsequent drying may require an operator initiation of the control handle 45. In either event the control handle 45 initiates operation of timing and control device 43 which is conventional and therefore is not illustrated herein in detail. The timing and control device 43, as mentioned above, is preferably of the type which upon initiation will be driven slowly by an electrical clock mechanism in a cycle to provide for a predetermined timed series of electrical contact manipulations.

During the operation of water extraction under the influence of the timing and control device 43, the solenoid operated valves 92 and 110 will remain de-energized and closed so that no fresh water will be admitted and no water will be circulated to the nozzle 111. The motor 83 and thus the pump 99 will be operated and the solenoid operated valves 97, 155 and 114 will be energized and opened so that any water draining into the sump and any water drawn into the water and air separating compartment 150 will be pumped out of the waste line 115.

The timing and control device 43 during moisture extraction will also operatively connect the blower 157 for operation so that air will be drawn into the orifice 141 through the tube 140 through the water and air separation compartment 150 and returned into the container 11 through the deflector 160 above the sump 17. The orifice 141 is constructed so as to provide for a constricted opening into the tube 140 thus providing for a relatively high velocity of air travel into the orifice 141. As the wet laundry is lifted by the belt 68 and tumbled against the inner surface 72 of the partition 70, the impact of the laundry against the partition surface 72 will force an appreciable quantity of water from the laundry onto the partition surface above the orifice 141, which water running downwardly along the surface 72 will be drawn into the orifice 141 by the air stream. Moreover, the laundry

in being tumbled against the partition surface 72 will repeatedly pass downwardly across the orifice 141 and the air stream entering the orifice will be drawn through the laundry so as to draw moisture therefrom through the tube 140 and into the water and air separating compartment 150. In the water and air separating compartment 150 the water drawn from the laundry by the air stream will drain downwardly along the inclined partition 152 and the bottom wall 153 into the tube 154 to be pumped out the waste pipe. Only air will enter the tube 156 since it enters the compartment 150 well above the level of the bottom wall 153. With the above described moisture extraction means operating for a few minutes after the final drainage of free water from a laundry load it is possible to extract sufficient moisture that the laundry may be handled without dripping. A relatively short moisture extraction period in accordance with this invention during which the belt 68 for tumbling the laundry is operated at the same relatively slow speed as it is during laundering yields moisture extraction which is comparable to that obtained by conventional spin drying apparatus.

Drying

Under the influence of the timing and control device 43 initiated by the handle 45, the above described free moisture extraction operation may be modified and augmented conveniently in a manner so as to provide for complete and rapid drying of the laundry. For this purpose a solenoid operated valve 170 is connected to the T 91 on the water inlet pipe 90 and a flexible pipe 171 connects the valve 170 with a water injection nozzle 172 fitted into the air tube 140 at the opposite side of the orifice 141 from the water separation compartment 150.

The timing and control device 43 provides for complete drying of the laundry by energizing the blower 157, the electric heater 130, and the solenoid valves 170, 97, 155, and 114 to open these valves. The motor 83 will, of course, continue to be energized as in prior operations so that the laundry will continue to be tumbled against the partition 70 and the water pump 99 will continue to operate. Air delivered by the blower 157 will pass into the sump 17 where it will be warmed by the heater 130. The heated air passing through the damp laundry being tumbled by the belt 68 and absorbing water vapor therefrom will be drawn into the orifice 141 where it will be contacted by a fine spray of cold water from the water injection nozzle 172 thus condensing the moisture absorbed by the heated air from the laundry. The cooling water from the nozzle 172 as well as the moisture condensed from the laundry will be separated from the air in the water and air separating compartment 150, the water being evacuated by the pump 99 to the waste pipe 115 and the air being recirculated by the blower 157 to the sump 17 of the container 11.

Having set forth the nature of this invention, what I claim herein is:

1. A laundering apparatus having a container for laundering fluid, a laundry compartment including a pair of disks, means supporting said disks in spaced relation within said container on a common substantially horizontal axis, an endless carrier belt, means supporting a portion of said carrier belt in engagement with the periphery of each of said disks beneath and along one side of said disks, and a stationary substantially vertical member disposed between the disk peripheries at the side of the disks opposite to that engaged by said carrier belt, said stationary vertical member being formed with a concave surface within said laundering compartment having a center of curvature substantially coincident with the axes of said disks, drive means for imparting movement to said carrier belt to shift said belt portion which is in engagement with said disks from beneath said disks upwardly along said one side of said disks, to elevate and tumble laundry in said laundry compartment against the concave surface of said stationary vertical member an aperture formed in said stationary vertical member terminating in an

orifice opening through the lower extremity of said concave surface into said laundry compartment, and suction means communicating with said aperture.

2. A laundering apparatus having a container for laundering fluid, a laundry compartment including a pair of disks, means supporting said disks in spaced relation within said container on a common substantially horizontal axis, an endless carrier belt, means supporting a portion of said carrier belt in engagement with the periphery of each of said disks beneath and along one side of said disks, and a stationary substantially vertical member disposed between the disk peripheries at the side of the disks opposite to that engaged by said carrier belt, drive means for imparting movement to said carrier belt to shift said belt portion which is in engagement with said disks from beneath said disks upwardly along said one side of said disks, to elevate and tumble laundry in said laundry compartment against said stationary vertical member, an aperture formed in said stationary vertical member terminating in an orifice formed as a narrow horizontally extending slot extending substantially across the entire width of said stationary vertical member and opening into said laundry compartment, and suction means communicating with said aperture.

3. A laundering apparatus comprising a container for laundering fluid, a pair of disks, means supporting said disks in spaced relation within said container on a common substantially horizontal axis, an endless carrier belt, a plurality of rollers supporting a portion of said endless carrier belt in engagement with the periphery of each of said disks beneath and along one side of said disks, drive means for imparting movement to said carrier belt to shift said belt portion in engagement with said disks from beneath said disks upwardly along said one side of said disks, a partition disposed within said container, means supporting said partition between the disk peripheries at the side of said disks opposite to that engaged by said carrier belt, means for admitting laundering fluid into said container for contact with laundry placed on said carrier belt between said disks, one of said disks being formed with a circular access aperture substantially concentric with said disk axis, said container comprising sidewalls and a top panel, that container sidewall contiguous to said apertured disk being formed with an access opening aligned with said disk aperture, and said top panel being formed with an access opening arranged between said spaced disks and between said partition and the upwardly extending portion of said carrier belt along said one side of said disks.

4. A laundering apparatus as set forth in claim 3 in which said openings in said top panel and said container sidewall are of equal size and in which said openings are arranged symmetrically about the imaginary line of juncture between said top panel and said container sidewall, an integral top and front cover member for said container comprising panels of substantially equal size and shape extending in angular relation from an imaginary line of juncture, and one of said top and front cover member panels being formed with an access hatch adapted for alignment with either the top panel opening or the sidewall opening selectively by reversal of the position of said top and front covering member relative to said container.

5. A laundering apparatus comprising a laundry container having a top access aperture and a front access aperture, a casing having a top and a front and formed with a top opening and front opening, respectively, an integral cover for said top and front openings of said casing including two panels extending in angular relation from a juncture between said panels, said cover panels and said casing openings each being similarly shaped and said casing adapted to accommodate said integral cover with either of said panels selectively positioned to close said top and front casing openings respectively, only one of said integral top cover panels

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formed with an access hatch, and means supporting said laundry container within said casing with said top and said front access apertures each positioned for alignment with said access hatch in one of the selected positions of said integral cover on said casing.

6. A laundering apparatus comprising a laundry container having a top access aperture and a front access aperture, a casing having a top and a front and formed with a top opening and front opening, respectively, two cover panels one for said top and the other for said front opening of said casing, said cover panels and said casing openings each being similarly shaped, said cover panels adapted to be joined in angular relation and said casing adapted to accommodate said joined panels with either of said panels selectively positioned to close said top and front casing openings, respectively, only one of said integral top cover panels formed with an access hatch, and means supporting said laundry container within said casing with said top and said front access apertures each positioned for alignment with said access hatch in one of the selected positions of said integral cover on said casing.

7. A laundering apparatus as set forth in claim 5 in

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which said top and front laundry container access openings are substantially similarly shaped and an exchangeable closure element adapted to be accommodated in that laundry container access opening which is not aligned with the access hatch in the selected position of the cover.

8. A laundering apparatus as set forth in claim 7 in which a lid is hinged on said cover providing a closure for said access hatch.

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