United States Patent

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[54] **COMMERCIAL LAUNDROMAT SIGNALING SYSTEM**
9 Claims, 3 Drawing Figs.

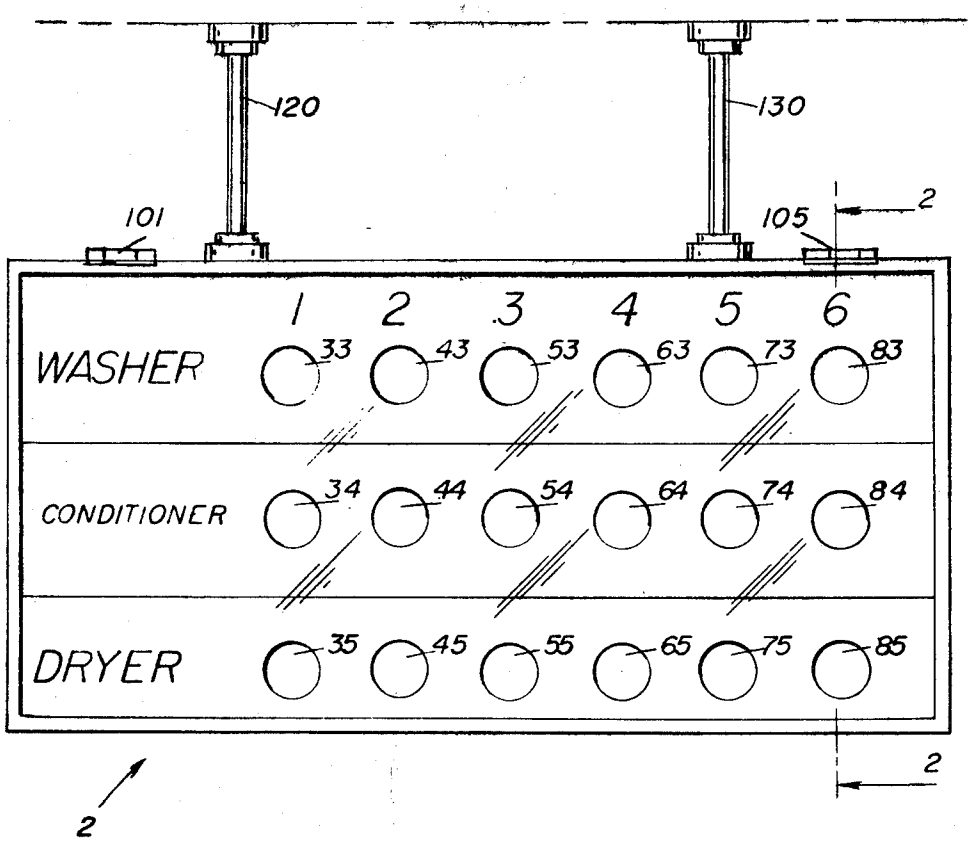
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[50] **Field of Search** 34/324, 326, 332, 366, 371, 372, 378, 381, 248, 267, 225, 366.1, 378.1; 68/27

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ABSTRACT: An improvement in a commercial laundromat equipped with a plurality of washing machines and/or dryers, said improvement comprising a remotely positioned indicator panel, said indicator panel equipped with a plurality of indicator means at least one of such means is responsive to the stage of use of a corresponding washing machine or dryer, each of said washing machines and/or dryers in signaling combination with at least one of said indicator means.



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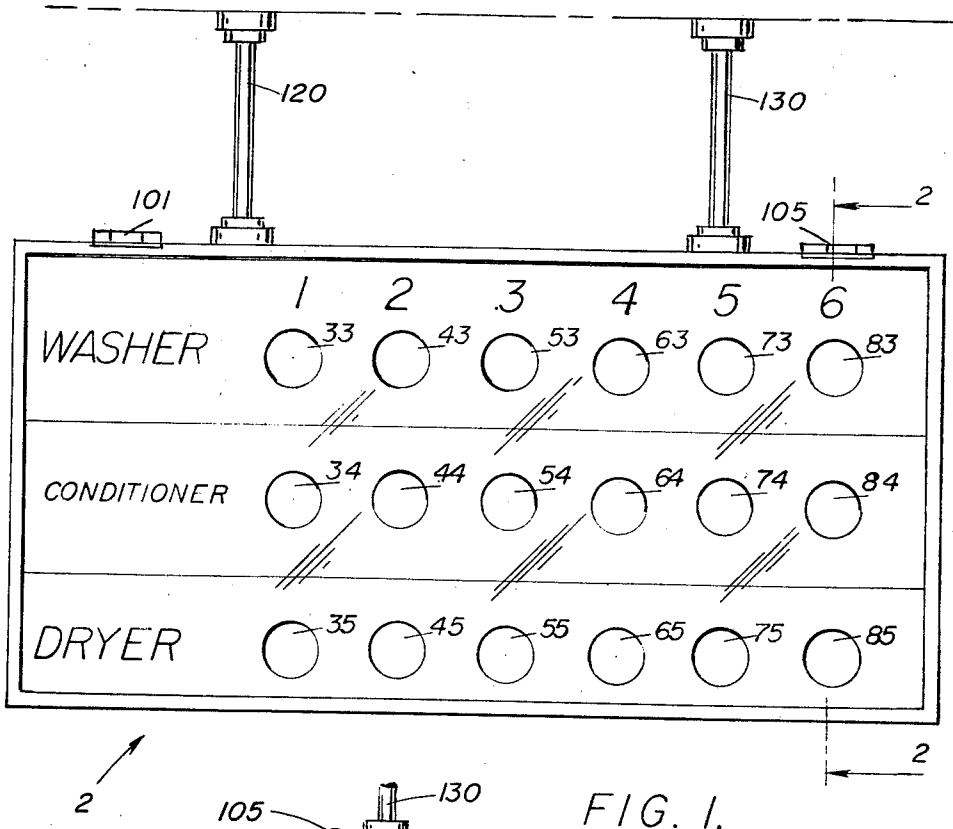


FIG. 1.

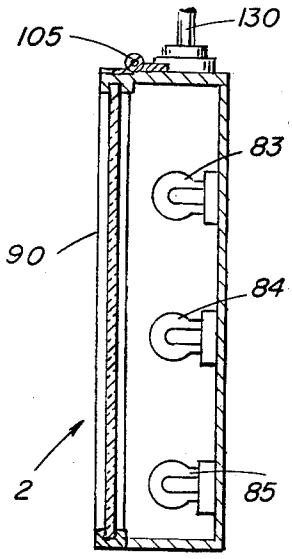
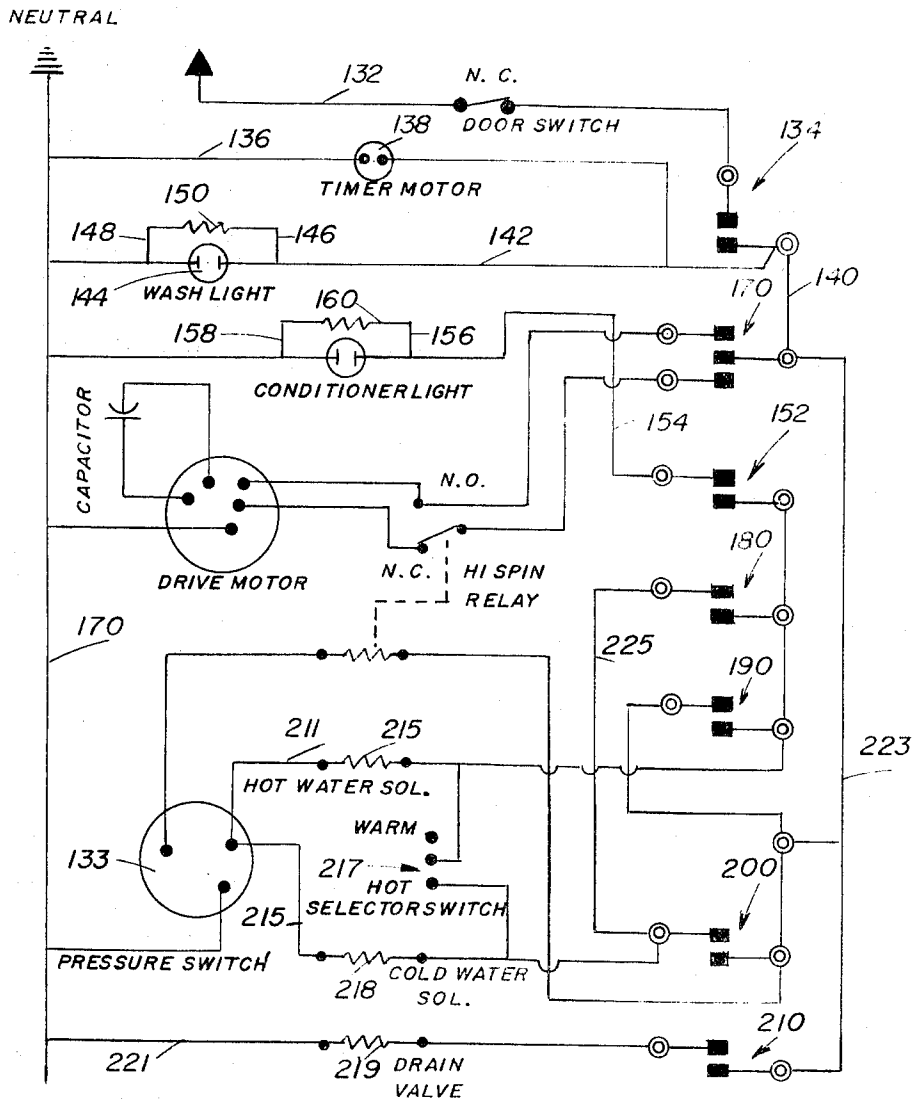


FIG. 2.

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FIG. 3.



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COMMERCIAL LAUNDROMAT SIGNALING SYSTEM

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to a combination of a centrally locatable indicator panel bearing indicators which are responsive to the stage of use of remotely positioned washing machines or dryers. More particularly, this invention relates to an improvement in a commercial laundromat equipped with a plurality of laundering machines wherein a centrally locatable easily viewable indicator panel containing indicators responsive to the progress of the laundering operations in the laundering machines is provided.

2. Discussion of the Prior Art

In commercial laundromats, there is provided Prior substantial number of washing machines and dryers. These usually consume a substantially large area of the laundromat. Often, due to the desirability of minimizing on copper tubing employed in plumbing and to conserve heat values of hot water en route to the washing machines, the machines are located close to one another. Therefore, for the comfort of patrons of these establishments, it has become the practice to provide a waiting area equipped with comfortable seats. These areas provide a place for the patrons to read a book, knit or engage in a similar fruitful endeavor while attending to the time consuming chore of doing the family wash. These waiting rooms also provide a safe area away from the electrical machines in which children accompanying the laundromat's patrons can play.

Several problems have arisen in the orderly operations of commercial laundromats. Specifically, because the patrons must wait at a substantial distance from the machine in which they have placed their wash, they must get out of their seats and go to the laundering machine itself to check on the status of their wash. This causes several problems. One such is that mothers who have brought their young children with them while they do the family wash must, of necessity, take their eyes off their children. It is well known that even in the shortest period of time children can wander off or become injured through a multitude of ways. In crowded laundromats where there are people waiting for access to a machine, there is a substantial probability that the party who leaves his seat to check on his wash will return to find his seat occupied by another.

Laundromats which operate thusly suffer from another problem, i.e., likelihood of loss of patronage through the mistaken belief that all of the laundering machines are in use. This occurs when a prospective patron enters an ostensibly full laundromat and hastily observes all machines to be occupied when such is not the case.

These laundromats present still another problem. It is common practice in washing certain fabrics, notably wash cloths and towels, to introduce into the rise water certain water conditioning agents which soften the water and provide smooth, fluffy washed fabrics. In commercial type washing machines of the type assembled for heavy-duty use, the water softening agent is introduced when the machine has begun the last rinse. Should the patron become be added in some other activity during the final rinse, no conditioner will beadded to the rinse water and the machine will go directly into the spin dry cycle. While these washers are usually equipped with an indicator light to indicate time for introduction of the conditioner, the lights are mounted on the machines themselves and are not readily visible to a person seated in a remotely situated waiting area.

It is recognized that washing machines presently in use like so many other electromechanical devices contain indicia responsive to the work cycle of the machine. However, such indicia have proved of little use in overcoming the above-mentioned problems related to actual laundromat operations.

SUMMARY OF THE INVENTION

Objects of the Invention

It is an object of this invention, therefore to provide a means for enabling patrons of a laundromat to keep abreast of the stage of their wash in a laundering machine from a position remote from the laundering machine.

It is another object of this invention, therefore, of providing a centrally viewable indicator panel responsive through its plurality of indicator means to the progress of the various washes in the laundering machines whose remote indicator means are mounted on said panel.

It is another object of this invention to enable such laundromat patrons to learn of the time when water conditioning agents are to be introduced into the rinse water of a commercial washer without having to periodically check the progress of the wash at the machine itself.

These and other objects and advantages of the present invention will become apparent from the following description, accompanying drawing and appended claims.

Statement of the Invention

Broadly, this invention contemplates an improvement for use in a commercial laundromat equipped with a plurality of laundering machines said improvement comprising a remotely positioned indicator panel said indicator panel equipped with a plurality of indicator means at least one such indicator means is responsive to the stage of use of a corresponding machine, machining each of said laundering machines in signalling combination with at least one of said indicator means.

In a particularly desirable embodiment of the present invention, a single indicator panel is employed said panel having an "on-off" indicator means and a "water conditioner" indicator means for each washing machine. The "on-off" indicator means being positioned proximate the water conditioner indicator means, both of said means being in the form of a light. It is similarly desireable in the practice of the present invention to provide dryer "on-off" indicator means, preferably in the form of a light, on an indicator panel. Where a dryer is grouped together with a washer in the laundromat to constitute a laundering station, it is desirable to position the dryer "on-off" indicator light proximate the lights responsive to the corresponding washer on the indicator panel.

DESCRIPTION OF THE DRAWINGS

The present invention can be more readily understood and appreciated by reference to the accompanying drawings in which:

FIG. 1 is a typical indicator panel pursuant to the present invention comprising indicator lights responsive to indicated laundering machines in a commercial laundromat.

FIG. 2 is a sectional view taken along lines 2–2 of FIG. 1.

FIG. 3 is a typical electrical schematic circuit diagram of a commercial heavy duty automatic washing machine adopted for use pursuant to the present invention.

DESCRIPTION OF SPECIFIC EMBODIMENT

A specific and preferred embodiment of the present invention is shown in the accompanying drawings in which reference numeral 2 generally designates the indicator panel The panel contains mounted therein by standard mountings indicator lights which are in electrical combination with the various washing machines or dryers within a given laundromat. The washing machines in the embodiment shown each have two remotely positioned indicator lights. The first of these such remotely positioned indicator means is responsive to the commencement and cessation of the washing operation. For that purpose it is designated herein as the washer "on-off" indicator means. While the indicator means can be both audio and visual, it is most appropriately visual. In the embodiment

depicted herein, this indicator is represented by reference numeral **33**. The same washing machine is provided with a water conditioner indicator means which in the specific embodiment shown is in the form of light **34**. These lights are actuated in the first instance when the machine is turned on and in the second instance when the washer timer actuated the first rinse as will appear more clearly below. The panel can be constructed of any suitable material, especially aluminum, and is of a size sufficient to house the indicator means required for the various laundering machines. The height of the panel is generally at least about 18 inches, but will vary depending upon the physical arrangements of the indicator lights and the size of the lights themselves. The remaining indicator panel lights have similar reference numerals.

In the embodiment shown in the drawings, a dryer indicator means is provided on the panel beneath indicia for a washer. This is employed especially in those situations in which a washing machine and a dryer are positioned adjacent one another and function as a laundering station so that one patron can use both machines simultaneously to do her wash. By providing the washer and dryer lights for cooperating laundering machines, the patron need only remember which numbered or otherwise designated laundering station she is using. It should be understood, however, that the dryer indicator means can be provided elsewhere on the same indicator panel or on a separate indicator panel. The choice of such arrangement will generally depend upon the physical arrangement of the machines themselves.

Referring to the construction of the panel itself, it is desirable that a face of frosted glass **90** such as that marketed under the trademark PLEXIGLAS be hinged to the panel as indicated by hinges **101** and **105**. The frosted glass diffuses the light in a controlled manner enabling sitting patrons to readily know whether or not the particular lights are on. The frosted glass also eliminates problems of glare due to entering sunlight or artificial house lights. The sockets for the bulbs are suitably constructed of Bakelite and adopted for use in a circuit whose voltage is 110 volts or other prevailing voltage in the particular geographical area. The bulbs employed for the lights are suitably 120 watt bulbs. The panel is provided with hollow tubing through which enter and exit the various wires employed to actuate the various indicator means. Suitable hollow tubing is shown in the drawings by reference numerals **120** and **130**. These hollow tubes can also be employed as means for suspending the indicator panel from the ceiling of the laundromat. It will be appreciated, however, that the panel need not be suspended from the ceiling but can be placed on a wall or on an assembly where it is centrally located and is easily viewed from the waiting area.

It is contemplated within the scope of the present invention to provide a panel having indicator lights on both sides for positioning lengthwise in the center of a waiting area. In this case, there can be two lights for every indicator means so that the lights can be seen from either side. Thus, a light on either side is responsive to the same stage change.

Referring to FIG. **3** which depicts an electrical wiring diagram modified to include electrical means of the present invention, a pressure switch **133** is provided in electrical combination with neutral ground line **170**. A door switch in normally closed position is in electrical association with timer switch contacts **134, 170, 152, 180, 190, 200** and **210** which are interconnected by line **223** and **140**. Employing line **132** current to the entire machine is interrupted when the door is opened. When the pressure switch **133** is actuated, the timer motor **138** is energized via line **136**. This, in turn, causes current to pass in line **142** through wash light **144** and through lines **146** and **148** on either side of resistor **150**. The resistor **150** is an indicator means pursuant to the present invention such as a light. The timer motor **138** at the appropriate time sends current through line **154** to light the conditioner light on the machine itself and to enable current to pass through lines **156** and **158** on either side of resistor **160**. Resistor **160** is an indicator means pursuant to the present invention mounted on the indicator panel **2**. Indicator means **160** and the conditioner light mounted on the machine usually light during the final rinse.

The washing machine whose electrical schematic is depicted in FIG. **3** is equipped with a water temperature control switch **217** which determines if current shall pass through lines **211** and **215** and correspondingly, if hot water solenoid valve **215** or cold water solenoid valve **218** shall be actuated. By removing wire **225**, the hot setting will provide a hot wash and cold rinse, and the warm setting will provide a warm wash and a warm rinse. As shown, the hot setting provides a hot wash and warm rinse and the warm setting provides a warm wash and warm rinse. A drain valve **219** is in electrical association with the timer via contacts **210**. It is similarly connected to line **170**.

It is contemplated pursuant to the present invention to incorporate both an audio and visual signaling means responsive to the stage of the wash when it is time to add conditioning agents. The purpose of this is to tell the patrons audible to look at the indicator panel. This is done using a bell or buzzer. The patron then looks at his light to see if it has lighted. If so, he goes to the machine. If not, he knows that the audio signal was for another's wash. The purpose of providing both is to permit the patron to become engrossed in a book, knitting or other activity and yet be remotely apprised of the change in the stage of his wash. This means renders his constant observation of the indicator panel unnecessary.

From the foregoing, it is apparent that the device of the present invention through inexpensive uncomplicated means solves all of the problems in the day to day operation of a laundromat. It enables all of the patrons to do their wash by minimizing the time between which one wash is finished and another started. It insures that the conditioner is added at the proper time and that the waiting room is more orderly. Other advantages of the present invention are apparent to those who frequent commercial laundromats.

The terms and expressions used herein have been used as terms of description and not of limitation, as there is no intention, in the use of such terms and expressions of excluding any equivalents, or portions thereof, as many or portions and departures are possible within the scope of the invention.

What I claim is:

1. An improvement for use in a commercial laundromat equipped with a plurality of laundering machines, said improvement comprising a remotely positioned indicator panel adapted to be permanently affixed to the structure of a commercial laundromat and to function as an indicator of the status of a plurality of laundering machines, said indicator panel equipped with a plurality of indicator means in juxtaposition to one another on said indicator panel, at least one of such indicator means being responsive to the stage of use of a corresponding laundering machine, the indicator means responsive to the stage of use of a corresponding laundering machine, the indicator means responsive to the stage of use of different laundering machines being positioned in general alignment on said indicator panel, each of said laundering machines in electrical signaling combination with at least one of said indicator means

2. An improvement according to claim **1** wherein at least one of said indicator means is responsive to the stage of use of a washing machine and at least one of said indicator means is responsive to the stage of use of a dryer.

3. An improvement according to claim **2** wherein a washing machine and dryer are physically positioned adjacent one another forming a laundering station, said washing machine and dryer are provided with remote indicator means which remote indicator means are positioned adjacent one another on said indicator panel.

4. An improvement according to claim **1** wherein said indicator means are lights.

5. An improvement according to claim **1** wherein said panel is provided with a faceplate of frosted glass hinged to said panel.

6. An improvement according to claim 1 wherein two indicator means on said panel are responsive to the stage of use of one washing machine, one of said indicator means indicating when the washing machine is in use and the other indicating when it is time to add a water conditioner or other laundering agent.

7. An improvement according to claim 6 wherein the indicator means indicating when it is time to add water conditioner is both audio and visual.

8. An improvement according to claim 1 wherein said panel

is provided with hollow tubing through which pass electrical wires in combination with said indicator means, said hollow tubing adaptable for use in suspending said panel from the ceiling of a room.

9. An improvement according to claim 1 wherein said panel has lights on both sides for being positioned lengthwise in the center of a waiting area, a light on either side being responsive to the same stage change.