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a part interest

[56]

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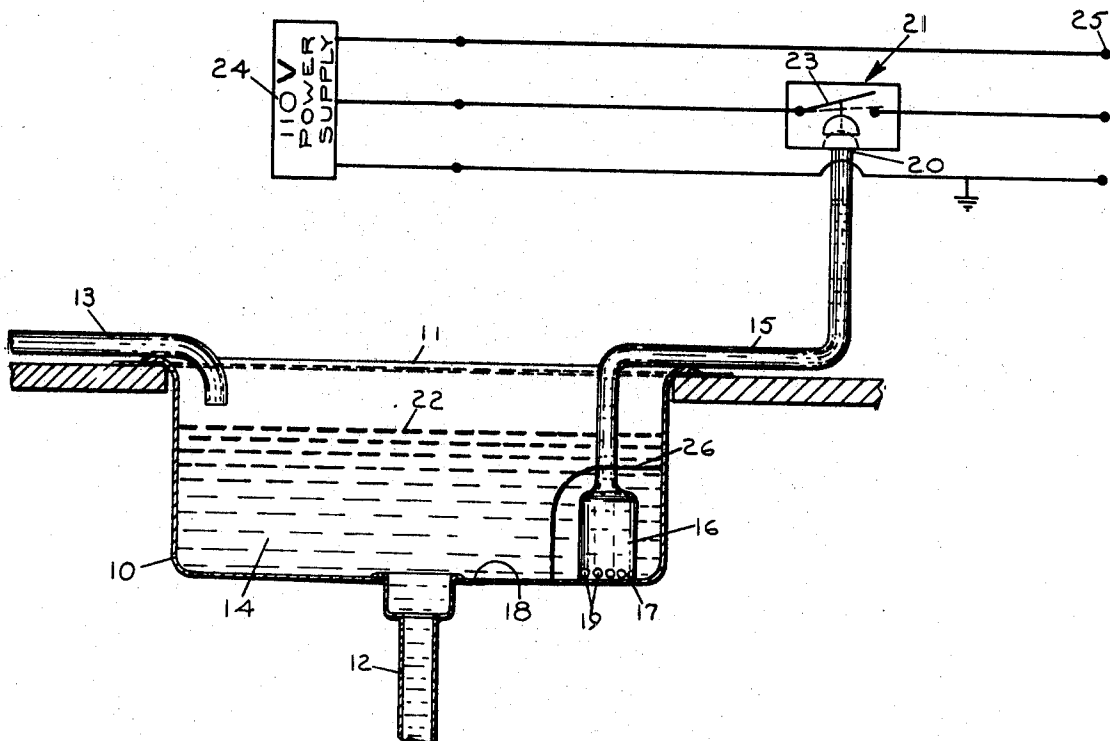
[54] **LIQUID LEVEL CONTROL DEVICE**
1 Claim, 2 Drawing Figs.

[52] U.S. Cl. **137/387,**
 137/390, 137/406, 134/57, 68/208

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ABSTRACT: A control device for a clothes or dishwasher wherefrom liquid is discharged into a sink or other receptacle having an outlet for the removal of said liquid to a sewage or other line and effective to disconnect the power input to said washer when the liquid in said sink reaches a predetermined level.



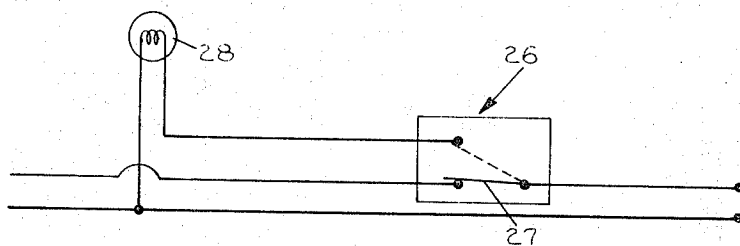


Fig. 2

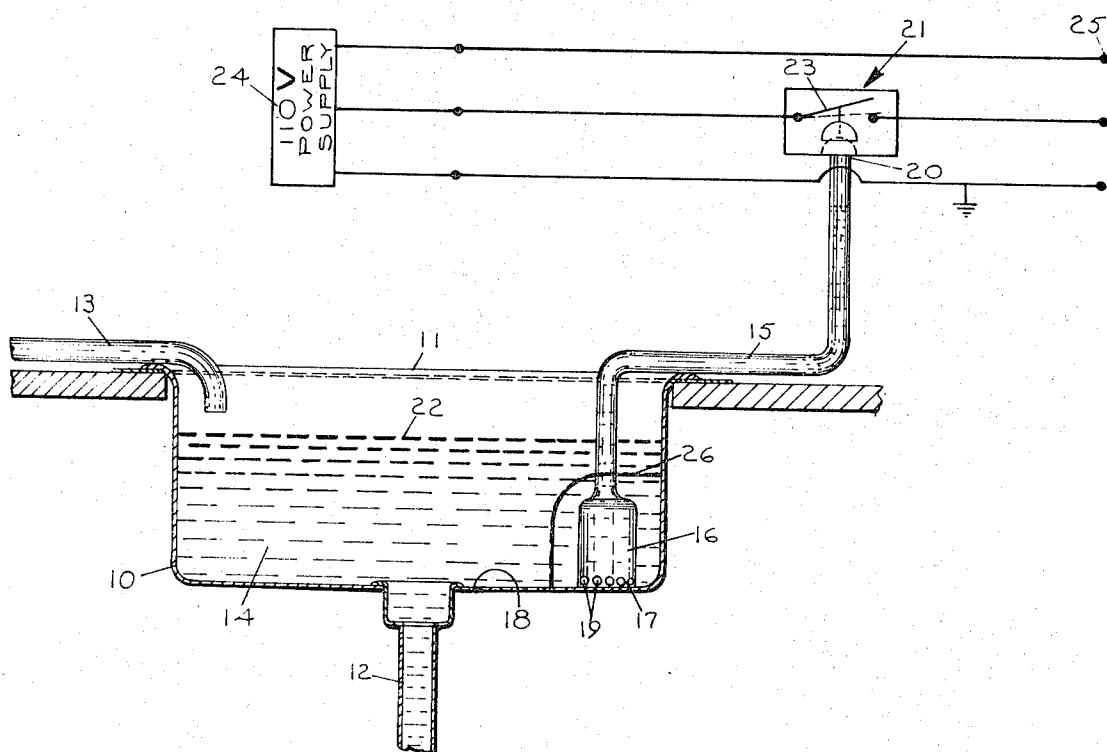


Fig. 1

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LIQUID LEVEL CONTROL DEVICE

BACKGROUND OF THE INVENTION

This invention pertains to a mechanism for stopping the operation of a washer when liquid being discharged from a sink into which the liquid was first emptied reaches a certain level and which is further effective to restart the operation of said washer when the liquid recedes from said level.

In many instances washers are utilized wherein the waste liquids are discharged into a sink having a relatively small opening through which said liquid passes to a waste line. It frequently happens that the outlet opening becomes partially or totally clogged whereby the waste liquids overflow the sink and cause damage to floors and ceilings underneath. No present mechanism is known which is effective to control the further discharge of waste liquids into the sink when the liquid level therein reaches a given height.

SUMMARY OF THE INVENTION

This invention pertains to a simple and inexpensive control device which through the utilization of an air pressure actuated switch is effective to cut off the power supply to the washer at a critical level in the sink. If the discharge from the sink then proceeds to a point below said critical level, the switch is effective to allow the washer to continue in its cycle with further discharge into the sink and so on, whereby possibility of any damage due to waste liquid overflow is completely eliminated.

The control device can be provided as original equipment in the machine or may be an attachment which may be easily and simply connected into the power supply to the machine.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be described in greater detail by reference to specific embodiments thereof as shown in the accompanying FIGS. of drawing wherein:

FIG. 1 is an elevational view, partly in section, of the invention illustrating its use in conjunction with a sink into which waste liquids are discharged; and

FIG. 2 is a view of a portion of a modification of FIG. 1 wherein a signaling device is employed to indicate disconnecting of the power to the machine.

DESCRIPTION OF THE PREFERRED EMBODIMENT

In FIG. 1 a conventional sink is shown at 11 having an open top and discharge outlet at 12. A liquid inlet 13 conveys waste liquid 14 from a clothes or dishwasher into the sink and in normal operation the discharge into the sink does not exceed the waste liquid discharge from the sink, or else the sink is sufficiently large to contain the normal excess.

The invention comes into play when the outlet 12 becomes partially or totally plugged by some foreign matter and comprises an air pressure line or conduit 15 of any suitable material such as rubber or plastic having an enlarged, generally cylindrical portion at 16 having an open bottom 17 adapted to rest on the base 18 of the sink. The lower part of the circum-

ferential portion may be irregular or have openings 19 therein to permit passage of waste liquid into the line 15.

The opposite end 20 of line 15 is connected to an air pressure switch indicated by the arrow 21 and which may be of a conventional design and commercially available from a number of sources. An increase in air pressure in the line 15, and which is caused by an increase of liquid level in that line, will, at a critical point dependent upon the setting of the pressure switch (which switch may have a variable control for changing said critical point) and at a predetermined level 22 of liquid in the sink, cause the normally closed switch lever 23 to move from the dotted to the solid line positions. This in turn will disconnect the power supply 24 from the line 25 to which the power line from the washer is adapted to be connected and will thereby prevent any further liquid discharge into the sink. As the liquid level in the sink recedes from the critical level 22, the liquid level in line 15 will also recede, causing a decrease in the air pressure in that line and closing of switch lever 23 to start the washer into operation again. A perforated guard 26 is preferably provided around the portion 16 to prevent foreign matter from plugging the openings 19.

DESCRIPTION OF MODIFICATION

In FIG. 2 a modified form of air pressure switch is shown at 26 wherein in the open position of the switch 27, not only is the power to the machine disconnected but also a further circuit is closed thereby to actuate a signal device such as a light bulb 28.

While one embodiment and a modification of the invention have been disclosed, it is to be understood that the inventive concept may be carried out in a number of ways. The invention is, therefore, not to be limited to the precise details described but is intended to embrace all variations and modifications thereof falling within the spirit of the invention and scope of the claims. I claim:

1. In combination with a sink having a discharge outlet therefrom and into which liquids are adapted to be discharged from the discharge line of a washing machine, said washing machine including a power line through which electricity may be supplied to operate said machine, a liquid level control device comprising:

- a. means for indicating the liquid level in said sink, comprising an air pressure conduit having one end adapted to be placed in said sink whereby liquids from said sink may pass into said conduit, said one end having an enlarged, generally cylindrical portion including openings therein to permit passage of waste into said conduit, and a perforated guard around said enlarged portion to prevent foreign matter from plugging said openings;
- b. normally closed air pressure-type switch means adapted to be actuated by said indicating means;
- c. a power input line connected to the power line of said washing machine, whereby actuation of said switch means will affect the power supply to said washing machine; and
- d. a signal means to indicate interruption in the power supply to said machine.