United States Patent

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[73] Assignee **Blackstone Corporation**

[54] **WASHING MACHINE TUB COVERS**
8 Claims, 3 Drawing Figs.

[52] **U.S. Cl.** **68/23.5,** 68/196, 68/208
[51] **Int. Cl.** **D06f 39/00**
[50] **Field of Search** 68/196, 208, 23, 23.5, 23.6, 23.7

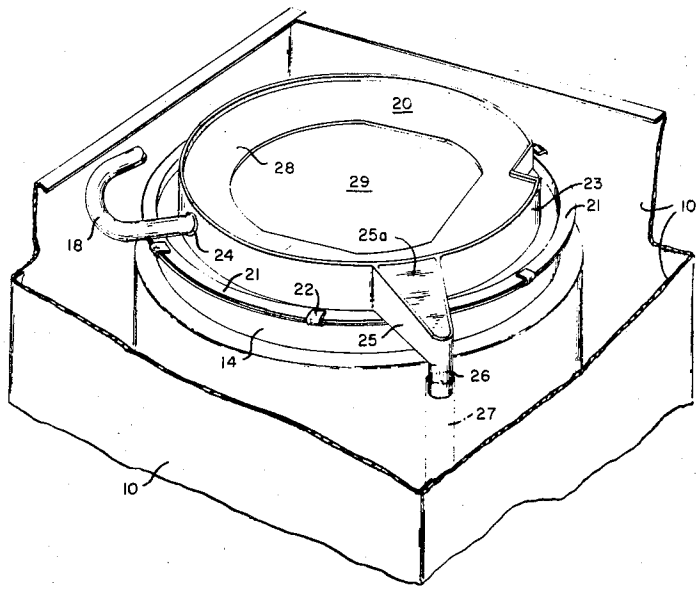
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ABSTRACT: An annular cover mounted on top of a clothes washer outer tub and extending inwardly over the clothes basket to contain the splashing of water created by the action of the agitator and to safeguard any overflow onto the base of the cabinet created by a defective water level switch or faulty timer or water valve, the cover having an annular rim engaging the outer tub, and a vertical wall terminating in an inwardly extending downwardly sloping annular flange and having an opening in one side leading into a well externally on the tub and a hose securely fastened to this well externally of the tub whereby in a high water condition the trough and hose will create a siphon thereby maintaining a safe water level before it overflows the cover onto the base, the hose fits through a hole in the base or cabinet of the washer.

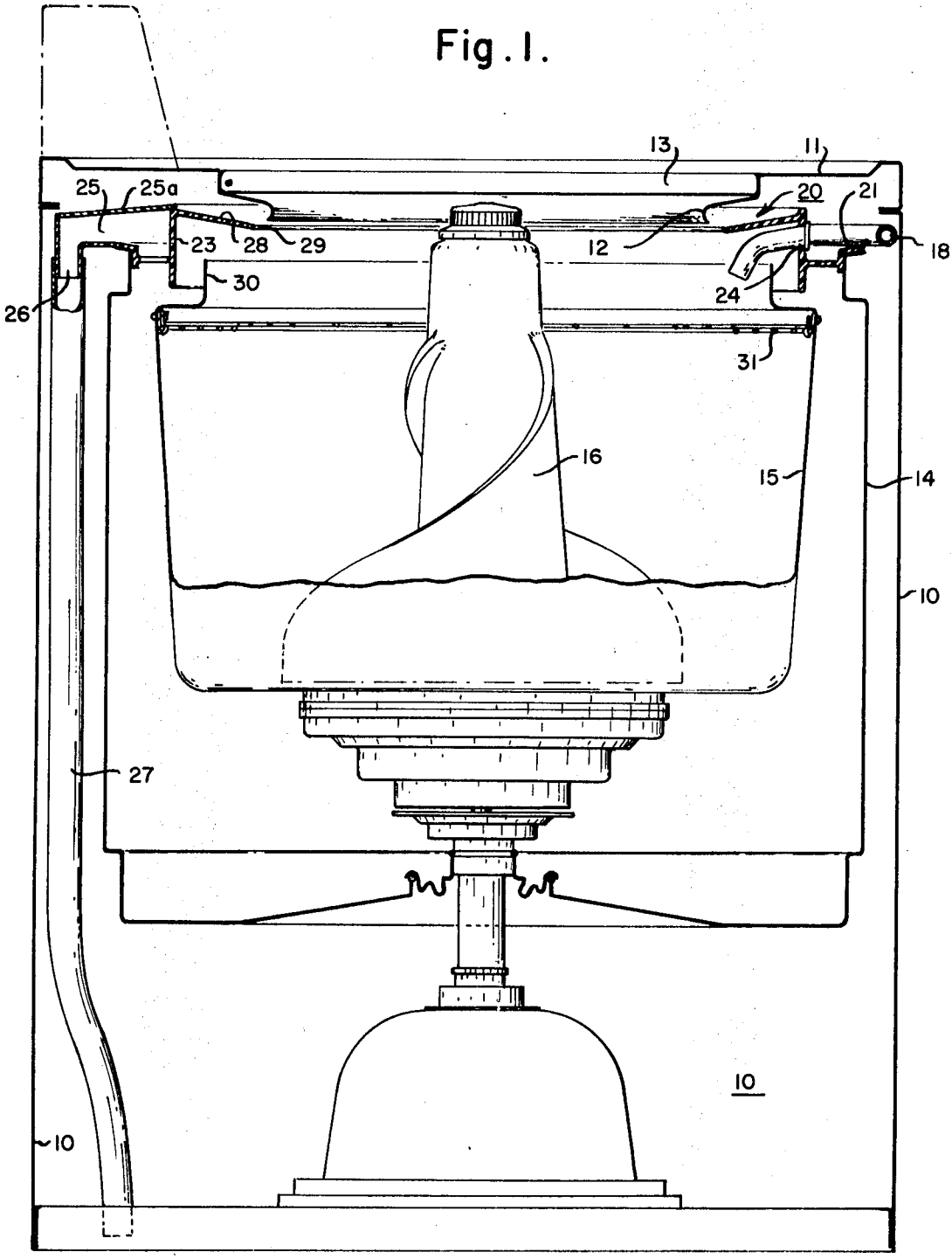


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SHEET 1 OF 2

Fig. 1.



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Fig. 2.

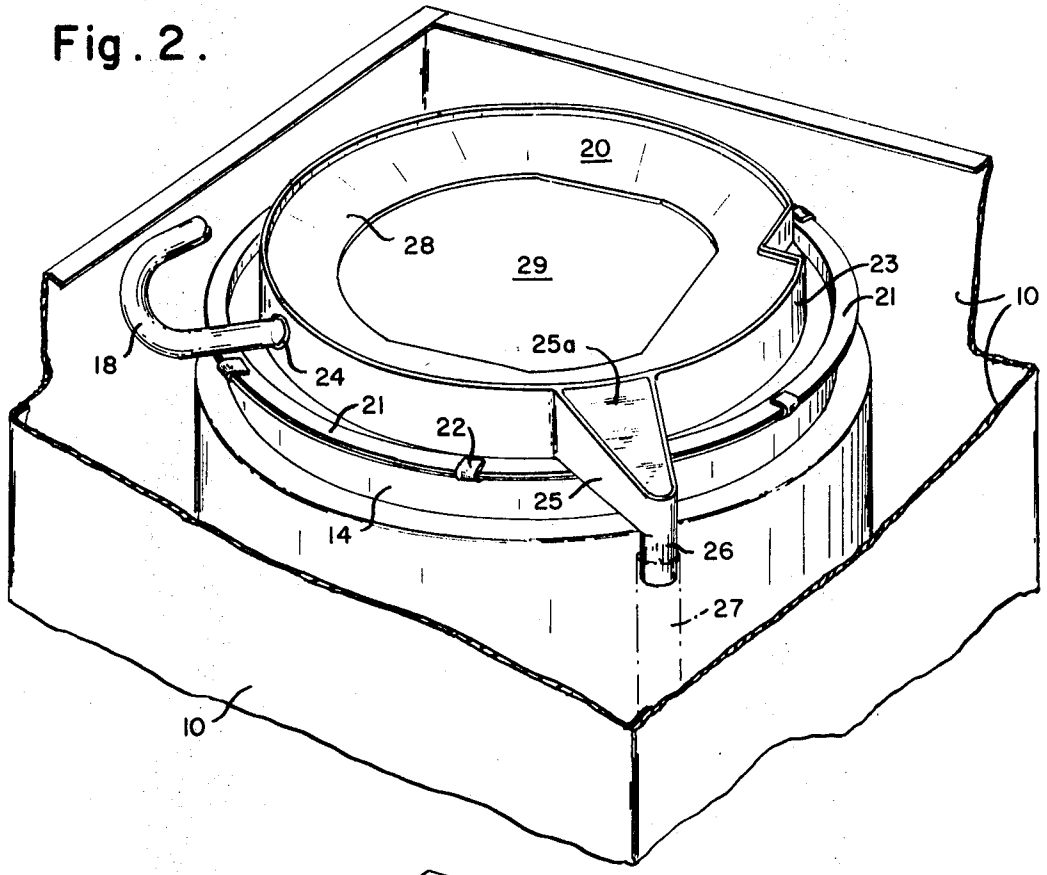
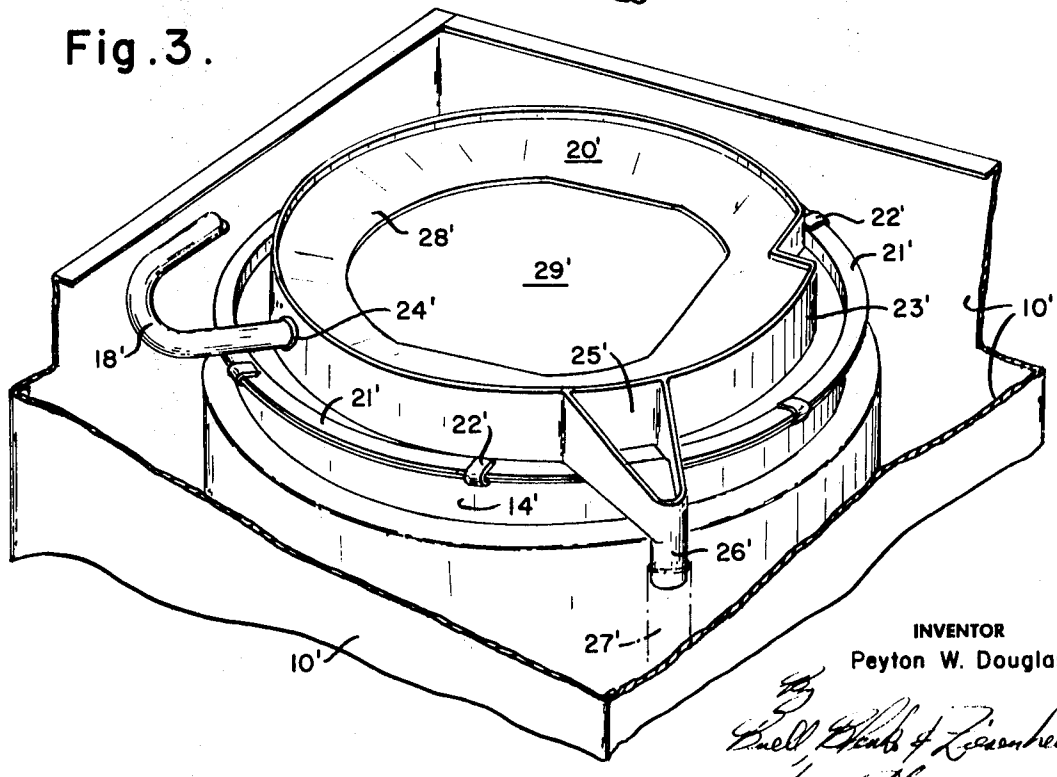


Fig. 3.



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WASHING MACHINE TUB COVERS

This invention relates to washing machine tub covers and particularly to a tub cover for clothes-washing machines for removing excess suds and water to prevent overflow into the machine.

Clothes-washing machines and particularly automatic clothes-washing machines are provided with an outer housing or cabinet surrounding a stationary water-holding receptacle and an inner rotatable tub and an oscillable agitator axially of both tubs. In automatic forms of such machines the clothes are washed with both tubs stationary and water is extracted from the clothes by rotating the inner tub at high speed to provide a centrifugal action. This series of operations is controlled by motors, brakes, clutches, switches and electrical contacts usually located beneath the tub.

In the washing operation it is common to provide for series of wash and rinse operations in which water is delivered into the tubs and removed in sequence. It is highly desirable that during these periods, the water in the tubs does not overflow onto the controlling motor, brakes, clutches, switches and the like, cause failure by short-circuiting the electrical system or for some other reason. This can happen, if for some reason, a valve fails to open or close in proper sequence.

The present invention provides a tub cover which confines water and suds within the tubs and in the event of a serious flooding problem carries the water and suds to a discharge point away from the mechanical and electrical equipment of the machine.

Preferably, I provide a unitary molded plastic annular cover having an outer rim tightly engaging the rim of the stationary tub, a generally vertically upstanding annular wall on said rim having an inwardly extending, downwardly sloping flange defining an opening generally corresponding to the opening of the inner tube and discharge means extending over the outer tub and communicating through the upstanding wall, said discharge means having a conduit means extending to the base or cabinet of the washing machine to deliver overflow water to the floor. The discharge means may be an open well or a closed well; in the first case acting as a gravity discharge means and in the second as a siphon means to relive a flooding condition in the washer. Preferably, I also provide a clothes stop extending between the inner and outer tube.

In the foregoing general description I have set out certain objects, purposes and advantages of my invention. Other objects, purposes and advantages will be apparent from a consideration of the following description and the accompanying drawings in which:

FIG. 1 is a section of a clothes-washing machine incorporating my invention.

Fig. 2 is a top isometric view of the machine of FIG. 1 with the housing top removed.

FIG. 3 is a top isometric view of a second embodiment of cover according to my invention.

Referring to the drawings I have illustrated a clothes-washing machine having an outer housing made up of side panels **10** and top **11**. The top **11** is provided with a central access opening **12** and a hinged cover **13**. Within the housing is a stationary tub **14** surrounding an inner perforate rotatable tub **15** and agitator **16**.

Water is supplied to the machine through a water valve connected to an inlet hose **18** which delivers water to the interior of tub **14**. The level of the water in the tub may be controlled by any of the well-known means such as a timer which operates the water valve.

An annular tub cover **20** is provided with an outwardly extending radial rim **21** which having its outer periphery an annular lip **21***a* which engages the top of tub **14** and is held in place by spring clips **22**. A vertical wall **23** extends upwardly from rim **21** spaced from the lip **21***a* toward the top **11** of the housing and is provided with an opening **24** receiving the inlet hose **18** and with a discharge well **25** which opens through rim **21** and extends beyond rim **21** and is provided with a tubular

outlet **26** connected to a depending hose **27** leading to the floor or a floor drain. The vertical wall **23** is provided at its top with an inwardly and downwardly extending flange **28** which defines an access opening **29** whose diameter is substantially that of inner tub opening **30**. This flange intercepts water thrown by the agitator and inner tub during their respective operative cycles and directs it back into the tubs.

Preferably a clothes guard **31** extends from rim **21** to a point adjacent inner tub opening **30** to prevent clothes from falling between the inner and outer tubs.

In FIGS. **1** and **2** I have shown the discharge well **25** with a cover **25***a* which provides a siphon effect in the event a flood condition exists so as to remove water from the tubs.

In FIG. **3**, I have shown a second embodiment in which all parts are identical with those of FIGS. **1** and **2** and are identified with like reference numerals carrying a prime sign. However the FIG. **3**, the discharge well **25'** is not covered and provides for a gravity flow of excess water entering the well.

While I have illustrated and described certain preferred embodiments of my invention in the foregoing specification, it will be understood that this invention may be otherwise embodied within the scope of the following claims.

I claim:

1. A tub cover for clothes-washing machines having an outer stationary open top water containing tub supported on a base and having an annular top edge in a single plane defining an opening and an inner open top concentric rotatable tub comprising an annular rim engaging the said annular top edge of the other tub in said single plane, a generally vertically upstanding annular wall on said rim, an inwardly extending downwardly sloping flange on the top of said wall defining an opening generally corresponding to the opening in the inner rotatable tub and discharge means communicating through the rim and extending over the outer tub and having a downwardly extending conduit means through the base or cabinet.

2. A tub cover as claimed in claim **1** wherein the discharge means is an open top well.

3. A tub cover as claimed in claim **1** having a perforate clothes stop extending inwardly from the rim to the periphery of the opening of the inner tub.

4. A tub cover as claimed in claim **1** having an opening sealingly receiving an inlet water supply hose.

5. A tub cover as claimed in claim **1** made of plastic.

6. A tub cover as claimed in claim **1** having clip means engaging the rim and outer tub top to hold the rim tightly on said tub top.

7. A tub cover for clothes-washing machines having an outer stationary open top water-containing tub supported on a base and an inner open top concentric rotatable tub comprising an annular rim engaging the top edge of the outer tub, a generally vertically upstanding annular wall on said rim, an inwardly extending downwardly sloping flange on the top of said wall defining an opening generally corresponding to the opening in the inner rotatable tub and discharge means communicating through the rim and extending over the outer tub and having a downwardly extending conduit means through the base or cabinet, said discharge means being a closed well providing with the conduit means a siphon action when water enters the same.

8. A tub cover for clothes-washing machines having an outer stationary open top water-containing tub supported on a base and having a rim on the top thereof and an inner open top concentric rotatable tub within the stationary tub comprising an inwardly extending downwardly sloping flange defining an opening generally corresponding to the opening in the inner rotatable tub, a generally horizontal wall spaced below said flange for mounting to the tub rim, a vertically upwardly extending wall spaced from said tub rim and connecting the horizontal wall and the sloping flange well means in the vertical cover wall extending out and over the stationary tub and a downwardly extending conduit means connected to said well means for draining excessive fluid to the outside of the washer cabinet.