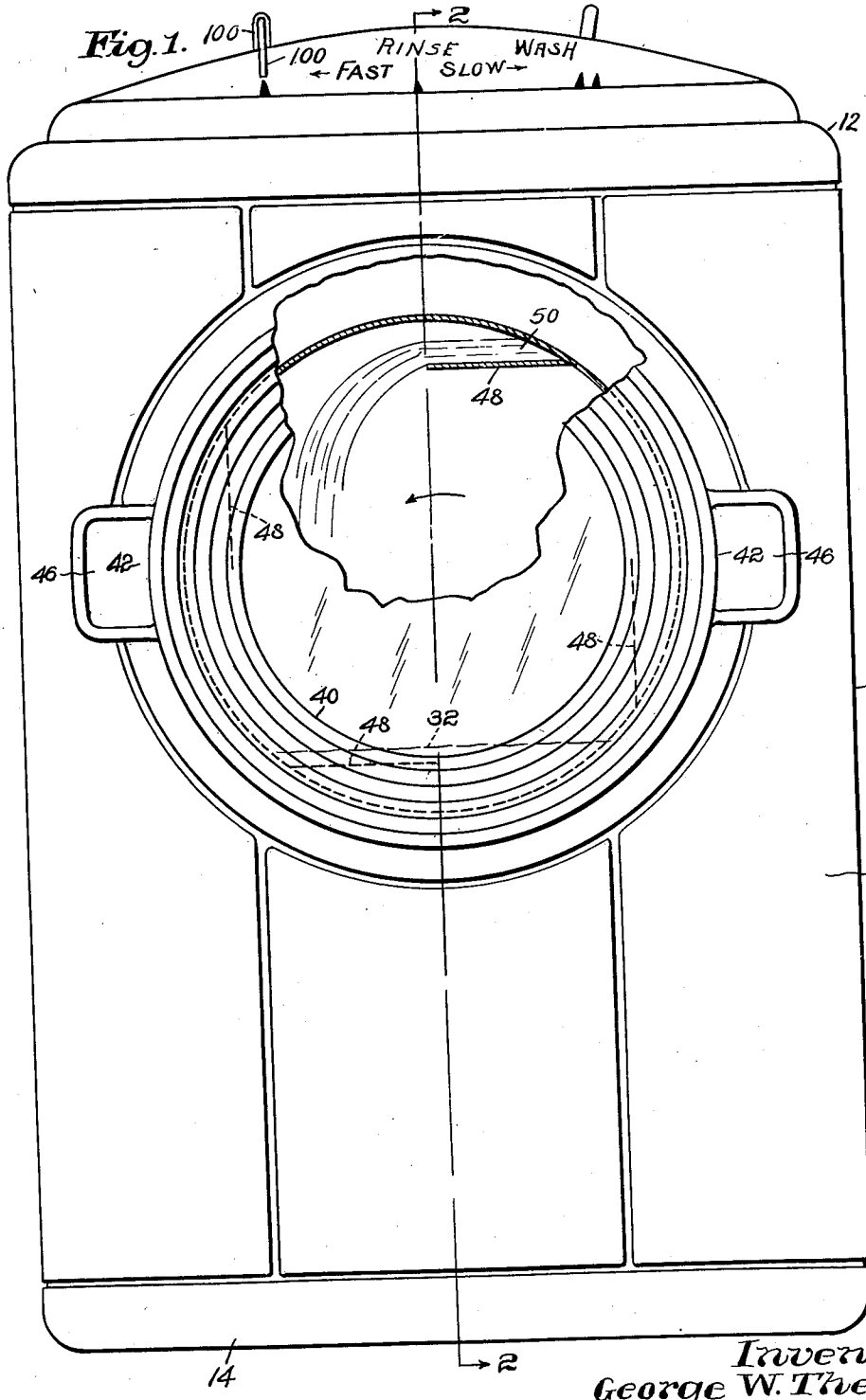
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TOY WASHING MACHINE

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Fig. 1.



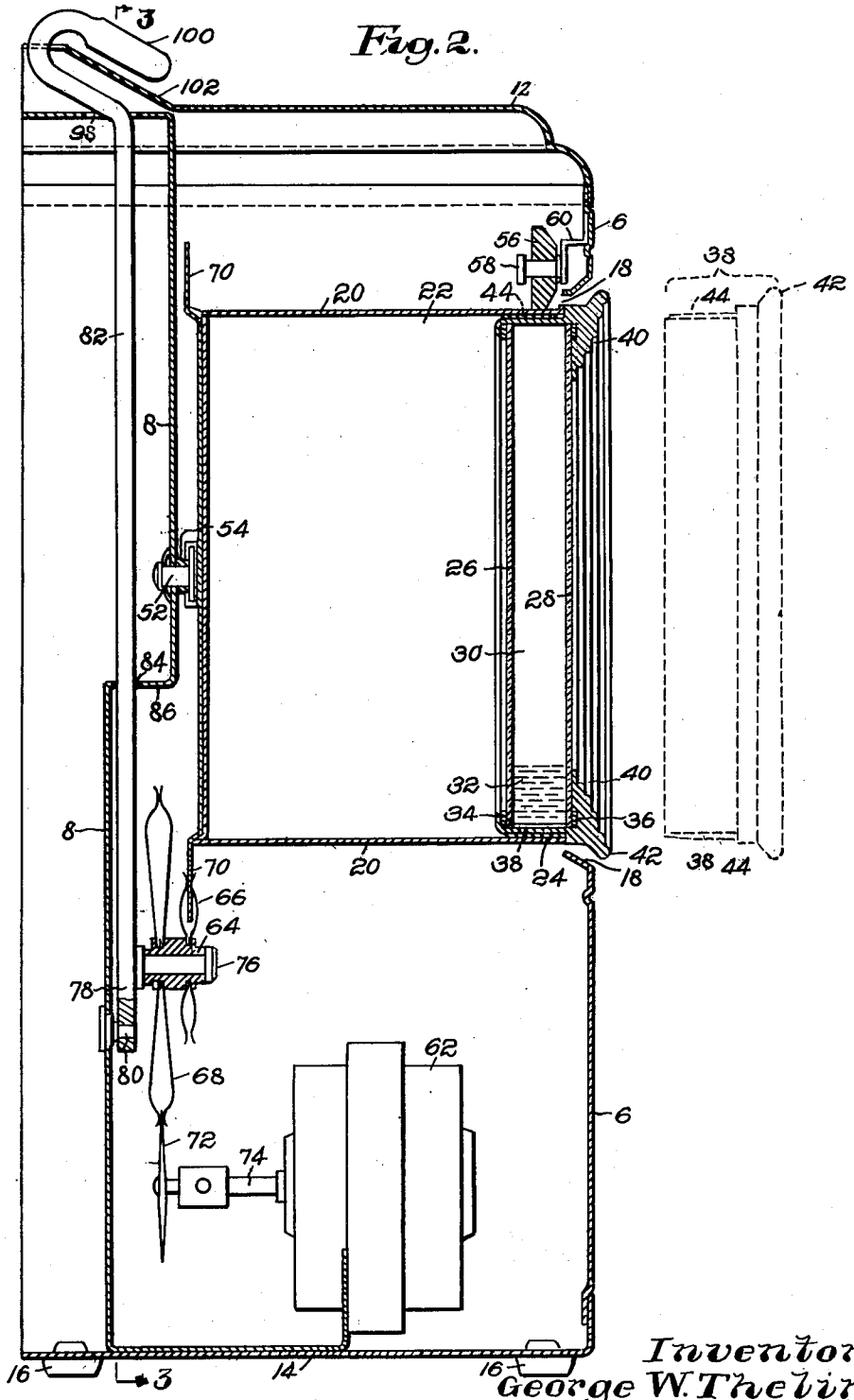
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TOY WASHING MACHINE

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Fig. 2.



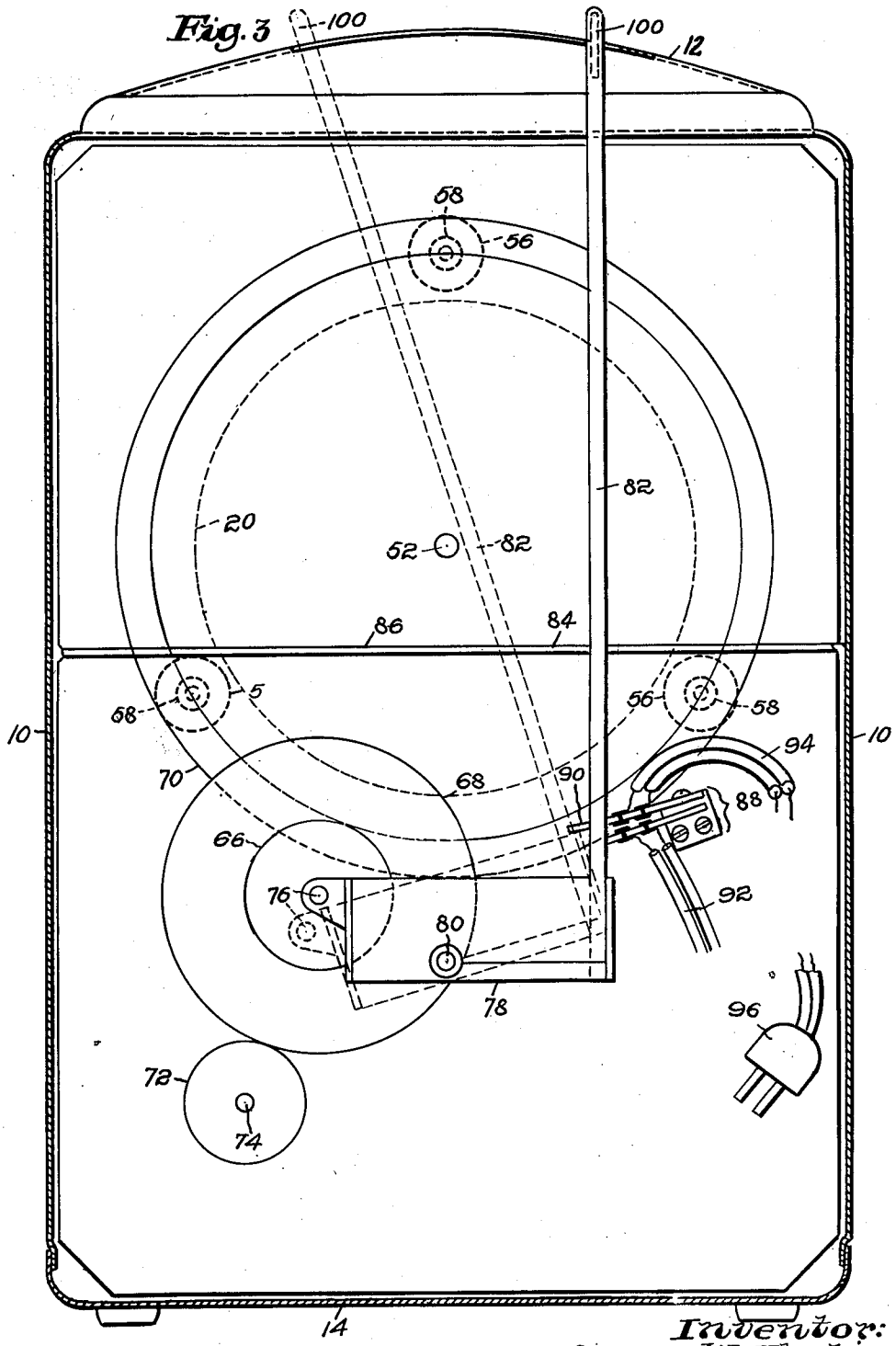
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Fig. 3



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TOY WASHING MACHINE

George W. Thelin, Newton, Mass.

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7 Claims. (Cl. 46—14)

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This invention relates to amusement devices in the nature of toys, and is concerned with a toy which simulates a washing machine by the creation of an illusion that articles such as dolls' clothes, for example, are being tumbled about in a chamber, washed, rinsed, and spun dry. This illusion involves the provision of separate inner and outer chambers, the inner one for clothes and the outer one for water, the outer chamber having transparent walls through which the inner one may be viewed, together with appropriate means, either hand or power operated, for rotating both chambers, and means for causing turbulence of the water when the chamber containing the water is rotated. By varying the speed of rotation, various illusionary effects of washing, rinsing, and spin-drying are achieved by the provision of suitable means associated with the water chamber. Thus a child is amused by the illusion but without any contact whatever with the water and without danger of spilling the same.

The invention will best be understood by reference to the following description when taken in connection with the accompanying drawings of one specific embodiment thereof, while its scope will be pointed out more particularly in the appended claims.

In the drawings:

Fig. 1 is a front elevation of a toy embodying the invention.

Fig. 2 is a vertical sectional view on line 2—2 of Fig. 1; and

Fig. 3 is a vertical sectional view on line 3—3 of Fig. 2.

Referring to the drawings and to the embodiment illustrated therein as an example, there is shown a toy comprising a housing 4 (see Fig. 1) of appropriate construction, made of wood or metal, the one shown being of sheet metal, for example, and having a front wall 6 (see Fig. 2) a rear wall 8, side walls 10, a top cover 12, and a bottom 14, all suitably constructed and arranged and having the general appearance of a washing machine. The bottom 14 may be provided with feet such as rubber cushions 16 to rest upon a floor or other support.

To carry out the effect of a washing machine, the front wall 6 is provided with an opening 18, which, as will presently appear, is occupied by the front end of a rotatable assembly including a drum 20 presenting an inner chamber 22 to receive a doll's clothes, for example, said drum having an open front end 24 normally closed by a cover of novel construction comprising two

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transparent walls 26 and 28 through which the inner chamber may be viewed, to carry out the illusion. To further this effect, these walls are separated by a chamber 30 to contain a liquid such as water 32, a sufficient amount of which is permanently sealed in the chamber to produce the desired effect. The transparent walls are sealed as by sealing rings 34 and 36 in a ring or bezel 38 provided with a flange 40 directed radially inward to hide the water at times, as will presently appear. A flange 42, directed radially outward, has the appearance of closing the front opening 18 of the housing. The ring or bezel 38 may be made of cast metal or molded plastic, for example, and has ribs 44 contacting the internal surface of the drum 20 rather snugly but enabling the cover to be withdrawn forwardly to permit the chamber 22 to be charged and emptied as desired. Finger recesses 46 enable the user's fingers to be inserted behind the flange 42 to pull the cover from its position in the front end opening of the rotatable drum.

To provide the desired turbulence of the water at moderate speeds, the ring 38 is provided internally and within the chamber 30 with appropriate means such as vanes 48 (see Fig. 1) creating buckets 50 to contain bodies of water which, at moderate speeds, will be discharged (see Fig. 1) when the rotor turns counterclockwise. When, however, the rotor is rotated at high speed, centrifugal force retains the water near the circumference of the chamber 30, where it will be hidden from view by the flange 40, thus creating the desired illusion of spin-drying. When the rotor is at rest, a considerable body of water is visible. As the doll's clothes are visible through the transparent walls at all times, the desired illusions of immersion in water, tumbling and turbulence, and spinning to dry the clothes are produced, yet without the undesired spilling of water with consequent possibility of damage to house furnishings and to the house itself as by leakage through a floor to a ceiling.

In the present example, the described rotor is suitably mounted for rotation about a horizontal axis, as by the provision of a rear stub shaft 52 (see Fig. 2) attached to the rear end of the drum 20 and turning in a suitable bearing 54 in the rear wall 8. The front end of the rotor is suitably supported as by a set of rollers or wheels 56, of rubber or other noise deadening material, for example, turning on fixed studs 58 on brackets 60, and resting against the external cylindrical surface of the rotor.

Rotation of the rotor may be accomplished by

hand or by power. If accomplished by hand, the hand will regulate the speed as desired. If accomplished by power, a suitable motor such as an electric motor 62 (see Fig. 2) may be employed. While variable speed motors and suitable controls such as rheostats are available, in the present example I have chosen to employ a speed-reducing and speed-varying mechanism between the motor and the rotor. Many mechanisms for this purpose are commercially available and may be employed. The one which I have chosen to employ is a variable-speed, friction-drive affair affording a double reduction, and a wide speed variation.

To this end, there is provided a sleeve 64 having affixed thereto two pairs of friction disks 66 and 68, the disks of each pair being in the nature of springs which press toward each other with resilient pressure. The disks 66 receive between them a disk 70 affixed to the drum 20, and the disks 68 receive between them a disk 72 affixed to a motor shaft 74. The sleeve 64 turns on a stud 76 whose position is suitably varied toward and from the motor shaft as by mounting the same on a rocker 78 fulcrumed on a stud 80 affixed to the rear wall 8 of the housing. Rocking of the rocker 78 is conveniently accomplished as by rod 82 affixed thereto and extending therefrom upwardly through a slot 84 in an offset 86 in the rear wall of the housing. In this example, the current to the motor is controlled by a double-pole, single-throw switch 88 of appropriate construction, the one herein employed being coordinated with the speed control as by having an arm 90 contacted by the rocker 78 as the speed varying mechanism reaches its lowest speed. Cables 92 and 94, one to the motor and one to a plug 96, conduct current to and from the switch.

The control rod 82 (see Fig. 2) extends upwardly through a second slot 98 in the housing and has a U-shaped terminal portion 100 which straddles an arcuate flange 102 at the top of the housing and serves as an indicator cooperating with suitable markings on the flange, such as "Off," indicating current shut off, "Wash" indicating slow-speed wash position, "Rinse" and "Spin-Dry," the high-speed position, with the indications "Fast" and "Slow" associated with arrows. From the "Off" position, a slight movement closes the switch and starts the motor. Further movement increases the speed through the "Wash" and "Rinse" positions to the "Spin Dry" position. Reverse movement of the control rod reverses this cycle.

Having thus described one embodiment of the invention, what I claim is:

1. In a toy which simulates a washing machine, the combination of a cylindrical rotor having a dry chamber adapted to receive articles such as a doll's clothes, said chamber having a viewing opening, a closure for said opening comprising a sealed chamber having transparent walls and adapted to contain liquid such as water, means in the second-named chamber to cause turbulence of the liquid therein, and means to rotate said rotor to agitate the articles in the first-named chamber and the liquid in the second-named chamber.

2. In a toy which simulates a washing machine, the combination of a cylindrical rotor having a dry chamber adapted to receive articles such as a doll's clothes, said chamber having a viewing opening, a closure for said opening comprising a sealed chamber having transparent walls

and adapted to contain liquid such as water, the liquid chamber having a peripheral opaque wall portion and means to rotate said rotor to agitate the articles in the first-named chamber and the liquid in the second-named chamber, said rotating means including a motor to drive said rotor, and means to cause variation of the speed of said rotor whereby at a relatively higher speed the liquid is centrifugally concealed by the opaque wall portion.

3. In a toy which simulates a washing machine, the combination of a housing, a rotor rotatably supported on said housing and having a chamber to receive articles such as a doll's clothes, said chamber having an opening for insertion and removal of such articles, a readily removable closure for said opening having two transparent walls separated by a chamber to receive liquid such as water, the article chamber being viewable through said walls and through the liquid chamber between them, vanes in the liquid chamber to cause turbulence of the liquid therein, opaque means about the periphery of the transparent walls at times to conceal the liquid, means to rotate said rotor to agitate the articles in the article chamber and the liquid in the liquid chamber, the rotating means including a motor to drive said rotor, variable speed control means for said motor including a lever pivoted on the housing, and indicia on said housing in predetermined motor-speed-representing juxtaposition to said lever.

4. A toy simulating a clothes washing machine comprising a supporting frame, a rotor thereon with means to rotate the same, the rotor having an inner chamber accessible to a wash load and an outer chamber sealed for liquid and having transparent walls through which the inner chamber and contents may be viewed with the effect of subjection of the load of the inner chamber to the liquid of the outer chamber, and turbulence creating means for the liquid of the outer chamber, whereby an illusion of a washing action upon the load is afforded.

5. A toy simulating a clothes washing machine, comprising a support, a wash-load chamber on the support, and a sealed liquid chamber rotatable on the support, the liquid chamber having opposed spaced transparent walls arranged in relation to the load chamber as a window thereto through which the load appears as though immersed in the liquid of the windowing sealed liquid chamber, variable speed rotating means for the liquid chamber, the latter having a peripheral opaque wall portion for concealing the liquid centrifugally at relatively high rotative speed of the liquid chamber, the latter also containing turbulence-creating means for the liquid, whereby at different speeds of the variable speed means the illusion is created of immersion of the load in the liquid, of a turbulent washing action, and of a spin-drying action.

6. A toy simulating a clothes washing machine, comprising a housing, a wash-load chamber rotatably supported on the housing, a sealed liquid chamber also rotatably supported from the housing and having opposed transparent walls, the load chamber having an opening in visual line with the transparent chamber walls whereby the illusion of subjection of the load to the liquid is afforded, rotating means for both chambers, the liquid chamber having an opaque peripheral portion adapted to conceal the liquid under centrifugal action under rotation of the liquid chamber at a relatively high speed, and the ro-

tating means being variable to afford such speed and alternatively a lower speed.

7. A toy simulating a clothes washing machine, comprising a housing, a wash-load chamber rotatably supported on the housing, a sealed liquid chamber also rotatably supported from the housing and having opposed transparent walls, the load chamber having an opening in visual line with the transparent chamber walls whereby the illusion of subjection of the load to the liquid is afforded, rotating means for both chambers, the liquid chamber containing means for creating turbulence of the liquid under rotation of the liquid chamber.

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