March 16, 1971 E. L. BROWN 3,570,271

SMALL CAPACITY CLOTHES CLEANING OR RINSING APPARATUS

Filed Jan. 17, 1969 2 Sheets-Sheet 1

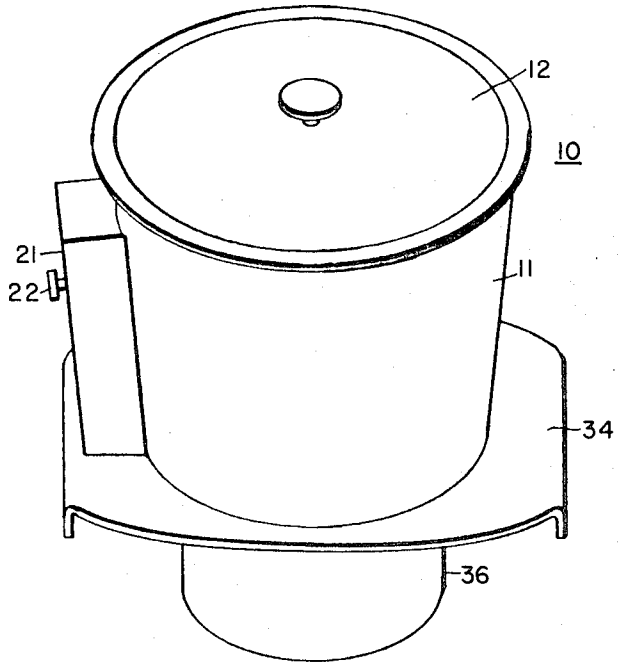


FIG. 1.

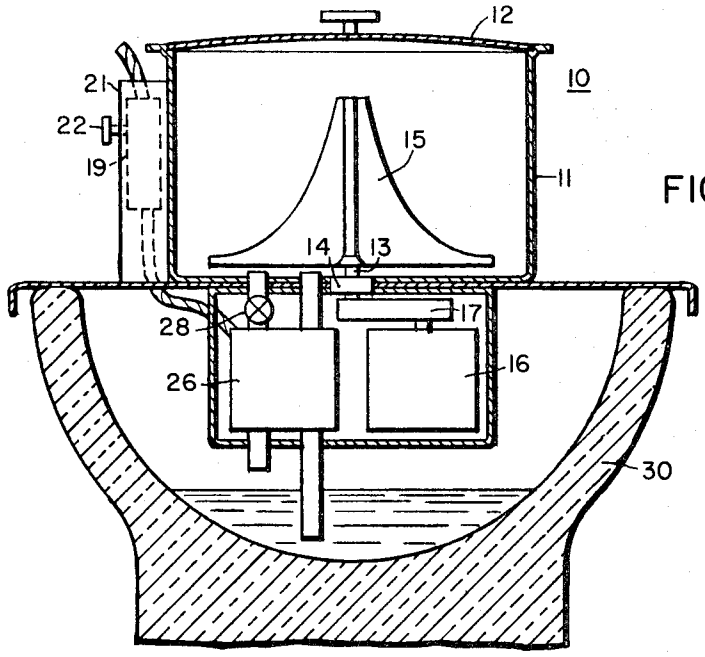


FIG. 2.

WITNESSES:

Leon M. Garman

James F. Young

INVENTOR

Edward L. Brown

BY B. B. Hebert, Jr.

AGENT

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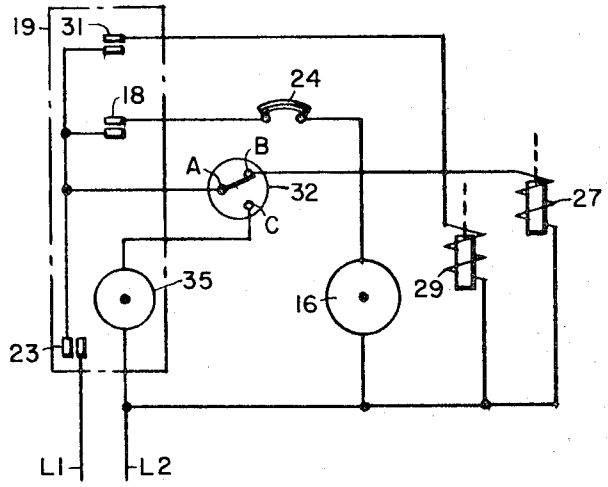


FIG. 3.

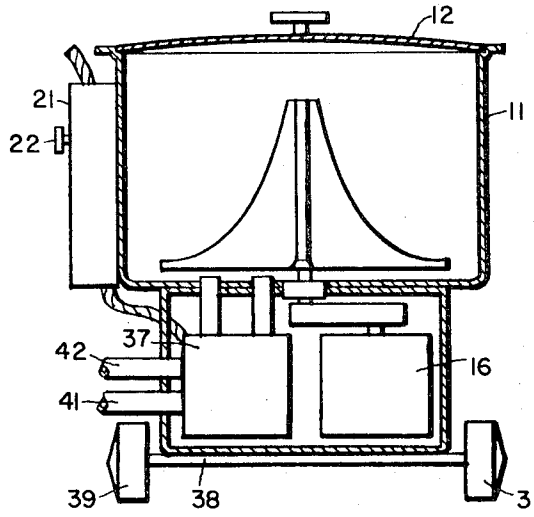


FIG. 4.

United States Patent Office 3,570,271
Patented Mar. 16, 1971

3,570,271

SMALL CAPACITY CLOTHES CLEANING OR RINSING APPARATUS

Edward L. Brown, Carmel, N.Y., assignor to Westinghouse Electric Corporation, Pittsburgh, Pa.

Filed Jan. 17, 1969, Ser. No. 791,900
Int. Cl. D06f 13/02
U.S. Cl. 68—3 5 Claims

ABSTRACT OF THE DISCLOSURE

A diaper or small clothes load rinsing apparatus which utilizes the water from a reservoir type source such as a water closet. The apparatus is characterized by the provision of a tub and pump for transferring water from the water closet to the tub and further, by the provision of a dump valve which serves to drain the dirty water from the tub back into the water closet for disposition thereof.

BACKGROUND OF THE INVENTION

This invention relates, in general, to clothes conditioning apparatus and, more particularly, to a small capacity rinsing machine suitable for use with baby diapers.

The problems attendant the handling of soiled baby diapers are well known. Traditionally, they are stored in a pail which is optimistically filled with a water solution designed to minimize odors. Even if the undesirable odors are controlled, pre-rinsing usually in a water closet, is required, and subsequently the water in the pail must be drained therefrom, usually by hand.

In order to overcome the foregoing disadvantages, laundry devices have been developed which can be utilized in a convenient location such as the bathroom. Some of these devices rinse and wash diapers while others only rinse. Obviously, to construct a device which both rinses and washes is quite costly.

Accordingly, the general object of this invention is to provide a new and improved small capacity clothes rinsing apparatus.

It is a more particular object of this invention to provide a new and improved diaper rinsing apparatus wherein the source of rinsing fluid is a water closet or reservoir that can be flushed by means of water, for example, a bath tub.

BRIEF SUMMARY OF THE INVENTION

The above-cited objects are accomplished by the provision of a clothes rinsing apparatus including a clothes tub for containing clothes to be rinsed, an agitator supported in the tub, a transmission and motor for effecting oscillatory movements of the agitator, a pump for transferring rinse fluid from a source to the tub and a drain for emptying the tub back into the source.

The invention is characterized in one embodiment by the provision of means for supporting the tub, pump and drain over or on the water source and in another embodiment by the provision of an ambulatory support for the above-mentioned components. The last-mentioned support, as will be obvious, may be conveniently transported from a place of storage to an area adjacent the water source which may be a water closet or a stationary tub in the laundry room or may even be the bath tub.

Further objects and advantages of the present invention will become apparent when considered in view of the following detailed description and drawings forming a part hereof.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of a clothes rinsing device representing the invention;

FIG. 2 is an elevational view, partly broken away, of the clothes rinsing device supported on a water closet;

FIG. 3 is a schematic diagram of the controlled components of the device shown in FIGS. 1 and 2; and

FIG. 4 is an elevational view, in section, of a modified form of a clothes rinsing device shown in FIG. 1.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to the drawings, especially FIGS. 1 through 3, reference character 10 designates generally a clothes rinsing device comprising a tub 11 for containing clothes to be rinsed and a cover 12 therefor. Supported for oscillatory movement in the tub 11 is an agitator structure 12 carried by a shaft 13. The shaft 13 is journalled in a bearing 14 in the tube 11 and the lower end of the shaft is connected to a main drive motor 16 through a transmission 17 which may be of any conventional design capable of imparting the aforementioned oscillatory motion.

The motor 16, as shown in FIG. 3, is energized through switch contacts 18 of a timer 19. The timer, shown in block form, in FIG. 2 is mounted in a housing 21 attached to the tub 11. A control knob 22 serves to set the timer 19 for a predetermined cycle of operation, power being supplied through the timer via conductor L1 and line switch contacts 23. To protect the motor 16 there is provided a safety thermostat 24 in series therewith.

A pulley (not shown for sake of clarity) carried by the motor output shaft serves to drive a friction wheel (also not shown) forming a part of a pump structure 26. A pump solenoid 27 serves to effect engagement of the friction wheel and pulley at a predetermined point in the cycle of operation, depending on the specific design of the timer. As will be apparent from FIG. 2, the pump 26 serves to transfer water from a source 27, herein disclosed as a water closet, to the tub 11. To drain the water from the tub there is provided a drain valve 28 and associated piping. The valve 28 is operated by means of a solenoid 29 energized by a switch contact 31 of the timer 19.

A circuit to the pump solenoid 27 mentioned above, is established through contacts A and B of a water level control switch 32, once the switch 32 has been actuated by virtue of a predetermined water level having been reached, continuity through the switch contacts A and B is broken thereby opening the circuit to the pump solenoid and, therefore, terminating operation of the pump. At this point continuity through the switch 32 is through contacts A and C thereby providing power to energize the timer motor 35 which then proceeds to advance timer cams (not shown) which open and close the switch contacts 18, 23 and 31 in accordance with the predetermined program.

In the embodiment shown in FIG. 1, a support structure 34 serves to suspend the tub 11, motor 16 and pump 26, the latter two of which are suitably mounted in the housing 36, on the water closet 27.

In the embodiment shown in FIG. 4, the motor 16, a combination pump and drain structure 37 and the tub 11 are supported on a cart 38 having wheels 39. The structure 37 has a pair of hoses 41 and 42 the former of which constitutes a drain hose and the latter which constitutes the means by which water is transferred from the water closet 27 to the tub 11 via the structure 37.

Since numerous changes may be made in the above apparauts and different embodiments made without departing from the spirit thereof, it is intended that all matter contained in the foregoing description or shown in the accompanying drawings, shall be interpreted as illustrative and not in a limiting sense.

What is claimed is:

1. In a diaper rinser for use with means providing a source of water, the combination comprising:

a tub structure having a cover therefor,

a pump for transferring clean water from said water source to said tub,

a drain valve for carrying dirty water from said tub back to said source, and wherein,

said water source comprises a water closet.

2. Structure as specified in claim 2 including, means for supporting said tub over said water closet.

3. Structure as specified in claim 2 including, ambulatory means for supporting said tub and said pump adjacent said water closet.

4. Structure as specified in claim 2 including, agitator structure supported for oscillatory movement within said tub, and a motor and transmission for rendering said agitator structure operable.

5. Structure as specified in claim 4 wherein said pump, said motor and said transmission are supported within a housing depending into said water closet from said means for supporting said tub thereabove.

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WILLIAM I. PRICE, Primary Examiner

U.S. Cl. X.R.

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