P. J. SKEFFINGTON.

WASHING MACHINE.

APPLICATION FILED JAN. 11, 1921.

1,385,404. Patented July 26, 1921.

Fig. 1.

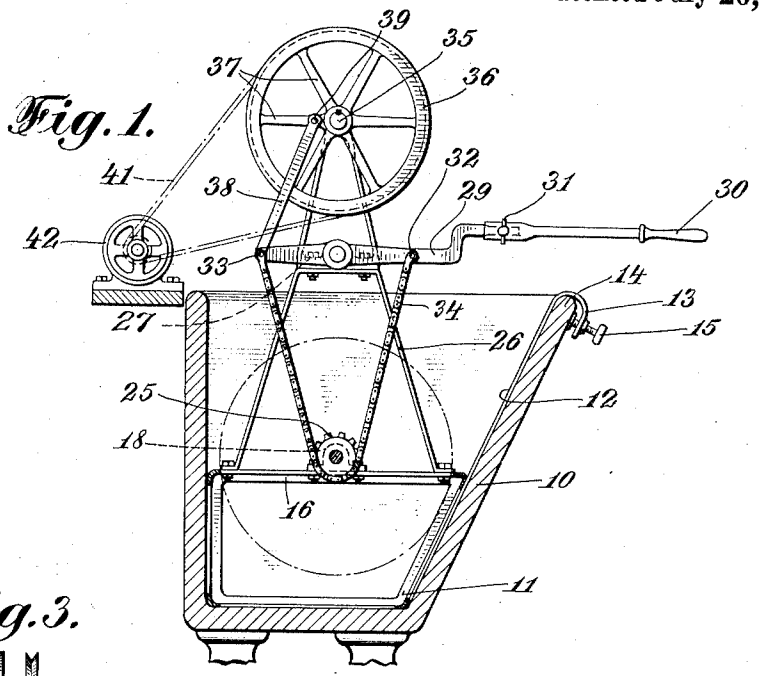


Fig. 3.

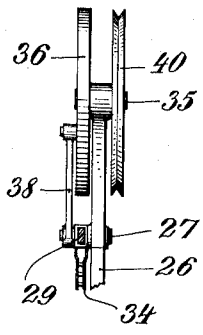


Fig. 2.

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PATRICK J. SKEFFINGTON, OF NEW YORK, N. Y.

WASHING-MACHINE.

1,385,404. Specification of Letters Patent. Patented July 26, 1921.

Application filed January 11, 1921. Serial No. 436,412.

To all whom it may concern:

Be it known that I, PATRICK J. SKEFFINGTON, a citizen of the United States, and resident of 222 East 15th St., New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Washing-Machines, of which the following is a specification.

This invention relates to improvement in washing machine.

One object of my invention is to provide a simple, effective, and inexpensive device which may be readily inserted into a standard wash tub and operated therein either manually or by power source.

Another object of my invention is to provide a suitable frame by means of which my apparatus may not only be supported but also rigidly fastened to a wash tub.

Another object of my device is to provide a perforated receptacle having a hinged door or cover through which clothes may be readily inserted into the receptacle and kept therein.

A further object of my invention is to provide a working mechanism whereby the receptacle may be revolved back and forth, through hand operation.

A still further object of my invention is to provide means whereby this hand operation is facilitated.

Another object of my invention is to provide in connection with the hand operation facilitating means other means by way of which my apparatus may be driven by a power source.

The foregoing and other objects will be more fully apparent from the following description and the accompanying drawings which form part of this specification and in which:

Figure 1 represents a cross sectional view through a wash tub in which my device is placed.

Fig. 2 is a perspective view of a preferred form of my apparatus.

Fig. 3 is a detail view showing the upper structure of my device.

Referring to the drawings, numeral 10 represents a wash tub body of commonly used construction. Within the tub rests a drum frame 11 from which extend at the front portion hanging or clamping bars 12 provided at the top with a hook-like extension 13 passing over the edge 14 of the front portion of the tub.

At the lower part of the hook 13 is a clamping screw 15 provided by means of which the frame may be secured to the tub wall.

Frame 11 comprises two side members 16 and longitudinal connecting members 17.

On top of the side members are provided drum bearings 18 in which the shaft 19 of drum 20 is rotatably mounted.

The drum is provided at its cylindrical surface with perforations 21.

Door 22, hinged at 23 to the cylinder proper and provided with locks 24, forms a portion of the cylinder and may be readily opened for permitting clothes to be inserted in the drum.

Attached to one end of the drum and lodged between that end and the bearing is a sprocket wheel 25. Extending upward and secured to one of the side members 16 of drum frame 11, is an upright frame extension 26, provided with lever bearing 27 and with a fly-wheel bearing 28. Both of the bearings are placed above each other and are in alinement with one of the drum bearings 18.

In bearing 27 an oscillating lever 29 is secured and is equipped with a handle 30 which may be attached or secured to the lever by means of a set screw 31.

Hingedly associated with lever 29 at 32 and 33 is a sprocket chain 34 which depends from the lever and passes around sprocket pinion 25, engaging it at its lower portion.

The distance from the center of the bearing 27 to the pivotal point 32 is equal to the distance from the pivotal point 33 to center of bearing 27.

Lodged in bearing 28 is a short shaft 35, to which is keyed on one side, the side above lever, a fly wheel 36.

At one of the ribs 37 of the fly wheel, a

connecting rod 38 is eccentrically associated therewith at 39. The other end of the connecting rod is attached at 33, one of the pivotal attaching points of sprocket chain 34. On the opposite side of bearing 28, a sheave 40 is keyed to shaft 35 and is adapted to receive a cord or belt indicated at 41 by means of which power may be transmitted from power source 42 conveniently disposed at the rear of the wash tub.

When lever 29 is swung up and down by handle 30 the sprocket chain 34 causes sprocket wheel 25 to alternatively rotate, first in one and then in the opposite direction. The sprocket pinion being permanently connected with the drum transmits the motion to the drum, whereby the clothes within the drum are caused to follow the motion of the drum.

The perforation provided in the surface of the drum facilitates cleansing water to pass in and out of the drum, thus causing the clothes to come in contact in various positions with the cleansing water.

In operation of lever 29 by means of handle 30, the oscillating motion of the lever is greatly facilitated through the fly wheel 36 connected with the lever by means of connecting rod 38, the fly wheel giving momentum to the lever, which causes this operation to be far easier than if no fly wheel would be present.

The connecting rod 38 also facilitates the operation of lever 29 by means of power source 42 which may drive sheave 40 when desired.

The simplicity of construction of my device and the possibility of applying it to any standard size wash tub, without the use of any special machinery or without necessitating the application of a separate water container in which the drum is to operate, my apparatus may be very cheaply built, while performing the duty of an expensive machine.

While I have shown a specific construction of my device, it is obvious that the design may be improved, and I therefore reserve for myself the right to make such changes or improvements within the scope of my invention, for which I claim:

1. A washing machine, comprising in combination, a drum frame adapted to fit a wash tub, a pair of bearings mounted at the ends of the frame, a pair of hook-like clamps extending upward from the front portion of the frame and adapted to engage the front edge of a was tub, a drum rotatably lodged in said bearings and provided with a hinged lid, said drum having a plurality of perforations in its cylindrical wall, a sprocket wheel associated with one end of the drum, an upright frame attached to the drum frame and provided with a lever bearing, an operating lever lodged in said lever bearing, a chain hingedly secured at its ends to said lever and engaging said sprocket wheel, a fly wheel bearing provided at the top of the upright frame, a fly wheel rotatably mounted at one side of the fly wheel bearing, a sheave connected with said fly wheel, at the other side of the bearing, a connecting rod eccentrically attached to said fly wheel, and forming connection between the latter and one end of said operating lever for the purpose and substantially as described.

2. A washing machine, comprising in combination, a frame adapted to be placed in a wash tub, said frame having means for securing it to the edge of a wash tub and an upright frame extension at one end, said frame provided with end bearings, said frame extension provided with two other bearings placed above each other, a perforated drum rotatably mounted in said end bearings, a sprocket wheel associated with said drum, a hinged lid forming part of the drum's outer surface, an operating lever oscillating in the lower frame extension bearing, a fly wheel and a sheave rotatably mounted in the upper frame extension bearing, a connecting rod provided between the fly-wheel and one end of said lever, and a sprocket chain swingably attached to the latter and engaging said sprocket wheel.

3. In a washing machine, the combination of a rotatably mounted drum, a sprocket wheel associated with the latter, an oscillating lever disposed above said sprocket wheel, a fly wheel rotatably mounted above said lever, a rod connecting said fly wheel and said lever, a sprocket chain depending from said lever and passing around and engaging said sprocket wheel and means for operating the machine.

4. In a clothes washing device, the combination of a rotatable, perforated drum having a hinged door, a sprocket wheel permanently attached to said drum, a sprocket chain engaging said sprocket wheel, an oscillating operating lever arranged above said sprocket wheel, said chain being attached to said lever, and means associated with said lever for facilitating its oscillating motion.

5. In a clothes washing device, a perforated, rotatably mounted clothes receiver, a chain wheel associated therewith, an oscillating lever, a chain depending therefrom and engaging said chain wheel, and means for facilitating the operation of said lever.

6. In a clothes washing device, a perforated rotatably mounted clothes receptacle, a chain wheel attached thereto, oscillating means mounted above the said wheel, a depending chain attached to said oscillating means and engaging said wheel, momentum

giving means associated with said oscillating means, and means for operating said oscillating means by a power source at will.

7. In a washing machine, a rotatably mounted receptacle, a chain wheel attached thereto, an oscillating lever mounted above the latter, a chain depending from said lever and engaging said wheel, means for facilitating the oscillation of said lever.

Signed at New York in the county of New York and State of New York this 7th day of January, A. D. 1921.

PATRICK J. SKEFFINGTON.