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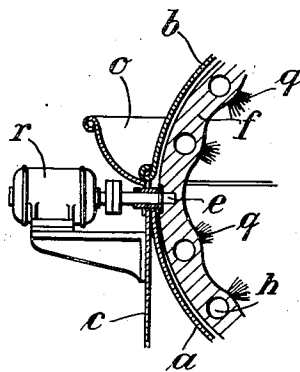
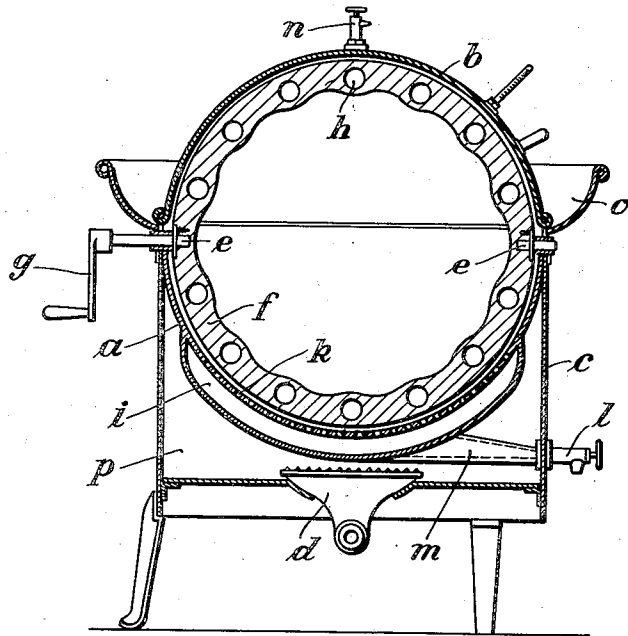
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WASHING MACHINE

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*Fig. 1*



*Fig. 2*

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## UNITED STATES PATENT OFFICE

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## WASHING MACHINE

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2 Claims. (Cl. 68—37)

This invention relates to a washing machine with a stirring device arranged in a container adapted to the shape of the inner contour of this container and to be moved along the same. Washing machines are known with stirrers rotatable about a vertical or horizontal axle and in the form of blades, undulated rods or hoops hingedly connected to the axle. As distinguished herefrom a flat ring, rotatable in a complete circle about a horizontal axle, is employed according to the invention, the inner edge of this ring facing the axle being undulated, whereas the outer edge conforms with the inner contour of the stationary container.

This construction presents the following advantages. During the rotation of the stirrer the lower part thereof acting like a scoop will raise to a point above a horizontal plane forming the axis of rotation the articles to be laundered which rest thereon. The raising of the articles to be laundered is facilitated by the undulated inner edge of the ring. The articles to be laundered having been raised slide back over the broad face of the ring, the undulated inner edge of the ring retarding this return movement. The laundry in sliding back rubs against the ring face which assists in the washing thereof. As there is steam in the upper portion of the container, the laundry will be flushed with steam whilst sliding on the ring, which process also considerably assists the washing.

The cleaning can also be assisted by arranging brushes on the ring for scrubbing the laundry as it slides down the ring.

By this method of washing the laundry is subjected to no rough treatment. Consequently, even very delicate material, which easily becomes damaged, can be washed in this machine.

An embodiment of the invention is illustrated by way of example in the accompanying drawing in which:—

Fig. 1 shows the machine in vertical section.

Fig. 2 shows a modified drive by means of an electric motor.

The lye and the articles to be laundered are introduced into a container *a* of spherical shape constructed in two hemispheres, arranged to open along a horizontal plane and hingedly connected to each other so that the top part forms a cover *b*. The bottom part of the container *a* is surrounded by a cylindrical casing *c* having feet and a heating device *d* which may be either a grate, gas burner or an electric heating element. A ring-shaped body *f* is arranged rotatable on horizontal trunnions *e* in the container *a* so that its external periphery extends close to the inner wall of the container. This ring-shaped body *f* can be slowly rotated by a crank handle *g* or by an electric motor *r* (Fig. 2). The

ring *f* has holes *h* so as to reduce the resistance to movement. The internal periphery of the ring *f* is slightly undulated and the edges are rounded so that in rotating it raises in the container the articles to be laundered until they slide off the ring under the action of gravity and drop back into the lye. The laundry can consequently never cake, always remains in motion and is thoroughly rinsed by the lye as it drops back therein. Consequently it is quickly washed so thoroughly that a subsequent washing by hand is not necessary.

The stirring device in the form of a ring, contrary to other known stirring mechanisms, enables the washing of lace, curtains and other delicate materials which easily become damaged, as the ring has no sharp edges and owing to its characteristic shape cannot exert a tearing effect.

As shown in Fig. 2, the ring *f* may also be provided with brushes *g* which work the laundry as it slides off the ring. This auxiliary arrangement is advantageous for washing less delicate, very dirty laundry.

The holes *h* in the ring not only reduce the resistance to the movement of the ring, but also cause the lye to froth so that it can better take up the dirt particles.

The bottom of the container *a* brushed by the flames is pressed outwards to form a trough *i* which is covered by a perforated sheet metal plate *k* conforming to the spherical internal contour of the container. This arrangement reliably excludes all possibility of burning the laundry. A draining pipe *m* controlled by a cock *l* extends from the trough *i*.

As the container *a* is closed by the cover *b*, very little fuel is required, especially as the generated heat is accumulated in the space *p* enclosed by the casing *c* and can thus be transmitted to the container without loss.

A whistle *n* is fitted on the top of the container to indicate the commencement of the boiling process. A gutter *o* is preferably fitted at the joint between the container *a* and its cover *b*.

I claim:—

1. A washing machine, comprising in combination a substantially spherical container, a stirrer in the form of a flat ring rotatable about a horizontal axis in said container, the outer periphery of said ring conforming to and being closely adjacent to the inner wall of said container, whereas its inner periphery adjacent the axis of rotation is undulated.

2. A washing machine as specified in claim 1, in which brushes are fitted on the inner periphery of ring.

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