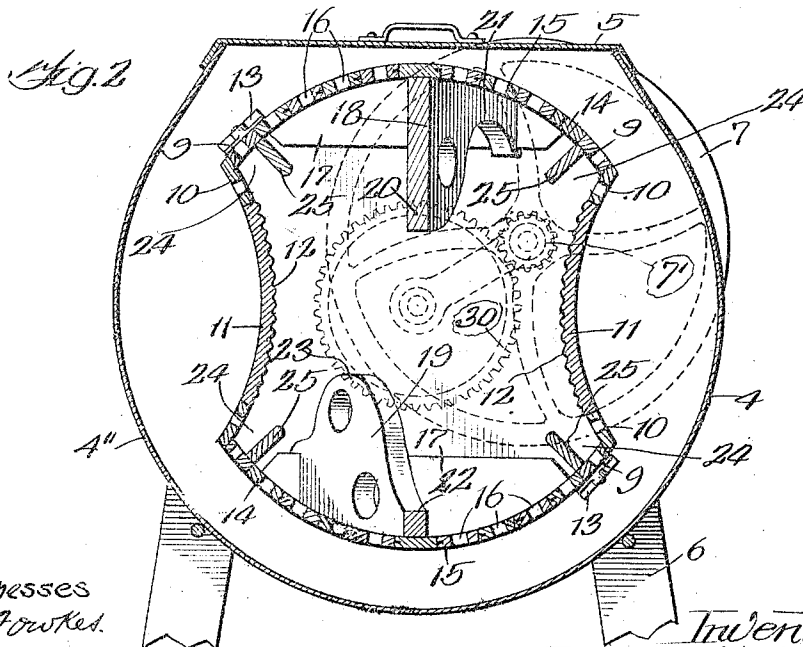
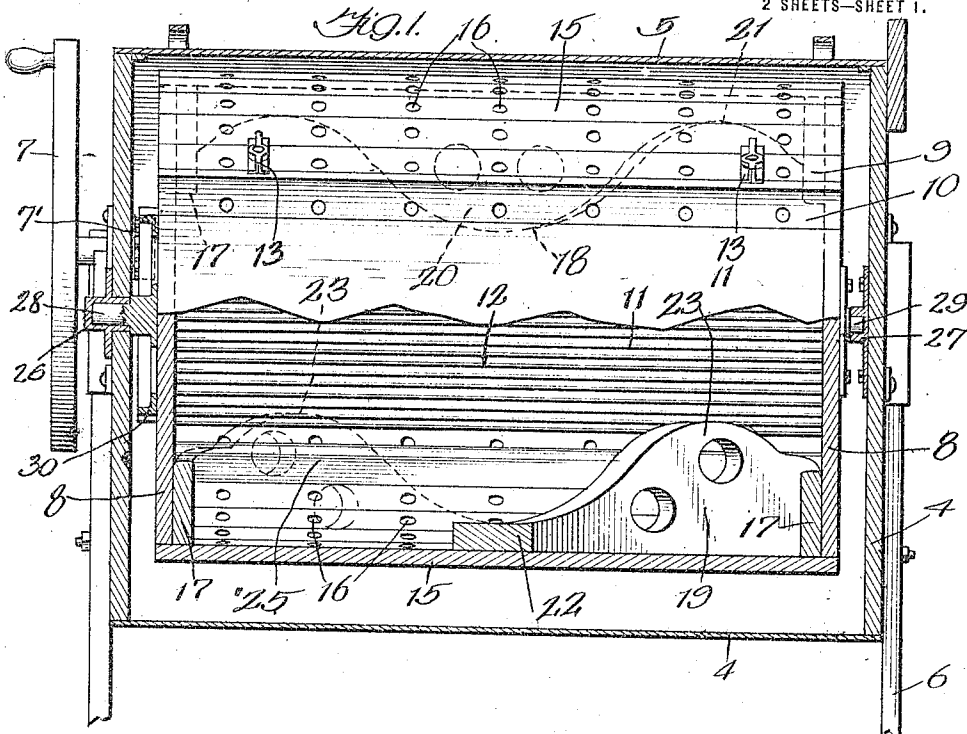


L. W. MAMMEN.  
CYLINDER FOR WASHING MACHINES.  
APPLICATION FILED AUG. 7, 1916.

1,254,252.

Patented Jan. 22, 1918.

2 SHEETS—SHEET 1.



Witnesses  
W. H. Fowler.

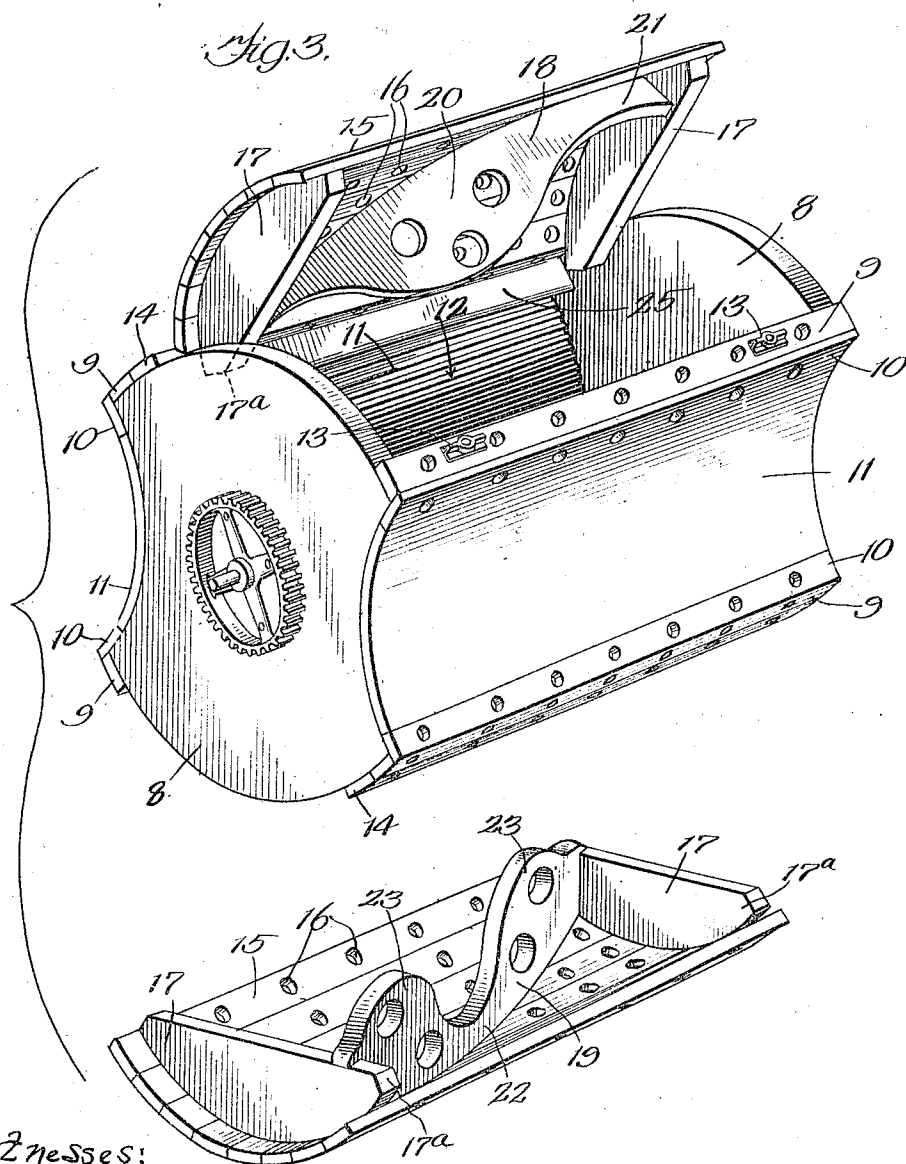
M. H. Moore.

Inventor:  
Lawrence W. Mammen.  
By *Symon & Bradley*  
Schaum Fowler, Attys.

L. W. MAMMEN.  
CYLINDER FOR WASHING MACHINES.  
APPLICATION FILED AUG. 7, 1916.

1,254,252.

Patented Jan. 22, 1918.  
2 SHEETS—SHEET 2.



Witnesses:

W. H. Fowkes

M. M. Moore

Inventor:

Lawrence W. Mammen.

By Symonds & Bradley, Attorneys, Fowkes  
Ellis

# UNITED STATES PATENT OFFICE.

LAWRENCE W. MAMMEN, OF CHICAGO, ILLINOIS.

## CYLINDER FOR WASHING-MACHINES.

1,254,252.

Specification of Letters Patent.

Patented Jan. 22, 1918.

Application filed August 7, 1916. Serial No. 113,451.

### *To all whom it may concern:*

Be it known that I, LAWRENCE W. MAMMEN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Cylinders for Washing-Machines, of which the following is a full, clear, and exact specification, as will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to laundry washing machines of the rotating cylinder container type, having reference more particularly to the cylinder container itself, and has for one of its main objects to improve the construction and increase the efficiency and utility of machines of this type. Another object is to provide a simple, compact and durable cylinder container capable of being readily and cheaply manufactured, and one constructed to obviate the necessity for removing the cylinder when the interior of the body of the machine is to be cleaned.

An important feature of my invention is the provision of a cylinder container having oppositely disposed convex and concave sides presenting alternately perforated and solid ribbed walls to the contents thereof in the rotation of the cylinder, wherein suction chambers are arranged adjacent lines of juncture between said walls whereby to induce a powerful suction through the perforated wall portions and thereby increase the washing effect of the cylinder in its rotation.

My invention further contemplates the provision in a rotary cylinder container of means for preventing the "balling" of the clothes in the container, that is, a means designed to overcome any incipient rolling up of the clothes into a ball due to rotation of the container too long in one direction, and without resorting to the heretofore common practice of alternating the directions of rotation. This object is effected by providing novel baffle or deflecting means disposed in the path of the clothes to break up the balling and which also incidentally permits the operator to simply rotate the machine in one direction only.

These, together with such other objects as may hereinafter appear, or are incident to my invention, I attain by means of the construction illustrated in preferred form in the accompanying drawings, herein:—

Figure 1 is a vertical longitudinal sectional view of a washing machine embodying my invention;

Fig. 2 represents a vertical transverse section taken centrally through Fig. 1;

Fig. 3 is a view in perspective of the cylinder container with the removable side sections disassociated.

Referring to the drawings, the numeral 4 designates the body portion of the washing machine which is provided with a suitable cover 5 and legs 6, and within this body 4 is journaled the cylinder container provided with suitable connections with the crank 7.

From an inspection of Figs. 1 and 2 it will be seen that the heads 4' of the machine body 4, which are solid throughout and entirely close the ends of the same, are provided substantially centrally thereof with fixed bearings 26 and 27 adapted to receive the stub shafts 28 and 29 of the cylinder, the former of which is preferably provided with a gear 30 in mesh with the crank shaft pinion 7'. These heads are desirably formed of wood and to their edge portions is attached the metallic main body portion 4'' which is formed in one piece, the whole being leak-proof and extending upwardly past the top line of the cylinder, terminating in a horizontal top opening adapted to be closed by the cover lid 5.

The numeral 8 indicates the heads of the cylinder formed with concave and convex portions at diametrically opposite sides and provided at the jointures or corners of such portions with the perforated angularly disposed bars 9 and 10 secured in juxtaposition to and extending between the heads 8. Imperforate concave wall sections 11 are attached to the concave portions of the heads intermediately of the bars 10, and are each formed with a corrugated inner surface 12 in which the corrugations parallel the cylinder axis.

In each convex portion, preferably one of the corner bars 9 is provided with wing nuts 13 and the other corner bar 9 pref-

erably has associated with it another similarly perforate bar 14 secured to the heads. Engaging each of the convex portions of the heads and fitting in between one of the bars 9 with its wing nuts and a bar 14 is a perforate wall section 15, both of which comprise slats formed with the several holes 16, and constitute diametrically opposite doors. Each of said doors in the embodiment shown have inner cross pieces 17 at its ends and to which the slats composing the door are secured, the cross pieces projecting beyond one side of the door, as at 17<sup>a</sup>, to terminally engage the under face of the bar 14, and the other marginal side of the door is engaged by the wing nuts 13, and by means of which the doors are maintained in a seated closed relation against the heads during the rotation of the cylinder.

In order to overcome any tendency of the clothes to "ball" during the rotation of the cylinder, inwardly projecting baffle members 18 and 19 are provided in the doors, and in the embodiment shown, each is diagonally mounted across a door to extend between opposite ends of its cross-pieces 17, the baffle members being so disposed diagonally with reference to each other, as in the manner clearly indicated in Fig. 3. Furthermore, these members relatively have reversely curved projecting face portions, the baffle 18 on the one hand having a central perforate ridge 20 and reduced end portions 21 and the baffle 19 on the other hand is formed with the central reduced portion 22 and the perforate end ridges 23. As thus described, these ridges and reduced portions of the baffle members have been formed to cooperate in a very efficient manner in preventing any "balling" of the clothes, and as the baffles are perforate they do not obstruct the flow of the cleansing liquid to any appreciable extent.

During the rotation of the cylinder the concave sections 11 form rubbing surfaces, and in passing through the water induce a flow or suction through the holes in the doors, so that the fluid is drawn through the clothes with considerable force, the suction being augmented by the disturbance or deflected flow produced by the concave sections and still further increased by the provision of suction channels 24 formed by the longitudinal corner ribs 25 carried radially by the bars 9 in juxtaposition to and substantially parallel with the bars 10 (Fig. 2). These channels 24 communicate with the holes formed in the bars 9 and 10 (Fig. 3). A cylinder so constructed and arranged will, in the operation of washing clothes, have a rapid and very effective action. It will be noted that these radial ribs, 25, direct a flow toward the corrugations of the concave

sections 11 where the rubbing effect on the clothes is produced. Another advantageous feature of my construction resides in the provision of the two removable door sections 15 in the container, permitting the removal first of one and then the other of these diametrically opposite sections so as to afford clear access to the basal portion of the body 4 for cleaning purposes and to recover articles of clothing, without necessitating the lifting out of the container every time when this has to be done.

From the foregoing, the essential features, elements and operation of my improved device, together with its simplicity and other advantages thereof, will be clearly apparent to those skilled in the art.

I do not desire to be understood as limiting myself to the precise details of construction and arrangement shown, as variations and modifications may be made in the features of construction and arrangement without departing from the spirit and scope of my invention and the terms of the following claims.

What I claim is:—

1. In a washing machine, the combination with a body portion provided with an open top, of a rotary cylinder container in said body portion comprising heads having corner pieces and imperforate corrugated concave wall sections secured thereto, and perforate convex door sections detachably secured to said corner pieces in a diametrically opposed relation, said door sections being removable through the open top of the said body portion, substantially as and for the purposes set forth.

2. A rotary cylinder for a washing machine, comprising heads, alternate fixed and removable wall sections carried by said heads, and a baffle member mounted on the removable member and having an inwardly projecting portion disposed diagonally in the path of the cylinder contents.

3. A rotary container for a washing machine, comprising in combination a pair of heads, a series of alternate fixed corrugated wall sections and removable perforate door sections carried thereby and comprising the side boundary of the cylinder, oppositely disposed baffle members mounted on the door sections and having inwardly projecting portions disposed intermediately of the corrugated wall sections and diagonally in the path of the container contents.

4. A rotary cylinder container comprising heads, associated alternate perforate and corrugated concave wall sections carried by said heads, and a longitudinally disposed rib extending radially from the plane of the perforate wall section whereby to constitute a restricted marginal channel having its open-

ing directed across the corrugations of the corrugated wall section.

5 5. A rotary cylinder container for a washing machine comprising alternately arranged convex perforate door sections and imperforate concave corrugated wall sections having perforated channeled mar-

ginal portions, and oppositely disposed baffle means carried by said door sections immediately of said channeled marginal portions. 10

In testimony whereof I have hereunto signed my name to this specification.

LAWRENCE W. MAMMEN.