J. LAING.

CLOTHES WASHING MACHINE.

APPLICATION FILED OCT. 8, 1917.

1,291,936. Patented Jan. 21, 1919.

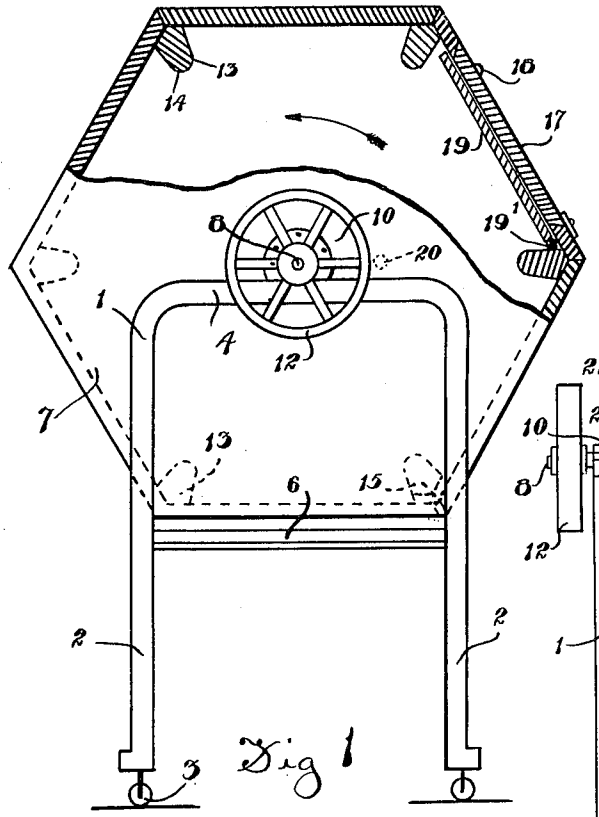

Fig 1

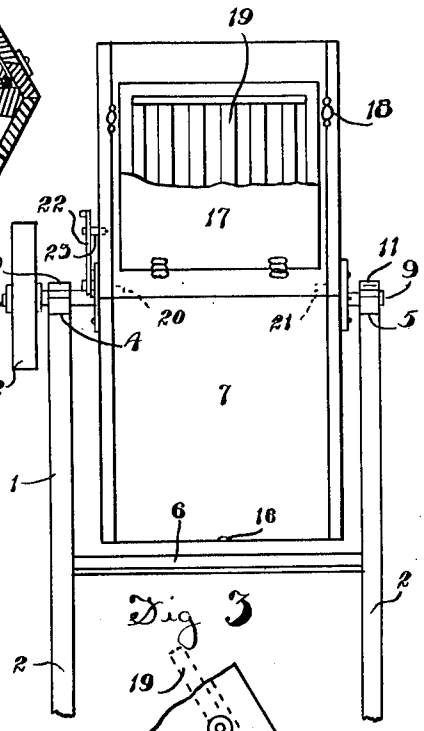

Fig 3

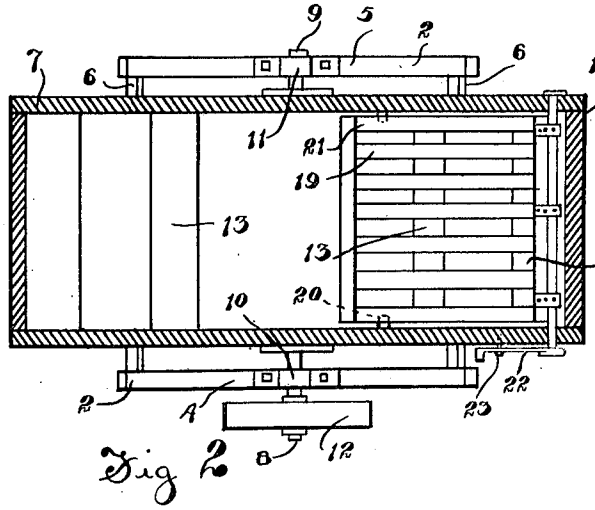

Fig 2

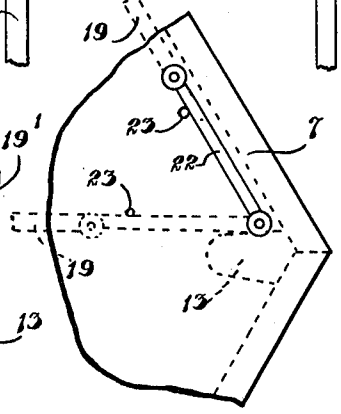

Fig. 4.

INVENTOR

John Laing

BY Fitzpatrick & Co.

ATTYS

UNITED STATES PATENT OFFICE.

JOHN LAING, OF WINNIPEG, MANITOBA, CANADA.

CLOTHES-WASHING MACHINE.

1,291,936. Specification of Letters Patent. Patented Jan. 21, 1919.

Application filed October 8, 1917. Serial No. 195,386.

To all whom it may concern:

Be it known that I, JOHN LAING, of the city of Winnipeg, in the Province of Manitoba, Canada, have invented certain new and useful Improvements in Clothes-Washing Machines, of which the following is a specification.

The invention relates to improvements in clothes washing machines, particularly for domestic use and the object of the invention is to provide an easily operated washer which, when rotated, will effectively agitate the clothes placed therein to thoroughly clean them and which will accomplish the washing of the clothes without injury to the most delicate fabrics.

A still further and important object of the invention is to provide as part of the washer a device which, after the clothes have been washed, can be set to gather the clothes in the washer and bring them to a position in which they will drain and from which they can be readily removed from the machine by entrance through a removable lid provided.

With the above objects in view the invention consists essentially in a base frame, a hexagonal drum rotatably mounted in the frame and provided interiorly and at the angular corners with cross bar agitators and fitted further with a removable lid and drain plug and a pivoted collector in the nature of a grid contained within the drum, the parts being arranged and constructed as hereinafter more particularly described and later pointed out in the appended claim, reference being had to the accompanying drawing in which:—

Figure 1 represents a side view of the washing machine with part of the drum broken away to expose interior construction and with the grid in the up position.

Fig. 2 represents a plan view of the machine with the drum appearing in horizontal section and the grid in the down position.

Fig. 3 represents a side view of the machine with half the lid broke away.

Fig. 4 represents an enlarged front view of the grid crank and adjoining parts, the crank being shown in dotted outline in the down position.

In the drawing like characters of reference indicate corresponding parts in the several figures.

1 represents a base frame comprising sets of corner legs 2 fitted with casters 3 and connected in pairs by side members 4 and 5 which form supports for the drum later described. The legs are suitably braced by tie rods 6 passing between them.

7 represents a six sided or hexagonal drum having the ends closed and supported at the ends by end spindles 8 and 9 secured to the ends and rotatably mounted in bearings 10 and 11 carried by the frame members 4 and 5.

One of the spindles is fitted with a driving pulley 12 so that the drum can be rotated by a belt from a motor if desired. The rotation could also be accomplished by a hand crank of the ordinary form applied on the spindle in the place of the pulley. This alternative is of such a well known construction that it is not considered necessary to show it.

In the angular corners of the drum I locate agitators in the nature of cross bars 13, which pass between the ends of the drum and extend radially inwardly. Actually the bars taper slightly in cross section and have their inner edges rounded as indicated at 14.

The base of one of these agitators is bored to present a more or less Y-shaped draining opening 15 which passes through the drum and is closed by a removable plug 16. The branch openings go to the opposite sides of the agitators so that when the drum is turned to the position in which the said agitator is down the water in the machine can be all drained out.

One of the sides of the drum is open and the opening is closed normally by a removable hinged lid 17 held closed by pivoted buttons 18.

Within the drum and adjoining the lid I locate a collector 19 in the nature of a substantially rectangular open grid which is permanently secured to a pivoted cross shaft 19′ passing across the drum, adjacent one of the agitators and is adapted to take an up position adjacent the inner side of the lid and to swing down clear of the adjoining agitator to a horizontal position within the drum and resting on a pair of side stops 20 and 21 secured to the ends of the drum.

A hand crank 22 is attached to the projecting end of the shaft carrying the collector so that one can manipulate the collector from the exterior.

Any suitable means such as removable

stop pins 23 can be utilized for fastening the crank against movement in either the up or down position of the collector.

The pins shown simply go into receiving openings in the end of the drum and engage the crank and hold the agitator in one position against the lid and in the other position against the stops.

The clothes to be washed are placed in the machine by opening the lid and throwing down the grid, care being taken to clear the clothes from the grid at this time. Afterward the grid is thrown up to its up position and locked and the lid is closed and the buttons turned.

The clothes are washed by turning the drum, which action causes the clothes to be agitated within the drum as will readily be understood.

After the washing has been completed the collector is thrown down and locked against the stops and then the drum is rotated one revolution in the direction indicated by the applied arrow (Fig. 1) with the result that all the clothes within the drum are picked up by the collector and raised out of the water which, it will be understood, probably fills slightly less than half the drum.

The clothes can be left on the grid until they drain and then by opening the lid one can remove them from the machine.

What I claim as my invention is:—

The combination with a multiple sided rotatably mounted drum provided in one of the sides with a lid, of a grid like collector pivotally secured within the interior of the drum and adjacent the side containing the lid and adapted to lie against said side and to swing inwardly to an approximately radial position, means for locking the collector in either position and an externally located hand crank for manipulating the collector.

Signed at Winnipeg, this 10th day of August, 1917.

JOHN LAING.

In the presence of—
GERALD S. ROXBURGH,
V. KNEESHAW.