

H. NEUMANN.
WASHING MACHINE.
APPLICATION FILED MAR. 11, 1912.

1,051,622.

Patented Jan. 28, 1913.

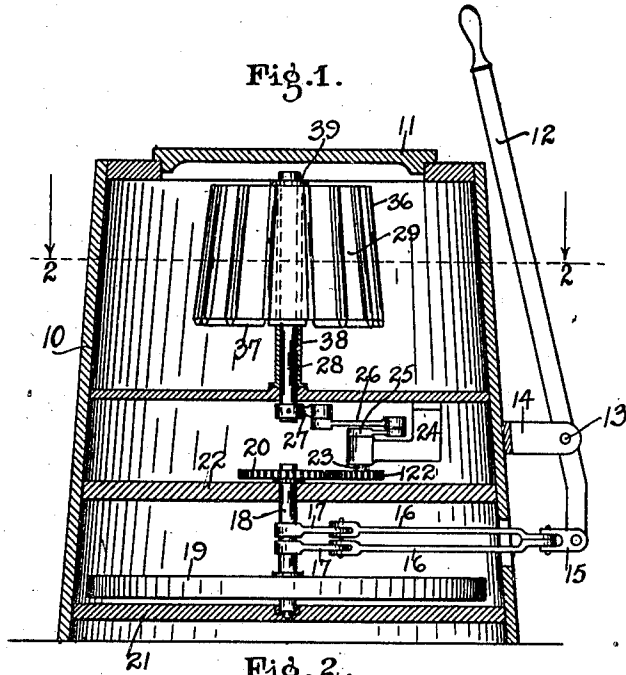


Fig. 3.

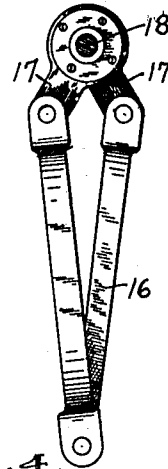


Fig. 4.

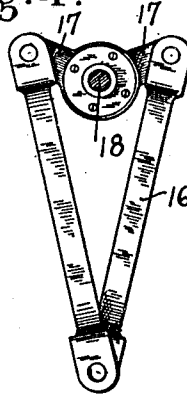


Fig. 7.

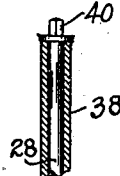


Fig. 5.

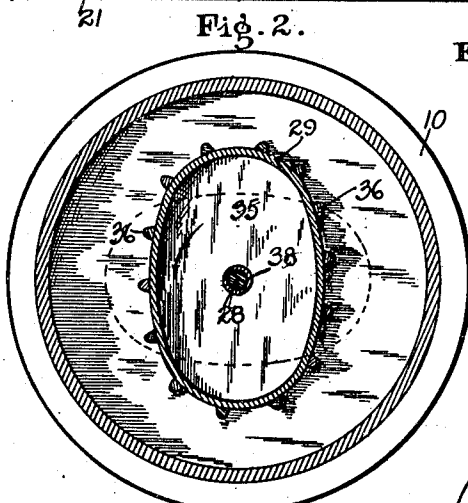
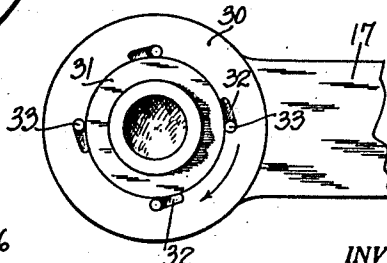
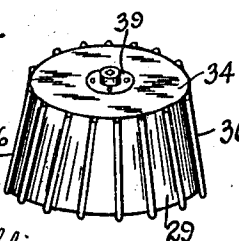


Fig. 6.



WITNESSES:

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HENRY NEUMANN, OF ANDERSON, INDIANA.

WASHING-MACHINE.

1,051,622.

Specification of Letters Patent.

Patented Jan. 28, 1913.

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To all whom it may concern:

Be it known that I, HENRY NEUMANN, a subject of Emperor William of the German Empire, and a resident of Anderson, county of Madison, and State of Indiana, have invented a certain new and useful Washing-Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings.

The object of this invention is to provide a washing machine of improved construction.

The features of the invention lie in the means for rubbing the clothes and in the means for imparting an oscillatory motion thereto.

The nature of the invention will be understood from the accompanying drawings and the following description and claim.

In the drawings, Figure 1 is a central longitudinal section through the device. Fig. 2 is a section on the line 2—2 of Fig. 1. Figs. 3 and 4 are plan views of the driving means showing the levers in their extreme positions. Fig. 5 is a plan view of one of the ratchet drives with the cover and shaft removed. Fig. 6 is a perspective view of the rubber. Fig. 7 is a detail of a portion of the clothes rubber driving shaft.

In detail, there is shown in the drawings a washing machine having a tub or washing chamber 10, with a cover 11, supported above a chamber containing the driving mechanism. An operating lever 12, fulcrumed at 13 upon a projection 14 from the machine frame has a link 15 pivotally secured to its lower end, and the other end of said link is bifurcated and within this bifurcated end, connecting rods 16 are pivoted at right angles to the pivotal connection with the operating lever 12. The other end of said connecting rods 16 are pivotally secured to ratchets 17 which surround the vertical driving shaft 18 carrying a fly-wheel 19 near its lower end and a gear 20 near its upper end. Said shaft has bearings in cross bars 21 and 22 secured to the frame of the machine. The gear 20 upon the shaft 18 meshes with a gear 122 upon the lower end of a short shaft 23 having bearing in a bracket 24 secured to the underside of the tub portion 10, and upon the upper end of said shaft there is a crank 25 with the outer end thereof pivotally connected to one end of a link 26, whose other end is pivotally con-

nected to a lever 27 secured to the rubber operating shaft 28 extending upward into the washing chamber 10 and upon which a clothes rubber 29 is removably secured. The gear 20 is materially larger than the gear 122 and the crank 25, link 26 and lever 27 are so designed that an oscillatory movement is imparted to the shaft 28 and rubber 29.

The ratchets 17 are of the well known construction, in which there is an outer member 30 and an inner member 31 which is secured to the shaft 18 and with tapering grooves 32 cut into the outer member, and into said grooves rollers 33 are dropped, which are of such diameter that when the outer member 30 is moved in the direction of the arrow, as shown in Fig. 5, the rollers will move in an opposite direction until they are pinched between the inner and outer members, thus binding them together, after which any further movement of the outer member will cause the inner member 31 and the shaft 18 to move with it. When the outer member is moved in an opposite direction, the rollers 33 will move to the largest part of the grooves 32, where they will barely touch the inner member 31 and will cause no gripping between the inner and outer members. As shown in Fig. 1, there are two of these ratchets 17, and preferably one operates in the opposite direction from the other, so that when the lever 12 is pushed to the left, as shown in Fig. 1, one of the ratchets will drive the shaft 18, while upon the reverse movement of the levers 12 the other ratchet will drive the shaft, the first one remaining idle.

The rubber 29 before mentioned is substantially elliptical in cross section and tapers inward slightly from the bottom to the top. Said rubber is preferably made of a sheet of metal secured to the top and bottom boards 34 and 35, respectively, and upon the sides ribs 36 are secured, which are substantially triangular in cross section. Upon the bottom board 35 there are similar ribs 37 running radially of the rubber. The tube 38 is secured to the bottom of the tub 10 and extends through a central opening in the bottom 35 of the rubber, and its upper end bears against a collar 39 secured to the top plate 34 and supports the rubber. The shaft 28 driven as before described, extends through said tube 38, and upon its upper end there is a squared portion 40, see Figs. 6 and

7, which extends through a squared opening in the central portion of the collar 39. Thus it will be understood that while the rubber will be driven by the shaft 28 and caused to oscillate, it may be readily removed by simply lifting it off of the tube 38. The advantageous features of this shape of rubber are readily apparent and it will be seen that as it oscillates there will be an alternating pull and push given to the clothes, similar in a way to the hand rubbing upon the old style wash board, and since the sides of the ribs 36 and 37 are tapered, there is no chance for them to grip and tear the articles being washed.

I claim as my invention:

In a washing machine, the combination with a tub, a vertical driven shaft extending within said tub, and means for oscillating said shaft, of a rubber removably mounted

on said shaft and adapted to be operated thereby, said rubber constituting two substantially elliptical members spaced apart the lower being larger than the upper one, means joining said elliptical members, ribs on said joining means and radial ribs on the under side of said lower member whereby when articles to be washed are placed in said tub they will be acted upon by the inclined outer surface of the rubber and the curved sides of the tub and by the under side of the rubber and the bottom of the tub.

In witness whereof, I have hereunto affixed my signature in the presence of the witnesses herein named.

HENRY NEUMANN.

Witnesses:

G. H. BOINK,
E. H. MAYO.