

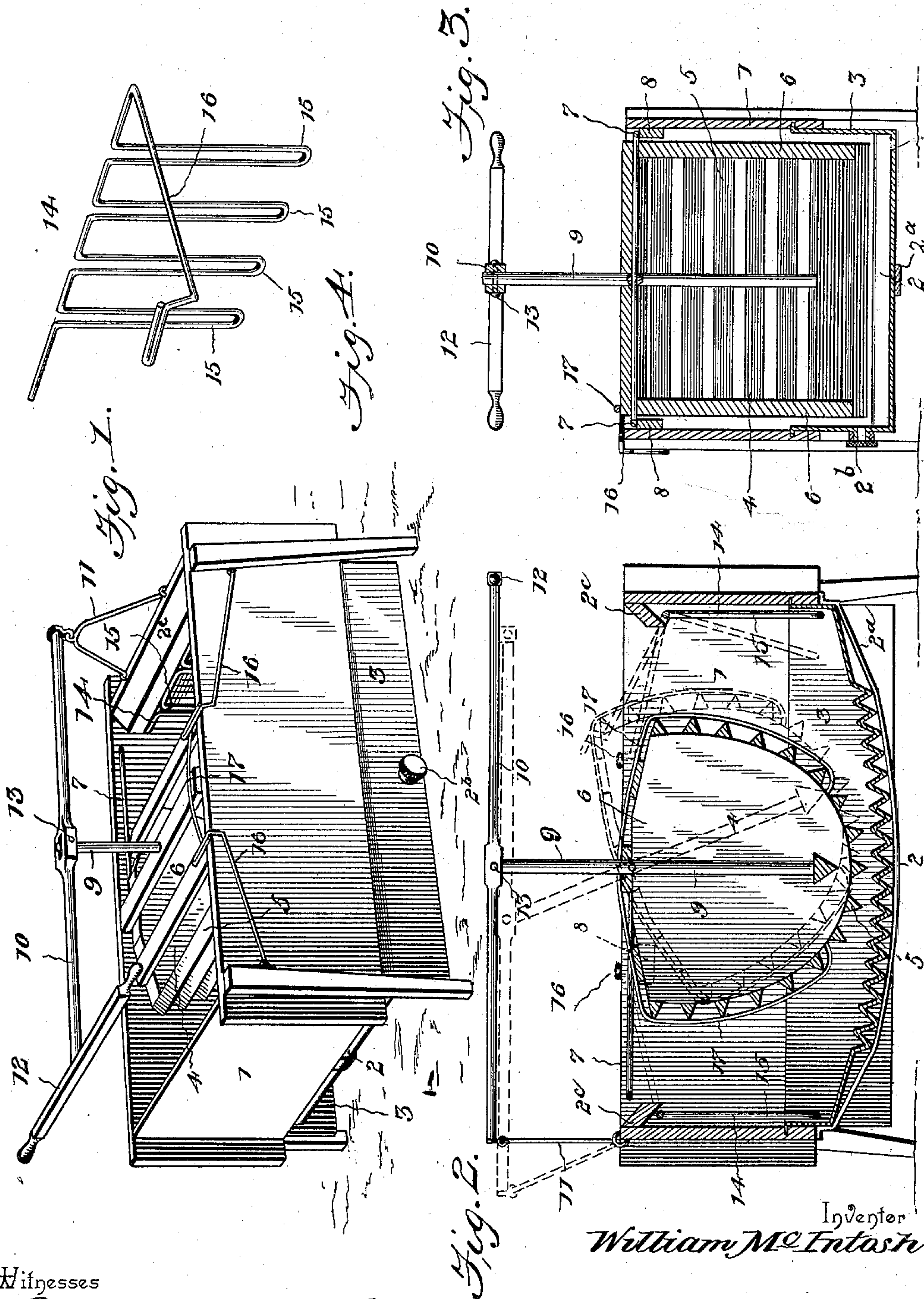
No. 634,991.

Patented Oct. 17, 1899.

W. McINTOSH.  
WASHING MACHINE.

(Application filed Feb. 7, 1899.)

(No Model.)



Inventor  
William McIntosh

Witnesses

E. S. Morrow  
J. F. Riley

By Two Attorneys,

C. A. Snow & Co.



# UNITED STATES PATENT OFFICE.

WILLIAM MCINTOSH, OF MUSKEGON, MICHIGAN.

## WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 634,991, dated October 17, 1899.

Application filed February 7, 1899. Serial No. 704,846. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM MCINTOSH, a subject of the Queen of Great Britain, residing at Muskegon, in the county of Muskegon and State of Michigan, have invented a new and useful Washing-Machine, of which the following is a specification.

The invention relates to improvements in washing-machines.

The object of the present invention is to improve the construction of washing-machines and to provide a simple and inexpensive one having an oscillating rubber and to enable the clothes operated on to be automatically distributed over the rubbing-surface of the washing-machine body at each oscillation of the rubber, whereby the clothes will be prevented from bunching at the ends of the washing-machine body and escaping washing.

The invention consists in the construction and novel combination and arrangement of parts, as hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a washing-machine constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a transverse sectional view. Fig. 4 is a detail perspective view of one of the clothes-distributing devices.

Like numerals of reference designate corresponding parts in the several figures of the drawings.

1 designates a substantially rectangular washing-machine body supported by legs and provided with a sheet-metal bottom corrugated transversely to form a rubbing-surface 2 and supported by a longitudinal bar 2<sup>a</sup>. The washing-machine body is preferably composed of sides and ends of wood, as shown, the sides being provided with extensions 3, of sheet metal, and the bottom being slightly extended upward at its ends. The metal lower portion of the washing-machine body increases the lightness of the machine, and the corrugations of the bottom are designed to be very pronounced and similar to those of an ordinary washboard in order that the clothes passing over them may be thoroughly rubbed. A discharge tube or spout is ar-

ranged at one side of the body and is provided with a screw-cap 2<sup>b</sup>, which can be readily removed when it is desired to empty the washing-machine body. An inclined board 2<sup>c</sup> is arranged at each end of the washing-machine body and disposed transversely thereof to form a shield to prevent water from splashing out of the machine.

An oscillating rubber 4 coöperates with the rubbing-surface of the washing-machine body and is provided with a curved lower rubbing-surface formed by transverse slats 5, which are triangular in cross-section and which are secured to end pieces 6 of the oscillating rubber. The oscillating rubber, which is connected with the sides of the washing-machine body by a bail or frame 7, is adapted to be swung out of the said body to afford access to the same for putting in and taking out clothes. The bail or frame 7, which is substantially rectangular, is composed of a transverse portion and parallel sides arranged on the inner faces of the sides of the washing-machine body. The transverse portion extends through the oscillating rubber, and the terminals of the parallel sides are bent outward at right angles and extend in opposite directions, forming journals and fitting in suitable bearing-perforations of the sides of the body. The sides of the frame or bail are supported by blocks 8 when the rubber is arranged within the body. The blocks 8, which are secured to the inner faces of the sides of the body, limit the downward movement of the oscillating rubber, but the latter is adapted to move upward to accommodate itself to the quantity of clothes being washed and to any variations in thickness of the same, thereby preventing excessive rubbing or wear.

The oscillating rubber is provided with a rigid centrally-arranged upwardly-extending arm 9, which is connected with an operating bar or lever 10, and the latter is fulcrumed at one end on a substantially V-shaped support 11 and is connected between its ends with the arm 9, its other end being provided with a handle 12. The operating bar or lever, which is disposed longitudinally of the washing-machine, is provided between its ends with an opening or slot to receive the arm 9, which is secured to the bar or lever 10 by a pivot-pin 13. The support 11 is sub-



stantially V-shaped and is journaled on the rear end of the washing-machine body, the terminals of its sides being bent at an angle to form journals or pintles and being arranged in suitable bearings of the body.

In order to prevent clothes from collecting or bunching at the ends of the washing-machine body and thereby escaping washing, each end of the body is provided with a clothes-distributing device 14, consisting of a rock-shaft journaled in suitable bearings of the washing-machine body and provided with depending fingers 15 for engaging the clothes and having a substantially L-shaped arm 16, arranged on the exterior of the washing-machine body and extending over the top thereof in position to be engaged by the oscillating rubber, whereby the fingers are actuated to throw the clothes from the ends of the washing-machine body toward the center thereof. The fingers preferably consist of loops, as shown, and the arms 16 are provided with handle-loops, so that the rock-shafts may be operated by hand.

The oscillating rubber is provided at one side with a rod 17, extending over its top and sides and located adjacent to the arms 16 and adapted to engage the same alternately. The upper face of the oscillating rubber is substantially flat, being slightly cut away at each side of the center, and at the end of each oscillation the rubber is adapted to engage the arm 16, toward which it moves, and actuate the fingers, so that the clothes at that end of the washing-machine body will be thrown beneath the rubber and toward the center. The rod 17 forms a track or way, so that the arm 16 will slide freely over the rubber and not catch on the slats.

If desired, the washing-machine body may be provided with a suitable cover, and when the latter is employed it will of course be provided with a longitudinal slot to permit the oscillation of the arm 9 of the rubber 4.

It will be seen that the washing-machine is exceedingly simple and inexpensive in construction and that as the clothes are prevented from collecting or bunching at the ends of the body and are thrown toward the center at each oscillation of the rubber they will be uniformly and thoroughly rubbed and will not require the use of a hand-washboard after being operated on by the machine. It will also be seen that the clothes-distributing devices are purely automatic in their operation, but may be actuated by hand. Furthermore, it will be apparent that the operating bar or lever will

enable the clothes to be rubbed with any desired pressure and will cause the rubbing action to be the same as that on an ordinary hand-washboard.

What I claim is—

1. In a washing-machine, the combination of a washing-machine body, an oscillating rubber, and a clothes-distributing device comprising a rock-shaft having clothes-engaging portions arranged within the washing-machine body, and an arm arranged to be supported by one of the sides of the washing-machine body and extending into the path of the oscillating rubber, whereby it is operated by the same, substantially as described.

2. In a washing-machine, the combination of a washing-machine body, an oscillating rubber, and a clothes-distributing device comprising a rock-shaft having clothes-engaging portions located within the washing-machine body, and an exterior arm located at one end of the rock-shaft and extending across the upper edge of one of the sides of the washing-machine body and adapted to be supported by the same, said arm being also extended into the path of the oscillating rubber, whereby it is operated by the same, substantially as described.

3. In a washing-machine, the combination with a washing-machine body, and an oscillating rubber, of a pair of clothes-distributing devices each comprising a rock-shaft provided with fingers, and a substantially L-shaped arm extending over the oscillating rubber and arranged to be engaged by the same, and a rod mounted on the oscillating rubber and arranged to contact with the arms, substantially as described.

4. In a washing-machine, the combination with a washing-machine body and an oscillating rubber, of a clothes-distributing device mounted in the washing-machine body at one side of the oscillating rubber and comprising a rock-shaft having clothes-engaging portions, and an arm connected with the rock-shaft and arranged on the exterior of the washing-machine body, whereby it is adapted to be operated by hand, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM MCINTOSH.

Witnesses:

A. W. BELL,  
W. L. G. MCINTOSH.