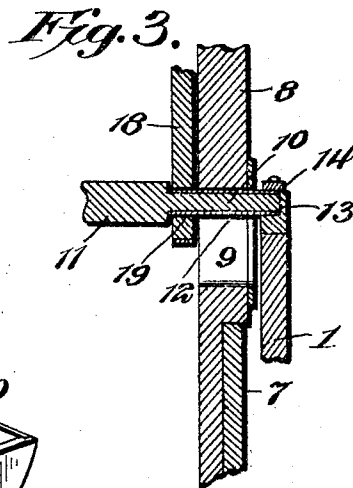
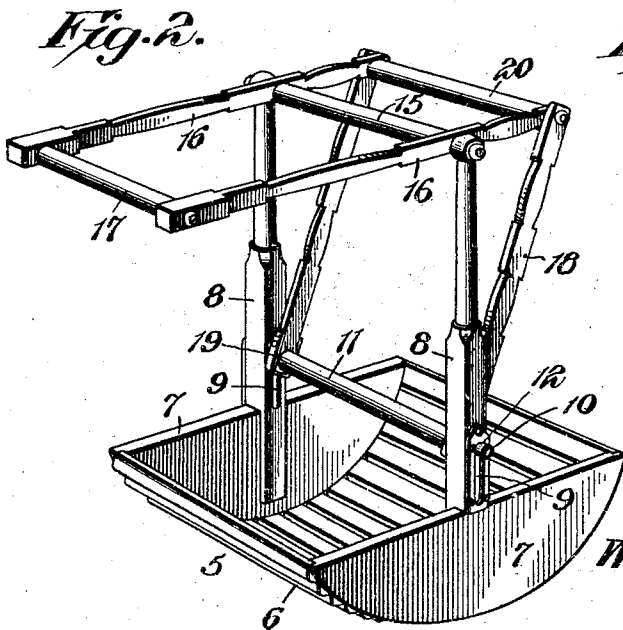
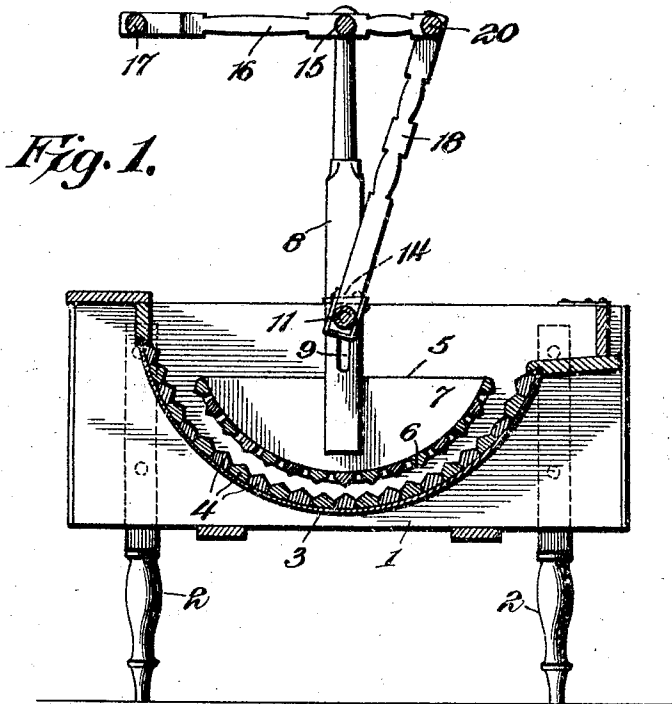


No. 770,989.

PATENTED SEPT. 27, 1904.

W. W. TERRIFF.
WASHING MACHINE.
APPLICATION FILED APR. 4, 1904.

NO MODEL.



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UNITED STATES PATENT OFFICE.

WILLIAM WALLACE TERRIFF, OF PORTLAND, MICHIGAN.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 770,989, dated September 27, 1904.

Application filed April 4, 1904. Serial No. 201,550. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM WALLACE TERRIFF, a citizen of the United States, residing at Portland, in the county of Ionia 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 comparatively inexpensive one of great strength and durability, adapted to be easily operated, and capable of effectively washing clothes and other fabrics without injuring the same.

A further object of the invention is to provide a washing-machine which will permit the rubber and the operating mechanism to be readily detached from the tub or body to reduce the weight of the latter for enabling the same to be readily moved.

Another object of the invention is to enable the pressure exerted by the rubber on the clothes to be readily controlled by the operator, whereby all kinds of fabrics may be washed with a pressure suitable to the same.

With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended, it being understood that various changes in the form, proportion, size, and minor details of construction within the scope of the claims may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a longitudinal sectional view of a washing-machine constructed in accordance with this invention. Fig. 2 is a detail perspective view of the oscillatory rubber and the operating mechanism therefor. Fig. 3 is a detail sectional view illustrating the manner of mounting the rubber in the tub or body.

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

1 designates a tub or washing-machine body provided with legs 2, having a curved bottom 3, which is provided with a rubbing-surface, preferably formed by transverse slats or bars 4, having projecting approximately triangular clothes-engaging portions. The curved rubbing-surface of the bottom of the body coöperates with an oscillatory rubber 5, having a lower convexly-curved rubbing-surface 6, which coöperates with the concave rubbing-surface of the body.

The oscillatory rubber is composed of sides 7 and connecting slats or bars, which form the rubbing-surface 6 and which are spaced apart to permit water to pass through the same. The sides 7 have lower curved edges, which are recessed to receive the bars which form the rubbing-surface 6. The oscillatory rubber is provided with arms 8, consisting of bars secured at their lower ends to the sides at the centers thereof and provided with longitudinal slots 9, extending upward from the sides of the rubber and receiving the journals or pivot portions 10 of a transverse shaft 11, on which the rubber oscillates. The transverse shaft is reduced at its ends to form the pivots or journals 10, and when the shaft is constructed of wood, as illustrated in the accompanying drawings, its pivots are provided with metallic sleeves 12, which are constructed of steel or other suitable metal. The pivots or journals are arranged in open bearings 13 and are retained therein by pivoted buttons 14. The sides of the washing-machine body or tub are provided with metallic bearing-boxes, as indicated in Fig. 3 of the accompanying drawings.

The upper ends of the arms are connected by a transverse rod or rung 15, which pierces the sides 16 of an operating-lever, which is composed of the said sides and a transverse handle-bar 17. The handle-bar, which connects the sides 16 of the operating-lever, is arranged at one end of the same. The transverse bar or rung 15 is arranged at a point between the ends of the sides of the operating-lever which extend rearward beyond the arms and which is fulcrumed on a support 18. The support 18 is composed of sides or bars provided at their lower ends with openings

19 for the reception of the pivots or journals of the transverse shaft and connected at their upper ends by a transverse bar or rung 20. The rear ends of the sides of the operating-lever are pierced by the ends of the bar or rung 20 and are supported by the same.

By mounting the support or fulcrum of the operating-lever on the transverse shaft which carries the oscillatory rubber the latter and its operating mechanism are supported by a single shaft and are adapted to be readily mounted on and removed from the washing-machine tub or body. The operating-lever is arranged in convenient position to enable the rubber to be easily operated, and it also enables the oscillatory rubber to be readily raised and lowered, whereby the pressure exerted by the rubber on the fabrics being washed may be readily regulated to suit the character of such fabrics and to prevent the same from being torn or otherwise injured by the washing-machine. The slots 9 of the arms of the oscillatory rubber permit the latter to move upward and downward, and the weight of the rubber and the operating-lever holds the former in engagement with the clothes and obviates the necessity of employing springs for forcing the rubber into engagement with the clothes. By this construction a rubber of sufficient weight for the purpose may be conveniently used and readily handled, owing to the lever which enables the rubber to be readily lifted. The oscillatory support on which the operating-lever is fulcrumed is adapted to swing toward and from the arms of the rubber when the operating-lever is raised and lowered, and it is capable of also oscillating simultaneously with the arms of the rubber when the latter is oscillated by the lever. Furthermore, by enabling the rubber and the operating mechanism to be detached from the tub or body by simply removing the journals from the open bearings the said tub or body may be readily moved from one place to another with little exertion. By this means the washing-machine may be readily handled.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a washing-machine, the combination with a body, of an oscillatory rubber, pivots or journals mounted on the body and pivoting the rubber, an oscillatory support also mounted on the said pivots or journals, and an operating-lever fulcrumed on the support and connected with the rubber, substantially as described. 55

2. In a washing-machine, the combination with a body, of an oscillatory rubber having slotted arms, a shaft journaled on the body and extending through the slots of the arms and pivoting the rubber to the body, an oscillatory support mounted on and carried by the said shaft and extending upward therefrom and arranged at an angle to the arms of the rubber, and an operating-lever fulcrumed at the top of the support and connected between its ends with the arms of the rubber, substantially as described. 60 65 70

3. In a washing-machine, the combination with a body, of a shaft journaled on the body, an oscillatory rubber having slotted arms receiving the shaft whereby the rubber is pivoted to the body, a support composed of bars mounted at their lower ends upon the said shaft and extending upward therefrom at an angle to the said arms and an operating-lever provided with side bars fulcrumed at their rear ends on the support and connected between their ends with the arms, substantially as described. 75 80

4. In a washing-machine, the combination with a body, of an oscillatory rubber having upstanding rigid arms, pivots or journals mounted on the body and fitting in slots of the said arms and pivoting the rubber to the body, an oscillatory support mounted on the said pivots or journals and extended upwardly therefrom and at an angle to the said arms, and an operating-lever connected at an intermediate point to the upper ends of said arms and at one end to the upper end of the oscillatory support, substantially as described. 85 90

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses. 95

WILLIAM WALLACE TERRIFF.

Witnesses:

JUSTIN L. SUTHERLAND,
S. A. HORNING.