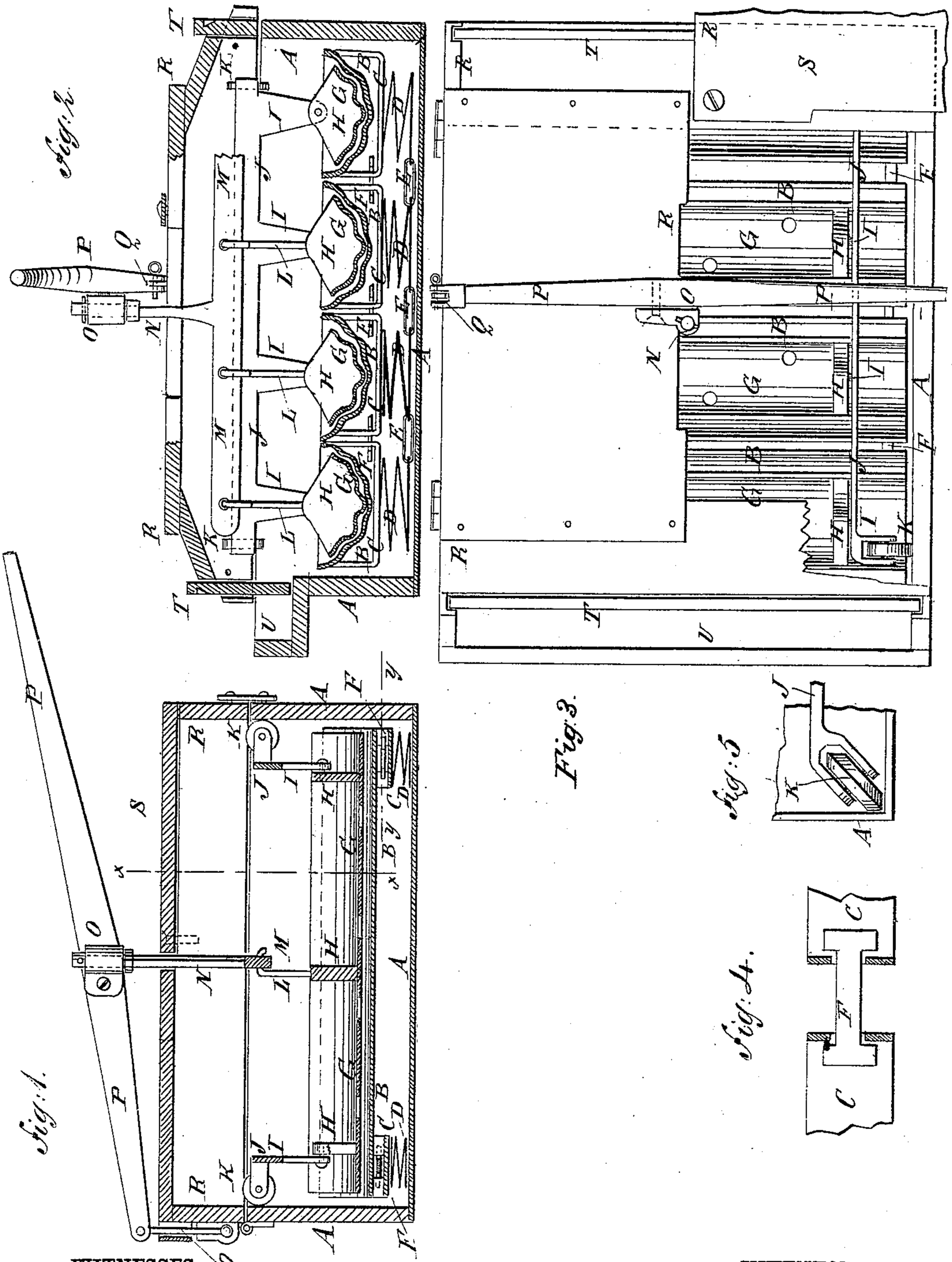
(No Model.)

J. F. ADAMS.

WASHING MACHINE.

No. 270,357. Patented Jan. 9, 1883.



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JOHN F. ADAMS, OF ELIZA, ILLINOIS.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 270,357, dated January 9, 1883.

Application filed March 21, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN FRANKLIN ADAMS, of Eliza, in the county of Mercer and State of Illinois, have invented a new and useful Improvement in Clothes-Washing Machines, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional side elevation of my improvement. Fig. 2 is a sectional front elevation of the upper part of the same taken through the line *x x*, Fig. 1. Fig. 3 is a plan view of the same, part of the top being swung back. Fig. 4 is a sectional plan view of a part of the same, taken through the line *y y*, Fig. 1. Fig. 5 is a plan view of a part of the machine, showing a modification.

The invention consists in the particular means by which the washing of fabrics may be facilitated, as hereinafter described.

A is the tub, which is made with a bottom, or a bottom and sides, of galvanized sheet-iron or other metal that will not corrode.

B are the lower rubbers, the upper sides of which are concaved, and are corrugated longitudinally. The rubbers B are made of such a length as to fit into the tub A lengthwise, and may be of any convenient width, a sufficient number being used to fill the tub A crosswise.

To the ends of the rubbers B are attached flat feet C, which rest upon and are attached to the upper ends of spiral springs D. The lower end, of the spiral springs D rest upon the bottom of the tub A, and are connected by links E or other suitable means to keep them from getting out of place. The adjacent arms of the feet C are slotted vertically to receive links or the toggles F, which are made with a T-head at each end, as shown in Fig. 4, to keep them from getting out of place. The toggles F connect the rubbers B and prevent them from getting out of place laterally, while allowing them to move up and down freely and independently of each other.

G are the upper rubbers, the upper sides of which are concaved, and their lower sides are convexed, and are corrugated or ribbed longitudinally. The upper rubbers, G, are made with a shorter radius than the lower rubbers, B, and so that the upper rubbers will fit into the lower rubbers, thereby distributing the pressure evenly over the clothes. The upper rubbers have holes through them for the passage of water.

To the central and end parts of the concaved upper side of the upper rubbers, G, are attached cross-bars or partitions H. To the end partitions H are pivoted the lower ends of arms I, the upper ends of which are formed upon or are rigidly attached to cross-bars J. The ends of the cross-bars J are bent outward at right angles, and to them are pivoted small wheels K to rest against the front and rear sides of the tub, and thus prevent the rubbers G from having a longitudinal movement, while allowing them to move up and down freely. The wheels K may be beveled upon both sides, and the ends of the bars J bent at such an angle that the said wheels K will fit into the angles between the sides and ends of the tub A, so as to prevent the rubbers G from having any longitudinal or lateral movement.

To the central partitions H are rigidly attached the lower ends of the arms L, the upper ends of which are pivoted to a cross-bar, M.

To the center of the cross-bar M is rigidly attached, or upon it is formed, an inwardly-projecting arm, N, having its upper part rounded to pass through the socket O, hinged to the side of a lever, P, by a screw or other suitable means. The arm N is held from longitudinal movement in the socket O by a collar or shoulder at the lower side of the said socket, and a pin or nut at the upper side, or by other suitable means. The end of the lever P is hinged to the upper end of the rod Q, placed at the rear side of the cover R. The rod Q has a ball formed upon or attached to its lower end, and works in bearings attached to the rear side of the cover R, so that the said rod can have a free rotary but no longitudinal movement. The cover R is hinged at the lower edge of its rear side to the upper edge of the rear side of the tub A, and has a slot in the middle part of its top for the passage of the arm N, as shown in Figs. 1, 2, and 3. The forward part, S, of the top of the cover R is movable, and is piv-

oted at one of its inner corners to a cross-bar of the said cover R, so that it can be swung back, as indicated in Fig. 3, to give access to the interior of the washer, without its being necessary to turn back the cover R. When the cover R is to be turned back the lever P is raised, which raises the upper rubbers, G, against the lower side of the cover R. The cover R is then unfastened, and the said cover and the upper rubbers can be turned back, so that the clothes can be conveniently put in and taken out. The ends T of the cover R are removable, and have their ends placed in grooves in the inner surfaces of the ends of the side bars of the said cover R, so that the said ends T can be adjusted for convenience when washing carpets and other long fabrics.

At the upper part of one side of the tub A is formed an offset, U, to receive a wringer, the lower edge of the movable end T resting upon the bottom of the offset U, as shown in Fig. 2.

In using the machine the clothes to be washed are placed in the lower rubbers, B, and the upper rubbers, G, are lowered upon them by closing the cover R. Then by working the lever P horizontally the clothes will be rubbed by and between the rubbers G B, and by working the said lever P vertically the clothes can be pounded, will have the water squeezed out of them, and will be showered with water through the holes in the upper rubbers, G, so that the washing can be done quickly and thoroughly.

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 the tub A, springs D, and feet C, of a series of concaved and corrugated lower rubbers, B, a series of corresponding convexed and corrugated upper rubbers, G, and a connecting and operating mechanism, substantially as herein shown and described.

2. In a washing-machine, the combination, with lower rubbers, B, of feet C and springs D, substantially as herein shown and described, whereby the said rubbers will oppose a yielding resistance to pressure applied to the clothes, as set forth.

3. In a washing-machine, the combination, with the feet C of the adjacent lower rubbers, B, of the toggle-bar F, having a T-head at each end, substantially as herein shown and described, whereby the said rubbers are kept in proper relative positions, while being allowed to move up and down independently, as set forth.

4. In a washing-machine, the combination, with the upper rubbers, G, and the tub A, of the bars J, having arms I and friction-wheels K, substantially as herein shown and described, whereby the said rubbers are held from longitudinal movement, while being allowed to move up and down and to rock freely, as set forth.

5. In a washing-machine, the combination, with the upper rubbers, G, having rigid arms L, of the bar M, having rigid arm N, the hinged socket O, the lever P, and the hinging swiveled rod Q, substantially as herein shown and described, whereby the said upper rubbers can be readily operated, as set forth.

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Witnesses:
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