

F. M. WIDERMAN.
Washing-Machines.

No. 143,209.

Fig. 1.

Patented September 23, 1873.

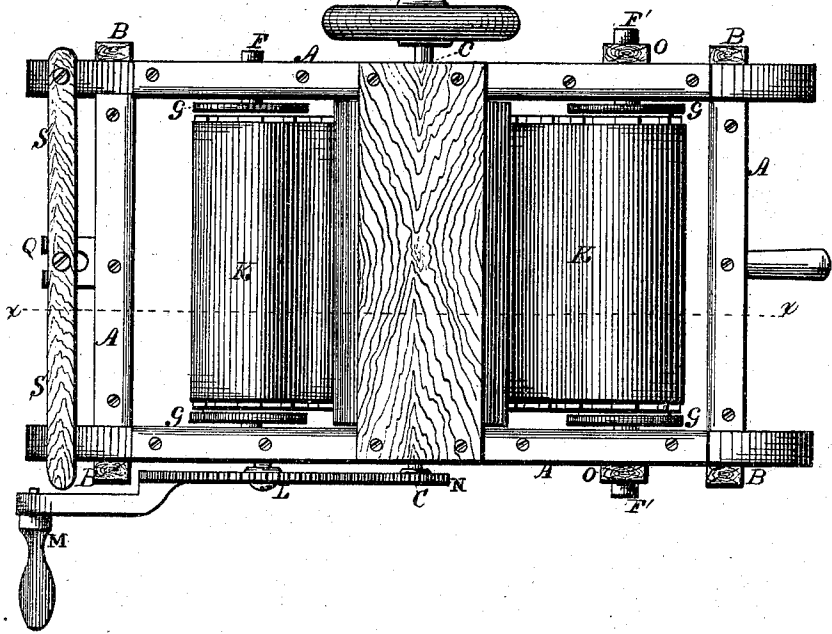
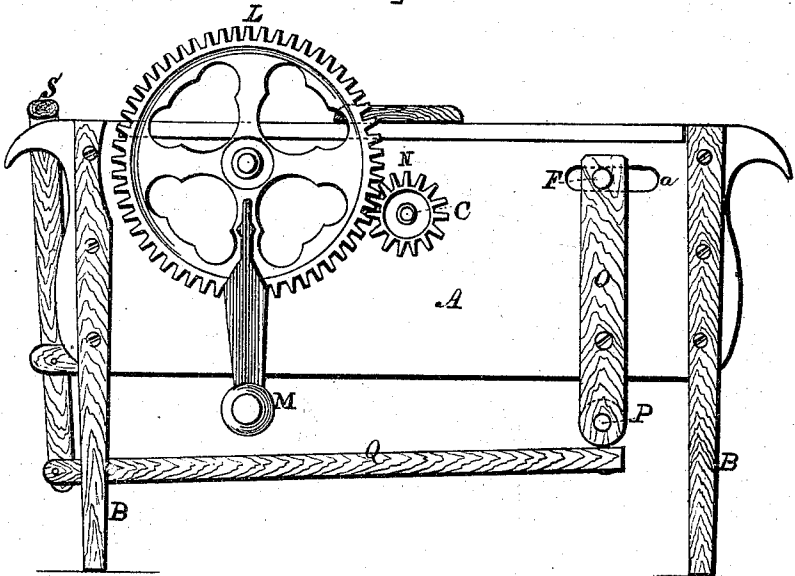


Fig. 2.



WITNESSES:

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Francis M. Wideman, by
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Fig. 3.

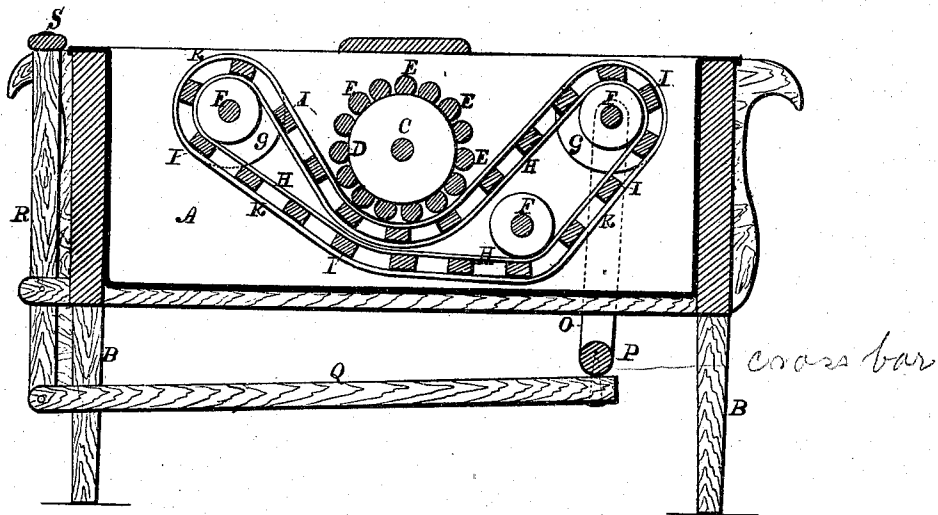
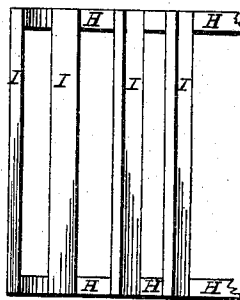


Fig. 4.



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UNITED STATES PATENT OFFICE.

FRANCIS M. WIDERMANN, OF CALVERTON, MARYLAND.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. 143,209, dated September 23, 1873; application filed May 3, 1873.

To all whom it may concern:

Be it known that I, FRANCIS M. WIDERMANN, of Calverton, in the county of Baltimore and in the State of Maryland, have invented certain new and useful Improvements in Washing-Machines; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a plan view of the upper side of my improved apparatus. Fig. 2 is a side elevation of the same, and Fig. 3 is a longitudinal section upon line *xx* of Fig. 1.

Letters of like name and kind refer to like parts in each of the figures.

The design of my invention is to enable soiled clothing to be cleansed by mechanical means with greater ease and thoroughness than has heretofore been practicable; and it consists principally in the means employed for feeding the clothing beneath the beater-cylinder, substantially as and for the purpose hereinafter specified. It consists, further, in the construction of the slotted endless supporting-belt, and its combination with the feed-belt, substantially as and for the purpose hereinafter shown. It consists, finally, in the machine as a whole, when its several parts are constructed and combined to operate substantially as and for the purpose hereinafter set forth.

In the annexed drawing, A represents a box or reservoir, having, preferably, a rectangular form uninclosed at its upper side, and supported upon or by means of four legs, B. Journaled within suitable bearings at the longitudinal center of the reservoir, and midway between its upper edge and bottom, is a shaft, C, upon which (within said reservoir) are secured two disks, D, that serve as supports for a series of semicircular slats, E, which are secured upon the peripheries of and extend between the same, the rounded portions of said slats being outward. Two other shafts, F, are journaled near the ends and upper edge of the reservoir, and are each provided with two flanged pulleys, G, which are secured upon the shaft immediately within the sides of said reservoir. Passing around the corresponding pulleys G, and beneath the ribbed cylinder, is an

endless rubber belt, H, upon which is secured one end each of a series of slats, I, which slats extend across, and are in a like manner secured to, the opposite belt H. A second belt or endless apron, K, made of or from cloth, is placed over or around the slatted apron and its pulleys, and serves as a support for the soiled clothing to be cleansed by the ribbed cylinder. A gear-wheel, L, suitably pivoted upon the outer side of the reservoir, provided with a crank, M, and engaging with a pinion, N, upon the projecting end of the shaft C, enables the ribbed cylinder or beater to be operated. As thus arranged the reservoir is partially filled with hot soap-suds, the clothing to be cleansed is placed upon the apron K in front of the beater-cylinder, and by means of the motion of the latter is caused to pass beneath the same, and by the action of the ribs E is freed from dirt. In order that the motion of the feed belt or apron K may be suspended whenever it may be necessary to subject any portion of the soiled clothing to an unusual amount of beating, the rear shaft F' extends through horizontal slots *a* in the sides of the reservoir, and is journaled within the upper ends of two bars, O, which extend below the bottom of said reservoir and are pivoted slightly above the same. The lower ends of the bars O are connected together by means of a cross-bar, P, from the center of which a second bar, Q, extends forward beneath the reservoir, and is connected to or with the lower end of a lever, R, that is so pivoted to or upon the end and lower side of said reservoir as to be capable of a movement in a line fore and aft of the same. The upper end of the lever R is pivoted to the center of a second lever, S, which extends across the upper end of the reservoir, and at one end is pivoted to the same.

By this arrangement of parts, the rear shaft can be adjusted toward or from the beater-cylinder, so as to loosen or tighten the feed-apron and correspondingly retard or accelerate the motion of the soiled clothing beneath said beater.

In order that the inner sides of the slatted apron may be prevented from rubbing together below the beater-cylinder, one or more bearing-rollers, T, are pivoted in suitable position near the lower side of the reservoir, and

the lower half of said apron caused to pass beneath the same.

The device thus constructed is simple, efficient, and can be readily constructed by any person possessing a slight knowledge of the use of tools.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. The means employed for feeding the soiled clothing beneath the beater-cylinder, consisting in the slatted supporting-belt H and I, the feed belt or apron K, the shafts and pulleys F and G, the bars O, P, and Q, and the levers R and S, when combined to operate substantially as and for the purpose specified.

2. The slatted supporting-apron, composed of the rubber belts H and I, in the manner shown, and combined with the feed-apron K, substantially as and for the purpose described.

3. The machine as a whole, when its several parts are constructed and combined to operate substantially as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 30th day of April, 1873.

FRANCIS M. WIDERMANN.

Witnesses:

GEO. S. PRINDLE,

EDM. F. BROWN.