D. W. MILLER.

WASHING-MACHINE.

No. 187,036. Patented Feb. 6, 1877.

Fig. 1.

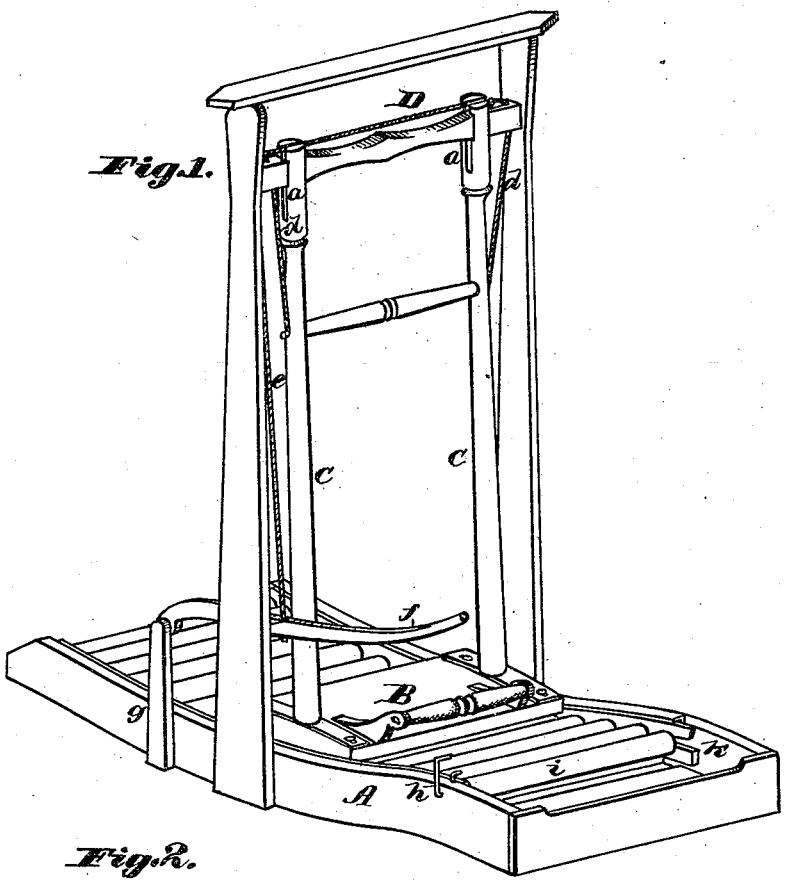
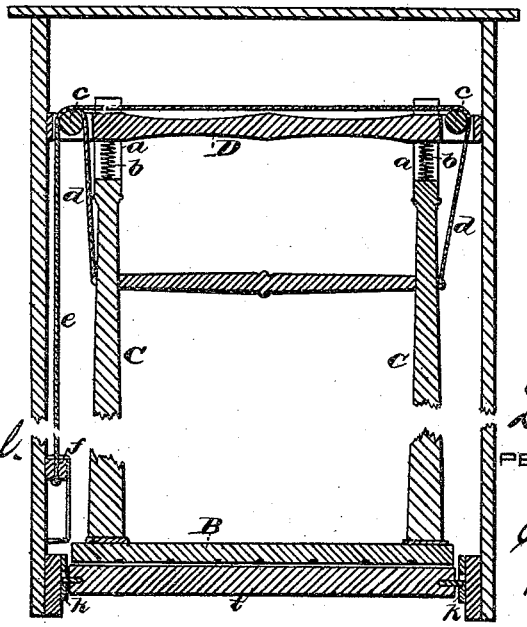


Fig. 2.



WITNESSES:

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DAVID W. MILLER, OF BINGHAMTON, NEW YORK.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **187,036**, dated February 6, 1877; application filed January 4, 1877.

To all whom it may concern:

Be it known that I, D. W. MILLER, of Binghamton, in the county of Broome and State of New York, have invented certain new and useful Improvements in Washing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a swinging or oscillating rubber for clothes-washing machines; and the invention consists in a rubber or device for rubbing the clothes over a rubbing-surface, suspended by arms from a frame, and combined with a lever, springs, cords, and pulleys, in such manner as that it may be temporarily held in any given position, in order to allow of the introduction beneath it of garments to be cleansed, substantially as hereinafter specified.

In the drawings, Figure 1 is a perspective view of a washing-machine embodying my invention, and Fig. 2 is a vertical section of the rubber.

The rubbing-surface A of the washing-machine may be of any character suited to my rubbing device. This rubbing device consists of a pad or rubber proper, B, which is suspended, by means of arms C C, from a shaft or cross-bar, D, arranged in a suitable frame rising from the frame or rubbing-surface A. The upper ends *a a* of these arms are slotted, and within these slots springs *b* are arranged, which springs are confined between the bottoms of said slots and the shaft or cross-bar D, so as to exert a downward pressure upon the arms. The spring may at the same time constitute connections between said arms and the cross-bar. *c c* are pulleys, arranged in slots in the shaft or cross-bar, over which pass cords *d d*. These cords, at one of their respective ends, are attached to the arms, and their other ends are joined to a cord, *e*, which latter is fastened to a hand-lever, *f*. The lever is fulcrumed to a post, *g*, rising from A, and is confined to the machine by any suitable means. (See, for illustration, Fig. 2.)

As above observed, the springs *b* tend to press the rubber B against its rubbing-surface A, and, consequently, said rubber B bears against the clothes being washed with its own weight, supplemented by the power of the springs, thereby lessening the labor of rubbing, and so facilitating the operation of cleansing the clothes; but in order to control the power of the springs, and to readily adjust the rubber as may be required, the cords, pulleys, and levers are used, for as the lever is drawn downwardly the rubber is raised, and it may be held in this raised position by providing a hook, *h*, to engage with the lever. The rubber may be thus held up when it is desired to put garments under the rubber; and it may be raised to various heights, as the requirements of the thickness of garments demand, such adjustments in no wise interfering with the oscillations or movement of the rubber.

I have preferred to show a form of rubbing-surface, A, which I now proceed to describe. Its frame should be rectangular, and of such curve as to correspond with the arc of the path traveled by the rubber B; and in this frame I arrange, on each side thereof, a slotted or grooved way, *k*, in which rollers *i* are supported by means of their gudgeons projecting thereinto. These rollers form the rubbing-surface of the machine; and they may be readily removed and replaced, by reason of their being supported in the grooved ways *k*.

What I claim is—

The combination, with the oscillating or swinging rubber B, having spring or yielding connections with its shaft, of the cords *d d*, pulleys *c*, lever *f*, and hook *h*, substantially as and for the purpose described.

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

DAVID W. MILLER.

Witnesses:
GEO. B. EDWARDS,
D. H. CARVER.