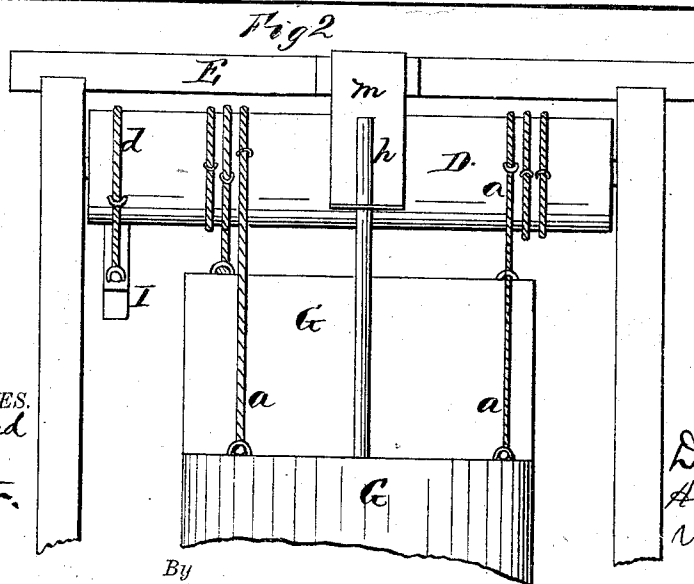
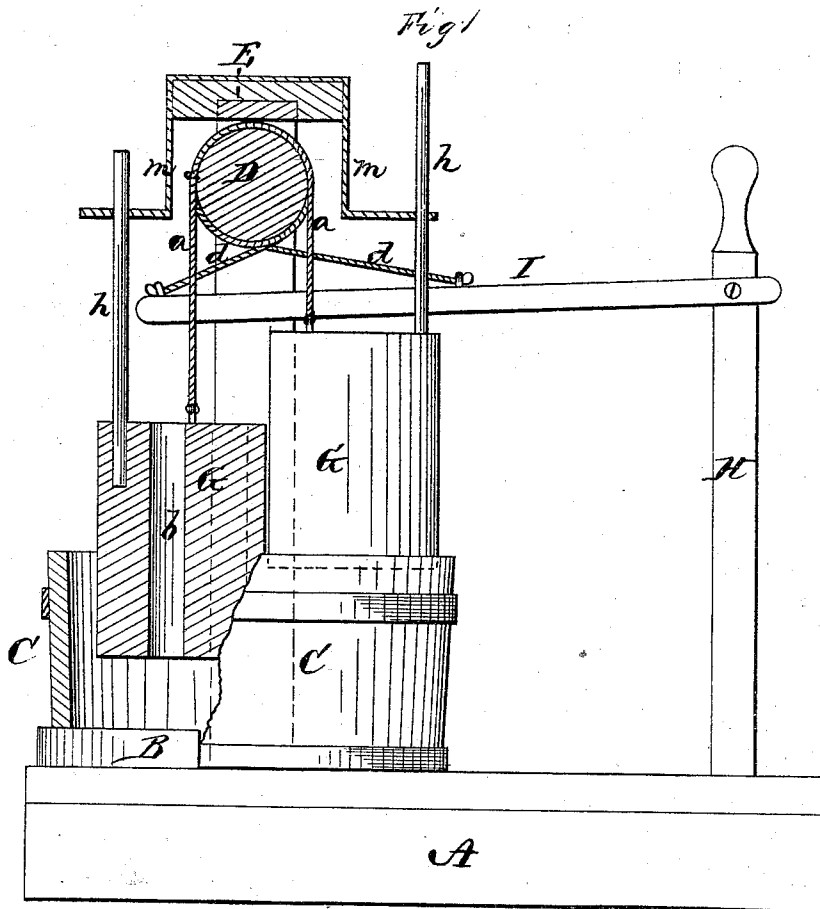


D. GRAHAM.
Washing-Machines.

No.147,632.

Patented Feb. 17, 1874.



WITNESSES.
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DAVID GRAHAM, OF ANAMOSA, IOWA.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **147,632**, dated February 17, 1874; application filed January 12, 1874.

To all whom it may concern:

Be it known that I, DAVID GRAHAM, of Anamosa, in the county of Jones and in the State of Iowa, 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 drawings and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a washing-machine, as will be hereinafter more fully set forth.

In the accompanying drawing, Figure 1 is a side elevation, part in section, of my machine; and Fig. 2 is a front view of the same.

A represents a bed-piece of any suitable dimensions, upon which, at one end, are fastened curved blocks B B, which form stops for the wash-tub C. To the bed A is secured an upright frame, E, the top-piece of which is directly above the center of the tub. In the top of the frame E is hung a roller, D, which is mounted upon suitable journals, and has two ropes, *a a*, wound around it, one near each end, the ends of said ropes hanging down from the top, one on each side of the roller. G G represent two beaters or blocks made semicircular in form and provided with a number of vertical passages, *b b*. These beaters are suspended, one upon each side of the center of the roller D, by being attached to the ends of the ropes *a*, and they are worked alternately up and down by the following means: To one side of the bed A is pivoted an upright lever, H, to which, near the upper end, is pivoted an arm, I, which passes under the roller

D, and is connected to it by means of a rope, *d*, wound around the roller and the ends fastened to the arm I, one on each side of the roller. By working the lever H back and forth the roller D is revolved alternately, first in one direction and then in the other, whereby the beaters or blocks G G are alternately raised and lowered, beating the clothes in the tub.

This machine is simple, cheap, and not liable to get out of repair. There is very little wear and tear of the clothes in washing them. The tub can easily be removed from under the beaters by first raising the back beater and drawing the tub forward from under the same, and then raising the front beater, when the tub can be taken out.

The movement of the beaters G G is guided by means of rods *h h*, one or more of which are attached to each beater, and pass vertically upward through a plate, *m*, attached to the top bar of the frame E.

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

The combination, in a washing-machine, of the vertically-perforated beaters G G, having guide-rods *h h*, windlass D, cords *a a*, arm I, and vertical lever H, pivoted at its lower end, all constructed substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 29th day of December, 1873.

DAVID GRAHAM.

Witnesses:

F. M. GILETT,
R. O. PETERS.