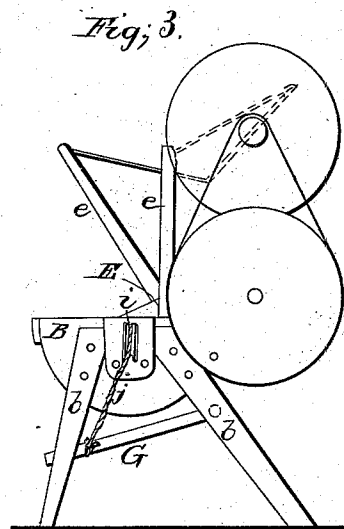
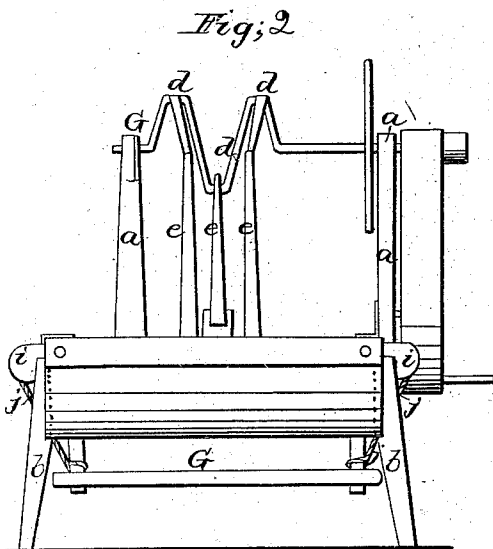
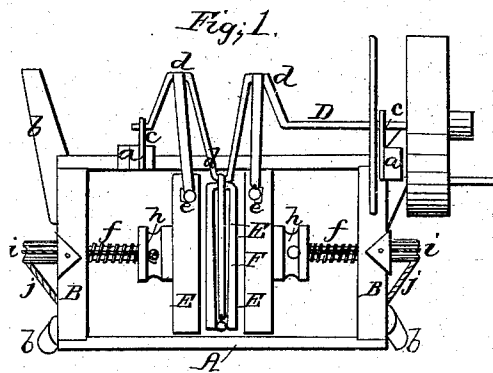


I. A. Livingston

Washing Machine.

N^o 66,363.

Patented July 2, 1867.



Witnesses;

*Sam Lloyd
Andrew Gordon*

Inventor;

*Ira A. Livingston
By Attorneys
J. B. Woodruff & Son*

United States Patent Office.

IRA A. LIVINGSTON, OF HORNELLSVILLE, NEW YORK.

Letters Patent No. 66,363, dated July 2, 1867.

IMPROVED WASHING MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, IRA A. LIVINGSTON, of the town of Hornellsville, Steuben county, in the State of New York, have invented certain new and useful improvements in Washing Machines; and the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a plan or top view of the machine with the washing apparatus.

Figure 2 shows a side elevation of the same.

Figure 3 is an end view, showing the driving mechanism.

The object of my invention is to effect, by the construction, arrangement, and operation of machinery, the precise results of hand-washing by rubbing the clothes between the knuckles or on the common fluted wash-board, but in a much easier and expeditious manner.

My invention consists in the arrangement and combination of a series of vibratory wash-boards to be operated by levers connected with a two, three, or four-throw crank, to which a steady and uniform motion may be given by gearing or a belt, and equalized by fly or balance-wheel.

My invention further consists in the arrangement and combination of the mechanism for parting the wash-boards to put in and take out the clothes, and control the pressure of the springs which act upon them, so that lace and the most delicate fabrics can be cleansed with as much safety as when washed by the hand, and all family washing done in the most perfect manner with the greatest facility, and for laundry establishments from eight to twelve hundred pieces per hour are cleansed perfectly.

To enable others to make and use my invention, I will describe it in detail, referring to the drawings and to the letters of reference thereon.

I make the tub or suds-box A in form a semicircle. I either line it or make the bottom of galvanized iron, zinc, or other non-corrosive metal, the ends B B being of wood, to which the legs *b b b b* are secured to support it at a suitable height. To the box-frame I place vertical posts, *a a*, on the top of which are the journal-boxes *c c* for the crank-shaft D to run in. The cranks *d d d* may be any number, according to the number of the vibrating rubbers E E E. For family use two and three of the rubbers are quite sufficient, they being operated by long levers *e e e*, so that the motion on the rubbers can be made as little or as great as may be desired, and the necessary strength applied, the vibrating rubbers E being hung centrally on a rod or shaft, F, extending longitudinally in the centre of the radius of the suds-box A, with spiral springs *f f* surrounding the rod F to press upon the hubs *h h* of the outside rubbers to hold them against the clothes; and for the purpose of opening the spaces between the rubbers I attach cords *j j* to the hubs *h h*, which extend out and over pulleys *i i*, and connect with a foot-piece, G, so that the operator can control the pressure on the clothes, so that light or a hard rubbing can be effected on all or any portion of a garment, precisely the same as if done on a wash-board, or by the knuckles of the hands.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The arrangement of a series of vibrating wash-boards E E, operated by levers *e e*, in combination with double or triple cranks and fly-wheel motion, substantially as and for the purposes herein set forth.

2. I claim the rubbers E E, as constructed, in combination with the rod F, springs *f f*, cords *j j*, pulleys *i i*, and foot-piece G, as and for the purposes described.

In testimony whereof I hereunto subscribe my name on this third day of April, 1867.

IRA A. LIVINGSTON.

Witnesses:

EDM. F. BROWN,
J. B. WOODRUFF.