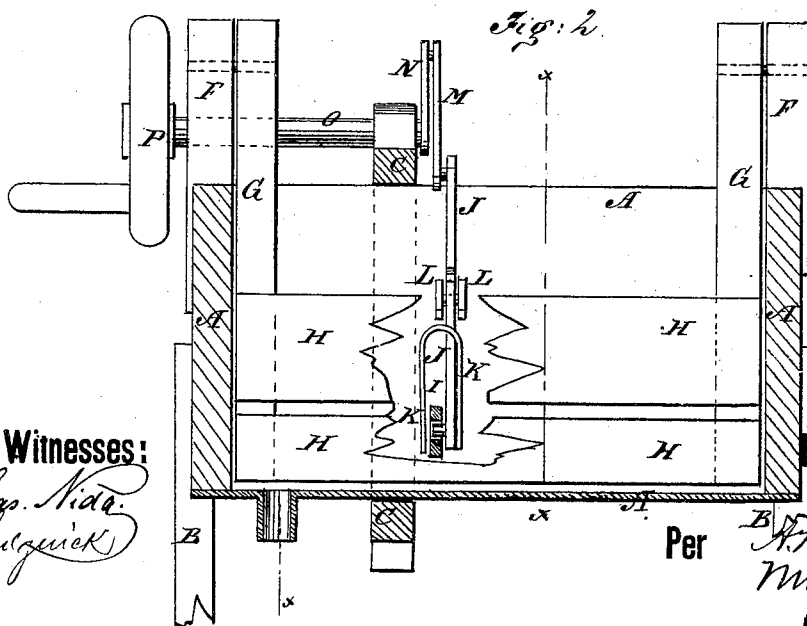
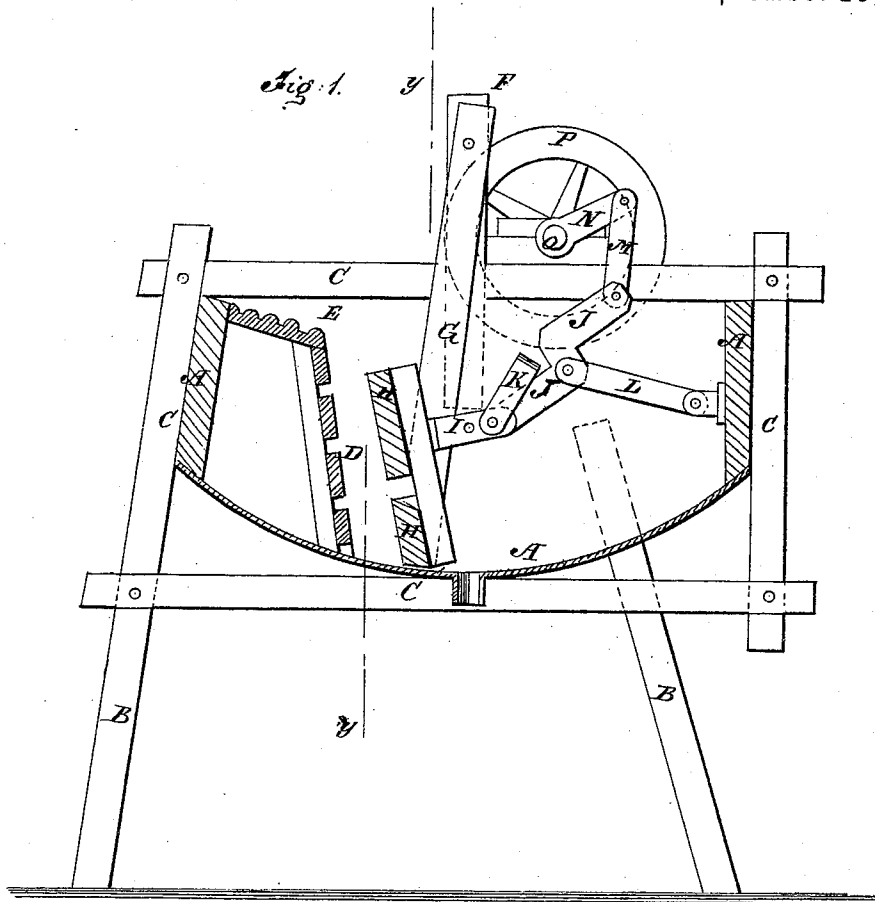


A. M. CAMPBELL.
Washing-Machines.

No. 143,060.

Patented September 23, 1873.



Witnesses:

Chas. Nida.
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UNITED STATES PATENT OFFICE.

ARTHUR M. CAMPBELL, OF KLINE'S GROVE, PENNSYLVANIA.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **143,060**, dated September 23, 1873; application filed July 19, 1873.

To all whom it may concern:

Be it known that I, ARTHUR M. CAMPBELL, of Kline's Grove, in the county of Northumberland and State of Pennsylvania, have invented a new and useful Improvement in Washing-Machines, of which the following is a specification:

Figure 1 is a vertical longitudinal section of my improved machine taken through the line *x x*, Fig. 2. Fig. 2 is a vertical cross-section of the same taken through the line *y y*, Fig. 1.

My invention has for its object to furnish an improved washing-machine which shall be so constructed that great pressure may be applied to the clothes with little effort, and which shall at the same time be simple in construction, convenient in use, and effective in operation, washing the clothes quickly and without injuring them. The invention consists in the combination of the binding-frame with the suds-box of a washing-machine, to strengthen said box against the pressure of the operating mechanism; in the U-spring, in combination with the lever and the rigid arm attached to the presser-board; and in the rigid arm, the lever, the U-spring, the self-adjusting fulcrum-bar, the connecting-bar, the crank, and the crank fly-wheel, constructed and operating, in connection with the suspended presser-board, as hereinafter fully described.

A represents the suds-box, which is made with vertical sides, vertical, or nearly vertical, ends, and a curved bottom. The suds-box A is supported upon legs B, of such a length as to raise the machine to a convenient height, and is strengthened against the pressure of the operating mechanism by a binding-frame, C, passing around it longitudinally, as shown in Figs. 1 and 2. In the suds-box A, near one end, is secured a stationary pressure-board, D, which is formed of transverse strips, having spaces between them for the free passage of the water. The upper edge of the pressure-board D is connected with the end board of the suds-box A by a slightly-inclined board, E, which is corrugated to adapt it to serve as a rubbing-board when desired. To the middle part of the side

boards of the suds-box A are attached two upwardly-projecting standards, F, to the upper ends of which are pivoted the upper ends of the arms G, which project down within the suds-box A, and to their lower ends are attached the ends of the presser-board H, which is made with an opening or slot in it a little below its middle part, which slot is made narrower toward the forward side of the presser, so that as much water may flow through it when moving back as when pressing the clothes forward. To the middle part of the rear side of the presser-board H is rigidly attached an arm, I, in which are formed a number of holes to receive a pin attached to the end of the lever J. To the end of the lever J is also attached one end of a U-shaped spring, K, the other or free end of which projects down upon the other side of the arm I, so as to keep the pin of the lever J in place in the hole of the said arm I. This construction allows the end of the lever J to be readily adjusted upon the arm I to adjust the presser-board to the amount of clothes to be operated upon. The lever J is made with an offset in its middle part, and to it, at said offset, is pivoted one end of a rod, L, the other end of which is pivoted to the rear end of the suds-box A, and which thus forms a self-adjusting fulcrum for said lever J. To the upper end of the lever J is pivoted the lower end of a short connecting-rod, M, the upper end of which is pivoted to the crank N attached to the inner end of shaft O. The shaft O revolves in bearings attached to the side of the box A and to the binding-frame C, and to its outer end is attached a crank fly-wheel, P, to which the power is applied, and the inertia of which gives more force to the presser-board H.

By this construction, as the presser-board H moves forward the clothes are pressed between said presser-board H and the stationary pressure-board D, pressing out the water, which carries the dirt with it. As the presser-board H moves back the back rush of the water sweeps the clothes back from the board D, and turns them over so that they are operated upon by the presser H each time in a differ-

ent place, and are thus cleaned thoroughly in all their parts.

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

1. The quadrangular frame C C, having legs B, embracing and confining the suds-box A, and forming the bearings of the crank-shaft O, as shown and described.

2. The combination of the U-spring K with the lever J and arm I of the presser-board, and with the pivot-pin thereof, as and for the purpose specified.

ARTHUR M. CAMPBELL.

Witnesses:

ENOCH METTLER,
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