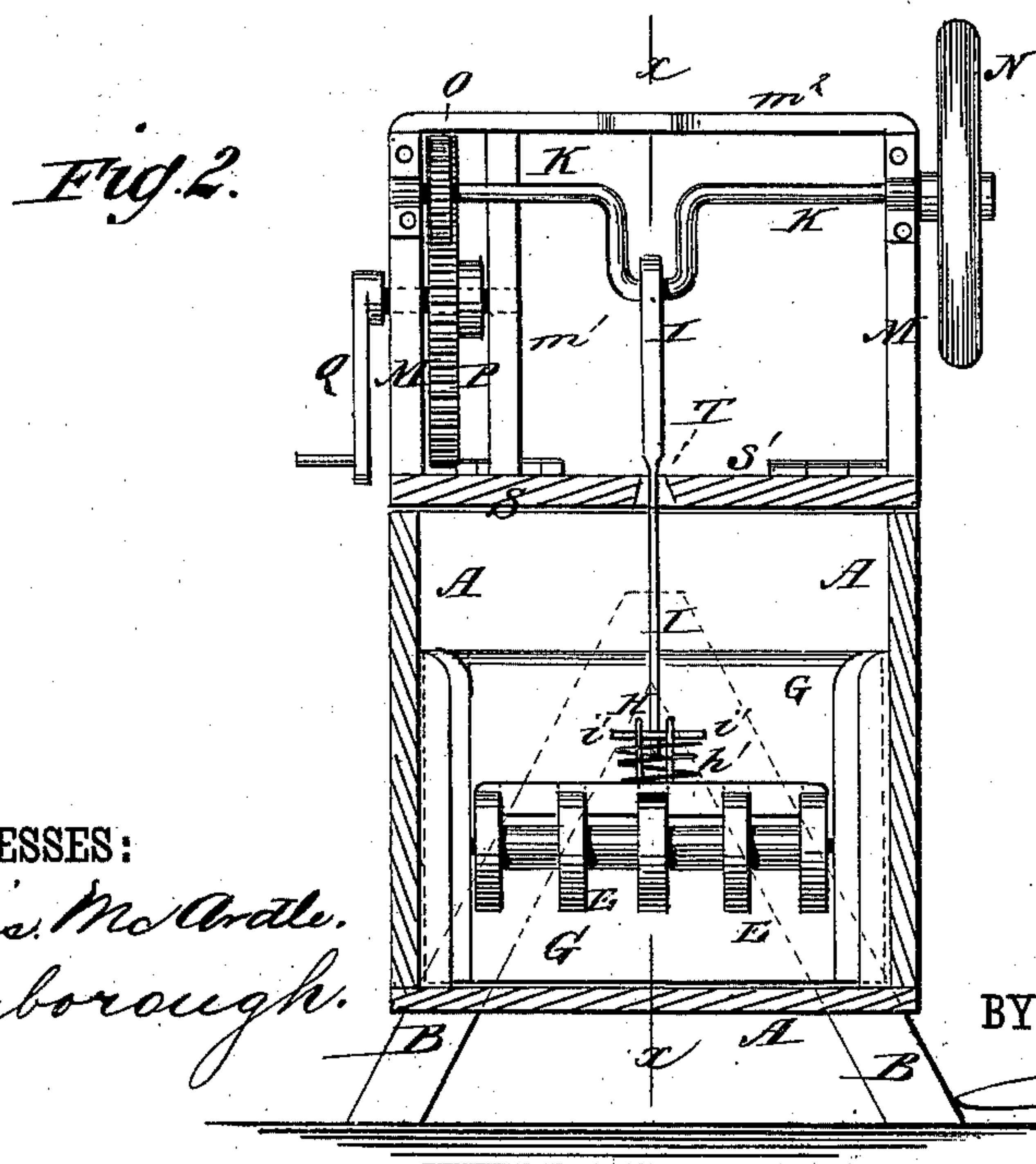
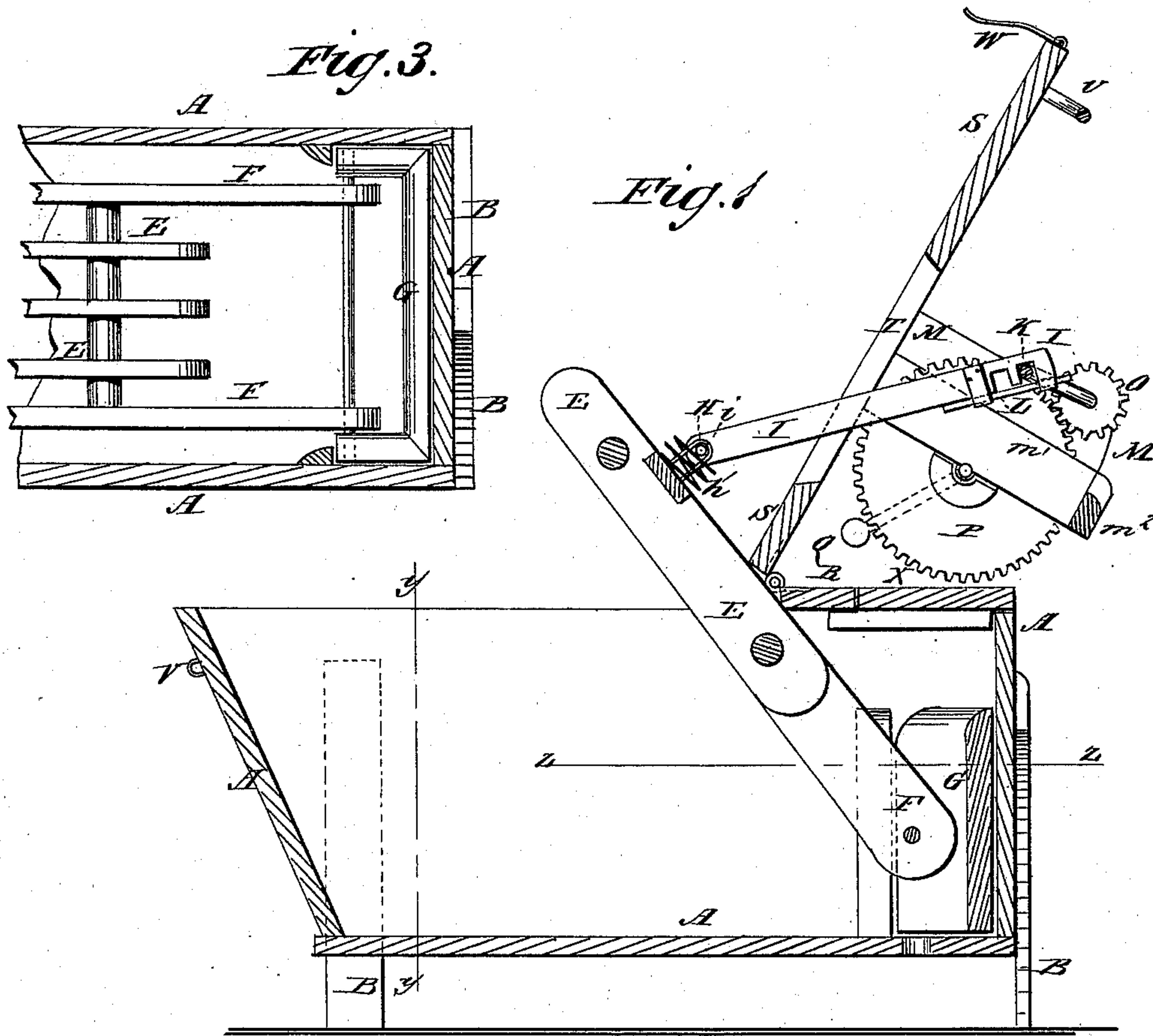


W. HAAS.
Washing-Machine.

No. 211,398.

Patented Jan. 14, 1879.



WITNESSES:

Francis McArdle.
J. H. Scarborough.

INVENTOR:

W. Haas.

BY

ATTORNEYS.

UNITED STATES PATENT OFFICE

WILLIAM HAAS, OF LYNDON, KANSAS.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **211,398**, dated January 14, 1879; application filed October 5, 1878.

To all whom it may concern:

Be it known that I, WILLIAM HAAS, of Lyndon, in the county of Osage and State of Kansas, 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. Fig. 3 is a detail horizontal section taken through the line *z z*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of this invention is to improve the construction of the washing-machine for which Letters Patent No. 203,031 were granted to me April 30, 1878, so as to make it more convenient in use, neater and more compact in construction, while being equally effective in operation.

The invention will first be described in connection with the drawing, and then pointed out in the claims.

A represents the suds-box, which is made rectangular in form, with vertical sides and rear end and an inclined or flaring forward end, and is supported upon legs B, of such a length as to raise the machine to a convenient height.

The suds-box A is designed to be provided with a cross-partition and other devices in the manner shown and described in Patent No. 203,031, but which are not shown in these drawings.

E is the upper or movable beater, the side bars F of which extend to the rearward, and are pivoted to a cross-bar of the board G, that slides up and down in ways or grooves at the rear end of the suds-box A. To the forward part of the beater E, or to a cross-bar attached to the said beater, are attached two long staples or slotted studs, H, around which is placed a spiral spring, *h'*.

The upper end of the spring *h'* rests against a pin, *i*, which passes through the staples H and through the lower end of the connecting-bar I. By this construction the beater is pressed down upon the clothes by pressure applied to the upper end of the spiral spring *h'*, so that

the said beater can adjust itself to the varying thicknesses of the said clothes.

The upper end of the connecting-bar I is notched to receive the crank formed upon the middle part of the shaft K, where it is secured in place by a detachable pin, L. Several notches are formed in the connecting-bar I to receive the crank, to enable the said connecting-bar to be shortened or lengthened, as more or less clothes are to be operated upon at a time.

The crank-shaft K revolves in bearings attached to the upper parts of the standards M, and to one of its ends is attached a fly-wheel, N, to give steadiness of motion to the machine. To the other end of the crank-shaft K is attached a small gear-wheel, O, the teeth of which mesh into the teeth of the larger gear-wheel, P, pivoted to one of the standards M, and to the secondary standard, *m*¹. To the outer journal of the gear-wheel P is attached the crank Q, by means of which the machine is operated.

The upper ends of the standards M *m*¹ M are connected by a cross-bar, *m*², and their lower ends are attached to the cover S. The cover S is hinged at its rear end to the cross-bar R, the ends of which are attached to the top edges of the side boards of the suds-box A at a little distance from their rear ends.

The connecting-bar I passes through and works in a longitudinal slot, T, formed in the middle part of the cover S. To the forward part of the cover S is attached a handle, U, for convenience in raising and lowering it. With this construction when the cover S is raised the operating mechanism and the movable beater E are raised with it, giving a free and convenient access to the interior of the machine for putting in and taking out the clothes, and for arranging and rearranging them as may be required.

The forward end of the cover S is secured in place when closed by a hasp, W, and staple V or other convenient fastening.

The part of the suds-box A in the rear of the cross-bar R is closed by a cover, X, which is made detachable to give convenient access to the rear part of the interior of the suds-box A for pouring in water or withdrawing the

plug from the discharge-opening to allow the suds to flow out.

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

1. The combination of the bars F, extending back from beater E, the slide-board G, having a cross-rod to which said bars are pivoted, and the box A, having vertical ways at the rectangular end, as shown and described.

2. The combination of the long staples or slotted studs H, the spiral spring *h'*, and the pin *i* with the movable beater E and the con-

necting-bar I, that connects the said beater with the operating mechanism, substantially as herein shown and described.

3. A washing-machine having a pounder, E, connected at one end, by extensions F, with a slide-board, G, in the suds-box, and at the other with an adjustable pitman, I, by a yielding connection, substantially as and for the purpose specified.

WILLIAM HAAS.

Witnesses:

H. ROGERS,

J. T. UNDERWOOD.