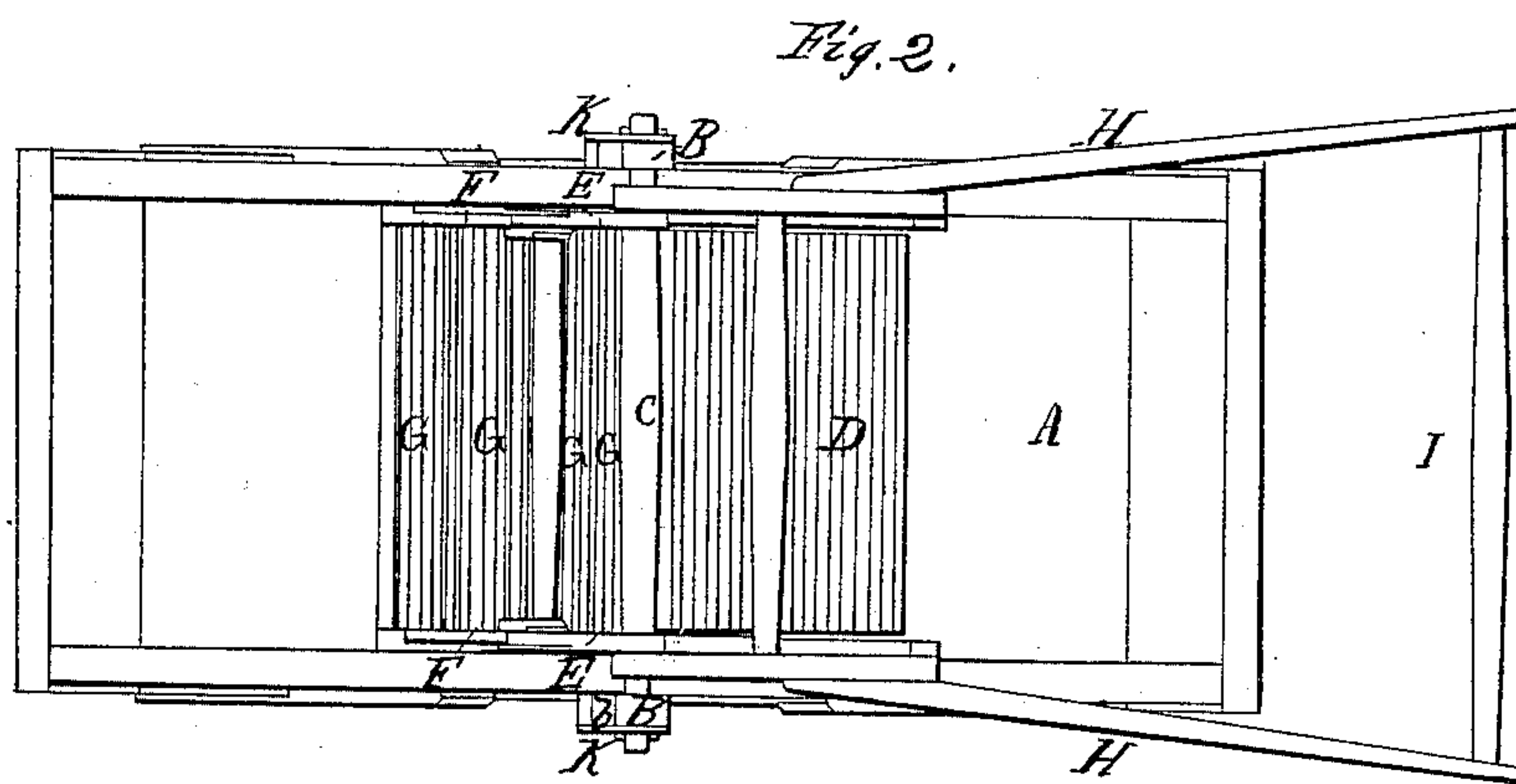
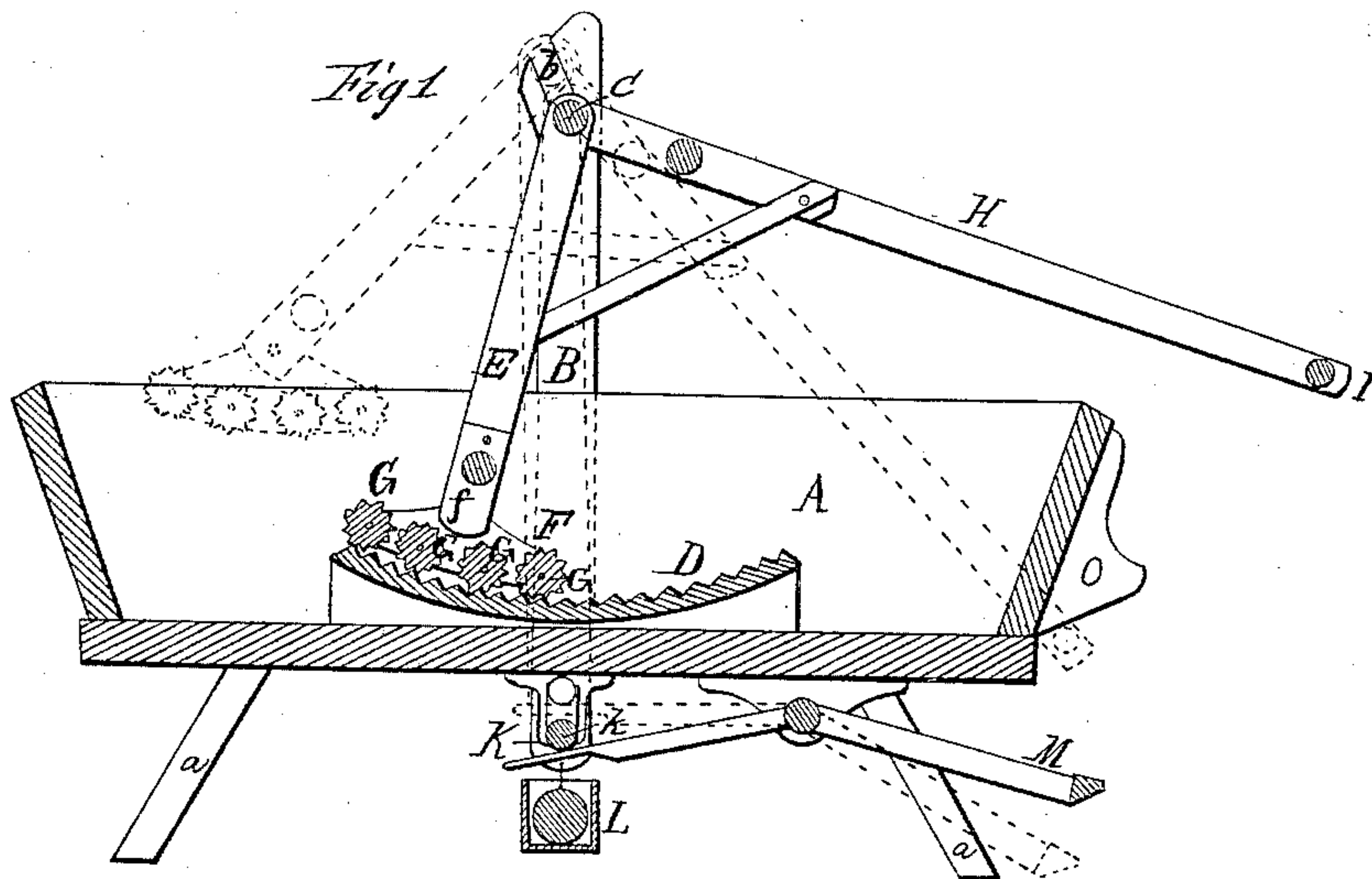


B. Horn,
Washing Machine,
N^o 36,978, *Patented Nov. 18, 1862.*



Witnesses,
Jeremiah L. Horn
John C. Line

Inventor
Benjamin Horn

UNITED STATES PATENT OFFICE.

BENJAMIN HORN, OF FLEMINGTON, NEW JERSEY, ASSIGNOR TO HIMSELF
AND J. P. RITTENHOUSE, OF SAME PLACE.

IMPROVED WASHING-MACHINE.

Specification forming part of Letters Patent No. 36,978, dated November 18, 1862.

To all whom it may concern:

Be it known that I, BENJAMIN HORN, of Flemington, in the county of Hunterdon and State of New Jersey, have invented certain new and valuable Improvements in Washing-Machines; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a vertical projection, and Fig. 2 is a plan view, similar letters of reference indicating like parts in both figures.

To enable others skilled in the arts to make and use my invention, I will proceed to describe its construction and operation by the aid of the drawings and of the letters of reference marked thereon.

A is a tub or box, of the form represented, supported upon legs *a*, and carrying two standards or uprights, B, at or near the middle of each side. A shaft, C, is fitted in bearings *b* near the top of these uprights, the bearings being slotted out at an angle, as represented, to allow of the removal of the shaft, and for another purpose hereinafter mentioned. A corrugated wash-board, D, curved to form a portion of a cylinder having the shaft C for an axis, is placed in the tub and fastened there. Two arms, E, extend downward from the shaft C, one near each upright B, and a cross-piece, F, is jointed to the end of each arm by the cross bolt or shaft *f*, as represented, so as to run just above the wash-board D, and to be at liberty to turn to a limited extent relatively to E. Between the two swiveling-pieces F, and rotating in bearings therein, I hang four fluted rollers, G G G G, the axis of these rollers lying in the elements of a cylinder concentric with D, when the cross-bars F are perpendicular to the arms E. If, now, the shaft C and arms E be oscillated, the rollers G roll in contact with the wash-board D, or with any garments placed thereon. This motion is obtained through two arms, H, extending from the shaft C to a cross-bar or brake, I, which receives motion from the hands of the operator. These arms H are bent outward at a little distance from the shaft, so that they play outside of the tub A, and are of a sufficient length to allow the operator to stand out of the reach of water splashing from the tub.

The shaft C extends out through the uprights B at each end, and rods or connections K are hung thereon extending nearly to the floor, and connected near the lower ends by a tie, *k*. A box, L, is suspended from the rods K, and this box is filled with whatever weight is desired to be added to the weight of the squeezing-rollers G in order to make them perform their office properly. This weight may be varied by the operator to correspond to the character of the work then in hand. A treadle, M, is hung beneath the tub A and connected with the rods K, so that the operator, by placing the foot upon the said treadle, may raise the weight-box L, shaft C, and rollers G, to allow of the insertion or removal of articles to be washed. Upon the side of the tub or box A, I fix an incline, O, so arranged relatively to the brake I and the inclined bearings *b* that when the treadle M is operated and the shaft C with its connections lifted, the brake I is caused to catch under the incline O, and as the shaft C moves in the inclined bearings *b*, I is forced backward down O, thus lifting and supporting the rollers G entirely clear from and beyond the wash-board D, as shown in red outline in Fig. 1. By this arrangement the wash-board D is entirely unincumbered and free for the reception or removal of the clothes when the rollers G are raised by the treadle M, and the rollers G are supported in that position so long as the treadle M is depressed. This is an advantage of practical importance, and one I believe peculiar to my invention.

In operating my improved machine, the operator places one or both feet upon the treadle M, raising G out of contact with the wash-board D, and then places whatever garment or garments it is desired to wash at one operation upon the wash-board. On releasing the treadle M the rollers G bear upon the clothes, adapting themselves by the turning of the pieces F relatively to E to the inequalities of thickness of the clothes, and bearing with an equal pressure, or nearly so, at all points of contact, which pressure is regulated by placing more or less weight in the box L. Now, by working the handle or brake I up and down, like the handle of a pump, the rollers G are caused to pass back and forth across the garments. The tub A being supposed to be filled with water or suds above the surface of the

wash-board, it will be seen that the action of the fluted rollers G and corrugated wash-board D is to alternately squeeze all parts of the clothes, and then allow them to absorb water, a process which is usually believed to be the best for removing dirt from cloth. There is little or no rubbing action upon the clothes, and by reason of the manner in which the rollers G are hung and the pressure obtained, a very nearly equal effect is produced upon all parts of the garments, even if thicker in one portion than in another. By reason of the arms H and brake I working outside of the tub, the operator is enabled to stand at a convenient distance out of the danger of being wet by the slopping water, and when the brake

is lowered to put in or remove clothes it is entirely out of the way of the operator.

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

1. The combination and arrangement of the rods K and weight-box L with the shaft C, arms E, rocking pieces F, and fluted rollers G, substantially as and for the purpose herein set forth.

2. The arrangement of inclines O and b, brake I, shaft C, rollers G, and treadle M, substantially as and for the purpose herein described.

Witnesses: BENJAMIN HORN.

JEREMIAH T. HORN,

JOHN C. SINE.