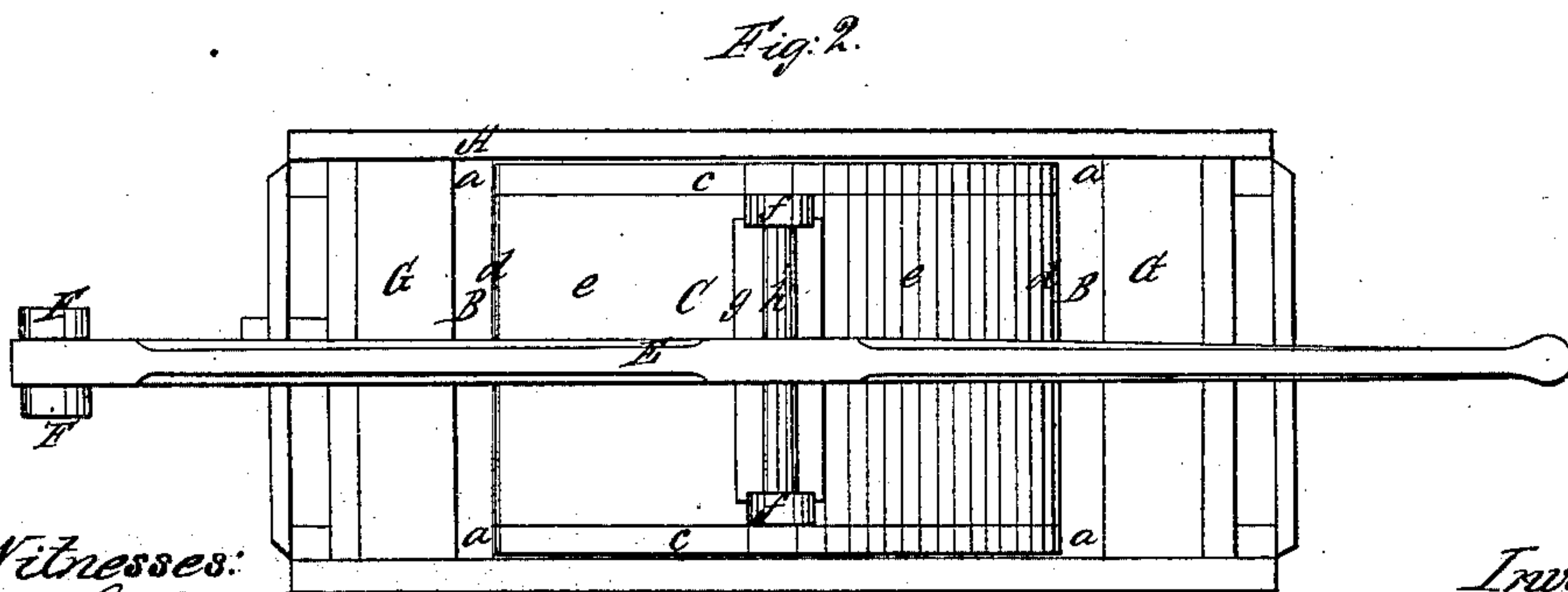
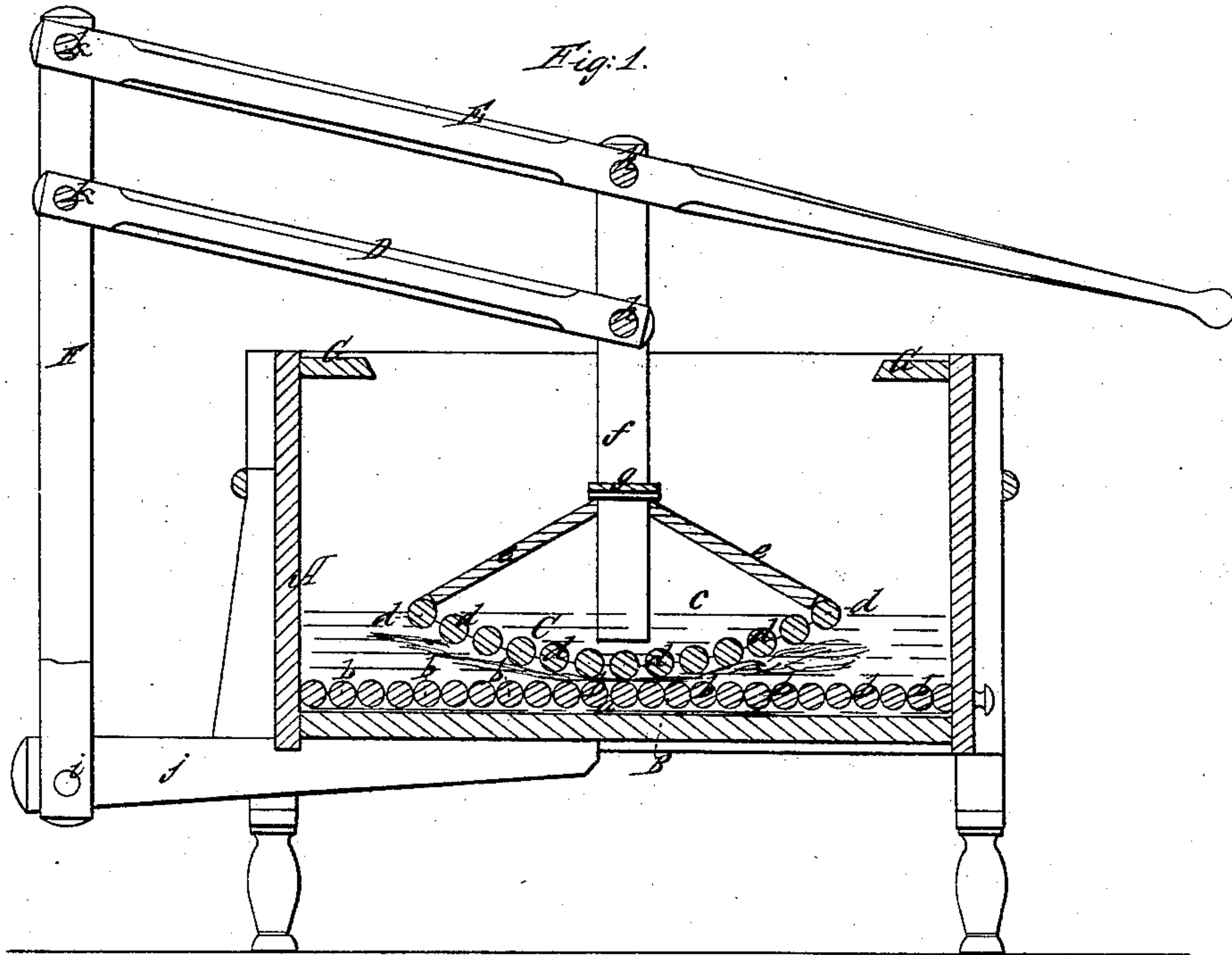


G. Walker,

Washing Machine,

N^o 27,584,

Patented Mar. 20, 1860.



Witnesses:

*R. S. Spencer
J. W. Corns*

Inventor:

*G. Walker
per Wm. M. Munniff, Attorney*

UNITED STATES PATENT OFFICE.

GEORGE WALKER, OF SPRINGVILLE, NEW YORK.

WASHING-MACHINE.

Specification of Letters Patent No. 27,584, dated March 20, 1860.

To all whom it may concern:

Be it known that I, GEO. WALKER, of Springville, in the county of Erie and State of New York, have invented a new and Improved Washing-Machine; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1, represents a longitudinal vertical section of this invention. Fig. 2, is a plan or top view of ditto.

Similar letters of reference in both views indicate corresponding parts.

In order to wash clothes in the most effectual manner, it is necessary to subject them to a squeezing as well as to a rubbing process. Neither the squeezing without the rubbing, nor the rubbing without the squeezing is sufficient to remove the dirt. The most effectual washing machine will be one in which both the rubbing and squeezing process are combined in one operation, so that the clothes are squeezed and rubbed at the same time.

With this object in view I have arranged my rubber on an arm or arms that connect by means of a connecting rod and a hand lever with a radius bar, so, that by imparting to the rubber a rolling motion, it assumes at the same time a longitudinal sliding motion, over the clothes subjecting them to the rubbing process, while the weight of the rubber with its attachments, regulated if necessary by a downward or upward pressure of the hand, is sufficient to exert the necessary pressure on the clothes.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

The tub A is constructed in the usual manner of wood or any other suitable material about twice as long as it is wide and of any desirable depth. Placed on the bottom of this tub is the rack B constructed of two longitudinal slats *a* with semi-circular notches in their upper edges and a series of rollers or cylindrical bars *b* are nailed down firmly into said notches. Instead of this rack however fluted boards may be used or a bottom of corrugated sheet metal and it may be made concave or convex as well as flat, and so that it is elevated above the bottom of the box and furnished with openings to admit of the water circulating through and

under it, or so that it lies close down on the bottom, and without openings.

C is the rubber constructed of two segmental side pieces *c* with semi-circular notches in their convex sides, which serve to receive rollers or cylindrical bars *d* similar to the rack B. These side pieces are firmly united by flat boards *e*; and arms *f*, are rigidly attached to the same, which extend beyond the top of the tub. A flat cover *g*, is placed loosely, on the top of the rubber and between the arms *f*, prevents a splashing of the water.

The arms *f*, are connected with each other by round bars or pins, *h h'* which form the fulcrum for a connecting rod D and hand lever E that serve to connect said arms with the vibrating lever or radius bar F, as clearly shown in Fig. 1. This lever has its fulcrum on a pin, on *i* that is secured in an arm *j*, which is attached to the bottom of the tub, and the distance of the pin *k*, which secures the end of the link D to the lever F, from the fulcrum *h* on the arms *f*, is equal to the distance of the pin *k'* from the fulcrum *h'*, of the hand lever E. The arms *f*, therefore will in all cases be paralleled with the lever F, and if a vibrating motion is imparted to said lever, the arms *f*, will assume a corresponding vibrating motion around an imaginary center, which would be at the same distance from the fulcrum *h, h'* as the pins *k, k'* from the fulcrum pin *i*. Each point of said arms nearer to the fulcrum *h h'* than the above mentioned imaginary center, partakes of the vibrating motion of said arms, so that the convex surface of the rubber, which is rigidly attached to said arms, assumes a rolling motion and at the same time it moves to and from the vibrating lever F, sliding over the bottom of the tub or over the rack B. The amount of this sliding motion, as will be understood from the above explanation, depends entirely upon the distance of the convex surface of the rubber from the above mentioned imaginary center or upon the difference between the distance of said convex surface from the fulcrum pins *h h'* and the distance of the pins *k k'* from the fulcrum pin *i*.

On each end of the tub A and extending from one side to the other is a board G leaving just room enough to insert the rubber. These boards prevent a splashing of the water.

If it is desired to use my machine the

clothes are placed on the bottom of the tub as nearly even as possible and water enough is added to cover the clothes or to make them float, and the rubber is set in motion.

5 The operation may be carried on in two or three different ways. The first which I denominate the "central process" is executed by placing the rubber down on the clothes near to the end of the box with a middling

10 quick motion and light downward pressure, then raising it slightly from the clothes and bringing it back to the end from where it started and when having given two or three strokes from one end to the middle of the

15 box raise the rubber clear off the clothes and carry it to the other end of the box and perform the same operation as before and so keep changing until the clothes are clean. The second way of operating the rubber I

20 denominate the "stepping or progressive process." The rubber is pressed down on the clothes a few inches (say from three to 5) from the end of the box and with a light pressure and easy quick motion it is forced

25 to the nearest end of the box; then it is slightly raised and carried forward a few inches farther than before; it is then set down and forced back in the direction from when it came and so on, stepping it forward

30 about twice as far as it is moved back until it arrives at the other end of the box. Then change, and return the rubber by the same process in the opposite direction to the end

from whence it first started and so on as long as necessary. A third way of operating 35 the rubber is the stamping or pounding process, but the rubbing is preferable in most cases.

Large pieces such as quilts where the water requires changing, are rolled up in 40 one end of the tub and the rubber is placed on them and a pressure exerted on the same, so that when the tub is placed at a slight inclination, so that the water runs out of the plug at one end of the tub, the quilt or other 45 piece by subjecting it to the pressure of the rubber from different sides, may be freed from water sufficiently to make a fresh supply of water practicable.

With this machine coarse pieces as well 50 as the finest and most delicate fabrics can be washed with equal facility and without the least injury.

What I claim as new and desire to secure 55 by Letters Patent, is—

The combination of the radius bar F, with the tub A, rod D, lever E, and convex rubber C, (as shown) so that said rubber will have a combined rotary and longitudinal motion, as and for the purpose herein 60 shown and described.

GEO. WALKER.

Witnesses:

HERMAN RUGG,
MORRIS FOSDICK.