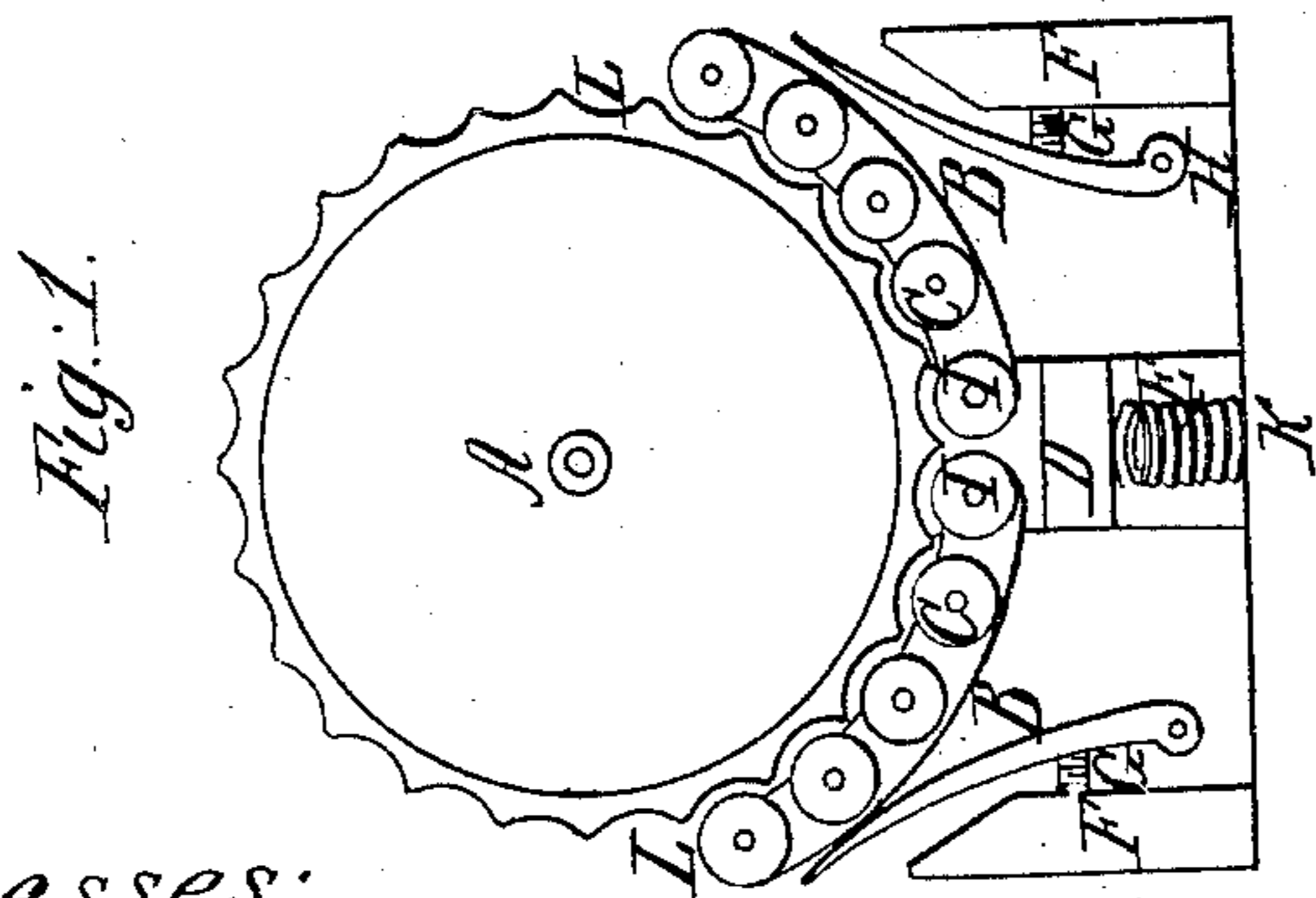
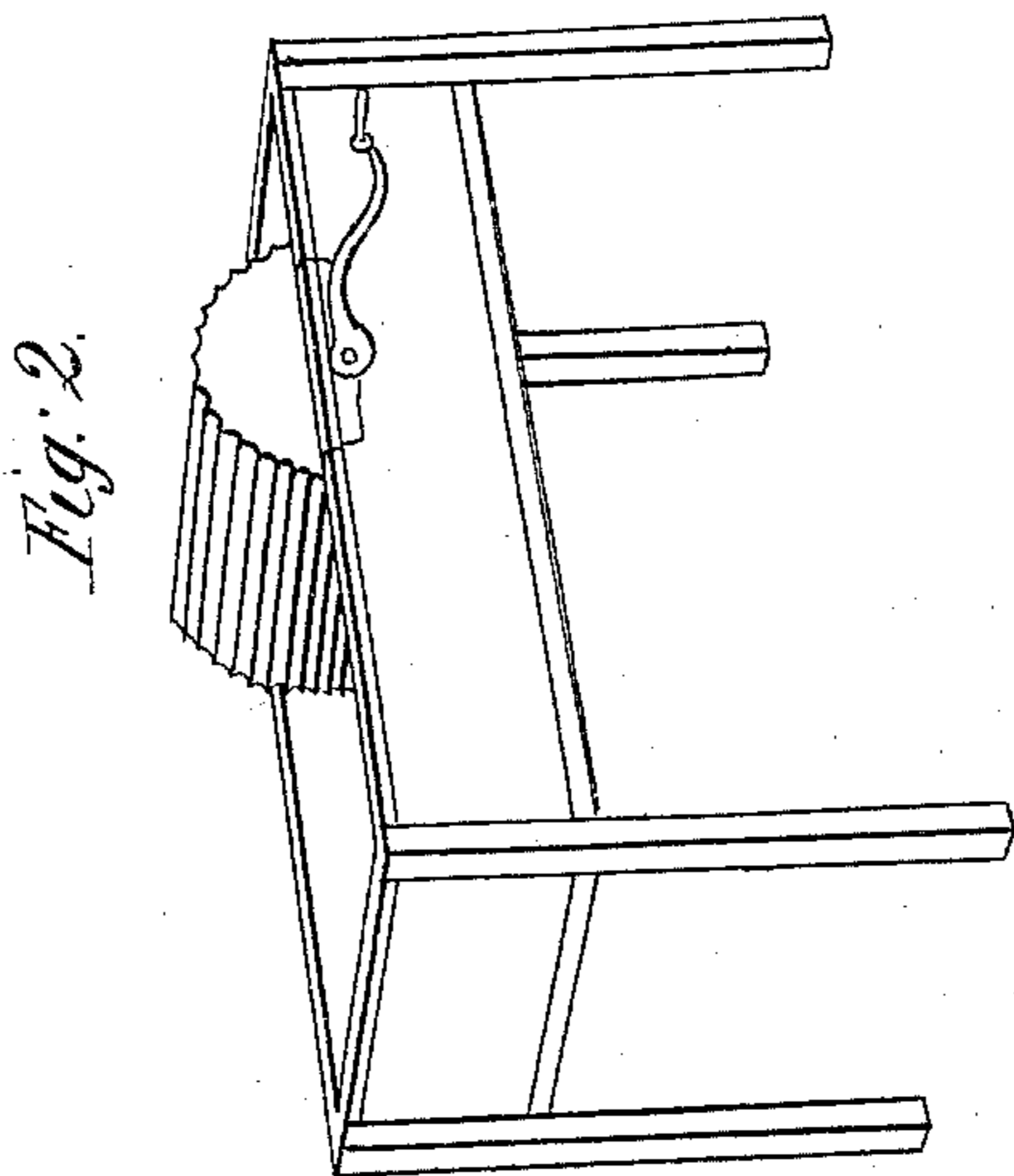


W. Hovey,
Washing Machine,
Patented Feb. 4, 1837.

No 117,



Witnesses;
J. H. Richardson
Chas. W. Richardson

Inventor;
William Hovey

UNITED STATES PATENT OFFICE.

WILLIAM HOVEY, OF WORCESTER, MASSACHUSETTS.

CYLINDER WASHING-MACHINE.

Specification of Letters Patent No. 117, dated February 4, 1837.

To all whom it may concern:

Be it known that I, WILLIAM HOVEY, of Worcester, in the county of Worcester, in the State of Massachusetts, have invented a new and useful Improvement in the Construction of Machines for Washing Clothes, called the "cylinder washing-machine," of which the following is a full and exact description.

This machine consists of a box or sink about three feet long and from ten to twelve inches deep and from twelve to eighteen inches wide. In this box or sink, near the middle from each end, I cut grooves in the side pieces of the box running up and down in a perpendicular manner about three-eighths of an inch deep, more or less, and two or three inches wide, as the builder may choose. This box or sink is then ready to receive the application of the washing apparatus, which is constructed as follows, viz: Fitted into the grooves cut in the sides of the box or sink are two brass stands or slides, one on each side of the box opposite each other, calculated and fitted to slide up and down in the grooves cut in said box; they are let in flush and even with the inside of the box and are connected together near the bottom by a piece of wood the same width as the slides and about one inch thick running transversely across the box. This connects the two slides in such a manner that they will both rise or fall in the grooves as this bottom piece that connects them is raised or lowered. This horizontal piece of wood that connects the upright slides of brass or other metal not subject to corrode stands on two or more spiral or other springs which are supported by the bottom of the box or sink in such a manner that this frame, which is composed of one bottom piece of wood and the two metallic slides as above described, will sink down by pressure and rise as it is relieved. This frame I shall call the spring frame, which supports the first division of the washing apparatus, viz, the small rollers, which are fitted to come in contact with one large one and in conjunction with it constitute the whole washing apparatus or principle by which the washing is done; all other parts I consider merely as necessary appendages. This first division I describe as follows: I have as many small rollers about one inch in diameter, more or less, as will when laid close and parallel to each other make about five-twelfths of a

circle of from eight to twelve inches diameter. These rollers are placed horizontally and parallel to each other with gudgeons of metal in each end, which run in circular pieces of brass or other metal not subject to corrode. These circular pieces of metal are so fitted that the small rollers, when fitted into them, form horizontally a surface conforming to the segment of a circle equal to that which I intend the outer surface or circle of the large cylinder shall be; which cylinder constitutes the second division of the washing apparatus. These circular pieces of metal in which the small rollers revolve are four in number, making two independent segments of the small rollers when fitted in their proper place. These segments of small rollers are hung in the spring frame on metallic pins projecting from near the bottom of the metallic slides or upright part of the spring frame in such a manner that the two segments of small rollers when hung in said spring frame will form a segment of a circle about five-twelfths of its circumference, more or less, with the concave side on the upper surface and running across the box. These segments of small rollers are hung on the pins in the upright slides in the spring frame by inserting the pins on which they hang into female centers made directly in a line with the centers of the two bottom rollers where the two segments meet and form the center hinge of the whole segment when they are united in the spring frame in such a manner that the upper edge of each of these wings or segments of small rollers can be moved out or in from the true circle of the whole segment without altering the lower rollers as they are hung in the spring frame. I then attach springs at each end of the upper edge of these segments near the top rollers, which springs are connected with the box or sink and serve to press the segments or rollers toward the center of the large cylinder which is fitted into the box so as to revolve in these segments of small rollers, its convex surface corresponding with the concave surface of the segment of small rollers. This roller or cylinder is fluted, so as to correspond with the small rollers in such a manner that when the springs have pressed them up they will all lie in the flutes of the large cylinder, and as this large cylinder is turned on its axis the springs will yield and let them out of

those flutes, and as they are pressed in and out by the springs and the fillets between the flutes alternately the washing is produced as the clothes are passed through between the surface of the large and small rollers. This large roller or cylinder runs by means of a crank and is turned around or backward and forward at will; it runs on a shaft or axis bearing on each side of the box; the best method of operating it is to turn it by hand backward and forward so as not to let the clothes run entirely out of the first division or small rollers nor should they wind around the large roller.

I disclaim all right to the principle or method of simply applying a fluted roller to a single segment of small rollers corresponding except such right as may be held in common with the public.

What I claim as my improvement consists in—

The method of dividing and applying the segment of small rollers as above described so as more fully to equalize the pressure between the surface of the small rollers and the fluted cylinder between which the washing is effected. I do not confine my claim to a single division of the small rollers any farther than simplicity and convenience may require to produce the desired effect. A division of each roller with springs pressing them toward the center of the fluted cylinder will more fully equalize the pressure between the small rollers and the fluted cylinder as they recede from or approach each other and will answer nearly as good a purpose as the one above described. I therefore claim the method of dividing and applying these segments of small rollers as above described or any other division that will serve to equalize the pressure between the surface

of the small rollers and the fluted cylinder while in the operation of washing clothes of various thicknesses.

More fully to illustrate the construction of this machine reference is hereby made to the accompanying drawings, in which—

Figure 1 is a sectional view of the apparatus. Fig. 2 is a perspective view of the same.

In Fig. 1 A is an end view of the fluted cylinder. B B are the circular pieces of brass in which the small rollers run. I I are the center hinges or pins on which the brass pieces are hung to the spring frame. C C are the segments of small rollers divided between I I. D is a bottom section of the upright slides and end of the cross piece that connects them which constitute the spring frame. E is the spiral spring which supports the spring frame. F F are two cross partitions in the sink. G G are spiral springs which are let into the cross partitions F F and press against the dogs H H which in connection serve to press the upper part of the segments of small rollers C C toward the center of the fluted cylinder A as they hang on the hinges or pins I I. K is the bottom of the sink. L L are the places where the clothes are entered for washing between the fluted cylinder and the segment of small rollers.

In testimony whereof I, the said WILLIAM HOVEY, hereto subscribe my name in the presence of the witnesses whose names are hereto subscribed, on the tenth day of January, A. D. 1837.

WILLIAM HOVEY.

Signed in presence of—

J. H. RICHARDSON,
GEO. W. RICHARDSON.