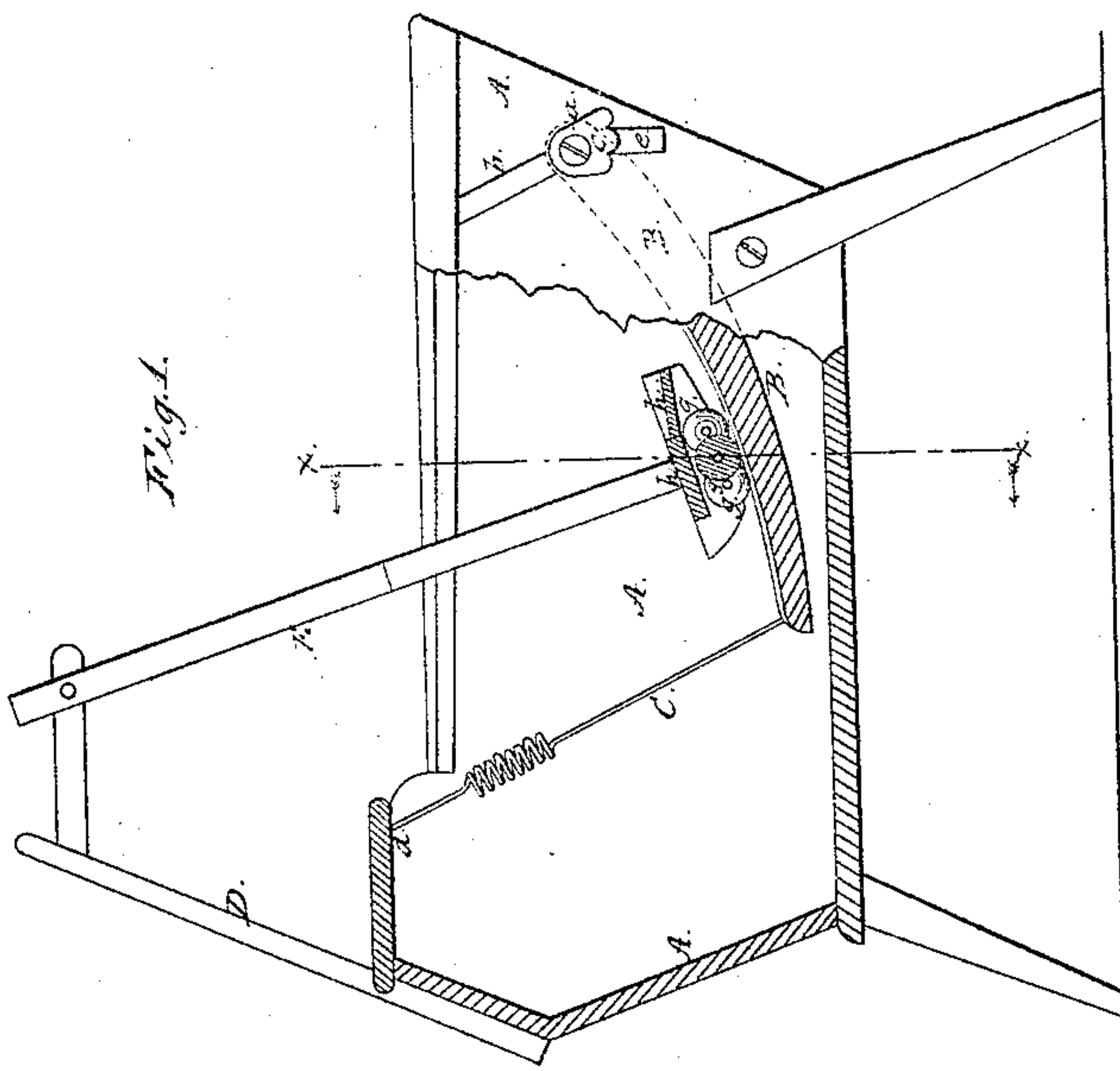
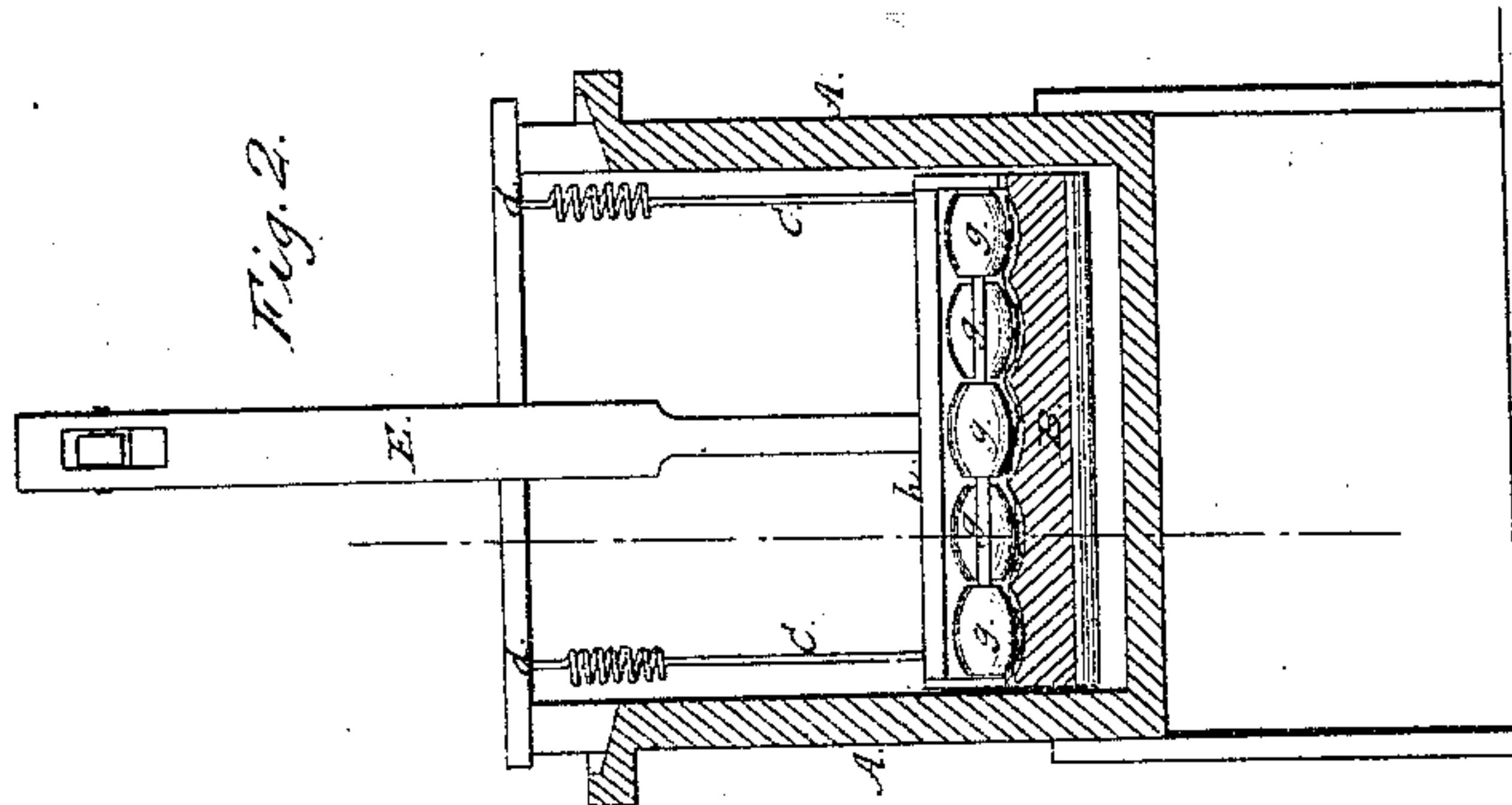


W. Shafer,
Washing Machine,
Patented Sep. 11, 1866
N^o 30,001.



Witnesses;
J. W. Coombs
R. S. Spencer

Inventor;
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attorneys

UNITED STATES PATENT OFFICE.

WILLIAM SHAFER, OF RIPON, WISCONSIN.

WASHING-MACHINE.

Specification of Letters Patent No. 30,001, dated September 11, 1860.

To all whom it may concern:

Be it known that I, WILLIAM SHAFER, of Ripon, in the county of Fond du Lac and State of Wisconsin, have invented a new and
5 Improved Washing-Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

10 Figure 1 is a vertical longitudinal section taken through the principal portion of my improved machine showing clearly the interior of the same. Fig. 2 is a transverse section taken in the vertical plane indicated
15 by the red line x, x , Fig. 1.

Similar letters of reference indicate corresponding parts in both figures.

This invention consists in combining with a curved and yielding washboard, arranged
20 within the wash-box or tub which is of a quadrangular shape as will be hereinafter described, a vibrating or pendulum rubber with a rolling surface which is made to act upon the surface of the washboard or upon
25 the clothes placed thereon, with a rolling and squeezing pressure instead of a rubbing pressure, as will be hereinafter described. The washboard will be made adjustable so that the machine may be adapted to wash
30 large or small articles with great ease and facility, at the same time the washboard will preserve its yielding action; all as will be hereinafter described and represented.

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

In the accompanying drawings, A is the wash-box with two parallel sides, horizontal bottom, and the ends inclining inward;
40 within this box is arranged a curved washboard B, which is corrugated longitudinally on its surface as shown in Fig. 2, one end of which board is attached to the sides of the box A, by pivots a, a , which pass through
45 slots b, b , in these sides, and receive regulating buttons c, c , on their ends, outside of the box, which rest upon slop-blocks e, e , Fig. 1. The board B, from this point inclines downward, and its lower end is suspended by
50 suitable spring rods C, C, from the top of the box A, at d , shown in Figs. 1 and 2. The board at its lower end being hung above the bottom of the box, will thus be allowed to have a yielding action while at
55 its upper end it will be supported by the fixed pivots a , above referred to. The slots

b , in the sides of the box A, allow the board to be elevated or depressed at the upper end, and the buttons c, c , will support it at this end in the desired position. The concavities
80 in the surface of the washboard may be covered with zinc if desired.

An arm D projects up a suitable distance from the top of the box A, at its rear end, and to the upper end of this arm is pivoted
85 a swinging rod E, carrying on its lower end the rubber, which acts upon the articles placed on the concave washboard, as shown clearly in Fig. 1. The bottom of this rubber has a rolling surface composed of a series of rotary balls or short rollers g, g ,
70 placed on rods extending transversely across the rubber box, as shown in Fig. 2.

If rollers instead of balls are used to form this rubber, their surfaces should be
75 convex, as shown in the drawings, so as to conform to the corrugations on the surface of the washboard. The axes of these balls or rollers g, g , are parallel to each other and are brought very close together, so that the
80 rollers of one shaft will be between the rollers on the other shaft next to it, the rollers will thus be brought very compactly together at the same time they are allowed to turn freely. In the drawings only three series of rollers g, g , are represented, but it
85 will be seen that the number may be multiplied at pleasure. Each roller runs in its corresponding groove in the surface of the washboard, which board is held up against
90 the rollers,—when the articles to be washed are not between,—by the spring rods C, C, at one end and by the buttons c, c , at the other end of the board. The rollers are covered with boards h, h , which prevent the
95 water from splashing out of the box A, during the operation of washing.

From this description it will be seen that the washboard may be adjusted nearer to or farther from the rubber surface, according
100 to the bulk of articles to be washed, and when the articles are placed on the concave board B, and the rubber moved back and forth over them, it will act upon the articles, and squeeze and press the water through
105 them, and thoroughly cleanse them, and this washboard will be held up by the spring suspension rods C, C, and press the articles against the rolling surface of the rubber which is moved the articles on the board, as
110 above described. By setting the board B, up closer to the rubber, after the articles are

washed, the water may be squeezed out of them.

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

The combination of spur rods C, C, concave washboard B, buttons *c*, *c*, and vibrat-

ing rubber composed of rollers *g*, *g*, arranged and operating conjointly as, and for the purposes herein set forth.

WILLIAM SHAFER.

Witnesses:

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