

Fig. 1.

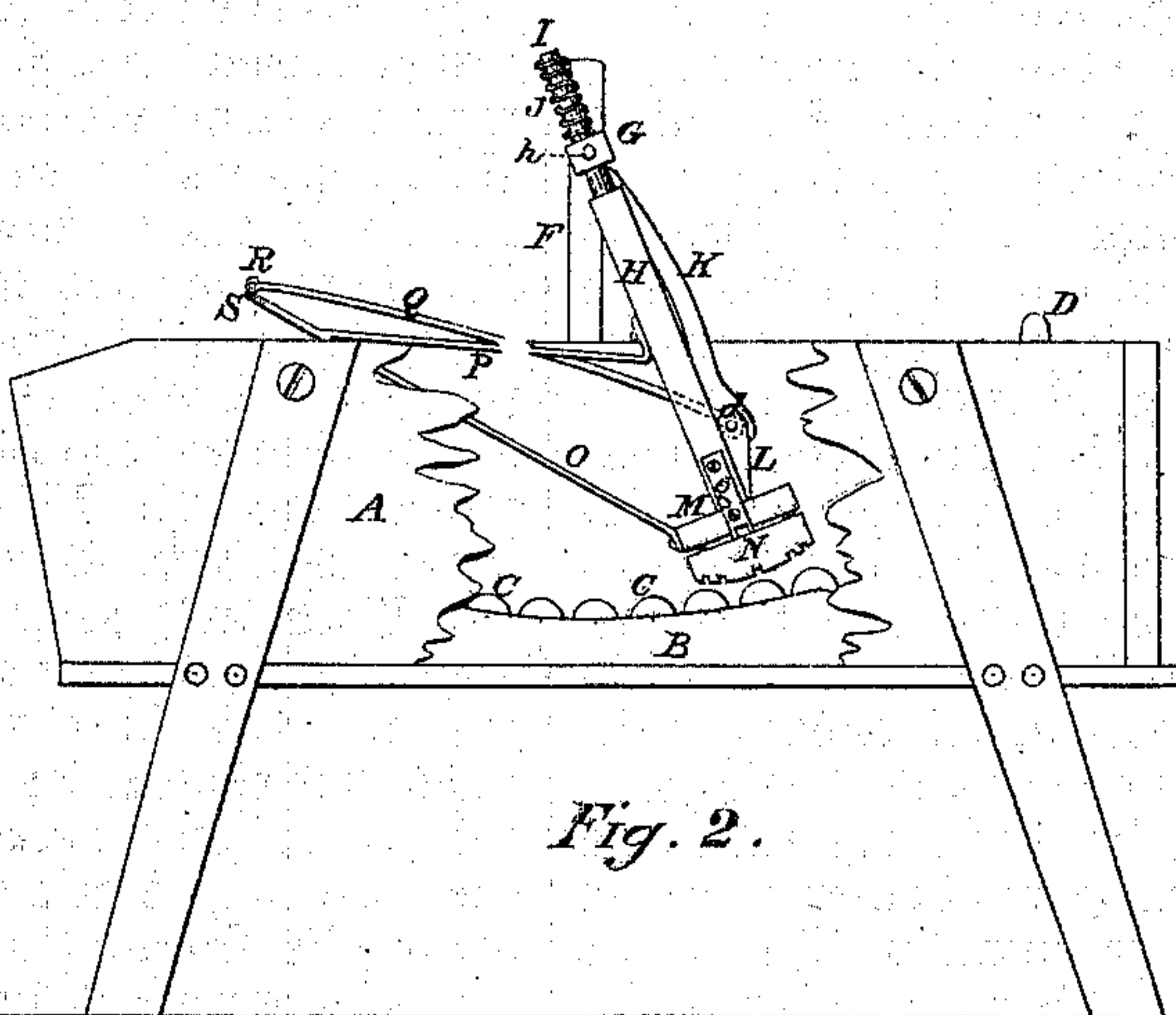


Fig. 2.

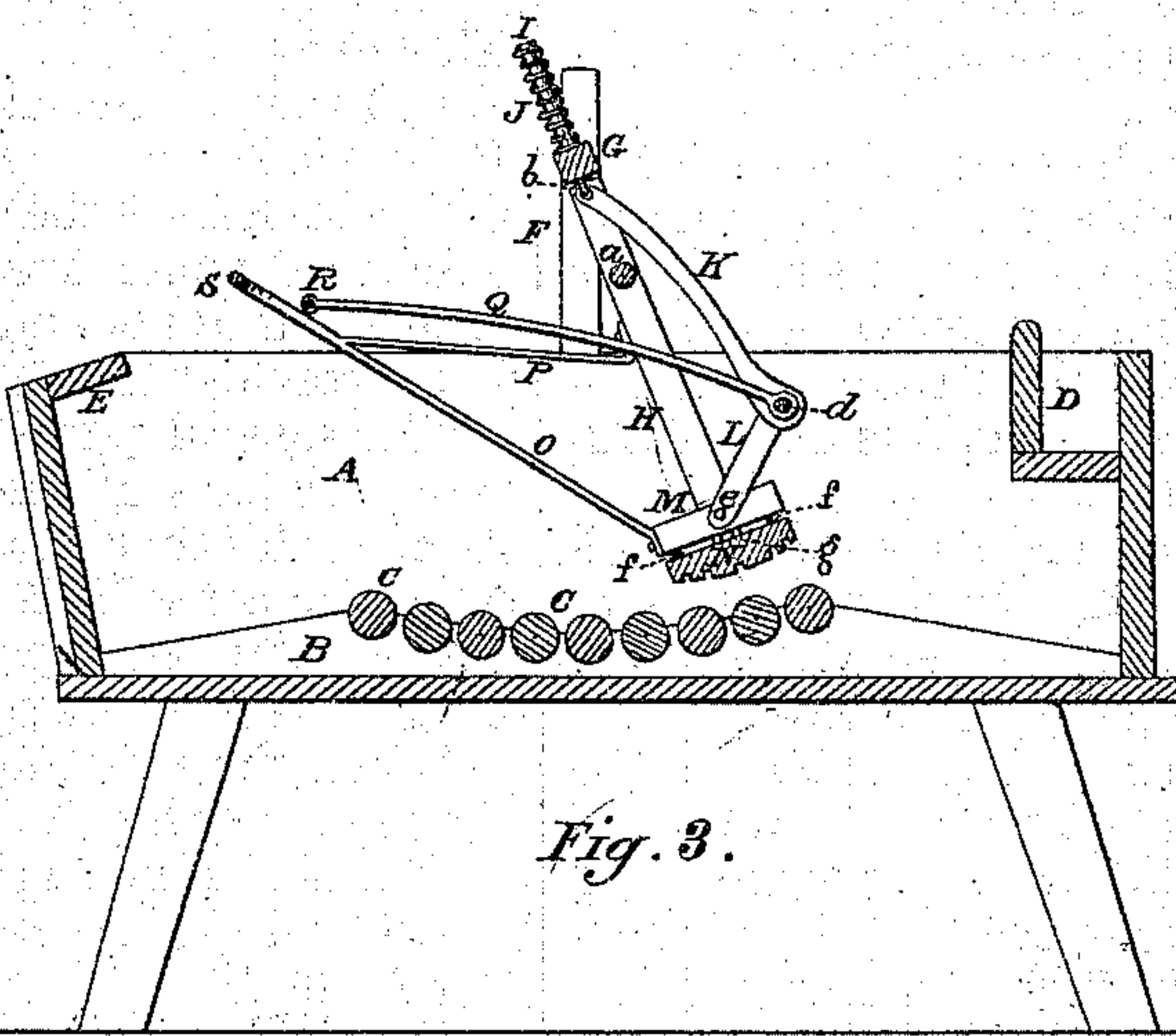


Fig. 3.

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Andrew Choffin } Witnesses.

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UNITED STATES PATENT OFFICE.

PETER YOUNG AND NOAH DOLL, OF ROBERTSVILLE, OHIO, ASSIGNORS TO THEMSELVES, JOHN RHODES, AND FREDERICK J. S. WAGNER, OF SAME PLACE.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. 119,070, dated September 19, 1871.

To all whom it may concern:

Be it known that we, PETER YOUNG and NOAH DOLL, of Robertsville, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Washing-Machines; and that the following is a full, clear, and exact specification thereof, which will enable others skilled in the art to make and use the said invention.

Our invention relates to that class of washing-machines having a vibrating rubber arranged over a concave bed of rollers; and its particular object is to obtain a quick and simple means of raising the rubber-frame or pressing it down to the concave roller-bed. Said invention consists in the construction of a rubber mounted on arms which are allowed to move up and down in holes in the rock-shaft of the rubber-frame, and which are forced down by one or more sets of toggle-levers connected to the rock-shaft and the rubber, and operated by a cross-bar attached by links to their joints; said rubber and arms being elevated by springs acting between the arms and rock-shaft, and the several parts being arranged so that the operator, on grasping the cross-bar by which he works the rubber, can also grasp the cross-bar which operates the pressure toggle-levers, and, by drawing said bars together by the grasp of his hand, can apply such pressure to the rubber as may be desired.

In the accompanying drawing, Figure 1 is a plan of a washing-machine embodying our invention. Fig. 2 is a side view of the same, one side of the suds-box being broken away to show the concave roller-bed and the rubber as it appears when pressed down. Fig. 3 is a longitudinal section of the machine.

A is the suds-box, of an ordinary form, which is usually supported on legs, as shown, and in one end of which is secured a box-piece, D, to which the clothes-wringer is conveniently attached, and in the other end of which is the overhanging board E, which prevents the suds from slopping out at that end of the box and soiling the clothes of the operator. The frame-pieces B B are secured in the bottom of the box A, and between them are journaled the rollers C C, which form the concave roller-bed. The uprights F F are secured to the sides of the box A, and in suitable holes or slots near their upper ends are journaled the pivots *h h* of the rock-shaft G of the rubber-frame. The rubber-arms

H H are made with round ends I I which extend up through holes in the rock-shaft G, and have the spiral springs J J placed around them, said springs resting on the rock-shaft G and pressing against a pin or head in or on the upper ends of the parts I of the arms H. The cross-piece *a* connects the arms H H, and on their lower ends are mortised the cross-heads M for the rubber N, which is suspended below said cross-heads by the slotted plates *g g*, which are secured on the arms H H and extend down into slots in the rubber N, where they are fastened by pins driven into the ends of said rubber through the slots in the plates *g*. The short spiral springs *f f* are placed at the sides of the rubber N and between it and the cross-heads M, thus allowing some elastic movement between the cross-heads M and rubber N, as well as a rocking movement of said rubber with respect to the said heads. The toggle-levers K L, of which there may be one set placed at the center of the rubber-frame, or two sets placed one at each side of the frame, or three sets placed one at each side and one in the center of the frame, (the two sets, being preferred by us,) are united by a pivot-pin, *d*, and are attached by a staple, *b*, to the rock-shaft G, and by a pin or screw, *e*, to the cross-heads M M. The links Q Q are attached to the pivot-pins *d*, and their other ends are united by a cross-bar, R, which is of sufficient length to rest on the bars O O, which have the cross-bar S attached to their ends, and which are attached to the cross-heads M M, their upper ends being braced by the braces P P attached to the arms H H.

The several parts are so arranged as to bring the cross-bars R and S within a short distance from each other, say from three to five inches, when the arms H H are drawn up by the springs J J, so that both of said cross-bars may be readily grasped by the hands of the operator.

When the machine is not in use the springs J J keep the arms H H drawn up and the toggle-levers K L at an angle with each other, thus raising the rubber N from the rollers C C, as shown in Fig. 3.

In working the machine, the operator grasps both the cross-bars S and R with his hands and draws the cross-bar R toward him by tightening his grasp on said bars, thereby straightening the toggle-levers K L and forcing the rubber N down close to the rollers C C, as shown in Fig. 2.

It is evident that by loosening and tightening his grasp on the cross-bars the operator can change the pressure of the rubber on the clothes as may be desirable for different kinds and thicknesses of clothing, or for working the clothes from one end of the box to the other; and it is also seen that, owing to the powerful action of the toggle-levers, but a small amount of strength is required to keep the cross-bars R and S drawn together.

What we claim as our invention, is—

1. The toggle-levers K L, in combination with the rock-shaft G and rubber N, said rubber being hung on the sliding arms H H, and the several parts being arranged substantially as and for the purpose specified.

2. The cross-bar R and links Q Q, in combina-

tion with the toggle-levers K L when arranged with respect to the cross-bar S, substantially as and for the purpose specified.

3. The combination of the rubber N, arms H H with cross-heads M M, toggle-levers K L, links Q Q, and cross-bar R, rock-shaft G, and spiral lifting-springs J J, the several parts being arranged substantially as and for the purpose specified.

As evidence of the forgoing witness our hands this 18th day of July, 1871.

PETER YOUNG.
NOAH DOLL.

Witnesses:

J. J. DELASS,
J. SHINGLE.

(117)