

SAMUEL WERNTZ.

Improvement in Washing-Machines.

No. 126,359.

Patented April 30, 1872.

Fig. 1.

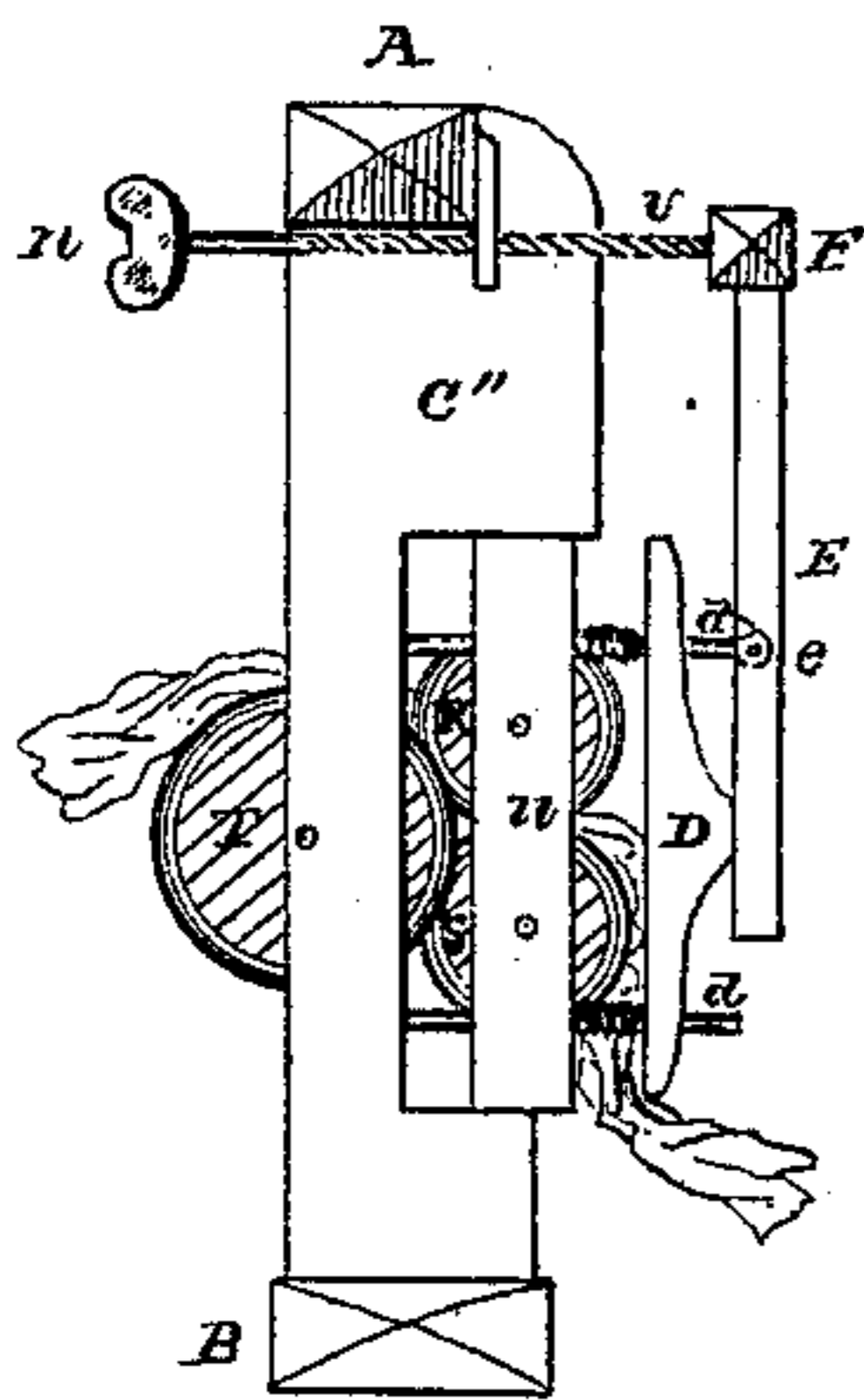
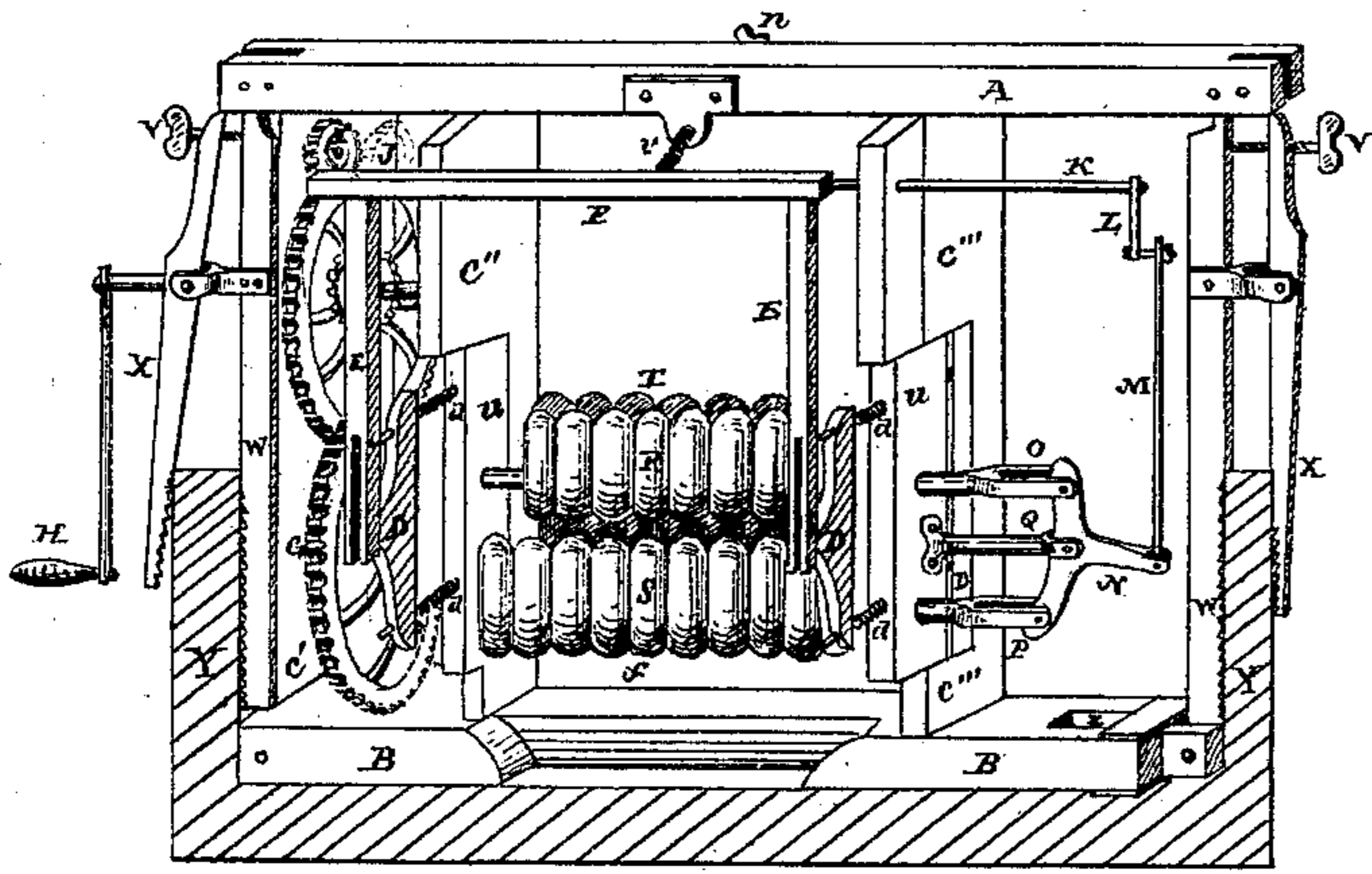


Fig. 3.

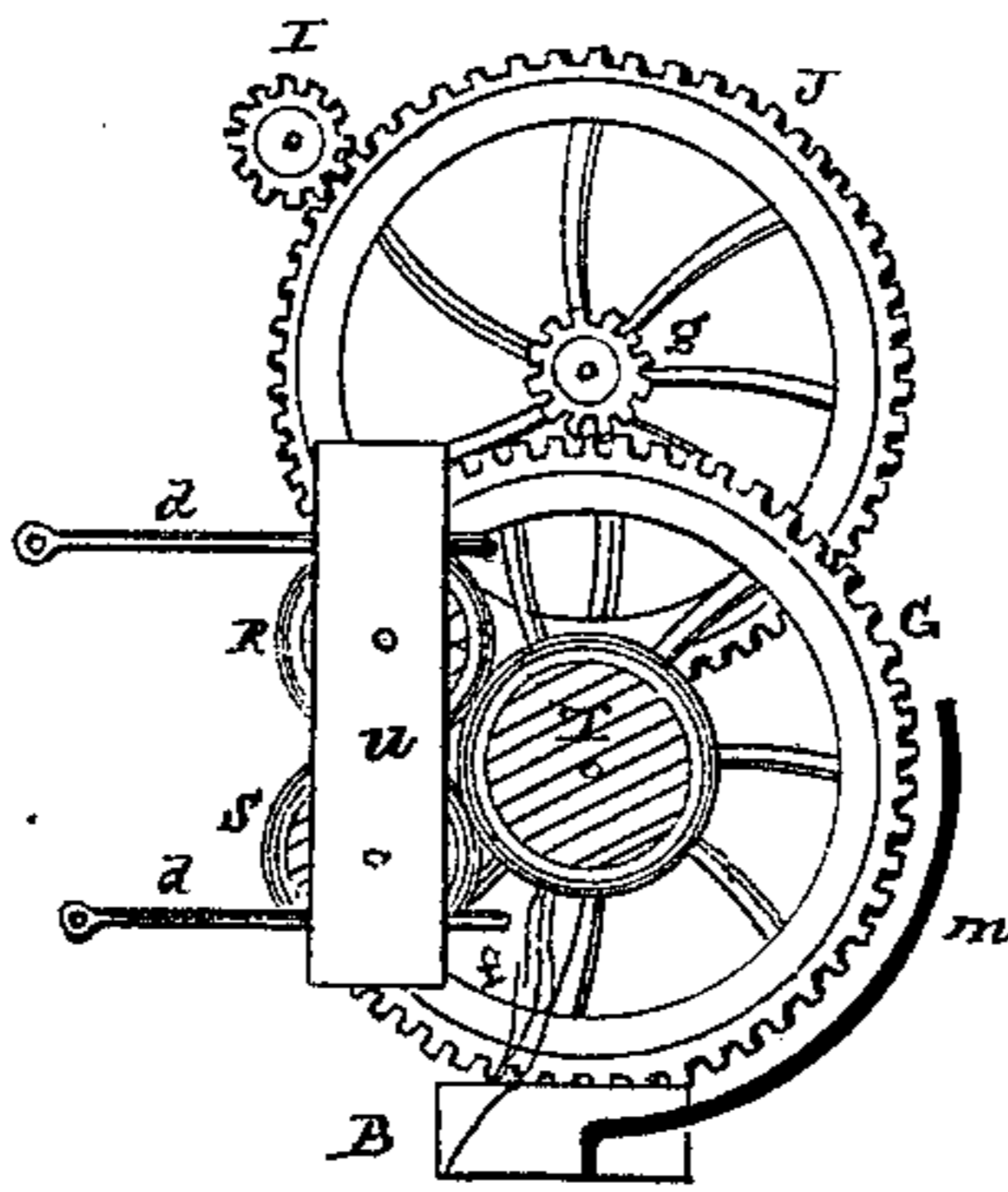


Fig. 2.

Witnesses.

Wm. B. Niley
Jacob Stauffer

Inventor.

Samuel Werntz

UNITED STATES PATENT OFFICE.

SAMUEL WERTZ, OF STRASBURG, PENNSYLVANIA, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO CHRISTIAN H. HARTMAN, OF SAME PLACE.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. 126,359, dated April 30, 1872.

Specification describing certain Improvements in Washing-Machines, invented by SAMUEL WERTZ, of Strasburg, in the county of Lancaster and State of Pennsylvania.

This invention relates to the manner of imparting a longitudinal rubbing and revolving motion to a pair of beaded rollers, in combination with a beaded feed-roller and gearing, together with the adjustable bearings, spring-pressure adjustment, and end clamps, by which the machine is attached to a tub or box when used.

The accompanying drawing and letters of reference fully illustrate the construction, in which—

Figure 1 shows the section Y of a tub or vessel, and the machine in perspective. Fig. 2 shows the relative position of the rollers and gearing. Fig. 3 shows the levers, spring, and adjusting-screw to regulate the pressure, a side elevation at the upright C'.

The frame consists of a base, B. This is boxed out at one end for a slotted sliding block, Z, to which the clamping arm W is connected below; also above to the cross-beam A. The bearings of the rollers R S are, in sliding blocks *u*, connected with the two central uprights C' C''. The outer upright C', with C'', forms the bearings for the gearing. The gearing consists of a cogged wheel, J, having a crank-handle, H, on its shaft, and a pinion, *g*, on the inner side, which pinion gives motion to the cogged wheel G, which is on the shaft that supports the larger or feed-roller T, and causes it to revolve slowly, and, by friction, imparts a revolving motion to the smaller pair of rollers R S. There is also a pinion, I, with a long shaft, K, driven by the cogged wheel J. This shaft K extends across beyond its outer bearing in C'', where it is provided with a crank-arm and pin, L, and a connecting-rod, M, which connects it to an oscillating arm, N, being T-shaped. This arm or rocker-shaft is centrally held by a pivot in a fixed fulcrum, Q. The two ends, at right angles to the stem N, have a hinged connection with a socket in which the shafts of the rubbers R S can turn. By this means one rubber is drawn out while the other is being pushed in, alternately rubbing over each other longitudinally, while, at the same time, they are free to revolve in their bearings and socket attach-

ment. The clamping device W X, with its binding-screw V on each end, is to secure it to the sides of the tub Y, in which the machine is set and adjusted. The clothing to be washed is fed over the larger roller T, and passes between the rubbers R S both backward and forward, at pleasure. These rollers R, S, and T have each a series of parallel rounded beads or rings, that are smooth and operate like the knuckles of the hands in their sliding or rubbing and revolving motion. To adjust the pressure to the bulk of the article submitted to be washed, the blocks or bearings *u* for the rubbers R S have guide-rods *d' d*, on which they slide, in front of the uprights C' C''. The upper rod *d'* passes through the spring-bar D and enters a slot in a vertical lever-arm, E, to which it is connected by a pivot, and forms the fulcrum. The lever-arms E are united above by a cross-arm, F. There is a long adjusting-screw, *n* U, under the top A of the machine which acts against the cross-arm F of the levers E to adjust their pressure against the spring-bar D, which bar also moves, on the guides *d' d*, against a coiled spring on each of said guides, and governs the resistance of the bearings for the rubbers so as to adjust the pressure. The cogged wheels may be incased below to prevent them from coming in contact with the clothing in the tub. *m* shows a shield which answers that purpose. The handle projects a sufficient distance so as to clear the outer side of the tub or vessel.

The machine being adjusted and clamped to the tub, the rollers immersed in the suds, is ready for operation. By introducing the article, as before mentioned, and turning the handle, the goods will be drawn back and forth by reversing the motion, and gently or strongly rubbed as it passes between the rubbers R S, according to the adjustment of the levers E E F. There is a cross-piece, *f*, under the roller T to prevent articles from turning under or mixing after being passed through.

I am aware that cam-wheels are employed to impart a rotating, and longitudinal, and oscillating motion to rubbers, differing substantially in the arrangement and manner of combination.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The hinged oscillating or rocker-arm N, in combination with the swivel or hinged sockets

O P on the ends of the rollers or rubbers R S, connecting-rod M, crank L, shaft and pinion K I, all arranged and operated in the manner and for the purpose specified.

2. In combination with the top A and base B of a washing-machine, I claim the arrangement of the clamps W X and set-screw V with the adjusting-block Z, all in the manner and for the purpose mentioned.

3. I claim the combined levers E E F, with

the spring-bar D, and spring guide-rods d' d , and sliding bearings u for the rubbers R S and adjusting-screw U, all arranged and operating jointly, substantially in the manner and for the purpose specified.

SAMUEL WERNTZ.

Witnesses:

WM. B. WILEY,
JACOB STAUFFER.