# J. W. Ricker,

## Washing Machine.

No. 112,382. Patented Mar. 7, 1871.

Fig. 1.

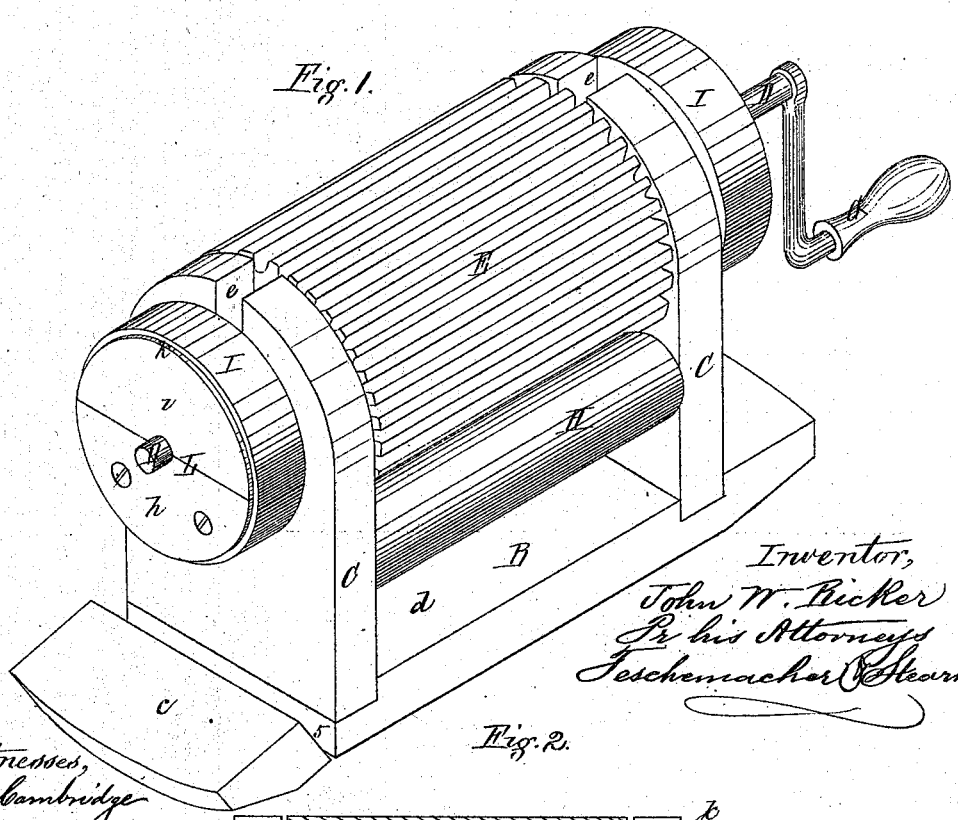


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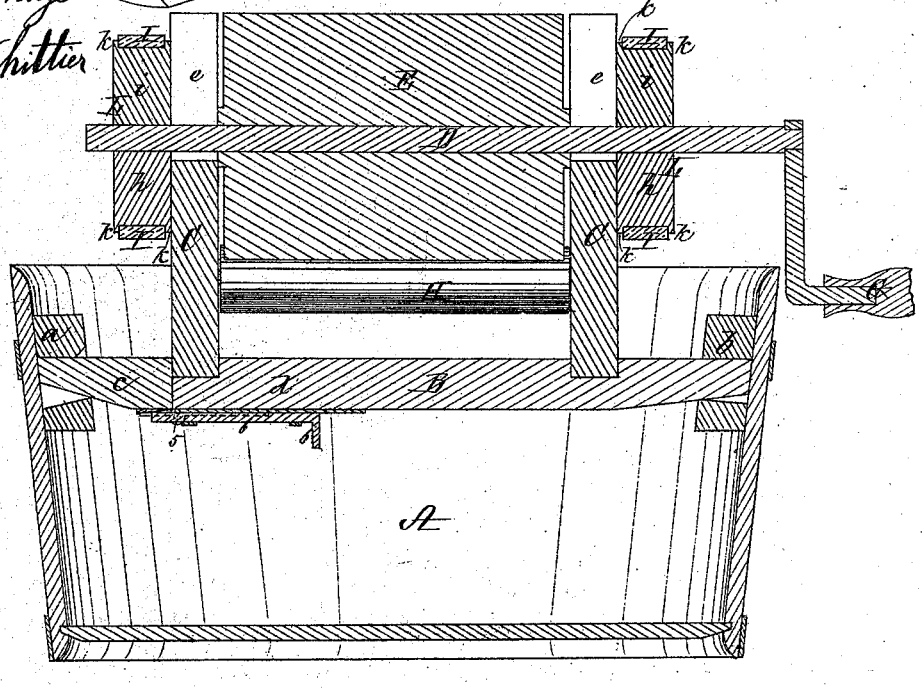
Fig. 2.



# UNITED STATES PATENT OFFICE.

JOHN W. RICKER, OF CHELSEA, MASSACHUSETTS.

## IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **112,382**, dated March 7, 1871.

*To all whom it may concern:*

Be it known that I, JOHN W. RICKER, of Chelsea, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Washing-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, making part of this specification, in which—

Figure 1 is a perspective view of a washing-machine having my improvements applied thereto. Fig. 2 is a longitudinal central section through the same, illustrating my improved method of securing it in place within a tub.

The first part of my invention relates to an improvement in the method of hanging the shaft of the main roller of a washing-machine; and consists in a socket or bearing composed of two pieces surrounded by an elastic band or spring, which allows the roller to yield, and serves to keep it down upon the article being washed, while the spring-band may be readily detached to allow the main roller to be raised or removed to liberate any clothes which may be obstructed in their passage through the machine; and my invention also consists in making the base or bottom of the machine in two pieces, pivoted together, forming a toggle-joint, which serves to snugly press the ends of the base within their cleats and against the sides of the tub, thus holding the machine securely in place.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawing, A represents an ordinary circular wash-tub, inside of which, at points diametrically opposite, are placed cleats *a b*, (of the form seen in cross-section, Fig. 2,) for the reception of the ends of the base B of the machine, the base being formed in two portions, *c d*, pivoted together at 5, by which a toggle-joint is formed, which, on pressure being applied down thereon, serves to bring the ends of the bed firmly against the inside of the tub within the cleats, thus holding the machine securely in position while being operated, whereby the vertical play and other objections incident to the method of securing a slotted bed-piece to the tub as heretofore are avoided.

To the bottom of the base B is secured a bolt, 6, by which the two portions *c d* may be rigidly connected when in the tub; but this bolt may be dispensed with, if desired.

From the top of the bed-piece B rise two vertical standards, C C, each of which is provided at its upper end with a slot, *e*, through which passes horizontally the shaft D of the main roller E of the washing-machine.

The exterior surface of the roller E is fluted or corrugated, and is revolved by hand-power (applied to the crank G) over four plain cylindrical rolls, H, which have their bearings in the vertical standards C, the clothes or other articles to be washed being passed between the fluted roller E and the plain rolls H thereunder.

On the outside of each standard are placed two semicircular pieces, *h i*, which form a socket or bearing, L, for the shaft of the main roller, the lower piece, *h*, being screwed or otherwise secured firmly to the standard, while the upper piece, *i*, is kept snugly down upon the lower piece, *h*, by an elastic strap or band, I, which surrounds them, a flange, K, extending around one or both sides of each of the pieces *h i*, to prevent the accidental displacement of the elastic band.

Each end of the shaft D passes between the two pieces *h i* on each side of a standard, a recess in each piece being formed for this purpose.

From the foregoing construction it will be evident that as the article being washed passes between the rolls H and the main roller E it is raised thereby, and its shaft D is pressed up against the under side of the upper semicircular piece, *i*, which, (being unattached to the standard C,) in turn, is raised against the resistance of the spring-band I, which yields to accommodate clothes of various thicknesses, but still keeps the upper piece, *i*, in a position to be instantly returned when the clothes have passed through the machine and the shaft has again come back to its place in the recess of the lower piece, *h*.

The spring-band above described is cheaper than the ordinary spiral spring heretofore used for this purpose, and is not so liable to get out of order as the latter, while it can readily be detached to allow of the main roller being raised or removed to liberate any article

should it be obstructed in its passage through the machine.

Furthermore, the resiliency of the rubber spring will not be impaired when stretched by clothes of considerable thickness passing under the main roller, whereas the metallic spiral spring above referred to is liable from this cause to become "set" and rendered unfit for further use.

Where the base made in one piece and having a slotted end is employed, after being snugly fitted to the cleats in the tub the water soon swells the parts, so as to render it very difficult to remove the machine when required; while, on the other hand, were the base of the old construction fitted loosely to the cleats, it would be unstable and play in a lateral or vertical direction, thus making the operation of washing inconvenient and laborious to perform.

*Claims.*

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

1. A socket or bearing, L, composed of two pieces, *h i*, applied to the shaft of a washing-machine, in combination with an elastic band, I, operating substantially in the manner and for the purpose set forth.

2. The base B, formed in two pieces, *c d*, pivoted together and applied to a washing-machine, substantially in the manner and for the purpose described.

Witness my hand this 2d day of February, 1871.

JOHN W. RICKER.

Witnesses:
N. W. STEARNS,
W. J. CAMBRIDGE.