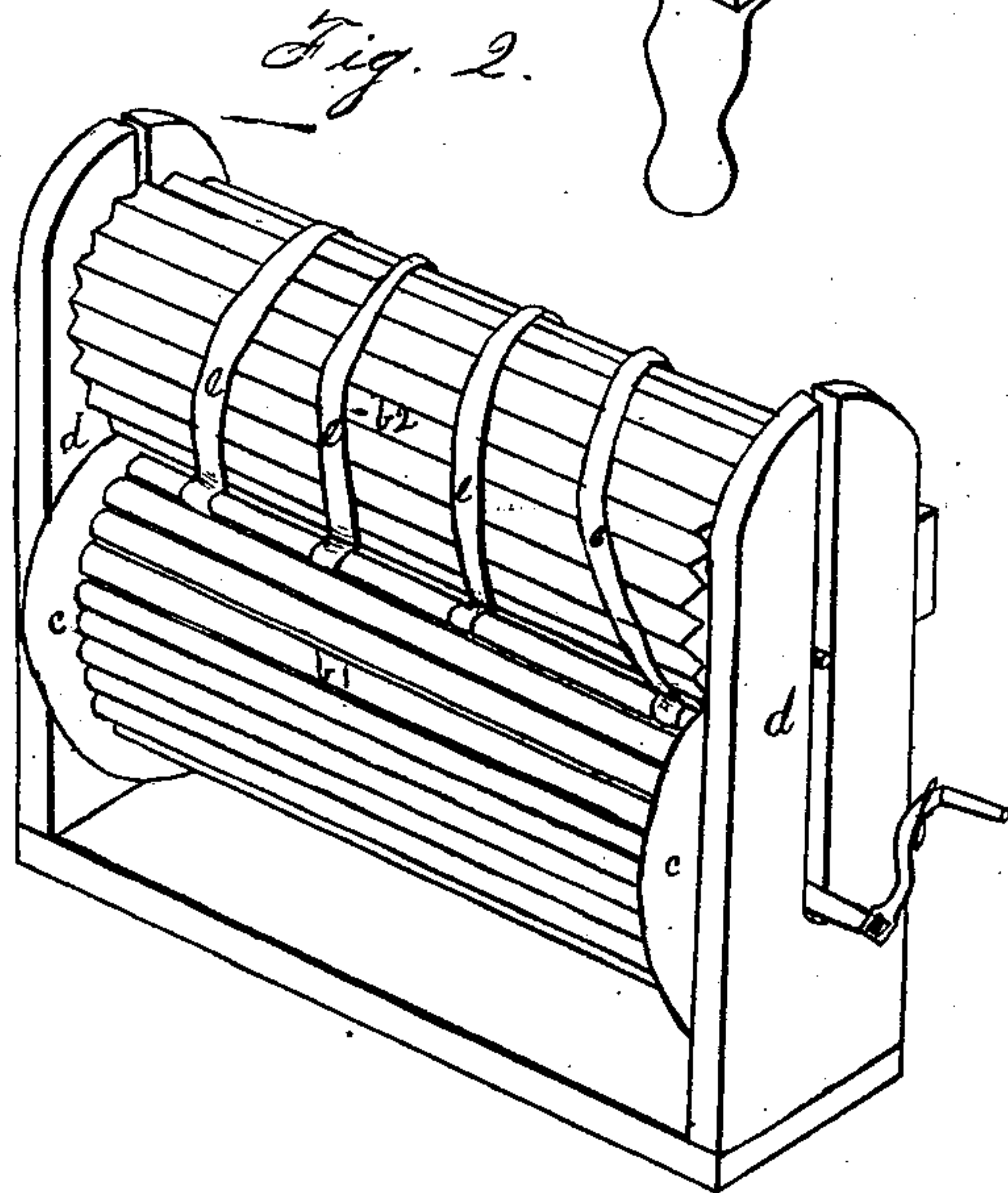
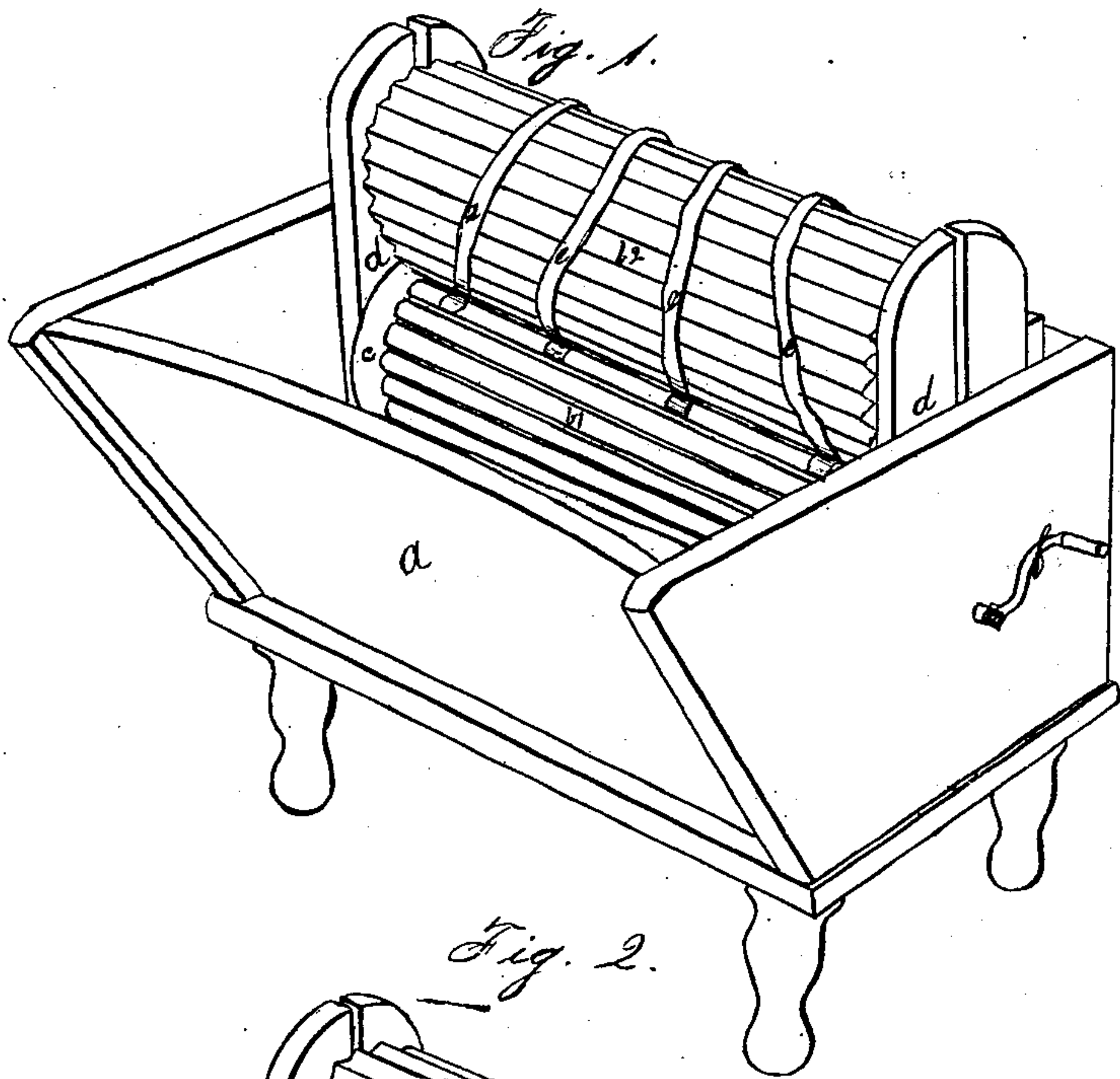


W. T. C. Runnells,

Washing Machine.

No. 102,714.

Patented May 3, 1870.



Witnesses
L. Curtis for
A. P. Kinney

Inventor
W. T. C. Runnells

United States Patent Office.

W. T. C. RUNNELLS, OF SEARSPORT, MAINE.

Letters Patent No. 102,714, dated May 3, 1870.

IMPROVED WASHING-MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

Be it known that I, W. T. C. RUNNELLS, of Searsport, in the county of Waldo and State of Maine, have invented a new and useful Machine for Washing Clothes; and I hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, in which—

Figure 1 is a perspective view.

Letter *a*, a tub.

*b*¹ *b*², corrugated rollers.

c c, guards.

d d, frame or slotted side pieces, in and to which the rollers *b*¹ *b*² are affixed by pivots in the ends.

e e e e, thin, flat strings attached to lower roller.

f, crank passing through lower roller and side pieces and side of tub.

Within a tub, made like tub *a*, or in any convenient form, I put the frame *d d*, in which are the rollers, one upon the other.

The lower roller, *b*¹, I make cylindrical and open through its corrugated surface, with a guard, *c*, upon each end, to prevent the clothes slipping over the ends. I make the lower roller one foot or more in diameter.

The upper roller, *b*², I make of heavy wood, or its equivalent, and self-adjusting, by reason of its own weight, and slotted side pieces, *d d*, in which it plays.

It should weigh twenty-five pounds or more, according to its length, and play between the guards *c c*.

When the clothes are to be put in, throw the loose end of the strings *e e e e* over the upper roller; put one end of the clothes upon the lower roller, where the strings are attached, and turn the crank, which operation draws the clothes between the rollers, winds them around the lower roller, winds the strings around the clothes, so as to hold them on, and effectually rolls, rubs, beats, and presses out the dirt, the tub being filled with warm suds to near the center of the lower roller, and thoroughly washes the clothes. To remove them from the roller when washed, turn the crank the other way.

What I claim, as my improvement in a washing-machine, is—

Attaching to the open or cage-roller flat tapes, by which, by the revolution of the rollers, the articles to be washed are held to the open roller, which is furnished with guards *c c*, as shown and described, in combination with tub *a*, with its corrugated end and slotted end pieces *d d*, adjusting-roller *b*², and crank *f*, arranged as described, for the purpose as set forth.

Dated at Searsport, Maine, December 17, 1869.

W. T. C. RUNNELLS.

Witnesses:

CHAS. F. GORDON,

AARON P. KINNEY.