A. O'DELL.

Washing-Machine.

No. 164,322. Patented June 8, 1875.

Fig. 1.

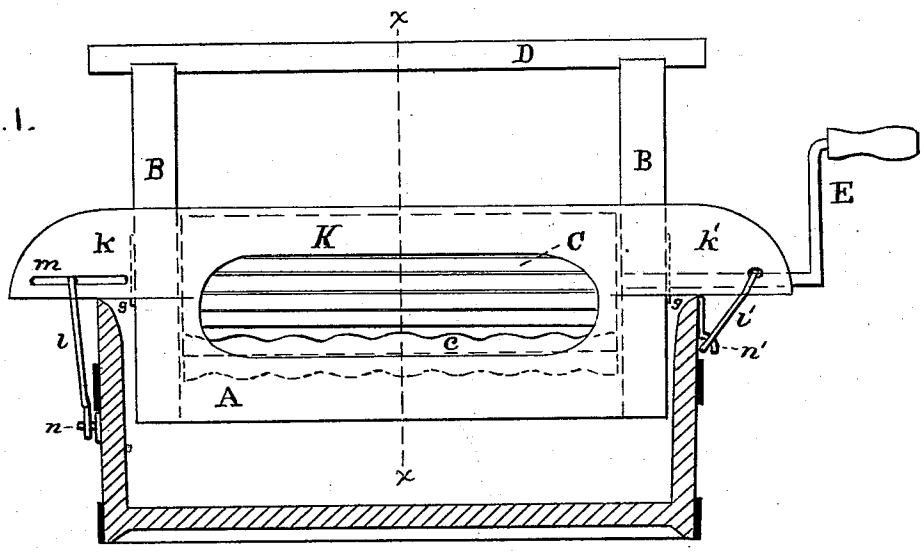


Fig. 2.

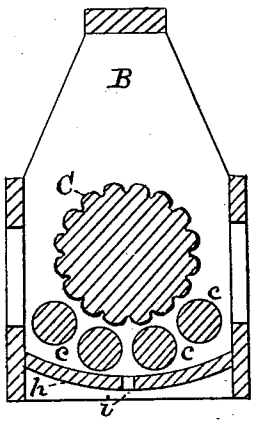
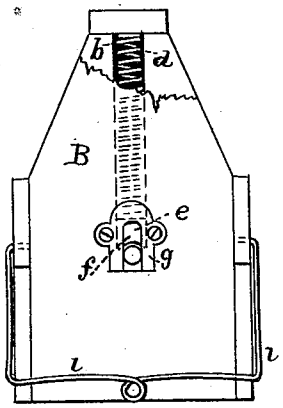


Fig. 3.



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UNITED STATES PATENT OFFICE.

ABIEL O'DELL, OF LIVERPOOL, OHIO.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **164,322**, dated June 8, 1875; application filed May 2, 1874.

To all whom it may concern:

Be it known that I, ABIEL O'DELL, of Liverpool, in the county of Medina and State of Ohio, have invented certain new and useful Improvements in Washing-Machines; and do hereby declare the following to be a full description of the invention, reference being had to the accompanying drawing forming a part of this specification.

My invention relates to washing-machines, and consists in certain improvements in the construction of the same, as hereinafter shown and described.

In the accompanying drawing, which illustrates my invention, Figure 1 is a side view of the machine attached to a tub, the latter being shown in section. Fig. 2 is a vertical section on line *x x* in Fig. 1. Fig. 3 is an end view, partly broken away.

In the drawing referred to, A designates the casing, and B the upright end pieces. C indicates the main roller, extending lengthwise within the casing, and having bearings in slots *f* in the said end pieces. The said roller is grooved or ribbed longitudinally, as shown in the drawing, and is provided with a crank, E, by which the machine is operated. A number of smaller rollers, *c*, are also placed within the casing, extending from end to end, and having bearings in the upright end pieces. These rollers *c* are corrugated or ribbed transversely and arranged on the arc of a circle, just below the main roller C, as shown in Fig. 2. The upright end pieces B are tubular, each having a circular vertical aperture, *b*, within which is placed a spring, *d*, supported by a block, *e*, resting on the shaft or journal of roller C; said end pieces have also the vertical slots *f* and metallic plates *g*, thus allowing the main roller an upward motion when the machine is operated. The bottom *h* is curvilinear, the lowest point being in the center, where it has the aperture *i* for an outlet. The side pieces K have the extensions *k k'*, which rest on the top of the tub when the machine is in position. The extensions *k* are provided with the slots *m*, in which pass the springs *l*, the said slots being intended to adjust the machine to tubs of various sizes. The machine is attached to a tub by putting the loop *l'* on the catch *n'*, placing the hooks of the spring *l* in the slots *m*, and pressing the eye of the spring downward and passing it onto the pin or catch *n*. The said spring *l* is of the form shown in the drawing, having right-angled arms, the upper extremities being hooked, the whole being of one piece of steel, forming a firm connection with the tub, and yet susceptible of extension. The small rollers *c* being corrugated or ribbed transversely, as shown, the clothes are conveyed more directly through under the main roller when machine is in operation, with but little liability to damage.

Having described my invention, I claim—

1. In a washing-machine, the combination of the side pieces having the extensions *k k'* and slots *m*, the rectangular-hooked spring-fastening *l*, pin *n*, loop *l'*, catch *n'*, and tub, constructed as shown.

2. In a washing-machine having the end pieces B, the combination of the main roller C, grooved lengthwise, as shown, and the small rollers *c*, ribbed or corrugated transversely, as shown, for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 16th day of April, 1874.

ABIEL O'DELL.

Witnesses:

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N. J. PRICHARD.