

United States Patent Office.

C. H. KNOX, OF MOUNT PLEASANT, IOWA.

Letters Patent No. 61,343, dated January 22, 1867.

IMPROVED WASHING MACHINE.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that I, C. H. KNOX, of Mount Pleasant, in the county of Henry, and State of Iowa, have invented a new and useful improvement in Washing Machines; and I do 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 and letters of reference marked thereon, making a part of this specification, in which—

Figure 1 is a longitudinal elevation of my improvement, including a part of the washing box, to which it is attached.

Figure 2 is a sectional elevation of the same, including the washing apparatus.

Figure 3 is a sectional elevation taken transversely through the red lines *x x*.

The nature of my invention consists, first, in clamping the gearing frame securely together, in order that the hot water used in the washing box will not so warp the lid of the box as to change the position of the gearing, and render it inoperative, in combination with the described arrangement and application of a friction-roller to operate against the reciprocating segment and prevent the cogs from becoming detached from the pinion which operates the washing apparatus. The object to be gained by the use of my device is, first, the washing box can be filled alternately with hot and cold water, and not warp or curve the lid so as to affect the gearing; which is not the case when the gearing is not clamped together, for when the lid is made convex on the top, as when cold water is used, the segment is thrown away from the pinion, and when hot water is employed the top of the lid becomes convex, causing the cogs of the gearing to fit so closely that the washing apparatus cannot be used; second, in consequence of the outer sides of the frame being made solid, the gearing attached thereto cannot either get out of place or interfere with the articles to be washed.

In order that others skilled in the art may be able to construct and use my device, I will describe the same.

A is a section of the lid of the common washing machine, in which is permanently attached the bearing, B, through which passes the vertical shaft C. F is the plate, which is let into the lid A, that supports the collars C, upon which the hollow shank I, of the pinion H, rests; the shaft C being prevented from falling down by means of the pin J passing through C, at the top of pinion H. K is the plate, which is secured to lid A, and supports the lower end of the shaft N, to which the friction-roller L is attached; the upper end of the shaft being supported by the projection M, on the part D, similar to the projection O, on D, which supports the upper end of shaft C. It will be seen that the roller N fits closely against the segment P, and will prevent the pinion H from getting out of gear. The segment P is hung upon the shaft R, and may have the proper reciprocating motion by means of the lever, shown at Q, fig. 1. Fig. 3 represents the extremities of the frame, D D', securely clamped together by means of the bar T and screws S. The object of this clamp is to prevent the spreading of the frame D D' by the warping of the lid A. E shows the enlarged parts of the frame D D', used for the purpose of covering the pinion H and friction-roller L, so that they may not become entangled with clothing. W shows what I term a socket-plate, to which the washing apparatus Y Z is attached. & is the nut which is secured to the part Y, and holds the shaft C' to the reverse rotary apparatus Y Z.

Operation: When my device has been constructed as set forth, it can be operated similar to the same character of machines now in use. The handle Q, attached to the segment P, can be grasped by the hand, and worked back and forth in the customary manner, which will give the required motion to the parts Y Z.

Having thus fully described my device, what I claim and desire to secure by Letters Patent of the United States, is—

The bolt R, in combination with the clamp T, friction-roller L, plates K and F as set forth.

Witnesses:

GEO. L. CHAPIN,

A. HAYWARD.

C. H. KNOX.