

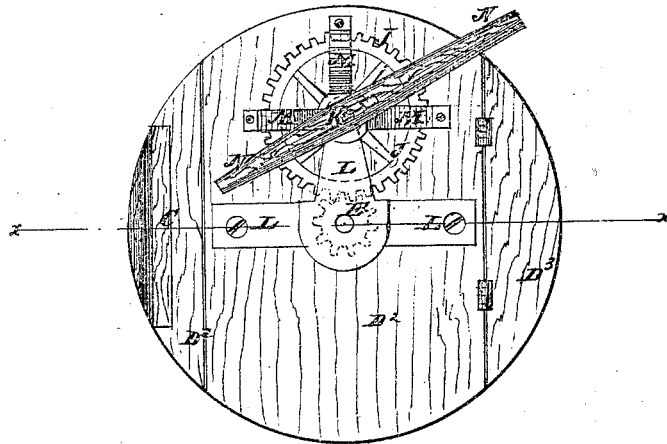
JAMES M. KIMBALL.

Improvement in Washing-Machines.

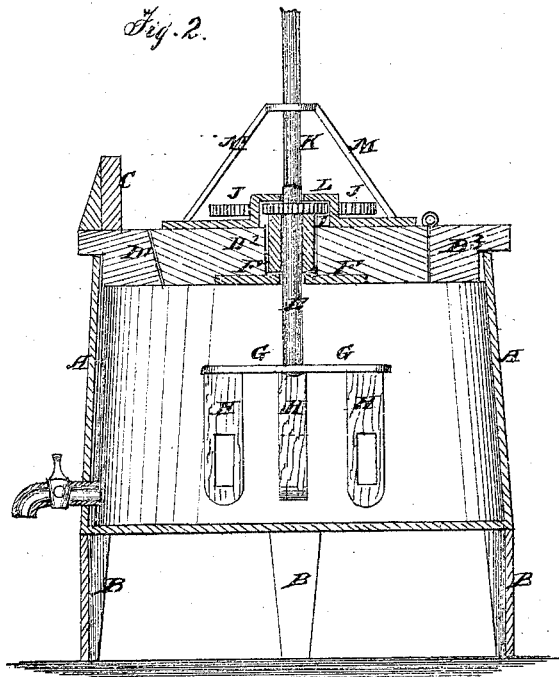
No. 114,305.

Patented May 2, 1871.

*Fig. 1.*



*Fig. 2.*



WITNESSES:  
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# United States Patent Office.

JAMES MUNROE KIMBALL, OF WOODSTOCK, ILLINOIS.

Letters Patent No. 114,305, dated May 2, 1871.

## IMPROVEMENT IN WASHING-MACHINES.

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, JAMES MUNROE KIMBALL, of Woodstock, in the county of McHenry and State of Illinois, have invented a new and useful Improvement in Washing-Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a top view of my improved machine.

Figure 2 is a detail vertical section of the same taken through the line *x x*, fig. 1.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved clothes-washing machine which shall be simple and inexpensive in construction, convenient in use, easily operated, and effective in operation, washing the clothes quickly and thoroughly, and without injuring them in the least; and

It consists in the construction and combination of the various parts of the machine, as hereinafter more fully described.

A is the tub or body of the machine, which is made of staves, and is supported upon legs B of such a length as to raise the machine to a convenient height.

Two or more of the staves of the tub A project above the top of said tub, and to them is attached a board, C, for the attachment of a wringer when required.—

D<sup>1</sup> D<sup>2</sup> D<sup>3</sup> is the cover, which is made in three parts, the narrow side parts D<sup>1</sup> D<sup>3</sup> being attached permanently to the top of the tub A, and the central main part D<sup>2</sup> being hinged at one of its side edges to one of the parts D<sup>1</sup> D<sup>3</sup>, as D<sup>3</sup>.

E is a short vertical shaft, which passes down through the center of the part D<sup>2</sup> of the cover, to which it is secured by a collar-box, F, secured to the lower side of said cover by screws or bolts.

To the lower end of the shaft E are attached the centers of two cross-arms or bars, G, one of which is made longer than the other.

To the four ends of the arms or bars G are attached the upper ends of the bars or paddles H, which are slotted or mortised longitudinally, as shown in fig. 2, so that as the said arms or paddles are carried around through the water by the revolution of the shaft E the water may pour through the said slots or mortises upon the clothes, and thus hasten the operation of cleaning them.

The slots or mortises in the arms or paddles H enable them to pass through the water more easily, as they do not have to push so large a body of water before them.

To the upper end of the shaft E is attached a

small gear-wheel, I, the teeth of which mesh into the teeth of the larger gear-wheel J attached to the vertical-shaft K.

The upper end of the central shaft E passes through the center of the three-armed plate L, so that the said shaft may have a bearing above and below the small gear-wheel I.

The three-armed plate L is secured to the upper side of the part D<sup>2</sup> of the cover by two screws or bolts, which pass through the ends of its opposite ends.

The shaft K, just above the gear-wheel J, passes through and revolves in the end of the third arm of the three-armed plate L.

The lower end of the shaft K revolves in a socket or step in the part D<sup>2</sup> of the cover, so that it may have a bearing above and below the gear-wheel J.

The shaft K is further supported in a vertical position by the three-armed brace M.

The upper end of the shaft K is squared off for some inches, and is made slightly tapering to receive the hand-bar or lever N, which has two or more holes of different sizes formed in it near its center, so that by passing the upper end of the shaft K through a larger or smaller hole of the bar or lever N the said bar or lever may be adjusted higher or lower, according to the height of the operator.

The machine is operated by oscillating the lever N, or by turning it through an entire revolution.

The shaft K should be made of such a length as to support the part D<sup>2</sup> of the cover, and the attached gearing when turned back, for putting in and taking out the clothes.

The bar or lever N may be used as a clothes-stick for passing the clothes to the wringer when a wringer is used.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

1. The slotted or mortised bars or paddles H and cross-arms G, in combination with the vertical shaft E to which they are attached, and with the tub A in which they work, substantially as herein shown and described, and for the purpose set forth.

2. An improved washing-machine formed by the combination of the tub A B, cover D<sup>1</sup> D<sup>2</sup> D<sup>3</sup>, short vertical central shaft E, collar-box F, cross-arms G, slotted or mortised arms or paddles H, gear-wheels I J, vertical shaft K, three-armed plate L, brace M, and adjustable bar or lever N with each other, substantially as herein shown and described, and for the purpose set forth.

JAMES MUNROE KIMBALL.

Witnesses:

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