No. 647,306. Patented Apr. 10, 1900.

H. KLEIMAN.

WASHING MACHINE.

(Application filed Mar. 25, 1899.)

(No Model.)

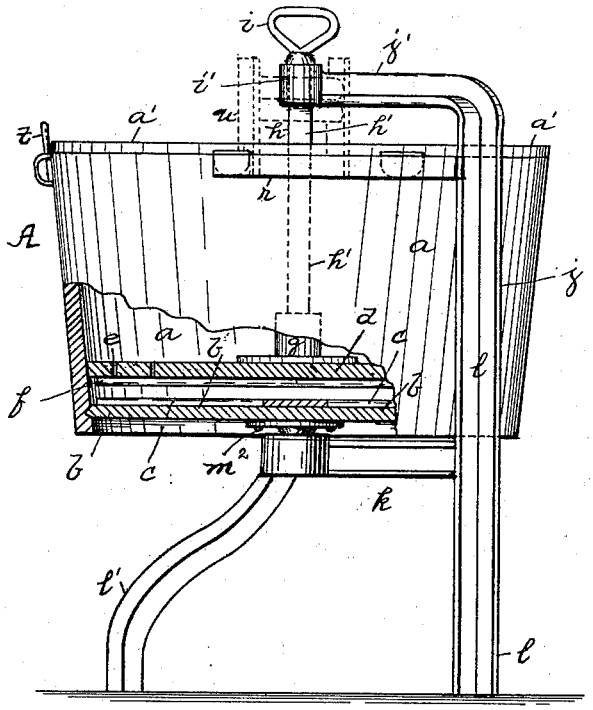

Fig. 1.

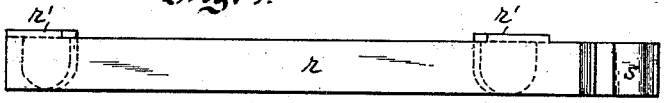

Fig. 2.

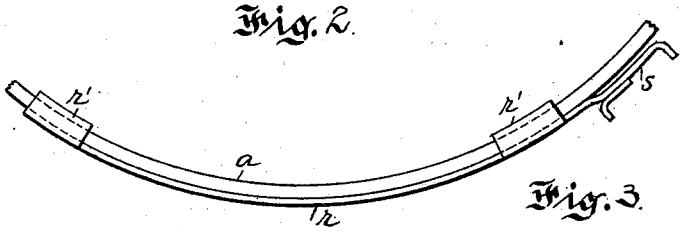

Fig. 3.

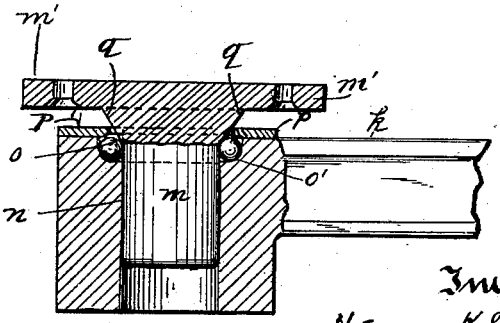

Fig. 4.

Witnesses:-
Lindsay & B. Little
Bernard F. McAlroy.

Inventor.
Henry Kleiman,
By J. N. Cooke
Attorney.

UNITED STATES PATENT OFFICE.

HENRY KLEIMAN, OF ALLEGHENY, PENNSYLVANIA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 647,306, dated April 10, 1900.

Application filed March 25, 1899. Serial No. 710,415. (No model.)

To all whom it may concern:

Be it known that I, HENRY KLEIMAN, a citizen of the United States, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, have invented a new Improvement in Washing-Machines, of which the following is a specification.

My invention relates to washing-machines and has special reference to the class of washing-machines which are operated by an oscillating movement of the tub or receptacle, such as is shown in United States Letters Patent granted to me on May 2, 1899, No. 624,220.

My invention consists, generally stated, in the novel construction, combination, and arrangement of parts, as hereinafter more specifically set forth and described, and particularly pointed out in the claims.

To enable others skilled in the art to which my invention appertains to construct and use the washing-machine, I will describe the same more fully, referring to the accompanying drawings, in which—

Figure 1 is a side view of my improved washing-machine. Fig. 2 is a side view of the locking-bar. Fig. 3 is a top view of the locking-bar, and Fig. 4 is an enlarged detail sectional view of the socket-bearing for holding the tub or receptacle.

Like letters herein indicate like parts in each of the figures of the drawings.

My improved washing-machine A is provided with the clothes-receptacle or tub *a*, having the cover *a'* and the bottom *b* therein, the upper face of which is provided with the radial ribs *c* thereon to form the lower rubber. Fitting within the tub *a* is the upper rubber *d*, which is provided with a series of perforations *e* therein and has radial ribs *f* secured to the under surface thereof. A boss *g* is secured to the upper surface of the upper rubber *d* and is provided with a square hole therein for engaging with the square portion *h'* of a detachable pin *h*. The detachable pin *h* is provided with a handle *i* at its upper end and the square portion *h'* thereof fits within a square opening *i'* on the outer end of the upper horizontal portions *j'* on the supporting-frame *j*, which acts to support the machine A, and this supporting-frame *j* is also provided with the lower horizontal portions *k* and the standards *l*, which are at right angles and opposite to legs *l'*, connected below the lower horizontal portion *k*.

Secured to the under surface of the bottom *b* is the pin or stud *m*, which is held to said bottom *b* by means of screw-bolts m^2, passing through a flange *m'* on the stud *m* and engaging with said bottom *b*. The stud *m* fits within a socket *n*, formed within the lower horizontal portion *k* of the frame *j*, and a series of metal balls *o* are placed within a seat *o'* in the upper end of said opening *n*, which are adapted to bear against the stud *m*. These balls *o* are held in place by means of a plate *p*, secured to said horizontal portion *k* and fitting over said balls *o* and seat *o'*. The upper portion of said stud *m* is inclined or tapered upwardly and outwardly toward the flange *m'*, as at *q*, to take up any wear upon the stud *m*.

Fitting around the top of the tub *a* is the locking-bar *r*, which conforms to the curve or circumference of the tub *a* and is provided with the depending clips or hangers *r'* thereon for fitting over the top edge of the tub *a*. The locking-bar *r* is preferably made of metal and is provided at one end with the bifurcated portion *s*, which is adapted to fit around the vertical standard *l* on the supporting-frame. A handle *t* is secured to the tub *a* for operating or turning the same.

The operation of my improved washing-machine is as follows: After the tub *a* is inserted within the supporting-frame *j* by means of the stud *m* on the bottom *b* engaging with the socket *n* in the lower horizontal portion *k* of said frame *j* the tub *a* is then filled with the required amount of hot soapy water and the clothes to be washed are placed within the tub *a*. After this is done the upper rubber *d* is inserted within the tub *a*, with its radial ribs *f* resting tightly and solidly down upon the clothes therein, when the cover *a'* can be placed in position over the tub *a*. The square pin *h* is then inserted through the opening *i'* on the upper horizontal portions *j'* of the frame *j* and through the cover *a'* and within the square opening of the boss *g* on the upper rubber *d*, so as to hold said upper rubber *d* stationary, when the machine is ready to wash the clothes therein. The operator by grasping the handle *t* and giving the tub *a* quick turns half-way around in one direction

and reverse turns in another direction for a short time the clothes within the tub *a* will become thoroughly washed. After the clothes are washed and it is desired to remove the same for any purpose all that is necessary is to lift or remove the detachable pin *h* by means of its handle *i* from engagement with the square socket or opening in the boss *g* and the opening *i*, so freeing the cover *a'* and upper rubber *d* and permitting them to be removed from the tub *a*. The locking-bar *r* can then be inserted to place, as shown in dotted lines, Fig. 1, by allowing the bifurcated portion *s* thereon to fit around one of the vertical standards *l* and the clips or hangers *r'* to fit over the top edge of the tub *a*, so locking the tub *a* and preventing movement of the same. The washed clothes can then be taken out of the tub *a* for bluing or drying, as desired. If a wringer is used, it can be firmly secured to the locking-bar *r*, as shown at *u* in dotted lines, Fig. 1, and this locking-bar *r* also enables the tub *a* to be locked, so that it can be tilted for emptying or cleaning the same or used for any other purpose desired. The cone *q* of stud *m* on the bottom *b* of the tub *a* engaging with the balls *o* in the lower horizontal portions *k* of the frame *j* permits the free and easy movement of the tub *a* and enables the same to be easily removed and inserted at will within the frame *j* for any purpose desired.

It will thus be seen that my improved washing-machine is cheap and simple in its construction and operation. It is strong and durable in its parts and will not easily get out of order.

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

1. In a washing-machine, the combination of a supporting-frame, a clothes-receptacle or tub journaled within said supporting-frame, and a locking-bar secured to said tub and provided with a bifurcated end portion for engaging with said frame.

2. In a washing-machine, the combination of a supporting-frame, a clothes-receptacle or tub journaled within said supporting-frame, and a locking-bar having clips or hangers thereon for engaging with the top edge of the tub and provided with a bifurcated end portion for engaging with the supporting-frame.

In testimony whereof I have hereunto set my hand at Pittsburg, in the county of Allegheny and State of Pennsylvania, this 20th day of February, A. D. 1899.

HENRY KLEIMAN.

Witnesses:
J. N. COOKE,
B. F. MCELROY.