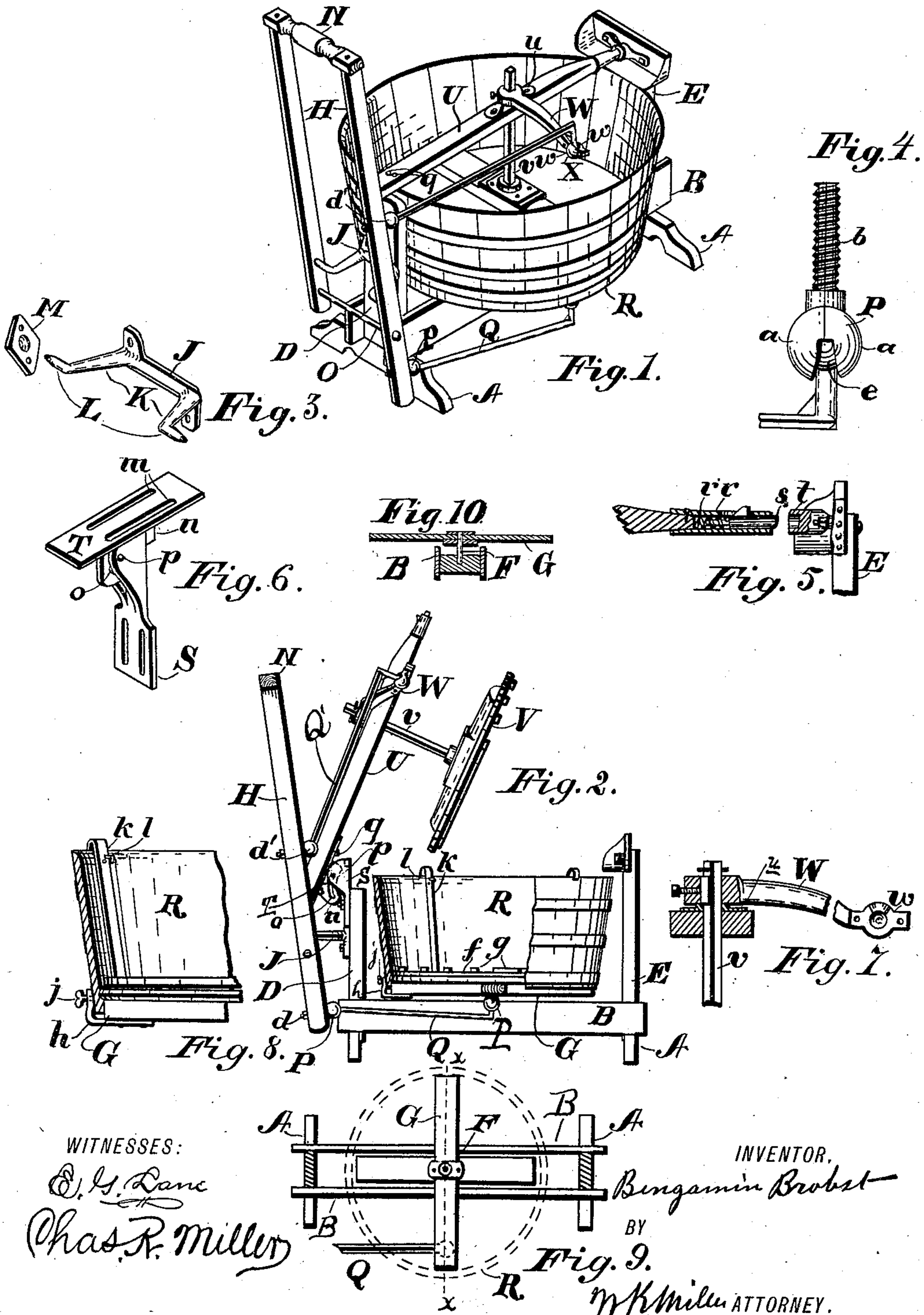


(No Model.)

B. BROBST.
WASHING MACHINE.

No. 400,741.

Patented Apr. 2, 1889.



UNITED STATES PATENT OFFICE.

BENJAMIN BROBST, OF COLUMBUS, OHIO.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 400,741, dated April 2, 1889.

Application filed May 1, 1888. Serial No. 272,452. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN BROBST, a citizen of the United States, and a resident of Columbus, county of Franklin, State of Ohio, have invented a new and useful Improvement in Washing-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

My invention relates to improvements in washing-machines; and it consists of the construction hereinafter described, and set forth in the claim.

Figure 1 is a view in perspective of a washing-machine illustrating my invention. Fig. 2 is a side elevation having a portion of the tub removed and the rubber raised. Fig. 3 is a view in perspective of the actuating-lever support. Fig. 4 is an elevation of ball and socket. Fig. 5 is a sectional view of cross-bar-locking device. Fig. 6 is a view in perspective of cross-bar hinged to standard. Fig. 7 is a view of the arm by which the washer-head is rotated. Fig. 8 is a fragment of tub, showing the manner of securing the tub to rotary frame. Fig. 9 is a plan view of the bottom or supporting frame; and Fig. 10 is a vertical sectional view of the same, taken through line *x x*, Fig. 9.

Similar letters of reference indicate corresponding parts in all of the figures of the drawings.

The supporting-frame in this case is composed of foot-pieces A, sills B, and standards D and E. A spindle, F, is suitably secured between these sills and affords an axis for a rotary frame, G. A bracket, as J, (shown in Fig. 3,) is bolted to the standard D, said bracket having outwardly-projected arm K, terminating in conical or tapered ends L, on which is pivotally secured the actuating-lever H. A conical metal box, as M, may be placed on said lever. If, as is shown in this case, two parallel levers are used, the upper ends are secured to a handle-bar, N, and the lower ends secured on the tapered ends L of the bracket J by the rod O, having a threaded end and a nut by which the levers may be drawn together to take up any looseness that may be caused by the wearing of the parts.

At the lower end of the lever H there is provided a spherical socket, as P, (see Fig. 4,) said socket formed of two semi-spherical parts, as *a*, having an annular thread, *b*, formed on and encircling the two parts of the shank, and near the lower end of the actuating-lever H a similar spherical socket, P, is secured to said lever, having, in addition to the thread, as shown on socket *a*, a tightening-nut, *d*. The two sockets are connected by a coupling-rod, Q, terminating at each of its ends in a ball or sphere, as *e*, adapted to be embraced by the spherical socket P, formed by the parts *a*, thus connecting the lever H with the oscillating frame G, to which the tub R is secured by the clasp *h* and thumb-screw *j*. Inside of said tub is provided a false or rubber bottom, as *f*, having cleats *g* secured thereto. To hold said bottom in position, a strip or rod, as *k*, is provided, secured to said bottom, and removably secured to the top of the tub by a hook or pin, as shown at *l*. By the use of said rods and fastening the bottom *f* may be submerged and held at the bottom of the tub, and when the wash is to be removed the rods *k* may be released from the tub, when the bottom *f* will float upwardly, raising the wash above the water, so that it may be removed without putting the hand into the water.

To the standard D there is adjustably secured a hinge-piece, S, to which is pivotally secured a co-operative part, T, having slots *m*, and a downwardly-projected wing, *n*, having a circular slot, as *o*, through which the pivot *p* is passed to secure the two parts of the hinge together.

The cross-bar U is secured to the upper part of the hinge T by bolts *q*, passed through the slot *o* and the bar, by means of which the bar may be adjusted across the tub. On the free end of the bar there is a ferrule, *r*, inclosing a coil-spring, *r'*, and locking-bolt *s*, by which the bar may be secured to catch-piece *t*, which is secured to the standard E.

About centrally over the tub R, in the cross-bar U, is secured a journal-box, *u*, through which the vertical shaft *v* is passed. On the lower end of said shaft is secured the rubber V, and to the upper end is adjustably secured the arm W. On the outer end of said arm is

provided a spherical socket, X, composed of two hemispherical portions, *w*, secured together, forming a socket, in which is placed the ball *e* on the end of rod Q'. The other
5 end of the rod is secured to the lever H by the socket *d'*.

By observing the construction as shown in Fig. 1 it will be seen that to vibrate the lever H over its pivotal connection with the stand-
10 ard D the tub R and the rubber V will be rotated in opposite directions.

The object of the ball-and-socket connections, as shown, is to provide a large wearing-surface and the connection of the parts, by
15 means of which greater freedom of movement may be secured.

It will be seen that by the peculiar construction of the hinge connecting the standard and the cross-bar the said bar may be raised
20 and at the same time have an endwise movement by means of the part T sliding upon

the pivot *p* into the locking position shown in Fig. 2. To replace the head, the bar is raised slightly and then permitted to swing over the tub into position, as shown in Fig. 1. 25

Having thus fully described the nature and object of my invention, what I claim, and desire to secure by Letters Patent, is—

The combination of the supporting-frame having a standard, as D, the hinge-piece S, 30 secured to said standard, hinge-piece T, pivotally secured to piece S, said piece T having a downwardly-projected wing, *n*, having therein a circular slot, O, and the cross-bar U, substantially as described, and for the pur- 35 pose set forth.

In testimony whereof I have hereunto set my hand this 28th day of April, A. D. 1888.

BENJAMIN BROBST.

Witnesses:

W. K. MILLER,

CHAS. R. MILLER.