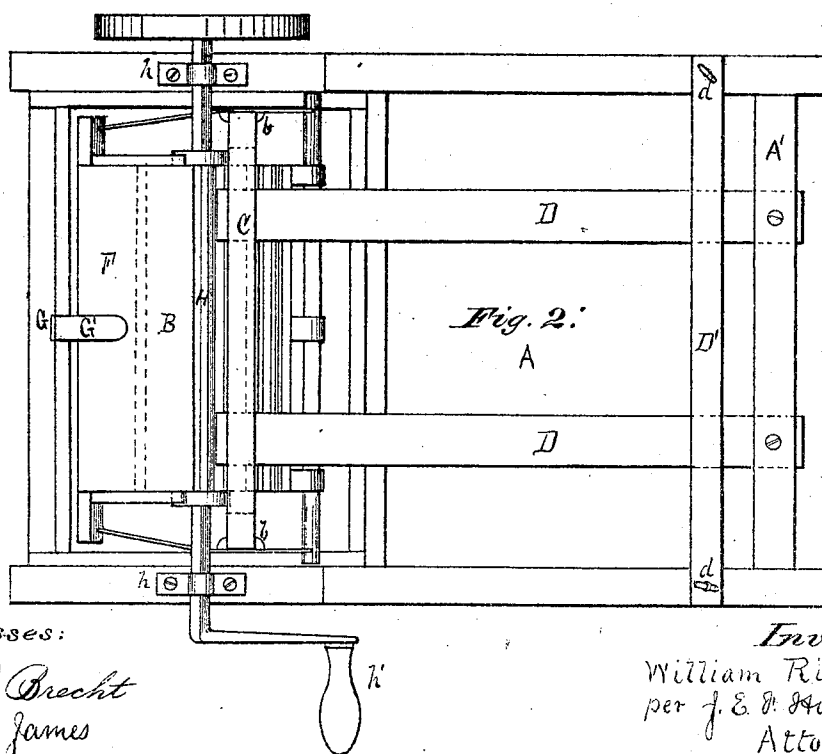
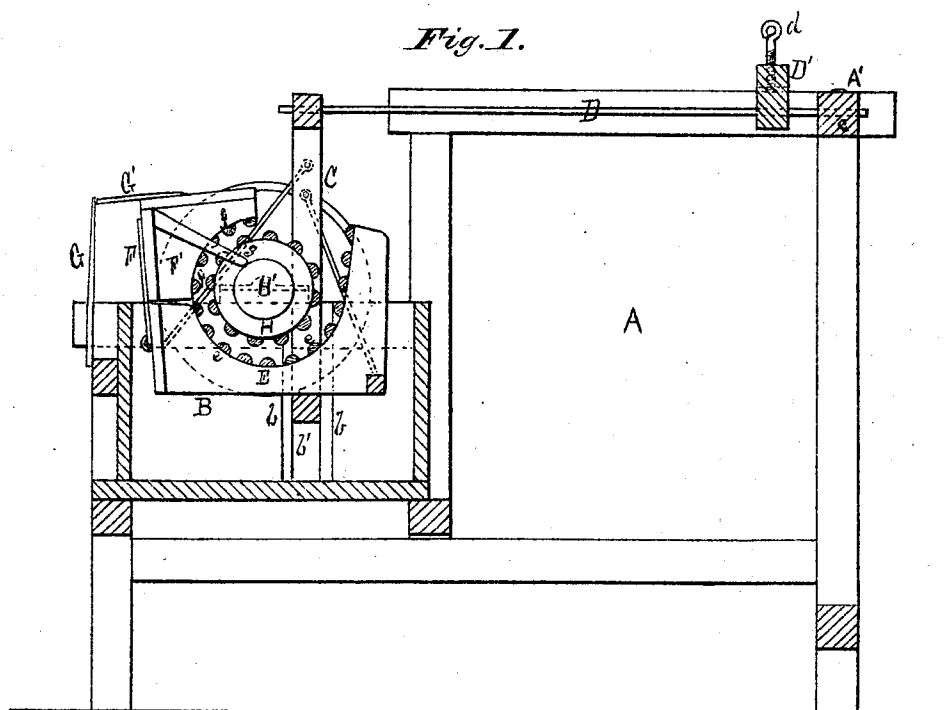


WILLIAM RILEY.

Improvement in Washing Machines.

No. 123,730.

Patented Feb. 13, 1872.



Witnesses:

J. C. Brecht
Edmn James

Inventor:

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per J. E. D. Holmead
Attorney.

UNITED STATES PATENT OFFICE.

WILLIAM RILEY, OF MADISON COUNTY, MISSISSIPPI.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. 123,730, dated February 13, 1872.

To all whom it may concern:

Be it known that I, WILLIAM RILEY, of the county of Madison and State of Mississippi, have invented certain new and useful Improvements in Washing-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing and the letters of reference marked thereon making part of this specification, in which—

Figure 1 is a longitudinal sectional view. Fig. 2 is a top-plan view.

The mechanism of my present improvement in its main features closely resembles that of the machine embraced in and covered by former Letters Patent of the United States No. 101,511, and which were issued to me April 5, 1870.

The sash-frame, which carries the lower rubber, travels in suitable bearings on the sides of the box, and is supported and sustained by adjustable plate-springs, as in the patent referred to. But, instead of the under rubber being a horizontal plate, as in that patent, in the present improvement it consists of a series of circular slats or rollers, arranged in the form of an arc of a circle, with a deep inclined back constructed of like slats or rollers. The upper rubber in my present improvement is also circular, and is constructed of a series of circular slats or rollers, and is secured to a suitable axle-shaft, which is journaled at the opposite sides of the frame, and which, through a crank-handle, imparts to the upper rubber a rotary movement; and it is this rotary instead of the reciprocating movement of my former patent which constitutes the chief essence and advantage of my present improvement. My invention also consists in providing a breast with a spring-support hinged to the upper face of the lower rubber, and so relatively arranged that it shall partially encircle the upper rubber, acting as if it were a jointed section or continuation of said lower rubber.

The construction and operation of my invention are as follows: A is an open frame, and which acts as a support for the entire mechanism. B is the box that contains the water, and is constructed in the usual manner, and of any suitable material. This box may be of any desired form and dimensions; but I usually make it rectangular, and of about twenty by twenty-four inches, and with a depth of

about ten inches. On the opposite sides of the frame are secured parallel slats *b b*, so arranged as to leave a vertical groove, *b'*, and in which groove travels the frame C. This frame C is nearly square, of the open-sash form, and is constructed of any suitable material. The width of this frame and the length of the box are relatively such as to permit of the insertion of the former in the grooves *b' b'*, and to insure its free vertical movement therein. This sash is supported by horizontal plate-springs D D, the ends of which are secured in mortises *c c* in the upper cross-bar A' of the frame A. These plate-springs D D also pass through mortises in the bar D', which is secured immediately in front of the cross-bar A', and which is secured to the frame by means of two thumb-screws, *d d*. These screw-bearings *d d* permit of the bar D' being moved to and fro horizontally, and also of its vertical adjustment. At the base of the sash-frame C is secured the lower rubber E. This rubber consists of a series of rollers or circular slats, *e e*, and is of the form or contour shown clearly in Fig. 1. It extends in the line of the arc of a circle from a point nearly flush with the front of the box toward the diagonal section of the same, terminating in a slightly-receding back, which extends some distance above the box. To the front face of this lower rubber E, or to the front of the box, is attached, so as to secure a hinged-joint connection, the breast F. This consists of an open right-angular frame, at or near the ends of which are secured concaved bearing-plates F' F', in which are secured rollers *f f* similar to the rollers *e e* of the lower rubber E. G is a spring, secured to the frame or rubber E, and so arranged that, in connection with the projecting arm G' attached to the breast, its tension shall constantly be employed so as to force the concaved face of the breast F toward the upper rubber H, but being prevented from direct contact therewith by the arms *g g*, causing the breast to thus closely encircle a portion of the upper section of the rubber. H is the upper rubber, and is a roller or drum composed of a series of small roller or circular slats, and is supported on an axle-shaft, H', journaled at suitable bearings *h h* on the sides of the frame, and provided with a crank-handle, *h'*. Instead of the bottom of the box B being flat, it may be concaved, as clearly shown in dotted lines

in Fig. 1, and which requires less water for the machine to be equally effective.

From the foregoing full and detailed description, the operation of the machine will be readily understood. The box B is filled with water to the usual depth and the crank-handle *h* turned. As the upper rubber H revolves, the clothes are wound thereon, the lower rubber E and breast F yielding automatically through the action of their respective springs D D and G, so as to allow of the passage of the clothes, but at the same time will preserve such contact between the various features as to insure the proper cleansing of the same.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The sash C, springs D D, bar D', circular rubber E, and rotary rubber F, when the whole is constructed and combined so as to operate substantially as described.

2. The breast F and spring G, when constructed and arranged as stated, and so combined as to operate, in connection with the rubbers E H, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM RILEY.

Witnesses:

ELIJAH FLEMING,
JNO. S. BELL.