T. J. WEBSTER.

Washing-Machine.

No. 161,186. Patented March 23, 1875.

Fig 1

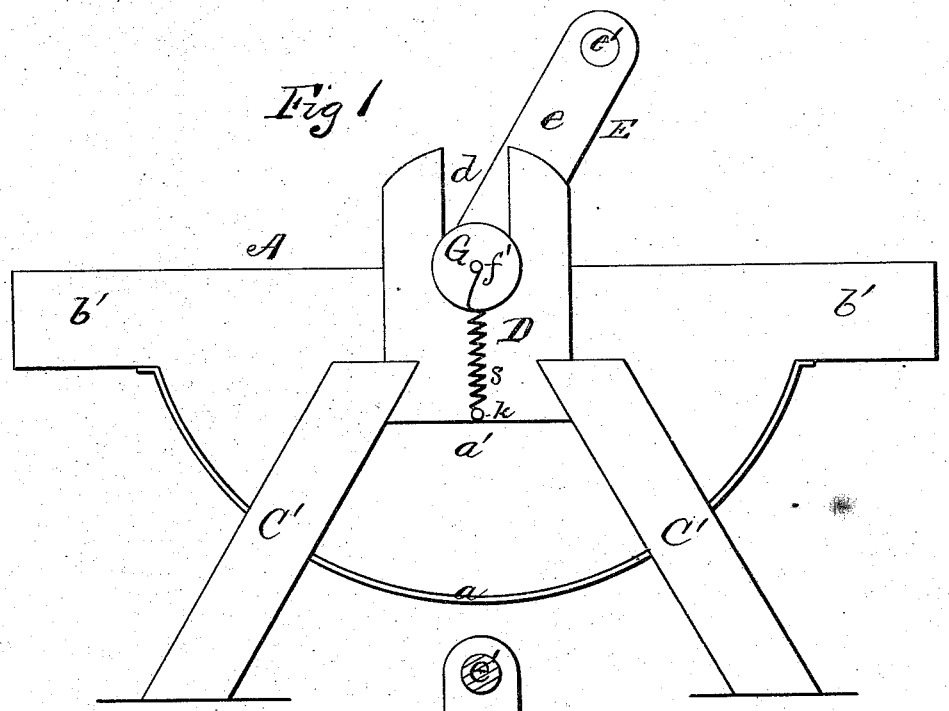


Fig 2

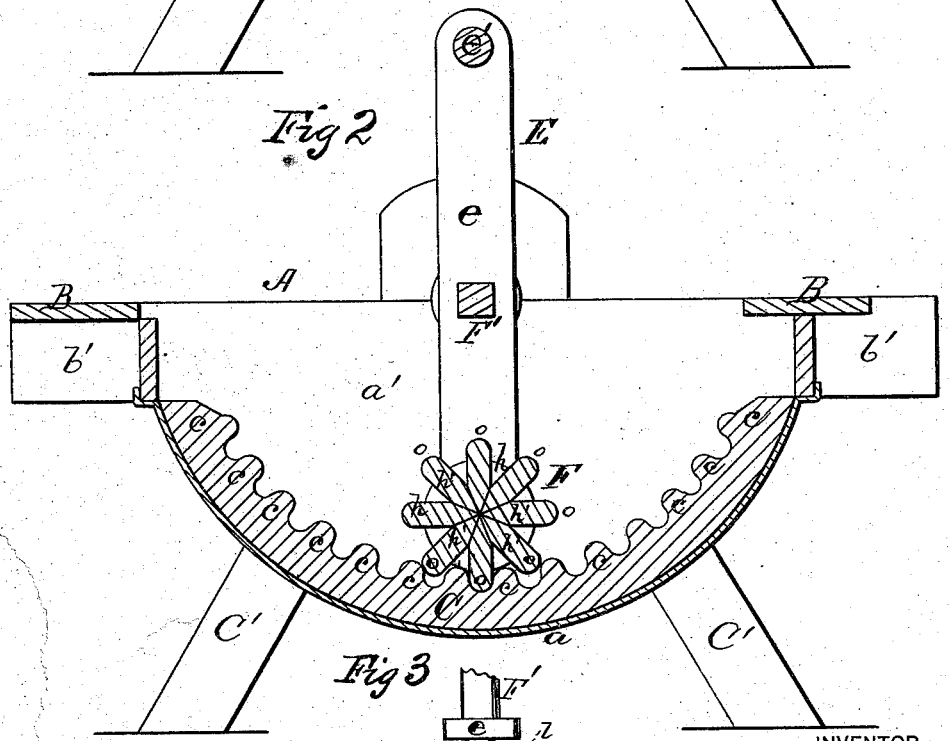
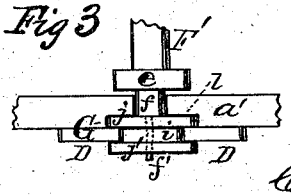


Fig 3



WITNESSES

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UNITED STATES PATENT OFFICE.

THOMAS J. WEBSTER, OF HUMBOLDT, KANSAS.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **161,186**, dated March 23, 1875; application filed November 28, 1874.

To all whom it may concern:

Be it known that I, THOMAS J. WEBSTER, of Humboldt, in the county of Allen and State of Kansas, have invented a new and valuable 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 making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of an end view of my washing-machine. Fig. 2 is a transverse sectional view of the same, and Fig. 3 is a detail view.

This invention has relation to washing-machines, wherein are employed a suds-box with a semicircular bottom and a rotating dasher actuated by means of a handle, and having its bearings in the vertical sides of the suds-box; and the nature of the invention consists mainly in grooved anti-friction wheels, freely rotating upon the ends of the rock-shaft supporting the hangers of a rotating dasher and squeezer, one of the flanges of which is adapted to be received into a corresponding recess in the upper edges of the vertical sides of the suds-box, whereby the dasher is held steady in the said box, and the lateral surfaces of the said hangers are prevented from rubbing against the sides thereof, thereby preventing undue friction, and greatly adding to the ease and comfort in working the dasher, as will be hereinafter more fully explained.

In the annexed drawings, A designates the suds-box of my improved clothes-washing machine, having a metallic bottom, *a*, preferably of zinc or galvanized iron, which is rigidly secured in any suitable manner to the lower rounding edges of its vertical sides *a'*. These sides terminate in projecting arms *b'*, which serve as handles, whereby the machine may be lifted conveniently from place to place. They also afford bearings for the journals of two vibrating shelves, B, which are adapted to be swung outward into the position shown in Fig. 2, for conveniently putting the clothes in the box, and then to be swung inward to prevent water from being dashed out of the box upon the person of the laundress, or upon surrounding objects. Within this box a transversely-corrugated bottom, C, is rigidly secured, which is made up of sectional strips *c*, secured together in any suitable manner, forming a perfect accurately-drawn arc, as shown in Fig. 2.

The suds-box above described is supported by legs C', rigidly secured to the sides thereof, the upper angular corners of which are received into correspondingly-shaped spaces cut into the lower edges of vertical standards D, which are also rigidly secured to the sides of the said suds-box, thus adding strength to the union of the said legs to the box, and effectually preventing their upward displacement when subjected to the strain of the water and clothing therein.

The standards D, above referred to, are vertically and deeply notched at *d*, as shown in Fig. 1, for a purpose hereinafter explained.

E designates the frame of a rotating dasher, F, consisting of two parallel hangers, *e*, affording bearings in their lower ends for the journals of the said dasher, and suitably braced by a handle, *e'*, as to their upper ends. Through these hangers a horizontal shaft, F', is passed, the said shaft being rigidly secured thereto, and prevented from rotation by having its squared ends fitted into corresponding apertures in the said hangers. These ends project a certain distance beyond the hangers, and terminate in cylindrical journals *f*, into which are secured metallic journals *f'*, of preferably reduced size, upon which are applied grooved anti-friction wheels G. The grooves *i* of the said wheels are of considerable depth, and the inner faces of their flanges *j j'* are vertical to the axis thereof.

When the dasher F is placed in position in the suds-box, the bifurcations of the standards D receive the said wheels between them, their inner flanges *j* being upon the inside, and their outer flanges *j'* upon the outside thereof, as shown in Fig. 3. The inner flanges are received into semicircular recesses *l* in the upper edges of the vertical sides of the suds-box, and the journals *f* have their bearings in that portion of the upper edge of the vertical sides of the press-box between the recesses *l* and the inside thereof. In this manner, when the dasher is actuated in washing clothing, it will be held steady in the suds-box, being pre-

vented from lateral displacement by the bifurcated standards D, within which the wheels G are received, and from endwise displacement by the engagement of the inner flanges *j* of the said wheels with the recesses *l* of the suds-box.

The dasher-frame being of slightly less width than the box, and being placed therein so that the lateral faces of its hangers shall not touch the sides of the said box, all friction of the said hangers against the side of the box is effectually prevented.

S designates springs, which are rigidly secured to the box at *k*, their free ends being detachably secured to the ends of the journal *f'*, so that, when the dasher F passes over a button on the garment being washed, it will cause the springs to yield, thereby doing away with a frequent cause of complaint—that is, the smashing of buttons.

The dasher F consists of two disks, *h*, into which are suitably secured radial buckets *h'*, as shown in Fig. 3, the said buckets having rounding outer edges *o*, which are adapted to be received into the grooves of the corrugated inner bottom C.

When the dasher is actuated, not only is the clothing squeezed by the rounded edges *o* of the buckets, but the latter throw the water over the clothing after the manner of the paddle-wheel of a steamer, before the squeezing or wringing action of the ends of the said buckets takes place, thus effectually and rapidly removing all impurities.

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

The combination, with the hangers *e* of the rotating dasher and squeezer F, and with the vertical sides *a'* of suds-box A, of the grooved pulley-wheels G, upon the ends of the rock-shaft *f'*, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

THOMAS J. WEBSTER.

Witnesses:

WILLIAM A. WEBSTER,

CHAS. GILBERT.