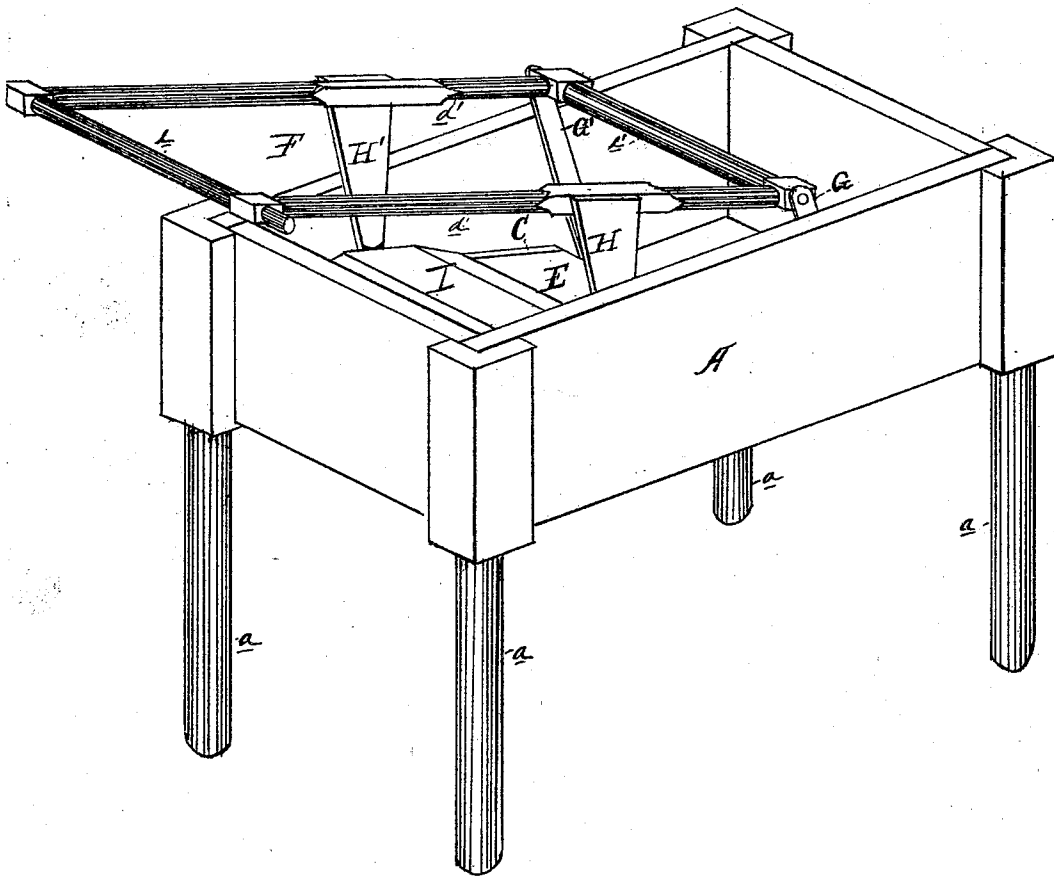


J. D. TOWER.
WASHING-MACHINE.

No. 172,208.

Patented Jan. 11, 1876.

Fig. 1.



Attest:
Charles Thurman,
R. N. Dyer.

Inventor:
J. D. Tower
by Geo. W. Dyer & Co.
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Fig. 2.

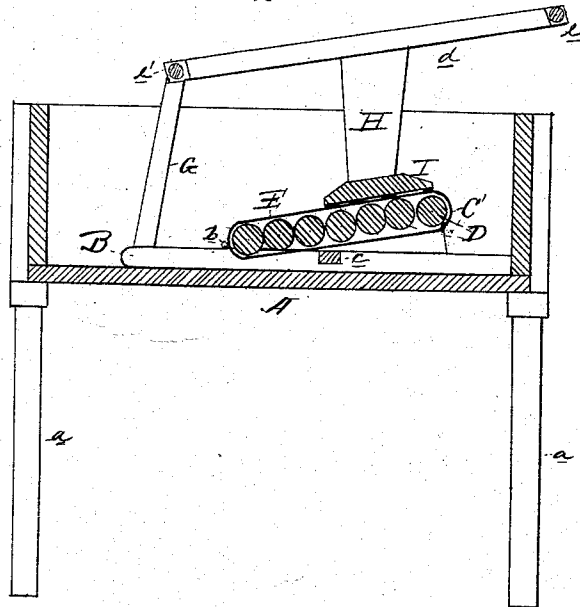
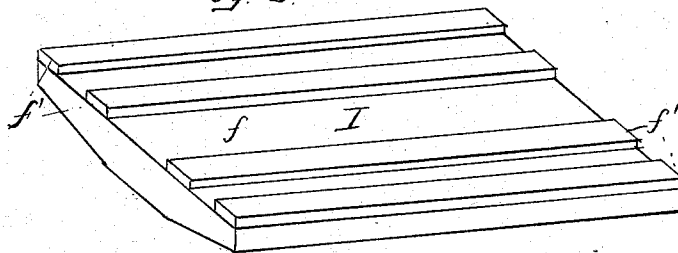


Fig. 3.



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UNITED STATES PATENT OFFICE.

JUSTUS D. TOWER, OF MENDOTA, ILLINOIS.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **172,208**, dated January 11, 1876; application filed December 7, 1875.

To all whom it may concern:

Be it known that I, JUSTUS D. TOWER, of Mendota, in the county of La Salle and State of Illinois, have invented a new and useful Improvement in Washing-Machines; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention relates to that class of reciprocating washing-machines wherein a rubber, having a flat face, is reciprocated over a set of rollers journaled in stationary side pieces, and its object is the production of a cheap machine without the use of metal springs, which will be simple in construction and efficient in operation.

My invention therein consists in the reciprocating rubber having a plain face and flat strips of india-rubber secured thereto, in combination with a set of inclined cloth-covered rollers; further, in the combination, construction, and arrangement of the various parts, all as more fully hereinafter explained.

To enable others skilled in the art to make my invention, I now describe the same in connection with the drawings, in which—

Figure 1 is a perspective view of my washing-machine; Fig. 2, a longitudinal section of the same, and Fig. 3 is a view of the face of the reciprocating rubber. Like letters denote corresponding parts in each figure.

A represents the box of the machine, rectangular in outline and supported upon suitable legs *a*. B B' represent two strips of wood placed loosely in the bottom of the box, one on each side, but not extending the entire length of said box. In the sides of the box above the strips B B' are driven two studs, *b b'*. C C' are two triangular-shaped pieces resting on the strips B B', and connected by a cross-piece, *c*, which rigidly connects the pieces C C' and rests in notches in the strips B B'. The ends of the pieces C C' abut against the studs *b b'* and thus hold the strips B B' securely in their place in the bottom of the box. In the triangular pieces C C' are journaled the ends of a set of rollers, D, their journals being parallel with the upper surfaces of the triangular pieces, and are thereby inclined to the same degree as such upper

surfaces. E is an endless band of cloth, which encircles the rollers D, and entirely covers the same. F is a rectangular frame, consisting of the side pieces *d d'* and end pieces *e e'*, the end piece *e* being used as a handle. G G' are two upright connecting-rods, preferably of metal, which are pivoted to the ends of the side pieces *d d'* and to the ends of the strips B B'. The connecting-rods allow the frame F to be moved back and forth. H H' are two pendent arms, rigidly secured one to each piece *d d'* of the frame F at their center. On the lower end of the arms H H' is pivoted the reciprocating rubber I, which has a slight play on the arms H H'. This rubber has a flat face, *f*, on which are secured, by any suitable means, thin flat bands of india-rubber, *f'*. The clothes to be washed are placed on the rollers and cloth belt, and under the rubber, by which they are rubbed back and forth till sufficiently clean.

The advantages gained by the construction and arrangement of the parts of my machine are as follows:

The method of constructing the face of the reciprocating rubber, by securing thin flat strips of india-rubber thereto at intervals, makes a cheap contrivance, and at the same time secures the necessary amount of friction and avoids as much as possible injury to buttons and clothing. The reciprocating rubber by being pivoted to the pendent arms is enabled to play slightly, to accommodate itself to the inclination of the rollers without the use of springs. The endless cloth belt covering the rollers prevents clogging, and injury to clothing, and the liability to break off buttons by catching between the rollers, and also presents a comparatively smooth surface for the operation of the reciprocating rubber. The longitudinal strips in the bottom of the tank act as springs when the reciprocating rubber is pressed down on the clothing. By placing the longitudinal strips, the connecting-rods, and the reciprocating frame all inside of the tank, a neat appearance is secured, and the exposure of the connecting-rods avoided.

Having thus fully described my machine, what I claim as new therein, and desire to secure by Letters Patent, is—

1. The reciprocating rubber I, having a

plane face and the flat strips of india-rubber secured thereto, in combination with a set of inclined cloth-covered rollers, D E, substantially as described and shown.

2. The combination with the tank A, of the strips B B', connecting-rods G G', frame F, rubber I, rollers D, and cloth belt E, all substantially as described and shown.

This specification signed and witnessed this 23d day of November, 1875.

JUSTUS D. TOWER.

Witnesses:

D. N. BARD,

W. H. WHEELER.