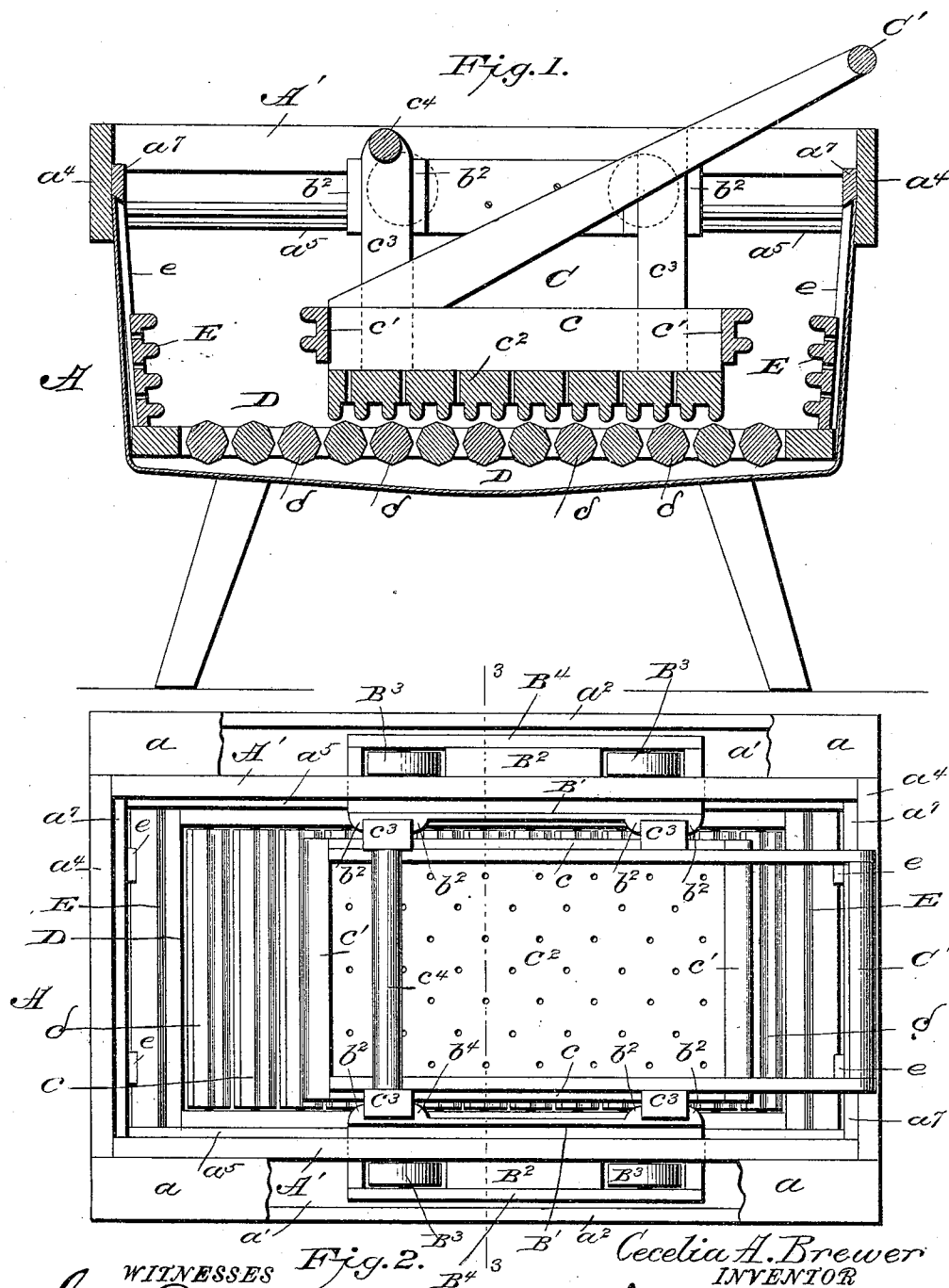


2 Sheets—Sheet 1.

No. 544,246.

Patented Aug. 6, 1895.



WITNESSES
L. S. Elliott,
E. M. Johnson.

by  Attorney

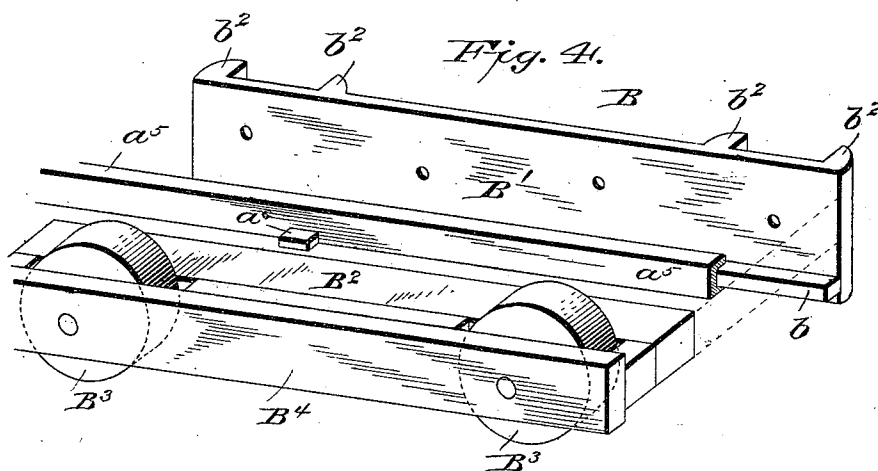
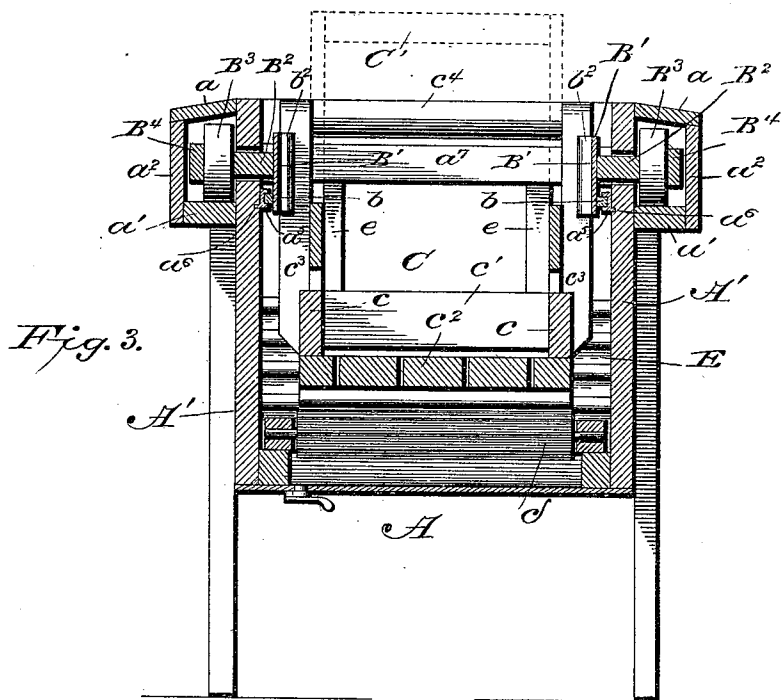
(No Model.)

2 Sheets—Sheet 2.

C. A. BREWER.
WASHING MACHINE.

No. 544,246.

Patented Aug. 6, 1895.



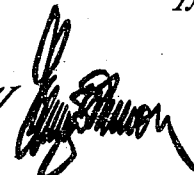
Cecelia A. Brewer

WITNESSES

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by 

Attorney

UNITED STATES PATENT OFFICE.

CECELIA A. BREWER, OF LA PORTE, INDIANA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 544,246, dated August 6, 1895.

Application filed April 4, 1895. Serial No. 544,466. (No model.)

To all whom it may concern:

Be it known that I, CECELIA A. BREWER, a citizen of the United States of America, residing at La Porte, in the county of La Porte and State of Indiana, have invented certain new and useful Improvements in Washing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of my invention is to provide a simple, cheap, and efficient washing-machine, which embodies a vertically-movable reciprocating rubber and a bottom board made up of a frame provided with rollers octagonal in cross-section, the interior of the tub or receptacle also having removable end pieces and rails which support the carriages for the reciprocating rubber, the construction and arrangement of the parts being such that they can be readily cleaned after use.

The invention consists in the construction and combination of the parts, as will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a longitudinal sectional view of a washing-machine constructed in accordance with my invention. Fig. 2 is a plan view. Fig. 3 is a transverse sectional view on the line 3 3 of Fig. 2, and Fig. 4 is a detail perspective view showing one of the carriages with which the reciprocating rubber engages.

A designates a tub or receptacle which is preferably provided with a metal bottom and wooden sides, to which the supporting-legs are secured. On the outer side of each side piece A' of the tub or receptacle A is rigidly secured a housing or way, consisting of upper and lower strips a and a' , which are secured to the side of the tub and connected to each other by a strip a^2 , and within these housings or ways the carriages hereinafter described, which support the rubber, move lengthwise of the tub. The housings are closed at their ends by transverse strips a^4 , which form the upper part of the ends of the tub. The up-

per part of the sides of the tub are provided with longitudinal slots or openings, and directly beneath these slots the side pieces have attached thereto a longitudinal rail or strip a^5 for the purpose hereinafter set forth, the rails being provided with projecting lugs or spurs a^6 , which enter the side pieces and hold them in place.

B B designate the carriages or roller-frames, which move in the housings or ways hereinbefore described, and are made up of a vertical board B', to which is secured a strip B², having apertures or bearings for one end of the stub-axes of rollers B³, the other end of the axes being supported in a strip B⁴, secured to the strip B² by means of interposed blocks, as shown. At the lower portion of the board B' is secured a longitudinal strip b , which engages the rail a^5 , attached to the side pieces of the tub, so as to support and guide the carriage, and the board B' is also provided on its inner side with projecting portions or lugs b^2 , with which the frame of the reciprocating rubber C engages.

The reciprocating rubber C is made up of side and end pieces c and c' , to which is attached the board c^2 , having a corrugated under surface and perforations to permit of the free circulation of the water, and to the side pieces $c c$ are secured upwardly-projecting pieces c^3 , which are connected to each other by a cross-bar c^4 , and by means of the operating-handle C', the pieces c^3 engaging the roller-frames or carriages, as hereinbefore described. It will be noted that by connecting the rubber to the carriages or roller-frames, as hereinbefore described, said rubber is not only permitted to have a longitudinal reciprocating movement, but also a vertical movement.

D designates the washboard, which is made up of a rectangular frame, in the side pieces of which are journaled rollers d , octagonal in cross-section. This washboard is placed in the bottom part of the tub or receptacle, so that the end pieces thereof will engage the end pieces of the tub and hold said washboard a slight distance above the bottom, as shown in Fig. 1.

Within the tub and at the ends thereof are positioned rubbing-surfaces E, which consist of a transverse board having a corrugated

surface and perforations, said boards being held in place by vertical pieces *e*, which are beveled at their upper end, so as to fit under the beveled lower edge of strips *a'*, secured to the inner side of the end pieces *a'* of the tub, the lower end of the pieces *e* resting upon the end pieces of the washboard. These rubbing-surfaces not only assist in cleaning the clothes placed in the receptacle, but also protect the metallic end pieces of the tub.

The operation of the device will be apparent to those familiar with this class of washing-machines, the rubber being raised in its guides, so that the clothes can be placed beneath the same, after which the rubber is reciprocated back and forth to thoroughly agitate the clothes or other articles that may be placed within the tub, the particular construction of the carriages not only making it easy to reciprocate the rubber, but also permitting said rubber to move up and down. In washing heavy articles, as blankets, &c., a weight may be placed within the side and end pieces of the rubber-frame, so as to hold the same down upon the article.

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

1. In a washing machine, the combination with a tub or receptacle, of a roller-bed *D*, end pieces *E*, and removable carriages or roller-frames *B* together with a reciprocating rubber *C* having end pieces *c'*, the rubber having an operating handle and upwardly-projecting pieces *c''* which engage with the removable carriages or roller-frames carried by the tub, substantially as shown.

2. In a washing machine, the combination with a tub, of a pair of carriages consisting of vertical boards *B'* having guides on one side for a reciprocating rubber, a longitudinal strip *B²* attached to the opposite side of the board, said strip carrying rollers, a strip *b* for engagement with a recessed strip *a⁵* attached to the sides of the tub, said tub also having roller ways *a'*, substantially as shown.

3. In a washing machine, the combination, of a tub or receptacle having on each of its longitudinal sides housings made up of strips *a*, *a'* and *a²*, the tub being provided with longitudinal slots which communicate with the

housings, grooved strips *a⁵* secured to the inner sides of the tub below the longitudinal slots, together with frames each consisting of a strip *B'* having guides with which the reciprocating rubber engages and strips *B²* and *b* which are secured to the strip *B'*, the strip *b* engaging with the grooved strip *a⁵*, and rollers journaled in the strip *B²* so as to bear on the strip *a'* of the housing, the parts being organized substantially as shown and for the purpose set forth.

4. In a washing machine, the combination, of a tub or receptacle having a roller-bed *D*, transverse strips *a'*, and end pieces *E* adapted to engage with the roller-bed and with the strips *a'*, substantially as shown and for the purpose set forth.

5. In a washing machine, the combination, of a tub or receptacle having a roller-bed and end pieces *E*, strips *a⁵* secured adjacent to the upper part of the tub, together with a reciprocating rubber having corrugated ends and bottom and vertical portions which engage with guides carried by the board *B'*, said board having a projecting portion on its opposite side which engages with the recessed strip *a⁵*, substantially as shown and for the purpose set forth.

6. In a washing machine, the combination with a tub or receptacle having a washboard located in the bottom part thereof, of housings or ways secured to the side pieces of the tub or receptacle and consisting of upper and lower strips *a* and *a'* connected to each other by a strip *a²*, carriages or roller-frames moving in the housings or ways, said carriages being made up of vertical boards *B'* having projections *b²*, a longitudinal strip *B²* secured to the board *B'*, and rollers journaled in the strip *B²* and in a strip *B³* secured to the strip *B²* by means of interposed blocks; together with a rubber frame *C* having vertical strips which engage the projections *b²* of the carriages, substantially as shown and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CECELIA A. BREWER.

Witnesses:

P. W. BREWER,
S. HANSHEER.