2 Sheets—Sheet 1.

J. T. GREENWOOD, Jr.
Washing-Machine.

No. 200,052. **Patented Feb. 5, 1878.**

Fig. 1.

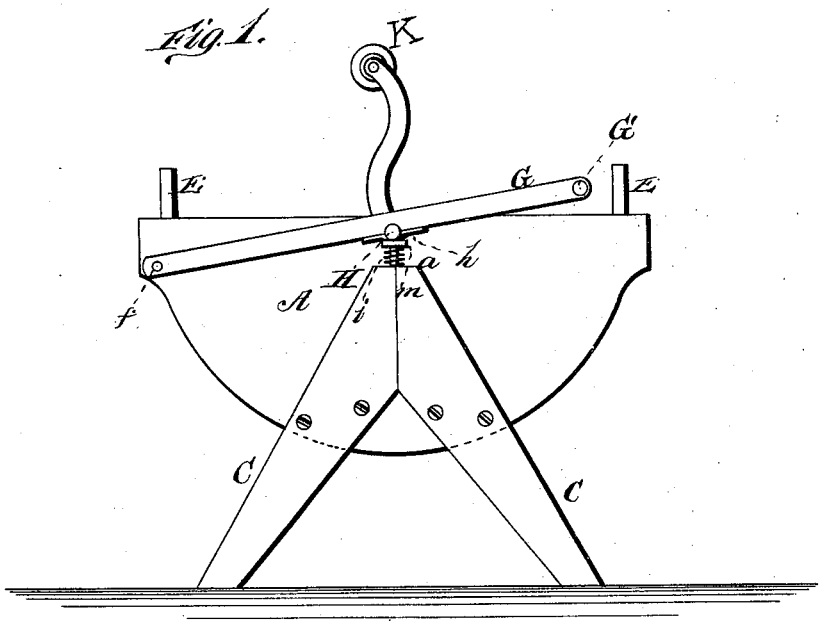
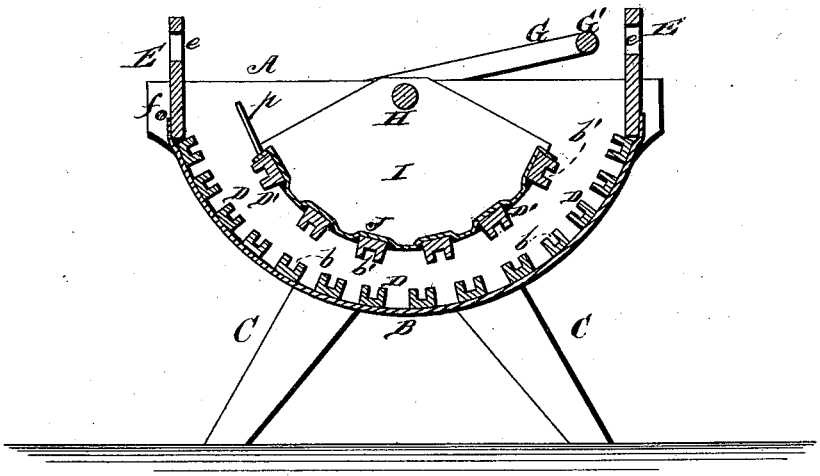


Fig. 2.



WITNESSES

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2 Sheets—Sheet 2.

J. T. GREENWOOD, Jr.

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Fig. 3.

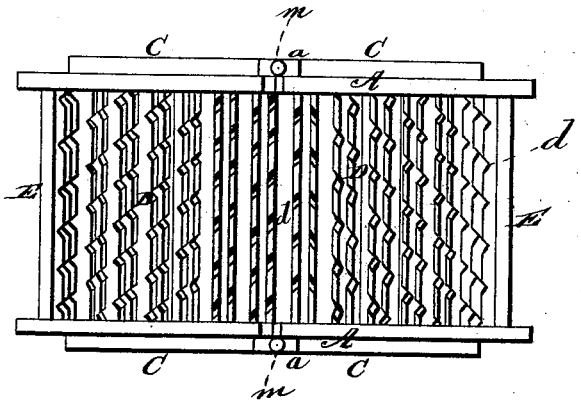
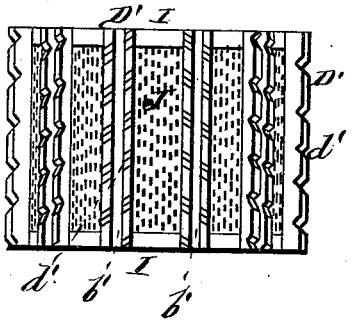


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN T. GREENWOOD, JR., OF BELOIT, WISCONSIN, ASSIGNOR OF ONE-HALF HIS RIGHT TO JULIUS R. NYE, OF SAME PLACE.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **200,052**, dated February 5, 1878; application filed December 15, 1877.

To all whom it may concern:

Be it known that I, JOHN T. GREENWOOD, Jr., of Beloit, in the county of Rock and State of Wisconsin, 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 drawings is a side view of my washing-machine. Fig. 2 is a vertical section. Fig. 3 is a plan view with the rocker removed, and Fig. 4 is a bottom view of the rocker.

The nature of my invention consists in the construction and arrangement of a washing-machine, as will be hereinafter more fully set forth.

The annexed drawings, to which reference is made, fully illustrate my invention.

The box of my washing-machine consists of two side pieces, A A, with a concave or semicircular bottom, B, secured between them. This box is supported on each side by legs C C, set angling, as shown in Fig. 1, and united at their upper ends, and forming a horizontal shoulder, *a*, at the top. On the bottom B is secured a series of cross-bars, D D, at equal distances apart. Each of these bars has in the top a longitudinal groove, *b*, and then a series of inclined grooves, *d*, formed across the two ledges or flanges formed by the longitudinal groove. The inclined or diagonal grooves or notches *d* in the bars D run in opposite directions from each end of the box to the center, for the purpose hereinafter mentioned.

At each end of the box is an end piece, E, standing vertically, as shown, and provided with an opening, *e*, as shown, for the insertion of the hand, for convenience in carrying the machine. At one end of the machine are pivoted two levers, G G, by means of a rod, *f*, and the other ends of the levers are connected by a round or handle, G′. In boxes *h h* on the under sides of the levers G G is placed a shaft, H, upon which is hung a rocker composed of two segmental side pieces, I I, connected by means of cross-bars D′ D′, at suitable distances apart. These bars are, on their outer faces, provided with longitudinal grooves *b′* and inclined or diagonal notches *d′*, in the same manner as described for the bars D on the bottom B of the box; but the notches *d′* run in the opposite direction from the corresponding ones, *d*, in the bottom bars.

The object of these grooves and notches is to increase the rubbing properties of the machine, and the angles crossing each other prevent the clothes from working to either side of the machine, and retain them in the center of the machine; also, the notches *d d′* of the bottom and rubber allow the water to escape from the grooved bars, and have a tendency of throwing the water to the center in contact with the clothes.

The rocker is further provided with a perforated zinc plate, J, on top of the cross-bars D′, to prevent the clothes from working up between said bars.

The levers G G rest upon headed pins *m m*, having spiral springs *i* surrounding them, and placed in the shoulders *a a*, formed by the upper ends of the legs C on each side of the machine. The springs *i* relieve the pressure of the rocker on the clothes while working, while at the same time, by pressure on the handle G′, the rocker can be forced down as far as desired.

The rocker is worked back and forth by means of a crank, K, on one end of the shaft H. On the end of the rocker next to the fulcrum ends of the levers is a projecting pin, *p*, as shown.

When the levers are raised to lift the rocker out of the box, the pin *p* catches in the opening *e* of that end piece E for holding the rocker.

I am aware that a rubber has heretofore been made with cross-bars provided with longitudinal grooves, and such I do not claim, broadly.

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

1. The combination, in a washing-machine, of the bars D D′, arranged as described, and provided with longitudinal grooves *b b′* and

inclined or diagonal notches *d d'*, the notches *d'* running in the opposite direction from the corresponding ones, *d*, in the bottom bars, whereby the rubbing capacities of the machine are increased and the clothes prevented from working to either side of the machine.

2. The pin *p*, projecting from one end of the rocker, in combination with the end piece E, with opening *e*, for the purposes set forth.

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

JOHN T. GREENWOOD, JR.

Witnesses:
J. R. NYE,
B. C. ROGERS,
W. C. DEARHAMMER.