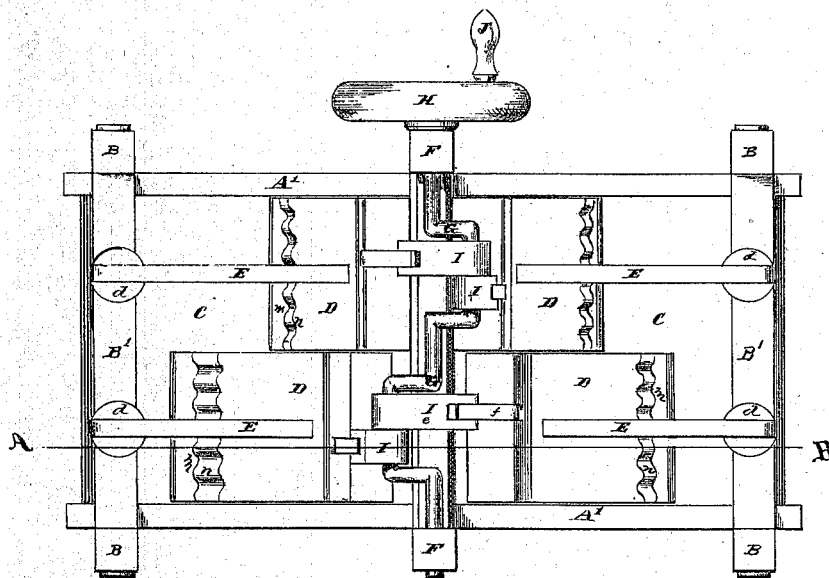
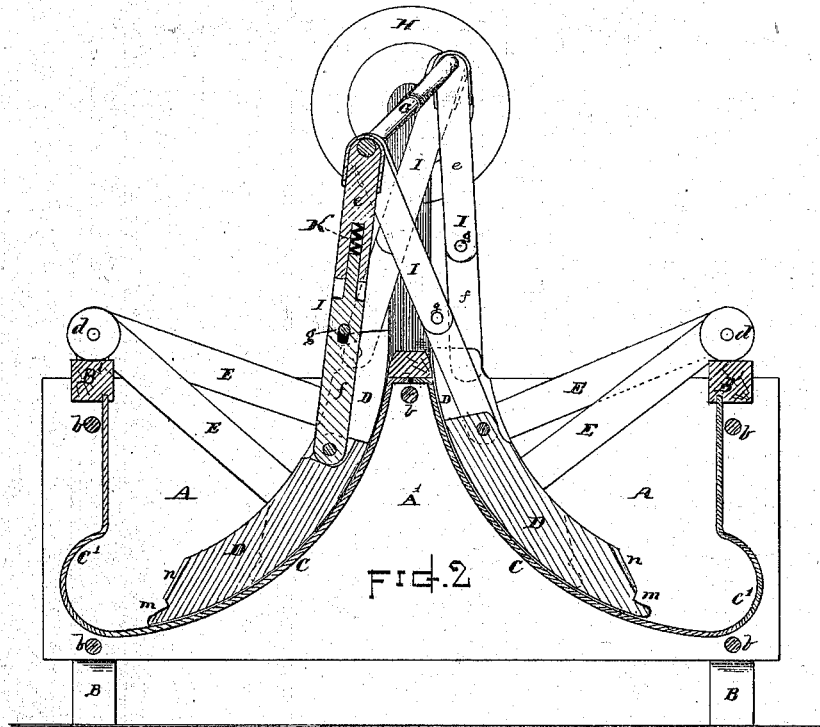


L. PUTNAM.

Improvement in Washing Machines.

No. 115,355.

Patented May 30, 1871.



Witnesses.

Thos. H. Dodge
A. E. Pierce.

FIG. 1

Inventor.

Lernard Putnam

UNITED STATES PATENT OFFICE.

LEONARD PUTNAM, OF WORCESTER, MASSACHUSETTS.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. 115,355, dated May 30, 1871.

To all whom it may concern:

Be it known that I, LEONARD PUTNAM, of the city and county of Worcester and Commonwealth of Massachusetts, 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 same, reference being had to the accompanying drawing which forms a part of this specification, and in which—

Figure 1 represents a plan view of my improved washing-machine; and Fig. 2 represents a longitudinal section of the same at line A B, Fig. 1.

To enable those skilled in the art to which my invention belongs to make and use the same I will proceed to describe it more in detail.

The nature of my invention consists in certain improvements in washing-machines, as hereinafter fully described.

In the drawing the parts marked A represent the tubs, the sides A' of which are supported by the frame E and rods *b*, which extend from side to side of the frame. C indicates the bottoms of the tubs, which, in this instance, are formed of metal, and are curved downward from the central portion of the frame to the outer ends, when they turn upward and inward to form semi-cylindrical spaces, C', and thence straight upward to the transoms B' of the frame, as shown in the drawing. D D D D indicate wooden hammers, which are supported upon the ends of arms E, and arranged to move up and down along the curved portion of the tub-bottom C, the ends of the arms E being pivoted in bearing-blocks *d*, upon the transoms B', whereby the hammers are caused to swing close to the metallic bottom C without rubbing against it. Vertical standards F project upward from the sides of the machine and support a crank-shaft, G, to the cranks of which the hammers are joined by means of spring pitmen I, as illustrated. The shaft G is provided with a balance-wheel, H, and handle J, by means of which it can be easily revolved, and the hammers D thereby operated. The pitmen I are formed in two parts, *e* and *f*. The upper part *e* is forked at its lower end and bored out in the interior to receive a spring, K, while the

upper end of the lower part *f* is worked down and fitted into the opening against the spring K, and is also held in place between the forked ends of the part *e* by a bolt, *g*, which passes through the parts from side to side, as shown. The opening in the part *f* is slotted below the bolt *g*, so that the part *f* can compress the spring K when the hammer strikes solidly, and thus permits the crank to pass the center in its revolution. The lower ends of the hammers are rounded off at their extremities, and are grooved laterally at *m*, and fluted vertically upon the beveled portion *n* above the groove *m*.

The articles to be washed are placed in the lower part of the tubs in front of the hammer, and a small quantity of water, sufficient to cover them, is added, together with the cleansing material. The operator then turns the crank-shaft G by means of its handle J, and the hammers D are alternately raised and depressed, thereby pounding and rolling the clothes in the semi-cylindrical space C', and thus removing the dirt in a very perfect and easy manner. Suitable plugs or faucets may be fitted to the bottoms or sides of the tubs, if desired, for drawing off the water when necessary.

The machine is shown in the drawing as having two tubs; but, if preferred, it can be made with but one.

Having described my improved washing-machine, what I claim therein as new and of my invention, and desire to secure by Letters Patent, is—

1. The combination, with the bottom C C', curved as shown, of the curved, grooved, and fluted hammers D D, spring pitmen I I, pivoted arms E E, and crank-shaft G, substantially as and for the purposes set forth.

2. A washing-machine, consisting of curved bottom and straight-sided tubs A, curved, grooved, and fluted hammers D D D D, pivoted arms E E E E, pitmen I I I I, springs K K K K, and crank-shaft G, the whole being constructed and combined for operation substantially as shown and described.

LEONARD PUTNAM.

Witnesses:

THOS. H. DODGE,
A. E. PEIRCE.