J. S., E. S & R. Godfrey,

Washing Machine,

No. 52,160. Patented Jan. 23, 1866.

Fig. 2

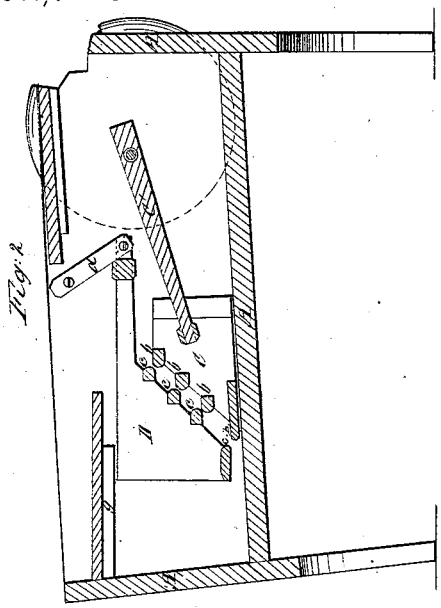


Fig. 4

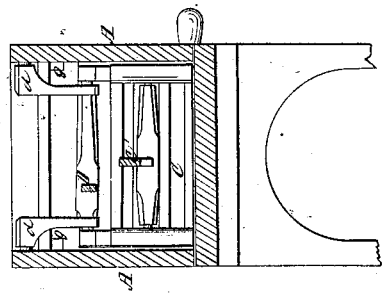


Fig. 1

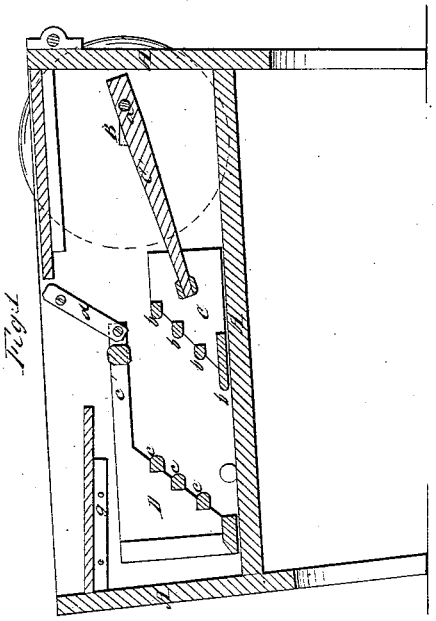
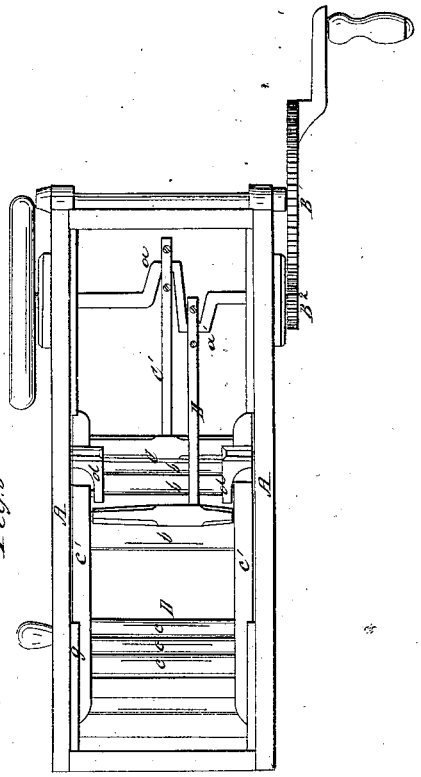


Fig. 3



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UNITED STATES PATENT OFFICE.

JOSEPH S. GODFREY, E. J. GODFREY, AND RUSSELL GODFREY, OF LESLIE, MICHIGAN.

WASHING-MACHINE.

Specification forming part of Letters Patent No. **52,160**, dated January 23, 1866.

To all whom it may concern:

Be it known that we, JOSEPH S. GODFREY, EMMONS J. GODFREY, and RUSSELL GODFREY, all of Leslie, in the county of Ingham and State of Michigan, have invented a new and Improved Washing-Machine; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a longitudinal section taken in a vertical plane through the center of our improved machine. Fig. 2 is a similar view, showing the position of the rubbers when they are in the act of squeezing articles between them. Fig. 3 is a top view of the washing-machine. Fig. 4 is a vertical cross-section through the machine, looking toward the dashers.

Similar letters of reference indicate corresponding parts in the several figures.

This invention consists in so constructing a washing-machine having reciprocating rubbers that alternately approach and recede from each other that the articles which are being washed will receive from said rubbers a beating, rubbing, and rolling action, and thus be caused to present new surfaces constantly to the rubbing-slats, as will be hereinafter described.

To enable others skilled in the art to understand our invention, we will describe its construction and operation.

In the accompanying drawings, A represents an oblong rectangular box or wash-tub, which is mounted upon legs, so that one end of this tub will be somewhat lower than the other end. Near the highest end of this tub is a transverse shaft, B, which is rotated by means of a large spur-wheel, B′, and a pinion, B^2, placed on one side of the tub outside. The shaft B has a two-throw crank formed on it, as shown in Fig. 3 at *a a′*. The crank *a* communicates a rectilinear reciprocating movement to the rubber C, and the crank *a′* gives a reciprocating movement to the rubber D through the medium of two pitman-rods, C′ D′. The rubber C slides upon the bottom of the tub, and it is constructed of two stepped side boards having slats or bars *b b* extending transversely across from one board to the other, as shown in Figs. 1 and 3. The forward or acting surfaces of these bars are rounded, for a purpose which will be hereinafter explained.

The rubber D consists of two stepped side boards, having the steps inverted so as to overhang the steps of the rubber C when these two rubbers approach each other. This overhanging stepped rubber D also slides upon the bottom of the wash-tub, and it is also furnished with slats or bars *c c*, which are arranged parallel to the slats *b b* of rubber C, but in a plane which is slightly above these latter slats. The two arms *c′ c′* of the rubber D are pivoted at their ends to vibrating hangers *d d*, which are connected to the inside of the side boards of the tub, as shown in Figs. 1, 2, 3, and 4, which arms communicate an up-and-down movement to the rubber D at the same time that it receives a back-and-forward movement. These arms are intended to force the slats of the rubber D downward upon the slats of the rubber C when these two rubbers come together. Now, in order to prevent the rubber D from rising two high when acting upon the articles which are placed in the tub to be washed, we arrange guides or holding-down strips *g g* over the side boards of said rubber, against which strips the upper part of the rubber presses while acting upon the articles. When the rubbers recede from each other the rubber D descends again and moves upon the bottom of the tub, as shown in Fig. 1. When the two rubbers approach each other with articles to be cleansed between them the rubber D will gradually rise in consequence of its more elevated slats *c c* acting upon the slats *b b* of the rubber C, and in this way the slats of the rubber D will be caused to glide over those of the rubber C, and to rub and turn the articles which are between them. As the rubber D is thus caused to rise it will be brought in contact with the strips *g g*, and at the termination of the stroke the articles will be subjected to a squeezing action. During the receding strokes of the rubbers the articles which are between them will be released and left free to absorb water.

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

1. Constructing the reciprocating rubbers C and D with stepped slatted surfaces, the slats of which are so arranged that they shall rub, squeeze, and roll the articles between them, substantially as described.

2. The combination of the rubber C with a rubber, D, which receives a backward-and-forward movement, and also a rising-and-falling movement, and which is held down at the proper time to squeeze the articles by means of the strips *g g*, substantially as described.

3. The combination of two reciprocating stepped rubbers, C and D, with the swinging supports *d d* and the holding-down strips *g g*, all arranged to operate substantially as described.

4. Arranging the slats of the rubber D in planes which are above the slats of the rubber C, in combination with the holding-down strips *g g*, substantially as described.

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