(No Model.)

T. & H. PHILLIPS.
Washing Machine.

No. 229,178. Patented June 22, 1880.

Fig. 1.

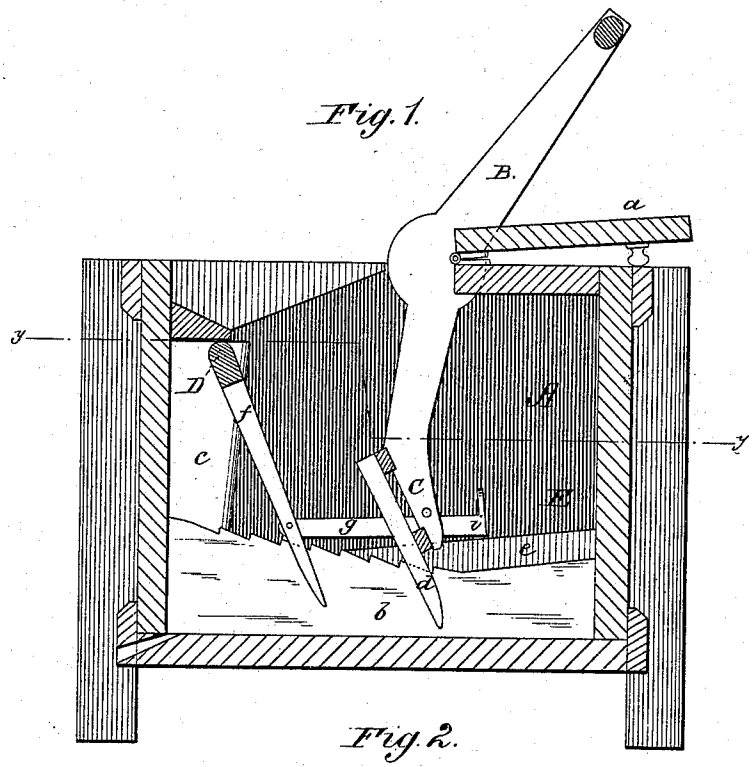
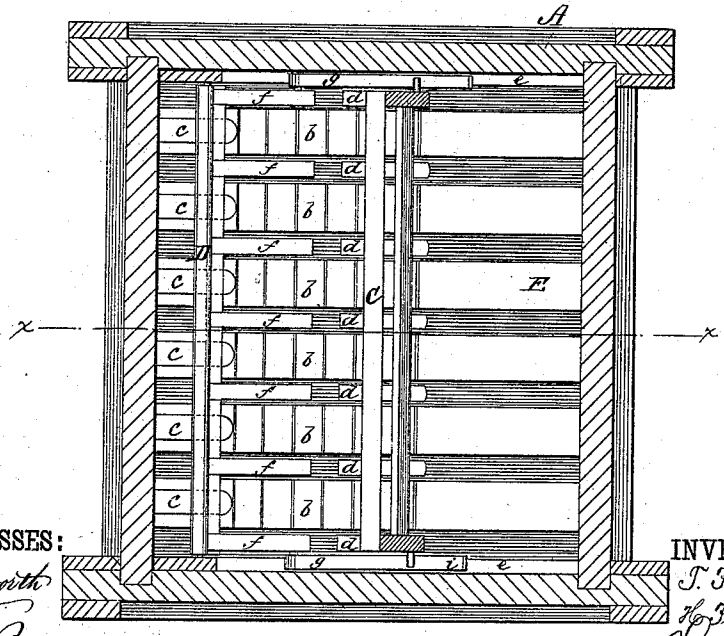


Fig. 2.



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THEODORE PHILLIPS AND HARLEY PHILLIPS, OF WINCHESTER, IOWA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 229,178, dated June 22, 1880.

Application filed April 21, 1880. (No model.)

To all whom it may concern:

Be it known that we, THEODORE PHILLIPS and HARLEY PHILLIPS, of Winchester, in the county of Van Buren and State of Iowa, have invented a new and Improved Washing-Machine; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical section through the line *x x* of Fig. 2. Fig. 2 is a horizontal section through the line *y y* of Fig. 1.

Our invention relates to certain improvements in washing-machines; and it consists in a combination of the following elements: a tank having a set of parallel strips in the bottom with rigid vertical bars at the end and with inclined and notched upper edges forming a wash-board, an oscillating beater consisting of a series of fingers passing between the parallel strips of the wash-board and connected to the lower end of a horizontally-pivoted lever-handle, and a set of fingers fixed to a rock-shaft and adapted to pass between the vertical bars rising from the ends of the wash-board, and having drag-bars on the side, which latter bars are struck by the beater on its backward movement and the fingers made to loosen up and roll over the clothes before being again squeezed between the beater, the wash-board, and the rigid vertical bars, all as hereinafter more fully described.

In the drawings, A represents the tank, which is provided at its bottom with a suitable outlet, and has at the top a cover, *a*. In the bottom of this tank are arranged a set of parallel strips, *b b*, the upper parts of whose working-surfaces are inclined upwardly and notched or corrugated from a point near the bottom of the tank to one side of the same, on which high side of the strips is mounted a rigidly-attached and vertically-pointing set of bars, *c*.

B is the handle, which is made bail-shaped, with two levers, one on each side, which are provided with fulcrum-pins, which rest in bearings in the tank. To the lower end of this handle is attached the oscillating beater C, which is formed of two horizontal strips fastened to end pieces, as shown, or directly to the lower end of the handle, if desired, and having attached to these horizontal strips a set of downwardly-projecting fingers, *d*, which pass down into and oscillate in the spaces between the bottom strips forming the wash-board.

At one end of the tank, and just above the rigid bars *c*, is arranged a rock-shaft, D, resting in bearings in the sides of the tank and having a set of downwardly-projecting fingers, *f*, which rest in the spaces between the strips of the wash-board and in the same plane with the fingers of the beater. To the lower ends of the outer fingers *f* of this series are loosely jointed a pair of drag-bars, *g*, one on each side, which bars rest upon guideways *e*, attached to the sides of the tank. These drag-bars are provided with lugs, pins, or tappets *i* at their ends, which tappets are struck by pins on the ends of the beater (or handle carrying the same) on the backward move, so as to turn the rock-shaft and cause the fingers to advance against the clothes just as the beater leaves them.

The action of the washing-machine is as follows: The water being prepared with the proper amount of soap and poured into the tank, the clothes are then inserted in front of the beater and rest upon the inclined and notched portion of the wash-board between the beater and the fingers on the opposite side. Then, as the beater is oscillated by the handle, it will be seen that as the beater advances upon the clothes it presses them against the rigid bars *c* and squeezes them, causing the water to pass from them in both directions. Then, on the retrograde movement of the beaters, the drag-bars are struck by the pins on the beater, the rock-shaft turned, and the downwardly-projecting fingers *f* strike against, roll over, and loosen up the clothes, causing them to absorb fresh portions of water previous to being again squeezed. This action, it will be seen, rapidly and thoroughly cleanses the clothes, and with but little wear or danger of tearing or damaging even the finest fabrics.

Upon the opposite side of the beater, as at E, clothes may be placed in soak while the others are being washed.

Having thus described our invention, what we claim as new is—

The tank A, having the inclined and notched parallel strips *b* in the bottom, with rigid bars *c* at one end of the same, the oscillating beater C, and the rock-shaft D, having downwardly-projecting fingers *f*, with drag-bars *g* and tappets *i*, all combined substantially as and for the the purpose described.

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Witnesses:
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