C. P. SMITH.
Washing-Machine.

No. 204,854. Patented June 11, 1878.

Fig. 2.

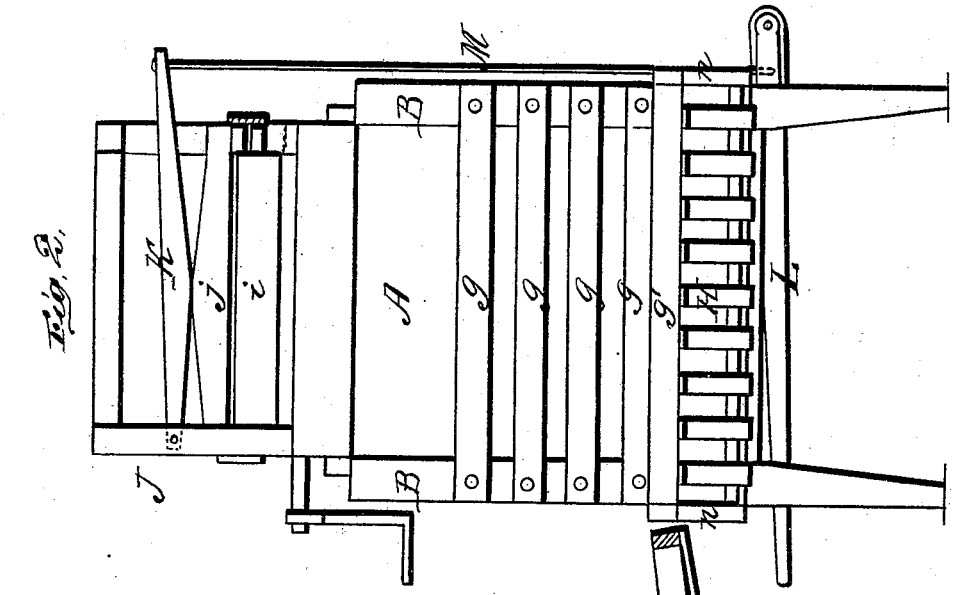
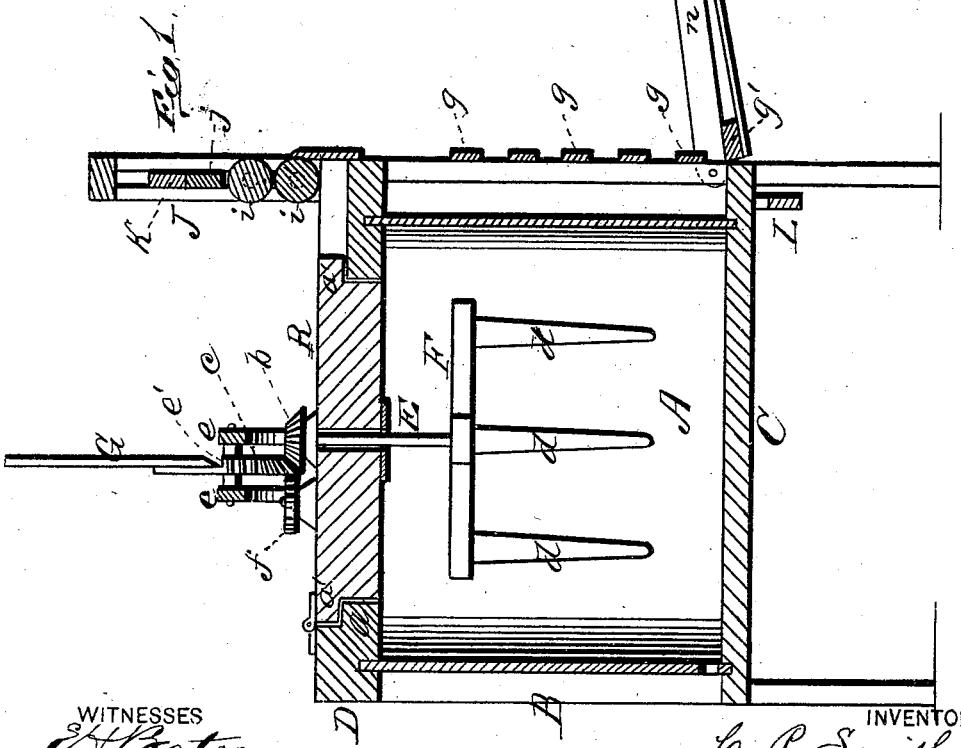


Fig. 1.



WITNESSES
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UNITED STATES PATENT OFFICE.

CYRUS P. SMITH, OF BRUNSWICK, MISSOURI.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **204,854**, dated June 11, 1878; application filed February 16, 1878.

To all whom it may concern:

Be it known that I, of CYRUS P. SMITH, of Brunswick, in the county of Chariton and State of Missouri, 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 representation of a vertical section of my improved washing-machine, and Fig. 2 is an end view of the same.

This invention has relation to improvements in washing-machines.

The nature of the invention consists in certain novel combinations of parts, as will be hereinafter more fully set forth.

In the annexed drawings, the letter A designates a metallic tank, of cylindrical form and suitable dimensions, that is supported upon a raised stand, C, and inclosed within a frame-work, B, of rectangular form. This frame-work supports at its top a horizontal casing, D, that rests upon the upper edge of the tank and forms a tight joint therewith, an annular groove being formed on the under side thereof, into which the upper edge of the tank is forced.

The opening of the door-casing is rectangular and rabbeted, as shown at *a*, Fig. 1, and it is closed by a hinged door, R, the edges of which are correspondingly rabbeted, as at *a'*. The under side of the lid, across its grain, is provided with dovetailed grooves, into which are passed wooden strips of corresponding form, for the purpose of preventing the said lid from warping.

E represents a metallic shaft, extending through and having its bearings in the lid aforesaid. This shaft has upon its lower end a horizontal cross-shaped or circular head, F, from which project downward a number of tapering pins, *d*, the ends of which are rounded off, and upon its upper end the shaft has a beveled gear, *b*. This gear engages a segmental gear, *c*, upon the lower end of a vibrating lever, G, fulcrumed at *e'* between two upright bearings, *e e*. The segmental gear *c* is beveled, and is held into contact with the gear *b*, irrespective of the lever-fulcrum *e'*, by an anti-friction wheel, *f*.

In washing, the tank is filled to a sufficient height with hot water and a suitable saponaceous compound. The clothes are then put in and float upon the surface of the water. The lid is then closed and the pins brought down upon the clothes.

By giving an oscillating movement to the lever G a corresponding horizontal motion is given to the head, and the pins, seizing upon the clothes, swirl them to and fro in the water, thereby causing a speedy cleansing thereof and dispensing with all friction. The pins, being round-ended, do not tear or injure the clothes, but by pressing them under the water cause all impurities detached therefrom to rise to the surface, by which means the clothing is rapidly washed.

At one end of the tank-frame are secured a number of transverse slats, *g*, and below said slats is a vibrating frame, H, the side bars *n* of which are hinged in any suitable manner to the sides of the frame, and are connected by means of a brace, *g'*, near their hinged ends. This frame may be thrown up into the vertical position, or down into the position shown in Fig. 1, when the brace *g'*, coming in contact with the tank-frame, serves as a stop to prevent further vibration. This frame H is designed to receive the clothes after being wrung out, the slats *g* serving to prevent them from coming in contact with the sides of the tank; or a basket may be placed on the frame H, aforesaid, for their reception.

Upon taking the clothes out of the tank, they are passed between the rollers *i* of a wringing apparatus, J. The upper roller is pressed against the lower one by a guided bar, *j*, actuated by a lever, K, fulcrumed in one end of the frame and projecting through the other, through the medium of a treadle, L, and a connecting-rod, M, connecting said le-

ver and treadle, as shown in Fig. 2. This construction leaves both hands free to manipulate the clothes.

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

The combination, with the tank A and its slatted frame B *g g*, of the swinging frame H, its side bars hinged to the sides of the tank-frame, and its brace *g'* serving as a stop, substantially as specified.

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

CYRUS P. SMITH.

Witnesses:
OTTO AMERLAN,
JOHN F. CUNNINGHAM.