

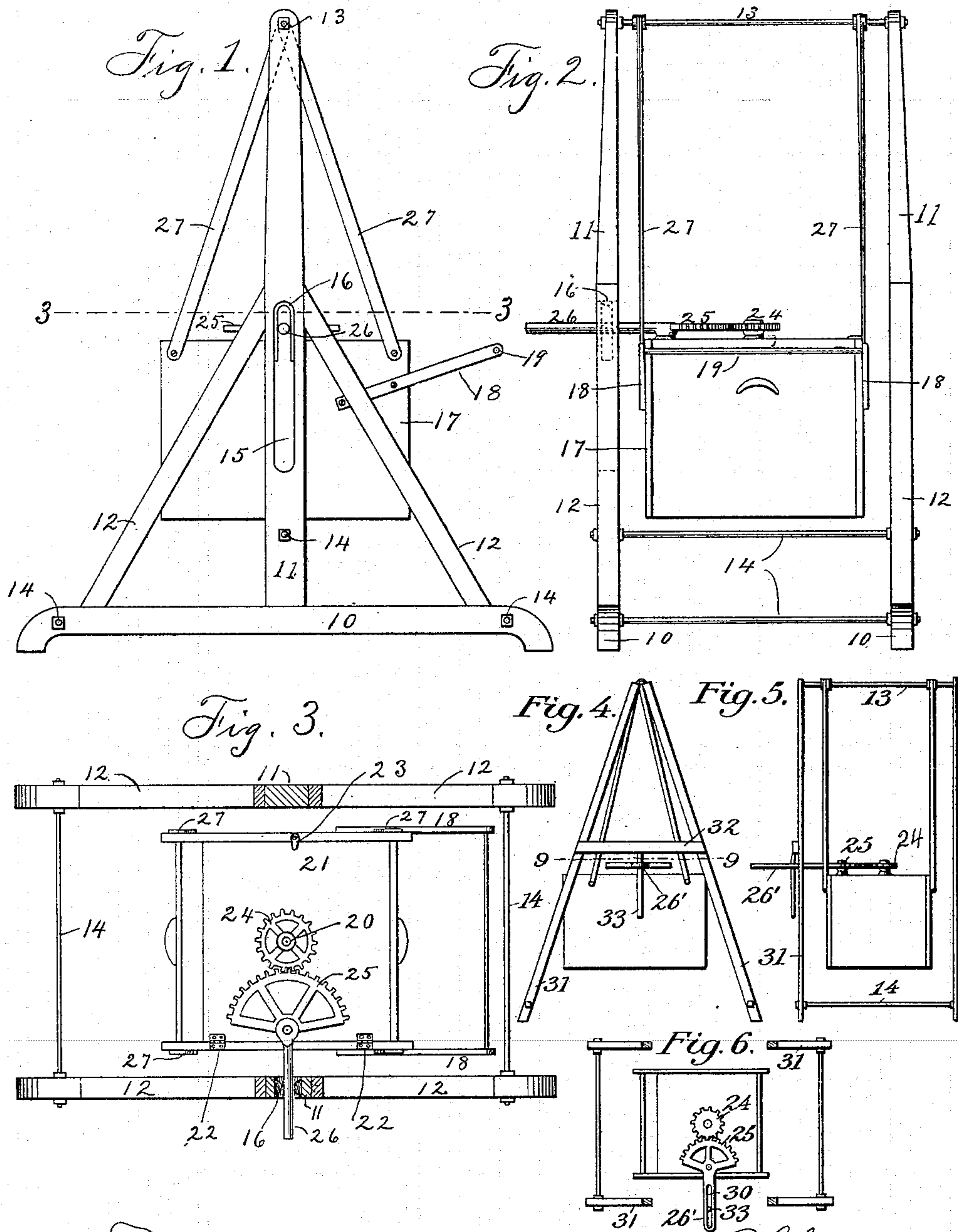
No. 612,399.

Patented Oct. 18, 1898.

G. R. CHESNUT.
WASHING MACHINE.

(Application filed Apr. 13, 1897.)

(No Model.)



Witnesses: J. A. Bramhall, R. L. Orwig, Inventor: Granville R. Chesnut, Thomas G. Orwig, J. Ralph Orwig, Attorneys.

UNITED STATES PATENT OFFICE.

GRANVILLE RICHARD CHESNUT, OF SPIRIT LAKE, IOWA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 612,399, dated October 18, 1898.

Application filed April 13, 1897. Serial No. 631,896. (No model.)

To all whom it may concern:

Be it known that I, GRANVILLE RICHARD CHESNUT, a citizen of the United States, residing at Spirit Lake, in the county of Dickinson and State of Iowa, have invented a new and useful Washing-Machine, of which the following is a specification.

This invention relates to that class of washing-machines in which the water is made to pass rapidly over the clothes to remove the dirt therefrom by means of a swinging motion imparted to the body of the machine.

My invention consists in the arrangement and combination of operative mechanism with a portable frame and a tub suspended in the frame, as hereinafter set forth, pointed out in my claim, and illustrated in the accompanying drawings, in which—

Figure 1 shows a side elevation of the complete machine. Fig. 2 shows an end elevation of the same; and Fig. 3, a horizontal sectional view, looking downwardly upon the machine, taken through the line 3 3 of Fig. 1. Figs. 4 and 5 illustrate, respectively, side and end elevations of another modification; and Fig. 6 shows a horizontal section taken through the line 9 9 of Fig. 4.

Referring to the accompanying drawings, it will be noted that the frame of the device is composed of the two parallel side pieces, the base 10, and the two uprights 11, fixed to the base and supported in position thereon by means of the braces 12. The tops of the said uprights 11 are held together and in proper relative position by means of the rod 13, and the stay-rods 14 are used to connect the lower ends of the two side pieces of the frame. In one of the side pieces 11, near its central portion, is formed a vertical slot 15, and at the upper end portion of this slot is an inverted-U-shaped bar 16, semicircular in cross-section, the purpose or function of which will be made clear hereinafter.

The reference-numeral 17 is used to indicate the washing-machine body, which is preferably made of wood and may be made in any of the usual forms or of any suitable material.

At one end of the machine-body the arms 18 are fixed, having a handle 19 connecting their outer ends, whereby the machine-body may be readily grasped for manual oscillation.

The reference-numeral 20 indicates a shaft rotatably mounted in the central portion of the lid 21 of the machine-body, which lid is hinged at 22, and a turn-button 23 is pivoted to the side of the machine-body to overlap the opposite end of the lid to hold the lid in place. This shaft 20 has, as is usual with machines of this class, a stirring device or dasher fixed to its lower end. This, however, is not shown in the accompanying drawings. On its top is a pinion 24, keyed thereto, and 25 indicates a segmental gear pivoted at 26 to the hinged top 21 and normally meshed with the pinion 24. Hence an oscillation of the gear 25 will rotate the shaft 20. Formed integral with the gear 25 is an arm 26, round in cross-section and extended laterally beyond the machine-body to project through the U-shaped bar 16 in the slot 15 of the upright 11. The body of the machine is supported from the rod 13 by means of hangers 27, pivoted to the said rod 13 and the corners of the machine-body to permit the same to oscillate. These hangers 27 are of such a length as to support the body of the machine in such a position that the arm 26 will pass through the slot 15 at a point near its upper end.

In practical operation the top 21 of the machine-body may be raised and lowered in just the same manner as though the gearing device at its top were absent. Hence the machine-body may easily be filled with water and suds and clothes in the usual manner. When this is filled, the lid is closed and the turn-button 23 placed in position to hold it down. In closing the lid care must be taken that the arm 26 passes through the slot 15 of the upright 11. This, however, is very easily done and does not require any extra time above what will be required in a machine not provided with the device. The operator then grasps the handle 19 and imparts to the machine-body a swinging, oscillating movement. This obviously causes the contents of the body of the machine to move from end to end within the body and the water to pass rapidly over the clothes, so as to carry therefrom any dirt that may be loosened. Furthermore, the arm 26 by being held to one position relative to the upright 11 will cause the segmental gear 25 to be oscillated, which movement will ro-

tate the shaft 20, on which the agitator is fixed. This will cause the clothes to be rubbed against the sides and bottom of the body, and the dirt that is loosened by said rubbing will be rapidly carried from the clothes by the movement of the water over them. Hence a thorough cleansing of the clothes is accomplished in a comparatively short time, and, furthermore, a comparatively slight application of power is all that is necessary to operate the machine, and the gearing devices for rubbing the clothes do not interfere in any manner with the raising and lowering of the lid of the body necessary in getting access to the interior of the machine-body.

In the modification illustrated in Figs. 4, 5, and 6 the construction and operation of the entire machine are similar to that just described. However, the arm 26^a of the segmental gear 25 is provided with a longitudinal slot 30, and, furthermore, the frame is of different construction, in that each side is composed of two uprights 31, converging at their upper ends and provided with a cross-piece 32 near their central portions, to which is attached a straight downwardly-projecting rod 33, designed to pass through the slot 30. The operation of this form and the preferred form are identical. In lowering the lid of the modified device it is necessary that care be taken to cause the arm 33 to be passed through the slot 30. It is obvious, further, that a slotted arm on the segment to receive a straight projection on the supporting-frame is a mechanical equivalent of a straight arm on the segment to enter a slot in the supporting-frame and that said modifications can be used interchangeably. Hence I do not desire to be understood as limiting myself to the particular arrangement of these parts.

In my former patent, No. 567,703, issued September 15, 1896, on a washing-machine I showed and described a washing-machine in which the washing-machine body was moved

in the same manner as in this application and the agitator operated in substantially the same manner and by means of the oscillating movement imparted to the machine-body. In the present application, however, I have shown and described mechanism for operating the agitator which is simpler, more durable and cheaper, and less liable to get out of order than the mechanism for the same purpose shown in the former application. Hence I do not desire to be understood as claiming, broadly, the mechanism for operating the agitator from the oscillating movement of the machine-body.

I claim—

The combination with a washing-machine, comprising a supporting-frame, hangers pivotally mounted on said frame, a machine-body attached to the hangers to be capable of an oscillatory movement, a cover for the body hinged thereto at one side and capable of movement in a vertical plane, a shaft mounted for rotation in the central portion of the said hinged cover, a gear-wheel on its upper end, a segmental gear pivoted to the cover, an integral arm projecting horizontally outward from the said segmental gear beyond the side of the hinged cover in the direction of the hinged edge of the cover, and means for connecting the said arm with the supporting-frame of the machine, said means being so constructed that, when the machine-body is in a horizontal position, the arm is automatically detached from the said connecting means when the cover is raised and automatically attached to the said connecting means when the cover is lowered, all arranged and combined substantially in the manner set forth and for the purposes stated.

GRANVILLE RICHARD CHESNUT.

Witnesses:

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