

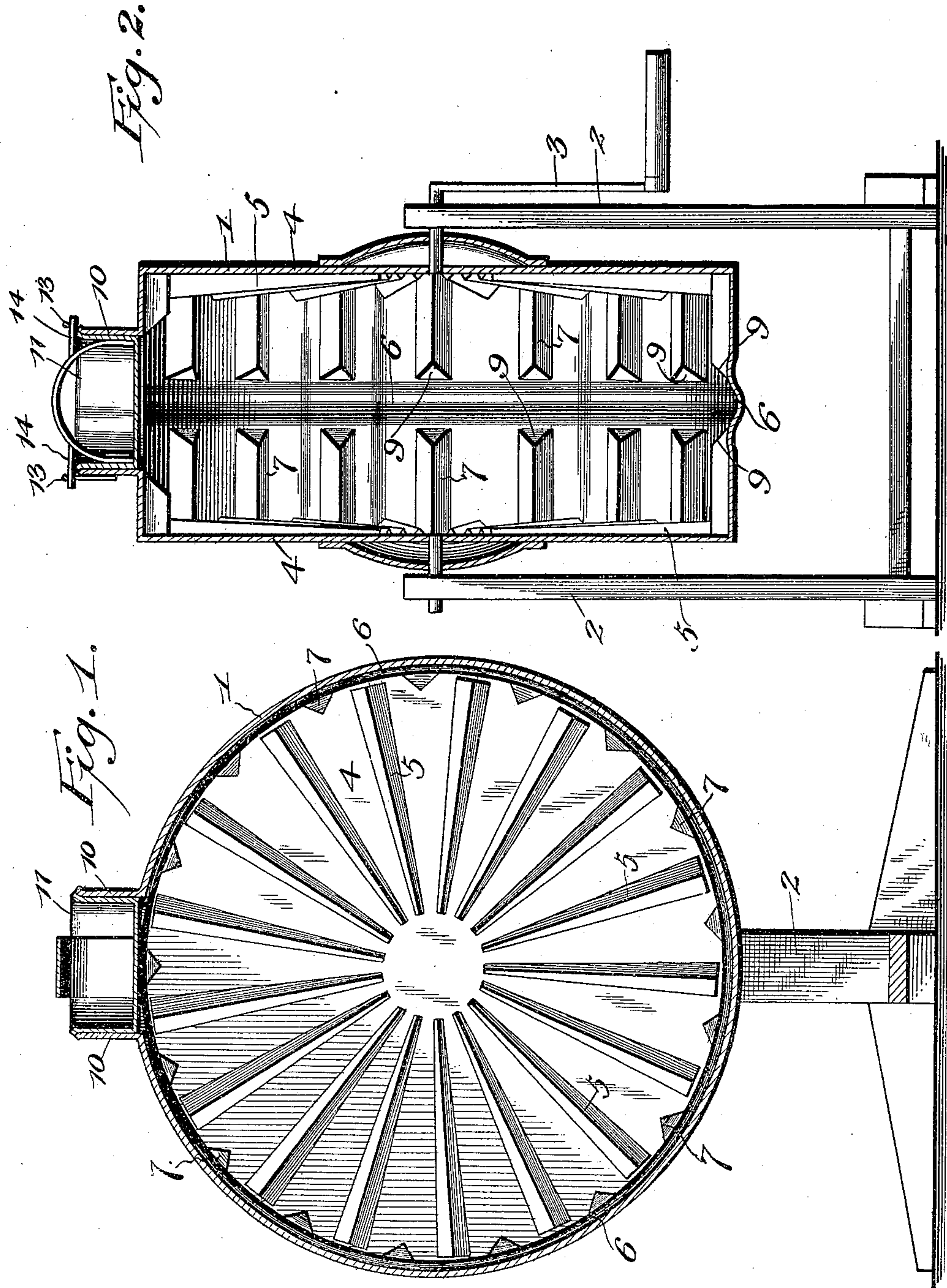
No. 641,455.

Patented Jan. 16, 1900.

U. G. LAWRENCE.
WASHING MACHINE.

(Application filed Oct. 1, 1898.)

(No Model.)



Witnesses

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UNITED STATES PATENT OFFICE.

ULYSSES G. LAWRENCE, OF GLENLOCK, KANSAS.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 641,455, dated January 16, 1900.

Application filed October 1, 1898. Serial No. 692,374. (No model.)

To all whom it may concern:

Be it known that I, ULYSSES G. LAWRENCE, a citizen of the United States, residing at Glenlock, in the county of Anderson and State of Kansas, have invented a new and useful Washing-Machine, of which the following is a specification.

The invention relates to improvements in washing-machines of the type embodying a rotary drum or cylinder.

The object of the present invention is to improve the construction of washing-machines of that type and to provide a simple, inexpensive, and efficient one which will possess strength and durability and which will be capable of rapidly and thoroughly washing clothes at the expenditure of a minimum amount of labor and without wearing, tearing, or otherwise injuring the fabrics.

The invention consists in the construction and novel combination and arrangement of parts, as hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a vertical longitudinal sectional view of a washing-machine constructed in accordance with this invention. Fig. 2 is a transverse sectional view.

Like numerals of reference designate corresponding parts in both figures of the drawings.

1 designates a cylindrical washing-machine body constructed of sheet metal or other suitable material and centrally journaled on a supporting-frame 2, one of the journals being extended to form a crank-handle 3, by means of which the cylinder is rotated. The sides 4 of the cylinder are provided at their inner faces with radial ribs 5, preferably V-shaped in cross-section and forming rubbing-surfaces adapted to engage the clothes being washed. These ribs, which may be constructed of any suitable material, are preferably made of sheet metal, as shown.

The cylinder is provided at its inner periphery with an annular groove or gutter 6, curved in cross-section and located at the center of the space between the ends or heads of the cylinder. In a full-sized machine this groove or gutter will be made three inches wide and one inch in depth. The spaces at opposite sides of the groove or gutter receive transverse ribs 7, arranged at intervals and

constructed of sheet metal or other suitable material and presenting outwardly-inclined faces. The adjacent ends of the ribs are beveled at 9 and slope from the groove or gutter 6. During the operation of washing when the cylinder is rotated the clothes are carried over the rubbing-surfaces formed by the two annular series of short transverse ribs 7, and they are thereby rubbed and subjected thoroughly to the action of the hot suds. The radial ribs 5, which are tapered, as shown, also assist the operation of washing, and the groove or gutter, which is parallel with the ends or heads, permits the water to flow backward and produces a counter agitation of the same, and thereby prevents the clothes being washed from being carried around with the cylinder in its rotation.

The machine when in motion practically revolves around the articles to be operated upon, the rubbing-surface or ribs performing a two-fold function—namely, that of rubbing the articles and also agitating the water. If the rubbing-surfaces or ribs 7 extended entirely across the inner periphery of the cylinder, they would carry the water in too great a body, and the force of gravity would be insufficient to counteract the continuous course, and as a result the articles operated upon would be rolled into a wad and only a small portion thereof would come in contact with the rubbing-surfaces. For this reason the ends of the transverse ribs are beveled to leave an intervening space. The groove or gutter between the adjacent beveled ends of the transverse ribs is indispensable to a perfectly-operating machine and also has a two-fold function—namely, to allow the water to flow back after it is lifted or carried partially upward by the ribs, and, secondly, to collect the dirty suds and sediment before and after the removal of the clothes and enable them to be quickly and effectually removed from the machine. In this manner the machine may be thoroughly drained, a result which could be only imperfectly effected were the ribs extended entirely across the body. The gutter communicates at both ends with the opening in the periphery of the cylinder, so that by turning the cylinder over till said opening is at the lowermost point the device is capable of draining itself.

The washing-machine body is provided with an opening in its periphery and has a flange 10 surrounding the same and adapted to receive the cover 11, which is secured to the flange by any suitable means that will enable it to be readily opened and closed. The flange is provided with hooks 13, and the cover, which has a suitable handle, is provided with lugs or projections for engaging the hooks. 10 The lugs or projections 14 are engaged with and disengaged from the hooks by partly rotating the cover.

Changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention. 15

What is claimed is—

1. In a washing-machine, a rotary cylindrical body having upon its inner side an annular gutter, and ribs at opposite sides of said gutter extending from the side walls inward and terminating adjacent to the gutter, substantially as described. 20

2. In a washing-machine, a rotary cylindrical body having an opening in its periphery, and provided upon its inner side with an annular gutter communicating with said opening, and ribs at opposite sides of the gutter, extending from the side walls inward and 25

terminating adjacent to the gutter, substantially as described. 30

3. In a washing-machine, a rotary cylindrical body, having an annular gutter upon its inner side, and ribs on opposite sides of the gutter extending from the side walls inward and terminating adjacent to the gutter, the inner ends of said ribs being beveled, substantially as described. 35

4. In a washing-machine, a rotary cylindrical body provided on the inner surface of its periphery with oppositely-disposed transverse ribs arranged in annular series and extending from the sides of the cylinder inward and terminating short of the center with their inner ends spaced apart, said cylinder being provided in the space between the inner ends of the transverse ribs, with an annular groove or gutter, extending entirely around the body and providing a passage for water, substantially as and for the purpose described. 40 45 50

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ULYSSES G. LAWRENCE.

Witnesses:

J. W. RICE,
A. P. FARRIS.