

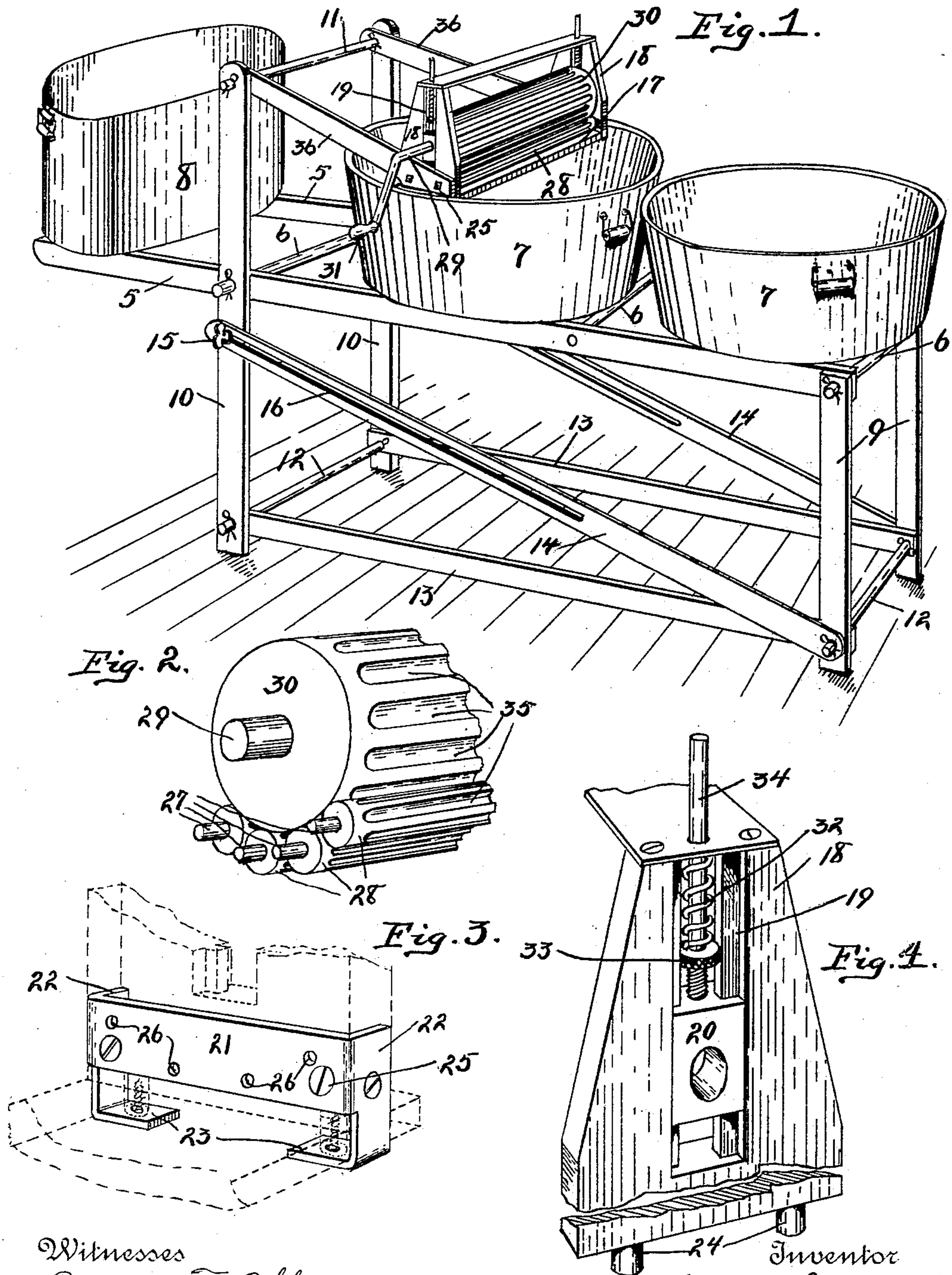
No. 616,509.

Patented Dec. 27, 1898.

C. VON MITTENDORFF.
WASHING MACHINE.

(Application filed Sept. 23, 1897.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES VON MITTENDORFF, OF BROAD RIPPLE, INDIANA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 616,509, dated December 27, 1898.

Application filed September 23, 1897. Serial No. 652,683. (No model.)

To all whom it may concern:

Be it known that I, CHARLES VON MITTENDORFF, a citizen of the United States, residing at Broad Ripple, in the county of Marion and State of Indiana, have invented a new and useful Washing-Machine, of which the following is a specification.

My invention relates to an improvement in washing-machines.

The object of my invention is to produce a washing-machine which shall be simple in construction and effective in operation, which shall be strong and rigid in construction, which may be folded into a small compass, and in which the washing-rollers are so formed as to be extremely durable.

The accompanying drawings illustrate my invention.

Figure 1 is a view in perspective of the entire machine. Fig. 2 is a detail of one end of the series of washing-rollers. Fig. 3 is a detail of the means for holding the standards of the roller-frame. Fig. 4 is a detail of one of the bearings for the upper roller.

In the drawings, 5 5 indicate a pair of side bars, and 6 a series of cross-bars formed into a frame adapted to support a pair of tubs 7 7 and a washboiler 8. Pivoted to one end of the frame thus formed is a pair of legs 9 9, and pivoted to said frame a short distance from the opposite end thereof is a pair of legs 10 10, the said legs extending above the bars 5 and being connected at their upper ends by a cross-bar 11. Each pair of legs 9 9 and 10 10 is connected by a cross-bar 12, and the legs 9 and 10 are connected at their lower ends by bars 13. In order to stiffen the table thus formed, I pivot to each leg 9, near the lower end thereof, a brace 14, which extends diagonally upward and is held in engagement with leg 10 by means of a thumb-screw 15 passing through a slot 16 formed in the upper end of the brace.

The washing-machine proper consists of a base-board 17 of such length that it may be inserted into and across the upper end of an ordinary tub. The said board is preferably provided at each end with any well-known adjustable means for making an adjustment in the length of said board in order to fit tubs of different sizes. Secured to board 17, near each end thereof, is a standard 18, each of which is provided at its upper end with a vertical slot

19, in which is mounted a bearing-block 20, the purpose of which will appear. In order to rigidly secure standards 18 to board 17, I provide a clip 21, formed preferably of sheet metal. Clip 21 is provided with a pair of ears 22, extending at right angles to the main portion and adapted to embrace the lower end of the standard 18. Ears 22 extend downward below the main portion of the clip for a distance slightly greater than the thickness of board 17 and are then bent inward to form lips 23, which lie beneath said board. Each of standards 18 is provided on its lower end with a pair of pins 24, which enter suitable holes formed in board 17. In assembling the parts clip 21 is placed upon the board 17 with lips 23 beneath said board. Standard 18 is then placed in position with pins 24 in their proper holes. The clip 21 is then moved along into engagement with the standard, as shown in Fig. 3, ears 22 lying upon each edge of the standard and lips 23 lying beneath pins 24. Suitable screws or bolts 25 are then passed through the clip and standard, screws being also passed through lips 23 into pins 24. By this means the standard 18 is very rigidly held, and the fastening means is not affected by the wash-water, as is the case where the fastening-screws are passed directly through the wood of the bottom board and the standard. Formed through each clip 21 are four holes 26, which serve as bearings for the shafts 27 of a series of four small grooved rollers 28, which extend between the two standards. Mounted in blocks 20 is the shaft 29 of a roller 30, which extends between the two standards and is considerably larger in diameter than the rollers 28. Shaft 29 is bent at one end to form a suitable crank 31. In order that roller 30 may be yieldingly held in position, I mount over each block 20 a spring 32, the tension of which may be adjusted by means of a nut 33, mounted upon a stem 34, secured to said block and passing up through the spring.

In the present construction all of the rollers are provided with a series of peripheral longitudinal grooves 35, which extend for only a portion of the length of said roller, so that there is left at each end a smooth surface equal in diameter to the outside of the teeth formed between the grooves. The small roll-

ers are arranged upon an arc struck from the center of the larger roller when in its normal position, so that when no clothing is being passed between the rollers the upper roller
5 rests upon the smaller rollers with the smooth end surfaces in contact with each other, thus preventing the intermeshing of the teeth and the consequent rattling and wearing out thereof.

10 Secured to board 17 or to standards 18 are two arms 36, which extend upward and rearward and are pivoted at their outer ends to the cross-bar 11, so that the board 17, with its attached parts, may be swung up out of
15 or down into the tub 7. The machine may be folded up and caused to occupy a very small compass by removing the tubs and loosening screws 15. Legs 9 and 10 may be then swung upon their pivots until bars 13

come into engagement with bars 5, the said 20 movement being allowed by the slots 16, formed in braces 14. The parts may be held in their folded position by tightening screws 15.

I claim as my invention—

25 In a washing-machine, the combination with the base-board and a pair of standards mounted thereon, of a clip 21 extending across one face of said standard and secured thereto and provided with a pair of ears 22 adapted to 30 embrace the edges of said standard, the said ears extending downward and bent inward to form a pair of lips 23 passing beneath the base-board, substantially as described.

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Witnesses:

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