(No Model.)

A. HALSTENBACH.

WASHING MACHINE.

No. 489,475. Patented Jan. 10, 1893.

Fig.1

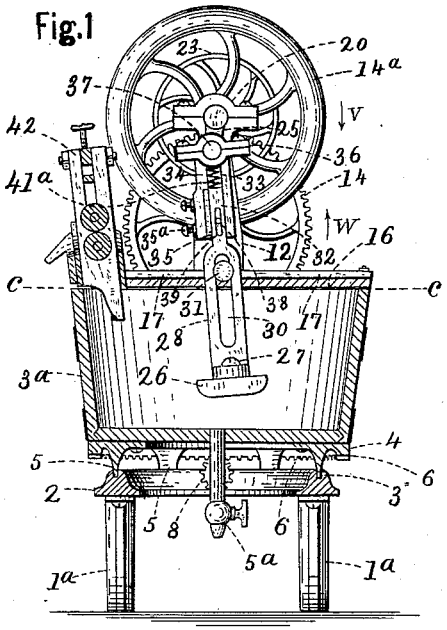


Fig.2

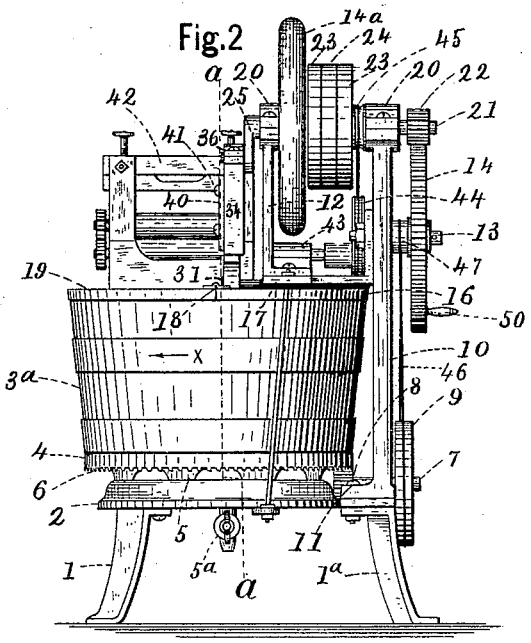


Fig.3

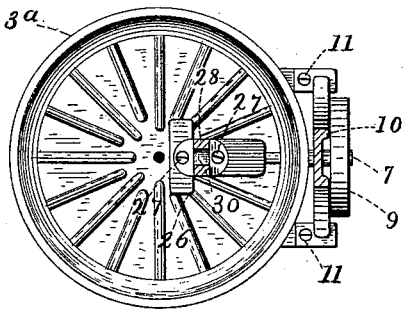
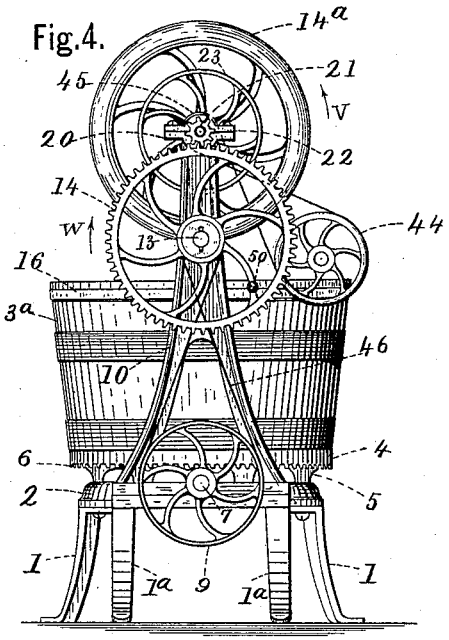


Fig.4.



Witnesses.

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UNITED STATES PATENT OFFICE.

AUGUST HALSTENBACH, OF BUFFALO, NEW YORK.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 489,475, dated January 10, 1893.

Application filed August 29, 1892. Serial No. 444,351. (No model.)

To all whom it may concern:

Be it known that I, AUGUST HALSTENBACH, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Washing-Machines, of which the following is a specification.

My invention relates to that class of washing machines adapted to be operated either by hand or power and will be fully and clearly hereinafter described and claimed, reference being had to the accompanying drawings, in which:—

Figure 1 is a vertical nearly central section in or about line *a a*, Fig. 2. Fig. 2 is a side elevation of the machine complete. Fig. 3 is a horizontal section in or about line *c c*, Fig. 1, the wringer being omitted. Fig. 4 is a rear view of the machine.

The lower frame consists of the supporting legs 1 and 1^a, the two front legs 1, supporting the front side of a circular portion, 2, having an annular groove 3, in the top, see Fig. 1, where a section through this groove is shown. The rear portion of the frame is supported by the legs 1^a. The tub 3^a, is constructed of wood in the usual way and is provided at the bottom with a circular cast iron portion, 4, having a series of downwardly projecting portions, 5, adapted to fit and slide in the circular groove, 3, in which the tub is thus supported and made to rotate. The tub may also be provided with a pipe and stop cock, 5^a, for drawing off the water (shown in Fig. 1.)

Surrounding the circular portion, 4, and forming a part of it is a series of gear teeth, 6, and at the rear of the frame supported in suitable boxes is a horizontal shaft, 7, on which is mounted a pinion, 8, shown in Figs. 1 and 2, which gears in with the teeth, 6, so that by turning this pinion the tub is made to rotate. At the end of the shaft 7, is a driving pulley, 9.

At the rear of the horizontal frame portion, 2, is a vertical frame, 10, secured thereto by bolts, 11 and at the front of the frame, 10, is another vertical frame, 12, secured to the frame 10 by a bolt and stud, 13, see Fig. 2. On this stud, 13, is mounted a spur gear wheel, 14, so as to turn thereon. The base of the frame, 12, rests upon the stationary top portion, 16, which is supported slightly above the tub by the side extension pieces, 17, extending each way from the base of the frame, 12, to which this stationary top portion is secured in any well known way. To this stationary portion, 16, is hinged by hinges, 18, see Fig. 2, another top portion, 19, (shown in Fig. 2,) which can be turned up on its hinges so that the interior of the tub can be easily got at.

At the top of each of the frame portions 10 and 12, is a box, 20, in which is mounted a horizontal shaft, 21, having at its outer or rear end a pinion, 22, adapted to gear in with the spur gear wheel, 14, and between the boxes, 20, is the fly wheel 14^a, and the tight pulleys 23, and between the tight pulleys is a loose pulley, 24, shown in Fig. 2. On the front end of the shaft, 21, is rigidly secured in any well known way a crank, 25, see Figs. 1 and 2, and to this crank is pivoted in the usual way the upper portion of the combined pounder and rubber. This combined pounder and rubber, 26, is made substantially in the form of a T, and is secured by bolts 27, (see Figs. 1 and 3,) to the lower end of a slotted bar, 28. Through the slot or opening, 30, in said bar is a pin, 31, rigidly secured to the upright frame portion, 12, see Figs. 1 and 2. The slotted bar, 28, is provided with a projecting portion, 32, (see Fig. 1,) which is adapted to fit and slide back and forth in the opening, 33, in the arm, 34. In one side of the opening, 33, is a take up plate, 35, (see Fig. 1.) The object of this plate is to tighten the slide way or opening, 33, when the parts become loose by wear, by means of the set screws, 35^a, see Fig. 1. The upper end of the arm, 34, is secured by the box, 36, to the crank-pin, 37, shown in Fig. 1. The projecting portion, 32, is secured to the arm, 34, by means of a pin, 38, which passes through a slot, 39, see Fig. 1, a cap plate 40, is then secured over it by bolts, 41, see Fig. 2. Within the opening in the arm, 34, and resting between the top of the projecting portion 32 and the upper end of the opening 33, is a spiral spring 41^a, to cause the combined pounder and rubber to give a yielding blow while in operation, shown in Fig. 1.

I have mentioned cast iron as a material of

which some of the parts are constructed, but wood or any other suitable material may be used.

In Figs. 1 and 2, I have shown an ordinary well known wringer, 42, attached to the machine. It is secured to one of the extension pieces 17 and to the stationary top portion, 16, or it may be attached in any well known way to any suitable stationary portion of the machine. The lower shaft of the wringer extends outward and into and through a box, 43, located on one of the side extension pieces, 17, and on the outer end is provided with a pulley 44, from which a belt extends to the pulley 45, on the shaft, 21, shown in Fig. 2, and as will be seen, this is a cross belt which is required to give the proper rotary movement to the wringer roller. The pulley 9, at the rear of the machine is also connected by a cross belt, 46, shown in Fig. 4, with the pulley 47, (shown in Fig. 2,) connected with the spur gear, 14, so as to turn with it.

The operation of the machine is as follows—By turning either of the driving pulleys 23 and the fly wheel 14^a, in the direction of the arrow V, the pinion 22 will turn the spur gear wheel in the direction of the arrow W. A cross belt being connected with the pulley, 9, and with the pulley, 47, the pinion, 8, will slowly turn the tub in the direction of the arrow X Fig. 2, while the crank 25, will cause the pounder 26, to move up and down, and through the stationary pin, 31, in the slot, 30, it will also having a rubbing movement the pounder being adapted to yield substantially as hereinbefore mentioned. The machine can be operated by hand by a handle, 50.

I claim as my invention.

1. In a washing machine, the combination with the tub for holding the articles to be washed of a means substantially as above described for giving the tub a horizontal rotary motion, a pounder and slotted connecting-rod connected by a pin to a crank mounted on the shaft carrying the driving pulleys and fly wheel, a stationary pin passing through the slot in the connecting-rod, and a means substantially as above described for giving the crank its required rotary movements and the pounder, its up and down and back and forth lateral movements as above set forth.

2. In a washing machine, a tub having downward projecting portions which slide in a circular groove at or near the base of the supporting frame a circular series of gear teeth projecting down from the bottom of the tub, a pinion on a horizontal shaft mounted in boxes adapted to gear in with said teeth, and a means substantially as above described for giving said tub a horizontal rotary motion, in combination with a pounder connected with a slotted connecting rod consisting of an upper and lower portion having the slotted portion or lower portion connected by a stationary pin so as to slide easily back and forth on said pin, a projecting portion on said slotted connecting rod adapted to slide into a slideway in the upper portion of the connecting rod and a spring for giving it a yielding movement, the upper portion of the connecting rod being pivoted to a crank mounted in boxes at the top of the frame and mechanism substantially as above described for giving the crank its required rotary movements for the purposes described.

3. In a washing machine, having a rotary movable tub and a means for moving it, a combined rubbing and pounding clothes pounder, consisting of a T shaped pounder, a connecting rod formed in two pieces one piece adapted to slide partly into the other, one portion being provided with a slot secured so as to slide on a stationary pin and having its lower end secured to the pounder, the other or upper portion being provided with a spring so as to allow the pounder to yield during its downward and rubbing movement on the clothes and having its upper end pivoted to a crank mounted on a shaft set in bearings in the frame of the machine and mechanism substantially as above described for giving the pounder its necessary movement as above set forth.

AUGUST HALSTENBACH.

Witnesses:
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