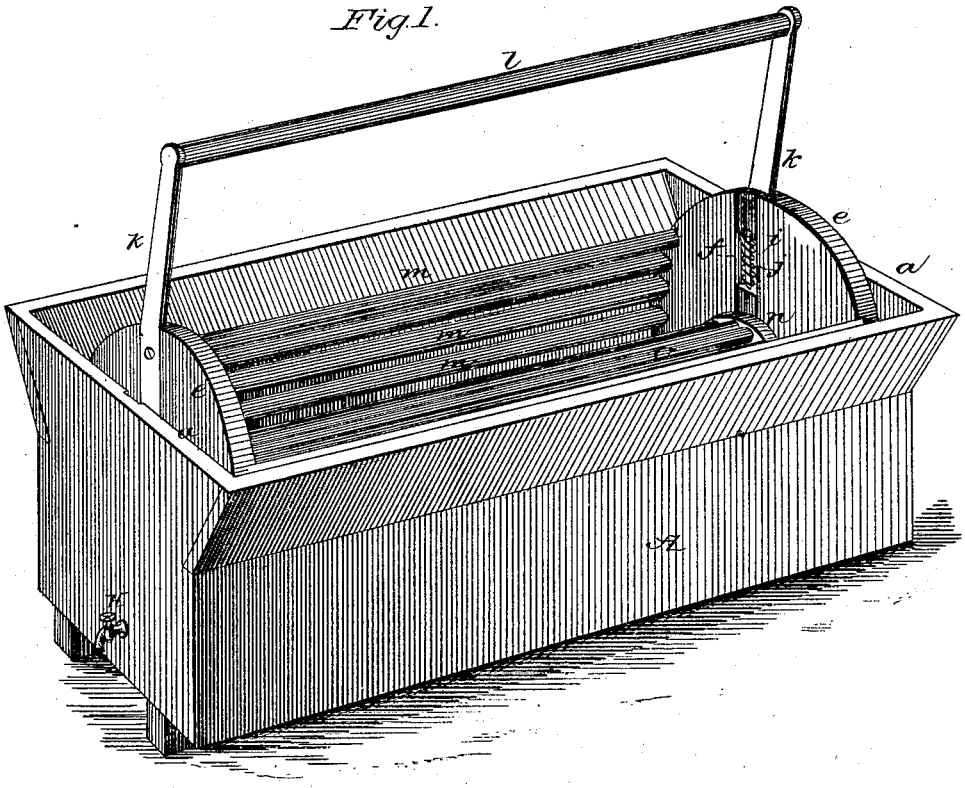
(No Model.) 2 Sheets—Sheet 1.

J. J. JOHNSTON.

WASHING MACHINE.

No. 265,818. Patented Oct. 10, 1882.

Fig. 1.



WITNESSES:

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

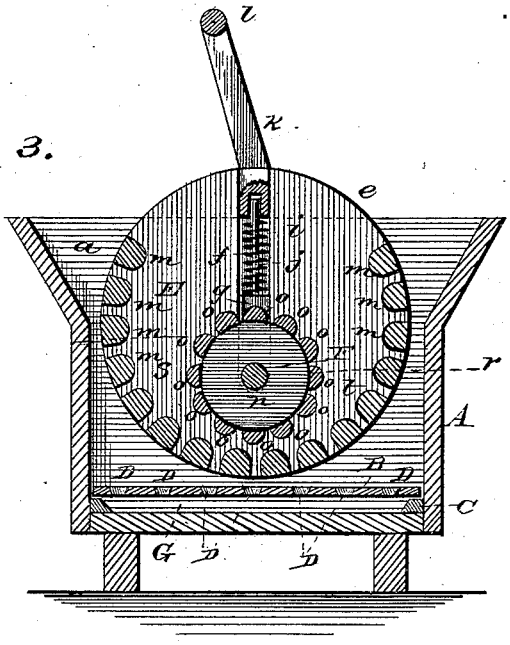
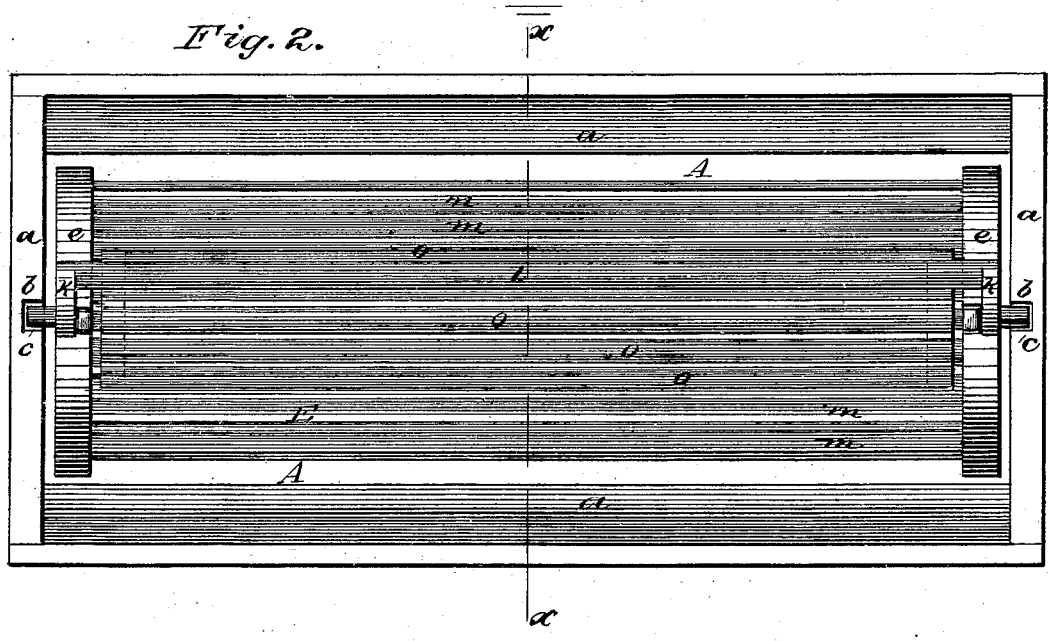


Fig. 2.



WITNESSES:

Fred. L. Dieterich

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INVENTOR.

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UNITED STATES PATENT OFFICE.

JAMES J. JOHNSTON, OF COLUMBIANA, OHIO, ASSIGNOR TO THE UNITED STATES IMPROVEMENT COMPANY, (LIMITED,) OF SAME PLACE.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 265,818, dated October 10, 1882.

Application filed February 23, 1882. (No model.)

To all whom it may concern:

Be it known that I, JAMES J. JOHNSTON, of Columbiana, in the county of Columbiana and State of Ohio, have invented a certain new and useful Improvement in Washing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention relates to an improvement in washing-machines; and it consists of a circular rubbing-chamber pivoted in a water-vessel having a secondary detachable bottom, with bell-mouth openings, and a corrugated rubbing-roller pivoted within said circular chamber in adjustable pressure-bearings, all of which will hereinafter more fully and at large appear.

To enable others skilled in the art with which my invention is most nearly connected to make and use it, I will proceed to describe its construction and operation.

In the accompanying drawings, which form part of this specification, Figure 1 is a perspective view of my improvement in washing-machines. Fig. 2 is a top view or plan of the same. Fig. 3 is a vertical and transverse section of the same at line *x x* of Fig. 2.

Reference being had to the accompanying drawings, A represents the water-chamber, having a secondary detachable bottom, B, which rests upon strips C, and furnished with a series of bell-mouth openings, D. In the ends *a* of the vessel A are grooves *b* for the trunnions *c* of the circular rubbing-chamber E, having circular ends *e*, in which are grooves *f* for the adjustable pressure-bearings *g* for the trunnions *h* of the corrugated rubbing-roller F. The trunnions *c* rotate in metallic bearings placed in the lower end of the grooves *b*, which bearings, by preference, are constructed of Babbitt metal. In the grooves *f* on rods *i*, which project upward from the adjustable pressure-bearings *g* into the detachable arms *k* of the handle *l*, are spiral springs *j*, the upper ends of which press against the lower ends of the detachable arms *k* and their lower ends against the upper ends of the bearings *g*, as shown in Fig. 3. To the ends *e* of the circular rubbing-chamber E are attached strips *m*, the inner sides of which are rounded, and said strips extend around about two-thirds of the circumference of the said ends *e*. The corrugated rubbing-roller F consists of the ends *n*, to the periphery of which are attached strips *o*, the outer surfaces of which are rounded.

The skillful mechanic will, from the foregoing description and by reference to the accompanying drawings, readily understand the construction of my improvement in washing-machines. I will therefore proceed to describe its operation, which is as follows: Water is placed in the vessel, filling it up to about the dotted line *r*. The several pieces of clothing to be washed are properly "soaped" and placed in the circular chamber E at *s*. The operator then takes hold of the handle *l* and imparts to the chamber E a reciprocating rotary motion, which will bring the clothing between the strips *m* and *o*, which will impart to the corrugated rubbing-roller F a reciprocating rotary motion, and the impinging of the strips *m* and *o* upon the clothing and rubbing action of the said strips, caused by the reciprocating rotary motion of the circular chamber E and roller F, will rapidly wash the dirt out of the clothing, which dirt will be drawn down through the openings D into the chamber G, from which the dirty water may be drawn by means of the stop-cock H. (Shown in Fig. 1.) The reciprocating rotary motion of the chamber E, combined with the bell-mouth openings D in the secondary bottom B, will cause a sucking action in the chamber G, which action will cause the dirt to be rapidly precipitated and carried down into the chamber G.

When it is desirable to turn the clothes in the process of washing them, the operator, by a long sweep of the handle *l*, throws them from the front side, *s*, of the circular chamber E to the rear side, *t*, the roller F yielding sufficiently to allow them to pass from the front side to the rear side, *t*, when a long sweep is given to the handle *l* by the operator. Then by a few short strokes of the handle the clothes will be turned so as to expose a fresh portion of them to the rubbing action of the strips *m* and *o*. The operator then, by a long sweep of the handle *l*,

throws the clothes back from the rear side, *t*, to the front side, *s*, of the chamber E, and continues the washing process until the operation of rubbing out the dirt is finished, after which the clothes are boiled and rinsed in the usual manner.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a washing-machine, the combination of the water-vessel A, having a secondary bottom, B, furnished with a series of bell-mouthed openings, D, the circular rubbing-chamber E, having grooves *f*, detachable arms *k*, and the corrugated rubbing-roller F, pivoted within the circular rubbing-chamber E in adjustable pressure-bearings *g*, having rod *i* and spiral spring *j*, and operating in the grooves *f*, substantially as herein described, and for the purpose set forth.

JAMES J. JOHNSTON.

Witnesses:
T. D. D. OURAND,
FRED. G. DIETERICH.