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S. HAWKINS.

Washing-Machines.

No. 140,037. Patented June 17, 1873.

Fig. 1.

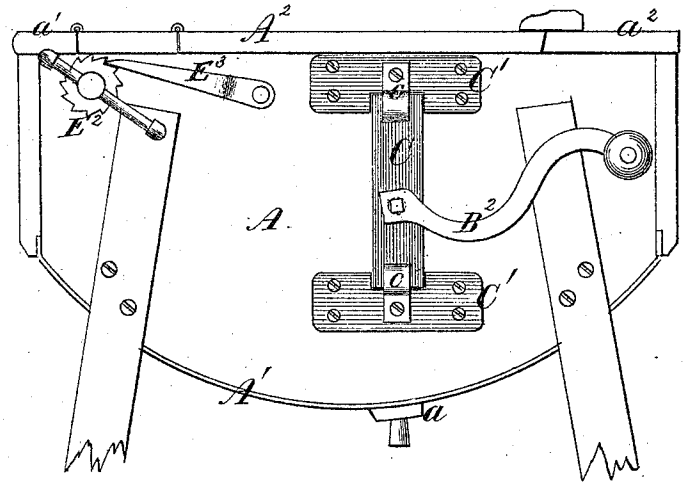
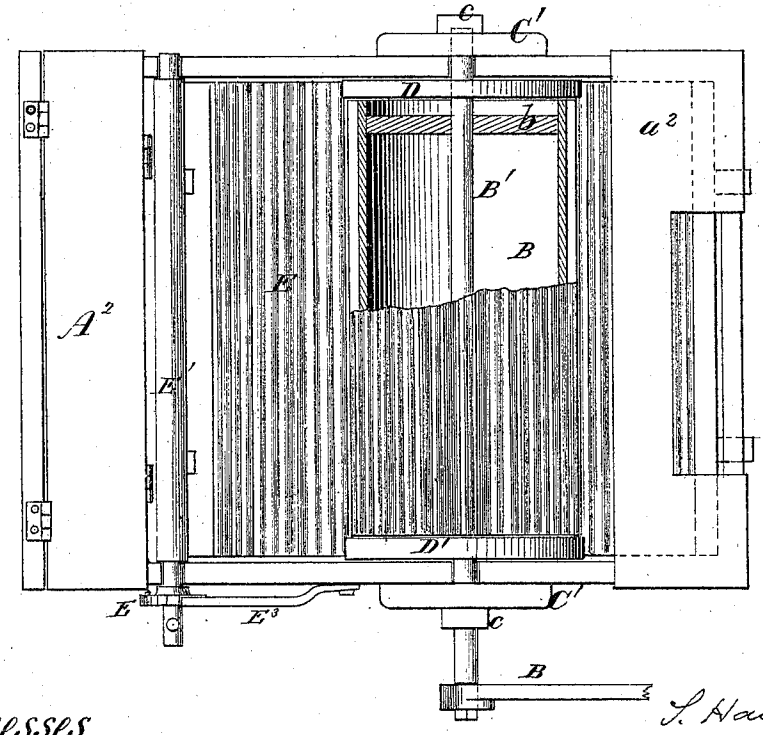


Fig. 2.



Witnesses.
A. Ruppert.
Edes. J. Eils

S. Hawkins
Inventor.
D. P. Holloway & Co.
Attys.

AM. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS)

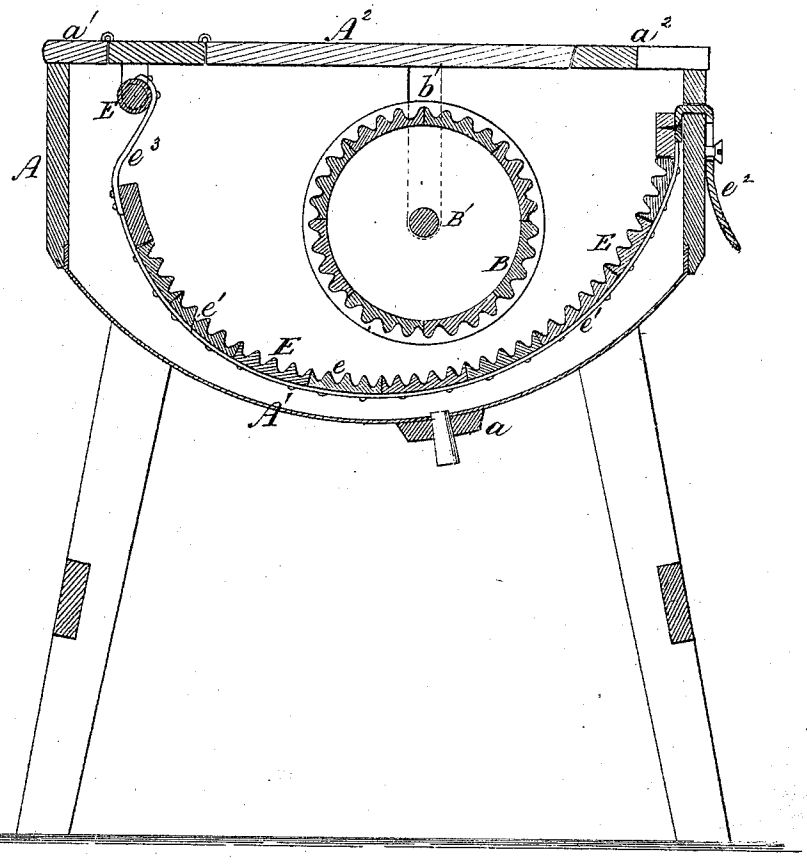
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Fig. 3.



Witnesses.
A. Ruppert
C. Edwd. F. Eibs

S. Hawkins
Inventor.
D. P. Holloway & Co
Attys

AM. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS)

UNITED STATES PATENT OFFICE.

SAMUEL HAWKINS, OF CHILLICOTHE, MISSOURI.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **140,037**, dated June 17, 1873; application filed April 7, 1873.

To all whom it may concern:

Be it known that I, SAMUEL HAWKINS, of Chillicothe, in the county of Livingston and State of Missouri, have invented a certain Improvement in Washing-Machines, of which the following is a specification:

This invention relates to that class of washing-machines composed essentially of a suds-box, an adjustable fluted or corrugated concave, and a cylinder revolving over the concave. My improvement consists in a novel construction of the concave, and in certain means for adjusting the same and the cylinder, as will be more fully explained in the ensuing description, and specifically pointed out in the claims.

Figure 1 is a side elevation of my improved washing-machine. Fig. 2 is a plan view, showing the lid of the suds-box thrown back to expose the interior arrangement, also illustrating the cylinder partly in action. Fig. 3 is a vertical longitudinal section.

The same letters of reference are used in all the figures in the designation of identical parts.

The suds-box A has a concave bottom, A^1, preferably made of galvanized sheet-iron, suitably secured to the sides and ends of the box, and strengthened by a transverse bar, *a*, along its middle. The lid A^2 is hinged to the top board a^1, and may be made of two pieces hinged together in the manner shown. The top board a^2 at the opposite end of the box is suitably formed to permit of the convenient attachment of a wringer. The rubbing-cylinder B is composed of a series of fluted bars firmly secured to circular heads *b*, by means of which it is fastened upon a shaft, B^1, which protrudes with its ends through elongated vertical slots *b'* in the sides of the suds-box. The shaft B^1 has its bearings in bars C, the bearings being arranged nearer to one end of the bars than to the other, so that by a reversal of the bars C the rubbing-cylinder can be adjusted vertically. The bars C are supported between recessed blocks C' C', and cover the slots *b'* in the sides of the suds-box, to prevent the escape of suds at those points; when arranged in the desired position, buttons *c* are turned over their ends to hold them securely in place, as clearly shown in Fig. 1. At one end the shaft projects through its bearing, and carries a crank, B^2, by which the cylinder is turned. To prevent clothes to be cleansed from being wound around the shaft or cylinder by getting caught between its ends and the sides of the suds-box, loose disks or washers D D' are placed upon the shaft B^1 between the ends of the cylinder and the sides of the box, as best seen in Fig. 2. The concave E is flexible, being composed of a series of fluted or corrugated wooden bars, *e*, secured to elastic straps e^1, which may consist either of thin bands of steel, or of straps of leather. The concave is hung at one end to the box by straps e^2, and at its other end it is connected by flexible straps e^3 to a roller, E^1, by turning which and winding up or unwinding the straps e^3 the concave may be raised or lowered, to adapt the space between it and the cylinder to the particular kind of articles to be washed. The roller turns in open bearings in the sides of the box, covered by the lid, and may be provided with a crank or other device for turning it; a ratchet-wheel, E^2, being secured to it at one end, acting in conjunction with a pawl, E^3, to hold the roller stationary after proper adjustment of the concave. By unhitching the straps e^2 of the concave from the box, the concave may be readily removed from the box by lifting the roller E^1 out of its open bearings, and drawing the concave after it.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of the suds-box, rubbing-cylinder, loose disks or washers D D', flexible concave E, and windlass E^1 E^2 E^3, all arranged and operating substantially as specified.

2. The rubbing-cylinder B B^1, suds-box A having elongated vertical slots *b'*, and reversible supporting-bars C, the bearings in which are nearer to one end than to the other, substantially as and for the purpose specified.

3. The suds-box and rubbing-cylinder, in combination with the loose disks or washers D D', substantially as and for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SAMUEL HAWKINS.

Witnesses:

H. M. POLLARD,

JAMES LEPER.