(No Model.) 2 Sheets—Sheet 1.

J. SCHARR.

WASHING MACHINE.

No. 420,108. Patented Jan. 28, 1890.

Fig. 1.

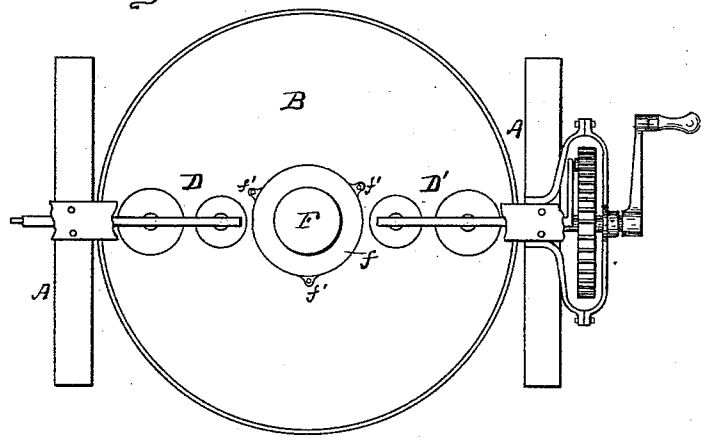
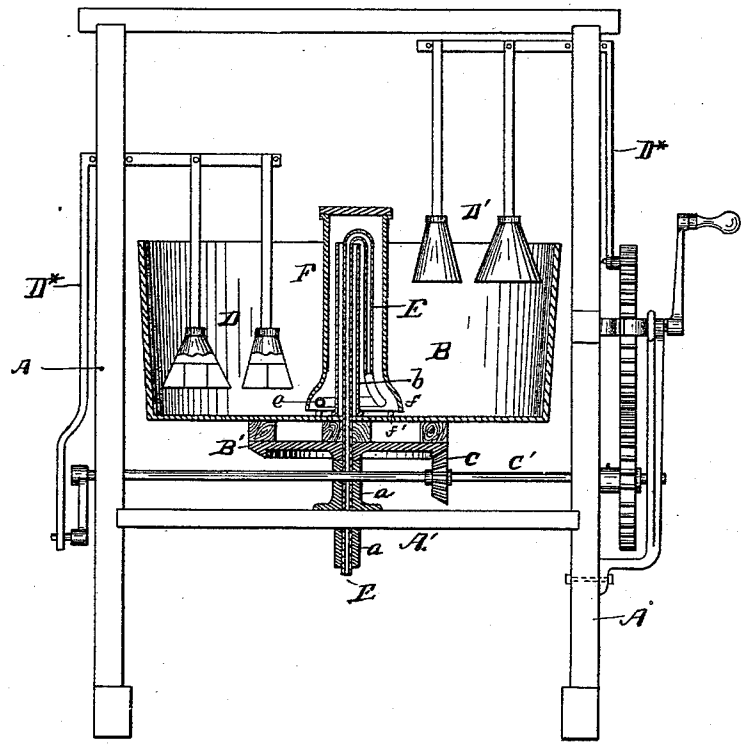


Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

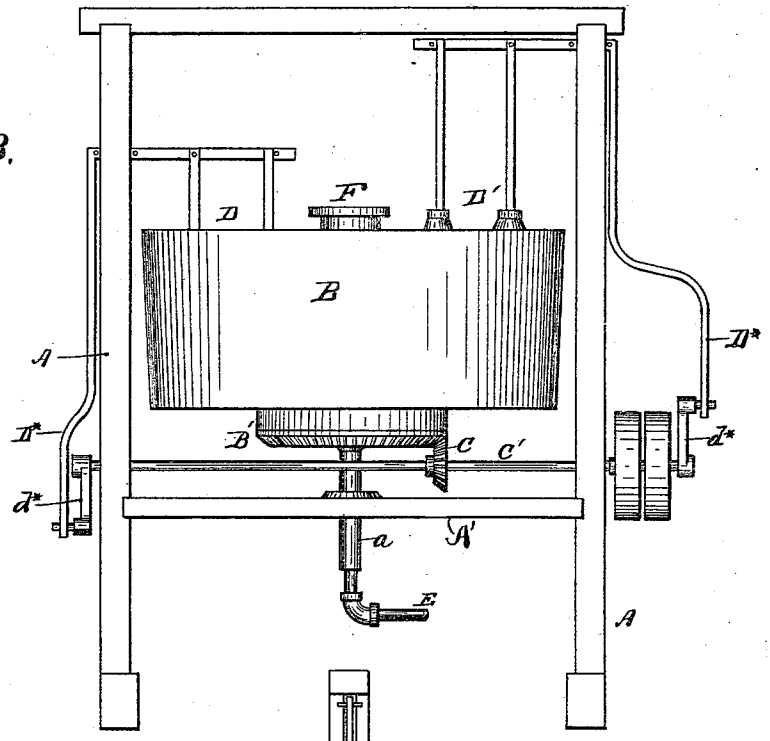


Fig. 4.

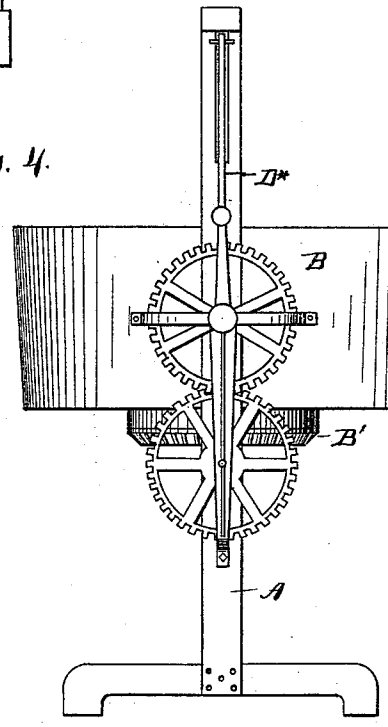


Fig. 5

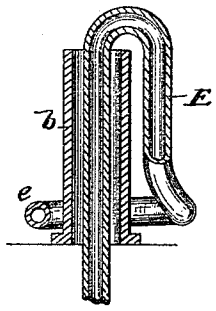
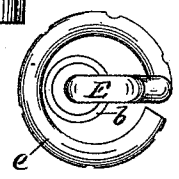


Fig. 6.



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UNITED STATES PATENT OFFICE.

JONATHAN SCHARR, OF PHILADELPHIA, PENNSYLVANIA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 420,108, dated January 28, 1890.

Application filed April 19, 1889. Serial No. 307,675. (No model.)

To all whom it may concern:

Be it known that I, JONATHAN SCHARR, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Washing-Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to washing-machines, and has for its object the provision of a combined suction-pounder and boiler or agitator.

It consists, essentially, in adding a steam-pipe to the pounding washing-machine shown in Patent No. 323,740, granted to me on August 4, 1885, and in provisions for operating such a machine by steam or other power.

The invention will be understood from the following detailed description, and pointed out in the claims.

The accompanying drawings illustrate the invention.

Figure 1 is a plan view of the machine with the top cross-tree removed. Fig. 2 is a vertical section of the device, showing it arranged for hand operation. Fig. 3 is a side elevation of the device arranged for the application of power. Fig. 4 is an elevation taken from the right-hand of Fig. 2. Fig. 5 is a sectional view of the steaming apparatus enlarged and having the cap or casing removed. Fig. 6 is a plan view of Fig. 5.

Similar letters of reference indicate corresponding parts in all the figures where they occur.

A is a frame, in which the tub, the pounders, and operating parts are mounted, certain parts of said frame being marked by different letters, as may be required. Upon a cross-bar A′ of frame A the tub B is supported on a collar *a*, on which the eye of a cogged disk B′ on the bottom of the tub rests. In the cogged rim of disk B′ meshes a spur-wheel C, mounted on a transverse shaft C′. This shaft is connected at the ends to the pounders D and D′ in such manner as to raise the two sets alternately, as set forth in the patent above referred to, the tub B being rotated as the pounders are operated. The form of connection to the pounders shown in Figs. 1 and 2 is substantially that shown in the patent, which is intended for operation by hand. I have made an improvement upon this construction, as indicated in Fig. 3, by reason of which power can be applied to shaft C′, as will be fully explained hereinafter.

To the hand-machine as well as the power-machine I apply the steam device by which steam or superheated steam is led into the bottom of the tub.

E is the steam-pipe, which passes up through the stud or collar *a* and eye of disk B′ into the tub through a central cylinder *b*, which is fastened to the bottom of the tub and extends to or nearly to the top thereof. The steam-pipe is carried up through the cylinder and bent upon itself and carried down upon the outside thereof and coiled around it at the bottom of the tub. The coil is marked *e*, and is provided with a series of discharge apertures or ports for the steam, which is delivered into the bottom of the tub, and keeps the water in a boiling condition throughout the operation of washing without the possibility of water escaping from the tub through the steam-pipe.

In order to protect the pipe, prevent water from being splashed or slopped into the top of the cylinder, and also to diffuse the steam more thoroughly over the bottom of the tub, I provide a cap or hood F, which is closed at the top and flared at the bottom, as shown at *f*, and provided with feet *f′ f′ f′* to keep its lower end slightly elevated above the bottom of the tub, so that the steam escaping from the pipe will be diffused over the bottom of the tub. The outer end of the steam-pipe is carried off to connect with a suitable boiler.

In the power form of tub, as shown in Fig. 3, the gearing shown in Figs. 1 and 2 is omitted and the shaft C′ is connected at both ends directly with the cranks *d* d**, to which the pitmen D* D* of the pounders are attached, and a pair of fast and loose pulleys G G′ are applied to the shaft, over which a suitable band from an engine is run to operate the pounders and tub.

The boiler for supplying steam to the tub may also be used for driving the engine for operating the shaft C′.

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

1. In a washing-machine, a revolving tub having a central cylinder extending up into it, closed at the bottom and open at the top, and a steam-pipe entering the tub through said cylinder, combined and arranged as and for the purpose set forth.

2. The combination, with a revolving tub having an upright cylinder and pounders in said tub, of a steam-pipe carried up through the cylinder and bent down to deliver steam at the bottom of the tub, as set forth.

3. The combination, with a revolving tub having a cylinder extending up through it, of a steam-pipe carried up through said cylinder and having a bend at the top and being carried back down the side and having a perforated coil around the base thereof, as set forth.

4. The combination of a revolving tub, a cylinder extending up through said tub, a steam-pipe carried up through said cylinder and carried back to the bottom of the tub, and a cap or hood set over the cylinder and steam-pipe in the tub, substantially as set forth.

5. The combination of a tub, a cylinder extending up through said tub, a steam-pipe carried up through said cylinder, bent over, carried down, and coiled round the base thereof, and provided with perforations in said coil, and a cap or hood having a flared base and supporting-feet to hold it above the bottom of the tub.

In testimony whereof I affix my signature in presence of two witnesses.

JONATHAN SCHARR.

Witnesses:
THOS. D. MOWLDS,
CHARLES E. LEX.