(No Model.)

I. H. ARNOLD, J. F. LILLARD & F. STERZING.

WASHING MACHINE.

No. 566,885. Patented Sept. 1, 1896.

Fig. 1

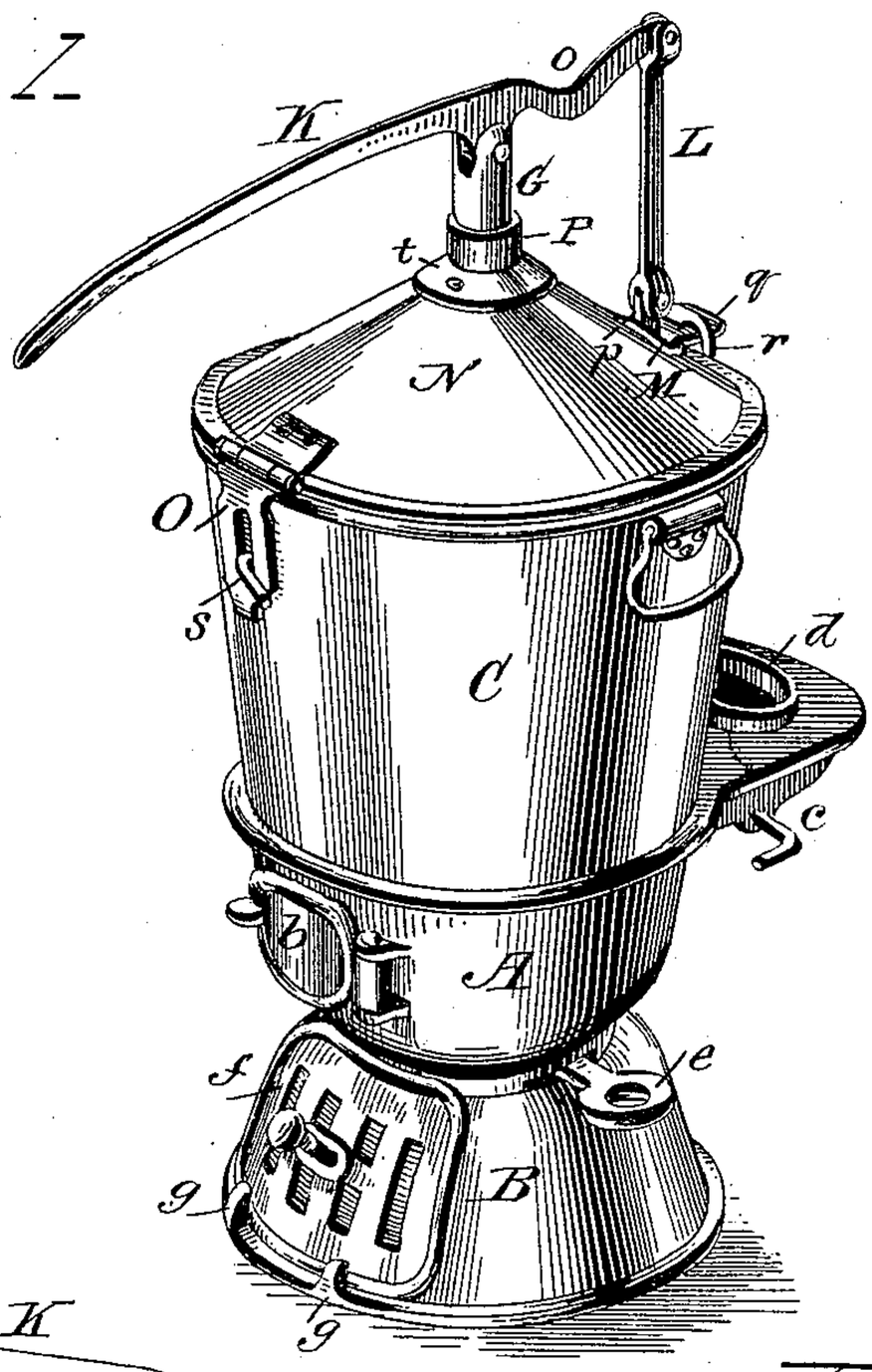


Fig. 2

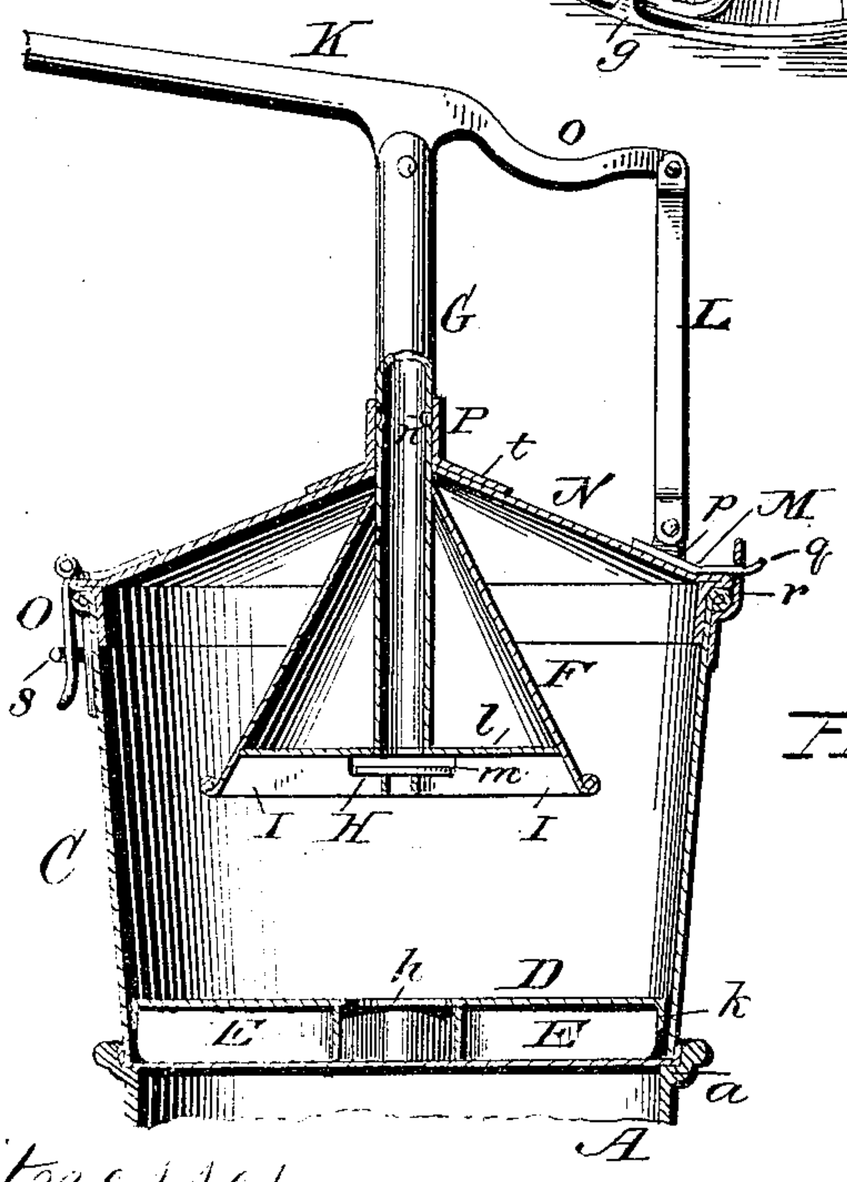


Fig. 3

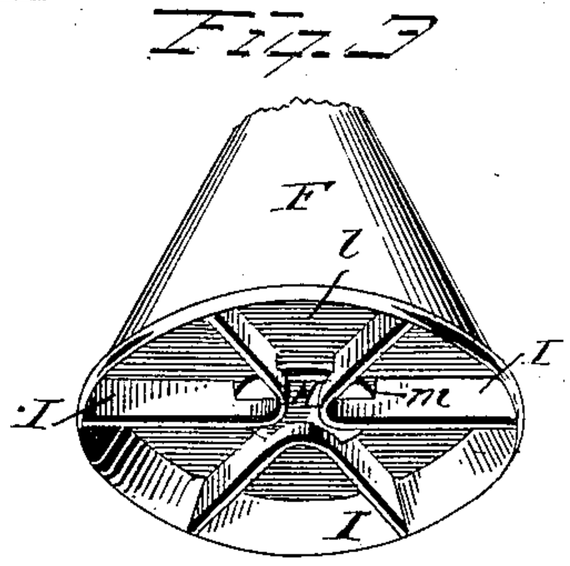
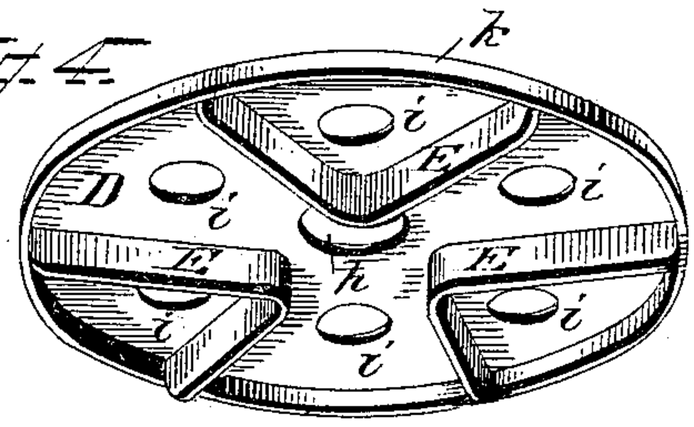


Fig. 4



Witnesses
C. Williamson
J. W. Smith.

Inventors
Isaac H. Arnold,
James F. Lillard,
Fred Sterzing,
per Chas. N. Fowler
Attorney.

UNITED STATES PATENT OFFICE.

ISAAC HILL ARNOLD, JAMES FRANCIS LILLARD, AND FRED STERZING, OF AUSTIN, TEXAS.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 566,885, dated September 1, 1896.

Application filed January 27, 1896. Serial No. 576,995. (No model.)

To all whom it may concern:

Be it known that we, ISAAC HILL ARNOLD, JAMES FRANCIS LILLARD, and FRED STERZING, citizens of the United States, residing at Austin, in the county of Travis and State of Texas, have invented certain new and useful Improvements in Washing-Machines; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

The present invention has relation to that class of boiler washing-machines in which a stove is employed especially designed to receive the boiler, said boiler being provided with a pounder attachment operated by a pivoted hand-lever.

It is the object of the invention to improve the construction of this class of washing-machines in its several details, whereby the machine will be materially improved in its operation and effectiveness and the most thorough cleansing of the clothes secured with the least expenditure of fuel and heat.

The invention consists of a washing-machine constructed substantially as shown in the drawings and hereinafter described and claimed.

Figure 1 of the drawings represents a perspective view of a washing-machine constructed in accordance with our invention, the boiler and stove being connected ready for use; Fig. 2, a sectional elevation of the boiler and its attachments, showing the upper portion or rim of the stove upon which the boiler is supported; Fig. 3, a detail perspective view showing the under side of the pounder; Fig. 4, a similar view of the removable false bottom to the boiler.

In the accompanying drawings, A represents the stove, which is especially constructed to receive the boiler of the washing-machine, said stove having an open top with a circumferential shoulder *a*, upon which the boiler rests, as shown in Fig. 2 of the drawings.

The stove A has a suitable door *b* at its front side, a damper of the usual construction, which may be operated by the handle *c*, means for attaching a suitable pipe for conducting off the products of combustion, as shown at *d*, and a shaking-grate provided with a handle *e*. These features being the necessary adjuncts to a stove, further illustration and description thereof are deemed unnecessary, and they may be modified or changed as circumstances require without departing from the principle of our invention.

The stove A has a flaring ash-pit B, which is provided with a combined damper and door *f*, which damper is to regulate the draft, and the removal of the door is to obtain access to the interior of the ash-pit to remove the ashes therefrom, the door and damper being of any suitable and preferred construction and held to its place by the lugs *g*.

The boiler C, in which the clothes are placed, may be of any suitable shape and size, and is supported over the stove by the flange or shoulder *a*, hereinbefore described. The boiler is provided with a removable false bottom D, having a large central opening *h* and smaller openings *i* around the same to permit a free circulation of the water in the usual manner. The false bottom D has a circumferential downwardly-projecting flange *k* to form a brace thereto and materially increase the strength of the false bottom.

To the under side of the false bottom are secured V-shaped supports E, which hold the bottom off the bottom of the boiler.

The hollow conical pounder F has a partition *l* near its base, which partition has a central opening to communicate with the open end of the upright stem G, the pounder being rigidly attached to the tubular stem and moves with it. The opening in the partition *l* and lower end of the stem G are controlled by a suitable valve H, which is supported by the V-shaped compressing-wings I. These wings are secured to the interior sides of the pounder F and to the partition *l* and decrease in width at their apex to form a space for the proper working of the valve H, as shown at *m* in Figs. 2 and 3 of the drawings.

The tubular stem G has vents *n* through its sides, and at its upper end has pivoted thereto a hand-lever K, which lever has a curved end *o*, as shown.

To the curved end of the hand-lever K is pivoted the upper end of a fulcrum-bar L, which bar at its lower end is pivoted to a

stud *p* upon a bracket M, secured to the cover N of the boiler. The bracket M has an engaging lip *q*, which lip engages with a loop *r*, projecting up from the side of the boiler C, which forms a temporary hinge for the cover.

On the cover N diametrically opposite the bracket M is secured a hinged slotted plate O, with which engages a pivoted locking-pin *s*, and when said pin is in position shown in Fig. 1 of the drawings the cover of the boiler will be securely held in place. When it is desired to remove the cover N, the pivoted locking-pin *s* is turned parallel or on line with the slot in the hinged plate O, which will admit the plate to be disconnected therewith and turned up out of the way and allow the lip *q* of the bracket M to be disconnected with the loop *r*, thereby enabling the cover with its connections to be entirely removed from the boiler.

The cover N, which is preferably of the shape shown in the drawings, has a central opening through which extends the tubular stem G, and around this opening is a tubular bearing-collar P. This bearing-collar through which the tubular stem extends has a securing-flange *t* whereby said collar may be fastened to the cover, said collar steadying the tubular stem when in motion. By means of the fastening devices upon the cover said cover is held tightly down over the boiler and thereby preventing the escape of any steam.

The downward stroke of the pounder will close the valve therein, which will cause the steam to be compressed and force the suds through the fiber of the goods in the boiler, thus expanding the goods and allowing the free passage of the steam and suds therethrough to thoroughly cleanse them, the false bottom acting as a receptacle to receive all dirt or sediment removed from the goods. Upon the downward stroke of the pounder the condensed steam is forced to the center, and at the upward stroke of the pounder the steam and suds is given a free circulation by means of the vents in the tubular stem, thus allowing the pounder to work freely. The function of the pounder, with its valve and perforation or vents in the tubular stem is to compress and suck the steam, and suds through the fabric in conjunction with the action of the false bottom.

The boiler may be provided with suitable handles for lifting it off the stove or replacing it thereon, and the stove may be of any suitable construction and adapted for burning wood or coal, as found desirable, and when the boiler is removed the opening in the stove may be closed by a suitable plate or cover.

Having now fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

In a washing-machine, the combination of a boiler, a detachable cover having a central aperture, a pounder, the stem of which passes through the aperture, a lever pivotally connected with said pounder-stem intermediate of its ends, a link pivotally connected with said lever at one end and pivotally connected with a lug carried upon the said cover at the other end, whereby the pounder and its operating mechanism are made removable with the cover, substantially as described.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

ISAAC HILL ARNOLD.
JAMES FRANCIS LILLARD.
FRED STERZING.

Witnesses:
W. J. OLIPHANT,
WM. M. MILBY.