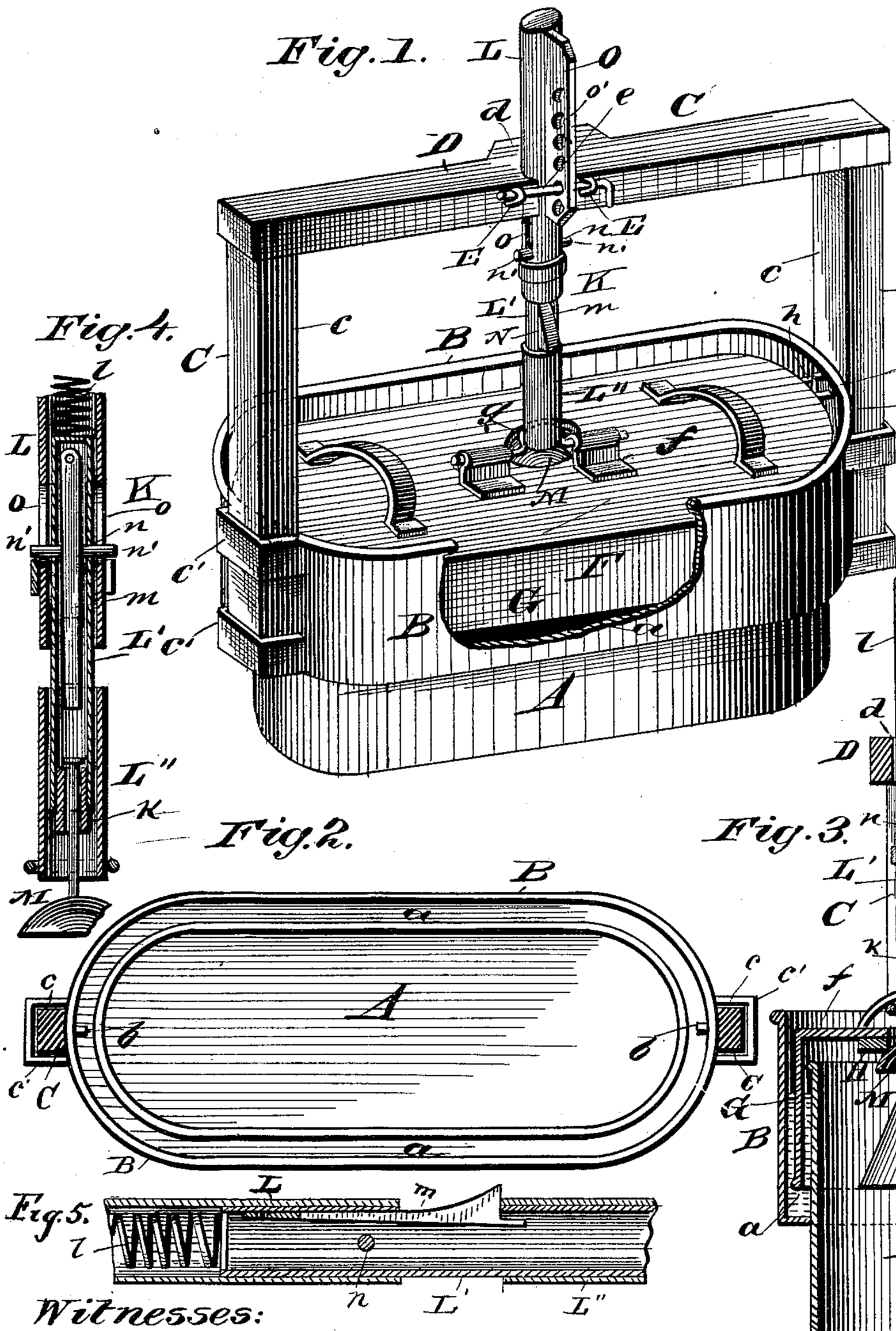
(No Model.)

R. R. DAVIS.

WASHING MACHINE.

No. 368,383. Patented Aug. 16, 1887.



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UNITED STATES PATENT OFFICE.

REED R. DAVIS, OF DOUGLASS, KANSAS.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 368,383, dated August 16, 1887.

Application filed July 27, 1886. Serial No. 209,244. (No model.)

To all whom it may concern:

Be it known that I, REED R. DAVIS, of Douglass, in the county of Butler and State of Kansas, have invented certain new and useful Improvements in Washing-Machines; and I do hereby 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 pertains to make and use the same.

My invention relates to automatic steam washing-machines, the object being to provide a machine of this character of simple and durable construction.

My invention consists in the combination, with a boiler and an outer casing or wall and supporting-frame, of a cover fitting in the space between the boiler and the outer casing or wall, and a valve which is automatically operated by the pressure of the steam.

My invention further consists in the details of construction herein described, and fully pointed out in the claims.

In the drawings, Figure 1 is a perspective view of my improved washer, with parts broken away to show more clearly the interior construction. Fig. 2 is a plan view of the boiler, outer casing or wall, and supporting-frame. Fig. 3 is a sectional view of the cover and valve-standard combined. Fig. 4 is a sectional view of the valve standard with the valve attached thereto. Fig. 5 is a sectional view of a portion of the valve-standard, showing the spring-latch.

A is a boiler provided with an outer casing or wall, B, secured to the boiler at some distance above the bottom of the latter and extending above the top of the boiler, thereby forming an annular space, *a*. The outer casing or wall is provided with guideways *b b*, whose functions will be hereinafter described.

C represents a supporting-frame consisting of uprights *c c*, secured at their lower ends in bearings *c' c'* of the casing B, and connected at their top ends by a horizontal bar, D. This bar D is recessed at one side, *d*, and at each side of said recess is provided with staples E E and a pin, *e*.

The cover F is formed of a top piece, *f*, provided with an annular depending flange, G, said top piece being formed with an opening at its center and provided on its under side with a valve-seat, H, and any desired number of clothes-pounders, I. The opposite ends of the boiler are provided with guides *h h*, which register with the guideways *b b*.

The valve-standard K is composed of three sections, L L' L''. The section L'' is of hollow cylindrical form and hinged to the top piece, *f*, at one side of the opening *g*. The section L' is also of hollow cylindrical form, and provided at its lower end with a plug, *k*, to which is loosely attached the valve M. The section L' is also provided internally with a spring-latch, *m*, which projects through a slot, N. The spring-latch *m* is tapered toward its upper end, and is riveted to the section L'. This tapering gives it the qualities of a spring, so that its lower end will project through the slot N. Near the upper end of the section L' is arranged a cross-pin, *n*, projecting beyond its sides to form lugs *n' n'*, said lugs working in slots *o o* of the section L to limit the motion of the section L'. The portion of the spring-latch *m* which projects through the slot N is made in the form of a catch having an inclined and a horizontal portion. The horizontal surface is adapted to bear upon the upper end of the section L'' and hold the valve M in place, while the inclined surface is adapted to bear against the lower edge of the section L and gradually press the said horizontal surface out of engagement with the upper end of the section L''. The section L is also of hollow cylindrical form, and is provided internally with a coiled spring, *l*, which presses on the top of the section L' to keep it down. The section L is also provided with slots *o o*, hereinbefore mentioned.

A rib or fin, O, having a series of holes, *o'*, is attached to one side of the section L, and said rib, in connection with the staples E E and pin *e* of the horizontal bar D, makes the valve-standard adjustable.

The space *a*, to prevent the escape of steam, is kept filled with water from a tank or any other suitable device.

The operation of my invention is as follows: The clothes and water are placed in the boiler. The cover is then placed in position and the valve-standard adjusted. The machine is then placed upon a stove or other heating apparatus, and as the steam is generated it presses the cover upwardly, and by so doing the inclined portion of the spring-latch *m* is pressed

against the lower end of the section L, and this movement presses the horizontal portion of the said spring-latch inwardly, and as soon as said horizontal portion is pressed far enough to free it from the top edge of the section L″ the section L′ will descend and will carry the valve M with it, thus allowing the steam to escape and the cover to fall by its own weight, and the coiled spring *l* forces the section L′ downwardly to strike the spring-latch and close the valve, and thus the operation is continued automatically, the water-supply being maintained by a slow feed from the tank to the cold-water space, the overflow from which empties into the boiler.

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

1. The combination, with a double-walled boiler having an annular cold-water space, of a cover provided with pounders and an annular depending flange, and a valve operated by steam for raising and lowering said cover, substantially as described.

2. The combination, with a double-walled boiler having a clothes-receptacle and an annular cold-water space, of a cover provided with pounders and an annular depending flange, and a valve and valve-standard, said valve-standard provided with a spring-latch to operate the valve, substantially as described.

3. The combination, with a double-walled boiler having a clothes-receptacle and an annular cold-water space, of a cover provided with pounders and an annular depending flange, and a valve-standard and a valve adapted to be automatically opened and closed, substantially as set forth.

4. In a steam washing-machine, the combination, with the boiler and supporting-frame, of a valve-standard having a hinged connection with the cover or top of the boiler, said valve-standard being provided with a spring-latch and a coiled spring, substantially as described.

5. The combination, with the boiler and supporting-frame and with the boiler-cover, of a valve and a valve-standard, the latter having an adjustable connection with the frame, substantially as described.

6. The combination, with the boiler, of an annular water-space, a cover having a depending flange to enter said water-space, the valve, and the three-part standard provided with a spring-latch and a coiled spring, substantially as described.

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

REED R. DAVIS.

Witnesses:
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