

No. 667,383.

Patented Feb. 5, 1901.

R. S. ANDREWS.  
WASHING MACHINE.

(Application filed Apr. 26, 1900.)

(No Model.)

2 Sheets—Sheet 1.

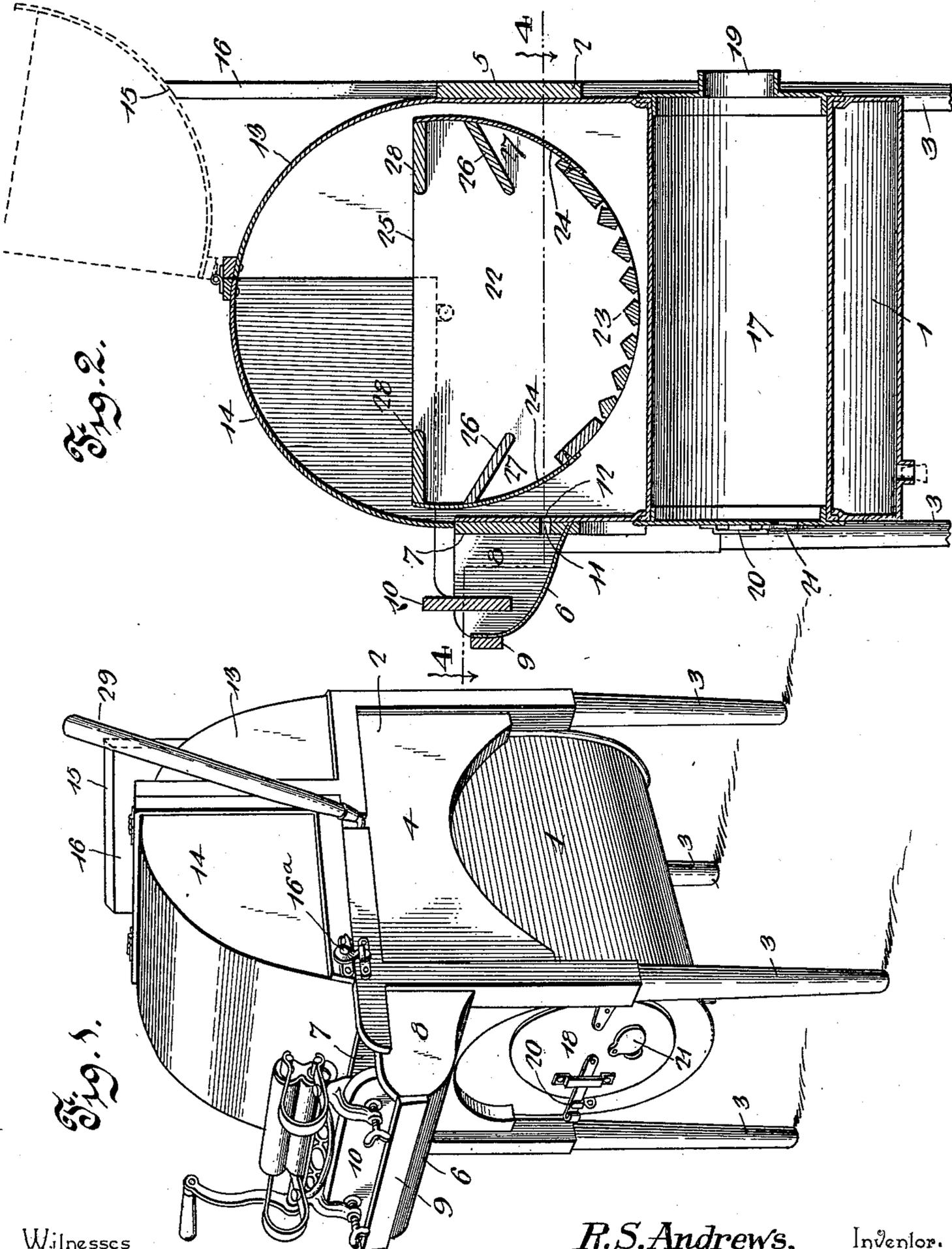


Fig. 2.

Fig. 1.

Witnesses

J. Frank Culverwell. By his Attorneys,

J. H. P. Key

R. S. Andrews, Inventor.

C. A. Snow & Co.

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Fig. A.

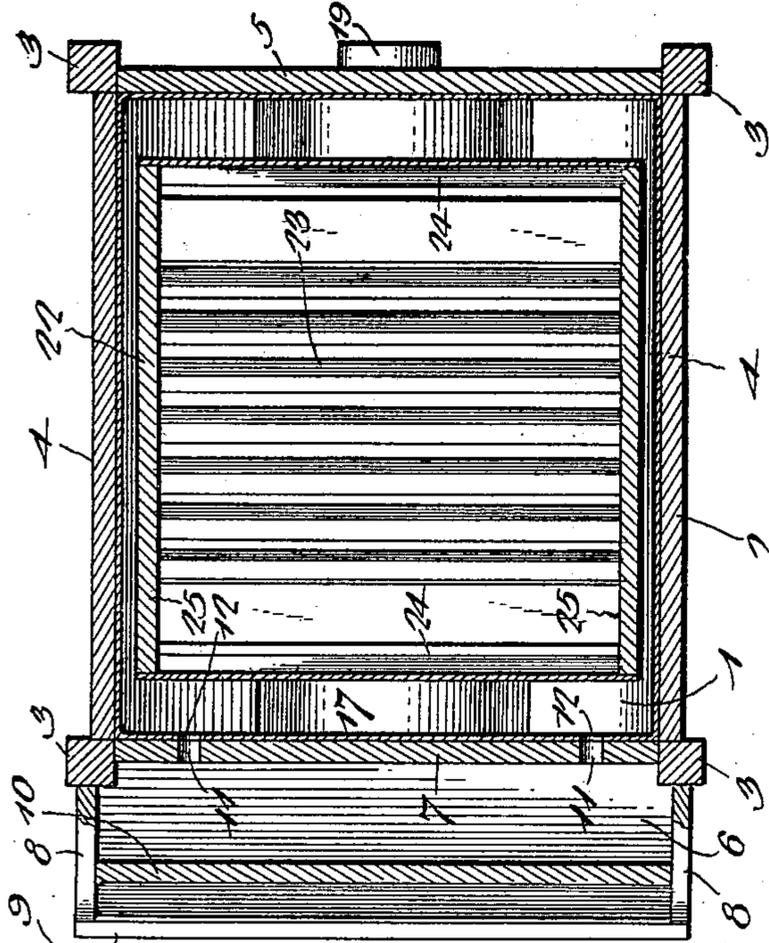
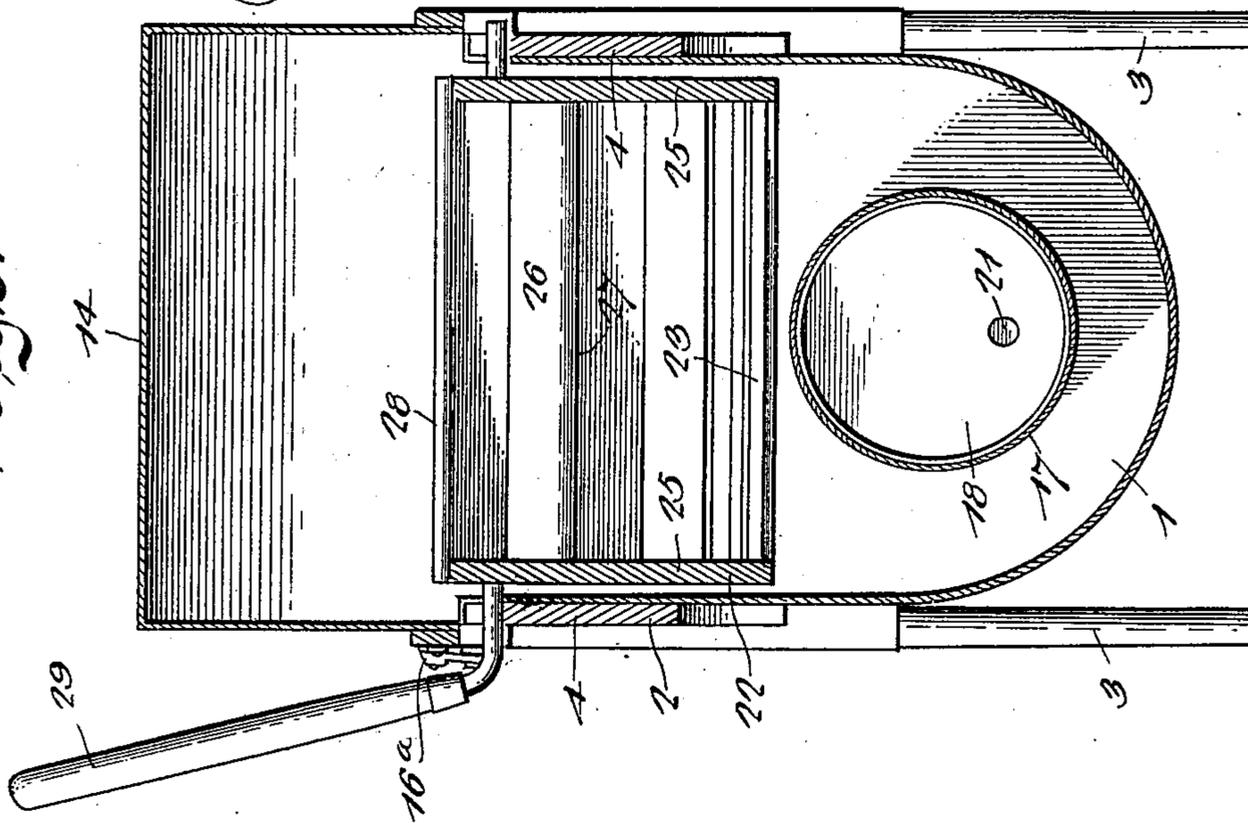


Fig. B.



Witnesses

*J. Frank Culverwell*, By *his* Attorneys,

*J. F. Riley*

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# UNITED STATES PATENT OFFICE.

RICHARD S. ANDREWS, OF REDDING, CALIFORNIA.

## WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 667,383, dated February 5, 1901.

Application filed April 26, 1900. Serial No. 14,469. (No model.)

*To all whom it may concern:*

Be it known that I, RICHARD S. ANDREWS, a citizen of the United States, residing at Redding, in the county of Shasta and State of California, have invented a new and useful Washing-Machine, of which the following is a specification.

The invention relates to improvements in washing-machines.

The object of the present invention is to improve the construction of washing-machines and to provide a simple and comparatively inexpensive one capable of rapidly and thoroughly washing clothes without injuring the fabrics and at the expenditure of a minimum amount of labor.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claim hereto appended.

In the drawings, Figure 1 is a perspective view of a washing-machine constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a transverse sectional view. Fig. 4 is a horizontal sectional view on line 4 4 of Fig. 2.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a metallic boiler or casing having a rounded bottom portion and supported by a frame 2, rectangular in horizontal section and provided at its corners with legs 3. The supporting-frame is composed of similar sides 4 and a connecting-back 5, the front of the frame being provided with a trough 6, composed of an inner wall 7 and a sheet-metal bottom extended upward to form the outer wall and connected with the rear wall by ends 8. The trough 6, which is supported at its front by a cleat 9, is provided with a wringer-supporting board 10, secured between the ends 8 and located adjacent to the front of the trough, as clearly illustrated in Fig. 2 of the accompanying drawings. The rear wall of the trough is provided with openings 11, registering with corresponding openings 12 of the front wall of the boiler and adapted to permit the water expelled from the clothes to flow back into the boiler, whereby the water is prevented from overflowing the walls

of the trough and spilling upon the floor or other supporting-surface.

The boiler is provided at the back with an upwardly-extending approximately quadrant-shaped portion 13, to the top of which is hinged an approximately quadrant-shaped lid 14, adapted when swung backward, as illustrated in dotted lines in Fig. 2 of the accompanying drawings, to be supported in such position by the beveled upper edge 15 of a vertical board 16. The vertical board 16 extends upward from the back 5 of the supporting-frame, and its upper edge forms a seat for the lid. The lid is locked in its closed position by a catch 16<sup>a</sup>, and the adjacent edges of the lid and the quadrant-shaped rear portion 13 are preferably reinforced by bars or cleats, as illustrated in Fig. 1 of the accompanying drawings.

Water is heated within the boiler by means of an approximately cylindrical fire-box 17, having a door 18 at its front end and provided with a collar or extension 19 at its rear end adapted to receive a smoke pipe or flue. The door 18, which is preferably hinged at one side, is provided at the opposite side with a suitable locking device 20, and the draft is controlled by a damper 21.

Within the boiler is journaled an oscillating approximately semicylindrical receptacle 22, adapted to receive the clothes to be washed and provided at its bottom with a rubbing-surface 23, composed of slats spaced apart to provide openings for the entrance and escape of water. The end portions 24 and the sides 25 of the oscillating receptacle are solid or imperforate, and inclined transversely-disposed boards or partitions 26 extend downward and inward from the ends of the clothes-receptacle at points below the upper edges thereof, forming air spaces or pockets 27, adapted to become filled with air when they rise above the surface of the water through the oscillation of the receptacle. The air contained within the pockets is compressed and forced through the clothes by reason of the pockets becoming partially inverted when carried downward by the oscillating receptacle and permitting water to enter them. The water rushing into the pockets forces the air from them and causes the said air to pass upward through the clothes, thereby greatly fa-

cilitating the operation of washing. The oscillating clothes-receptacle is provided with inwardly-extending top portions 28, adapted to prevent the escape of clothes when either end of the receptacle is swung downward to the lowest position. A handle 29 is secured to one of the journals of the oscillating receptacle, and it extends upward therefrom, as illustrated in Fig. 1 of the accompanying drawings, when the receptacle is in its normal position.

The cylindrical fire-box is spaced from the walls of the boiler and is entirely surrounded by the water, thereby affording a large heating-surface and preventing its walls from being overheated and affecting the joints.

It will be seen that the washing-machine is simple and comparatively inexpensive in construction, that the oscillating receptacle is provided at its bottom with a rubbing-surface to be engaged by the clothes, and that air-pockets are located at the ends of the receptacle, whereby the air contained within the pockets will be forced out through the clothes by both the partial inversion of the pockets and the movement of the same through the water. It will also be seen that by these means clothes and other fabrics may

be rapidly and thoroughly washed without wearing, tearing, or otherwise injuring them and that after the operation of washing has been completed the water may be quickly expelled from the clothes, the expelled water being conducted back to the boiler and not being permitted to spill upon the floor or other supporting-surface.

What is claimed is—

In a washing-machine, the combination with a boiler or casing, of an oscillating receptacle of approximately semicylindrical shape having inwardly-extending top portions 28 to retain the clothes within it, and provided at its bottom with a rubbing-surface composed of slats spaced apart to form openings, and the inclined partitions 26 located above the ends of the rubbing-surface between the same and the top portions 28 and forming air-pockets, substantially as and for the purpose described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

RICHARD S. ANDREWS.

Witnesses:

CHARLES SNOW,  
ABRAHAM J. WILLIAMS.