E. F. PARKER.

WASHBOILER.

APPLICATION FILED JUNE 12, 1908.

**920,171.** Patented May 4, 1909.

*Fig. 1.*

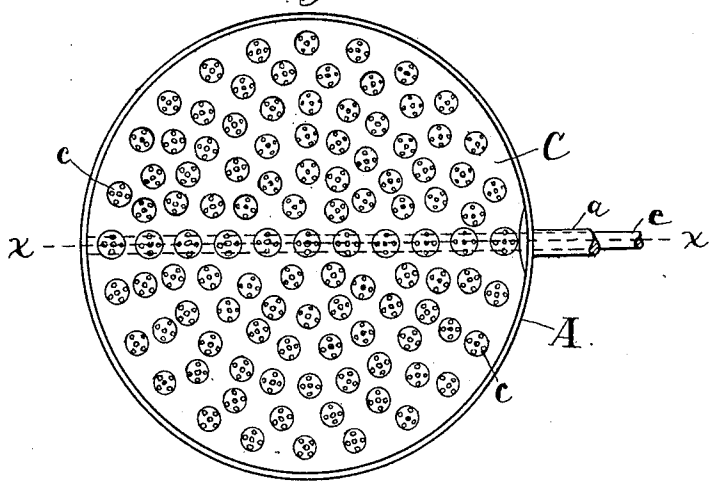
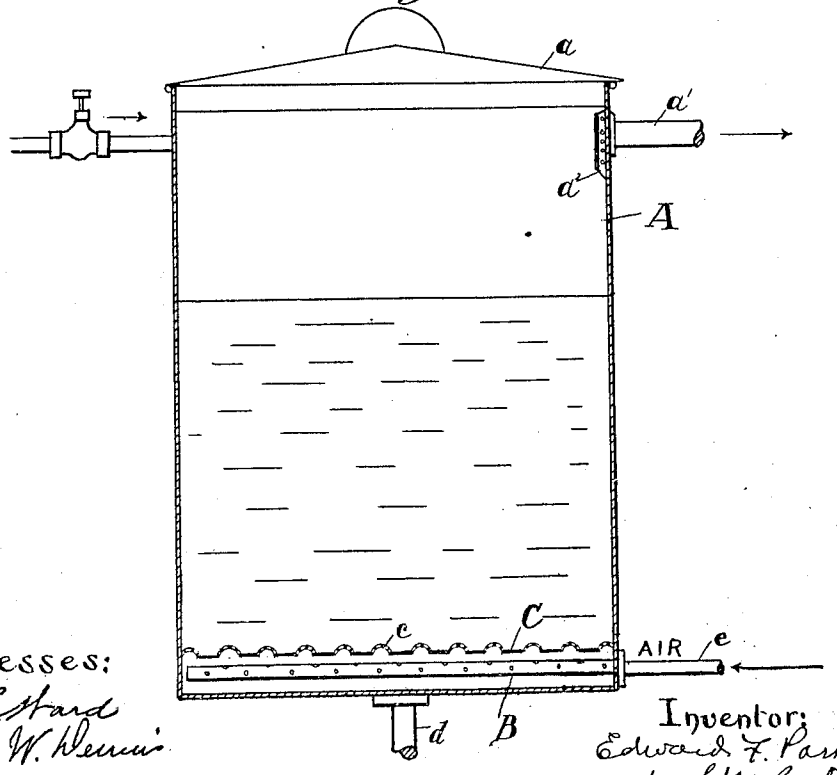



*Fig. 2.*

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# UNITED STATES PATENT OFFICE.

EDWARD F. PARKER, OF FAIRFIELD, MAINE.

## WASHBOILER.

No. 920,171. Specification of Letters Patent. Patented May 4, 1909.

Application filed June 12, 1908. Serial No. 438,071.

*To all whom it may concern:*

Be it known that I, EDWARD F. PARKER, of Fairfield, in the county of Somerset and State of Maine, have invented certain new and useful Improvements in Washboilers, of which the following is a specification.

My invention relates to a washing machine of that class wherein no mechanically operated parts are used to manipulate the clothes but air is forced through the water and through the clothes, the passage of the air carrying water through the interstices of the cloth and acting to remove the dirt. In machines of this class it has been difficult to cause the air to pass uniformly through the mass of clothes since it has a strong tendency to follow the line of least resistance.

The object of my invention is to produce such a machine in which the air will pass uniformly through the whole mass of the clothes and with this object in view the invention consists of placing a perforated horizontal diaphragm near the bottom of the tank with an air supply pipe preferably perforated beneath the diaphragm whereby the air from the perforated pipe will pass equally through all parts of the diaphragm and evenly through the mass of clothes.

I illustrate my invention by means of the accompanying drawing in which—

Figure 1 is a plan of my washer, and Fig. 2 is a section on the line $x$ $x$ of Fig. 1 with the pipes in section.

As here illustrated, the machine consists of a tank A having a suitable cover $a$ and a lateral outlet near the top for carrying off air and steam, this outlet being covered by a strainer $a^2$ to prevent the plugging of the outlet by the clothes as they boil up. Just above the bottom of the tank is a perforated horizontal diaphragm C for effecting the even distribution of air. This diaphragm is composed preferably of sheet metal and it has in it a series of upward extending bosses $c$ forming recesses on the under side of the diaphragm. These recesses are perforated by numerous holes $c$ through which the air passes upward. Air is supplied to the chamber between the perforated diaphragm and the bottom as here shown by means of a perforated air pipe $e$ horizontally disposed and connecting with a source of compressed air supply. Steam may also be introduced to the pipe $e$ to heat the water if desired. A waste pipe $d$ is supplied at the bottom for drawing off the water.

In using the washer, hot water with the necessary amount of washing compound, soap or whatever is to be used for the purpose is introduced into the tank along with the clothes and air under pressure from an ejector, air tank, or compressor or drawn in by vacuum, is introduced through the pipe $e$. The air comes out through the perforations of the pipe, passes upward through the perforations in the bosses $c$ and is evenly distributed throughout the mass of clothes and water causing a violent ebullition of the same. The violent action of the air forces the water through the interstices of the fabric thoroughly cleansing the clothes or whatever is being washed and without any considerable abrasion or wear.

The total area of the holes in the diaphragm is approximately equal to the capacity of the pipe, so that the air will tend to distribute itself equally throughout the whole area of the diaphragm and will not pass up through one part which happens to be near the source of supply. The upward extending recesses or pockets tend to equalize the distribution of the air which collects in the pockets and is thereby prevented from going to the point of least resistance.

Many modifications of my device as here shown may be made in practice without departing from my invention.

By the use of a steam injector or other like device for supplying the air, the water would be gradually heated as the dirt was softened and released and a much more effective result obtained.

I claim:—

In a washing machine the combination of a tank, a horizontal sheet metal diaphragm near the bottom of the tank having a series of upward projecting perforated domes and a perforated air supply pipe beneath said diaphragm extending substantially across said tank.

In testimony whereof I have affixed my signature, in presence of two witnesses.

EDWARD F. PARKER.

Witnesses:
E. C. HERRING,
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