

J. O. COOPER.
WASHBOILER.
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972,341.

Patented Oct. 11, 1910.

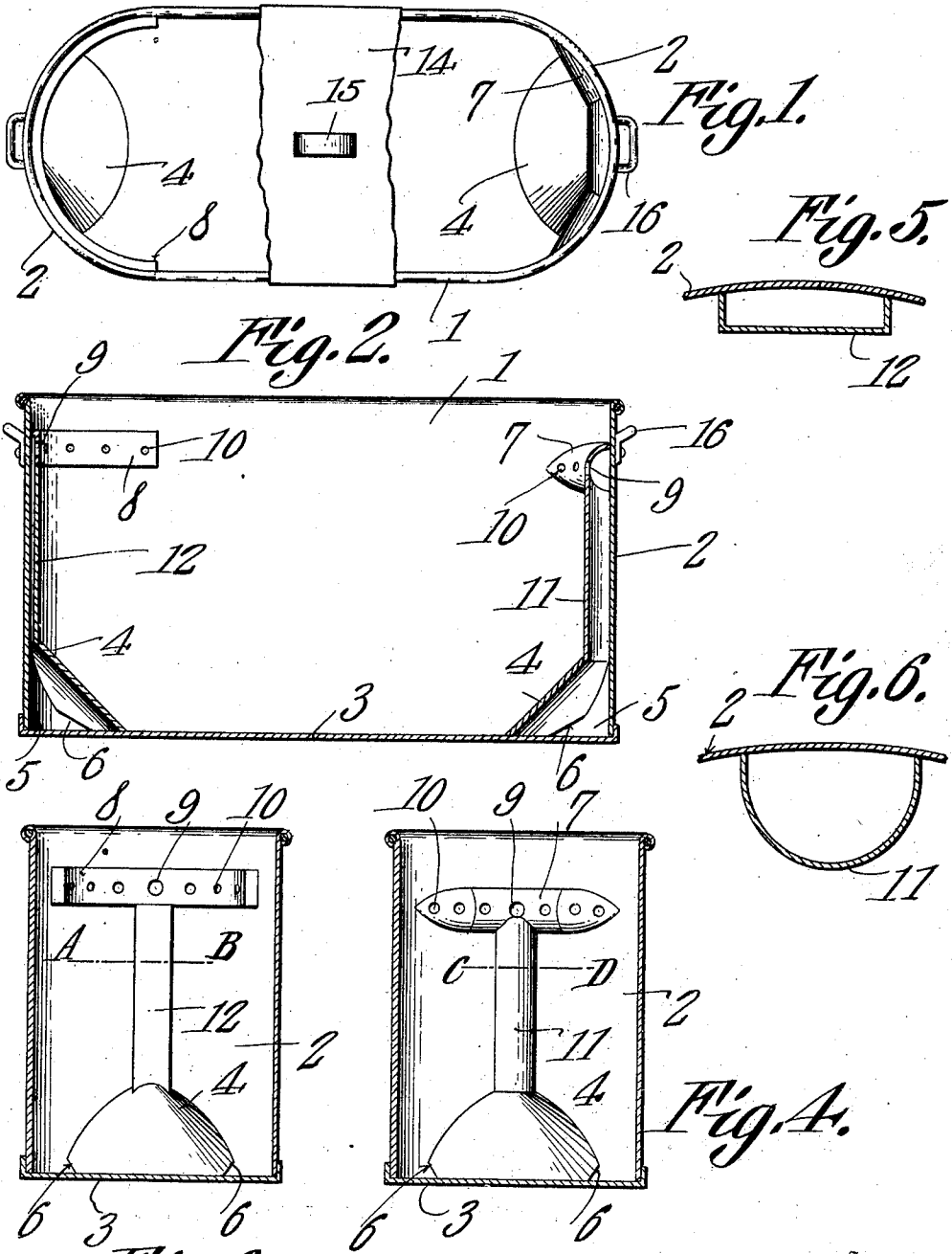


Fig. 3.
Witnesses
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Fig. 4.
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UNITED STATES PATENT OFFICE.

JAMES O. COOPER, OF CANADIAN, TEXAS.

WASHBOILER.

972,341.

Specification of Letters Patent.

Patented Oct. 11, 1910.

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To all whom it may concern:

Be it known that I, JAMES O. COOPER, a citizen of the United States, residing at Canadian, in the county of Hemphill and State of Texas, have invented a new and useful Washboiler, of which the following is a specification.

It is the object of this invention to provide a wash-boiler, having, at its ends, chambers, adapted to receive the water which is in the boiler and to conduct the water upwardly, to spray the same, in converging streams, upon the garments which are within the boiler.

Another object of the invention is to construct a device of the character above mentioned, wherein the water will be equally distributed upon the garments within the boiler, when one end of the boiler is subjected to a greater degree of heat than the other end of the boiler.

Another object of the invention is to provide a boiler having in its ends, chambers, so constructed that they will tend to retain a certain amount of the water which is within the boiler, in close relation with the bottom of the boiler, so that the water so contained, may be heated for subsequent circulation, the partitions defining the chambers, being so constructed that they will promote the upward movement of the water.

With the above and other objects in view, the invention consists in the novel construction and arrangement of parts hereinafter described, delineated in the drawings, and specifically claimed, it being understood, that, since the drawings show but one form of the invention, changes, properly falling within the scope of what is claimed, may be made, without departing from the spirit of the invention.

Similar numerals of reference are employed to denote corresponding parts throughout the several figures of the drawings; wherein,—

Figure 1 is a top plan, a portion of the lid being broken away in order to reveal the internal construction of the device; Fig. 2 is a vertical longitudinal section, the lid being removed; Fig. 3 is a vertical transverse section, looking toward one end of the boiler, the lid being removed; Fig. 4 is a vertical transverse section, looking toward an opposite end of the boiler from that shown in Fig. 3, the lid being removed; Fig. 5 is a fragmental transverse section of one end of

the boiler upon the line A—B of Fig. 3; and Fig. 6 is a fragmental transverse section of the opposite end of the boiler from that shown in Fig. 5, the cutting plane of Fig. 6 being denoted by the letters C—D in Fig. 4.

In carrying out the invention, there is provided a boiler 1, having curved end walls 2, and a flat bottom 3, of single thickness. Curved partitions 4 are united with the bottom 3, and with the end walls 2 of the boiler, to define chambers 5 in the ends of the boiler, the partitions 4 being cut away adjacent their points of union with the bottom 3 and with the curved end walls 2, to define inlet ports 6 to the chambers 5.

Mounted upon the end walls 2 of the boiler, adjacent the top of the boiler, and extended transversely of the end walls, are tubes 7 and 8, arcuate in outline, to conform to the curvature of the walls 2 upon which they are mounted. Upright pipes 11 and 12 unite the apexes of the chambers 5 with the tubes 7 and 8, respectively. Both the tube 8 and the pipe 12 are rectangular in transverse outline, the tube 7 and the pipe 11 being arcuate in transverse outline, and of larger cross sectional area than the corresponding elements upon the opposite end of the boiler 1. The tubes 7 and 8 are closed at their ends, and are provided, intermediate their ends, with a plurality of spaced outlet ports. One of these ports, denoted by the numeral 9, is alined vertically with the pipe 11 at one end of the boiler, and another of the outlet ports 9 is alined vertically with the pipe 12 at the other end of the boiler, both of the said outlet ports 9 being of larger diameter than the other outlet ports 10, which are disposed in the tubes, upon either side of the larger outlet ports 9.

The boiler 1 may be closed by means of a lid 14, provided with a handle 15, and the boiler 1 may be provided at its ends, with handles 16; all of common, or any desired construction.

When the boiler is placed upon a stove or other heating device, the water which is within the boiler will find its way through the inlet ports 6, into the chambers 5. The water thus within the chambers 5 will be heated to a boiling point, and following the curved partitions 4, will rise through the pipes 11 and 12, into the tubes 7 and 8, from which it will be projected, in converging streams, upon the garments which are within the boiler, the water ultimately finding its

way through the garments, to enter again, the chambers 5, whereupon the cycle hereinbefore described, will be repeated. Owing to the fact that the bottom of the boiler is of single thickness, and that the partitions 4 are connected directly with the bottom and with the upright walls of the boiler, the water which is within the chambers 5 will be held in close contact with the fire, the heating of the water within the chambers 5 being thereby promoted.

The several outlet ports 10 serve to distribute converging streams upon the garments within the boiler, but, in order that the portions of the garments which are located in the middle of the boiler, may be thoroughly sprayed, the outlet ports 9 are made of somewhat larger diameter than the ports 10, in order to receive a proportionately large share of the contents of the pipes 11 and 12, to distribute the said contents upon the garments in the middle of the boiler, which said portions of the garments will not ordinarily be reached by the converging streams proceeding from the outlet ports 10.

Attention is called to the fact that the pipe 12 and the tube 8 are rectangular in cross sectional outline, while the pipe 11 and tube 7 are curved in cross sectional outline, and of larger cross sectional area than the corresponding elements upon the opposite end of the boiler. The advantage of this construction is, that when the fire at one end of the heating device is hotter than at the other end, the end of the boiler 1 in which the pipe 12 and the tube 8 is mounted, may be placed over the hotter end of the fire. Owing to the fact that the members 8 and 12 are of smaller cross sectional area than the members 7 and 11, respectively, the flow of the heated water through the members 8 and 12 will be retarded, so that approxi-

mately the same volume of water will pass through the outlet ports 9 and 10 in the tube 8, as passes through the outlet ports in the tube 7, the pressure in the chamber 5 with which the pipe 11 communicates, being less than the pressure in the chamber 5 with which the pipe 12 communicates, owing to the difference in the temperatures to which the opposite ends of the boiler are subjected. Moreover the members 7 and 11 permit the water to flow more freely therethrough, than through the rectangularly disposed members 8 and 12 at the other end of the boiler, the shapes of the members 7 and 11, upon the one hand, and of the members 8 and 12 upon the other hand, thus serving to equalize the amount of water which will be distributed from the opposite ends of the boiler.

Having thus described the invention what is claimed is;—

The combination with a wash boiler, of upright pipes located upon the end walls thereof; transverse, perforated, boiler supported tubes with which the upper ends of the pipes communicate; and enlarged compartments at the lower ends of the pipes, having communication at their lower ends only, with the boiler; the pipe and the tube at one end of the boiler being arcuate in transverse outline, and the pipe and the tube at the other end of the boiler being rectangular in transverse outline and of less cross sectional area than the first named pipe and tube, thereby to equalize the outflow from the tubes, under different pressures in the compartments.

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

JAMES O. COOPER.

Witnesses:

J. A. YOUNGBERG,
W. F. MICOU.