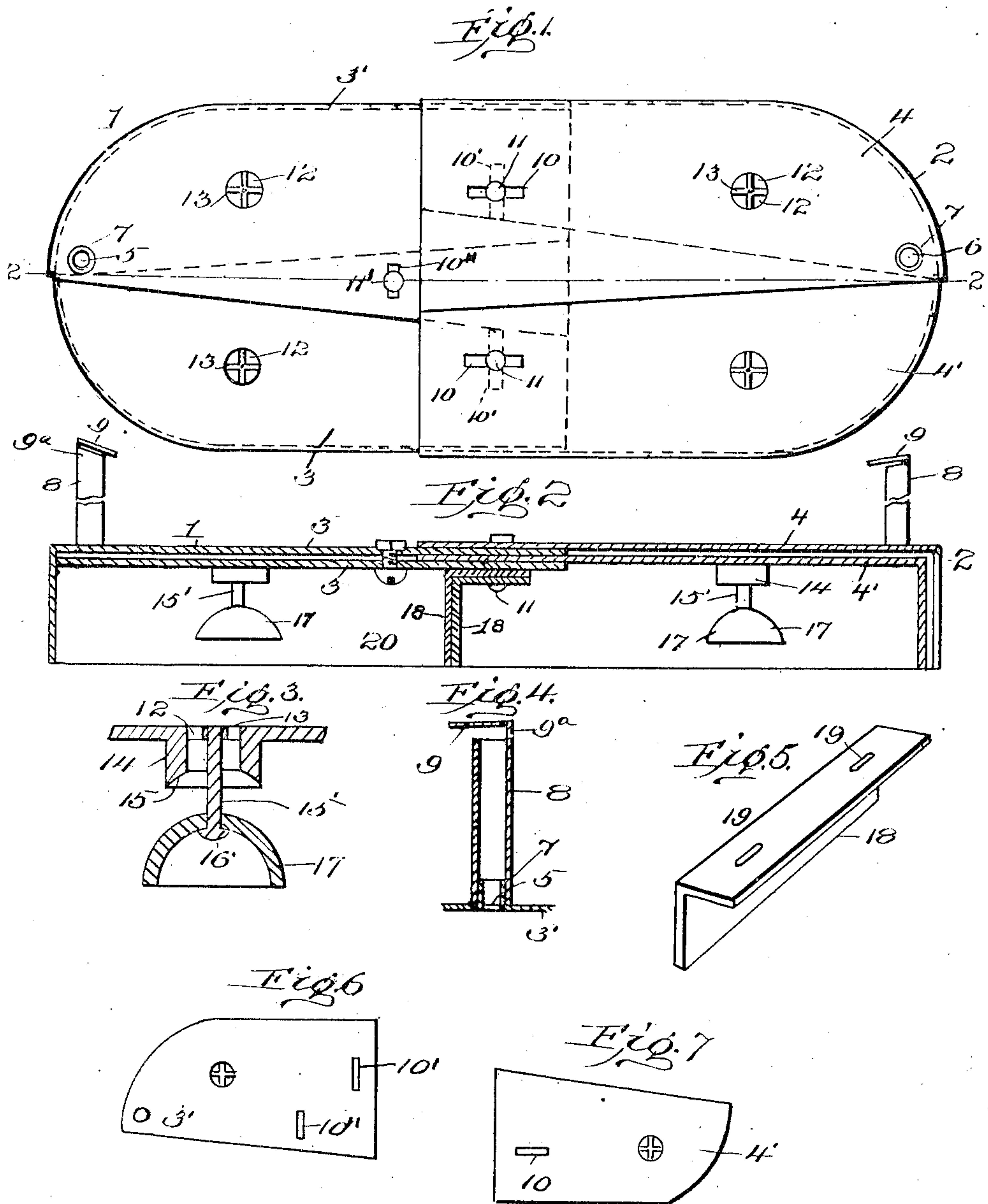


No. 843,437.

PATENTED FEB. 5, 1907.

A. L. BRAZEE.
WASHING BOILER.

APPLICATION FILED DEC. 15, 1904.



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WASHING-BOILER.

No. 843,437.

Specification of Letters Patent.

Patented Feb. 5, 1907.

Application filed December 15, 1904. Serial No. 236,996.

To all whom it may concern:

Be it known that I, ALBERT L. BRAZEE, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented certain new and useful Improvements in Washing - Boilers; 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 appertains to make and use the same.

This invention relates to certain new and useful improvements in washboilers, and more particularly to a boiler attachment.

The object of the invention is the provision of means for causing a regular circulation of the hot water from the bottom of a common washboiler up to the top of the clothes which are deposited within the boiler and down through said clothes to the bottom of the boiler again next to the heated surface.

Another object of the invention is to improve the construction of an adjustable attachment which is adapted to be positioned within and near the bottom of a boiler for the purpose of providing means whereby the liquid which is contained within the boiler may be kept in continuous circulation.

A still further object of the invention is the improvement of a boiler attachment which is capable of longitudinal and transverse adjustment.

Another object of the invention is the production of a device for causing circulations of liquid in a boiler, said device being capable of circumferential adjustment and which is provided with valves.

With these and other objects in view the invention consists in certain novel constructions, combinations, and arrangements of parts, as will be hereinafter fully described, illustrated in the accompanying drawings, and more particularly pointed out in the claims hereto appended.

In the drawings, Figure 1 is a top plan view of a device constructed in accordance with the present invention, the tubes or funnels being removed therefrom. Fig. 2 is a longitudinal vertical central sectional view of the device depicted in Fig. 1, taken on line 2 2, Fig. 1, and showing the funnels or tubes positioned thereon. Fig. 3 is an enlarged fragmentary sectional view of a portion of one of the leaves or members of one of the sections and a valve structure formed thereon. Fig. 4 is a fragmentary sectional view

of one of the leaves or members of one of the sections, to which is removably secured a conducting funnel or tube, which is shown in vertical section. Fig. 5 is a perspective view of one of the sections of the transverse partitioning and supporting device. Figs. 6 and 7 are top plan views of leaves or members employed in the construction of the two sections which form the device.

In carrying out the present invention I have produced an attachment which is to be positioned within any ordinarily-constructed washboiler, such positioning being possible by reason of the fact that the dimensions of the attachment can be altered for boilers of different widths and lengths, or, if it is desired, the attachment can be both longitudinally and transversely adjusted. It will be obvious that a water-circulating device of this character is of great utility, by reason of the adjustability of the different members which are employed in the construction of the same.

Referring to the drawings by reference-numerals, 1 designates the inner telescoping section, which is removably secured to the outer telescoping section 2. Each of the sections comprises two leaves or members adjustably connected. The sections are also adjustably connected. The specific structure of each leaf or member, as well as each section, will be hereinafter described.

The section 1 comprises an under leaf or member 3, to which is removably secured a leaf or member 3'. In the drawings I have shown that leaf 3' overlaps upon leaf 3; but it is entirely optional with the constructor whether leaf 3' overlaps upon or, as in the case of leaf 3, said member 3' is positioned so as to permit of leaf 3 to overlap thereon. The leaves or members 4 and 4' of sections 2 are similarly positioned, although the relative position of the leaves with respect to the leaves or members of section 1 are different. An aperture 5 is formed in leaf or member 3', and an aperture 6 is formed in leaf or member 4. An annular extension is formed upon the upper surface of leaves 3' and 4, said extensions surrounding apertures in said leaves or members. Referring to Fig. 4, it will be seen that the aperture 5, which is formed in leaf 3', is surrounded by the hollow or annular extension 7, upon which extension 7 there is removably positioned a conducting tube or stack 8. The tube or stack 8 is provided with a hood 9, secured thereto

only at its back or rear portion, which is employed for the purpose of more efficiently distributing the heated liquid over the contents of the boiler as said liquid is discharged from the tube or stack.

As disclosed in Fig. 2, stacks or tubes 8 are positioned upon the ends of the device. The hoods 9 of the stacks or tubes are positioned so as to direct the discharge therefrom toward the central portion of the boiler, and if said boiler contains clothes the heated liquid will be more or less evenly distributed thereover.

The longitudinal adjustment of the device is obtained by a pair of parallel slots 10, formed upon leaves or members 4 and 4', which permit of the securing means 11, positioned in the elongated slots 10, to be adjusted to different parts of the slots. As, for instance, if the sections are drawn apart the securing means 11, which are preferably bolts provided with nuts, will be retained in a fixed position relative to the leaves or members 3 and 3' of the section 1, but said securing means will be adjusted in the elongated slots 10, and consequently assume a different position to that in which they were positioned before adjustment of the sections.

With regard to the lateral adjustment the device may be considered as formed of two longitudinal portions, the inner portion comprising the leaves 3 and 4' and the outer portion the leaves 3' and 4. The leaf 3 has a bolt 11' passed therethrough, and the leaf 3' is formed with a transversely-disposed slot 10'', through which the bolt 11' passes. This bolt constitutes the sole connecting means between the two longitudinal portions, and its movement within the slot 10'' permits the two longitudinal portions to be moved back and forth with relation to each other. In making this lateral adjustment it will be readily apparent that should there be simply a sliding movement of the bolt 11' within the slot 10'' the two longitudinal edges of the device will remain parallel throughout the adjustment, while if there is also a pivotal motion the opposite sides will be bulged outwardly at their central portions and the bolts 11 will also move laterally within the slots 10'.

Valves are formed upon the sections, preferably one being formed upon each leaf, near the central portion thereof. Each valve comprises a plurality of approximately V-shaped ports 12, formed in a circle upon each leaf, thereby providing a guard 13, which will prevent of the passage of a portion of a garment into the valve-opening. Secured contiguous to the ports 12 and upon the under surface of the leaf is an inclosing member 14, which is preferably an angular extension. The member 14 projects downwardly and is beveled at 15 for the purpose of forming a valve-seat. Depending from the guard 13, and preferably the central por-

tion thereof, is a valve-stem 15', upon the lower end of which there is formed a head 16. The head 16 is adapted to limit the movement of a cup-shaped or convexed disk-shaped valve member 17, which is loosely mounted upon the valve-stem 15'. The member 17 of the valve is capable of being moved upward and lie against the beveled portion 15 of the extension 14 for closing the valve. When the pressure of the water within the body of the boiler is greater than that contained next to the heated surface of the boiler, the movable valve member 17 will drop, thereby opening the inlet, permitting of the passage of liquid into the compartments formed between the bottom of the boiler and the sections of the device. When the liquid contained between the bottom of the boiler and the sections of the circulating device is sufficiently heated, it will be caused to pass upwardly through the tubes 8 and discharge therefrom near the upper portion of the boiler. As the liquid is discharged from the heated compartment near the bottom of the boiler it will be necessary to supply said compartment with liquid to replace that being discharged. The supplying of the compartment with liquid is obtained through the medium of the valves, as heretofore specified. The liquid supplied to the heated compartment near the bottom of the boiler is obtained from that contained in the bottom portion of the boiler, such liquid being caused to pass through the clothes, if they are in the boiler, and through the valve-ports into the compartment formed between the bottom of the boiler and the leaves.

The device is also provided with partitioning and reinforcing means, said means supporting the central portion of the device, which is constructed by assembling the sections 3, 3', 4, and 4'. The supporting and reinforcing means comprises a plurality of angular telescoping members 18. In one portion of each of the members 18 there is formed elongated slots 19, within which are positioned the bolts 11 for securing the reinforcing members 18 in an assembled position with the sections, said members 18 also forming a transverse partition for the device, which provides compartments in a boiler when the device is positioned in the bottom thereof. The elongated slots 19 will permit of the adjustment of the sections, which slide one upon the other. When the sections are adjusted laterally, it will be obvious that the partitioning means, which also support the center of the device, should necessarily be adjusted, if it is desired to prevent the circulation of the liquid contained in the boiler between the heated surface and the sections from one end of the device to its opposite end. By means of the partitioning device when the water is highly heated the liquid must pass upward through the tubes

or stacks 8 at each end of the device, while if the partitioning means were not employed and one portion of the heated surface should heat the water in that part of the device to a higher degree the water from the other portion of the compartment formed between the heated surface and the upper portion of the sections would be supplied to that portion of the surface which is heated to a higher degree than the remaining portion.

The hoods 9 of the stacks or tubes 8 are bent slightly downward, so as to insure of the discharge of the liquid evenly over the contents of the boiler. As heretofore stated, the stack 8 is so positioned as to direct the heated liquid of the boiler toward the central portion thereof, as the back portion 9^a of the stack contiguous to the upper end thereof, will prevent of the discharge of liquid upon that side of the tube or stack 8.

Before placing the device within the boiler the longitudinal and lateral adjustments are made, as has been previously described, the longitudinal adjustment by telescoping the sections 1 and 2 upon each other and the lateral adjustment by moving with relation to each other the two longitudinal portions comprised, respectively, by the pair of leaves 3' and 4 and the pair of leaves 3 and 4'. It is also to be understood that if found desirable the leaves comprising each longitudinal portion may be given a pivotal motion with relation to each other, whereby the longitudinal sides of the device are caused to bulge outwardly at their central portion.

Referring to Fig. 2, it will be clearly obvious that each leaf is provided with flanges 20, which form when the sections are in an assembled position a circumferential flange or depending supporting member for the different leaves or members of the sections of the device. The flanges 20 therefore extend entirely around the outer edge of the device, as is shown by a broken line, Fig. 1.

Having thus fully described my invention,

what I claim as new, and desire to secure by Letters Patent, is—

1. In a device of the character described, the combination with overlapping sections, each section comprising members, of transverse supporting and partitioning means comprising overlapping, longitudinally-adjustable sections, each section provided with elongated apertures and removable fastening means for securing said sections in an assembled position with said first-mentioned sections.

2. In a device of the character described, the combination with sections formed with apertures, of transverse partitions formed of overlapping members, said members being formed with elongated apertures, and bolts passing through the apertures and securing said sections and members together, said partitions supporting the center of the device.

3. In a device of the character described, the combination with overlapping sections, each section comprising members, said members each provided with an aperture, the apertures of the members of one section registering with and formed at right angles to the apertures of the members of the other section, a supporting and partitioning device positioned beneath said overlapping sections, said device comprising overlapping, longitudinally-movable sections, each of said sections provided with elongated apertures, the apertures of said partitioning device registering with the apertures of said first-mentioned sections, and removable fastening means positioned within the apertures of said device and within the apertures of said sections for securing said device to said sections.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

ALBERT L. BRAZEE.

Witnesses:

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C. C. PHILLIPS.