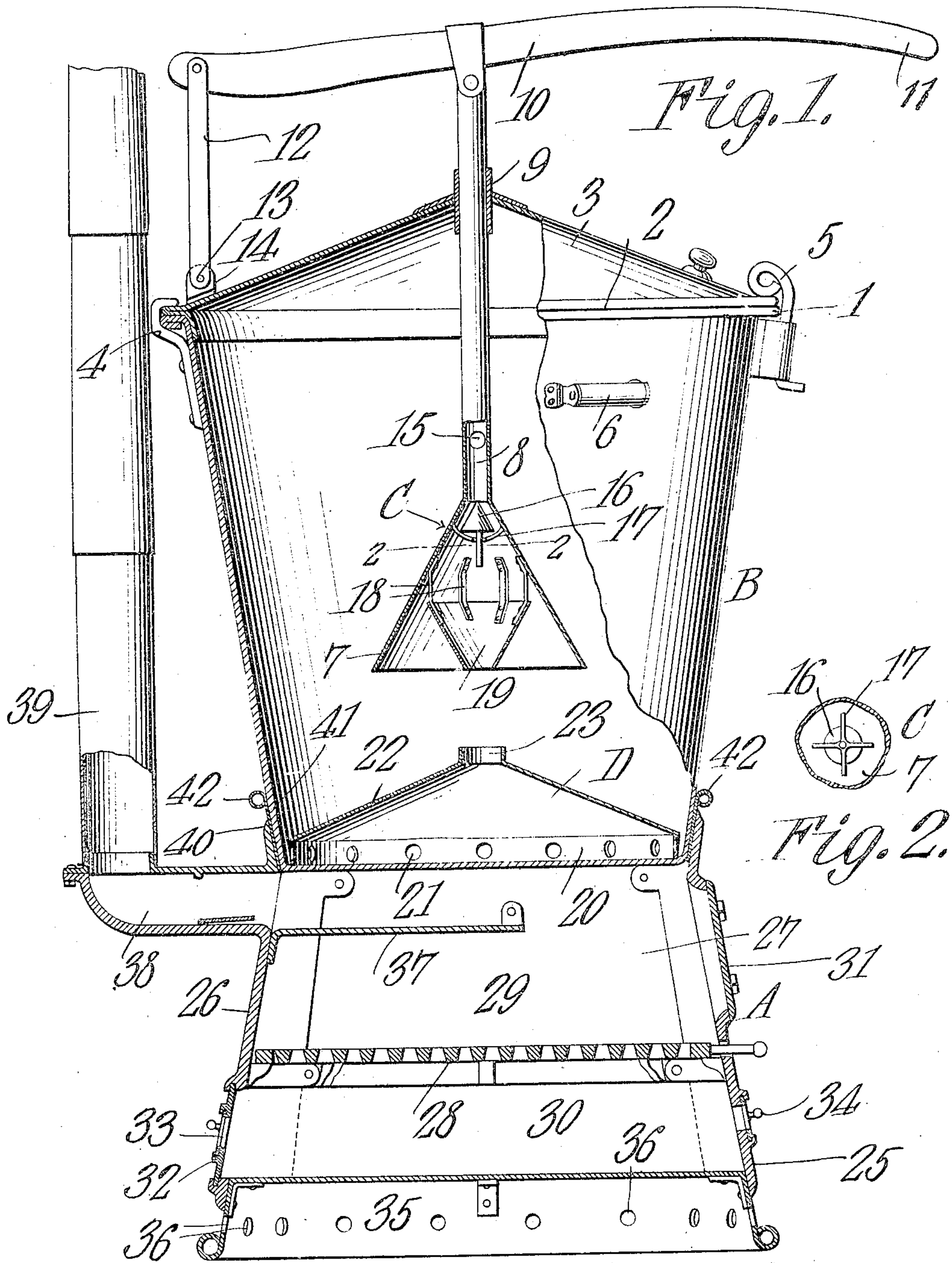


No. 887,970.

PATENTED MAY 19, 1908.

H. H. SHEARD.
 WASHING APPARATUS.
 APPLICATION FILED MAR. 18, 1907.



WITNESSES:

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HARRY HITNER SHEARD, OF FORT WORTH, TEXAS.

WASHING APPARATUS.

No. 887,970.

Specification of Letters Patent.

Patented May 19, 1908.

Application filed March 18, 1907. Serial No. 363,086.

To all whom it may concern:

Be it known that I, HARRY HITNER SHEARD, a citizen of the United States, residing at Fort Worth, in the county of Tarrant and State of Texas, have invented a new and useful Washing Apparatus, of which the following is a specification.

This invention relates to a novel washing apparatus comprising a receptacle for clothing to be washed; mechanism for forcing steam and hot saponified water through the meshes of the garments; and a means for keeping the water in the receptacle always at a boiling point.

The object of the invention is to provide a washing apparatus so constructed that boiling soapy water is caused to travel down the sides of the receptacle containing the clothes and through a generator where the temperature of the water is raised and converted into steam, and the two combined forced out through a suitable opening in the center of the generator into the bottom of the mass of clothing, and thence through the meshes of said clothing, by which means a thorough cleansing is obtained.

Another object of the invention relates to a clothes pounder which operates on the top of the clothes; moving in a vertical direction to force steam and hot suds downwardly through the clothes to assist the upward current of the cleansing medium as it passes out of the generator in its work of renovation.

A further object of the invention applies to the heater, which is so constructed that a larger percentage of heat generated by the fuel is put to profitable use than is the case in heaters commonly used at the present time.

With these and other objects in view the invention consists in the novel construction, combination and arrangement of parts hereinafter described and pointed out in the appended claims.

Referring to the drawings: Figure 1 is a vertical section of the invention a portion of the clothes receptacle being shown in elevation. Fig. 2 is a detail cross section on the line 2—2 of Fig. 1.

A heater, indicated by A supports on its top a washing receptacle B, within which is a vertically moving clothes pounder C, and a steam generator D, the latter resting on the bottom of the receptacle.

The washing or clothes receptacle B is preferably circular in cross section and wider at

its top than at its bottom. It may be made of tin, galvanized iron, copper or other suitable material, alone or in combination. The top of the receptacle B is provided with an outwardly turned flange 1 on which rests a flange 2 of an upwardly tapering cover 3. The cover 3 is locked on the receptacle B by means of a fixed hook 4 at the rear of the receptacle, which engages over the flange 2 of the cover, and a rotatable fastening device 5 on the front of the receptacle which may be turned to engage and disengage the cover when it is desirable to fasten the cover on the receptacle or remove it. Suitable handles 6 are provided on each side of the receptacle for removing it from the heater or to other places, one of which handles is shown in the drawing.

The pounder C comprises a truncated conical body 7 made of sheet metal and open at the bottom. Attached to its upper truncated end is an operating rod 8, which passes through a suitable bearing 9 in the cap 3, and is pivotally attached to a lever 10, one end of which is formed into a handle 11 while the opposite end is pivotally connected to links 12 loosely connected by a pin 13 to a lug 14 attached to the top 3 at its rear. As thus constructed, on moving the handle in a vertical direction the operating rod 8 will slide up and down through the bearing 9, imparting its motion to the body 7 of the clothes pounder. The lower portion of the operating rod 8 is made hollow, and communicates through an opening 15 with the interior of the receptacle. A valve 16 is supported by a cage 17 in a suitable position to close the passage between the head 7 and the operating rod 8. Within the head 7 and supported by hangers 18 is an inverted frusto-conical tube 19 through which water is forced down to the clothes when the lever is depressed.

The generator D consists of a narrow ring 20 of sheet metal provided with perforations 21, the said ring being vertically disposed and having a diameter slightly less than the receptacle B. A low conical cover 22 is secured to the upper edge of the ring 20 and at the apex of said cover, which is open, a short tubular neck 23 is attached.

The operation of the apparatus as thus far described is as follows: The fastening device 5 is turned and the cover 3 with the clothes pounder, C, lever 10 and links 12 attached, removed from the receptacle. The generator D if not already in place is put in the re-

ceptacle and then the clothes to be washed with a suitable quantity of water and soap, or soapy water if preferred, and then the cover with its attachments returned to place and locked by the fastening 5. It is advisable that the cover fit the receptacle steam tight to prevent any loss of water. Heat is now applied to the bottom of the receptacle and the temperature of the water raised to boiling point. As the temperature of the water rises it will pass out through the neck 23 of the generator D into the center of the mass of clothes, cooler water in the meantime passing down the sides of the receptacle and through the openings 21 into the generator. As the boiling proceeds the handle 11 is operated to raise and lower the pounder C the result of this operation is to force hot soapy water mixed with steam down through the clothes in opposition to the water and steam rising from the generator. When the head 7 of the pounder is raised, the valve 16 therein falls and permits steam to enter the openings 15 and pass down the hollow rod 8 into the head 7 and frusto conical tube 19. The return or downward stroke closes the valve and forces the water between the head 7 and frusto conical tube 19 up and over the edge of said tube where it mixes with the steam entering through the valve opening and the combined steam and hot water is forced downwardly in the condenser and out through its constricted end. The operation being similar to that of pumping.

The heater A which forms a part of the washing apparatus comprises a front plate 25, a back plate 26 and side plates 27, but one of the latter being shown, these plates are bolted together in any suitable manner to form a hollow box which is divided by means of a grate 28 into two parts, the upper one 29 serving as the fire box and the lower one 30 the ash pit, in which an ash pan may be placed. The fire box 29 is provided with a door 31 through which fuel is fed, this door is preferably hinged to the front plate. Sliding doors 32 close the rear of the ash pit 30, which, when opened, permit the ash pan to be inserted and removed. The sliding doors 32 are provided with a sliding damper 33 to regulate the back draft while a similar damper 34 in the front plate regulates the draft at the front of the fire box. A skirt 35 provided with perforations 36 is fitted within the bottom of the heater A and forms the base therefor.

Between the grate 28 and the top of the furnace is placed a horizontal deflector plate 37 attached to the rear and side plates of the furnace and extending from the rear plate 26

wardly a short distance beyond the center of the heater. The top of the plate 37 is approximately on a line with the bottom of a smoke flue 38 to which is attached a pipe 39 for carrying off the products of combustion. The object of the plate 37 is to cause the heat generated at the rear of the furnace to pass forwardly beneath the plate and then over it to the flue 38 and smoke pipe 39 so that the entire amount of heat produced by the fuel will pass under and practically in contact with the bottom of the clothes receptacle B, none of the heat being lost by a direct passage to the flue 38. The top of the heater A projects a short distance above the flue 38 and is preferably circular in shape with outwardly flaring sides into which the bottom of the clothes receptacle B is placed. The flaring top 40 of the heater is lined with a sheet metal collar 41 projecting above the flaring top and finished off with a roll 42.

Having thus described the invention what is claimed is:—

1. A clothes washing apparatus comprising a clothes receptacle, a tight cover therefor, a generator within the receptacle of slightly less diameter, having a narrow perforated vertical flange attached to a conical cap and with an opening at its apex surrounded by a short tubular neck, said tube adapted to convey hot water and steam from the generator upwardly into the center of the clothes to be washed, and a pounder adapted to be reciprocated in a vertical direction for forcing steam and hot water downwardly through the clothes.

2. A clothes washing apparatus comprising a receptacle for clothes, a removable steam tight cover therefor, a generator within and at the bottom of said receptacle having a conical top with an opening in its apex surrounded by a short tubular neck, said tube adapted to convey steam and hot water upwardly into the center of the clothes to be washed, and a vertically reciprocating pounder having a hollow conical head attached at its smaller end to a hollow operating rod opening into said head and into the receptacle through a perforation above said head and a valve in the head arranged to close its smaller end when the pounder descends to push water and steam through the clothes, and to open when the pounder is raised to permit the inflow of air and steam through said perforation into the pounder.

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

HARRY HITNER SHEARD.

Witnesses:

H. C. PETTIGREW,
J. A. BRANNAN.