(No Model.)

G. J. DEHN.

APPARATUS FOR CLEANING WATER HEATERS.

No. 595,120. Patented Dec. 7, 1897.

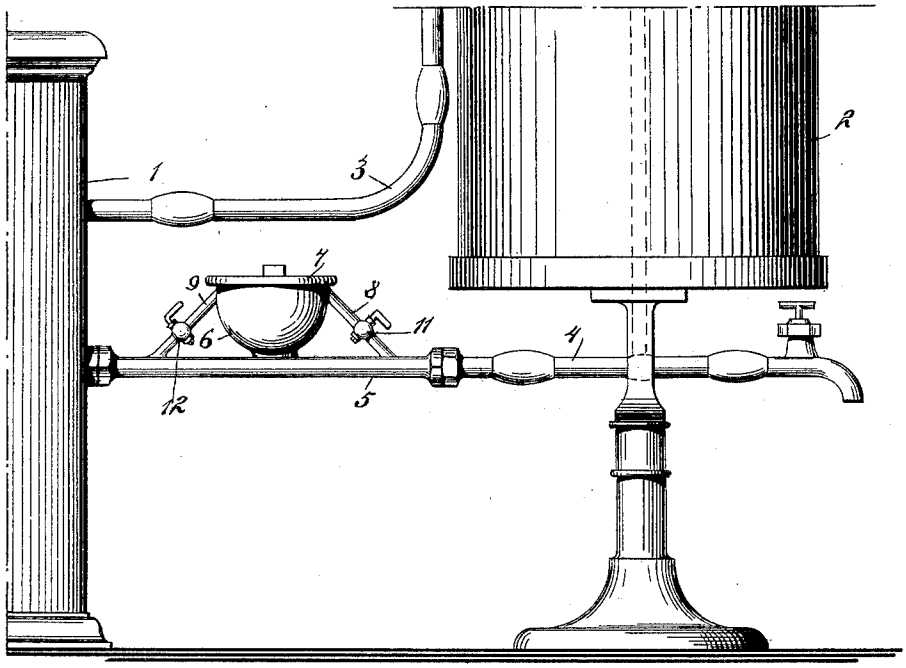


Fig. 1

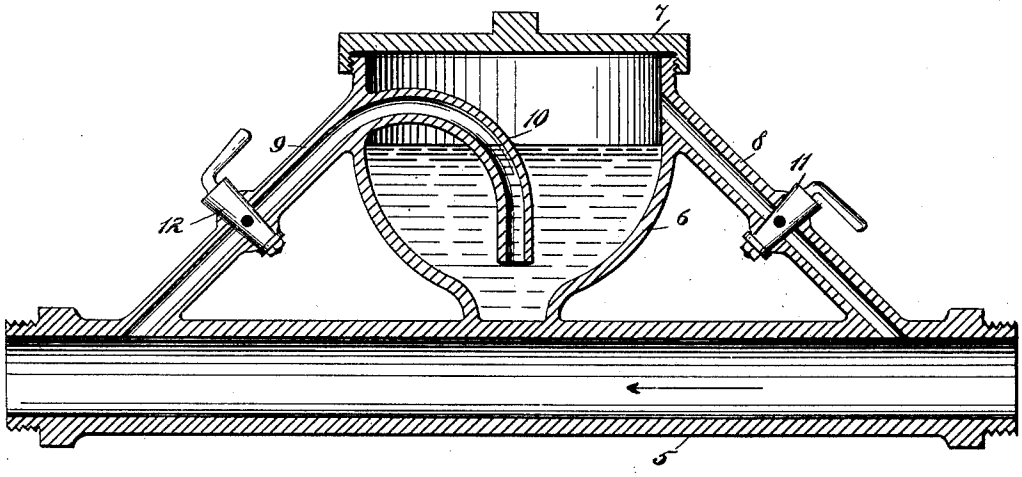


Fig. 2

WITNESSES:

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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GEORGE J. DEHN, OF IRON MOUNTAIN, MICHIGAN.

APPARATUS FOR CLEANING WATER-HEATERS.

SPECIFICATION forming part of Letters Patent No. 595,120, dated December 7, 1897.

Application filed June 4, 1897. Serial No. 639,392. (No model.)

To all whom it may concern:

Be it known that I, GEORGE J. DEHN, of Iron Mountain, in the county of Dickinson and State of Michigan, have invented new and useful Improvements in Apparatus for Cleaning Water-Heaters, of which the following is a full, clear, and exact description.

This invention relates to improvements in apparatus for preventing the accumulation of lime or similar matter in boilers, water back or front ranges, and connecting-pipes; and the object is to provide a simple means for automatically supplying a compound to the water to prevent lime or the like matter from adhering to the interior of the water-receptacle.

I will describe an apparatus embodying my invention and then point out the novel features in the appended claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both views.

Figure 1 is an elevation of a portion of a water-back range and a hot-water tank, showing my invention as applied thereto; and Fig. 2 is a sectional elevation of the apparatus.

Referring to the drawings, 1 designates the tank portion of a water-back stove or range, and 2 is a boiler having the usual pipe connection 3 with the water-back. Leading from the bottom of the boiler 2 is the usual supply-pipe 4, and a coupling-pipe 5 connects the supply-pipe with the water-back.

Mounted on the coupling-pipe 5 is a vessel 6, provided with a cover 7, which may be secured in place in any desired manner. I have here shown it as provided with a downwardly-extended flange at its edge, having a screw-thread to engage with a screw-thread on the vessel. A pipe 8 extends from the upper portion of the vessel 6 to the coupling-pipe 5 at one side of the vessel, and from the other side of the vessel a pipe 9 extends from said vessel to a connection with the coupling-pipe 5. This pipe 9 has a gooseneck portion 10 within the vessel 6 and extended nearly to the bottom thereof. The pipe 8 may be termed the "feed-pipe" for the vessel 6, and the pipe 9 the "discharge-pipe" for carrying out water with which a compound is mingled. The pipe 8 is provided with a plug-valve 11, and the pipe 9 is also provided with a plug-valve 12.

The object in providing the pipe 9 with a gooseneck, as described, is to prevent an outflow of liquid from the vessel 6 should the valve 12 be inadvertently left open and the valve 11 closed.

In using this apparatus the valves 11 and 12 must be closed, and then a suitable compound is placed in the vessel 6 and the cover 7 put in position. Then upon opening the valves 11 and 12 a certain portion of water will discharge from the coupling-pipe 5 through the pipe 8 into the vessel 6, where the compound will be mingled with it, and this water and compound will discharge through the pipe 9 into the water-back and also into the boiler, this operation of course only taking place when the water is in circulation.

The apparatus may be made of any suitable metal and at comparatively small cost. The demand for the apparatus will be generally for kitchen-ranges and range-heaters. While I have shown and described it in connection with a water-back range and boiler, it is obvious that it may be connected with the feed-pipe of any water-heater.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

An apparatus for cleaning water-heaters, comprising a length of pipe designed for connection with a feed-pipe, a vessel on said pipe for containing a compound, a removable cover for the vessel, an inlet leading from the pipe into the vessel near its top, an outlet leading from the upper portion of the vessel to the pipe, the said outlet having a downwardly-turned portion within the vessel and extending nearly to the bottom thereof, and valves for the inlet and outlet.

GEORGE J. DEHN.

Witnesses:
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FABIAN J. NUDELL.