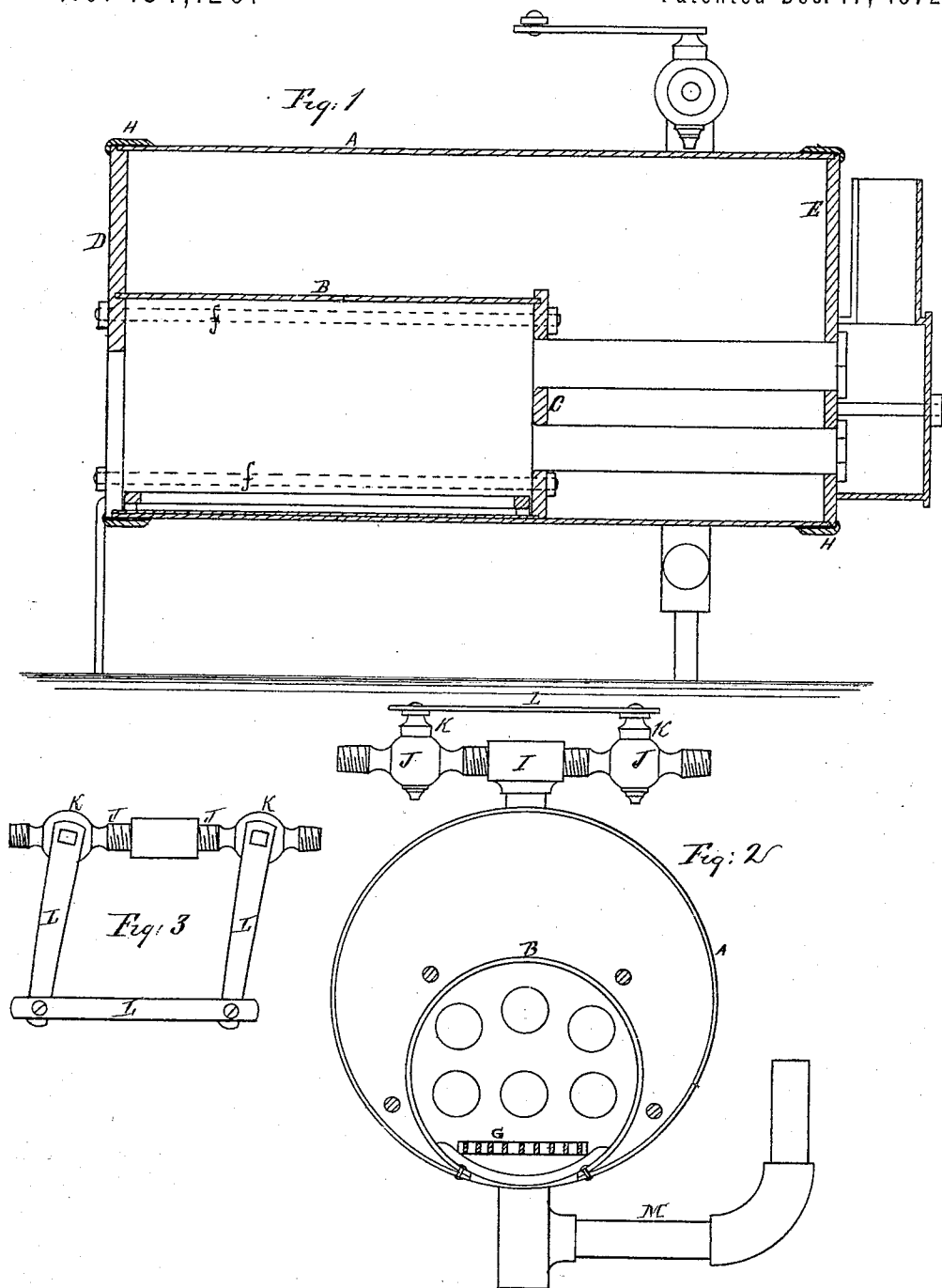


J. S. WOOLSEY.
Portable Water-Heater for Domestic Purposes.
 No. 134,120. Patented Dec. 17, 1872.



Witnesses

J. L. Boone
C. M. Richardson

Inventor

John S. Woolsey
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UNITED STATES PATENT OFFICE.

JOHN S. WOOLSEY, OF GILROY, CALIFORNIA.

IMPROVEMENT IN PORTABLE WATER-HEATERS FOR DOMESTIC PURPOSES.

Specification forming part of Letters Patent No. 134,120, dated December 17, 1872.

To all whom it may concern:

Be it known that I, JOHN S. WOOLSEY, of Gilroy, Santa Clara county, State of California, have invented an Improved Portable Heater; and I do hereby declare the following description and accompanying drawing are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or improvement without further invention or experiment.

The object of my invention is to provide an improved portable heater or boiler by which water can be heated for household purposes; and it consists mainly in a novel method of constructing the heater, and uniting the different parts so that it is easily made tight without the use of joints.

Referring to the accompanying drawing for a more complete explanation of my invention, Figure 1 is a longitudinal section, Fig. 2 is a transverse section, and Fig. 3 is a top view, of the levers and cocks.

A is the outer shell of the boiler, which is made light, not being required to stand much pressure. B is an inside shell, which forms the fire-box, and C is the flue-sheet at the fire-box end. D and E are the front and back heads of the boiler. The front head D and the flue-sheet C are grooved in the proper manner to receive the ends of the inner shell B, which are set into their respective grooves in lead or other suitable cement, and the whole is thus drawn tight by suitable bolts *f*. The two shells A and B are brought together at their lower edges, and at this point are united by rivets, leaving an open space, over which the grate G lies, as shown. The heads D and E of the boiler are fitted to the outer shell A, as shown, and a wrought-iron band, H, is shrunk over the junction at each end, so as to hold all the parts firmly together without rivets, and at the same time make it steam-tight. Suitable gage-cocks are provided for the front boiler-head. A pipe, I, arises from the top of the boiler, and branches off as shown at J J. These branches have cocks K, which

are connected by levers L, so that when one is opened the other will be closed. One of these branches leads off the heated water, and the other leads into the top of a barrel or tank, which is so placed as to have the pipe M, from the bottom of the boiler, lead into the bottom of the tank.

Whenever the water is heated in the boiler, and when it is not needed for heating purposes, a circulation will be kept up between it and the tank, so that all the water will become heated, and when, by reason of use, the water in the boiler is lowered, that from the tank will flow in and take its place. As this water is already heated, no cessation of the work need result. It affords a convenient method of utilizing the waste heat and preventing any accumulation of pressure within the boiler. The whole device is cheap and efficient.

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

1. The boiler having the shell B fitted into the heads C and D and secured by the bolts F, substantially as and for the purpose described.
2. The shell A fitted to the heads D and E, in combination with the securing-bands H, substantially as and for the purpose described.
3. The pipes J with their double cocks K and operating-levers L, and the pipe M, when employed to form a connection with a tank or barrel, and operating substantially as and for the purpose herein described.
4. A boiler composed of the double shells A and B, secured as described, and having the pipes J and M with the cocks K and operating-levers L, the whole forming a water-heating apparatus, substantially as and for the purpose described.

In witness whereof I hereunto set my hand and seal.

JOHN S. WOOLSEY. [L. S.]

Witnesses:

GEO. M. MASON,
R. B. BUCKNER.