

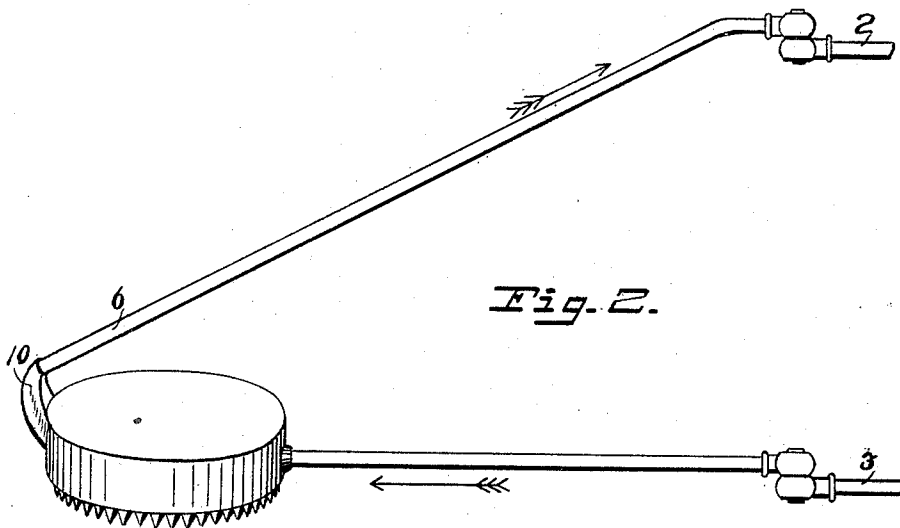
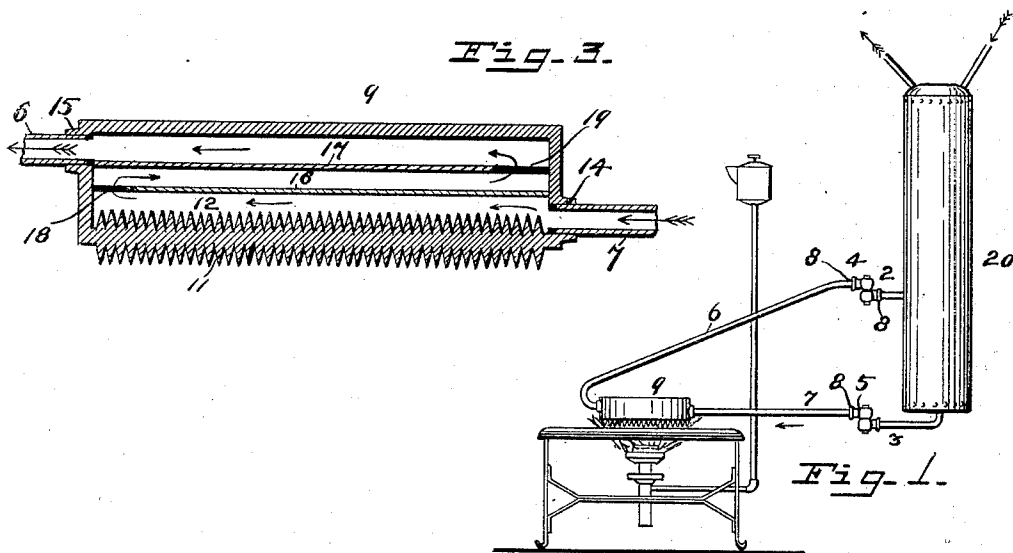
(No Model.)

C. W. PURPLE.

SEPARABLE WATER BACK OR HEATER FOR STOVES.

No. 474,459.

Patented May 10, 1892.



Witnesses.

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UNITED STATES PATENT OFFICE.

CHARLES W. PURPLE, OF MINNEAPOLIS, MINNESOTA.

SEPARABLE WATER BACK OR HEATER FOR STOVES.

SPECIFICATION forming part of Letters Patent No. 474,459, dated May 10, 1892.

Application filed March 20, 1891. Serial No. 385,738. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. PURPLE, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain Improvements in Separable Water Backs or Heaters for Stoves, of which the following is a specification.

My invention relates to a water heater or drum movably connected with the stationary boiler-tank or hot-water reservoir and adapted to be moved into position to be heated by the fire in the stove or to be moved away therefrom at pleasure.

The object of the invention is to provide a water back or heater in permanent connection with the city water-supply and at the same time mechanically removable with respect to the stove.

To this end the invention consists in the combinations and constructions hereinafter described, and particularly pointed out in the claims.

My invention will be more readily understood by reference to the accompanying drawings, in which—

Figure 1 is a general view illustrating a device embodying my invention in use with a common form of gas-stove. Fig. 2 is an enlarged view of the apparatus removed from the reservoir. Fig. 3 is a sectional elevation of the water-heater proper.

As shown in the drawings, the pipes 2 and 3 are the usual iron taps extending from the side and bottom of the boiler. To these taps are secured the swivel or swinging joints 4 and 5, adapted to allow movement in lateral or vertical directions, or both. The pipes 6 and 7 are screwed tightly into the thimbles 8 of the joints 4 and 5 and extend outwardly to the water back or drum 9, adapted to be moved over or in proximity to the heating-stove. As shown, the pipe 7 extends into the lower part of the drum 9, while the pipe 6 extends therefrom at its upper portion. I preferably provide the neck 10, cored out and turned back, so as to admit of the pipe 6 being screwed directly into it, instead of making it necessary to bend the pipe 6, as shown in Fig. 1. The lower portion of the water drum or back 9 is provided on both its under and interior surfaces 11 and 12, respectively, with spikes or corrugations extending there-

from, as shown in the drawings, and greatly increasing the heating and radiating surfaces. This drum is preferably of a circular form and may consist of a simple hollow box having inlet and outlet sleeves or thimbles 14 and 15, into which the pipes 7 and 6 pass.

In order to insure the heating of the water entering through the pipe 7 and passing over the radiating-surface 12, I may provide the diaphragms 16 and 17, having openings 18 and 19 oppositely placed and respectively opposite to the inlet and outlet openings in the lower and upper part of the drum. The water is thus compelled to flow clear across the bottom of the drum when it is returned upon itself in the chamber between the diaphragm and discharged through the opening 19 into the upper chamber of the drum, from whence the hot water rises through the pipes 6 and enters the hot-water tank 20. It will be seen that the water-back is supported on the pipes 6 and 7 as brackets and that being hinged to the boiler it may be easily swung away from the top of the stove just as a gate would be swung on its hinges. Hence when it is desired to have hot water throughout the pipes in the house the water-back is swung over the fire or flame of the cooking-range or gas-stove, while if no hot water is needed or it is wished to move the stove the water-back is swung to one side out of the way.

In order to adapt a device to use with varying sizes of stoves, I may use universal or ball-bearing joints between the taps and the pipes 6 and 7 in connection with movable joints at the heating-drum 9 and, if desired, in either or both of the pipes 6 and 7, thereby adapting the drum to a vertical movement and to set down closely over the stove.

A special advantage of my device lies in its use in tenement houses, where the occupants are continually changing, as my separable water-back does away with the necessity of employing a plumber to connect or disconnect the boiler-tank with the water back or front, permanently secured in the ordinary stove.

It is obvious that the invention admits of various modifications which would readily suggest themselves to one skilled in the art; and I therefore do not confine myself to the specific construction shown and described.

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

1. The combination, in a device of the class
5 described, of the water back or drum, with the boiler-tank or reservoir pipes leading therefrom at points one above the other and to said drum and swivel-joints in said pipes at points near said tank, whereby said drum is
10 adapted to swing laterally with said pipes as supports, substantially as described.

2. The combination, in a device of the class described, of a drum having its lower wall or
15 inlet and outlet ports provided in the lower and upper portions of its walls, and jointed

pipe connections therewith, whereby said drum is made movable with respect to its reservoir, substantially as described.

3. The combination, in a water-back, of the
20 circular drum having the corrugated or spiked bottom, with inlet and outlet openings in the walls of said drum, and the diaphragms 16 and 17, provided with openings 18 and 19,
25 substantially as described.

In testimony whereof I have hereunto set my hand this 17th day of January, 1891.

CHARLES W. PURPLE.

In presence of—

C. E. VAN DOREN,
O. G. HAWLEY.