

(No Model.)

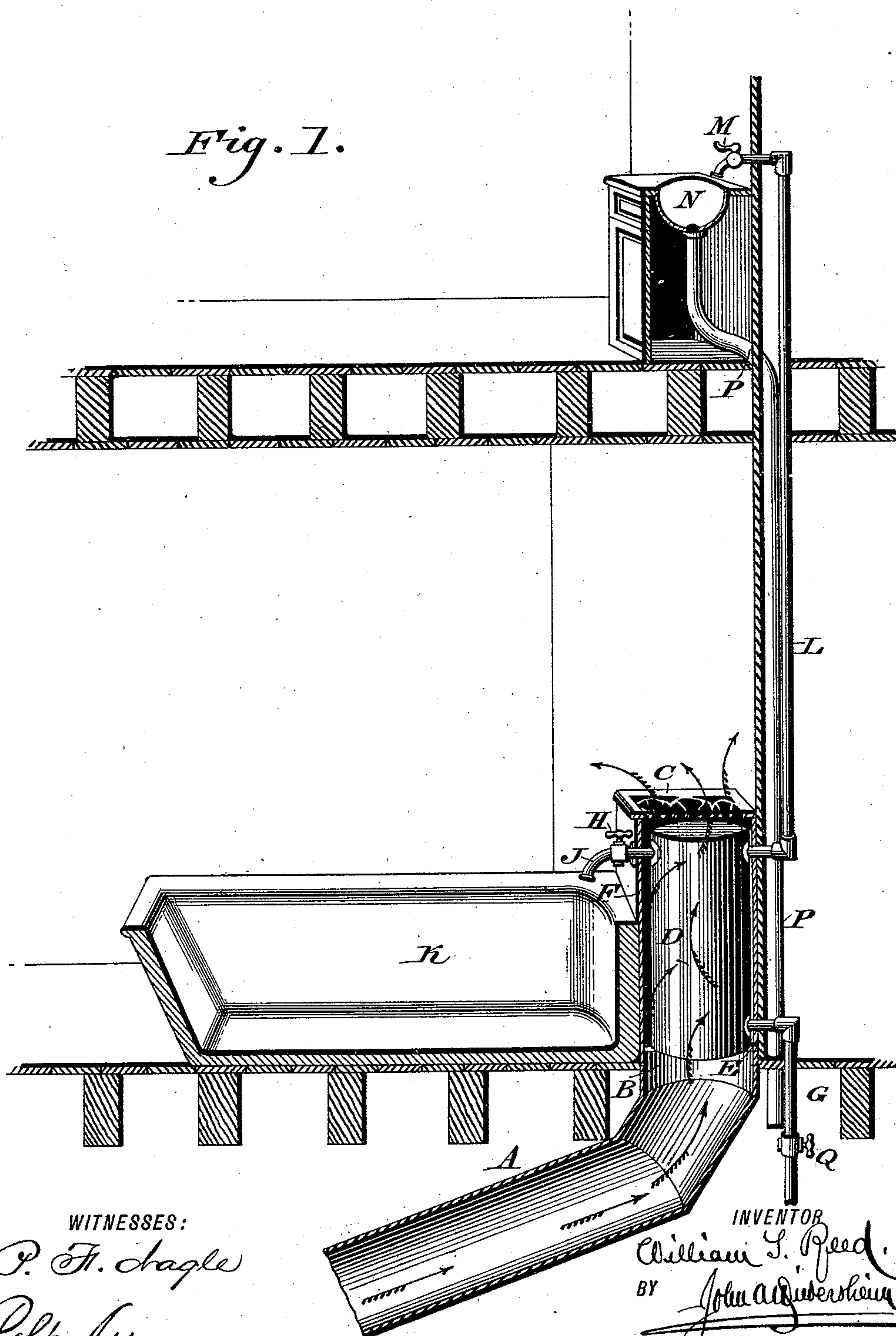
2 Sheets—Sheet 1.

W. S. REED.
APPARATUS FOR HEATING WATER.

No. 455,057.

Patented June 30, 1891.

Fig. 1.



WITNESSES:

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INVENTOR

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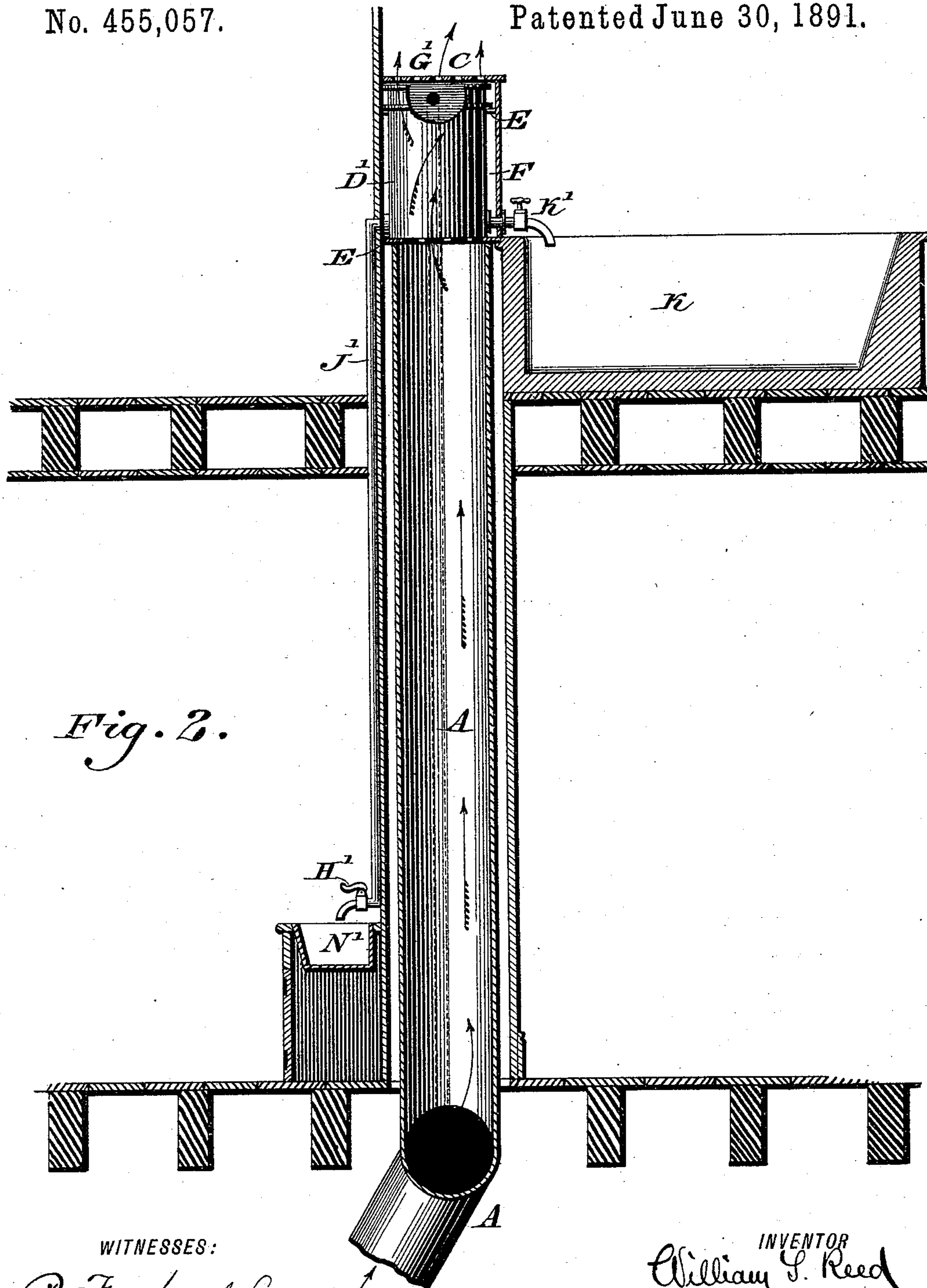


Fig. 2.

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UNITED STATES PATENT OFFICE.

WILLIAM S. REED, OF MARSHALLTOWN, IOWA.

APPARATUS FOR HEATING WATER.

SPECIFICATION forming part of Letters Patent No. 455,057, dated June 30, 1891.

Application filed October 7, 1890. Serial No. 367,327. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. REED, a citizen of the United States, residing at Marshalltown, in the county of Marshall, State of Iowa, have invented a new and useful Improvement in Apparatus for Heating Water, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of improvements in apparatus for heating water, as hereinafter fully described.

Figure 1 represents a partial side and partial vertical sectional view of an apparatus embodying my invention, the water-supply being under pressure. Fig. 2 represents a vertical sectional view of the invention applied to an upper story, the water-supply not being under pressure.

Similar letters of reference indicate corresponding parts in the two figures.

Referring to the drawings, A designates a hot-air flue leading from a heater or other suitable source of supply, and provided with an enlarged portion or chamber B, having a register C. In the said chamber is located the tank or other receptacle D for holding the water to be heated. The said tank D is so supported within said chamber C by the cross-bars E as to be free from contact with the walls of the chamber, thereby forming an air-space which surrounds the tank and permits the free passage around the same of the hot air from the heater or other source of supply, so as to heat the contents of the tank. A supply-pipe G leads into the lower end of the tank from a pump or reservoir of any ordinary construction adapted to furnish water thereto under pressure.

H designates a faucet in the discharge-pipe J of the tank which empties into a bath K.

Leading from the upper part of the tank D to an upper story is a pipe L, which is provided with a faucet M, adapted to control the discharge of the hot water in said pipe into a basin or other suitable receptacle, the latter having a waste-pipe P. The pipe G is provided with a faucet Q, so that the supply of water to the tank and pipe L may be shut off when desired.

It will be seen that the water in the tank D will be heated by the hot air which enters the chamber B by the flue A, and that the warmer portion thereof will rise to the upper part of the tank and in the pipe L, so that warm water may be drawn by the faucets H and M from the said tank and pipe.

In Fig. 2 is shown a water-tank located in the flue or chambered portion thereof, the supply not being under pressure, as in the apparatus shown in Fig. 1. The tank D is located in the flue A, and has a surrounding air-space F within the flue, as in Fig. 1, so that the hot air in the said flue may pass on all sides of the same, and thus thoroughly heat the contents of the tank, which is fed thereto by a supply-pipe G'. A hot-water-discharge pipe J' leads downward from the tank D' to a stationary basin N' in a lower floor, and is supplied with a faucet H' to control the flow from the same. A faucet K' controls the discharge of hot water from the tank D' to a bath K. It will be seen that the heat of the flue is greatly utilized, and that no extra expenditure of fuel is necessary to heat a large quantity of water.

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

1. A hot-air flue communicating with the bottom of an enlarged chamber having a top register, a tank inclosed by said chamber, and supply and distributing pipes exterior of said chamber and connected to said tank; said parts being combined substantially as described.

2. A hot-air flue having a continuation in the form of an enlarged chamber with closed sides and a register at top, a tank supported within said chamber, and supply and distributing pipes exterior of said chamber and connected to said tank, said parts being combined substantially as described.

WILLIAM S. REED.

Witnesses:

G. W. WEEKS,
GEO. TRAUTMAN.