

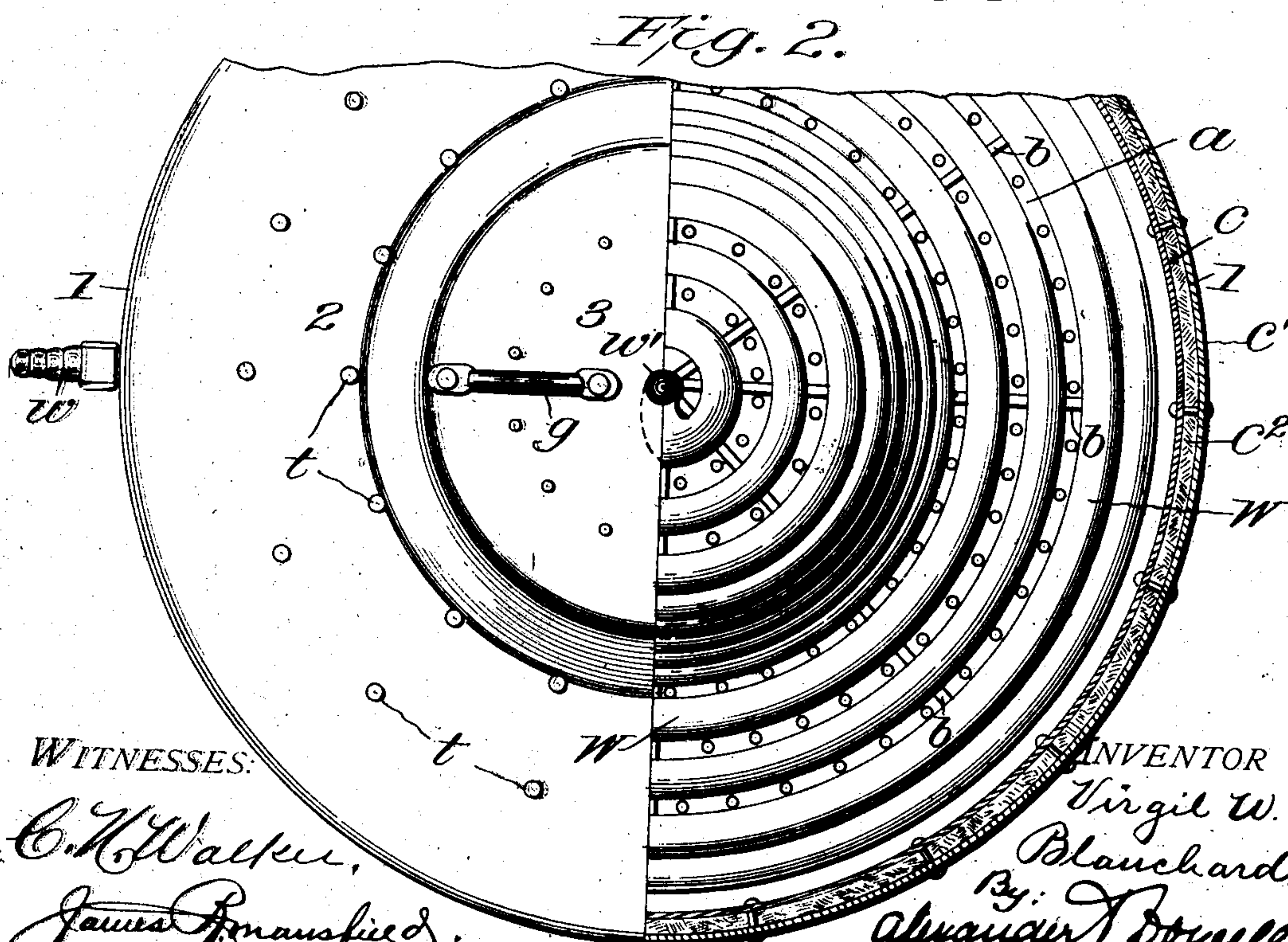
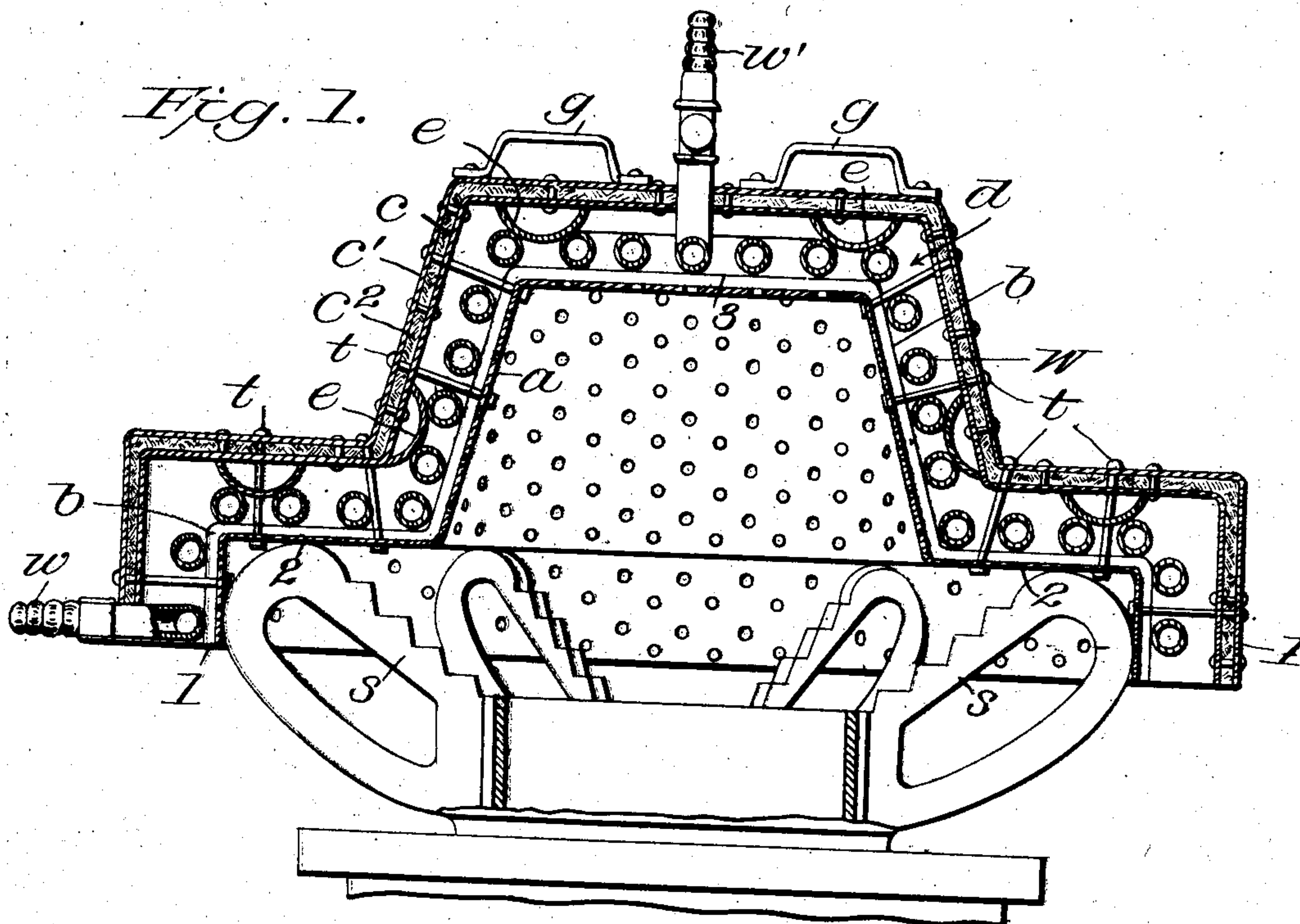
No. 834,226.

PATENTED OCT. 23, 1906.

V. W. BLANCHARD.

WATER HEATER.

APPLICATION FILED JAN. 22, 1906.



WITNESSES:

C. M. Walker,
James P. Mansfield.

INVENTOR
Virgil W. Blanchard.
By: *Alexander T. Dowell*
Attorneys

UNITED STATES PATENT OFFICE.

VIRGIL W. BLANCHARD, OF NEW YORK, N. Y.

WATER-HEATER.

No. 834,226.

Specification of Letters Patent.

Patented Oct. 23, 1906.

Application filed January 22, 1906. Serial No. 297,260.

To all whom it may concern:

Be it known that I, VIRGIL W. BLANCHARD, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Water-Heaters; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form part of this specification.

This invention is a novel water-heater for use in connection with heating-stoves, particularly gas heating-stoves; and the object of the present invention is to provide a water-heating device which can be readily put on or removed from a heating-stove and need not form a permanent part thereof, by means of which water can be heated very quickly and readily.

The device can be used to heat water for cooking purposes or for bathing purposes and can be connected to the ordinary water-pipes of a building by means of flexible detachable hose, if desired, so that the water can pass therethrough on its way to the tub or receptacle where the hot water is to be used.

When not in use, the device can be readily removed from the stove.

By this attachment I am enabled to use an ordinary heating or warming stove to heat water, and the device can be applied to many of the gas heating-stoves in common use.

The invention will be fully understood from the following description and the drawings, in which—

Figure 1 is a sectional view of the device as applied to the top of my heating-stove above referred to; and Fig. 2 is a plan view thereof, partly in section.

The heater is approximately cap-shaped or dome-shaped in appearance, having a lower annular portion 2 adapted to support the device upon the upper part of a stove. In the example shown it is illustrated as supported on the top brackets *s* of the gas heating-stove shown in my application above referred to directly over the outlet from the stove. It is also provided with an exterior depending flange portion 1, adapted to cause the hot gases to pass upwardly into the crown or dome of the heater and is provided with a central crown or dome portion 3, in which the hot gases are trapped. Within the walls of the heater is a water-heating coil *W*, which is connected at its lower end to a water-sup-

ply and at its upper end provided with an outlet-pipe. This is the general construction of the heater and the preferred form.

It is specifically constructed in the following manner: The heater has an interior lining *a*, preferably constructed of perforated sheet metal, which is approximately cap or dome shaped to conform to the general outline of the heater. This interior lining is stiffened and supported by radially-disposed ribs *b*, preferably narrow metal strips, which give stiffness and rigidity to the device. Surrounding this inner lining is a coil of pipe *W*, which coil conforms in general conformation to the contour of the heater, and is provided at its lower end with a nipple *w* of any suitable kind, to which the end of a flexible hose may be attached leading to a water-supply. (Not shown.) The upper end *w'* of the coil projects sufficiently to afford means for connection with a pipe or tube leading to a hot-water receptacle or tank.

Exterior to the coil is an outer jacket conformable in general contour to that of the inner wall and coil, such outer jacket being composed of an inner metallic wall *c*, an outer metallic wall *c'*, and an inner layer *c''* of non-heat-conducting material, such as asbestos, so that there will be very little heat lost by conduction or exterior radiation from the heater. Preferably the outer casing is separated from the coil by an air-space *d*, which affords a flue-passage in which the hot air passing through the coil is directed downwardly and out through the openings around the lower edge of the heater, as shown.

The casing may be spaced apart from the coil by means of bridge-pieces *e*, attached to the casing, and the inner and outer walls are retained in place by means of through-bolts or rivets *t*. The heater may be provided with handles *g*, by which it can be lifted on or off the stove, as desired.

When the heater is to be used, it is placed over the outlet of the stove, as indicated in the drawings, so that the hot gases are discharged upwardly into the hollow under side of the heater and pass through the perforations in the inner wall thereof to and around the coil and through the coil into the flues *d* and thence downwardly and out. In this manner the coil is subjected to intense heat in a most advantageous manner and will be quickly raised to a high temperature. Therefore water supplied through the coil will be correspondingly heated.

As the heater can be connected by flexible hose with the ordinary water-supply pipes in the building, it is obvious that the device can be readily used in connection with any ordinary gas heating-stove or with other stoves, if desired.

The advantage of this water-heating attachment will be obvious, and it will be particularly useful to residents of flats and small houses wherein it is quite desirable to use the warming-stoves to heat water, &c.

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

1. A water-heating attachment for gas heating-stoves comprising a dome-shaped perforated lower wall, a dome-shaped coil of pipe thereon, and a superposed dome-shaped imperforate top wall.
2. A water-heating attachment for gas heating-stoves comprising a dome-shaped perforated wall, an imperforate upper wall, and a coil in the space between the walls.
3. A water-heating attachment for gas heating-stoves comprising a dome-shaped perforated wall, an imperforate upper wall, and a coil arranged in the space between the walls, and having a hot-air space between the coil and the upper wall.
4. A water-heating attachment for gas-stoves comprising an inner perforated wall, an outer wall or casing separated from the inner wall by an air-space, and a water-heat-

ing coil inclosed in the space between the walls, the space between the coil and the outer wall being for hot air.

5. A dome-shaped water-heating attachment for gas-stoves, comprising an inner perforated wall, an outer casing having non-heat-conducting walls separated from the inner wall by an air-space, and a water-heating coil inclosed between the walls, the space between the coil and the outer wall being for hot air.

6. A water-heating attachment for gas-stoves comprising radially-disposed ribs, a dome-shaped coil supported on said ribs and an outer dome-shaped casing above and separated from the coil so as to form a hot-air space around the coil.

7. A water-heating attachment for gas-stoves, comprising an inner dome-shaped wall, radially-disposed strengthening-ribs, a coil supported on the said ribs and conforming in contour to the inner wall, an outer casing separated from the coil so as to form a hot-air space between the coil and outer casing, and connections between the inner and outer walls.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

VIRGIL W. BLANCHARD.

In presence of—

T. H. ALEXANDER,
JAMES R. MANSFIELD.