

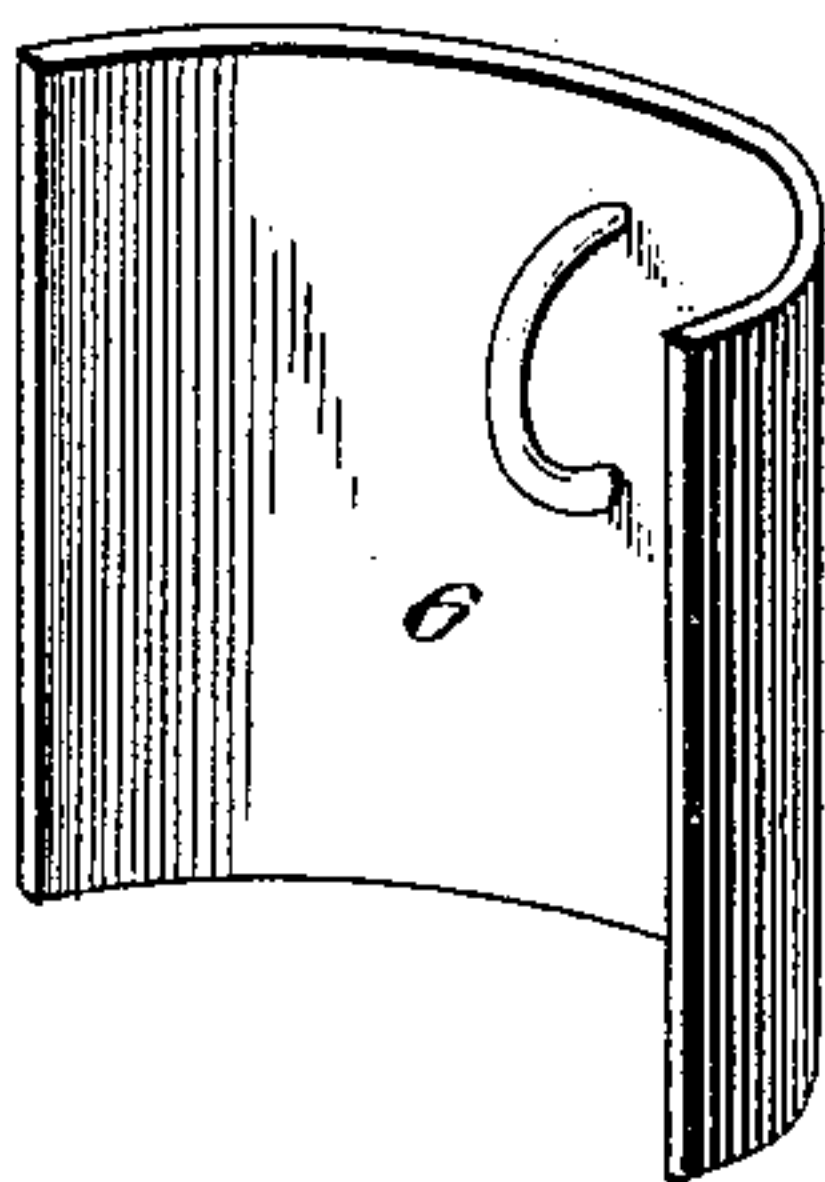
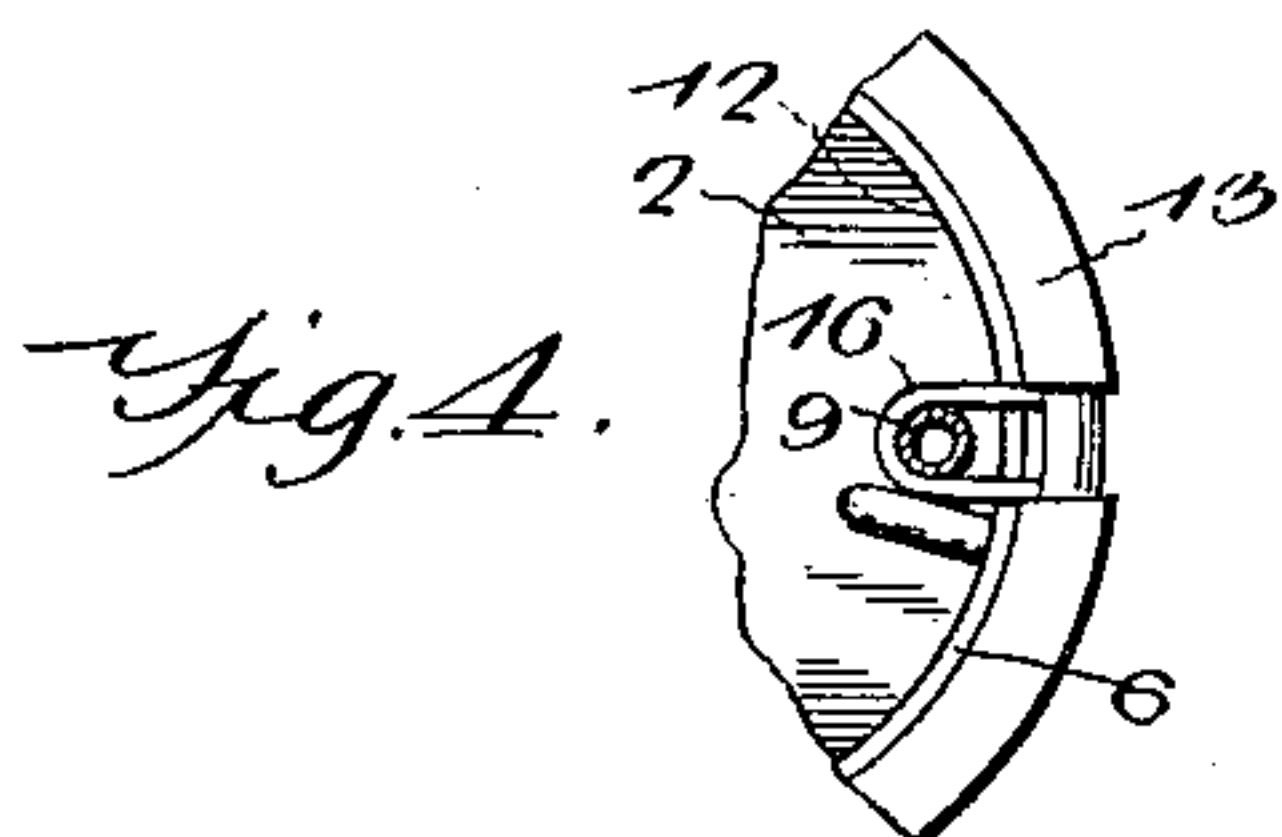
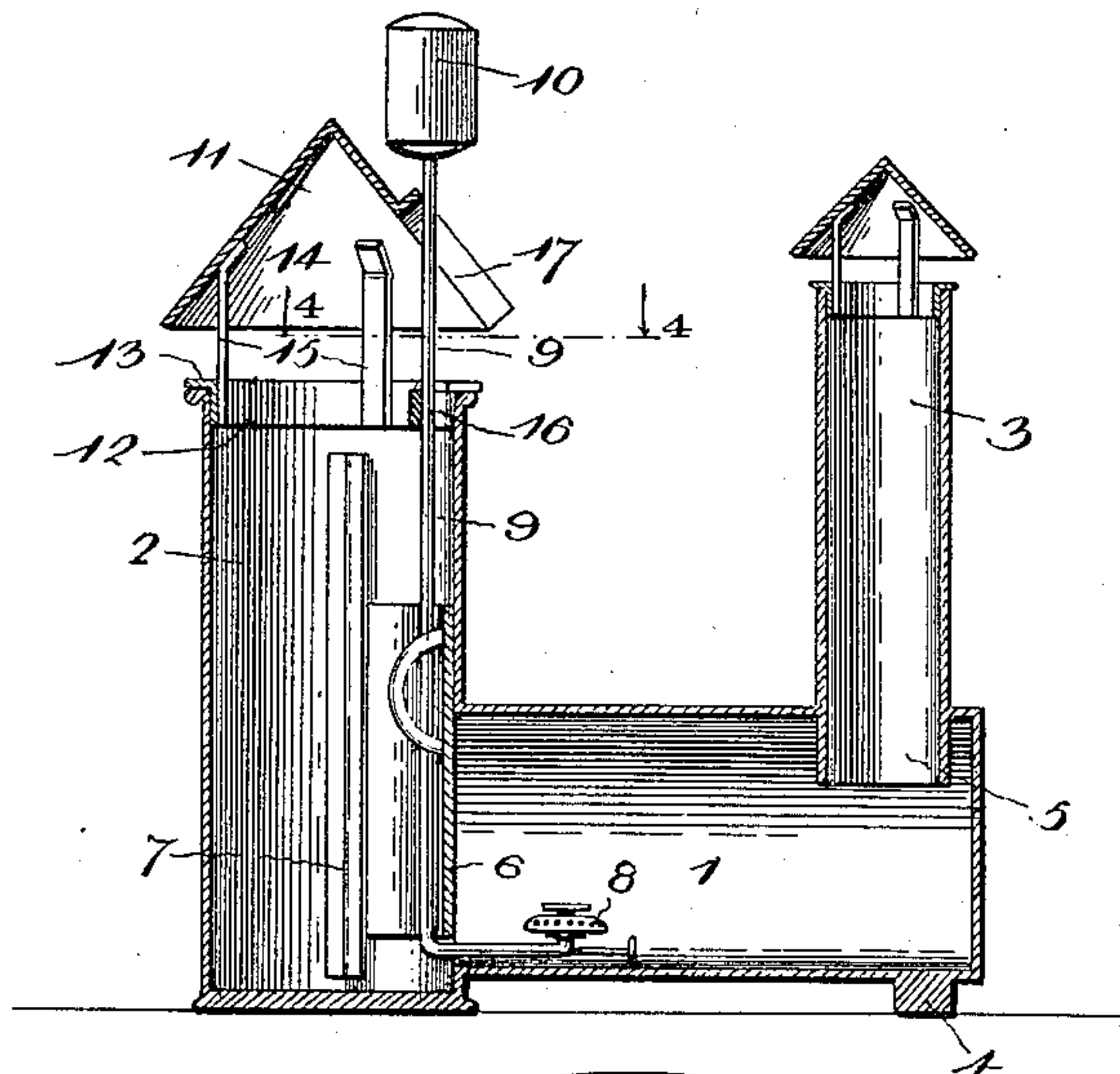
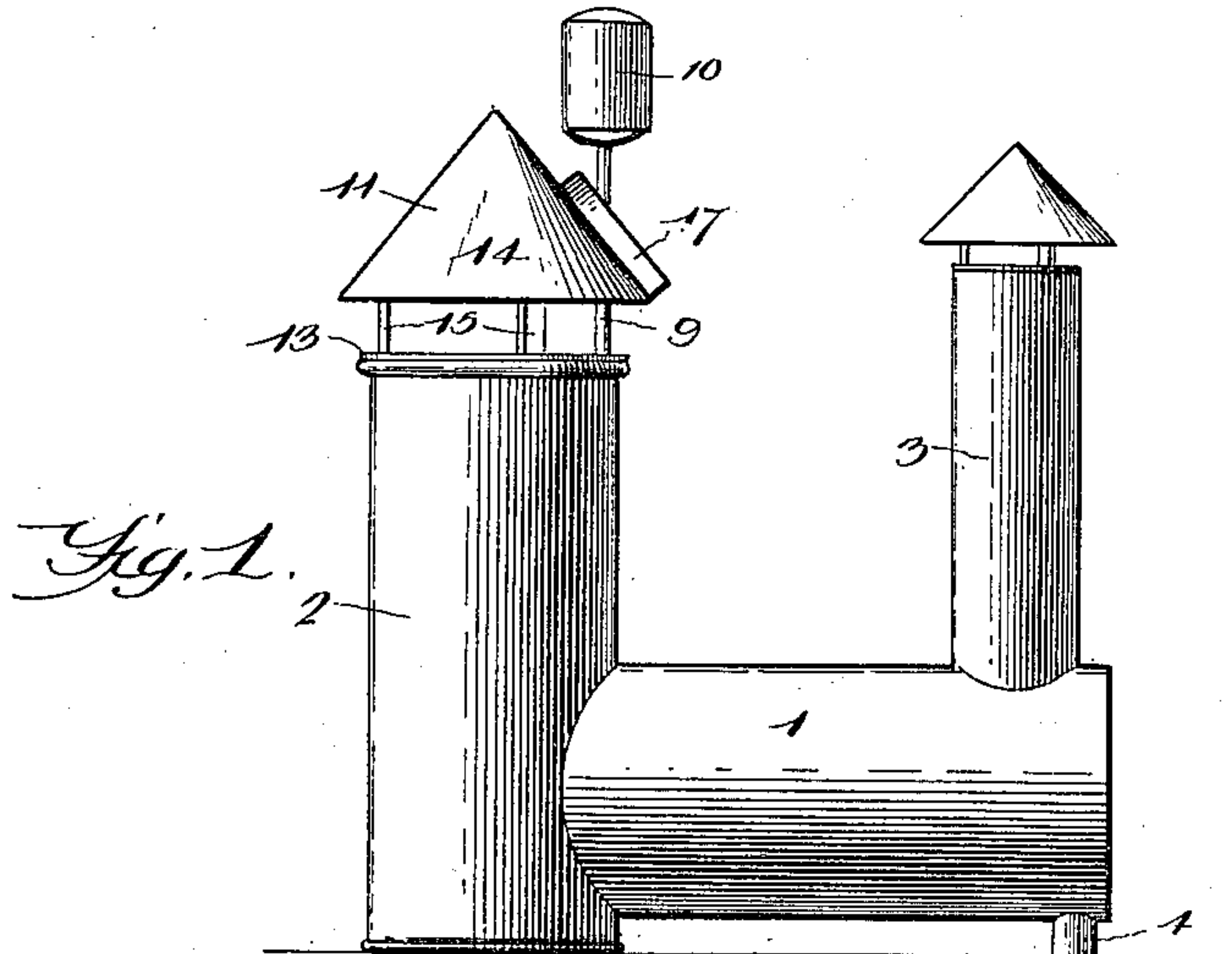
No. 610,561.

Patented Sept. 13, 1898.

L. PHELPS.
TANK HEATER.

(Application filed Mar. 30, 1898.)

(No Model.)



Witnesses

J. Frankfurterwell, By His Attorneys.

J. E. Hoyle

Lynn Phelps, Inventor.

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UNITED STATES PATENT OFFICE.

LYNN PHELPS, OF KANEVILLE, ILLINOIS.

TANK-HEATER.

SPECIFICATION forming part of Letters Patent No. 610,561, dated September 13, 1898.

Application filed March 30, 1898. Serial No. 675,772. (No model.)

To all whom it may concern:

Be it known that I, LYNN PHELPS, a citizen of the United States, residing at Kaneville, in the county of Kane and State of Illinois, have invented a new and useful Tank-Heater, of which the following is a specification.

My invention relates to tank and bath heaters, and has for its object to provide a simple, inexpensive, and efficient heater of the class designed for the use of gasolene or other fluid fuel and constructed to economize in the consumption of fuel by developing the maximum heat.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claim.

In the drawings, Figure 1 is a side view of a heater constructed in accordance with my invention. Fig. 2 is a central longitudinal section of the same. Fig. 3 is a detail view in perspective of the inlet-flue cap. Fig. 4 is a partial horizontal section on the plane indicated by the line 4 4 of Fig. 2.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a heat-chamber of cross-sectionally cylindrical construction, communicating at one end with an upright inlet of feed-flue 2 and at the other end with an upright outlet-flue 3, said heat-chamber communicating with the side of said inlet-flue, whereby the closed lower end of the latter forms a base for supporting the apparatus on the bottom of a tank or other receptacle of which the contents are to be heated. The opposite end of the horizontal heat-chamber, under the outlet-flue 3, is preferably provided with a depending stud or rest 4. The outlet-flue 3 depends terminally into the interior of the heat-chamber to form an extension 5, which serves, in connection with a slide-damper 6, to retain the heat in the upper portion of the chamber or cylinder 1, said damper being fitted at its side edges in guides 7 in the inlet or feed flue 7 and being adapted to be raised to expose the entire contiguous end of the heat-chamber when it is desired to intro-

duce the burner 8 and to be subsequently depressed to partly close said contiguous end of the heat-chamber and extend downwardly thereover a sufficient distance, as above indicated, to confine the heat. Said burner is fed by means of a supply-tube 9, extending from an attached tank 10, and the tube and tank, with the burner, are supported in their operative positions with relation to the other portions of the apparatus by means of a removable cap 11, fitted in the upper end of the flue 2. Said cap consists of a collar 12, which is fitted in the upper end of the flue and is flanged at its upper edge, as shown at 13, to rest upon the upper edge of the flue, a conical hood 14 and standards 15 connecting the hood with the collar, and said collar is provided with a seat 16 for the reception of the feed-tube 9 and the hood with a flanged radial slot 17. The outlet-tube 3 is also preferably provided with a removable cap constructed substantially as described in connection with the cap 11.

The apparatus as set forth is of simple and cheap construction and is adapted to rest upon the floor or bottom of a tank or other receptacle, with the upper ends of the flues 2 and 3 above the surface of the contents of such receptacle, and by connecting the burner with the tank by means of the feed-tube the fuel may be lighted at the burner, after which the latter may be inserted downwardly through the inlet-flue and introduced into the heat-chamber, the removable cap 11 being fitted in place to hold the burner and attachments in position. After introducing the burner the damper may be depressed to the desired extent, as above set forth, to confine the heat.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having described my invention, what I claim is—

A heating device of the class described, having a heat-chamber and communicating inlet and outlet flues provided with caps, the cap of the inlet-flue having a collar removably

fitted in the flue and provided with a seat, and
a burner removably located within the heat-
chamber and having an attached feed-tube
and tank, said feed-tube extending through
5 said seat in the collar of the cap which is fit-
ted upon the inlet-flue, and held by said seat
to maintain the burner and tank in their op-
erative positions, substantially as specified.

In testimony that I claim the foregoing as
my own I have hereto affixed my signature in 10
the presence of two witnesses.

LYNN PHELPS.

Witnesses:

JOHN W. DANFERMAN,
JAMES MCKENNEY.