

No. 881,362.

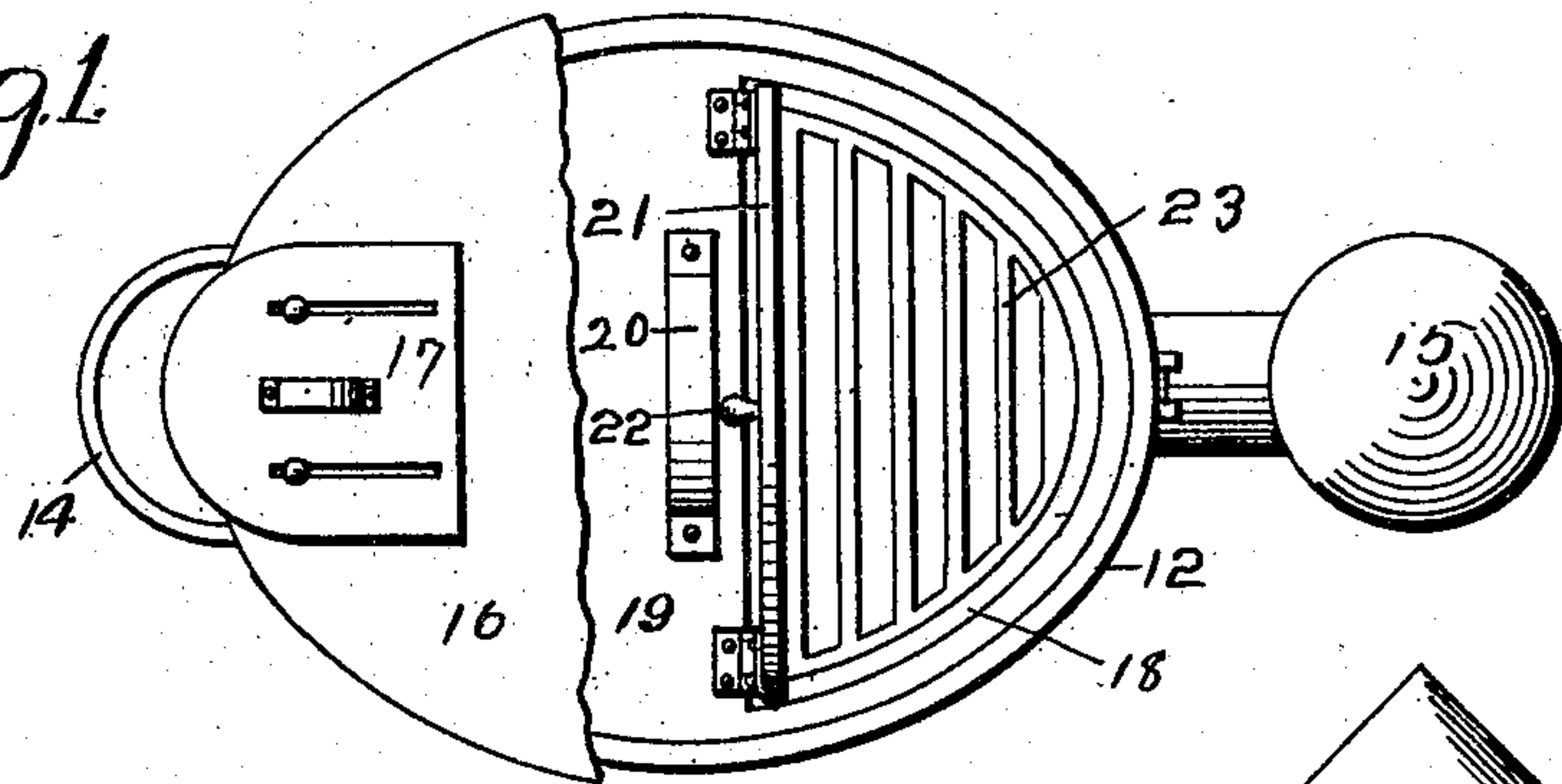
PATENTED MAR. 10, 1908.

A. W. VAN RINSUM.

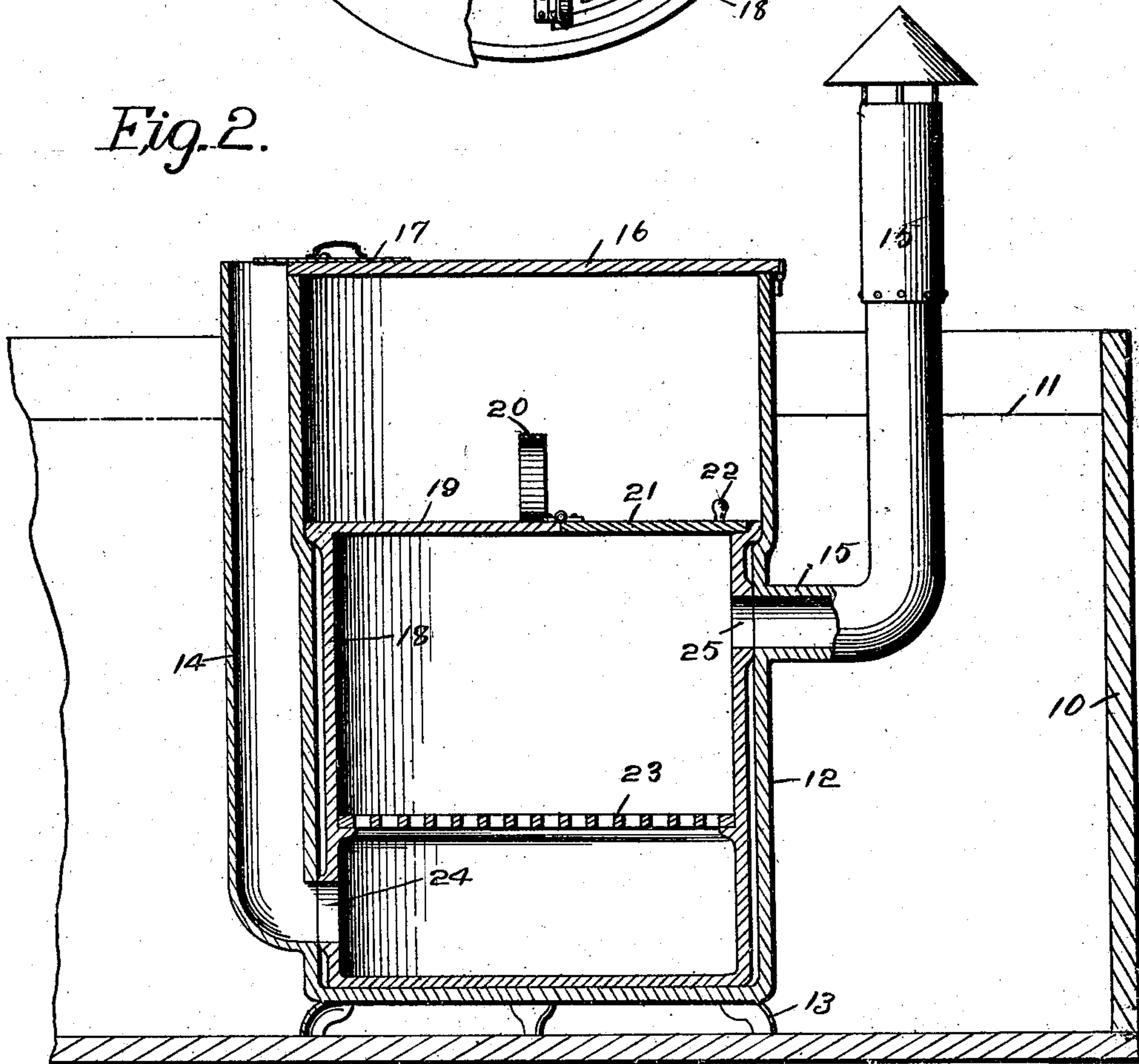
TANK HEATER.

APPLICATION FILED JAN. 29, 1908.

*Fig. 1*



*Fig. 2.*



Witnesses  
P. L. Spencer.  
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# UNITED STATES PATENT OFFICE.

ALBERT W. VAN RINSUM, OF ALTOONA, IOWA.

## TANK-HEATER.

No. 881,362.

Specification of Letters Patent.

Patented March 10, 1908.

Application filed January 29, 1906. Serial No. 298,331.

*To all whom it may concern:*

Be it known that I, ALBERT W. VAN RINSUM, a citizen of the United States, residing at Altoona, in the county of Polk and State of Iowa, have invented a certain new and useful Tank-Heater, of which the following is a specification.

The object of my invention is to provide a tank heater of simple, durable and inexpensive construction to which access may be had quickly and easily for the purpose of feeding fuel to the grate or removing ashes from the ash-pit and in which a maximum portion of the heat generated by the fuel will be imparted to the surrounding water and not lost by radiation through the top of the heater.

My invention consists in certain details in the construction, arrangement and combination of the various parts of the device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claim and illustrated in the accompanying drawings, in which—

Figure 1 shows a top plan view of the complete device, and Fig. 2 shows a central, sectional view of same.

Referring to the accompanying drawings, I have used the reference numeral 10 to indicate that portion of the tank shown and the dotted line 11 indicates the water line of the tank.

My improved heater comprises a casing or body portion 12 open at its top and resting upon legs 13. At one side, I have formed a draft flue 14 opening into the body portion at its bottom and at the other side some distance below the water line is a discharge flue 15 which extends outwardly a short distance and then upwardly to a point above the body portion. On top of the casing is a hinged cover 16 and mounted on the cover 16 is a draft slide 17 which may be moved to wholly or partially cover the draft passageway 14.

The combustion chamber and ash-pit is formed complete of a single body portion 18, the total height of which is approximately two-thirds of the height of the body portion 12. At its top is a stationary cover 19 provided with a handle 20 and a hinged cover 21 provided with a handle 22. Near its body

portion is a grate 23 and below the grate is a draft passageway 24 designed to register with the lower end of the draft flue 14 and on the opposite side above the grate is a flue opening 25 designed to register with the flue 15.

In practical use and assuming the parts to be in the position shown in Fig. 2 and assuming that it is desired to feed fuel to the grate, the operator need only raise the cover 16 and then the cover 21. If the fire is burning on the grate, the heat will be radiated outwardly to heat the water in the tank. Practically all of the heat is contained in the space below the water level as the cover 16 prevents the escape of heat in any material quantity from the top of the combustion chamber. Furthermore a large portion of the heat passes through the flue which is arranged to travel outwardly from the combustion chamber through the water before passing upwardly to a point of discharge and a great deal of heat is radiated from the flue to the water. If, however, it is desired to clean either the grate or the ash-pit, the operator simply raises the cover 16, grasps the handle 20 and bodily removes the entire combustion chamber. This can be done readily even if the fire is burning on the grate and then the combustion chamber may be cleaned as desired without danger of putting ashes in the water tank. Then when the combustion compartment has been cleaned, it may be readily replaced in the same manner and this may be done whether a fire is burning on the grate or not.

Having thus described my invention, what I claim and desire to secure by Letters Patent of the United States, therefor is—

An improved tank heater comprising a body portion open at its top, and provided at one end with a draft passageway extended from the top to a point near the bottom, and communicating with the interior of the body portion at the bottom, a flue communicating with the opposite side of the body portion at a point midway between its upper and lower ends, and extended upwardly to a point above the body portion, and a detachable combustion chamber com-

prising sides, top and bottom, designed to fit into the said body portion, and provided with a grate, and with draft passage-ways to register with the draft passage way and flue  
5 of the body portion; a handle secured to the top of said combustion chamber, a hinged section in said top of the combustion cham-

ber, and a cover for the top of the body portion, provided with an adjustable slide to extend over the said draft passage way.

ALBERT W. VAN RINSUM.

Witnesses:

H. A. DECKER,

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