J. M. SIEGER.

WATER TANK HEATER.

APPLICATION FILED DEC. 1, 1913.

1,114,394.

Patented Oct. 20, 1914.

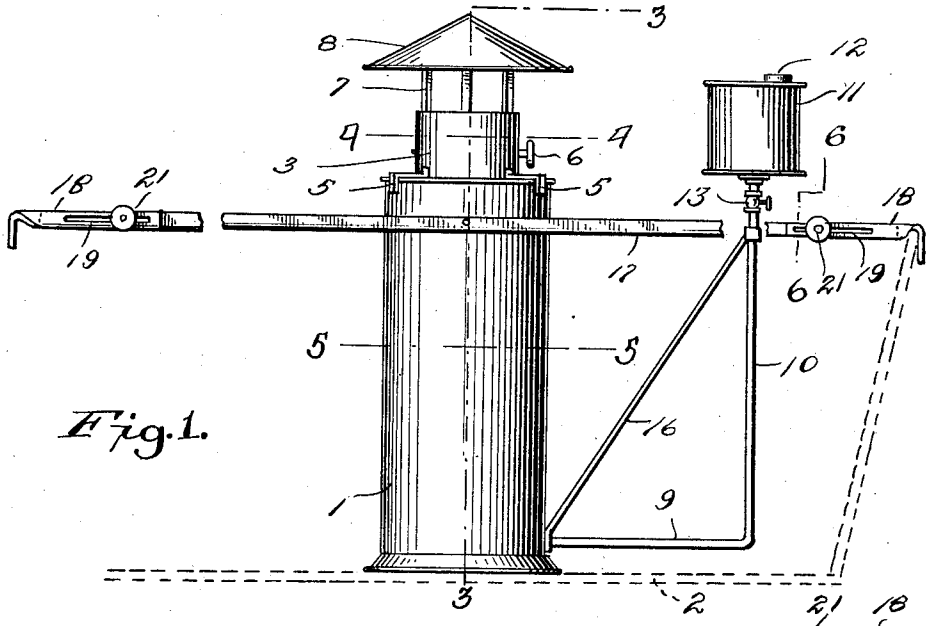


Fig. 1.

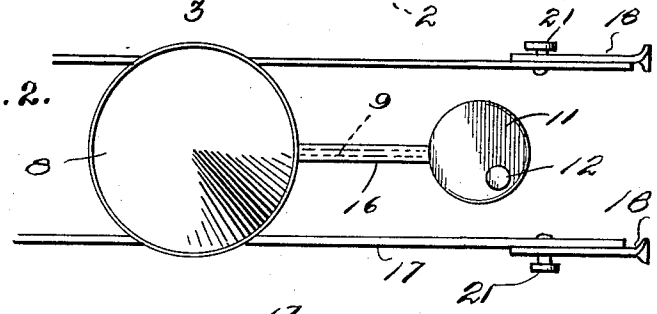


Fig. 2.

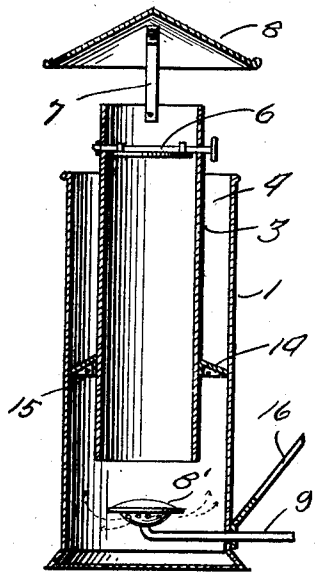


Fig. 3.

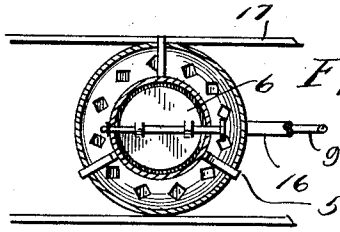


Fig. 4.

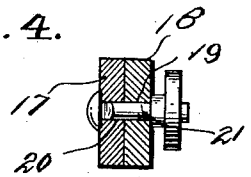


Fig. 6.

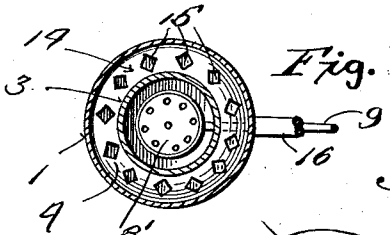


Fig. 5.

Witnesses

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UNITED STATES PATENT OFFICE.

JOSEPH M. SIEGER, OF AVOCA, WISCONSIN.

WATER-TANK HEATER.

1,114,394. Specification of Letters Patent. Patented Oct. 20, 1914.

Application filed December 1, 1913. Serial No. 803,993.

To all whom it may concern:

Be it known that I, JOSEPH M. SIEGER, a citizen of the United States, residing at Avoca, in the county of Iowa, State of Wisconsin, have invented certain new and useful Improvements in Water-Tank Heaters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention is directed to improvements in water tank heaters, and has for its object to so construct a device of this character that the same may be partially submerged in the water in the tank to heat the water.

A further object of the invention is to so construct a heater of this type that the burner will be supplied with the proper ventilation so as to insure the perfect heating of the water.

A still further object of the invention is to so construct a heater of this character that a gasolene burner may be used for heating the device.

With these and other objects in view, this invention resides in the novel features of construction, formation, combination and arrangement of parts to be hereinafter more fully described, claimed and illustrated in the accompanying drawing, in which:—

Figure 1 is a side elevation of the heater, showing the same in a tank, the tank being shown in section. Fig. 2 is a top plan view of the device. Fig. 3 is a sectional view on line 3—3 of Fig. 1. Fig. 4 is a similar view on line 4—4 of Fig. 1. Fig. 5 is a similar view on line 5—5 of Fig. 1. Fig. 6 is a similar view on line 6—6 of Fig. 1.

Referring to the drawing, the numeral 1 designates the main casing, the same being formed from sheet metal and is preferably circular in cross section, the bottom of which is designed to rest upon the bottom of the tank 2.

The upper end of the casing 1 is open so that the flue 3 may be passed therein so that the lower end will be spaced above the bottom of said casing, said flue being of less diameter than the diameter of the casing 1 so as to provide an annular space 4. To properly hold the flue 3 within the casing 1, said flue is provided with radial hooked arms 5 which engage over the upper edge of the casing 1.

The upper end of the flue 3 projects a short distance above the upper edge of the casing 1, the projected end of said flue being provided with a damper 6, which may be operated to regulate the draft through said flue. Rising from the upper edge of the flue 3 are arms 7, which support the conical top 8, which prevents snow or rain from entering the flue, said top being sufficiently spaced from the upper end of said flue to permit exit of smoke and gases from the gasolene burner 8 which is supported immediately below the lower end of the flue 3 upon the feed pipe 9, said feed pipe having a branch 10 which communicates with the bottom of the supply tank 11, which is supplied with gasolene through the filling opening 12, said branch being of such length that the tank will be at all times supported above the water line in the tank 1. Immediately under the tank 11 is a valve 13 which is operable to regulate the flow of gasolene to the burner 8.

Encircling the flue 3 and having its outer periphery engaging the inner surface of the casing 1 is a ring 14, said ring being provided with perforations 15, said ring serving to center and prevent swinging of the flue 3, and by providing the perforations in said ring air may freely circulate in the annular space 4 to furnish the proper air to the burner 8. The pipes 9 and 10 are connected by a bar 16, which effectually braces the same so as to support the weight of the tank 11. Fixed upon opposite sides of the casing 1, and near the upper edge thereof are bars 17, the outer ends of which are provided with adjustable hooked extensions 18, which are designed to engage the upper edge of the tank 1 to firmly hold the device submerged in the water in the tank 1.

The extensions 18 are provided with slots 19, which register with slots 20 formed in the end of the bars 17, said slots being engaged by the clamping bolt 21, which is operable to clamp the extensions in adjusted relation to the bars 17.

When it is desired to light the burner it is only necessary to manipulate the valve 13 to feed gasolene thereto, whereupon a lighted match dropped through the flue 3 will ignite the gasolene so as to heat the casing 1, and thus the water in the tank.

The heater is particularly designed for heating the water in cattle troughs or the like, which frequently freezes in cold

weather, thus preventing the cattle from receiving the proper amount of water.

What is claimed is:—

The combination with a tank, of a heater comprising a vertical tubular casing, a flue telescopically mounted in the casing and spaced from the interior wall thereof, a damper in said flue, a perforated ring encircling said flue and having its periphery engaging the casing, a burner mounted below the lower end of the flue, and means for securing the heater to the tank.

In testimony whereof, I affix my signature, in the presence of two witnesses.

JOSEPH M. SIEGER.

Witnesses:

GARDIE DODGE,

JOHN W. SCHWINGEL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."