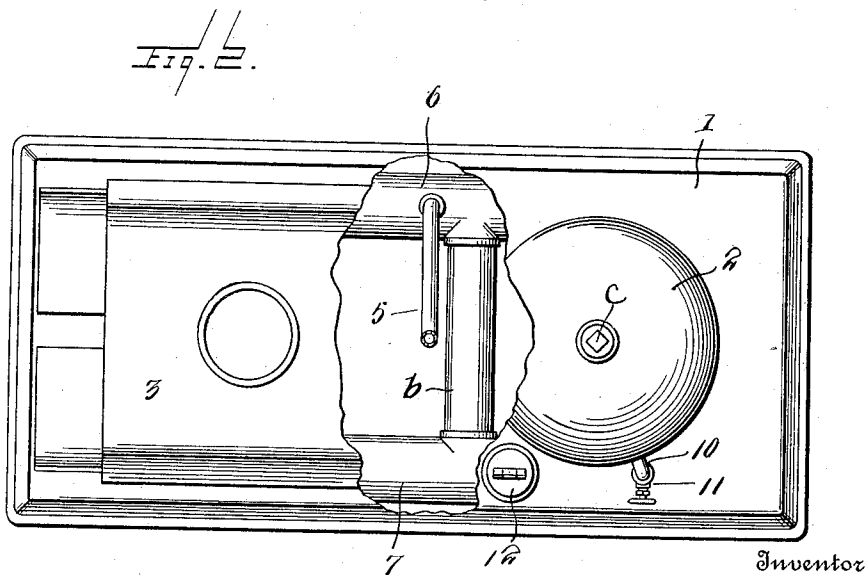
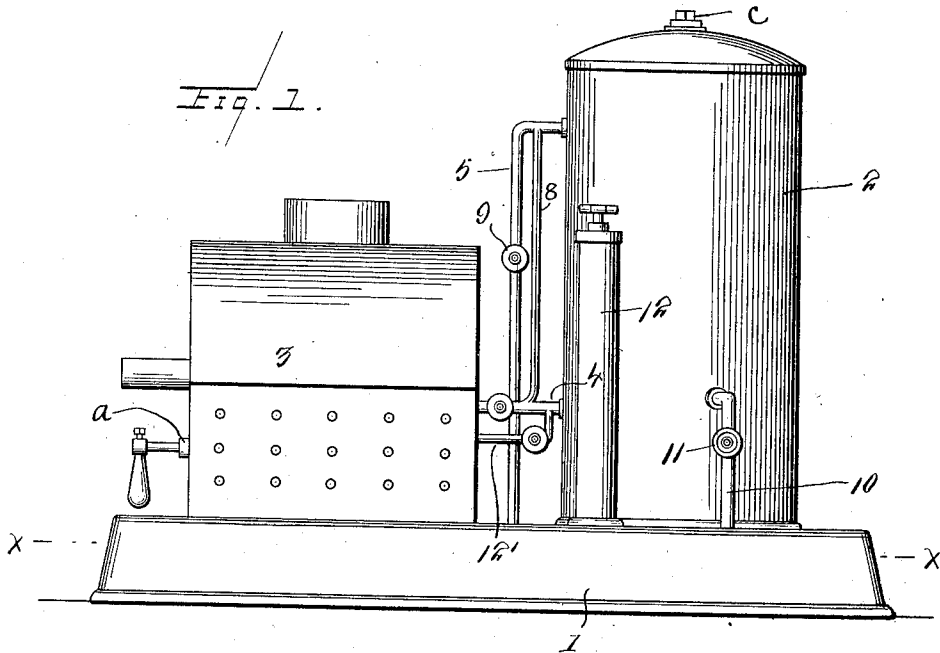


F. H. DENICKE.
SOLDERING FURNACE.
APPLICATION FILED JULY 1, 1911.

1,055,967.

Patented Mar. 11, 1913.

2 SHEETS—SHEET 1.



Witnesses
E. R. Ruppert.
V. B. Hillyard.

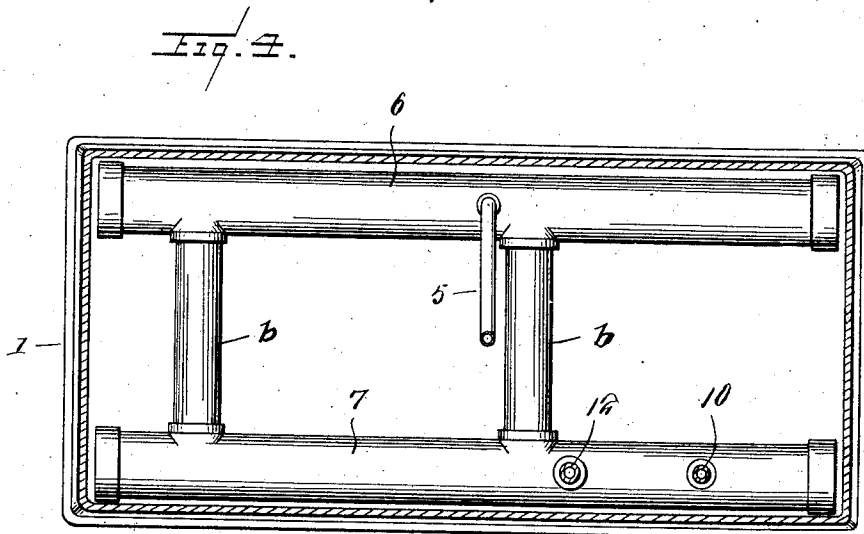
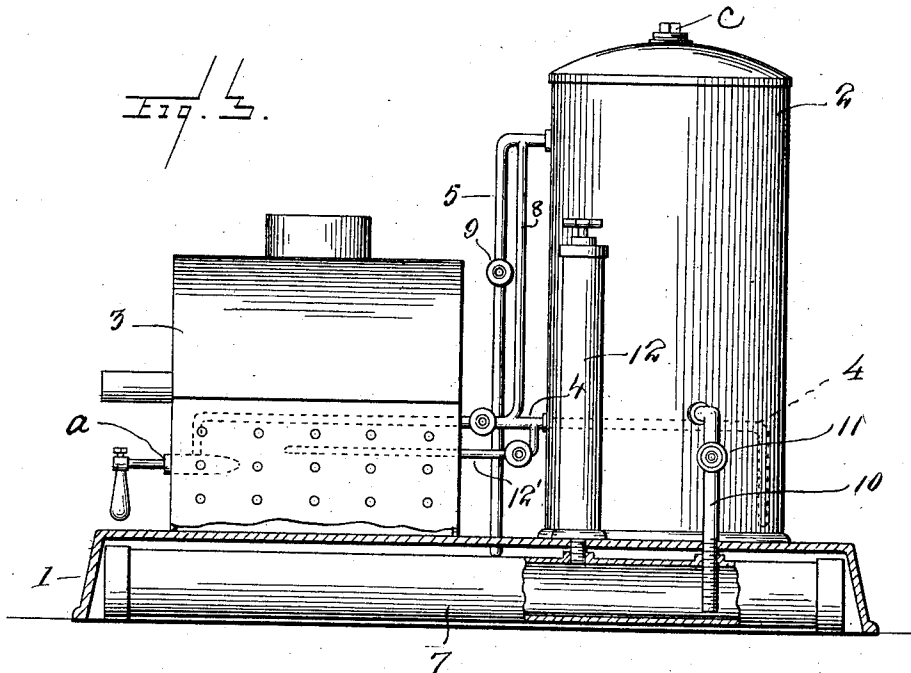
Inventor
Fredrick H. Denicke
By Victor J. Evans
Attorney

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UNITED STATES PATENT OFFICE.

FREDRICK H. DENICKE, OF MAUSTON, WISCONSIN.

SOLDERING-FURNACE.

1,055,967.

Specification of Letters Patent.

Patented Mar. 11, 1913.

Application filed July 1, 1911. Serial No. 636,390.

To all whom it may concern:

Be it known that I, FREDRICK H. DENICKE, a citizen of the United States, residing at Mauston, in the county of Juneau and State of Wisconsin, have invented new and useful Improvements in Soldering-Furnaces, of which the following is a specification.

This invention relates to furnaces using a volatile liquid such as gasolene for fuel and designed chiefly for heating soldering irons or the like, said furnace being portable and intended chiefly for use by plumbers and tinsmiths.

The primary object of the invention is the provision of tubes which may be utilized for storing air, or as a supplemental reservoir for carrying fuel, particularly when the usual tank will not contain a sufficient quantity for a job or piece of work and avoiding the necessity for carrying an extra supply of fuel in a can or other receptacle.

The invention consists of the novel features, details of construction and combination of parts, which hereinafter will be more particularly set forth, illustrated in the accompanying drawings, and pointed out in the appended claim.

Referring to the drawings, forming a part of the specification, Figure 1 is a side view of a soldering furnace embodying the invention. Fig. 2 is a top plan view of the furnace having a part broken away. Fig. 3 is a sectional elevation. Fig. 4 is a horizontal section on the line $x-x$ of Fig. 1.

Corresponding and like parts are referred to in the following description, and indicated in all the views of the drawings, by the same reference characters.

The essential parts of the furnace are mounted upon a base 1 which is hollow. A tank 2 is mounted upon one end of the base and the furnace 3 is mounted upon the opposite end portion of the base and may be of any construction such as commonly employed for heating soldering irons. The tank 2 contains the gasolene or other volatile liquid fuel for supplying the burner of the furnace. A pipe 4 connects the tank 2 with the burner a and conveys the liquid fuel thereto. Pipes 5 and 8 connect the upper portion of the tank with a tube 6 and with the pipe 4 to supply air thereto under pressure, thereby economizing in the consumption of the fuel and insuring the production of a clear flame. The tubes 6 and 7 are located within the hollow base 1 and form

storage chambers for holding air under pressure or for receiving an extra supply of gasolene or like volatile liquid. The two tubes 6 and 7 are connected near opposite ends by means of tubes b . The pipe 5 connecting the tube 6 with the upper portion or air space of the tank 2 has a valve 9 in its length. A second pipe or tube 10 connects an end portion of the tube 7 with the lower portion or fuel space of the tank 2. The pipe 10 has a valve 11 in its length. An air pump 12 secured to a side of the tank 2 is connected at its lower end with the tube 7.

The tank 2 is adapted to be supplied with gasolene or other liquid fuel through a plug controlled opening c in its upper end. Upon operating the pump 12 the tubes 6 and 7 and the upper portion of the tank 2 may be charged with air under any desired pressure and after said parts have been charged the valve 9 is closed, thereby confining the air in the tubes 6 and 7 so as to be drawn upon as occasion may require to replenish the air space in the tank 2. Should it be required to carry an extra supply of gasolene or liquid fuel the tubes 6 and 7 are used as storage chambers for receiving the extra quantity of fuel. In this case it will be necessary to operate the pump 12 to supply any deficiency in air pressure in the tank 2. Upon opening the valve 11 and operating the pump 12 the gasolene may be forced from the tubes 6 and 7 into the fuel or liquid space of the tank 2. It will be understood that each of the pipes 4 and 5 is provided with a valve for regulating and controlling the opening therethrough so that the amount of fuel passing to the burner and the amount of air supplied to the flame may be adjusted to meet existing conditions so as to secure the best possible results. A pipe 12' leads from the pipe 4 and terminates in a burner which acts as a pilot to keep the main burner pipe hot when the furnace is temporarily not in use, thereby saving time, fuel and matches.

From the foregoing description, taken in connection with the accompanying drawings, the advantages of the construction and of the method of operation will be readily apparent to those skilled in the art to which the invention appertains, and while I have described the principle of operation of the invention, together with the device which I now consider to be the embodiment thereof,

I desire to have it understood that the device shown is merely illustrative, and that such changes may be made when desired as are within the scope of the claim appended
5 hereto.

Having thus described the invention what is claimed as new, is:—

In a device of the class described, a hollow base, a furnace mounted upon an end
10 portion of the base, a tank located upon the opposite end portion of the base, valved connections between the upper and lower portions of the tank and the furnace, connected

tubes arranged within the base, a valved pipe connecting one of the tubes with the
15 upper portion of the tank, another valved pipe connecting another tube with the lower portion of the tank, and a pump for charging the tubes with air under pressure.

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

FREDRICK H. DENICKE.

Witnesses:

FREDERICK E. DENICKE,
W. F. WINSOR.

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