

No. 609,067.

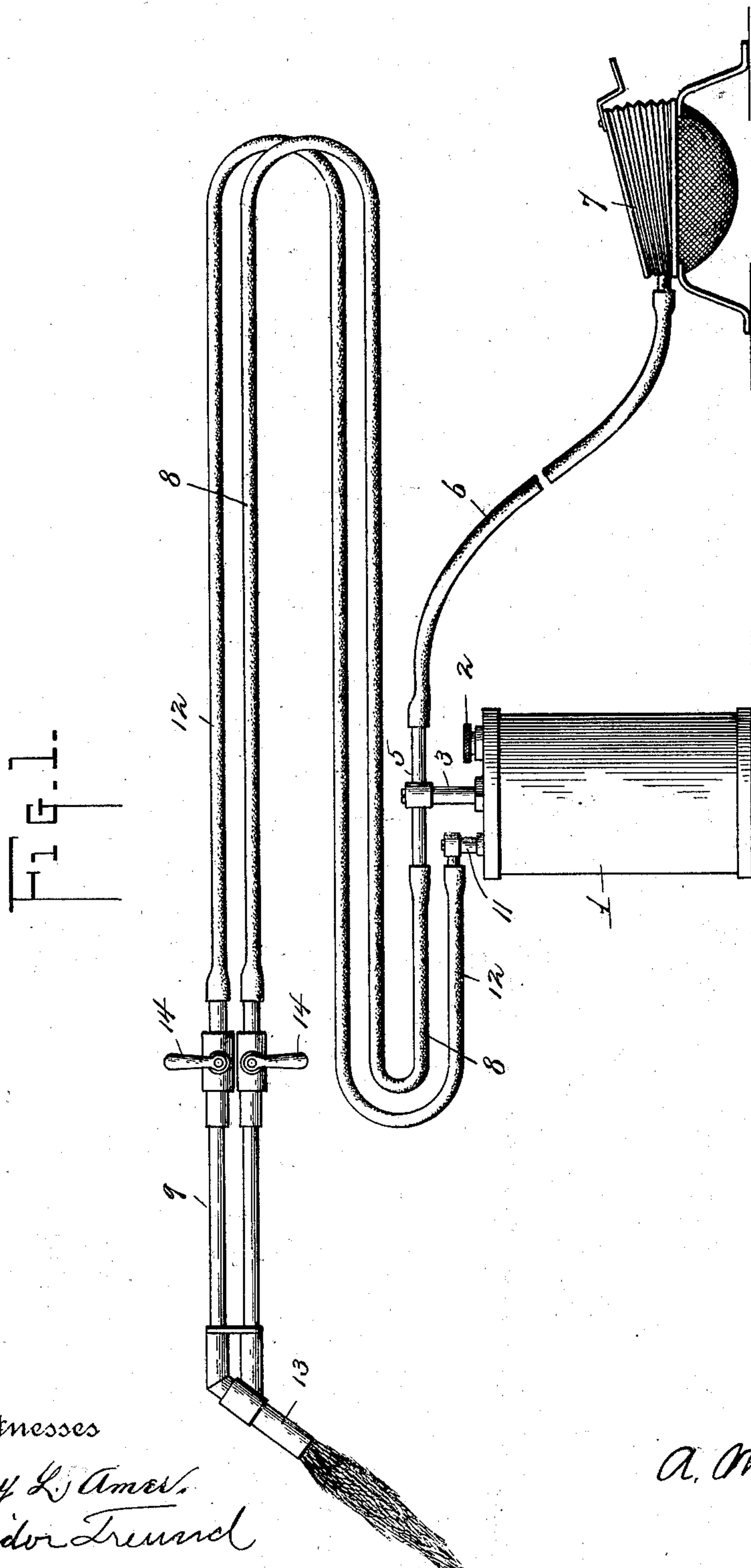
Patented Aug. 16, 1898.

A. M. WOLTZ.  
BLOWPIPE.

(Application filed Sept. 24, 1897.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses  
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Isidor Freund

Inventor  
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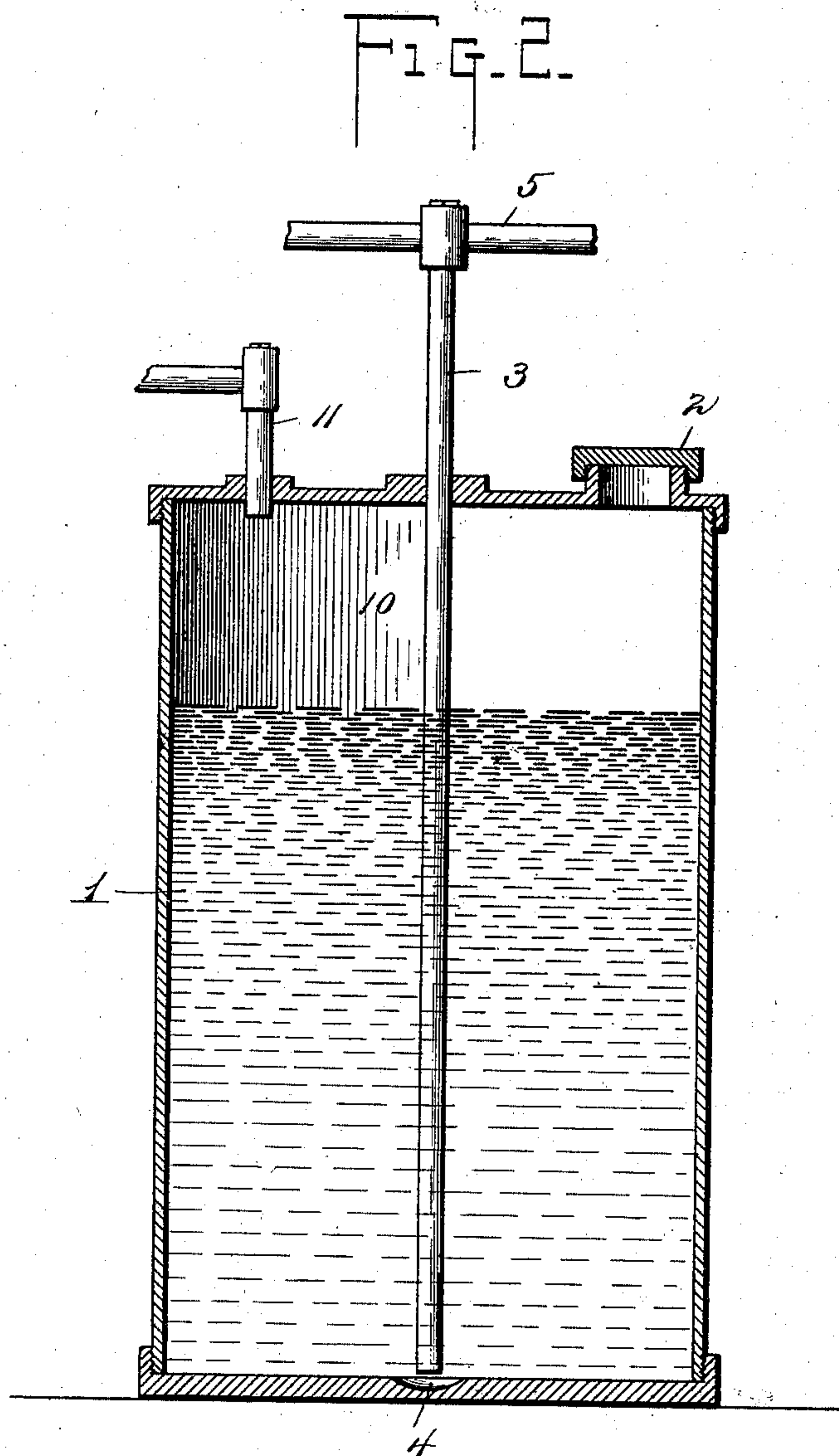
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# UNITED STATES PATENT OFFICE.

ALBERT M. WOLTZ, OF WASHINGTON, DISTRICT OF COLUMBIA.

## BLOWPIPE.

SPECIFICATION forming part of Letters Patent No. 609,067, dated August 16, 1898.

Application filed September 24, 1897. Serial No. 652,817. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT M. WOLTZ, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Blowpipes; 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.

My invention relates to blowpipes; and the object in view is to provide, in connection with a suitable burner and blowpipe, a carbureter by means of which gasolene or other similar liquid may be vaporized and commingled with oxygen in the correct proportions to produce when ignited an intensely-hot flame desirable in brazing and for various purposes.

The detailed objects and advantages of the invention will be pointed out in the course of the subjoined description.

My invention consists in certain novel features and details of construction and arrangement of parts, as hereinafter fully described, illustrated in the drawings, and pointed out in the claim hereto appended.

In the accompanying drawings, Figure 1 is an elevation of the complete apparatus constructed in accordance with this invention. Fig. 2 is an enlarged vertical section through the tank or carbureter.

The improved apparatus contemplated in this invention embodies, essentially, a tank or carbureter 1, which may be of cylindrical or other form, as preferred, and closed at top and bottom, the said tank being designed to be partially filled with gasolene or other volatile oil and being for this purpose provided at the top with a supply-opening, sealed by a screw-plug 2, by means of which the tank may be filled.

Passing through the top of the tank or carbureter is an injector-pipe 3, which reaches to the bottom of the tank and terminates just over or extends into a pocket or depression 4 in the bottom of the tank, so that all of the gasolene may be utilized.

Above the top of the tank the pipe 3 is provided with a T 5, to one end of which is attached a flexible tube 6, extending to a pump or bellows 7 or other air compressor or supply.

To the opposite end of the T is attached a second flexible tube 8, which conveys a portion of the air to a blowpipe or burner 9, the remainder of the air passing through the injector-pipe to the bottom of the tank and thence upward through the gasolene into the carburization chamber or space 10.

An L-shaped nozzle or discharge-spout extends through the top of the carbureter 1 and terminates just beneath the top, communicating with the space 10, so as to receive and carry off the carbureted air, and connected to said nozzle is a flexible pipe 12, which attaches at its opposite end to the burner 9. The burner 9 is of the ordinary twin-pipe type provided with a siamese coupling or nozzle 13, whereby the carbureted air and oxygen are commingled, and the pipes of the burner are supplied with independent cocks 14, whereby the two currents may be governed and properly regulated.

From the foregoing description, taken in connection with the drawings, it will be seen that when air is supplied under pressure through the tube 6 a portion of the air passes directly to the tube 8, while the remainder passes to the bottom of the tank 1 and up through the gasolene and, becoming impregnated with the carbon, enters and is forced through the tube 12 to the burner or blowpipe. Here the two currents are commingled, and when ignited a powerful flame is produced and intense heat induced. The apparatus, while especially designed for brazing, is also useful for a variety of purposes wherever an intensely-hot flame is desirable.

It is deemed important that the tank be without partition and that the pipe 3 extend through the same in close proximity to the bottom, so that the air under pressure will be positively forced through the liquid in the tank, and by thus dispensing with the separated chamber at the top I am enabled to dispose my discharge or outlet tube in a vertical position. Thus all the connections can be made through the top or cover of the tank, avoiding all possibility of leakage and also saving the cost of fitting the parts to the wall of the tank. I find also that by this construction and arrangement of the parts I accomplish better results.

It is also deemed important that the dis-



charge-pipe extend vertically and be of less height than the injector-pipe 3, as shown, so that carbureted air will readily pass from the tank, and by reason of the difference in height of the two pipes the tubes 8 and 12 can be disposed, as shown, both over the top of the tank and one beneath the other, whereby the connections are less liable to be broken or injured than when upon the side and below the top of the tank. All the connections are arranged on the top of the tank, where they are out of the way of contact with other objects in moving the device about. The connections also terminate within the area of the top, as shown, so that no projecting parts are left to become broken off. These features are of great importance in practical use of the device.

It is also deemed of importance that the pipe 3 extend a sufficient distance above the top of the tank to receive the T at a point above the pipe 11 and its connections, whereby the T forms a grip or handle by which the device may be carried from place to place in use. The T thus forms an important function in addition to that of a means for connection of the flexible pipes.

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

The improved blowpipe herein described, comprising the tank having a removable top, the injector-pipe extended through the top and supported therein with its inner end extended in close proximity to the bottom of the tank, a discharge-pipe also supported in the top and extended therethrough and of less exterior height than that of the injector-pipe, the T on the outer end of the injector-pipe and terminating within the area of the top, which latter is provided with a filling-aperture with closure, a blowpipe or burner and independent flexible tubes connecting the same with the discharge-pipe and with one branch of the T on the injector-pipe, and a flexible tube on the other branch of said T and connected with a source of air-supply, all substantially as herein shown and described and for the purpose specified.

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

ALBERT M. WOLTZ.

Witnesses:

HARRY L. AMER,  
ISIDOR FREUND.