

UNITED STATES PATENT OFFICE.

CHARLES T. TARPENNING, OF XENIA, OHIO, ASSIGNOR TO CHARLES C. HENRIE, OF SAME PLACE.

GASOLINE-FURNACE.

SPECIFICATION forming part of Letters Patent No. 539,152, dated May 14, 1895.

Application filed June 8, 1894. Serial No. 513,964. (No model.)

To all whom it may concern:

Be it known that I, CHARLES T. TARPENNING, a citizen of the United States, residing at Xenia, in the county of Greene, State of Ohio, have invented certain new and useful Improvements in Gasoline-Furnaces, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in gasoline furnaces and burners therefor, and it has for its objects among others to provide a simple and cheap furnace in which the flames will strike together in the center thereby producing an intense heat and at the same time the heat will be retained within a small compass and when the soldering tools are in place they will be heated from all sides. The frame in which
15 the burner is located is so constructed as to prevent a draft through the heat chamber and the needle point is so protected as to prevent deflection of the gas, thus making it a most satisfactory furnace for outdoor use.
20 The burner is supported directly upon the tank and the tool-support is arranged at the open side of the heat chamber.

Other objects and advantages of the invention will hereinafter appear and the novel features thereof will be specifically defined by the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part
35 of this specification, and in which—

Figure 1 is a substantially central vertical section through my improvements. Fig. 2 is a horizontal section on the line 2 2 of Fig. 1 looking down, and Fig. 3 is a sectional detail.

40 Like letters of reference indicate like parts in all the views.

Referring now to the details of the drawings by letter, A designates a tank or receptacle of any desired capacity and shape, in this instance shown as circular, and this tank or receptacle is designed to contain the gasoline or other material to be used in the burner. It is provided with a suitable cock *a* as shown to introduce air to the tank to increase the
50 pressure and force out the gasoline.

The burner is supported on the tank or re-

ceptacle in any suitable manner, as by the supports *a'* which rise from the top thereof and to which the lugs *A'* depending from the bottom of the frame B are secured by bolts
55 and nuts as shown clearly in Fig. 1. To one end of this frame is secured the tool-support C which projects horizontally as seen in the views and is designed to support the soldering irons or other tools which it is desired
60 to heat. This support may be affixed in position in any desired manner, being shown as provided with a depending flange *C'* which is held to the frame by screws *C²*. The bottom of the frame B is provided with an open-
65 ing *b* as seen in Fig. 1 over which is placed a sheet metal plate D which is preferably corrugated as seen best in Fig. 1. The corrugations extend at right angles to the length of the tool-support as shown and may serve as
70 stops for the inner ends of the tools as they are placed on the support.

E is a pipe extending around three sides of the frame B as seen best in Fig. 2 and upon the inner face of its opposite parallel portions is
75 provided with perforations *e* as seen best in Fig. 1 and these perforations are covered by wire gauze *E'* as is also best seen from Fig. 1. This pipe may be retained in position in any well known way. Its ends are shown as seated
80 in depressions in the front portion of the frame while its transverse portion is secured by a vertical bolt F passed through the lug *e'* on the pipe and through the bottom of the frame and is provided at one end with a re-
85 taining nut *e²* as shown in the figures of the drawings.

G is a pipe communicating with the interior of the tank and extending upward from the rear of the frame and thence forward in a
90 horizontal plane over one of the side portions of the pipe E as shown, and this portion of the said pipe E is provided upon its upper surface with a plurality of small jet openings
95 *g* directly under the horizontal portion of the pipe G as shown best in Fig. 2. These are for the purpose of heating the material in the pipe G before it gets to the burner. One end of the pipe E is closed in any suitable manner while its other end is provided with a cap
100 or plug having an opening and opposite this opening is the nozzle H which is provided

with a needle valve having its stem *h* provided with a hand wheel *H'* by which it may be manipulated when desired. The nozzle and valve are supported from the end of the pipe *G* to which they are connected by suitable coupling, and the lower end of the depending pipe *I* is screw threaded and capped or closed and thereon is a nut *I'* above which and between which and a shoulder on the pipe *I* is a rotatable cup or receptacle *J* provided with a handle *J'* and a vertical plate or portion *K* which is designed to serve as a valve to close the end of the nozzle when the cup is turned to bring the said plate in the position in which it is shown in Fig. 1.

L is a cover plate closed upon three sides, being open at the front as seen best in Fig. 1 and this cover plate is removably supported over the frame *B* in any suitable manner as for instance by being inserted between the same and the pipe *E* and there held simply by frictional engagement of the parts. This cover plate is provided with a removable top piece *L'* supported upon lugs *l* as seen in Fig. 1 and this removable piece is provided with a central hole *l'* over which is detachably supported the plate *M* having the legs *m* with shoulders or offsets as seen in Fig. 1 to hold the piece or plate elevated as shown.

A suitable handle should be provided by which the device may be readily moved from place to place. I have shown a handle *N* of wire having its ends pivotally connected with the bail *N'* the ends of which are hooked as seen at *n* and detachably engaged in holes in the lugs *n'* on the sides of the frame *B* as seen in Fig. 1.

With the parts constructed and arranged substantially as above set forth the operation is simple and will be readily understood especially when taken in connection with the annexed drawings in which the arrows indicate the course of the gasoline and the heat, and a further detailed description thereof is not deemed necessary.

Modifications in detail may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

Where the needle valve discharges into the

burner I place on the inside a small tube *O* of any desired length and having its inner end closed as shown in Fig. 3 and openings *o* upon opposite sides for the gas to pass through and into the burner. By this means the direct force of the stream is broken and driven out through the side openings thus giving equal pressure all around. In this instance the tube *O* is shown as held within the burner by a nut *O'* screwed into the burner, but other means may be employed in lieu thereof.

What I claim as new is—

1. The combination with the frame having an opening in its bottom, of the horizontally disposed sheet metal corrugated plate over said opening, the perforated pipe and the tool-support, as set forth.

2. The combination with the frame, of the pipe in a single piece of uniform diameter throughout and arranged around three sides thereof and perforated upon the adjacent faces of the opposite portions thereof, a horizontally disposed corrugated sheet metal plate over an opening in the bottom of the frame and the supply pipe with its nozzle, all substantially as specified.

3. The combination with the tank and the frame, of the pipe supported in said frame and arranged upon three sides thereof, the pipe communicating with the tank and having a portion over one leg of the pipe in the frame, the nozzle supported on the supply pipe, the needle valve and the horizontally disposed corrugated sheet metal plate over an opening in the bottom of the frame, as set forth.

4. The combination with the tank, the frame with its perforated pipe, and the supply pipe with its nozzle and valve, of a horizontally disposed corrugated sheet metal plate over a central opening in said frame and the cover plate over said pipe and having an opening at its front end, as set forth.

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

CHARLES T. TARPENNING.

Witnesses:

CHARLES C. HENRIE,

WILLIAM G. HARRINGTON.