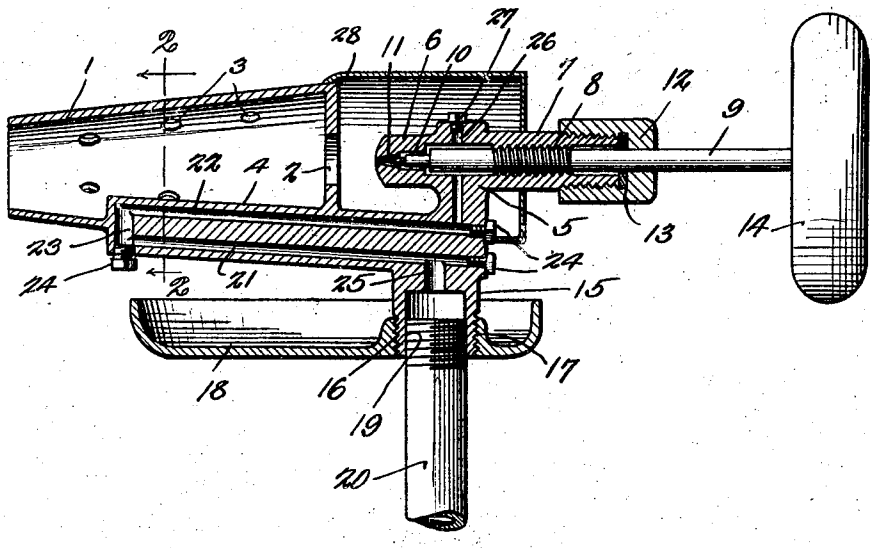
July 10, 1928. 1,676,352

C. RUECKERT

BLOW TORCH BURNER

Original Filed Feb. 13, 1925

Fig. 1.



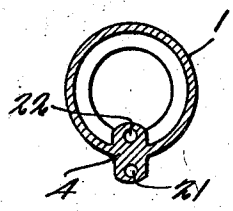


Fig. 2.

Curtis Rueckert

Inventor

By C. A. Snow & Co.

Attorneys.

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UNITED STATES PATENT OFFICE.

CURTIS RUECKERT, OF CHICAGO, ILLINOIS, ASSIGNOR TO MATHIAS KLEIN & SONS, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

BLOWTORCH BURNER.

Application filed February 13, 1925, Serial No. 8,957. Renewed May 25, 1928.

This invention relates to a burner for a blow torch such as used by plumbers and other mechanics, one of the objects of the invention being to provide simple and efficient means whereby the fuel can be vaporized prior to being delivered from the nozzle of the torch.

A further object is to provide a structure of this character which is simple and durable, the vaporizer of which can be cheaply manufactured.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed may be made within the scope of what is claimed without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings

Figure 1 is a central longitudinal section through the burner.

Fig. 2 is a section on line 2—2, Fig. 1.

Referring to the figures by characters of reference 1 designates a frusto-conical burner head, the front or small end of which is open while the rear end or base has a central aperture 2. The wall of this head is provided with openings 3 through which air will be admitted to be mixed with the combustible vapor discharged from the nozzle of the burner as hereinafter explained.

The head 1 is formed with a longitudinal enlargement 4 which projects into the head and also beyond the outer surface thereof. This enlargement also extends rearwardly from the head. Formed on the rear portion of the enlargement is an angular extension 5 having a forwardly extending nozzle 6 and a rearwardly extending tubular arm 7. The arm is interiorly screw threaded as at 8 to receive a threaded valve stem 9. A needle valve 10 extends from the stem 9 and is adapted to project into and close a tapered vent 11 formed in nozzle 6. A screw cap 12 engages the arm 7 and serves to press packing 13 around the stem 9. This stem can be rotated by means of a handle 14 of any suitable construction.

An extension 15 projects downwardly from the rear portion of the enlargement 4 and is exteriorly screw threaded as at 16 for engagement by the wall of an aperture 17 formed in a priming cup 18. Extension 15 has a threaded bore 19 in which is screwed one end of a feed pipe 20.

Parallel longitudinal bores 21 and 22 are formed in the enlargement 4, these bores being extended from the back end of said enlargement to points close to the front end thereof. The bores are here connected by a radial bore 23 extending into the enlargement from the bottom thereof. The bores 21, 22 and 23 are closed at their outer ends by screw plugs 24. Bore 21 communicates with recess 15 through a port 25 and a bore 26 is extended downwardly through the extension 5 and communicates with the stem receiving passage in the said extension. The outer end of the bore 26 is adapted to be closed by a screw plug 27. A protecting hood 28 is fitted around the rear or base portion of the head 1 and fits snugly against the extension 7 so as to enclose the burner 6. This head can be slipped back against the cap 12 to give access to the burner 6.

In using the device priming fuel 1 is placed in the cup 18 and lighted. Fuel admitted to the bores 21 and 22 from the pipe 20 will thus be vaporized and will escape through the bore 26 and the nozzle 6. The outflow of this fuel can be controlled by needle valve 10. The jet of fuel will be directed from the nozzle into the head 1 where it will mix with air admitted through the opening 3 so as to produce a highly combustible mixture. This mixture can be ignited at the outlet end of the head.

Obviously the heat generated will result in vaporizing the fuel in the bores 21 and 22 so that further use of the cup 18 is unnecessary. It will be noted that the plugs 24 are so positioned that when they are removed any fuel trapped in the inclined bores 21 and 22 will be free to flow into the cup 18 and used for priming purposes.

Importance is attached to the fact that the different bores are disposed at such angles as to be readily formed in the device for the purpose of producing the passages at the desired points. Likewise all of these bores can be cleaned easily simply by removing the screw plugs at the outer ends thereof.

What is claimed is:—

1. A torch of the character set forth, com-

prising a combustion head which is open at one end and has an integrally formed closure at the opposite end with an inlet aperture therethrough, an elongated generator body formed integrally with said head and projecting for some distance beyond the rear end of the head, said body being of relatively uniform cross section and having a substantial portion thereof projecting into the combustion chamber, said generator body having an extension at its rear end for connection with a supply pipe and having a second substantially T-shaped extension with its upper portion in alignment with said inlet aperture, said generator body having two substantially parallel bores extending inwardly from the rear end, screw plugs for closing the outer ends of the bores, a connecting bore for connecting the inner ends of said bores, a screw plug for closing the outer end of said connecting bore, an inlet port in the first named extension leading to the lower one of the parallel bores, an outlet port leading from the upper parallel bore through the T-shaped projection, a screw plug for closing the upper end of said last named bore, said T-shaped projection also having a longitudinal passageway with an outlet orifice adjacent to said inlet opening, and a valve for controlling the outlet orifice.

2. A blow torch comprising a cast metal combustion chamber having a wall at one end with an inlet aperture therethrough, an elongated generator body cast integrally with the head and extending for some distance beyond the rear end thereof, said generator body being of substantially uniform cross section and having a portion thereof projecting into the combustion chamber, means at the rear end of the generator body for securing it to a supply member, an upwardly extending integrally formed projection at the rear end of the generator body, said torch having a tortuous passageway leading from the connecting means through the lower portion of the generator body to the front end thereof, then upwardly and back through the generator body, and then upwardly through said projection to an outlet adjacent to said inlet aperture in the head, the portions of said passageway through the generator body being straight and substantially parallel, a valve for controlling said outlet, and a hood covering the valve and adjacent portion of the head, substantially as described.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature.

CURTIS RUECKERT.