Sept. 27, 1949. J. A. WRIGLEY 2,483,081

NATURAL GAS BLOWTORCH

Filed March 22, 1946

Fig. 1.

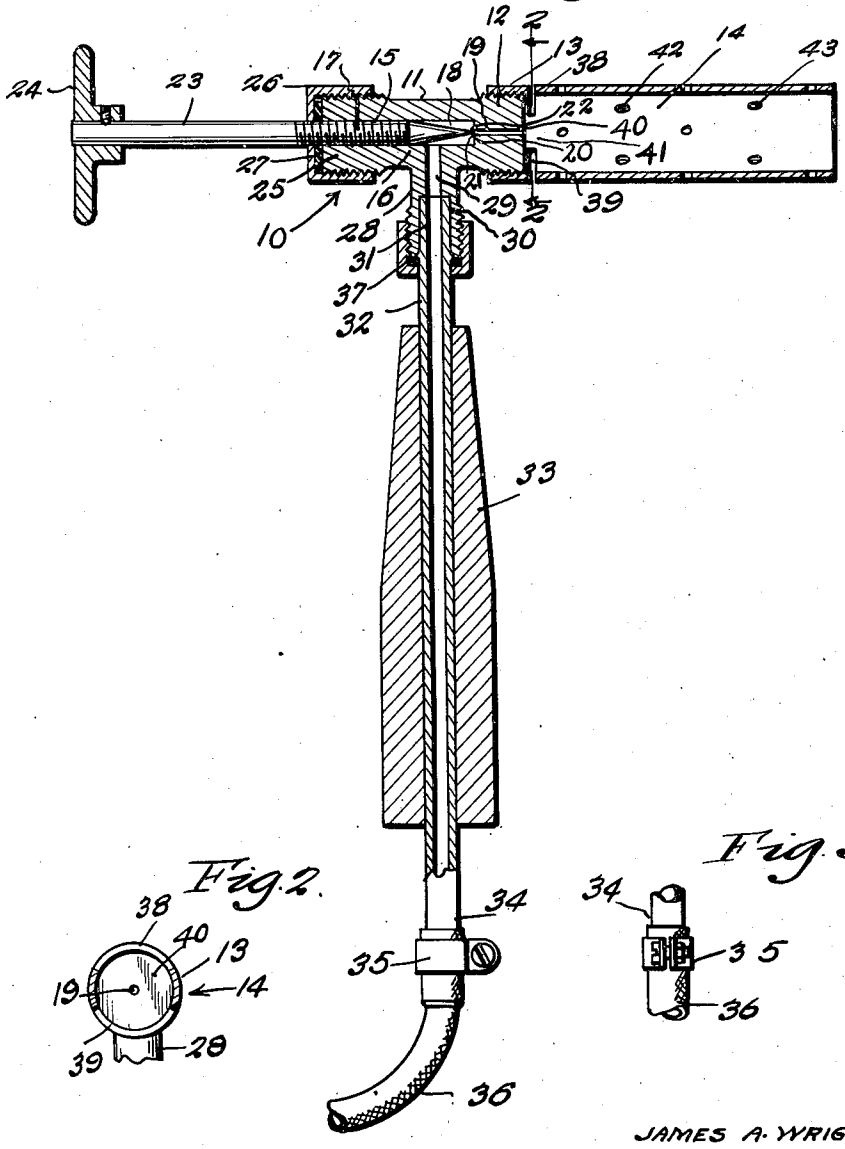


Fig. 2.

Fig. 3

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NATURAL GAS BLOWTORCH

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1 Claim. (Cl. 158—27.4)

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It is to be understood that the primary purpose of the invention to be herein disclosed (the accompanying drawings of which are purely for illustrative purposes and constitute merely one application of the principle involved) is to provide a blow torch which requires no pumping for pressure which is adapted for use with natural gas and which is very inexpensive as compared to other blow torches.

Another object of the invention is to provide a T-shaped blow torch fed with gas through a flexible hose and which is very light and easy of manipulation.

The primary object of the invention, of which the accompanying drawings are illustrative, is the provision of means in a natural gas blow torch whereby atmospheric air is admitted in volume at the point of ignition of the gas and whereby additional air is admitted to the blow tube as the heat of combustion intensifies.

Other features and advantages will become more readily apparent from the following description and the accompanying illustrative drawings in which:

Figure 1 is a longitudinal vertical sectional view of the invention,

Figure 2 is a sectional view taken on line 2—2 of Figure 1, and

Figure 3 is a detailed view of a connection.

While one embodiment of the invention is illustrated in the above referred to drawings, it is to be understood that they are merely for the purpose of illustration and that various changes in construction may be resorted to in the course of manufacture in order that the invention may be utilized to the best advantage according to circumstances which may arise, without in any way departing from the spirit and intention of the device which is to be limited only in accordance with the appended claims. And while there is stated the primary field of utility of the invention it remains obvious that it may be employed in any other capacity wherein it may be found applicable.

In the accompanying drawings, and in the following specification, the same reference characters are used to designate the same parts and elements throughout and in which 10 refers to the complete invention which consists of a burner nozzle 11 to the end 12 of which is screwed the end 13 of a blow tube 14. The nozzle 11 is T-shaped and is provided with a longitudinal bore 15 through its head 16 into which the needle valve 17 is screw threaded. From the inner end 18 of bore 15 extends a reduced gas bore 19, the

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inner end 20 of which forms a seat 21 for the valve end 22. The outer stem 23 of the needle valve is provided with a hand wheel 24. To the end 25 of the head 16 is threaded a cap 26 to press packing 27 around the valve stem.

The integral vertical stem 28 of the nozzle 11 is provided with a gas inlet bore 29 enlarged at its lower end 30 to form a seat for the pressed in end 31 of a tube 32 which is extended through a plastic or other tapered handle 33 and to its lower outer end 34 has connected thereto by a clamp 35, a flexible tube 36 which is to be connected at its other end (not shown) to a gas supply pipe or jet. A packing 37 is provided for the connection of the tube 32 and stem 28.

Slots 38 and 39 are provided in said end 13 of tube 14 at the outer face 40 of said head end 12 to permit a relatively large inflow of atmospheric air at the point of combustion 41 of gas. The said slots 38 and 39 may be of any required width whereby the inflow of air may be increased or decreased at will by simply turning the tube 14 one way or another on the nozzle end 12. This can easily be done even when the torch is lighted by injecting a nail or the like into one of the series of apertures 42, 43, etc., provided along the length of the tube 14 to progressively admit air to the increasingly heating combustion mixture.

From the foregoing specification it will become apparent that the invention disclosed will adequately accomplish the functions for which it has been designed and in an economical manner and that its simplicity, accuracy and ease of operation are such as to provide a relatively inexpensive device considering what it will accomplish and that it will find an important place in the art to which it appertains when once placed on the market.

It is thought that persons skilled in the art to which the invention relates will be able to obtain a clear understanding of the invention after considering the description in connection with the drawings. Therefore, a more lengthy description is regarded as unnecessary.

Changes in shape, size and rearrangement of details and parts such as come within the purview of the invention claimed may be resorted to, in actual practice, if desired.

Having thus described the invention that those versed in its particular art will fully understand how to make and use the same, as well as its functions, and without having attempted to detail all of the forms in which it may be made, all of its advantages, or all of the uses to which it may be put, it is declared that which is claimed

as new and sought to be protected by Letters Patent is:

A blow torch including a T-shaped head having its opposite ends and the end of its stem portion externally threaded, said head being formed with a longitudinal internally threaded bore extending through one of the ends and an axially aligned elongated reduced gas bore extending through the opposite end thereof and in communication with said threaded bore, a needle valve threadably supported in said internally threaded bore for controlling the gas flow through said gas bore, a packing gland about said needle valve threadably supported upon the head opposite the gas bore, an operating hand wheel on the outer end of said needle valve, said stem portion of the head being axially bored and connected with the longitudinal bore in said head, the lower end of said stem portion being formed with an enlarged bore in its end forming a circumferential seat at its inner end about the axial bore therethrough, a gas supply pipe disposed in said enlarged bore seated on said seat, a packing gland threaded on said stem about said gas supply pipe, a supporting handle disposed on said gas supply pipe, a perforated blow tube threadably and adjustably supported upon the threaded end of said head, said blow tube being formed with oppositely disposed elongated circumferential air inlet slots each extending nearly halfway about said tube at its inner end at the outlet or discharge end of said gas bore, and the effective air supply entering through said circumferential slots being controllable by the rotation and longitudinal movement of the blow tube upon said head.

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