July 23, 1929. B. LURIE 1,721,914

GAS TORCH FOR DENTAL USE

Filed Sept. 29, 1926

Fig. 1

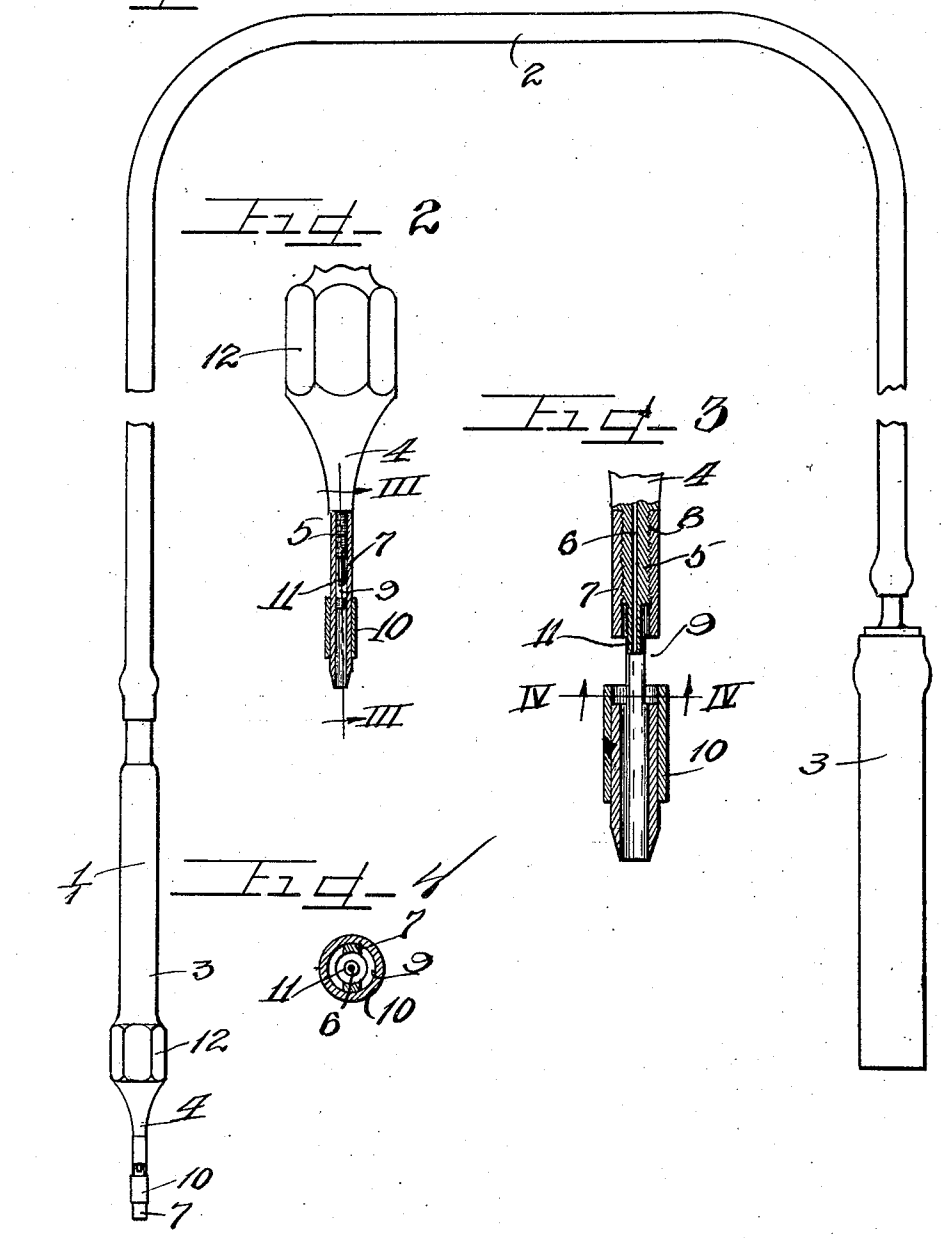


Fig. 2

Fig. 3

Fig. 4

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UNITED STATES PATENT OFFICE.

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GAS TORCH FOR DENTAL USE.

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This invention relates to a gas torch for dentists.

In dentistry it is often necessary to apply a clean heat to some localized spot, as in the softening of modeling compounds and the like. Consequently a stationary gas burner is not suitable, nor one that will not give a blue or colorless flame.

It is therefore an object of this invention to provide a non-stationary gas torch for dental use that may be manually manipulated to direct a clean, sootless flame against localized or relatively inaccessible spots.

Other and further important objects of this invention will be apparent from the disclosures in the specification and the accompanying drawings.

This invention (in a preferred form) is illustrated in the drawings and hereinafter more fully described.

On the drawings:

Figure 1 is a broken elevational view of a device embodying the principles of my invention.

Figure 2 is an enlarged fragmentary view with parts in section.

Figure 3 is a further enlarged sectional view of the burner tip taken on line III—III of Figure 2.

Figure 4 is a sectional view taken on line IV—IV of Figure 3.

As shown on the drawings:

The reference numeral 1 indicates a gas torch embodying the principles of my invention and illustrated as connected by means of a flexible tubing 2 to a suitable gas outlet 3. The gas torch 1, as will be apparent from the following description, is particularly adapted for dental use, since it may be easily manipulated so as to direct a needle flame to any localized portion of the work to be heated.

Said gas torch 1 comprises an elongated tube forming a cylindrical handle 3 and provided with a hexagonal shaped enlarged portion 12. The purpose of the hexagonal shaped portion 12 is to provide flat faces upon which the device may rest when laid upon a table or other surface without danger of its rolling off or otherwise becoming displaced. Beyond said hexagonal shaped portion 12 the tube terminates in a tapered portion 4 having an externally threaded reduced end 5. Said threaded end 5 is provided with an integral unthreaded needle-like end 11, and a capillary bore 6 extending axially through said reduced end 5 and needle end 11 to provide a passage for the gas. A removable burner tip 7 provided with an internally threaded portion 8 is adapted to be threaded upon the reduced end 5 into abutting relation with the end of the tapered portion 4. Said burner tip 7 is provided with oppositely positioned slots 9 for the admission of air to the burner tip. It should be noted that the needle end 11 terminates near the middle of the slots 9, whereby the velocity of the gas through said needle end 11 draws air through the slots 9. Said slots 9 and capillary bore 6 are of such relative dimensions as to produce with normal gas pressures an intimate mixture of gas and air in the correct proportions to give a colorless flame, denoting complete combustion. The amount of air admitted through the slots 9 may, if necessary by virtue of varying gas pressures, be controlled by means of a sleeve 10 frictionally mounted for slidable movement on the burner tip 7 and adjustable over the apertures or slots 9.

It is thus apparent that the burner is of the Bunsen type, whereby a blue or colorless flame, free of carbon and non-soot forming may be produced. This is important in dental work, since the carbon deposited by a sooty flame on modeling compounds and the like would interfere with the physical properties of the compound or other material used in connection with dentistry.

Furthermore, it will be appreciated that a less intense flame can be obtained by the gas torch described than is the case where larger burners or burners employing compressed air are used. The admission of air can be regulated to give a small blue flame of the desired intensity, a very important feature in dental work.

It is thus apparent that I have provided a simple and useful gas torch for dentists and one that is easily manipulated by hand for applying localized heating to relatively inaccessible points.

I am aware that many changes may be made, and numerous details of construction may be varied through a wide range without departing from the principles of this invention, and I therefore do not purpose limiting the patent granted hereon, otherwise than necessitated by the prior art.

I claim as my invention:

A gas torch for dental use, comprising an elongated tube forming a cylindrical handle,

said tube being provided with an enlarged portion having flattened faces terminating in a reduced portion having a relatively long capillary bore for the passage of gas, a tubular burner tip threaded upon the said reduced portion, the said burner tip having a slot formed therein, and a sleeve slidable on the said tubular tip for regulating the opening of said slots for controlling the admission of air to the burner tip.

In testimony whereof I have hereunto subscribed my name.

BENJAMIN LURIE.