No. 794,449. PATENTED JULY 11, 1905.

G. H. BROWN.

BLOWPIPE.

APPLICATION FILED OCT. 5, 1904.

Fig. 1.

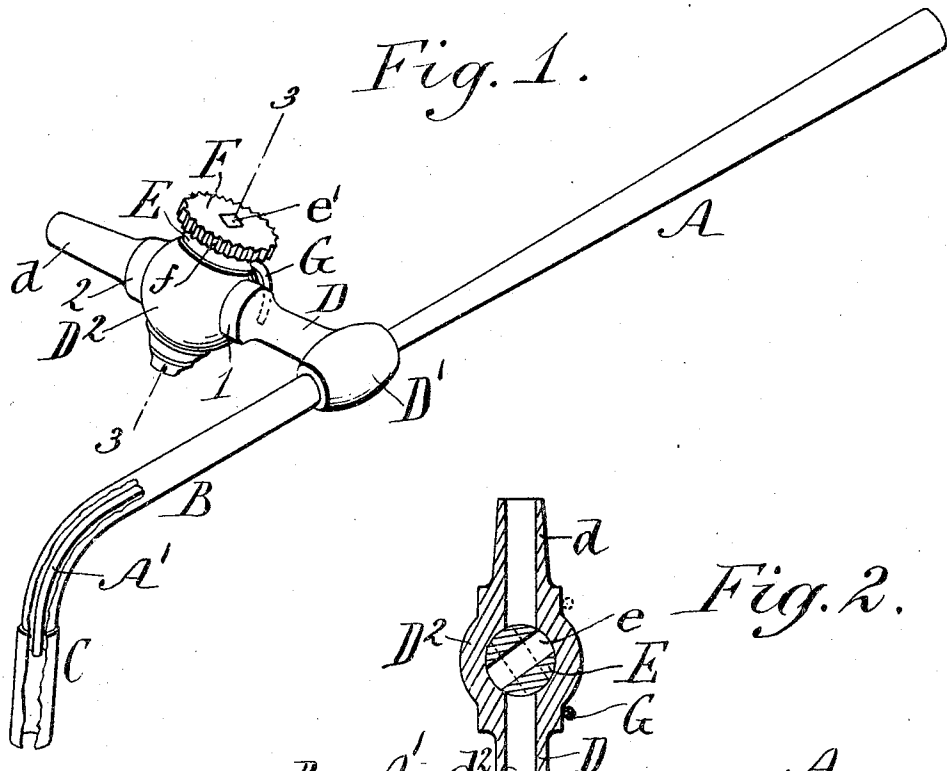
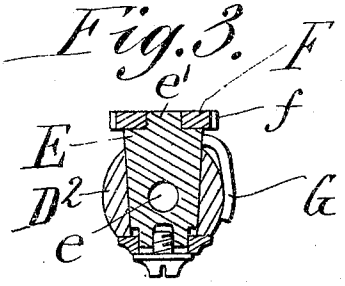


Fig. 2.

Fig. 3.



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No. 794,449. Patented July 11, 1905.

UNITED STATES PATENT OFFICE.

GEORGE HOLLENBECK BROWN, OF NEWARK, NEW JERSEY.

BLOWPIPE.

SPECIFICATION forming part of Letters Patent No. 794,449, dated July 11, 1905.

Application filed October 5, 1904. Serial No. 227,210.

To all whom it may concern:

Be it known that I, GEORGE HOLLENBECK BROWN, a citizen of the United States, and a resident of Newark, county of Essex, and State of New Jersey, have invented certain new and useful Improvements in Blowpipes, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters and figures of reference indicate corresponding parts.

This invention relates to valves for blowpipes, the object thereof being to provide a device of this character embodying improved means for effectually and easily controlling the gas-supply while the device is in use, whereby the power and size of the jet may be under the constant control of the operative, while at the same time it may be set to continuously maintain an even flame of any predetermined volume, or the gas may be cut off at will.

In carrying out my invention I provide a structure wherein the blowpipe proper communicates with a transverse gas-supply channel having a novel valve device susceptible of being easily and effectually operated by means of a finger of the hand of the operative manipulating the blowpipe.

The invention will be hereinafter fully described, and specifically set forth in the annexed claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a perspective view, shown partly broken away, of my improved blowpipe; Fig. 2, a sectional plan view, and Fig. 3 is a vertical sectional elevation taken on the line 3 3 of Fig. 1.

In the practice of my invention the blowpipe proper comprises the tapering air-inlet tube A and the preferably curved discharge-tube B, having on its outer end a short mixing-tube C, whose free end embodies the flame-orifice. The tube A terminates in a contracted tubular extension A′, having its outlet or discharge end within the mixing-tube C back of the flame-orifice, whereby gas and air is mixed within said tube C.

The tubes A and B are connected by means of a coupling-head D′ of a gas-supply pipe D, which has a nozzle d for engagement with a flexible gas-supply pipe. The coupling-head D′ has a horizontal channel d' leading therethrough, which communicates with the transverse channel d^2, leading through the gas-supply pipe D. Formed integral with the pipe D is a globe-shaped casing D^2, which has a conical valve E seated therein. Through the valve, at a point registering with the channel d', is a port e. This said valve is ground to fit nicely, but loosely, within its seat, so that it may be freely turned by a minimum expenditure of force. Secured to the stem e' of the valve E is a circular thumb-nut F, having peripheral serrations f around its edge for contact with the fingers of an operative.

G designates a spring, which is fastened to the valve-key E and reaches onto and engages the globular surface of the casing D^2 by frictional contact. In the example of my invention here given I have illustrated this spring as being attached to the larger end of the valve-key E; but it may be attached to either end with equal facility. This spring is carried by and moves with the key when it is turned, sliding with its free end on the said globular surface of the casing. The resistance of the frictional contact is such, on account of the resilience of the spring, that while the key can be easily turned it will when at rest always be held in position by the spring. The collars 1 and 2, one at each end of the casing D^2, are stops to limit the motion of the spring G, so as to maintain the port e of the valve-key E in proper relative arrangement with the gas-inlet channel. When the blowpipe is not in use, the valve is to be turned until the spring G rests against the stop 1. Then the port e will be in position illustrated by Fig. 2 of the drawings, with the gas-supply cut-off. When it is desired to use the device with a full supply of gas, the valve is turned until its port registers and is parallel with the inlet d^2 of the supply-pipe. When in this condition, the spring G occupies a position approximately midway between the stops 1 and 2, and to reduce the supply it is only necessary to turn the valve to the desired extent in either direction. To maintain a constant flame of minimum power, it is sim-

ply necessary to turn the valve until its spring G contacts with the stop 2, as shown by dotted lines, Fig. 2 of the drawings.

In the operation and use of the device the operative may grasp the same with one hand and operate the valve by contact of one finger against the serrated periphery of the nut F or by use of the thumb and forefinger, if desirable. Thus he can readily set the valve to supply any required volume of gas, and having attained the desired conditions can maintain the device set to furnish the required volume for any length of time desirable, the frictional contact of the spring G with the valve-casing causing the valve to remain in set position.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a valve for blowpipes a casing having a globular surface, and a conical valve-key working in said casing, said key having a circular serrated thumb-nut on the end thereof, in combination with a spring fastened to said valve-key carried thereby, reaching onto and engaging the said globular surface by frictional contact.

2. In a valve for blowpipes, a globular valve-casing with a stop at each end thereof, and a conical valve-key working in said casing and having a serrated head and a spring reaching to and in frictional contact with the exterior globular surface of the casing of said valve and adapted to alternately engage the said stops, substantially as shown and described.

3. In a valve for blowpipes, the combination with the gas-supply having the globular valve-casing and end stops, and the valve-key having a top with serrated edge, of the spring reaching to and in frictional contact with the globular exterior surface of the casing of said valve, and alternately engaging the said stops, the said spring being carried by said key and removably holding the same in any position in which it may be placed by the operator, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 3d day of October, 1904.

GEORGE HOLLENBECK BROWN.

Witnesses:
JNO. SHIPLEY,
C. C. DOW.