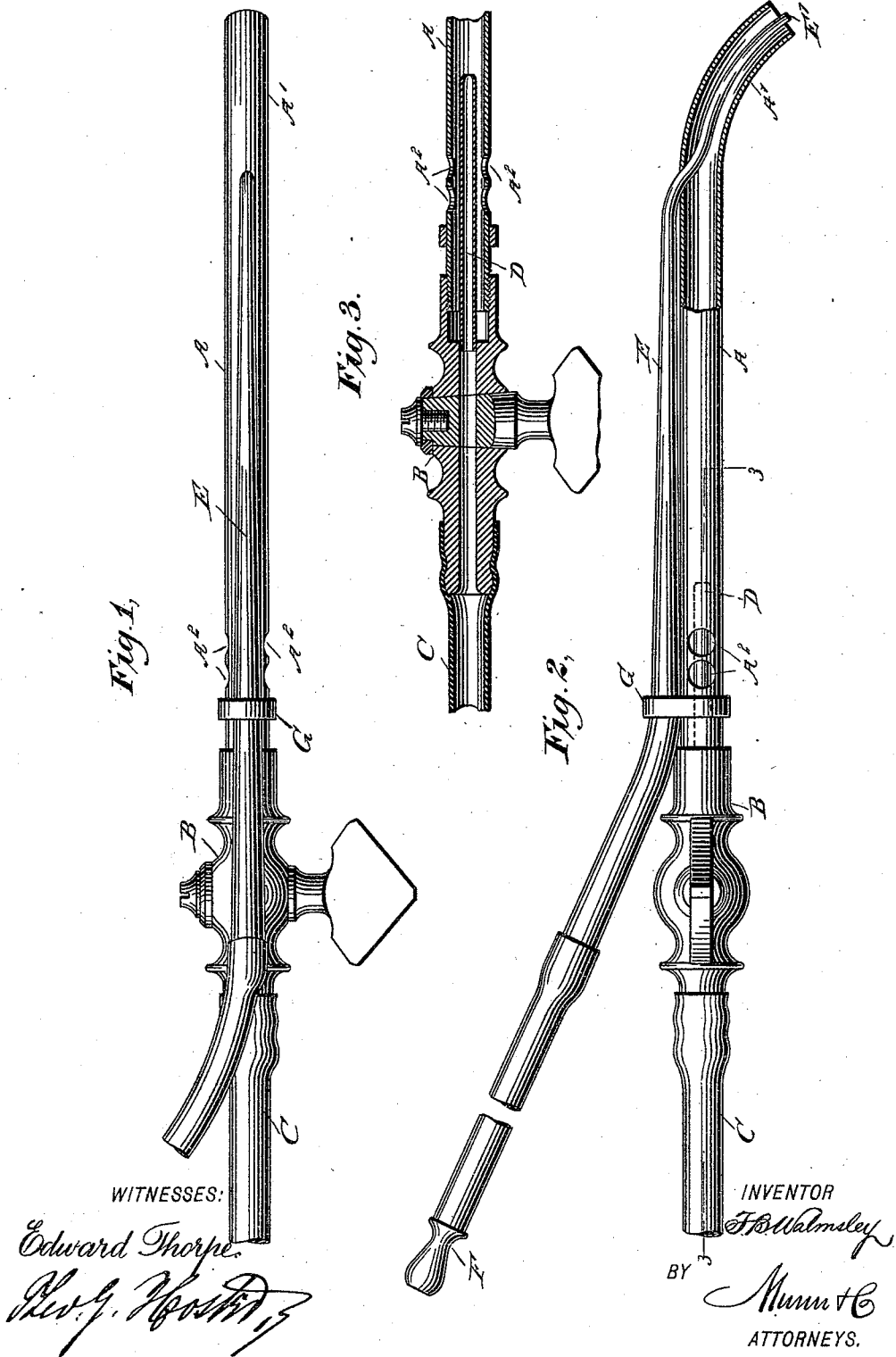


(No Model.)

T. B. WALMSLEY.
BLOWPIPE.

No. 553,742.

Patented Jan. 28, 1896.



UNITED STATES PATENT OFFICE.

THOMAS B. WALMSLEY, OF NEW YORK, N. Y.

BLOWPIPE.

SPECIFICATION forming part of Letters Patent No. 553,742, dated January 28, 1896.

Application filed April 22, 1895. Serial No. 546,721. (No model.)

To all whom it may concern:

Be it known that I, THOMAS B. WALMSLEY, a subject of the Queen of Great Britain, at present residing in New York city, in the county and State of New York, have invented a new and Improved Blowpipe, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved blowpipe which is simple and durable in construction, very effective in operation, and more especially designed for the use of plumbers in fusing or burning lead pipe or sheet metal together by the employment of illuminating, natural or gasoline gas and Yager's salt as a flux.

The invention consists of a gas-supply pipe extending into a mixing-tube having air-inlet openings in the rear of the discharge end of the said gas-pipe, and an air-pipe extending into the said mixing-tube and discharging at the outer end of the mixing-tube.

The invention also consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the improvement. Fig. 2 is a side elevation of the same with part in section, and Fig. 3 is a sectional plan view of part of the improvement on the line 3 3 of Fig. 2.

The improved blowpipe is provided with a mixing-tube A, preferably curved at its front end A', and secured at its rear end in a valve B, adapted to be connected by a flexible tubing C with the burner of an ordinary gas-supply pipe or with any other source of gas-supply. The outlet of the valve B enters a short gas-pipe D, extending centrally into the rear end of the mixing-tube A, the said gas-pipe B extending a short distance beyond the air-inlet openings A² formed in the said tube A. Now it will be seen that when the valve B is open the gas can pass from the gas supply through the said valve B and pipe D into

the mixing-tube A to draw in a quantity of air through the openings A² to cause this air to mix with the gas issuing from the pipe D.

It is understood that the gas, on account of being under pressure, creates a suction in the rear end of the tube A, as the gas passes forward in the latter, to cause an inflow of air at the openings A², as previously explained.

Into the front end A' of the tube A extends the reduced end E' of the air-pipe E, provided at its rear end with the usual mouthpiece F through which the air is forced by the operator to direct the flame to the desired point. An elongated ring G serves to fasten the air-pipe E to the tube A, as plainly indicated in Figs. 1 and 2, so that when the said ring G is slipped forward over the pipe E and tube A, then the said pipe E can be conveniently removed and another one of larger or smaller dimensions can be substituted on the tube A. The extreme front or discharge end E' of the air-tube A extends centrally in the discharge end of the tube A and a short distance beyond the tube A, as plainly indicated in Fig. 2.

Now it will be seen that when the device is in use and a mixture of gas and air passes through the tube A to burn at the front end thereof and the operator forces air through the pipe E then the flame is drawn out into a very fine stream upon the desired point. Now as the discharge end of the pipe E is in the center of the flame and extended beyond the gas-outlet the operator by an increase of air-pressure is not liable to blow out the flame. It will further be seen that by the arrangement described a ready connection can be made at any time with a chandelier to obtain the necessary gas supply.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A blowpipe, comprising a mixing-tube having a valve and lateral inlets, a gas-pipe extending within the mixing-tube and having its outlet between the outlet of the mixing-tube and its air-inlets, and the air-pipe removably attached to the mixing-tube and having its forward portion extended into said mixing-tube and having its end extended be-

yond the mixing-chamber, substantially as specified.

2. A blowpipe comprising a mixing-tube having a valve and lateral air-inlets, a gas-
5 pipe extending within the mixing-tube and having its outlet between the outlet of the mixing-tube and its air-inlets, and the air-

pipe removably attached to the mixing-tube and having its forward portion extended into said mixing-tube, substantially as specified. 10
THOMAS B. WALMSLEY.

Witnesses:

THEO. G. HOSTER,
C. SEDGWICK.