

P. J. GRIFFIN.
BLOWPIPE FOR WELDING METAL.
APPLICATION FILED AUG. 6, 1909.

955,064.

Patented Apr. 12, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

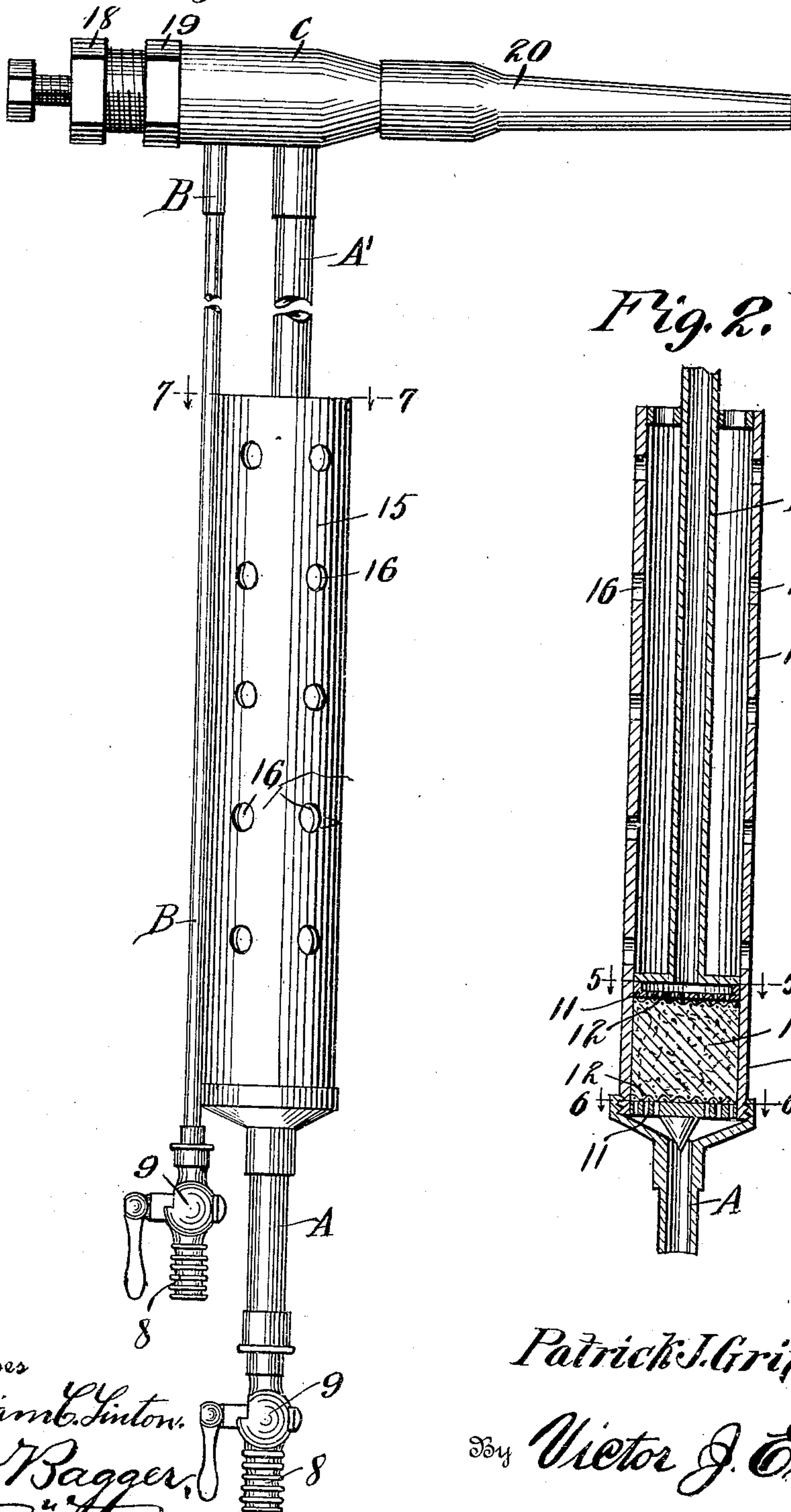
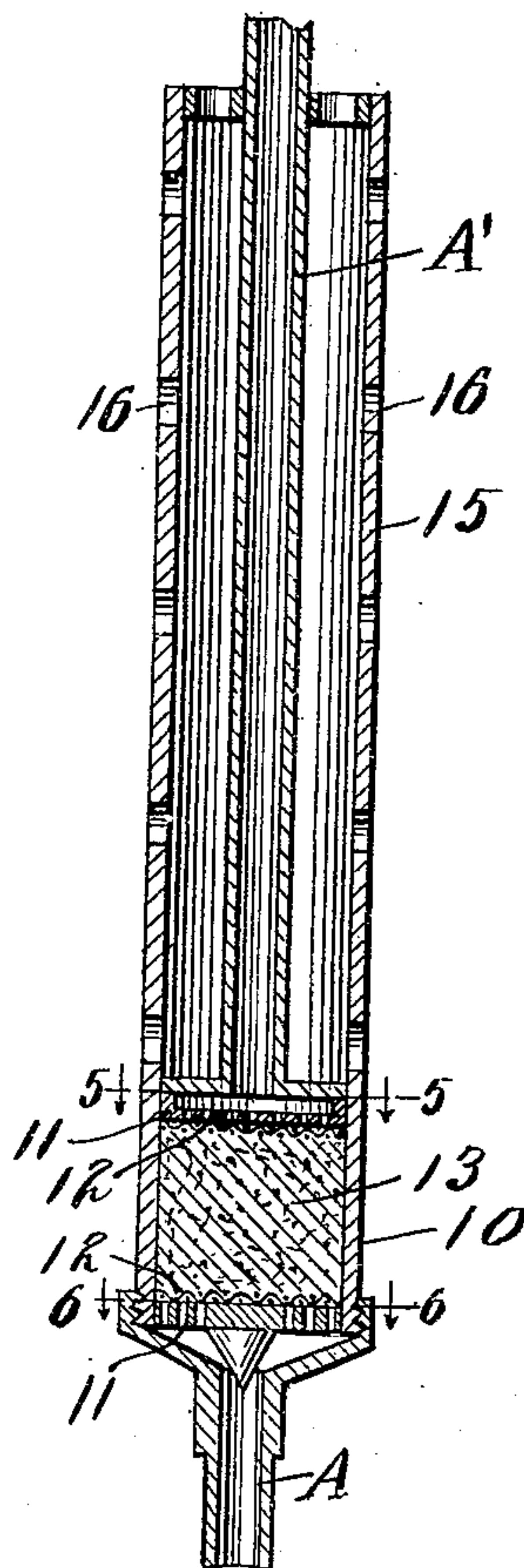


Fig. 2.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

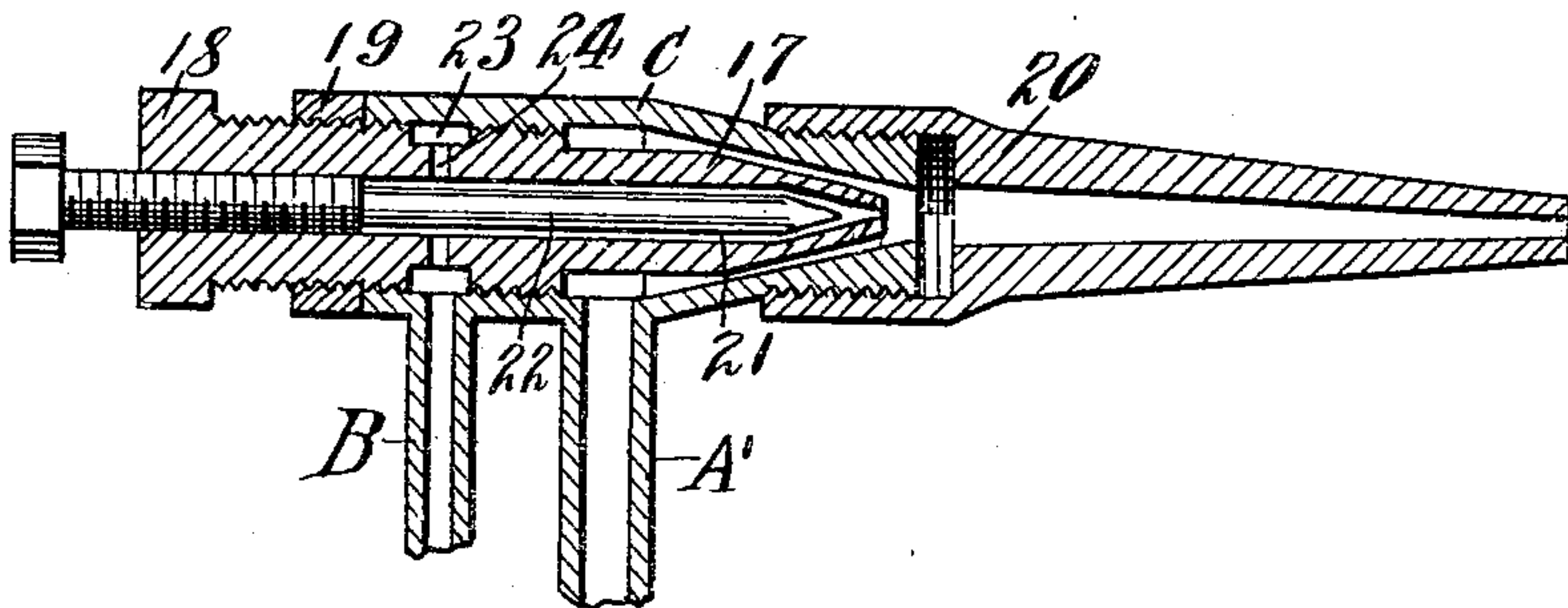


Fig. 4.

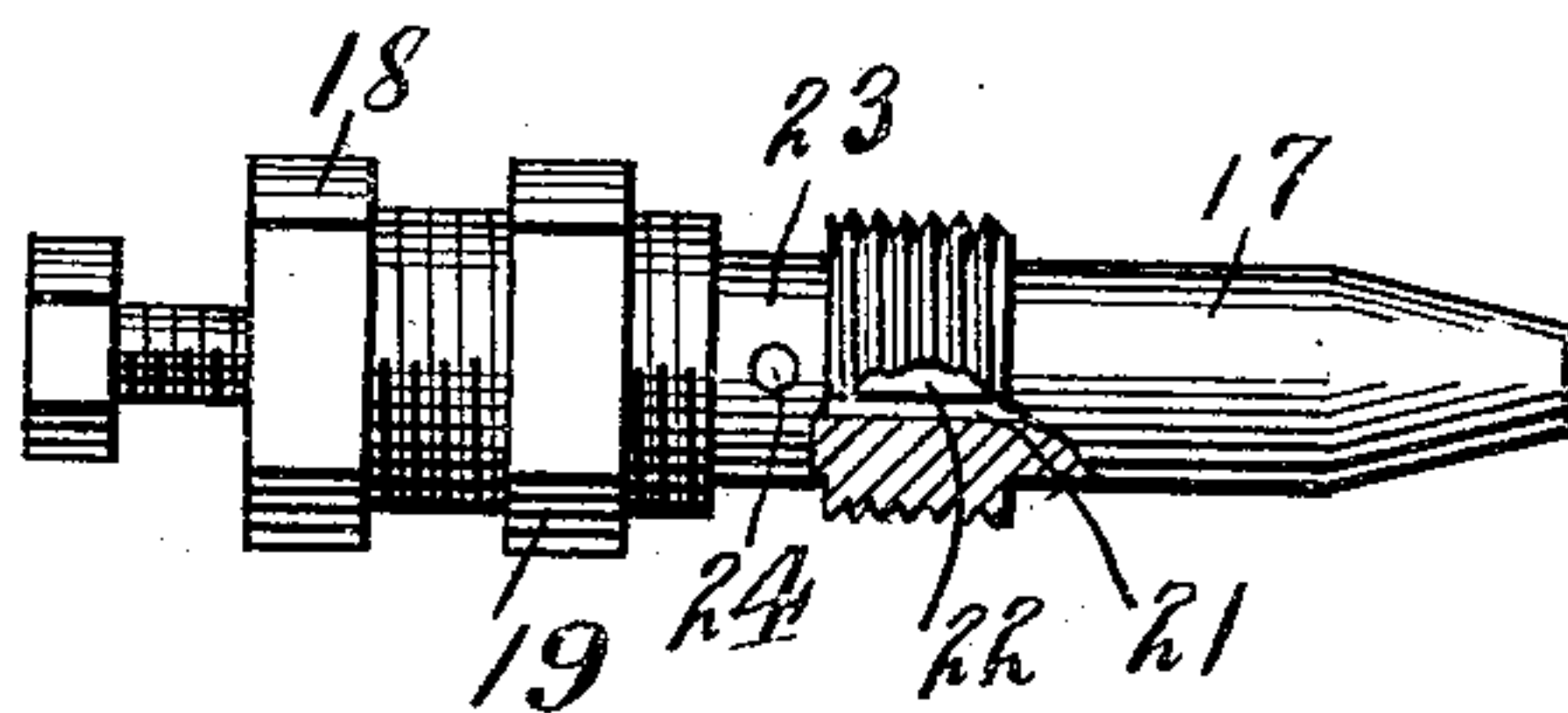


Fig. 7.

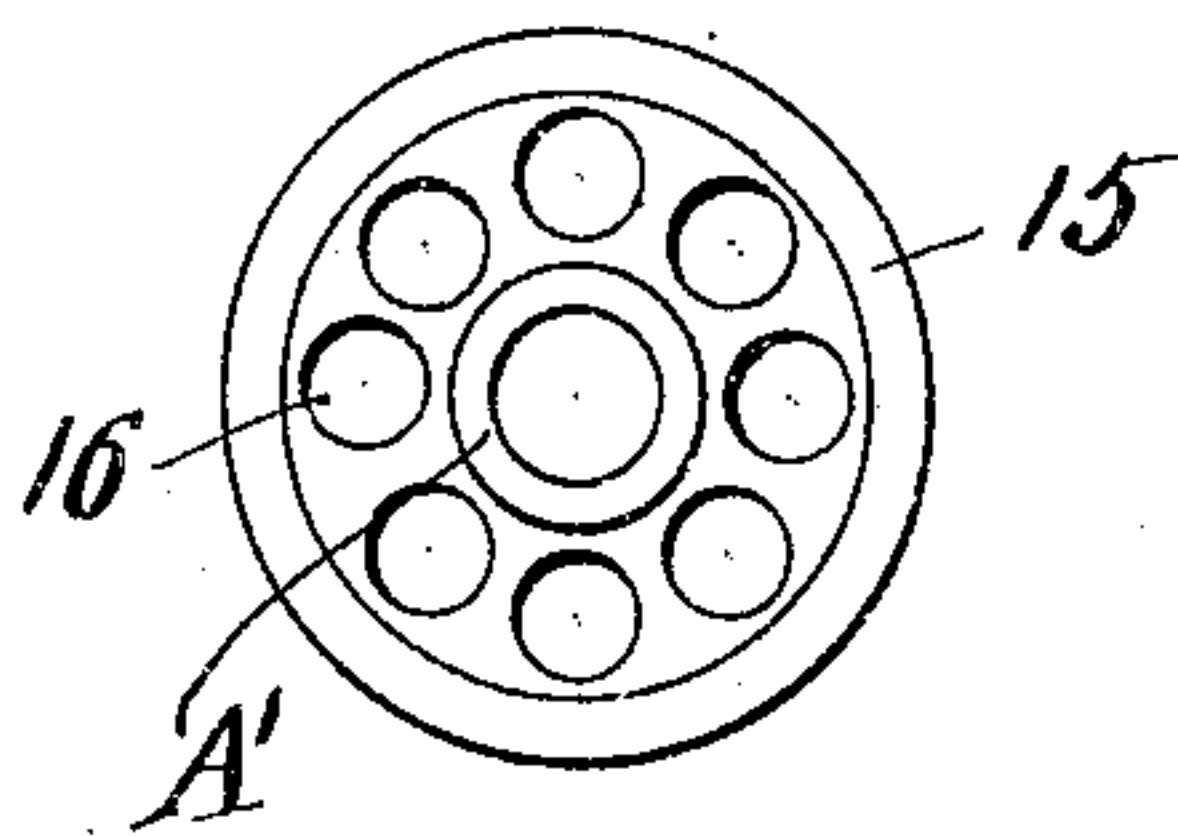


Fig. 5.

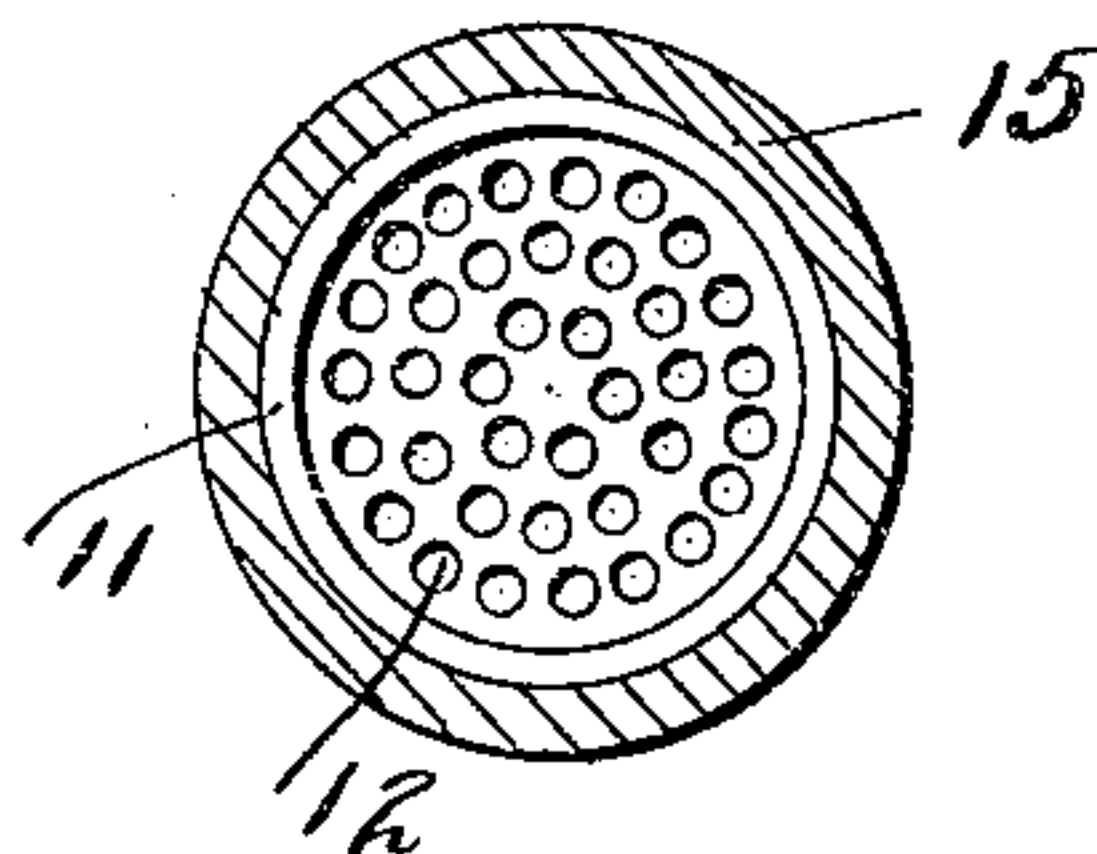
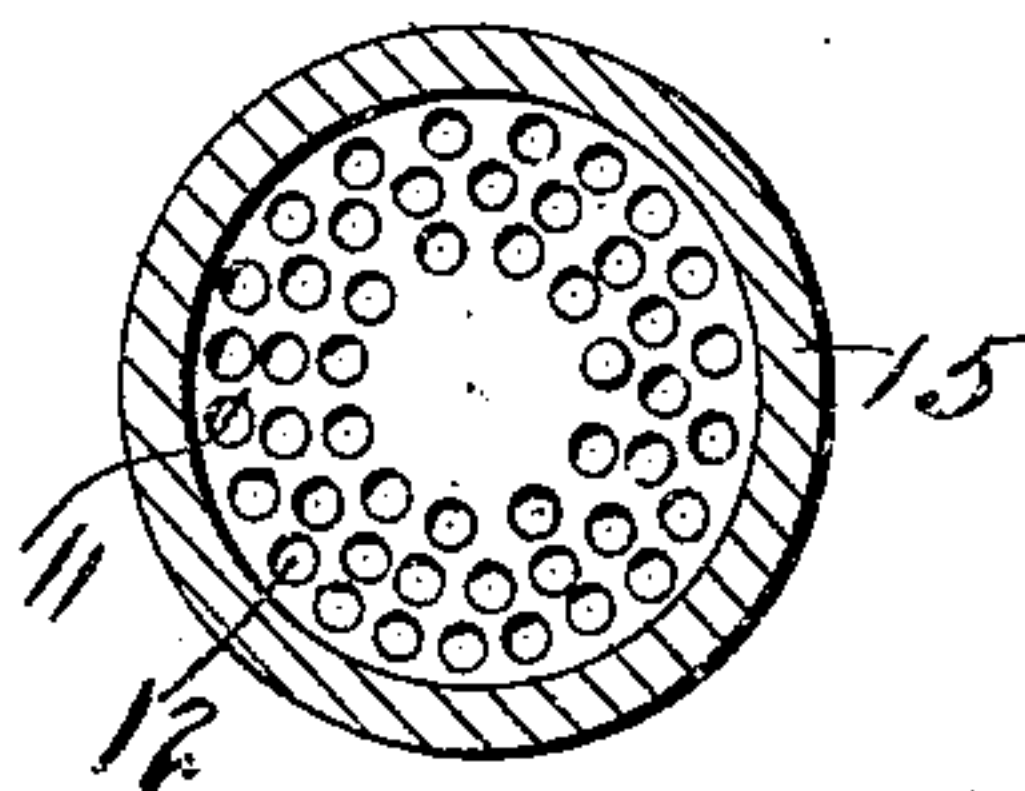


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

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BLOWPIPE FOR WELDING METAL.

955,064.

Specification of Letters Patent.

Patented Apr. 12, 1910.

Application filed August 6, 1909. Serial No. 511,565.

To all whom it may concern:

Be it known that I, PATRICK J. GRIFFIN, a citizen of the United States, residing at Camden, in the county of Camden and State of New Jersey, have invented new and useful Improvements in Blowpipes for Welding Metal, of which the following is a specification.

This invention relates to that class of welding tools of blow pipes which are adapted for the combustion of acetylene gas and oxygen and it has for its objects to produce a device of this class which shall possess superior advantages in point of simplicity, durability and general efficiency, and in which the relative supply of oxygen and of acetylene gas may be easily and accurately regulated to produce a flame of the requisite intensity.

A further object of the invention is to produce a device of the class referred to which shall emit a flame of great relative length, thus enabling the device to be used without much injury to the burner tips, and consequently greatly lengthening the life of said tips.

A further object of the invention is to prevent the necessity for exchanging the tips according to the character of the work to be performed, enabling a single tip to be used for various classes of work by gaging and regulating the relative supply of gas and oxygen.

Still further objects of the invention are to simplify and improve the general construction and arrangement of this class of devices.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claim.

In the accompanying drawings has been illustrated a simple and preferred form of the invention; it being however understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the invention, may be resorted to when desired.

In the drawings: Figure 1 is a side elevation of a blow pipe or welding tool constructed in accordance with the invention. Fig. 2 is a longitudinal sectional view taken

through the handle and the parts associated therewith. Fig. 3 is a sectional view taken longitudinally through the valve, the valve casing and the burner tip. Fig. 4 is a side elevation partly in section showing the valve removed from the casing. Figs. 5, 6 and 7 are sectional detail views taken on the planes indicated by the lines 5—5 and 6—6 in Fig. 2 and by the line 7—7 in Fig. 1.

Corresponding parts in the several figures are denoted by like characters of reference.

A and B designate pipes for the passage respectively of acetylene gas and oxygen; said pipes being provided with nipples adapted to be connected with the source of supply by means of flexible connections such as rubber tubes, and having stop cocks or valves 9 whereby the supply may be shut off when desired. The gas pipe A is suitably connected with a tubular casing 10 containing strainers and filters 11—12 and an intermediate packing 13 of mineral wool, asbestos or the like, said packing serving as a back flash arrester. The casing 10 is connected by an extension A' of the pipe A with the valve casing C; and the tubular casing 10 is provided with an extension constituting a handle by means of which the device may be conveniently manipulated; the walls of said extension being provided with apertures 16 to prevent overheating. The pipe B is connected with the valve casing C adjacent to the extension A' of the pipe A, and said pipe B may be soldered upon or otherwise connected with the tube that constitutes the handle of the device for the purpose of preventing the parts from being readily separated.

The valve casing C is tapered toward one end for the reception of a needle valve 17 having a somewhat blunt point. The valve 17 is exteriorly threaded to engage the correspondingly threaded interior of the casing C, and said valve is provided with a wrench seat 18 and with a lock nut 19 whereby it may be secured in adjusted position. The tapered end of the valve casing C is threaded for the reception of a detachable burner tip 20 through which the combustible mixture is ejected from the valve casing. The needle valve 17 has an axial longitudinal bore 21 wherein is seated an auxiliary needle valve 22 having threaded engagement with the bore for a portion of its length to permit adjustment of said auxiliary valve within the housing or casing

formed by the valve 17. The flow of acetylene through the casing C is regulated by the valve 17, and the latter is provided with an annular groove or recess 23 registering
5 with the inlet of the pipe B through which oxygen is supplied; the valve 17 is also provided with a plurality of apertures 24 in registry with the groove 23 from which oxygen will thus flow to the bore of the valve
10 17, the outflow of oxygen from said bore being controlled by the auxiliary needle valve 22.

From the foregoing description taken in connection with the drawings hereto annexed the operation and advantages of this invention will be readily understood by those skilled in the art to which it appertains. By enabling the relative flow of gas and oxygen to be easily, completely and accurately controlled by the operator, the
20 flame may be perfectly regulated and its length and intensity be varied according to the character of the work that is to be performed.

25 The construction of the device is simple

and inexpensive, and it will be found thoroughly efficient for the purposes for which it is provided.

Having thus described the invention, what is claimed is—

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In a device of the character described, a gas pipe, a cylindrical receptacle connected therewith and having extended apertured walls constituting a handle, an anti-back flash, and filtering packing in the cylindrical
35 receptacle, an extension of the gas pipe connected with the receptacle and projecting through the handle, an oxygen pipe or duct secured exteriorly upon the handle, a valve casing mounted upon the latter pipe and
40 upon the extension of the gas pipe and communicating with said pipes, and means for controlling the relative flow of gas and oxygen through the valve casing.

In testimony whereof I affix my signature
45 in presence of two witnesses.

PATRICK J. GRIFFIN.

Witnesses:

THOMAS C. BRADY,
ALBERT SCHEIRA.