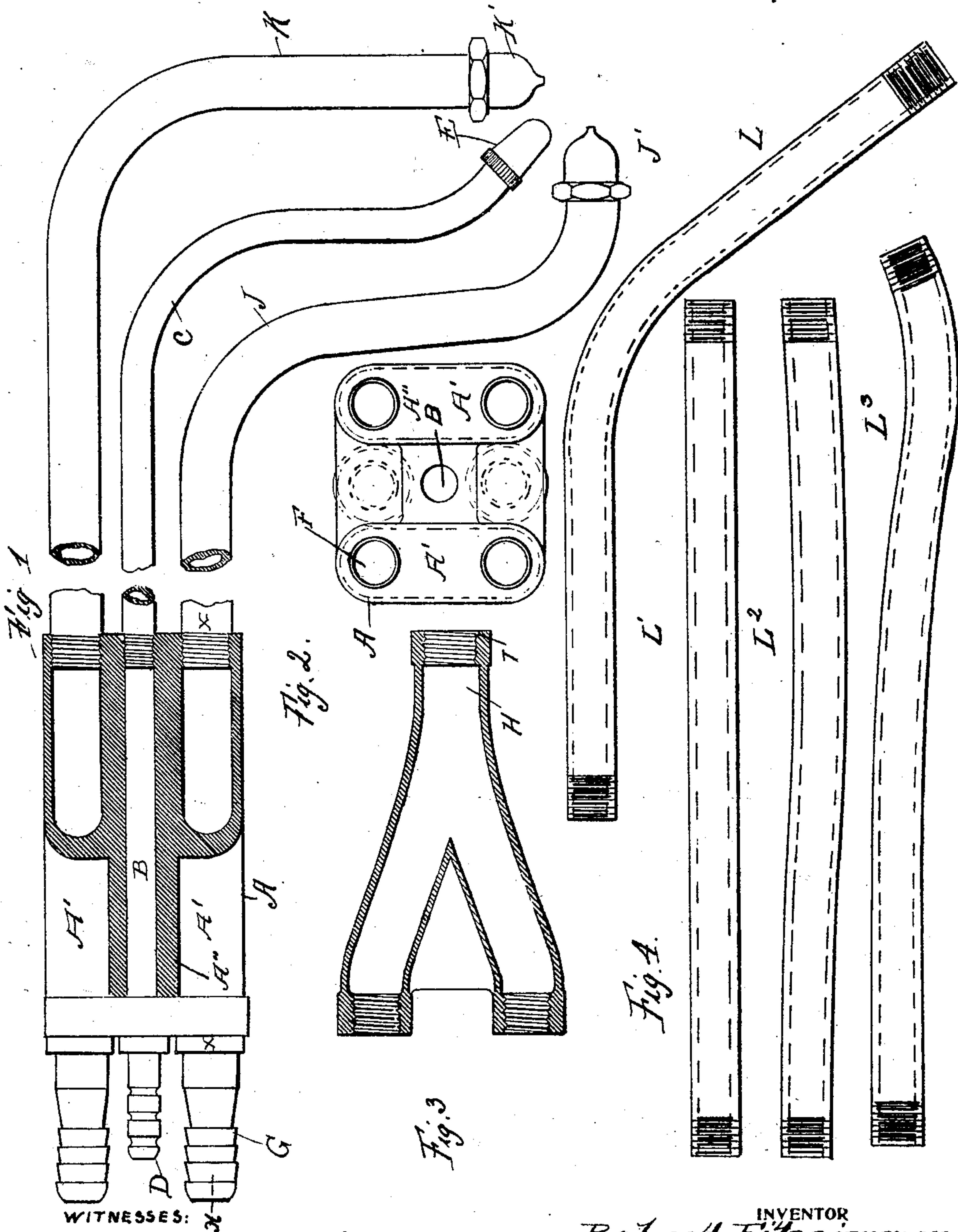


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 INTERCHANGEABLE BLOWPIPE.  
 APPLICATION FILED JAN. 24, 1907.

898,860.

Patented Sept. 15, 1908.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

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## INTERCHANGEABLE BLOWPIPE.

No. 898,860.

Specification of Letters Patent.

Patented Sept. 15, 1908.

Application filed January 24, 1907. Serial No. 353,761.

*To all whom it may concern:*

Be it known that I, ROBERT FITZSIMMONS, a citizen of the United States, residing at Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a certain new and useful Improvement in Interchangeable Blowpipes, of which the following is a specification.

My invention relates to a new and useful improvement called the interchangeable blow pipes, and has for its object to provide an exceedingly simple and effective arrangement of this description for using oxygen, hydrogen and air or ordinary illuminating gas or acetylene gas by means of which an intensely hot flame of small dimensions may be projected against sheet metal or the like for burning the same into sections upon lines, or for burning holes in sheet metal plates or boilers, and which may be also used for lead burning, brazing, soldering or the like.

With these ends in view, this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, I will describe its construction in detail, referring by letter to the accompanying drawing forming a part of this specification, in which—

Figure 1 is a side elevation of my improved blow pipe, a portion being sectioned. Fig. 2, an end view. Fig. 3, a section at the line X of Fig. 1. Fig. 4, a detail view of the various shaped pipes, which may be interchanged with those shown in Fig. 1.

Head A, is composed of two spaced members A', each having a pair of the said passages F, therein adjacent the ends thereof, these members being connected by the central web A in which passage B is formed.

In carrying out my invention as here embodied, A represents the stock or head of the device, having an air passage B formed therein, the inner end of this passage is threaded to receive a suitable coupling D for attaching a flexible tube, while the outer end of this passage is also threaded to receive pipe C terminating in the burner E. The head has four tubular passages F formed therein, each of which has threaded thereto a coupling

ling G, by means of which flexible tubes may be attached thereto, and these passages are arranged in pairs, each pair converging so as to form a single passage H, the ends of which are threaded, as indicated at I to receive one or the other of the pipes J or K, which terminate in the burners J' and K' respectively, by which arrangement two kinds of gas or gas and air may be admitted to either of the passages H, and from thence forced through the burners J' and K', and likewise air or any desired gas may be forced through the pipe B and burner E, and as these burners are arranged as shown in Fig. 1 so as to cause the gases and air issuing therefrom to converge to a common point, the proper regulation of the flow of the gases will produce any desired flame, and this flame may be made long or thin, and of intense heat, by means of which a sheet metal plate may be severed on any desired line as rapidly as the operator can pass the flame along the line. The pipes L, L', L<sup>2</sup>, and L<sup>3</sup> may be substituted for the pipes K or J so as to bring the burners in any desired position relative to the head or stock, thus adapting the tool for various kinds of work such as brazing, welding, dressing, cutting iron or steel plates, shafting, bars or other shapes. Also for cutting round or square holes out of sheet metal or pipes.

Having thus fully described my invention, what I claim as new and useful, is—

1. A blow pipe composed of a head formed of two members spaced apart and each provided with a pair of passages arranged adjacent the ends thereof, a centrally arranged connecting web connected to said members, each pair of said passages being inclined towards one another and merging into a single passage, said web being formed with a single central passage which extends throughout the length of said head and is disposed between said single passages, each of said single passages and said passage of the web being threaded at their rear ends, and a coupling secured to the front end of said passage of the web and to each of said pairs of passages.

2. A blow pipe composed of a head formed at one end with a central passage which extends through its length and with two separate pairs of passages arranged on opposite sides of said central passage, the passages of each pair of passages being inclined towards

one another and meeting to join and form a single passage at a point substantially mid-way of the length of said head, said single passages being continued and extending  
5 through the rear of said head, whereby there are five passages at one end of said head and three at the opposite end thereof.

In testimony whereof, I have hereunto affixed my signature in the presence of two subscribing witnesses.

ROBERT FITZSIMMONS.

Witnesses:

JOSEPH C. SMITH,  
S. M. GALLAGHER.