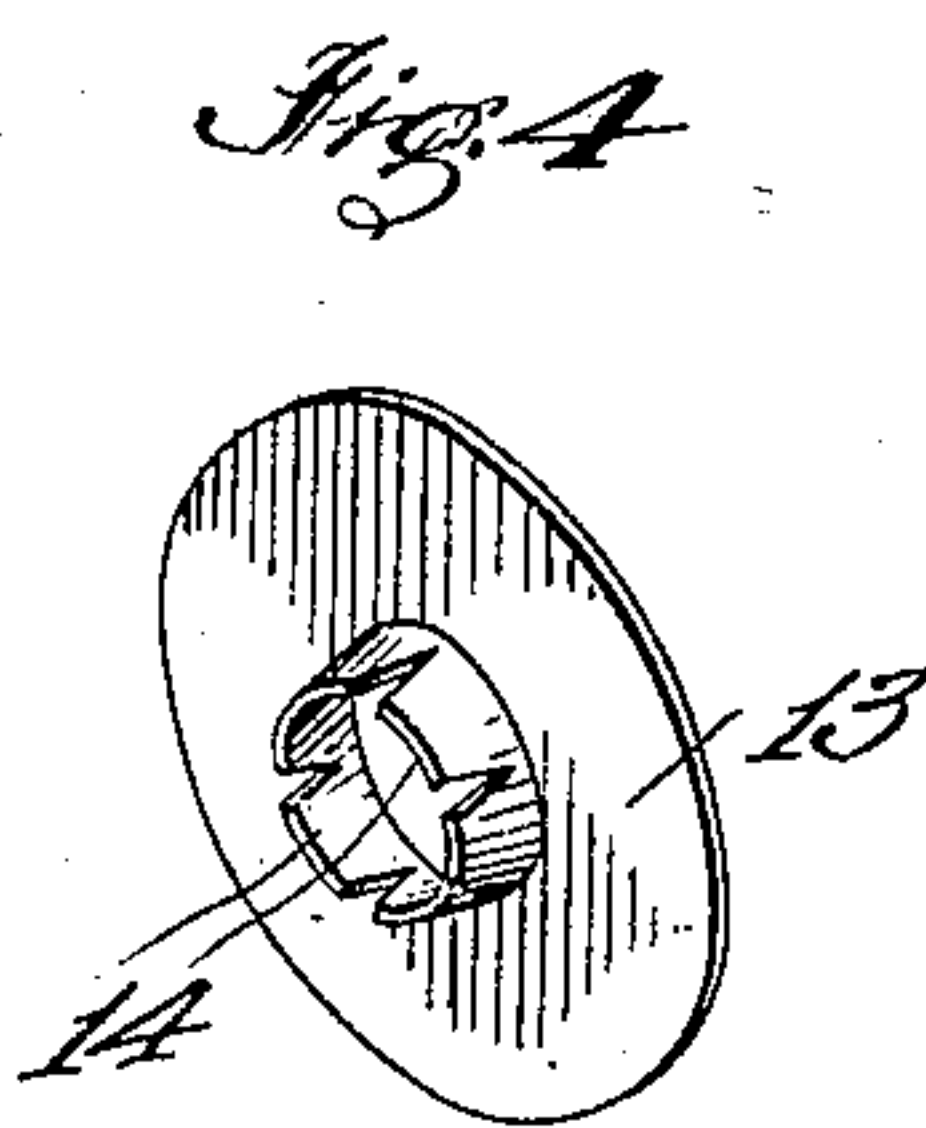
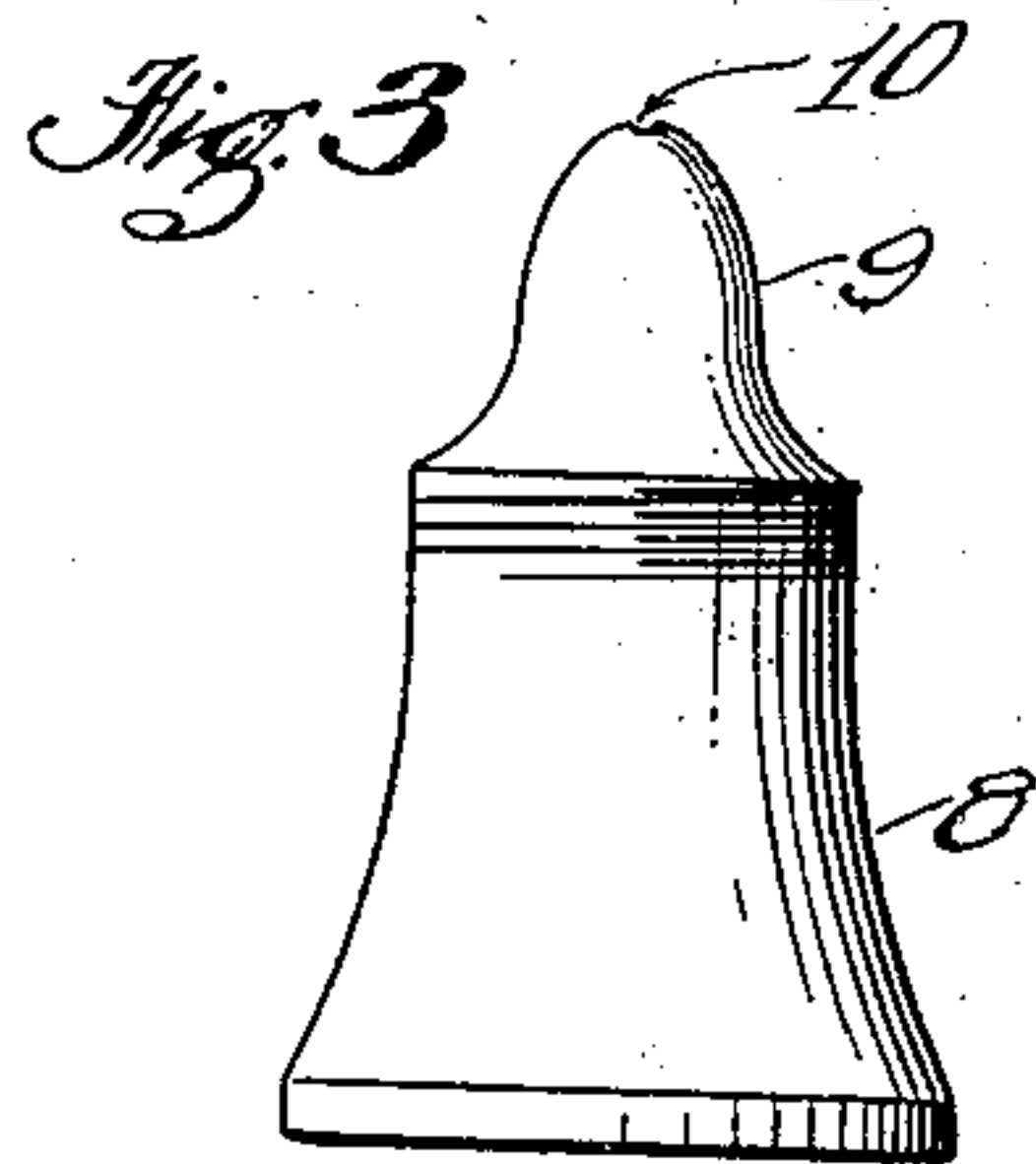
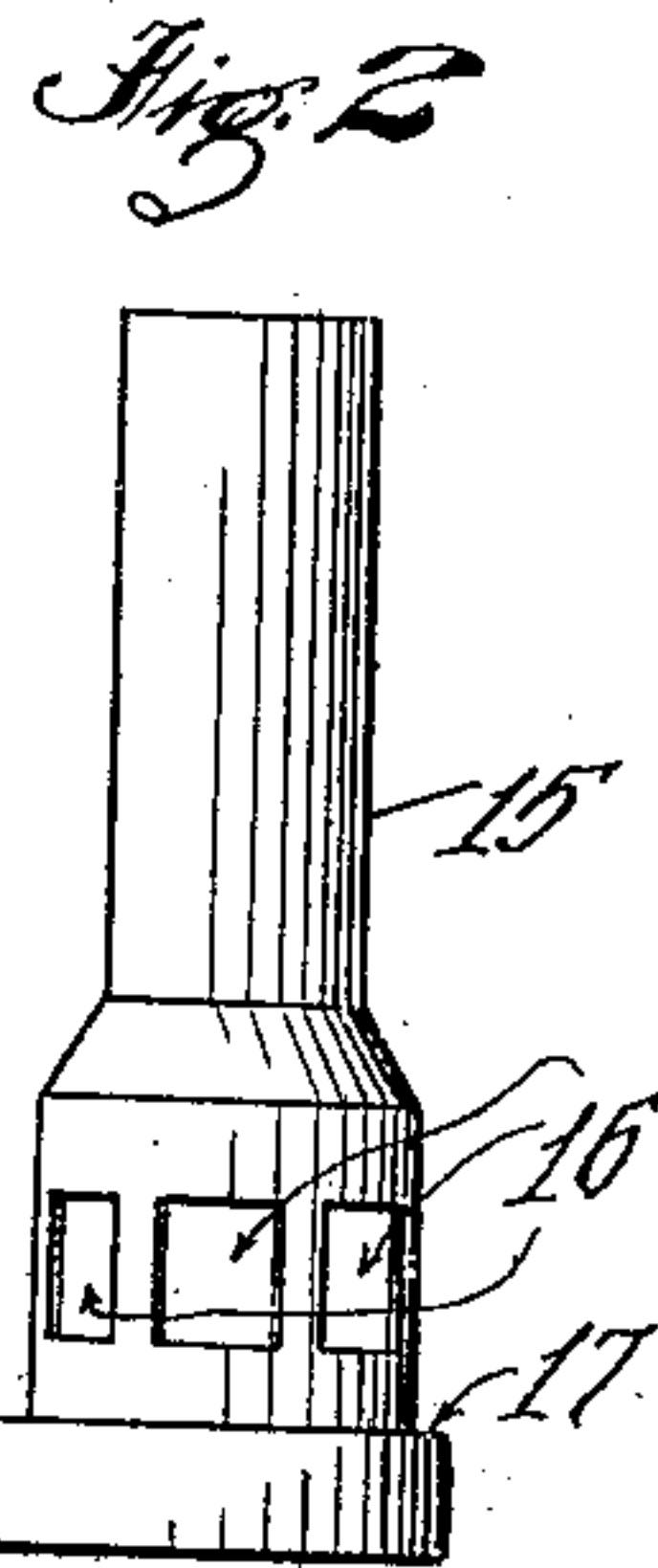
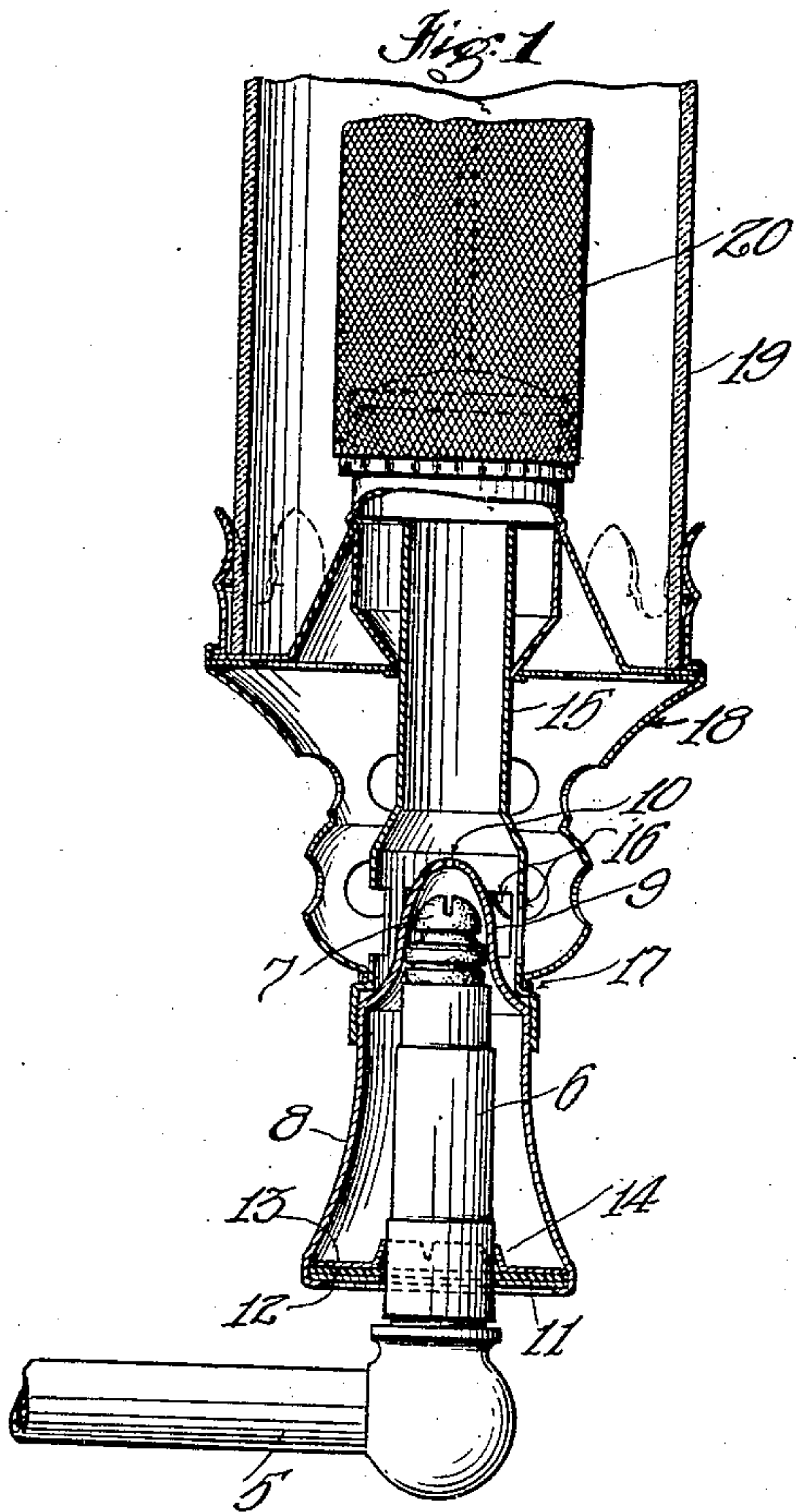


No. 859,355.

PATENTED JULY 9, 1907.

F. WHEELER.  
BUNSEN BURNER.  
APPLICATION FILED NOV. 21, 1906.



Witnesses  
*William J. ...*  
*Edmund A. ...*

Inventor  
*Ferdinand Wheeler*  
By *Howard Morham*  
Attorneys.

# UNITED STATES PATENT OFFICE.

FERDINAND WHEELER, OF LOS ANGELES, CALIFORNIA.

## BUNSEN BURNER.

No. 859,355.

Specification of Letters Patent.

Patented July 9, 1907.

Application filed November 21, 1906. Serial No. 344,375.

*To all whom it may concern:*

Be it known that I, FERDINAND WHEELER, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Bunsen Burners, of which the following is a specification.

My invention relates to that class of Bunsen burners which is designed to be used for lighting purposes in connection with a mantle; and the object thereof is to provide a Bunsen burner which may be placed upon the ordinary gas pillar and tip without removing any of the parts and which can be removed therefrom and leave the fixture in condition to be used without the Bunsen burner, whereby in case of accident to any of the parts of the Bunsen burner which would prevent its use, the same may be removed and light secured from the ordinary pillar and tip. I accomplish this object by the burner described herein and illustrated in the accompanying drawings, in which:—

Figure 1.—is a longitudinal central section of my improved Bunsen burner in place on an ordinary gas pillar and tip. Figs. 2, 3 and 4.—are details of certain of the parts of my burner.

In the drawings 5 is the ordinary service pipe to which is secured the ordinary gas pillar 6 provided with the ordinary lava tip 7.

8 is the base piece of my improved burner, which is preferably formed by spinning a piece of metal into a tubular column with a tapered top 9, in the center of which is a port 10 which is just above the orifice of the lava tip. Just below the port the top contacts with the lava tip as shown in Fig. 1, thereby steadying the top of the base and holding it central over the tip, and preferably forming a gas tight joint therebetween. In the bottom of the base piece is secured, by inturning the ends thereof, a metal washer 11 which snugly fits the pillar, and above this washer is a rubber gasket 12 which contacts with the pillar so as to make an air tight joint, and above the gasket is a second metallic washer 13, constructed of resilient metal and provided with upturned lips 14, which bear against the pillar with spring pressure, thereby holding the base centrally alined on the pillar. Upon the top of the base piece is secured the air mixing tube 15, provided with ports 16 to supply the necessary air to mix with the gas for producing the desired flame. This tube is preferably secured to the base by being internally threaded at the bottom and screwing upon the base portion as shown in Fig. 1. A shoulder 17 is formed on the lower por-

tion of the mixing tube to receive and support the lower portion of the mantle gallery 18 of usual construction and which is secured upon the burner in the usual manner. 19 is the ordinary chimney or globe, and 20 is the usual incandescent mantle.

By this construction it will be observed that there is a gas tight joint between the pillar and Bunsen burner base, so that the gas will pass through port 10 under the usual pressure. It will also be observed that in case of accident to the mantle or to the chimney when a new part cannot be replaced, the Bunsen burner can be removed from the ordinary gas pillar and it can then be used with the ordinary tip, which is always in place therein for producing light.

Having described my invention, what I claim is:—

1. A Bunsen burner provided with a hollow base piece adapted to be slipped upon an ordinary gas pillar without the removal of the ordinary tip thereof, said base piece being in gas tight contact with said pillar at some point thereof and having a central port in the top of said base piece; and a mixing tube secured to said base piece and projecting upwardly therefrom and having ports in said mixing tube surrounding the tip of the gas pillar.

2. A Bunsen burner comprising a tubular base piece having a tapered top with a central port therein, said tapered top being adapted to contact with the tip of the gas pillar at a point below the port; a washer in the bottom of said base piece, adapted to contact with the base of the pillar and make the joint therebetween gas tight; and a mixing tube having ports in the bottom thereof secured to the top of said base piece.

3. The combination of a Bunsen burner comprising a tubular base piece having a tapered top with a central port therein, said tapered top being adapted to contact with the tip of the gas pillar at a point below the port and in gas tight contact therewith and a spring washer in the bottom of said base piece having lips adapted to contact with the base of the pillar; and a mixing tube having ports in the bottom thereof secured to the top of said base piece, with a gas pillar having a tip in the top thereof, said base piece being adapted to slip over said pillar and tip.

4. In combination, a gas pillar; a tip in the top thereof; a Bunsen burner comprising a hollow base piece adapted to slip on said gas pillar; said base piece being closed at the top except at a central port; a mixing tube secured to said base piece and projecting upwardly therefrom, said mixing tube having ports in the bottom thereof and surrounding the port in the top of the base piece.

In witness that I claim the foregoing I have hereunto subscribed my name this 15 day of November, 1906.

FERDINAND WHEELER.

Witnesses:

G. E. HARPHAM,  
EDMUND A. STRAUSE.