

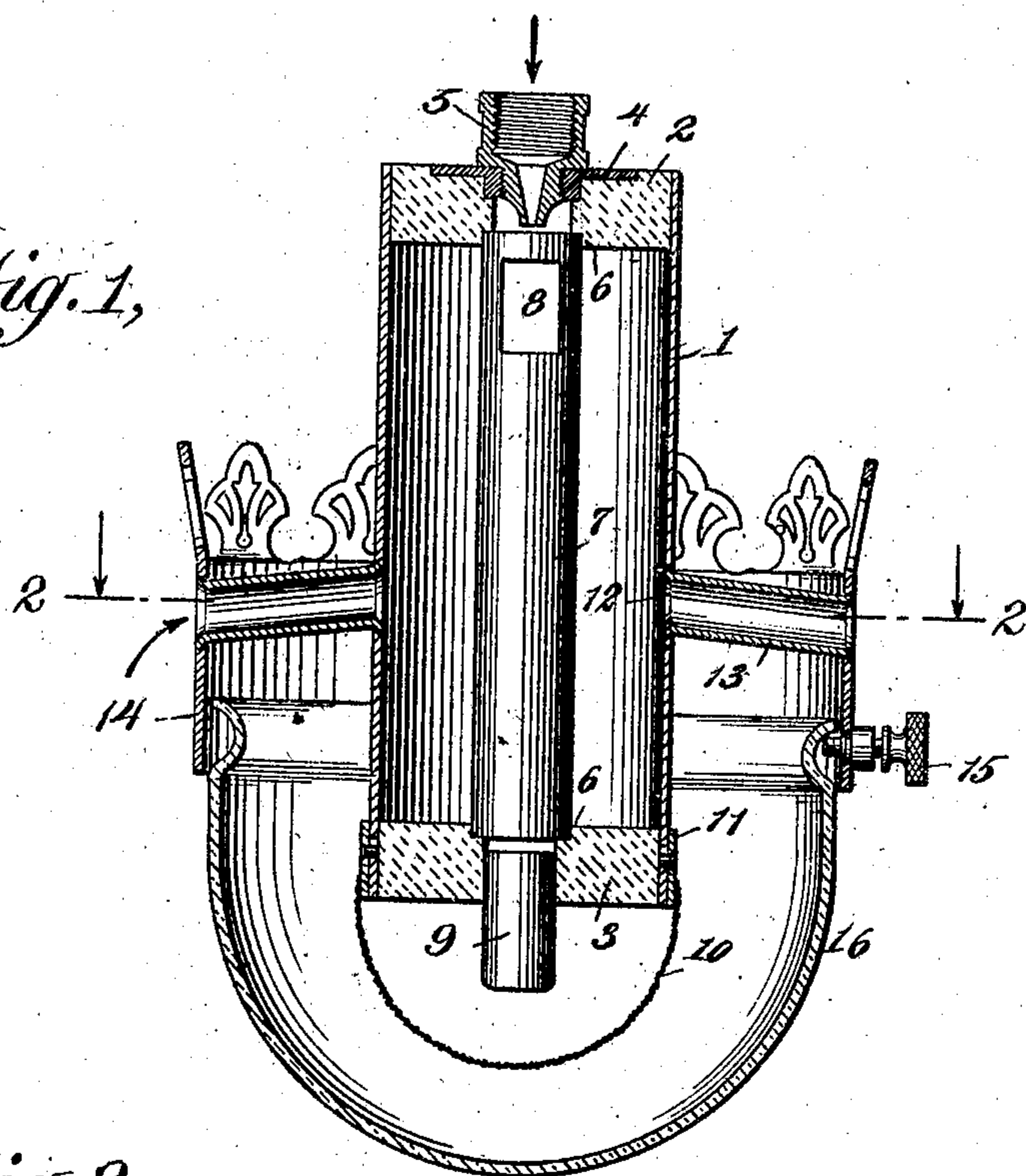
No. 894,477.

PATENTED JULY 28, 1908.

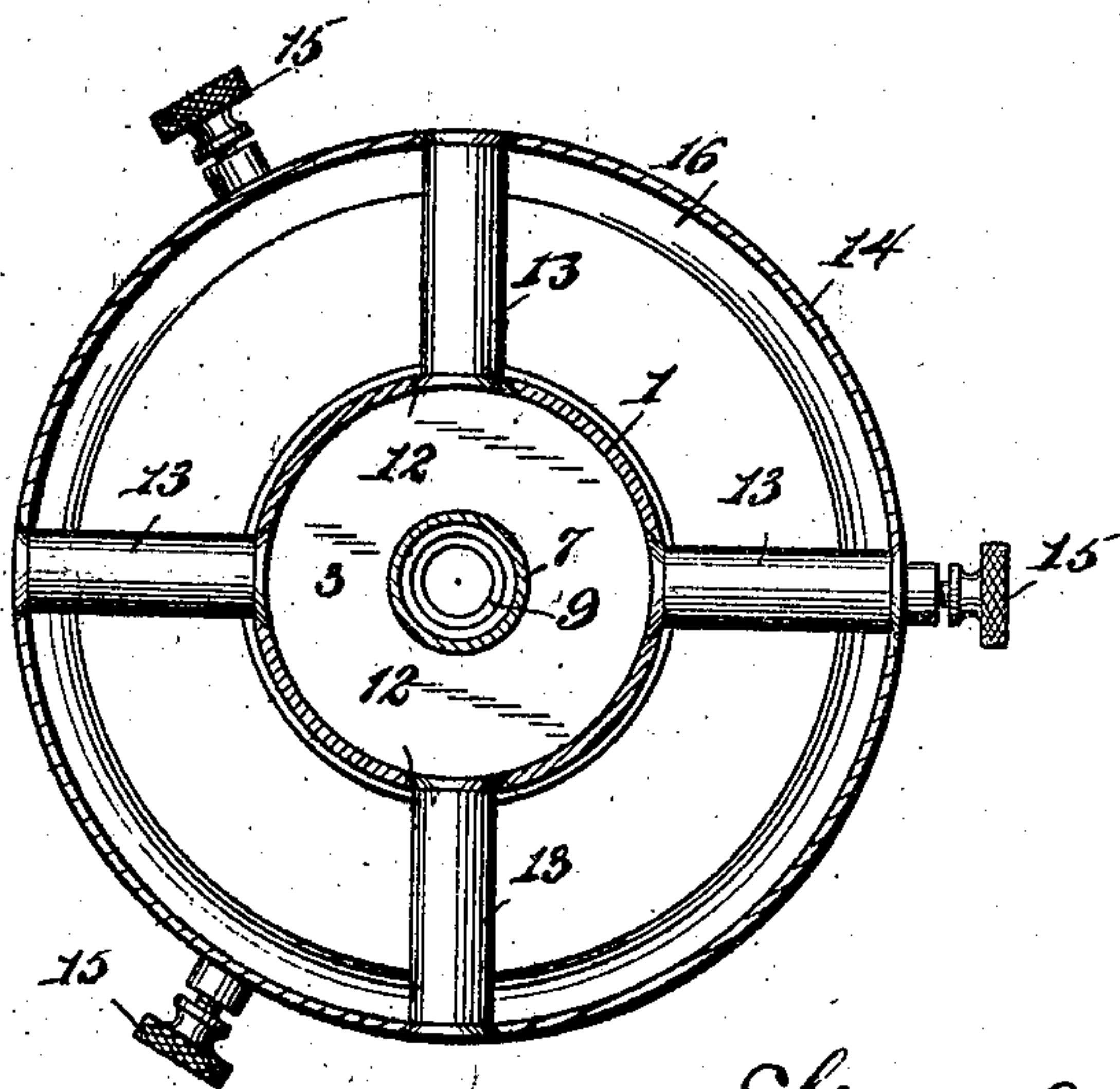
C. B. & T. WHITE.  
GAS BURNER.

APPLICATION FILED JAN. 12, 1906.

Fig. 1,



*Fig. 2,*



WITNESSES:  
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 Clarence B. White  
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 BY  
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# UNITED STATES PATENT OFFICE.

CLARENCE B. WHITE, OF MONTCLAIR, NEW JERSEY, AND THOMAS WHITE, OF NEW YORK, N. Y.

## GAS-BURNER.

No. 894,477.

Specification of Letters Patent.

Patented July 28, 1908.

Application filed January 12, 1906. Serial No. 295,718.

*To all whom it may concern:*

Be it known that we, CLARENCE B. WHITE, a citizen of the United States, and a resident of Montclair, New Jersey, and THOMAS WHITE, a citizen of the United States, and a resident of the borough of Brooklyn, in the city of New York, State of New York, have invented certain new and useful Improvements in Gas-Burners, of which the following is a specification.

The present invention relates to a lamp of the so-called Welsbach type in which a mantle is brought to a high state of incandescence by the heat of a Bunsen flame.

The object of the invention is to construct a lamp of that type in which the Bunsen burner is inverted and the incandescent mantle supported below the outlet end of the burner tube instead of above as has been the general practice heretofore.

The invention will be understood by reference to the accompanying drawings in which

Figure 1 is a vertical section with the gas supply tube in elevation, and Fig. 2 a horizontal section on the plane of the line 2—2 of Fig. 1.

Similar reference numerals indicate similar parts in the several views.

Referring to the drawings, the numeral 1 designates an outer inclosing metallic cylindrical casing having at its upper and lower ends lava or other suitable heat insulating blocks 2 and 3 respectively. Each of said blocks is provided with a central opening, as shown, and surrounding the opening in the block 2 on its upper side is a plate 4 having a threaded flange seated in the block opening and to which is secured a nipple 5, the latter adapted to be secured to a gas supply pipe. On their inner sides the blocks 2 and 3 are formed with grooves surrounding the central openings which grooves constitute seats to receive a burner tube 7 the upper end of which terminates immediately below the nipple 5. The tube 7 is provided near its upper end with an opening 8 through which the necessary air is supplied to the gas for the purpose of producing a heating flame. Seated in the opening in the lower block 3 and projecting downwardly therefrom is a burner tip 9, the whole constituting a burner of the Bunsen type. An incandescing mantle 10 is secured by means of suit-

able base 11 to the outer side of the lower end of the cylindrical casing 1.

The casing 1 is provided with any convenient number of openings 12 in which are secured laterally projecting open ended flues 13. Upon these flues is supported a shield 14 which may be given any desired ornamentation and to which is secured by means of set screws 15 a glass globe 16 to inclose the mantle 10.

In operation the gas will pass downwardly through the nipple 5 and escaping into the tube 7 will be mixed with the necessary proportion of air passing in through the flues 13 and opening 8 to produce at the tip 9 a heating flame to render the mantle 10 incandescent. The heated products of combustion escape through the interstices of the mantle and will rise between the casing 1 and shield 14 thus heating the incoming air in flues 13 and the column of air in casing 1, assisting materially in securing proper combustion of the gas.

The casing 1 being closed to the products of combustion the air confined therein will rise with sufficient velocity to overcome the back pressure in the tube due to the heat of the flame and mantle.

What we claim and desire to secure by Letters Patent is:

1. In a lamp of the type described the combination of an inclosing casing having openings therein to admit atmospheric air, heat insulating blocks secured in the ends thereof, an inverted burner tube seated in openings in said heat insulating blocks, and an incandescing mantle surrounding the burner outlet.

2. In a lamp of the type described the combination of an inclosing casing having openings therein to admit atmospheric air, heat insulating blocks secured in the ends thereof, an inverted burner tube seated in openings in said heat insulating blocks the burner outlet projecting below the lower block, and an incandescing mantle surrounding the burner outlet, said casing being provided with air inlets for the purpose described.

3. In a lamp of the type described the combination of an outer cylindrical casing, heat insulating blocks secured in the ends thereof, an inverted burner tube seated in,

openings in said heat insulating blocks, an incandescing mantle surrounding the burner outlet, and laterally projecting air inlet flues from openings in said casing.

- 5 4. In a lamp of the type described the combination of an outer cylindrical casing, heat insulating blocks secured in the ends thereof, an inverted burner tube seated in openings in said heat insulating blocks, an in-  
10 candescing mantle surrounding the burner outlet, laterally projecting air inlet flues from openings in said casing, a shield mounted on said flues, and a globe secured to said shield to inclose the mantle.

In testimony whereof we have hereunto 15 signed our names in the presence of two subscribing witnesses.

CLARENCE B. WHITE.  
THOMAS WHITE.

Witnesses to the signature of Clarence B. White:

E. VAN ZANDT,  
M. E. McNinch.

Witnesses to the signature of Thomas White:

WM. H. AITKEN,  
W. WERLEY.