

J. DAVIS.
GAS BURNER.

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949,676.

Patented Feb. 15, 1910.

Fig. 1.

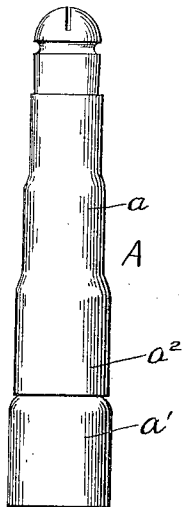
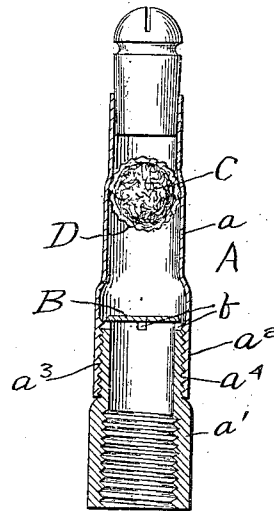


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN DAVIS, OF WASHINGTON, DISTRICT OF COLUMBIA.

GAS-BURNER.

949,676.

Specification of Letters Patent.

Patented Feb. 15, 1910.

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To all whom it may concern:

Be it known that I, JOHN DAVIS, a citizen of the United States, residing at Washington, in the District of Columbia, have invented new and useful Improvements in Gas-Burners, of which the following is a specification.

My invention has relation to improvements in gas burners, and the object of the invention is to provide a burner formed in two sections, a lower and an upper section telescoping one within the other, the lower and inner section being provided at its upper and smaller end with a suitable number of perforations arranged in circular series around its periphery, and a stationary disk secured to the upper end of the lower section of the burner by which the sheet or flame of the gas in such construction in conjunction with an auxiliary controller or regulator is augmented, said auxiliary controller or regulator being composed of fine wire loosely wrapped over each other to form a ball, said ball being located in a cage formed of wire meshing of larger diameter and located in the upper section of the burner above the stationary disk and in the path of the same and the tip of the burner.

With these and other objects in view the invention consists in the novel and peculiar construction and combination of parts as will be hereinafter more in detail described and the asserted novelty specifically claimed.

I have fully and clearly illustrated my invention in the accompanying drawings, in which;

Figure 1 is a front elevation of my improved gas burner, and Fig. 2 is a sectional view of the same.

Similar letters of reference indicate corresponding parts in the several figures.

A designates a burner composed of two sections, a discharge section *a* and a chambered section *a'* one telescoping within the other. The lower part of the upper section *a* is provided with an enlargement *a²* which has screw threads *a³* formed upon its inner surface which engage corresponding screw threads *a⁴* formed upon the outer surface of a reduced portion of the lower chambered section *a'*. The upper end of the lower section *a'* is provided with a disk B which permanently closes the upper and smaller end of the section *a'* and around this end and upon the edge of the periphery of said sec-

tion *a'* and slightly below or on the same plane with the disk B is a multiple number of perforations *b* through which the gas passes from the lower or fixture section of the burner into and through the discharge section *a* of the burner previous to passing through an auxiliary gas controller or regulator located in the discharge section *a* of the burner above the disk B, which will be hereinafter more fully described.

C designates a gas controller or regulator composed of a wire ball and a cage formed of wire meshing. The strands of wire of the ball are loosely wrapped together one strand over the other, the strands of wire leaving suitable interstices between each other through which the gas passes.

D designates a cage composed of fine wire meshing within which the wire ball C is loosely located, the gas passing previously through this cage before it passes through the interstices of the wire ball and from thence through the wire ball and again passes out of the cage through the tip of the burner.

Importance is attached to the construction of this auxiliary gas controller and cage so far as their functions and operation in connection with the permanent disk B and burner is concerned, and by this combination of ball and cage it has been shown by actual demonstration that greater light and heat is produced through this medium. The expansion of the flame or sheet of gas and consequently therefrom the brilliancy of the flame is primarily due to the auxiliary controller detachably located in the burner.

From the construction of a burner of this character the gas has an uninterrupted and steady flow upwardly from the lower section through the series of openings in the fixed or stationary disk and thence up through the cage and the interstices of the strands of wire composing the wire ball located within the cage and out through the tip of the burner. This auxiliary controller gives the gas greater illuminating power.

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

1. In a gas burner the combination with a cage constructed of fine wire meshing of globular form; of a ball composed of fine wire strands wrapped over and around each other leaving interstices therethrough for

the passage of the gas in more or less quantity according to the pressure, substantially as described.

2. In a gas burner the combination with
5 the upper and outer tubular section, a lower
and inner tubular section, the upper and
smaller end of which is provided with perforations around the edge of its periphery in
circular series, a stationary disk secured to
10 the upper end of said lower section; of an
auxiliary gas controller composed of fine

wire strands wrapped one over the other in the form of a ball, and a cage in ball form composed of fine wire meshing within which the first mentioned ball is located. 15

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN DAVIS.

Witnesses:

J. D. YOAKLEY,

HARRY F. RUETH.