

A. BRAY.
ACETYLENE GAS BURNER.
APPLICATION FILED MAR. 2, 1909.

935,735.

Patented Oct. 5, 1909.

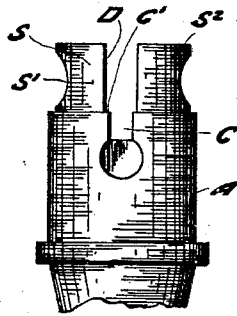


Fig. 1.

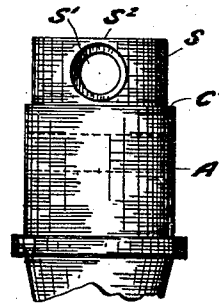


Fig. 2.

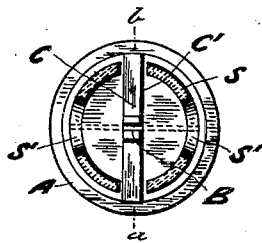


Fig. 3.

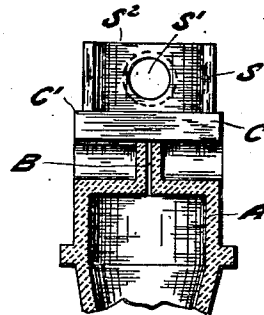


Fig. 4.

WITNESSES

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ARTHUR BRAY, OF LEEDS, ENGLAND.

ACETYLENE-GAS BURNER.

935,735.

Specification of Letters Patent.

Patented Oct. 5, 1909.

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To all whom it may concern:

Be it known that I, ARTHUR BRAY, a subject of the King of Great Britain and Ireland, whose postal address is Bagby Works, Leicester Place, Leeds, in the county of York, England, have invented certain new and useful Improvements in Acetylene-Gas Burners, of which the following is a specification.

This invention relates to improvements in burners for acetylene gas, and has for its object, the arrangement and construction of an atmospheric flat flame single jet burner, which can be turned down without the disadvantage of excessive carbon deposits on the gas burner orifice to which burners of this class are liable.

An acetylene burner on the Bunsen principle, which may be turned down without the above mentioned disadvantage, has hitherto been known and patented, an example of such burner being shown in Bray's U. S. Patent, No. 629061 of July 18th. 1899, and it is also known to construct a single jet atmospheric burner which will produce a flat flame, an example of which is shown in Dolan's British Patent No. 14522 of 1907, but such latter burner cannot readily be turned low, and at the same time be kept free from carbon deposits.

My invention therefore consists in a combination of a single jet flat flame atmospheric burner, and an open superstructure carried on such burner.

In describing my invention in detail, reference is made to the accompanying sheet of drawings similar letters indicating similar parts, in which,

Figure 1 is an elevation of the burner, and Fig. 2 is an elevation taken at right angles to Fig. 1. Fig. 3 represents a sectional plan, and Fig. 4 represents a sectional elevation on line *a-b* in Fig. 3.

In carrying out my invention, the burner comprises a gas outlet slit B, (Figs. 3 and 4) which may project into, or be flush with the lower edge of a slit C formed on what would be the tip of an ordinary burner, such slit C being at right angles to the slit B, and of greater width. This slit C may have vertical walls, or such walls may be partially straight and partially curved, as desired. As will be understood, the extremity or exit of the slit B is below the upper edges C' of slit C. A burner of this description produces a single flat flame, yet

when such burner is turned low, carbon is deposited on the gas exit, that is, on the upper edges of slit C, and in order to prevent this deposit, I place above the burner A, and in contact with or forming part of same, an open superstructure S. This superstructure may be formed by continuing the walls of the burner tip in a preferably curved shell, the slit D being formed in the shell parallel with slit C but above it, slit D also being wider than slit C so as not to interfere with the flame when turned high, and in the shell are formed a convenient number of apertures or the like S¹. The superstructure S may, however, be somewhat less in diameter than the burner tip. The upper edge S² of the superstructure is carried up any convenient distance above the upper face of what would be a burner A, were the superstructure absent, the distance being such as not to interfere with the flame when same is turned high. The effect of the superstructure is to cause the flame when turned low, to ride on the edges S², and thus prevent the liability of deposit of carbon on the gas burner orifice, that is, the top of the slit or cut C. When the burner is turned high the flame will ride on the upper edges of the cut C or thereabout.

The superstructure, as will be understood, may take other forms than that shown and may be made as an attachment to a flat flame burner, though I prefer to make the superstructure and burner tip from one piece of porcelain, steatite, or the like.

Other flat flame burners than that hereinbefore described and illustrated have been used, and to these I may apply the superstructure.

What I claim as my invention is:—

An acetylene gas burner comprising a burner having a flat flame aperture therein, the tip of said burner extending above said aperture and having a slit therein extending at right angles to the aperture and of greater width, and a superstructure having a second slit therein having its walls parallel to the walls of the first mentioned slit and having apertures in its said walls.

In witness whereof, I have hereunto set my hand, in the presence of two witnesses.

ARTHUR BRAY.

Witnesses:

CLEVE WAUGH,
HARRY MUDD.