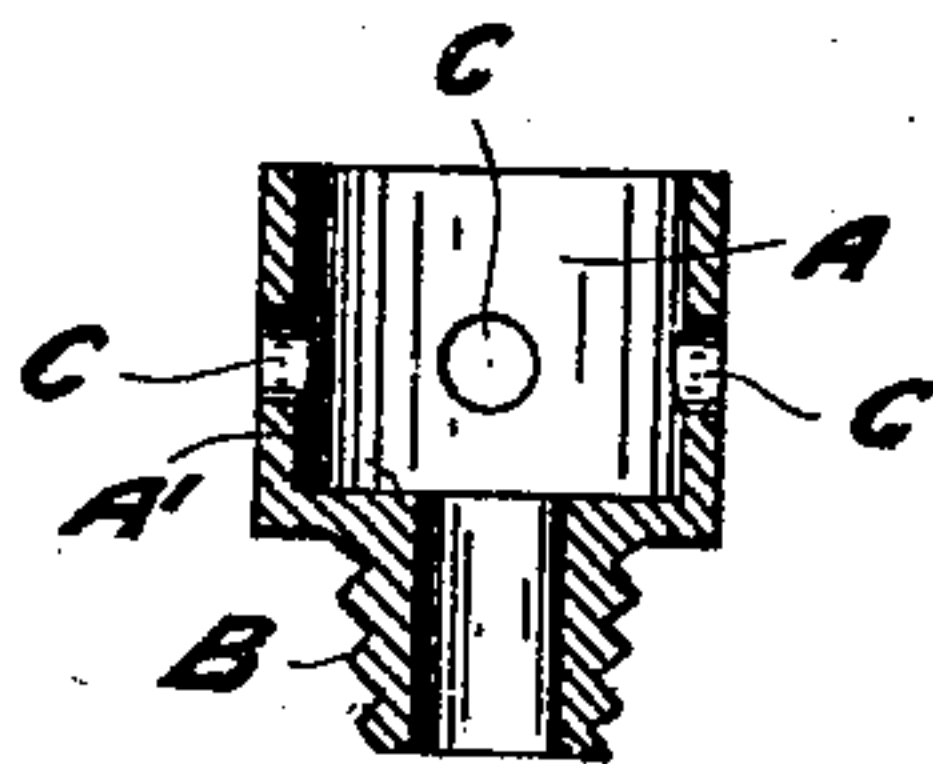


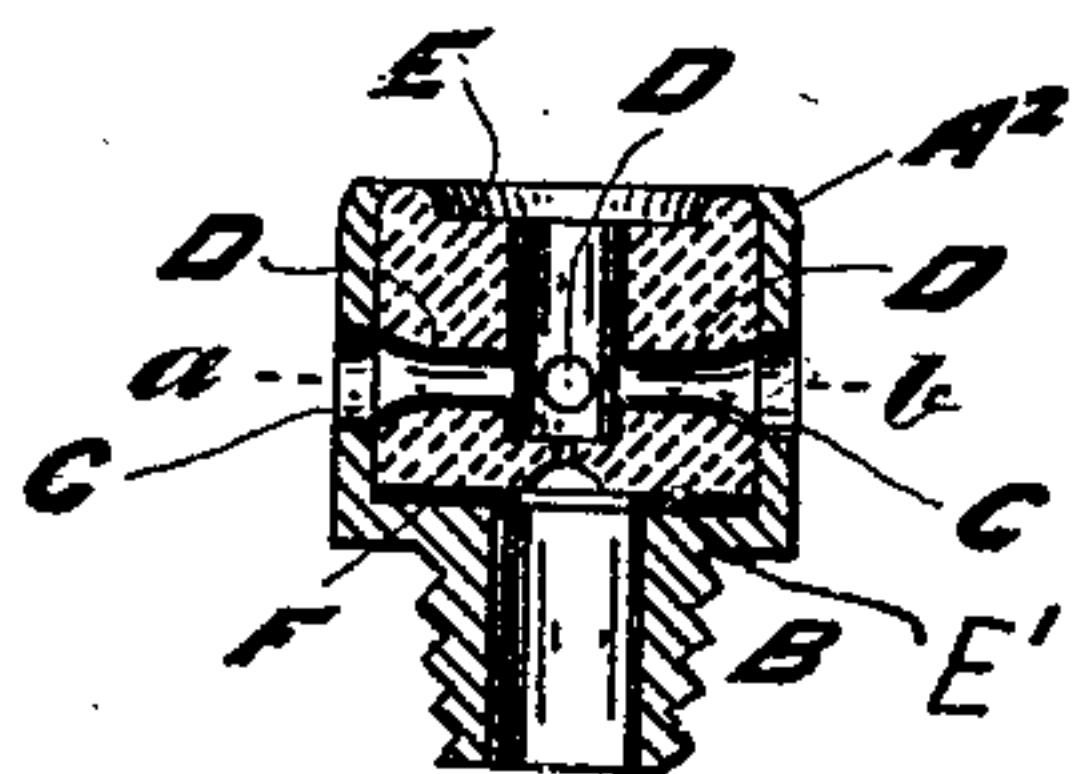
908,732.

A. BRAY.  
ACETYLENE BURNER.  
APPLICATION FILED MAR. 25, 1908.

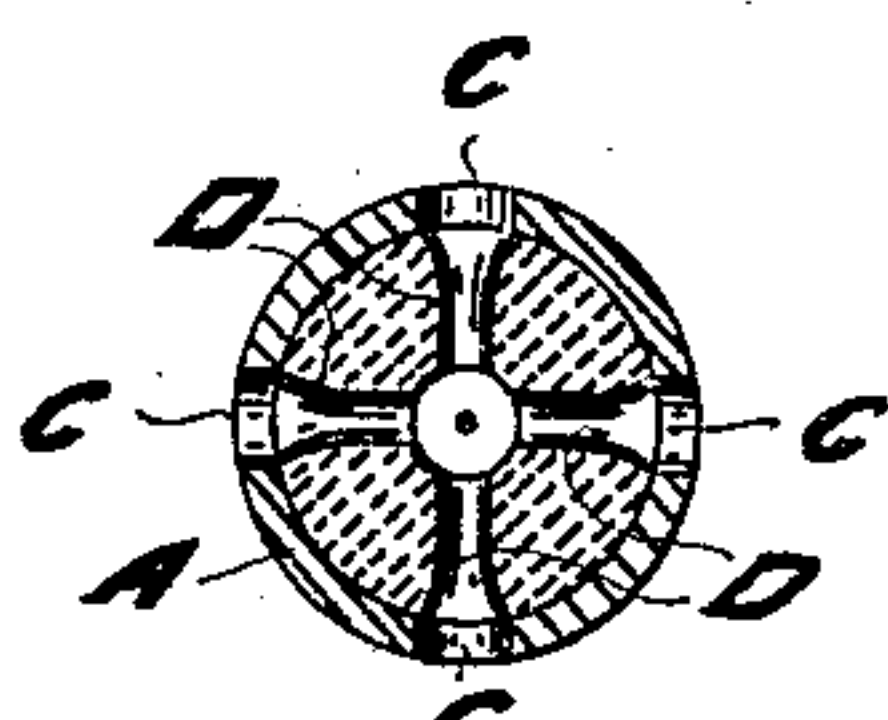
Patented Jan. 5, 1909.



*Fig. 1.*



*Fig. 2.*



*Fig. 3.*

WITNESSES

W. P. Burke  
W. J. J. Kennedy.

INVENTOR

Arthur Bray  
BY Wm. Wallace White.

ATTY.

# UNITED STATES PATENT OFFICE.

ARTHUR BRAY, OF LEEDS, ENGLAND.

## ACETYLENE-BURNER.

No. 908,732.

Specification of Letters Patent.

Patented Jan. 5, 1909.

Application filed March 25, 1908. Serial No. 423,242.

*To all whom it may concern:*

Be it known that I, ARTHUR BRAY, a director of the firm of Geo. Bray & Co., Limited, of Bagby Works, Leicester Place, Leeds, in the county of York, England, gas-lighting engineer, subject of the King of Great Britain and Ireland, have invented certain new and useful Improvements in Acetylene-Burners, of which the following is a specification.

10 This invention relates to improvements in burners for acetylene gas, and has for its object the arrangement and construction of a combined metal and porcelain or like burner.

It has hitherto been customary to construct acetylene gas burners or burner tips entirely of steatite, porcelain, or the like, with the result that when same are screwed or otherwise fastened into their sockets, there is a great liability of the tips becoming broken, leaving the lower part in the socket, and further, when once the tip is placed in the socket, it is difficult to remove and replace same without liability of breakage, whereas the burner constructed according to my improvement may be readily removed from its socket without liability of breakage. When a flat flame burner is desired, there are in many cases, two burners mounted in one socket, and should one of the tips in the usual burners of this class become deranged, the whole burner is generally discarded, whereas by my improvement, the defective tip may be removed and a new one attached in its place.

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

Figure 1 represents a sectional elevation of a metal casing or socket for a burner tip to an enlarged scale. Fig. 2 represents a sectional elevation of the complete burner. Fig. 3 represents a sectional plan on line *a. b.* of Fig. 2.

45 In carrying out my invention, I form a metal casing or socket A, threaded exter-

nally at B, or made in the form of a plug or otherwise, to suit the varying styles of joint between the burner and its socket, or the burner and the gas fitting. In this casing are bored holes or the like C to correspond with the air admission holes D in the porcelain or like burner tip E, which is placed in the casing A. The tip E, which may be on the Bunsen principle, as shown, or any other suitable form, and which bears the flame, has its base E<sup>1</sup> formed flat, or substantially so, as is also the interior base A<sup>1</sup> of the casing A. The tip E is placed in the casing and cemented thereto at the base, as shown at F, in Fig. 2. The top end of the tip is thus free from luting, the cement therefore being uninjured by the flame. The upper edge A<sup>2</sup> of the casing A may be slightly turned over the upper part of the tip E, in order to secure the said tip more firmly. The air holes D may be made slightly taper to insure their coinciding with the apertures C. The acetylene gas burners constructed as above will be found easy of attachment to a burner socket or gas fitting, and the liability of broken burners which is experienced in those made wholly of porcelain or the like be overcome.

What I claim as my invention is:—

An acetylene gas burner comprising a metal casing having apertures for the admission of air, and a reduced threaded portion forming a plug, said casing having a flat bottom, and a burner tip having a flat base adapted to be seated on the flat bottom of the casing, said tip having air apertures therein of tapered formation and registering with those in the casing, the upper edge of said casing being turned over upon the tip to hold said tip in place.

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

ARTHUR BRAY.

Witnesses:

CLEVE WAUGH,  
HARRY MUDD.