L. J. BACHUS.
GAS LIGHTING APPARATUS.
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Inventor

L. J. Bachus

Witnesses

J. A. Cline

G. D. Hunt

by A. Williams

Attorneys
UNITED STATES PATENT OFFICE.

LUCIUS JAMES BACHUS, OF LOUISVILLE, KENTUCKY.

GAS-LIGHTING APPARATUS.

Patent Nov. 5, 1912.


To all whom it may concern:

Be it known that I, Lucius J. Bachus, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Gas-Lighting Apparatus; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in mechanical gas lighting appliances.

One object of the invention is to provide a gas lighting appliance having an improved construction of sparking mechanism and means for operating the same.

Another object is to provide a device of this character which will be simple, strong, durable and inexpensive in construction, efficient and reliable in operation and which may be readily attached to an ordinary gas burner.

A further and important object of the invention is in the provision of a simple, practical and efficient device of the character described, whereby the abrading wheel employed is adapted to be adjusted in respect to the burner tip.

With these and other objects in view, the invention consists of certain novel features of construction and the combination and arrangement of parts as will be more fully described and claimed.

In the accompanying drawings; Figure 1 is a side view of a gas burner showing the invention applied thereto; Fig. 2 is a perspective view of the appliance removed; Fig. 3 is a central vertical longitudinal section of the same; Fig. 4 is a vertical cross section of the appliance taken on the line 4—4 of Fig. 3.

My improved gas lighting appliance comprises an attaching and supporting bracket which is preferably formed from a metal plate cut to form burner gripping arms 2 which are adapted to be engaged with and embrace a burner and which are clamped into tight engagement therewith by a clamping bolt and nut 3 engaged with the projecting apertured ends of the arms 2 as clearly shown in Fig. 1 of the drawings. The plate from which the bracket is constructed is also cut to form a supporting lug or member 4 which is bent back in the opposite direction from the arms 2 and into a horizontal position.

In the supporting lug 4 is formed an aperture in which is secured a tubular holder having an enlarged head 5 for the spark producing mechanism, said holder having on its upper end an apertured parallel bearing lugs 6 between which is revoluvably mounted a scratching or abrading wheel or disk 7. The portion of the holder 5 which projects below the supporting lug 4 is reduced and threaded externally and onto said threaded end is adapted to be screwed an interiorly threaded socket 8, said socket having formed on its outer side, annular serrated surfaces 9 whereby a firm grip may be obtained on the socket for screwing or adjusting the same on the threaded lower end of the holder.

Arranged in the upper portion of the tubular body of the holder 5 is a spark producing element 10 which may be of any suitable construction and which is preferably in the form of a cylindrical block which fits loosely in the tubular body of the holder. The spark producing element 10 is supported in the holder 5 and is forced up and held in yielding engagement with the periphery of the scratching wheel or disk by a coiled spring 11 arranged in the lower portion of the holder, said spring having its lower end engaged with or seated in the socket 8 and its upper end engaged with the lower end of the sparking element as shown. By thus arranging the spring and adjustable socket the tension or pressure of the spring may be regulated to force the sparking element into more or less tight engagement with the scratching wheel. The spring 11 also serves to move the sparking element up and to hold the same in operative engagement with the scratching wheel as the sparking element is worn away on its upper side by the repeated action of the scratching wheel. The periphery of the scratching wheel 7 is finely and sharply serrated both transversely and circumferentially, thus forming an efficient and reliable scratching surface and also enabling the surface of the wheel to be firmly gripped or engaged by the thumb or finger for the purpose of revolving the wheel against the spark producing element to form the spark for igniting the gas escaping from the tip of the burner.
In the application and operation of the
device the bracket 1 is secured to the burner
at such distance below the top or discharge
opening thereof that the spark will be pro-
duced substantially on a line with the upper
end of the tip, said spark being thrown for-
wardly or in a direction toward the dis-
charge opening in the burner tip by the
foreseeable revolution of the scratching wheel
in the opposite direction. By constructing
and arranging the scratching wheel as here-
in shown and described, it will be seen that
the wheel serves the double function of a
scratching element and as a means for oper-
ating the same, or in other words no operat-
ing mechanism except the thumb or finger is
required for manipulating the scratching
wheel.

My improved lighting appliance may be
employed in connection with any form of
gas burner but is especially designed for and
intended to be used in connection with the
head lights of motor vehicles burning acety-
lene or other form of gas whereby the use
of matches for lighting the burners is ob-
viated.

From the foregoing description taken in
connection with the accompanying draw-
ings, the construction and operation of the
invention is readily understood without re-
quiring a more extended explanation.

Various changes in the form, proportion
and the minor details of construction may
be resorted to without departing from the
principle or sacrificing any of the advan-
tages of the invention as claimed.

Having thus described my invention, what
I claim is:

1. A gas lighting apparatus, a member
adapted to be secured to a gas burner and
having a laterally extending supporting arm
provided with a screw threaded aperture,
said arm being adapted to be bent to and
from the burner to adjust the upper portion
of the device at a proper inclination, a tu-
bular holder having an exteriorly threaded
portion extending through said aperture, an
enlarged stop head adapted for contact with
the supporting arm and having a bifurcated
upper end, an abrading wheel revolvably
mounted in said bifurcated end of the holder
adjacent to the head portion of the holder,
a sparking element slidably mounted in said
holder immediately below the wheel and
within the head of the holder, a socket ad-
justably secured upon the reduced screw
threaded extension of the holder beneath the
arm, and a coiled spring disposed between
the bottom of the socket and the lower end
of the sparking element, for the purpose de-
scribed.

In testimony whereof I have hereunto set
my hand in presence of two subscribing wit-
tesses.

LUCIUS JAMES BACHUS.

Witnesses:
Pierre Viglin,
Henry J. Angermeyer.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."