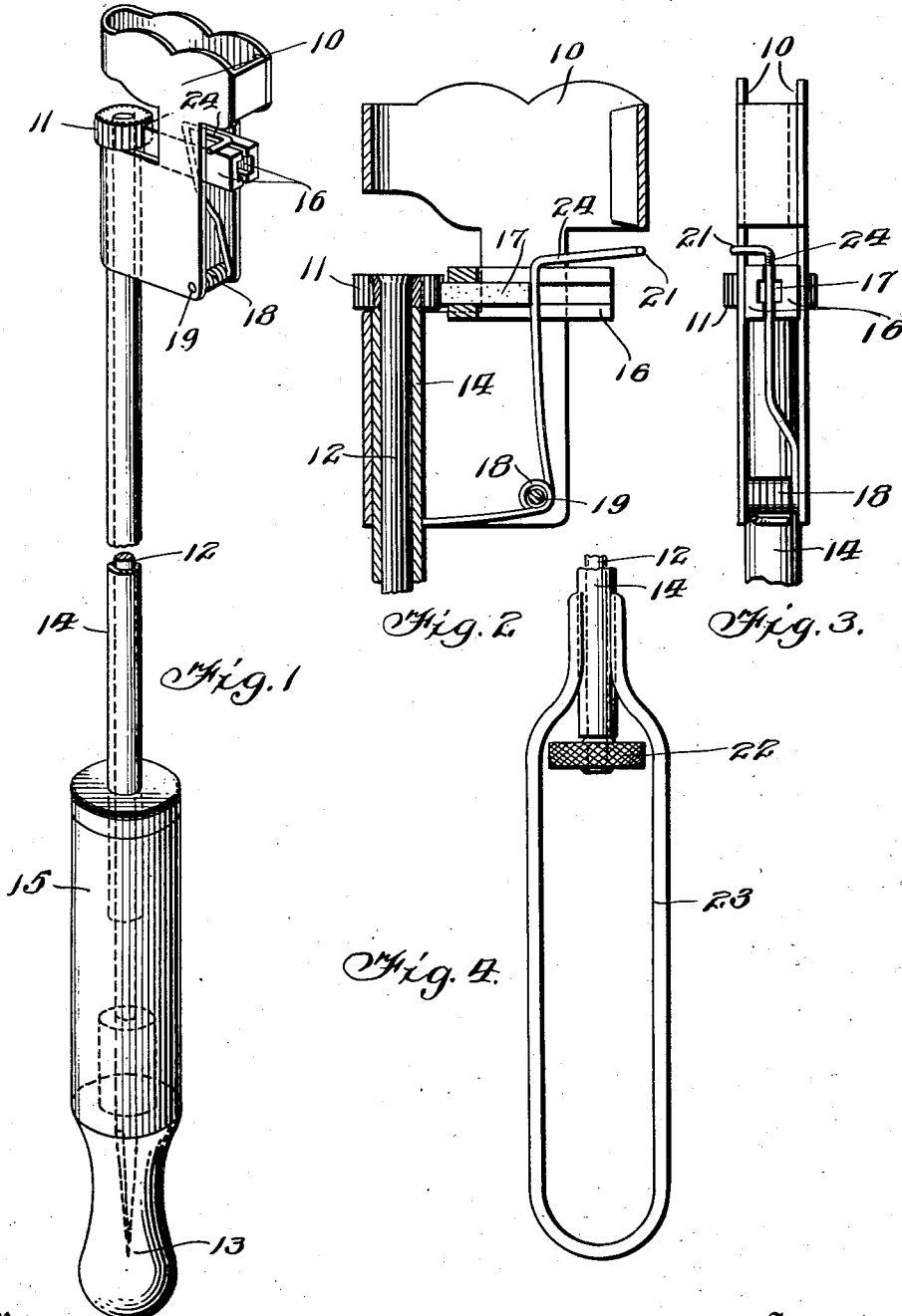


C. BRUSSEL.
GAS LIGHTER.

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UNITED STATES PATENT OFFICE.

CHARLES BRUSSEL, OF NEW YORK, N. Y.

GAS-LIGHTER.

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To all whom it may concern:

Be it known that I, CHARLES BRUSSEL, citizen of New York, residing at 511 West One Hundred and Seventy-seventh street, in the county of New York and State of New York, have invented certain new and useful Improvements in Gas-Lighters; and I do hereby 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 device pertains to gas lighters and more particularly to that style using ceric metal which is acted upon by the abrading surface.

The object of this invention is to provide an article of manufacture which is cheap in its construction and which has the combined use of a gas lighter and key turning socket.

Another object of this invention is to provide a device in which the ceric metal may be easily removed to permit substitution of a larger piece thereof and further means for causing the ceric metal to always engage the abrading surface.

Further objects will be apparent from the following specification, appended claims, and drawings thereof in which—

Figure 1 is a perspective view of the device. Fig. 2 is a vertical sectional view through the device longitudinally, Fig. 3 is a rear elevation of the upper portion of the device as shown in Fig. 2 and Fig. 4 is a view of a modified form of the handle.

Referring more specifically to the drawings, there is shown a head 10 which may be made of sheet metal stamped to the desired form and bent as shown in the drawings to form a holder for the several parts of my invention. The blank when stamped or cut is provided with an opening which when the blank is folded forms the recess in which is rotatably mounted an abrading wheel 11 which is mounted on the upper end of a shaft 12 which has its lower end rigidly secured to an operating handle 13, so that rotation of handle 13 causes similar rotation of the wheel 11. The shaft 12 passes through tube 14 which is secured at one end to the handle 15 and at its opposite end to the head 10 as shown in the drawings. The walls of the head carry guides 16 which are substantially of a channel bar formation and so positioned as to cause the

grooved faces to be opposite one another. These guides 16 are positioned radially to the wheel 11 and the bar of ceric metal 17 is slidably mounted in grooves in said bars, said bar 17 being adapted to engage the periphery of the wheel 11 so that rotation of the wheel 11 produces an abrading effect on the bar 17 which in turn creates a flash. The coil spring 18 is mounted about a pin 19 carried by said walls of the head 10 and said spring has one thereof engaging the tube 14 as shown in Fig. 2 of drawings, while the opposite end thereof is bent so as to pass freely between the guides 16, the end thereof after having passed between the guides 16 is bent rearwardly as shown at 24 for an interval then laterally as at 21 to form a thumb piece for manipulation of the spring.

Fig. 4 of the drawing shows a modified form of a handle for use in connection with my device and comprises a knurled wheel 22 which is secured to the lower end of shaft 12 which wheel is intended to be manipulated by the thumb and forefinger of the hand which engages the bent wire guard 23 which is secured at its upper end to the tube 14 as shown.

In operation the socket formed in the upper end of the head 10, is adapted to engage the key of the gas fixture to turn the same so that gas may be turned on or off, then in case the gas is turned on the device is raised so that the flash formed by the abrading wheel and ceric metal occurs within the flow of gas and this flash is generated or caused by holding the handle 15 and rotating the handle 13 in the proper direction with respect to the handle 15 which in turn causes the head 10 which carries ceric metal to remain substantially stationary while the abrading wheel 11 is rotated to cause a spark from the ceric metal. I have mentioned ceric metal throughout the specification as the same is a staple product but I do not restrict myself to the use thereof as any equivalent for said metal may be substituted in place thereof.

In assembling the handles 13 and 15, I have shown by dotted lines in Fig. 1 of the drawing that the handle 13 has a dowel which is adapted to fit within the socket formed within the member 15 and although I am not restricted to this form I consider that such a structure causes the handle 13 to be more rigid with respect to handle 15

and the strain on rod or shaft 12, is relieved thereby. I have also shown the lower end of shaft 12 tapered so that same may be driven into handle 13 and be held securely therein, said tapered portion having an irregular or non-circular face so as to get a purchase in the handle 13 as to cause the parts to move in unison.

Having thus described my invention, I claim:

1. In a gas lighter, the combination of a holder, a key socket formed therein guides carried thereby, a piece of spark producing material slidable in said guides, a wheel rotatably mounted in said holder, a spring carried by said holder engaging said ceric or other metal, means for rotating said abrading wheel in a uniform direction with respect to said holder, and means for preventing said spring from contacting with said abrading wheel.

2. A gas lighter, comprising a handle, an extended stem and a head secured to said stem, said handle being made in two sections one of which is revoluble in a uniform direction with respect to the other, a shaft secured to one of said handle sections and revoluble in a uniform direction through said stem said head carrying guides and a spring operating therebetween, a bar of spark producing material slidable in said

guides, an abrading wheel mounted upon said shaft and adapted to engage said bar of ceric metal and a socket formed in said head.

3. In a gas lighter, a handle, an elongated stem and a head, said handle being made in sections, said stem being secured to one of the handle sections, a shaft revoluble through said stem and secured to the other of said handle sections, said head comprising a metal plate stamped and bent about said stem, a socket formed thereby, said head having a recess formed therein, an abrading wheel mounted upon said shaft within said recess, guides carried by said head, a bar of spark producing material slidable in said guides and radially disposed with respect to said abrading wheel, a spring carried by said head and exerting its influence upon said spark producing material toward said abrading wheel, said spring continuing beyond said head into a thumb piece and stops formed on said guides to limit the movement of said spring.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES BRUSSEL.

Witnesses:

GEORGE L. THOM,
HUGO MOCK.