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LIGHTER FOR GAS BURNERS AND STOVES

Filed Feb. 1, 1930

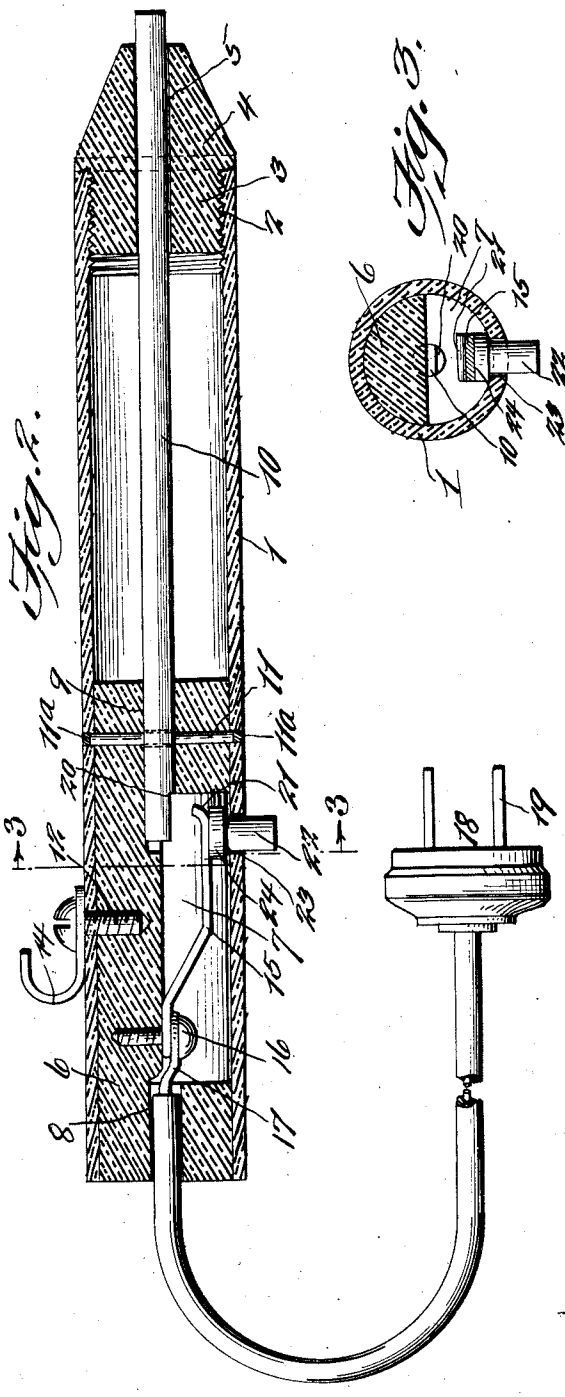


Fig. 2.

Fig. 3.

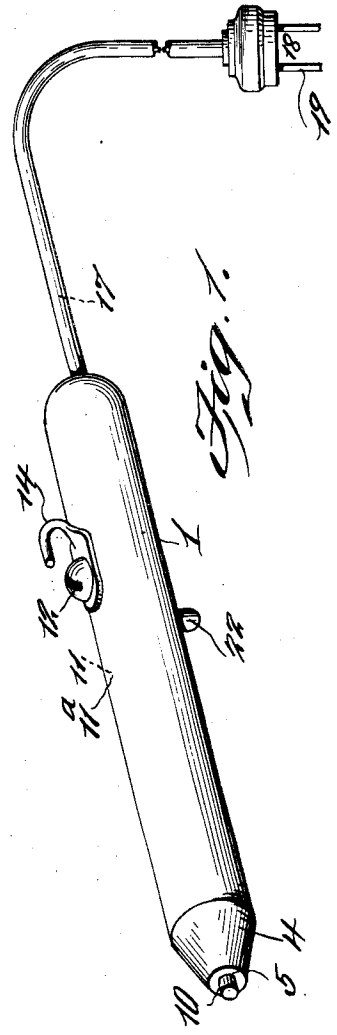


Fig. 1.

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LIGHTER FOR GAS BURNERS AND STOVES

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This invention relates to a lighter, particularly of the electrical type, and adapted for lighting gas burners, ranges, stoves and the like, that is wherever gas is to be lighted, and the purpose of the invention is to provide a very simple and practical construction of device of this kind, which is inexpensive in its manufacture, whereby it can be sold at a reasonable profit, and which also eliminates the use of matches and other means (such as having a fire stone) heretofore employed.

Another purpose is to provide an article of this kind having electrical resistance, either metallic or non-metallic, of sufficient size as to permit grounding of the phase wire in an A. C. current and the plus or positive wire in a D. C. lighting circuit, whereby the gas burner, range, stove and the like constitute the ground. The purpose is that as soon as the ends of the resistance device performs a contacting operation with the range, stove or the like, a spark is created thereby igniting the gas.

Another purpose is to provide, in a lighter a core of some suitable composition arranged in one end of a hard fibre cover tube for the support of a lead connection and a spring contact, and the support of one end of a resistance, such as a carbon rod, the outer end of the resistance or carbon rod being supported in a nozzle mounted in the other end of the tube, the nozzle being made of any material preferably asbestos composition, so that when the contact element carried by the first core is brought into engagement with the rear end of the resistance, and the forward end of the resistance is brought in contact with the metal of the range or stove or the like, a circuit is completed lighting a spark, which will ignite the gas, allowed to escape from the burner, range, stove and the like.

It is to be understood that the particulars herein given are in no way limitative, and that while still keeping within the scope of the invention, any desired modification of details and proportions may be made in the construction of the appliance according to circumstances.

The invention comprises further features and combination of parts to be hereinafter set forth, shown in the drawings and claimed.

In the drawings:

Figure 1 is a view in perspective of the improved lighter constructed in accordance with the invention.

Figure 2 is a longitudinal sectional view through the same.

Figure 3 is a sectional view on line 3—3 of Figure 2.

Referring to the drawings, 1 identifies a covering or housing tube, which may be any diameter and any length and constructed of any suitable hard fibrous material. One end of the tube interiorly is threaded at 2 for the reception of the exteriorly threaded reduced portions 3 of a nozzle plug 4. The exposed end of the nozzle plug is tapered and is provided with a longitudinal bore 5.

Positioned within the other end of the cover tube or housing is a core 6, which may be any length, and is fitted within the cover tube or housing. This core 6 may be constructed of any substance, such as fibrous composition material and is provided with a recess 7. The rear end of the core is provided with a bore or passage 8, while the forward end has a similar bore 9. A resistance element 10 preferably comprising a carbon rod is housed in the cover tube, with its rear end fitted in the bore 9 and its forward end passing through the bore 5, with its extremity protruding slightly beyond the nozzle, sufficiently to contact with a body of metal preferably the metal which is usually positioned over a burner.

A transverse pin 11 engages the core 6 and through the resistance element 10, thereby not only securing the resistance element to the core but assisting in holding the core in position especially until a screw 12 is engaged with the core. The pin 11 is of such a length that when it is positioned its opposite ends are short of the marginal edges of opposite openings formed in the cover tube. In this way cavities at the opposite ends of the pins are caused to be formed. These cavities are filled with some suitable compound or composition 11*a*, such as will cover the opposite extremities of the pin 11, and

when made flush with the exterior of the cover tube presents a neat appearance.

The screw 12 is threaded through the cover tube and into the core 6, thereby insuring the mounting of the core. A suitable clip 14 is also secured to the exterior of the cover tube by means of the screw 12, and by said clip the lighter may be hung upon a suitable support (not shown).

The bottom of the recess 7 supports a spring contact 15, a screw 16 passing through one end of the spring contact and threaded into the core 6 to hold the contact in position. One end of a lead 17 (such as the live side of the line) is also secured in position by means of the screw 16. The lead 17 is suitably insulated exteriorly of the cover tube and is in engagement with the spring contact, the other end of the lead is connected to a conventional type of plug 18, one of the arms or terminals 19 being in circuit with the lead.

The rear end of the resistance element 10 is slightly recessed at 20, the bottom of which may be engaged by the lateral end or terminal 21 of the spring contact, when the spring contact is depressed.

In order to depress the free end of the spring contact a button 22 is mounted in an opening 23 of the wall of the cover tube, the enlarged end 24 of the button being located on the interior of the recess 7. The large end of the button limits the button in its outward movement. However one face of the spring contact normally engages the face of the enlarged end, so that when the button is depressed the contact may be forced toward and in engagement with the bottom of the recess 20 formed in the rear end of the resistance element, such as a carbon rod.

In using the lighter, that is when the button is depressed and causing the spring contact to engage with the resistance element or carbon rod, that is when the terminals of the plug 18 are engaged with the socket, and the exposed end of the resistance element 10 is brought into a scratching contact with the metal around the burner, range, stove or the like, such metal being grounded through the range and the gas pipes leading to the ground, a spark is caused to be created, when said scratching contact is broken, the sparks resulting from said broken scratching contact are adapted to ignite the gas flow from the burner, range or similar apparatus, hence eliminating the use of matches and other devices.

The invention having been set forth, what is claimed is:

1. In a lighter, the combination with a cover tube or housing provided with a core of fibrous material in one end and a core nozzle of similar material in the other end, of a resistance element mounted in said cores, the rear core having a recess, a line lead extending into the first core and terminating at a point within the recess, a plug connected to the outer end of the line lead, a spring contact connected to the end of the line lead within the recess and having its terminal disposed whereby it may contact with the resistance element, and an actuating element mounted in the wall of the cover tube and adapted to cooperate with the terminal of the spring contact to depress it in engagement with the resistance element, whereby a spark may be created at the exposed end of the resistance element when brought into scratching engagement with the metal element of the burner of a range.

2. In a lighter as set forth, a fibre tubular housing, a core fitted and secured in one end and provided with a recess, a resistance element extending through the inner end of the core, with its extremity exposed at a point adjacent one end of the recess, means passing through the tubular housing through the core and resistance element to secure the core in position and at the same time hold all three together, means in the other end of the housing to mount and support the other end of the resistance element with its extremity exposed, a line lead with a plug at one end and its other end passing through the core and terminating a short distance within the recess, a spring contact connected to the line lead at a point within the recess and having its free end in a close position to the inner end of the resistance element, and means mounted in and carried by the wall of the housing to depress the free end of the spring contact against the inner end of the resistance element, whereby when the plug is engaged with a socket and the exposed end of the resistance element brought into scratching contact with the metal around a gas range, a spark may be created for igniting the escaping gas.

In testimony whereof he affixes his signature.

FRANZ A. RUMP.