June 19, 1934. L. ZWILLING 1,963,345

WICK LIGHTER

Filed May 20, 1930

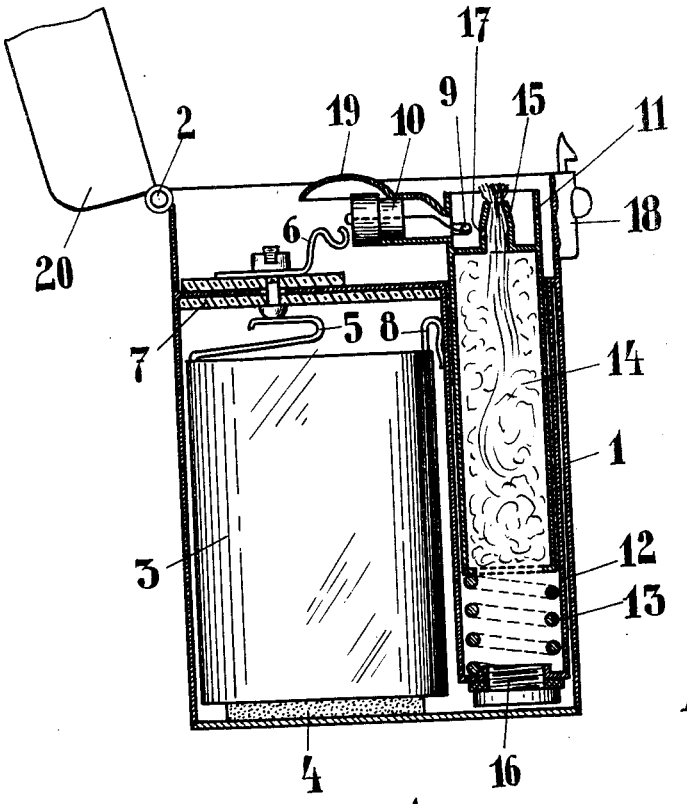

Fig.1.

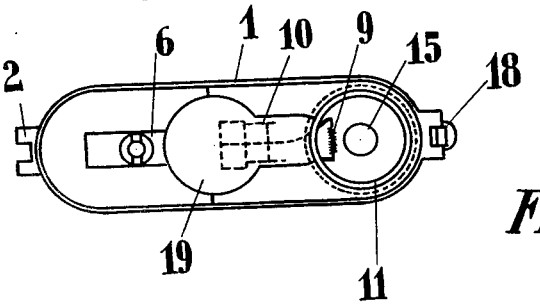

Fig.2.

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Patented June 19, 1934 1,963,345

UNITED STATES PATENT OFFICE

1,963,345

WICK LIGHTER

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Application May 20, 1930, Serial No. 454,145
In Germany May 23, 1929

1 Claim. (Cl. 175—296)

In wick lighters, which are lighted by an electrically heated ignition spiral or by the spark of a cerium stone, the difficulty lies in the production of an air-fuel mixture within the range of the ignition device at the instant the spark is formed or the ignition temperature is reached.

According to the invention the vessel containing the liquid fuel of the lighter is provided with a device for producing a pressure therein in such a manner that, at the instant of the production of the ignition spark or of the incandescence of the electrically heated incandescent wire, a flow of gaseous or vaporous fuel is forced from the fuel container into the ignition space.

The device for producing a pressure in the fuel container may consist of a pump, for example an air pump, built into the container, or of a displacer which reduces the volume of the fuel container.

It is preferable on the one hand to produce a certain positive movement between the pressure producer and the device for producing the ignition temperature, and on the other hand to conduct the flow of the gaseous or vaporous fuel or fuel mixture in a narrow channel to the device for producing the ignition temperature.

An embodiment of the invention is illustrated by way of example in the accompanying drawing in which:

Fig. 1 shows a pocket lighter in longitudinal section.

Fig. 2 shows the pocket lighter in top plan view with the lid removed.

In the drawing 1 is the casing of the lighter, which is provided with a lid 20 hinged thereon by a hinge 2. In this lighter casing the dry battery 3 is inserted, which rests on an insulator 4 and supplies current through a contact spring 5 to a contact spring 6 above an insulator 7, whereas a contact spring 8 bears on a metal part metallically connected with the casing 1 so that the second pole of the dry battery 3 is lying on the mass. 9 is the ignition wire, which is consequently supplied with current as soon as the carrier 10 of the ignition wire 9 is moved downwards by means of the handle 19 so that the contact spring 6 comes into contact with the carrier 10. Current flows then from the dry battery 3 through spring 5, contact spring 6, carrier 10, ignition wire 9, casing 1 to the contact spring 8. The carrier 10 with the handle 19 of the ignition wire 9 is fastened to the casing part 11, which slides tightly in the casing part 12 against the action of a spring 13. In the space between the two casing parts 11 and 12 the liquid fuel, for example benzine, as also the wick 14 are arranged, the free end of which wick extends to the outer side through the wick sleeve 15. The two casing parts can be pushed out of the casing 1 and opened by unscrewing the screw part 16 for filling in the fuel. A narrow channel opening 17 is provided in the side of the sleeve 15.

The operation of the pocket lighter is as follows:

After the lid 20 has been opened by depressing the snap lock 18, the casing part 11 is pressed downwards by the handle 19 into the casing part 12 against the action of the spring 13. Consequently the vapours and gases of the fuel enclosed in the two part container is forced out through the narrow passage 17. At the same time by depressing the handle 19 the carrier 10 of the ignition wire 9 is brought into contact in the manner described, with the contact spring 6, so that current flows from the battery through the ignition wire causing it to glow almost immediately and this wire being situated in the path of the gas current, forced out through the channel 17, ignites this gas current. By this ignition flame the liquid fuel on the wick is ignited which projects from the sleeve 15. As soon as the lid 20 is again engaged in the snap lock 18, the flame of the lighter is extinguished.

Lighters for lamps and other purposes, for example gas lighters can be made in a similar manner.

I claim:—

An electric lighter, comprising in combination a casing divided into two compartments, a fuel container in one of the compartments consisting of a stationary part for the fuel and a part vertically shiftable in said stationary part, a wick in and projecting from the upper end of said shiftable part having a small aperture positioned near the wick, an insulating carrier on said shiftable part, an ignition wire on said carrier in proximity to the aperture in said container under the free end of said wick, connected at one end to said container, a contact carried by said carrier connected to the other end of said ignition wire, a battery in the other compartment of said casing, one pole of said battery conductively connected to said casing and therefore to said stationary part, and a contact conductively connected to the other pole of said battery situated in the path of movement of the contact on said carrier, the shiftable part adapted on being pushed into the stationary part of said container to produce a pressure to cause liquid fuel to flow in gaseous form through the aperture in said shiftable part against said ignition wire, and at the same time to bring the contact in said carrier against the contact of said battery to cause current to flow from said battery through said ignition wire and heat said wire.

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