

O. SCHLICK.
PYROPHOROUS LIGHTER.
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1,057,585.

Patented Apr. 1, 1913.

Fig. 1.

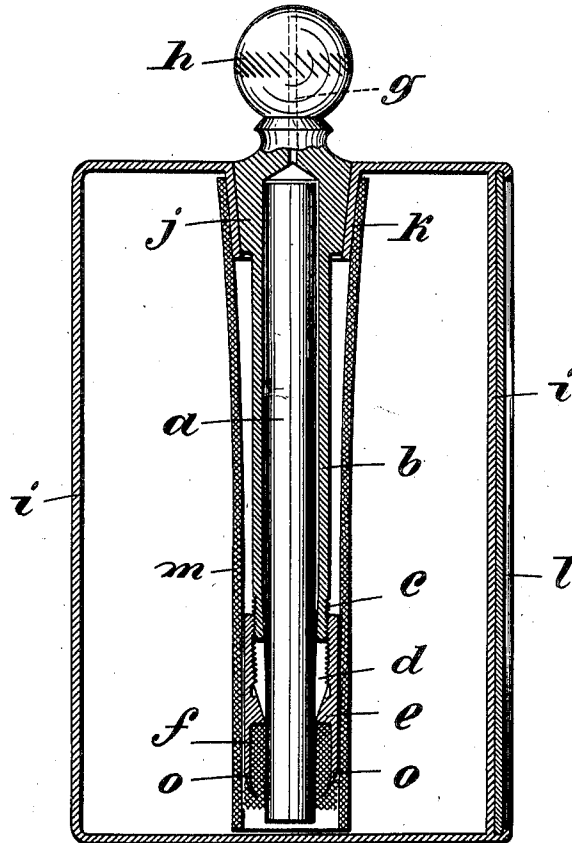
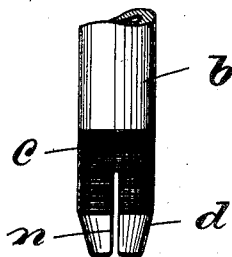


Fig. 2.



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UNITED STATES PATENT OFFICE.

OTTO SCHLICK, OF BERLIN, GERMANY.

PYROPHOROUS LIGHTER.

1,057,585.

Specification of Letters Patent.

Patented Apr. 1, 1913.

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To all whom it may concern:

Be it known that I, OTTO SCHLICK, of Berlin, a subject of the King of Saxony, and whose post-office address is Steinmetzstrasse 31, in the city of Berlin, Kingdom of Prussia, German Empire, have invented a new and useful Pyrophorous Lighter, of which the following is a specification.

This invention relates to pyrophorous lighters, that is to say, to lighters in which a spark is produced by rubbing a spark producing material, for instance cerium-iron or the like, the said spark being adapted to light a wick impregnated with inflammable liquid such as benzin or the like or a piece of tinder. In such lighters a milled wheel is quickly rotated by a spring or the like, whereby a spark is produced from the spark producing material, or a rod-like holder, is employed which as a rule is mounted in the casing containing an impregnated wick, and is itself provided with such a wick, the holder being withdrawn from the casing and rubbed like a match on a rubbing surface of the casing and is thus ignited.

This invention relates to an improvement in lighters of the latter kind. In these lighters, hitherto it has been usual to secure in a metal sleeve a short piece of spark producing material such as cerium-iron or the like, by means of cement. When the said short piece was worn away by repeated striking, it was necessary to dissolve the cement and to insert a new piece. This manipulation is not only complicated, but can not be done by the customer himself. The drawback is obviated according to this invention by employing a rod of spark producing material, of practically the same length as the holding sleeve, inserted in the holder used for striking, in an easily detachable and adjustable manner through the cap containing the burning wick, in the same way as a lead is introduced into a pencil. The invention has therefore the great advantage that in such a lighter the length of life of the pyrophorous material without renewal is considerably increased, and the adjustment of the lighting rod can be easily effected at any moment by the user.

A construction according to this invention is illustrated by way of example in the accompanying drawing in which—

Figure 1 is a longitudinal section, while Fig. 2 shows the bottom part of the holder

sleeve in elevation, turned at 90° from the position shown in Fig. 1.

In the drawing, the rod *a* of spark producing material is fitted loosely into the central bore of a sleeve *b* made of metal. This sleeve is provided at the bottom with a screwthread *c* on which is screwed a screwthreaded cap *e*. The sleeve *b* is made with a tapering bottom end *d* and provided with slots *n*, so that the conical end of the sleeve *b* is slightly springy. The cap *e* is also made of a corresponding conical shape, as shown in the drawing, so that, when it is screwed on, the conical tongues *d* of the sleeve *b* are firmly pressed against the rod *a* and hold it fast, while when the cap *e* is unscrewed, the rod *a* can be easily advanced.

In front of the conical portion, the cap *e* is provided with tongues *o* between which preferably are arranged slots and between which is jammed a wick *f* of non-combustible material such as asbestos-wool, glass-wool or the like. At the upper end the sleeve *b* is provided with a button *h* forming a handle and with a widened conical part *j* fitting exactly into a conical branch *k* of the casing *i* of the lighter, to one side of which is secured the rubbing surface *l*. The button *h* is preferably provided with a longitudinal perforation *g* through which a pin or the like can be introduced in case the rod *a* should stick fast in the sleeve *b*. To the branch *k* of the casing *i* is secured a tubular wick *m*.

The method of use is as follows:—After having withdrawn from the casing *i* the holder consisting of the sleeve *b*, the pyrophorous bar *a* and the wick cap *e*, a little liquid such as benzin or the like, is introduced, until the wick *m* is impregnated therewith, whereupon the rest of the liquid is poured off. The holder is then introduced into the casing. During withdrawal the ignition wick *f* becomes sufficiently impregnated with benzin, so that on the holder being rubbed with the ignition bar *a* on the rubbing surface *l* the wick *f* is lighted by the spark. After use, and after extinguishing the flame, the holder is replaced. If after a certain time the ignition bar *a* has worn down to the edge of the wick *f*, so that the said wick *f* and the spring tongues *o* would be damaged by further use, the wick cap *e* is somewhat unscrewed, and the ignition bar *a* is advanced to the same extent.

The ignition bar *a* can then be easily adjusted at any moment and used until it is all worn out down to a slight length. Obviously if it were desired, instead of producing a flame, to make a piece of tinder glow, the wick *f* could be replaced by tinder.

What I do claim, and desire to secure by Letters Patent of the United States, is:—

10 An ignition apparatus of the character described, comprising in combination a casing, a tubular holder removably inserted into the casing a rod of spark producing material loosely inserted into the holder, an annular

wick surrounding the lower end of said rod, conical tongues on the lower end of said tubular holder and a screw threaded cap fitting with a conical recess on the conical tongues and provided with tongues for holding in position said annular wick. 15

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses. 20

OTTO SCHLICK.

Witnesses:

HENRY HASPER,
WOLDEMAR HAUPT.