Jan. 19, 1926. 1,569,941

W. BALTRUSCH

POCKET LIGHTER

Filed April 17, 1924

Fig. 1

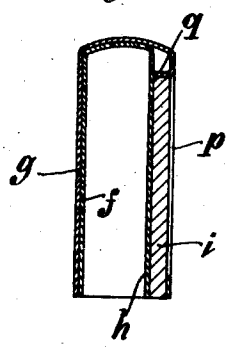
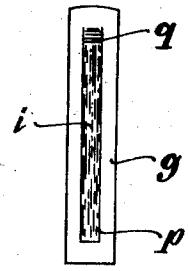


Fig. 2



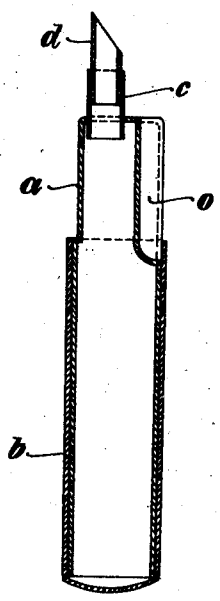


Fig. 3



Fig. 4



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UNITED STATES PATENT OFFICE.

WILHELM BALTRUSCH, OF ELBERFELD, GERMANY.

POCKET LIGHTER.

Application filed April 17, 1924. Serial No. 707,281.

To all whom it may concern:

Be it known that I, WILHELM BALTRUSCH, a citizen of the German Republic, and residing at Elberfeld, in the Province of Rhenish Prussia, Germany, merchant, have invented certain new and useful Improvements in Pocket Lighters, for which I have filed an application for patent in Germany on April 25, 1923, Serial Nr. B.109466 X/44b2, and of which the following is a specification.

The invention relates to a pocket lighter with a chisel- or scoop-like scraper mounted on the combustible container and pyrophoric element mounted on the removable closing cap.

In known lighters of this kind the pyrophoric element is mounted in a separate holder exchangeably attached to the cap. Both holder and pyrophoric element project to some extent from the wall of the cap, which arrangement is not only unsightly but has the drawback that, owning to the sharp edges of the holder, the lining of the pocket is damaged or gets torn off. Moreover, in many cases, owing to the defective fastening method of the holder the pyrophoric element easily gets lost.

These drawbacks are obviated by the pocket lighter according to the present invention in that the pyrophoric element is mounted in a downwardly opening intermediate chamber or longitudinal channel located between the two walls of the double-walled cap, the outer of which walls has a window-like opening for exposing the operative face of the pyrophoric element. The latter is no longer positioned on the outside of the wall of the cap, but inside the latter, whereby the lighter has a perfectly closed form and at the same time damage to the pocket-lining is avoided. In addition, the pyrophonic element is safeguarded against loss, and finally the separate holder for the element is dispensed with.

The longitudinal channel for receiving the pyrophric element is conveniently formed of a groove pressed into the inner wall of the cap, so that the outer wall of the latter need be pressed outwardly only little or not at all from its normal level. The pyrophoric element and the groove in the cap-wall containing said element conveniently have the cross-section of a segment of a circle the flat surface of the element constitutes the operative face. In contradistinction to the usual cross-section of pyrophoric element, this has the advantage that the element can be used up almost completely whereas in the known rectangular and dove-tail sections always very large, unusable waste or residue remains behind.

In order to remove the pyrophoric element with little trouble from the chamber between the two walls of the cap when the worn element is to be replaced by a fresh one, the upper or narrow edge of the window in the outer cap-wall is bent inwardly so that it constitutes a stop for the pyrophoric element when the latter is pushed from below into the channel. The element can then be pushed downwardly by means of a sharp implement, e. g. the edge of a knife, inserted between the edge of the window and the upper edge of the pyrophoric element.

An embodiment of the invention is shown by way of example in the accompanying drawing, wherein.

Fig. 1 is a longitudinal section of the combustible container and the cap (shown removed),

Fig. 2 a side view of the cap, and

Figs. 3, 4 are horizontal sections of cap and upper end of said container respectively.

The rectangular combustible container which is as usual filled with an absorbent material, e. g. wad, adapted to receive an easily inflammable liquid, for example, benzine, comprises in known manner two sheet metal socket-like casings *a* and *b* with their open ends engaging the one into the other. The wick-tube *c* soldered into the top of the casing *a* is provided with a scoop or chisel-like scraper *d* of steel which is secured in known manner, e. g. by being firmly pressed in. The double-walled cap comprises two sheet metal caps *f*, *g* of rectangular cross-section, the closed end of the one being pressed into the closed end of the other. On one of the narrow sides of the cap an inwardly extending curved groove *h* is pressed into the inner wall *f* of the cap, the wall of which groove engages in a second groove *o* in the casing *a* of the container when the cap is put on. Owing to the groove *h* being pressed into the inner wall *f* of the cap there is formed between said wall and the outer wall *g* a longitudinal channel, which, according to the invention, serves to receive the pyrophoric element *i* which consists, for example, of a piece of cerium-iron,

the latter being pushed into said channel from the lower or open end of the cap. On the same narrow side of the cap, the outer wall of the latter has a window-like opening *p*, through which the operative face of the pyrophoric element is exposed. The latter, and correspondingly with it the channel receiving it, have each the cross section of a segment of a circle, so that the element can be used up almost completely, i. e. without waste. The upper edge *q* of the window-like opening *p* cut in the outer cup-wall is at a right angle bent inwardly, so that it serves as stop for the pyrophoric element *i*. In that way the element can be pushed out downwardly with little trouble by means of an implement inserted between the edge *q* and upper edge of the element *i* when it is necessary to supply a fresh pyrophoric element.

The invention is not limited to the embodiment shown, but covers many modifications therein or thereof. For example the combustible container might be round instead of rectangular and the longitudinal channel instead of being formed by pressing a groove in the inner cap-wall might be formed by pressing in the outer wall an outwardly projecting groove or longitudinal ridge. Finally the pyrophoric element, instead of having the segment-like cross-section shown might have the known polygonal cross-section, the longitudinal channel between the two cap-walls being then of polygonal form.

Claims:

1. A pyrophoric pocket lighter comprising in combination: a combustible container, a chisel- or scoop-like scraper mounted on said container, a double-walled cap for covering said scraper and said container, a pyrophoric element arranged between the two walls of said double-walled cap, and an opening in the outer wall of said cap for exposing the operative face of said pyrophoric element.

2. A pyrophoric pocket lighter comprising in combination: a combustible container, a chisel- or scoop-like scraper mounted on said container, a double-walled cap for covering said scraper and said container, a longitudinal channel between the two walls of said cap for receiving a pyrophoric element, and a window like opening in the outer wall of said cap in front of said channel.

3. A pyrophoric pocket lighter comprising in combination: a combustible container, a chisel- or scoop-like scraper mounted on said container, a double-walled cap for covering said scraper and said container, a longitudinal channel between the two walls of said cap for receiving a pyrophoric element, said channel being open at the lower end of said cap, and a window like opening in the outer wall of said cap in front of said channel.

4. A pyrophoric pocket lighter comprising in combination: a combustible container, a chisel- or scoop-like scraper mounted on said container, a double-walled cap for covering said scraper and said container, a longitudinal groove pressed into the inner wall of said double-walled cap, said groove forming a downwardly open longitudinal channel between the two walls of said cap, a pyrophoric element arranged in said channel, a window like opening in the outer wall of said cap for exposing the operative face of said pyrophoric element and a longitudinal groove on the top end of said combustible container for receiving said groove portion of the inner wall of said cap.

5. A pyrophoric pocket lighter comprising in combination: a combustible container, a chisel-like scraper mounted on said container, a double-walled cap for covering said scraper and said container, a longitudinal channel arranged between the two walls of said double-walled cap, said channel being open at the lower end of said cap, a pyrophoric element arranged in said channel, a window-like opening in the outer wall of said cap for exposing the operative face of said pyrophoric element, the upper edge of said opening being bent inwardly to form a stop for said pyrophoric element.

6. A pyrophoric pocket lighter comprising in combination: a combustible container, a chisel-like scraper mounted on said container, a double-walled cap for covering said scraper and said container, a longitudinal groove of segment-like cross-section pressed into the inner wall of said double-walled cap, said groove forming a downwardly open channel between the two walls of said cap, a pyrophoric element arranged in said channel, said element having a segment-like cross section, and an opening in the outer wall of said cap for exposing the flat surface of said pyrophoric element.

7. A pyrophoric pocket lighter comprising in combination: a combustible container, a chisel-like scraper arranged on said container, a cap for covering said scraper and said container, and a pyrophoric element arranged at said cap, said pyrophoric element having a segment-like cross section, the flat surface thereof constituting the operative face.

In testimony whereof I affix my signature.

WILHELM BALTRUSCH.