

# PATENT SPECIFICATION



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## COMPLETE SPECIFICATION.

### Cerium Pocket Lighter.

I, FRITZ BECK, of No. 12, Kaiserstrasse, Nuremberg, Bavaria, Germany, of German nationality, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to a cerium pocket lighter of the kind in which the steel striker has an annular shank secured to the wick container and surrounding the wick and in which the cerium is removably carried at the end of a tubular cover.

In pocket lighters of this kind, it is known to mount the cerium piece in a ring-shaped piece with inner opposing faces outwardly inclined from above to below, the ring-shaped piece being secured upon the end face of the tubular cover by means of a detachable cap having an aperture in its top wall, but in this case the cerium piece projected above the ring-shaped piece and through the aperture in the removable cap.

The present invention is differentiated from the construction above referred to in that the cerium piece is disposed entirely within the removable cap and has its upper surface below the upper surface of the ring-shaped piece, the inner opposing surfaces of the ring-shaped piece, which are outwardly inclined from above to below, serving as guides for the steel striker.

In order that the invention may be clearly understood, I shall proceed to describe the same with reference to the construction shown by way of example in the accompanying drawing, wherein:—

Fig. 1 shows the pocket lighter in axial section.

Fig. 2 is a side elevation of the pocket lighter.

[Price 1/-]

Fig. 3 is a plan view of the same.

Figs. 4 and 5 show the tubular cover in side elevation and in plan view respectively.

Figs. 6 and 7 are a side elevation and a plan view respectively of the mounting of the cerium.

Figs. 8 and 9 represent the cerium in side elevation and in plan view respectively.

Figs. 10 and 11 show the screw cap for fixing the mounting of the cerium in side elevation and in plan view respectively.

Figs. 12, 13 and 14 show the friction device in different views.

Figs. 15 and 16 are respectively a side elevation and a view from below of the wick holder.

The fuel reservoir *a* consists of a conical tube closed at the lower end by a bottom plate and at the upper end by the wick holder *c*. In the wick holder *c* the knife *d* of peculiar shape is mounted whose cutting edge is preferably situated transversely to the axis of the wick holder or slightly inclined with regard to the same. The knife *d* has an annular shaft *d*<sup>1</sup> which fits the boring for the wick and which encloses the wick so that the knife is securely mounted in the wick holder *c*.

A sleeve *b* whose conicity corresponds with the conicity of the fuel reservoir *a* and which is closed at the upper end is mounted upon said fuel reservoir; it has outer threads designed to receive the screw cap *g*. The top of the screw cap has a circular opening so that it forms an inwardly projecting ring-shaped head *g*<sup>1</sup>. Between the head *g*<sup>1</sup> and the end face of the sleeve *b* the mounting of the cerium is located which consists of a circular disk *e* having a rectangular opening *e*<sup>1</sup>. Two opposite edges of the opening *e*<sup>1</sup> are

bevelled downwardly so that a dove-tailed recess is formed in which the cerium piece *f* is inserted which has two bevelled side faces *f*<sup>1</sup>.

5 Owing to the peculiar construction of the sleeve described, the cerium piece is countersunk and removable.

The pocket lighter presents an absolutely smooth outer surface and is consequently to be stored easily in a pocket. 10 It can even be used as pipe-stopper.

After the cap *g* has been screwed off the mounting *e* with the cerium piece *f* drops out. The cerium piece can be removed by 15 a slight pressure from its mounting and a new piece of cerium can be inserted. The fixation is effected in an equally simple manner but in inverse succession.

Owing to the conical shape of the fuel reservoir and of the sleeve a gas tight 20 joint is effected between said two parts so that no loss of fuel can occur. To make the pocket lighter ready for use it is merely necessary to remove the sleeve *b* 27 and to rub the knife *d* along the opening *e*<sup>1</sup> over the cerium *f* to produce strong sparks which light the wick. The wick holder *c* remains in the fuel reservoir so 30 that no fuel can be lost even when the pocket lighter is being used.

The comparatively large cutting edge *d* rubs over the entire width of the cerium piece but does not penetrate into the same, so that no cerium is wasted. When 35 the cutting edge has become blunt it can be easily sharpened or the knife can be replaced by a fresh knife. The benzine reservoir forms a handy handle, so that the knife is better guided in the slot or 40 recess *e*<sup>1</sup> than the thin friction member of the pocket lighters of known construction, with which it happens frequently that the knife slips off the cerium unless the lighter is handled carefully.

The improved construction of the 45 pocket lighter, which could evidently be oval, flat edged or of other shape, offers the further advantage that the wick can be easily replaced. The lower end of the wick is stored in the hollow space of the 50 wick holder and is in contact with the wadding of the fuel reservoir merely by pressure.

Having now particularly described and ascertained the nature of my said inven- 55 tion and in what manner the same is to be performed, I declare that what I claim is:—

1. An improved pocket lighter operated by friction characterized in this that the 60 cerium piece is mounted in a ring-shaped piece (*l*) with inner opposing faces which are outwardly inclined from above to below so that the upper edge of said ring-shaped piece slightly overlaps the upper 65 surface of the cerium piece and is adapted to serve as guide for the rubbing tool.

2. An improved pocket lighter as claimed in Claim 1 characterized in this that the ring-shaped piece (*e*) which 70 encloses the pyrophoric mass is held in position by a screw cap (*g*) with open top screwed upon the cover (*b*).

3. An improved pocket lighter operated by friction as claimed in Claim 1 character- 75 ized in this that the tubular fuel reservoir is conical at its upper end, the sleeve removably mounted upon said upper end of the fuel reservoir being conically enlarged at the lower end in order to 80 prevent any escape of fuel.

Dated this 10th day of January, 1921.

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[This Drawing is a reproduction of the Original on a reduced scale.]

