

## PATENT SPECIFICATION



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## COMPLETE SPECIFICATION

## Improvements relating to Pyrophoric Lighters

I, ALOIS KAUFMANN, of 57, Pernerstorfergasse, Vienna X, Austria, of Austrian 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 pyrophoric lighters of the kind having shielding means surrounding the wick, and apertured for admitting a controlled draught to the flame.

An object of the invention is to provide improved lighters of this kind wherein favourable guiding of the flame is assured by special arrangement of the draught apertures.

According to the invention, draught apertures constituted by slots, formed in the side walls of the casing or in a windshield associated therewith, are inclined to the axis of the lighter at an angle which is greater than  $30^\circ$  and less than  $90^\circ$  and have louvers which direct the incoming air away from the friction wheel and upwards.

It has been proposed to provide lighters wherein air slots covered with inclined deflecting surfaces are provided in a windshield surrounding the flame, said slots being disposed parallel or at right angles to the axis of the lighter so that the incoming air is deflected thereby from the wick and wick tube in such a manner that while the flame is sufficiently fed thereby, it cannot be extinguished.

As distinct from this, by the arrangement of the draught slots and their louvers according to the present invention, the incoming air is forced away from the friction wheel and upwards, producing a lengthened flame and at the same time increasing the protection of the delicate parts of the lighter, such as friction wheel and parts associated therewith, from the action of the flame.

In order to obtain a flame which is lengthened still more, air inlet holes may additionally be provided in the parts of the walls of the lighter casing which surround the wick tube, at or below the level of the wick. Air entering through these openings flows upwardly as in a flue and thus lengthens the flame.

In the drawing two embodiments of the

invention are illustrated by way of example.

Fig. 1 shows a lighter with pivoted windshield in side elevation,

Fig. 2 shows the same in front elevation, and

Fig. 3 shows a second embodiment with integral windshield in side elevation.

In the embodiment shown in Figs. 1 and 2, a windshield 2 is pivoted about the friction wheel axle 1. Lateral slots 3 in the windshield are inclined at an angle of about  $45^\circ$  to the axis of the lighter, and inclined louvers 4, pressed out in the production of the slots, are directed outwardly and downwardly, so that air entering through the slots 3 flows upwards and away from the friction wheel and takes the flame with it in this direction. The flame is thus lengthened and pulled away from the friction wheel, so that this part is saved from the harmful action of the flame. Holes 10 are shown (Fig. 2) in the end of the windshield 2.

In the parts of the lighter casing surrounding the wick tube, circular air inlet openings 7 are provided under the windshield 2, at about the level of the top wall 6 of the removable fuel container 5, i.e. below the level of the wick 9. The air entering through these openings is deflected along the curved wall portion 8 of the fuel container and passes upwardly in the shaft, enhancing the lengthening of the flame.

In the embodiment shown in Fig. 3, the arrangement is substantially the same, the difference being that no separate pivoted windshield is provided, but the slots 3 are disposed in the side walls of the casing, which are extended upwardly to constitute a shaft about the wick 9. The operation is the same as in the first embodiment.

According to whether the flame is to be deflected from the friction wheel to a greater extent or to be lengthened more in the upward direction, the angle of the slots 3 relative to the axis of the lighter is made smaller or greater.

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

1. A pyrophoric lighter, characterised in that draught apertures in the form of slots provided in the side walls of the casing or in a windshield associated therewith are inclined to the axis of the lighter at an angle which is greater than 30° and less than 90°, and have louvers which deflect the incoming air away from the friction wheel and upwards.
2. A pyrophoric lighter according to claim 1, wherein additional air inlet openings are provided in the parts of the

lighter casing surrounding the wick tube, at or below the level of the wick.

3. A pyrophoric lighter substantially as described with reference to the accompanying drawing. 15

Dated this 23rd day of July, 1936.

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

