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PATENT SPECIFICATION



Application Date: Sept. 23, 1943. No. 15593/43.

566.915

Complete Specification Left: Aug. 31, 1944.

Complete Specification Accepted: Jan. 18, 1945.

PROVISIONAL SPECIFICATION

Improvements in or relating to Pyrophoric Lighters and the like

I, HENRY PEARCE, British nationality, of 10, Goring Street, London, E.C.3, do hereby declare the nature of this invention to be as follows:—

5 This invention relates to pyrophoric lighters and the like which are adaptable either for pocket use or for table use or generally for other domestic purposes, its object being to provide a novel and simple
10 construction in which the majority of the parts, if not all, can be produced by mass production methods from stampings, pressings or mouldings.

15 According to the present invention I provide a chamber or body of appropriate shape and dimensions adapted to contain absorbent material such as cotton wool which can be saturated with inflammable liquid and which chamber or body is
20 hermetically closed along all its edges except as hereinafter explained. Obviously the dimensions of the table or domestic model would be larger than those for pocket use. The bottom surface
25 is recessed, that is to say let into the lower end of the body, a sufficient amount so that a filling plug generally in the form of a screw-plug, does not protrude beyond the lower peripheral edge of the body.
30 The bottom surface is therefore advantageously made thick enough to take a screw thread or may be reinforced around the hole for the plug for this purpose.

35 The body is divided longitudinally by a partition to form an auxiliary compartment which opens into the top surface of the body and there is provided with a tubular forked fitting holding a milled striking wheel against which a flint is
40 pressed by a spring located within the aforesaid compartment; the tension of the spring is adjusted by an adjusting screw engaged in the bottom of the body, similarly to the screw plug. In a simple
45 construction the compartment may be formed by a piece of tube fitted between the bottom of the body and the top thereof and advantageously protruding beyond the top where it is shaped into a fork to
50 accommodate the wheel. In front of the wheel is a wick holder which can be detachably or permanently secured in or to the top of the body.

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The wheel has a spindle on which is mounted a knob or the like which can be
55 readily rotated by the thumb or a finger. In one construction the said spindle extends across the width of the top of the body and is there supported in a bracket, lug or the like mounted on the aforesaid
60 top.

A snuffer for extinguishing the flame from the wick and for preventing evaporation of the fuel oozing through the wick, is carried by or formed at the end of a
65 somewhat semi-circular arm mounted on a spindle supported in a pair of bearings likewise fitted to the top of the body. Such arm, however, is adapted to be actuated by a finger or thumb piece
70 generally disposed near the operating knob of the striking wheel so that when holding the body in the hand, the thumb serves firstly to flick over the said thumb
75 piece thereby uncovering the wick, and secondly to rotate the knob of the steel so that all the operations can be effected with the hand holding the lighter. The thumb
80 piece may, for convenience, be formed or fitted at the end of an extension piece of the semi-circular arm, such extension
85 piece being at right angles to the arm and lying adjacent the spindle for such arm.

A brake spring bears against the thumb
90 piece or the extension piece so as to hold it from unintentional movement in either the closed or open positions of the snuffer. Said brake spring can be secured by a
95 rivet or screw to the top surface of the body.

Where the lighter is intended for table or domestic use the bottom is closed by a cap or the like which is pressed into or about the bottom peripheral edge of the
100 body so as to be easily placed in position or removed when the lighter is to be filled or the flint adjusted. The said cap or the like can be weighted and may form a slightly protruding flange to give an
105 ornamental effect or it may form a compartment for spare flints, wicks and so on. The body itself is, in a preferred form, shaped like a book with rounded back, the front and rear surfaces being ornamented, coloured and so on.

Dated this 23rd day of September, 1943.

CHATWIN & COMPANY,
253, Gray's Inn Road, London, W.C.1,
Patent Agents for the Applicant.

COMPLETE SPECIFICATION

Improvements in or relating to Pyrophoric Lighters and the like

I, HENRY PEARCE, British nationality, of 10, Goring Street, London, E.C.3, 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 and the like which are adaptable either for pocket use or for table use or generally for other domestic purposes, its object being to provide a novel and simple construction in which the majority of the parts, if not all, can be produced by mass production methods from stampings, pressings or mouldings.

According to the present invention I provide a chamber or body of appropriate shape and dimensions adapted to contain absorbent material such as cotton wool which can be saturated with inflammable liquid and which chamber or body is hermetically closed along all its edges except as hereinafter explained. Obviously the dimensions of the table or domestic model would be larger than those for pocket use. The bottom surface is recessed, that is to say let into the lower end of the body, a sufficient amount so that a filling plug generally in the form of a screw-plug, does not protrude beyond the lower peripheral edge of the body. The bottom surface is therefore advantageously made thick enough to take a screw thread or may be reinforced around the hole for the plug for this purpose.

The body is divided longitudinally by a partition to form an auxiliary compartment which opens into the top surface of the body and there is provided with a tubular forked fitting holding a milled striking wheel against which a flint is pressed by a spring located within the aforesaid compartment; the tension of the spring is adjusted by an adjusting screw engaged in the bottom of the body, similarly to the screw plug. In a simple construction the compartment may be formed by a piece of tube fitted between the bottom of the body and the top thereof and advantageously protruding beyond the top where it is shaped into a fork to accommodate the wheel. In front of the wheel is a wick holder which can be detachably or permanently secured in or to the top of the body.

The wheel has a spindle on which is mounted a knob or the like which can be readily rotated by the thumb or a finger. In one construction the said spindle extends across the width of the top of the body and is there supported in a bracket, lug or the like mounted on the aforesaid top.

A snuffer for extinguishing the flame from the wick and for preventing evaporation of the fuel oozing through the wick, is carried by or formed at the end of a somewhat semi-circular arm mounted on a spindle supported in a pair of bearings likewise fitted to the top of the body. Such arm, however, is adapted to be actuated by a finger or thumb piece generally disposed near the operating knob of the striking wheel so that when holding the body in the hand, the thumb serves firstly to flick over the said thumb piece thereby uncovering the wick, and secondly to rotate the knob of the steel so that all the operations can be effected with the hand holding the lighter. The thumb piece may, for convenience, be formed or fitted at the end of an extension piece of the semi-circular arm, such extension piece being at right angles to the arm and lying adjacent the spindle for such arm.

A brake spring bears against the thumb piece or the extension piece so as to hold it from unintentional movement in either the closed or open positions of the snuffer. Said brake spring can be secured by a rivet or screw to the top surface of the body.

Where the lighter is intended for table or domestic use the bottom is closed by a cap or the like which is pressed into or about the bottom peripheral edge of the body so as to be easily placed in position or removed when the lighter is to be filled or the flint adjusted. The said cap or the like can be weighted and may form a slightly protruding flange to give an ornamental effect or it may form a compartment for spare flints, wicks and so on. The body itself is, in a preferred form, shaped like a book with rounded back, the front and rear surfaces being ornamented, coloured and so on.

The invention is shown by way of simple example in the accompanying drawing in which:—

Fig. 1 is a part sectional elevation.

Figs. 2 and 3 are end views from opposite ends.

Fig. 4 is a plan, and

5 Fig. 5 shows a detail.

The body 1 has a bottom 2 with filling plug 3 and is provided with a compartment formed by a tube 4 housing a spring 5 pressing a flint 6 against the steel wheel 10 mounted in the fork end 8 of the tube 4. A wick holder 9 is disposed forward of the forked end 8 and is closed by a snuffer 10 carried by or formed at the end of a semi-circular arm 11 at the end of a spindle 12 and also terminates an extension 15 from the arm 11.

The striking wheel 7 is carried at the end of a spindle 16 at the other end of which is an operating knob 17. A brake spring 18 anchored to the top of the body 1 serves to hold the thumb piece 14 against unintentional movement. A loaded base 19 may be provided in the case of table lighters.

25 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. Pyrophoric lighter with a body containing absorbent material, a recessed base therefor with filling plug, a compartment in the body secured between the base and the top of the body to accommodate a flint and spring, a snuffer for the wick provided at the end of a somewhat semi-circular arm connected by an extension to a thumb piece and a brake spring on the top of the body bearing against the thumb piece or the extension 40 to retain the same in position.

2. Lighter as claimed in claim 1 in which the compartment provided in the body is in the form of a tube protruding through the top of the body and fork-ended to receive a striking wheel mounted on a spindle provided at the other end with an operating knob. 45

3. Lighter as claimed in claims 1 and 2 formed with rounded back to give the appearance of a book. 50

4. Lighter as claimed in claims 1 to 3 constructed and arranged substantially as shown in the accompanying drawing.

Dated this 31st day of August, 1944.

CHATWIN & COMPANY,
253, Gray's Inn Road, London, W.C.1,
Patent Agents for the Applicant.

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

