

PATENT SPECIFICATION

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COMPLETE SPECIFICATION

Improvements in or relating to Pyrophoric Lighters

We, CYRIL ARTHUR BROWN and ARTHUR HENRY SWAN BROWN, both British Subjects, and both of 17, Meath Road, Ilford, in the County of Essex, 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.

Pyrophoric lighters are known wherein a friction wheel and an operating head are mounted co-axially as a unit between a flint carriers and a fuel container.

It is also known to hold a snuffer of a pyrophoric lighter in its open and closed positions by a spring pressed ball.

Pyrophoric lighters are also known wherein a wick tube is recessed to receive an operating head for a friction wheel.

It is further known to provide a snuffer of a pyrophoric lighter with a tapered recess to receive the tapered head of a wick tube.

According to the present invention a pyrophoric lighter is provided with a snuffer which is pivotally mounted in a recess in a flint carrier secured to the top of a container, the snuffer being provided with a lip, projecting slightly from the container, for facilitating the raising of the snuffer from a closed into an open position, the snuffer being provided with two recesses for co-operation with a spring-pressed ball mounted in a recess in the flint carrier for holding the snuffer in its closed and open positions.

The snuffer is preferably provided with a truncated or tapered recess for receiving the correspondingly shaped end of a wick tube.

A friction wheel is preferably mounted co-axially with an operating head.

The lighter is preferably of rectangular block shape the only projecting parts being a lip in the snuffer and the periphery of the operating head.

The invention will now be described by way of example with reference to the accompanying drawing, wherein:—

Fig. 1 is a side view of a pyrophoric lighter.

Fig. 2 is a view looking at the left hand

end of Fig. 1.

Fig. 3 is a view looking at the right hand end of Fig. 1.

Fig. 4 is a plan of Fig. 1.

Fig. 5 is a section on the line of V—V of Fig. 4.

Fig. 6 is a section on the line VI—VI of Fig. 4.

As shown in the drawings a pyrophoric lighter is provided with a rectangular container 1, which at its lower end is closed by a plate 2. The plate 2 is provided with a filling opening and to the inner side of the plate 2 is secured an internal boss 3 for the reception of a screwed plug 4 for closing the filling opening. The upper end of the container 1 is closed by a plate 5 to which is secured a flint carrier 6.

The flint carrier 6 is provided with a bore 7 parallel with the top of the container which is partly screw threaded, as indicated at 8, for the reception of an adjusting screw 9. The bore 7 receives a spring 10 into the end of which is fitted a stop 11 against which a flint bears.

Between the end of the flint carrier 6 and the plate 5 are mounted a friction wheel 12 and an operating head 13 which form an integral unit. The friction wheel 12 is preferably of hardened silver steel, whilst the operating head 13 is preferably of brass.

The operating head 13 preferably projects beyond the container 1 so that it can be readily operated.

A spindle 14, on which the friction wheel 12 and operating head 13 are mounted, is held in position between the parts 5 and 6, by screws 15.

The carrier 6 is provided with a recess 16 in which a snuffer 17 is pivotally mounted on a pivot 18.

The snuffer 17 is provided with two recesses 19, 20. The recesses 19, 20 co-operate with a ball 21 which is urged outwardly from a recess 22 in the carrier 6 by a spring 23. The recesses 19, 20 are so located that in the position shown; that is to say the closed position, the ball 21 engages with the recess 19 thus holding the snuffer in the closed position, whilst when the snuffer is turned through about 90°, Fig. 5, the ball 21 engages with the

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recess 20 so as to hold the snuffer 17 in the open position.

The snuffer 17 is provided with a lip 24 for facilitating its raising from the closed into the open position. The lip 24 projects slightly from the container 1.

In the snuffer 17 is provided a truncated or conical recess 25 for the reception of the correspondingly shaped end 26 of a wick tube 27 mounted in the plate 5.

Adjacent the operating head 13 the tube 27 is preferably recessed to provide the necessary clearance for the rotation of the operating head 13 and to ensure that the friction wheel is at the correct distance from the wick tube.

By the provision of the tapered recess 25 and the correspondingly shaped end 26 leakage of petrol or the like from the container 1 is prevented, whilst when the snuffer 17 is opened petrol or like fumes are caused to be drawn from the end 26 ready for ignition by the spark produced by the rotation of the friction wheel 12 over the flint.

By the positioning of the operating head 13 relatively to the tube 27 as shown, the tube 27 is surrounded on two sides by the flint carrier 6 and the head 13, thus ensuring that the vapour from the tube is always present for direct ignition.

As a result of the construction shown a lighter of compact design is obtained and which is substantially of rectangular block appearance, the only projections being the rim of the operating head 13 and the lip 24 of the snuffer 17.

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

1. A pyrophoric lighter, wherein a snuffer is pivotably mounted in a recess in a flint carrier secured to the top of a container, the snuffer being provided with a lip, projecting slightly from the con-

tainer, for facilitating the raising of the snuffer from a closed into an open position, the snuffer being provided with two recesses for co-operation with a spring pressed ball mounted in a recess in the flint carrier for holding the snuffer in its closed and open positions.

2. A pyrophoric lighter according to Claim 1, wherein the snuffer is provided with a truncated or tapered recess for receiving the correspondingly shaped end of a wick tube.

3. A pyrophoric lighter according to Claim 1 or 2, wherein a friction wheel and an operating head forming a unit, are mounted between the flint carrier and the container.

4. A pyrophoric lighter according to Claim 3, wherein a wick tube, recessed on one side so as to provide clearance for the operating head whereby so as to position the friction wheel at the correct distance from the wick tube, is surrounded on two sides by the flint carrier and operating head.

5. A pyrophoric lighter according to Claim 3 or 7, wherein a flint in the flint carrier, is kept in contact with the friction wheel by means of a spring which is mounted within a bore in the flint carrier, the bore extending parallel to the top of the container.

6. A pyrophoric lighter according to any one of the preceding claims, wherein the lighter is of substantially rectangular block shape from which only project an operating head and a lip on the snuffer.

7. A pyrophoric lighter substantially as described, and as shown in the accompanying drawing.

Dated this 17th day of December, 1943.

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329, High Holborn, London, W.C.1,
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[This Drawing is a reproduction of the Original on a reduced scale.]

