

PATENT SPECIFICATION

598,745



Application Date: Sept. 7, 1945.

No. 23154/45.

Complete Specification Left: Sept. 9, 1946.

Complete Specification Accepted: Feb. 25, 1948.

PROVISIONAL SPECIFICATION

An Improved Pyrophoric Lighter

We, JOHN HENRY COLLINS, of The Old House, Nazeing, Essex, a British Subject, and BARNETT PEARLMAN, of 51, South Lodge, London, N.W.8, a British Subject, do hereby declare the nature of this invention to be as follows:—

This invention relates to an improved pyrophoric lighter for cigarettes and the like, of the kind wherein a snuffer arm is pivotally mounted on the casing of the lighter and is movable against spring pressure into and out of a position in which a snuffer cap provided on the free end of such arm engages over the wick and

wick holder.

The invention provides an improved construction of the pivotal support for such snuffer arm upon the lighter casing.

According to the invention, the improved pivotal support for the snuffer arm of a pyrophoric lighter comprises two spaced parallel posts or plates extending at right angles from the casing, one of such posts or plates having formed therein an open-ended slot inclined downwardly towards the casing, and the other post or plate having provided therein a substantially V-shaped slot, closed at the ends of the arms of the V, one arm of the V being in register with the slot in the first-mentioned post or plate, and the other arm of the V extending upwardly.

One end of the snuffer arm is provided

with pivot pins or lugs on opposite sides thereof, and in order to assemble the snuffer arm upon the lighter casing, one of the pivot pins on the end of the snuffer arm is inserted into the upwardly-inclined arm of the V-shaped slot in one of the supporting posts or plates and the snuffer arm is then moved downwardly against the action of a spring provided upon the lighter casing and intended to maintain the snuffer arm in its desired position, until the pivot pin on one side of the snuffer arm reaches the bottom of the V-shaped post. At this point, the pivot pin on the other side of the snuffer arm is in register with the open lower end of the inclined slot in the other supporting post or plate, and continued movement of the snuffer arm causes the two pivot pins to travel up to the ends of the upwardly inclined open ended slot in one supporting member and of the other arm of the V-shaped slot in the other supporting member, in which positions they are normally maintained by the pressure of the spring on the lighter casing against the snuffer arm.

Dated this 7th day of September, 1945.

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COMPLETE SPECIFICATION

An Improved Pyrophoric Lighter

We, JOHN HENRY COLLINS, of The Old House, Nazeing, Essex, a British Subject, and BARNETT PEARLMAN, of 51, South Lodge, London, N.W.8, a British Subject, 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 an improved pyrophoric lighter for cigarettes and the like, of the kind wherein a snuffer arm is pivotally mounted on the casing of the lighter and is movable against spring

pressure into and out of a position in which a snuffer cap provided on the free end of such arm engages over the wick and wick holder.

The invention provides an improved construction of the pivotal support for such snuffer arm upon the lighter casing.

According to the invention, the improved pivotal support for the snuffer arm of a pyrophoric lighter comprises two spaced parallel posts or plates extending at right angles from the casing, one of such posts or plates having formed therein an open-ended slot inclined downwardly

[Price 1/-]

towards the casing, and the other post or plate having provided therein a substantially V-shaped slot, closed at the ends of the arms of the V, one arm of the V being in register with the slot in the first-mentioned post or plate, and the other arm of the V extending upwardly.

One end of the snuffer arm is provided with pivot pins or lugs on opposite sides thereof, and in order to assemble the snuffer arm upon the lighter casing, one of the pivot pins on the ends of the snuffer arm is inserted into the upwardly-inclined arm of the V-shaped slot in one of the supporting posts or plates and the snuffer arm is then moved downwardly against the action of a spring provided upon the lighter casing and intended to maintain the snuffer arm in its desired position, until the pivot pin on one side of the snuffer arm reaches the bottom of the V-shaped post. At this point, the pivot pin on the other side of the snuffer arm is in register with the open lower end of the inclined slot in the other supporting post or plate, and continued movement of the snuffer arm causes the two pivot pins to travel up to the ends of the upwardly inclined open ended slot in one supporting member and of the other arm of the V-shaped slot in the other supporting member, in which positions they are normally maintained by the pressure of the spring on the lighter casing against the snuffer arm.

The invention will be more clearly understood from the accompanying drawings which illustrate one preferred embodiment and in which

Fig. 1 is a side elevation of the assembled lighter.

Fig. 2 is a section along the line A—A in Fig. 1.

Fig. 3 is a perspective detail view of the components of the lighter and

Fig. 4 shows the manner of operation of the snuffer arm.

Referring now to Figs. 1 and 3, upon the upper plane surface of the reservoir 1 of the lighter, there are mounted a combined thumb and friction wheel 2, a wick-holder 3, a snuffer arm 4 having at one end a cap 5 and at the other end lugs or pivot-pins 6 and 6¹, a flint tube 7, snuffer arm supporting posts or brackets 8 and 9 and snuffer arm spring 10. As may be seen from Figs. 2 and 3 the flint tube 7 and supporting posts 8 and 9 are made in a single unit from a single sheet-metal stamping. This unit is adapted to be bolted to the reservoir 1 at the tapped holes 12, while the wheel 2 is secured to the reservoir by the bolt 11.

In the supporting post 8 there is provided a V-shaped slot XYZ, while in the

post 9 there is an open-ended straight slot 13 parallel to and in register with the arm YZ of the slot XYZ.

Thus, in order to mount the snuffer arm in the lighter, firstly the spring 10 is placed in the bed between the posts 8 and 9. As may be seen from Fig. 4, the inner edge of the post 9 descends substantially vertically from the open end of the slot 13, and a projection 14 from the spring 10 engages with the said inner edge and thus prevents the spring 10 from sliding in a direction away from the wick-holder.

Then, the lug 6 on the arm 4 is inserted at X in the slot XYZ, the common axis of lugs 6 and 6¹ being kept horizontal so that the lug 6¹ is free. Still keeping the axis of the lugs horizontal the arm 4 is fixed downwardly against the pressure of the spring 10, until the lug 6 reaches the point Y and the lug 6¹ comes opposite the open end of the slot 13 in the arm 9.

On continuing the movement of the arm 4 so that the lug 6 enters the arm YZ of the slot XYZ, the spring 12 expands and forces the lugs 6 and 6¹ into their pivotal positions at the point Z in the slot YZ, and at the upper end of the slot 13, as shown in Figs. 1 and 3.

To remove the snuffer arm the process is reversed.

Figure 4 shows the upper portion of the lighter as in Figure 1, with the post 8 removed so that the method of operation of the snuffer arm 4 may be seen. The lower edge 15 of the arm 4 bears upon the upper surface of the compression spring 10, whereby the anti-clockwise turning movement is applied to the arm 4, thus tending to force the cap 5 into position on the wick-holder 3. When the snuffer arm is rotated by hand against the spring 10 the edge 15 slides along the surface of the spring 10, until finally the flat back edge 16 of the arm 4 bears against the spring and no turning movement is applied to the arm which remains locked in position.

It will be seen that the present invention provides a lighter snuffer arm which, while it may simply and easily be attached to and detached from the supporting posts, is yet held firmly in position on the ensemble lighter.

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 pivotal support for the snuffer arm of a pyrophoric lighter comprising two spaced parallel posts or plates extending at right angles from the casing of the lighter, one of such posts or plates having formed therein an open-ended slot inclined downwardly towards the casing, and the

other post or plate having provided therein a substantially V-shaped slot closed at the ends of the arms of the V, one arm of the V being in register with the slot in the first mentioned post or plate, and the other arm of the V extending upwardly.

2. A support according to claim 1, wherein there are provided on the pivoting end of the snuffer arm, lugs or pivot pins adapted to engage with the slots in the posts or plates.

3. A support according to Claim 1 or 2 wherein there is provided a compression spring between the parallel posts, adapted to act between the lighter casing and the snuffer arm.

4. A support according to Claim 3

wherein means are provided whereby lateral movement of the compression spring relative to the parallel posts is prevented.

5. A support according to any of the preceding Claims wherein the parallel posts are formed from a single strip of sheet metal.

6. A support for the snuffer arm of a pyrophoric lighter as described with reference to the accompanying drawing.

Dated this 9th day of September, 1946.

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Leamington Spa: Printed for His Majesty's Stationery Office, by the Courier Press.—1948.
Published at The Patent Office, 25, Southampton Buildings, London, W.C.2, from which
copies, price 1s. 0d. each (inland) 1s. 1d. (abroad) may be obtained.

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

