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PATENT SPECIFICATION

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COMPLETE SPECIFICATION

An Improved Manufacture of Pyrophoric Lighters for Cigarettes or the like

We, ERNEST EDWARD BEECH, a British Subject, of 29, Shrubland Road, London, E.17; HOWARD WALL LIMITED, a British Company, of 25-37, Hackney Road, London, E.2; and B. PEARLMAN AND COMPANY LIMITED, a British Company, of 9-13, Redchurch Street, London, E.2, 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 improvements in pyrophoric lighters for cigarettes and the like, of the kind in which an arm mounted on the upper part of a casing serving as a reservoir is movable manually upon a pivotal support into and out of a position in which a member provided on the arm covers a wick extending from within the reservoir.

In prior known constructions of such lighters, such pivotally mounted arm, hereinafter referred to as "the snuffer arm," has usually been supported upon a pivot pin or spindle passing therethrough, the ends of such pin or spindle being supported in holes formed therefor in uprights provided upon the upper part of the reservoir for that purpose. To hold the snuffer arm in this position of support, the pivot pin has commonly been provided at one end thereof with a slotted head and at the other end with a screw-threaded portion adapted to be engaged in a screw-threaded hole formed in one of the uprights or supporting members.

Such snuffer arms have further previously been provided with parts thereof adjacent the pivot which engage the free end of a leaf spring mounted upon the upper part of the casing to urge the snuffer arm towards its opened or closed positions.

It has been found in practice that difficulty exists in satisfactorily forming the required screw-threads upon the pivot and in the supporting upright, owing to the relative smallness of the parts concerned, and furthermore, such screw-threaded pivot pins have been found liable to

become unthreaded during use of the lighter, with the risk of loss thereof.

In accordance with the present invention, the difficulties of manufacture of such screw-threaded parts are obviated, and a relatively less expensive and more readily assembled and dis-assembled mounting means is provided, which has the further advantage that the snuffer arm may readily be removed from its mounting if desired, for example, for cleaning of the lighter parts, or for adjustment of the leaf spring.

According to the invention, pins or the like projecting laterally from one end of the snuffer arm of a cigarette or like lighter engage in inclined slots formed in supporting members provided upon the lighter casing or reservoir. Such pins or the like may advantageously be comprised by a single pin or rivet extending through a hole formed therefor in the end of the snuffer arm and secured thereto in a permanent manner, for example by brazing or soldering.

It will be readily seen that the snuffer arm is prevented from unintentional removal from its mounting through the pins or rivets passing downwardly out of the inclined slots in the supporting uprights, by reason of the pressure upon the pivoted end of such arm of the leaf spring, whereby the free end of the arm is urged towards either its closed or its opened positions.

The invention may be carried into practice as shown in the accompanying drawing, in which

Figure 1 is a side elevation and Figure 2 is a plan of a cigarette or like lighter constructed in accordance with the invention, and

Figure 3 is a perspective detail view of the pivoted end of the snuffer arm, the leaf spring and the supporting uprights above referred to.

As shown in the drawing, upon the upper plane surface 1 of the reservoir 2 of a cigarette or like lighter there are secured uprights 3, 3 having inclined slots 4, 4 formed therein. Such supporting up-

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rights may conveniently be formed from a single strip of sheet metal 5, bent to the shape shown in Figure 3.

5 A snuffer arm 6, at the end thereof to be pivoted upon the lighter or reservoir casing, is provided with laterally extending pins or rivets 7, 7, which may conveniently be formed by a single pin extending through a hole formed therefor 10 in the end of the snuffer arm and secured thereto in any suitable manner.

A leaf spring 8, secured to the upper surface 1 of the reservoir by means such as a screw 9, is so shaped that the free end thereof extends between the uprights 3, 3 in a position where it engages the lower surface of the pivoted end of the arm 6, urging the part of this arm on the side of the point of pivotal support remote from the free end of the arm in an upward direction, and thus tending to move the arm to the position where a snuffing member 10 on the free end thereof engages a wick holder 11 mounted in the face 1 of the reservoir, or to a position where the arm 6 extends at an angle of 90° or 180° to the surface 1, depending upon whether the arm is moved until the flat 7a or the flat 7b is engaged by the free end of the spring 8.

30 It will be appreciated that the assembly upon the reservoir of the parts described can be effected in a relatively simple and rapid manner. The spring 8 is secured by its screw 9 to the surface 1, the supporting member 5 provided with the slotted uprights 3, 3 is secured to the surface 2 in any convenient manner, for example by means of soldering the part of the member 5 intermediate of the supporting uprights 3, 3 to the surface 2, and thereafter the pins 7, 7 on the snuffer arm 6 are moved into the slots 4, 4 in the uprights 3, 3 by engagement of the end of the said arm 6 with the spring 8, and forcibly depressing the free end of the spring until the pins 7, 7 enter such slots 4, 4. The parts may be disassembled readily in the reverse sequence of operations.

50 In a modified form of the invention, (not illustrated) one or both of the pins 7, 7 on the snuffer arm 6 is or are spring-pressed and capable of movement into and out of a recess or slide-way provided therefor in the end of the snuffer arm. In this form of the invention, the slots 4, 4 in the supporting members 3, 3 are replaced by bearing holes into which the pins 7, 7 may be inserted by movement

of the slidable pin or pins into the recess against the action of a spring situated in such recess, the slidable pin or pins being released when in register with the holes in the members 3, 3 and moved by the spring within the recess into such holes.

65 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:—

70 1. A pyrophoric lighter for cigarettes or the like, wherein pivot pins or journals project from opposite sides of a snuffer arm and are held in bearings formed in supporting members on the lighter casing by spring pressure.

75 2. A pyrophoric lighter as claimed in Claim 1, wherein the pivot pins or journals are rigid with the snuffer arm and engage in inclined slots formed in the supporting members.

80 3. A pyrophoric lighter as claimed in Claim 1, wherein one or both of the pivot pins are retractable within a recess or recesses provided in the snuffer arm, a spring or springs being provided in such recess to urge the pivot pin or pins outwardly into bearing holes in the supporting members.

85 4. A pyrophoric lighter according to Claims 1 and 2, wherein a leaf spring provided on the lighter casing engages with the end of the snuffer arm carrying the pivot pins or journals to maintain such pins within their bearings.

90 5. A pyrophoric lighter as claimed in Claim 4, wherein the leaf spring also serves to urge the snuffer arm to its opened or closed positions.

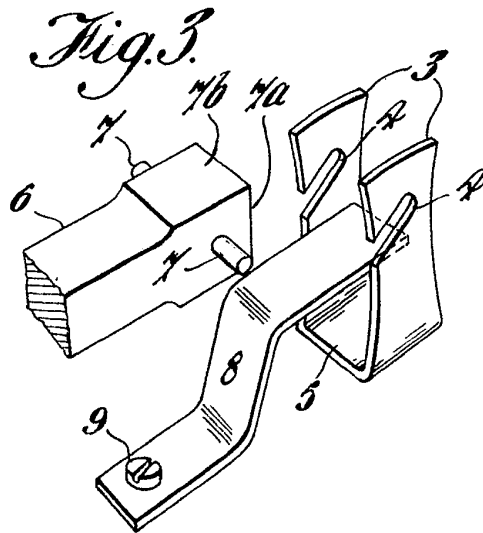
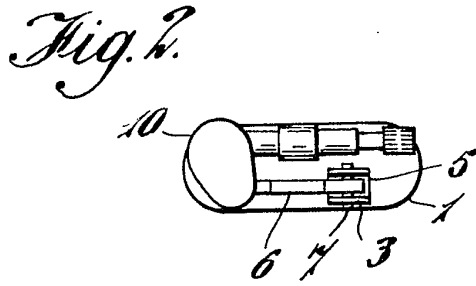
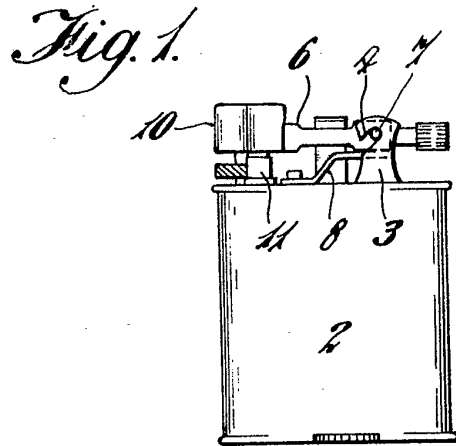
95 6. A pyrophoric lighter as claimed in any of the preceding claims, wherein the supporting members are formed from a single strip of sheet metal.

100 7. A pyrophoric lighter as claimed in any of Claims 1, 2, 4, 5 or 6, wherein the pivot pins upon the end of the snuffer arm are formed by a single pin or rivet extending through a hole provided therefor in the end of the snuffer arm.

105 8. A pyrophoric lighter constructed and operating as hereinabove described with reference to the accompanying drawings.

Dated this 26th day of August, 1941.

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Agents for the Applicants.



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