

PATENT SPECIFICATION

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COMPLETE SPECIFICATION

Improvements in Lighters for Cigarettes or the like

I, GEORGE PHILIP SCHMITT, of 687, Lexington Avenue, New York City, in the State of New York, United States of America, a citizen of the United States of America, 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:—

10 This invention relates to lighters for cigarettes or the like of the type which comprises a fuel container with a fuel egress opening over which a catalyst is situated when the lighter is in use and

15 wherein the catalyst is removed from the fuel opening when the lighter is in its inoperative condition.

The present invention provides an improved form of lighter and is characterised

20 in this that the catalyst chamber is coupled by an arm to a hinged lid, the arm being adapted to slide the chamber into a position above or away from the fuel opening, said arm carrying a pad or

25 the like which when the lid is closed is held over the fuel opening to seal same.

This and other features will be more readily understood by reference to the following description and the accompanying

30 drawings in which Figure 1 is a sectional side elevation of an open lighter made in accordance with the present invention; Figure 2 is a side elevation of the lighter of Figure 1 showing the parts

35 closed; Figure 3 is a plane of the lighter as shown in Figure 1. Figures 4, 5, 6 and 7 are views in detail of certain component parts used in the lighter of Figures 1, 2 and 3

40 The lighter comprises a fuel container 1 having a hinged cap or lid 2. A top plate 3 forming the upper wall of the container has a fuel opening 4 and an air duct

45 5. A plurality of similar air ducts may be provided if desired. A collar 6 surrounds the opening 4 and houses the upper end of a foraminous tube 7 which extends to the base 8 of the container. The tube 7 is contiguous a plurality of

50 tubular wicks 9 which fill the container and act as absorbents for the fuel which may be alcohol fed into the container through the opening 4. A lining of absorbent paper or the like may be used in the container 1. The bottom of the tube 7 has a cut-away portion to enable the tube more readily to be fed with the fuel. Upon the top plate 3 a catch plate 10 is superimposed, one end carrying a stud 11 extending through an opening in the wall of the container 1 and the other end engaging a spring 12 arranged so that normally the stud 11 protrudes through the opening in the position shown in Figure 1 but so that by pressing the stud 11 inwardly against the force of the spring an opening in the raised end of the plate 10 may be caused to release a stud 13 on the cap 2. The catch plate 10 has a cut-away part in its centre so that in any position it does not obscure the opening 4 or 5. The catalyst, in the form of granules or in any other form, is housed in a chamber 14 which consists of a base plate, a collar and two perforated retaining discs 15. This is a known construction and enables the fuel and air to enter the catalyst chamber. The said base plate has two catches 16 which project upwardly. The lid or cap 2 is hinged to the container 1, and pivoted in the lid is an arm 17 of which one end is bifurcated, the extremities of each limb having a detent 18 shaped as shown and engaging the catch 16 of the chamber 14. A spring 19 presses on the arm 17 so as to effect the engagement of 16 and 18. The base plate of the chamber 14 fits snugly within the side walls of the container 1 above the catch plate 10 and when the cap 2 is open, i.e., in the position shown in Figure 1, the chamber 14 lies vertically above the opening 4. The arm 17 carries on its under side a pad 20 of rubber or the like and a stud 21 projects from the cap 2. When the cap is open the pad 20 is clear of the openings 4 and 5, but when the lid is closed the arm 17 moves the chamber 14 to the position shown in broken lines in Figure 2, and the pad 20 is brought into a position over the openings 4 and 5, the stud 21 exerting a slight pressure on the arm 17 to ensure that the pad effectively seals said openings.

It will be seen from the above that when the lid 2 is closed the fuel chamber is

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sealed and the catalyst chamber 14 is removed from the fuel opening whereas on opening the lid 2 the chamber is brought into an operative position. A cigarette or the like held against the upper perforated disc of the catalyst chamber will be lighted if suction be applied, owing to vapour and air (entering the chamber through duct 5) mixing in the chamber in presence of the catalyst.

The container may be refilled at any time by causing a relative lateral movement between the chamber 14 and the arm 17. This causes the detents 18 to rid over the catches 16. The chamber may then be slid away from the opening 4 into which the fuel may be poured. The replacement of the chamber 14 is readily effected by sliding the catches 16 under the detents 18.

Having no wparticularly 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 lighter of the type to which this invention relates wherein the catalyst chamber is coupled by an arm to a hinged lid, the arm being adapted to slide the chamber into a position above or away from the fuel opening said arm carrying a pad or the like which when the lid is closed is held over the fuel opening to seal same.

2. A lighter according to claim 1 wherein the fuel container near the under side of the catalyst chamber communicates with the atmosphere through an appropriately formed duct or ducts and wherein a pad or said arm seals said duct or ducts when the lid is closed.

3. A lighter according to claims 1 or 2 wherein the lid carries a stud or projection when engages the arm exerting a pressure on the pad when the lid is closed.

4. A lighter according to any of the preceding claims in which the fuel con-

tainer comprises a top plate in which are formed the fuel opening and an air duct, a catch plate mounted contiguous said top plate and adapted to slide thereover said catch plate carrying a catch adapted to engage or disengage a catch member on a cap hinged to said container.

5. A lighter according to claim 4 wherein the catch is held in its locking position by a spring situated between a wall of said container and the end of said catch plate remote from the catch.

6. A lighter according to any of the preceding claims wherein the catalyst chamber is formed on a slidable plate which has integral projections which are engaged by slots formed in an arm pivoted to the cap or lid of the lighter.

7. A lighter according to claim 6 wherein the arm is held in engagement with said projections by a spring.

8. A lighter according to claims 6 or 7 wherein the projections and slots are shaped so that a relative movement between the chamber and the arm may be employed for effecting a ready removal of the projections from engagement with the slots for the purpose herein specified.

9. A lighter according to any of the preceding claims wherein the fuel container comprises a foraminous tube one end of which constitutes the fuel opening.

10. A lighter according to claim 9 wherein the said tube has a cut away portion for the purpose herein specified.

11. A lighter according to claim 10 wherein the container comprises a plurality of separate wicks against some or all of which the foraminous tube contacts.

12. A lighter according to claims 10 or 11 wherein the interior of the container is lined with a fuel absorbent material.

Dated the 20th day of February, 1935.

ERNEST HEY,
Chartered Patent Agent.

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

