# PATENT SPECIFICATION

408,164

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COMPLETE SPECIFICATION.

## Improvements in Petrol Lighters.

I, LÉON JOSEPH KIRCHNER, of 19, rue des Merles, Mulhouse, Haut Rhin, France, a citizen of France, 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 petrol lighters of the type comprising a flint and wick holder assembly adapted to be inserted into a casing containing an absorbent soaked in petrol, a spark igniting the petrol absorbed by the wick from the absorbent in the casing being produced by rubbing the flint against a roughened surface formed externally on the container.

According to the invention in a lighter of this type the flint is non-detachably secured to a nut adapted to be detachably mounted on a threaded sleeve member of the flint and wick holder assembly axially movable relatively to the other members of said assembly said nut being discarded with the residual fragment of the used-up flint.

Other features of the invention will appear as the description proceeds.

In known flint lighters the flint usually works loose after a short period of use, unless it is tightly fixed, in which case its replacement is a matter of some difficulty. Flints with a flat surface are worn by the steel friction member in an irregular manner, and if the stone is of rectangular section, it becomes worn in the middle and cracks after a short time, whereupon the remaining parts of the flint are lost and become unserviceable. The invention has for its object to eliminate these defects and to provide a lighter constructed of very simple and easily interchangeable parts so that the worn flint can be readily replaced, the strength of its material is preserved and the conditions in which it is used are the most favourable. The initial cost of the apparatus is very small, it requires no mechanical maintenance, and the cost of replacement of the flint, the only part which is used up, is insignificant.

[*Price* 1/-]

The attached drawing illustrates, by way of an example, one embodiment of the lighter according to the invention.

Figure 1 is a sectional view, and

Figure 2 a plan view of the apparatus.

A container 1, made of a very light material, in the shape of a moulding or sheet metal stamping is formed at its upper part with a screw lid 2 carrying a depending tube 3 extending into the container 1, and acting as a guide for the flint holder body 4. The container 1 is provided on one side with a file holder 5 having a file 6, and on the other side with a hook 7 engaging with the two flanged slides 8 of a support 9 made of a single piece and provided with two holes 10 for receiving a spare flint 11 mounted on a nut 12, and the screw-driver 13, respectively, and with a slot 14 constituting a safety stop for the hook 7, which is fitted with an elastic cut out tongue 7*a* engaging automatically with the slot 14. The hook 7 unless it is fitted with this cut out tongue 7*a*, can be pulled out.

The cage 15, divides the support 9 into two compartments 16 communicating with the two holes 10 in the support 9, whilst the ribs 17 of the partition 15 act as supports for the spare flint and for the screw-driver 13.

The flint carrier nut 12 is connected, by means of claws 18 to a threaded sleeve 19, and held very strongly by a central screw 20 in the threaded sleeve 19. The latter is screwed into the flint holder body 4 and its square head 21 engages in the square section interior of a springy slotted bush 22 having a milled head or knob 23 and frictionally and rotatably mounted in the handle 24 secured to the flint holder body 4 at 27. Thus by rotating the knob 23 in one direction or the other the threaded sleeve 19 and with it the flint 11 rigidly connected thereto will move axially relatively to the combined flint holder body 4, handle 24 and bush 22. The flint cannot yield in any direction in the course of rubbing, being securely held in every direction.

It will be seen that the slotted bush 22 is a snug fit in the handle 24 owing to the elasticity of its prongs and it is

held, against axial movement relatively to the handle on the one hand by the flange 25 and on the other hand by the adjusting head 23. The handle 24 is preferably made of an insulating material.

The flint holder body 4 is threaded externally at its lower end to receive a tube 26 tapered inwardly at its free end, the object of this tube will be described later.

The fibre tube or insulating handle 24 is rigidly connected to the fluted cone 27 of the flint holder body 4, which has teeth or the like driven very strongly into the fibre, thereby preventing detachment of the handle 24 from the flint holder body and relative rotation between these members.

The rubbing file 6 is made of tempered steel. Consequently it does not lose its sharp edge or deteriorate in the course of rubbing, but remains regular at all times.

An asbestos wick 28 is enclosed between the flint and the tube 26, from which it slightly protrudes. The tube 26 may be slotted at its free end, to facilitate the insertion of the asbestos, and to render possible the absorption of petrol thereby. The container 1 is fitted with cotton wool 29, which is saturated with petrol poured in through the tube 3 depending from the screw-lid 2, which may be hollowed out around the tube opening to facilitate the pouring in of the petrol. The air can escape from the container through the small holes 30 made in the tube 3.

For changing the flint which is sold for this lighter rigidly fixed into the nut 12, the screw-driver 13 supplied with the lighter is inserted through the upper end of the bush 22 and the central screw 20 is unscrewed, when the nut 12 with the end of the used up flint may be released from the grip of the claws 18 by hand. The new flint is then inserted between the claws and the screw 20 tightened with the aid of the screw-driver 13.

It is understood that alterations may be made in the embodiment shown without departing from the spirit of the invention.

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. A petrol lighter of the type comprising a flint and wick holder assembly adapted to be inserted into a casing containing an absorbent soaked in petrol, a spark igniting the petrol absorbed by the wick from the absorbent in the casing being produced by rubbing the flint against a roughened surface formed externally on the container, wherein the flint is non-detachably secured to a nut adapted to be detachably mounted on a threaded sleeve member of the flint and wick holder assembly axially movable relatively to the other members of said assembly said nut being discarded with the residual fragment of the used up flint.

2. A petrol lighter according to Claim 1, wherein the threaded sleeve member detachably carrying the flint holder nut is slidably but non-rotatably connected to a rotatable but not slidable member of the flint and wick holder assembly, the detachable engagement of the flint holder nut to said sleeve member being effected by claws and a screw passing axially through said sleeve member and screwed into said flint holder nut.

3. A petrol lighter according to Claim 1 or 2, wherein the flint and wick holder assembly is adapted to be frictionally held in a depending sleeve formed on or secured to the underside of a screw lid for the lighter casing.

4. A petrol lighter according to any of the preceding claims, wherein the lighter casing has a hook adapted to be inserted into a holder fixed to a wall or the like, said hook having a springy safety catch to prevent removal of the lighter.

5. A petrol lighter according to Claim 4, wherein the holder is formed with compartments adapted to hold a spare flint and a screw-driver for the screw securing the flint holder nut to the threaded sleeve member.

6. A petrol lighter substantially as herein described with reference to the accompanying drawing.

Dated this 19th day of October, 1933.

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Fig. 1.

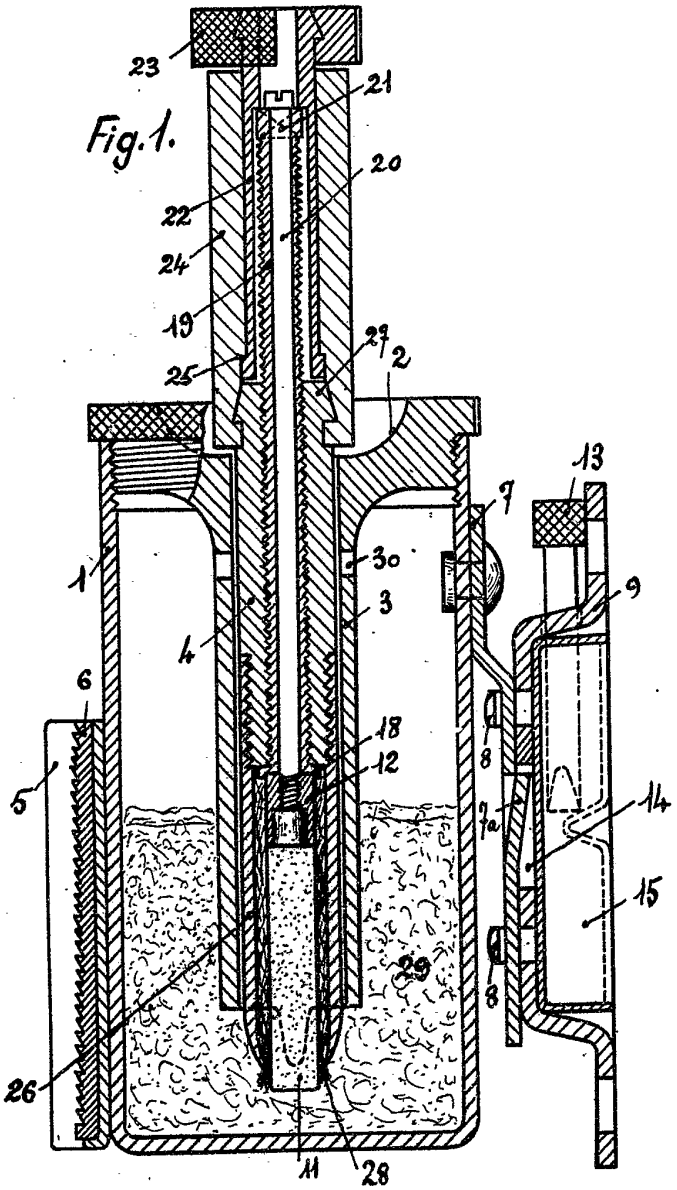
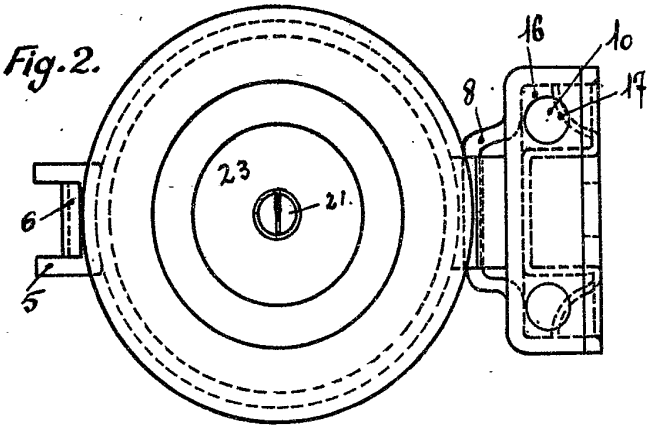



Fig. 2.

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