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IGNITING DEVICE FOR CIGARETTES, CIGARS, AND THE LIKE

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FIG. 1.

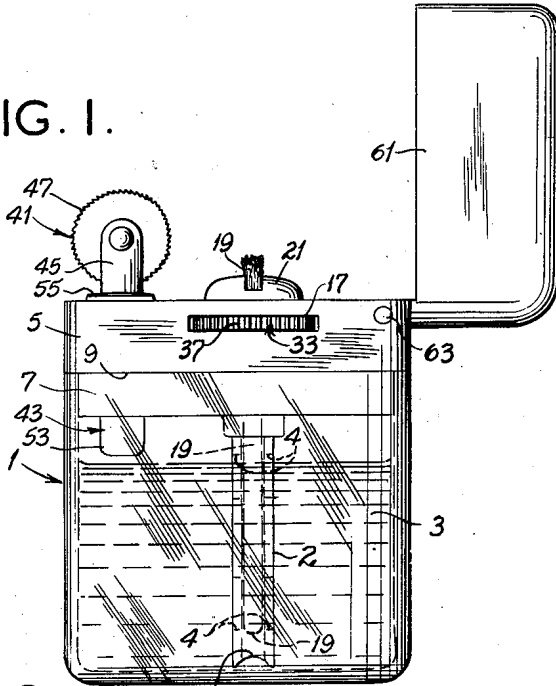


FIG. 4.

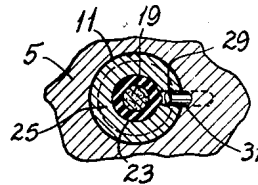


FIG. 2.

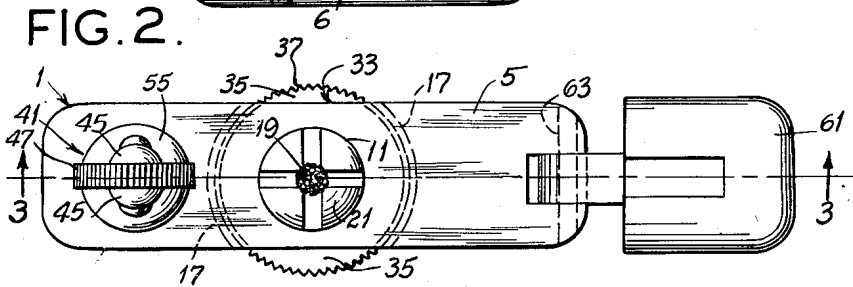
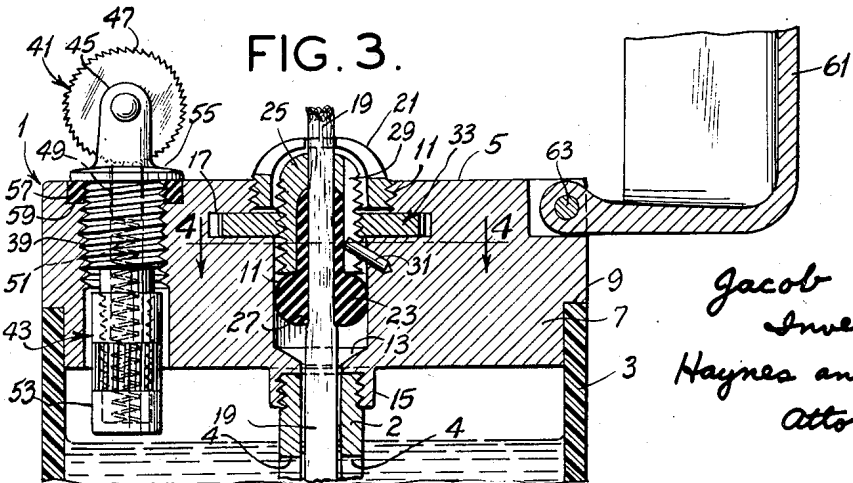


FIG. 3.



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UNITED STATES PATENT OFFICE

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IGNITING DEVICE FOR CIGARETTES, CIGARS, AND THE LIKE

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5 Claims. (Cl. 67—7.1)

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This invention relates to igniting devices for cigarettes, cigars and the like and more particularly to igniting devices of this class having a wick which is spark-ignited.

The principal feature of the invention is the provision in an igniting device of the class described of means for readily adjusting the wick to adjust the length of its exposed end. In general, this is accomplished by providing the head of a liquid fuel container with a recess extending from the outer face of the head and opening into the interior of the container. The head has a slot in a plane transverse to the recess intersecting the recess. A hollow screw member is axially movable but non-rotary in the recess. A nut is rotary in the slot and threaded on the screw member, and projects from the head so as to be accessible for turning it to move the screw member axially. A wick extends from within the container through the screw member to the exterior of the head and is gripped in the screw member. With this arrangement, by rotating the nut to move the screw member axially in the recess, the wick may be moved axially along with the screw member to adjust the extension of the wick from the head. Other features will be in part apparent and in part pointed out hereinafter.

The invention accordingly comprises the elements and combinations of elements, features of construction, and arrangements of parts which will be exemplified in the structures hereinafter described, and the scope of the application of which will be indicated in the following claims.

In the accompanying drawing, in which one of various possible embodiments of the invention is illustrated,

Fig. 1 is a view in elevation of an igniting device of the pocket cigarette lighter type embodying the invention, with a cap thereof open;

Fig. 2 is an enlarged plan view of Fig. 1;

Fig. 3 is a section taken on line 3—3 of Fig. 2; and

Fig. 4 is a fragmentary section taken on line 4—4 of Fig. 3.

Similar reference characters indicate corresponding parts throughout the several views of the drawing.

Referring to the drawing, an igniting device of the pocket cigarette lighter type embodying the invention is shown to comprise a pocket-size container 1 for liquid fuel consisting of a flat, open-mouthed vessel 3 closed by a head 5. As herein illustrated, the vessel 3 is molded of a transparent or translucent plastic material so

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that the fuel supply is visible. The head 5 has a portion 7 extending into the vessel from a shoulder 9, with portion 7 tightly fitting in the mouth of the vessel and suitably cemented therein with a fuel-tight joint. The shoulder 9 bears against the rim of the vessel 3.

The head 5 of the container is formed at its approximate center with a recess 11 extending down into the head from its upper or outer face. The recess, as illustrated is of circular cross section and tapers inward at its bottom designated 13. A wick opening, of smaller diameter than the recess, extends from the center of the bottom 13 of the recess through the head 15, where it is surrounded by an opaque jacket 2 threaded into the head 15. This jacket may be composed of an opaquely tinted (black, for example) plastic, or metal, its purpose being primarily to hide the wick which ordinarily has an undesirable vermiform appearance in the visible fluid of transparent igniters of this class. The jacket 2 includes side openings 4 and an opening at the bottom, as indicated at 6, so that fluid may find its way to the wick contained in the jacket. Above the rim of the vessel 3, the head 5 is formed with a transverse slot 17 in a plane perpendicular to the axis of the recess 11, intersecting the latter, and extending through the head from one side thereof to the other.

At 19 is shown a wick. This extends from within the vessel 3 through the wick opening 15 and the recess 11 and out through an apertured cap 21 threaded in the end of the recess above the slot 17. The portion of the wick extending through the recess extends through a tubular packing member 23 made of a fuel-resistant resilient material such as a suitable synthetic rubber. The upper or outer end portion of the packing member below the cap 21 is compressed on the wick by a hollow screw member or collet 25 axially movable in the recess. The wick is not so tightly gripped in the packing member, however, as to cut off capillary flow of fuel through the wick. The packing member 23 extends downward from the lower end of the screw member 25 and its lower end is enlarged, as indicated at 27, to plug the recess in any position of adjustment.

As shown, the screw member 25 is longitudinally split, as indicated at 29, so that it may be compressed on the packing member 23. The split provides a longitudinal keyway receiving a key 31 extending into the split from the closure head 5. As shown, the key 31 comprises an inclined pin fixed in the head within the recess. It prevents rotation of the screw member 25 while

permitting the latter to slide inward and outward in the recess. The screw member 25 is threaded in a flat circular nut 33 rotary in the slot 17. The diameter of the nut is greater than the thickness or width of the head 5 and it has portions 35 accessible on opposite sides of the head for turning it. The nut may be peripherally knurled, as indicated at 37, to facilitate turning it.

The above-described arrangement is such that by turning the nut 33 in one direction or the other, the screw may be moved inward or outward to increase or decrease the exposed length of wick extending out of the head through the apertured cap 21. The screw may also be moved far enough inward, if desired, to compress the lower end portion 27 of the packing member against the bottom and lower portions of the recess 11 tightly to seal the wick opening 15 and tightly to compress the wick to prevent loss of fuel, either by leakage or evaporation from the exposed end of the wick.

Adjacent one of its ends, the head 5 has a bore 39 extending completely through the head and opening into the vessel 3. Threaded in this bore is a spark wheel and flint unit, generally designated 41, comprising a flint tube 43 having bearings 45 at its upper end for a spark wheel 47. Within the tube is a flint 49 biased against the spark wheel by a compression spring 51 reacting from a cap 53 threaded on the lower end of the flint tube. The tube is provided with a flange 55 at its upper end which bears against a washer 57 located in a counterbore 59 at the upper end of the bore 39 to seal the bore. The spark wheel and flint unit 41 is removed to open the bore 39 for filling the container with fuel. A closure cap 61 adapted to cover the spark wheel and exposed end of the wick is pivoted at the other end of the head, as indicated at 63.

From the above, it will be seen that the invention provides a reliable and economical means for readily adjusting the length of the exposed end of the wick as a part of the igniting device, as well as a means for tightly sealing the device against loss of fuel. With the igniter of the invention, it is an easy matter to adjust the wick to obtain a desired length of flame, or to feed a fresh wick end into position for ignition by the spark wheel and flint. When necessary, the wick may be pulled through the tubular packing member 23 to provide a sufficient length of wick above the upper end of the screw member 25 to extend out of the cap 21. It is contemplated that the invention may be embodied in devices other than pocket cigarette lighters, for example in table model lighters, and the invention is not to be taken as limited to pocket cigarette lighters.

While certain terms have been used above for the various parts, the following are equivalents and are used in certain of the claims: The screw member 25 is in effect a collet which is rendered nonrotary in the recess or opening 11 by the pin and slot combination 31, 29. Obviously other equivalents may be used for preventing rotation, such as a square collet in a square opening, the collet being partially threaded at its corners. The collet 25 is in effect counterbored from its lower side to accept the packing 27 which forms a frictional grip between the wick and the collet. This packing is also provided with an extensive mass between the collet and the shoulder formed by the bottom 13 to act as material which, when the collet is drawn inward, will squeeze the wick and seat on 13 to form a seal.

In view of the above, it will be seen that the

several objects of the invention are achieved and other advantageous results attained.

As many changes could be made in the above constructions without departing from the scope of the invention, it is intended that all matter contained in the above description or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

I claim:

1. In an igniting device of the cigarette lighter type, a container for lighter fuel having a head, said head having a recess therein extending from the outer face of the head and opening into the interior of the container, said head also having a slot in a plane transverse to the recess intersecting the recess, a hollow screw member axially movable but non-rotary in the recess, a nut rotary in the slot threaded on the screw member and projecting from the head so as to be accessible for turning it to move the screw member axially, and a wick extending from within the container through the screw member to the exterior of the head and gripped in the screw member, whereby, by rotating the nut to move the screw member axially in the recess, the wick may be moved axially along with the screw member to adjust the extension of the wick from the head.

2. In an igniting device of the cigarette lighter type, a container for lighter fuel having a head, said head having a recess therein extending from the outer face of the head and opening into the interior of the container, said head also having a slot in a plane transverse to the recess, the slot intersecting the recess and extending through the head from one side thereof to the other, a hollow screw member axially movable but non-rotary in the recess, a nut rotary in the slot threaded on the screw member and projecting on opposite sides of the head, a wick extending from within the container through the screw member to the exterior of the head, and a packing member in the screw member frictionally gripping the wick in the screw member, whereby, by rotating the nut to move the screw member axially in the recess, the wick may be moved axially along with the screw member to adjust the extension of the wick from the head.

3. In an igniting device as set forth in claim 2, the further feature of forming the packing member with an enlarged portion extending out of the screw member toward the bottom of the recess and plugging the recess.

4. An igniting device of the pocket cigarette lighter type comprising a container for lighter fuel consisting of a vessel through which the fuel supply is visible having a head, said head having a recess therein extending from the outer face of the head and a wick opening leading from the bottom of the recess into the interior of the container, said head also having a slot in a plane transverse to the recess, the slot intersecting the recess and extending through the head from one side thereof to the other, an apertured cap at the outer end of the recess, a hollow screw member movable axially in the recess between its bottom and the cap and held against rotation in the recess, a flat nut rotary in the slot and threaded on the screw member, the nut being of such size as to project on opposite sides of the head, a packing member in the nut, a wick extending from within the container through the wick opening and through the packing member in the screw member and out through the cap, the wick being frictionally gripped in the screw

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member by the packing member so as to be axially movable with the screw member, and a spark wheel and flint unit mounted in a bore in the head adjacent the recess.

5. An igniting device as set forth in claim 4, further including an opaque tube extending from the head into the interior of the container, the wick extending in said tube and being hidden thereby, said tube having at least one opening whereby fuel may gain access to the wick.

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