

United States Patent

[11] 3,583,848

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[31] **P 16 32 618.4**

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[50] Field of Search **431/277, 264, 274, 254, 255, 267**

[56] **References Cited**

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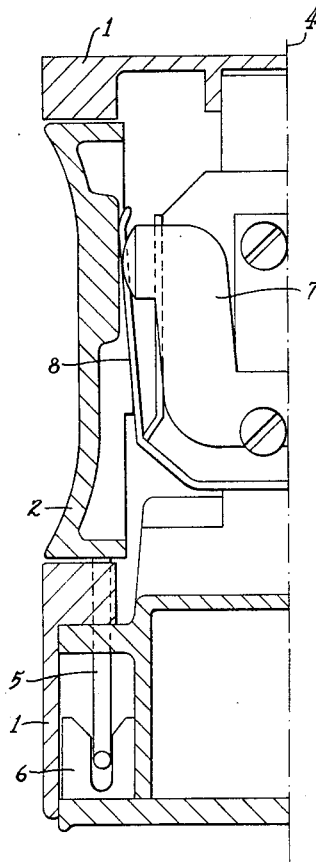
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[54] **TABLE LIGHTER**
4 Claims, 3 Drawing Figs.

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ABSTRACT: A table-type cigarette lighter of the electromagnetic type has an elongated press key and is disposed in a recess of the housing whereof the burner is near one end. The pivotable mounting of the press key near the other end of the housing permits operation of the key with the application of but a small force at any portion of the press key.



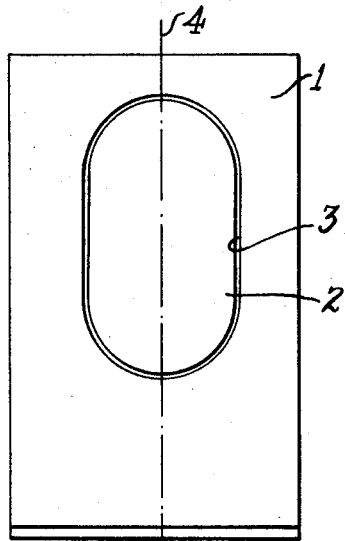


Fig 1

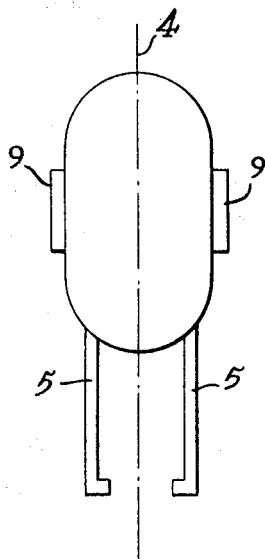


Fig 3

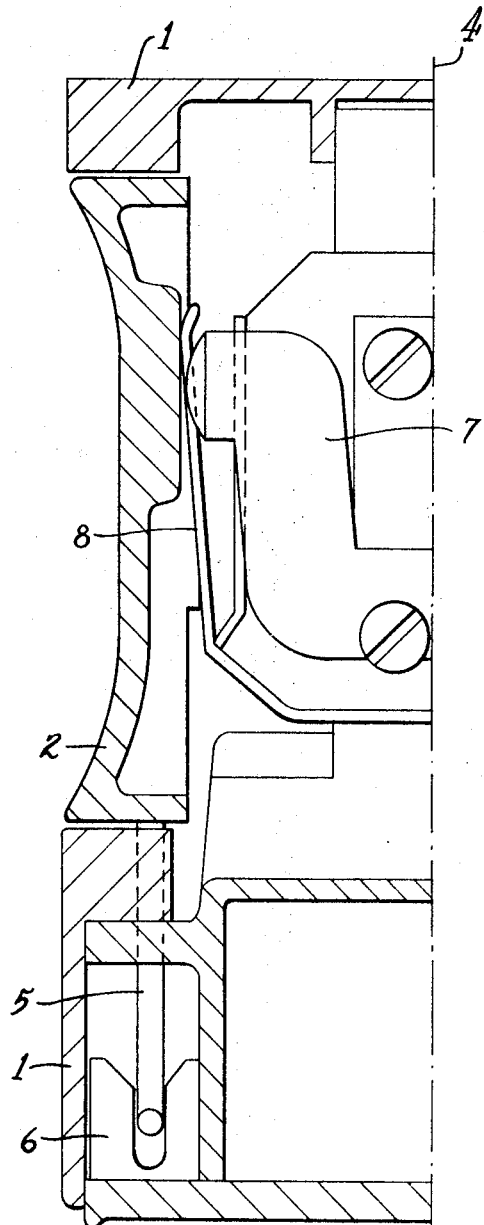


Fig 2

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TABLE LIGHTER

The present invention relates generally to cigarette lighters and it relates more particularly to electromagnetically operated table-type cigarette lighters which have a magnetic spark producing system including a permanent magnet and an interrupting armature.

The known cigarette lighters of this type are provided with an operating member at their upper end portion which contains also the burner and which are usually slidable with respect to the cylinder axis and parallel relation thereto.

It is an object of the present invention to provide a cigarette lighter of the table-type which can be handled with a better feel and in which the operating mechanism is placed at a point which better satisfies the practical requirements for a lighter.

In accordance with the invention a lighter is provided in which the operating member is formed as a press key instead of a pushbutton and which is disposed in a recess of the cylindrical housing wall and can be pressed inwardly upon operation in a direction transverse to the longitudinal axis of the cylindrical housing.

Such construction and arrangement of the operating member makes it possible that the table-type cigarette lighter can be handled simply by one hand and without the application of a considerable force, as the press key is arranged along the length of the cylindrical housing, parallel to the axis thereof, and having a length which corresponds at least to the width of two fingers.

In accordance with the invention, in order to improve and to simplify the operation of the cigarette lighter, the press key is disposed in the general contour of the cylindrical housing wall and is formed concavely along its length on its face pointing outwardly of the lighter housing. In view of this construction the possibility of pinching of the skin during operation is eliminated.

The force required to operate electromagnetically operated cigarette lighters, to which the present invention relates, generally is considerably large. The instant invention provides for a reduction in that required force by placing the press key in the upper end portion of the lighter near the burner containing portions of the cylindrical housing and, by mounting it on a pair of levers pivotably journaled at the bottom of the cylindrical lighter housing.

In accordance with the present invention, as applied to a table-type lighter having a magnetic spark producing system comprising a permanent magnet with an interrupting armature, a spool and spark producing electrode, the interrupting armature is coupled to the press key through a lever. For the coupling purpose, the press key in accordance with the present invention is provided preferably with a cam means which is placed at a distance from the pivot point of the armature and couples the press key with the last-mentioned lever into operational relationship when the press key is pressed.

The invention will become more readily apparent from the following description of a preferred embodiment thereof shown, by way of example, in the accompanying drawing, in which:

FIG. 1 is an elevational view of a table-type lighter in accordance with the invention having a cylindrical housing with an elongated press key being placed in a recess of the housing;

FIG. 2 is a partial sectional view taken along the line 4 which is the central longitudinal axis of the table-type cigarette lighter shown in FIG. 1, and passing also through the middle of the press key; and

FIG. 3 is a plan view of the press key removed from the overall arrangement.

With reference to FIG. 1, it is seen that the cigarette lighter

in accordance with the invention is provided with a cylindrical housing 1 having an operating member in the form of a press key 2. The press key 2 is disposed in a recess 3 formed in the cylindrical housing 1. The operation of the cigarette lighter is effected by pressing the key 2 inwardly of the housing, that is, transversely with respect to the axis 4 of the cylindrical housing 1.

FIG. 2 represents a section through the longitudinal axis 4 of the housing 1 passing also through the middle of press key 2 of FIG. 1. The press key 2 is mounted on a pair of similar pivotable levers 5 which in turn are pivotably journaled in a bearing block 6 near the foot portion of housing 1. Such mounting of the press key 2 has the advantage that a sufficiently large lever arm is available for the operation of the switching devices coupled to the press key as discussed below. The press key 2 in accordance with the invention remains jam free at all times irrespective of at which point the force required for the operation of the lighter is applied to the surface of the press key. The outer surface of the press key 2 is concavely formed along its length and it does not protrude beyond the edges of recess 3 formed in the cylindrical housing wall 1. The press key 2 on its side facing the inside of the housing of the lighter has a cam surface provided thereon away from the midpoint of the length of the press key, and on which a lever 7 serving for the actuation of the fuel valve, and a lever 8 serving for the actuation of the spark-producing mechanism, abut.

FIG. 3 shows the press key alone, removed from the remainder of the lighter. As seen in FIG. 3, the press key 2 is provided on its sides with holding lugs 9 which secure the press key 2 within the housing against the pressure exerted by the levers 7 and 8. The pivoting levers 5 are symmetrical and are disposed somewhat eccentric on the lower end portion of the press key 2, in order to avoid the hazard of a side tripping of the press key and its jamming in case when a force is applied to the press key 2 at a point other than the center thereof.

While the invention has been described in connection with only one specific embodiment, it will be readily apparent that numerous modifications thereof may readily be made. It is, therefore, intended by the appended claims to cover all such modifications and variations as come within the true spirit and scope of the invention.

What I claim is:

1. A lighter comprising a housing including an upright cylindrical wall, a spark-producing mechanism including an associated fuel valve disposed in said housing, means for operating said spark-producing mechanism and said fuel valve including an elongated press key, said cylindrical wall having a recess receiving therein said press key, said press key being movable to and from an upright rest position wherein it is disposed substantially within the contour of said cylindrical wall, and means mounting said press key in said housing for movement inwardly from said rest position when pressed, wherein said housing has a longitudinal upright axis, said press key being elongated in a direction parallel to the axis and being formed concavely along said direction on the surface thereof facing outwardly of said housing.

2. A lighter, as claimed in claim 1, wherein said press key has a length of about the width of two fingers.

3. A lighter, as claimed in claim 1, and a burner near one end portion of said housing, said press key being disposed in said housing near said burner, said mounting means comprising lever means pivotably mounted in said housing near the other end portion thereof.

4. A lighter, as claimed in claim 3, wherein said lever means comprises a pair of levers.