

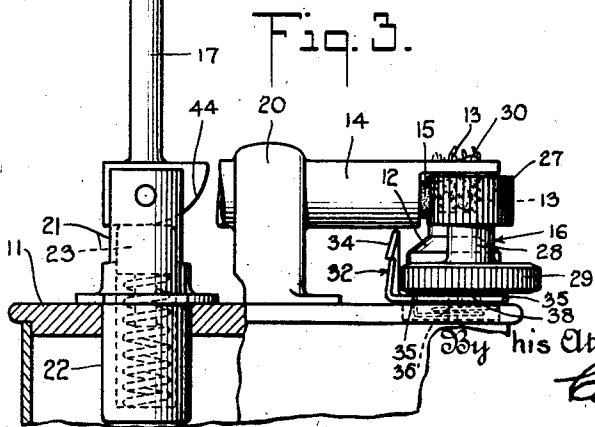
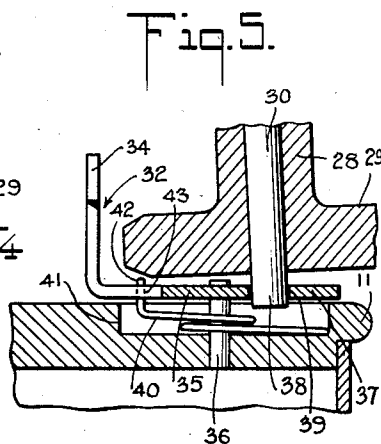
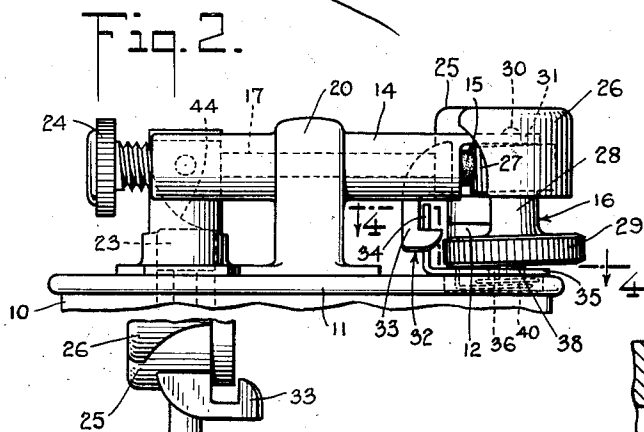
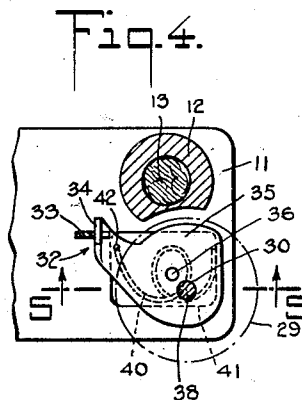
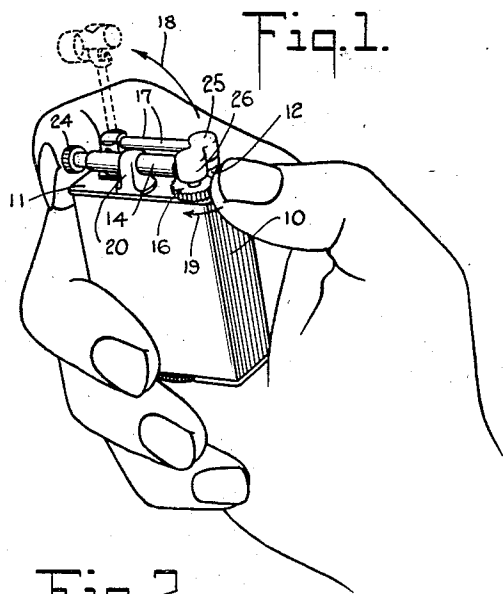
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C. HARDY

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POCKET CIGAR LIGHTER

Filed Nov. 7, 1927



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By his Attorneys
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POCKET CIGAR LIGHTER

Application filed November 7, 1927. Serial No. 231,570.

This invention relates to a cigar lighter and relates more particularly to a pocket lighter of the type in which a friction wheel is rotated in contact with a body of a pyrophoric alloy for producing a spark emission which serves to ignite a fuel containing wick.

In pocket cigar lighters of this class a liquid fuel is contained in a receptacle, the top or cover of which carries the operating parts of the lighter which include a wick holder or tube, a holder for a body of pyrophoric alloy, an actuating means cooperating with the pyrophoric alloy for producing a spark emission and a snuffer device cooperating with the wick holder and wick. In a well known form of pocket cigar lighters of this class, the snuffer device and the igniting apparatus are both mounted on the top wall of the fuel receptacle, the construction being such that in operating the cigar lighter, the snuffer device must first be manually moved from its closed to an open position before the igniting apparatus can be actuated.

A prime object of my present invention centers about the provision of an improved pocket cigar lighter of this type embodying a design and construction in which a single operating movement is made effective for moving the snuffer device from its closed to its open position and for actuating the igniting apparatus.

To the accomplishment of the foregoing and such other objects as will hereinafter appear, my invention consists in the elements and their relation one to the other, as hereinafter more particularly described and sought to be defined in the claims, reference being had to the accompanying drawings which show the preferred embodiment of my invention, and in which:

Fig. 1 is a perspective view of the improved cigar lighter of my invention showing the manner of using the same,

Fig. 2 is an elevational view thereof taken on an enlarged scale and showing the main operating parts thereof, with the snuffer device shown in its closed position,

Fig. 3 is a similar view thereof with parts broken away and showing the snuffer device in its open position,

Fig. 4 is a fragmentary cross sectional view taken in the planes of the broken line 4—4, Fig. 2, and

Fig. 5 is an enlarged fragmentary view showing the details of construction of some of the operating parts thereof.

Referring now more in detail to the drawings, the pocket cigar lighter embodying my improvements comprises, as an entirety, a fuel receptacle 10 having a casing top wall 11, which top wall carries the operating parts of the lighter, which include a holder or tube 12 through which a fuel impregnated wick 13 projects, a holder or tube 14 containing the pyrophoric alloy 15, a friction wheel and actuating mechanism generally designated as 16, both cooperating with the said wick holder 12, with which in turn cooperates a snuffer device 17 movable from a closed snuffing position such as shown in Figs. 1 and 2 of the drawings to an open position such as shown in Fig. 3 of the drawings.

In accordance with my present invention, the operating parts of the cigar lighter are so organized that a single operating movement of the finger of the user, as illustrated in Fig. 1 of the drawings, simultaneously effects the movement of the snuffer device 17 to an open position and the operation of the igniting apparatus 16. This is accomplished by interrelating the movable snuffer device 17 with the igniting apparatus 16 so that the initiation of the operation of the finger wheel of the igniting apparatus 16 automatically effects the movement of the snuffer device to its open position; and in the particular embodiment of the invention herein exemplified, the construction and the relation of the parts are such that a finger pressure exerted by the thumb of the user in the initiation of the rotation of the finger wheel effects the releasing movement of the snuffer device to the open position as shown by the arrowed line 18 in Fig. 1 of the drawings, the continued movement of the thumb, as indicated by the arrowed line 19 in said figure causing the wick igniting emission of sparks.

Preferably the receptacle top wall 11 and the supports for the operating elements of the lighter are made in the form of a unitary

casting more specifically set forth in my co-
 pending application, Serial No. 231,569 filed
 Nov. 7, 1927, the said top wall 11 including
 a standard or post 20 in which the pyrophoric
 alloy holder or tube is mounted, a support 21
 for pivotally journalling the snuffer device
 17 and a housing 22 for a spring plunger de-
 vice 23 which serves to operate the snuffer
 device 17. The tube or holder 14 is provided
 with the customary tensioning and adjusting
 means 24 for the pyrophoric body, and the
 snuffer device 17 is provided with a snuffer
 box 25 which seats over the wick tube or
 holder 12, and a cover 26 which seats over
 and surrounds part of the igniting apparatus
 16.

The igniting apparatus 16 comprises in the
 construction herein exemplified a friction
 wheel 27 fixed to a sleeve 28, the latter having
 an integral operating finger wheel 29, these
 parts being force-fitted onto a spindle 30
 journaled at its top end preferably in a sup-
 port 31 extending from and formed integral-
 ly with the tube 14 and journaled at its bot-
 tom end in the manner to be detailed hereinafter.
 As will be understood, when the finger
 wheel 29 is rotated by the thumb of the user,
 the action of the friction wheel 27 against the
 pyrophoric alloy 15 causes the production of
 an emission of sparks which ignites the wick
 13.

For accomplishing the desired object of
 the invention the snuffer device 17 and the
 igniting apparatus 16 are connected together
 by a latching and unlatching mechanism
 generally designated as 32, the operation of
 which may be controlled by the pressure
 which is exerted by the thumb of the user in
 the initial or starting stage of operation of
 the finger wheel 29. This latching mecha-
 nism comprises a latch element 33 affixed to
 the snuffing device 17 and a complementary
 latch element 34 which preferably is an up-
 turned part of a lever 35. The lever 35 de-
 fines the connecting means between the
 finger wheel 29 and the latch elements, said
 lever fulcrumed on the pivot pin 36 having
 an arm 37 in which the spindle 30 of the
 igniting apparatus is journaled, the bottom
 end 38 of said spindle being received by an
 opening 39 in said lever arm. The latch
 element 34 defines the other arm of said lever
 35 and said lever is actuated by a spring 40
 housed in a recess 41 formed in the top casing
 wall 11, one end of said spring engaging a
 wall of the recess, as clearly shown in Figs.
 2 to 5 of the drawings, the other end of said
 spring 40 being provided with an upturned
 end 42 which projects through an orifice 43
 in the latch arm of said lever 35.

With this recited construction it will be
 seen that when the snuffer device 17 is in its
 closed position, as shown in Figs. 1 and 2 of
 the drawings, the latch elements 33 and 34
 engage and are held in engagement by the

action of the spring 40. When, however,
 pressure is exerted on the finger wheel 29 in
 the manner illustrated in Fig. 1 of the draw-
 ings, such pressure is applied by the spindle
 30 to the operating arm 37 of the latch lever
 35 and is effective for moving the said lever
 about the fulcrum 36 against the action of
 the spring 40, such movement causing the
 latch element 34 to disengage from its com-
 plemental latch element 33. When this dis-
 engagement is effected the spring operated
 plunger 23 acts on the cam element 44 of the
 snuffing device 17 to automatically flip the
 snuffer device 17 from its closed to the open
 position, as shown in Fig. 3 of the drawings.
 This is accomplished merely by the initial
 pressure normally exerted by the thumb of
 the user on the finger wheel which is always
 just prior to the rotating of the finger wheel
 so that the natural operating movement of
 the thumb of the user accomplishes first the
 opening of the snuffer device and then the
 igniting of the wick in proper sequential
 order. The construction is moreover such
 that the only operation which is necessary to
 perform the two functions of releasing the
 snuffer for movement to its open position and
 of igniting the wick, is a rotating movement
 of the finger wheel 19, it being the initial pres-
 sure exerted on the finger wheel or the initial
 movement of rotation thereof which pro-
 duces the release of the latching elements.
 When the finger wheel 29 is in turn released
 after the cigar lighter has been operated,
 the spring 40 returns the latch element 34
 as well as the finger wheel 29 to their normal
 positions under tension of the spring 40 so
 that the return manual movement of the
 snuffer device 17 from its open to a closed
 position causes the re-engagement of the
 latch elements 33 and 34 for locking the
 snuffer device in its closed position.

The manner of making and using the im-
 proved cigar lighter of my present invention
 will, in the main, be fully apparent from
 the above detailed description of the con-
 struction and operation thereof. It will be
 further apparent that while I have shown
 and described my invention in the preferred
 form, many changes and modifications may
 be made in the structure disclosed without
 departing from the spirit of the invention,
 defined in the following claims.

I claim:

1. A pocket lighter comprising, in com-
 bination, a fuel receptacle having a holder for
 a wick, a snuffer arm oscillatable between
 open and closed positions, resilient means for
 moving said snuffer arm from its closed to its
 open position, sparking mechanism for ignit-
 ing said wick including an operating finger
 wheel mounted on a vertical spindle, means
 supporting one end of said spindle, an os-
 cillatable plate provided with a bearing for
 the other end of said spindle, latch means

mounted on said plate for engaging and holding the snuffer arm in closed position, resilient means tending to oscillate said plate in latching position in order to keep the snuffer arm closed, the axis of oscillation of the plate and the axis of rotation of the finger wheel being so eccentrically related that rotative pressure applied to the finger wheel oscillates the plate and releases the snuffer arm to permit ignition of the wick.

2. A pocket lighter comprising, in combination, a fuel receptacle having a holder for a wick, a snuffer arm oscillatable between open and closed positions, resilient means for moving said snuffer arm from its closed to its open position, sparking mechanism for igniting said wick including an operating finger wheel mounted on a vertical spindle, means supporting the upper end of said spindle, an oscillatable plate mounted closely subjacent said finger wheel and provided with a bearing for the lower end of said spindle, latch means mounted on said plate for engaging and holding the snuffer arm in closed position, resilient means tending to oscillate said plate in latching position in order to keep the snuffer arm closed, the axis of oscillation of the plate and the axis of rotation of the finger wheel being so eccentrically related that rotative pressure applied to the finger wheel oscillates the plate and releases the snuffer arm to permit ignition of the wick.

Signed at New York in the county of New York and State of New York, this 3rd day of November A. D. 1927.

CHARLES HARDY.