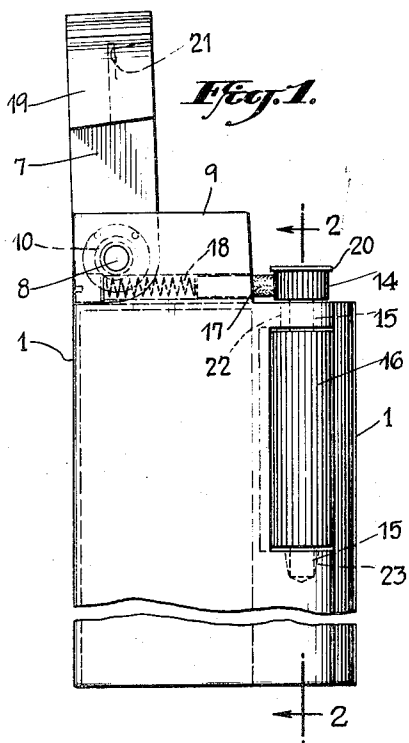
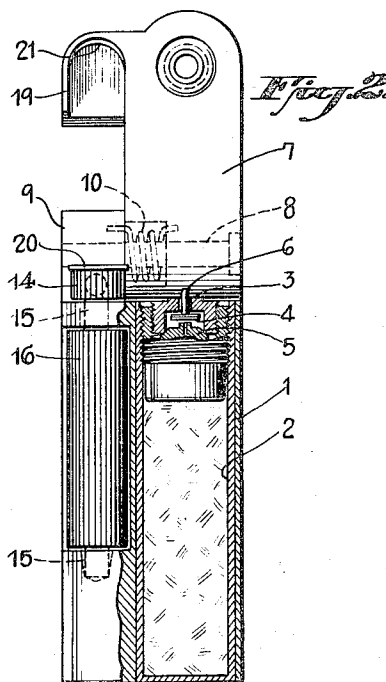
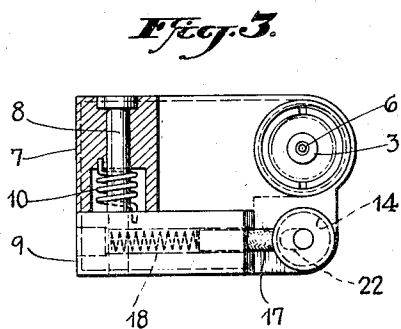
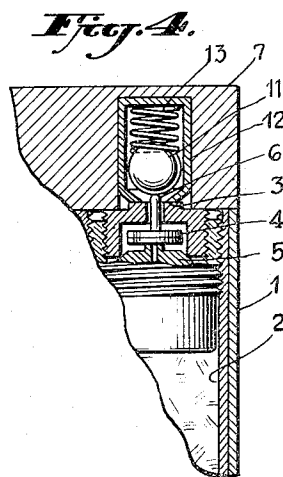


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GAS LIGHTER MECHANISM

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GAS LIGHTER MECHANISM

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1 Claim. (Cl. 67—7.1)

1

The invention relates to a cigar lighter fueled by inflammable gas such as butane or propane, the burner of the lighter being provided with an overlying cap which holds closed a valve controlling the flow of gaseous fuel through the burner, and the gas being ignited at the burner by a manually rotated sparking wheel, the parts being so coordinated that when the operator applies manual pressure to initiate rotation of the sparking wheel, the cap is automatically opened. When the cap opens, the fuel valve also opens to cause gas to flow through the burner, and the flame may then be produced by manual rotation of the sparking wheel, the flame persisting as long as the cap remains open and being extinguished when the cap is closed to move the fuel valve into closed position. Further features of the invention will be in part obvious and in part specifically referred to in the description hereinafter contained which, taken in conjunction with the accompanying drawings, discloses a preferred form of lighter constructed to operate in accordance with the invention; the disclosure however should be considered as merely illustrative of the invention in its broader aspects. In the drawings—

Fig. 1 is a side view of a lighter constructed to operate in accordance with the invention, the above mentioned cap being shown in open position.

Fig. 2 is a section taken on the line 2—2 of Fig. 1, looking in the direction of the arrows.

Fig. 3 is a top plan view of the lighter shown in Fig. 1, the cap being partially cut away.

Fig. 4 is a detail vertical section illustrating a preferred form of engagement between the cap and the fuel valve.

The invention is illustrated as applied to a lighter having an outer casing 1, which may be understood as removably receiving an appropriate inner container 2 which holds butane or the like under pressure. The internal details of construction of container 2 and its mode of attachment in and removal from the casing 1, will not be described in detail, since the invention is not particularly concerned therewith. In the illustrated form of the invention, the flow of gas from within container 2 to the burner member 3 is controlled by a valve 4 which cooperates with an apertured valve seat member 5, the valve 4 being provided with an actuating member shown in the form of a plunger 6 which is exposed through the mouth of the burner member 3.

When the burner is idle, a cap 7 covers the mouth of burner 3, and holds the valve 4 closed

2

to prevent the flow of fuel to the burner. In the illustrated form of the invention this cap is pivotally mounted to swing about a stud 8 (Fig. 3) which is fixed in an ear 9 extending up from casing 1, and a coil spring 10 is provided to urge cap 7 toward open, burner exposing position. As shown in Fig. 4, the portion of the cap 7 which engages the burner 3 when the cap is in burner covering position, preferably is provided with a ball 11 contained within an appropriate housing 12 and urged by a spring 13 into engagement with the actuating plunger 6 of valve 4. Thus when cap 7 is in burner covering position, the flow of gaseous fuel to the burner is shut off, but when cap 7 moves to burner exposing position, valve 4 is released so that it may move to open position, for example, by the internal gaseous pressure of the gas passing through the valve seat member 5.

The lighter is provided with a sparking wheel structure in which the serrated sparking wheel 14 is rotated by manual pressure when a flame is desired. As shown this sparking wheel is mounted upon a spindle 15 which is journaled in the outer casing 1, and also carries a roughened cylinder 16 against which the operator's thumb or finger is pressed to turn the wheel 14 when desired. A flint 17 mounted within the ear 9 previously described, is shown as pressed against wheel 14 by a spring 18.

A latch is provided for releasably holding the cap 7 in burner covering position, and is so coordinated with the sparking wheel structure that the application of manual pressure to the latter, when sparks are to be produced, will release the latch and permit the cap 7 to swing to burner opening position under the action of spring 10, thus releasing valve 4 and causing fuel to flow out through the burner. In the illustrated form of the invention, the cap 7 is provided with a hood 19 (Fig. 2) which covers the sparking wheel 14 when the cap is in burner covering position, and a circular lip 20 on sparking wheel 14 engages above an arcuate ledge 21 when cap 7 is manually moved to burner covering position. To provide for the above mentioned latching and unlatching action, the upper bearing 22 of the spindle 15, may be somewhat elongated as shown in Fig. 3, and the lower bearing 23 of spindle 15 may be somewhat tapered as shown in Fig. 1, so that the pressure of spring 18 will urge the sparking wheel 14 and lip 20 to the right as the parts appear in Fig. 1. If the cap 7 be then manually moved to burner covering position, the lip 20 will move slightly to the left and latch over the ledge

3

21, thus holding the cap 7 in burner covering position. Then when the user applies manual pressure to the cylinder 16 preparatory to rotating the sparking wheel 14, this manual pressure will move the sparking wheel structure to the left (as the parts appear in Fig. 1) against the action of spring 18, thus releasing the latch 20 and permitting the cap 7 to move to burner exposing position. Then ignition will be secured as rotative manual pressure continues to be applied to cylinder 16.

While the invention has been disclosed as embodied in a lighter of the above described specific construction, it should be understood that changes may be made without departing from the invention in its broader aspects, within the scope of the appended claim.

I claim:

A gas fueled lighter of the character described including a casing having therein a chamber constructed to hold gas under pressure, a burner mounted in fixed position on said casing, said burner having a gas passageway therein, a fuel valve interposed between said burner and chamber, said valve having an actuating plunger exposed at the mouth of said burner, said plunger being mounted to move between an upper position wherein said valve is open and a lower position wherein said valve is closed, said plunger being spaced from the walls of said passageway to per-

4

mit free flow of said gas through said passageway, a cap mounted on said casing to move between positions in which it respectively covers and exposes said burner, said cap being urged toward burner exposing position, said cap having a valve plunger engaging member mounted to move with respect to the remainder of the cap structure in a direction toward and from said valve plunger, and a spring urging said last mentioned member toward valve plunger engaging position, a sparking wheel structure including a manually engageable member mounted to move bodily as well as rotatably in response to manual pressure, and means releasable by bodily movement of said last mentioned member as aforesaid, for releasably holding said cap in burner covering position.

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