Dec. 20, 1949 A. CAMPOS 2,491,550

POCKET LIGHTER

Filed June 7, 1946

FIG. 1.

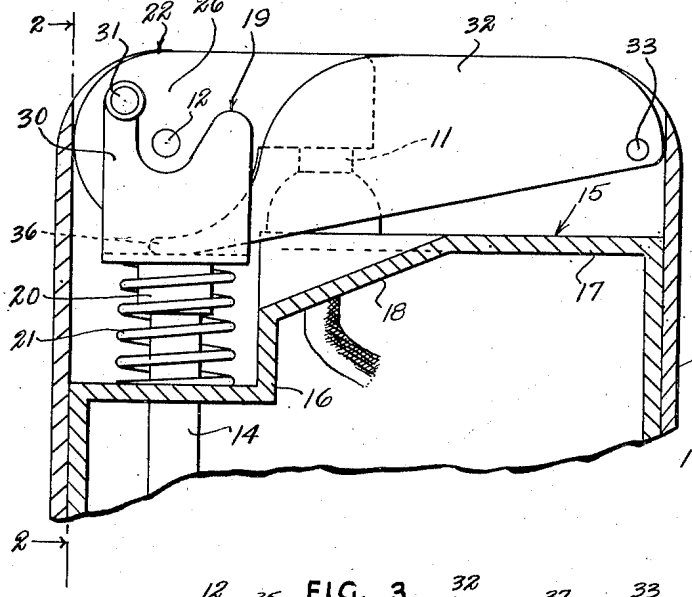


FIG. 2.

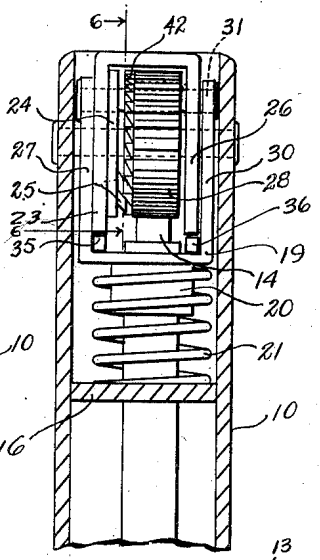
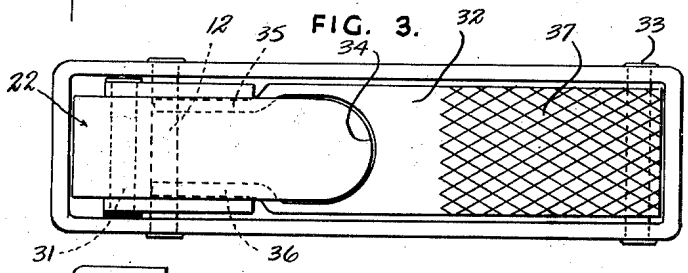


FIG. 3.



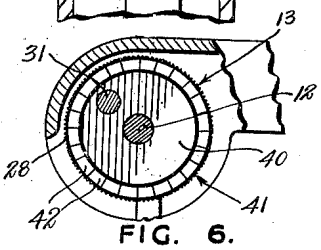
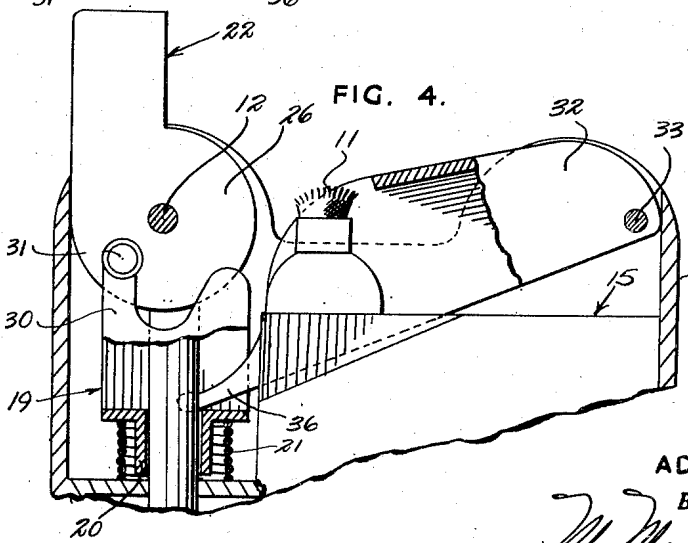


FIG. 6.

FIG. 4.



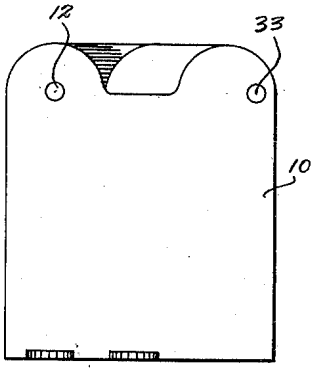


FIG. 5.

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POCKET LIGHTER

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4 Claims. (Cl. 67—7.1)

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This invention relates to a pocket lighter, and more particularly to that type in which movement of the hood operates to create a spark to ignite the wick.

An object of the present invention is to provide a lighter wherein the lighter mechanism is actuable by pressure applied to the cover.

Another object of the present invention is to provide a lighter in which movement of the hood to generate sparks to ignite the wick is effected by depressive action of the cover.

A further object of the present invention is to provide a lighter which may be easily manipulated.

A still further object of the present invention is to provide a lighter which is inexpensive in construction and absolutely reliable in operation.

Other objects and advantages will become apparent from the following description.

An embodiment of the invention is illustrated by way of example in the accompanying drawings, wherein:

Figure 1 is an enlarged fragmentary side elevational view, with parts in section and parts broken away, showing the relative position of the parts of the lighter of the present invention when in normal or closed position.

Figure 2 is an enlarged fragmentary transverse sectional view, taken on the line 2—2 of Figure 1.

Figure 3 is a plan view of the lighter shown in Figure 1.

Figure 4 is an enlarged fragmentary side elevational view, with parts in section and parts broken away, showing the relative position of the parts when in open position.

Figure 5 is a side elevational view of the lighter of the present invention.

Figure 6 is a fragmentary transverse sectional view, taken on the line 6—6 of Figure 2.

Referring to the drawings, the numeral 10 designates the fuel receptacle through the top wall 15 of which projects an end of a wick 11 which is housed within and supplied with liquid fuel contained in said receptacle. Rotatably mounted on a pin or shaft 12 carried by the top of the side walls of the receptacle 10 adjacent an end thereof is an abradant-surfaced wheel 13, the mounting of said wheel being such that its abradant surface is in contact with a pyrophoric element 14 supported by means housed within the receptacle 10, not shown. The wheel 13, Figure 6, comprises a central solid core 40 and an outer ring member 41 concentrically mounted on said core, the core having a centrally disposed

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opening extending therethrough for the reception of the pin or shaft 12 therein. The ring member 41 is provided on its outer peripheral surface thereof with abradant serrations 28. Projecting from a side of the ring member 41 is a ratchet 42.

As clearly shown in Figures 1 and 4, the top wall 15 comprises a depressed portion 16, a flat portion 17, and an inclined intermediate portion 18, the pyrophoric element 14 projecting upwardly through the depressed portion 16. Disposed about the projecting end of the pyrophoric element 14 and mounted for reciprocatory upward and downward movement is a forked member 19. The forked member 19 is provided with a collar 20 which depends from its base thereof. Arranged in surrounding relation with respect to the collar 20 of the forked member 19 and having its upper end bearing against the lower face of the base of said member is a coil spring 21, said spring having its lower end bearing against the upper face of the depressed portion 16 of the top wall 15 and supported thereby.

Mounted in superimposed relation with respect to the forked member 19 and fixedly secured thereto is a hood 22, the hood 22 being pivotally supported on the pin or shaft 12. Juxtaposed upon the inner face of the side wall 23 of the hood 22, Figure 2, and carried thereby is a disk-like element 24, said element being provided with a detent 25 which is normally in engagement with an interspace of the ratchet 42 of the outer ring member 41 of the wheel 13. The side walls 23 and 26 of the hood 22 and the forks 27 and 30 of the forked member 19 complemental thereto are fixedly secured to the core 40 of the wheel 13 by means of the eccentrically disposed pin 31 carried by said core. It is to be noted that both of the forks 27 and 30 of the forked member 19 are of the same configuration as the fork 30 shown in Figures 1 and 4.

Arranged in cooperative association with the hood 22 and forked member 19 is a cover 32, said cover being pivotally mounted in the side walls of the receptacle 10, as at 33. The cover 32 is provided with a cut-out portion 34, Figure 3, for the reception of the end of the hood 22 therein. The side walls 35 and 36 of the cover 32 adjacent the cut-out portion 34, Figures 1, 3 and 4, are offset, and each of said walls terminates in a rounded end. The rounded end of the side wall 35, Figure 2, extends between the side wall 23 of the hood 22 and the base of the forked member 19, and rests upon the upper face of said member and is supported thereby, while the rounded end of the side wall 36 extends between the side

wall 26 of the hood 22 and the base of the forked member 19 and likewise rests upon the upper face of said member and is supported thereon. The top exterior surface of the cover 32 is provided with a serrated portion 37, as shown in Figure 3.

In operation of the lighter of the present invention, the operator grasps the lighter in one of his hands and while grasping the lighter places the index finger of such hand upon the serrated portion 37 of the cover 32 and then causes such finger to exert a downward directed pressure thereon. The application of this downwardly directed pressure causes the pointed ends of the side walls 35 and 36 of the cover 32 to impart a downwardly directed force upon the base of the forked member 19, resulting in the movement of the forked member 19 downwardly against the tension of the spring 21. The movement of the forked member 19 downwardly results in a swinging movement of the hood 22 upwardly about its pivot 12. With the swinging movement of the hood 22 the disk 24 is rotated, and with the rotation of the disk 24 the abradant-surfaced wheel 13 is likewise rotated by virtue of the detent 25 of the disk 24 being in engagement with an interspace of the ratchet of said wheel. The exertion of the downwardly directed pressure on the cover 32 is continued until the hood 22 has been moved to its full open position, as shown in Figure 4. With the upward movement of the hood 22, the sparks emitted from the pyrophoric element ignite the wick 11, forming a flame for the lighting of a cigarette.

Upon withdrawal of the index finger from engaging contact with the serrated portion 37 of the cover 32, the forked member 19 is caused to be moved upwardly under the action of the spring 21. The upward movement of the forked member 19 results in a swinging movement of the hood 22 downwardly about the pivot 12 and finally into engagement with the cut-out portion 34 intermediate the walls 35 and 36 of the cover 32. During the upward movement of the forked member 19 the detent 25 merely rides over the ratchet of the abradant wheel, and at the termination of such movement drops into engagement with an interspace of the ratchet. With the movement of the hood to its normal position, the position shown in Figure 1, the hood is brought into embracing relation with the wick 11, thereby extinguishing the flame.

It will be understood that the lighter may be constructed and arranged as best suited to meet the requirements of use, and that, except as pointed out in the accompanying claims, the invention is not restricted to the particular construction shown and described herein.

I claim:

1. In a lighter, the combination with a fuel receptacle, a wick projecting from said receptacle, an abradant surfaced rotatable wheel adjacent said wick, a pyrophoric element in contact with said wheel, and a pivotally mounted hood arranged in superimposed embracing relation with respect to said rotatable wheel and operatively connected thereto, of a member mounted for reciprocatory up-and-down movement on said receptacle adjacent said hood, means operatively connecting said member to said hood on one side of the pivotal mounting of the latter, and a cover arranged in side-by-side relation with respect to said hood pivotally mounted on top of said receptacle and operatively connected to said member and actuable upon application of a downwardly-directed pressure thereon to cause downward movement of said member and concomitant actuation of said hood and said wheel.

2. In a lighter, the combination with a fuel receptacle, a wick projecting from said receptacle, an abradant surfaced rotatable wheel adjacent said wick, a pyrophoric element in contact with said wheel, and a pivotally mounted hood arranged in superimposed embracing relation with respect to said rotatable wheel and operatively connected thereto, of a member mounted for reciprocatory up-and-down movement on said receptacle adjacent said hood, means operatively connecting said member to said hood on one side of the pivotal mounting of the latter, a cover arranged in side-by-side relation with respect to said hood pivotally mounted on top of said receptacle and operatively connected to said member and actuable upon application of a downwardly-directed pressure thereon to cause downward movement of said member and concomitant actuation of said hood and said wheel, and resilient means interposed between said member and said receptacle for returning said member, said hood and said wheel, to normal position upon withdrawal of the downwardly-directed pressure applied to said cover.

3. In a lighter, the combination with a fuel receptacle, a wick projecting from said receptacle, an abradant surfaced rotatable wheel adjacent said wick, a pyrophoric element in contact with said wheel, and a pivotally mounted hood arranged in superimposed embracing relation with respect to said rotatable wheel and operatively connected thereto, of a member disposed about said pyrophoric element and mounted on said receptacle for reciprocatory up-and-down movement with respect to said element, means operatively connecting said member to said hood on one side of the pivotal mounting of the latter, and a cover arranged in side-by-side relation with respect to said hood pivotally mounted on top of said receptacle and operatively connected to said member actuable upon application of a downwardly-directed pressure thereon to cause downward movement of said member and concomitant actuation of said hood and said wheel.

4. In a lighter, the combination with a fuel receptacle, a wick projecting from said receptacle, an abradant surfaced rotatable wheel adjacent said wick, a pyrophoric element in contact with said wheel, and a pivotally mounted hood arranged in superimposed embracing relation with respect to said rotatable wheel and operatively connected thereto, of a member disposed about said pyrophoric element and mounted on said receptacle for reciprocatory up-and-down movement with respect to said element, means operatively connecting said member to said hood on one side of the pivotal mounting of the latter, and a cover arranged in side-by-side relation with respect to said hood pivotally mounted on said receptacle and operatively connected to said member actuable upon application of a downwardly-directed pressure thereon to cause downward movement of said member and concomitant actuation of said hood and said wheel, said cover being provided with a cut-out portion for the reception of one end of said hood and having side walls adjacent said cut-out portion extending between said hood and said member for operative engagement with the upper face of said member.

ADOLPH CAMPOS.

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