

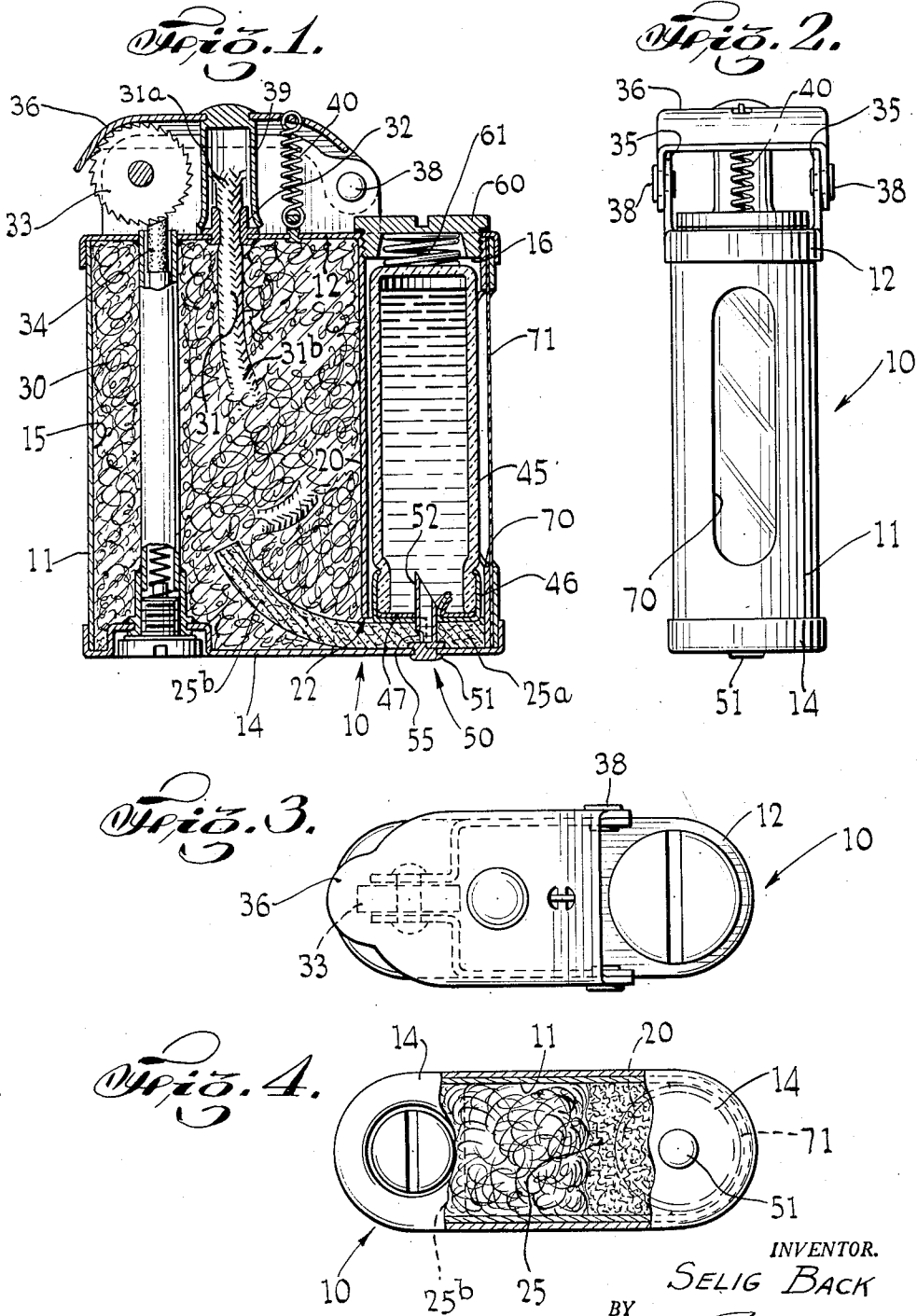
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CIGAR AND CIGARETTE LIGHTER

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CIGAR AND CIGARETTE LIGHTER

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1 Claim. (Cl. 67—7.1)

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My invention relates to cigarette or cigar lighters of the so called sparking type in which a spark is created by means of a flint to ignite a wick carrying lighter fluid and has for one of its objects the provision of novel means whereby the wick may be kept at maximum saturation for relatively long periods of time to maintain the lighter at a high degree of efficiency.

Another object of my invention is to provide a lighter of the class described which shall be so constructed and arranged as to house a removable cartridge or container of lighter fluid and in which self-regulatory means shall be provided for automatically feeding fluid from said cartridge to the wick chamber so that when the absorbent material therein has become saturated the flow of fluid from the cartridge will stop until such time as a certain quantity of the lighter fluid has evaporated from the wick chamber, when fluid will again be supplied from the cartridge, such action continuing until the fluid in the cartridge has been exhausted.

A further object of my invention is to provide a cigar or cigarette lighter of the character described which shall comprise relatively few and simple parts, which shall be easy to assemble and use and which shall represent a general improvement in the art.

Still further objects of my invention will hereinafter be pointed out or will become apparent from the detailed description to follow.

In the accompanying drawings:

Fig. 1 is a vertical longitudinal cross-sectional view of a cigarette lighter constructed and arranged in accordance with my invention;

Fig. 2 is an end elevational view thereof;

Fig. 3 is a top plan view thereof; and

Fig. 4 is a bottom plan view thereof, with certain portions of the outer wall broken away to disclose the interior construction thereof.

Referring now in detail to the drawings, I have shown a cigar or cigarette lighter constructed and arranged in accordance with my invention and comprising generally a casing 10 of metal or other suitable material and of any conventional shape, such as, for example, being elongated in one direction and rounded at the sides, as shown. The said casing 10 may consist of a continuous surrounding side wall 11, a top wall 12 and a bottom wall 14. The said top and bottom walls 12 and 14 may be attached to the side wall 11 by overlapping flange portions in frictional engagement with the side wall, or by welding, to render the casing leakproof and airtight.

The casing 10 may be divided into two compartments 15 and 16 by means of transverse ver-

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tically disposed arcuate wall 20, so disposed as to make the compartment 16 substantially circular in cross-sectional contour.

A portion of the transverse wall 20, adjacent the bottom thereof, is cut away to form an opening 22, said opening 22, communicating directly with the two compartments 15 and 16. Overlying a portion of the bottom wall 14, is a suitable wick member 25 having the usual absorbent properties. The said wick 25 is of such size that a portion thereof 25a is disposed at the bottom of the compartment 16, while an integral portion 25b, passing through the opening 22 in the wall 20 is disposed within the compartment 15.

Disposed within the compartment 15 is the usual type of absorbent material 30, such as, for example, cotton adapted to become saturated with lighter fluid. Into this compartment 15, and in intimate contact with the saturated cotton 30 is a standard type wick 31 adapted to have one of its free ends 31a frictionally fed through a collar 32 in the top wall 12 to be exposed to sparking action from a rotatable wheel 33 and cooperating spring fed flint 34 in any well known manner familiar to the art, the other end 31b of the wick 31 being embedded in the cotton 30. As is well known, the wick 31 will draw lighter fluid from the cotton 30 to be ignited by the said spark from the flint 34. Any suitable covering mechanism may be provided for the wick 31, the wheel 33 and the flint 34. One such type of covering is that shown in the drawing and comprises a pair of upstanding bracket members 35 to which there is pivotally attached, by means of the pivots 38, the downwardly depending walls of an inverted, U-shaped cover member 36. A tubular flame snuffer 39 may be suitably attached to the cover 36 in proper alignment with the wick end 31a and a spring 40 normally maintains the cover 36 in closed position.

In accordance with my invention I provide the following means for automatically supplying lighter fluid from a source of supply to the cotton 30 so that the same will be continuously maintained at substantial saturation until the fluid from the source of supply has been exhausted.

The compartment 16 is designed to receive therein a cartridge 45 holding a supply of lighter fluid. The said cartridge 45 is preferably made in the form of a tubular glass vial as shown, and is sealed against evaporation and leakage by a suitable closure member 46. A washer 47 may be interposed between the closure 46 and the cartridge.

Permanently attached to the bottom wall 14 is

an upwardly projecting piercing member 50, comprising the rivet head portion 51 and the tubular portion 52 projecting upwardly therefrom.

It is noted that the top end of the tubular portion 52 is angularly cut to provide a piercing point and that the said portion 52 pierces the wick 25, impaling the same thereon and thus holding the said wick in proper effective position. An opening 55 is provided in the tubular portion 52 which communicates directly with the material of the wick 25 surrounding the said portion 52.

In use, a sealed cartridge 45, containing lighter fluid is placed in the compartment 16 in inverted position and pressed downwardly therein to cause the tubular member 52 to pierce the closure 46 and washer 47 of the cartridge 45. Due to the fact that the wick 25 is porous to provide an air passageway, fluid from the cartridge 45 will flow through the tubular member 52 and through the opening 55 to be absorbed by the wick 25 to saturate the entire wick. When this occurs, the cotton 30 in the compartment 15 being in direct contact with the wick 25 will absorb fluid therefrom until the said cotton, in turn becomes saturated. The wick 31 will then draw fluid from the saturated cotton 30 in the usual manner. When the cotton 30 and the wick 25 have become saturated, the flow of fluid from the cartridge 45 will cease because of lack of air space necessary to permit the flow. When the lighter has been in use for awhile, a portion of the fluid in the cotton 30 will evaporate thus causing the said cotton to draw some fluid from the wick 25. When this happens, the flow of fluid from cartridge 45 will begin again until the saturation point is reached at which time the flow of fluid from the cartridge will again cease.

It is thus seen, from the above, that I have provided a self-regulatory system for feeding lighter fluid from a source of supply when and as needed.

When the fluid in the cartridge 45 has been exhausted, the empty cartridge may be readily removed and replaced with one containing a new supply of fluid.

It is noted that, in accordance with my invention, the owner of my lighter need only possess a few extra cartridges to maintain the lighter at maximum operative efficiency for long periods of time without resorting to the hitherto messy and time consuming practice of refueling.

A cap 60 removably threaded into the wall of the compartment 16 and a spring 61 interposed between the cap 60 and the cartridge 45 serves to hold the said cartridge in the said compartment and to maintain the same pressed against the piercing member 50. A washer between the cap 60 and the top wall 12 will help seal the compartment 16.

If desired, a slotted vertically disposed opening 70 may be provided in the casing wall of the compartment 16, so that the fluid content of the cartridge may be known at all times. A protective window member 71 of transparent Celluloid or cellophane or the like may be employed to seal the opening 70 so that there will be no evaporation or leakage of fluid and to help render the casing leakproof and airtight.

It will thus be seen that there is provided a device in which the objects of my invention are achieved, and which is well adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention, and as various changes might be made in the embodiments above set forth, it is understood that all matter herein set forth, or shown in the accompanying drawing, is to be interpreted as illustrative and not in a limiting sense.

Having described my invention, what I claim and desire to secure by Letters Patent is:

A lighter of the class described comprising a casing having a bottom wall, a first compartment in said casing, a second compartment in said casing, a communicating opening between said compartments, said first compartment containing absorbent material adapted to absorb and hold lighter fuel, an absorbent member, a portion of said absorbent member being disposed in each of said compartments and passing through said communicating opening, a liquid fuel cartridge having a discharge opening at the bottom thereof to normally permit the liquid fuel to flow there-through by the action of gravity when the lighter is held in upright position, means for removably supporting said cartridge in said second compartment with said discharge opening directly blocked by and in communication with the said portion of said absorbent member disposed in said second compartment so that fuel will flow from said cartridge only directly to said absorbent member to be absorbed thereby, the said portion of said absorbent member disposed in said first compartment being in intimate contact with the said absorbent material therein whereby to transfer fuel from the cartridge to said absorbent material to saturate the same, said cartridge being normally provided with a closure sealing the fuel contents therein against leakage and evaporation, the said closure being of pierceable material, a piercing member fixed to said bottom wall and projecting upwardly therefrom into said first compartment, said portion of said absorbent member in said first compartment being impaled on said piercing member, said piercing member being adapted to pierce the said closure when the said cartridge is mounted in said first compartment to form said discharge opening, said piercing member having a tubular portion to permit the fuel from the cartridge to pass therein, and an opening in the wall of said tubular portion disposed adjacent said absorbent member so that fuel from the cartridge may flow directly to said absorbent member after said closure has been pierced.

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