Nov. 3, 1964 J. E. AYRES 3,154,935

DISPOSABLE GAS OPERATED CIGARETTE LIGHTER

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Fig. 1.

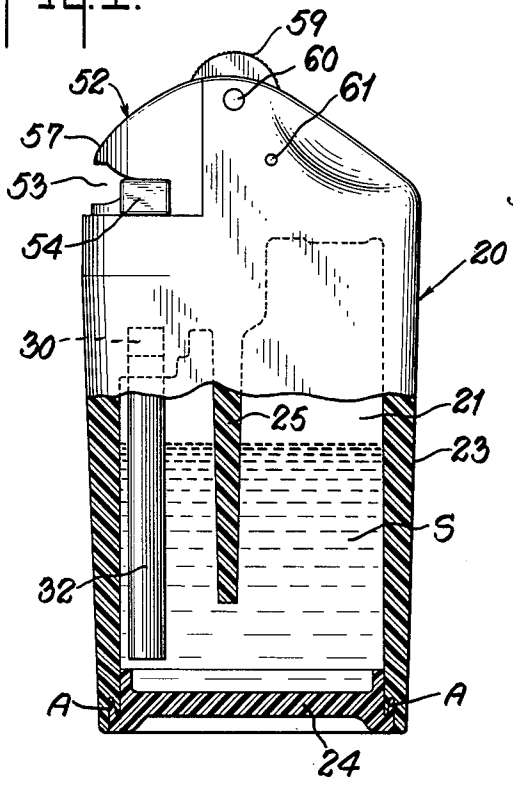
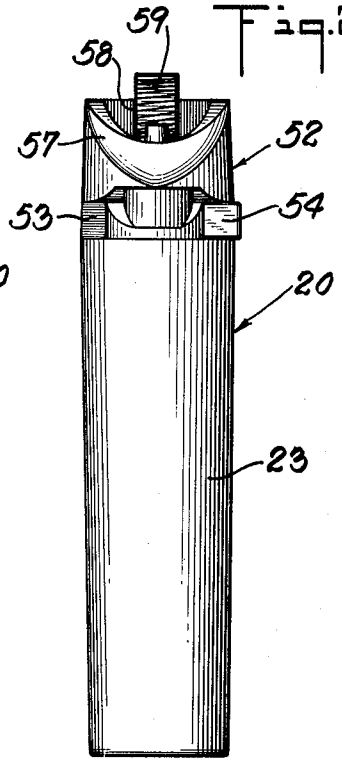


Fig. 2.



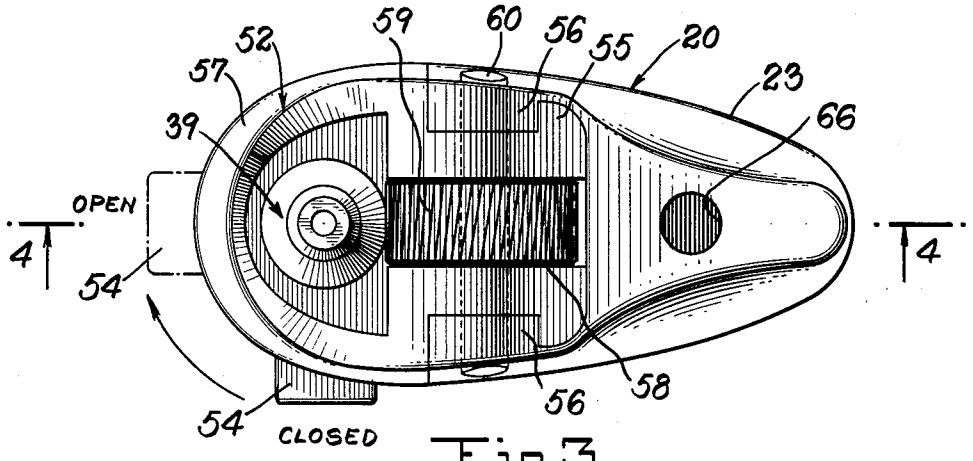


Fig. 3.

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Fig. 4.

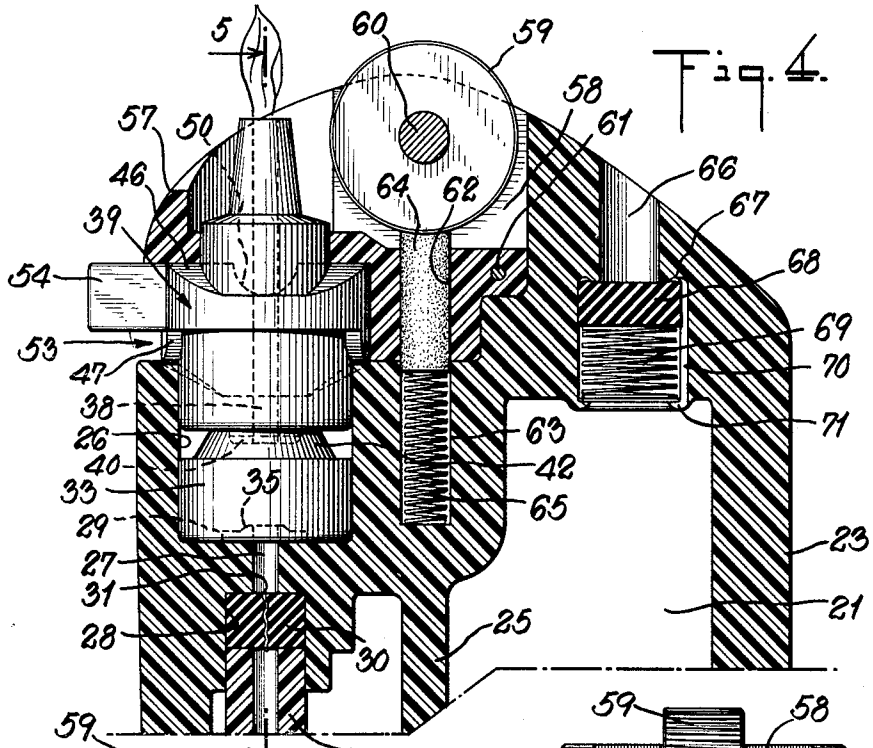


Fig. 6.

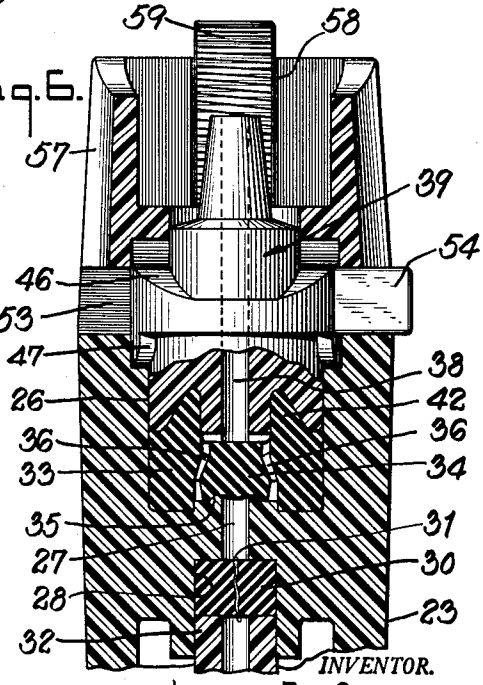
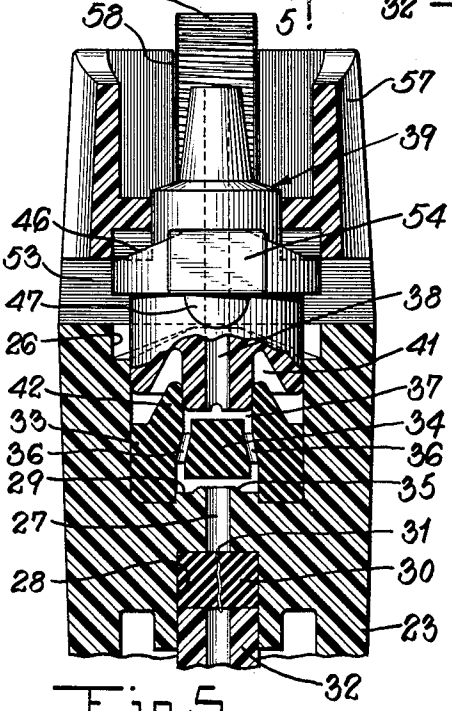


Fig. 5.



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Fig. 7.

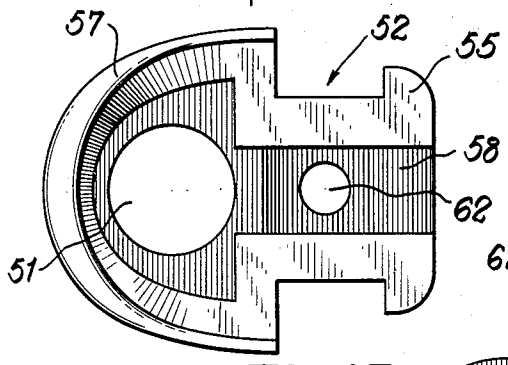


Fig. 8.

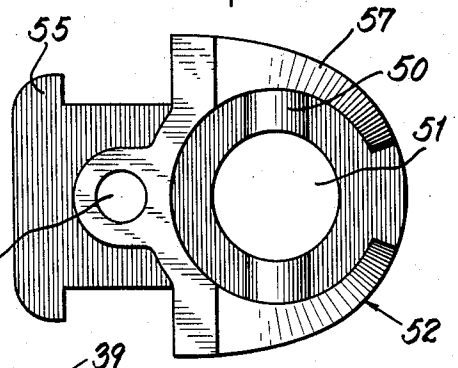


Fig. 10.

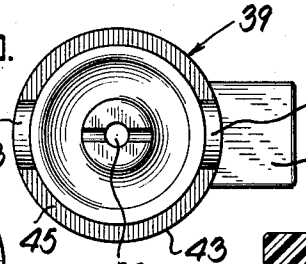


Fig. 9.

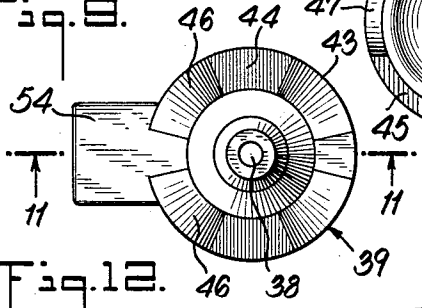


Fig. 11.

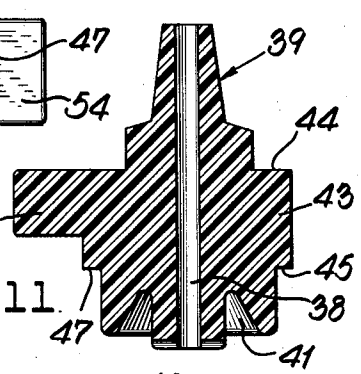


Fig. 12.

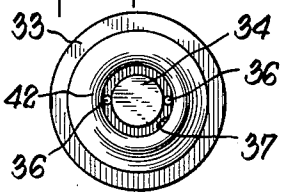
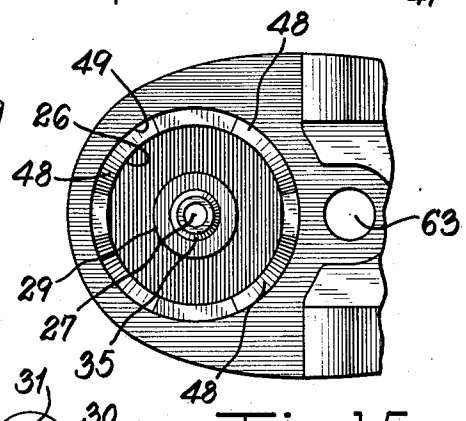


Fig. 14.

Fig. 13.



Fig. 15.



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United States Patent Office 3,154,935 Patented Nov. 3, 1964

3,154,935
DISPOSABLE GAS OPERATED CIGARETTE LIGHTER

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Filed Aug. 17, 1961, Ser. No. 132,047
16 Claims. (Cl. 67—7.1)

The present invention relates to a lighter for cigarettes, cigars or the like wherein gas from a supply of a liquefied petroleum fraction, such as butane or propane, is employed to provide the lighter flame.

An object of the present invention is to provide a gas operated cigarette or cigar lighter which can be manufactured and sold at a relatively low cost and which, because of its low cost, can be discarded after its fuel supply has been exhausted. Another object of the present invention is to provide a gas operated cigarette or cigar lighter in which the height of the flame of burning gas is regulated or controlled and will remain substantially uniform at a predetermined height until the supply of fuel is exhausted.

Other objects and advantages of the present invention will be apparent and better understood from the following description and the accompanying drawings in which:

FIG. 1 is a side elevational view in partial section of a gas operated cigarette or cigar lighter embodying the present invention;

FIG. 2 is a front elevational view of the lighter shown in FIG. 1;

FIG. 3 is a top plan view of the lighter shown in FIG. 1, but on an enlarged scale;

FIG. 4 is a fragmentary view in vertical section taken along the line 4—4 of FIG. 3;

FIG. 5 is a fragmentary view in vertical section taken along line 5—5 of FIG. 4;

FIG. 6 is a view corresponding to FIG. 5, but with certain parts shown in different positions;

FIG. 7 is a top plan view on an enlarged scale of the cover piece or hood for the lighter shown in FIGS. 1–6;

FIG. 8 is a bottom plan view of the cover piece shown in FIG. 7;

FIG. 9 is a top plan view on an enlarged scale of the valve-operating member for the lighter shown in FIGS. 1–6;

FIG. 10 is a bottom plan view of the valve-operating member shown in FIG. 9;

FIG. 11 is a view in vertical section taken along line 11—11 of FIG. 9;

FIG. 12 is a top plan view on an enlarged scale of the valve insert for the lighter shown in FIGS. 1–6;

FIG. 13 is a top plan view on an enlarged scale of the choke element for the lighter shown in FIGS. 1–6;

FIG. 14 is a fragmentary view in vertical section and on an enlarged scale of a portion of the body of the lighter shown in FIGS. 1–6; and

FIG. 15 is a top plan view of the portion of the body of the lighter shown in FIG. 14.

Referring now to the drawings in detail and, more particularly, to FIGS. 1–3, there is a cigarette or cigar lighter 20 of a convenient size and shape to be held in the user's hand or carried in the user's pocket.

The lighter burns gas provided by a supply S of liquefied fuel which is confined under pressure in a fuel chamber 21 within the lighter. In the illustrated embodiment of the invention, the fuel chamber is formed by a hollow body comprising an upper body or shell 23 and a bottom 24. Both the upper body and the bottom may be molded from a suitable plastic material, such as butyrate acetate or the like, which is capable of withstanding the internal pressure exerted thereon by the liquid fuel and which will not be adversely affected by contact with the liquid fuel. In addition, the plastic material may be clear or translucent so that the quantity of fuel in the chamber will be readily visible.

The supply of liquid fuel is confined under pressure in the chamber within the body so as to keep it in liquid phase and a fuel, such as isobutane in liquid form, will have a pressure of about 30 lbs. per square inch at a normal temperature (70° F.). As gas is consumed in operation of the lighter, a drop in the pressure within the lighter body takes place which permits the liquid fuel to expand into a gas until the pressure of the gas and the liquid fuel in the chamber has equalized. In the operation of such devices, it has been found that a relatively small quantity of the liquid fuel, about an ounce, will supply sufficient gas for operation of the lighter for several months under normal conditions of use.

To insure against leakage of the fuel where the bottom is joined to the body, the mating surfaces of these parts have an N shape or other suitable configuration, as indicated at A, to increase the contacting surface areas of these parts which are joined together by a suitable solvent or cement. In addition, the upper body may be provided with internal reinforcing ribs 25 which extend downwardly from the top thereof along opposite sides to prevent distortion of the body under the pressure exerted on the interior thereof.

As shown best in FIGS. 4–6, the top of the body has a valve receiving well or cavity 26 formed in its upper surface adjacent its forward or front end and a discharge passageway 27 which extends through the body. The passageway has an outlet which communicates with the well or cavity in the top of the body and an inlet which communicates with a choke receiving recess 28 formed in the lower or interior surface of the top of the body. A raised boss 29 located in the center of the bottom of the valve receiving cavity surrounds the outlet of the passageway and forms a valve seat.

A choke 30 comprising a disc of resilient material, such as rubber or the like, having a thread 31 extending therethrough is fitted within the recess in the lower or interior surface of the body at the inlet of the discharge passageway. The choke controls the rate at which fuel under pressure flows from the chamber in the body into the discharge passageway so as to provide a flame of the desired height. In actual practice, a cotton thread of about .015 inch in diameter which has been forced through the rubber-like material with a needle, has been found to permit a flow of fuel which will provide a flame of suitable height for the lighting of cigarettes, cigars or the like. The choke body which is made of a rubber-like material should be fitted within the recess in the body with pressure being exerted on the sides thereof so that any expansion of the choke body caused by contact with the fuel will not be apt to cause a variation in the rate of flow of the fuel through the choke.

It has also been found that a variation in the height of the flame may occur depending on whether the fuel contacting with the choke is in liquid-phase or is in gas-phase. In order to prevent such variation and to maintain the flame at a predetermined height under normal operating conditions without adjustment, one end of a siphon tube 32 of polyethylene or the like is fitted into the recess beneath the choke element but without pressing tightly against it. The other end of the siphon tube extends to a point adjacent the bottom of the chamber in the body so that it will normally be immersed in the supply of liquid fuel. The siphon tube has an inner diameter of about 1/32 of an inch and it has been discovered that such an arrangement will maintain a uniform flame height regardless of the level of the liquid fuel supply in the chamber or the position in which the lighter is held so long as the end of the tube remains in the liquid fuel.

Apparently, the siphon tube maintains fuel in liquid-phase in contact with the bottom of the choke so long as the lower end of the tube remains in the liquid fuel and thus, promotes uniformity in the rate at which fuel flows through the choke and a uniform flame height.

The cavity in the upper surface of the body top contains a valve insert 33 which is made of a flexible rubber-like material. The valve insert as shown best in FIGS. 5 and 6, is made as one piece having central bores or openings at each end thereof with a flexible web or diaphragm 34 extending transversely across the interior of the insert at a point intermediate the ends thereof. When the valve insert in positioned in the cavity, the bore in the lower end of the insert makes a close fit with the central boss in the bottom of the cavity and the central portion of the flexible web is positioned above the outlet end of the discharge passageway. When the parts of the lighter are in the open or operating position, the lower surface of the flexible web is spaced slightly above the upper surface of the central boss, as shown in FIG. 5, and when the parts are in closed position, as shown in FIG. 6, the lower surface of the flexible web is pressed into sealing engagement with the top of the central boss, thus closing the outlet end of the passageway. To insure a good seal between the bottom of the web and the boss without excessive pressure, the upper surface of the boss may be provided with an upwardly sloping annular shoulder 35 which surrounds the outlet of the discharge passageway and engages with the lower surface of the web when said surface is pressed against it.

The flexible web moves upwardly and returns to its raised position by its own resilience when pressure is released from it. This upward movement of the web is also aided by the pressure of the fuel from within the body of the lighter.

The web contains one or more openings 36 which communicate with circular channels 37 on opposite sides of the web to permit the fuel, now in the form of a gas, to flow into the central bore in the upper end of the valve insert and thence, into a bore 38 extending through a valve-operating member 39. The valve-operating member includes a cylindrical stem portion having a lower end which is fitted into the central bore in the upper end of the valve insert and engages with the flexible web. The surface at the lower end of the stem portion contains a transverse slot 40 which communicates with the circular channel on the upper side of the web and thus, provides a passage through which fuel can flow to the bore in the stem if the lower end of the stem remains in contact with the center of the web.

An annular recess 41 having a tapering outer wall surrounds the stem and receives a raised projection 42 of complementary shape extending upwardly from the top of the valve insert. Thus, the valve-operating member makes a snug leakproof fit with the valve insert, and the valve insert, in turn, makes a snug leakproof fit with the body of the lighter to prevent any leakage of the fuel between these parts which would adversely affect operation of the lighter.

The valve-operating member is mounted in the lighter body so that it may be moved or rotated through an arc of about 180° in operation of the lighter. Such rotation causes vertical up and down movement of the valve-operating member relative to the body of the lighter and opens or closes the valve. As shown best in FIGS. 9–11, the valve-operating member has an enlarged portion 43 intermediate its ends. The enlarged portion forms annular shoulders 44 and 45 facing upwardly and downwardly and having cam surfaces 46 and 47 formed thereon, respectively. The cam surface 47 formed on the downwardly facing shoulder cooperates with a cam surface 48 formed at the bottom of an annular recess 49 (see FIGS. 14 and 15) surrounding the top of the cavity in the upper surface of the top of the lighter body.

The cam surface on the upwardly facing shoulder co-

operates with a cam surface 50 surrounding an opening 51 in a cover piece or hood 52 (see FIG. 8) through which the top of the valve-operating member extends. The cover piece or hood is secured to the top of the lighter body and holds the valve-operating member in place. The lower surface of the cover piece at the forward end thereof is spaced from the opposing upper surface of the lighter body so as to form an arcuate slot 53 of about 180° through which an operating lever 54 carried by the valve-operating member extends.

The cam surfaces on the valve-operating member and on the lighter body and the cover piece are shaped so that when the operating lever is at either end of the slot (as shown in FIGS. 1 and 6, for example), the valve-operating member is moved to its lower position and the valve is closed. When the operating lever is moved to the center of the slot (as shown in FIGS. 4 and 5, for example), the valve-operating member is moved to its raised position and the valve mechanism is open. Positive movement of the valve-operating member between its raised and lowered position is assured by the cooperating cam surfaces on opposite sides of the valve-operating member.

The cover piece or hood may be molded from a phenolic resin or other suitable material which is heat resistant. It has a T-shaped rear end 55 which fits into a matching slot defined by spaced side walls 56 extending upwardly from the lighter body. The forward end of the cover piece has walls 57 which abut against the forward ends of the upwardly extending walls on the body and form a smooth continuation thereof. The walls on the cover piece also surround the opening through which the top of the valve-operating member extends and slope downwardly toward the front thereof so as to provide protection for the flame when the lighter is in operation.

The leg of the T-shaped end of the cover piece contains a slotted opening 58 in the top thereof to receive a flint wheel 59 which is rotatably supported on a bolt or pin 60. The bolt or pin extends through the sides of the cover piece, across the slotted opening and through the sides extending upwardly from the lighter body so as to hold the cover piece in place on the body. The cover piece may also be held in place by cement or a second pin 61, or both, in case the flint wheel should receive excessive heat from the flame.

The center leg of the T-shaped end of the cover piece also has an opening 62 formed therein which registers with a cavity 63 in the top of the lighter body (see FIG. 4). The opening in the cover piece and the cavity in the body are positioned directly beneath the flint wheel and contain a flint 64 and a coil spring 65 which urges the flint into engagement with the flint wheel. A long flint which will last for the duration of the fuel supply may be employed, but if desired, the flint may be renewed by removal of the flint wheel.

The supply of liquid fuel may be placed in the lighter by leaving the lower end of the lighter body open until after assembly of the other parts and inserting the bottom piece after the supply of fuel has been placed in the body. This would be carried out under refrigeration in order to maintain the fuel in liquid condition. However, if desired, a fuel loading opening or passageway 66 may be provided in the body of the lighter (see FIG. 4). The passageway for admitting the fuel has a shoulder 67 intermediate its ends against which plug 68 of resilient sealing material, such as rubber, is urged by a coil spring 69. The rubber disc makes a snug fit with the sides of the passageway and when it is pushed down against the force of the spring, fuel is permitted to flow into the chamber in the lighter body through a slot 70 extending along one wall of the passageway. The rubber sealing disc and the spring may be held in place by forming over the plastic material from which the body is made at the lower end of the passageway as indicated at 71.

In operation, the lighter is held in the user's hand and the operating lever is first moved to its center position to

open the valve. The user then rotates the flint wheel to strike a spark which ignites the gas escaping from the opening in the top of the valve-operating member. To extinguish the flame, the operating lever is moved to either end of the slotted opening which closes the valve, thus cutting off the supply of gas.

It will be understood that various changes and modifications may be made in the particular embodiment of the invention which has been described and illustrated herein without departing from the spirit or scope of the invention as defined by the following claims.

I claim:

1. In a gas operated cigarette lighter, the combination comprising a body having a closed chamber formed therein, said chamber being adapted to receive and confine under pressure a supply of an inflammable gas producing fuel in liquid form, said body having a discharge passageway communicating with the chamber formed therein, said passageway having an outlet in an outer surface of the body and an inlet in an inner surface of the body, a choke located in the inlet of the discharge passageway, said choke comprising a body of resilient material having a thread extending therethrough, a valve insert of resilient material mounted on the body at the outlet of the discharge passageway, said insert including a flexible web portion extending over and spaced above said outlet, said web portion being vertically movable into and out of sealing engagement with a surface of the body surrounding the outlet of the discharge passageway and having at least one opening extending therethrough in offset relation to said outlet, a valve-operating member rotatably mounted on the body and being vertically movable between a raised and a lowered position relative to the body by rotation of said member, said valve-operating member including a stem portion extending downwardly into engagement with the flexible web portion, said stem portion forcing the flexible web portion of the valve in sealing engagement with the surface of the body when the valve-operating member is in its lowered position, said valve-operating member also having a passageway extending therethrough and communicating with the opening in the flexible web portion of the valve insert, a cover piece mounted on the body and engaging with the valve-operating member, said cover piece holding the valve-operating member in place and having an opening through which an upper end of the valve-operating member extends and spark producing means carried by the cover piece adjacent the outlet end of the discharge passageway extending through the valve-operating member.

2. In a gas operated cigarette lighter, the combination as defined in claim 1 wherein the body is molded from a plastic material capable of withstanding the pressure exerted thereon by the fuel in the chamber in the body and the cover piece is molded from a plastic material capable of resisting heat.

3. In a gas operated cigarette lighter, the combination as defined in claim 1 wherein the choke body is confined under pressure in the inlet to the discharge passageway in the lighter body.

4. In a gas operated cigarette lighter, the combination as defined in claim 1 which includes a siphon tube having one end fitted in the inlet to the discharge passageway in the lighter body beneath the choke with its other end extending to the bottom of the chamber in the body.

5. In a gas operated lighter of the character described, the combination which comprises a lighter body having a fuel chamber therein, said lighter body being molded from a plastic material and including a hollow upper portion having an opening at its lower end and a bottom fitted within and closing said opening, said upper portion having a top with a discharge passageway extending therethrough and communicating with the fuel chamber, said discharge passageway having an outlet located at the bottom of a cavity in the top of the upper portion, a valve member of resilient material fitted within said cavity and

forming a seal with the sides thereof, said valve member including a flexible web having at least one opening extending therethrough and a solid portion extending over the outlet of the discharge passageway, said web being normally spaced above said outlet and being movable into sealing engagement with the bottom of the cavity surrounding said outlet, a valve-operating member carried by the lighter body, said valve-operating member having an upper end and a lower end with a passageway extending between said ends, said lower end of the valve-operating member extending into engagement with the flexible web and with the passageway in the valve-operating member being in communication with the opening in the web, means for moving the valve-operating member vertically with respect to the body with said movement of the valve-operating member in one direction moving the flexible web into sealing engagement with the bottom of the cavity in the top of the upper portion, spaced walls extending upwardly from the top of the upper portion adjacent the cavity formed therein, a cover piece molded from a heat resistant plastic material mounted on top of the upper portion, said cover piece having a rear portion fitted between sad spaced upstanding walls and a forward portion extending over the valve-operating member, said forward portion engaging with and holding the valve-operating member in operating position and having an opening through which the upper end of the valve-operating member extends, said rear portion of the cover piece having a slotted opening in the upper surface thereof, a pin extending through said upstanding walls and the rear portion of the cover piece, said pin extending across the slotted opening in the rear portion of the cover piece, a flint wheel rotatably mounted on said pin in the slotted opening in the rear portion of the cover piece, a flint carried by the lighter body beneath the flint wheel and a spring urging the flint into engagement with the flint wheel, said flint and spring extending into a well formed in the top of the lighter body and extending through an opening in the rear portion of the cover piece registering with said well.

6. In a gas operated lighter, the combination as defined in claim 5 wherein the valve-operating member is rotatable and the means for moving said member vertically includes cams formed on opposing surfaces of the valve-operating member, the top of the lighter body and the cover piece.

7. In a gas operated lighter, the combination as defined in claim 5 which includes a choke fitted within a recess formed in the interior of the lighter body communicating with the discharge passageway, said choke including a body of resilient material and a thread extending therethrough.

8. In a gas operated cigarette lighter, the combination comprising a body having a chamber formed therein, said chamber being adapted to confine a supply of an inflammable gas producing liquid fuel within the body under a pressure sufficient to maintain the fuel in liquid condition, said body having a discharge passageway extending therethrough and communicating with the fuel chamber, said passageway having an outlet in an exterior surface of the body and an inlet in an interior surface thereof, choke means located at the inlet of the discharge passageway and controlling the rate at which fuel flows through said passageway, a siphon tube communicating with and extending downwardly from the choke means to a point adjacent the bottom of the fuel chamber, manually operable valve means located at the outlet of the passageway, said valve means including a valve-operating member rotatably mounted on the body and being movable vertically relative to the body in movement of the valve means between open and closed positions, said valve-operating member having cam surfaces formed thereon, a cover piece secured to the body and holding the valve-operating member in operating position, and cam surfaces formed on the cover piece and the lighter body, said last-mentioned cam surfaces cooperating with the cam surfaces on

the valve-operating member and effecting positive vertical movement of the valve-operating member with respect to the body upon rotation of said member.

9. In a gas operated cigarette lighter, the combination comprising a body having a closed chamber formed therein, said chamber being adapted to receive and confine under pressure a supply of an inflammable gas producing fuel in liquid form, said body having a discharge passageway communicating with the chamber formed therein, said passageway having an outlet in an outer surface of the body and an inlet in an inner surface of the body, a choke located in the inlet of the discharge passageway, said choke comprising a body of resilient material having a thread extending therethrough, a valve insert of resilient material mounted on the body at the outlet of the discharge passageway, said insert including a flexible web portion extending over and normally being spaced above said outlet, said web portion being vertically movable into and out of sealing engagement with a surface of the body surrounding the outlet of the discharge passageway and having at least one opening extending therethrough in offset relation to said outlet, a valve-operating member rotatably mounted on the body and being vertically movable between a raised and a lowered position relative to the body by rotation of said member, said valve-operating member including an enlarged portion intermediate its ends having upwardly and downwardly facing cam surfaces formed thereon and a stem portion extending downwardly into engagement with the flexible web portion of the valve insert, said stem portion forcing the flexible web portion of the valve into sealing engagement with the surface of the body when the valve-operating member is in its lowered position, said valve-operating member also having a passageway extending therethrough and communicating with the opening in the flexible web portion of the valve insert, a cover piece mounted on the body and engaging with the valve-operating member, said cover piece holding the valve-operating member in engagement with the flexible web portion of the valve insert and having an opening through which an upper end of the valve-operating member extends, cam surfaces on the cover piece and the lighter body opposing the cam surfaces on the valve operating member and cooperating therewith in effecting vertical movement of the valve operating member upon rotation of said member, and spark producing means carried by the cover piece adjacent an outlet of the passageway extending through the valve-operating member.

10. In a gas operated cigarette lighter, the combination as defined in claim 9 which includes an operating lever carried by the valve-operating member and extending to a point beyond the body of the lighter.

11. In a gas operated cigarette lighter of the character described having a hollow body containing a supply of an inflammable gas producing fuel in the form of a liquid, said body having a discharge passageway extending therethrough, said passageway having an inlet and an outlet, the improvement comprising a valve insert of resilient material carried by the lighter body, said valve insert including a flexible web having at least one opening therein and a solid portion extending over an outlet of a discharge passageway in the lighter body, said web being normally spaced above the outlet with the solid portion thereof being movable into and out of sealing engagement with a surface of the body surrounding said outlet, a valve-operating member mounted on the body with one end thereof in engagement with the flexible web of the valve insert, said valve-operating member being movable vertically relative to the lighter body with said movement of the valve-operating member in one direction moving the flexible web into engagement therewith and containing a passageway extending therethrough, said passageway in the valve operating member communicating with the opening in the valve insert and a choke located in an inlet to the discharge passageway in the lighter body, said choke comprising a plug of resilient material and a thread extending therethrough.

12. A gas operated cigarette lighter which comprises a body molded of a plastic material, said body having a chamber formed therein and being adapted to contain a supply of an inflammable gas producing fuel in liquid form with a discharge passageway extending through the body and communicating with the fuel chamber, said discharge passageway having an outlet located in an exterior surface of the body and an inlet located in an interior surface of the body, choke means located on the inside of the body at the inlet of the passageway for controlling the rate at which fuel flows through the passageway, a siphon tube extending downwardly from the choke means to a point adjacent the bottom of the fuel chamber, manually operable valve means located at the outlet of the passageway, said valve means including a valve insert having a movable portion, said movable portion being movable relative to the outlet of the discharge passageway between open and closed positions and having an offset opening therein, a manually operable valve-operating member engaging with said movable portion of the valve insert, said valve-operating member having a passageway extending therethrough and communicating with the outlet of the discharge passageway through the offset opening in the valve insert when the insert is in open position, a cover piece secured to the body and extending over the valve-operating member, said cover piece holding the valve-operating member in engagement with the valve insert and containing an aperture through which an end of the valve-operating member extends, said end of the valve-operating member containing an outlet communicating with the passageway therein, and a sparking wheel rotatably mounted on the cover piece adjacent the outlet in said end of the valve-operating member.

13. A gas operated cigarette lighter as defined in claim 12 wherein the cover piece is molded from a thermosetting plastic material capable of withstanding high temperatures.

14. In a cigarette lighter of the gas burning type, the combination which comprises a hollow lighter body defining a chamber for storage under pressure of a supply of gas-producing fuel in liquid phase, said lighter body being molded from plastic material and including a top wall having a valve-receiving cavity formed therein with a passageway extending from a bottom surface of said cavity to the fuel chamber, said passageway having an inlet in an interior wall of the lighter body and an outlet in the bottom surface of the valve-receiving cavity, a valve insert of resilient material fitted within the valve-receiving cavity with side portions thereof forming a seal with side walls defining said cavity, said valve insert including a flexible web normally spaced above and extending over the outlet in the bottom of the cavity, said web having an opening extending therethrough in offset relation to the outlet in the bottom surface of the cavity and being movable into sealing engagement with the bottom surface of the cavity surrounding said outlet, a valve-operating member mounted on the lighter body with a lower end thereof extending into the valve-receiving cavity and engaging with the flexible web of the valve insert, said valve-operating member being movable vertically relative to the lighter body with movement thereof in one direction forcing the flexible web of the valve insert into sealing engagement with the bottom surface of the valve-receiving cavity, said valve-operating member also containing a discharge passageway extending therethrough, said discharge passageway communicating with the offset opening in said flexible web and the passageway in the lighter body when the flexible web is in normal position spaced above the bottom surface of the cavity, and choke means for controlling the rate at which fuel passes from the fuel chamber in the lighter body into the passageway in the top wall thereof,

said choke means comprising a plug of deformable material held in sealing engagement with interior portions of the lighter body surrounding the inlet to the passageway in the top wall thereof and a cotton thread extending through said plug.

15. In a cigarette lighter of the gas burning type, the combination which comprises a hollow lighter body defining a chamber for storage under pressure of a supply of gas-producing fuel in ilquid phase, said lighter body being molded from plastic material and including a top wall having a valve-receiving cavity formed therein with a passageway extending from a bottom surface of said cavity to the fuel storage chamber, said passageway having an inlet in an interior wall of the lighter body and an outlet in the bottom surface of the valve-receiving cavity, a valve insert of resilient material fitted within the valve-receiving cavity with side portions thereof forming a seal with side walls defining said cavity, said valve insert including a flexible web normally spaced above and extending over the outlet in the bottom surface of the cavity, said web having an opening extending therethrough in offset relation to the outlet in the bottom surface of the cavity and being movable into sealing engagement with the bottom surface of the cavity surrounding the outlet, a valve-operating member mounted on the lighter body with a lower end thereof extending into the valve-receiving cavity and engaging with the flexible web of the valve insert, said valve-operating member being movable vertically relative to the lighter body with movement thereof in one direction forcing the flexible web of the valve insert into sealing engagement with the bottom surface of the valve-receiving cavity, said valve-operating member also containing a discharge passageway communicating with the offset opening in said flexible web and the passageway in the lighter body when the flexible web is in normal position spaced above the bottom surface of the cavity, cam means formed on the lighter body and the valve-operating member for effecting vertical movement of the valve operating member relative to the lighter body, and choke means for controlling the rate at which fuel passes from the fuel chamber in the lighter body into the passageway in the top wall thereof, said choke means comprising a plug of deformable material held in sealing engagement with interior surfaces of the lighter body surrounding the inlet to the passageway in the top wall thereof and a cotton thread extending through said plug.

16. In a cigarette lighter of the gas burning type, the combination which comprises a hollow lighter body defining a chamber for storage under pressure of a supply of gas-producing fuel in liquid phase, said lighter body being molded from plastic material and including

a top wall having a valve-receiving cavity formed therein with a passageway extending from a bottom surface of said cavity to the fuel chamber, said passageway having an inlet in an interior wall of the lighter body and an outlet in the bottom surface of the valve-receiving cavity, a valve insert of resilient material fitted within the valve-receiving cavity with side portions thereof forming a seal with side walls defining said cavity, said valve insert including a flexible web normally spaced above the bottom surface of the cavity and extending over the outlet therein, said web having an opening extending therethrough in offset relation to the outlet in the bottom surface of the cavity and being movable into sealing engagement with the bottom surface of the cavity surrounding said outlet, a valve-operating member mounted on the lighter body with a lower end thereof extending into the valve-receiving cavity and engaging with the flexible web of the valve insert, said valve-operating member being movable vertically relative to the lighter body with movement thereof in one direction forcing the flexible web of the valve insert into sealing engagement with the bottom surface of the valve-receiving cavity, said valve-operating member also containing a discharge passageway communicating with the offset opening in said flexible web and the passageway in the lighter body when the flexible web is in normal position spaced above the bottom surface of the cavity, choke means for controlling the rate at which fuel passes from the fuel chamber in the lighter body into the passageway in the top wall thereof, said choke means comprising a plug of deformable material held in sealing engagement with interior portions of the lighter body surrounding the inlet to the passageway in the top wall thereof and a cotton thread extending through said plug, a flint wheel rotatably mounted on the top wall of the lighter body, said wheel being located at one side of and adjacent an upper end of the discharge passageway in the valve-operating member, and a flint resiliently urged into engagement with said flint wheel, said flint being located in a recess formed in the top wall of the lighter body.

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