Feb. 15, 1955 J. GEVIRMAN 2,701,955

POCKET CIGARETTE LIGHTER

Filed Nov. 19, 1953

FIG. 1.

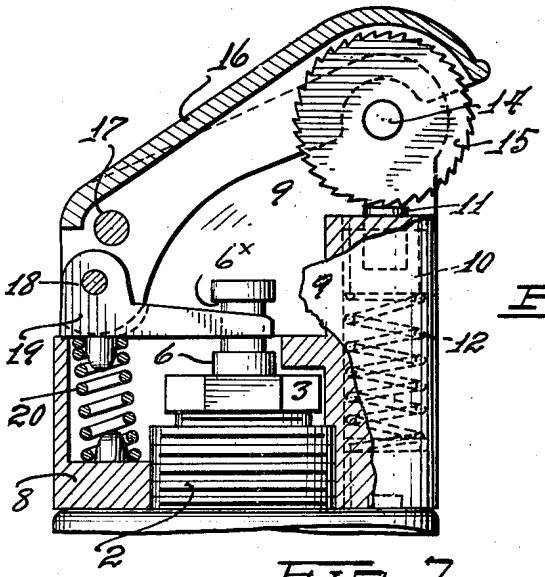

FIG. 3.

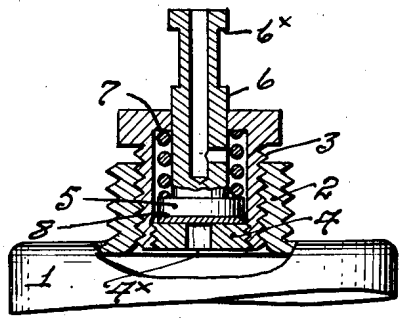

FIG. 4.

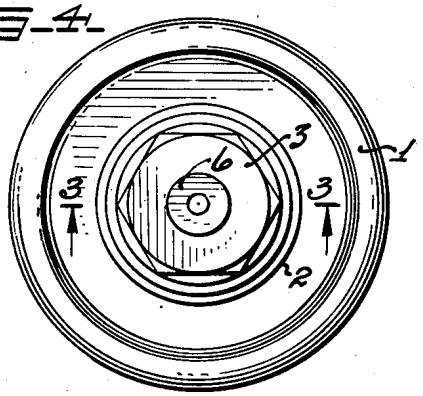

FIG. 7.

FIG. 6.

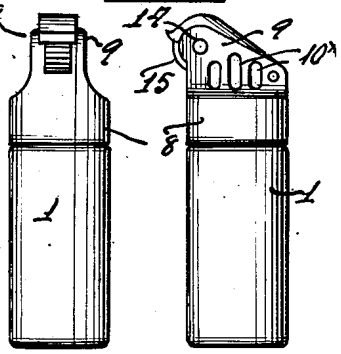

FIG. 2.

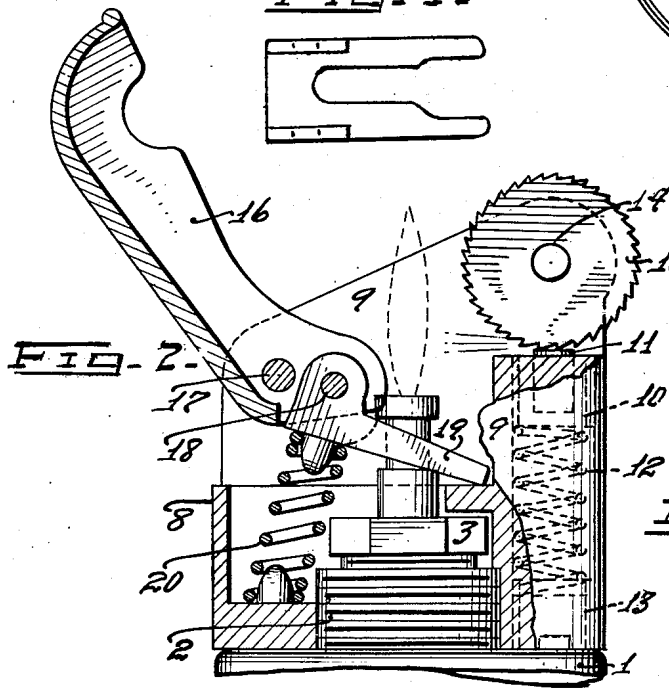

FIG. 5.

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POCKET CIGARETTE LIGHTER

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2 Claims. (Cl. 67—7.1)

The object of the present invention is to provide a lighter of the type having a replacement tank for containing an inflammable hydrocarbon gas under pressure.

The specific object of the invention is to provide a lighter of said type so designed that the operating parts are carried directly by the tank itself so that the latter constitutes the body of the lighter and serves as the member which is immediately grasped by the hand in using the lighter, the arrangement being such that the tank is exposed. In such case, the tank may be inexpensively decorated by a lacquer dip, although it may be provided with a tight fitting plated shell if desired.

By reason of the fact that the tank forms the body of the article, the construction is simplified and the removal of a depleted tank and the replacement of the filled tank is made easy.

The invention will be described with reference to the accompanying drawings in which:

Fig. 1 is an enlarged vertical section through the upper portion of the tank and the operating mechanism-head with the mechanism shown therein, the flint carrier and its spring being shown in dotted lines, the cover of the mechanism-head being closed;

Fig. 2 is a view similar to Fig. 1 showing the cover raised and the position of the parts immediately after operation of the flint wheel and the lighting of the gas;

Fig. 3 is a detailed view in vertical section showing the upper portion of the tank and its valve, the section being taken on the line 3—3 of Fig. 4;

Fig. 4 is a plan view of the tank looking downward toward its top;

Fig. 5 is a side elevation of the assembled lighter elements, consisting of tank and mechanism-head;

Fig. 6 is a similar view with the structure turned 90°; and

Fig. 7 is a plan view of the valve stem lever.

The tank will first be described. It consists of a cylinder which normally is about the diameter of a lipstick, commonly sold as a cosmetic item, the tank being generally indicated at **1**. It is formed with a neck **2** which is threaded both externally and internally. Internally the neck receives the threaded hollow stem of valve casing member **3**, at the base of which is threaded a disk **4** having a gas exit aperture at **4***x*. The chamber provided by the valve casing member **3** receives a valve head **5** carried by stem **6**, the head being normally held down by a spring **7** encircling the stem **6** and bearing upon the head. Toward its upper end, the stem is formed with a shoulder at **6***x*. Below the head is preferably employed a membrane disk **8** which may be of cellulosic material.

It will be seen that the top of the valve casing is of lesser diameter than the diameter of the threaded neck **2**. Therefore the threaded neck may directly receive and tightly hold, by screw application, the mechanism-head which is shown generally at **8**.

The mechanism-head is a die casting, tubular at its lower portion and then rising from the tubular portion into two spaced arms **9**, as shown more particularly in Fig. 5 with relation to Figs. 1 and 2. These arms **9** may have unbroken surfaces, but preferably each is formed with air entrance perforations as shown at **10***x* in Fig. 6, whereas in Figs. 1 and 2 the arms are unbroken. The base of the mechanism-head is relatively thick and formed with a central threaded aperture into which may be threaded a threaded neck **2** of the tank **1**. Also toward one side of the mechanism-head, a thickened wall between the two arms **9** is provided, which wall is vertically apertured to receive the usual cup-like carrier **10** for a flint **11**, the carrier being pressed upwardly by a coil spring **12** held in position by a plug **13** which usually is threaded in position. Above the flint position is a shaft **14** held by the arms **9** and carrying a serrated flint wheel **15**.

A combined cover and valve lift is pivoted between the arms **9**. This cover-valve lift is indicated at **16** and its

pivot is shown at **17**. Pivoted to the cover **16** at **18** is a valve lift lever **19**. The latter is biased upwardly by a coil spring **20** and provided with a fork to embrace the valve stem **6** and to lie under and for operative engagement with shoulder **6***x* of the valve stem as the cover is raised to the position of Fig. 2. At the same time when the parts are in the position of Fig. 1, the tines of the fork at the end of valve lift lever **19** are so spaced as to offer no obstruction to the removal or insertion of the tank, since the spacing at the end of the fork tines is slightly greater than the shoulder portion **6***x* of the valve stem.

In the use of the lighter a cartridge, without change, is threaded into the mechanism-head with the cap thereof in down position. As the head of the valve stem rises, it will be passed between the tines of the lift lever and therefore the tank may be moved to uppermost position without obstruction. As the cap is raised, the tines are moved inward until the wider opening passes the valve neck shoulder and the narrower passage lies under the latter so the tines and the neck continued movement, being raised, will raise the valve. A quick rotation of the flint wheel will ignite the emerging gas. When the lighting operation is over, the operator will flip the cover down and the valve will close.

It will be understood that various modifications may be made in the form and arrangement of the elements constituting the embodiment illustrated in the drawings without departure from the spirit of the invention.

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

1. A pocket cigarette lighter consisting of a mechanism-head, formed with an annular lower area and two spaced upstanding arms merging into said lower area, the said lower area having an internal wall formed with a major axial threaded aperture and a minor aperture at the side thereof, a flint and pressure spring therefor disposed in said minor aperture, a friction wheel pivoted between said upstanding arms, a cover pivoted between said arms at a point opposite the friction wheel, a valve lift lever disposed under the cover member and pivoted thereto at a point at which the rear end of the cover is raised in swinging movement, so that the lift lever in turn is raised, said lift lever being forked, the spacing between the forks at the outer end of the lift lever being relatively wide and the spacing between the forks rearwardly of said wide spacing being relatively narrow, and a body member for the lighter consisting of a gas tank having a threaded hollow neck, a lift valve in said neck and including a shouldered valve stem, the wider spacing between the forks being such that, upon threading the gas tank into the mechanism-head, said shoulder of the lift valve will be passed between the forks at its wider spacing and will rise above said forks and in position to be engaged by said forks upon the raising and pivotal action of the cover.

2. A pocket cigarette lighter consisting of a mechanism-head, formed with a seat at its base and two spaced upstanding walls merging into said base, the said base having a major axial threaded aperture and a minor aperture at the side thereof, a flint and pressure spring therefor carried at said minor aperture, a friction wheel pivoted between said upstanding walls, a valve lift lever, said lift lever being forked, the spacing between the forks at the outer end of the lift lever being relatively wide and the spacing between the forks rearwardly of said wide spacing being relatively narrow, means for actuating said lift lever in a combined forward and lifting movement and a body member for the lighter consisting of a gas tank having a threaded hollow neck, a lift valve in said neck and including a shouldered valve stem, the wider spacing between the forks being such that, upon threading the gas tank into the mechanism-head, said shoulder of the lift valve will be passed between the forks at is wider spacing and will rise above said forks and in position to be engaged by said forks upon the raising and lifting action of the lever.

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