

Aug. 19, 1958

A. GREENHOUSE ET AL

2,847,843

CIGARETTE LIGHTER

Filed Sept. 6, 1956

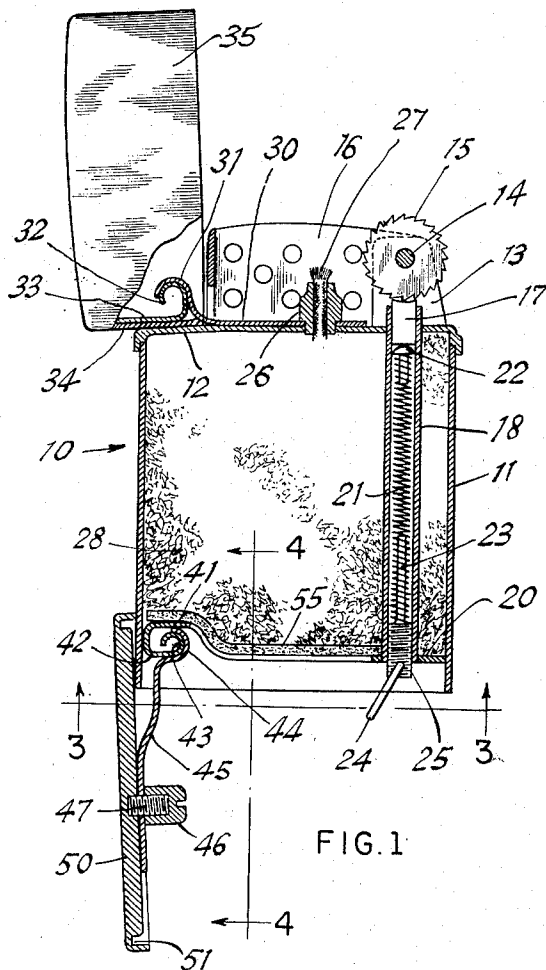


FIG. 1

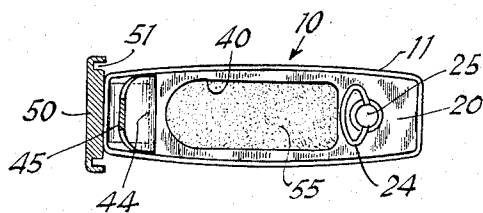


FIG. 3

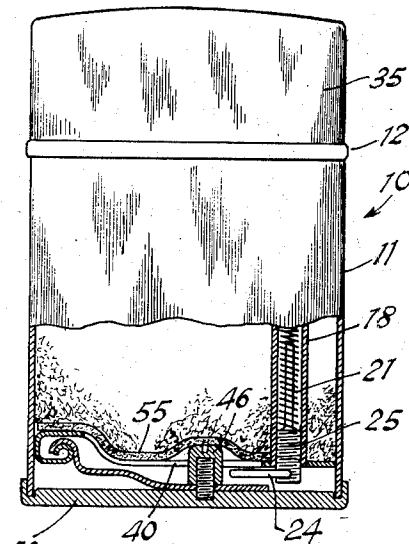


FIG. 2

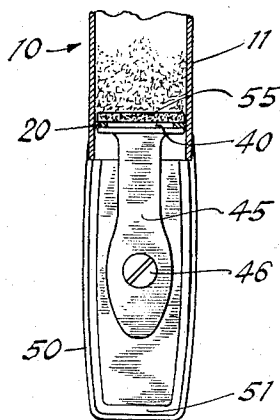


FIG. 4

INVENTORS
ALEX GREENHOUSE
BY GEORGE COHN

Irving Heidman
ATTORNEY

1

2,847,843

CIGARETTE LIGHTER

Alex Greenhouse, Glen Oaks, and George Cohn, Mount Vernon, N. Y., assignors to Royal Sales Company, New York, N. Y., a partnership

Application September 6, 1956, Serial No. 608,335

3 Claims. (Cl. 67—7.1)

This invention relates to cigar or cigarette lighters and, more particularly, to a lighter of this type having improved fuel replenishing means and flint adjusting means.

Cigar and cigarette lighters generally comprise a metal housing containing absorbent material in fluid transfer relation with a wick projecting outwardly of the housing through a suitable wick holder. The combustible vapors emanating from the wick are ignited by sparks resulting from frictional engagement between a striking wheel and a flint which is spring biased against the wheel surface. The flint is generally mounted in a tube extending through the lighter and enclosing a coil spring engaged at its upper end with the wick and, at its lower end, with an adjusting screw threaded into the tube.

The lighter fluid is replenished by removing a threaded cap from the bottom of the lighter and pouring fluid into the filler opening. This cap has a slot engageable by a coin or a screw driver to operate the cap. The adjusting screw for the flint biasing spring has a similar cap for similar operation by a coin or screw driver. The cap for the filling opening and the adjusting screw are exposed on the bottom wall of the lighter.

In accordance with the present invention, a lighter is provided in which the bottom of the housing is provided with a closure or cap snapped by spring means to a fully open or fully closed position. The spring means includes cooperating leaf spring hinge members one secured in the housing and the other in the cap, these hinge members being formed at their free ends with telescoped cylindrically curved sections. The hinge member secured to the housing has an elongated slot or opening there-through which is covered by a piece of absorbent fabric lying along the hinge member. The spring enclosing tube for the flint extends through and is secured to the fixed part of this hinge member.

To replenish the lighter fluid, all that is necessary is to snap open the bottom cover and pour the fluid onto the part of the fabric strip exposed through the slot in the hinge member in the housing.

Flint adjustment is easily effected by virtue of a ring or the like secured to the spring adjusting screw and exposed when the bottom cover is snapped open. As a further feature of the invention, the lighter is provided with a similar spring snapped top closure or cap.

For an understanding of the invention principles, reference is made to the following description of a typical embodiment thereof as illustrated in the accompanying drawing. In the drawing:

Fig. 1 is a vertical sectional view of the lighter in the open position;

Fig. 2 is an elevation view, partly in section, of the lighter in the closed position; and

Figs. 3 and 4 are sectional views on the correspondingly numbered lines of Fig. 1.

Referring to the drawings, the lighter 10 is formed of any suitable sheet metal and includes a reservoir or hous-

2

ing comprising a tubular body member 11 to which is secured a top wall member 12 having a pair of upright ears 13 carrying a pin 14 rotatably mounting a striking wheel 15. Pin 14 also secures in place apertured wind guard 16 which is a U-shape member having the outer ends of its legs overlapping ears 13.

Wheel 15 operates against a flint 17 mounted in a tube 18 secured through an aperture in wall 12. The lower or opposite end of tube 18 is secured in an aperture in a leaf spring hinge member 20 described more fully hereinafter. Flint 17 is biased against wheel 15 by a coil spring 21 in tube 18. Spring 21 has its upper end engaged with the stem of a headed pin 22 whose head engages flint 17. The lower end of spring 21 embraces the elongated stem 23 of an adjusting member 25 threaded into the lower end of tube 18. Adjustment of the spring pressure is effected by turning member 25 through the medium of a readily accessible ring 24 secured to the projecting lower end of member 25. The provision of ring 24 enables the spring to be easily adjusted as compared with the usual arrangements in which a coin or screw driver must be used to operate the adjustment means.

A wick support 26 is secured in an aperture in wall 12 and has an enlarged mid-portion serving to clamp a spring hinge member 30 to wall 12. A wick 27 extends through support 26 and, in body member 11, is in liquid absorbing contact with the usual absorbent packing 28 saturated with the lighter fluid.

Spring 30 is in the form of a leaf spring having an upturned free end 31 curved cylindrically to embrace the mating cylindrically curved end 32 of a leaf spring 33 secured along an end wall 34 of a cap 35. The relation of the springs 30 and 33 is such that, when cap 35 is opened, it is snapped to the position of Fig. 1 in which wall 34 engages wall 12 and, when cap 35 is moved in a closing direction, it is snapped into mating engagement with the periphery of wall 12 to enclose the operating parts of the lighter.

Leaf spring hinge 20, and the parts associated therewith, form an important feature of the invention. This spring 20 extends from the right end wall of member 11, as viewed in Figs. 1 and 2, parallel to the bottom edge of the lighter for the major part of its length. Spring 20 is spaced inwardly from the bottom of the lighter. Near the opposite end wall of member 11, spring 20 is offset inwardly as at 41, and then extends parallel to the lighter bottom to such opposite wall. The free end of member 20 is then bent downwardly along the wall and inwardly, as at 42, with its end being cylindrically curved, as at 43, to fit within the cylindrically curved end 44 of a cooperating leaf spring member 45 secured to bottom closure plate 50.

Spring 20 has an elongated filler aperture 40 therein, which is closed by a strip 55, of absorbent fabric extending along the inner surface of spring 20. This construction eliminates the usual filter opening closed by a threaded plug or the like, and greatly facilitates replenishment of the lighter fluid supply. All that is necessary is to open plate 50, as described hereinafter, and pour the fluid through opening 40 onto absorbent strip 55 in contact with absorbent packing 28.

The curved free end 44 of spring 45 is offset from the inner surface of cap 50. Spring 45 is held in position by a threaded cap 46 secured onto a stud 47 threaded into cap 50. This cap has a rim portion, grooved as at 51, to receive and embrace the bottom end of member 11. The relation of springs 20 and 45 is such that, during opening movement of cap 50, it is snapped to the position of Fig. 1 to lie against the outer surface of member 11. During closing movement of cap 50, it is snapped to the closed position of Fig. 2 wherein the lower edge

3

of member 11 seats in groove 51 to provide a substantially air-tight closure for the lighter. Cap 50 is easily swung open to provide for refilling the lighter or for adjustment of flint 17.

While a specific embodiment of the invention has been shown and described in detail to illustrate the application of the invention principles, it will be understood that the invention may be embodied otherwise without departing from such principles.

What is claimed is:

1. A cigarette lighter comprising, in combination, a tubular housing, of metal, having a fixed top wall; absorbent material substantially filling said housing; a wick tube on said top wall having a wick therein in contact with said material; a striking wheel rotatably mounted on said top wall; a flint support tube projecting from said top wall; a flint in said support tube; means biasing said flint against said wheel for spark creating cooperation therewith; a first hinge including a first leaf spring secured within said housing adjacent and substantially closing its lower open end and having a cylindrically curved free end within said housing, and a second leaf spring having a cylindrically curved free end telescoped with that of said first leaf spring; a substantially flat cap adapted to sealingly engage and close said lower open end; said second leaf spring being secured to said flat cap for snapping of said flat cap between open and closed positions; said first leaf spring having an aperture therein;

4

and a piece of absorbent fabric overlying said first leaf spring and covering said aperture, and in contact with said material; whereby the lighter fuel supply may be replenished by snapping open said flat cap and pouring fuel on said piece of fabric through said aperture.

2. A lighter as claimed in claim 1 in which said support tube extends through and is secured to said first leaf spring.

3. A lighter as claimed in claim 2 including a coil spring in said support tube engaged with said flint; and an adjusting screw threaded into the lower end of said support tube to engage said coil spring, and having an adjusting head accessible on opening of said flat cap.

References Cited in the file of this patent

UNITED STATES PATENTS

498,178	Leonard	May 23, 1893
1,213,157	Conway	Jan. 23, 1917
1,874,219	Aronson	Aug. 30, 1932
2,461,330	Landwehr	Feb. 8, 1949
2,564,298	Costello	Aug. 14, 1951

FOREIGN PATENTS

525,598	Germany	May 26, 1931
915,937	France	Aug. 5, 1946
948,899	France	Feb. 7, 1949