

Feb. 19, 1952

C. A. HART

2,586,035

POCKET LIGHTER WITH COILED SPRING FOLLOWER UNIT

Filed May 15, 1950

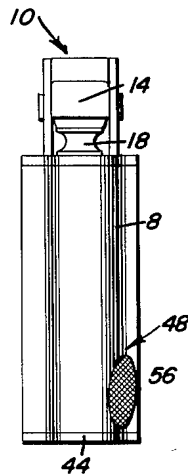
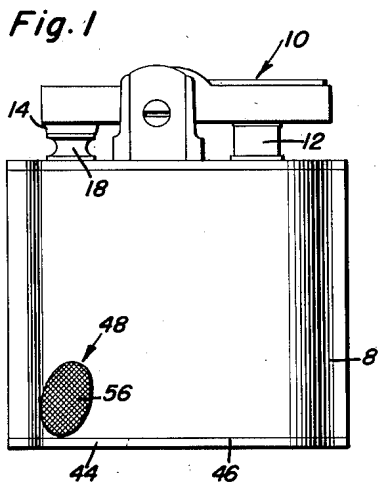


Fig. 2

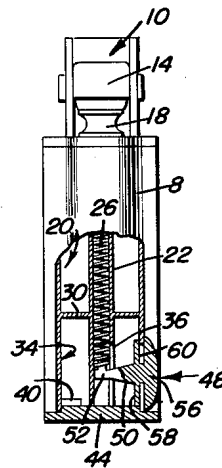
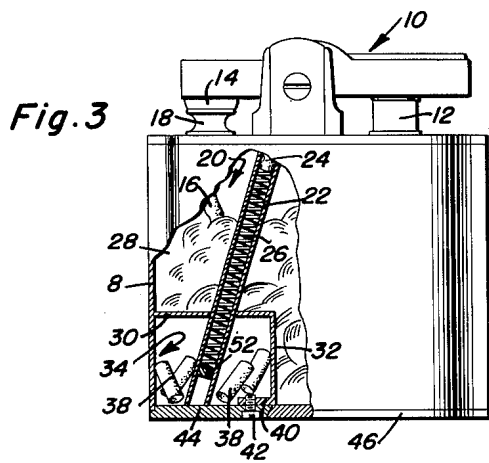


Fig. 4

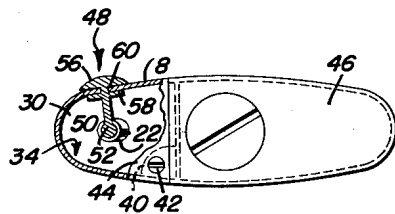


Fig. 5

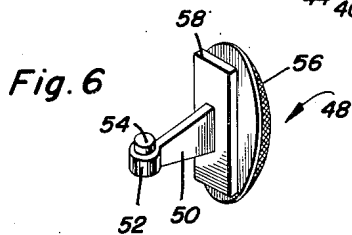


Fig. 6

Cecil A. Hart

INVENTOR.

BY *Clarence A. O'Brien*
and Harvey R. Jacobson
Attorneys

UNITED STATES PATENT OFFICE

2,586,035

POCKET LIGHTER WITH COILED SPRING FOLLOWER UNIT

Cecil A. Hart, Hackensack, N. J.

Application May 15, 1950, Serial No. 161,964

2 Claims. (Cl. 67-7.1)

1

The present invention relates to cigar and cigarette lighters of pocket and table types and has reference in particular to added improvements on and in connection with such lighters.

One improvement has to do with a novel and practical manually actuatable follower unit for the customary coiled spring which is housed in the usual flint containing cylinder. The purpose of the follower unit is to compress and thus tension the coiled spring in order to place the flint under greater pressure at a time when the flint has become unduly worn and when the spring is too weak to perform its expected flint pressing result.

It is a matter of common knowledge that many pyrophoric lighters fail to operate as a result of the flint being worn down to a point where the spring has exhausted or nearly exhausted its tension and is then of insufficient strength to apply enough pressure on the flint to assure the expected spark with requisite consistency. Flint holding springs are constructed so that they will be neither too strong nor too weak when a new flint is placed in the flint and spring cylinder. It is difficult, obviously, to construct these springs so that the tension on the flint will be adequate throughout the life of the flint. The present improved follower unit is therefore offered to compensate for spring failure at the stage when the flint has become unduly worn and fails to meet the sparking wheel with requisite pressure.

Pursuant to the requirements to be met, the spring cylinder is formed with a slot and the casing with a complementary slot and the two slots are properly lined up with each other to accommodate a conveniently positioned and constructed follower unit. The latter is of one-piece construction and characterized by an arm which is operable in the slot and provided on the outer end with a push-button and provided on its inner end with a follower disk which is slidable in the cylinder and in thrust contact with the adjacent end of the coiled spring.

Another phase of the invention has to do with the provision of an auxiliary compartment within the confines of the main fuel compartment, said auxiliary compartment being isolated and of fluid-tight construction and serving, on the one hand, to house the slotted portion of the spring cylinder to prevent lighter fluid from getting into the cylinder.

A further improvement has to do with the stated auxiliary compartment wherein same is provided with a readily applicable and removable cover, whereby said compartment may be employed as a storage enclosure for spare flints.

2

Other objects and advantages will become more readily apparent from the following description and the accompanying illustrative drawings.

In the accompanying sheet of drawings, wherein like numerals are employed to designate like parts throughout the views:

Figure 1 is a side elevation of a conventional type pocket lighter with the aforementioned improvements incorporated therein;

Figure 2 is an elevation at right angles to that appearing in Figure 1 which may be said to be a front end elevation;

Figure 3 is a side view with portions broken away and shown in section, illustrating certain of the improvements with particularity;

Figure 4 is a view at right angles and with parts broken away and shown in section to show the construction and position of the follower unit;

Figure 5 is a bottom plan view with portions broken away and shown in section; and

Figure 6 is a perspective view of the follower unit per se.

Reference is had first to Figure 3 wherein the body or casing is denoted by the numeral 8. This is of a well known type and includes a pivotally mounted lever 10 with spring check means 12 at one end and with a snuffer 14 at the opposite end cooperating with the usual wick 16 by way of the wick-holding neck 18. The main fuel chamber is denoted at 20 and the usual flint cylinder is denoted at 22. The flint 24 is shown in position in the cylinder and is held in operative position by the customary coiled spring 26. These are, of course, old parts.

In the main compartment which houses the cotton or equivalent wadding material 28, I provide, in the lower left-hand corner coacting partitions 30 and 32 defining an auxiliary compartment 34. The lower end portion of the cylinder 22 extends into the compartment 34 where it is provided with an open bottomed slot 36 as better shown in Figure 4. The slot 36 being within the confines of the compartment 34 is obviously out of fluid communication with the main chamber or compartment 20. This compartment is also adapted to contain, as shown in Figure 3, spare flints 38. It will be noticed that an ear 40 projects into the auxiliary compartment and said ear is provided with a screw-threaded hole to accommodate a fastening screw 42 for the removable lid or cover 44. This cover is suitably constructed and fitted into place and has a beveled edge portion coacting with the corresponding edge portion on the main bottom 46. It may be novel in lighters in this category to provide an auxiliary

3

compartment 34 to house a slotted portion of a spring cylinder and to also provide a space for storing spare flints wherein the open bottom of said compartment is closed by a lid or cover 44 held in place by fastening means 40 and 42, as shown.

The primary feature of the invention has to do, obviously, with the spring follower unit 48. This is a one-piece structure and is characterized by a suitable arm 50 having a follower disk 52 at its inner end with said disk provided with a stud 54 to accommodate the adjacent coils on the coiled spring 26. On the opposite end of the arm is an ovate or suitably constructed and knurled push-button 56. Spaced from and inwardly of the push-button is a stabilizing flange 58. That portion of the arm between the flange and button operates in a restricted slot 60 which is lined up with the aforementioned slot 36, as best shown in Figure 4.

By assembling the follower unit 28 and mounting same in the open bottomed slots 36 and 60 as shown, said unit is in readiness for use whenever necessary or desired. The follower unit is so located that its presence on the casing does not, obviously, interfere with the application and removal of the auxiliary compartment cover 44. The auxiliary compartment is quite small and therefore does not take up too much space in the main fuel compartment 20. Its double use as a container for spare flints and as a housing for the slotted portion of the spring containing cylinder 22 is novel in lighters of the type under consideration.

The unit 48 is ordinarily not used, of course, when the flint is new, for then the spring 26 provides the necessary pressure to properly control and actuate the flint. When, however, the flint wears down to a point where the spring 26 fails to function properly, the added and needed tension on the spring may be obtained by merely pressing upwardly on the thumb button 56. In so doing, the spring is compressed and the requisite extra pressure on the flint is had.

The difficulty often encountered in removing the coiled spring from its cylinder and installing a new flint and replacing the spring is not experienced with the improved follower, as is obvious.

It will be seen that I have evolved and produced a lighter with certain new and useful improvements in which manufacturers, users and others will find their expected needs fully met, contained and accessibly available.

In view of the foregoing description taken in conjunction with the accompanying drawings, it is believed that a clear understanding of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even through there is herein shown and described a preferred embodiment of the invention, the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and within the scope of the appended claims.

Having described the invention, what is claimed as new is:

4

1. A pocket lighter of the class shown and described comprising a casing having a wick-equipped neck, a flint cylinder, means for igniting the wick, a flint in said cylinder, a coiled spring in said cylinder, said cylinder being provided adjacent its lower end only with a slot, said casing having an aligned coacting slot at its lower end only and both slots being relatively short and opening through the lower ends of the cylinder and casing, respectively, and a one-piece follower unit embodying an arm slidable in said slots, a follower disk on one end of the arm and slidable in said cylinder against the adjacent end of said spring, a push-button on the other end of said arm, said push-button being located exteriorly of the slot in said casing for convenient operation, and a stabilizing flange carried by said arm in spaced parallelism with said push button, said flange having wiping contact with the interior of said casing and bridging the slot in said casing.

2. A pocket lighter of the class described comprising a casing having wick and igniting facilities for the wick, said casing including a body portion having a main fuel containing compartment, one lower corner portion of said compartment having partitions at right angles to each other and coacting with the wall portions of the body and defining a flint storing compartment, the latter opening through the bottom of the casing, a readily applicable and removable cover for said open bottom, means carried by one of said partitions and said cover for removably holding the cover in a closed position, a flint cylinder mounted essentially in said fuel containing compartment and having a lower end portion projecting into said flint storing compartment, said lower end portion having a slot of restricted length, said slot terminating within the limits of said storing compartment and being open at its lower end and opening through the open body of said flint storing compartment, said cover serving, when the cover is in place, to close the lower end of said slot, said casing having a lower portion of one wall provided with a slot aligned with the first-named slot and in registry with said flint storing compartment and opening through the bottom of the casing and closed normally by said cover, a coil spring in said cylinder, and a follower unit having an arm slidable in said slots, an end portion slidable in said cylinder and engaging a coacting end portion of said spring, and push button means on the opposite end of said arm, said means being exteriorly located and coacting with the slot in said casing.

CECIL A. HART.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS		
Number	Name	Date
1,793,515	Segal	Feb. 24, 1931
2,472,282	Burchett	June 7, 1949
FOREIGN PATENTS		
Number	Country	Date
239,266	Switzerland	Sept. 30, 1945
616,003	Great Britain	Jan. 14, 1949