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L. C. OGLE

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CIGARETTE LIGHTER FILLER UNIT

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Fig. 1.

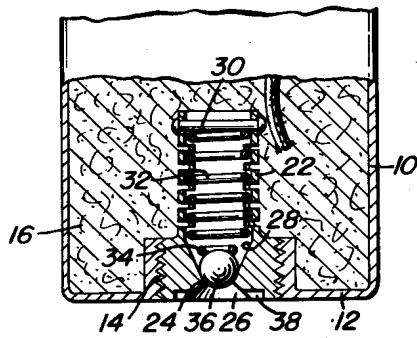


Fig. 2.

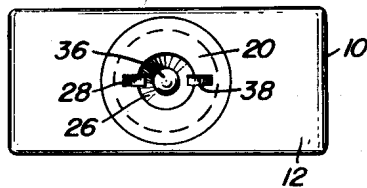
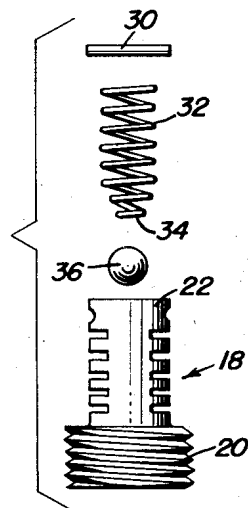


Fig. 3.



Inventor

Luther C. Ogle

By

*Chance W. O'Brien*  
*and Harvey B. Jacobson*  
Attorneys

# UNITED STATES PATENT OFFICE

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## CIGARETTE LIGHTER FILLER UNIT

Luther C. Ogle, Holly Hill, Fla.

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1 Claim. (Cl. 220-86)

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This invention relates to new and useful improvements in cigarette lighters and the primary object of the present invention is to provide a cigarette lighter including novel and improved means for receiving lighter fluid so that the packing in the lighter may be saturated with the fluid in a convenient manner.

Another important object of the present invention is to provide a cigarette lighter filler unit including a valve normally urged to its closed position for restricting the flow of fluid from the lighter and which valve is quickly and readily urged to an open position by the discharge nipple of a container of lighter fluid pressed thereagainst.

A further object of the present invention is to provide a filler unit attachment for cigarette or pipe lighters including a fluid receiving opening countersunk at its entrance to reduce to a minimum the fluid wasted during the filling of a lighter.

A still further aim of the present invention is to provide a cigarette lighter filler unit that is simple and practical in construction, strong and reliable in use, small and compact in structure, neat and attractive in appearance, relatively inexpensive to manufacture, and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a fragmentary view, partly in elevation and partly in section, of a lighter and showing the present invention in section applied thereto;

Figure 2 is a bottom plan view of a lighter the present unit applied thereto; and

Figure 3 is a group side elevational view of the present invention removed from a lighter.

Referring now to the drawings in detail, wherein for the purpose of illustration, there is disclosed a preferred embodiment of the present invention, the numeral 10 represents a lighter or lighter casing of any suitable type having a wall 12 in which there is provided an internally threaded filling opening 14.

The opening 14 normally receives a closure plug (not shown) that is completely removed in order to place a lighter fluid into the cotton or packing 16 within the lighter.

The above filling operation requires a complete

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removal and replacing of the closure plug and often results in a lossage of the plug since the same must be held in one hand while a fluid is injected through the opening 14. Such a filling operation also requires considerable time and frequently the use of a tool or a coin for turning the closure plug.

It is therefore the principal object of the present invention to provide an attachment for the lighter or a replacement for the closure plug that will eliminate the aforementioned difficulties.

To accomplish the desired results, there is provided a plug designated generally by the numeral 18 and which is constructed of any suitable material, such as plastic, cork or metal. This plug 18 includes an externally threaded head portion 20 that receivably engages the opening 14 and a tubular, perforated or slotted, shank portion 22 that extends inwardly of the wall 12.

The head portion 20 is provided with an axial filling opening 24 the ends 26 and 28 of which are counter-sunk to provide an entrance and valve seat respectively.

A rivet of holding member 30 is fixed to the inner end of the shank portion 22 and forms an abutment for one end of a coil spring 32. The free end of the spring 32 is tapered, as at 34, and urges a ball valve 36 to its closed position in the seat 28.

Diametrically opposed recesses or kerfs 38 are provided in the outer face of the head portion 20 to receive a suitable tool or coin for turning the plug 18 during the removal or replacement thereof.

In practical use of the present invention, the lighter 10 is held so that the wall 12 is above the valve 36. The nipple end or discharge tip of a container of lighter fluid is then pressed against the valve 36 to urge the same to an open position.

Should any of the fluid discharged from the container fail to enter the shank 22, the fluid will then be retained in the entrance 26 until the fluid evaporates or passes into the shank portion 22.

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 though there is herein shown and described a preferred embodiment of the invention the same is susceptible to certain changes fully compre-

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hended by the spirit of the invention as herein described and the scope of the appended claim.

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

In a cigarette lighter having an internally threaded filling port, a filler unit comprising a plug having an elongated hollow perforated shank portion and an externally threaded head portion, the head portion of said plug receivably engaging the port, an axial countersunk opening provided in the head portion of said plug, a ball valve received in said opening, a spring mounted in said shank portion and having a tapered end bearing against and urging the valve to its closed position, said spring being of a diameter substantially equal to the internal diameter of the shank portion, and an abutment fixed to and located within said shank portion for said spring, said valve being located relatively close to the outer face of said head portion to permit the discharge nipple of a container of lighter fluid to urge the valve to its opening position during filling of the lighter

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with a fluid, said abutment comprising a pin extending diametrically through said shank portion and having flattened ends disposed exteriorly of said shank portion.

LUTHER C. OGLE.

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