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LIGHTER CASING CONSTRUCTION

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Fig. 1.

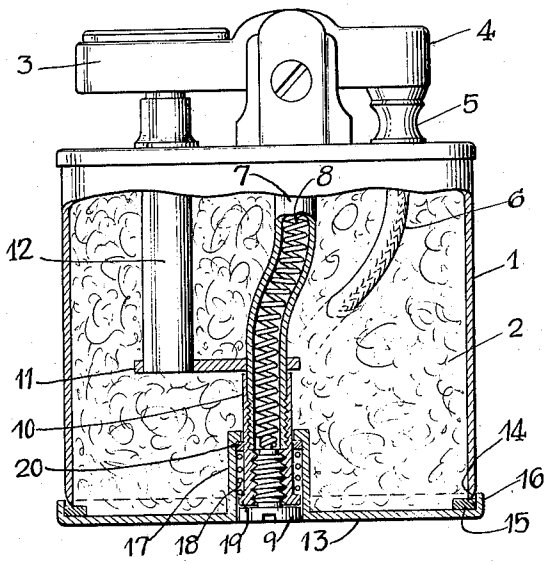


Fig. 2.

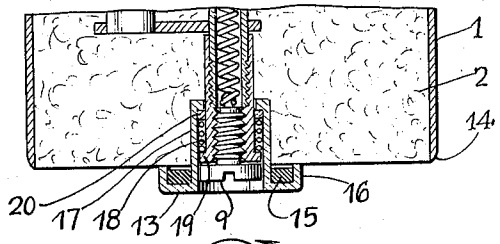


Fig. 3.

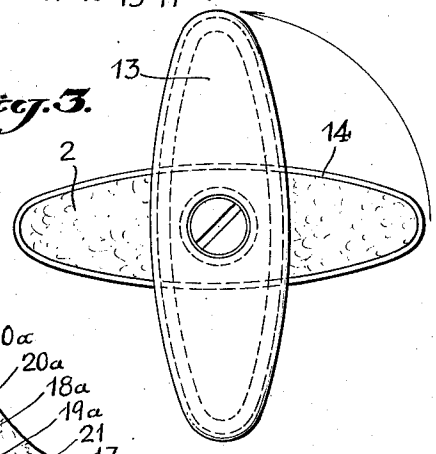
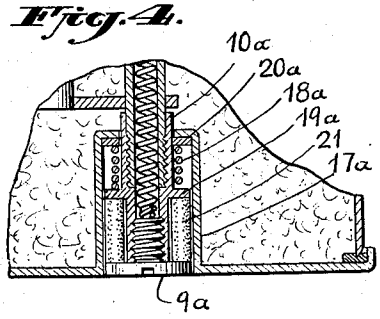


Fig. 4.



INVENTOR.
ALEXANDER H. ARONSON.
BY
Ward Crosby & Neal
ATTORNEYS.

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LIGHTER CASING CONSTRUCTION

Alexander H. Aronson, South Orange, N. J., assignor to Ronson Art Metal Works, Inc., Newark, N. J., a corporation of New Jersey

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3 Claims. (Cl. 67—7.1)

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The invention relates to cigar lighters of the type employing a fuel containing casing into which a wick projects, and which are usually provided with a filling of absorbent material such as cotton by which the lighter fluid is carried and conducted to the wick. In lighters of the above type, access to the interior of the lighter casing is needed for replenishing the fuel supply, and it is also necessary at times to remove the absorbent filling if the wick becomes dislodged from the wick tube or when a new wick is to be inserted.

The primary object of the present invention is to provide a lighter casing construction which may be readily manipulated to afford access to the interior fuel chamber for any of the above purposes, without requiring special tools or appliances, and which will still afford a sufficient seal against the evaporation of lighter fluid when the casing is closed. In a more specific aspect the invention aims to provide a casing construction as aforesaid, wherein the closure for the fuel chamber is so combined with the flint tube construction that the latter serves as a mounting for the closure, and access to the flint tube is afforded without disturbing the closure structure. Further objects and advantages of the invention will be in part obvious and in part specifically referred to in the description hereinafter contained which, taken in conjunction with the accompanying drawings, discloses certain preferred lighter casing constructions capable of operating in accordance with the invention; the disclosure however should be considered as merely illustrative of the invention in its broader aspects. In the drawings:

Fig. 1 is a side view with certain parts cut away, of a lighter having a casing constructed to operate in accordance with the invention, the closure for the casing being shown in fuel chamber sealing position.

Fig. 2 is a view similar to the lower portion of Fig. 1 but showing the closure in fuel chamber exposing position.

Fig. 3 is a bottom plan view of the parts as they appear in Fig. 2.

Fig. 4 is a fragmentary view similar to the lower portion of Fig. 1, but showing a somewhat modified construction.

The invention is disclosed as applied to a cigar lighter having fuel casing 1 of general oval cross section, the fuel chamber within the casing being filled with absorbent material 2. A fingerpiece 3, snuffer 4 and wick tube 5 are shown as mounted on the top of the casing, the wick tube

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enclosing the upper end of a wick 6 which extends down into the absorbent material 2, but the above parts of the lighter need not be described in detail since they may be assumed to be of any known or appropriate construction for igniting the upper end of the wick 6. I prefer to employ a flint tube 7 which projects down through the central portion of the fuel chamber and encloses a pressure spring 8. The latter may be adjusted by means of a screw 9 which engages within a threaded sleeve 10 fixed to the lower end of the flint tube 7. In the form shown, a bracing piece 11 extends between the flint tube 7 and the lower end of a casing 12 which receives the stem of fingerpiece 3.

In accordance with the present invention, the fuel casing 1 is provided with a charging opening which is normally covered and sealed by a closure plate 13, the latter being pressed into sealing relation with the portion of the casing which surrounds the charging opening, but the closure plate being so mounted that it can be drawn away by the user from its sealing position shown in Fig. 1, and twisted into the position shown in Figures 2 and 3, wherein it largely exposes and affords ready access to the interior of casing 1. In the illustrated form of the invention, the lower rim 14 of the casing 1, which surrounds the charging opening, is beveled as shown to provide a sharp edge, and the closure plate 13 is provided with an annular packing ring 15 of neoprene or like resilient material which is surrounded by the peripheral flange 16 of the closure plate, and the ring 15 being pressed into close engagement with the rim 14 of casing 1.

The closure plate 13 is shown as provided with a central internal hub 17 which surrounds the flint tube structure above described. A compression spring 18 within this hub seats at its lower end against an annular flange 19 on the sleeve 10, and at its upper end against a packing washer 20 of neoprene or the like, the washer 20 in turn seating against the upper end wall of the hub 17. This construction mounts the closure plate slidably and rotatably upon the flint tube structure, the packing ring 20 sealing the joint, and limits the extent to which the closure plate may be moved away from the fuel casing.

Thus in the position shown in Fig. 1, the spring 18 resiliently presses the closure plate 13 into sealing relation with casing 1, but the operator may grasp the closure plate in his fingers and move it outwardly from its sealing position, against the pressure of spring 18, whereupon the closure plate may be twisted into the crosswise

position with respect to the casing which is shown in the Figs. 2 and 3, whereupon the closure plate may be released by the user and will be held in open position by spring 18. In this position the fuel chamber in casing 1 will be largely exposed, which simplifies the operation of adding fuel to the fuel chamber, and makes it easier for the user to observe when a proper amount of fuel has been added and absorbed by the absorbent material in the different zones of the fuel chamber. Also this large exposure much facilitates the withdrawal of the absorbent material from the fuel chamber, and the proper repacking of such material into the chamber, and the adjustment or replacement of the wick, when necessary. To restore the closure plate to sealing relation, it is merely necessary to twist it back into alinement with the casing 1 and then release it so that the spring 18 forces the two parts into tight engagement. Access to the flint tube 7 for replacement of a flint may be had at all times by adjustment of screw 9, without disturbing the closure structure.

In Fig. 4 I have shown a somewhat modified construction wherein the sleeve 10*a* of the flint tube is provided with an annular flange 19*a* spaced inwardly from the bottom wall of the casing so as to afford an annular chamber between this flange and the flint adjustment screw 9*a* and surrounded by the hub 17*a*, in which chamber a number of replacement flints 21 may be stored. The hub 17*a*, spring 18*a* and neoprene washer 20*a*, of Fig. 4, and also the unnumbered parts therein may be understood as being similar in function to the correspondingly numbered parts of Figs. 1 to 3.

While the invention has been disclosed as carried out by lighter casings of the above described specific constructions, it should be understood that changes may be made therein without departing from the invention in its broader aspects, within the scope of the appended claims.

I claim:

1. A lighter construction including a fuel casing having a fuel chamber therein and also having one end thereof open, through which end said chamber may be charged, a closure plate overlying said open end to form a closure for said chamber, swivel means mounting said closure plate with respect to said casing, said swivel means including substantially coaxial parts respectively fixed with respect to said plate and casing and which are relatively rotatable and slidable one along the other to afford movement of said closure plate toward and from its chamber closing position and also rotary movement thereof out of alinement with said open end of the casing to expose said chamber, and spring means acting between the aforesaid parts to urge said closure plate toward the casing structure in both of its chamber closing and chamber exposing positions.

2. A lighter casing construction including a fuel casing having a fuel chamber therein and also having one end thereof open through which end said chamber may be charged, a flint tube structure within said casing and extending toward said open end, a closure plate overlying said open end to form a closure for said chamber, said closure plate being mounted upon said flint tube structure to afford both angular and longitudinal movement of the closure plate with respect to said casing to expose said chamber, spring means urging said closure plate toward the casing structure in both of its aforesaid fuel chamber closing and fuel chamber exposing positions, said flint tube structure including a flint adjusting member located substantially at the axis about which said closure plate is movable angularly as aforesaid, said adjusting member being accessible from the exterior side of said closure plate.

3. A lighter construction including a fuel casing having a fuel chamber therein and also having one end thereof open, through which end said chamber may be charged, a closure plate overlying said open end to form a closure for said chamber, swivel means mounting said closure plate with respect to said casing, said swivel means including a hub carried by and projecting inwardly from said closure plate, said casing carrying a post engaging said hub and with respect to which post the closure plate structure is relatively rotatable and slidable to afford movement of said closure plate toward and from its chamber closing position and also rotary movement thereof out of alinement with said open end of the casing to expose said chamber, and spring means urging said closure plate toward the casing structure in both of its chamber closing and chamber exposing positions.

ALEXANDER H. ARONSON.

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