May 26, 1953 J. L. McCRACKEN 2,639,598

CIGARETTE LIGHTER CASE

Filed March 26, 1951

Fig. 1.

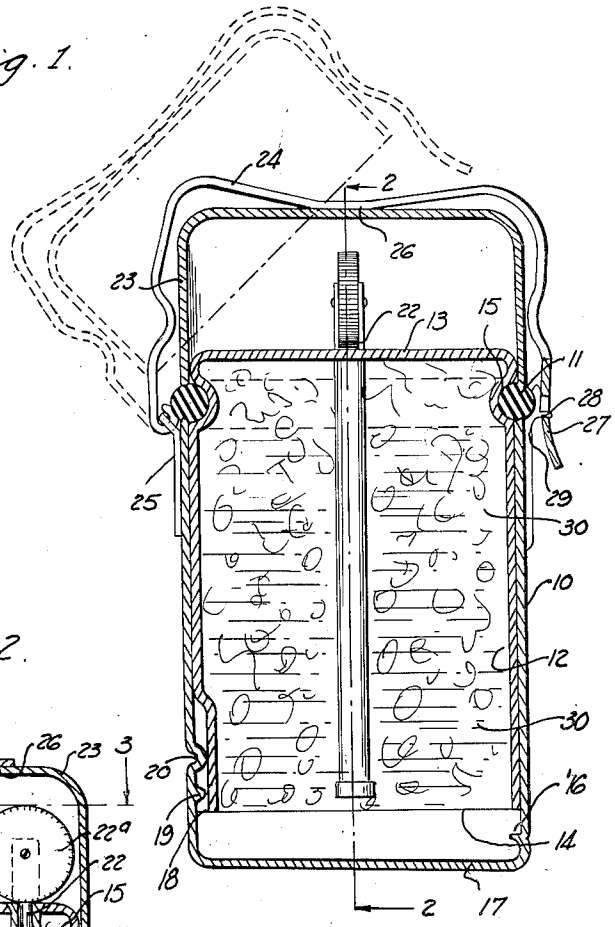


Fig. 2.

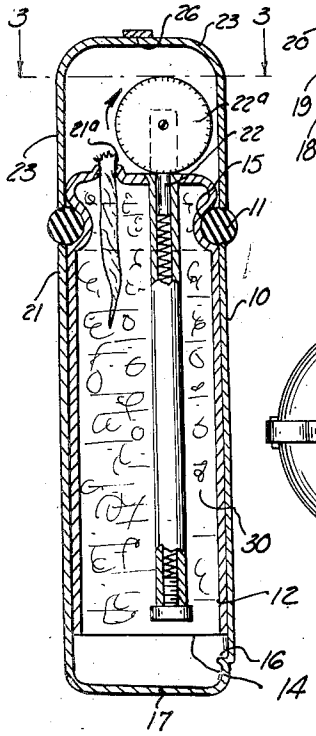


Fig. 4

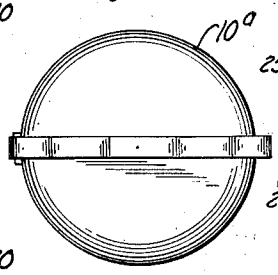
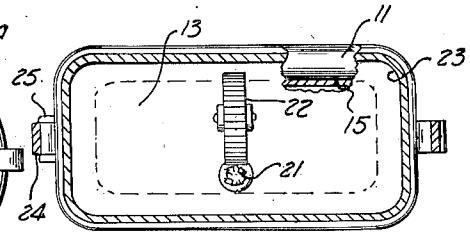


Fig 3.



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CIGARETTE LIGHTER CASE

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2 Claims. (Cl. 67—7.1)

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This invention relates to shock resisting, water-proof cases for cigarette lighters, and has for one of its objects the production of a simple and efficient case having a full floating inner member which is yieldably supported by an inset elastic ring carried by the outer member and engaged by the cover.

A further object of this invention is the production of a simple and efficient shock resisting water-proof case for cigarette lighters, wherein the inner member is resiliently suspended within the outer member and is suspended from one end of the outer member.

Other objects and advantages of the present invention will appear throughout the following specification and claims.

In the drawing:

Figure 1 is a vertical sectional view of the cigarette lighter case;

Figure 2 is a vertical sectional view taken at right angles to Figure 1, on line 22 of Figure 1;

Figure 3 is a horizontal sectional view taken on line 3—3 of Figure 2;

Figure 4 is a top plan view of a modified form of the casing with a circular contour.

By referring to the drawing in detail, it will be seen that 10 designates the outer member in which is slidably fitted the inner member 12. The inner member 12 is of a proper contour to fit within the outer member 10, as shown in Figures 1 and 2. The inner member 12 is provided with a closed top 13 and an open bottom 14. An inwardly pressed channel or groove 15 is formed in the exterior surface of the inner member 12 just below the closed top 13. The channel 15 receives the thick elastic ring 11, which ring is cemented in the channel 15, or it may be held in the channel 15 by means of the contracting elasticity of the ring 11. The ring 11 resiliently and yieldably suspends the inner member 12 within the outer member 10 and constitutes a yieldable seal the outer member 10 and the inner member 12. The ring 11 is pressed tightly against the upper end of the outer member when the inner member 12 is fitted into the outer member 10.

The outer member 10 is provided with an inwardly pressed portion 16 adjacent the closed bottom 17 of the member 10, to constitute a rigid abutment for contact with the bottom open end 14 of the member 12 to positively limit the inward movement of the inner member 12 into the outer member 10 while assembling the parts and to hold the open end 14 out of contact with the bottom 17. The inner member 12 is also provided with the vertical inwardly pressed groove 18, extending

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upwardly from the open bottom 14 for receiving the vertically spaced inwardly protruding lugs 19 and 20, which are carried by the inner face of the outer member 10, near the lower end thereof. This structure constitutes a means for properly locating the members 10 and 12, and for preventing rotary twist of the inner member within the outer member when the parts are assembled. It is especially advantageous where the case is circular in cross-section, and in all cases tends to prevent the inner and outer members from abutting against each other at their bottom ends.

A conventional wick 21 and a conventional igniting means 22 are carried by the closed top 13 of the inner member 12, and extend inwardly of the members 10 and 12, as shown in Figure 2. A cap or cover 23 is adapted to snugly fit over the upper ends of the inner and outer members, as shown in Figures 1 and 2. The lower edge of the cover or cap 23 rests snugly upon the thick elastic ring 11 to define a sealed pocket above the closed top 13 of the member 12 when the cap or cover 23 is closed. A flat spring 24 is shaped at a suitable contour to engage the hinge clip 25 which is fixed to the side of the member 10 below the ring 11, and to thereby provide a hinge connection for connecting the cap 23 to the member 10. The spring 24 extends over the cap or cover 23, as shown in Figure 1, and is preferably anchored or fixed, as at 26, to the top of the cap or cover 23. The spring 24 is provided with a free end 27 which is apertured and is adapted to engage the latching lug 28 of the latching plate 29 carried by the outer member 10 to releasably hold the cover or cap in a closed and sealed position in engagement with the thick elastic ring 11. When the free end 27 is moved outwardly out of engagement with the latching lug 28, the cap or cover 23 will automatically move to an open position, such as the dotted line position under the action of the hinging spring 24, when access may be had to the igniting and lighting means.

It should be understood that the cigarette lighter case 10^a may be circular in cross-section, as shown in Figure 4, or substantially rectangular in cross-section, as shown in Figures 1 to 3 inclusive. It is not desired to limit the casing to any one shape, since the shape may be varied to suit the fancy of the manufacturer and the convenience of the user.

The inner member 12 is stuffed or filled with absorbent cotton 30 and this cotton extends around the wick 21 and flint tube of the igniting means 22, as shown in Figure 2. This absorbent cotton 30 is saturated with lighter fluid and any

excess fluid is shaken off before the inner member 12 is inserted into the outer member 10. The inner member 12 is moved inwardly of the outer member until the ring 11 abuts the upper or outer edge of the outer member to provide a seal therebetween and to also provide a shock absorber when assembling the members. The space between the open end 14 of the member 12 and the bottom 17 provides a chamber for receiving drippings of fluid which might fall from the absorbent cotton.

When igniting the lighter, and when the operator's thumb presses outwardly and downwardly around the contour of the wheel 22a, to rotate the wheel 22a in the direction of the arrow shown in Figure 2, the resultant pressure upon the top of the inner member 12 will force the inner member 12 into the outer member until the resilient ring 11 overcomes or balances this downward pressure. This movement of the member 12 into the member 10 creates a compression within the members to force turbulent gas from the fuel upwardly and outwardly through the wick aperture 21a at the time the spark is thrown toward the wick, causing the ignition of the gas and wick, as a result of the activated supply of gas which is very susceptible to ignition. It should be noted that the wick is by nature compressible under pressure of the gas within the lighter case so that the compressed gas will pass out between the wick 21 and the wick aperture 21a.

It should be understood that certain detail changes may be made in the present invention and fall within the spirit of the invention, so long as these changes fall within the scope of the appended claims.

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

1. A cigarette lighter case comprising an outer member having an open top and a closed bottom, an inner member fitted in the outer member, a resilient band carried by the inner member and engaging the outer member to constitute a resilient yieldable and compressible buffer and seal therebetween, the inner member having a closed top and an open bottom, a lighter fluid saturated absorbent filler within said inner member, a compressible wick carried by said inner member and extending into said saturated absorbent filler, an igniter carried by said inner member adjacent the wick for igniting the wick,

said member being movable inwardly within the outer member under pressure counter to and against said resilient band to force compressed gas which is present in the fluid out between the wick and the wick aperture and to thereby facilitate ignition of the wick as the igniter is actuated, the resilient band being adapted to be compressed as the inner member is pressed inwardly of the outer member by an operator, and providing an automatically expanding means to expand when pressure is relieved by an operator to automatically move the inner member outwardly of the outer member to its normal position.

2. A cigarette lighter case comprising an outer member having an open outer end and a closed bottom, an inner member, a thick elastic resilient and compressible band secured to and surrounding the closed outer end of said inner member, said inner member having an open bottom and a closed top fitted in the outer member and inwardly spaced relative to the outer member, means retaining a lighter fluid within the members, said inner member having a groove formed around the top thereof adjacent the closed top, said band fitting in said groove for attaching and yieldably suspending the inner member for sealing the members together, a wick carried by the top of the inner member, an igniter carried by the top of the inner member, a hinged cover carried by said outer member enclosing the wick and igniter and the upper end of the inner member and abutting said elastic band to enclose and seal the area adjoining the wick and igniter, a latching means for said cover, and said elastic band constituting a resilient seal between the cover and said outer member and being adapted to expand when said latching means is released to automatically and initially swing said cover to an open position.

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