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FLUID CONTENT GAUGE FOR LIGHTERS

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FIG. 1

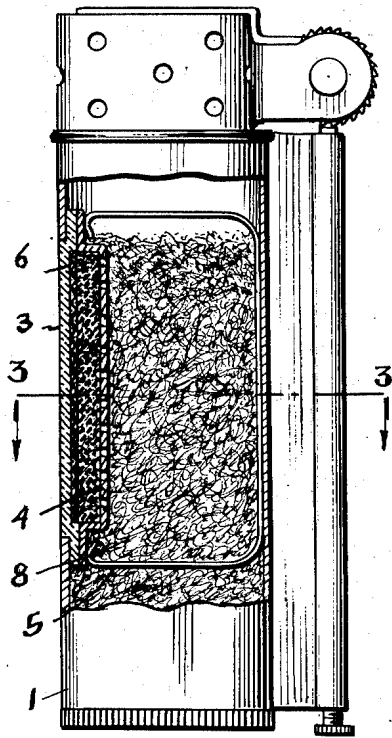


FIG. 2

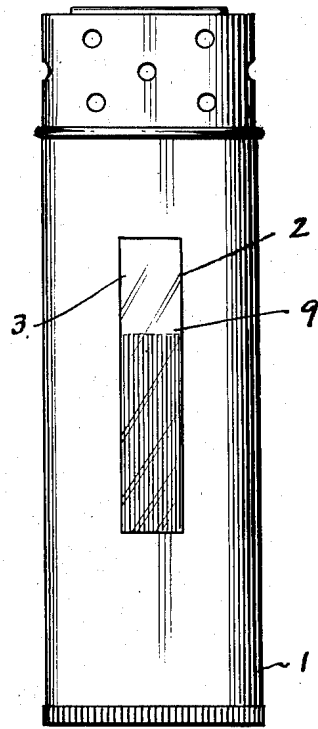


FIG. 3

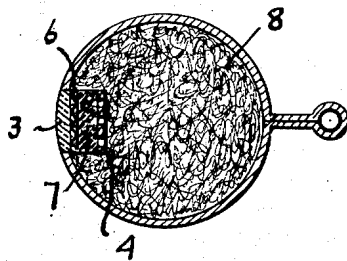
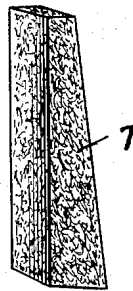


FIG. 4



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FLUID CONTENT GAUGE FOR LIGHTERS

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7 Claims. (Cl. 73-432)

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This invention relates to a gauge. An object of the invention is to provide a gauge for indicating the fluid or semi-fluid content of a container such as a cigar or cigarette lighter.

It is another object of the invention to provide a gauge which is of very simple construction, which may be easily installed and which will actually reveal the condition of the fluid content of the container.

Other objects and advantages will be apparent from the following specification, which is illustrated by the accompanying drawings, wherein:

Figure 1 is a side elevation of a lighter partly in section.

Figure 2 is an elevational view thereof taken at right angles to the view shown in Figure 1.

Figure 3 is a cross-sectional view taken on the line 3-3 of Figure 1, and

Figure 4 is a perspective view of a felt element employed.

Referring now more particularly to the drawings, the numeral 1 designates the case forming a container. As shown, the case is that of a cigar or cigarette lighter.

In one side of the case there is an opening 2 of any selected shape and which is covered by a translucent pane 3 of glass or other similar material.

The numeral 4 designates a metal clamping strip which is, preferably, perforated throughout, and whose ends are outwardly offset.

As will be noted, the margins of the pane 3 are inwardly offset and fit against the inner side of the case around the opening 2 so that the outer surface of the pane 3 is flush with the outer surface of the case.

The outwardly offset ends of the clamping strip fit closely against the upper and lower ends of the pane 3 as shown in Figure 3, and may be maintained thereagainst in any selected manner. As shown, there is a U-shaped clamp 5, the free ends of whose arms are inwardly curved and rest against the offset portions of the strip 4, said clamp being in contact with the opposite side of the case 1 and thereby held in place under compression.

Pressed against the inner side of the pane 3 there is a strip 6 of porous material such as fabric, or paper, preferably fabric; or the inner side of the pane may be frosted.

Between the clamping strip 4 and said strip of porous material, or the frosted pane, and extending from end to end of the space between the strip 4 and pane 3, there is a resilient element 7. This element is preferably felt of a dark color, or of a contrasting color from the porous strip 6.

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This felt is of substantially the same width as said clamping strip and pane.

This element 7 is of the same radial thickness as the space between the strip 6, or pane, and the clamping strip 4, at one end and gradually increases in radial thickness to the other end so that the pressure on the strip will increase from one end to the other when the element 7 is installed.

The container 1, in use, is filled with an absorbent material 8, such as lint cotton, and when the lighter is in use this material is saturated with the lighter fluid. The felt will also be saturated to the same degree as the lint cotton.

When the felt is fully saturated, the pressure of it against the strip 6, or the frosted pane, will cause the lighter fluid to give a uniform color to the pane 3.

As the fluid evaporates, there is a change in moisture through the strip 6 and since the pressure of the strip 4 increases in intensity from the narrow to the thick end of the felt, there will be a difference of color revealed through the pane 3, that is, the less intense the pressure the lighter will be the color revealed through the pane 3, as is more accurately illustrated in Figure 4.

As the fluid continues to evaporate from the lint cotton 8, the line of demarkation 9 will descend, thus indicating to the user the condition of the lighter fluid in the lighter.

What I claim is:

1. In a lighter, a translucent pane in the lighter case including a covering of porous material on the inside of the pane, a tapered element of absorbent material, such as felt, adjacent the inside of said covering, clamp means pressing said absorbent element against the covering.

2. In a lighter, a translucent pane in the lighter case including a covering of porous material fitted against the inside of the pane, a tapered resilient element of absorbent material adjacent the inside of said covering, and clamp means pressing said element against the covering.

3. In a lighter, a translucent pane in the lighter case including a covering of porous material against the inside of the pane, a tapered element of felt-like material adjacent the inside of said covering, and clamp means pressing said element against the covering.

4. In a lighter, a translucent pane in the case, an element of felt-like material adjacent the inside of said pane, clamp means including a pressure exerting member adapted to press said element against the pane with intensity which increases from one end of the element to the other end of the element.

5. In a lighter, a translucent pane in the lighter case, a tapering element of absorbent material

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adjacent the inside of said pane, pressure exerting means in said casing including a clamping strip in contact with said element and means for maintaining said strip in parallel spaced relation to said pane, whereby said element is caused to bear with varying intensity throughout the area of said pane.

6. In a lighter, a translucent pane in the lighter case, a tapering element of absorbent material in contact with the inside of the pane, a clamping strip in contact with the inside of said element in parallel relation to the pane, and means cooperable with the case and said strip to hold the strip in clamping contact with said element.

7. In a lighter, a translucent pane in the lighter case, a tapering element of absorbent material in contact with the inside of the pane, a clamping strip in contact with the inside of the element

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throughout the length of the element, and means cooperable with the case and said strip to hold the strip in clamping contact with said element.

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

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