



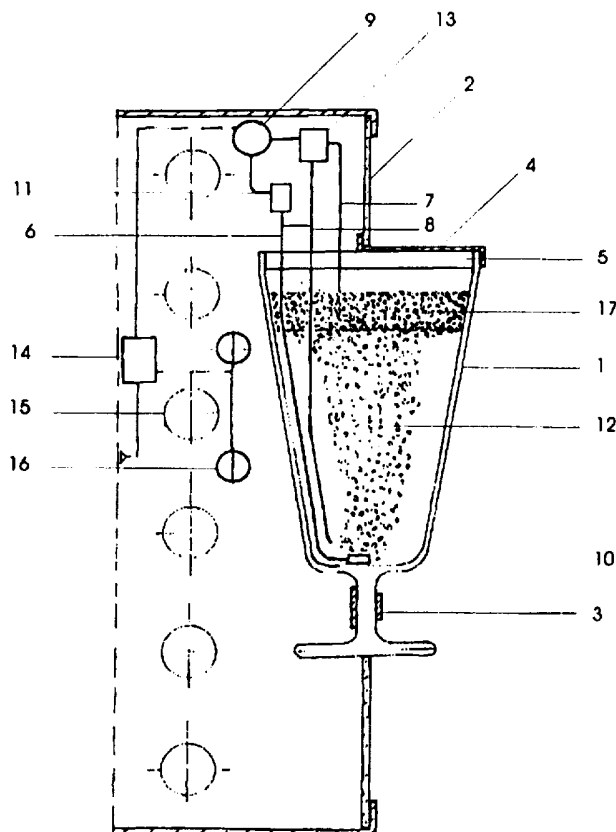
## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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| <p>(51) International Patent Classification <sup>6</sup> :<br/><b>G09F 13/24, 19/12</b></p>   | <p><b>A1</b></p>   | <p>(11) International Publication Number: <b>WO 97/44772</b><br/>(43) International Publication Date: 27 November 1997 (27.11.97)</p> |
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(54) Title: ADVERTISING DEVICE FOR BEVERAGES WITH BUBBLING LUMINOUS ANIMATION

## (57) Abstract

The present disclosure refers to an advertisement device for beverages whose purpose is to stimulate the consumption of such products by means of the constant or intermittent illumination and bubbling of the liquid contained within a container, through the formation of clouds of micro-bubbles and a superficial layer of froth, consisting of a panel and intended to stimulate the sales and the consumption of beverages, characterized by the use of a container (1) shaped so as to resemble a glass, cup, goblet, bottle or flask of transparent material, and having a lid (5) which is attached, by means of clamps (3) and a retaining ring (4) or is integrally molded in a translucent panel (2) which in its interior, a given volume of hydro-alcoholic solution dyed in the color of the product to be advertised, said container (1) embodying tubes (6; 7 and 8) which form a closed circuit of an inert gas such as nitrogen and including a compressor (9), a bubbler (10), a check valve (11) and a cyclone separator (13) intended to separate the gas from the entrapped liquid. The tubes (6; 7 and 8) are intended, one of them (6) for the admittance of the gas at the bottom of the container (1) which contains the bubbler (10) coupled to the tip of the tube and is intended for the formation of micro-bubbles of the gas (12); the other tube (7) is intended for the capture of the inert gas at the surface of the liquid and the third tube returns the liquid sprayed by the gas back to the liquid surface. Said panel (2) contains, furthermore, a back-lighting device (15) and intermittent lights (16) which flash at a rate commanded by a timer (14) which also turns on and off the compressor (9).



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Patent Descriptive Report of the Invention "**ADVERTISING DEVICE FOR BEVERAGES WITH BUBBLING LUMINOUS ANIMATION**".

5 The present disclosure refers to an advertisement device for beverages whose purpose is to stimulate the consumption of such products by means of the constant or intermittent illumination and bubbling of the liquid contained within a container, through the formation of clouds of micro bubbles and a superficial layer of froth.

10 In the present state of the art, the sales of mass consumption products such as beer, colas and drinks relies on the use of efficient media of advertisement in the points of sale. This is the result of the great variety of brands and products available in the market and of the fierce competition between  
15 them all.

To this effect, the consumer is at all times subjected to a great variety of promotional devices of all sorts such as posters, calendars, watches, caps, key-holders, prizes, and gifts, whose  
20 aim is to attract his attention and to imprint the brand in his brain. However, the market is already saturated by this type of merchandising and the competition ends up resulting in apathy and disinterest of the public.

The present invention is based in a novel concept of merchandising such products by means of an unusual motion  
25 effect intended to call the attention of the potential consumer. It consists of a medium of advertisement that stimulates the sales and the consumption of beverages by inducing the desire for them as the result of the vision of the liquid in motion and the formation of a layer of foam at the surface and the condensation  
30 of humidity in the exterior, just as happens during actual conditions.

The present advertisement device consists of a cup, a bottle or a flask which is mounted inside a panel molded in with the shape of the desired container, which is illuminated from  
35 behind and filled with a liquid that imitates the desired beverage (beer, cola, or such). The liquid is "brought to life" - that is, caused to bubble as in its state during actual consumption - in order to cause an irresistible desire to drink in the prospective consumer.

40 The device in question is a closed circuit of an inert gas (usually nitrogen) formed by a compressor, a bubbler, a catcher of sprayed liquid and a check valve that prevents the counter-current of the liquid. The said circuit encloses a certain amount of liquid usually consisting of an alcoholic solution colored like  
45 the product to be advertised.

In this circuit the gas is driven - in the intermittent cycles dictated by a timer that turns the compressor on and off - up to

the surface of the liquid, which is contained in a container such as a glass, a bottle or a flask attached to the panel or molded on it. Micro-bubbles are formed inside the liquid by means of a bubbler in the end of the tube that leads the gas to the bottom of the container. Once inside the liquid, the micro bubbles rise and bubble to the surface and form a new layer of foam at each cycle, but never exceed a predetermined level. When they reach the surface, the bubbles burst and release the gas which is recaptured by means of a catching tube placed near the surface of the liquid and is led to a cyclone separator that separates the gas from the liquid. In this way the gas is returned to the compressor in dried condition, whereas the sprayed liquid is returned to the container.

In the compressor the dry gas is impelled back into the liquid after passing through the check valve that prevents the return of the liquid when the compressor is turned off at the end of a cycle. An inert gas such as nitrogen ( $N_2$ ) is used in the circuit, so as to allow a long useful life for the device. The liquid consists of an alcoholic solution colored with the color of the product to be advertised and which allow the formation of micro-bubbles in a proportion and size similar to the one desired.

The figures that illustrate the present text include numerical references to be used in conjunction with the detailed description below, which is a possible embodiment of the invention, but is in no way restricted to its size, proportions, materials, shapes or finishes eventually chosen for its industrialization, but are only illustrative and intended to help the understanding of its constructive details.

Figure 1 is a front view of the invention consisting of a panel of a translucent material exhibiting a glass of beer molded to its surface.

Figure 2 is a side view displaying the constructive details of the gas circuit and its components.

Figure 3 is a schematic diagram showing the details of the circuit and its components, as well as the way in which they act inside the container of the liquid.

The present invention, in the embodiment illustrated in the figures in question, consists of an advertisement device composed of a container such as a glass, cup, bottle or flask of transparent material (1) which is integrally molded to a panel of translucent material (2) or, yet, attached to it by means of clamps (3) and a fixation ring (4).

Said container (1) contains a certain amount of an alcoholic solution artificially colored in the color of the advertised product, and has a lid (5) and tubes (6; 7 and 8), said tubes being, one of them (6) for admitting the inert gas (nitrogen) into the liquid, the second (7) for the capture of the released gas from the bubbles

and the third (8) for returning the sprayed liquid dragged by the gas back to the surface of the liquid.

5 Said tubes (6; 7 and 8) form a closed circuit for the gas which is impelled by means of a compressor (9) into a bubbler (10) attached to the lower extremity after passing through a check valve (11) that prevents the counter-current of the liquid when the device is turned off. The micro-bubbles form and rise to the surface of the liquid, where they burst open. These micro-bubbles form a layer of froth and then liberate the enclosed gas  
10 that is recaptured by the intended tube (7) at a rate dependent of the speed of compression dictated by the compressor (9). The liberated gas is admitted into a cyclone separator (13) that separates the gas from the liquid dragged by it from the surface of the liquid. Said cyclone separator returns the collected liquid  
15 back to the container by means of a tube (8), whereas the dry gas is returned to the compressor (9), closing the circuit. A new cycle is started every time the timer (14) turns the compressor (9) on and off.

20 The panel is back-lit by a back-lighting device (15) and a set of intermittent lights (16) which flash in order to enhance the effect of bubbling of the micro-bubbles (12) which condense at the surface of the liquid, where they form a layer of froth (17) which imitate their natural formation, but are prevented from building up too much, in order to attract the attention of the  
25 watcher. At the external surface of the container are placed adhesives (18) printed with the brand of the product and which must be adequate to the desired visual effect and to the particular product, in order to stimulate its consumption.

30 According to these characteristics and to the embodiment just described, the result is a medium of publicity which incorporates animation, light and bubbling and which is so novel and original that it has all the requirements to deserve a utility patent.

## C L A I M S

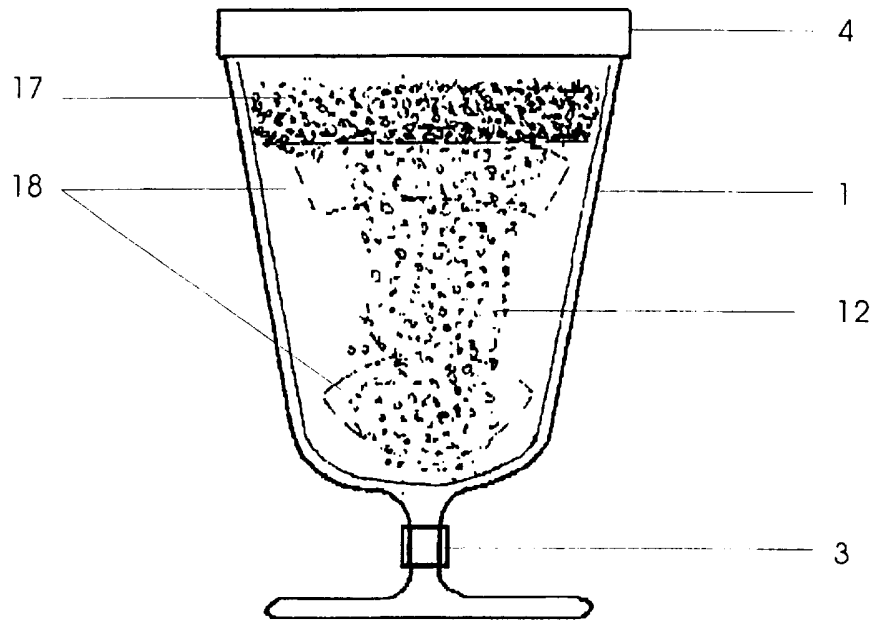
1) "ADVERTISING DEVICE FOR BEVERAGES WITH BUBBLING LUMINOUS ANIMATION", consisting of a panel and intended to stimulate the sales and the consumption of beverages, **characterized by** the use of a container (1) shaped so as to resemble a glass, cup, goblet, bottle or flask of transparent material, and having a lid (5) which is attached, by means of clamps (3) and a retaining ring (4) or is integrally molded in a translucent panel (2) which in its interior, a given volume of hydro-alcoholic solution dyed in the color of the product to be advertised, said container (1) embodying tubes (6; 7 and 8) which form a closed circuit of an inert gas such as nitrogen and including a compressor (9), a bubbler (10) a check valve (11) and a cyclone separator (13) intended to separate the gas from the entrapped liquid; the tubes (6; 7 and 8) are intended, one of them (6) for the admittance of the gas at the bottom of the container (1) which contains the bubbler (10) coupled to the tip of the tube and is intended for the formation of micro-bubbles of the gas (12); the other tube (7) is intended for the capture of the inert gas at the surface of the liquid and the third tube returns the liquid sprayed by the gas back to the liquid surface, said panel (2) contains, furthermore, a back-lighting device (15) and intermittent lights (16) which flash at a rate commanded by a timer (14) which also turns on and off the compressor (9).

2) "ADVERTISING DEVICE FOR BEVERAGES WITH BUBBLING LUMINOUS ANIMATION", according to claim 1, **characterized by** the fact that the gas is impelled by the compressor (9) down to the bottom of the fluid where it forms the micro-bubbles (12) which rise to the surface where they form a layer of froth (17) which imitates the natural formation when the product is actually consumed.

3) "ADVERTISING DEVICE FOR BEVERAGES WITH BUBBLING LUMINOUS ANIMATION", according to claims 1 and 2, **characterized by** the fact that the inert gas circuit is activated intermittently or continuously and synchronously or not, by means of a timer (14) that can be previously programmed to turn on and off the gas compressor (9) and the intermittent lights (16), being the amount of micro-bubbles (12) previously adjusted by means of the regulation of the output of the compressor (9).

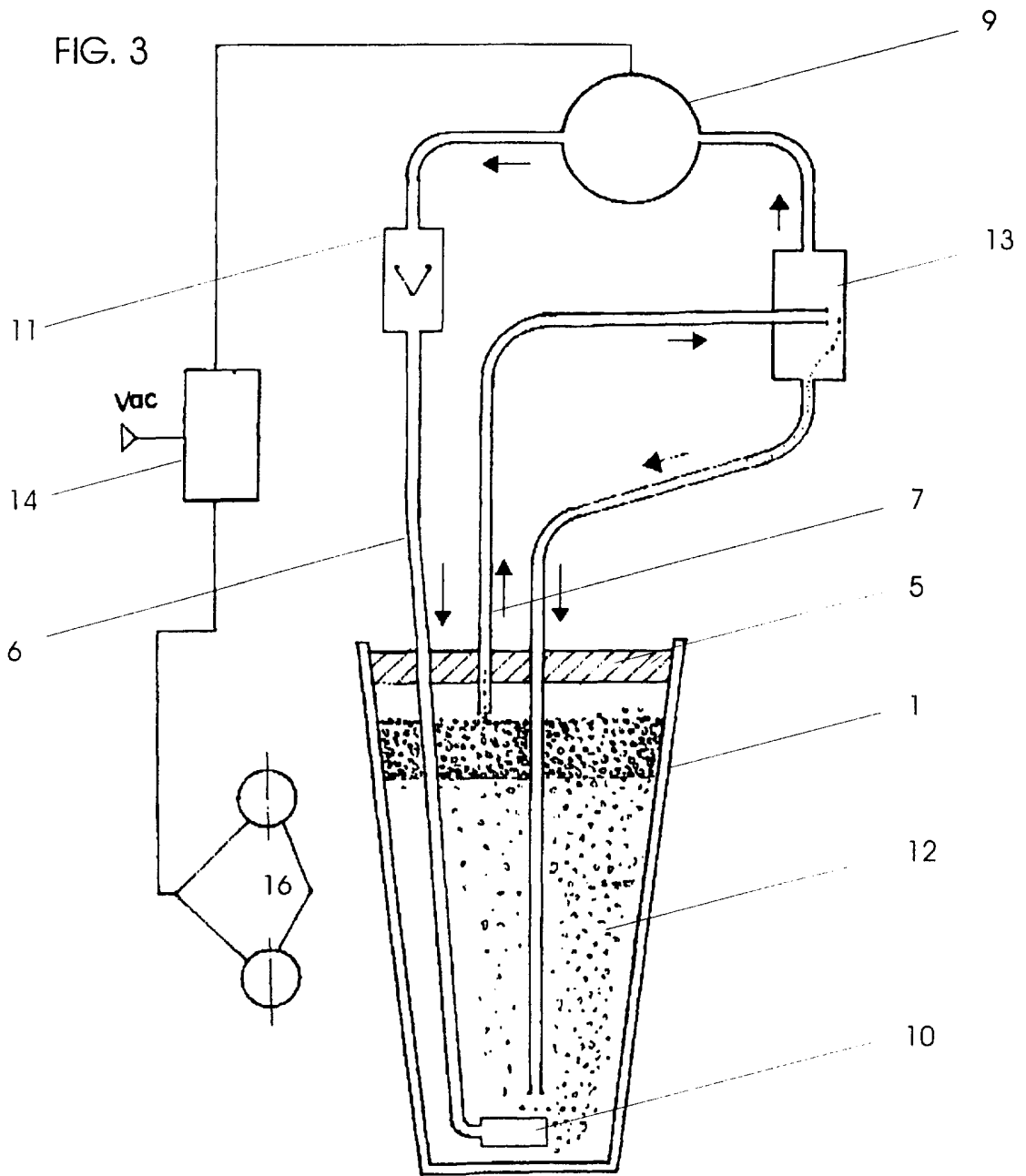
4) "ADVERTISING DEVICE FOR BEVERAGES WITH BUBBLING LUMINOUS ANIMATION", according to claims 1, 2 and 3, **characterized by** the fact that the container (1) is imprinted with advertisement stickers (18) in its front surface in order to characterize the device with the brand of the manufacturer or the product to be advertised by the device.

FIG. 1









# INTERNATIONAL SEARCH REPORT

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| International application No.<br>PCT/BR 97/00019 |
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| <b>A. CLASSIFICATION OF SUBJECT MATTER</b><br>IPC <sup>6</sup> : G 09 F 13/24, 19/12<br>According to International Patent Classification (IPC) or to both national classification and IPC   |
| <b>B. FIELDS SEARCHED</b><br>Minimum documentation searched (classification system followed by classification symbols)<br>IPC <sup>6</sup> : G 09 F 13/00, 19/00<br>Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched<br>Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)<br>WPIL, EPODOC |

| C. DOCUMENTS CONSIDERED TO BE RELEVANT |  |                       |
|--|--|-----------------------|
| Category*                              | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No. |
| P,A                                    | WO 96/31 862 A1 (HAKKERT) 10 October 1996 (10.10.96), fig.1-5; page 3, line 10 - page 4, line 17; page 6, line 8 - page 8, line 17; claims 1,3-7,9,10. | 1-4                   |
| A                                      | WO 95/19 026 A2 (HAKKERT) 13 July 1995 (13.07.95), fig.4-6; page 6, line 5 - page 7, line 28; claims 1,12.   | 1-4                   |
| A                                      | US 4 208 848 A (KOHL) 24 June 1980 (24.06.80), fig.2,4; column 2, line 67 - column 3, line 15; column 3, lines 27-37.                                  | 1-4                   |
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| A                                      | US 5 349 771 A (BURNETT) 27 September 1994 (27.09.94), fig.2-4; abstract; column 3, line 43 - column 4, line 52.                                       | 1-4                   |

Further documents are listed in the continuation of Box C.
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| Date of the actual completion of the international search<br>17 October 1997 (17.10.97) | Date of mailing of the international search report<br>30 October 1997 (30.10.97) |
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International application No.

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|   |  | US A 5349771   | 27-09-94   | keine - none - rien |  |