United States Patent [19]

Tamburri

[11] **3,721,240**

[45] **March 20, 1973**

[54] **MECHANICAL SMOKING DEVICE**

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[22] Filed: **Nov. 10, 1970**

[21] Appl. No.: **88,273**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 767,051, Sept. 30, 1968, abandoned, which is a continuation-in-part of Ser. No. 584,277, Oct. 4, 1966, abandoned.

[52] **U.S. Cl.** **128/208,** 131/171

[51] **Int. Cl.** **A61m 15/06**

[58] **Field of Search** 128/208, 201, 203; 131/171, 131/172, 170; 222/3

[56] **References Cited**

UNITED STATES PATENTS

14,325	7/1917	Burke	128/201
2,836,044	5/1958	Zellweger	431/207
2,882,940	4/1959	Zellweger	141/293
2,920,623	1/1960	Holt	128/208
3,157,179	11/1964	Paullus et al.	128/208
3,425,414	2/1969	Roche	128/201

FOREIGN PATENTS OR APPLICATIONS

409,650	7/1932	Great Britain	131/171

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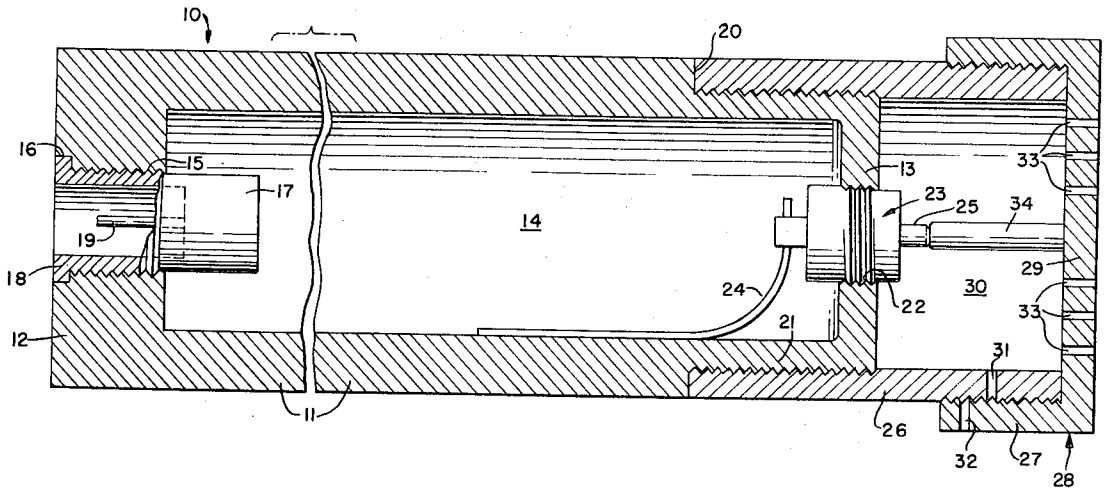
[57] **ABSTRACT**

This specification discloses a smoking device to be carried on the person of a user as one does a cigar, cigarette, or pipe and which includes a refillable storage chamber for a liquefied flavored and perfumed gas under pressure, said chamber having an inlet or refill valve and a discharge valve connecting with a suction chamber having an air passage to facilitate sucking or puffing of gases from the suction chamber.

7 Claims, 2 Drawing Figures



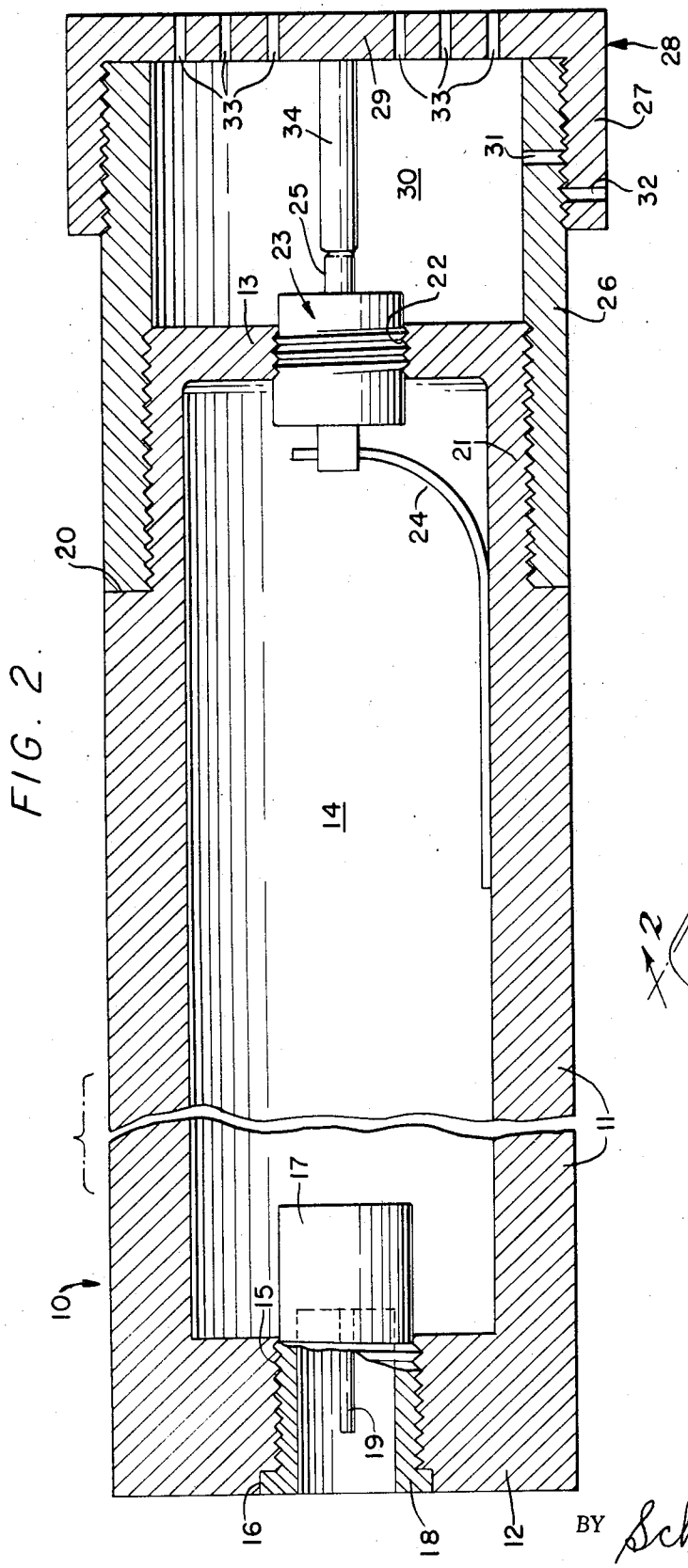


FIG. 2.

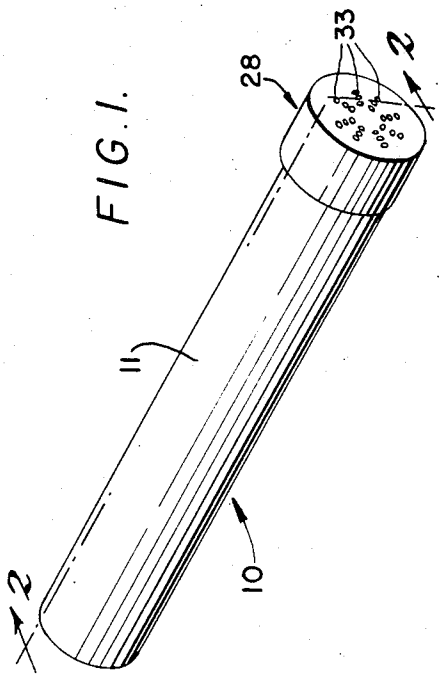


FIG. 1.

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MECHANICAL SMOKING DEVICE

This application is a continuation in part of my copending application Ser. No. 767,051, field Sept. 30, 1968, now abandoned, which application is a continuation in part of my application, Ser. No. 584,277 field Oct. 4, 1966, and now abandoned.

The present invention relates to mechanical smoking devices and is concerned primarily with such a device which is intended to replace conventional smoking materials such as cigars, digarettes, and pipe tobacco.

BACKGROUND OF THE INVENTION

At the present time it is well accepted, if not fully established, that the smoking of tobacco is harmful to the user. Some attempt has been made to substitute for conventional smoking material and equipment such as cigars, cigarettes, and pipes, smoking devices of a mechanical nature. However, the known devices have not been accepted by the using public for various reasons. Among them is the fact that there is no known device which uses a liquefied gas as the material which is consumed by use of the device.

OBJECTS OF THE INVENTION

With the foregoing conditions in mind the present invention has in view the following objects:

1. To provide a mechanical smoking device which has the appearance of a cigar, cigarette, or pipe.

2. To provide a device of the type noted which uses a liquefied gas which may be flavored, perfumed, or colored,

3. To provide a device of the character aforesaid which includes a storage chamber, an inlet or refill valve for the chamber, and a discharge valve which emits gas from the storage chamber.

4. To provide a device of the kind described which includes a suction chamber that communicates with the storage chamber and which receives gas from the storage chamber.

5. To provide a smoking device of the type noted which includes a suction chamber having an air passage which facilitates sucking and puffing by a user when that part of the device which houses the suction chamber is positioned in the mouth of a user.

Various other more detailed objects and advantages of the invention such as arise in connection with carrying out the above noted ideas in a practical embodiment will in part become apparent and in part be hereinafter stated as the description of the invention proceeds.

SUMMARY OF THE INVENTION

The foregoing objects are achieved by providing a mechanical smoking device which simulates a cigar, cigarette, or pipe as desired. The device includes a storage chamber defined by the wall structure of the device. An inlet or refill valve is mounted in this wall structure and is operable to charge a liquefied gas under pressure into the storage chamber. A suction chamber is also included in the wall structure and a discharge valve, also mounted in the wall structure, when opened, discharges gas from the storage chamber into the suction chamber. The wall structure defining the suction chamber has an air passage which, when open communicates with the ambient atmosphere.

For a full and more complete understanding of the invention, reference may be had to the following description and accompanying drawing wherein:

FIG. 1 is a perspective of a smoking device simulating a cigar and embodying the principles of the present invention; and

FIG. 2 is a longitudinal section through the device of FIG. 1, being taken on the plane of the line 2–2 of FIG. 1. In this view parts have been broken away to permit of illustration on an enlarged scale.

Before referring to the drawing, it is noted that the subject device is susceptible of use with any liquefied gas which is not harmful to a user when drawn into his mouth and/or inhaled. It should also be capable of functioning as a carrier for flavoring, perfume, or coloring materials as desired. One such liquefied gas that is now known and available to the public is Octa-Fluoro-Cylo-Butane, which is produced and sold by Dupont under the descriptive number C—318.

Referring now to the drawing, and first more particularly to FIG. 1, a smoking device in simulation of a cigar is therein illustrated and designated in its entirety at 10. As illustrated it is cylindrical but this shape is not a limitation on the invention. It may be provided in any shape and size depending on which particular smoking article is to be simulated.

Referring now to FIG. 2, the device 10 is shown as including a cylindrical wall 11 having end walls 12 and 13 integral therewith. This wall structure 11, 12, and 13 may be of any material having the required properties of strength and rigidity with a metal being included as a preferred material because of its ability to withstand high pressure. Wall structures 11, 12, and 13 define a storage chamber 14.

End wall 12 is formed with a threaded opening 15 which is counterbored at 16. An inlet or refill valve is represented diagrammatically at 17. It may be any valve which will accept liquefied gas from a proper container and pass it into storage chamber 14. Such valves are well known and are now widely used in butane lighters. Such a valve is fully disclosed in the following U.S. Pat. Nos.: Re. 24,163, 2,882,940, and 3,085,601. The valve disclosed in U.S. Pat. No. 2,882,940 may be taken as that which is represented by valve 17.

Valve 17 is externally threaded and is screwed into threaded opening 15. It has a head 18 which is received in counterbore 16 when screwed home. Valve 17 has a hollow needle or finger 19 which cooperates with the neck of a container which is inserted into valve 17 in the manner disclosed in U.S. Pat. No. 2,882,940. A container for liquefied gas under pressure is disclosed in U.S. Pat. No. 3,224,626.

Wall 11 is reduced in diameter at the portion adjacent to end wall 13 to provide a shoulder at 20 and an externally threaded extension 21. End wall 13 is formed with a threaded aperture 22 in which is secured a discharge valve indicated diagrammatically at 23. This discharge valve 23 is fully disclosed in U.S. Pat. No. 2,836,044. So far as this invention is concerned, the pertinent elements of valve 23 are the evaporation strip or wick 24 and the operating plunger 25. In the depressed position of plunger 25, valve 23 is closed and in its raised or extended position, valve 23 is opened.

A sleeve 26 has an end portion that is internally threaded and screwed onto threaded extension 21. In its assembled position on extension 21, the end face of sleeve 26 abuts shoulder 20. The outer end of sleeve 26 is externally threaded and screwed thereonto is a skirt 27 of a cap identified generally at 28. Cap 28 has an end wall 29 from the inner surface of which projects a stem 34 which is in alignment with plunger 25 which it engages for operative purposes. End wall 13, sleeve 26, and end wall 29 define a suction chamber 30.

Sleeve 26 is formed with a passage 31 while skirt 27 is formed with a similar passage 32. Cap 28 may be unscrewed to permit plunger 25 to assume a position in which valve 23 is open and also bring passages 31 and 32 into alignment and thereby establish communication between suction chamber 30 and the ambient atmosphere. End wall 29 is formed with a plurality of openings 33 through which a mixture of air and gas from suction chamber 30 may be drawn into the mouth of a user.

OPERATION

While the manner of using the subject smoking device and its mode of operation are believed to be obvious from the illustration of the drawings and description of parts set forth above they may be briefly outlined as follows:

Liquefied gas under pressure is introduced into storage chamber through refill valve 17. This is accomplished by pressing the end of the neck of a container of the type described in U.S. Pat. No. 3,224,629 against the end of needle 19. The needle penetrates the container neck and the liquefied gas flows into storage chamber 14. When the latter is filled, or substantially so, the liquefied gas will be under a pressure of about 25 p.s.i.

With cap 28 screwed to its fully closed position, that is, with the inner face of wall 29 engaging the end face of sleeve 26, stem 30 engages plunger 25 to hold valve 23 in its closed position. In this position passages 31 and 32 are out of alignment. When the use of the device is desired, cap 28 is unscrewed from sleeve 26 sufficiently to bring passages 31 and 32 into alignment. At the same time stem 34 is retracted from plunger 25 to open discharge valve 23. Gas in its gaseous state now flows through valve 23 into suction chamber 30.

The user now inserts the capped end of sleeve 26 into his mouth and sucks on it. This draws air through aligned passages 31 and 32 into suction chamber 30 where it is mixed with gas from valve 23. The mixture of air and gas is drawn through opening 33 into the user's mouth. He may merely draw the mixture into the mouth or inhale it. It is discharged from the mouth by puffing in the usual manner of a smoker.

While a preferred specific embodiment of the invention is hereinbefore set forth, it is to be clearly understood that the invention is not to be limited to the exact constructions, mechanisms, and materials illustrated and described because various modifications of these details may be provided in putting the invention into practice.

What is claimed is:

1. In a mechanical smoking device,
   a. wall structure comprising top, bottom, and side walls defining a storage chamber containing liquified gas,
   b. a refill valve mounted in said bottom wall structure and operable to pass liquified gas under pressure into said storage chamber,
   c. a discharge valve mounted in said top wall structure and operable to discharge gas in its gaseous state from the storage chamber, and including an operating plunger,
   d. wall structure defining a suction chamber that communicates with said storage chamber via said discharge valve,
   e. a cap adjustably mounted on the wall structure defining the suction chamber and having an end wall formed with openings,
   f. a stem carried by said cap for operative engagement with said plunger, and
   g. openings in said cap and the wall structure on which it is mounted which, when in alignment, establishes communication between said suction chamber and the ambient atmosphere.

2. The mechanical smoking device of claim 1 in which said wall structure includes a wall that a common to the storage and suction chamber and in which wall said discharge valve is mounted.

3. The mechanical smoking device of claim 1 in which the discharge valve includes a wick that is positioned in the storage chamber.

4. The mechanical smoking device of claim 1 in which the wall structure defining the suction chamber is a sleeve and the cap includes a skirt that is screwed onto the sleeve with the openings in said cap and wall structure being in said sleeve and skirt.

5. The mechanical smoking device of claim 1 in which the wall structure which defines the storage chamber comprises a cylindrical wall and two end walls, said refill valve being mounted in one end wall and the discharge valve in the other end wall.

6. The mechanical smoking device of claim 5 in which the wall structure that defines the suction chamber includes a sleeve that is screwed onto the cylindrical wall of the structure which defines the storag chamber.

7. The mechanical smoking device of claim 1 in which said liquified gas which is introduced into said storage chamber is flavored and perfumed.

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