Nov. 16, 1937. H. L. UBER 2,098,983

TOBACCO USER'S APPLIANCE

Filed Sept. 14, 1934

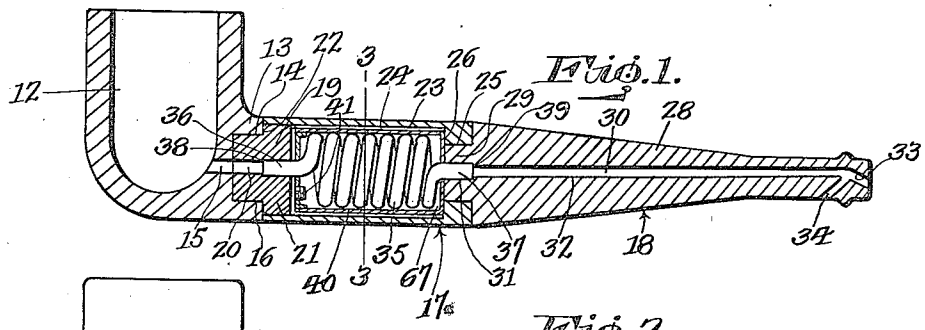


Fig. 1.

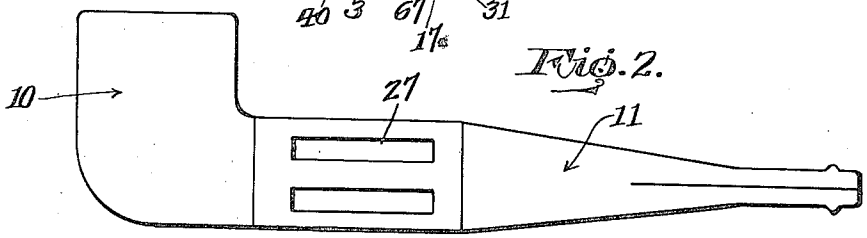


Fig. 2.

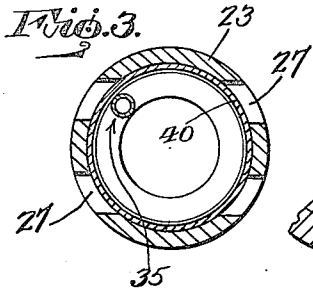


Fig. 3.

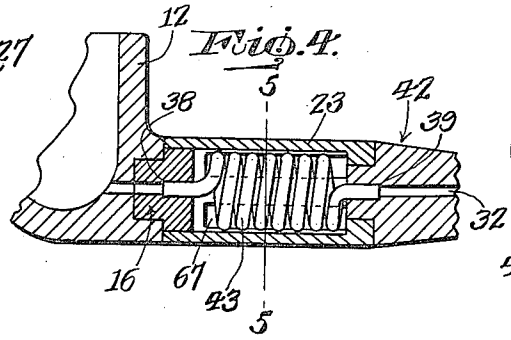


Fig. 4.

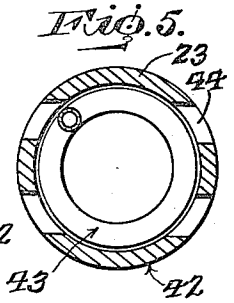


Fig. 5.

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TOBACCO-USER'S APPLIANCE

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4 Claims. (Cl. 131—12)

My invention relates to a tobacco-user's appliance, such as a pipe.

It is a definite known fact that many pathological conditions affecting the human body are brought about by a lowered resistance either locally or generally plus the added etiology of a persistent and continued irritation. It is also well known that the temperature of the smoke from a combusting body of tobacco within the bowl of a pipe or in a cigar or cigarette holder is around 110 to 120 degrees. The presence of this abnormally high temperature of smoke in the mouth of the smoker constitutes a factor which accomplishes both of these effects, namely—(1) a lowering of tissue resistance to heat; (2) a constant and gradually accumulative effect by an irritant which in this case is heat. Carcinoma or cancer of the mouth is a more or less common complaint and it more often occurs in men and it is also more likely to occur in men who smoke than otherwise. If so, the manner of prevention lies in reducing the irritation caused by smoking, and, in this regard, the heat element in the smoking habit is considered practically of greater interest than is any irritation produced by nicotine. Cancer of the mouth is not the only diseased condition from which protection may be obtained by such protection of avoiding heating the mouth unnecessarily by reason of smoke of abnormally high temperatures especially in comparison with the normal temperature of the mouth of 98.6 degrees. The high temperature of the smoke ranges from 110 degrees upward and assumes at times a temperature of 120 degrees, probably higher, persistently so for some prolonged period of time during smoking conditions.

It is one of the aims of my invention to overcome the objections heretofore stated and which is accomplished by providing a tobacco-user's appliance, in a manner as hereinafter set forth with means for cooling or reducing the temperature of smoke created from a combusting body of tobacco, as the smoke travels through the appliance to the mouth for the purpose of preventing or reducing to a minimum deleterious effects upon the mouth when smoking tobacco.

A further object of my invention is to provide, in a manner as hereinafter set forth, a tobacco-user's appliance having means that returns the saliva to the mouth, instead of it going down the smoke channel or passage of the appliance and being later pulled into the mouth saturated and discolored with nicotine.

Further objects of my invention are to provide, in a manner as hereinafter set forth, a tobacco-user's appliance which is comparatively simple in its construction and arrangement, strong, durable, compact, thoroughly efficient in its use for the purpose intended thereby, and comparatively inexpensive to manufacture.

To the above ends essentially and to others which may hereinafter appear, my invention consists of such parts, and such combination of parts which fall within the scope of the invention as claimed.

In the drawing:

Figure 1 is a longitudinally sectional view of a tobacco-user's appliance in accordance with my invention of the pipe type,

Figure 2 is a side elevation thereof,

Figure 3 is a section on line 3—3, Figure 1,

Figure 4 is a fragmentary view in longitudinal section of a modified form of my invention of the pipe type, and

Figure 5 is a section on line 5—5, Figure 4.

Referring to Figures 1, 2, and 3 of the drawing the appliance illustrated is of the pipe type and includes a receiver 10 for the tobacco and a stem 11 connected to and communicating with the receiver 10. The latter is in the form of a bowl 12 having one side at its bottom formed with an annular protuberance 13. The bowl 12 has an annular socket 14 with its mouth opening at the outer end of the protuberance 13. The bowl 12 is also formed with a smoke outlet 15 in proximity to its bottom which opens into the base of the socket 14 axially thereof.

The stem 11 includes the separable sections 16, 17, and 18. The section 16 constitutes an insulator of any suitable material and consists of a body part 19 of circular cross section formed with a smoke passage 20 of two different diameters, the smallest of which being of the same diameter as that of the outlet 15. The body part 19 is provided with a laterally directed annular flange 21 at one end and which forms section 16 with a peripheral shoulder 22. The diameter of the section 16 at the flanged end thereof is less than that of the protuberance 13. The diameter and length of the non-flanged portion of section 16 is such as to snugly fit throughout the socket 14. When the section 16 of the stem 11 is arranged in co-relation to the receiver 10, the shoulder 22 abuts the protuberance 13 and the non-flanged part of said section completely fills the socket 14. When section 16 is in position relative to the receiver 10 that portion of smallest diameter of the smoke passage 20 registers with the smoke outlet 15.

The section 17 of stem 11 constitutes a housing

and is formed of any suitable material. The section 17 is in the form of sleeve-like body 23 of circular cross section having its outer diameter corresponding to the outer diameter of the protuberance 13 at the free end of the latter. The body 23 is formed of two portions of different inner diameters. The portion of largest inner diameter is designated 24 and the other portion at 25. The portion 24 is of materially greater length than the portion 25. The junction of the two portions of different inner diameters provide an internal shoulder 26. The inner diameter of portion 24 corresponds substantially to the outer diameter of the flanged part of section 16. The portion 24 is ported or apertured and shown by way of example as being formed with circumferentially disposed lengthwise extending spaced oblong slots 27 for establishing communication between the interior of said portion and the atmosphere and constitutes cooled or cold air inlets, or heated or hot air outlets. The section 17 has the free end of its portion 24 mounted on and snugly engaging throughout the periphery of the flange 21 of section 16. When section 17 is positioned upon section 16, in the manner as referred to the free end edge of portion 25 abuts the edge of the protuberance 13 at the free end of the latter.

The section 18 of the stem 11 constitutes a mouth piece and is formed of an elongated body 28 of any suitable material tapering from its inner to its outer end. The body 28 at its outer end is formed axially thereof with a circular protuberance 29 equally spaced from the outer periphery of said body. The section 18 is formed from end to end thereof with a smoke passage 30 having a portion 31 of greater diameter than the portions 32, 33 thereof. The portion 32 is of greater length than the portions 32, 33. The portion 32 is arranged at the outer end and the portion 33 at the inner end of passage 30. The portion 33 is disposed at an angle with respect to the portion 32. The section 18 is also formed with a saliva outlet 34 which opens into the passage 30 at the point of mergence of the portions 32, 33. The outlet 34 extends at a forward inclination with respect to the inner end of section 18 and opens at the periphery of the latter.

Arranged within the stem section 17 and separably engaging in the pipe stem sections 16, 18 is a smoke conducting member 35 formed of a series of closely arranged tubular coils and oppositely extending end terminal portions 36, 37 disposed axially with respect to the ends of the body of coils. The end terminal portion 36 is extended into that portion of largest diameter of the smoke passage 20. The end terminal portion 37 extends into the portion 31 of the smoke passage 30. The junction of the two diameters of the smoke passage 20 provides a shoulder 38 against which abuts the end edge of terminal portion 36. The junction of portions 31, 32 of smoke passage 30 provides a shoulder 39 against which abuts the end edge of terminal portion 37. The terminal portions 36, 37 snugly engage in the sections 16 and 18, and by positioning the terminal portions 36, 37 in the manner as referred to the member 35 forms continuations of the passages 20 and 30. The member 35 constitutes a means for reducing the temperature of the smoke as it travels from the receiver 10 to the mouth of the user. The section when mounted in position has the portion 25 seated on, completely surrounds, and snugly engages the protuberance 29, as well as abutting the outer end edge of section 18.

Arranged within the section 17 of the stem is a separable cooling medium container 40 formed of an annular body and a pair of ends formed with axial openings through which extend the terminal portions 36, 37. The ends of container 40 are sealed to the terminal portions 36, 37 as well as being sealed to the container body to prevent leakage. The cooling medium may be oil or any other suitable liquid, semi-liquid or solid. That is to say any material possessing a cooling characteristic. One of the ends of the container 40 is provided with a filling opening closed by a removable plug, as at 41. The container 40 is arranged in section 17 between the portions of different inner diameter of such section.

The form shown in Figures 4 and 5 will be of the same construction as that shown in Figures 1, 2, and 3 with this exception—the stem 42 is not provided with the container 40 whereby the smoke conducting member 43 will be air cooled through the slots 44.

The smoke conducting member and slotted housing or slotted housing portion coact to reduce the temperature of the smoke as it travels towards the mouth of the user. The smoke conducting member, slotted housing or slotted housing portion, container and cooling medium coact to reduce the temperature of the smoke as it travels towards the mouth of the user.

The housing part of any one of the stems shown provides a chamber 67 for the coiled smoke conducting member or the cooling medium container in which is arranged the conducting member.

In the event of the use of either the coil alone or the coil enclosed within a sealed, closed container for oil or other suitable liquid or semi-liquid medium or material within the housing arranged for these units, said housing contains slits or apertures to permit the heated air to be evacuated from within the housing from the heated coils or heated oil or other suitable liquid or semi-liquid medium or material container or to permit the ingress of cool or cold air into the chamber within the housing of both and, that the air-cooled unit is therefore air-cooled alone whereas, the oil or other suitable liquid or semi-liquid medium or material cooled unit is a combination of oil or other suitable liquid or semi-liquid medium or material cooled and air cooled.

What I claim is:

1. In a tobacco smoker's appliance, a structure of stem-like contour including a plurality of separably connected sections, smoke passages arranged in endwise spaced alignment and a portion of enlarged inner diameter intermediate its ends providing a chamber between the inner ends of said smoke passages, said chamber being formed with a pair of end walls, the inner ends of said smoke passages being flush with said end walls of and opening into said chamber, that part of said structure providing the said portion of enlarged inner diameter being formed with spaced wide elongated slots lengthwise thereof providing for a draft of cooling air through said chamber, and a smoke conducting member formed of a series of closely arranged tubular coils and oppositely extending tubular end terminal portions disposed axially with respect to and extending laterally from the end coils of said series of coils, said end terminal portions being arranged in said chamber and separably mounted in the opposed

ends of said smoke passages, and said series of coils being arranged in said chamber.

2. In a tobacco smoker's appliance, a structure of stem-like contour including an inner end tubular section, an intermediate tubular section and an outer end tubular section, said sections being separably connected together, said end sections providing smoke passages arranged in spaced endwise opposed relation, said intermediate section having its inner diameter materially greater than the inner diameter of each end section and providing in connection with said end sections a chamber, said intermediate section having spaced slots lengthwise thereof providing for a draft of cooling air through said chamber, a smoke conducting member formed of a series of closely arranged tubular coils and oppositely extending tubular end terminal portions disposed axially with respect to and extending laterally from the end coils of said series of coils, said end terminal portions being arranged in said chamber and separably mounted in the opposed ends of said smoke passages, said series of coils being arranged in said chamber, said slots being arranged in the sides of said intermediate section, and said inner end section possessing an insulating characteristic.

3. In a tobacco smoker's appliance, a structure of stem-like contour including an inner end tubular section, an intermediate tubular section and an outer end tubular section, said sections being separably connected together, said end sections providing smoke passages arranged in spaced endwise opposed relation, said intermediate section having its inner diameter materially greater than the inner diameter of each end section and providing in connection with said end sections a chamber, said intermediate section having spaced slots lengthwise thereof providing for a draft of cooling air through said chamber, a smoke conducting member formed of a series of closely arranged tubular coils and oppositely extending tubular end terminal portions disposed axially with respect to and extending laterally from the end coils of said series of coils, said end terminal portions being arranged in said chamber and separably mounted in the opposed ends of said smoke passages, said series of coils being arranged in said chamber, a cooling medium container including a body and a pair of ends, said container being separably mounted in said chamber, the body of said container encompassing said coils, the ends of said container surrounding said end terminal portions in proximity to the inner ends of said end sections, said slots being arranged in the sides of said intermediate section, and said inner end section possessing an insulating characteristic.

4. In a smoker's appliance, a structure of stem-like contour including a chamber intermediate its ends and a pair of smoke passages arranged in inner endwise opposed relation opening into said chamber, a tubular smoke conducting member formed of a coiled part and a pair of oppositely disposed end terminal portions, said coiled part arranged in said chamber and said end terminal portions extending from said chamber in and opening into said passages, said structure being formed with means to provide for a draft of cooling air entering said chamber for contact with said coils and end portions, said means consisting of a series of slots extending lengthwise of said structure, opening into and substantially corresponding in length to the length of said chamber.

HAROLD L. UBER.