May 30, 1961 YAO-HUANG LI 2,986,146

SMOKER'S IMPLEMENT

Filed July 8, 1958

FIG. 1

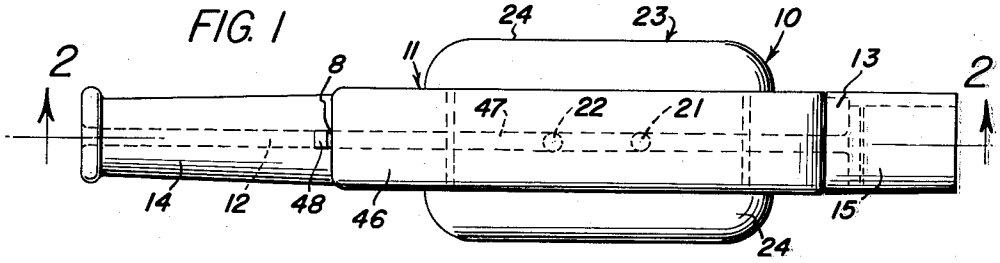


FIG. 2

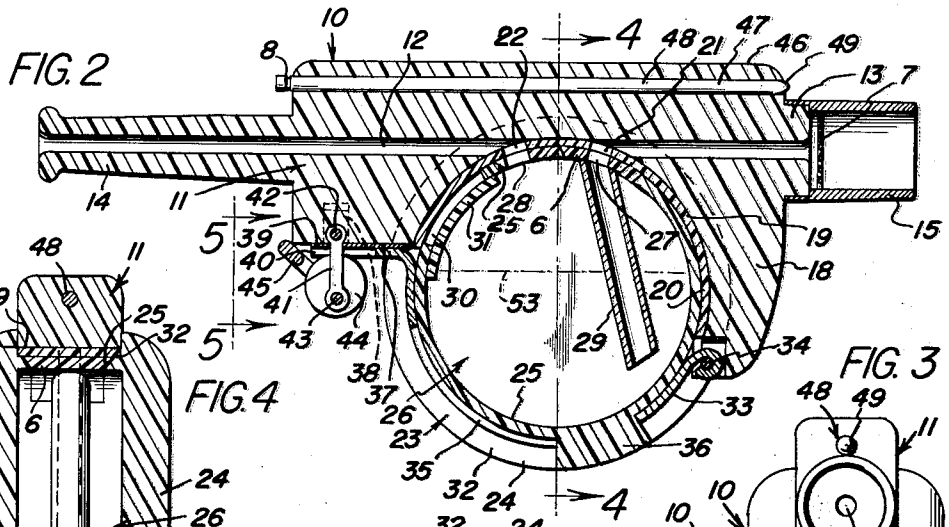


FIG. 4

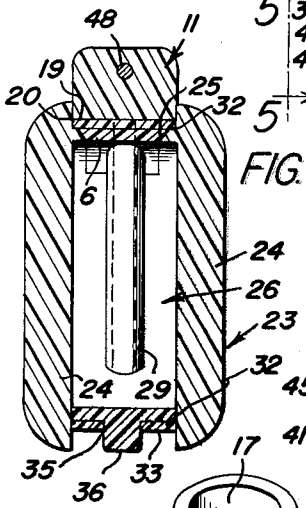
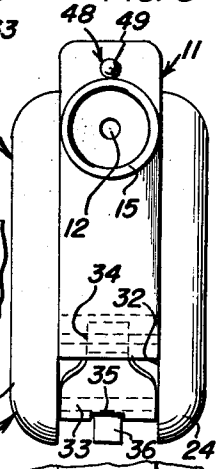


FIG. 3



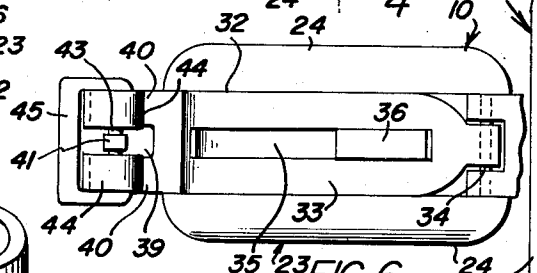


FIG. 6

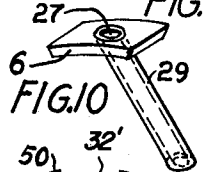


FIG. 10

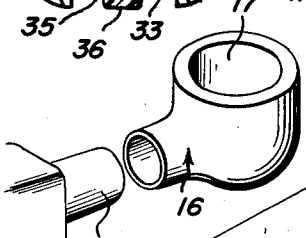


FIG. 7

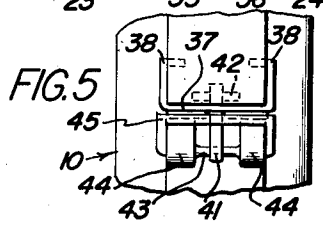


FIG. 5

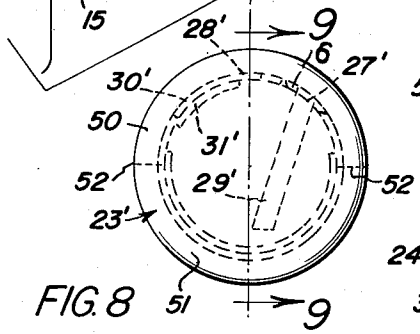


FIG. 8

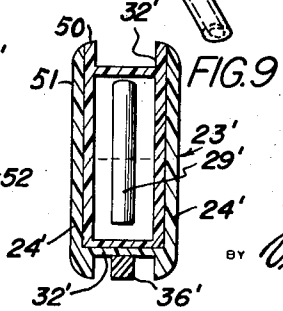


FIG. 9

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SMOKER'S IMPLEMENT

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3 Claims. (Cl. 131—184)

This invention relates to a smoker's device or implement.

The object of the invention is to provide a smoker's device which can be used for holding a cigar, cigarette, or pipe bowl whereby a smoker can use the device when smoking one of these members.

Another object of the invention is to provide a smoker's implement which includes a member that has a mouthpiece on one end, and wherein the other end of the member is adapted to have either a cigarette, or cigar, or pipe bowl releasably connected thereto, and wherein there is further provided a means for selectively causing the smoke to pass through a suitable chemical or other medium so that the smoke can be filtered or otherwise treated whereby the smoke which is sucked into the person's mouth will be highly pleasing and will be diminished of harmful ingredients.

A still further object of the invention is to provide a smoker's device which is extremely simple and inexpensive to manufacture.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawings, forming a part of this application, and in which like numerals are used to designate like parts throughout the same.

Figure 1 is a top plan view of the smoker's device, constructed according to the present invention.

Figure 2 is a sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a front elevational view of the smoker's device of the present invention.

Figure 4 is a sectional view taken on the line 4—4 of Figure 2.

Figure 5 is a fragmentary elevational view taken on the line 5—5 of Figure 2.

Figure 6 is a fragmentary bottom plan view of the device.

Figure 7 is a fragmentary perspective view showing the manner of attaching a pipe bowl to the device.

Figure 8 is a front elevational view illustrating the assembly of a modified casing.

Figure 9 is a sectional view taken on the line 9—9 of Figure 8.

Figure 10 is a fragmentary perspective view illustrating certain constructional details of the present invention.

Referring in detail to the drawings, the numeral 10 indicates the smoker's implement or device of the present invention which is shown to comprise a body member 11 that can be made of any suitable material such as plastic. The body member 11 is provided with a longitudinally extending bore 12. A shoulder 13 is arranged on one end of the body member 11, and a mouthpiece 14 is arranged on the other end of the body member 11. The shoulder 13 is adapted to have a support member 15 releasably connected thereto as shown in Figs. 1 and 2 for example, and the support member 15 can be used to provide a support for a cigarette, cigar or the like. Or, the support member 15 may have a pipe bowl 16 connected thereto

as shown in Fig. 7, and the pipe bowl 16 may have its chamber 17 filled with tobacco in the usual manner.

The body member 11 further includes a depending portion 18 which is provided with an arcuate recess 19, and the recess 19 communicates with the bore 12. The numeral 20 indicates an arcuate liner or ring which is positioned in the recess 19, and the liner 20 is provided with a pair of spaced apart apertures 21 and 22, Fig. 2.

There is further provided a rotary casing which is indicated generally by the numeral 23, Fig. 4, and the rotary casing 23 includes spaced parallel side walls 24 and a cylindrical wall member 25, the interior of the casing 23 being hollow as at 26 for a purpose to be later described. The wall member 25 of the casing 23 is provided with a pair of spaced apart ports 27 and 28 which are mounted for movement into and out of registry with the apertures 21 and 22 in the liner 20. A tube 29 extends inwardly from the wall member 25 and is secured thereto or formed integral therewith, and the tube 29 registers with the port 27. The wall member 25 is further provided with a cutaway section 30, and a baffle or plate 31 is spaced inwardly from the cutaway section 30, and the baffle 31 is secured in any suitable manner to the inner surface of the wall member 25.

The outer peripheral portion of the casing 23 is provided with an annular groove 32, and the liner 20 engages a portion of the groove 32. The numeral 33 indicates a locking member or strap which has one end hingedly connected to the depending portion 18 of the body member 11 at as 34. The strap 33 engaging the other portion of groove 32 is provided with a cutout 35, and a finger piece or knob 36 extends from the casing 23 and projects through the cutout 35. Thus, by manually moving the finger piece 36, the casing 23 can be rotated to the desired position when the locking device 44 is loosened.

There is further provided a means for locking the strap 33 in place whereby the casing 23 will be retained in place connected to the body member 11, and this locking means comprises a plate 37 which is mounted below the body member 11, and the plate 37 may be retained in place by fingers 38. An end portion of the strap 33 is cutaway or bifurcated as at 39 so as to define spaced apart legs 40, and the numeral 41 indicates a link which projects through the plate 37 and which is anchored to the body member 11 as at 42. A shaft or pin 43 is carried by the lower end of the link 41, and a pair of eccentric cams 44 are connected to the shaft 43, the cams 44 being mounted for movement into and out of locking engagement with the legs 40 of the strap 33. The numeral 45 indicates a manually operable lever or bracket which is connected to the cams 44, so that by manually moving the lever 45, the cams 44 can be moved into or out of locking or releasing position with respect to the strap 33, as shown in the drawings.

The body member 11 further includes an upper portion which is enlarged as at 46, and the enlargement 46 is provided with an opening 47, there being a pin or cleaning tool 48 releasably positioned in the opening 47. The pin 48 is provided with a grooved head and a pointed end 49 for facilitating the use of the pin 48 as for example when various surfaces and holes are being cleaned or the like.

Referring to Figures 8 and 9 of the drawings, there is illustrated a second type of casing which is indicated generally by the numeral 23', and the casing 23' independent of casing 23 in operation includes two bodies 50 and 51 which can be separated at the location indicated by the numeral 52. The body 50 functions as a cartridge, that is it is previously filled and sealed with a liquid or solid contents enabling it to be carried around separately by the smoker so that it can replace the contaminated one in the supporting frame 51. The assem-

bly and size of member 23' resembles member 23. The part 51 is provided with a finger piece 36' which is attached to its cylindrical wall.

From the foregoing, it is apparent that there has been provided a smoker's implement or device which is capable of use in various or several different manners. With the parts arranged as shown in Figs. 1 and 2 for example, it will be seen that a cigarette or cigar can be inserted in the support member 15, and with a suitable chemical or treating agent of a liquid or solid form in the interior 26 of the casing 23 it will be seen that with the mouthpiece 14 in the smoker's mouth, the smoke will follow or travel in the following path: With the parts arranged as shown in Fig. 2, it will be seen that when the smoker sucks in, smoke from the cigarette or cigar will pass through the bore 12 and then through the aperture 21 and then through the port 27 and then down through the tube 29 and into the chemical which is arranged in the chamber 26. This chemical may be of any desired type such as a type which will impart a pleasant flavor or odor to the smoke, or else it may be of a type which will filter or remove harmful ingredients such as tar, nicotine or the like from the smoke. The filtered or treated smoke will then pass up through the port 28 and out through the aperture 22, and this filtered or flavored smoke will then be drawn or sucked into the person's mouth through the bore 12. Thus, the person will be able to smoke with increased pleasure and safety or enjoyment.

As an alternative method of using the device, the user can manually loosen the strap 33 by turning part 45 counterclockwise Fig. 2, by moving the knob 36 clockwise to the limit of the cutout and by turning part 45 clockwise again. This will cause the casing 23 to rotate so that the ports 28 and 27 will move out of registry with the apertures 22 and 21, and wherein the cutaway portion 30 can move into registry or engagement with the apertures 22 and 21. Thus, with the cutaway section 30 registering with the apertures 22 and 21, it will be seen that with a cigarette or cigar in the support member 15, and with the cigar or cigarette lit, when the person sucks in the usual manner on the mouthpiece 14, the smoke will pass through the outer end portion of the bore 12 and then pass through the cutaway section 30 and then continue on through the bore 12 and into the smoker's mouth. Thus, in this last named position of the casing 23 the smoke will not be subjected to any filtering action by the material in the chamber 26 so that when desired the smoker can draw the smoke into his mouth without having the smoke altered or treated in any manner. Thus, the smoker can enjoy the first half of his cigarette in its fresh and genuine flavor.

Furthermore, there is provided a means for permitting the casing 23 to be removed from the device, as for example when the casing 23 is to be replaced or refilled with a chemical or other medium. To remove the casing 23, it is only necessary to pivot the lever 45 in a counterclockwise direction, Fig. 2, and this will move the cams 44 from the position shown in Fig. 2 to an unlocked position so that the legs 40 of the strap 33 can be moved out of engagement with the cams 44 and plate 37. Then, due to the provision of the hinge 34, it will be seen that the strap 33 can be moved sufficiently apart whereby the casings 23 or 23' can be removed from the recess 19. A new or fresh cartridge 50 for casing 23' can then be inserted in place or else the old casing 23 can be refilled by removing the tube 29, since the tube 29 and wall portion 6 are of one piece or integral formation, as for example as shown in Figure 10. Then, when the casing 23 has been refilled, it is positioned as shown in Figs. 2 and 4 or Figs. 3 and 6 for example, and the strap 33 is again arranged so that it engages the groove 32 in the casing 23 or 23' and then the cams 44 are moved to a locked position as shown in Fig. 2 whereby the casing 23 or 23' will be locked in place. Nevertheless, with the casing 23 or 23' locked loosely in place, it is still capable of being rotated by means of the finger piece or knob 36 since the strap 33 and liner 20 engage the annular groove 32 in the outer periphery of the casing. The cutout 35 in the strap 33 provides sufficient clearance whereby the finger piece 36 can move back and forth in the cutout 35 so that the casing 23 can be positioned in different locations as previously described. When lever 45 is turned clockwise to the limit, Fig. 2, casing 23 or 23' is tightly locked.

The parts can be made of any suitable material and in different shapes or sizes. The material in the chamber 26 may be a liquid, solid particles or fiber. In Fig. 2 the broken line indicated by the numeral 53 may indicate the level of contents for liquid in the chamber 26.

The device of the present invention is adapted to be used for smoking cigarettes or tobacco, depending upon the type of holder attached to it. The device can be arranged so that the smoke can pass directly or indirectly to the smoker's mouth. It is generally recognized that the butt end of a cigarette is itself a filter of the burning end so that the smoke resulting from the last portion of a cigarette accumulates obnoxious elements so that such smoke is always stronger and hotter which causes an unpleasant feeling to the smoker. However, with the present invention, the smoker can smoke the first hlaf of the cigarette directly, and then by moving the finger piece 36 to the position shown in Fig. 2, the last half can be smoked indirectly through a filtering medium in the chamber 26 so as to eliminate this unpleasantness. Generally, a cigarette holder is either for direct smoking or straight filtering, but the present invention can be switched on and off as desired.

Different types of materials may be arranged in the chamber 26 such as liquids, crystals, fibers or particles for filtering smoke, and in addition the material in the chamber 26 may be used for blending or flavoring or enhancing the taste as desired by the user of the present invention. Also, chemicals can be used for giving a pleasing fragrance to the smoke and the casings can be sold or distributed separately so that the particular smoker may purchase a desired casing which can then be mounted in the present invention. With the finger piece 36 in the position of Figure 2, disagreeable tobacco juice will be trapped so that it cannot reach the mouth of the smoker as happens with an ordinary tobacco pipe. In addition the finger piece 36 can be moved to the extreme left position, Figure 2, so that the ports 28 and 27 can be blocked off whereby the device can be carried in a person's pocket without danger of leakage.

The liner 20 can be made of a soft material such as a soft plastic material, and when the section 30 registers with the openings 22 and 21, the smoke can be sucked directly into the smoker's mouth without entering the chamber 26. The groove 32 functions as a guide so that the casing 23 or 23' can be readily rotated. The tubing 29 is positioned so that when the smoke passes through the tubing 29, the smoke will be effectively treated with the material in the chamber 26. The casing 23 may be self-contained or it may be provided with an auxiliary support as shown in Figures 8 and 9, and the chamber 26 may be of a capacity to filter a great number of cigarettes or cigars without the necessity of replacing the solution or chemical. An air-tight connection is provided between the casing and body member 11 whereby smoke can efficiently pass through its proper path. The pin 48 which may be metal, can be used to pick away the burnt end or cigarete butt that may be in the member 15 and it can also be used for cleaning tar out of the various openings. The member 16 may be made of a suitable material such as wood and may be provided with or without a clay lining and the various parts of the device are adapted to be made of a material which is not affected by heat and the device is light in weight and of a rugged construction.

A small groove 8 is provided in the pin 48 so that it can be engaged by a person's fingernail in order to facilitate removal of the pin.

The ash screen 7 is positioned in the member 15.

The tubing 29 of the casing 23 can be removed for cleaning or refilling, and the tube 29 may be connected to a wall portion 6 or formed integral therewith, as for example as shown in Figure 10 wherein it will be noted that the wall portion 6 and tube 29 are of one piece construction so that the device of Figure 10 can be removed and replaced as a unit. The portion 6 is of a substantially rectangular formation and can be removed together with the tubing 29 so as to leave an opening large enough for the above purposes. The sides of the opening and those of the cut portion 6 are tapered so as to fit tightly together, Figs. 2 and 4. To fill liquid into the casing 23, there may be provided an extra disc-like box made of soft plastic material so that the liquid can be sucked in the disc-like box by pressing together its sides and releasing with its bill in the liquid. Then, the casing can be filled by pressing the sides of the disc box or squeezable container with the bill or nozzle inserted in the casing. In this manner of operation, the casing 23 can also be cleaned when the liquid used is water or alcohol. The squeezable container above described may have a soft plastic stopper to fit tightly in the opening of the bill or nozzle, so that if desired the smoker can fill the squeezable container and carry it around for refilling whenever required or desired.

The casing 23' has two main bodies, the cylindrical chamber box 50' and its support frame 51', Figs. 8 and 9. When they are fited together the casing 23' has an outside shape and size the same as casing 23 so as to fit in the body member 11 and liner 20. The cylindrical chamber box has a pair of spaced apart ports 27' and 28', the tubing 29', and the cutaway section 30' with the baffle 31' spaced inward similar to casing 23, except that the tubing 29' is not removable. The entire body 50 is intended to be used once and then discarded as a cartridge. It is previously filled and sealed with a liquid or solid contents and can be carried around in a smoker's pocket to replace the one in use already contaminated by excessive collection of nicotine and tar. The supporting frame 51 has two walls 24', half of which is thinner than those of 24. It has half of a cylindrical wall with a groove 32' and a knob 36'. It contains or supports the cylindrical chamber box 50 to form the entire casing 23'. Whatever size and shape 50 lacks, 51 makes them up to conform with that of casing 23.

Minor changes in shape, size and rearrangement of details coming within the field of invention claimed may be resorted to in actual practice, if desired.

I claim:

1. In a smoker's implement, a body member provided with a longitudinally extending bore, a shoulder on one end of said body member, a support member connected to said shoulder, a mouthpiece on the other end of said body member, said body member further including a depending portion provided with an arcuate recess, said recess communicating with said bore, an arcuate liner positioned in said recess and having a pair of spaced apart apertures therein, a rotary casing including spaced parallel side walls, a cylindrical outer wall member and a hollow interior comprising a closed chamber, there being a pair of spaced apart ports in said outer wall member which are mounted for movement into and out of registry with the apertures in said liner, a tube extending inwardly from said outer wall member and registering with one of said ports, said outer wall member being provided with a cutaway section, a baffle spaced inwardly from said cutaway section and secured to said outer wall member, there being an annular groove in the outer peripheral portion of the casing, said liner engaging a portion of said groove, a strap having one end hingedly connected to said body member, a portion of said strap engaging said groove, there benig a cutout in said strap, a finger piece extending outwardly from said casing and projecting through said cutout, an end of said strap being bifurcated, a plate mounted below said body member, a link projecting through said plate and having one end connected to said body member, a shaft carried by said link, a pair of cams eccentrically connected to said shaft, said cams being mounted for movement into and out of locking engagement with the bifurcated portion of said strap, and a lever connected to said cams for moving said cams.

2. In a smoker's implement, a body member provided with a longitudinally extending bore, a shoulder on one end of said body member, a support member connected to said shoulder, a mouthpiece on the other end of said body member, said body member further including a depending portion provided with an arcuate recess, said recess communicating with said bore, an arcuate liner positioned in said recess and having a pair of spaced apart apertures therein, a rotary casing including a cylindrical chamber box and a supporting frame, said chamber box having a pair of spaced apart ports, a tubing, and a cutaway section and an inwardly spaced baffle, the supporting frame including a pair of outer walls and said supporting frame being provided with a groove, said liner engaging a portion of said groove, a strap having one end hingedly connected to said body member, a portion of said strap engaging said groove, there being a cutout in said strap, a finger piece extending outwardly from said casing and projecting through said cutout, an end of said strap being bifurcated, a plate mounted below said body member, a link projecting through said plate and having one end connected to said body member, a shaft carried by said link, a pair of cams eccentrically connected to said shaft, said cams being mounted for movement into and out of locking engagement with the bifurcated portion of said strap, and a lever connected to said cams for moving said cams.

3. The structure as defined in claim 1, and further including an enlargement on the upper portion of said body member, and a pin releasably supported by said enlargement.

References Cited in the file of this patent

UNITED STATES PATENTS

38,883	Chinnock	June 16, 1863
55,321	Masson	June 5, 1866
1,692,971	Alland	Nov. 27, 1928
2,815,030	Wenger	Dec. 3, 1957

FOREIGN PATENTS

191,126	Germany	Nov. 14, 1907