July 12, 1960 A. MARGULEAS 2,944,554

SMOKING ARTICLES

Filed Jan. 21, 1959

Fig. 1.

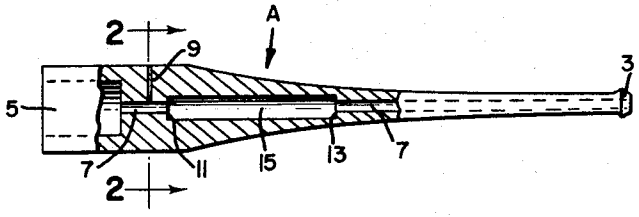


Fig. 2.

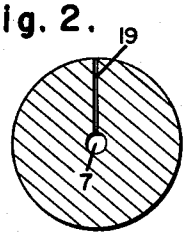


Fig. 3.

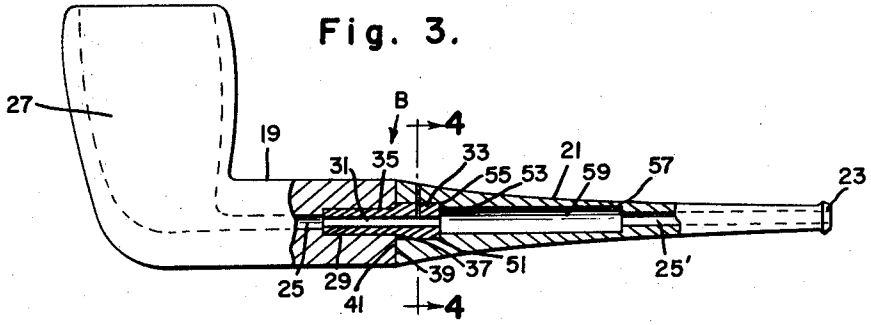


Fig. 4.

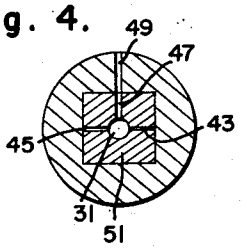


Fig. 5.

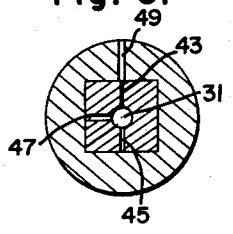
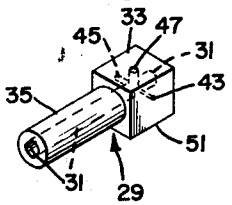


Fig. 6.



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United States Patent Office 2,944,554 Patented July 12, 1960

2,944,554

SMOKING ARTICLES

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Filed Jan. 21, 1959, Ser. No. 788,132

4 Claims. (Cl. 131—198)

This invention relates to improvements in smoking articles such as smoking pipes and holders for cigars and cigarettes.

It has been found that some of the various forms of smoke filtration presently available are inefficient and incapable of preventing deleterious tars in the form of vapors and toxic fumes from penetrating the mouth and thence the lungs of the smoker.

Further, smokers have always been bothered by the sharp bite or burn of hot smoke as it enters the mouth particularly when the tobacco in the cigar, cigarette or pipe has been nearly consumed.

Accordingly, the present invention has as a principal object the elimination of the heretofore objectional bite or burn which object results in a cool smoke which is more enjoyable to the smoker. Additionally, the present invention has as a principal object the reduction of tars and other similar substances which otherwise would reach the mouth of the user.

It has been found that by bringing a minute stream of outside air into the smoking article to the smallest possible diameter of smoke flow in a direct line to the mouthpiece, a thorough mixing of air and smoke is obtained thus reducing the heat of the smoke and condensing the vapors carrying tars and other foreign materials. Further, it has been found that by removing this condensate from the line of smoke flow to the smoker's mouth by means of a trap adapted to receive such condensate, a smoke is obtained which is free from deleterious foreign matter, and which is more enjoyable to the smoker in that the flavor of the tobacco is better preserved.

The objects of the invention are accomplished by providing at least one minute air vent in pipes or holders to bring a narrow stream of outside air into the smoke duct of the article to intersect the smoke path at its smallest cross sectional area of flow through the stem in a direct line to the mouthpiece, and by further providing a condensate trap in the bottom of the mouthpiece between the vent and the bit to remove the condensate and foreign matter which results from the cooling process from the smoke stream.

Additionally, it is an object of the invention to provide an article for smoking in accordance with the above invention which also has a means for selectively varying the quantity or rate of air flow to the smoke duct through the vent so that the smoker can regulate the mixing process according to his individual taste.

A still further object is to provide a smoking article according to the above invention having a means by which it may be converted to conventional use.

These latter objects are accomplished by providing a smoking article having a minute outer air vent formed through the top of the mouthpiece normal to the smoke duct adapted to be separately, releasably engaged with three inner vents having bore diameters of various sizes, the largest of which substantially corresponds in dimension with the bore diameter of the outer vent.

The inner vents are carried by a coupling member which removably joins the stem and bowl sections of the article together at their inner ends, and is rotatable with respect to the bowl section as hereafter explained.

The coupling also includes a solid surface surface adjacent the sides carrying the inner vents, which separately, releasably engages the inner aperture of the outer vent to close communication therethrough.

Other objects and advantages will become apparent upon reference to the accompanying specification and drawings in which characters of reference represent corresponding parts in the several views.

Fig. 1 is a longitudinal side view of a cigar or cigarette holder in partial cross section showing a simple form of the invention.

Fig. 2 is an enlarged transverse sectional view taken along line 2—2 of Fig. 1.

Fig. 3 is a longitudinal side view of a pipe in partial cross section showing a second embodiment of the invention.

Fig. 4 is an enlarged transverse sectional view showing one position of the coupling, taken along line 4—4 of Fig. 3.

Fig. 5 is an enlarged transverse sectional view showing another position of the coupling taken along line 4—4 of Fig. 3.

Fig. 6 is a perspective view of the coupling shown in section in Fig. 4.

Figs. 1 and 2 illustrate a holder for cigarettes or cigars generally indicated at A, having a mouthpiece 3 at one end and at the other end a socket or bowl 5 shown in dotted lines, adapted to receive the butt end of a cigar or cigarette.

As indicated in section and by the dotted lines, the holder A is bored through the center thereof to form a smoke duct 7 communicating the bowl 5 with the mouthpiece 3 of the holder. Disposed vertically in the holder and at right angles to the smoke duct 7 is a minute air vent 9 opening communication between the atmosphere and the smoke duct 7 at its smallest cross section of smoke flow in a direct line to the mouthpiece.

At point 11 the bore diameter of the smoke duct abruptly increases and extends longitudinally to point 13 where it sharply decreases to form a trap 15 below the line of smoke flow to collect the foreign matter and condensate filtered from the smoke.

Thus, when the smoke is drawn through the smoke duct 7 of the holder A, air is drawn simultaneously through the air vent 9 and turbulently contacts the smoke at its point of narrowest flow through the holder thoroughly mixing with and cooling the smoke. As the smoke is cooled the moisture content of the smoke is condensed and the condensate carrying foreign material filters into the condensate trap 15 where it is retained throughout the smoking operation.

Referring now to Figures 3, 4, 5 and 6, there is illustrated a second embodiment of the invention and B showing a pipe, having a shank 19 and a mouthpiece 21 having a bit 23 as shown in Fig. 3. Smoke duct portions 25 and 25' are formed through both the shank and mouthpiece communicating the bowl 27 with the mouthpiece 23 by reason of an insert coupling 29 which joins the shank 19 and mouthpiece 21. The coupling has a smoke duct 31 therethrough axially aligned with the ducts 25 and 25'. Duct 31 through the coupling represents the narrowest cross section of bore through the pipe.

The coupling includes a first plug 33, rectangular in cross section, and a second plug 35, circular in cross section, which abuts one side of the first plug and projects outwardly therefrom.

The first or rectangular plug 33 of the coupling 29

is snugly, removably nested in a socket in the connecting end of the mouthpiece 21. The circular plug 35 snugly, removably and rotatably nests in a socket in the connecting end of the shank 19. The outer end of trap 59 forms a shoulder 55 which positions the inner end of the rectangular plug 33. The opposite end 37 of plug 33 and outer end 39 of mouthpiece 21 are in alignment and abut the shoulder 41 of the shank 19. Thus, when the pipe B is assembled, the coupling 29 is completely hidden from view.

As is better seen in Figs. 4 and 5, the rectangular plug of the coupling is provided with three minute radial vents 43, 45, and 47 with bore diameters of different dimensions, all of which have inner apertures intersecting the smoke duct 31 at the same location. These inner vents are formed through adjacent sides of the rectangular plug 33 normal to the smoke duct 31, and separately, releasably engage a minute vertical outer air vent 49 which has a bore diameter substantially as large as that of the largest inner vent 47. The inner vents carried by the releasable rectangular plug permit the flow of air from the atmosphere to the smoke duct 31 selectively in three different volumes and rates of flow. Thus, the smoker can vary the intake of air according to his taste.

The rectangular plug 33 also includes a solid side 51, opposite the side of the plug containing the middle inner vent 47, which separately, releasably engages the inner aperture of the outer air vent 49 to close communication between the atmosphere and the smoke duct. As is obvious, by eliminating the venting operation, the pipe is converted for conventional use.

Adjacent the inner end of the rectangular plug 33, the diameter of the smoke duct increases at 53 where it is slightly smaller in cross section than the exterior of the rectangular plug to form shoulders 55 for abutting the inner end of the plug. This increased bore diameter extends to point 57, where it abruptly decreases forming a trap 59 in the bottom of the mouthpiece 21 below the line of smoke flow for collecting foreign matter and condensate from the smoke.

When any inner vent is engaged with the vertical outer vent 49 in the stem, the operation of the pipe is the same as that of the holder in Fig. 1. Air is drawn from the atmosphere to the smoke duct 31 through the vent 49 cooling the smoke at its smallest cross sectional area of flow in a direct line to the bit 23. The smoke vapors are condensed and the condensate then flows into the trap 59 between the vent 49 and the bit 23.

In this embodiment, when the user desires a different volume of air to mix with the smoke, or to change the rate of air flow, the rectangular plug 33 is removed from its socket, and the vent selected, raised to the top of the plug by rotating the circular plug 35 in its socket. By plugging the coupling 29 back into the stem, communication is again established between the atmosphere and the smoke duct 31 through the vent chosen. A like procedure is followed to convert the pipe to conventional

smoking by raising the solid side 51 of the plug 33 to the top.

Also, other variations of air intake can be made by turning the mouthpiece 21 180° with respect to the shank 19 when the pipe is in assembled arrangement. With the mouthpiece 21 so inverted, the flow of air through the vent 49 is upward from the underside of the stem and different mixing results are obtained.

As is apparent, whether the pipe is used in the conventional manner, or the venting operation is from the underside thereof, the condensate trap 59 is still available for the depositing of foreign matter which may form in the pipe.

Although I have described the invention in rather particular detail for purposes of clarity of understanding through reference to illustration and example, it is understood that various changes and modifications may be practiced within the spirit of the invention and the scope of the appended claims.

What is claimed is:

1. A device for smoking pipes and holders for cigars and cigarettes having a shank having a tobacco receiving member at the outer end thereof, a mouthpiece and a smoke conveying duct adapted to convey smoke from the receiver to the mouthpiece, the improvement which comprises a connector between said shank and said mouthpiece having two portions wherein one portion is polygonal in section and fits into a similar recess in the outer end of said mouthpiece, the other portion is circular in section and mates with a duct in the shank, wherein said connector has radially directed passages through all but one of the walls of the polygonal portion adapted to be aligned with an aperture in the outer end portion of the mouthpiece whereby the quantity of air admitted to the smoke stream may be adjusted from zero to a maximum by removal and replacement of said connector.

2. The device of claim 1 wherein the smoke conveying duct has a sectional area which is not constant and the quantity of air admitted to the smoke stream is admitted to the smallest cross-sectional area of smoke flow in a direct line to said mouthpiece through said duct.

3. The device of claim 1 wherein means is provided in said shank between said radially directed passages and said mouthpiece to trap foreign matter and condensate.

4. The device of claim 2 wherein means is provided in said shank between said radially directed passages and said mouthpiece to trap foreign matter and condensate.

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