June 16, 1953 A. B. MODINE 2,642,069

SMOKING PIPE

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Fig. 1.

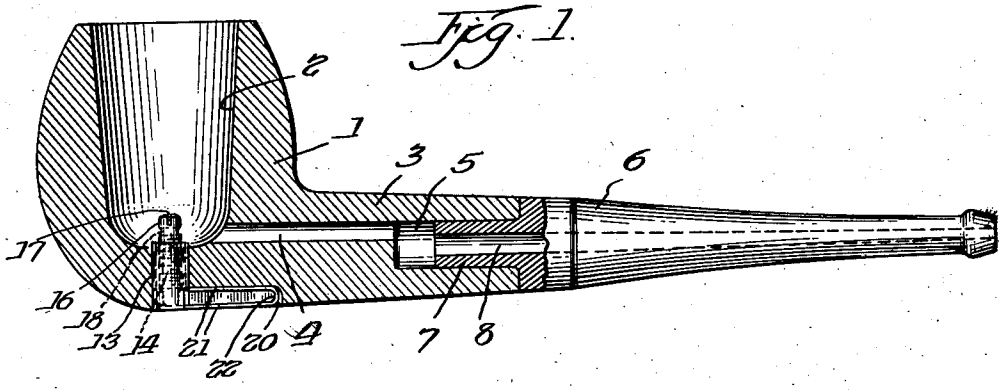


Fig. 2.

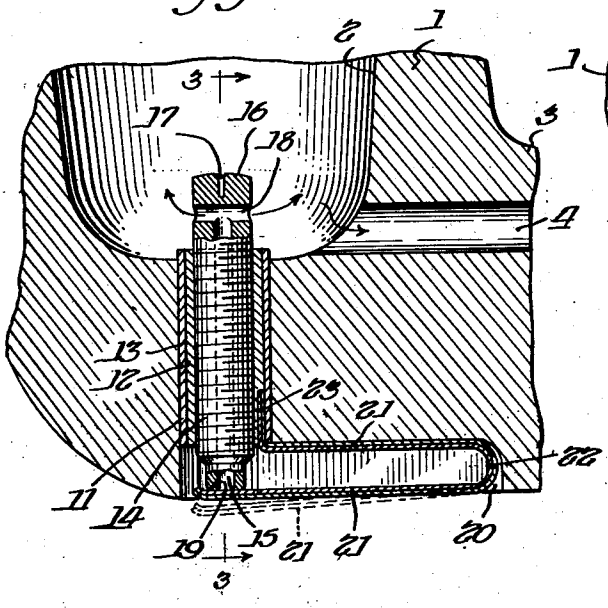
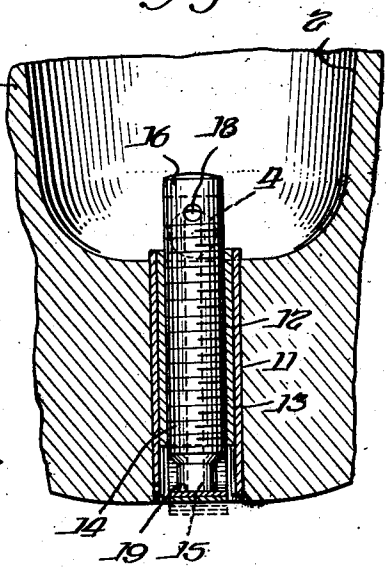


Fig. 3.



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SMOKING PIPE

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6 Claims. (Cl. 131—198)

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My invention relates to smoking pipes and is particularly designed to provide a novel construction and arrangement where a cool, dry smoke may be obtained.

Among its objects is the production of a smoking pipe which is simple, inexpensive and particularly efficient, not only in cooling the smoke, but also in aerating and drying the tobacco at the bottom of the bowl, thereby preventing the accumulation of soggy, moist tobacco at the interior of the pipe bowl in the path of the smoke drawn from the bowl to the stem and bit.

With the conventional smoking pipe it is not unknown for the smoker to at times suck up a slug of a wet, foul tasting and undoubtedly unhealthy mass. With my improved aerated pipe, the contents of the pipe bowl at the bottom is substantially dry at all times, so that the tobacco may be more or less completely burned.

A further object is the production of an adjustable thermostatic valve means for controlling the admission of air to the interior of the bowl and which will not in any way mar or detract from the appearance of the pipe, the same retaining the appearance of a conventional smoking pipe.

Many other objects and advantages of the construction herein shown and described will be obvious to those skilled in the art from the disclosures herein given.

To this end my invention consists in the novel construction, arrangement and combination of parts herein shown and described and more particularly pointed out in the appended claims.

In the drawings, wherein like reference characters indicate like or corresponding parts:

Fig. 1 is a sectional view of a smoking pipe constructed as herein described with my improved thermostatically controlled aerator;

Fig. 2 is a sectional view on a larger scale illustrating the air passages of the adjustable tubular member, partly in section, and also the automatic control of the admission of air to the air duct; and

Fig. 3 is a cross sectional view taken substantially on line 3—3 of Fig. 2.

Referring to the drawings, 1 represents a conventional pipe bowl of any desired size, shape and material provided with a recess or chamber 2, into which the tobacco is placed, the bowl being provided with the conventional stem 3, through which extends a smoke duct 4—5. The stem may be provided with a bit or mouth piece 6, of suitable material which may be secured to the stem in any suitable manner, the same as shown being provided with an end 7 arranged to frictionally engage the stem at the outer end, and which is provided with a smoke duct 8. It is immaterial whether the bit is of the push-in type as shown or a threaded or like type, these types being more or less conventional.

The pipe is provided with a bore or opening 11, extending from the interior of the bowl adjacent

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the bottom to the exterior of the bowl, and within this bore is arranged a sleeve 12, which in the preferred construction shown extends through an outer sleeve 13 closely fitting the bore 11, the two sleeves being secured together and frictionally or otherwise maintained in place in the bore 11. The inner sleeve 12 is internally threaded, and through the same passes a tubular externally threaded screw member 14 having an air duct 15 through the same which is open at the lower end. The upper or inner end of the duct 15 in the screw member 14 communicates with a transverse duct 18 at the end, the end or top being closed as indicated at 16. The screw end 16 is provided with a slot 17 or its equivalent in which a suitable tool may be inserted to conveniently adjust the screw in the sleeve to control the operation of the device and regulate the amount of air admitted. As clearly shown in Fig. 2, the transverse duct 18 through which the air entering by way of the duct 15 may be discharged into the pipe bowl chamber is adjacent the bottom of the tobacco chamber 2.

The lower end of the screw 14 is constructed to provide a valve seat 19 arranged to cooperate with a movable thermostatic valve member 21, as shown, of the bi-metal type which as shown is bent or looped back upon itself as shown at 22, with the end 23 secured between the sleeves 12 and 13, and screw 14 being in heat conducting relationship. The free end 21 is movable and arranged to cooperate with the valve seat 19 at the outer end of the screw 14 so that when the pipe is lighted, heat in due time will be transmitted from the interior of the bowl through the screw 14 and sleeves 12 and 13 and the body of the pipe to the thermostatic valve member 21. The construction and adjustment is such that when the parts are cool the thermostatic member normally will close the port or duct 15 at the valve seat 19 and prevent the admission of air to the bowl interior, but as soon as sufficient heat reaches the bi-metal valve the same will open, the extent of opening depending upon the heat reaching the same. However, the tubular screw 14 with the duct 15 being adjustable, the time and extent of opening of the duct and the admission of the cool air into the interior of the bowl may be controlled or varied as desired by inserting a screw driver in the slot 17 and adjusting the tubular screw 14. If preferred, the screw head may be constructed to fit a socket wrench, instead of slotted for a screw driver. As will be noted the bowl is preferably provided with a recess 20 in which the thermostatic member 21 may be seated so as to be protected against injury and will be substantially concealed.

It will be noted that the cool air entering the bowl enters through the bottom of the bowl adjacent the smoke duct in the stem and drys or aerates the tobacco as well as cools the passing smoke, thereby preventing the accumulation of wet tobacco or so called "slugs" at the entrance

end of the stem duct 4 extending from the bowl to the bit or mouth piece 6. By the drying action of the passing air, the pipe bowl does not become soaked up and remains clean and sweet at all times and may be maintained cleaner. It has been found that upon completing the smoking of a pipe full of tobacco, the ashes may be knocked out leaving the bowl entirely empty and free of any sludge since no sludge or wet tobacco has accumulated in the bowl. The screw 14 may be readily adjusted or removed for cleaning and a wire or pin pushed through the duct 15 or passage 18. It has been found that this is rarely if ever needed even when the pipe has been in use for a prolonged period.

Having thus described my invention, it is obvious that various immaterial modifications may be made in the same without departing from the spirit of my invention; hence, I do not wish to be understood as limiting myself to the exact form, construction, arrangement and combination of parts herein shown and described or uses mentioned.

What I claim as new and desire to secure by Letters Patent is:

1. In a smoking pipe having a bowl, said bowl provided with an air intake duct adjacent the bottom, an internally threaded sleeve arranged in said duct, an externally threaded tubular screw open at its outer end threadedly engaging said sleeve at the interior thereof and provided with a valve seat at its outer end, the inner end of said tubular screw being closed and provided with a transversely extending duct through the same adjacent its closed end connecting with the interior of the tubular screw, and a thermostatically operated valve member mounted on the bowl at the exterior thereof and substantially flush therewith for cooperation with said valve seat at the outer end of the tubular screw, said closed end extending into said bowl to provide means for effecting rotation and thus adjustment, from within said bowl of said tubular screw relative to said sleeve and said valve member.

2. In a smoking pipe having a bowl for containing tobacco, said bowl provided with an air intake duct adjacent the bottom, an internally threaded sleeve arranged in said duct, an externally threaded tubular screw communicating with the interior of the bowl threadedly engaging said sleeve at the interior thereof, said tubular screw being open at its outer end and provided with a valve seat thereat, and a thermostatically operated valve member mounted on the sleeve at the exterior of said bowl for cooperation with said valve seat at the outer open end of the tubular screw and operative to open or close the valve seat as the thermostatically operated valve member becomes heated or cooled.

3. In a smoking pipe of the kind described having a tobacco containing bowl and in combination, an air admission duct at the bottom of the bowl, an adjustable tubular member mounted in said air duct and provided with a valve seat at its outer end, a valve member comprising a bimetallic thermostatic member having one end operatively connected to the bowl independently of said adjustable tubular member and with the other end looped back and engageable with the outer end of said adjustable member to constitute a valve cooperating with the outer end of said tubular member and operative to control the admission of air to the interior of the bowl.

4. In a pipe of the kind described provided with an opening through the bottom of the bowl, an internally threaded metal sleeve arranged in said opening and secured therein, a metal tubular member screw threaded into said metal sleeve and adjustable therein, a bi-metallic strip having one end secured to said sleeve and thence bent laterally and under and back upon itself, with the free end disposed in proximity to the outer open end of said tubular member and in engagement therewith to seat upon and close the open end when cold, said bowl being recessed at the exterior to substantially contain the bi-metal strip, said bi-metal strip constituting a temperature controlled valve member for regulating the admission of air to the bowl interior.

5. A device of the kind described comprising a pipe bowl having a chamber for containing tobacco and with a tubular stem communicating with the interior of the bowl adjacent the bottom of said chamber, said bowl provided with a duct therethrough and with a tubular screw mounted in said duct and movable inwardly or outwardly by engaging and turning of the screw, the inner end of the latter being exposed at the bowl interior and by means of which such adjusting action may be effected, and thermostatically actuated means having a portion thereof secured to the bowl and located between the screw and a portion of the bowl and held thereby in such position, another portion of said means adapted to engage and seal one end of the screw for controlling the admission of air through said tubular screw when the pipe is smoked, the admission of air through the screw to the interior of the bowl being increased or decreased depending upon the temperature of the bowl and screw member.

6. In a smoking pipe of the kind described, a bowl formed with a chamber and having a tubular stem extending therefrom and communicating with said chamber in the bowl, the latter having a recess formed at the bottom of the bowl, a tubular, adjustable member mounted at the bottom of the bowl with an end disposed within the bowl, said last mentioned end constituting means for effecting adjustment of said member from within the bowl, and the other end of said member projecting into the recess, a thermostatic member having a portion thereof secured to the bowl and located between the tubular adjustable member and a portion of the bowl and held thereby in such position, another portion of said means adapted to engage and seal one end of the tubular adjustable member, and said thermostatic member concealed within the recess and substantially flush with the bowl so that the thermostatic member is protected against injury.

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