Aug. 19, 1941. C. S. CARLBERG 2,252,880

SMOKING PIPE

Filed May 22, 1940

Fig. 1.

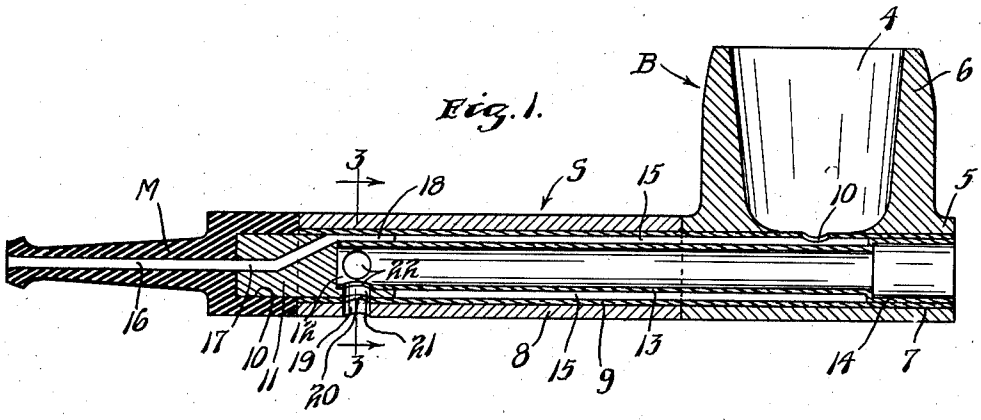


Fig. 2.

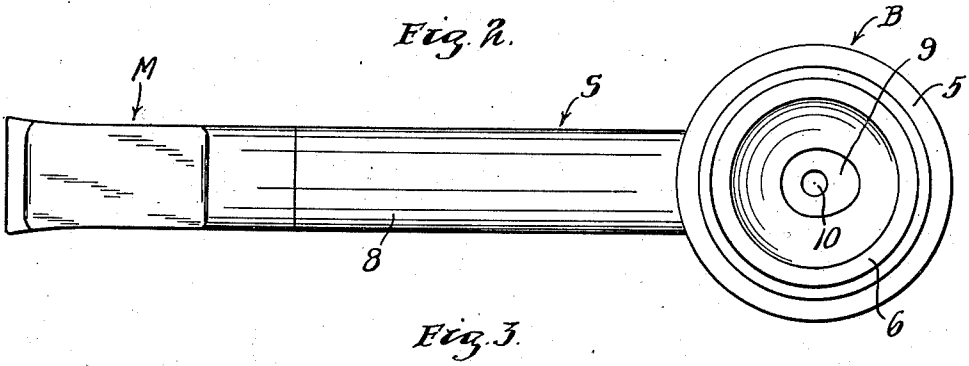


Fig. 3.

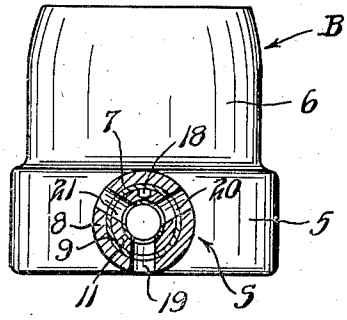
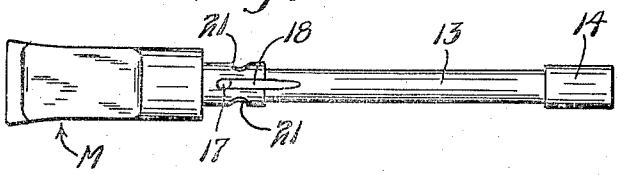


Fig. 4.



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SMOKING PIPE

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5 Claims. (Cl. 131—195)

This invention relates to smoking pipes and particularly to such pipes having therein ventilating and moisture diverting means.

An ordinary smoking pipe may become considerably heated through use thereof and also is difficult to clean and permits passage of moisture into the mouth of the user.

An object of my invention is to provide a smoking pipe including in its structure means producing a ventilating and cooling effect and wherein such means is substantially concealed within the structure of the pipe.

Another object of the invention is to provide such a pipe constructed to cool smoke drawn therethrough.

Another object is to provide such a pipe having therein moisture diverting and cooling means.

Still another object is to provide such a pipe which may be particularly quickly and easily cleaned.

Yet another object of the invention is to provide such a pipe of construction enabling economy in the material and manufacturing operations expended in construction thereof.

A further object is to provide such a pipe of light, compact, simple, rugged and inexpensive construction.

These and other objects and advantages of the invention will more fully appear from the following description made in connection with the accompanying drawing, wherein like reference characters refer to the same parts throughout the views, and, in which:

Fig. 1 is a longitudinal cross sectional view of an embodiment of my invention drawn to a somewhat enlarged scale;

Fig. 2 is a top view;

Fig. 3 is a vertical sectional view taken along the line 3—3 of Fig. 1, as indicated by the arrows; and

Fig. 4 is a top view of the mouthpiece of my pipe and the parts which are permanently attached thereto.

Referring to the drawing the embodiment of my invention shown therein includes a bowl member B, a stem S, and a mouthpiece M disposed in the same general manner as the corresponding parts of the usual type of smoking pipe.

The bowl B may be constructed of any suitable material and is so formed as to have an interior space 4 wherein tobacco may be placed. The bowl B is of circular cross sectional shape throughout and it may be made by a turning operation on a lathe. The lower portion 5 of the bowl B is relatively thick vertically and preferably is made to a slightly larger diameter than the upper part 6 of the bowl B. The lower portion 5 of the bowl B is provided with a diametric aperture 7 which is open at both ends thereof and which in its medial portion opens into the lowermost part of the interior space 4 of the bowl.

The stem S includes an outer shell 8 which is tubular in form and may be of any suitable material. The right-hand end of the shell 8 is in abutment with a point on the periphery of the lower portion 5 of the bowl B whereat one end of the diametrical aperture 7 opens. The interior diameter of the shell 8 is the same as the diameter of the diametric aperture 7 in the lower portion 5 of the bowl B. The right-hand end of the shell 8 is shaped to closely fit the contour of the periphery of the lower portion 5 of the bowl B, and the axis of the shell 8 is common with the axis of the diametric aperture 7.

To firmly join together the bowl B and the shell 8 of the stem S and also to form a lining for the shell 8 and the diametrically apertured portion of the bowl B I provide a tube 9 extending throughout the length of the shell 8 and the diametrical aperture, as shown, and preferably formed of relatively strong material such as, for example, metal. The upper side of the tubular lining 9 is provided with an aperture 10 at the axis of the bowl B for establishing communication between the interior space 4 of the bowl B and the interior space of the tubular lining 9.

The mouthpiece M may be of the same general external shape as the mouthpiece of the usual type of smoking pipe, and may be made of any suitable material. The forward end of the mouthpiece M is provided with a forwardly opening recess 10 in which the rear end of a plug 11 is secured by suitable means such as cement or the like. The plug 11 extends a moderate distance forwardly of the forward end of the mouthpiece M and its forwardly projecting portion has a diameter suitable for a frictional fit in the tubular lining 9 of the stem S. The plug 11 in its forward portion is normally disposed within the rear portion of the liner 9, as shown. The forward end of the plug 11 is provided with a forwardly opening cylindrical recess 12 of substantially less diameter than the internal diameter of the tubular liner 9. A tubular element 13 having an external diameter less than the internal diameter of the liner 9 and suitable for a snug fit in the recess 12 of the plug 11 is inserted at its rearward end in the recess 12. The rear end of the tubular element 13 is secured to the plug 11 by suitable means such as solder or the like.

The tubular element 13 extends forwardly to a point beyond the aperture 10 of the liner 9. Another tubular element 14 is telescopically associated with the forwardmost end of the tubular element 13 in portions thereof forwardly of the aperture 10. The tubular element 14 is secured to the tubular element 13 by suitable means such as solder and extends forwardly to the forward end of the diametrical aperture 7 and tubular liner 9.

The space 15 between the external periphery of the tubular element 13 and the internal periphery of the tubular lining 9 constitutes a longitudinal passage in the stem S communicating at its forward end with the interior space 4 of the bowl B through the aperture 10.

The mouthpiece M is provided with the usual longitudinal aperture or passage 16 and the plug 11 is provided with a passage 17 communicating with the passage 16 and extending axially a short distance forwardly and then inclined upwardly to a point at the upper surface of the plug 11. From the point from which the passage 17 opens at the upper surface of the plug 11 a groove 18 in the upper portion of the plug 11 extends forwardly to the forward end of the plug 11 to communicate with the rear end of the passage 15. Thus the pipe is provided with a smoke passage including the aperture 10, the passage 15, the groove 18, the passage 17, and the passage 16.

In the overlapping portion of the stem shell 8 the tubular liner 9, the plug 11, and the tubular element 13, apertures 19, 20, 21 and 22 all in registration with each other are formed respectively in the stem shell 8, the tubular liner 9, the plug 11, and the tubular element 13. Although one such series of registering apertures 19, 20, 21 and 22 would accomplish my purpose I prefer to have in my pipe more than one such series of apertures and have shown three such series of apertures in the drawings, as best seen in Fig. 3. These apertures are so located as to not intersect or communicate with the groove 18, and form openings or ports from the interior of the tubular element 13 to the atmosphere. It should be apparent that the interior of the tubular element 13 constitutes a longitudinal passage in the stem S open to the atmosphere at both ends. This passage formed by the tubular member 14, the tubular element 13 and the apertures 19, 20, 21 and 22 functions as a ventilating passage which is closely associated with the smoke passage 15 in regard to transfer of heat from the smoke passage 15 to the interior passage of the tubular element 13. The tubular element 13, therefore, constitutes a heat exchanger for cooling of both the pipe bowl B and stem S and also cooling of the smoke traveling from the bowl B into the mouthpiece M. Since a smoker in using a pipe rarely ever holds the pipe so that it is exactly horizontal the above mentioned ventilating passage will practically always be inclined sufficiently so that stack action will occur therein whereby there will be a flow of air therethrough by convection.

The mouthpiece M, plug 18, tubular element 13 and tubular member 14 are all secured to each other and may be withdrawn rearwardly as a unit from the tubular liner 9 when it is desired to clean the interior parts of the pipe, and the plug 11 and tubular member 14 are of such external diameter as to normally be frictionally held in the tubular liner 9. The removable parts mentioned above and constituting a unit are shown in Fig. 4, and it should be apparent that the exterior of the tubular element 13 may be very quickly and easily cleaned by simply wiping off the same. The interior of the tubular element 13 and the apertures 19, 20, 21 and 22 are subjected to only passage of air therethrough rather than smoke and moisture, and, therefore, should remain relatively clean and should require cleaning only at long intervals if at all.

The space 15 between the tubular element 13 and the tubular liner 9 in addition to constituting a smoke passage also functions as a moisture trap for gathering moisture and preventing the same from passing through the groove 18, passage 17 and passage 16 to the mouth of the user of the pipe. With the parts shown in Fig. 4 removed from the remainder of the pipe, it should be seen that the interior of the tubular liner 9 may be quickly and easily cleaned by simply passing a cloth or other suitable means through the interior space of the tubular liner 9.

I have constructed a pipe in accordance with my invention and have put the same to practical use and found that smoke passing from the pipe into the user's mouth is much cooler than with an ordinary smoking pipe and is practically entirely free of any moisture content.

It is apparent that I have invented a novel, compact, light, rugged and inexpensive smoking pipe which is self-cooled, which delivers cool and moisture free smoke, and which may be particularly quickly and easily cleaned.

It will, of course, be understood that various changes may be made in the form, details, arrangement and proportions of the various parts without departing from the scope of my invention.

What is claimed is:

1. A smoking pipe comprising, a bowl member equipped with a stem having a longitudinally apertured mouthpiece associated with its free end, said stem and the base of said bowl member having a continuous relatively large longitudinal bore extending through the front of said bowl member, a tubular element disposed in said bore and having a smaller diameter than the same so as to divide the same into a pair of concentric passages, and structures formed on the respective ends of said tublar element with diameters closely fitting in said bore, said structures being arranged and so apertured as to place respective ends of one of said passages in communication with the respective interior spaces of said member and said mouthpiece, and said structures and said member and stem being so arranged and apertured as to place both ends of the remaining one of said passages in communication with the atmosphere at the front of said bowl member and at the rear of said stem respectively.

2. The combination defined in claim 6 and the one of said structures adjacent said mouthpiece being attached thereto.

3. A smoking pipe comprising, a bowl member equipped with a stem having a longitudinally apertured mouthpiece associated with its free end, said stem having therein a relatively large longitudinal bore extending therethrough and being extended through said member to open into the atmosphere at the side thereof opposite said stem, said member having therein an aperture communicating between its interior space and said bore, and a tubular element carried by said mouthpiece and extending throughout the length of said bore, the extreme end portions of

said element being in closely fitting relation with said bore and the medial portion being of reduced cross-sectional dimension to provide a passage between itself and the interior periphery of said stem extending from said aperture to a point adjacent said mouthpiece, the end of the interior of said element at the outer side of said member being open to the atmosphere and the other end being closed, said other end having a port formed therein communicating between said passage and the interior space of said mouthpiece, and said tubular element and said stem having respective registering apertures formed therein communicating between the interior of said tubular element and the atmosphere.

4. A smoking pipe comprising, a bowl having a relatively thick bottom wall containing a diametrical aperture, a pipestem having therein a longitudinal bore of the same diameter as said aperture, said pipestem being placed in radial and abutting relation with said bowl with said aperture and said bore axially aligned, a tubular member extending through the length of said bore and said aperture in snugly fitting relation therewith to firmly connect said bowl to said stem, a longitudinally apertured mouthpiece carried by the free end of said stem, said bowl and said tubular member having registering apertures to inter-connect the interior spaces thereof, and a tubular element carried by said mouthpiece and extending throughout the length of said tubular member, the extreme end portions of said element being in closely fitting relation with said member and the medial portion being of reduced diameter to provide a passage between itself and said member extending from said apertures to a point adjacent said mouthpiece, the end of the interior of said element at the outer side of said bowl being open to the atmosphere and the other end being closed, said other end having a port formed therein communicating between said passage and the interior space of said mouthpiece, and said tubular element, said tubular element and said stem having respective registering apertures therein adjacent said mouthpiece communicating between the interior of said tubular element and the atmosphere.

5. A smoking pipe comprising, a bowl member equipped with a longitudinally apertured mouthpiece associated with the free end of said stem, said bowl member and stem having a continuous passage extending below the tobacco-receiving cavity of said bowl member and extending longitudinally of said stem from the front end of said bowl to the outer end of said stem, a longitudinally disposed member in said passage dividing the same into a smoke duct having communication with the bottom of the tobacco-holding cavity and an air duct having communication with the atmosphere at the forward end of said bowl, a closure member between the forward end of said longitudinally disposed member and said passage for preventing entrance of air into said smoke duct, a closure member associated with said stem for closing the rear end of said smoke duct, means associated with said stem providing a port communicating with the interior of said stem and with the outer end of said smoke duct, and means forming a passage connected with the outer end of said air duct and communicating with the atmosphere adjacent the rear of said stem.

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