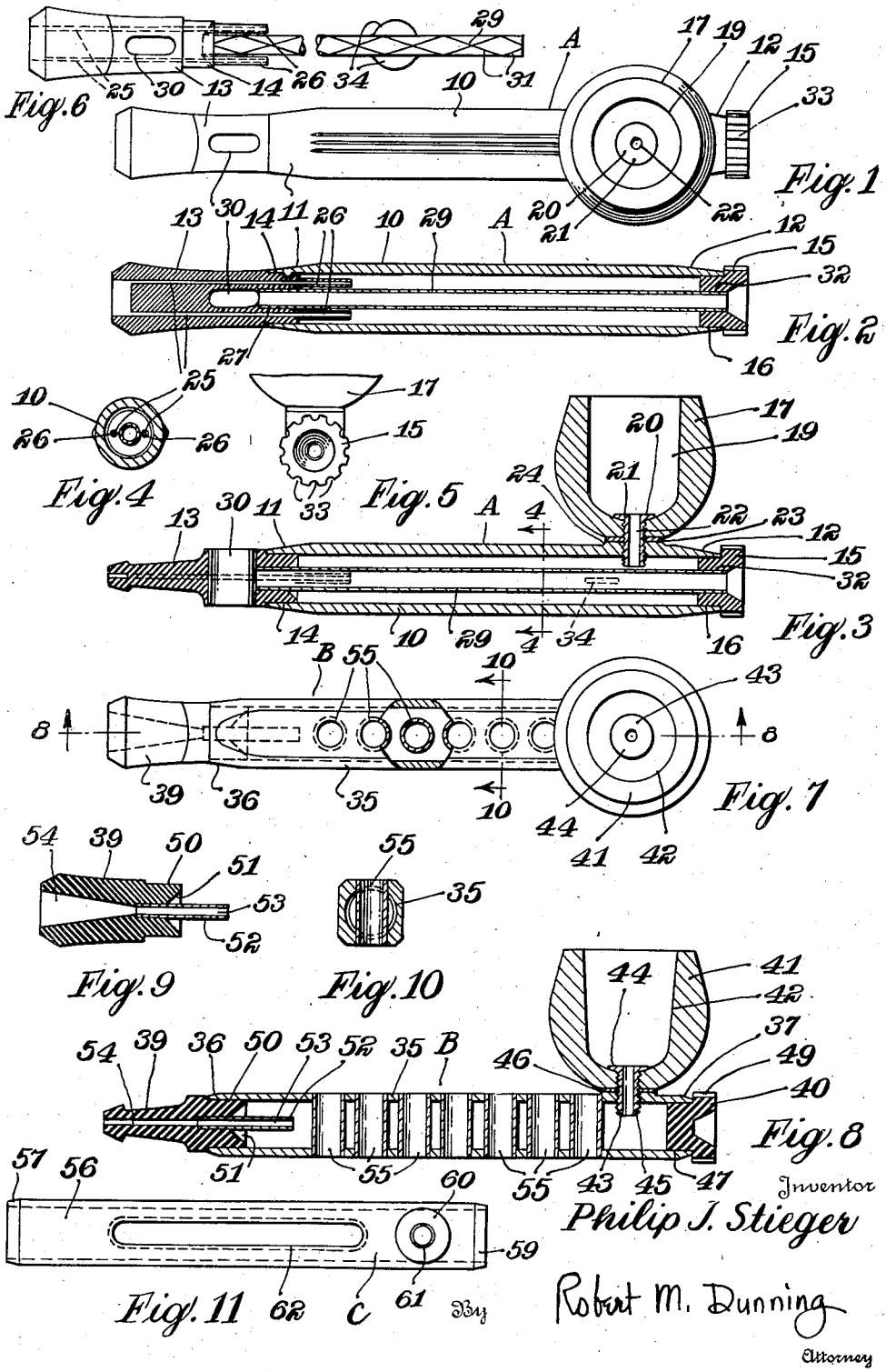
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SMOKING PIPE

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Inventor
Philip J. Stieger
By Robert M. Dunning
Attorney

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SMOKING PIPE

Philip J. Stieger, St. Paul, Minn.

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5 Claims. (Cl. 131—195)

My invention relates to an improvement in smoking pipe, wherein it is desired to provide a cool, sweet, clean, dry smoke.

It is the object of the present invention to provide a pipe having an unusual amount of uninsulated surface to provide efficient heat transfer. This I accomplish by providing one or a series of passages or flues through the smoke chamber of the pipe, through which air may flow. These flues are constructed of metal or other material of good heat conductivity. The smoke, in contacting the surfaces of these flues will be cooled, thereby providing a cool, dry smoke.

It is an object of the present invention to provide a pipe having a smoke chamber through which smoke must pass, and having one or more of a series of air flues passing through the smoke chamber, which flues act to condense moisture from the smoke. The relatively cool surfaces of the smoke chamber and of the air flues tends to condense any moisture contained in the smoke, and to thereby provide a drier smoke than is ordinarily possible.

A feature of the present invention lies in the provision of a pipe having a bit end at one end thereof designed to be held between the teeth, and being concave or inwardly beveled at its other end. An integral or separate tube or tubes projects outwardly from this other end of the bit, but the concave shape of the end is provided to space the free end of the tube a considerable distance from the said other end of the bit. In this way, I increase the amount of travel of any condensed moisture upon the walls of the pipes encircling the bit, before the moisture can enter the end of the projecting tube or tubes.

A further feature of the present invention lies in the provision of a pipe having an elongated smoke chamber which is hollow and which is open at both ends so as to permit the entire length of the smoke chamber to be internally cleaned when it is so desired. A plug is provided for normally closing one end of the smoke chamber, while the bit normally closes the other end thereof.

A further feature of the present invention lies in the provision of a flue or flues, which extend entirely through the smoke chamber. By providing such a flue or flues, a passage of air is provided which may continuously flow through the flue or flues to cool the smoke. Because of the heat of the bowl of the pipe when the same is in use, the body of the pipe will be heated to some extent and this heating will be somewhat uneven. As a result, a continuous flow of air will circulate through the flue or flues, particularly during operation of the pipe.

A further object of the present invention lies in the provision of inside flues extending through the smoke chamber. These flues act to absorb part of the heat which might normally be transferred to the outer barrel. Thus with my construction the pipe is externally cooler, and more comfortable to handle.

These and other objects and novel features of my invention will be more clearly and fully set forth in the following specification and claims.

In the drawing forming a part of my specification:

Figure 1 is a top plan view of my pipe showing the construction thereof.

Figure 2 is a sectional view of the pipe illustrated in Figure 1, the section being taken on a horizontal plane beneath the bowl of the pipe.

Figure 3 is a vertical section through the pipe showing the construction thereof.

Figure 4 is a cross-sectional view through the pipe, the position of the section being indicated by the line 4—4 of Figure 3.

Figure 5 is an end view of the pipe, a portion of the bowl being broken away.

Figure 6 is a top plan view of the bit and flue attached thereto.

Figure 7 is a top plan view of a modified form of construction of pipe, a portion of the barrel being broken away to disclose the construction thereof.

Figure 8 is a vertical section through the pipe illustrated in Figure 7.

Figure 9 is a transverse section through the bit of the pipe illustrated in Figure 7.

Figure 10 is a cross-sectional view through the pipe illustrated in Figures 7 and 8.

Figure 11 is a top plan view of a modified form of pipe barrel construction.

The pipe A, illustrated in Figures 1 through 6 of the drawing, includes an elongated tubular barrel or sleeve 10 preferably provided with tapering ends 11 and 12. A bit 13 is provided with a circular portion 14 of proper diameter to frictionally fit into one end of the barrel 10. A plug 15 is provided with a circular shoulder 16 of a size to fit within the other end of the sleeve or barrel 10. The smoke chamber of the pipe is provided within the sleeve or barrel 10 between the bit 13 and the plug 15.

A bowl 17 is designed to communicate with the interior of the barrel 10. The bowl 17 includes a bowl recess 19 at the bottom of which

I provide a hollow tubular bolt 20. The bolt 20 is provided with a head 21 and a hollow tubular shank 22 which is externally threaded to fit through the sleeve or barrel 10. A gasket 23 may, if desired, be provided between the base of the bowl 17 and a boss 24 which may be provided on the outer surface of the barrel 10 and against which the bowl may engage. The tubular shank 22 forms a passage for smoke and moisture from the bowl 17 to the interior of the sleeve or barrel 10. The bit 13 is constructed with a pair of spaced smoke passages 25 extending longitudinally therethrough. These smoke passages 25 terminate in a pair of forwardly projecting tubes 26. These spaced tubes 26 are of small diameter and may be formed integrally with the bit 13, or may comprise tubular elements, such as short metal tubes which are inserted into an end of the bit 13. The tubes 26 are preferably spaced from the inner walls of the sleeve or barrel 10 so that moisture can not be conducted from these inner walls through the smoke passages 25 in the tubes 26.

Between the tubes 26, I provide a central recess 27 in the bit 13 to accommodate the end of a tubular core element 29. This core element 29 is firmly attached to the bit 13 and may be integral therewith, or may be pressed into the same. The tubular core 29 may be formed of the same material as the bit or may be formed of other material, such as metal, which is a good conductor of heat.

A passage 30 extends vertically through the bit 13 and is open at both ends thereof. This opening or passage 30 is in communication with the passage through the tubular core 29. In other words, air may pass through the opening 30 and through the tubular core 29 to be exhausted out of the pipe at the other end of the same. Oppositely arranged spiral grooves 31 may be provided on the outer surface of the core 29 if it is so desired to tend to direct the smoke in a swirling path so as to increase the travel thereof.

It should be noted that the end of the shoulder 14 of the bit 13 is concave in shape so as to increase moisture capacity of the barrel. This concave shape is best illustrated in Figures 2, 3, and 6 of the drawing.

The plug 15 has a central opening 32 therethrough which will accommodate the end of the tubular core 29. The opening 32 fits about the tube with a friction fit which will permit ready passage of the tube through the same, but which will prevent air from entering the smoke chamber. The outer surface of the plug 15 is preferably knurled or grooved at 33 so as to simplify the task of removing the plug.

It should be noted that the bowl 17 of the pipe is removable so that the passage 22 therefrom may be readily cleaned. It should also be noted that the tubular shank 22 forming the passage projects into the barrel 10 so that liquid or condensation will not run into the passage from the walls of the barrel 10. In order to provide additional support for the tubular core 29 which is in centered position with respect to the barrel 10, I provide two or more spacing ears 34 which engage the walls of the barrel and support the tube. When assembled the air may flow through the passage 30 and through the tubular core 29 and also through the opening 32 in the cap 15. The air may flow in either direction depending upon the position of the pipe and circulation is insured by the slight warming of the tube by the smoke from the pipe bowl. The air passing through the tubular core 29 is heated slightly during its passage.

In Figures 7 through 10 of the drawing I disclose a pipe B, which is somewhat similar in principle to the pipe A previously described. The pipe B includes an elongated tubular barrel 35 which may, if desired, have a rectangular outer shape with a circular passage therethrough. The barrel 35 is preferably inwardly tapered at its ends 36 and 37, as best illustrated in Figure 8 of the drawing. One end of the tubular barrel 35 is normally closed by a bit 39, while the other end thereof is usually closed by a plug 40.

The bowl 41 is provided with a bowl cavity 42 at the base of which is provided a tubular bolt 43. The bolt 43 is provided with a head 44 and a hollow shank 45 which is externally threaded to fit through the bowl and through the boss 46 which may be provided on the surface of the barrel 35. The free end of the shank 45 is preferably at some distance from the inner wall of the barrel 35 so as to prevent moisture or condensation from flowing into the tubular shank 45 from the barrel walls.

The plug cap 40 is preferably provided with a shoulder 47 which frictionally engages within the end of the barrel 35. The plug cap 40 is in appearance similar to the plug 15 previously described and is preferably provided externally with knurling or grooves 40, making the plug easier to grip and turn with the fingers.

The bit 39 is provided with a circular shoulder 50 of a size to frictionally engage within the end of the tubular barrel 35. The shoulder portion 50 of the bit is concave or inwardly beveled at 51 and a tubular projection 52 extends forwardly from the bit and accommodates the smoke passage 53. The tube 52 may be formed integrally with the bit 39 or may be inserted thereinto, as in the present drawing. A passage 54 through the bit communicates with the passage 53 through the tubular element 52 so as to permit the smoke to pass freely from one end of the bit to the other. The concave shape of the end of the bit increases the distance of flow of condensation in order to enter the smoke passage 53 through the tube 52.

A series of spaced vertical tubular flues 55 extend through the barrel 35 from top to bottom thereof. These flues 55 may be integral with the walls of the tubular barrel 35, or may be pressed into the walls with a tight fit to prevent leakage around the flues. The tubes 55 permit air to constantly flow therethrough and the outside of these tubes permit efficient heat transfer from the heated smoke and gases within the barrel 35 to the air flow through the tubes 55. Because of the fact that the tubes or flues are heated during the use of the pipe, a constant flow of air therethrough is insured.

The operation of the pipe B is believed clearly understood from the foregoing description. The smoke from the bowl 41 passes through the tubular shank 45 of the bolt 43 and through the barrel 35, being withdrawn through the tubular passage 53 in the tubular element 52 and through the smoke passage 54 in the bit 39. During its movement through the pipe the smoke is in constant contact with the relatively cooler flues 55, thereby acting to remove part of the heat contained in the smoke. A cool, dry smoke is thereby provided.

In Figure 11 of the drawing I illustrate a pipe barrel which is indicated in general by the letter C. The barrel C is designed to take the place of

the barrel 35 which has just been described. The barrel C comprises a tubular body 56 which may be tapered at its ends 57 and 59. A boss 60 on the pipe has a threaded opening 61 therethrough to accommodate the threaded hollow shank of a bolt such as 43, used for holding a bowl such as 41 in place. A plug such as 40 is to be used with the barrel C and a bit 39 is also to be used with this barrel.

In virtually all respects the barrel C is identical to the barrel 35, with the exception that in place of the numerous spaced flues 55 of the pipe B, I provide a single elongated flue 62 extending through the barrel body 56. This flue 62 is sealed with respect to the walls of the barrel 56 and allows a free flow of air therethrough during operation of the pipe. This type of flue is somewhat desirable in that it may be more easily cleaned than the barrel 35 including spaced flues 55. Flues which extend horizontally rather than vertically might in some instances be utilized.

In accordance with the patent statutes, I have described the principles of construction and operation of my pipe, and while I have endeavored to set forth the best embodiments thereof, I desire to have it understood that obvious changes may be made within the scope of the following claims without departing from the spirit of my invention.

I claim:

1. A smoking pipe comprising an elongated tubular barrel, a bowl secured thereto and having a passage therefrom communicating with the interior of said barrel, a bit secured to one end of said barrel normally closing the same, a tube projecting from said bit and extending longitudinally through said barrel, a plug encircling the free end of said tube and closing the other end of said barrel, a passage transversely through said bit in communication with the end of said tube, and a pair of oppositely disposed smoke passages extending through said bit in spaced relation to said tube and said passage, and tubular projections on the end of said bit in communication with said smoke passages extending into said barrel.

2. A smoking pipe comprising an elongated tubular barrel, a bowl secured thereto and having a passage therefrom communicating with the interior of said barrel, a plug normally closing one end of said barrel, a bit normally closing the other end of said barrel, a tube extending longitudinally of said barrel, said tube extending through said plug and embedded into said bit, a transverse passage through said bit in communication with the end of said tube, a pair of smoke passages oppositely disposed on either side of said transverse passage and in spaced relation to said passage and said tube, said smoke passage extending longitudinally through said bit, and tubular projections on said bit in communication with said smoke passages extending into said barrel in spaced relation with the walls of said barrel and in spaced relation with said tube.

3. A smoking pipe comprising an elongated tubular barrel, a bowl secured thereto and having a passage therefrom communicating with the interior of said barrel, a plug normally closing one end of said tubular barrel, a bit normally closing the other end of said barrel, a tubular member extending longitudinally of said barrel and extending into said plug, an axial passage in said plug in communication with said tubular member, a longitudinal passage in said bit in communication with the other end of said tubular member, a transverse passage spaced from the ends of said bit extending therethrough in communication with said longitudinal passage, said transverse passage, longitudinal passage, tubular member, and passage in said plug forming an air conduit out of communication with the remainder of the interior of said pipe, a pair of oppositely disposed smoke passages extending longitudinally through said bit in spaced relation to said first named longitudinal passage and said transverse passage, said smoke passages extending on a straight line through said bit and into the interior of said barrel.

4. A smoking pipe comprising an elongated tubular barrel, a bowl secured thereto and having a passage therefrom communicating with the interior of said barrel, a plug normally closing one end of said barrel, a bit normally closing the other end of said barrel, an elongated tubular member within said barrel, an opening in said plug to receive one end of said tubular member, a longitudinal aperture in said bit in communication with the other end of said tubular element, a transverse passage through said bit in communication with said longitudinal aperture, a concave inner end on said bit, a pair of hollow tubular elements projecting into said barrel from said concave end of said bit, said tubular elements arranged in spaced relation to said tubular member and the walls of said barrel, and smoke passages extending longitudinally through said barrel in communication with said tubular elements.

5. A smoking pipe comprising an elongated tubular barrel, a bowl secured thereto and having a passage therefrom into communication with the interior of said barrel, a plug normally closing one end of said barrel, a bit normally closing the other end of said barrel, a hollow tubular element connecting said plug and said bit, a passage through said plug communicating with the interior of said tubular member, a transverse passage through said bit communicaitng with the other end of said tubular member, longitudinal smoke passage means through said bit into the interior of said barrel and spaced from said transverse passage and said tubular member, said tubular member being of substantially smaller diameter than the interior of said barrel and supported in spaced relation with respect thereto, and spiral grooves on the exterior surface of said tubular member.

PHILIP J. STIEGER.