

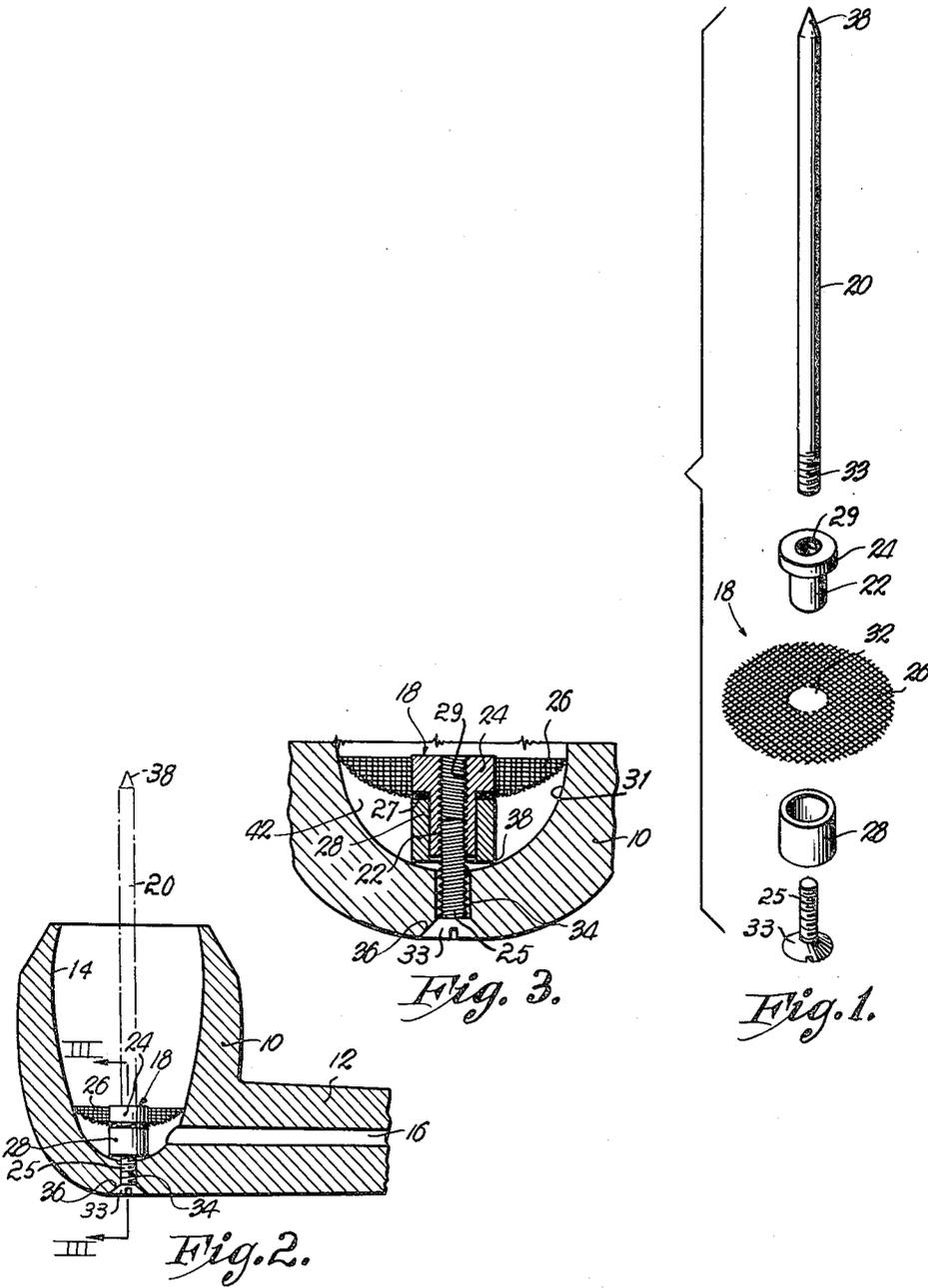
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FILTER ATTACHMENT FOR SMOKING PIPES

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**FILTER ATTACHMENT FOR SMOKING PIPES**

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1 Claim. (Cl. 131—206)

This invention relates to smoking pipes, and particularly to filters used in such pipes for improving the quality of the smoke, and thereby adding to the enjoyment of the smoker.

The most important object of this invention is to provide a resilient filter which is inserted in the lower portion of the bowl of the pipe, and held therein by its inherent resiliency until the user desires to remove the filter for cleaning or replacement.

Another important object includes the way in which the flexible character of the filter permits wedging thereof into a portion of the pipe bowl of relatively smaller diameter than the filter itself, so that the latter conforms to the configuration of the bowl and remains in place until removed.

A further object of this invention is the provision of a filter in the bowl of a pipe for the purpose of filtering out slugs of tobacco, and of preventing clogging and air stoppage in the stem of the pipe.

A still further object of my invention is the provision of a filter insert for smoking pipes having a manually manipulable element forming a part thereof and usable for installing and removing the foraminous filter insert.

Other objects include the ease with which the transverse bowl filter hereinafter described is installed, removed, cleaned and reinstalled.

In the drawing:

Fig. 1 is an exploded perspective view of the filtering unit, per se, and the installation rod therefor;

Fig. 2 is a cross-sectional view of the bowl and stem of a smoking pipe and showing the installed filtering unit; and

Fig. 3 is an enlarged, fragmentary, transverse cross-sectional view, taken on line III—III of Fig. 2, and looking in the direction of the arrows.

In smoking pipes of the kind illustrated in the accompanying drawing, the filters, if used at all, are usually located in the stem, where action is limited to the reduction of nicotine content and the filtering out of solids. Moist tobacco gathers in the bottom of the bowl, which tends to clog up the stem as well as to add to the moisture content of the smoke. Furthermore, the presence of this moist tobacco in the bottom of the bowl prevents the formation of a uniform cake on the smoking surface below a certain level of the bowl, as is well known among pipe smokers. With the presence of this condition, it is obvious that a percentage of each pipeload of tobacco is wasted.

The invention disclosed herein eliminates both excessive moisture in the bowl and unnecessary clogging of the stem, and thus insures more satisfactory service from smoking pipes in general.

In the drawing, there is illustrated a pipe having a bowl 10 and a stem 12. The inner surface of the bowl 10 is indicated by the numeral 14, and the smoke passage in the stem 12 by the numeral 16.

In Fig. 1, the component parts of a filtering insert 18 are shown to be an internally threaded supporting ele-

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ment or nut 22 having a peripheral flange 24, a perforated or foraminous filtering disc 26, a collar 28, and a screw 25. An installation and removal rod 20 is also preferably provided.

The non-flammable disc 26 is provided with a central opening 32 of the same diameter as the outside diameter of nut 22. Likewise, the collar 28 has an inside diameter substantially equal to the outside diameter of nut 22. The screw 25 engages the internal threaded bore 29 of nut 22. In assembly of the insert 18, the disc 26 and the collar 28 are fitted on the nut 22, with the collar 28 holding the disc 26 in engagement with a shoulder 27 of the flange 24. The screw 25 passes through the bowl 10 as hereinafter explained and is threaded into the nut 22. The rod 20 is threaded at one end, as at 33, for engagement with the internal threads of nut 22.

The pipe smoker uses the rod 20 to wedge the insert 18 into the bowl 10, as shown in Fig. 2. Since the diameter of the disc 26 is greater than the diameter of the surface 14 of bowl 10 in the lower arcuate portion 31 thereof, the disc 26 assumes a dish shape configuration, as is shown in Figs. 2 and 3, with the periphery of the disc 26 in engagement with the surface 14, above the passage 16. Due to the flexing of the disc 26, the insert 18 is held firmly in edge contact with the portion 31 of surface 14. The rod 20 makes it possible to adjust the insert 18 until the axis of the rod 20 is in alignment with the axis of the bowl 10. Then the rod 20 is removed, and the pipe is ready for use with the insert 18 in place.

It is to be noted that the length of the collar 28 is sufficient to maintain the disc 26 spaced above the passage 16.

The screw 25 positively maintains the insert 18 in place, and prevents accidental displacement by the various instruments which a pipe smoker uses to condition the bowl of his pipe. The bowl 10 is provided with an access hole 34, on the axis of the bowl, enlarged as at 36 to accommodate the head 33 of the elongated screw 25. In installation, the collar 28 is dropped into the bowl 10 over hole 34. The rod 20 is threaded into nut 22, which, in turn, is placed in opening 32 of disc 26. The disc 26 is then inserted into bowl 10, the nut 22 fitted into collar 28, and the elongated screw 25 threaded into the nut 22, through the hole 34, until the filter is in the desired position, with the collar engaging the bottom of the surface 14, as at 38. Then rod 20 is removed, and the pipe is ready for use with the filtering insert 18 in place.

The rod 20 is pointed at the opposite end 38 from threaded end 33. The pointed end 38 of the rod 20 is used to dislodge the filtering insert 18 for cleaning or replacement thereof.

After the insert 18 is in place in the bowl 10, there is a void 42 presented in the lower portion of the bowl 10, into which the passage 16 extends. Since tobacco never enters the void 42, there is no chance for solids to enter the passage 16. With the disc 26 above the passage 16, all tobacco placed in the bowl 10 burns and an even cake is formed on the entire surface 14 above disc 26.

While only the preferred embodiment has been shown, this invention is not to be limited to the details described, but covers all variations and modifications falling within the spirit of the invention and the scope of the appended claim.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

In a smoking pipe, a bowl having an open-top, tobacco-receiving cavity therein, said bowl having an internally concavely arcuate, lower portion defining a concavely arcuate bottom for the cavity, said lower portion of the bowl being provided with a hole therethrough communicating with the bottom of the cavity; a support element having a pair of integral, axially aligned, cylindrical por-

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tions of different diameters, there being a shoulder on the one portion of larger diameter facing the other portion of smaller diameter, said element having an elongated, axial, threaded bore therethrough, an upper portion of said bore being adapted to receive a threaded installation rod; a replaceable, initially flat, foraminous, non-flammable, resilient, annular disc of greater outer diameter than the inner diameter of the bowl at the normal location at which the disc is to be used, said disc having a central opening therein of greater diameter than said other portion and of lesser diameter than said one portion, said disc being disposed upon said element in engagement with said shoulder and with said other portion extending through said opening; a cylindrical, tubular collar of outer diameter substantially equal to said one portion of the element, of a length substantially equal to said other portion of the element and of an inner diameter greater than the latter, said collar being slidably fitted upon said other portion of the element and having its upper extremity in engagement with the disc to hold the latter against the shoulder, the lower extremity

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of the collar being in engagement with said concavely arcuate lower portion of the bowl and closing the cavity off from the hole, the lower extremity of the element being within the collar and spaced above said lower portion of the bowl; and a screw extending through said hole in the bowl and threaded into said other portion of the element, said screw having a head of greater diameter than the hole and disposed externally of the bowl.

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