Nov. 8, 1949 J. H. STEVENS 2,487,740

TOBACCO PIPE

Filed Feb. 15, 1945

Fig. 1.

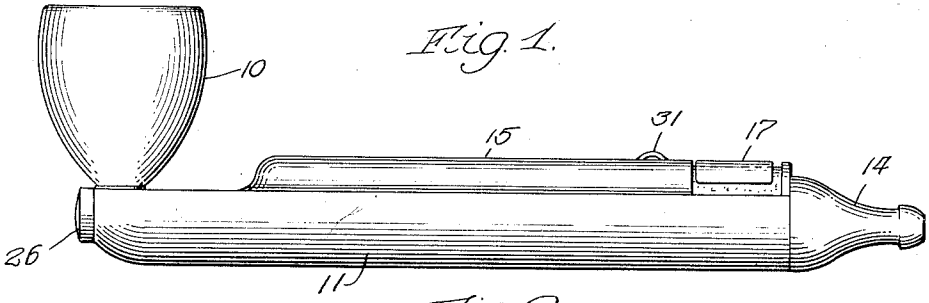


Fig. 2.

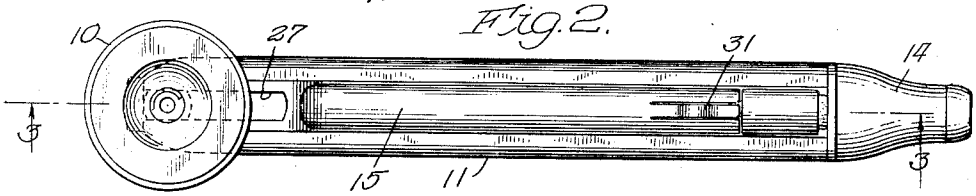


Fig. 3.

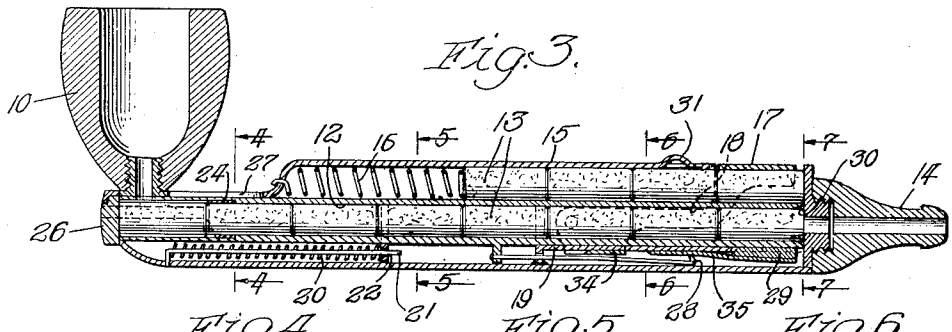


Fig. 4.

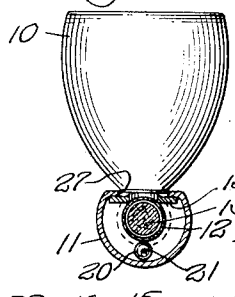


Fig. 5.

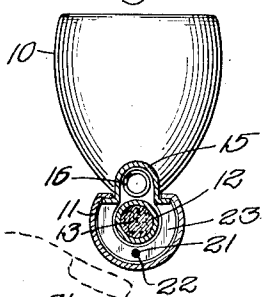


Fig. 6.

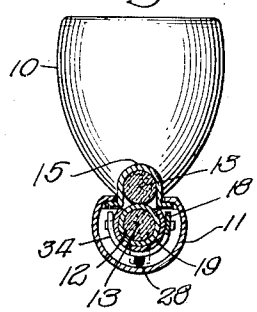


Fig. 8.

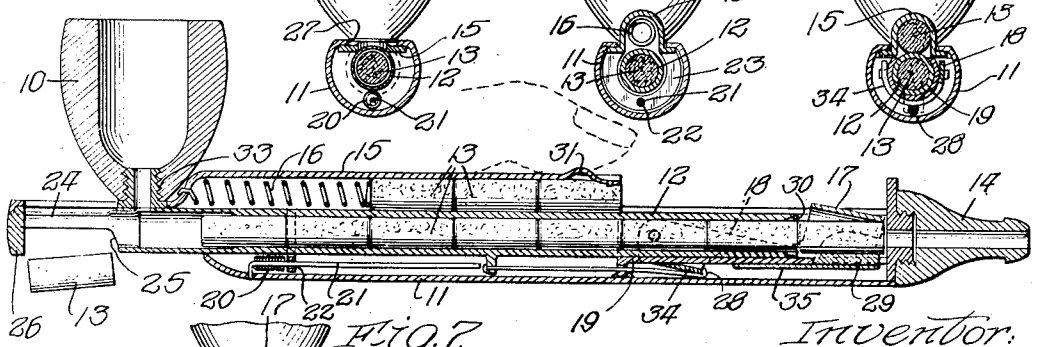
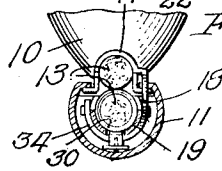


Fig. 7.



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TOBACCO PIPE

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20 Claims. (Cl. 131—202)

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This invention relates to a tobacco pipe, and particularly a pipe adapted to hold filters for filtering the smoke before it reaches the smoker.

Ordinary tobacco pipes require frequent cleaning in the shank and stem portions in order to remove the thick masses of tar, nicotine and resins that are deposited from the smoke. Some types of pipes include a space in the shank or in the stem for positioning a filter to help clean the smoke and remove some of these materials before they reach the smoker. These filters can ordinarily only be removed by disassembling the pipe, removing an old filter, putting in a new one, and then reassembling the pipe. The job not only requires considerable time, but it is also rather dirty due to the mass of tar deposited in the filter and in the stem. I have invented a new type of tobacco pipe wherein filters may be automatically removed from the stem of the pipe, when they become fouled, without having to touch the filter or disassemble the pipe. This new pipe also includes a magazine or storage chamber of new filters that are automatically fed into the stem of the pipe as the old filter is being removed. This magazine conveniently lies along the top of the pipe stem to form a part thereof and is adapted to contain a number of stored filters that can be inserted in the pipe one at a time. An important feature of this new tobacco pipe is the fact that the operation of removing an old filter and inserting a new one also serves to clean the sides of the smoke tube in the stem of the pipe. This is an important feature as the new pipe can thus be automatically cleaned and will remain always in perfect smoking condition.

The invention will be described as related to a typical embodiment set out in the accompanying drawings. Of the drawing, Figure 1 is an elevational view of the new pipe; Figure 2 is a plan view of said pipe; Figure 3 is a vertical longitudinal section taken along the line 3—3 of Figure 2; Figure 4 is a vertical transverse section taken along the line 4—4 of Figure 3; Figure 5 is a section taken along line 5—5 of Figure 3; Figure 6 is a section taken along line 6—6 of Figure 3; Figure 7 is a section taken along line 7—7 of Figure 3; and Figure 8 is a longitudinal section similar to Figure 3 showing the pipe in extended position relative to removing an old filter and inserting a new one.

The pipe illustrated in the accompanying drawings comprises a bowl 10, a housing 11 defining the stem of the pipe, a smoke tube 12 slidably mounted in the pipe and containing a plurality of aligned filters extending from a point adjacent

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the bowl of the pipe to the front of the pipe, a bit 14 screwed onto a threaded portion on the front end of the pipe and a magazine 15 mounted above and lying parallel to the smoke tube 12. The magazine is slidable with relation to the smoke tube and thhe housing and contains a number of new filters for insertion into the front end of the smoke tube when needed. Within the magazine 15 there is located a spring 16 at the rear thereof that urges the new filters toward the front of the magazine. In the bottom of the pipe, between the smoke tube 12 and the bottom of the housing 11, there is located a second spring 20 that normally holds the pipe in closed position ready for use. This second spring is held in position by a pin 21 extending at the front end through a hole 22 located in an arcular member 23 positioned around the smoke tube and serving as reinforcement for the pipe structure. At the rear of the pipe there is a thimble 24 slidably mounted in the smoke tube. This thimble has an opening 25 in the bottom to permit used filters to drop through when the thimble is pulled out. The thimble has a cap 26 on the rear that is adapted to be grasped by the user when it is desired to remove an old filter and insert a new one. This cap also serves as a mounting for the thimble whereby it is mounted on a portion of the magazine that extends to the rear of the pipe. This portion has an elongated slot 27 surrounding that portion of the bowl joining the smoke tube.

In order to transfer a new filter from the magazine 15 to the front of the smoke tube 12 there is provided a top curved plate 17 at the front of the magazine and forming a part of the cover of the magazine. This top curved plate is of slightly less length than one of the filters, which ordinarily are about ½ inch long, and carries an arm 18 hingedly attached by means of a semi-circular member 34 on the opposite end of said arm to a curved plate 19 surrounding the bottom of the front portion of the smoke tube 12. The curved plate 19 is immovable with respect to the housing 11. As soon as the smoke tube is pulled out, a hook 28 located in the bottom of the pipe and beneath the smoke tube 12 grasps the semi-circular member 34 that is on hinged arm 18 to pull the curved plate 17 down. Before this action can be accomplished it is necessary that the smoke tube be pulled back far enough so there is a space at the front of the pipe sufficient to hold the new filter. This can be accomplished by making the arm of the hook 28 of sufficient length so that there is a delayed action effect. The newly inserted filter is held in position by a second curved

plate 29 attached by means of a flat spring 35 to the bottom of the first curved plate 19 near the front thereof so that when the smoke tube is pushed toward the front of the pipe and into operating position, tapered front edges 39 of the smoke tube 12 will engage the new filter and guide it into the smoke tube, thereby pushing the other filters toward the rear. When the smoke tube 12 is pulled back in removing a used filter, the curved plate 29 is forced up by its spring 35 to form a continuation of the bottom of the smoke tube and properly position a new filter.

When the pipe has been in use for some time, it will be found that the filter immediately beneath the bowl of the pipe will have absorbed most of the tar. When it becomes necessary to remove this filter, the cap 26 on the thimble 24 is grasped by the thumb and fingers and pulled back. This operation allows the used filter to drop out of the thimble through the opening 25 as shown in Figure 8. The pulling back on the thimble cap 26 also pulls the attached slidable magazine back moving all the new filters except the one under the curved top plate 17. With the thimble in this position, the elongated slot 27 is in contact at its front end with the base of the bowl 10. A further pulling action on the cap 26 now pulls back the smoke tube 12 to which the bowl is attached and separates the front end of the smoke tube from the bit end of the pipe. This pulling action also causse hook 28 to engage the semi-circular member 34 on hinged arm 18 which is attached to the curved plate 17 and pulls this plate down. This action serves to transfer the new filter immediately beneath the curved plate to an aligned position with the front of the smoke tube. The new filter is held in this aligned position by means of the second curved plate 29 at the bottom of the pipe. When the new filter has been thus positioned the smoke tube is shoved forward, thereby inserting the new filter into the front of the smoke tube. This shoving action which is exerted on the thimble 24 pushes the thimble back within the smoke tube in closed position and also raises the first curved plate 17 to its normal position at the top of the pipe where it serves as an extension cover to the magazine 15. The curved plate is raised up partially by the front of the smoke tube 12 and is then raised up the rest of the way by a new filter in the magazine moving to the front of the magazine under the urging of magazine spring 16. The pipe is then in completely closed position and is ready for use.

While the pipe is in open position it is necessary to hold the remaining new filter within the magazine so that the magazine spring 16 will not expel them. This holding may be accomplished by providing a small raised plate 31 at the front end of the magazine. The small raised plate has a spur 32 which can be held against the first filter by means of the thumb of the user pressing down against said plate, as shown in Figure 8. At this time, new filters may also be inserted into the magazine by feeding them one at a time lengthwise into the magazine. As soon as one is pushed into position, thereby shoving the others back, it can be held as described above by means of the spur 32.

The bowl 10 may be mounted on the pipe in any desired manner. As shown, it is screwed into a threaded stud 33 that is located at the rear of the smoke tube 12. This stud is welded or otherwise fastened to the smoke tube and has a central opening coinciding with a similar opening in the

smoke tube to permit the smoke to pass from the interior of the bowl into the smoke tube.

As can be seen by the above description, this new pipe is entirely automatic in operation and is convenient to use. Because the pipe is constructed so that only the last filter adjacent the bowl is removed, each filter is inserted at the front of the pipe and works its way back as new filters are added. This action serves to wipe the inner side of the smoke tube free from any foreign deposited materials and removes the necessity of using pipe cleaners. This also serves to get the most efficient use from each filter as the filter that is beneath the bowl has been in the pipe for the longest time, while the filter that is at the front of the pipe has been there for the shortest time. Thus the new pipe not only provides a cleaner smoke, but is itself kept clean at all times.

Having described my invention in considerable detail as applied to a typical embodiment of the same, it is my intention that my invention be not limited by these details but rather be construed broadly within its spirit and scope as set out in the accompanying claims.

I claim:

1. A tobacco pipe comprising a bowl, a smoke tube containing a plurality of filters, a bit, a magazine adjacent said smoke tube for holding a supply of new filters, means for ejecting at least one used filter at a time from said smoke tube, and means for feeding at least one new filter from the magazine to the smoke tube.

2. A tobacco pipe comprising a bowl, a smoke tube containing a plurality of filters, a bit, a magazine adjacent said smoke tube for holding a supply of new filters, means for ejecting at least one new filter at a time from said smoke tube at the bowl end of the pipe, and means for feeding at least one new filter from the magazine to the smoke tube at the bit end of the pipe.

3. A tobacco pipe as set out in claim 2 wherein said magazine is located above and lying along the smoke tube.

4. A tobacco pipe as set out in claim 2 wherein said smoke tube has said ejecting means in the bowl end thereof and has a hook portion engaging said feeding means whereby both said means are substantially simultaneously operable by a relative movement of said smoke tube.

5. A tobacco pipe comprising a bowl, a smoke tube containing a plurality of filters, a bit, a magazine above and lying along the smoke tube for holding a supply of new filters, a hatch at the bowl end of the pipe for removing a used filter, a second hatch at the bit end of the pipe between the smoke tube and the magazine for placing new filters in the smoke tube at the front end of the pipe, and single means for opening both said hatches.

6. A tobacco pipe comprising a bowl, a smoke tube containing a plurality of filters, a bit, a magazine above and lying along the smoke tube for holding a supply of new filters, a hatch at the bowl end of the pipe for removing a used filter, a second hatch at the bit end of the pipe between the smoke tube and the magazine for placing a new filter in the smoke tube at the front end of the pipe, transferring means for transferring a new pipe filter from the magazine to the front end of the smoke tube through said second hatch when opened, and single means for opening both said hatches and operating said transferring means.

7. A tobacco pipe comprising a bowl, a smoke tube containing a plurality of aligned filters ex-

tending from a point adjacent the bowl of the pipe to the front of the pipe, a bit on the front end of the pipe, a magazine above and lying along the smoke tube for holding a supply of new filters in alignment, spring means at the rear of said magazine urging the aligned new filters toward the front of the pipe, a slidable hatch at the bowl end of the smoke tube for removing a used filter from the smoke tube, a second slidable batch at the bit end of the smoke tube opening into the magazine for placing a new filter in the smoke tube, transferring means for effecting transfer of said new filter to the smoke tube, and means for opening the first hatch and substantially simultaneously opening the second hatch and operating said transferring means.

8. A tobacco pipe as set out in claim 7 wherein said smoke tube is slidably mounted in said pipe and said second hatch and said transferring means are operated by sliding the smoke tube toward the rear of the pipe.

9. A tobacco pipe comprising a bowl, a smoke tube slidably mounted in the pipe and containing a plurality of aligned filters extending from a point adjacent the bowl of the pipe to the front of the pipe, a bit on the front end of the pipe, a slidable magazine mounted above and lying along the smoke tube for holding a supply of new filters in alignment, spring means at the rear of said magazine urging the aligned new filters toward the front of the magazine, second spring means normally urging the slidable smoke tube toward the bit end of the pipe to hold said pipe in closed position for use, a slidable hatch at the bowl end of the pipe and fitted within the smoke tube for removing a used filter therefrom, a second slidable hatch at the bit end of the pipe that opens when the smoke tube is slid from position toward the rear of the pipe, and transferring means for transferring a new filter from the magazine to the bit end of the pipe when said second hatch is open.

10. A tobacco pipe comprising a bowl, a smoke tube slidably mounted in the pipe and containing a plurality of aligned filters extending from a point adjacent the bowl of the pipe to the front of the pipe, a bit on the front end of the pipe, a slidable magazine mounted above and lying along the smoke tube for holding a supply of new filters in alignment, spring means at the rear of said magazine urging the aligned new filters toward the front of the magazine, second spring means normally urging the slidable smoke tube toward the bit end of the pipe to hold said pipe in closed position for use, a slidable hatch at the bowl end of the pipe and fitted within the smoke tube for removing a used filter therefrom, a second slidable hatch at the bit end of the pipe that opens when the smoke tube is slid from position toward the rear of the pipe, and transferring means for transferring a new filter from the magazine to the bit end of the pipe when said second hatch is open, said transferring means comprising a hinged arm and attached curved top plate with said top plate pulling a new filter down into engaging position with the smoke tube when the smoke tube is slid back to its farthermost rearward position.

11. A tobacco pipe as set out in claim 10 wherein the said curved top plate forms a top portion of the magazine when the pipe is in closed position for use.

12. A tobacco pipe as set out in claim 10 wherein there is provided means for holding the new filter in position within the magazine and against displacement by the magazine spring when a new filter is being transferred to the smoke tube.

13. A tobacco pipe comprising a bowl, a smoke tube slidably mounted in the pipe and containing a plurality of aligned filters extending from a point adjacent the bowl of the pipe to the front of the pipe, a bit on the front end of the pipe, a slidable magazine mounted above and lying along the smoke tube for holding a supply of new filters in alignment, spring means at the rear of said magazine urging the aligned new filters toward the front of the magazine, second spring means normally urging the slidable smoke tube toward the bit end of the pipe to hold said pipe in closed position for use, a slidable thimble at the bowl end of the pipe fitted within the smoke tube and being open at the bottom to serve as a hatch for removing a used filter, a second slidable hatch comprising an opening between the front of the magazine and the inside of the pipe that is normally kept closed by the smoke tube when it is in closed position, transferring means comprising a hinged arm mounted in the interior of the pipe and having an attached curved plate overlying the front filter in the magazine and normally forming a portion of the top of the magazine, means including a hook attached to the slidable smoke tube of the pipe for engagement with the transferring means to pull a new filter down into engaging position with the front of the smoke tube when the smoke tube is slid back to its farthermost rearward position, and means for holding the new filters in position within the magazine and against displacement by the magazine spring when the pipe is in open position and a new filter is being transferred to the smoke tube.

14. A tobacco pipe comprising a bowl, a smoke tube containing a plurality of aligned filters and an axially movable member at the bowl end of the smoke tube having a hatch in its under side which when slid back to its farther-most rearward position allows one of these filters to fall by gravity through the hatch.

15. A tobacco pipe comprising a bowl, a smoke tube containing a plurality of aligned filters, a bit, a hatch movable from open to closed position at the bowl end of the smoke tube for removing one of these filters at a time and a second hatch movable from open to closed position at the bit end of the smoke tube for inserting a new filter.

16. A tobacco pipe comprising a bowl, a smoke tube containing a plurality of aligned filters, a bit, a magazine containing a new filter, means for removing one filter from the bowl end of the pipe, and means for transferring said new filter from the magazine to the smoke tube at the bit end of the pipe.

17. A tobacco pipe comprising a bowl, a smoke tube containing a plurality of aligned filters, hatches movable from open to closed position and means for removing a filter through one hatch at the bowl end of the smoke tube and means for inserting a new filter through the second hatch at the bit end of the smoke tube.

18. A tobacco pipe as set out in claim 15 wherein the smoke tube has an axially movable member at the bowl end thereof having said removing hatch therein and said axially movable member when moved to its farthermost rearward position pulls said smoke tube away from said bit to expose said inserting hatch, both said removing

hatch and said inserting hatch operating substantially simultaneously.

19. A tobacco pipe comprising a bowl, a smoke tube containing a plurality of aligned filters, a bit, a magazine containing new filters, finger actuated means connected to the smoke tube for removing a filter from the smoke tube, means at the bit end of the smoke tube for transferring a filter from the magazine to the smoke tube, said last recited means being operatively connected to the smoke tube whereby both said means operate substantially simultaneously.

20. A tobacco pipe as set out in claim 6, having an axially movable member at the bowl end of the pipe, the first hatch being located in the bottom of the movable member to permit a used filter to fall out by gravity.

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