Oct. 14, 1941. R. H. SHERLOCK 2,258,867

SMOKING PIPE

Filed Sept. 16, 1940

Fig. 1.

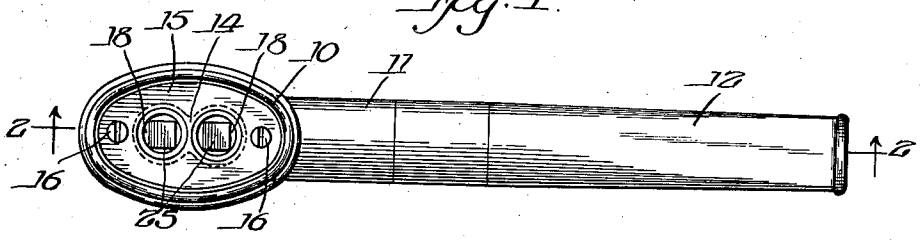


Fig. 2.

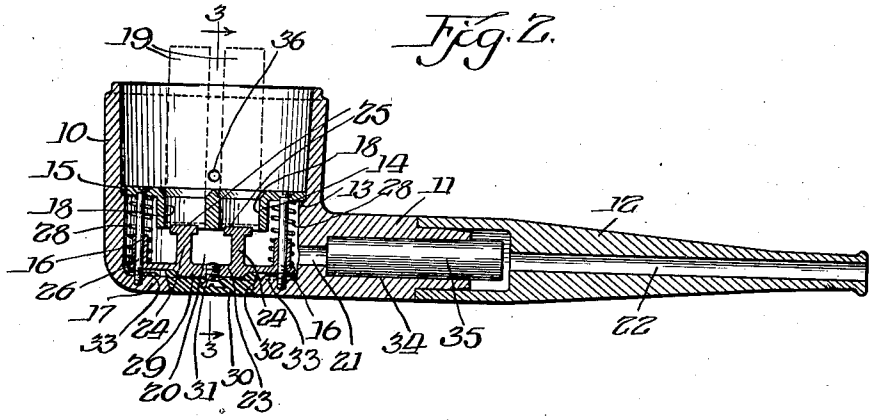


Fig. 4.

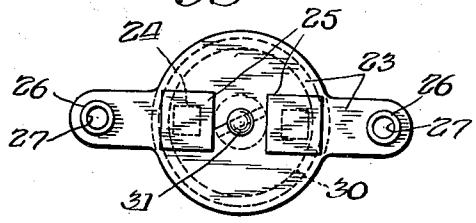


Fig. 3.

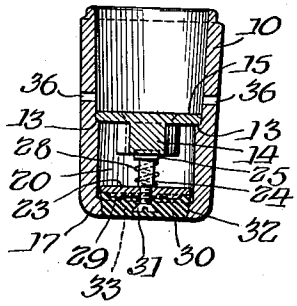
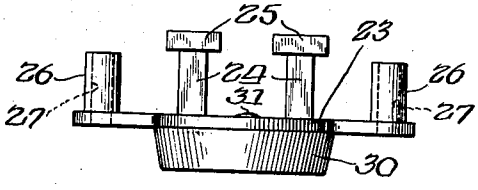


Fig. 5.



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SMOKING PIPE

Ralph H. Sherlock, Berwyn, Ill.

Application September 16, 1940, Serial No. 356,926

8 Claims. (Cl. 131—183)

My invention relates to pipes designed and adapted particularly for the smoking of tobacco in cartridge form.

An important object of the invention is to provide an arrangement in which a number, preferably two, of comparatively short tobacco cartridges may be inserted in sockets provided within the bowl pipe to be subjected to the smoking suction through the pipe stem, with the cartridges spaced from each other and from the sides of the bowl for adequate air space around the cartridges for proper combustion, and so that the bowl will form a receptacle for the ashes dropping from the cartridges.

A further object is to provide plungers normally providing seats at the bottoms of the sockets for the inserted cartridges and which are shiftable from the exterior of the bottom of the bowl for ejecting the cartridge butts or remains after smoking of the pipe.

Another object is to provide an arrangement with which, instead of smoking a comparatively long cartridge from which the ashes may drop without being caught, two cartridges of half the length may be inserted side by side in the sockets provided in the pipe bowl so that the ashes dropping therefrom will be caught by the surrounding bowl, and the two cartridges may be smoked in parallel for greater smoke volume through the pipe stem.

Still another object is to provide construction and arrangement which will enable the pipe parts to be economically manufactured and assembled so that the pipe may be sold at a comparatively small cost.

My invention also involves other features of construction and arrangement and all the features are embodied in the structure shown on the drawing, in which drawing

Figure 1 is a plan view of the pipe;

Figure 2 is a section on plane II—II of Figure 1;

Figure 3 is a section on plane III—III of Figure 2;

Figure 4 is an enlarged plan view of the ejector structure; and

Figure 5 is a side elevation of the structure shown on Figure 4.

The pipe shown comprises a bowl 10 having the stem 11 extending therefrom for receiving a detachable mouthpiece 12. The bowl may be of any desired shape, the drawing showing it to be of elliptical cross section with the major axis paralleling the stem.

Intermediate the top and bottom of the bowl an annular internal shoulder 13 is provided for supporting the cartridge holding element. This holding element comprises the body 14 from whose upper end extends the flange 15 of elliptical shape to intimately fit against the bowl sides above the shoulder 13 and to rest on the shoulder. Screws 16 extend through and downwardly from the opposite ends of the flange and thread into the bottom wall 17 of the bowl so that the holder element is securely held against the shoulder 13. The body 14 of the holder element has two cylindrical passageways 18 therethrough laterally spaced a distance from each other and of a diameter for receiving the ends of tobacco cartridges 19 for supporting these cartridges vertically within the bowl wall above the holder element. The space 20 between the holder element and the bowl bottom 17 forms a suction chamber communicating with the stem structure passageway which includes the bore 21 through the stem part 11 and the bore 22 through the mouthpiece 12, suction at the end of the mouthpiece thus creating suction in the chamber 20 which is applied to the ends of the tobacco cartridges in the sockets 18 for smoking of these cartridges.

The ejector element 23 is in the form of a plate extending across the bottom of the bowl and having upwardly extending plungers 24 terminating in polygonal heads 25 normally positioned in the lower ends of the holder passages 18 to form seats for the ends of the tobacco cartridges, as shown on Figure 2. Sleeves 26 extend upwardly from the ends of the ejector member which form continuations of passageways 27 for receiving the screws 16, springs 28 encircling these sleeves and the screws, these springs normally holding the ejector element to the bottom of the bowl.

A boss 29 on the lower side of the ejector member receives and centers an ejector button 30 which is held in place by a screw 31, this button normally engaging in the opening 32 in the bottom wall 17 of the bowl. Upon upward pressure on the button, the ejector element 23 will be shifted against the resistance of the spring 28 to move its plungers 24 through the passageways 18 for ejection from these passageways of the butts or remains of the tobacco cartridges after smoking thereof.

In order that there will be no leakage of air into the suction chamber 20 through the opening 32 during smoking of the pipe, the button 30 is preferably made of frusto-conical shape to function as a valve for seating against the correspondingly shaped edge of the opening 32, and the button is therefore preferably made of some resilient material such as rubber. As shown on Fig-

ure 2, the arrangement is such that the ejector element 23 will not contact the bottom wall 17 of the bowl so that the entire force of the spring pressure will be against the valve button 30 to hold it securely against its seat in the opening 32 to effect a seal against air leakage to the suction chamber 20. In order to provide more extended and secure anchorage for the screws 16, the bowl bottom wall 17 may have the bosses 33.

The stem bore 21 may be enlarged as indicated at 34 for receiving a filtering element 35 for filtering the smoke before passage thereof through the stem bore 22. Through the sides of the bowl air inlet holes 36 may be provided for the flow of air into the bowl for insuring more uniform combustion of the tobacco cartridges.

To fill the pipe for smoking, two cartridges 19 are inserted in the cylindrical holder passages 18 to seat against the heads 25 of the ejector plungers 24. Owing to the polygonal form of the plunger heads, there will be ample passageway between the heads and the cylindrical passageways for the application of suction to the cartridges for smoking thereof, and owing to the adequate air space within the bowl around the cartridges and the air supply through the holes 36, there will be efficient and uniform combustion, the comparatively large air space between the burning cartridges and the bowl walls insulating these walls against the accumulation of heat, thus assuring a cool smoke. This space in the bowl around the cartridges also serves as an ash receptacle for receiving the ash from the cartridges. The cartridges are preferably of a length so that when inserted in the pipe they will project only a short distance above the bowl so that they may be more readily ignited, but so that the falling ashes will be caught by the bowl.

With my improved arrangement, where two cartridges are inserted in the pipe and are smoked in parallel, the volume of smoke will be correspondingly multiplied for more enjoyable smoking. The cartridges are in the form of tobacco rolled in and held by a wrapper, preferably of paper, and different brands of ordinary smoking tobacco may be used which, after a comparatively short period of non-operation of the pipe, will automatically extinguish so that, the pipe may be relit at any time for continued or final smoking of the cartridges until they are fully consumed.

The cartridges may be of ordinary cigarette diameter but of half cigarette length so that they may be readily commercialized in packages of the same size as ordinary cigarette packages.

I have shown a practical embodiment of the features of my invention but I do not desire to be limited to the exact construction, arrangement and operation shown and described as changes and modifications may be made without departing from the scope of the invention.

I claim as follows:

1. A tobacco cartridge smoking pipe comprising a bowl and a stem structure extending therefrom, a transverse wall dividing said bowl into an upper combustion chamber and a lower suction chamber communicating with the stem structure bore, said wall having passageways between the combustion chamber and the suction chamber for receiving tobacco cartridges to be smoked, ejector plungers in said suction chamber normally forming seats for the cartridges, and means operable from outside the bottom of said bowl for shifting said plungers for ejection of the remains of the smoked cartridges from said passages.

2. A tobacco cartridge smoking pipe comprising a bowl and a bored stem structure extending therefrom, a horizontal cross wall secured in said bowl to divide the bowl into an upper or combustion chamber and a lower or suction chamber, vertical passageways through said wall into which tobacco cartridges may be inserted at their lower ends to project upwardly in the combustion chamber and to be subjected to the suction in the suction chamber when the pipe is smoked, an ejector element in said suction chamber having plungers normally terminating at the bottoms of said passageways to form seats for the inserted cartridges, the bottom of the bowl having an opening, said ejector element normally extending into said opening to close the same and being thereby engageable to be shifted for movement of its plungers through said passageways for the ejection of the remains of smoked cartridges.

3. A tobacco cartridge smoking pipe comprising a bowl and a bored stem structure extending therefrom, a transverse wall in said bowl dividing it into an upper combustion chamber and a lower suction chamber communicating with the stem structure bore, a vertical passageway in said wall for receiving the lower end of a cylindrical tobacco cartridge for support thereof in said combustion chamber, an ejector element in said suction chamber normally engaging at the bottom of said passageway to form a seat for the cartridge, spring means tending to hold said ejector element in normal position, the bottom wall of said bowl having an opening, said ejector element normally extending into said opening to close the same and being thereby engageable for shift to eject the remains of the smoked cartridge.

4. A tobacco cartridge smoking pipe comprising a bowl having a bored stem structure extending therefrom, a horizontal cross wall in said bowl above the level of the stem structure bore dividing said bowl into a combustion chamber above the wall and a suction chamber between the wall and bowl bottom communicating with the stem structure bore, a pair of vertical passageways through said wall into which a pair of cartridges may be inserted for subjection to the suction in the suction chamber and for combustion in the combustion chamber, an ejector element in the suction chamber having plungers extending upwardly therefrom and provided with heads normally located adjacent the bottoms of said passages to form seats for the cartridges, the bottom wall of said bowl having an opening therethrough, a closure member on said ejector element normally forming a closure for said opening to prevent air leakage into the suction chamber during smoking of the pipe, said closure member being manually engageable from outside the bottom of the pipe for shifting the ejector element for passage of the plungers through said passageways for ejection of the remains of the cartridges after a smoking operation.

5. A tobacco cartridge smoking pipe comprising a bowl and a bored stem structure extending therefrom, said bowl having an internal shoulder above the level of the stem structure bore, a cross wall in said bowl seating on said shoulder to divide the bowl into a combustion chamber above the wall and a suction chamber below the wall

communicating with the stem structure bore, screws engaging said cross wall and threading into the bottom wall of the bowl for holding said walls against the shoulder, a pair of transverse passageways through said cross wall for receiving the lower ends of tobacco cartridges for extension of the cartridges upwardly in said combustion chamber and for subjection to said cartridges at their lower ends to the suction in the suction chamber when the pipe is smoked, an ejector element in the suction chamber having plungers extending upwardly therefrom and terminating in heads normally positioned adjacent the lower ends of said passageways to form seats for the cartridges, springs interposed between said cross wall and said ejector element for normally yieldingly holding said ejector element in normal position, and means engageable from outside of the bowl for shifting said ejector element for movement of said plunger heads through said cross wall passages for ejection therefrom of the remains of smoked cartridges.

6. A tobacco cartridge smoking pipe comprising a bowl and a bored stem structure extending therefrom, said bowl having an internal shoulder above the level of the stem structure bore, a cross wall in said bowl seating on said shoulder to divide the bowl into a combustion chamber above the wall and a suction chamber below the wall communicating with the stem structure bore, screws engaging said cross wall and threading into the bottom wall of the bowl for holding said walls against the shoulder, a pair of transverse passageways through said cross wall for receiving the lower ends of tobacco cartridges for extension of the cartridges upwardly in said combustion chamber and for subjection to said cartridges at their lower ends to the suction in the suction chamber when the pipe is smoked, an ejector element in the suction chamber having plungers extending upwardly therefrom and terminating in heads normally positioned adjacent the lower ends of said passageways to form seats for the cartridges, springs interposed between said cross wall and said ejector element for normally yieldingly holding said ejector element in normal position, the bottom wall of said bowl having an opening therethrough, a closure member on said ejector element for said opening and normally held by the pressure of said springs to close and seal said opening for prevention of air leakage into the suction chamber when the pipe is being smoked, said closure member being engageable from outside the bottom of the bowl for upward shift thereof and of the ejector element for movement of the plunger heads through said cross wall passageways for ejection therefrom of the remains of smoked cartridges.

7. A tobacco cartridge smoking pipe comprising a bowl and a bored stem structure extending therefrom, said bowl being of oval cross section with its major axis paralleling the stem structure, a cross wall in said bowl above the level of the stem structure bore dividing said bowl into a combustion chamber above the wall and a suction chamber between the wall and the bottom of the bowl communicating with the stem structure bore, a pair of vertical passageways through said cross wall aligned in the major axis of the bowl for receiving a pair of tobacco cartridges for extension of the cartridges upwardly in the combustion chamber and for subjection to the lower ends thereof to the suction in the suction chamber, an ejector element in said suction chamber having upwardly extending plungers normally terminating adjacent the lower ends of said passageways to form seats for the cartridges, and means operable from the exterior of said bowl for shifting said ejector element upwardly for ejection by the plungers from said passageways of the remains of smoked cartridges.

8. A tobacco cartridge smoking pipe comprising a bowl and a bored stem structure extending therefrom, said bowl being of oval cross section with its major axis paralleling the stem structure, a cross wall in said bowl above the level of the stem structure bore dividing said bowl into a combustion chamber above the wall and a suction chamber between the wall and the bottom of the bowl communicating with the stem structure bore, a pair of vertical passageways through said cross wall aligned in the major axis of the bowl for receiving a pair of tobacco cartridges for extension of the cartridges upwardly in the combustion chamber and for subjection to the lower ends thereof to the suction in the suction chamber, an ejector element in said suction chamber having upwardly extending plungers normally terminating adjacent the lower ends of said passageways to form seats for the cartridges, and means operable from the exterior of said bowl for shifting said ejector element upwardly for ejection by the plungers from said passageways of the remains of smoked cartridges, said cartridge holder passageways being laterally spaced from each other and spaced from the bowl wall for adequate air supply for proper combustion of the cartridges and so that said bowl may form a receptacle for receiving the combustion ash.

RALPH H. SHERLOCK.