



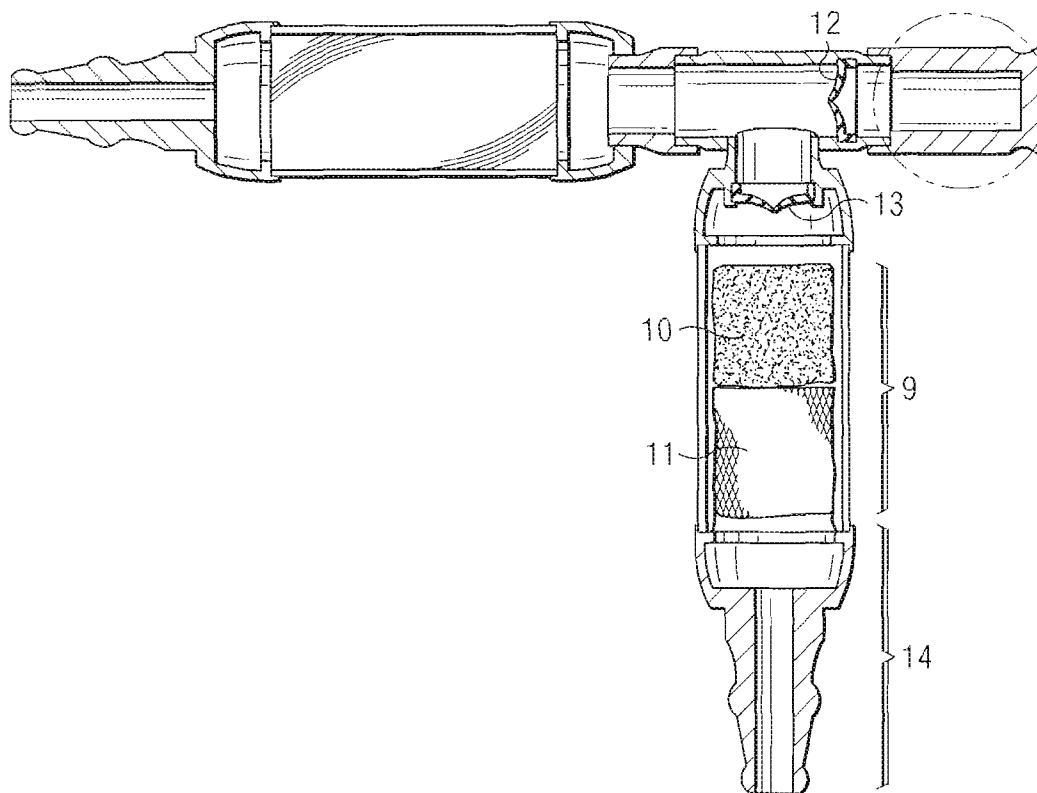
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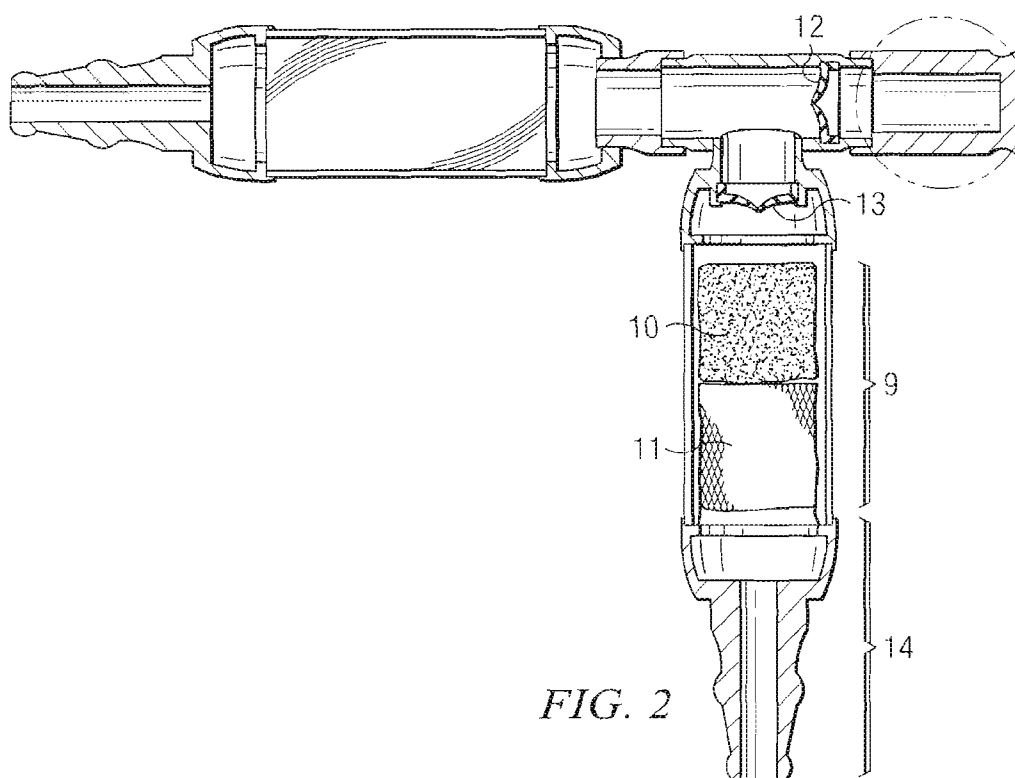
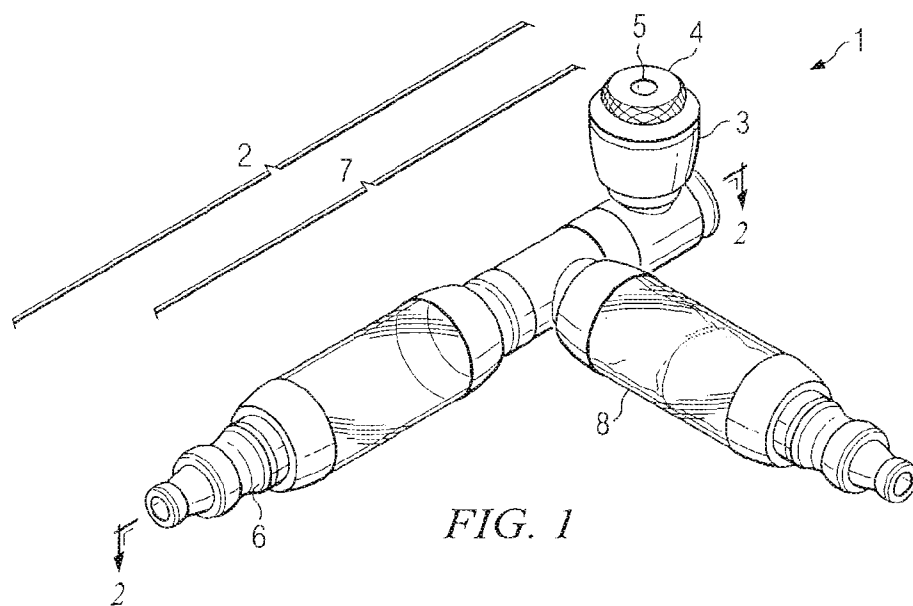
(19) **United States**(12) **Patent Application Publication**
Martilik(10) **Pub. No.: US 2008/0230077 A1**(43) **Pub. Date: Sep. 25, 2008**(54) **NON-POLLUTING SMOKING DEVICE****Publication Classification**(76) Inventor: **Jeremiah Emmett Martilik,**
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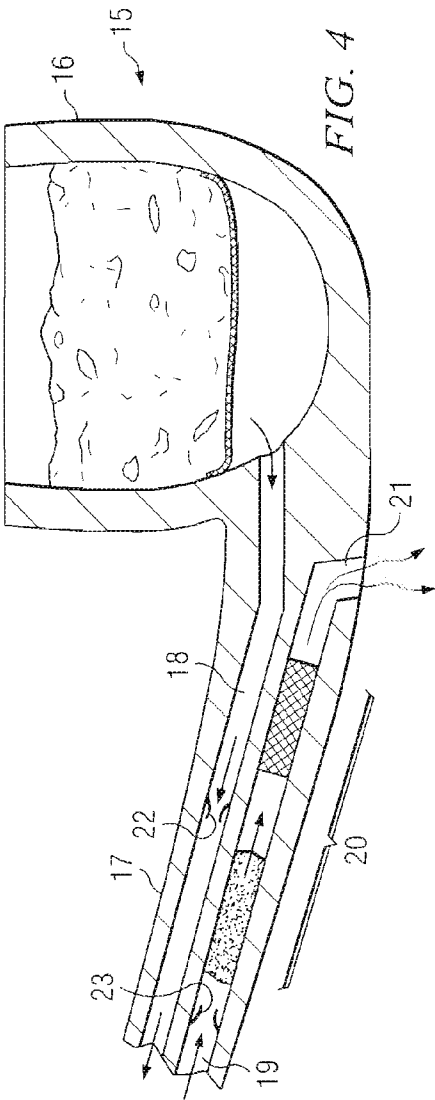
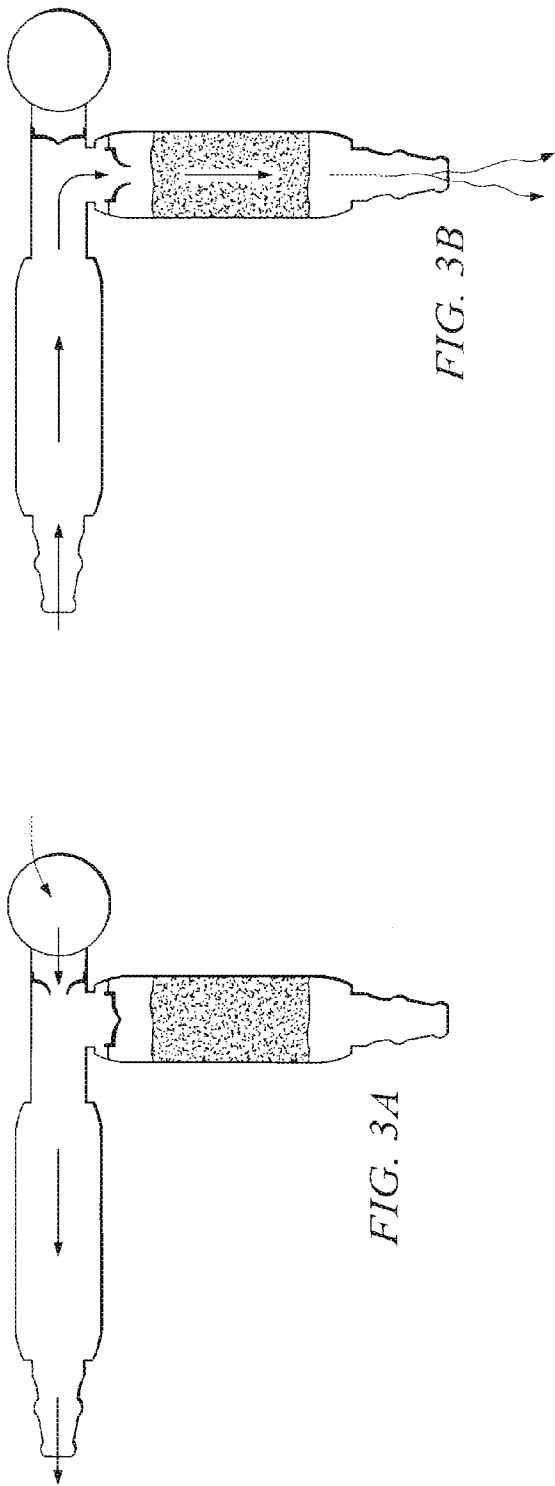
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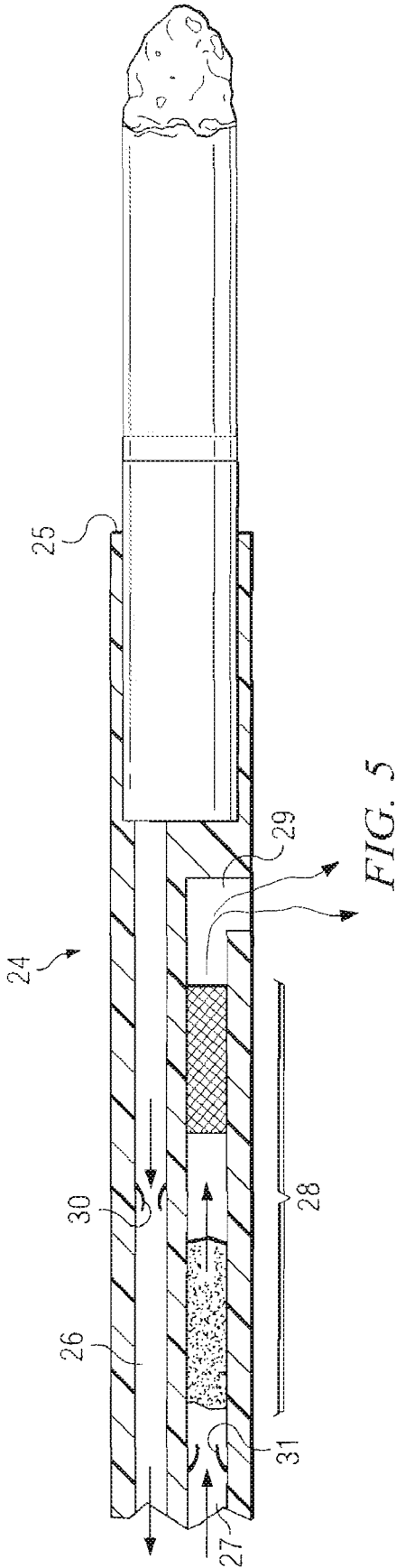
Michael A. O'Neil**Michael A. O'Neil, P.C.****5949 Sherry Lane, Suite 820****Dallas, TX 75225 (US)**(52) **U.S. Cl. 131/202; 131/216**(21) Appl. No.: **12/050,695**(57) **ABSTRACT**(22) Filed: **Mar. 18, 2008****Related U.S. Application Data**(60) Provisional application No. 60/895,857, filed on Mar.
20, 2007.

A non-polluting smoking device through which smoke is first inhaled and then exhaled, the device containing a filter or series of filters for filtering harmful toxins and unpleasant odors, thereby preventing same from being emitted into the air.









NON-POLLUTING SMOKING DEVICE

CLAIM TO PRIORITY

[0001] Applicant claims priority based on provisional patent application Ser. No. 60/895,857 filed Mar. 20, 2007, the entire content of which is incorporated herein by reference.

TECHNICAL FIELD

[0002] This invention relates to smoking devices, and more particularly to a nonpolluting smoking device which prevents harmful toxins and unpleasant odors contained in smoke from being emitted into the air.

BACKGROUND AND SUMMARY

[0003] Smoking is the activity of burning a substance, such as tobacco, in a pipe or by other means, and inhaling or tasting the vapor. The practice developed independently in different parts of the world and has been used as a means to ingest a variety of substances.

[0004] A smoking pipe is a device used for smoking a substance such as tobacco. A smoking pipe typically consists of a small chamber (the bowl) for combustion of the smoking substance and a stem that ends in a mouthpiece.

[0005] Pipes have been fashioned of an assortment of materials including brier, clay, ceramic, corncob, glass, meerschaum, metal, porcelain, stone, wood, and various combinations thereof. Some pipes are designed with special mechanics or functions, such as the different forms of water pipes. Others are designed with the demands of the smoking substance in mind, such as the different varieties tobacco. Pipes also vary across a wide spectrum of cost and complexity, from hookahs made with hand-blown glass and fitted with precious metals to the pipes of un-glazed clay that were popular in Europe and the Americas for centuries.

[0006] In recent years the practice of smoking has come under attack by government and private interest groups concerned about health and environmental problems associated with smoking. Efforts by such groups have been building over the past several decades to limit and otherwise ban the practice of smoking, particularly in public places. One of the primary complaints/concerns associated with smoking is that the smoke of tobacco and other substances contains harmful toxins. Further, many people consider the smell of smoke to be noxious and unpleasant. The present invention is designed to eliminate harmful toxins and unpleasant odors resulting from smoking.

[0007] A first embodiment of the invention comprises a pipe. A first pipe piece has a bowl at one end in which a smoking substance is placed and a mouthpiece through which smoke can be inhaled at the other end, with a hollow passageway extending between the bowl and the mouthpiece so as to connect same. A second pipe piece is perpendicularly joined to the first pipe piece, with a filter or series of filters disposed therein. A user of the pipe first inhales smoke through the mouthpiece. The smoke is then exhaled through the mouthpiece. A check valve positioned between the bowl and the mouthpiece prevents the exhaled smoke from flowing back through the bowl. A second check valve positioned between the first pipe piece and the second pipe piece directs exhaled smoke through the filter or series of filters in the second pipe piece while preventing air from entering the mouthpiece therethrough. As the exhaled smoke passes through the filter

or series of filters, harmful toxins and unpleasant odors are eliminated therefrom. The pipe is designed so that the filter(s) can be removed and replaced.

[0008] A second embodiment of the invention comprises a pipe with a bowl at one end in which a smoking substance is placed and a stem or shank terminating in a mouthpiece through which smoke can be inhaled. Running through the stem from the bowl to the mouthpiece is a first hollow conduit through which smoke is inhaled. A second hollow conduit with a filter or series of filters disposed therein runs from the mouthpiece, parallel to the first hollow conduit, and terminates at an opening positioned between the mouthpiece and the bowl.

[0009] A user of the pipe first inhales smoke through the mouthpiece. The smoke is then exhaled through the mouthpiece. A check valve positioned within the first hollow conduit prevents the exhaled smoke from flowing back through the bowl. A second check valve positioned within the second hollow conduit directs exhaled smoke through the filter or series of filters disposed therein. As the exhaled smoke passes through the filter or series of filters, harmful toxins and unpleasant odors are eliminated therefrom. The pipe can be designed so that the filter(s) can be removed and replaced.

[0010] A third embodiment of the invention comprises a holder designed to receive a cigarette or cigar. Running from the end which receives the cigarette or cigar to an opposite terminal end, which is the inhaling end, is a first hollow conduit through which smoke is inhaled. A second hollow conduit with a filter or series of filters disposed therein runs from the inhaling end, parallel to the first hollow conduit, and terminates at an opening positioned between the inhaling end and the receiving end.

[0011] A user of the device first inhales smoke through the mouthpiece. The smoke is then exhaled through the mouthpiece. A check valve positioned within the first hollow conduit prevents the exhaled smoke from flowing back through the cigarette or cigar. A second check valve positioned within the second hollow conduit directs exhaled smoke through the filter or series of filters disposed therein. As the exhaled smoke passes through the filter or series of filters, harmful toxins and unpleasant odors are eliminated therefrom. The device can be designed so that the filter(s) can be removed and replaced.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] A more complete understanding of the present invention may be had by reference to the following Detailed Description when taken in connection with the accompanying Drawings, wherein:

[0013] FIG. 1 is a perspective view of a first embodiment of the invention;

[0014] FIG. 2 is a sectional view of a first embodiment of the invention;

[0015] FIG. 3A is a plan view of a first embodiment of the invention directionally illustrating an air flow;

[0016] FIG. 3B is a plan view of a first embodiment of the invention directionally illustrating an opposite air flow;

[0017] FIG. 4 is a sectional view of second embodiment of the invention; and

[0018] FIG. 5 is a sectional view of a third embodiment of the invention.

DETAILED DESCRIPTION

[0019] Referring to the drawings, and particularly to FIG. 1 thereof, a first embodiment of the invention comprising a pipe 1 is shown. A first pipe piece 2, constructed of metal, glass, ceramic, or other such materials which are well known to those having skill in the art, has a bowl 3 at one end in which a smoking substance is placed. The bowl 3 and the first pipe piece 2 can be unitary, or, alternatively, separate pieces capable of engaging one another by screwing them together or by other such means. The bowl 3 can be constructed of wood, metal, glass, ceramic, or other such materials which are well known to those having skill in the art.

[0020] Additionally, the bowl 3 may be fitted with a cap 4. The cap 4 can be a "smokeless" type cap so as to eliminate or limit smoke from escaping the bowl 3. The cap 4 also functions to prevent the spilling or loss of a smoking material placed in the bowl 3. A hole 5 is disposed within the cap 4 so as to facilitate an air flow and to allow the smoking substance to be ignited. The cap 4 screws on or otherwise connects to the bowl 3 and can likewise be constructed of metal, glass, ceramic, or other such materials which are well known to those having skill in the art.

[0021] The terminal end comprising the bowl 3 of the pipe piece 1 can have a hole disposed therein so as to allow for continuous inhalation upon the covering of same. At the end opposite the bowl 3, the pipe piece 1 terminates in an open mouthpiece 6 through which smoke can be inhaled. The mouthpiece 6 can be constructed of metal, glass, ceramic, or other such materials which are well known to those having skill in the art.

[0022] Between the bowl 3 and the mouthpiece 6 the first pipe piece 2 is characterized by a hollow chamber 7 so as to allow smoke to flow from the bowl 3 to the mouthpiece 6. A second pipe piece 8 is perpendicularly joined to the first pipe piece 2. The second pipe piece 8 can be removably joined to the first pipe piece 2, such as by a screw or other such means, or can be permanently joined to the pipe piece 1. The second pipe piece 8 functions as a filter housing with a hole disposed in the end opposite the end joined to the first pipe piece 2 so as to allow filtered smoke to flow out of the pipe 1. In the embodiment shown, the second pipe piece 8 is a reproduction of a portion of the hollow chamber 7/mouthpiece 6 of the first pipe piece 2.

[0023] Referring now to FIG. 2, a series of filters 9 is shown disposed within the second pipe piece 8. A first filter 10 can be comprised of charcoal. A second filter 11 can be comprised of a deodorizing cotton. The ordering and spacing of the series of filters 9 can be altered according to specific filtering needs. It is envisioned that other filters/series of filters can be utilized depending on varying filtering needs. The composition of such filters will be known to those having skill in the art.

[0024] A user of the pipe first inhales smoke through the mouthpiece 6. As shown in FIG. 2, a check valve 12 is positioned between the bowl 3 and the mouthpiece 6 so as to prevent exhaled smoke from flowing back through the bowl 3. The check valve can be a swinging or trap door type check valve as shown in FIG. 2, or an alternate type check valve. In the embodiment shown, the check valve 12 is positioned in proximity to the bowl 3, however, the check valve 12 can be positioned at any point between the mouthpiece 6 and the bowl 3.

[0025] Referring now to FIG. 3A, operation of the check valve 12 is illustrated. As indicated by the arrows, when a user inhales through the mouthpiece 6, air will flow through the bowl 3, into the first pipe piece 2, and through the mouthpiece 6 thereof. Inhalation exerts a force on the check valve 12 so as to cause the check valve 12 to open, allowing smoke to be drawn through the mouthpiece 6. The check valve 12 is unidirectional in that it will only open towards the mouthpiece 6 upon inhalation. In this manner, exhaled smoke is prevented from flowing back through the bowl 3.

[0026] Smoke is then exhaled through the mouthpiece 6. Again referring to FIG. 2, a second check valve 13 is positioned between the first pipe piece 2 and the second pipe piece 8 so as to allow the exhaled smoke to flow through the second pipe piece 8 and direct the exhaled smoke through the filter or series of filters 9. The check valve 13 can be a swinging or trap door type check valve as shown in FIG. 2, or an alternate type check valve. In the embodiment shown, the check valve 13 is positioned in proximity to the joint between the first pipe piece 2 and the second pipe piece 8, however, the check valve 13 can be positioned at any point between the joint and the filter or series of filters 9.

[0027] As exhaled smoke passes through the filter or series of filters 9, harmful toxins and unpleasant odors are eliminated therefrom. The filter or series of filters 9 can be removed and replaced. This can be accomplished by detaching the second pipe piece 8 from the first pipe piece 2 or by detaching a terminal portion 14, which can be detached from the second pipe piece 8 by a screw or other such means, so as to allow removal and replacement of the filter or series of filters 9. Filtered smoke then exits the second pipe piece 8 through an opening in the terminal portion 14 thereof.

[0028] The second pipe piece 8 can also be detached from the first pipe piece 2 and used independently, such as with other conventional pipes. In this manner a user would inhale from a separate pipe and then exhale through the second pipe piece 8 so as to accomplish the desired filtering.

[0029] Referring now to FIG. 3B, operation of the check valve 13 is illustrated. As indicated by the arrows, when a user exhales through the mouthpiece 6, smoke will flow through the second pipe piece 8 and the filter or series of filters 9 disposed therein. Exhalation exerts a force on the check valve 13 so as to cause the check valve 13 to open, allowing smoke to be pushed through the filter or series of filters 9. The check valve 13 is unidirectional in that it will only open towards the filters or series of filters 9. In this manner, exhaled smoke is prevented from flowing back through the bowl 3, and likewise, air is prevented from being drawn through the second pipe piece 8 upon inhalation.

[0030] Referring now to FIG. 4, a second embodiment of the invention is shown comprising a pipe 15 with a bowl 16 at one end in which a smoking substance is placed and a stem 17 terminating in a mouthpiece through which smoke can be inhaled. Running through the stem 17 from the bowl 16 to the mouthpiece is a first hollow conduit 18 through which smoke is inhaled. A second hollow conduit 19 with a filter or series of filters 20 disposed therein runs from the mouthpiece, parallel to the first hollow conduit 18, and terminates at an opening 21 positioned between the mouthpiece and the bowl 16.

[0031] A series of filters 20 is shown disposed within the second hollow conduit 19. A first filter can be comprised of charcoal. A second filter can be comprised of a deodorizing cotton. The ordering and spacing of the series of filters 20 can

be altered according to specific Filtering needs. It is envisioned that other filters/series of filters can be utilized depending on varying filtering needs. The composition of such filters will be known to those having skill in the art.

[0032] A user of the pipe **15** first inhales smoke through the mouthpiece. A check valve **22** is positioned within the first hollow conduit **18** between the bowl **16** and the mouthpiece so as to prevent exhaled smoke from flowing back through the bowl **16**. The check valve can be a swinging or trap door type check valve as shown in FIG. **4**, or an alternate type check valve. In the embodiment shown, the check valve **22** is positioned at a distance from the bowl **16**, however, the check valve **22** can be positioned at any point between the mouthpiece and the bowl **16**.

[0033] As indicated by the arrows in FIG. **4**, when a user inhales through the mouthpiece, air will flow through the bowl **16**, into the first hollow conduit **18**, and through the mouthpiece portion thereof. Inhalation exerts a force on the check valve **22** so as to cause the check valve **22** to open, allowing smoke to be drawn through the mouthpiece portion of the stem **17**. The check valve **22** is unidirectional in that it will only open towards the mouthpiece upon inhalation. In this manner, exhaled smoke is prevented from flowing back through the bowl **16**.

[0034] Smoke is then exhaled through the mouthpiece. A second check valve **23** is positioned within the second hollow conduit **19** between the bowl **16** and the mouthpiece so as to allow exhaled smoke to flow through the second hollow conduit **19** and direct the exhaled smoke through the filter or series of filters **20**. The check valve **23** can be a swinging or trap door type check valve as shown in FIG. **4**, or an alternate type check valve. In the embodiment shown, the check valve **23** is positioned in proximity to the filter or series of filters **20**, however, the check valve **23** can be positioned at any point between the mouthpiece and the filter or series of filters **20**.

[0035] As exhaled smoke passes through the filter or series of filters **20**, harmful toxins and unpleasant odors are eliminated therefrom. It is also envisioned that the pipe **15** can be designed so as to allow the filter or series of filters **20** to be removed and replaced. This can be accomplished by fitting a joint within the stem **17** so as to allow access to the filters or series of filters **20**. Filtered smoke then exits the second hollow conduit **19** through the opening **21**.

[0036] Referring now to FIG. **5**, a third embodiment of the invention is shown comprising a holder **24** for receiving a cigarette or cigar. Running from a receiving end **25** of the holder **24** to an opposite terminal end, which is the inhaling end, or mouthpiece, is a first hollow conduit **26** through which smoke is inhaled. A second hollow conduit **27** with a filter or series of filters **28** disposed therein runs from the inhaling end, parallel to the first hollow conduit **26**, and terminates at an opening **29** positioned between the inhaling end and the receiving end **25**.

[0037] A series of filters **28** is shown disposed within the second hollow conduit **27**. A first filter can be comprised of charcoal. A second filter can be comprised of a deodorizing cotton. The ordering and spacing of the series of filters **28** can be altered according to specific filtering needs. It is envisioned that other filters/series of filters can be utilized depending on varying filtering needs. The composition of such filters will be known to those having skill in the art.

[0038] A user of the holder **24** first inhales smoke through the mouthpiece. A check valve **30** is positioned within the first hollow conduit **26** between the receiving end **25** and the

mouthpiece so as to prevent exhaled smoke from flowing back through the cigarette or cigar. The check valve **30** can be a swinging or trap door type check valve as shown in FIG. **5**, or an alternate type check valve. In the embodiment shown, the check valve **30** is positioned at a distance from the receiving end **25**, however, the check valve **30** can be positioned at any point between the mouthpiece and the receiving end **25**.

[0039] As indicated by the arrows in FIG. **5**, when a user inhales through the mouthpiece, air will flow through the cigarette or cigar, into the first hollow conduit **26**, and through the mouthpiece. Inhalation exerts a force on the check valve **30** so as to cause the check valve **30** to open, allowing smoke to be drawn through the mouthpiece portion of the holder **24**. The check valve **30** is unidirectional in that it will only open towards the mouthpiece upon inhalation. In this manner, exhaled smoke is prevented from flowing back through the cigarette or cigar.

[0040] Smoke is then exhaled through the mouthpiece. A second check valve **31** is positioned within the second hollow conduit **27** between the receiving end **25** and the mouthpiece so as to allow exhaled smoke to flow through the second hollow conduit **31** and direct the exhaled smoke through the filter or series of filters **28**. The check valve **31** can be a swinging or trap door type check valve as shown in FIG. **5**, or an alternate type check valve. In the embodiment shown, the check valve **31** is positioned in proximity to the filter or series of filters **28**, however, the check valve **31** can be positioned at any point between the mouthpiece and the filter or series of filters **28**.

[0041] As exhaled smoke passes through the filter or series of filters **28**, harmful toxins and unpleasant odors are eliminated therefrom. It is also envisioned that the holder **24** can be designed so as to allow the filter or series of filters **28** to be removed and replaced. This can be accomplished by fitting a joint within the holder **24** so as to allow access to the filters or series of filters **28**. Filtered smoke then exits the second hollow conduit **27** through the opening **29**.

[0042] Although preferred embodiments of the invention have been illustrated in the accompanying Drawings and described in the foregoing Summary and Detailed Description, it will be understood that the invention is not limited to the embodiments disclosed, but is capable of numerous rearrangements, modifications, and substitutions of parts and elements without departing from the spirit of the invention.

What is claimed is:

1. A smoking device comprising:

a bowl comprising a hollow interior for receiving smoking materials therein;

a stem connected to and extending from the bowl for engagement with the mouth of a smoker to support the bowl therefrom;

a first passageway extending from the hollow interior of the bowl through the stem to the distal end thereof;

means mounted in the first passageway for permitting smoke to pass from the hollow interior of the bowl through the first passageway and through the distal end of the stem into the mouth of a smoker while simultaneously preventing the flow of air from the distal end of the stem through the first passageway into the hollow interior of the bowl;

a second passageway extending from the distal end of the stem through the stem to an outlet located between the distal end of the stem and the bowl; and

means mounted in the second passageway for preventing the flow of air through the second passageway from the outlet to the distal end of the stem while permitting the flow of smoke through the second passageway from the distal end of the stem to the outlet.

2. A smoking device of claim 1 further comprising a conduit removably joined at an outlet of the stem between the distal end of the stem and the means founded in the first passageway for permitting for filtering out harmful toxins and unpleasant odors from the flow of air; and a third passageway extending from an outlet of the stem through the conduit to the distal end thereof.

3. A smoking device of claim 2 further comprising at least one filter disposed within the third passageway for removing harmful toxins and unpleasant odors from the flow of air moving through the third passageway.

4. A smoking device of claim 3 wherein at least one filter is comprised of charcoal.

5. A smoking device wherein at least one filter is comprised of deodorized cotton.

6. A smoking device of claim 3 further comprising a means for removing and replacing at least one filter located in the third passageway.

7. A smoking device of claim 1 further comprising at least one filter disposed in the second passageway for removing harmful toxins and unpleasant odors from the flow of air moving through the second passageway.

8. A smoking device of claim 7 wherein at least one filter is comprised of charcoal.

9. A smoking device of claim 7 wherein at least one filter is comprised of deodorized cotton.

10. A smoking device of claim 7 further comprising a means for removing and replacing at least one filter located in the second passageway.

11. A smoking device comprising:

a tube comprising a hollow interior for receiving smoking articles therein selected from the group consisting of cigarettes and cigars;

a stem connected to and extending from the tube for engagement with the mouth of a smoker to support the tube therefrom;

a first passageway extending from the hollow interior of the tube through the stem to the distal end thereof;

means mounted in the first passageway for permitting smoke to pass from the hollow interior of the tube through the first passageway and through the distal end of the stem into the mouth of a smoker while simultaneously preventing the flow of air from the distal end of the stem through the first passageway into the hollow interior of the tube;

a second passageway extending from the distal end of the stem through the stem to an outlet located between the distal end of the stem and the tube; and

means mounted in the second passageway for preventing the flow of air through the second passageway from the outlet to the distal end of the stem while permitting the flow of smoke through the second passageway from the distal end of the stem to the outlet.

12. A smoking device of claim 11 further comprising at least one filter disposed within the second passageway for removing harmful toxins and unpleasant odors from the flow of air moving through the second passageway.

13. A smoking device of claim 12 wherein at least one filter is comprised of charcoal.

14. A smoking device of claim 12 wherein at least one filter is comprised of deodorized cotton.

15. A smoking device of claim 12 further comprising a means for removing and replacing at least one filter located in the second passageway.

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