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**Gay**

(54) **MOUTHPIECE FOR SMOKING PIPE**

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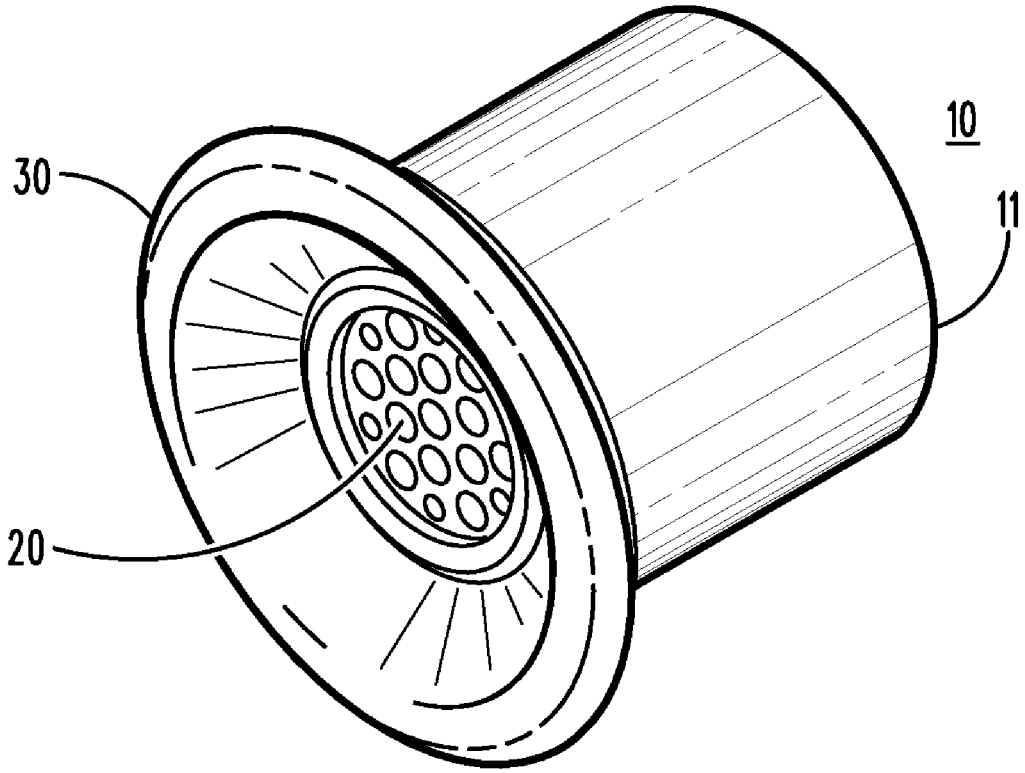
(52) **U.S. Cl.**

CPC ..... ***A24F 7/04*** (2013.01); ***A24F 7/02*** (2013.01); ***A24D 3/04*** (2013.01)

(57) **ABSTRACT**

A mouthpiece and filter for smoking pipes. This pipe add-on effectively improves the smoking experience by it providing a filter at the end of a standard smoking pipe which filters out ash and other large particulates; and allowing for users to replace the mouthpiece when sharing a single pipe, limiting the transfer of diseases, resulting in a more sanitary experience.



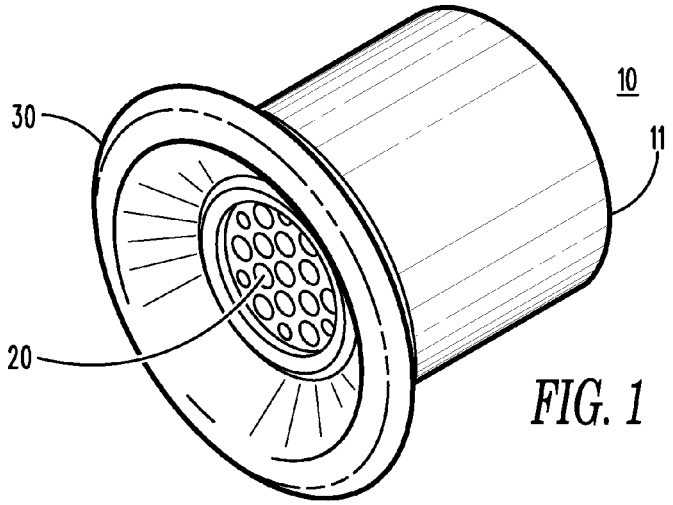



FIG. 1

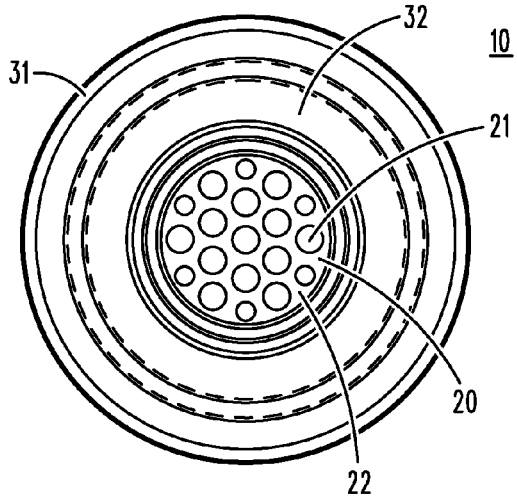



FIG. 2

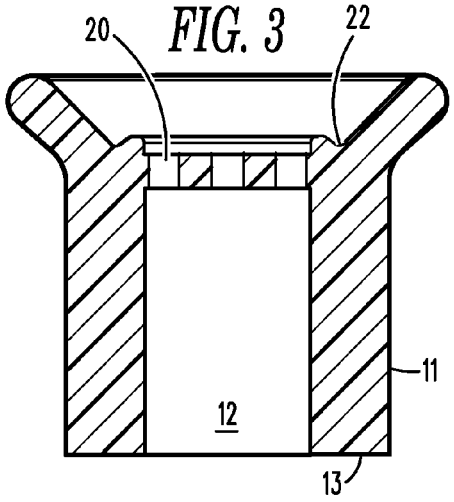



FIG. 3

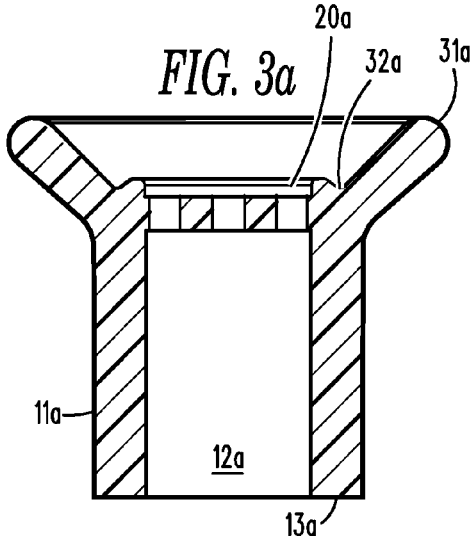



FIG. 3a

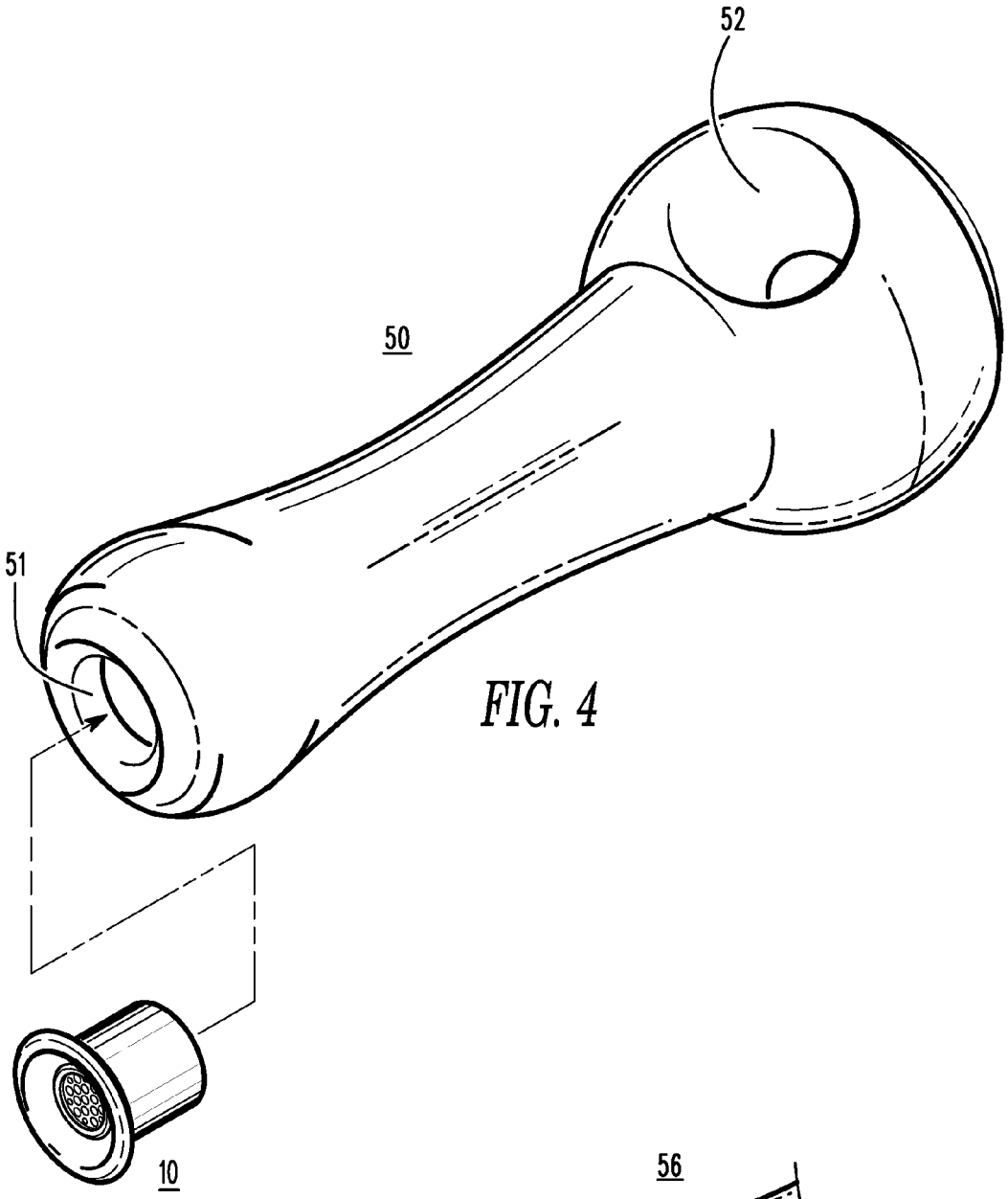



FIG. 4

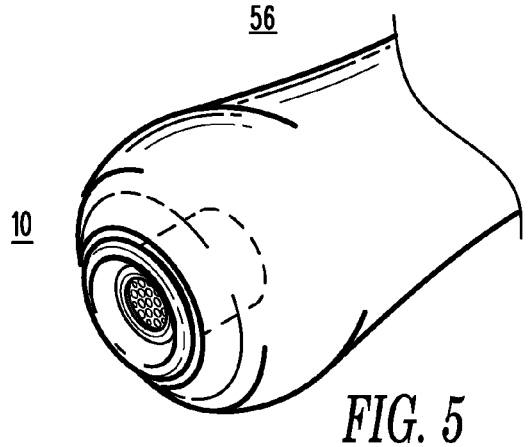



FIG. 5

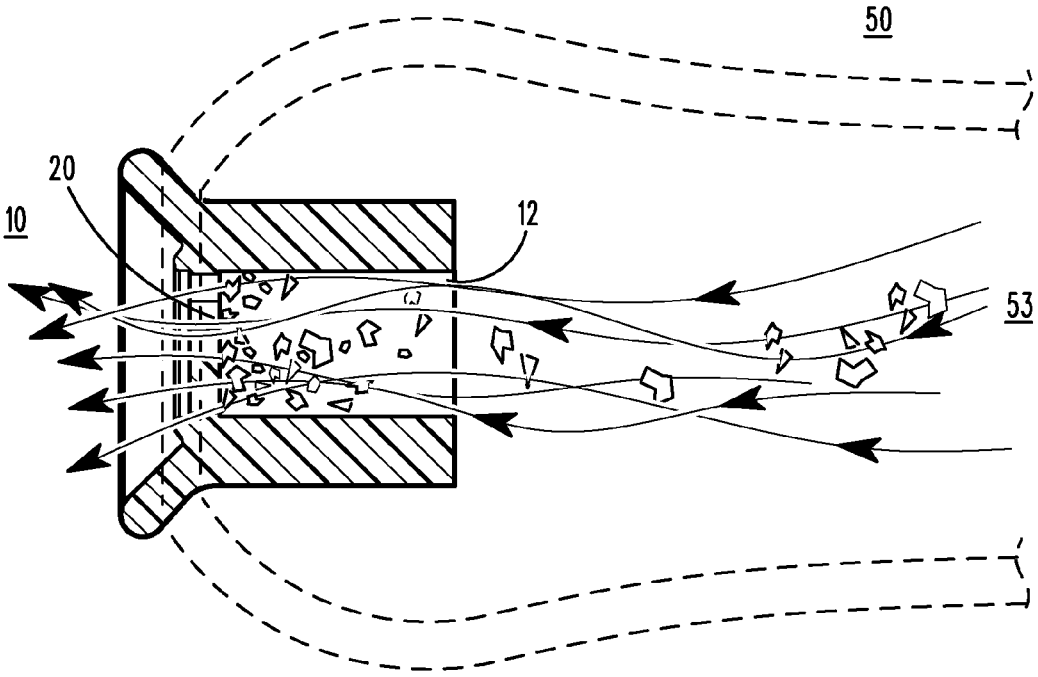



FIG. 6

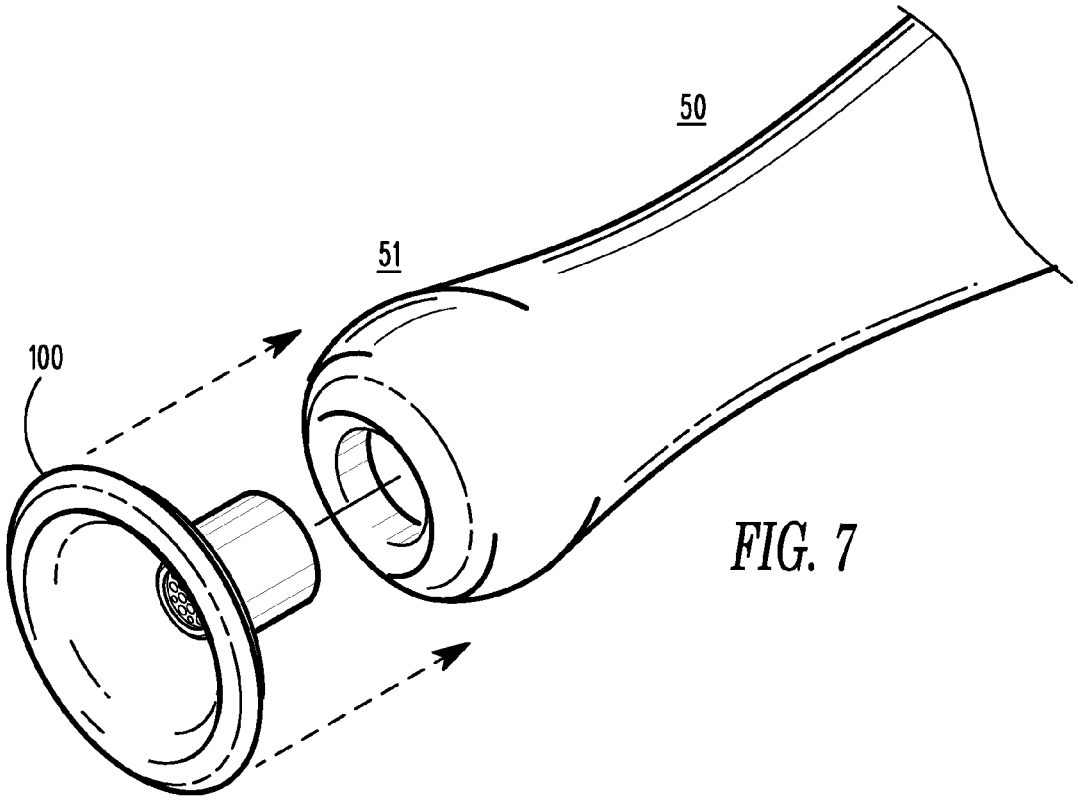



FIG. 7

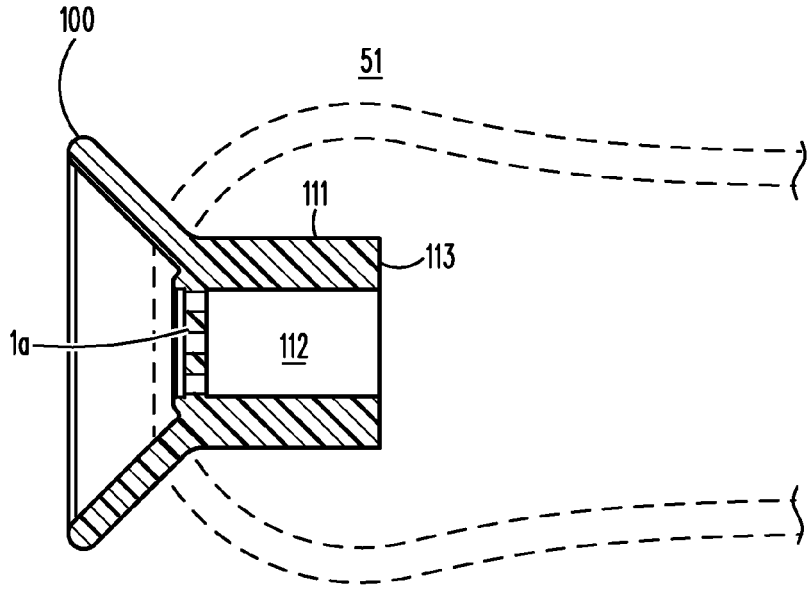



FIG. 8

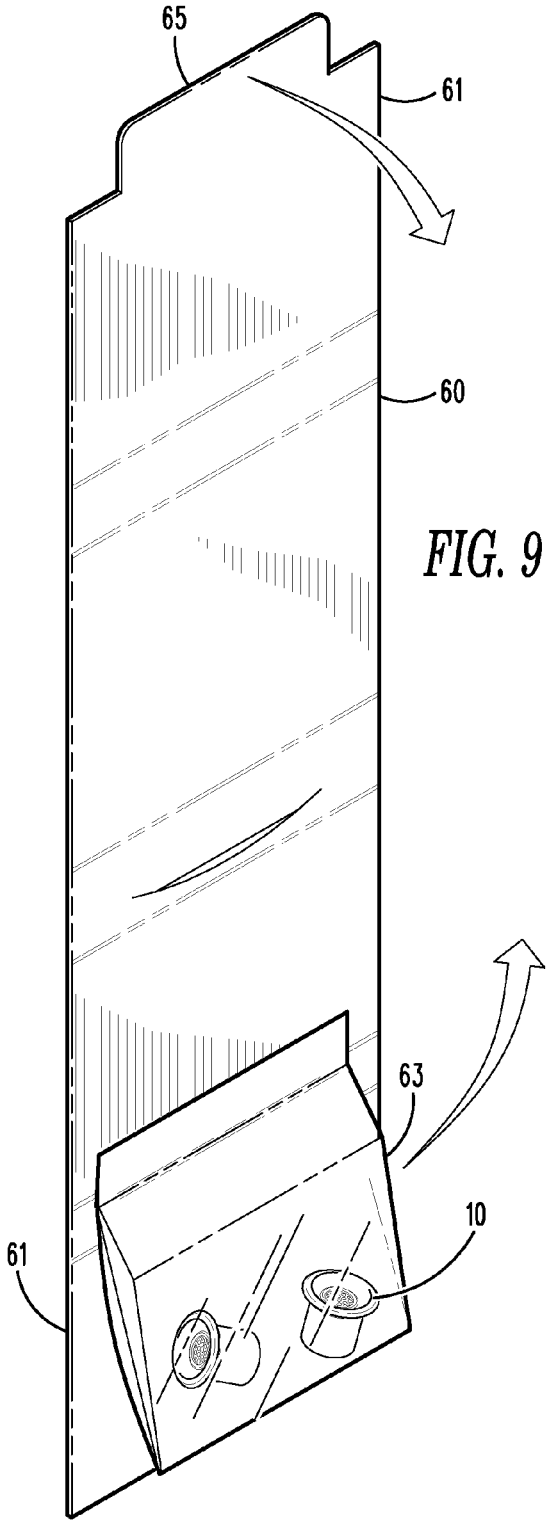



FIG. 9

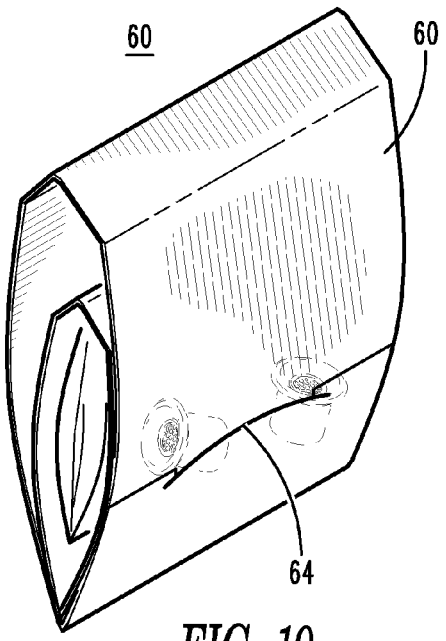



FIG. 10

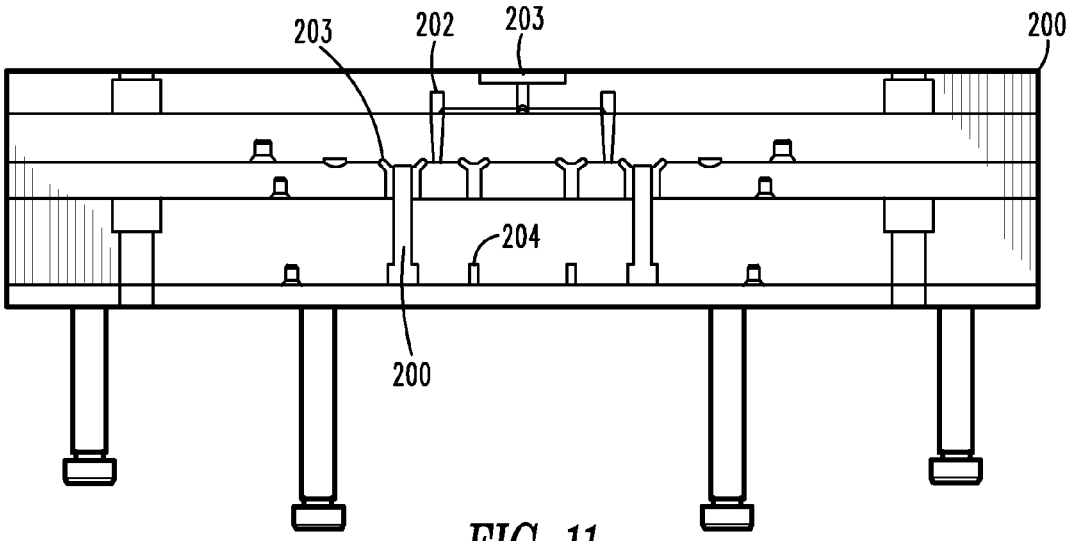



FIG. 11

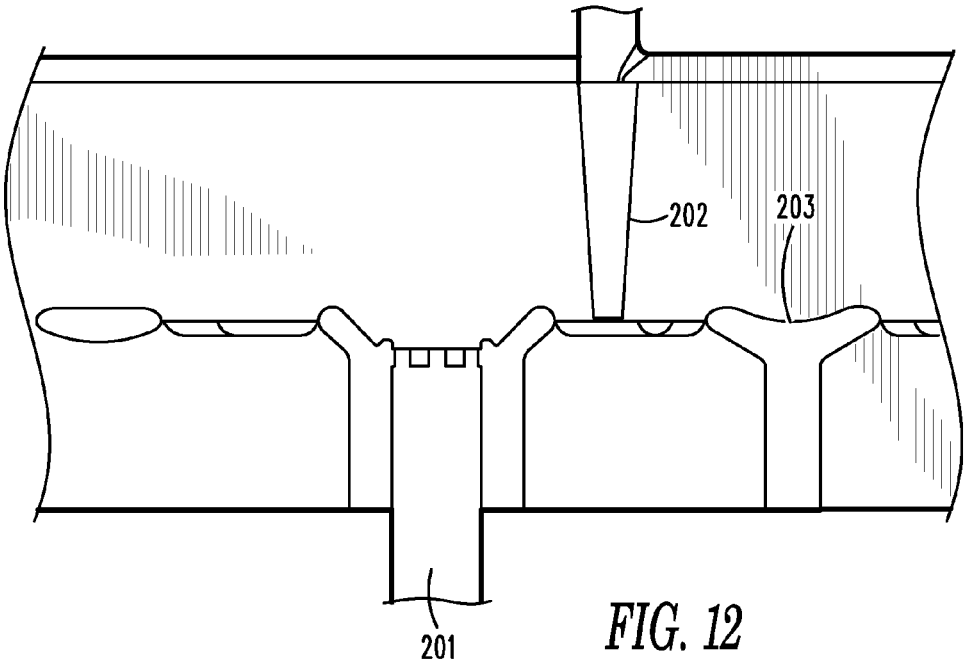



FIG. 12

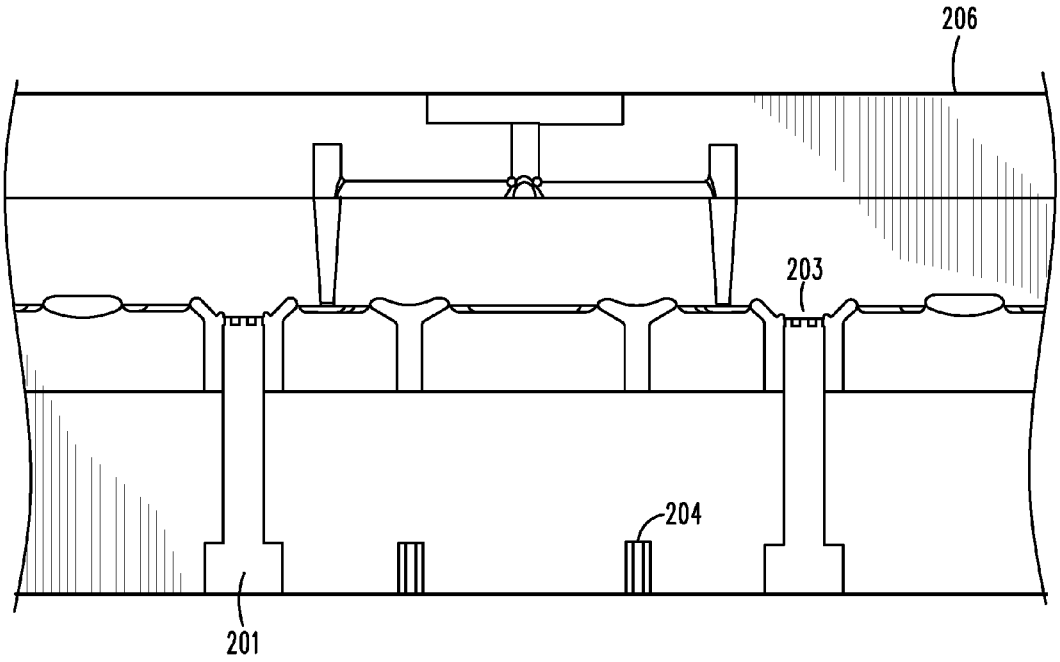



FIG. 13

# MOUTHPIECE FOR SMOKING PIPE

## BACKGROUND OF THE INVENTION

**[0001]** Field of the Invention

**[0002]** The present invention generally relates to a mouthpiece for pipes. Pipe add-on effectively improves the smoking experience in two critical ways: First it provides a filter at the end of a standard smoking pipe which filters out ash and other large particulates; and second it allows for users to replace the mouthpiece when sharing a single pipe, limiting the transfer of diseases, resulting in a more sanitary experience.

**[0003]** Discussion of the Prior Art

**[0004]** U.S. Pat. No. 4,121,598 ('598 Patent), which issued to Hornsby discloses a Smokers' Pipes. The '598 Patent describes a smoker's pipe comprising a stem unit incorporating the base of the bowl and formed of a plastics material and a bowl element detachably fitted to the bowl base portion and preferably formed of briar, the stem unit including the bowl base being internally metal lined. The pipe may include an externally fluted metal condenser plug in the bowl base and which plug may be integral with the bowl base lining.

**[0005]** U.S. Pat. No. 4,841,994 ('994 Patent), which issued to Lugli, discloses a Mouth. The '994 Patent essentially describes mouth-piece which comprises a tubular body which accommodates a filter element which defines, with the inner walls of the tubular body, a first collection chamber for the combustion products, while a second collection chamber for the condensation products is defined in the same tubular body by a slot which extends into the tubular body and is rigidly connected thereto. The filter element has a nucleus of truncated cone shape, which is completely inserted inside the tubular body and has a face in abutment with the end of a cigarette.

**[0006]** U.S. Pat. No. 6,745,777 ('777 Patent), which issued to Liu discloses a Tobacco Filter Means Superimposedly Rechargeably Filled with Disposable Filter Units. The '777 Patent describes tobacco filter device which includes a plurality of filter units superimposedly rechargeably filled in a sleeve member, having a bowl member connected to an outer end (smoking end) of the sleeve member and a mouthpiece connected to an inner end (mouth end) of the sleeve member, whereby upon smoking of tobacco or a cigarette as loaded or inserted in the bowl portion, the filter unit or units positioned on an outer portion of the sleeve member adjacent to the smoking end, after being saturated with smoking waste including tar and nicotine, may be pushed outwardly and discarded from the outer end of the sleeve member as thrusted and urged by a fresh (new) filter unit (or units) as recharged into the inner (mouth) end of the sleeve member, thereby still keeping use of those filter units not yet saturated and loaded in the rear portion of the sleeve member, without wasting the useful filter units.

**[0007]** U.S. Pat. No. 7,513,258 ('258 Patent), which issued to Kollasch et al., describes a Disposable Filter Means for Smoking. The '258 Patent describes a disposable shank trap for use with a pipe to filter smoke from the burning chamber. The shank trap can include or be associated with other filters to further filter smoke. The advantage of the shank trap is that it can be easily replaced, avoid problems with the cleaning of the pipe, provide efficient filtering of the smoke and efficient usage of the tobacco.

## SUMMARY OF THE INVENTION

**[0008]** Pipes and other types of smoking accessories have been used to smoke tobacco and other herbal materials for many years, but recently over the past decade or so, the pipes and other types of smoking accessories that were once commonly made of wood or metal are now, typically made of glass. The primary reason for the switch to glass as a material for pipe making is that glass does not alter the taste of the material being smoked, like the burning of wood or the heating of a metallic material would have. In addition, glass is a thermal insulator when compared to many other materials used for constructing pipes. Another reason for the switch to glass is that the design, shape and color spectrum is only limited by the glass blower's imagination. Typically, in a wooden or metallic pipe, a metallic screen is placed in the bowl of the pipe to cover the opening in between the bowl and the stem to prevent ash byproduct from passing through the stem of the pipe and entering the user mouth. However those applications are not suitable for use with glass pipes as discussed below. Thus, there is a need for a filter that can be used with a typical glassware (the term glassware herein shall represent the vast array of glass smoking accessories in the market) smoking system.

**[0009]** A major problem with glassware is that the metallic screens typically used in metal or wood pipes, do not fit and stay in the glass bowl, so they are not used. This leaves the opening in the bowl exposed, which allows the smoke to pass into the stem of the pipe opening, and the burnt ash is then free to travel into and through the stem of the glassware and enter the user's mouth. There are glass "screens" that are placed into the bowl that prevent the original material from falling through the opening in the bowl prior to it being burnt, but these do not actually plug the hole between the bowl and the stem (or they would prevent the pipe from working), however once the material is turned into ash, it is still able to be sucked through the opening between the bowl and the stem, and then into the user mouth. Another issue with the glass screens placed into the bowl, is it gets clogged frequently and requires constant cleaning sometimes damaging the glassware

**[0010]** Therefore a goal of the present invention is to solve both of the issues addressed above, by providing a solution that is inserted into the mouthpiece opening of a pre-existing glassware. As most consumers purchase their glassware based on the aesthetic look and feel of the piece, it is important that the design of the mouth tip screen does not alter the aesthetic appearance of the glassware once inserted. The mouth tip screen is typically comprised of three components: the hollow core shaft that is inserted into the mouthpiece opening, the mouthpiece; which replaces or covers the glassware's original mouthpiece; and the screen.

**[0011]** Such an application is capable of being used with several types pipes and smoking apparatuses. Indeed, a major advantage of the design of the current invention is its universal applicability and adaptability to a wide range of smoking devices, and its simplicity of use or cleaning, and its relatively cheap cost in comparison to other filters currently on the market.

**[0012]** To achieve this result the typical use of the device proceeds as follows: the shaft of the mouthpiece is compressed into the opening of the glassware's original mouthpiece. This compression also forms an air tight seal around the opening keeping all airflow going through the center opening in the shaft. As the user draws smoke through the

stem and out through the mouthpiece, the holes in the screen allow the smoke to pass through, but the holes are not large enough to allow ash and resin byproducts through thereby improving the smoker's experience and health.

**[0013]** To achieve these objectives, a wrench and ratchet adaptor, methods, and tools having the following features is proposed.

**[0014]** In a first embodiment a mouthpiece for use with a smoking pipe having a tube, a filter formed at one end of the tube portion, a mouth-engaging element attached to the tube portion adjacent the filter portion, and wherein the tube, filter, and mouth-engaging element are integrally formed of a single material. In some instances the single material that forms the tube, filter, and mouth-engaging elements is injection molded liquid silicone rubber. In others, the mouth-engaging element angles away from the shaft at near or around 45 degrees and has a rounded edge, and the interior portion mouth-engaging element begins angling upwards from a point of the shaft such that it creates a u-shaped dip between the mouth-engaging element and the filter. In one example the filter comprises at least nineteen holes oriented with mirrored symmetry. In a typical embodiment the five holes are oriented along a first line of symmetry, four holes are located adjacent said five holes on either side of the line of symmetry, three holes are located adjacent said four holes on the end opposite said line of symmetry, and said holes are also symmetrical along lines of symmetry rotated forty-five, ninety, and one hundred thirty five degrees from said first line of symmetry. Typical dimensions include: the holes have a diameter ranging from 0.025-0.035 inches, the shaft has an inner diameter of 0.204 inches and an outer diameter of 0.305 inches, the shaft has an inner diameter of 0.204 inches and an outer diameter of 0.390 inches.

**[0015]** In a second embodiment the invention contemplates a combination smoking pipe and mouthpiece having a smoking pipe comprising a bowl for burning smoking material, a hollow shaft for transporting smoke, and a hole situated at the end of the shaft opposite the bowl for the user to inhale smoke through, and a mouthpiece comprising a tube, a filter formed at one end of the tube portion, a mouth-engaging element attached to the tube portion adjacent the filter portion, wherein

**[0016]** the tube, filter, and mouth-engaging element are integrally formed of a single material, wherein the tube portion of the mouthpiece is placed inside of the hole of the smoking pipe and is capable of allowing the flow of smoke through the hole at the end of the pipe through the filter of the mouthpiece. In some instances the mouthpiece is formed from flexible injection molded liquid silicone rubber, the smoking pipe is formed from glass, and the tube of the mouthpiece is compressibly engaged to the interior portion of the hollow shaft of the smoking pipe. In certain embodiments the mouth-engaging element angles away from the shaft at near or around 45 degrees and has a rounded edge, the interior portion mouth-engaging element begins angling upwards from a point of the shaft such that it creates a u-shaped dip between the mouth-engaging element and the filter, and the filter comprises at least nineteen holes oriented with mirrored symmetry. The filter may preferably have five holes are oriented along a first line of symmetry four holes are located adjacent said five holes on either side of the line of symmetry, three holes are located adjacent said four holes on the end opposite said line of symmetry, wherein said holes are also symmetrical along lines of symmetry rotated forty-five, ninety, and one hundred thirty five degrees from said first line of symmetry, and the holes have a diameter ranging from 0.025-0.035 inches.

**[0017]** In another embodiment of the invention, the invention contemplates a method of smoking comprising providing a smoking pipe, the smoking pipe comprising a bowl for burning smoking material, a hollow shaft for transporting smoke, and a hole situated at the end of the shaft opposite the bowl for the user to inhale smoke through, providing a removable mouthpiece said mouthpiece comprising a tube, a filter formed at one end of the tube portion, a mouth-engaging element attached to the tube portion adjacent the filter portion, wherein the tube, filter, and mouth-engaging element are integrally formed of a single material, providing a smoking material, placing the tube portion of the mouthpiece inside of the hole of the smoking pipe, placing the smoking material into the bowl of the smoking pipe, igniting the smoking material, drawing smoke through the shaft of the smoking pipe and through the filter of the mouthpiece, the filter trapping ash and particulates while allowing smoke and air to flow through the filter. The method may also comprise removing the mouthpiece from the end of the smoking pipe, washing the mouthpiece to remove ash and particulates caught by the filter, and replacing the washed mouthpiece into the smoking pipe. In other cases the mouthpiece is formed from flexible injection molded liquid silicone rubber, the smoking pipe is formed from glass, and placing the tube portion of the mouthpiece inside of the hole of the smoking pipe comprises compressing the tube of the mouthpiece and inserting it into the hole of the smoking pipe and releasing pressure on the mouthpiece, thereby the tube of the mouthpiece is compressibly engaged to the interior portion of the smoking pipe. In other cases, the mouth-engaging element angles away from the shaft at near or around 45 degrees and has a rounded edge, the interior portion mouth-engaging element begins angling upwards from a point of the shaft such that it creates a u-shaped dip between the mouth-engaging element and the filter, and the filter comprises at least nineteen holes oriented with mirrored symmetry, five holes being oriented along a first line of symmetry, four holes are located adjacent said five holes on either side of the line of symmetry, three holes are located adjacent said four holes on the end opposite said line of symmetry, wherein said holes are also symmetrical along lines of symmetry rotated forty-five, ninety, and one hundred thirty five degrees from said first line of symmetry, and the holes have a diameter ranging from 0.025-0.035 inches.

**[0018]** Such embodiments do not represent the full scope of the invention. Reference is made therefore to the claims herein for interpreting the full scope of the invention. Other objects of the present invention, as well as particular features, elements, and advantages thereof, will be elucidated or become apparent from, the following description and the accompanying drawing figures.

## BRIEF DESCRIPTION OF THE DRAWINGS

**[0019]** Other features of my invention will become more evident from a consideration of the following brief descriptions of drawings:

**[0020]** FIG. No. **1** is a perspective view of a preferred mouthpiece according to the present invention.

**[0021]** FIG. No. **2** is a front side view of the preferred mouthpiece of FIG. no. **1** according to the present invention.

**[0022]** FIG. No. **3** is a side-on cutaway view of the preferred mouthpiece of FIG. no. **1** according to the present invention.

**[0023]** FIG. No. **3***a* is a side-on cutaway view of a second embodiment of a preferred mouthpiece according to the present invention

**[0024]** FIG. No. **4** is a perspective view of a preferred mouthpiece of the current invention in conjunction with an exemplary smoking pipe.

**[0025]** FIG. No. **5** is a perspective close up view of a preferred mouthpiece of the current invention inside the mouthpiece of an exemplary pipe.

**[0026]** FIG. No. **6** a side-on cutaway view of a preferred mouthpiece in cooperation with an exemplary smoking pipe according to the present invention, with operational features also shown.

**[0027]** FIG. No. **7** is a perspective view of another embodiment of the of a preferred mouthpiece of the present invention in cooperation with an exemplary smoking pipe.

**[0028]** FIG. No. **8** a side-on cutaway view of the preferred mouthpiece of FIG. **7**. in cooperation with an exemplary smoking pipe according to the present invention.

**[0029]** FIG. No. **9** is a perspective view of a preferred packaging for the mouthpieces of the current invention in an open position.

**[0030]** FIG. No. **10** is a perspective view of a preferred packaging for the mouthpieces of the current invention in a closed position.

**[0031]** FIG. No. **11** is a side on view of a preferred manufacturing apparatus for the mouthpieces of the current invention.

**[0032]** FIG. No. **12** is a close up, side on view of the preferred manufacturing apparatus of FIG. **11**.

**[0033]** FIG. No. **13** is a side on view of a preferred manufacturing apparatus for the mouthpieces of the current invention.

## DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

**[0034]** Referring now the drawings with more specificity, the present invention essentially provides a mouthpiece and filter for a smoking pipe or other smoking apparatus. In addition the mouthpiece can be modified with several other variables and features discussed below to fit a wide range and variety of smoking pipes, of various sizes, shapes, and applications.

**[0035]** Looking now to FIGS. **1** and **2** a typical mouthpiece and filter **10** is show. The mouthpiece is typically created using injection molded Liquid silicone rubber (LSR). This allows the mouthpiece to easily removed from the glassware, and can be wiped clean, or be machine washable, as the resin from the burnt material will not adhere to the LSR, as it will most other surfaces. The mouthpiece **10** then can be easily re-inserted into the glassware, ready for use again. The perspective view of FIG. **1** shows the general structure of mouthpiece **10** which comprises a shaft or stem **11**, filter **20**, and mouthpiece tip, or mouth engaging element **30**. The tip typically angles away from the shaft at near or around 45 degrees and has a rounded edge **31**. As seen in FIG. **2**, filter **20** is typically made up of multiple holes **21** and screening portion **22** (in this embodiment nineteen holes are set out in a specific, mirrored layout that is specifically adapted for maximizing smoke flow without allowing ash through). Holes **21** will typically have a diameter ranging from 0.025-0.035 inches with smaller holes situated in certain positions in order to be accommodated according to the design as shown. Tip portion **30** has a screen connection portion **32** and rounded edge **31** is situated at the edge to prevent cutting or chafing of the user's lips, tongue, and mouth.

**[0036]** Similarly, FIGS. **3** and **3***a* show side-by-side embodiments of the mouthpiece of the current invention capable of being used in two different sizes of smoking pipe. The unit is typically 0.455 in in overall height and 0.533 in in overall width (diameter of the outermost edge of the rounded edge **31**). Inner diameters **12** and **12***a* are preferably 0.204 in. This will accommodate several pipes, but an alternative embodiment (FIG. **3***a*) is capable of accommodating smaller pipe openings. The objective is to cover a range of glass pipe openings from 0.385 in to 0.225 in. The larger shaft **11** embodiment has an outer diameter of 0.390 in to allow compression to hold it into the mouthpiece. The shaft thickness **13** is 0.093 in and allows compression down to an opening of 0.285 in while still allowing airflow through the opening. The small shaft **11***a* embodiment of FIG. **3***a* has an outer diameter of 0.305 in allowing for compression into an opening of 0.300 in and a shaft thickness **13***a* of 0.050 in allows for compression down to an opening of 0.225 in while still allowing airflow through the opening. As shown in both FIGS. **3** and **3***a* dips **32** and **32***a* are at the filter **20**(**20***a*)-tip **30**(**30***a*) interface. This allows the edge to bend and be flexible. The tip **30** angles off the shaft at a 45-degree angle at 0.322 in from the bottom of the shaft and the outer dimensions of the mouthpiece do not change with the different shaft sizes.

**[0037]** Looking now to FIGS. **4** and **5** mouthpiece **10** is shown interaction with a typical piece of smoking glassware **50**. In typical operation smoking material is inserted into the bowl **52** which may or may not have its own screen or filter in the bottom. The material is then lit and the user draws smoke through end **51** to achieve a high. The mouthpiece **10**, of the current invention is inserted into the internal diameter of end **51** to achieve an airtight seal as shown in FIG. **5**. This allows for the screen of the mouthpiece to filter out particulates that would otherwise enter the mouth and lungs of the user. This operation is shown in greater detail in FIG. **6** where smoke and particulates **53** travel down the internal shaft of pipe **50** towards end **51**. There the smoke enters the shaft **12** of mouthpiece **10** and smoke exits, while particulates are trapped in screen **20**. If excess particulates accumulate after multiple uses the mouthpiece **10** can easily be removed and wiped clean.

**[0038]** Looking now to FIGS. **7** and **8** the hygenic advantages of certain embodiments of mouthpiece **100** can be more clear. Often smokers will share glassware **50** and thus all users will end up placing their mouth on the same glass of end **51**. Thus, by varying the diameter of mouthpiece **100** the majority or entirety of the end **51** can be covered by the mouthpiece **100**. Shaft **111**, shaft thickness **113**, screen **120**, and interior diameter **112** are substantially the same. However the simple interchanging of mouthpieces means that a health-conscious user can utilize his own filter **100** and thus avoid unnecessary exposure to diseases.

**[0039]** In addition to creating a new mouthpiece and filter for smoking, innovative packaging that replicates the design and feel of a matchbox is provided in FIGS. **9** and **10**. Therein packaging **60** has a bag **63** for holding mouthpieces **10** which is situated on interior flap **62**. This can then be

folded and secured in place using tab **65** on outer flap **61** which slides into slit **64** creating a stable packaging system that provides a unique look and feel.

**[0040]** Looking now to FIGS. **11-13** an exemplary apparatus **200** for injection molding of the mouthpiece of this invention is shown. In a typical application the mold closes, followed by the injection of the polymer into the mold cavity through nozzles **202**. Often times injection and cold runner **205** precedes the nozzles in operation. Typically two separate liquids are mixed which catalyzes the solidification process. Once the cavity **203** **203** is filled, pins **204** are inserted to provide the bottom half of the mouthpiece's unique shape, in addition a holding pressure is maintained to compensate for material shrinkage. In the next step, the Liquid silicone rubber material vulcanized causing it to fully solidify and once the part is sufficiently solidified, the mold opens and the part is ejected with ejector pins **201**. To achieve the desired dimensions of the mouthpiece (as described herein) various changes and adjustments to the injection molding process may be preferably altered depending on the make and manufacture of the molds and the choice of liquid silicone rubber by the manufacturer which may shrink or expand after extraction of the parts from the molding, as would be understood by one of ordinary skill in the art.

**[0041]** Accordingly, although the invention has been described by reference to certain preferred and alternative embodiments, it is not intended that the novel arrangements be limited thereby, but that modifications thereof are intended to be included as falling within the broad scope and spirit of the foregoing disclosures and the appended drawings.

I claim:

**1**. A mouthpiece for use with a smoking pipe comprising:

a tube;

a filter formed at one end of the tube;

a mouth-engaging element attached to the tube portion adjacent the filter portion; wherein

the tube, filter, and mouth-engaging element are integrally formed of a single material.

**2**. The mouthpiece of claim **1** wherein:

the single material that forms the tube, filter, and mouth-engaging elements is injection molded liquid silicone rubber.

**3**. The mouthpiece of claim **1** wherein:

the mouth-engaging element angles away from the shaft at near or around 45 degrees and has a rounded edge; and

the interior portion mouth-engaging element begins angling upwards from a point of the shaft such that it creates a u-shaped dip between the mouth-engaging element and the filter.

**4**. The mouthpiece of claim **1** wherein:

the filter comprises at least nineteen holes oriented with mirrored symmetry.

**5**. The mouthpiece of claim **4** wherein:

five holes are oriented along a first line of symmetry;

four holes are located adjacent said five holes on either side of the line of symmetry;

three holes are located adjacent said four holes on the end opposite said line of symmetry; and

wherein said holes are also symmetrical along lines of symmetry rotated forty-five, ninety, and one hundred thirty five degrees from said first line of symmetry.

**6**. The mouthpiece of claim **5** wherein:

the holes have a diameter ranging from 0.025-0.035 inches.

**7**. The mouthpiece of claim **5** wherein:

the shaft has an inner diameter of 0.204 inches and an outer diameter of 0.305 inches.

**8**. The mouthpiece of claim **5** wherein:

the shaft has an inner diameter of 0.204 inches and an outer diameter of 0.390 inches.

**9**. A combination smoking pipe and mouthpiece comprising:

a smoking pipe comprising a bowl for burning smoking material, a hollow shaft for transporting smoke, and a hole situated at the end of the shaft opposite the bowl for the user to inhale smoke through; and

a mouthpiece comprising a tube, a filter formed at one end of the tube portion, a mouth-engaging element attached to the tube portion adjacent the filter portion, wherein the tube, filter, and mouth-engaging element are integrally formed of a single material;

wherein the tube portion of the mouthpiece is placed inside of the hole of the smoking pipe and is capable of allowing the flow of smoke through the hole at the end of the pipe through the filter of the mouthpiece.

**10**. The combination of claim **9** wherein:

the mouthpiece is formed from flexible injection molded liquid silicone rubber;

the smoking pipe is formed from glass; and

the tube of the mouthpiece is compressibly engaged to the interior portion of the hollow shaft of the smoking pipe.

**11**. The combination of claim **10** wherein:

the mouth-engaging element angles away from the shaft at near or around 45 degrees and has a rounded edge;

the interior portion mouth-engaging element begins angling upwards from a point of the shaft such that it creates a u-shaped dip between the mouth-engaging element and the filter; and

the filter comprises at least nineteen holes oriented with mirrored symmetry.

**12**. The combination of claim **11** wherein:

five holes are oriented along a first line of symmetry;

four holes are located adjacent said five holes on either side of the line of symmetry;

three holes are located adjacent said four holes on the end opposite said line of symmetry;

wherein said holes are also symmetrical along lines of symmetry rotated forty-five, ninety, and one hundred thirty five degrees from said first line of symmetry; and

the holes have a diameter ranging from 0.025-0.035 inches.

**13**. A method of smoking comprising:

providing a smoking pipe, the smoking pipe comprising a bowl for burning smoking material, a hollow shaft for transporting smoke, and a hole situated at the end of the shaft opposite the bowl for the user to inhale smoke through;

providing a removable mouthpiece said mouthpiece comprising a tube, a filter formed at one end of the tube portion, a mouth-engaging element attached to the tube portion adjacent the filter portion, wherein the tube, filter, and mouth-engaging element are integrally formed of a single material;

providing a smoking material;

placing the tube portion of the mouthpiece inside of the hole of the smoking pipe;

placing the smoking material into the bowl of the smoking pipe;

igniting the smoking material;

drawing smoke through the shaft of the smoking pipe and through the filter of the mouthpiece, the filter trapping ash and particulates while allowing smoke and air to flow through the filter.

**14**. The method of claim **13** further comprising:

removing the mouthpiece from the end of the smoking pipe;

washing the mouthpiece to remove ash and particulates caught by the filter; and

replacing the washed mouthpiece into the smoking pipe.

**15**. The method of claim **14** wherein:

the mouthpiece is formed from flexible injection molded liquid silicone rubber;

the smoking pipe is formed from glass; and

placing the tube portion of the mouthpiece inside of the hole of the smoking pipe comprises compressing the tube of the mouthpiece and inserting it into the hole of the smoking pipe and releasing pressure on the mouthpiece, thereby the tube of the mouthpiece is compressibly engaged to the interior portion of the smoking pipe.

**16**. The method of claim **15** wherein:

the mouth-engaging element angles away from the shaft at near or around 45 degrees and has a rounded edge;

the interior portion mouth-engaging element begins angling upwards from a point of the shaft such that it creates a u-shaped dip between the mouth-engaging element and the filter; and

the filter comprises at least nineteen holes oriented with mirrored symmetry, five holes being oriented along a first line of symmetry, four holes are located adjacent said five holes on either side of the line of symmetry, three holes are located adjacent said four holes on the end opposite said line of symmetry, wherein said holes are also symmetrical along lines of symmetry rotated forty-five, ninety, and one hundred thirty five degrees from said first line of symmetry, and the holes have a diameter ranging from 0.025-0.035 inches.

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