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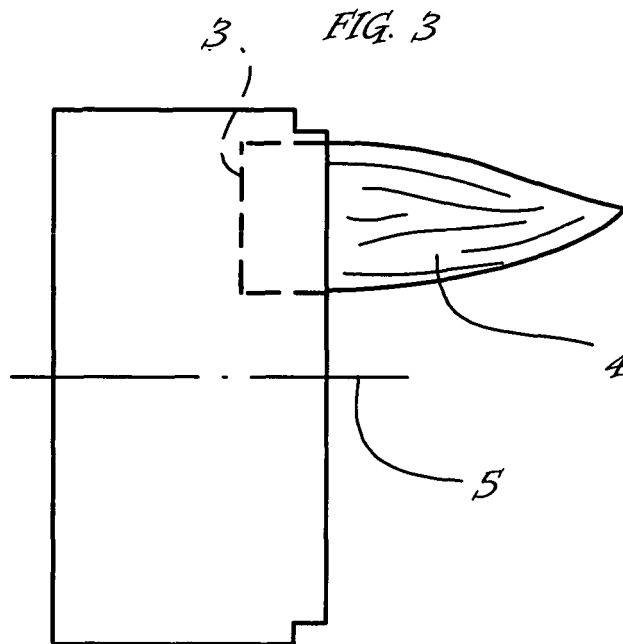
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(54) **Brush for art and cosmetic uses**

(57) A brush (1, 101) for art and cosmetic uses, wherein a thick body (2, 102), designed to be held in a user's hand, has at least one hole (3, 103) for receiving a tuft (104) of hairs; said hole (3, 103) and tuft (4, 104) of hairs being in offset position with respect to the longitudinal axis (5) of said body (2, 102). The lower portion of the body (2, 102) has a cavity (105) for connection to a liquid reservoir (106) or another utility tool (107) such

as a pencil, a rubber or another brush (1, 101) having a thick body (2, 102) and a centered or peripheral tuft (4, 104) of hairs, said second brush (1, 101) being of appropriate size for connection thereof within the cavity (105). The tuft (4, 104) of hairs being fixed or capable of sliding in a bushing (103), or of being folded into a compartment (111) formed on the upper portion of the body (2, 102). A cap (6) may be provided to cover and protect the tuft (4, 104) of hairs.



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Description

[0001] This invention relates to a brush generally intended for art and cosmetic application uses.

[0002] In the field of fine arts, prior art provides brushes composed of a rod-like handle with a tuft of natural or synthetic hairs secured thereto by means of a metal ferrule or band.

[0003] These brushes are held like a pen, which makes them suitable for use by adult persons, and unsuitable for young children, who find them difficult to handle.

[0004] Furthermore, due to their rod-like shape, and the presence of a metal ferrule, conventional brushes may be considered as blunt instruments, dangerous for children.

[0005] Cosmetic brushes, particularly for application of eye makeup are also dangerous in that they also have a rod-like shape and are used in close proximity to the eyes, wherefore a clumsy movement may cause eye injury.

[0006] A first object of the present invention is to enhance comfort, practical use and safety of the brush particularly when the latter is used by young children or by adults near the eyes for application of makeup thereon; the inventive brush has a thick body with a tuft of hairs projecting therefrom, in an offset position with respect to the center axis of the body.

[0007] A further object of this invention is to provide a brush having means for sliding or folding back the tuft of hairs into the thick body and allowing connection thereof with a liquid reservoir or an additional tool, such as a pencil.

[0008] The provision of an additional paint reservoir allows to perform long-lasting art operations.

[0009] The provision of an additional tool, such as a graphic pencil, allows to make use of a two-in-one tool.

[0010] The provision of means for folding back or displacing the brush tuft allows to protect the latter when the brush is not in use.

[0011] These objects and advantages are achieved by the brush of this invention, which is characterized by the content of the annexed claims.

[0012] This and other features will be more apparent from the following description of a few embodiments, which are shown by way of example and without limitation in the accompanying drawings, in which:

- Figure 1 is a perspective view of the brush;
- Figure 2 is a top plan view of the brush of Figure 1;
- Figures 3 and 3a are two side views of the brush of Figure 2 with the tuft of hairs being fitted therein in two different methods;
- figures 4, 5, 6, 7 and 8 are plan views of various types of brushes, some with a corresponding partial side view;
- Figure 9 is a median view of a brush having a thick body and a tuft of hairs in offset position;
- Figure 10 shows a reservoir with a liquid of any type

for painting and/or cosmetics therein;

- Figure 11 is a sectional assembly view of the objects as shown in Figures 1 and 2;
- Figure 11A shows a variant of the brush of Figure 3;
- Figure 12 is an assembly view of the brush of Figure 3;
- Figure 13 shows a variant of the brush, equipped with an additional tool;
- Figure 14 is a sectional view of the thick-body brush of Figure 1 with a means for displacement of the tuft of hairs introduced therein;
- Figure 15 shows the thick body of the brush of Figure 6 with the tuft embedded in the body;
- Figures 14A and 14B show a variant of the thick body of Figure 6;
- Figure 16 shows another variant of the brush of Figure 6;
- Figure 17 shows a configuration in which a tuft is introduced in the brush of Figure 8;
- Figure 18 shows the brush of Figure 1 with a tuft overturning system;
- Figure 19 shows the brush of Figure 10 with the tuft overturned;
- Figure 20 shows the panel without its reservoir, and only having its tuft displacement bushing, with the tuft outside the thick body;
- Figure 21 shows the brush without its reservoir, and only having its tuft displacement bushing, with the tuft inside the thick body.

[0013] Referring to Figures 1, 2 and 3, numeral 1 generally designates a brush comprising a thick body 2, which acts as a hand grip, in this figure having a cylindrical shape with the diameter of the base 2a greater than the height of the cylinder 2b.

[0014] A hole 3 is formed in such thick body 2, having essentially the same shape and size as a tuft of hairs 4 to be fitted in said hole and attached thereto by suitable adhesives or glues.

[0015] The hole 3 is offset with respect to the axis 5 of the thick body 2 so that the tuft 4 of hairs is situated in a peripheral area of the cylinder base.

[0016] In accordance with a possible embodiment, as shown in Figure 3A, the tuft 4 of hairs may be wrapped in a metal or plastic ferrule 4a having a press-fit joint 4b.

[0017] The ferrule 4a is wholly embedded in the hole 3.

[0018] The embodiment of Figure 3A allows to readily change the size or shape of the tuft of hairs with the shape of the body 2 remaining unchanged.

[0019] An undercut 2d may be advantageously formed on the side surface 2c of the thick body 2, for receiving a plastic cap 6 to cover and protect the tuft 4 of hairs of the brush.

[0020] Referring to Figures 4 and 5, a brush is shown which is essentially identical to that of the previous figures, with a tuft 4 of different size and with an identical or lightly different thick body 2, having two opposite recesses 7 to facilitate grasp and hold thereof by a user's

hand.

[0021] Referring to Figures 6, 7 and 8, other exemplary brushes are shown, in which the tuft of hairs has an oval or rectangular shape, or a number of small tufts are arranged in a row, as shown in Figure 6.

[0022] Figure 8 shows a body having three recesses 7 arranged substantially at 120° intervals.

[0023] According to a further embodiment, not shown, the body 2 may have a plurality of holes 3 of different sizes and shapes arranged along a peripheral edge for receiving any desired tuft of hairs, in which case the tufts of hairs are held by a ferrule 4a like the one of Figure 3a.

[0024] The thick body 2, which is shown as having a cylindrical shape, may also have a different shape, preferably another thick shape, with at least one of the transverse dimensions considerably greater than the height of the thick body 2.

[0025] One of the transverse dimensions of the body 2 may at most be equal to the height, provided that the tuft 4 of hairs is still offset with respect to the longitudinal axis of the body 2.

[0026] When the brush is used for makeup application, the compact size of the brush facilitates hand movements required for product application, and does not disturb the mirror view.

[0027] Furthermore, all sharp edges may be smoothed to prevent injuries, particularly when the product is used by young children, and the hand grip may be made of any rigid material (such as wood or plastic) or soft material (such as natural or synthetic rubber) or of a rigid material covered with a soft material, still for injury prevention purposes and to facilitate usage by children, without departure from the scope as defined by the accompanying claims.

[0028] Referring to Figures 9, 10, 11 and 12, numeral 101 designates the brush for cosmetic or art uses, which comprises the thick body 102, acting as a hand grip, the hole 103, offset with respect to the axis of the body 102, the tuft of hairs 104 in a peripheral area.

[0029] In the example as shown, the body 102 has a cylindrical shape with the diameter of the base 102a greater than the height 102b of the cylinder; however, according to a further embodiment, not shown, the body 102 may have any other shape, e.g. quadrangular, polygonal, elliptical, or representing figures, flowers, character images, without departure from the scope of the invention.

[0030] A preferably circular cavity 105 is formed on the opposite side of the thick body 102, for receiving either a liquid reservoir 106, as shown in Figure 10, or another utility tool as described hereafter.

[0031] Connection of such elements may occur thanks to threads 105a formed on the boundary of the cavity 105.

[0032] The hole 103 for receiving the brush connects the base 105b of the cavity to the bristles of the tuft 104, so that, once the body 102 and reservoir 106 assembly is folded back, the liquid contained therein wets the bristles.

[0033] The tuft 104 of hairs may be attached to the body 102 by suitable adhesives or glues, or by wrapping it in a metal or plastic ferrule 104a to be in turn introduced and/or secured in the hole 103.

5 **[0034]** Referring to Figure 13, a variant embodiment is shown, as mentioned hereinbefore, in which the auxiliary means is a pencil 107, introduced in the body instead of the reservoir 106 to provide a different graphical tool. Thus, a two-in-one tool is obtained.

10 **[0035]** Any other graphic or utility tool may be used instead of the pencil 107, such as a rubber or another brush having a thick body and a centered or peripheral tuft of hairs, obviously of appropriate size for connection thereof within the cavity 105.

15 **[0036]** The new tool shall obviously have threads corresponding to those designated by 105a in the brush 101.

[0037] It shall be understood that while threaded couplings have been proposed therein for improved liquid-tightness, other known couplings may be obviously used without departure from the scope of this invention.

20 **[0038]** Referring to Figures 14 and 15, a variant embodiment is shown in which the body 102 has a bushing 108 between the tuft of hairs 104 and the hole 103.

25 **[0039]** The hole 103 is larger than the tuft 104 containing ferrule 104a, so as to also contain the bushing 108.

[0040] A helical groove 109 is formed around the inner surface of the bushing 108, for engagement of the pegs 104 extending from the ferrule 104a.

30 **[0041]** Figure 14 also shows the tuft of hairs 104 connected to the cavity 105 through the inner hole of the bushing 108, wherefrom it can receive liquid from the reservoir 106, if present.

35 **[0042]** When required, the bushing 108 and its receiving hole may be shorter, so as to prevent connection thereof with the cavity 105: an example of this is shown in Figures 14A and 14B.

[0043] Rotation of the bushing 108 relative to the body 102 will cause displacement of the tuft 104 thanks to the peg 104b joined thereto by the ferrule 104a.

40 **[0044]** Referring to Figures 16, 17, 20, 21, embodiments are shown in which, notwithstanding the presence of the bushing 108, the brush 101 has no cavity 105 for connection to the reservoir 106.

45 **[0045]** The bushing may be situated either above or below the body 102.

[0046] Figures 18 and 19 show a variant embodiment of the system for folding back the tuft 104, which may be pivoted about a fixed point, in this case the peg 104b which is integral with the body 102 and is no longer inserted in the helical groove 109 of a bushing 108 (not present in this case).

50 **[0047]** Otherwise, according to a variant, a pin 112 may be received in a circular through compartment formed in the ferrule 104a and possibly in the tuft 104; said pin 112 being also received in a portion of the thick body 102.

[0048] To allow overturning, an additional compartment 111 is formed in the upper portion of the body 102.

[0049] The overturning control may consist, for in-

stance, of an extension of the outer pin which projects from the thick body 102, allowing it to be manually pivoted, with the tuft of hairs 104 attached thereto.

[0050] In accordance with a variant embodiment, the hole 103 for receiving the ferrule 104a may extend toward the cavity 105 with decreasing diameter to limit the outflow of liquid to the bristles of the tuft of hairs 104.

[0051] According to yet another variant embodiment, the cavity 105, which is described herein as having a circular shape, may have any shape, i.e. a quadrangular, polygonal or elliptical shape: In this case, connection with a tool 107 or with the reservoir 106 will be different from that described herein, due to the impossibility of forming threads all around it.

[0052] In this case, said elements 106 and 107 may be connected by press fit couplings or by ball joints or spring-loaded ball joints embedded in the body 102.

[0053] According to a variant, as shown in Figure 11A, the tuft 104 may be disposed in an overturned position, i.e. introduced from the side of the hole 103 facing the cavity 105, so that it is turned toward the reservoir 106.

Claims

1. A brush (1, 101) for art and cosmetic uses, **characterized in that** it comprises a thick body (2, 102), designed to be held in a user's hand; said thick body (2, 102) having at least one hole (3, 103) for receiving a tuft (104) of hairs; said hole (3, 103) and tuft (4, 104) of hairs being in offset position with respect to the longitudinal axis (5) of said body (2, 102).
2. A brush (1, 101) as claimed in claim 1, **characterized in that** the lower portion of the body (2, 102) has a cavity (105) for connection to a liquid reservoir (106) or another utility tool (107) such as a pencil, a rubber or another brush (1, 101) having a thick body (2, 102) and a centered or peripheral tuft (4, 104) of hairs, said second brush (1, 101) being of appropriate size for connection thereof within the cavity (105).
3. A brush (1, 101) as claimed in claim 1, **characterized in that** said tuft of hairs (4, 104) is wrapped in a metal or plastic ferrule (4a, 104a), which is introduced and/or secured in the hole (3, 103).
4. A brush (1) as claimed in claim 1, **characterized in that** a bushing (8) is interposed between the ferrule (4a, 104a) and the hole (3, 103), a groove (9) being formed on its inner surface for receiving the pegs (104b) projecting from said ferrule (4a, 104a).
5. A brush (1, 101) as claimed in claim 1, **characterized in that** the tuft (104) pivots relative to a fixed point into a compartment (111) formed in the upper portion of the body (2, 102), said fixed point consisting of a fixed peg (104b) in the body (2, 102), which projects from the ferrule (4a) of the tuft of hairs (4, 104), or a pin (112) which connects the body (2, 102) with the ferrule (4a, 104a), said pin (112) being received in a circular through compartment formed in the ferrule (4a, 104a) and possibly in the tuft (4, 104).
6. A brush (1, 101) as claimed in claim 2, **characterized in that** the cavity (105) has a circular, quadrangular, polygonal or elliptical shape; when it has a circular shape, the cavity (105) has threads (105a) on its boundary.
7. A brush (1, 101) as claimed in claim 1, **characterized in that** the body (2, 102) may have a circular, quadrangular, polygonal, elliptical shape, or represent figures, flowers or character images and has a height equal to or smaller than at least one of the transverse dimensions of the body.
8. A brush (101) as claimed in claims 1 and 2, **characterized in that** the tuft (104) is introduced in the hole (103) from the cavity (105) side, so as to face the reservoir (106) side.
9. A brush (101) as claimed in claim 1, **characterized in that** the tuft (104) is introduced in the hole (103) from the side opposite the cavity (105) side.
10. A brush (1, 101) as claimed in claim 1, **characterized in that** the body (2, 102) is made of any rigid material, or soft material, or of a rigid material covered with a soft material.
11. A brush (1, 101) as claimed in claim 1, **characterized in that** said tuft of hairs (4, 104) has any shape and size.
12. A brush (1, 101) as claimed in claim 1, **characterized in that** the side surface (2c, 102c) of the thick body (2, 102) may have an undercut (2d, 102d) formed thereon, for connection with a cap (6) for covering and protecting the tuft (4) of hairs.
13. A brush (1, 101) as claimed in claims 1 and 9, **characterized in that** the hole (3, 103) contains a male-female joint (4b) for securing the ferrule (4a, 104a) that wraps and retains the tuft (4, 104) of hairs.
14. A brush (1, 101) as claimed in claim 1, **characterized in that** the body (2, 102) has one or more recesses (7) to facilitate grasp and hold thereof by a user's hand.
15. A brush (1, 101) as claimed in claim 1, **characterized in that** the tuft (4) of hairs is directly attached within the hole (3) of the body (2) by means of suitable adhesives or glues.

16. A brush (1, 10) as claimed in claims 2 and 6, **characterized in that** the liquid reservoir (106) or the utility tool (107) are secured by a press-fit coupling or by ball joints or spring-loaded ball joints embedded in the body (102), or by a threaded coupling, if the cavity (105) has a circular shape.

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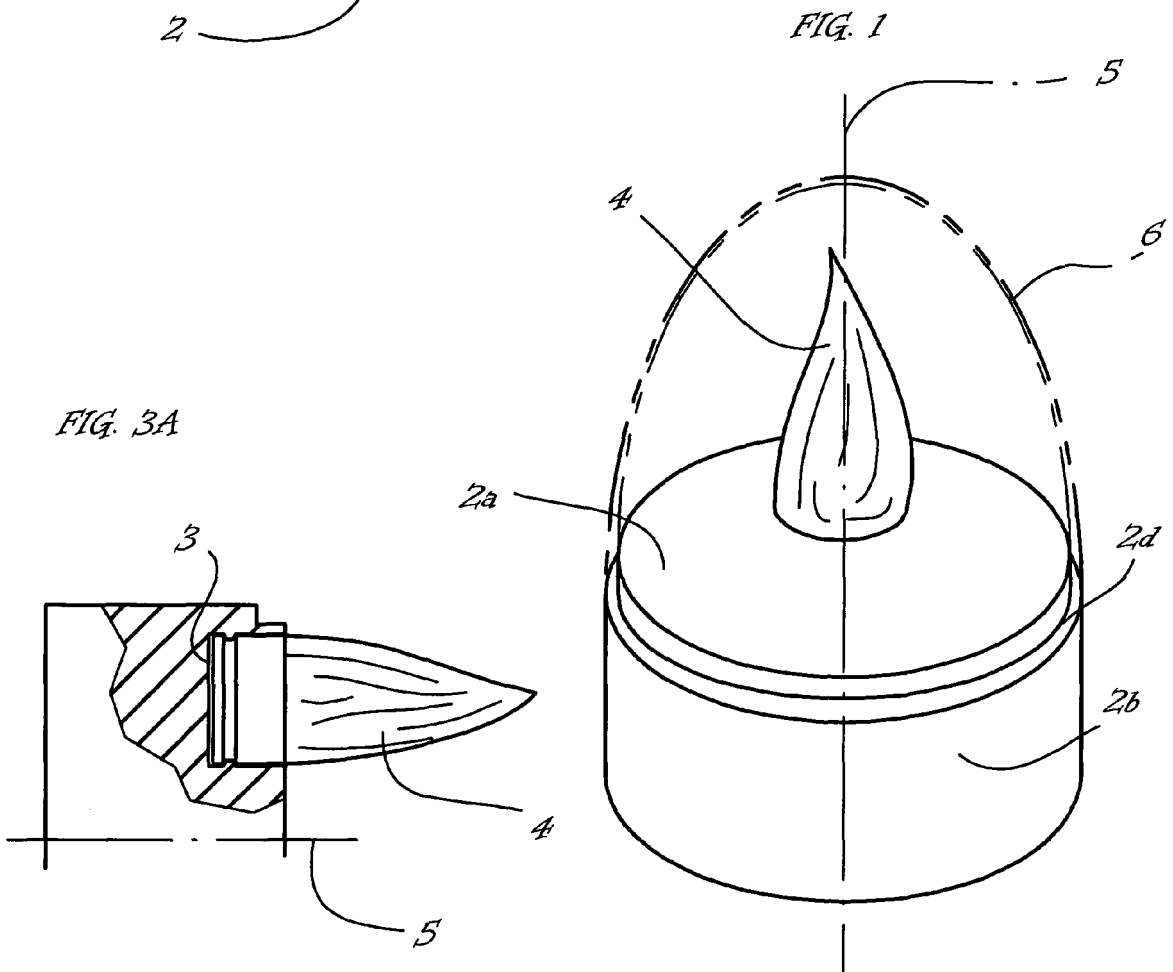
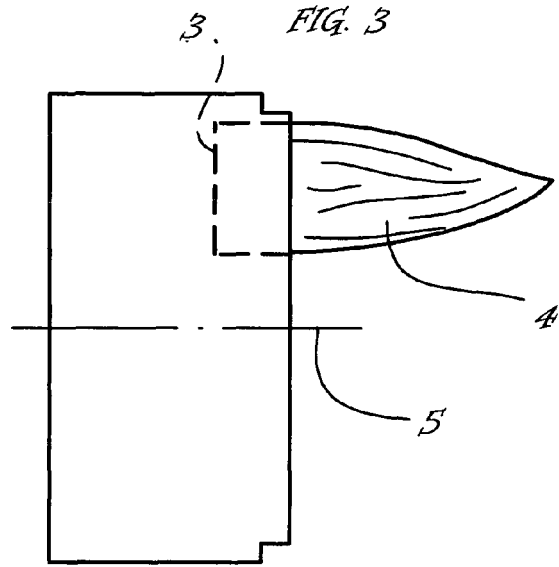
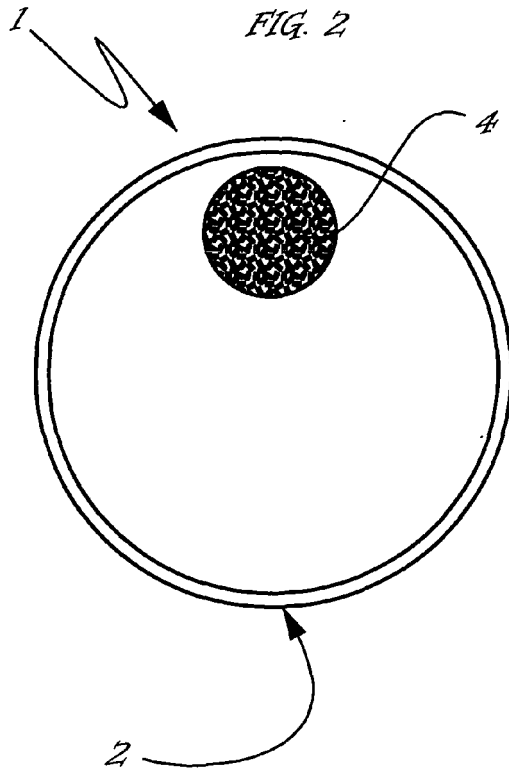


FIG. 4

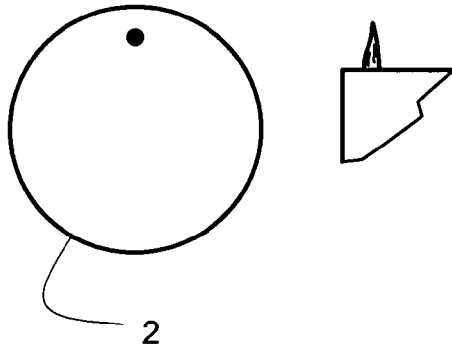


FIG. 5

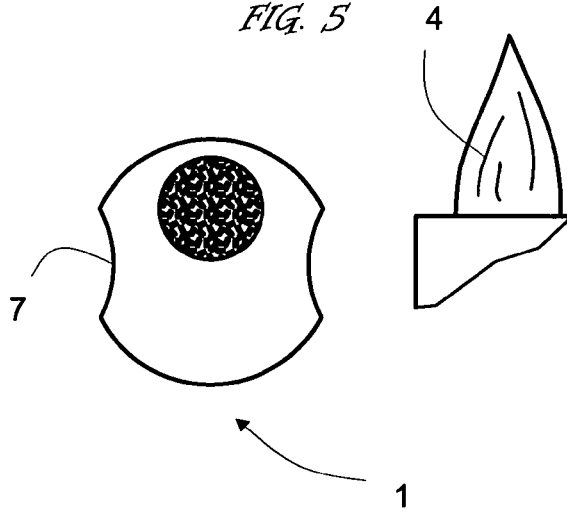


FIG. 6

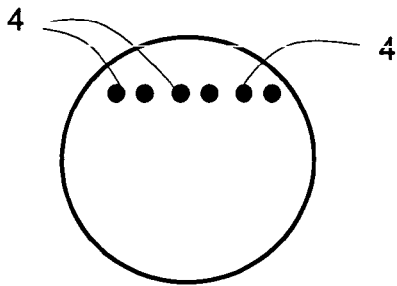


FIG. 7

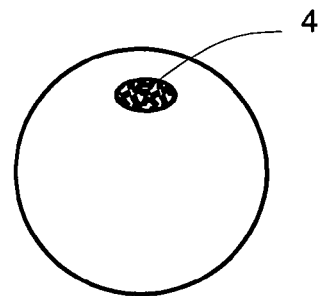
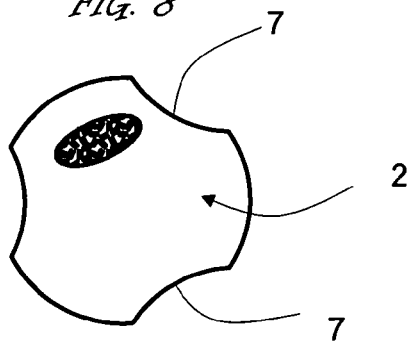
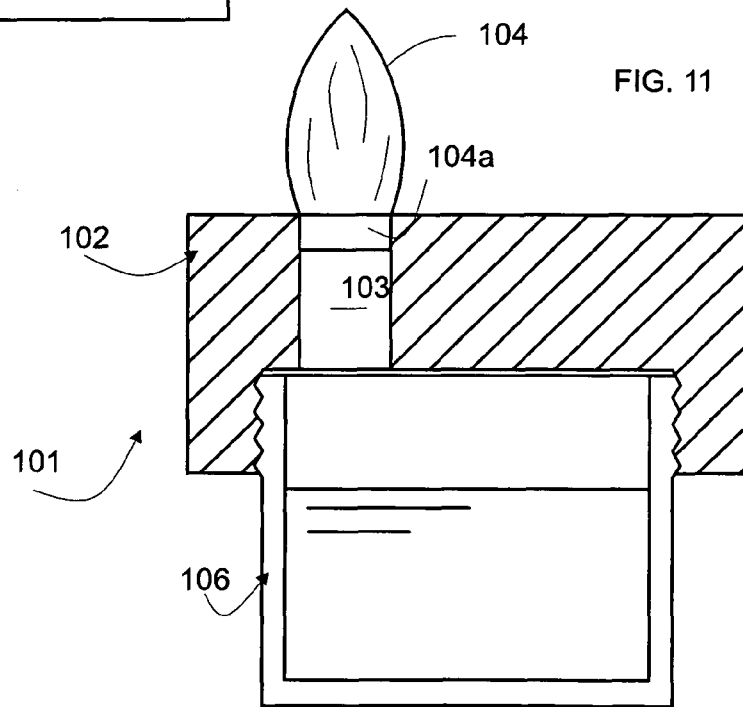
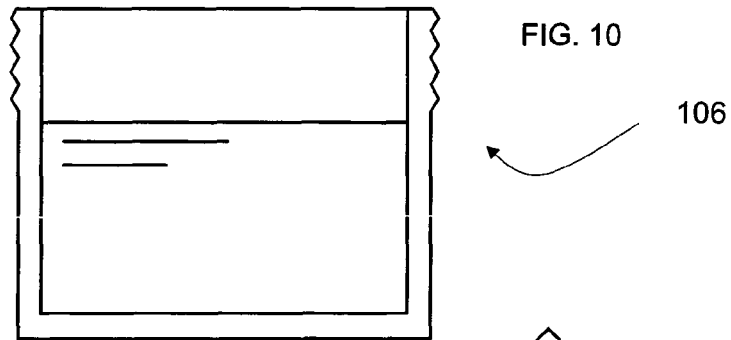
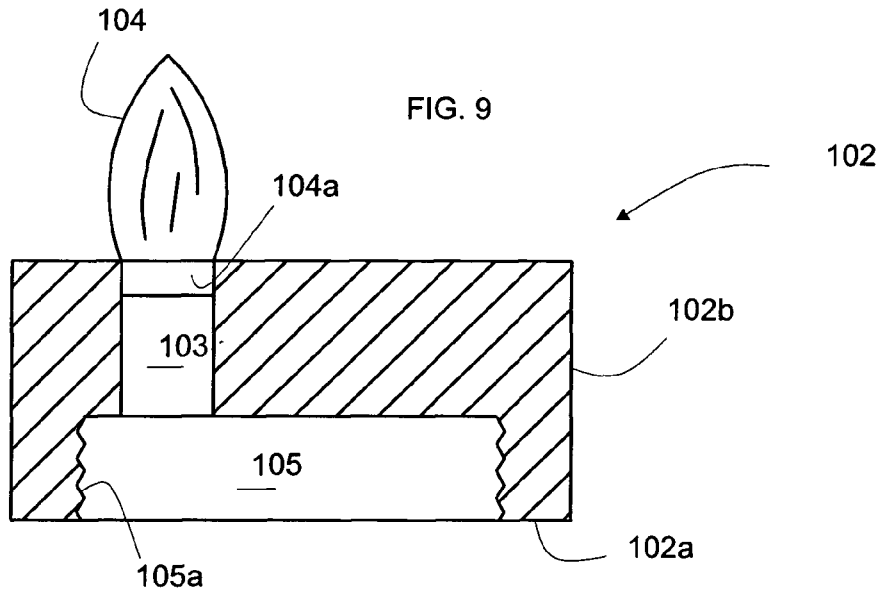
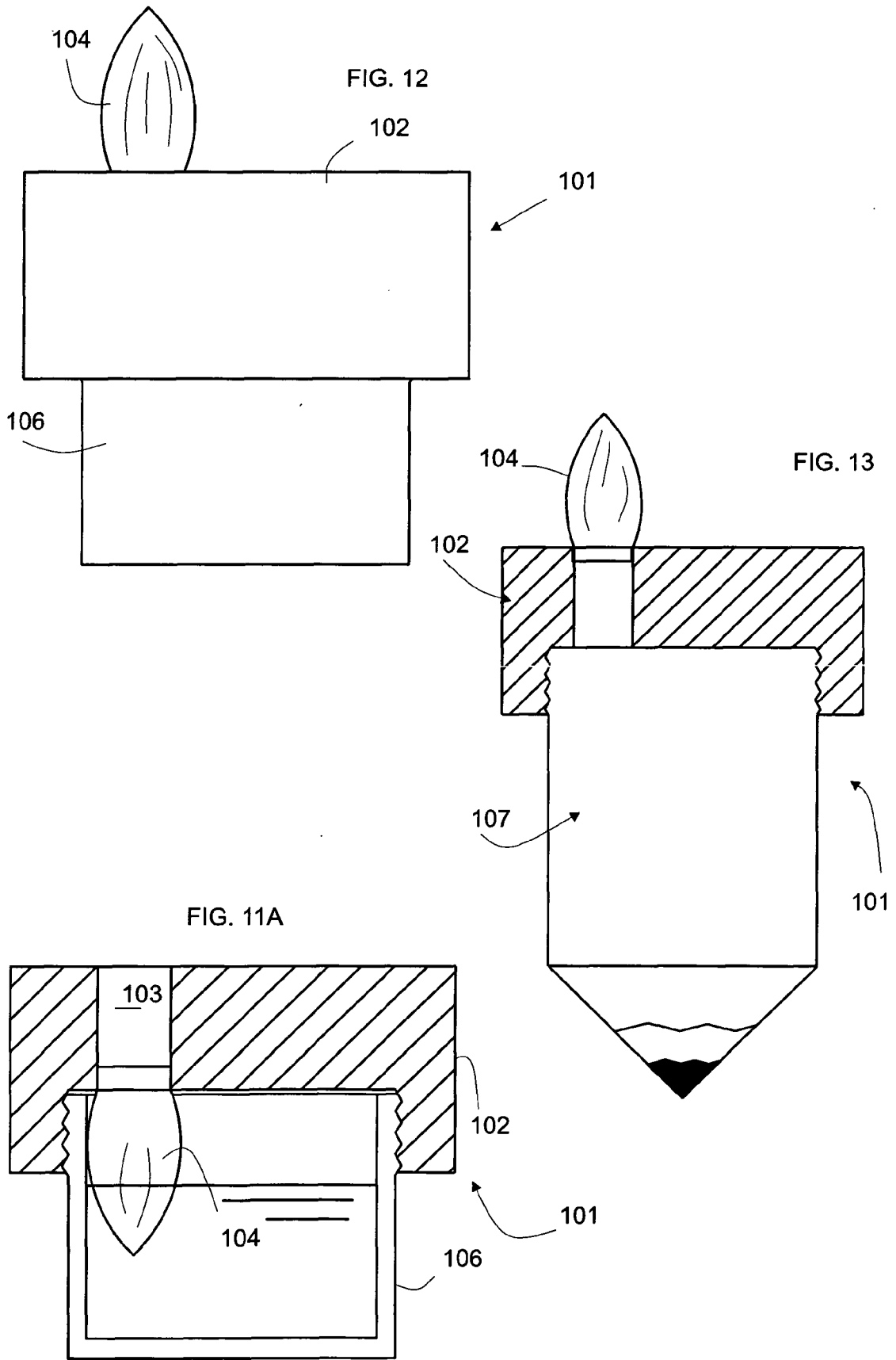


FIG. 8







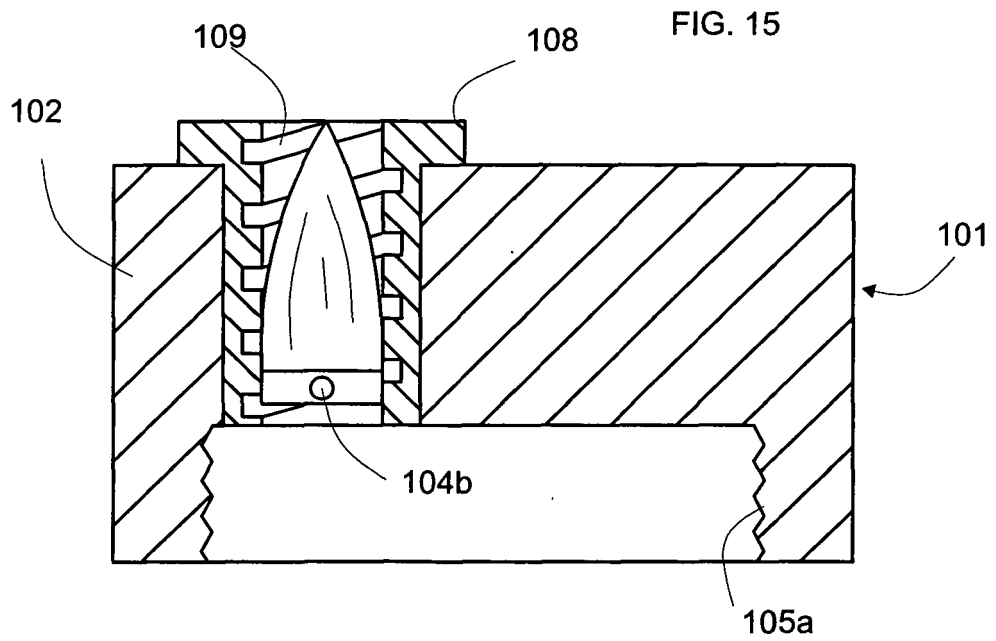
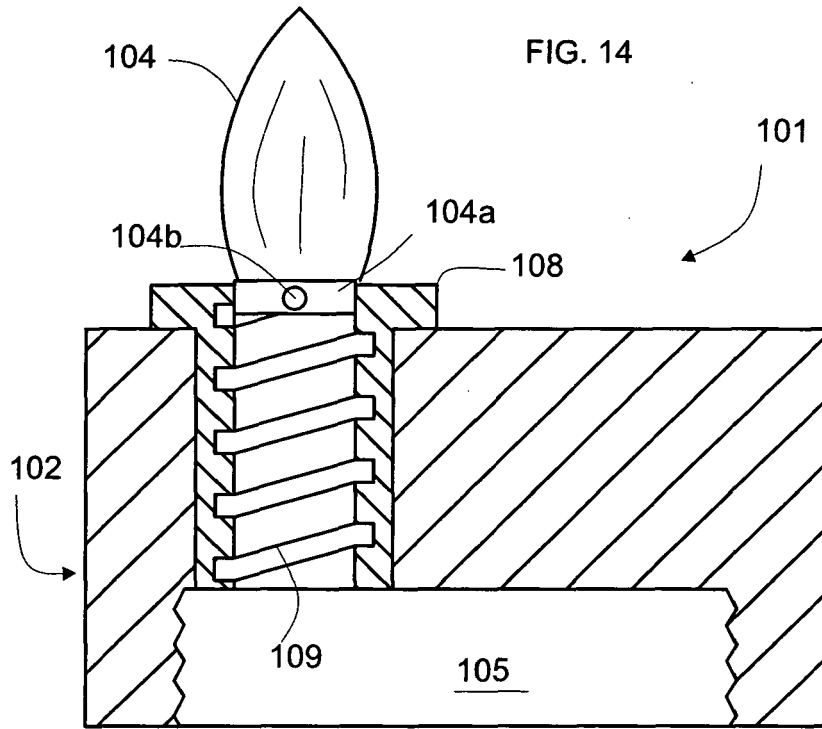


Fig. 14A

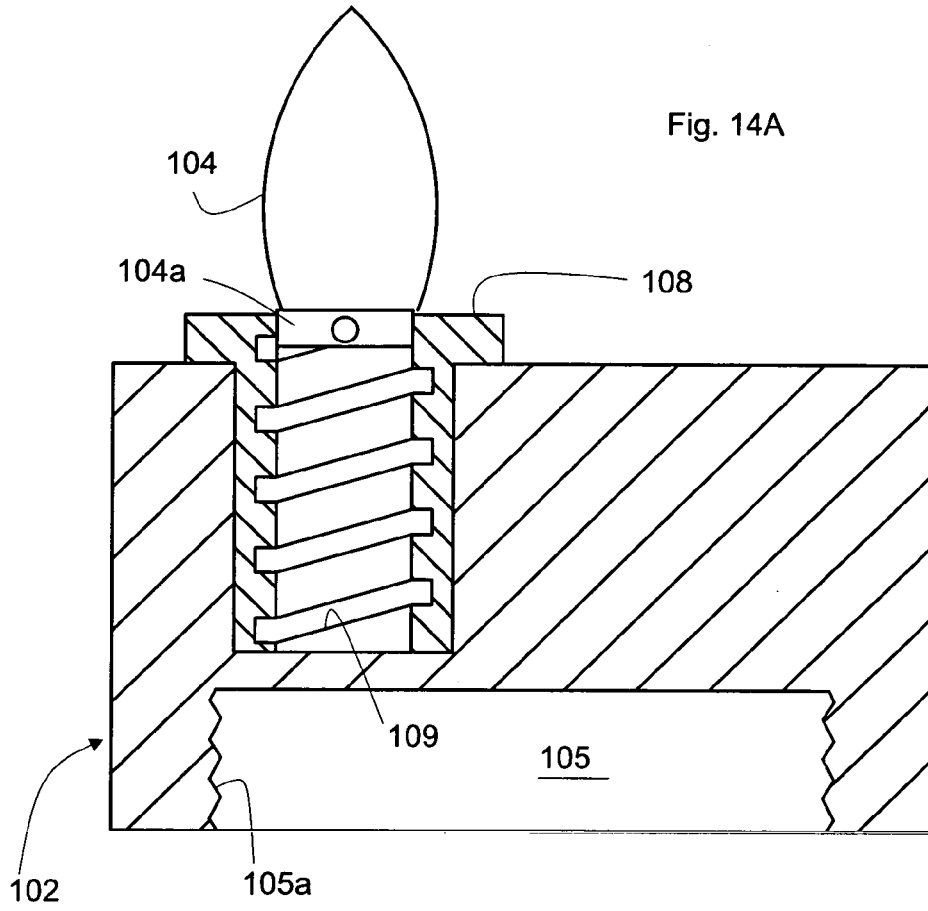
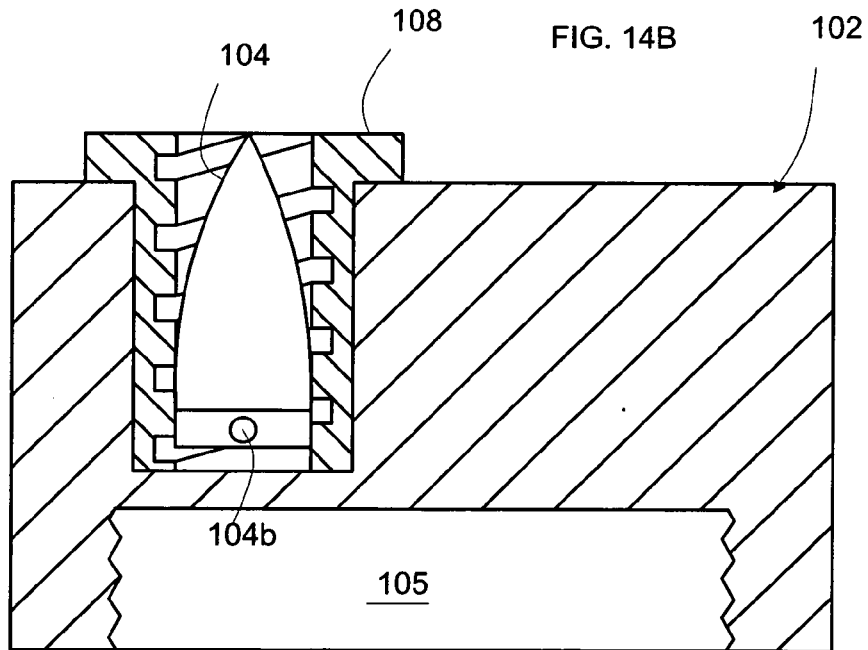
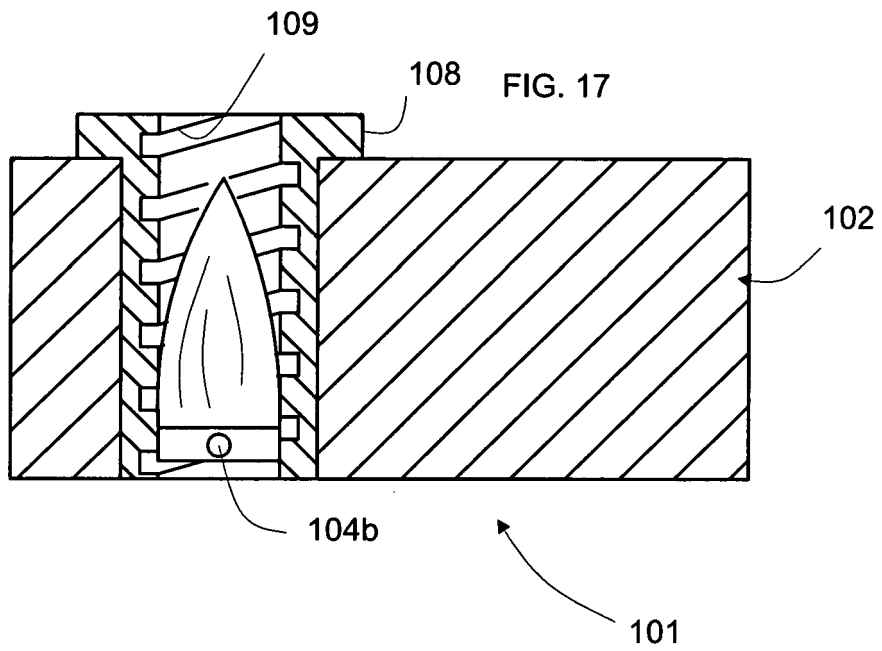
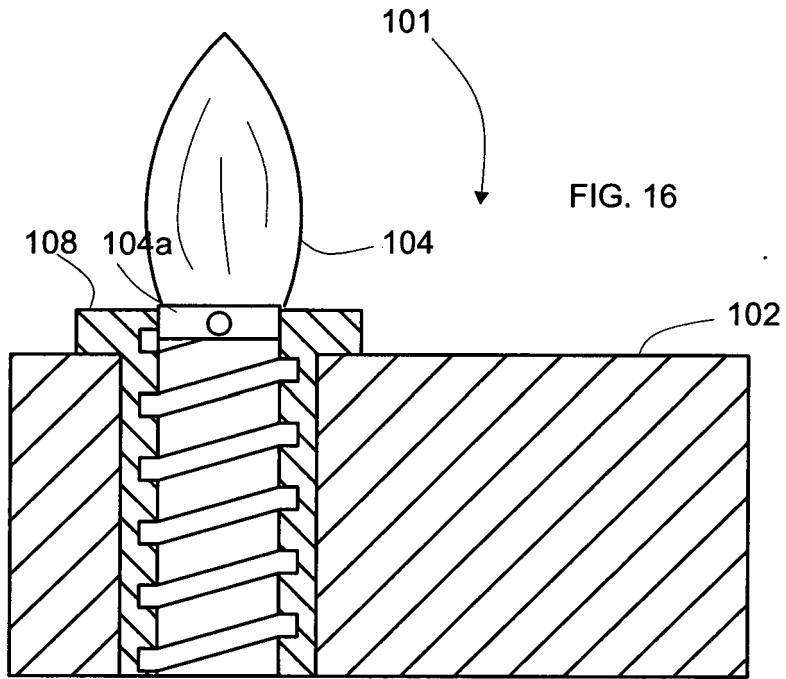
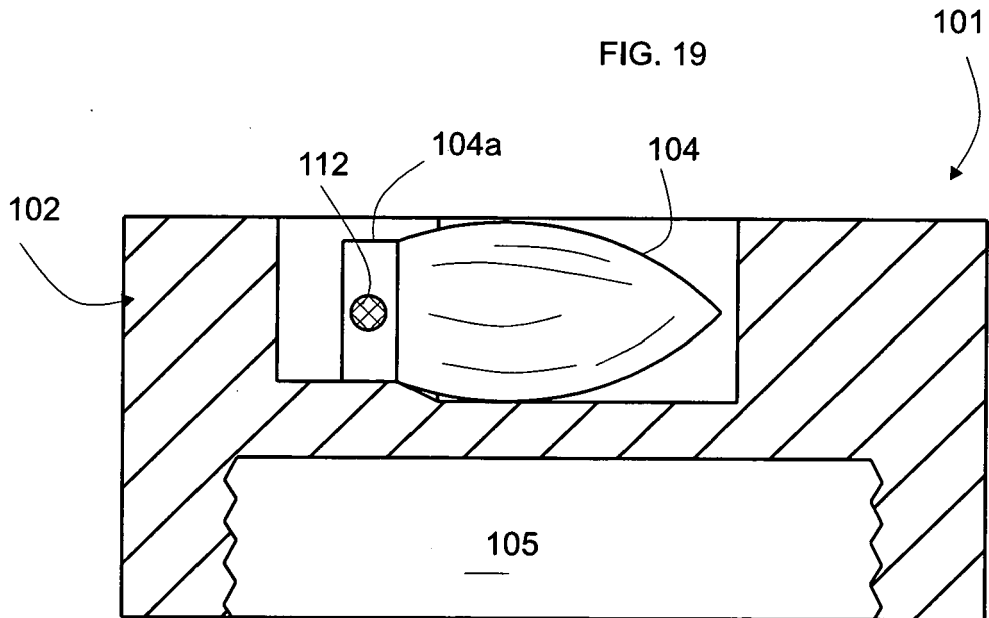
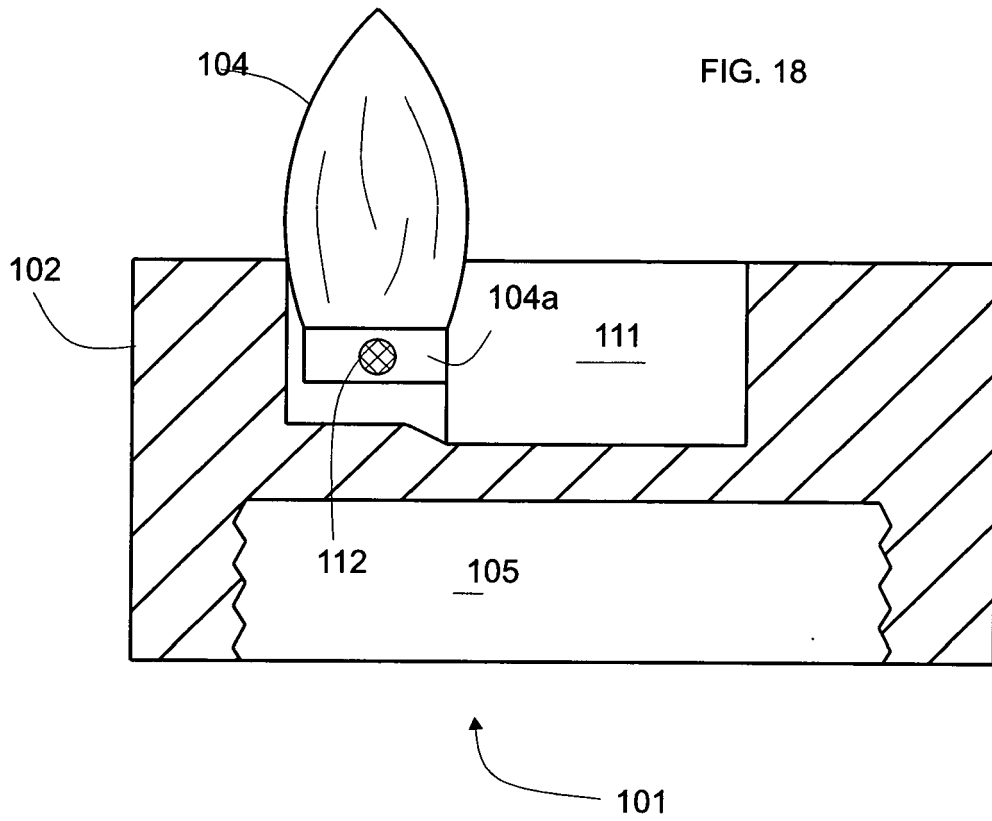
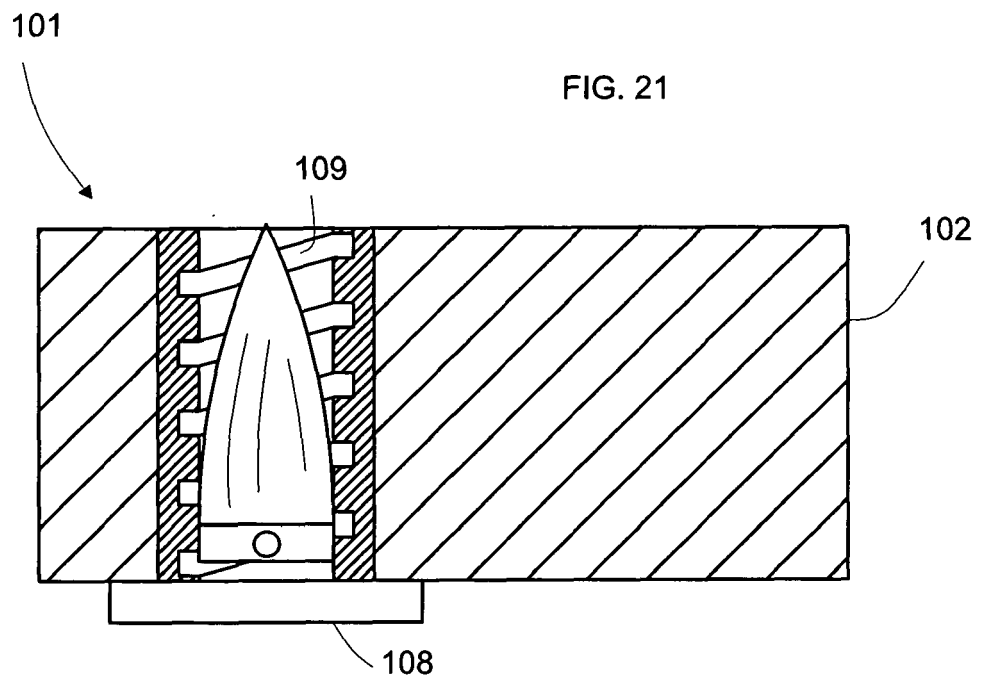
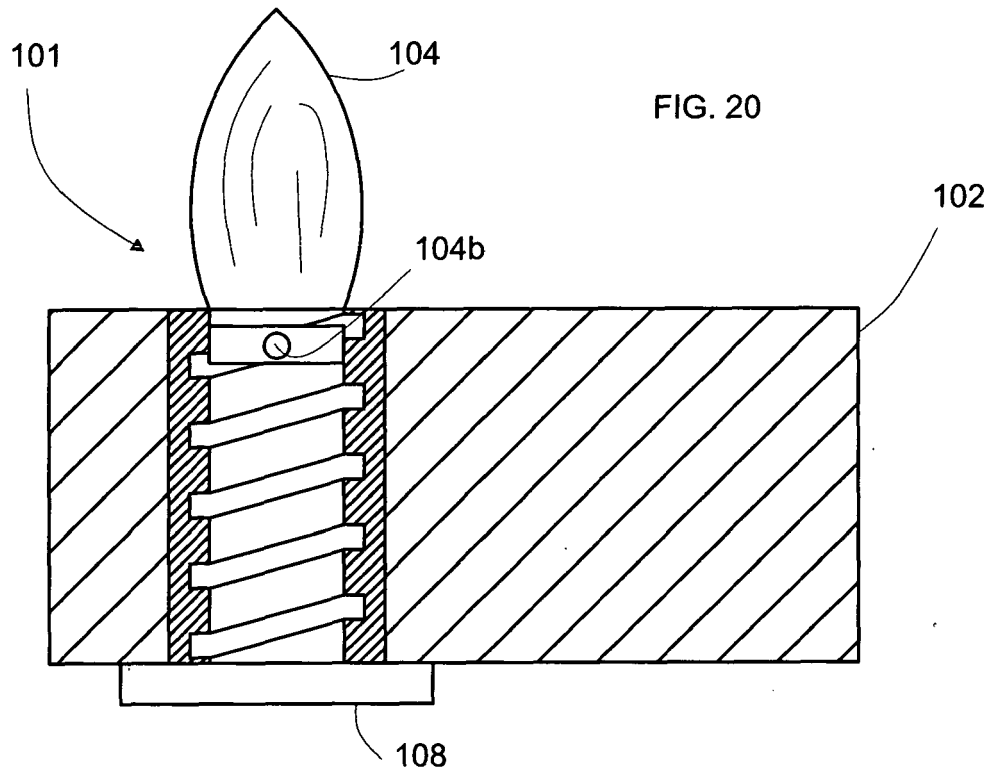


FIG. 14B











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EPO FORM 1503 03.02 (P04CO1)

ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 06 01 4438

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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