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(54) **Perforable closure**

Durchlöcherbarer Verschluss

Fermeture perforable

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(4

Description

[0001] The present invention relates generally to a closure and particularly to a perforable closure for use in conjunction with perforating elements such as syringes, needles and the like.

[0002] Such closures are used, for example, in conjunction with containers for medicines, in which the contents must be kept sterile. Perforating elements can be introduced into the container through the closure. The closures are self-sealing to punctures from perforating elements.

[0003] Examples of such closures include FR2598137, EP0364783, US2135386 and EP1392569.

[0004] The present invention seeks to address certain problems with known perforable closures.

and comprises a first needle member 25 and an outer closure 30 which incorporates a second needle member 31.

[0020] Referring now also to Figures 3 and 4 the closure 10 is shown in more detail.

[0021] The closure 10 comprises a generally cylindrical body 40 having a radially outwardly extending flange 41 at one end thereof. This end of the body is adapted to receive the neck 16 of the container 15. The container neck 16 includes a radially outwardly extending transfer bead 17 against which the closure flange 41 abuts as shown in Figure 4. The closure 10 is secured to the container neck 16 by any convenient means, which in this embodiment comprise as snap bead arrangement (not shown).

[0022] The end of the body 40 opposite the flange 41

[0032] Referring now to Figure 13 there is shown a closure 310 formed according to an alternative embodiment. The closure is similar to the closures shown in Figures 1 to 11. In this embodiment there is no step between the two openings 250, 255. The openings are provided at either end of a figure-of-eight chimney 265 projecting from a top deck 270, as shown best in Figures 14 and 15.

[0033] As shown in Figure 15, the openings 250, 255 are covered, by respective disc-shape foil covers 220, 221 each having a respective pull tab 220a, 221a.

[0034] The covers 220, 221 are positioned over the openings 250, 255 as shown in Figure 14 and then welded into position.

[0035] In an alternative embodiment (not shown) just the

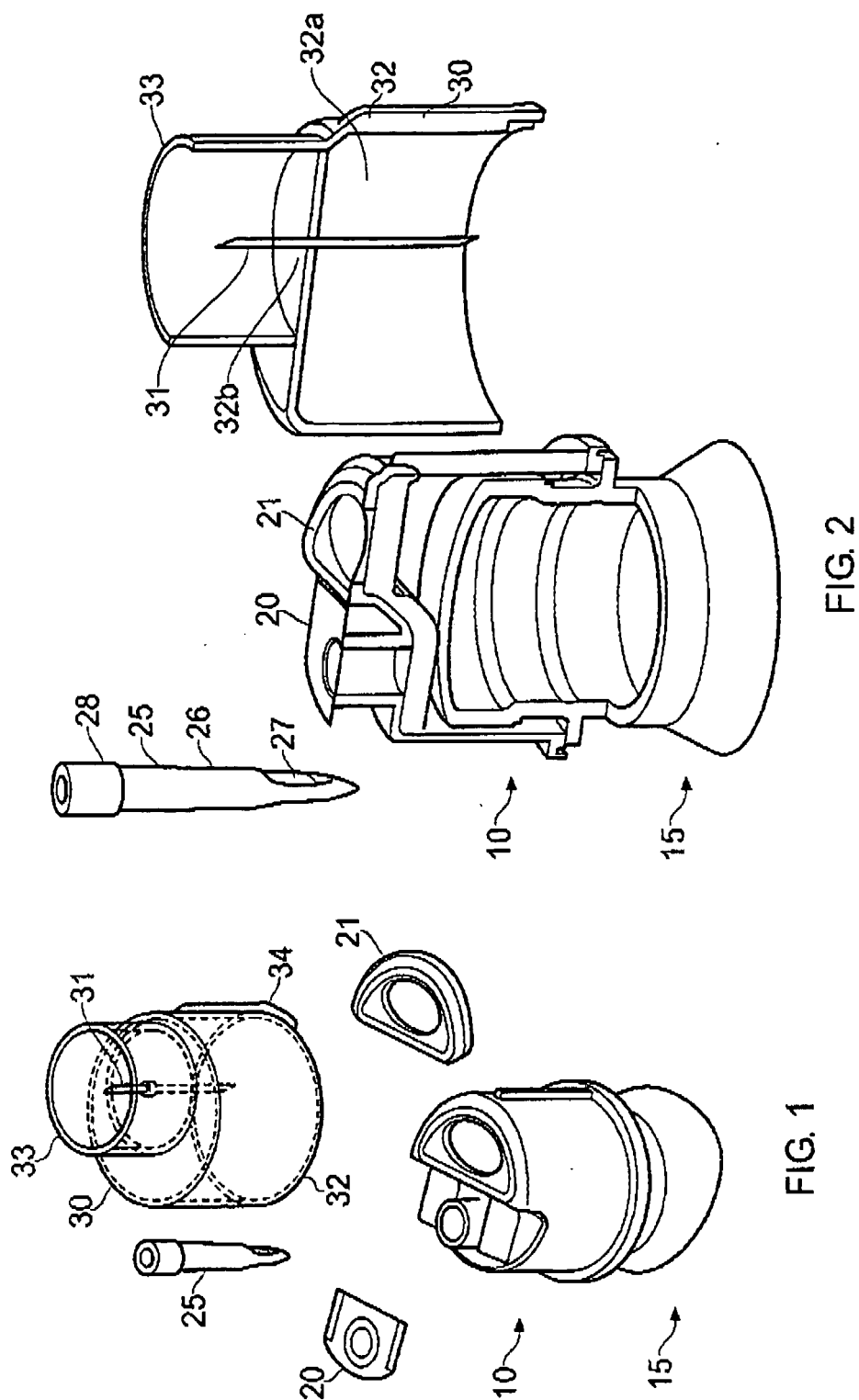
9. Verschluss gemäß Anspruch 7 oder 8, wobei das äußere Verschlusselement und der Verschluss winkelige Ausrichtungsmittel (42, 34) enthalten.
10. Kombination aus einem Behältnis und einem durchstechbaren Verschluss gemäß einem der vorhergehenden Ansprüche.

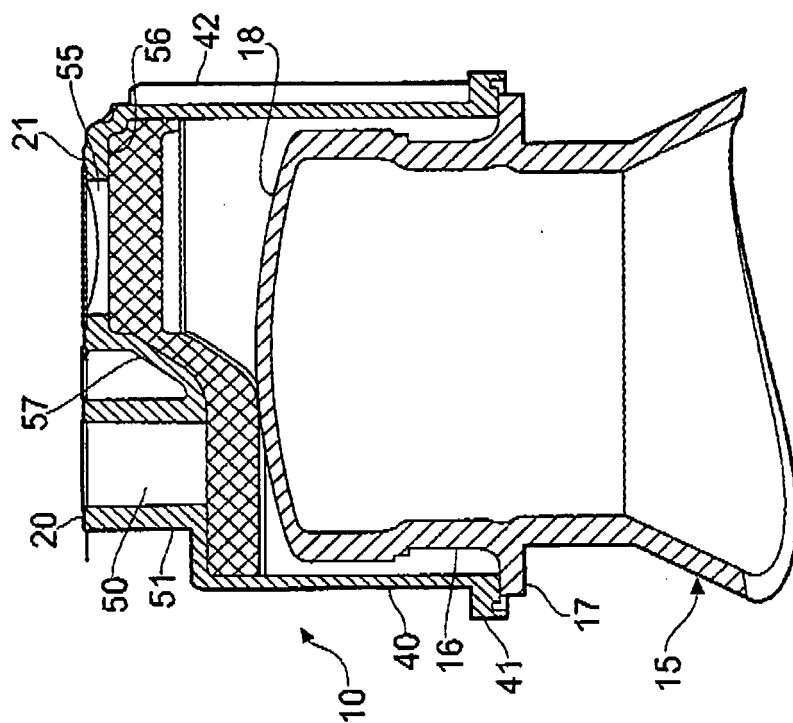
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9. Fermeture selon la revendication 7 ou 8, **caractérisée en ce que** l'élément de fermeture extérieur et la fermeture comprennent des moyens d'orientation angulaire (42, 34).
10. Combinaison d'un récipient et d'une fermeture perforable selon l'une quelconque des revendications précédentes.

Revendications

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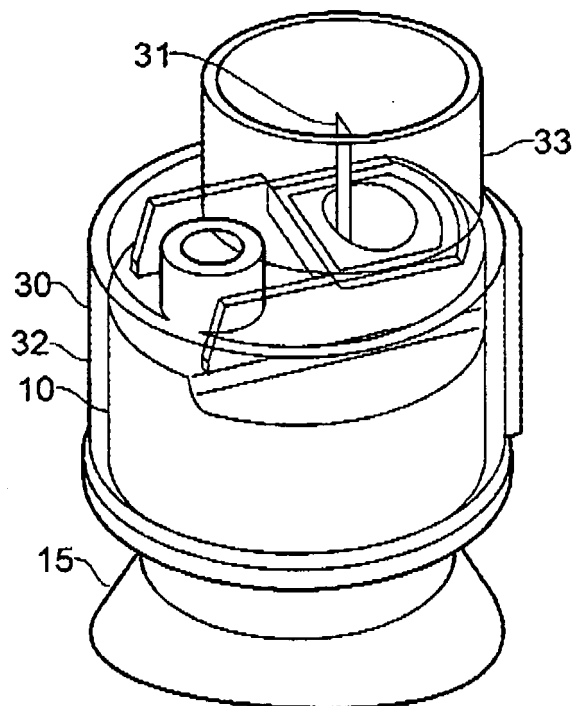


FIG. 5

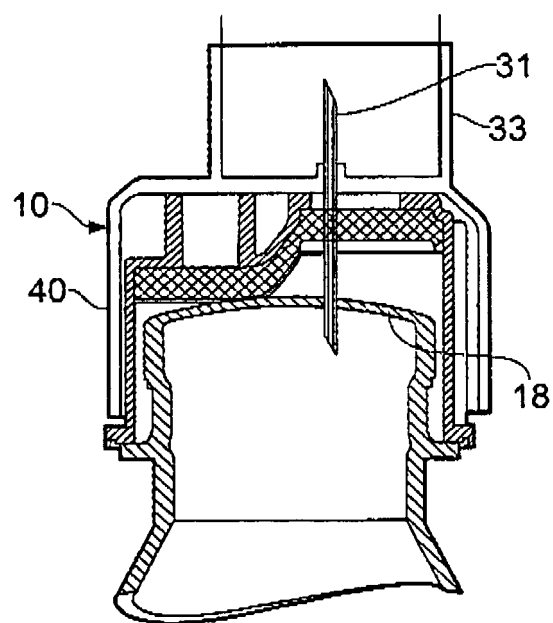


FIG. 6

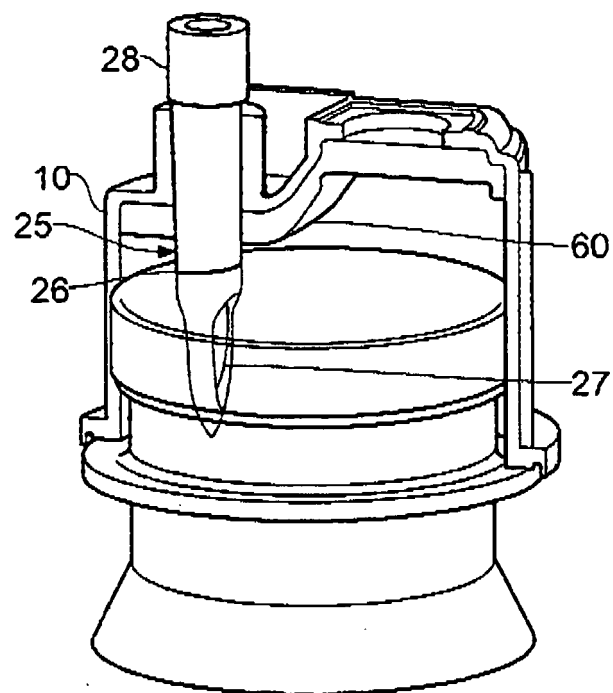
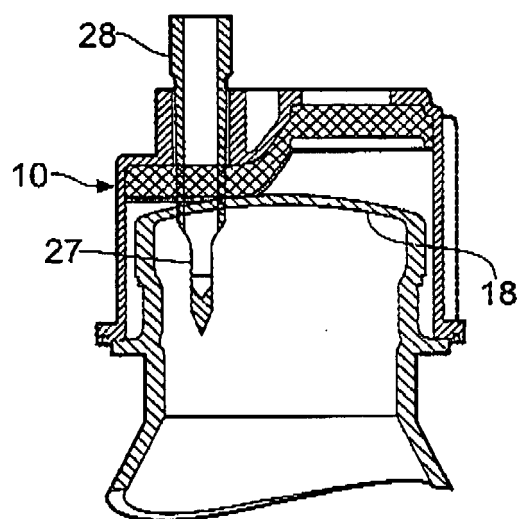


FIG. 7



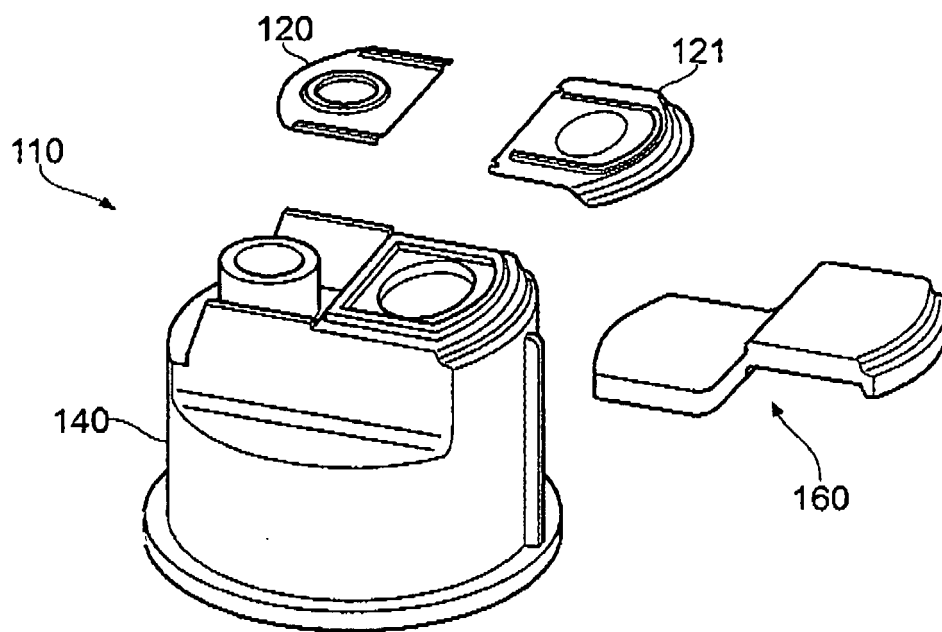
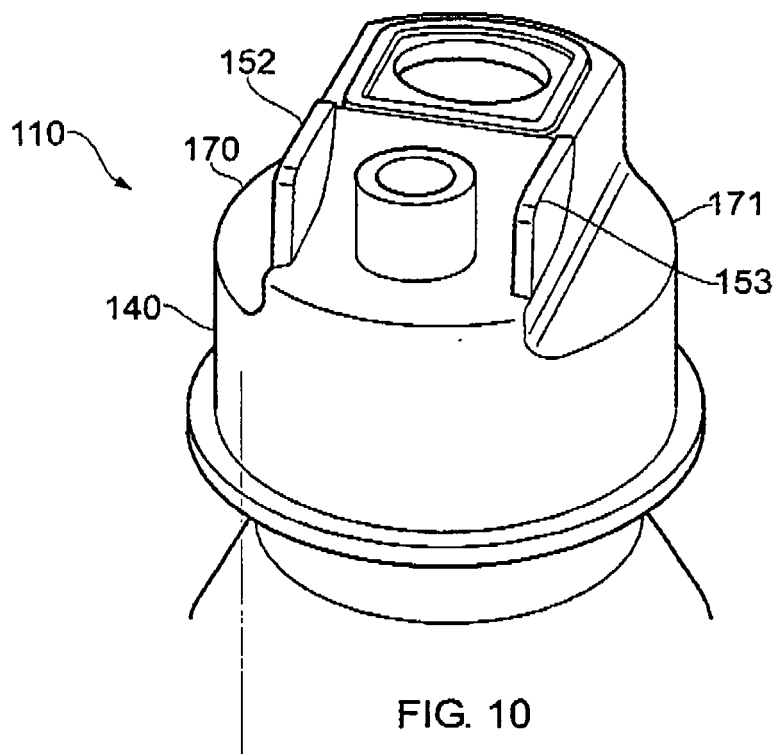


FIG. 9



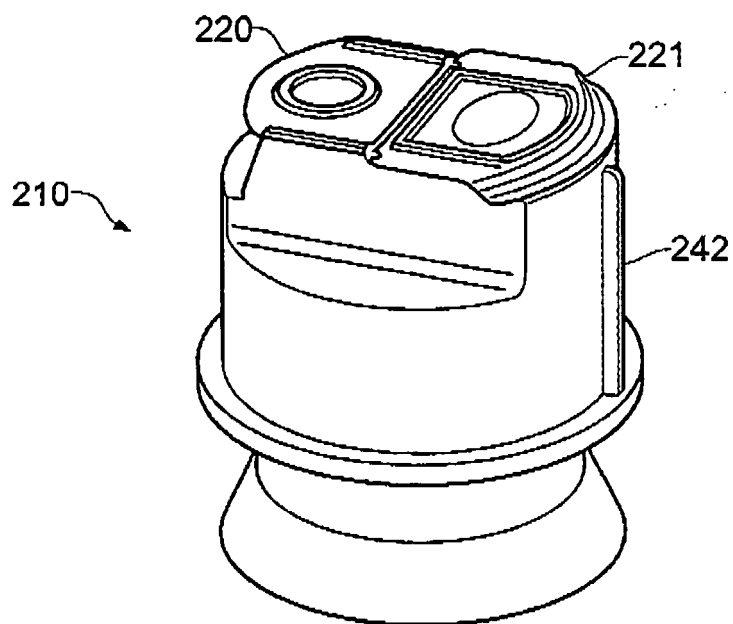
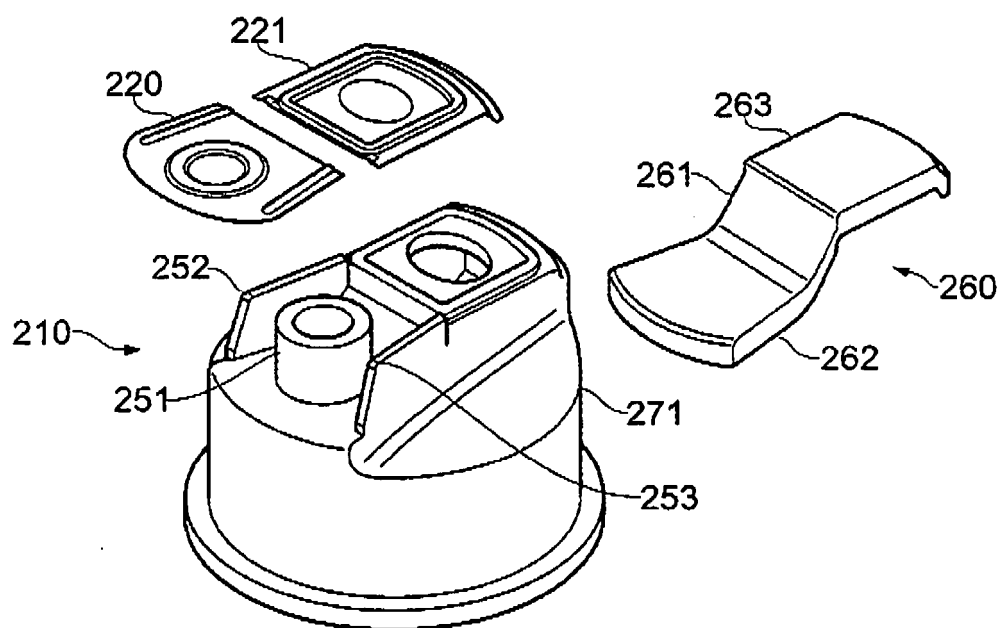


FIG. 11



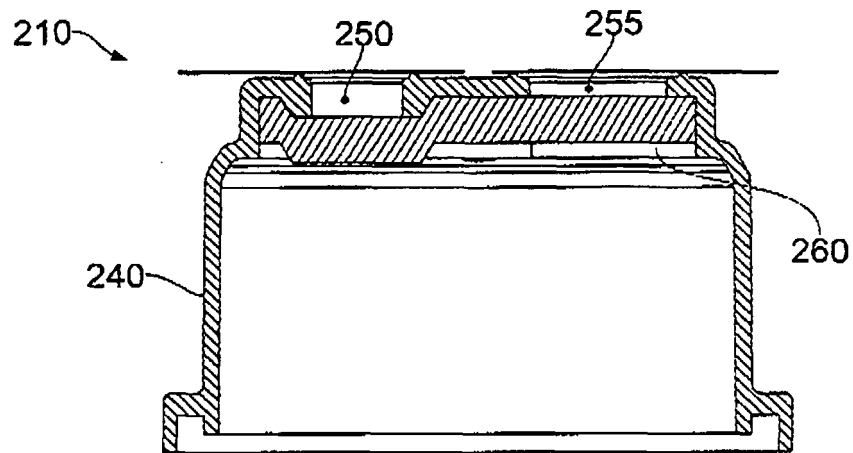


FIG. 13

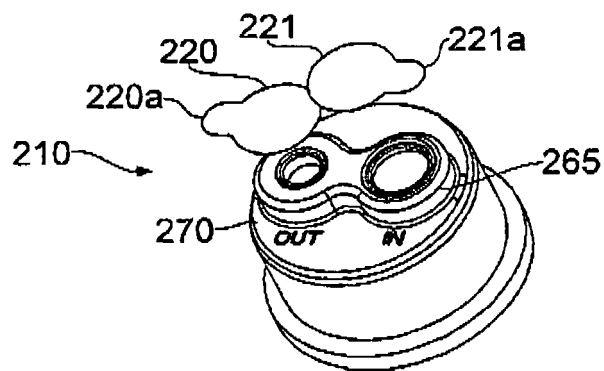


FIG. 14</

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- FR 2598137 [0003]
- EP 0364783 A [0003]
- US 2135386 A [0003]
- EP 1392569 A [0003]
- WO 03013972 A1 [0005]
- EP 1547429 A2 [0006]