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(54) **A bag having heating or chilling means**

Beutel mit Heiz- oder Kühlvorrichtung

Sachet pourvu de moyens de chauffage ou refroidissement

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Description

[0001] The present invention relates to a heating or chilling sack container, of the kind comprising the characteristics expressed in the preamble to claim 1.

[0002] Said container is particularly suitable for disinfecting, emollient or cosmetic napkins, but it can advantageously be used also to contain food products, such as drinks.

[0003] An example of industry in which the container of the present invention can be used is that of air transport.

[0004] Airliner passengers are provided with damp napkins with which to wipe their face and/or hands.

[0005] Depending on requirements, said napkins can be provided also warm (or cold), by pouring, according to the traditionally used technique, hot (or cold) water thereon.

[0006] This system, however, guarantees the heating or the chilling of the napkins for a limited time only, so that, if the number of persons to be served is large, the last persons to receive the napkins do so with the napkins nearly at ambient temperature.

[0007] In parallel, in the cosmetic field envelope-shaped containers are currently available on the market that are able to develop in their interior a predetermined quantity of heat, and are used to heat lotions or cosmetic products, generally before their application on the user's body.

[0008] Heating envelopes currently available on the market, however, have a structure that, in addition to being particularly complex and costly from a construction point of view, is able to contain and handle a rather limited range of products.

[0009] The aforesaid heating envelopes are usually constituted by an outer case, within which is provided a suitable quantity of water-soluble compounds, a small bottle of water destined to be broken to initiate an exothermic reaction, and a container immersed in the aforesaid soluble compounds and containing the product to be heated.

[0010] To allow the extraction of the product from the envelope, the container where product is stored is provided with a bottleneck shaped portion extending to the exterior of the envelope itself and having such a shape as to serve also as a dispenser of the product itself.

[0011] From the above description it is readily understood that the construction of such heating envelopes is particularly complex, since their construction process provides for the insertion of a container for the product to be handled into the exterior case, the introduction of the soluble compounds and of the small water bottle in the space delimited by the case and by the newly positioned container and the sealing of the case around the projecting portion of the interior container in order to prevent, in use, the spillage of the aqueous solution from the heating envelope.

[0012] Another drawback of current heating envelopes

is given by their limited field of use, since they are mainly suitable for handling cosmetic products in lotion form.

[0013] A further drawback of the heating envelopes described above is their ability to perform solely a heating treatment on the products contained therein.

[0014] In US-A-5465707 is described a sack container which tries to overcome the cited drawbacks; however this aim is only partially obtained.

[0015] The main aim of the present invention, therefore, is to make available a sack container able to eliminate or substantially reduce the aforementioned drawbacks relating to the prior art and only partially solved by the device according to the cited document.

[0016] An important aim of the present invention is to make available a sack container able to contain therein a wide range of products and to subject them to a heating or chilling treatment depending on product type and/or on the user's requirements.

[0017] Another aim of the present invention is to obtain a sack container that can be easily obtained starting from elements and materials which are commonly available on the market and, that, moreover, is competitive from the economic point of view.

[0018] Not the least aim of the present invention is that with the aforesaid sack container it is possible to access the product contained therein in an easy and rapid manner, without any risk that the user may release or come in contact with the solution of chemical reactants.

[0019] These, and other aims that shall become clearer farther on, are achieved by a sack container as described in the accompanying claims.

[0020] Further features and advantages of the invention shall become more readily apparent from the detailed description that follows of some preferred, but not exclusive, embodiments of a sack container, illustrated in the accompanying drawings, in which:

- Figure 1 shows a perspective and sectioned view of a first embodiment of a container according to the present invention;
- Figure 2 shows a perspective view of a variation of the first embodiment of a container according to the present invention;
- Figure 3 is a sectioned view of the container of Figure 2 according to trace III-III of Figure 2;
- Figure 4 is a partially sectioned lateral view of a breakable container containing water, used in the present invention;
- Figure 5 shows a perspective cross section view of an embodiment variation of the container of Figure 1;
- Figure 6 shows a perspective cross section view of another variation of the container according to the first embodiment of the present invention;
- Figure 7 shows a sectioned view of a variation of the container of Figure 2;
- Figure 8 shows a section view of an embodiment variation of the container of Figure 3;
- Figure 9 shows a perspective sectioned view of a

container according to the present invention provided with an interior case;

- Figure 10 shows a perspective sectioned view of a second embodiment of a container according to the present invention;
- Figure 11 shows an embodiment variation of the container of Figure 8;
- Figure 12 shows an embodiment variation of the container of Figure 9;
- Figure 13 shows an embodiment variation of the container of Figure 7;
- Figure 14 is a section view of a container in accordance with the second embodiment of the present invention, with the base portion open;
- Figure 15 is a section view of the container of Figure 14 with the base portion closed;
- Figure 16 is a perspective bottom view of a container made in accordance with the second embodiment;
- Figure 17 is a perspective, partially sectioned view of a container according to a third embodiment of the present invention; and
- Figure 18 shows an embodiment variation of the container of Figure 17.

[0021] With reference to the aforementioned figures, a sack container according to the present invention is totally indicated with the reference number 1.

[0022] The accompanying figures illustrate a series of possible embodiment variations relating to the container 1 of the present invention. These variations can also be mutually combined also in different ways from the ones illustrated herein, without thereby departing from the scope of the present invention.

[0023] In a first embodiment, the sack container 1 comprises a first, a second and a third layer 2, 3, 4 of laminar, impermeable material, at least partly superposed and mutually defining at least two compartments (Figures 1-9, 11-13).

[0024] In particular, the first and the second layer 2, 3 mutually define a primary compartment 5 able to contain a product 6 to be heated or chilled, whilst the second and the third layer 3, 4 mutually define a first secondary compartment 7 destined to contain heating or chilling means 8.

[0025] In the first secondary compartment 7 are inserted in a first chemical compound 9 and at least a breakable container 10 containing a second chemical compound 11 and placed in direct contact with the first chemical compound 9.

[0026] The first and the second chemical compounds 9, 11 are such as to give rise, if placed in contact, to a chemical reaction that causes a positive or negative temperature gradient depending on the chemical compounds in use.

[0027] If the container 1 is destined to allow the heating of the product 6 contained therein, the first and second chemical compound 9, 11 are selected in such a way as to give rise to an exothermic reaction if placed in contact.

[0028] Such chemical compounds 9, 11 can advantageously be constituted by compounds that are soluble in water, such as sodium chloride and magnesium sulphate, and by water.

5 **[0029]** If instead the container 1 is destined to allow the chilling of the product 6 contained therein, the first and second chemical compounds 9, 11 are selected in such a way as to give rise to an endothermic reaction if placed in contact.

10 **[0030]** In this case, too, the chemical compounds 9, 11 can advantageously be constituted by compounds soluble in water and by water, but, in this case, the soluble compound to be used shall be, for instance, sodium nitrite or sodium sulphate.

15 **[0031]** In both cases, the breakable container 10 can indifferently contain water or the soluble compound, the other chemical compound being wholly located around it.

[0032] The container 1 further comprises means 12 for opening the primary compartment 5 to allow the extraction of the product 6 contained therein.

20 **[0033]** Said opening means 12 can be constituted, for instance, by an opening 13 obtained through the first layer 2 (Figures 1, 5-8).

[0034] Advantageously said opening 13 can be closed 25 by an adhesive strip 14 that allows to close the primary compartment 5 again after extracting the product 6 of interest (Figures 1 and 5).

[0035] Other embodiments are provided, in which the opening 13 obtained between the first and the second layer 2, 3, can be closed and reopened by means of a 30 known pressure closure 15 (similar to the one shown in Figures 17-18), constituted by a seat with substantially rectilinear development associated either to the first layer 2 or to the second layer 3, and by an engagement organ 35 with substantially rectilinear shape and associated to the other layer 2, 3. Said pressure closure 15 can advantageously extend all around the primary compartment 5 to allow an easier access to the product 6 contained therein.

40 **[0036]** Alternatively, if the product 6 contained in the primary compartment 5 is constituted by a liquid, such as a drink, the opening 13 can be closed by a stopper 13 (Figure 8).

[0037] In this case, too, the opening 13 can be obtained in correspondence with the junction area between the first and the second layer 2, 3, and be closed by a stopper 45 16 (Figure 11).

[0038] When the product 6 is constituted by a liquid drink, the opening 13 can also be shut by a thin layer 17 of laminar material (Figures 7, 13), able to be penetrated 50 by a straw (indicated in dashed lines in Figure 7) or removable by means of an adhesive strip.

[0039] As shown in Figure 6, the opening means 12 can be constituted also by a cut 18 developing along a concave trajectory on an outer face 19 of the primary compartment 5, and by an adhesive strip 14. 55

[0040] The cut 18 delimits a strip of laminar material 20 partially detached from the remaining part of the layer whereon the cut 18 itself is obtained, whilst the adhesive

strip 14 is fixed over the cut 18 and the strip 20, to allow the opening and the re-closure of the primary compartment 5 lifting and repositioning the strip 20.

[0041] A second embodiment of the present invention provides for the container 1 to comprise in addition to the first three layers 2, 3, 4 of laminar material described above, also a fourth layer 21 at least partly superposed to the first layer 2 (Figures 10, 12, 14-16).

[0042] This fourth layer 21 defines with the first layer 2 a second secondary compartment 22 which, similarly to the first, contains the first chemical compound 9 and a second breakable container 10 containing the second chemical compound 11.

[0043] With reference to the primary compartment 5, the second secondary compartment 22 is thus positioned opposite to the first secondary compartment 7.

[0044] The different variations illustrated for the opening means 12 of the primary compartment 5 are also applicable to a container 1 obtained in accordance with the second embodiment.

[0045] Some other variations, applicable to both described embodiments, are listed below.

[0046] A first embodiment variation of the container 1 of the present invention (Figures 2, 3, 7, 8, 11 and 13-15) provides for the primary compartment 5 to have a prolongation 23, relative to the first secondary compartment 7 in the first embodiment, and relative to both secondary compartments 7, 22 in the second embodiment, and for the opening means 12 to comprise a weakening area 24, constituted for instance by a sequence of incisions, obtained on the prolongation 23 itself to allow the primary compartment 5 to be opened by ripping (Figure 2).

[0047] Alternatively, in correspondence with the prolongation 23, an indication can be printed to teach where to effect a cut by means of scissors.

[0048] A weakening area 24, constituted for instance by a sequence of incisions, to allow the rip-out opening of the primary compartment 5, can be provided also on containers 1 lacking a prolongation 23 (this embodiment is not shown herein).

[0049] In an additional embodiment variation of the present invention, the container 1 can further comprise, inside each secondary compartment 7, 22 present, at least a case 25, preferably also made of laminar, impermeable material (Figures 9 and 12).

[0050] Said case 25 contains the first chemical compound 9 and the breakable container 10, and it can be fastened to the secondary compartment 7, 22 into which it is inserted, by means of fastening means 26, such as sealing or gluing.

[0051] The container 1 of the present invention can also have a traditional envelope shape or it can be provided with a base portion 27 whereby it can be set down onto a surface whilst remaining in the vertical position (Figures 5, 13-16).

[0052] As shown in Figures 5, 13-16, the container 1 can comprise a bottom layer 28 integrally associated to at least two of the other layers, in particular to the outer-

most ones.

[0053] In the first embodiment the bottom layer 28 is then fastened at least to the first and to the third layer 2, 4, whilst in the second embodiment is fastened at least to the third and to the fourth layer 4, 21.

[0054] In a first variation, the bottom layer 28 is also movable from a first position in which it is folded back onto itself and is substantially set side by side to the layer where to it is fastened (Figure 15), and a second position in which it is placed substantially transversely to said layers (Figures 14-16).

[0055] When the bottom layer 28 is in the second position, the layers where to it is associated are mutually distanced, and in this way the container 1 can be set down onto its own base portion 27.

[0056] In a second embodiment variation, the base portion 27 has two wings 29, movable from a position in which they face each other to a position in which they are mutually aligned (Figure 13).

[0057] A third embodiment of the present invention provides for the container 1 to be used for heating or chilling products 6 that are independent of the container 1 itself, such as bottles.

[0058] In accordance with the third embodiment, the container has the primary compartment 5 and the two secondary compartments 7, 22 similarly to the second embodiment, and the means 12 for opening the primary compartment 5 comprise at least an opening 13 obtained between the first and the second layer 2, 3.

[0059] The layers 2, 3, 4, 21 that constitute the container 1 are movable from a non operative position in which they lie substantially parallel to each other and in which the primary compartment 5 has minimum volume, to an operative position in which the primary compartment 5 has maximum volume and can house the product to be heated.

[0060] As shown in Figures 17 and 18, the opening 13 is advantageously obtained between the first and the second layer in correspondence with an upper portion 30 of the container 1.

[0061] In correspondence with its own base portion 27, the container 1 can comprise, depending on the embodiments, either a second opening 13, such that, when the layers 2, 3, 4, 21 are in the operative position, the container 1 has tubular shape, or a bottom layer 28 which serves as a bearing base and such that the container 1 assumes a bucket-like shape when the layers 2, 3, 4, 21 are in the operative position.

[0062] The bottom layer 28, if present, is integrally associated at least to the first and to the second layer 2, 3, and is movable from a first position in which it is folded back onto itself and is substantially set side by side with the first and the second layer 2, 3, to a second position in which it is placed substantially transversely relative to the first and to the second layer 2, 3 (Figure 18).

[0063] When the bottom layer 28 is in the related second position, the first and the second layer 2, 3 are mutually distanced, and the container 1 can be set down

onto its own base portion 27.

[0064] Preferably, according to the third embodiment, the container 1 comprises at least a case 25, similar to the cases 25 described above, removably inserted inside the related secondary compartment 7, 22.

[0065] Additionally, the container 1 comprises means 31 for accessing the secondary compartments 7, 22 to allow the replacement of the used cases 25 with new ones.

[0066] Advantageously the access means 31 comprise a pressure closure 15 of the type described above (Figures 17 and 18).

[0067] In all described embodiments, the breakable container 10 can advantageously be provided with at least a preferential rupture area 32 (Figure 4) to allow the rupture of the container in correspondence with said rupture area 32, when a user subjects it to flexion or compression.

[0068] All different layers of laminar and impermeable material whereof the container 1 of the present invention is made are preferably obtained from materials such as Polythene, Aluminium or still others such as water-proofed cardboard, and the junction areas between the different layers of laminar material can advantageously be obtained by means of heat sealing or gluing.

[0069] Moreover, the junction between the first and the second layer 2, 3 is obtained by means of a pressure closure 15 positioned along the entire junction perimeter. This is the case mentioned above, in which the opening 13 is obtained between the first and the second layer 2, 3, and extends all around the primary compartment 5 to allow an easier access to the product 6 contained therein.

[0070] In this case, therefore, the first and the second layer 2, 3, can be completely separated from each other to provide better accessibility to the product 6.

[0071] Preferably, the breakable container 10 is constituted by a small bottle containing water, whilst the case 25 is also constituted by a laminar, impermeable material.

[0072] Some observations pertaining to the use of the container 1 in some particular cases are set out below, wholly similar considerations applying for different products and for packages destined to provide a different thermal treatment.

[0073] In the particular case in which the product 6 is constituted by one or more napkins for personal hygiene and the container 1 is of the heating type, when the user wants to obtain a napkin he/she may decide whether it should be warm or at ambient temperature.

[0074] If the user wants it at ambient temperature, he/she needs simply to open the primary compartment 5 using the opening means 12 and remove a napkin.

[0075] If the opening means 12 allow it, and if the container 1 contains multiple napkins, the user can subsequently shut off access to the primary compartment 5, preserving the other napkins for a later time.

[0076] If, on the contrary, the user desires a warm napkin, he/she flexes or compresses the container 1, breaking the breakable container 10 and causing the two chem-

ical compounds to mix.

[0077] For better mixing, the user can shake the container 1 for a few seconds.

[0078] The mixing of the chemical compounds initiates the chemical reaction between them, which produces heat.

[0079] To allow the reaction to be completed and heat to be transmitted to the napkins, a few minutes must be allowed to elapse.

[0080] Actual time depends in any case both on the substances used as chemical compounds and on the dimensions of the container 1 as well as on the quantity of product 6 to be heated.

[0081] Once the required time has elapsed, the user can thus remove the napkin in the ways described above.

[0082] When using a container 1 according to the third embodiment, the user first inserts the cases 25 inside the secondary compartments 7, 22, then causes the rupture of the breakable containers 10 causing the (exothermic or endothermic) chemical reaction to start, and lastly it brings the layers 2, 3, 4, 21 to the operative position and inserts the product in the primary compartment 5.

[0083] The present invention achieves important advantages.

[0084] In the first place the constitution of the container allows to remove the product contained therein in a practical manner and above all independently of the secondary compartment, so as to minimise the risk of coming in contact with the solution of chemical reactants.

[0085] In the second place, the provision of closing means that can be re-closed, such as the adhesive strip, allows to open and close the container several times, and gradually to extract the product from the primary compartment, as well as to maintain the product contained therein at the desired temperature for a long time.

[0086] Moreover, the container provided with the two secondary compartment is particularly well suited when the product has particularly large thickness, as in the case in which it consists of a high number of superposed napkins, since it is able, in use, to exchange a greater quantity of heat with the product itself.

[0087] Additionally, the use of cases inserted in the secondary compartment guarantees a greater simplicity of construction of the container.

[0088] The fact that such cases are fastened to the respective secondary compartment, it allows to prevent them from exiting from the compartments when the container is opened.

[0089] Not least, the bearing portion, if the bottom layer is present, allows to maintain the container in the vertical position, which is particularly convenient when the product is liquid.

[0090] A container according to third described embodiment allows to have at all times, in any place or situation, the ability to heat or chill any product (in particular, but not exclusively, food products).

[0091] It should further be noted that the present invention is relatively easy to construct and the cost con-

nected to its realisation is not very high.

[0092] The invention thus conceived can be subject to numerous modifications and variations, without thereby departing from the scope of the inventive concept that characterises it.

[0093] All components can be replaced by technically equivalent elements and in practice all materials employed, as well as the shapes and dimensions of the various components, can be any, as needed (within the scope of those indicated above).

Claims

1. A sack container comprising
a first and a second layer (3) of laminar, flexible and impermeable material, at least partly superposed and mutually defining at least a primary compartment (5) to contain product (6);
at least a third layer (4) of laminar, flexible and impermeable material defining with said second layer (3) at least a first secondary compartment (7);
a first chemical compound (9) inserted in said first secondary compartment (7); at least a breakable container (10) inserted in said first secondary compartment (7) in contact with said first chemical compound (9), said breakable container (10) containing in its own interior at least a second chemical compound (11), said first and second chemical compound (9), (11) giving rise, if placed in contact, to a chemical reaction producing a temperature gradient, and means (12) for opening said primary compartment (5) to allow the extraction of said product (6) from the interior of the container (1) itself, said container being **characterized in that** it comprises a fourth layer (21) of laminar, flexible and impermeable material at least partly superposed to said first layer (2) and defining with said first layer (2) a second secondary compartment (22), said second secondary compartment (22) comprising said first chemical compound (9) and a second container containing said second chemical compound (11), the container further comprising at least a case (25) positioned internally to each of said secondary compartments (7, 22), each case (25) containing said first chemical compound (9) and said breakable container (10) positioned internally to the related secondary compartment (7, 22), and means (31) for accessing said secondary compartments (7, 22) to allow the replacement of said cases (25).
2. A container as claimed in claim 1 **characterised in that** said opening means (12) comprise at least an opening (13) obtained through at least one of said layers defining the primary compartment (5).
3. A container as claimed in claim (2) **characterised in that** it further comprises a removable stopper (16)

positioned to close said opening (13).

4. A container as claimed in claim 1 **characterised in that** said primary compartment (5) has an outer face (19), and **in that** said primary compartment (5) presents, on said outer face (19), a cut (18) developing along a concave trajectory delimiting a strip (20) of laminar material partially detached from the remaining part delimiting the primary compartment (5) itself and **in that** said opening means (12) comprise an adhesive strip (14) attached to said outer face (19) and covering said cut (18) and said strip (20), to allow the opening and reclosing of said primary compartment (5) by lifting and repositioning said strip (20).
5. A container as claimed in claim 1 **characterised in that** said primary compartment (5) has a prolongation (23), relative to said first secondary compartment (7), and **in that** said opening means (12) comprise a weakening area (24) obtained on said prolongation (23) to allow the rip-out opening of said primary compartment (5).
6. A container as claimed in claim 1 **characterised in that** said primary compartment (5) has a prolongation (23), relative to said secondary compartment, and **in that** said opening means (12) comprise a weakening area (24) obtained on said prolongation (23) to allow the rip-out opening of said primary compartment (5).
7. A container as claimed in claim 1 **characterised in that** said breakable container (10) comprises at least a preferential rupture area (32), said rupture area (32) allowing the container to break under the user's action.
8. A container as claimed in claim 1 **characterised in that** said breakable containers comprise each at least a preferential rupture area (32), said rupture area (32) allowing the rupture of the container under the user's action.
9. A container as claimed in claim 1 **characterised in that** it further comprises, in correspondence with its own base portion (27), a bottom layer (28) solidly associated at least to said first and third layer (2), (4), and movable from a first position in which it is folded back onto itself and is substantially set side by side to said first and third layer (2), (4), to a second position in which it is placed substantially transversely relative to said first and third layer (2), (4), and in which said first and third layer (2), (4) are distanced from each other in such a way that said container (1) can be set down on its own base portion (27).
10. A container as claimed in claim 1 **characterised in**

- that** it further comprises, in correspondence with its own base portion (27), a bottom layer (28) integrally associated at last to said third and fourth layer (4), (21), and movable from a first position in which it is folded back onto itself and it is substantially set side by side to said third and fourth layer (4), (21), to a second position in which it is positioned substantially transversely relative to said third and fourth layer (4), (21), and in which said third and fourth layer (4), (21) are distanced from each other in such a way that said container (1) can be set down onto its own base portion (27).
11. A container as claimed in claim 1 **characterised in that** it further comprises at least a case (25) positioned internally to said first secondary compartment (7), said case (25) containing said first chemical compound (9) and said breakable container (10).
12. A container as claimed in claim 11 **characterised in that** it further comprises fastening means (26) for fastening said case (25) inside said first secondary compartment (7).
13. A container as claimed in claim 1 **characterised in that** it further comprises fastening means (26) for fastening said cases (25) internally to said secondary compartments (7). (22).
14. A container as claimed in claim 1 or 13 **characterised in that** said means (12) for opening said primary compartment (5) comprise at least an opening (13) obtained between the first and the second layer (2), (3), said layers (2), (3), (4), (21) being movable from a non operative position in which they lie substantially parallel to each other and in which said primary compartment (5) has minimum volume, to a second position in which said primary compartment (5) has maximum volume.
15. A container as claimed in claim 1 **characterised in that** said access means (31) comprise a pressure closure (15).
16. A container as claimed in any of the claims 1, 14 and 15 **characterised in that** it further comprises a second opening (13), and **in that** when said layers (2), (3), (4), (21) are in said operative position, said container (1) has tubular shape.
17. A container as claimed in any of the claims 1, 14 and 15 **characterised in that** it further comprises, in correspondence with its own base portion (27), a bottom layer (28) integrally associated at least to said first and second layer (2), (3), and movable from a first position in which it is folded back onto itself and it is substantially set side by side to said first and second layer (2), (3), to a second position in which it is placed substantially transversely relative to said first and second layer (2), (3), and in which said first and second layer (2), (3) are distanced from each other in such a way that said container (1) can be set down onto its own base portion (27).
18. A container as claimed in claim 1 **characterised in that** said opening means (12) comprise at least an opening (13) obtained between the first and the second layer (2), (3), and a removable stopper (16) positioned to close said opening (13).
19. A container as claimed in claim 1 **characterised in that** said opening means (12) comprise at least an opening (13) obtained between the first and the second layer (2), (3), and a pressure closure (15), able to be re-closed, positioned to close said opening (13).
20. A container as claimed in claim 1 **characterised in that** said opening means (12) comprise at least an opening (13) for accessing said primary compartment (5), and a thin layer (17) made of laminar material, able to be punched, positioned to close said opening (13).
21. A container as claimed in claim 1 **characterised in that** said opening means (12) comprise a weakening area (24) obtained on said primary compartment (23) to allow the rip-out opening of said primary compartment (5).
22. A container as claimed in claim 1 **characterised in that** said first and second layer (2), (3), are mutually fastened by means of a pressure closure (15), able to be re-closed.
23. A container as claimed in any of the previous claims, **characterised in that** said first and second chemical compound (9), (11) give rise to an exothermic reaction if placed in contact.
24. A container as claimed in claim 23 **characterised in that** said first chemical compound (9) is constituted by a saline compound and said second chemical compound (11) is constituted by water.
25. A container as claimed in claim 23 **characterised in that** said first chemical compound (9) is constituted by water and said second chemical compound (11) is constituted by a saline compound.
26. A container as claimed in claim 24 or 25 **characterised in that** said saline compound is selected among the group constituted by sodium chloride and magnesium sulphate.
27. A container as claimed in any of the claims from 1

to 22 **characterised in that** said first and second chemical compound (9), (11) give rise to an endothermic reaction if placed in contact.

28. A container as claimed in claim 27 **characterised in that** said first chemical compound (9) is constituted by a saline compound, and said second chemical compound (11) is constituted by water. 5
29. A container as claimed in claim 27 **characterised in that** said first chemical compound (9) is constituted by water and said second chemical compound (11) is constituted by a saline compound. 10
30. A container as claimed in claim 28 or 29 **characterised in that** said saline compound is selected among the group constituted by sodium nitrite and sodium sulphate. 15

Patentansprüche

1. EIN SACKBEHÄLTER, welcher eine erste und eine zweite Schicht (3) eines laminaren, flexiblen und undurchlässigen Materials umfasst, das sich mindestens teilweise überlagert und gemeinsam mindestens ein Hauptfach (5) festlegt, um ein Produkt (6) aufzunehmen; 25
sowie mindestens eine dritte Schicht (4) eines laminaren, flexiblen und undurchlässigen Materials, welches mit der besagten zweiten Schicht (3) mindestens ein erstes zusätzliches Fach (7) umfasst; 30
sowie eine erste chemische Verbindung (9), welche in das besagte erste zusätzliche Fach (7) eingeführt wird; 35
sowie mindestens ein zerbrechlicher Behälter (10), welcher in das besagte erste zusätzliche Fach (7) in Kontakt mit der besagten ersten chemischen Verbindung (9) eingeführt wird, wobei der besagte zerbrechliche Behälter (10) in seinem eigenen Inneren eine zweite chemische Verbindung (11) enthält, und wobei die besagte erste und zweite chemische Verbindung (9), (11), falls sie in Kontakt treten, eine chemische Reaktion auslösen, welche eine ansteigende Temperatur erzeugt, sowie eine Einrichtung (12) zum Öffnen des besagten Hauptfaches (5), um die Herausnahme des besagten Produktes (6) aus dem Inneren des Behälters (1) selbst zu ermöglichen, wobei der Behälter **dadurch gekennzeichnet ist, dass** er eine vierte Schicht (21) eines laminaren, flexiblen und undurchlässigen Materials umfasst, welche sich mindestens teilweise mit der besagten ersten Schicht (2) überlagert und mit der besagten ersten Schicht (2) ein zweites zusätzliches Fach (22) festlegt, wobei das zweite zusätzliche Fach (22) die besagte erste chemische Verbindung (9) umfasst, sowie ein zweiter Behälter, welcher die besagte zweite chemische Verbindung (11) enthält und wo- 50
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bei der Behälter außerdem einen Einsatz (25) umfasst, welcher im Inneren eines jeden besagten zusätzlichen Fachs (7, 22) angebracht ist, jeder Einsatz (25) enthält die besagte erste chemische Verbindung (9) sowie den besagten zerbrechlichen Behälter (10), welcher im Inneren des entsprechenden zusätzlichen Fachs (7, 22) angebracht ist, sowie eine Einrichtung (31) für den Zugriff auf die besagten zweiten Fächer (7, 22), um den Ersatz der besagten Einsätze (25) zu ermöglichen.

2. EIN BEHÄLTER nach Anspruch 1, **dadurch gekennzeichnet, dass** die besagte Öffnungseinrichtung (12) mindestens eine Öffnung (13) umfasst, welche durch mindestens eine der besagten Schichten erzeugt wird, welche das Hauptfach (5) bestimmen. 20
3. EIN BEHÄLTER nach Anspruch 2, **dadurch gekennzeichnet, dass** er einen entfernbaren Stöpsel (16) umfasst, der angebracht wird, um die besagte Öffnung (13) zu verschließen.
4. EIN BEHÄLTER nach Anspruch 1, **dadurch gekennzeichnet, dass** das besagte Hauptfach (5) eine Außenseite (19) besitzt, sowie **dadurch**, dass das besagte Hauptfach (5) auf seiner Außenseite (19) eine Kerbe (18) aufweist, welche sich entlang einer konkaven Bahn entwickelt, die einen Streifen (20) eines laminaren Materials eingrenzt, der teilweise vom verbliebenen Teil abgelöst ist und das Hauptfach (5) selbst festlegt, sowie **dadurch**, dass die besagte Öffnungseinrichtung (12) einen Klebestreifen (14) umfasst, welcher an der besagten Außenseite (19) befestigt ist und die besagte Kerbe (18) sowie den besagten Streifen (20) bedeckt, um das Öffnen und das Wiederverschließen des besagten Hauptfaches (5) durch Anheben und Neupositionierung des besagten Streifens (20) zu ermöglichen. 40
5. EIN BEHÄLTER nach Anspruch 1, **dadurch gekennzeichnet, dass** das besagte Hauptfach (5) eine Verlängerung (23) besitzt, die im Verhältnis zum besagten ersten zusätzlichen Fach (7) steht, sowie **dadurch**, dass die besagte Öffnungseinrichtung (12) einen abgeschwächten Bereich (24) umfasst, der auf der besagten Verlängerung (23) erzeugt wird, um das Öffnen durch Aufreißen des Hauptfachs (5) zu ermöglichen. 45
6. EIN BEHÄLTER nach Anspruch 1, **dadurch gekennzeichnet, dass** das besagte Hauptfach (5) eine Verlängerung (23) besitzt, die im Verhältnis zum besagten zusätzlichen Fach steht, sowie **dadurch**, dass die besagte Öffnungseinrichtung (12) einen abgeschwächten Bereich (24) umfasst, der auf der besagten Verlängerung (23) erzeugt wird, um das Öffnen durch Aufreißen des Hauptfachs (5) zu ermöglichen. 50
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lichen.

7. EIN BEHÄLTER nach Anspruch 1, **dadurch gekennzeichnet, dass** der besagte zerbrechliche Behälter (10) mindestens einen Bereich (32) umfasst, welcher sich vorzugsweise auseinander ziehen lässt, wobei der besagte Bereich (32), welcher sich auseinander ziehen lässt, es ermöglicht, dass der Behälter bei der Anwendung durch den Benutzer geöffnet wird.
8. EIN BEHÄLTER nach Anspruch 1, **dadurch gekennzeichnet, dass** die besagten zerbrechlichen Behälter jeweils mindestens einen Bereich (32) umfassen, welcher sich vorzugsweise auseinander ziehen lässt, wobei der besagte Bereich (32), welcher sich auseinander ziehen lässt, es ermöglicht, dass der Behälter bei der Anwendung durch den Benutzer auseinander gezogen wird.
9. EIN BEHÄLTER nach Anspruch 1, **dadurch gekennzeichnet, dass** er außerdem in Verbindung mit seinem eigenen unteren Abschnitt (27) eine Grundschicht (28) umfasst, welche stabil mit mindestens der besagten ersten und dritten Schicht (2), (4) verbunden ist, und von einer ersten Position, bei welcher er zusammengelegt wird und sich hauptsächlich nebeneinander liegend zur besagten ersten und dritten Schicht (2), (4) befindet, in eine zweite Position beweglich ist, bei welcher er hauptsächlich transversal in Bezug zur besagten ersten und dritten Schicht (2), (4) angebracht wird, und bei welcher die besagte erste und dritte Schicht (2), (4) derartig voneinander entfernt sind, dass der besagte Behälter (1) auf seinem eigenen unteren Abschnitt (27) abgelegt werden kann.
10. EIN BEHÄLTER nach Anspruch 1, **dadurch gekennzeichnet, dass** er außerdem in Verbindung mit seinem eigenen unteren Abschnitt (27) eine Grundschicht (28) umfasst, welche vollständig mit der besagten dritten und vierten Schicht (4), (21) verbunden ist, und von einer ersten Position, bei welcher er zusammengelegt wird und sich hauptsächlich nebeneinander liegend zur besagten dritten und vierten Schicht (4), (21) befindet, in eine zweite Position beweglich ist, bei welcher er hauptsächlich transversal in Bezug zur besagten dritten und vierten Schicht (4), (21) angebracht wird, und bei welcher die besagte dritte und vierte Schicht (4), (21) derartig voneinander entfernt sind, dass der besagte Behälter (1) auf seinem eigenen unteren Abschnitt (27) abgelegt werden kann.
11. EIN BEHÄLTER nach Anspruch 1, **dadurch gekennzeichnet, dass** er mindestens einen Einsatz (25) umfasst, der im Inneren des ersten zusätzlichen Fachs (7) angebracht ist, und wobei der besagte Ein-

satz (25) die besagte chemische Verbindung (9) und den besagten zerbrechlichen Behälter (10) enthält.

12. EIN BEHÄLTER nach Anspruch 11, **dadurch gekennzeichnet, dass** er außerdem eine Halterungseinrichtung (26) umfasst, um den besagten Einsatz (25) innerhalb des besagten ersten zusätzlichen Fachs (7) zu befestigen.
13. EIN BEHÄLTER nach Anspruch 1, **dadurch gekennzeichnet, dass** er außerdem eine Halterungseinrichtung (26) umfasst, um die besagten Einsätze (25) innerhalb der besagten zusätzlichen Fächer (7), (22) zu befestigen.
14. EIN BEHÄLTER nach Anspruch 1 oder 13, **dadurch gekennzeichnet, dass** die besagte Öffnungseinrichtung (12) für die Öffnung des besagten Hauptfaches (5) mindestens eine Öffnung (13) umfasst, welche zwischen der ersten und zweiten Schicht (2), (3) gewonnen wird, wobei die besagten Schichten (2), (3), (4), (21) von einer sich nicht in Betrieb befindlichen Position, bei welcher sie sich hauptsächlich parallel zueinander befinden und bei der das besagte Hauptfach (5) ein minimales Volumen besitzt, in eine zweite Position beweglich ist, bei welcher das besagte Hauptfach (5) ein maximales Volumen besitzt.
15. EIN BEHÄLTER nach Anspruch 1, **dadurch gekennzeichnet, dass** die besagte Zugangseinrichtung (31) einen Druckverschluss (15) umfasst.
16. EIN BEHÄLTER nach Anspruch 1, 14 und 15, **dadurch gekennzeichnet, dass** er außerdem eine zweite Öffnung (13) umfasst, sowie **dadurch, dass**, wenn die besagten Schichten (2), (3), (4), (21) sich in Betriebsposition befinden, der Behälter (1) eine röhrenförmige Form besitzt.
17. EIN BEHÄLTER nach Anspruch 1, 14 und 15, **dadurch gekennzeichnet, dass** er außerdem in Verbindung mit seinem eigenen unteren Abschnitt (27) eine Grundschicht (28) umfasst, welche vollständig mit der besagten ersten und zweiten Schicht (2), (3) verbunden ist und von seiner ersten Position, in welcher er zusammengelegt wird und sich hauptsächlich nebeneinander liegend zur besagten ersten und zweiten Schicht (2), (3) befindet, in eine zweite Position beweglich ist, bei welcher er hauptsächlich transversal in Bezug zur besagten ersten und zweiten Schicht (2), (3) angebracht wird, und bei welcher die besagte erste und zweite Schicht (2), (3) derartig voneinander entfernt sind, dass der besagte Behälter (1) auf seinem eigenen unteren Abschnitt (27) abgelegt werden kann.
18. EIN BEHÄLTER nach Anspruch 1, **dadurch ge-**

- kennzeichnet, dass** die besagte Öffnungseinrichtung (12) mindestens eine Öffnung (13) umfasst, welche zwischen der ersten und zweiten Schicht (2), (3) erzeugt wird, sowie einem entfernbaren Stöpsel (16), der angebracht wird, um die besagte Öffnung (13) zu verschließen.
19. EIN BEHÄLTER nach Anspruch 1, **dadurch gekennzeichnet, dass** die besagte Öffnungseinrichtung (12) mindestens eine Öffnung (13) umfasst, welche zwischen der ersten und zweiten Schicht (2), (3) erzeugt wird, sowie einen Druckverschluss (15), der wiederverschlossen werden kann und angebracht wird, um die besagte Öffnung (13) zu verschließen.
20. EIN BEHÄLTER nach Anspruch 1, **dadurch gekennzeichnet, dass** die besagte Öffnungseinrichtung (12) mindestens eine Öffnung (13) umfasst, um zum besagten Hauptfach (5) zu gelangen, sowie eine dünne Schicht (17), welche aus laminaem Material gefertigt wurde und gestanzt werden kann und so gelagert ist, dass die besagte Öffnung (13) verschlossen wird.
21. EIN BEHÄLTER nach Anspruch 1, **dadurch gekennzeichnet, dass** die besagte Öffnungseinrichtung (12) einen abgeschwächten Bereich (24) umfasst, welcher auf dem besagten Hauptfach (23) erzeugt wird, um das Öffnen durch Aufreißen des Hauptfachs (5) zu ermöglichen.
22. EIN BEHÄLTER nach Anspruch 1, **dadurch gekennzeichnet, dass** die besagte erste und zweite Schicht (2), (3) wechselseitig durch Einrichtungen mit einem Druckverschluss (15) befestigt sind, welcher wiederverschließbar ist.
23. EIN BEHÄLTER nach jedem der vorherigen Ansprüche, **dadurch gekennzeichnet, dass** die besagte erste und zweite chemische Verbindung (9), (11) eine exothermische Reaktion auslöst, wenn sie in Kontakt gebracht werden.
24. EIN BEHÄLTER nach Anspruch 23, **dadurch gekennzeichnet, dass** die besagte erste chemische Verbindung (9) aus einer Salzverbindung besteht, und die zweite chemische Verbindung (11) aus Wasser besteht.
25. EIN BEHÄLTER nach Anspruch 23, **dadurch gekennzeichnet, dass** die besagte erste chemische Verbindung (9) aus Wasser gebildet wird und die besagte zweite chemische Verbindung (11) aus einer Salzverbindung gebildet wird.
26. EIN BEHÄLTER nach Anspruch 24 oder 25, **dadurch gekennzeichnet, dass** die besagte Salzverbindung aus der Gruppe gewählt wurde, welche aus Natriumchlorid und Magnesiumsulfat gebildet wird.
27. EIN BEHÄLTER nach jedem der Ansprüche von 1 bis 22, **dadurch gekennzeichnet, dass** die besagte erste und zweite chemische Verbindung (9), (11) eine endothermische Reaktion auslösen, wenn sie in Kontakt gebracht werden.
28. EIN BEHÄLTER nach Anspruch 27, **dadurch gekennzeichnet, dass** die besagte erste chemische Verbindung (9) aus einer Salzverbindung besteht, und die zweite chemische Verbindung (11) aus Wasser besteht.
29. EIN BEHÄLTER nach Anspruch 27, **dadurch gekennzeichnet, dass** die besagte erste chemische Verbindung (9) aus Wasser gebildet wird und die besagte zweite chemische Verbindung (11) aus einer Salzverbindung gebildet wird.
30. EIN BEHÄLTER nach Anspruch 28 oder 29, **dadurch gekennzeichnet, dass** die besagte Salzverbindung aus der Gruppe gewählt wurde, welche aus Natriumnitrit und Natriumsulfat gebildet wird.

Revendications

1. Un conteneur pour sacs comportant une première et une seconde couche (3) d'un matériau lamellaire, flexible et imperméable, au moins partiellement superposées et définissant réciproquement au moins un compartiment primaire (5) pour contenir le produit (6) ; au moins une troisième couche (4) d'un matériau lamellaire, flexible et imperméable définissant avec ladite seconde couche (3) au moins un premier compartiment secondaire (7) ; un premier composé chimique (9) incluse dans ledit premier compartiment secondaire (7) ; au moins un conteneur cassant (10) incluse dans ledit compartiment secondaire (7) au contact de ledit premier composé chimique (9), ledit conteneur cassant (10) contenant à son propre intérieur au moins un second composé chimique (11), lesdits premier e second composés chimiques (9), (11) donnant lieu, si mises au contact l'une de l'autre, à une réaction chimique produisant un gradient de température, et des moyens (12) pour ouvrir ledit compartiment primaire (5) en vue de permettre de sortir ledit produit (6) de l'intérieur du conteneur (1) lui-même, ledit conteneur étant **caractérisé en ce qu'il** comporte une quatrième couche (21) d'un matériau lamellaire, flexible et imperméable au moins partiellement superposée à ladite première couche (2) et définissant avec ladite première couche (2) un second compartiment secondaire (22), ledit second compartiment secondaire (22) comportant ledit premier composé chimique (9) et un second

- conteneur contenant ledit second composé chimique (11), le conteneur comportant aussi au moins une cage (25) positionnée à l'intérieur de chacun desdits compartiments secondaires (7,22, chaque case (25) contenant ledit premier composé chimique (9) et ledit conteneur cassant (10) positionné à l'intérieur des compartiments secondaires (7,22) y afférents, et moyens (31) pour accéder audits compartiments secondaires (7,22) en vue de permettre le remplacement des cages susdites (25).
2. Un conteneur selon la revendication 1, **caractérisé en ce que** lesdits moyens d'ouverture (12) comportent au moins une ouverture (13) obtenue par le biais d'au moins l'une des couches susdites définissant le compartiment primaire (5).
 3. Un conteneur selon la revendication 2, **caractérisé en ce qu'il** comporte aussi un bouchon amovible (16) positionné pour fermer ladite ouverture (13).
 4. Un conteneur selon la revendication 1, **caractérisé en ce que** ledit compartiment primaire (5) a une surface extérieure (19), et **en ce que** ledit compartiment primaire (5) présente, dans ladite surface extérieure (19), une coupe (18) se développant le long d'une trajectoire concave délimitant une bande (20) d'un matériau lamelliforme partiellement détachée de la partie résiduelle délimitant le compartiment primaire (5) lui-même et **en ce que** lesdits moyens d'ouverture (12) comportent une bande adhésive (14) fixée à ladite surface extérieure (19) et couvrant ladite coupe (18) et ladite bande (20), en vue de permettre l'ouverture et la refermeture dudit compartiment primaire (5) par le relevage et le repositionnement de ladite bande (20).
 5. Un conteneur selon la revendication 1, **caractérisé en ce que** ledit compartiment primaire (5) a une rallonge (23), eu égard audit premier compartiment secondaire (7), et **en ce que** lesdits moyens d'ouverture (12) comportent une zone d'affaiblissement (24) obtenue sur ladite rallonge (23) pour permettre l'ouverture par arrachage dudit compartiment primaire (5).
 6. Un conteneur selon la revendication 1, **caractérisé en ce que** ledit compartiment primaire (5) a une rallonge (23), eu égard audit compartiment secondaire, et **en ce que** lesdits moyens d'ouverture (12) comportent une zone d'affaiblissement (24) obtenue sur ladite rallonge (23) pour permettre l'ouverture par arrachage dudit compartiment primaire (5).
 7. Un conteneur selon la revendication 1, **caractérisé en ce que** ledit conteneur cassant (10) comporte au moins une zone de rupture préférentielle (32), ladite zone de rupture (32) permettant au conteneur de craquer sous l'action de l'utilisateur.
 8. Un conteneur selon la revendication 1, **caractérisé en ce que** chacun des conteneurs cassants susdits comportent au moins une zone de rupture préférentielle (32), ladite zone de rupture (32) permettant la rupture du conteneur sous l'action de l'utilisateur.
 9. Un conteneur selon la revendication 1, **caractérisé en ce qu'il** comporte aussi, à proximité de sa propre portion du socle (27), une couche de base (28) solidement associée au moins aux première et troisième couches (2), (4) susdites, et amovible d'une première position où elle est repliée sur elle-même et substantiellement positionnée à côté des première et troisième couches (2), (4) susdites, à une seconde position où elle est mise dans une position substantiellement transversale par rapport aux première et troisième couches (2), (4) susdites, et où lesdites première et troisième couches (2), (4) sont écartées l'une de l'autre de sorte que ledit conteneur (1) puisse être positionné sur sa propre portion du socle (27).
 10. Un conteneur selon la revendication 1, **caractérisé en ce qu'il** comporte aussi, à proximité de sa propre portion du socle (27), une couche de base (28) intégralement associée au moins aux troisième et quatrième couches (4), (21) susdites, et amovible d'une première position où elle est repliée sur elle-même et substantiellement positionnée à côté des troisième et quatrième couches (4), (21) susdites, à une seconde position où elle est mise dans une position substantiellement transversale par rapport aux troisième et quatrième couches (4), (21) susdites, et où lesdites troisième et quatrième couches (4), (21) sont écartées l'une de l'autre de sorte que ledit conteneur (1) puisse être positionné sur sa propre portion du socle (27).
 11. Un conteneur selon la revendication 1, **caractérisé en ce qu'il** comporte également au moins une cage (25) positionnée à l'intérieur dudit premier compartiment secondaire (7), ladite cage (25) contenant ledit premier composé chimique (9) et ledit conteneur cassant (10).
 12. Un conteneur selon la revendication 11, **caractérisé en ce qu'il** comporte aussi moyens d'attelage (26) pour atteler ladite cage (25) à l'intérieur dudit premier compartiment secondaire (7).
 13. Un conteneur selon la revendication 1, **caractérisé en ce qu'il** comporte aussi moyens d'attelage (26) pour atteler lesdites cages (25) à l'intérieur des compartiments secondaires (7), (22) susdites.
 14. Un conteneur selon la revendication 1 ou 13, **caractérisé en ce que** lesdits moyens (12) pour l'ouver-

- ture dudit compartiment primaire (5) comportent au moins une ouverture (13) obtenue entre la première et la seconde couche (2), (3), lesdites couches (2), (3), (4), (21) étant amovibles d'une position non opérationnelle où elles se trouvent substantiellement parallèles les unes aux autres et où ledit compartiment primaire (5) a un volume minimum, à une seconde position où ledit compartiment primaire (5) a un volume maximum.
15. Un conteneur selon la revendication 1, **caractérisé en ce que** lesdits moyens d'accès (31) comportent une fermeture par pression (15).
16. Un conteneur selon l'une quelconque des revendications 1, 14 et 15, **caractérisé en ce qu'il** comporte aussi une seconde ouverture (13), et **en ce que** lorsque lesdites couches (2), (3), (4), (21) sont dans ladite position opérationnelle, ledit conteneur (1) a une forme tubulaire.
17. Un conteneur selon l'une quelconque des revendications 1, 14 et 15, **caractérisé en ce qu'il** comporte aussi, à proximité de sa propre portion du socle (27), une couche de base (28) intégralement associée au moins aux première et seconde couches (2), (3) susdites et amovible d'une première position où elle est repliée sur elle-même et substantiellement positionnée à côté des première et seconde couches (2), (3) susdites, à une seconde position où elle est mise dans une position substantiellement transversale par rapport aux première et seconde couches (2), (3) susdites, et où lesdites première et seconde couches (2), (3) sont écartées l'une de l'autre de sorte que ledit conteneur (1) puisse être positionné sur sa propre portion du socle (27).
18. Un conteneur selon la revendication 1, **caractérisé en ce que** lesdits moyens d'ouverture (12) comportent au moins une ouverture (13) obtenue entre la première et la seconde couche (2), (3), et un bouchon amovible (16) positionné de façon à fermer ladite ouverture (13).
19. Un conteneur selon la revendication 1, **caractérisé en ce que** lesdits moyens d'ouverture (12) comportent au moins une ouverture (13) obtenue entre les première et seconde couches (2), (3), et une fermeture par pression (15), en état d'être refermée, positionnée pour fermer ladite ouverture (13).
20. Un conteneur selon la revendication 1, **caractérisé en ce que** lesdits moyens d'ouverture (12) comportent au moins une ouverture (13) pour accéder au compartiment primaire (5) susdit, et une couche mince (17) se composant d'un matériau lamellaire, en état d'être poinçonné, positionnées pour fermer ladite ouverture (13).
21. Un conteneur selon la revendication 1, **caractérisé en ce que** lesdits moyens d'ouverture (12) comportent une zone d'affaiblissement (24) obtenue sur ledit compartiment primaire (23) en vue de permettre l'ouverture par arrachage dudit compartiment primaire (5).
22. Un conteneur selon la revendication 1, **caractérisé en ce que** lesdites première et seconde couches (2), (3), sont fixées l'une à l'autre moyennant une fermeture par pression (15), en état d'être refermé.
23. Un conteneur selon l'une quelconque des revendications précédentes, **caractérisé en ce que** lesdites premier et second composés chimiques (9), (11) donnent lieu à une réaction exothermique si placées l'une au contact de l'autre.
24. Un conteneur selon la revendication 23, **caractérisé en ce que** ledit premier composé chimique (9) est constitué d'un composé salin et que ledit second composé chimique (11) est constitué d'eau.
25. Un conteneur selon la revendication 23, **caractérisé en ce que** ledit premier composé chimique (9) est constitué d'eau et que ledit second composé chimique (11) est constitué d'un composé salin.
26. Un conteneur selon la revendication 24 ou 25, **caractérisé en ce que** ledit composé salin est sélectionné parmi le groupe constitué de chlorure de sodium et de sulfate de magnésium.
27. Un conteneur selon l'une quelconque des revendications 1 à 22, **caractérisé en ce que** lesdites premier et second composés chimiques (9), (11) donnent lieu à une réaction endothermique si placées l'une au contact de l'autre.
28. Un conteneur selon la revendication 27, **caractérisé en ce que** ledit composé chimique (9) est constitué d'un composé salin, et que ledit second composé chimique (11) est constitué d'eau.
29. Un conteneur selon la revendication 27, **caractérisé en ce que** ledit premier composé chimique (9) est constitué d'eau et que ledit second composé chimique (11) est constitué d'un composé salin.
30. Un conteneur selon la revendication 28 ou 29, **caractérisé en ce que** ledit composé salin est sélectionné parmi le groupe constitué de nitrite de sodium et de sulfate de sodium.

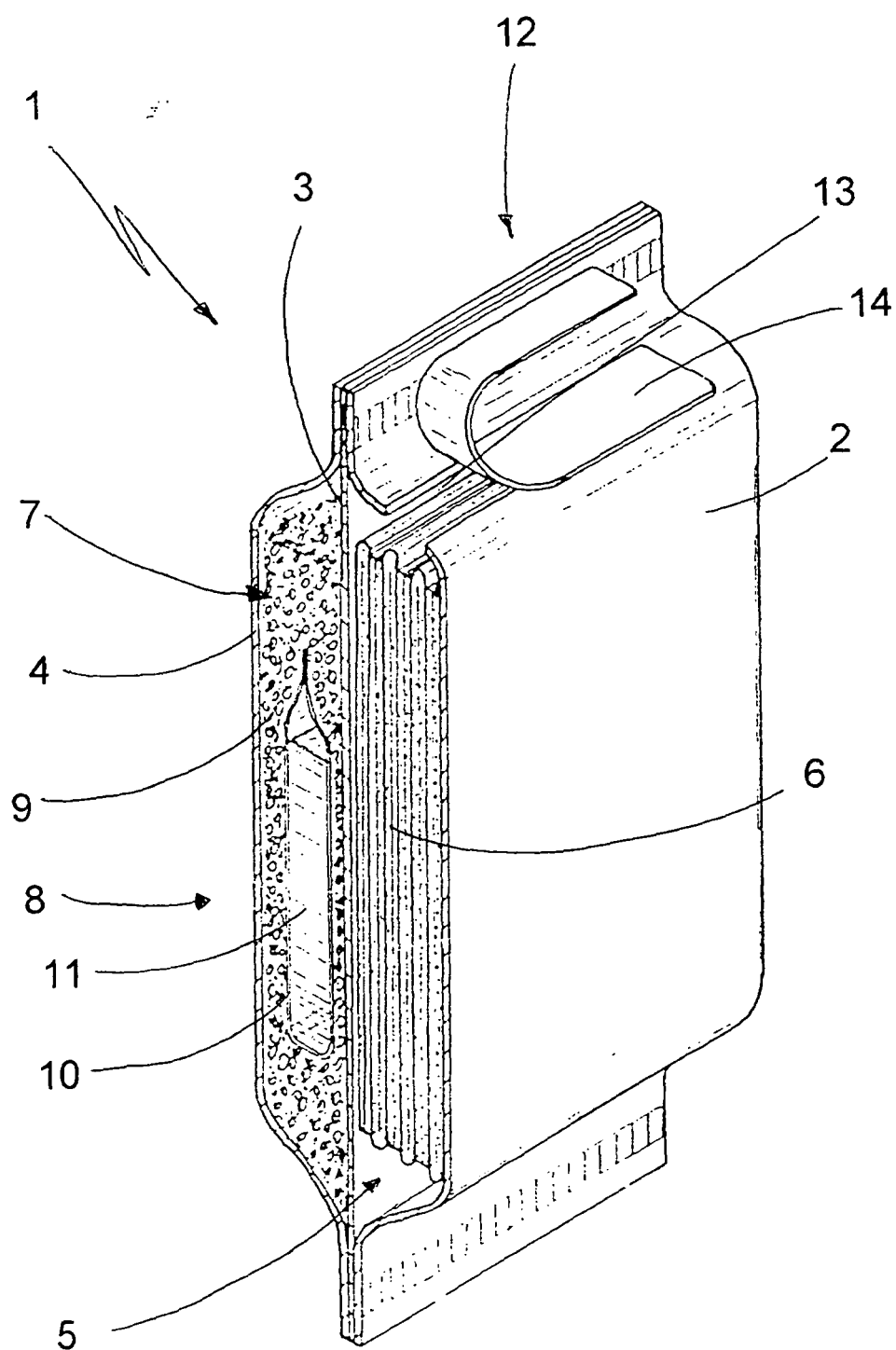


FIG. 1

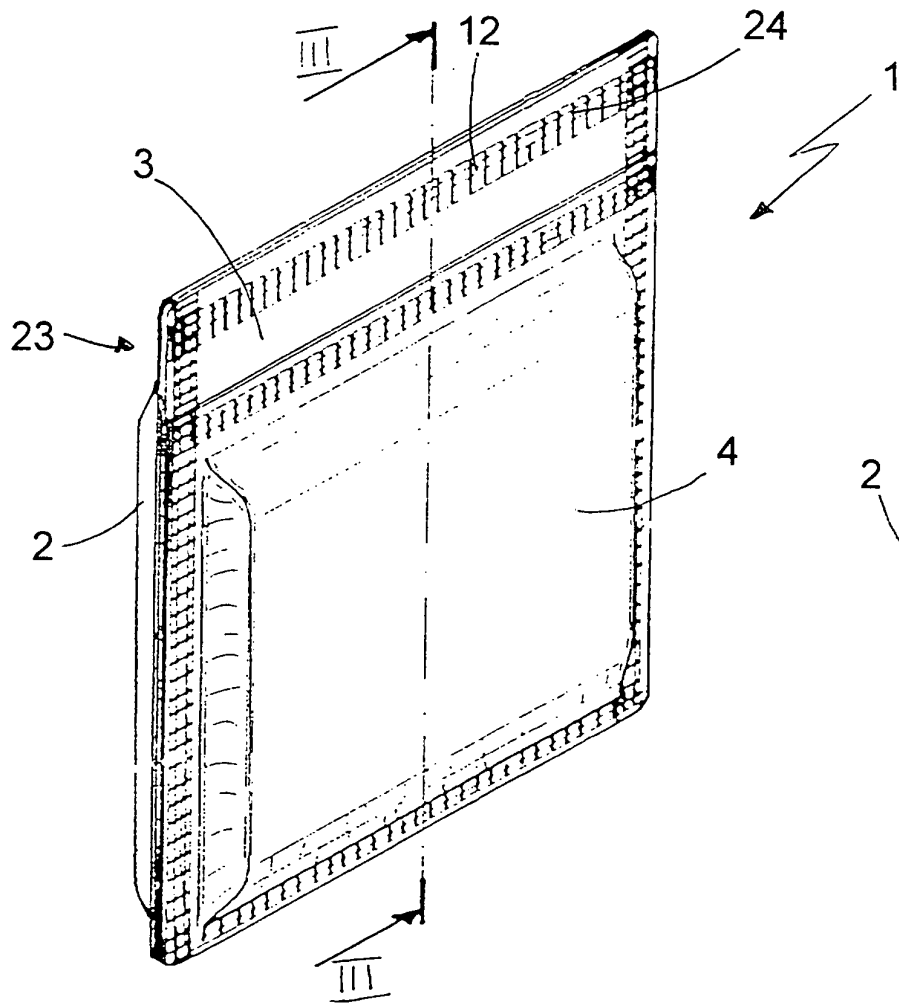


FIG. 2

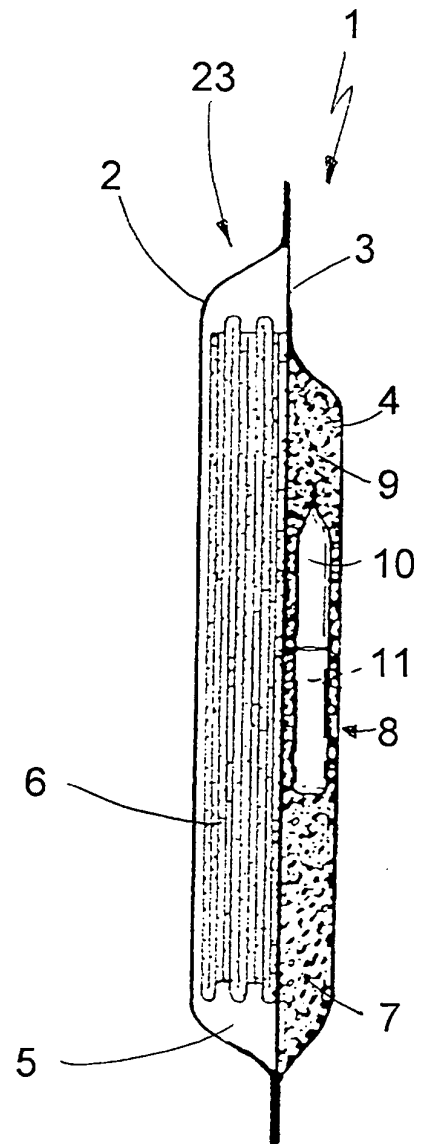


FIG. 3

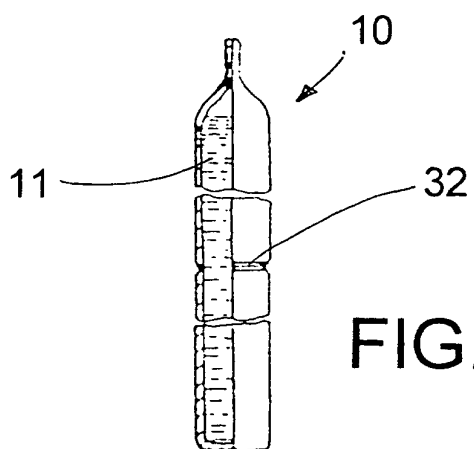


FIG. 4

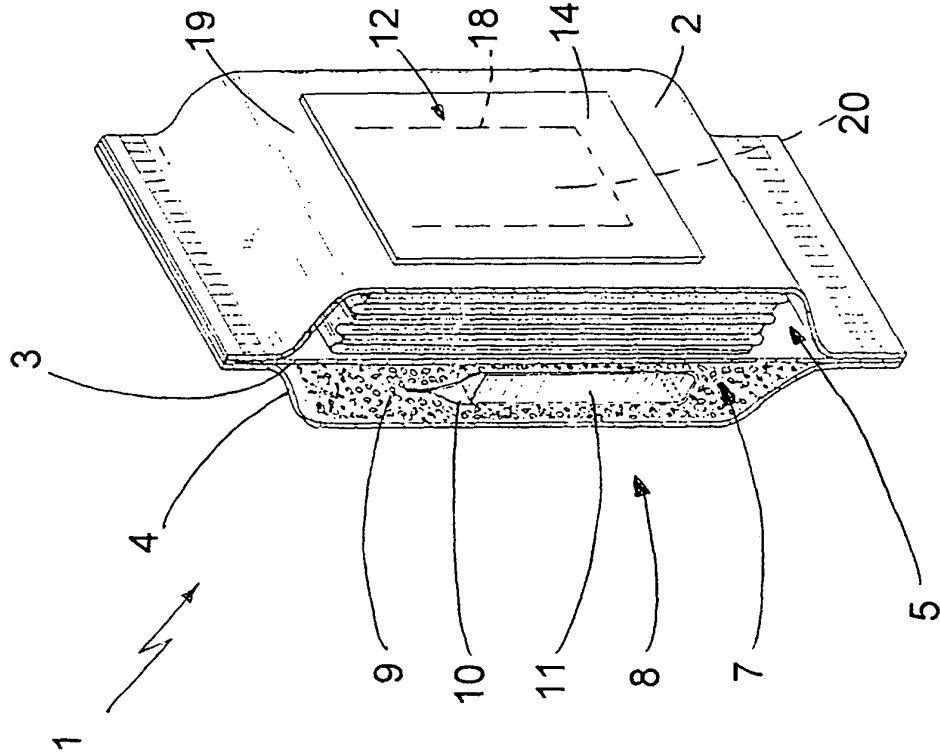


FIG. 6

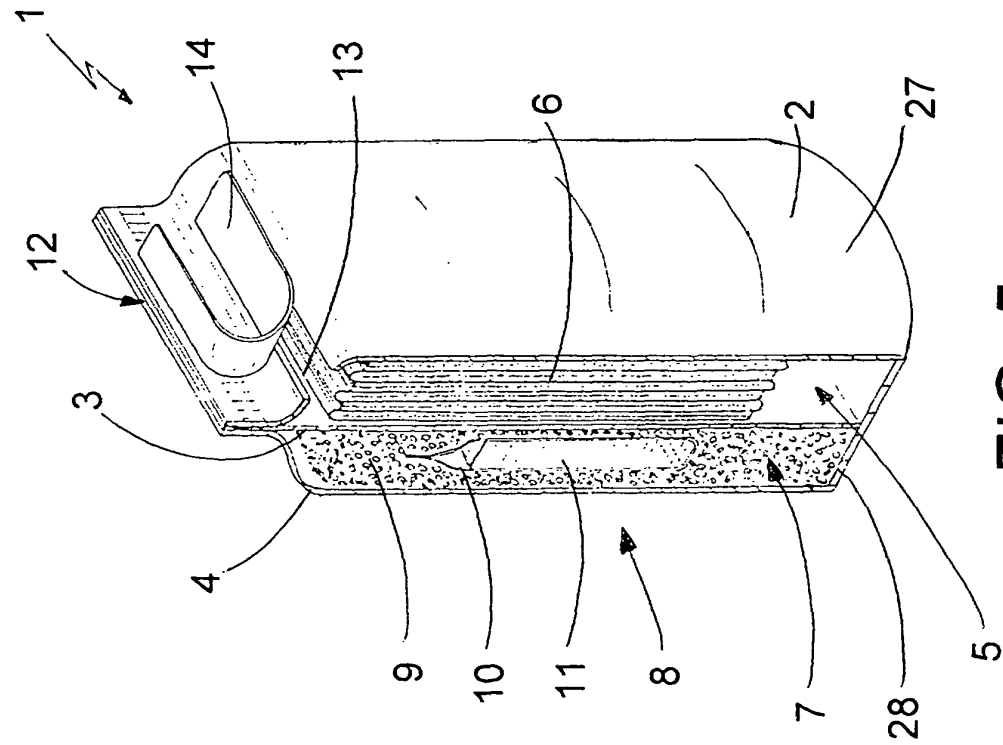


FIG. 5

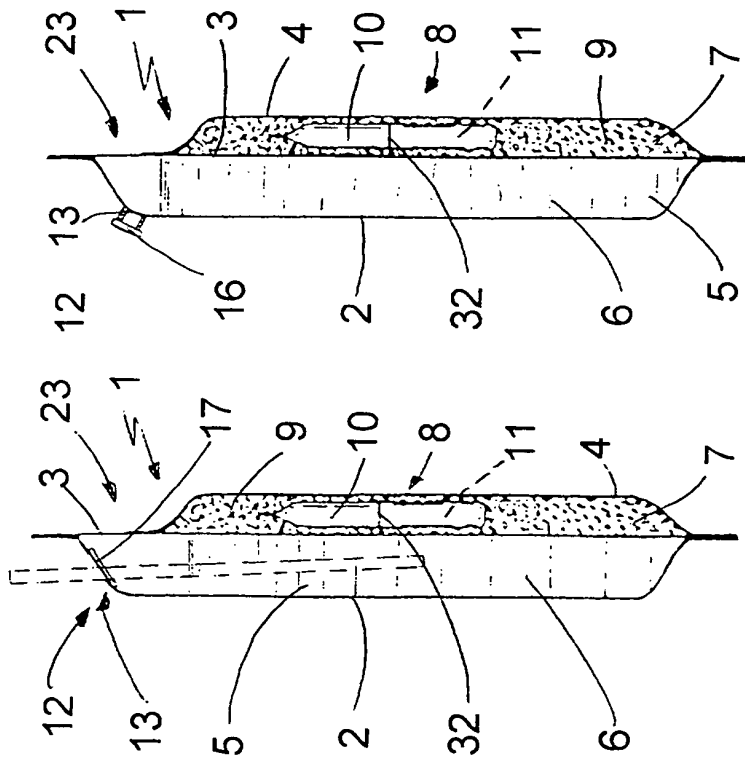


FIG. 7 FIG. 8

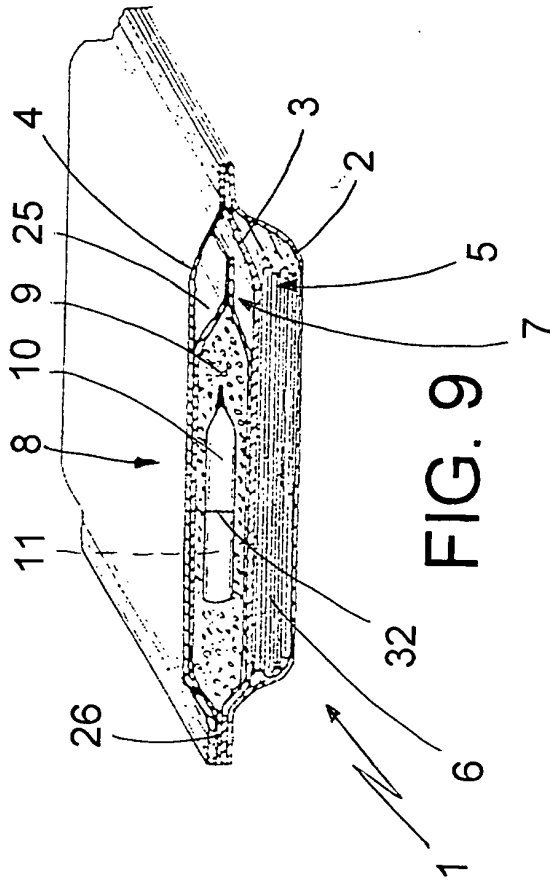


FIG. 9

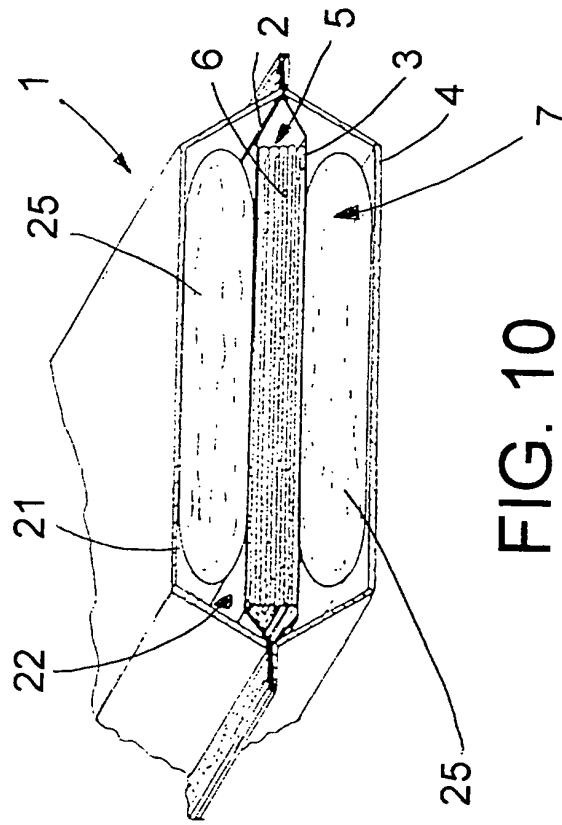


FIG. 10

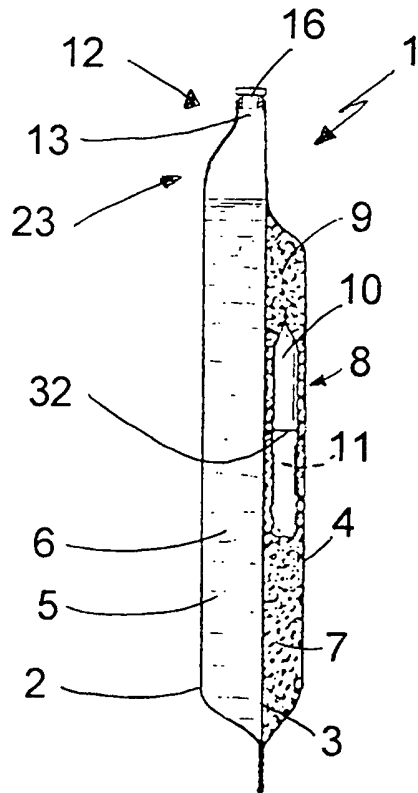


FIG. 11

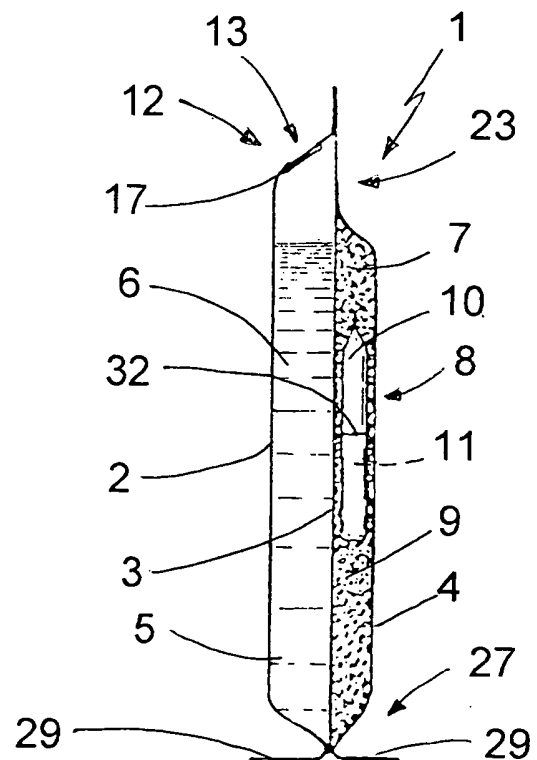


FIG. 13

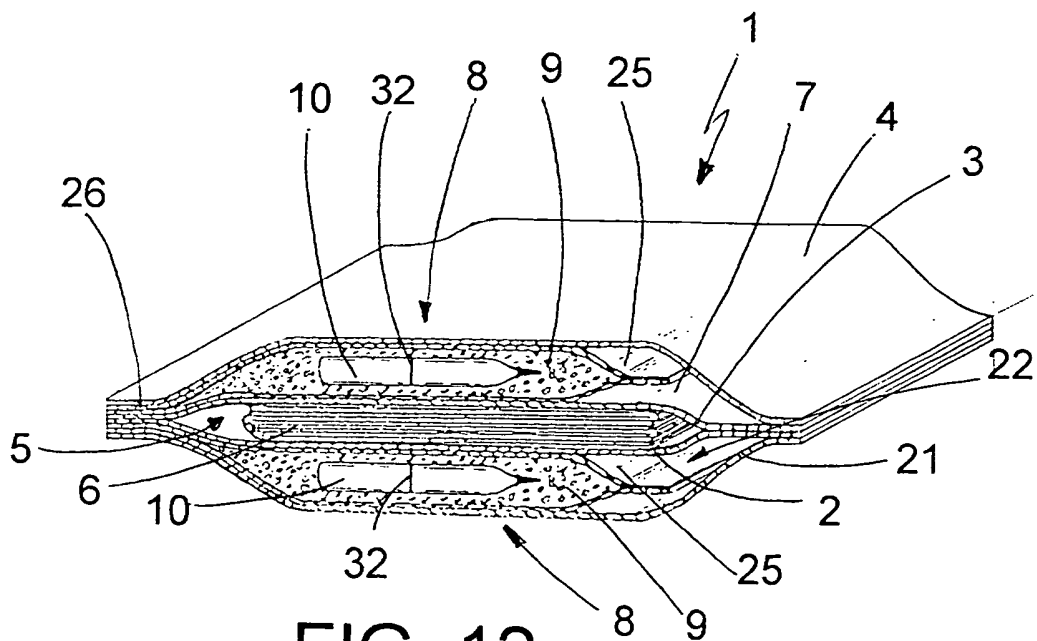
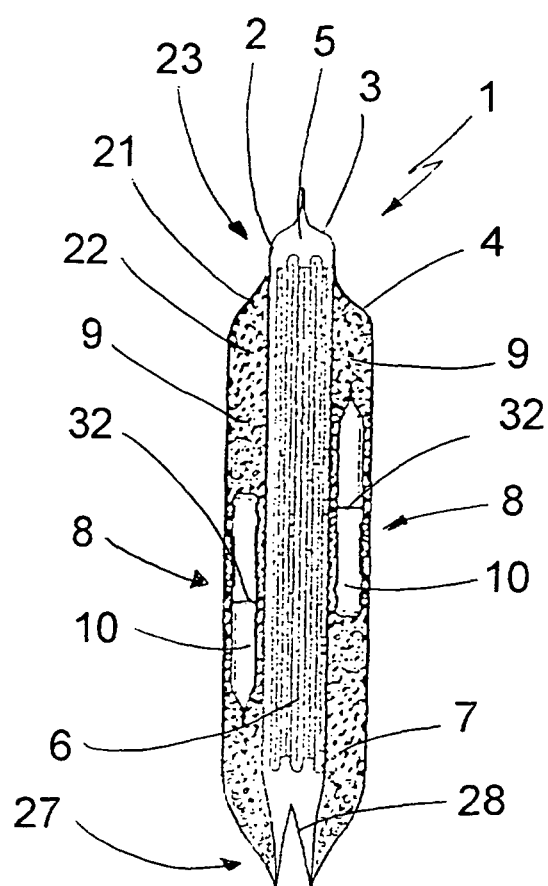
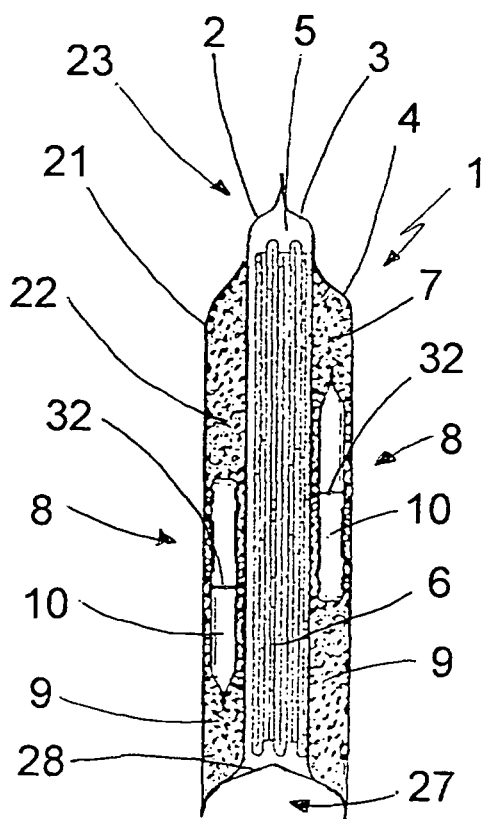
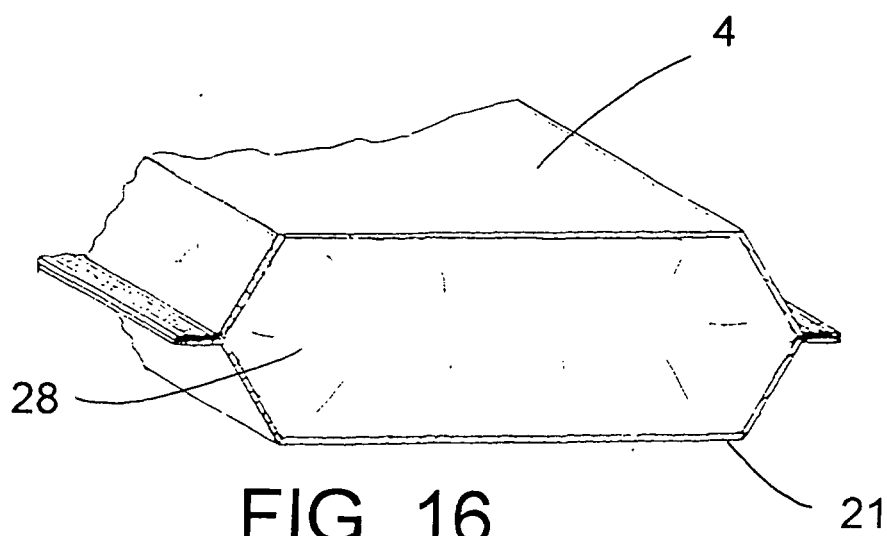


FIG. 12



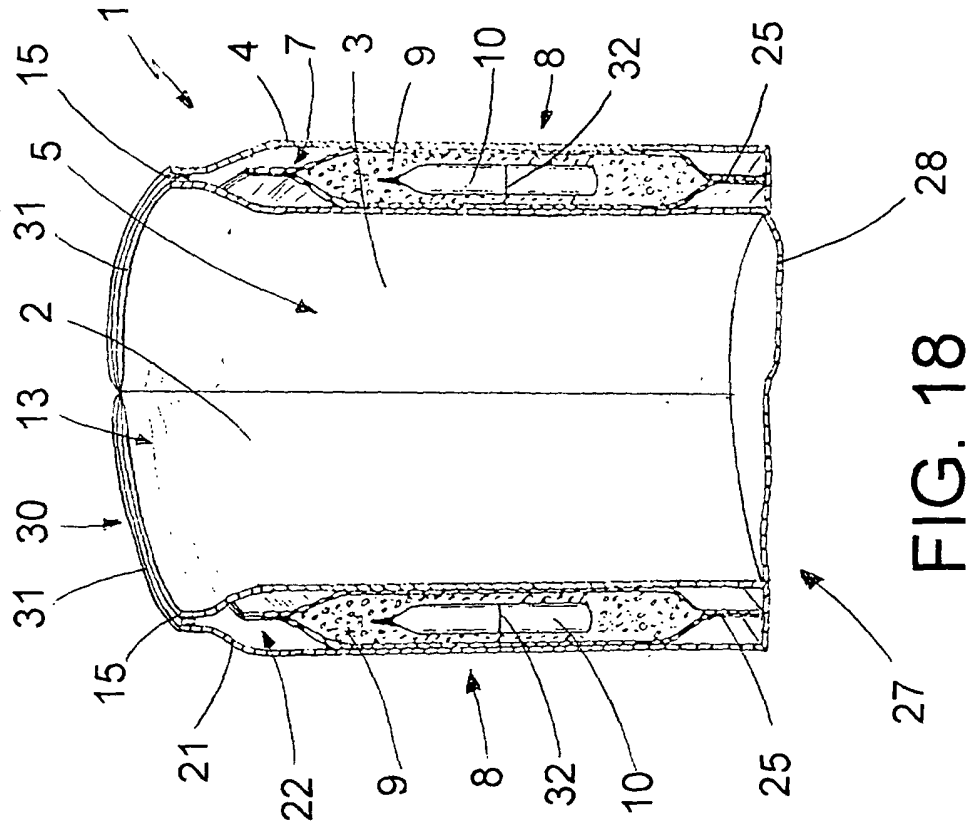


FIG. 18

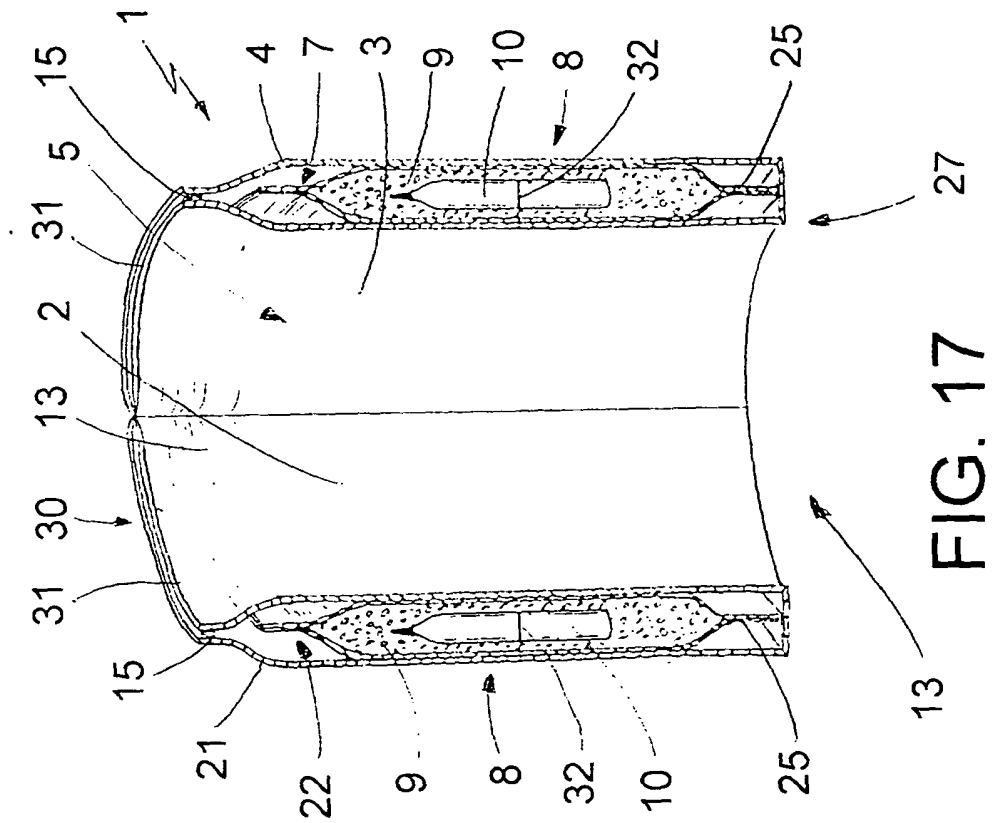


FIG. 17