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(72) Inventeurs/Inventors:
VAN DER SCHAAF, TJERK PIER, NL;
GROENEWOUD, EWALD, NL;
HERMAN, PAUL THOMAS DIRK, NL

(73) Propriétaire/Owner:
ENHOLD B.V., AN

(74) Agent: MCCARTHY TETRAULT LLP

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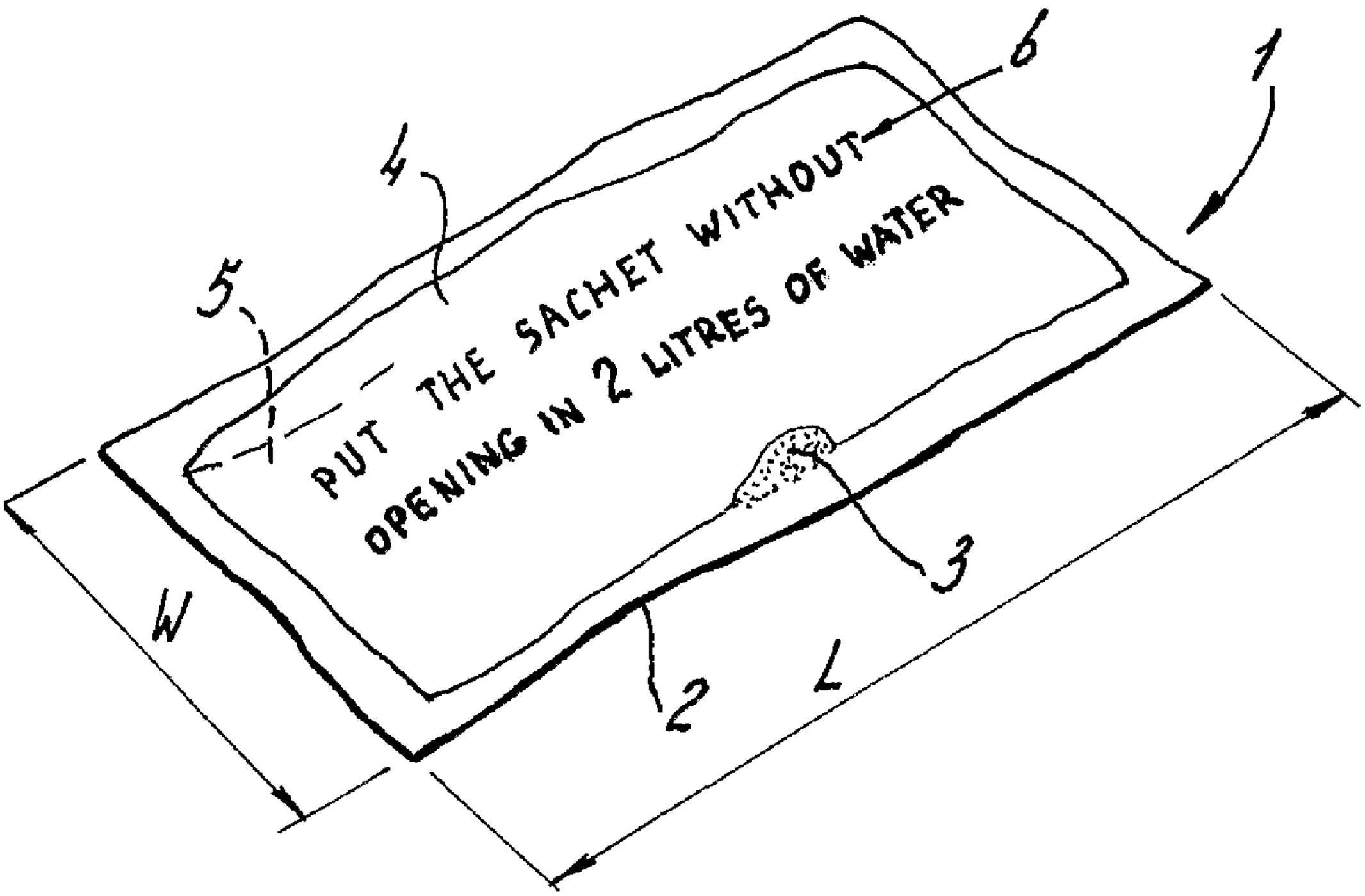
(54) Title: PACKAGE COMPRISING FEEDING MATERIALS FOR CUT FLOWERS



(57) Abrégé/Abstract:
The invention relates to a sachet, in particular a sachet assembly, comprising a closed bag (2) which is formed from water-permeable filter paper, and a solid substance (3) which is contained in the bag and is at least partially water-soluble. The water-

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(57) Abrégé(suite)/Abstract(continued):
soluble solid substance comprises a preparation for cut flowers. In particular, the preparation comprises a foodstuff and/or conditioning agent and/or disinfectant and/or biocide and/or growth inhibitor. The invention also relates to a packaging assembly comprising a waterproof, or at least moisture-proof, outer packaging containing a large number of sachets according to the invention. The invention also relates to the use of a sachet made from water-permeable filter paper for administering a preparation to cut flowers which are standing in water.

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(71) Applicant *(for all designated States except US)*: **POKON & CHRYSAL B.V.** [NL/NL]; Gooimeer 7, NL-1411 DD Naarden (NL).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **VAN DER SCHAAF, Tjerk, Pier** [NL/NL]; Volendamstraat 14, NL-8244 DT Lelystad (NL). **GROENEWOUD, Ewald** [NL/NL]; Kropaar 3, NL-1273 AL Huizen (NL). **HERMAN, Paul, Thomas, Dirk** [NL/NL]; Zonnebloempad 8, NL-8255 JB Swifterbant (NL).

(74) Agent: **JORRITSMA, Ruurd**; Nederlandsch Octrooibureau, Scheveningseweg 82, P.O. Box 29720, NL-2502 LS The Hague (NL).

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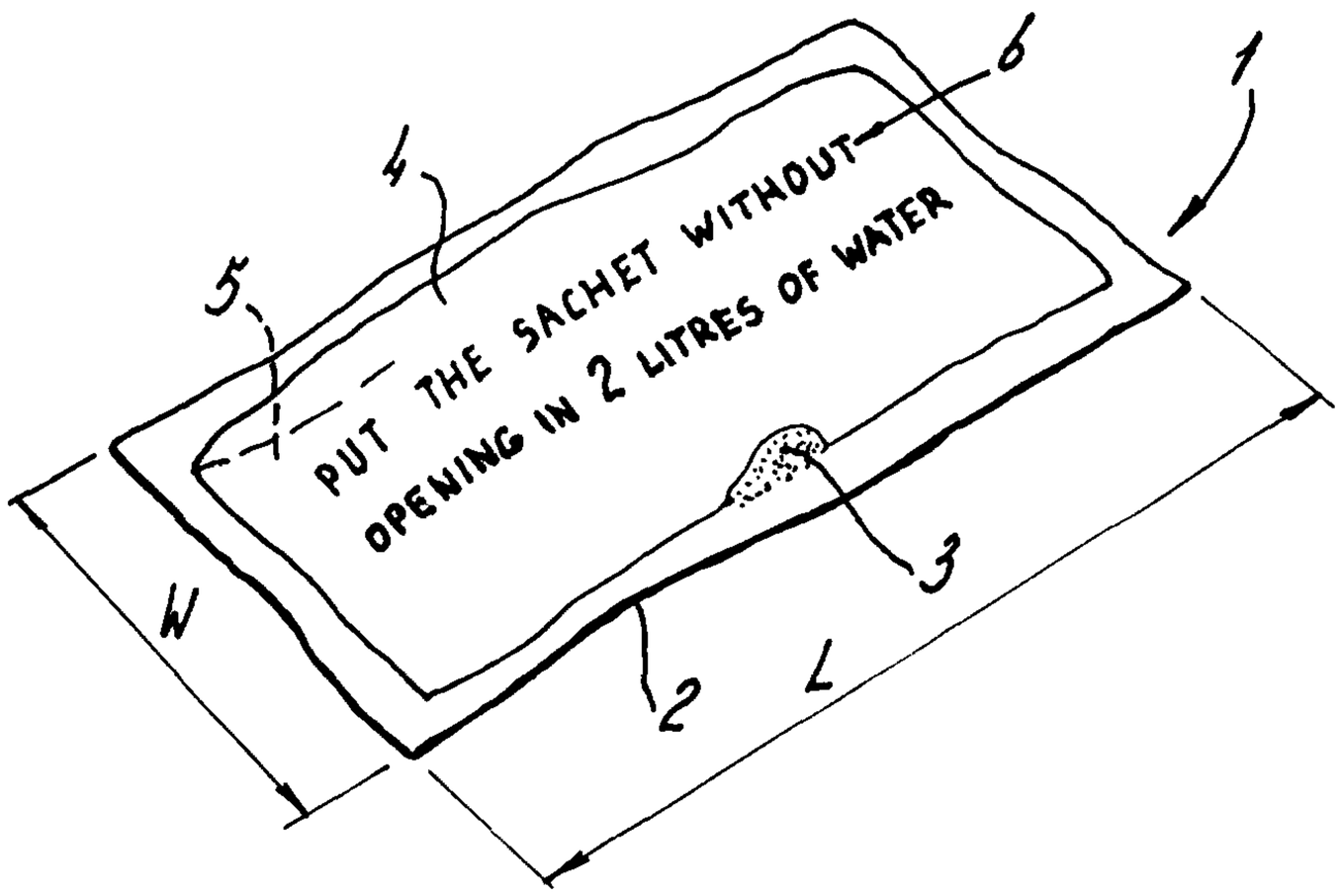
(54) Title: PACKAGE COMPRISING FEEDING MATERIALS FOR CUT FLOWERS



(57) Abstract: The invention relates to a sachet, in particular a sachet assembly, comprising a closed bag (2) which is formed from water-permeable filter paper, and a solid substance (3) which is contained in the bag and is at least partially water-soluble. The water-soluble solid substance comprises a preparation for cut flowers. In particular, the preparation comprises a foodstuff and/or conditioning agent and/or disinfectant and/or biocide and/or growth inhibitor. The invention also relates to a packaging assembly comprising a waterproof, or at least moisture-proof, outer packaging containing a large number of sachets according to the invention. The invention also relates to the use of a sachet made from water-permeable filter paper for administering a preparation to cut flowers which are standing in water.

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PACKAGE COMPRISING FEEDING MATERIALS FOR CUT FLOWERS

FIELD OF THE INVENTION

[0001] The present invention relates to a sachet, in particular a sachet assembly, comprising:

a closed bag which is formed from water-permeable filter paper and

a solid substance which is contained in the bag and is at least partially water-soluble.

BACKGROUND OF THE INVENTION

[0002] A sachet assembly including alternate contents is known. One could think, for example, of a tea bag, which is formed from a filter paper, also known as tea bag paper, in which, a certain quantity of optionally comminuted tea leaves is packaged. A tea bag of this type is, as is known, generally provided with a string which can be used to hang it in a tea cup or tea pot so that, once the tea has brewed sufficiently, the string can be used to remove it again from the cup or teapot.

SUMMARY

[0003] It is an aspect of the present invention to provide a preparation for cut flowers in an administration form which is such that it is ensured and can be checked that a specific dose has been administered to the water in which the cut flowers are standing.

[0004] According to an aspect of the invention, in the sachet of the type described in the introduction, the water-soluble solid substance comprises a preparation for cut flowers. A sachet of this type can be placed in the water in a container holding cut flowers which are standing in water, after which the water can enter the bag via the filter paper, so that the preparation is dissolved, and then carries the preparation, out of the bag in dissolved form. Since the bag is closed, administration of one bag ensures that a specific dose is administered. Furthermore, the bag will remain present even after it has been administered to the water, which makes it easy to check that the preparation has been administered. Therefore, it is possible for both the purchaser, such as a florist or consumer, to see that the cut flowers which have been purchased are in water which has been appropriately treated, and also it is possible for an inspection body to establish, in a simple and efficient way, that a specific dose

has been administered to cut flowers. An inspection body of this type may, for example, be a body which checks the quality of goods on behalf of a professional association of cut-flower traders, but may also, for example, be a supplier or purchaser of cut flowers who wishes to check whether the cut flowers which he has supplied are treated correctly.

[0005] Advantageously, the preparation in the sachet according to the invention will comprise a food and/or conditioning agent and/or disinfectant and/or biocide and/or growth inhibitor. In this context, the term conditioning agent is understood in particular as meaning an agent which is used to adjust the state of the water, such, as its hardness or pH. The term growth inhibitor is understood as meaning an agent which inhibits the growth, of microorganisms, so that the water uptake and food uptake by the cut flowers remains appropriate.

[0006] Furthermore, in the sachet according to the invention, it is advantageous if the filter paper is semi-permeable. In this context, the term semi-permeable is understood as meaning, in particular, permeability to particles up to a maximum size of 100 to 400 μm.

[0007] With a view to ease of production, it is advantageous, in the sachet according to the invention, if the bag is rectangular in shape. In connection with the final administration of a sachet of this type to a container, such as a bucket, holding a quantity of water of the order of magnitude of 1 to 5 liters, although sometimes more liters, it is in this case preferable if the rectangular bag has dimensions of 2 to 8 cm wide by 2 to 12 cm long.

[0008] Furthermore, in a sachet according to the invention, it is advantageous if the bag is provided on the outside with an image, in particular, obtained using a printing technique. Filter paper is eminently suitable for an image to be applied thereto, for example, with the aid of a printing technique such as a flexographic printing technique. The image may in this case be applied to the filter paper before the filter paper is formed into a bag. In this way, it is possible to provide the bag with an advertising message. In particular, however, it is advantageous for the bag in this way to be provided with instructions for use or application. However, it is also highly useful and advantageous for the bag to be provided with an indication of the preparation contained therein in this way. Such an indication may, for example, be a brand name, but may also be a list of the ingredients or active constituents. It is also possible to provide the bag with warnings in this way.

[0009] Furthermore, in the sachet according to the invention, it is advantageous if the bag is made from a filter material which, when it takes up water, becomes transparent or translucent, in such a manner that the contents become visible. In this way, it is possible to

check, when the bag has been put in water, that the contents are present in the bag. In this case, it is also advantageous if the entire contents are water-soluble. This is because in this way it is possible, by visual inspection, to determine whether the sachet is still active. This also makes it possible to prevent errors, since it can be determined visually whether an empty or used bag/sachet assembly has been added to the cut flowers. For this purpose, it is also possible to use an ink which changes color when the active substances have been exhausted. In this regard, consideration may be given, for example, to pH indicators, such as litmus.

[0010] Furthermore, in the sachet according to the invention, it may be advantageous if the water-soluble material is hygroscopic.

[0011] The invention also relates to a packaging assembly comprising a waterproof, or at least moisture-proof, outer packaging containing a large number of sachets according to the invention. A packaging assembly of this type can be used to ensure that the sachets arrive at the user in good condition and, moreover, can be stored in good condition for a certain time by the user. The outer packaging will in this case preferably be a waterproof or at least moisture-proof recloseable outer packaging. Consideration may be given, for example, to a plastic bucket with a lid which can seal onto the upper rim of the bucket via a, preferably clamping, labyrinth seal.

[0012] The invention also relates to the use of a sachet made from water-permeable filter paper for administering a preparation, such as a food, and/or conditioning agent and/or disinfectant and/or biocide and/or growth inhibitor for microorganisms, to cut flowers which are standing in water.

BRIEF DESCRIPTION THE DRAWINGS

[0013] In the text which follows, the present invention will be explained in more detail with reference to examples which are illustrated in the drawings, in which:

[0014] Fig. 1 shows a diagrammatic and perspective, partially cut-away view of a sachet assembly according to the invention; and

[0015] Fig. 2 shows a diagrammatic, side elevational, partially cut-away view of a bucket holding cut flowers, which contains a sachet assembly according to the invention.

[0016] Fig. 3 shows a fragmentary perspective view of an exemplary strand of multiple sachets according to the disclosure.

[0017] Fig. 4 shows a fragmentary plan view of an exemplary web of multiple sachets according to the disclosure.

DETAILED DESCRIPTION OF THE EMBODIMENTS

[0018] In a first aspect, a sachet is provided. The sachet comprises: a closed bag which is formed from water-permeable filter paper and a solid substance which is contained in the bag and is at least partially water-soluble. For the sachet, the solid substance comprises a preparation for cut flowers, characterized in that the bag is made from a filter material which, when it takes up water, becomes transparent or translucent, in such a manner that the contents become visible.

[0019] In the sachet, the preparation may comprise at least one of a food, conditioning agent, disinfectant, biocide, or growth inhibitor.

[0020] In the sachet, the filter material may be paper that is semi-permeable.

[0021] In the sachet, the bag may have a rectangular shape.

[0022] In the sachet, the bag may have dimensions within the range of 2 to 8 cm wide and within the range of by 2 to 12 cm long.

[0023] In the sachet, the bag may be provided on the outside with an image.

[0024] In the sachet, the image may comprise instructions for use.

[0025] Also, in another aspect, a strand comprising any of the aspects of the sachets as described above may be provided which are joined together to form a strand.

[0026] In another aspect, a sheet or web comprising any of the aspects of the above noted sachets may be provided which are joined together to form a sheet or web.

[0027] In another aspect, packaging comprising a waterproof or moisture-proof outer packaging and containing at least one sachet as described above may be provided.

[0028] In another aspect, use of a sachet made from water-permeable filter paper for administering a preparation including at least one of a food, conditioning agent, disinfectant, biocide, and growth inhibitor, to a cut flower which is standing in water is provided. Therein, the filter paper, when it takes up water, becomes transparent or translucent in such a manner that the contents including the preparation become visible.

[0029] In another aspect, a combination comprising a vase, water disposed within the vase, cut flowers disposed in the water in the vase and a sachet disposed within the water in the vase is provided. The sachet comprises: a closed bag which is formed from water-permeable filter paper, and a solid substance which is contained in the bag and is at least partially water-soluble. The solid substance comprises a preparation for cut flowers. The bag is made from a filter material which, when it takes up water, becomes transparent or translucent, in such a manner that the contents become visible.

[0030] The combination may further comprise a moisture-proof, outer packaging disposed about the sachet when not disposed in the water.

[0031] In another aspect, a method of providing a preparation for cut flowers is provided. The method combines the steps of: providing water, providing a sachet and combining the water and the sachet in a container, and placing the cut flowers in the container in contact with the water. The sachet comprises: a closed bag which is formed from water-permeable filter paper, the filter paper being transparent or translucent when saturated with water, and a solid substance contained in the bag, the solid substance being water-soluble, preparation for cut flowers. The solid substance becomes visible through the filter paper when the sachet is disposed in the water and the filter paper is wet, whereby an observer may observe whether the solid substance is present and whether the solid substance is dissolved, and thus whether the sachet should be replaced.

[0032] In the method, the preparation may comprise at least one of the following: a food, conditioning agent, disinfectant, biocide, and/or growth inhibitor.

[0033] In the method, the bag may have a rectangular shape.

[0034] In the method, the closed bag may have an outside, and the bag may be provided on the outside with a printed image.

[0035] In the method, the step of providing a sachet may comprise providing sachets joined together to form a strand, and separating a sachet from the other sachets.

[0036] In the method, the step of providing sachets joined together to form a strand may comprise providing parallel strands joined laterally to one another to form a sheet or web.

[0037] In the method, the step of providing a sachet may comprise providing more than one sachet, and the method may further comprise providing a moisture-proof packaging containing the sachets and removing a sachet from the moisture-proof packaging.

[0038] In another aspect, a sachet is provided, comprising: a water-permeable, closed bag, and a solid substance which is contained in the bag and is at least partially water-soluble. The solid substance may comprise a preparation for cut flowers and when the closed bag is in water, it is transparent or translucent, in such a manner that the contents become visible.

[0039] In the sachet, the bag may be formed from paper.

[0040] In the sachet, the bag may be semi-permeable.

[0041] Fig. 1 shows a sachet according to the invention. The sachet 1 according to the invention, comprises a bag 2 comprising water-permeable filter paper. The bag 2 is composed of a rectangular upper panel 4 and a rectangular lower panel 5, which panels are

joined together along their periphery, for example by an adhesive bond. A preparation 3, which is partially shown in a cut-away section, is situated in the bag 2. This preparation 3 contains in particular, a food and/or a disinfectant and/or a biocide. The preparation 3 may be a powder or granules, but may also be a solid substance in some other form. The preparation 3 may be entirely water-soluble, but may also be partially water-soluble. In particular, it is conceivable for the preparation 3 to comprise a substrate which is not water-soluble, in which substrate the soluble preparation is situated. Then, when the substrate comes into contact with water, the preparation will be dissolved and will be released from the substrate.

[0042] As shown in Fig. 1 for the upper panel 4, the bag 2 may be printed. In the example illustrated, the printing represents instructions for use, namely put sachet without opening in 2 liters of water.

[0043] The length L of the sachet which is illustrated by way of example in Fig. 1 is approximately 9 cm, while its width W is approximately 5 cm. However, it should be clear that these dimensions, which are given by way of example for the length L and width W, are purely illustrative. These dimensions may vary within wide limits. By way of example, the dimension for the length L may vary in a range from 2 to 16 cm, although smaller or larger dimensions for the length L are also conceivable. The width dimension W may, for example, vary in a range from 2 to 10 cm, although in this case too, both smaller and larger width dimensions are conceivable.

[0044] It should be noted that, although Fig. 1 shows a rectangular sachet, the sachet may also be square, round, triangular or trapezium-shaped, or whatever other form may be desired.

[0045] Fig. 2 shows, by way of example, a bucket 10 containing cut flowers 12 standing in water 11. A sachet 1 according to the invention is situated in this bucket.

[0046] Fig. 3 shows, by way of example, a strand 15 according to the invention comprising a multiplicity of sachets 1 according to the invention.

[0047] Fig. 4 shows, by way of example, a web 16 according to the invention comprising a multiplicity of sachets 1 according to the invention. The web 16 can be considered as being composed of a number of parallel strands 15 as shown in Fig. 3 which are joined together at their sides. Providing the sachets according to the invention in web, sheet or strand form has the considerable advantage of increasing the ease of handling, in particular for automated processing, of the sachets considerably.

[0048] Preferred embodiments of this invention are described herein, including the best mode known to the inventors for carrying out the invention. Variations of those preferred embodiments may become apparent to those of ordinary skill in the art upon reading the foregoing description. The inventors expect skilled artisans to employ such variations as appropriate, and the inventors intend for the invention to be practiced otherwise than as specifically described herein. Accordingly, this invention includes all modifications and equivalents of the subject matter recited in the claims appended hereto as permitted by applicable law. Moreover, any combination of the above-described elements in all possible variations thereof is encompassed by the invention unless otherwise indicated herein or otherwise clearly contradicted by context.

CLAIMS:

1. A sachet comprising:

a closed bag which is formed from water-permeable filter paper, and

a solid substance which is contained in the bag and is at least partially water-soluble, wherein the solid substance comprises a preparation for cut flowers, characterized in that the bag is made from a filter material which, when it takes up water, becomes transparent or translucent, in such a manner that the contents become visible.

2. The sachet according to claim 1, wherein the preparation comprises at least one of a food, conditioning agent, disinfectant, biocide, or growth inhibitor.

3. The sachet according to any one of claims 1 or 2, in which the filter material is paper that is semi-permeable.

4. The sachet according to any one of claims 1 to 3, in which the bag has a rectangular shape.

5. The sachet according to claim 4, wherein the bag has dimensions within the range of 2 to 8 cm wide and within the range of by 2 to 12 cm long.

6. The sachet according to any one of claims 1 to 5, in which the bag is provided on the outside with an image.

7. The sachet according to claim 6, in which the image comprises instructions for use.

8. A strand comprising a plurality of sachets according to any of one of claims 1 to 7 which are joined together to form a strand.

9. A sheet or web comprising a plurality of sachets according to any one of claims 1 to 8 which are joined together to form a sheet or web.

10. Packaging comprising a waterproof or moisture-proof outer packaging, and containing at least one sachet according to any one of claims 1 to 9.

11. Use of a sachet made from water-permeable filter paper for administering a preparation including at least one of a food, conditioning agent, disinfectant, biocide, and growth inhibitor, to a cut flower which is standing in water, which said filter paper, when it takes up water, becomes transparent or translucent in such a manner that the contents including the preparation become visible.

12. A combination comprising:

a vase,

water disposed within said vase,

cut flowers disposed in said water in said vase, and

a sachet disposed within said water in said vase, the sachet comprising

a closed bag which is formed from water-permeable filter paper, and

a solid substance which is contained in the bag and is at least partially water-soluble,

wherein the solid substance comprises a preparation for cut flowers, characterized in that the bag is made from a filter material which, when it takes up water, becomes transparent or translucent, in such a manner that the contents become visible.

13. The combination according to claim 12, wherein the preparation comprises at least one of a food, or conditioning agent, disinfectant, biocide, or growth inhibitor.

14. The combination according to any one of claims 12 or 13, in which the filter paper is semi-permeable.

15. The combination according to any one of claims 12 to 14, in which the bag has a rectangular shape.

16. The combination according to claim 15, wherein the bag has dimensions within the range of 2 to 8 cm wide and within the range of by 2 to 12 cm long.

17. The combination according to any one of claims 12 to 16, in which the bag is provided on the outside with an image.

18. The combination according to claim 17, in which the image comprises instructions for use.

19. The combination according to any one of claims 12 to 18, further comprising a moisture-proof, outer packaging disposed about said sachet when not disposed in said water.

20. A method of providing a preparation for cut flowers, said method combining the steps of:

providing water,

providing a sachet, said sachet comprising

a closed bag which is formed from water-permeable filter paper, said filter paper being transparent or translucent when saturated with water, and

a solid substance contained in the bag, said solid substance being water-soluble, preparation for cut flowers,

combining said water and said sachet in a container, said solid substance being visible through the filter paper when said sachet is disposed in said water and said filter paper is wet, whereby an observer may observe whether said solid substance is present and whether said solid substance is dissolved, and thus whether the sachet should be replaced, and

placing said cut flowers in said container in contact with said water.

21. The method according to claim 20, wherein the preparation comprises at least one of the following: a food, conditioning agent, disinfectant, biocide, and/or growth inhibitor.

22. The method according to any one of claims 20 or 21, in which the bag has a rectangular shape.

23. The method according to any one of claims 20 to 22, wherein the closed bag has an outside, and the bag is provided on the outside with a printed image.

24. The method according to any one of claims 20 to 23, wherein the step of providing a sachet comprises providing a plurality of sachets joined together to form a strand, and separating a sachet from said plurality of sachets.

25. The method according to claim 24, wherein the step of providing a plurality of sachets joined together to form a strand comprises providing a plurality of parallel strands joined laterally to one another to form a sheet or web.

26. The method according to any one of claims 20 to 25, wherein the step of providing a sachet comprises providing a plurality of sachets, and the method further comprises providing a moisture-proof packaging containing said plurality of sachets, and removing a sachet from said moisture-proof packaging.

27. A sachet comprising:

a water-permeable, closed bag, and

a solid substance which is contained in the bag and is at least partially water-soluble, wherein the solid substance comprises a preparation for cut flowers and when said closed bag is in water, it is transparent or translucent, in such a manner that the contents become visible.

28. The sachet according to claim 27, wherein the bag is formed from paper.

29. The sachet according to claim 27 or 28, wherein the preparation comprises at least one of a food, or conditioning agent, disinfectant, biocide, or growth inhibitor.

30. The sachet according to any one of claims 27 to 29, in which the bag is semi-permeable.

31. The sachet according to any one of claims 27 to 30, in which the bag has a rectangular shape.

32. The sachet according to claim 31, wherein the bag has dimensions within the range of 2 to 8 cm wide and within the range of by 2 to 12 cm long.

33. The sachet according to any one of claims 27 to 32, in which the bag is provided on the outside with an image.

34. The sachet according to claim 33, in which the image comprises instructions for use.

fig-1

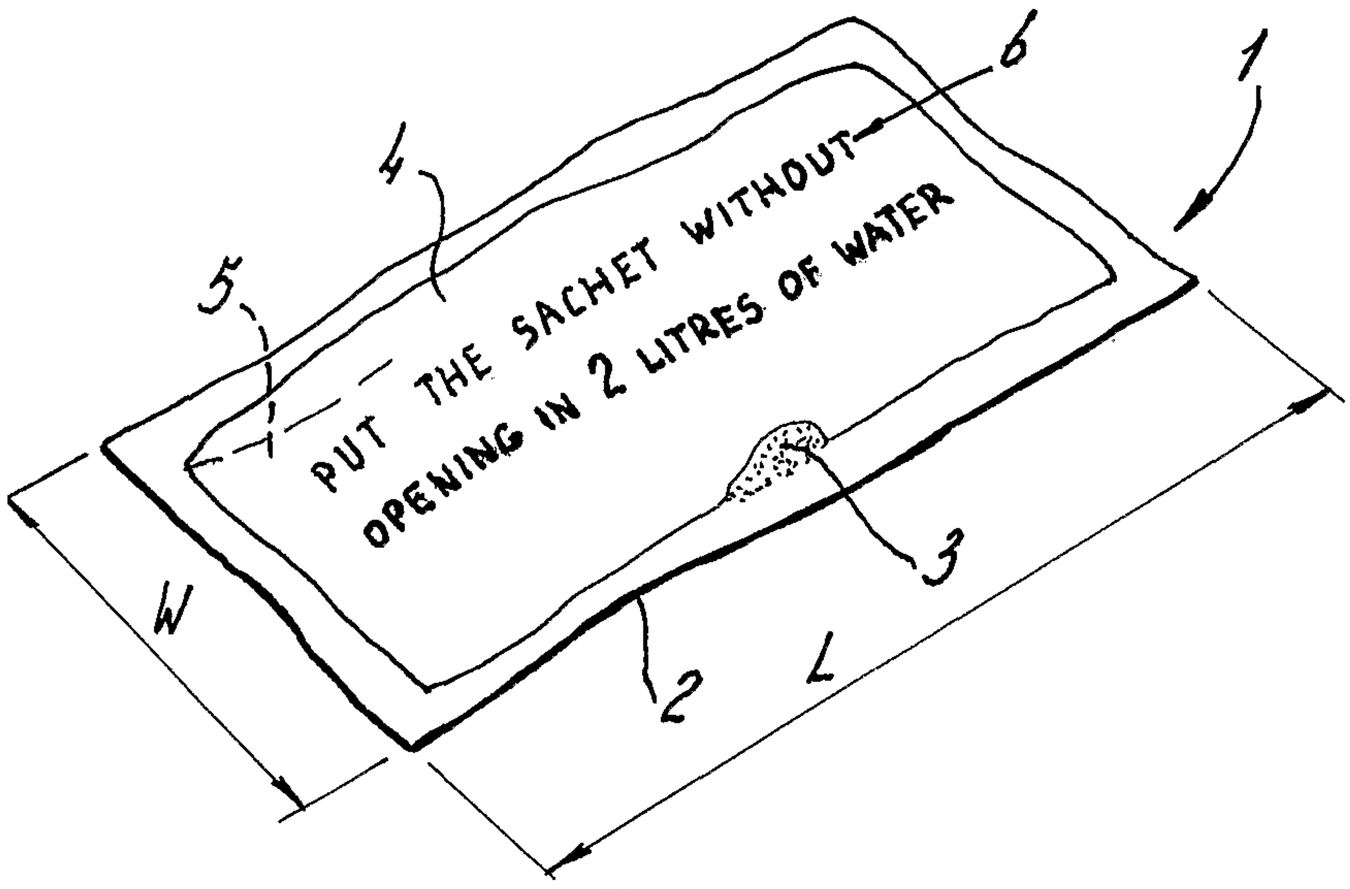
PUT THE SACHET WITHOUT
OPENING IN 2 LITRES OF WATER
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fig-2

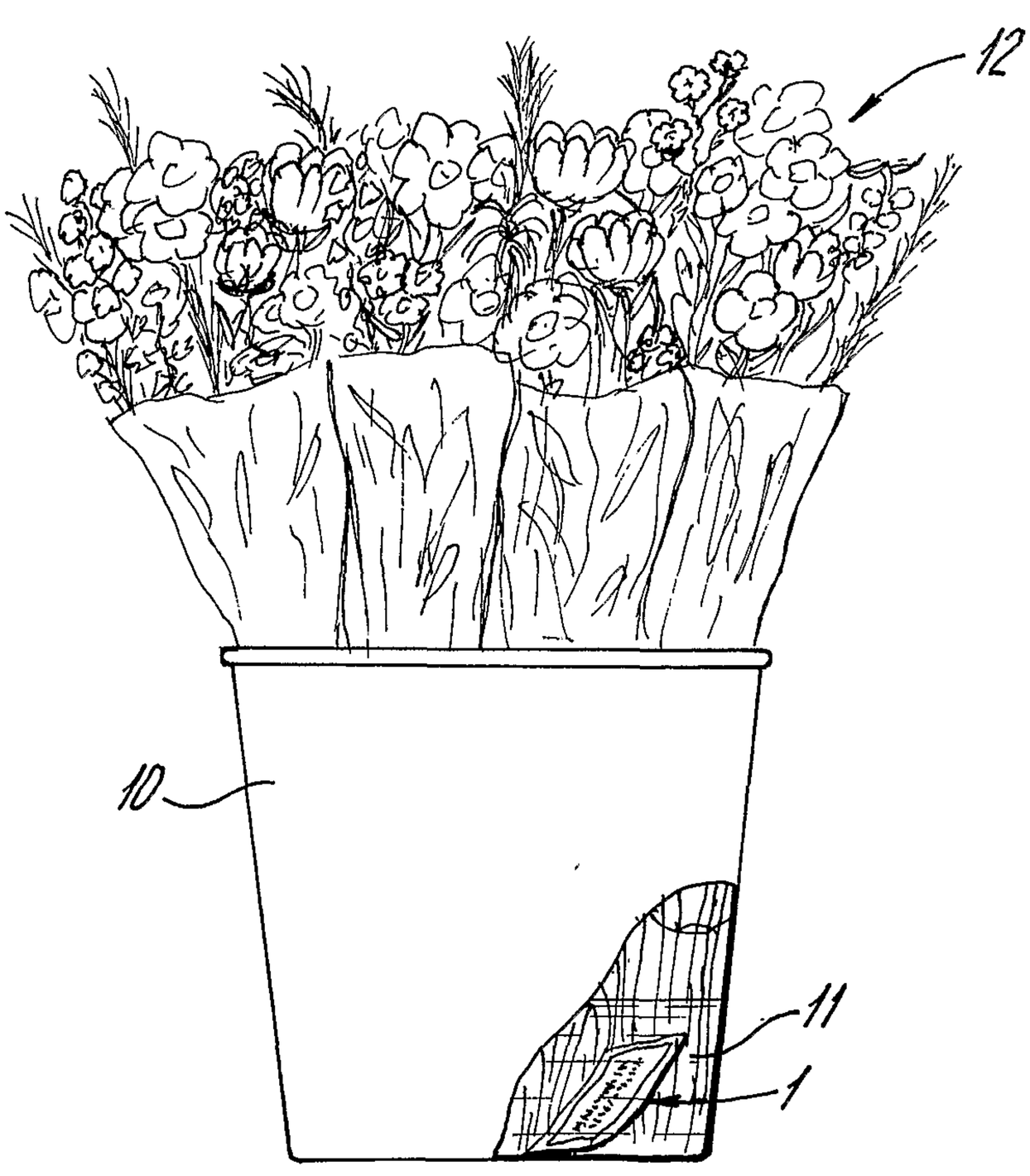
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Fig-3

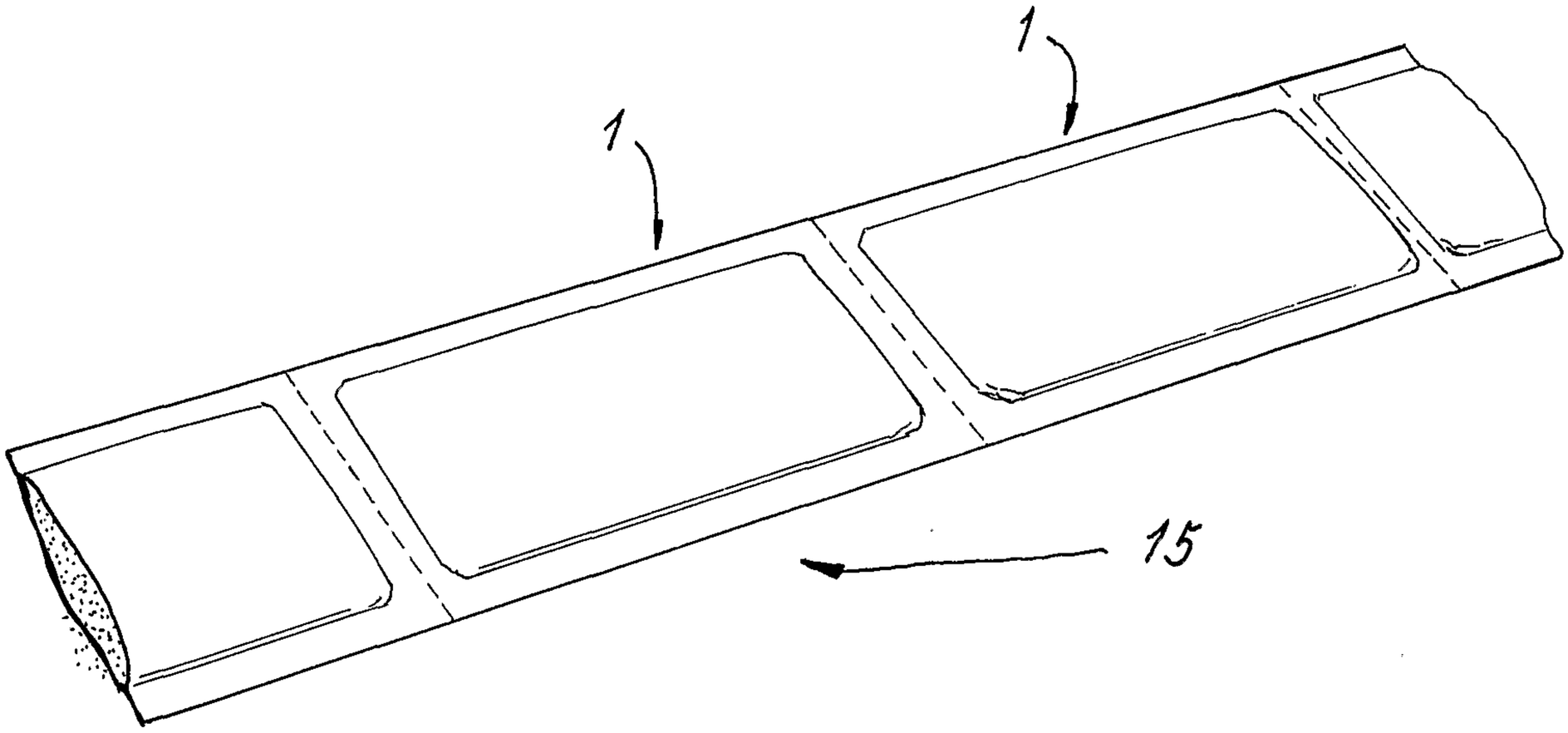
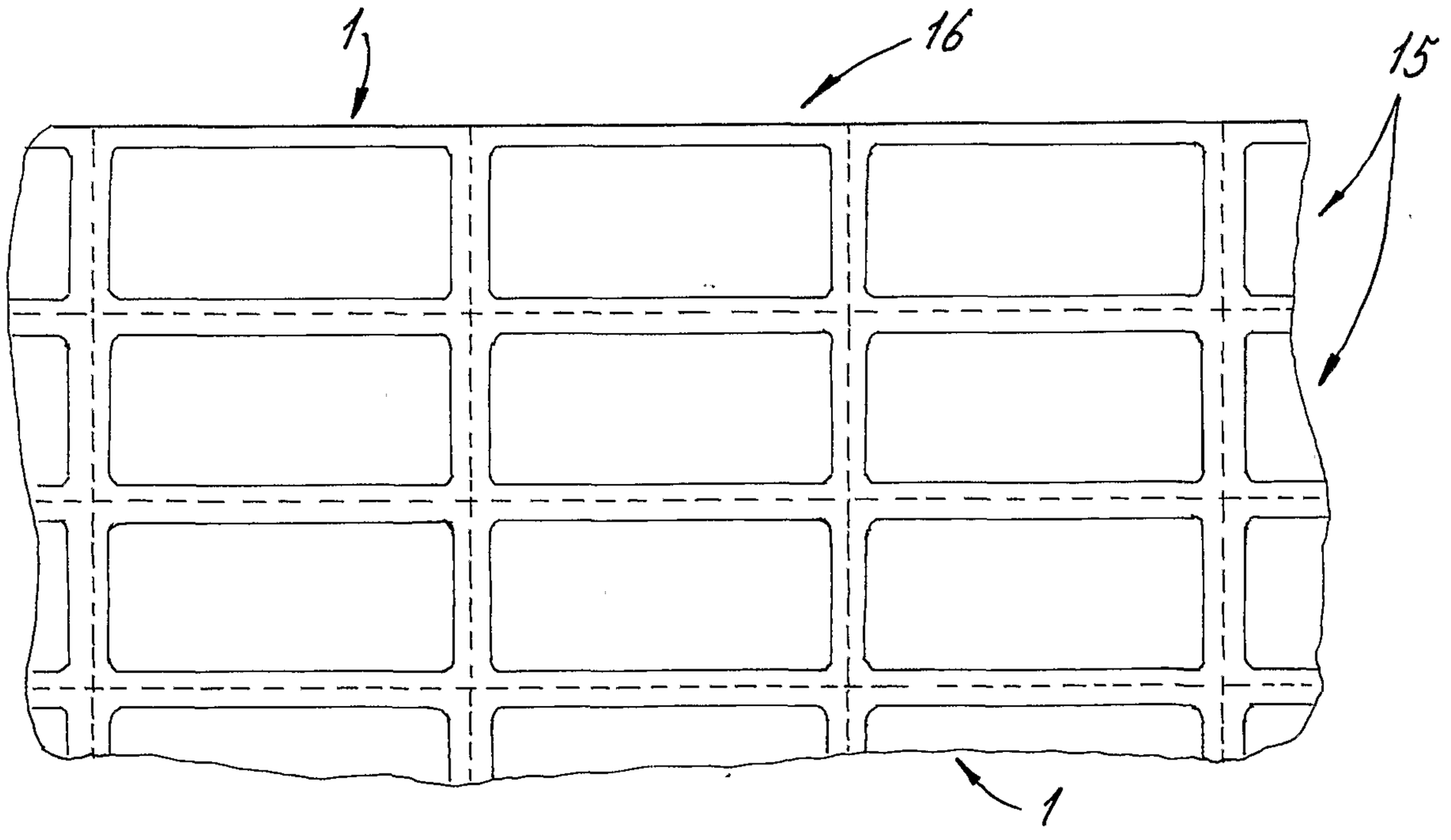
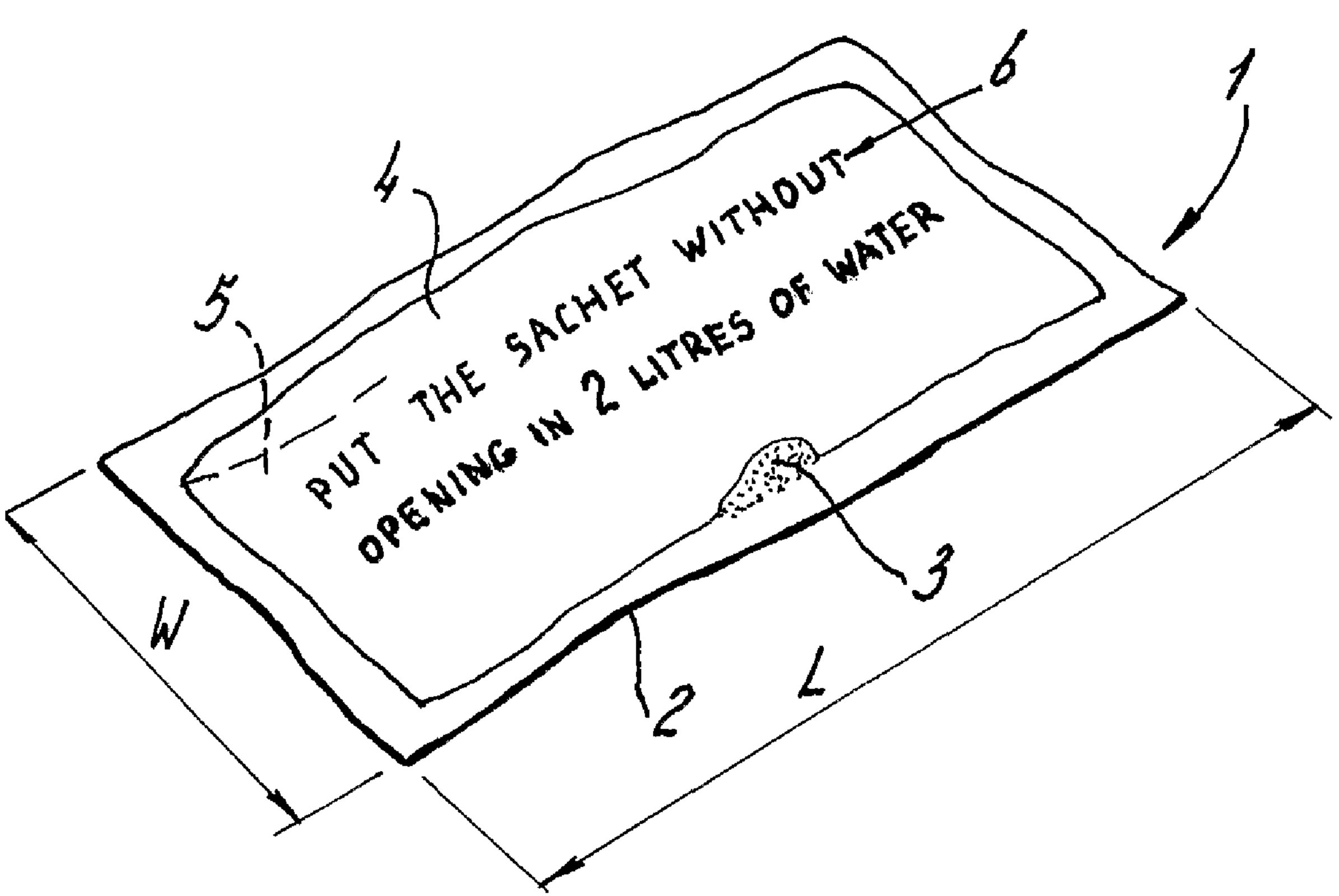


Fig-4

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