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(72) Inventor: **Matos Rodriguez, Manuel**
21730 Almonte (ES)

(74) Representative: **Pons Ariño, Angel**
Pons Patentes y Marcas Internacional, S.L.
Glorieta Rubén Dario 4
28010 Madrid (ES)

(71) Applicant: **Donana 1998, S.L.**
21730 Almonte (ES)

Remarks:
Amended claims in accordance with Rule 137(2) EPC.

(54) **Strawberries alveolar tray**

(57) Tray with cavities for strawberries intended to be disposed in the interior of a box for its storage and transport, and which is made up of a sheet (1) which has a plurality of compartments (2) where each compartment is intended to receive a strawberry. The compartments (2) comprise a first depression (4) which is configured to

receive the sepal of the strawberry, a second concentric depression (5) lower than the first depression (4) and configured to receive the pedicle of the strawberry, and a protrusion (6) that protrudes upwards from the first depression (4) and which is configured to support the thalamus of the strawberry.

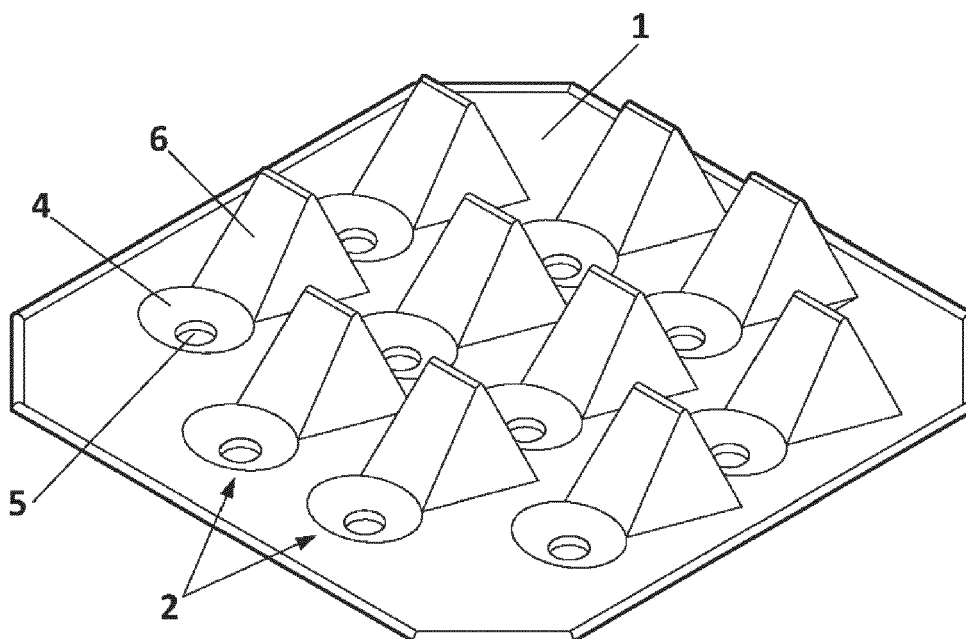


FIG. 1

Description

FIELD OF THE INVENTION

[0001] The present invention falls within the technical field of fruit packaging, specifically a tray with cavities for packing strawberries.

BACKGROUND TO THE INVENTION

[0002] Several different solutions for packaging fruit are currently known. The solution most often used by low cost fruit sellers and/or distributors is the stacking of the fruit inside a box.

[0003] In this solution the fruit is not arranged in a specific way but dumped directly into the box to transport/sell the fruit and the consumers take the fruit directly from the box.

[0004] In the particular case of strawberries, this solution is equivalent to selling strawberries piled up in small, usually made of plastic, boxes. In most cases these boxes are in turn placed inside a closed bag, also of plastic, so that no strawberries are lost. The described boxes are sold at a set price based on the weight of the box.

[0005] The biggest problem with this form of packaging of strawberries is that users cannot see if there are strawberries in the box that are in a deteriorated condition. When consumers buy one of these boxes they do not know if they will be able to eat almost all the strawberries or whether, as is often the case, most of the strawberries inside the box are in a deteriorated condition and will have to be thrown away.

[0006] Another solution known in the prior art is to place the fruit in boxes but arranged in an orderly fashion. In this case it is easier to distinguish if some of the fruit is in a deteriorated condition, but it does not prevent adjacent fruit from being contaminated.

[0007] In the case of medium/large sized fruit such as oranges, apples, grapefruit, watermelon, etc. the seller or the consumer herself or himself can select the fruit he or she wishes to buy. This way they can select the fruit that is in the best condition.

[0008] However, in the case of strawberries, which are smaller in size, the consumer does not have the opportunity to select each piece of fruit individually. The consumer purchases a whole box of strawberries and has to choose them at a glance. It is necessary to present the strawberries in boxes in a way that makes it easier for the consumer to see the state of the strawberries and to make them more desirable.

[0009] In this sense, on the state of the art, strawberry boxes are known in which these strawberries are positioned in a orderly fashion, in a single layer, so that the consumer has visual access to all the fruit.

[0010] On the other hand, a packing solution known in the prior art which can only be used with fruit of medium/large size are trays with cavities. These are depressions in sheets that receive the fruit. They are hemispher-

ical depressions of different sizes depending on the type of fruit that is to be placed in them. Being of hemispherical shape, they can house tomatoes, pears with their base placed in the depressions, apples, etc.

DESCRIPTION OF THE INVENTION

[0011] The strawberries tray with cavities of the invention herein described is specially designed for the packing of strawberries being conical, tapered or long wedge shaped.

[0012] The strawberries tray with cavities is intended to be disposed in a box for storage and transport. The tray has a plurality of cavities each destined to receive a strawberry.

[0013] The cavities have a configuration specially designed to allow proper support of the pedicle, the sepal, and the thalamus of the strawberry. More specifically the strawberries are arranged in the cavities with the pedicle and sepal facing down, thus being housed in depressions of the cavity, and with the thalamus pointing upward, being supported by a protrusion of the cavity.

[0014] These cavities are distributed separated from each other in the strawberries tray with cavities. In one embodiment the cavities are in a staggered arrangement. In another embodiment the cavities are in a matrix arrangement, that is, arranged in rows and columns perpendicular and parallel to each other. In another embodiment the cavities are arranged in parallel columns to each other but not aligned in parallel rows.

[0015] As the cavities are separated from each other, the strawberries do not touch each other. So there is no lateral contact between strawberries nor upper or lower contact.

[0016] Moreover, the configuration of the cavities, specially adapted to the shape of strawberries, allows a better grip of each strawberry on the tray. This facilitates transport operations with strawberries because an extra precaution is not required to stop the strawberries from slipping or moving out of their positions. It also facilitates exposure of strawberries at point of sale because the tray with cavities can be inclined so that consumers can see the strawberries better without fear that they will fall or slide and move out of their positions.

[0017] One of the most important advantages of the proposed tray with cavities is that it improves the conservation of the strawberries. As there is space between the strawberries, the air can circulate but it retains the moisture so that the strawberries are in optimum condition. Also if one of the strawberries is in poor condition or it develops mold, this does not affect adjacent strawberries as they are not in contact. So if one of the strawberries is in poor condition, the person in charge of the distribution and/or sale of the strawberries can detect it very quickly, at a mere glance, and replace that single strawberry with one that is in good condition.

[0018] So far, with packing containers of the prior art, all the strawberries were touching each other and it was

therefore more difficult to detect strawberries in deteriorated condition. Also in the case of coming across some strawberry in poor condition, it could not be established with certainty whether or not the strawberries that were in contact with it had become infected. In such cases, the distributor and/or seller of the strawberries had to replace several of the strawberries to ensure that the consumer did not receive any in deteriorated condition. Thanks to the proposed trays with cavities, fewer strawberries become deteriorated and costs are reduced due to not having to replace those strawberries in poor condition.

[0019] Thus, a major advantage of the present invention is that it enables the strawberries to be displayed as individual items. This allows the consumer himself/herself to observe the entire surface of the strawberry to make sure they are all in good condition. In this way the consumer who buys a tray with cavities of strawberries has the guarantee that all the strawberries placed in the tray are in good condition for consumption and this increases her/his trust in the product and makes him/her come back to buy the product again. Moreover, the tray with cavities offers a very good presentation of strawberries which is pleasant for consumers to view.

BRIEF DESCRIPTION OF THE DRAWINGS

[0020] To complement the description being made and in order to better aid understanding of the characteristics of the invention in accordance with a preferred practical embodiment thereof, a purely illustrative non-limiting set of drawings is attached as an integral part of said description, which shows the following:

Figure 1 shows a perspective view of the strawberries tray with cavities.

Figure 2 shows a plan view of the strawberries tray with cavities.

Figure 3 shows a sectioned profile view of a cavity in the strawberries tray with cavities.

Figure 4 shows a plan view of a cavity in the strawberries tray with cavities.

PREFERRED EMBODIMENT OF THE INVENTION

[0021] An exemplary embodiment of the invention is presented below with the aid of figures 1 to 4.

[0022] The strawberries tray with cavities shown in figure 1 is intended to be arranged inside a box for the storage and transport of the strawberries, and is made up of a sheet (1) in which a plurality of cavities (2) are found where each one of them is adapted to receive a strawberry. As also seen in figure 2, all the cavities (2) are spaced and distributed evenly.

[0023] Each of said cavities (2) comprises a first depression (4) that is configured to receive the strawberry's sepal and a second depression (5) extending concentrically and downwards to the first depression (4) and is

configured to receive the strawberry's pedicle. Each cavity also comprises a protrusion (6) which protrudes upwards from the first depression (4) and has a truncated pyramid configuration with at least one front face (7) configured to support the strawberry's thalamus.

[0024] In one embodiment of the invention, the first depression (4) has an oval shaped perimeter and a spherical cap configuration, as shown, for example, in figures 2 and 3. In another embodiment of the invention the first depression (5) has a circular perimeter and a spherical cap configuration. The second depression (5) preferably has a cylindrical configuration, as shown, for example, in figure 3.

[0025] In figures 3 and 4 the details of a cavity (2) are illustrated, in a side view and a plan view respectively.

[0026] The parts of the protrusion (6) of the cavity (2) can be appreciated in these figures which comprise:

- a front face (7) having a curved trapezoidal configuration with a lower front edge (8) in correspondence with the perimeter of the first depression (4), an upper front edge (9) defining the top apex of the protrusion (6) and two lateral front edges (10) connecting the lower edge (8) to the upper edge (9),
- a rear face (11) having a trapezoidal configuration with a lower rear edge (12) in contact with the sheet (1), an upper rear edge (13) corresponding to the upper front edge (9) and two lateral rear ends (14) connecting the lower rear edge (12) to the top rear edge (13), and
- two lateral faces (15) having a quasi triangular configuration and connecting the front face (7) to the rear face (11).

[0027] The protrusion (6) will preferably further comprise a mating face (16) extending from the upper front edge (9) to the top rear edge (13).

[0028] This combination of the depressions (4, 5) and the protrusion (6) associated with the cavities (2) allows a perfect adaptation to the shape of the strawberries that are placed on them. In addition, the front face (7) of the protrusion (6) is preferably concave to ensure better securement of the strawberry in the desired position, and to prevent, for example, the strawberries sliding towards one of the lateral ends (10) and tipping over.

[0029] As shown in figures 1 and 2 the sheet (1) preferably has a rectangular shape with chamfered corners to facilitate the coupling inside the box of strawberries. This is because, in the state of the art, boxes for strawberries are known to have a rectangular configuration with crosspieces of triangular section in the corners. Thus the free space available in the interior, for the placement of the tray with cavities, is not completely straight but the sections corresponding to the corners are missing. With this configuration the sheet (1) fits perfectly into these boxes since the depressions are in line with the described crosspieces.

[0030] Preferably, the frontal faces (7) of all cavities

(2) are parallel to each other. That is, all the cavities (2) are oriented in the same direction as seen in figures 1 and 2. This allows for faster positioning of the strawberries in the cavities (2) and allows better visualization of strawberries by consumers.

[0031] To ensure that the thalamus of the strawberry is situated in the most suitable position to allow the consumer to fully appreciate it, the front faces (7) have an inclination between 50° and 70° to the sheet (1). When larger strawberries are placed in the tray with cavities, the front face (7) is less inclined so that the strawberries do not protrude too far from the box. In one preferred embodiment, this inclination is 55° with respect to the sheet (1).

[0032] When smaller strawberries are placed in the tray with cavities, the front face (7) is more inclined so that the thalamus of the strawberry is more visible. In one preferred embodiment, this inclination is 65° with respect to the sheet (1).

[0033] The sheet (1) of the strawberries tray with cavities is preferably of a material selected out of plastic and molded cellulose.

Claims

1. Strawberries tray with cavities intended to be arranged in the interior of a box for the storage and transport of the strawberries, and which is made up of a sheet (1) which contains a plurality of spaced cavities (2) distributed uniformly where each cavity is intended to receive a strawberry and **characterized in that** the cavities (2) comprise:

- a first depression (4) which is configured to receive the sepal of the strawberry
- a second depression (5) which extends concentrically downwards to the first depression (4) and which is configured to receive the pedicle of the strawberry
- a protrusion (6) that protrudes upwards from the first depression (4) and which has a truncated pyramid configuration with at least one front face (7) configured to support the thalamus of the strawberry.

2. Strawberries tray with cavities according to claim 1 wherein a first depression (4) has an oval shaped perimeter and has a spherical cap configuration.

3. Strawberries tray with cavities according to claim 1 wherein a first depression (4) has a circular perimeter and has a spherical cap configuration.

4. Strawberries tray with cavities according to claim 1 wherein the second depression (5) has a cylindrical configuration.

5. Strawberries tray with cavities according to claim 1 wherein the protrusion (6) of the cavities (2) comprises:

- a front face (7) which has a curved trapezoidal configuration with a lower front edge (8) in correspondence with the perimeter of the first depression (4), an upper front edge (9) which defines the top apex of the protrusion (6), and two lateral front edges (10) that join the lower edge (8) to the upper edge (9),
- a rear face (11) which has a trapezoidal configuration with a lower rear edge (12) in contact with the sheet (1), an upper rear edge (13) that corresponds to the upper front edge (9) and two lateral rear ends (14) which join the lower rear edge (12) to the upper rear edge (13) and
- two lateral faces (15) which have a quasi triangular configuration and which join the front face (7) to the rear face (11).

6. Strawberries tray with cavities according to claim 5 wherein the protrusion (6) additionally comprises a mating face (16) which extends from the upper front edge (9) to the upper rear edge (13).

7. Strawberries tray with cavities according to claim 5 wherein the front face (7) is concave.

8. Strawberries tray with cavities according to claim 1 wherein the sheet (1) has a rectangular configuration with chamfered corners to facilitate its coupling inside the strawberries box.

9. Strawberries tray with cavities according to claim 1 wherein the front faces (7) of all the cavities (2) are parallel to each other.

10. Strawberries tray with cavities according to claim 1 wherein the front faces (7) have an inclination of between 50° and 70° with respect to the sheet (1).

11. Strawberries tray with cavities according to claim 10 wherein the front faces (7) have an inclination of 55° with respect to the sheet (1).

12. Strawberries tray with cavities according to claim 10 wherein the front faces (7) have an inclination of 65° with respect to the sheet (1).

13. Strawberries tray with cavities according to claim 1 wherein the sheet (1) is made of a material selected out of plastic and molded cellulose.

Amended claims in accordance with Rule 137(2) EPC.

1. Strawberries tray with compartments intended to be arranged in the interior of a box for the storage and transport of the strawberries, comprising a sheet (1) and a plurality of spaced compartments (2) distributed uniformly in said sheet (1) where each compartment is intended to receive a strawberry and **characterized in that** each compartment (2) comprise:
 - a first depression (4) that extends downwards from the sheet (1) and is configured to receive the sepal of the strawberry
 - a second depression (5) which extends concentrically downwards from the first depression (4) and which is configured to receive the pedicle of the strawberry
 - a protrusion (6) that protrudes upwards from the first depression (4) and which has a truncated pyramid configuration with a front face (7), having an inclination with respect to the sheet (1), which is configured to support the thalamus of the strawberry.
2. Strawberries tray with compartments according to claim 1 wherein the first depression (4) has an oval shaped perimeter.
3. Strawberries tray with compartments according to claim 1 wherein a first depression (4) has a circular perimeter and has a spherical cap configuration.
4. Strawberries tray with compartments according to claim 1 wherein the second depression (5) has a cylindrical configuration.
5. Strawberries tray with compartments according to claim 1 wherein the protrusion (6) of the compartments (2) comprises:
 - a front face (7) which has a curved trapezoidal configuration with a lower front edge (8) in correspondence with the perimeter of the first depression (4), an upper front edge (9) which defines the top apex of the protrusion (6), and two lateral front edges (10) that join the lower edge (8) to the upper edge (9),
 - a rear face (11) which has a trapezoidal configuration with a lower rear edge (12) in contact with the sheet (1), an upper rear edge (13) in correspondence with the upper front edge (9) and two lateral rear ends (14) which join the lower rear edge (12) to the upper rear edge (13) and
 - two lateral faces (15) which have a quasi triangular configuration and which join the front face (7) to the rear face (11).
6. Strawberries tray with compartments according to claim 5 wherein the protrusion (6) additionally comprises a mating face (16) which extends from the upper front edge (9) to the upper rear edge (13).
7. Strawberries tray with compartments according to claim 1 wherein the front face (7) is concave.
8. Strawberries tray with compartments according to claim 1 wherein the sheet (1) has a rectangular configuration with chamfered corners to facilitate its coupling inside the strawberries box.
9. Strawberries tray with compartments according to claim 1 wherein the front faces (7) of all the compartments (2) are parallel to each other.
10. Strawberries tray with compartments according to claim 1 wherein the front faces (7) have an inclination of between 50° and 70° with respect to the sheet (1).
11. Strawberries tray with compartments according to claim 10 wherein the front faces (7) have an inclination of 55° with respect to the sheet (1).
12. Strawberries tray with compartments according to claim 10 wherein the front faces (7) have an inclination of 65° with respect to the sheet (1).
13. Strawberries tray with compartments according to claim 1 wherein the sheet (1) is made of a material selected out of plastic and molded cellulose.

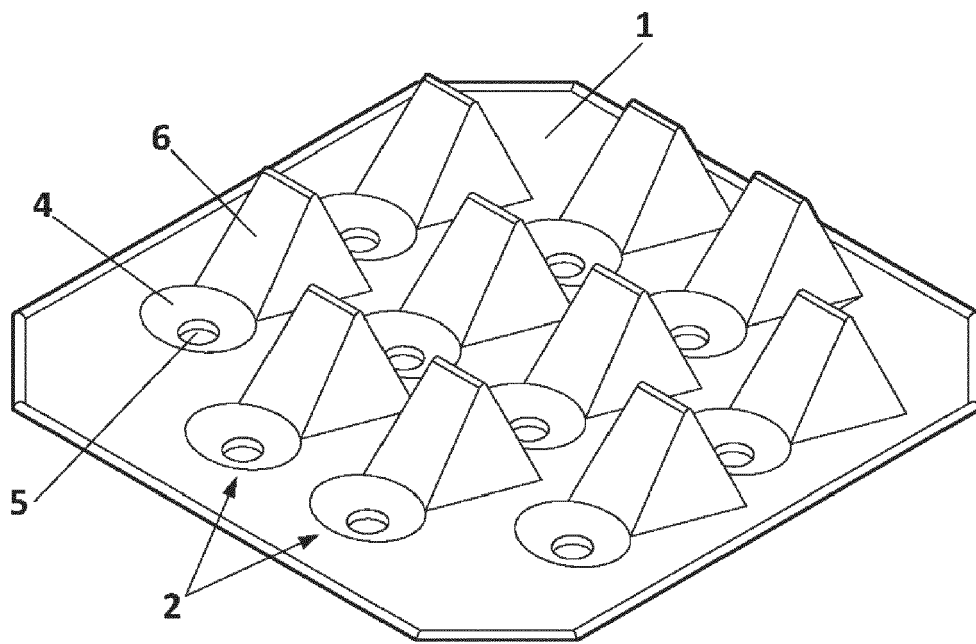


FIG. 1

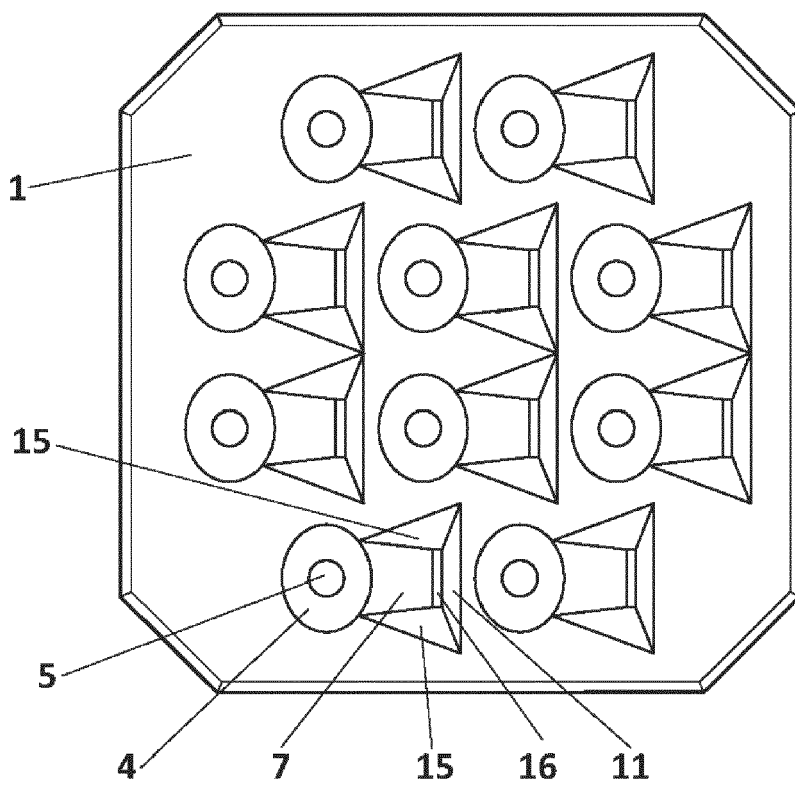


FIG. 2

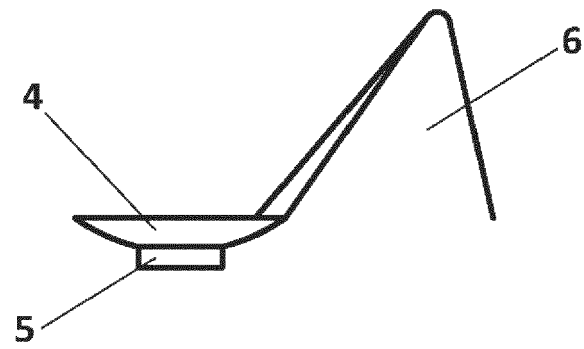


FIG. 3

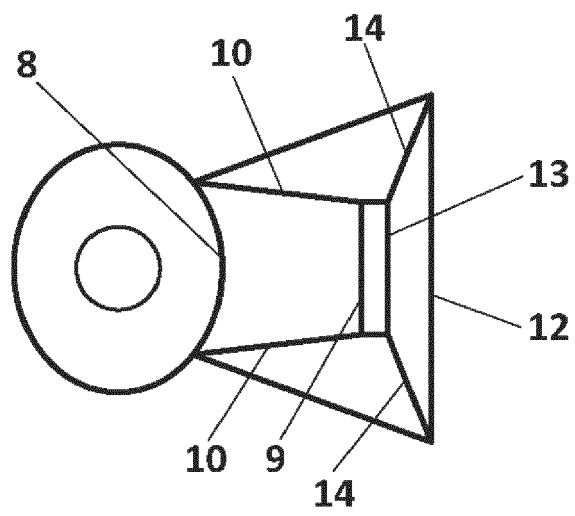


FIG. 4



EUROPEAN SEARCH REPORT

 Application Number
EP 14 38 2075

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Place of search Munich		Date of completion of the search 29 August 2014	Examiner Weyand, Tim
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

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