

⑫

EUROPEAN PATENT APPLICATION

⑲ Application number: **88500120.6**

⑤① Int. Cl.4: **B 65 D 85/50**

⑳ Date of filing: **02.12.88**

③① Priority: **02.12.87 ES 8703769**

④③ Date of publication of application:
07.06.89 Bulletin 89/23

⑧④ Designated Contracting States:
AT BE CH DE FR GB GR IT LI LU NL SE

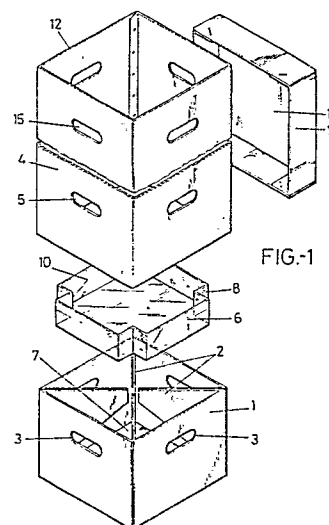
⑦① Applicant: **LOS QUEMADOS, S.A.**
Carretera de Chipiona-Rota Km. 2
E-11550 Chipiona (Cádiz) (ES)

⑦② Inventor: **Fernandez de Bobadilla Rivero, Alvaro**
Carretera de Chipiona-Rota, Km. 2
E-11550 Chipiona (Cadiz) (ES)

⑦④ Representative: **Herrero Antolín, Julio**
HERRERO & ASOCIADOS, S.L. Alcalá, 21
E-28014 Madrid (ES)

⑤④ **Container for the transport of flowers.**

⑤⑦ This invention consists of a prismatic shaped cardboard box, which is combined with a plastic tray, at the bottom of the box, which tray supports the free ends of the flower stalks to be transported, and which also serves as a water collector.



Description

CONTAINER FOR THE TRANSPORT OF FLOWERS

OBJECT OF THE INVENTION

The present invention relates to a container for the transport of flowers, which has been specifically designed for the transport of carnations, but which may also be used for the transport of any other type of flowers, and which has in turn been designed for long distance transport, such as international transport, but which may also be used in short stretches or distances.

BACKGROUND OF THE INVENTION

The use of boxes is known for the transport of flowers, which boxes have a height suited to the length of the flower stalks, a basically prismatic-quadrangular shape with diagonal partition walls on the bottom thereof destined to hold the carnation stalks such that the upper area of the latter may be immobilised, as such area is the largest in volume and as the carnations are altogether adapted to the section of the box, whilst their stalks are in turn held by the said lower partition walls, and their tendency to side tilting, due to the obvious handlings and movements to which the box is submitted during transport, is considerably limited.

The box is complementarily provided below its middle level and on each of its four side faces, with an equal number of apertures which on the one hand constitute grasps which expedite handling of the box and on the other provide venting windows for the ventilation of the flowers established therewithin.

The side walls of the box furthermore extend, in correspondence with its upper mouth, to shape closure flaps.

This type of boxes, which theoretically afford an acceptable efficiency, in practice pose many problems, derived from their own nature, more specifically cardboard, and because of the fact that the carnations or flowers in question, in order to be able to endure transport, especially when same is lengthy, must be wet when introduced into the box.

The first problem arising consists in the fact that the stalks, through their free end, i.e., where the humidity is concentrated, pierce through the base of the box, rendering it useless, for the water moistens the cardboard massively at the leaning points of the stalks and the latter's weight is sufficient for the wet cardboard to be pierced.

On the other hand, the environmental humidity present inside the box softens its walls and these lose considerable consistency, which is furthermore already relatively weak because of the closure system of the box, based on hinged flaps, which barely help to stiffen the assembly.

Finally, the side apertures carry out their function as grasps of the box, but are nevertheless inadequate as venting means for the inside thereof.

DESCRIPTION OF THE INVENTION

The container for the transport of flowers of the invention fully solves all the aspects of the previously

mentioned problems.

More specifically, and in order to achieve the above, the container of the invention, with a basic structure similar to that previously described, presents as one of its essential features the fact that the bottom of the box, specifically below the diagonal partition walls, is provided with a water proof and plastic tray of minimum width in order to reduce its cost as far as possible, since such tray is not intended to be a resistant element but merely a water collector in order to prevent the humidity from reaching the bottom of the box, for a dry cardboard box is obviously sufficient, from the point of view of mechanical resistance, in order to bear the weight of its contents without any risk of deterioration, such deterioration taking place precisely due to the effect of humidity, wherefore the said tray is only intended as a barrier against such humidity.

In accordance with a further characteristic of the invention, it has been foreseen that the whole surface, both internal and external, of the container is coated with paraffin, thereby solving the problem of structural weakening caused by environmental humidity.

Such water proof tray basically has the same plant as the box or body of the container, except that its apices are provided with respective dihedral and straight channelings, with a considerable amplitude, having a double function, on the one hand allowing the tray to be placed and fixed under the diagonal partition walls of the box, since these have a triangular profile, with the lower edge gradually moving away from the corresponding apex of the box to the middle vertical thereof, with a slope of 45°, in order that these channelings of the tray separate the apices thereof sufficiently with respect to the apices of the box, in order that said tray may be at an acceptable height at the point of contact with said diagonal partition walls, at the same time as such channelings or recesses of the apices of the tray reduce the useful surface of each of the compartments defined on the bottom of the container by the diagonal partition walls, wherefore the possibility of dispersion of the carnation stalks is substantially reduced and, consequently, fixing thereof is improved.

In accordance with a further characteristic of the invention the container is provided with a lid, substituting the conventional closing flaps, which is physically independent of the body of the container, of the type which incorporates a perimetral sleeve, shaping a sort of tray to which the mouth of the container may be "fitted", thereby obtaining a substantial stiffening of the latter's body when in a closed position.

Finally, and as yet another characteristic of the invention, the body of the container is provided with a second group of apertures located relatively close to the mouth thereof and which are similar to the lower ones, and which on the one hand increase internal ventilation or venting of the container, since

they co-operate with the lower apertures, and on the other hand expedite the placing of a lid on the body for they allow clamping by introducing four fingers in two opposed apertures while the thumb leans on the base of the lid.

DESCRIPTION OF THE DRAWINGS

In order to complement the description being made and to assist the better understanding of the characteristics of the invention, a set of drawings is attached to the present specification as an integral part thereof wherein the following have been shown in an illustrative and non-limiting manner:

Figure 1 shows perspective view of a breakdown of the elements of a container for the transport of flowers in accordance with the present invention.

Figure 2 shows a side elevational view and cross-section of the same container.

Figure 3 finally shows a plan view thereof, without the lid.

PREFERRED EMBODIMENT OF THE INVENTION

In the light of these figures it may be observed that the container for the transport of flowers of the invention is comprised by a sheet of cardboard which is duly folded to shape a prismatic-rectangular body 1 from the vertical cants whereof project triangular partition walls 2, in a diagonal arrangement, which converge onto the imaginary middle axis of the box, and is provided with apertures 3 on its side walls, this laminar and folded body being complemented, as aforesaid, by a tubular body 4, of quadrangular section, of greater height than box 1 and within which the latter is closely housed, being in turn provided with windows 5 on its side walls which, after assembly, are opposed to previously mentioned windows 3.

From this basic structure such container presents, as one of its main characteristics, the fact that a sort of plastic and water proof tray 6 is coupled at the bottom of box 1 and under the diagonal partition walls 2, such that the free tips or ends of the flower stalks will lean on said tray 6, the bottom 7 of the box being protected both from the piercing effect of such stalks and, especially, from the humidity coming therefrom, the tray 6 consequently acting as a collector.

This tray, as may be especially observed in the perspective view of figure 1 presents in correspondence with its apices broad dihedral and straight channelings 8 which, as may in turn be observed in figure 2, allow placing of tray 6 occupying most of the base 7 of box 1, under diagonal partition walls 2 and at an acceptable height for said tray 6 since these partition walls 2 have a triangular shape, as has previously been said, and its hypotenuse or lower edge 9 adopts an angle of around 45°, wherefore as said edge is coupled in correspondence with the imaginary bisector of these dihedral channelings 8, as is in turn shown in Figure 3, the point of intersection between the edge 9 of each partition wall 2 and the cant 10 of the corresponding channeling, are substantially separated from the likewise corresponding apex of the box and from the

bottom 7 of the latter, which separation determines the maximum height of tray 6.

Both the laminar body constituting lower box 1 and tubular body 4 which extends said lower box 1 in the necessary height in accordance with the size of the flowers, are provided with a layer of paraffin coating 11 on their whole surfaces, both external and internal, represented in the enlarged detail of Figure 2, such that whilst the plastic and water proof tray 6 situated on the bottom of the container acts as collector of the water coming from the plants, this paraffin coating 11 protects the container from the effects of environmental humidity, both the humidity present within the container itself and that present in its surroundings.

The tubular body 4 is interrupted in its upper mouth 12, i.e., it lacks the conventional closing flaps and in substitution therefor such container has an independent lid 13 provided with a perimetral sleeve 14, such that the mouth 12 of the container body may be fitted into the housing formed by the lid 13 with its perimetral sleeve 14, as shown in Figure 2, wherefore such lid not only duly closes the container but also participates significantly in the structural stiffening thereof.

It has finally been foreseen that the tubular body 4 and in addition to lower apertures 5, is provided on each of its faces with another upper aperture 15, relatively close to the lower edge of sleeve 13 of the lid, such that these upper apertures 15 co-operate with lower apertures 3-5 in ventilating the inside of the container and at the same time, due to their proximity to the lid, expediting implantation thereof, for, as has previously been said, fingers may be introduced through two opposed apertures 15 and, simultaneously the thumb be pressed onto base 13 of the lid in order to fully close same in an operation which avoids the risks derived from closure by exclusively placing pressure on lid 13, which could give rise to undue effort causing deformation of the container as a whole.

A container is therefore achieved, in accordance with the structure described, which in addition to ensuring a perfect stability for the flowers there-within, is highly resistant to the effects of humidity, both as regards water coming from the flowers themselves and environmental humidity, which provides a greater structural stiffness, a better inner ventilation and an easier handling.

Claims

1.- Container for the transport of flowers, of the type which incorporates a prismatic-rectangular body, on the basis of cardboard walls, and on the bottom whereof are established diagonal partition walls projecting from its vertical edges which define compartments that increase the stability of the stalks therewithin, essentially characterised in that it is provided with a tray obtained from plastic and water proof material on its bottom and under the said diagonal

partition walls, which acts as a support means for the free ends of the flower stalks and as a water collector, it having been foreseen that said plastic tray, having a minimum wall thickness, incorporates in correspondence with its vertical cants, dihedral and vertical channelings which allow a considerable height for said tray as such channelings are situated in correspondence with the lower edge of the diagonal partition walls, which edge adopts an angle and an upward position from the corresponding apex towards the centre of the container.

2.- Container for the transport of flowers, in accordance with claim 1, characterised in that its body is complemented by a lid which is physically independent therefrom, provided with a perimetral sleeve which determines a housing which has its concavity directed downwards and closely receives the mouth of the body therewithin, thereby stiffening its struc-

ture.

3.- Container for the transport of flowers, in accordance with preceding claims, characterised in that both the body and the lid of the container, obtained from cardboard, are provided with a coating of paraffin on their whole surfaces, both external and internal.

4.- Container for the transport of flowers, in accordance with preceding claims, characterised in that each of the side faces of the body are provided, close to the lower edge of the perimetral sleeve of the lid, in a coupling situation of the latter, with four apertures which, in co-operation with the conventional lower apertures, improve the internal ventilation of the container, and at the same time, due to the proximity of the lid take part in the operations for coupling of the latter.

5

10

15

20

25

30

35

40

45

50

55

60

65

4

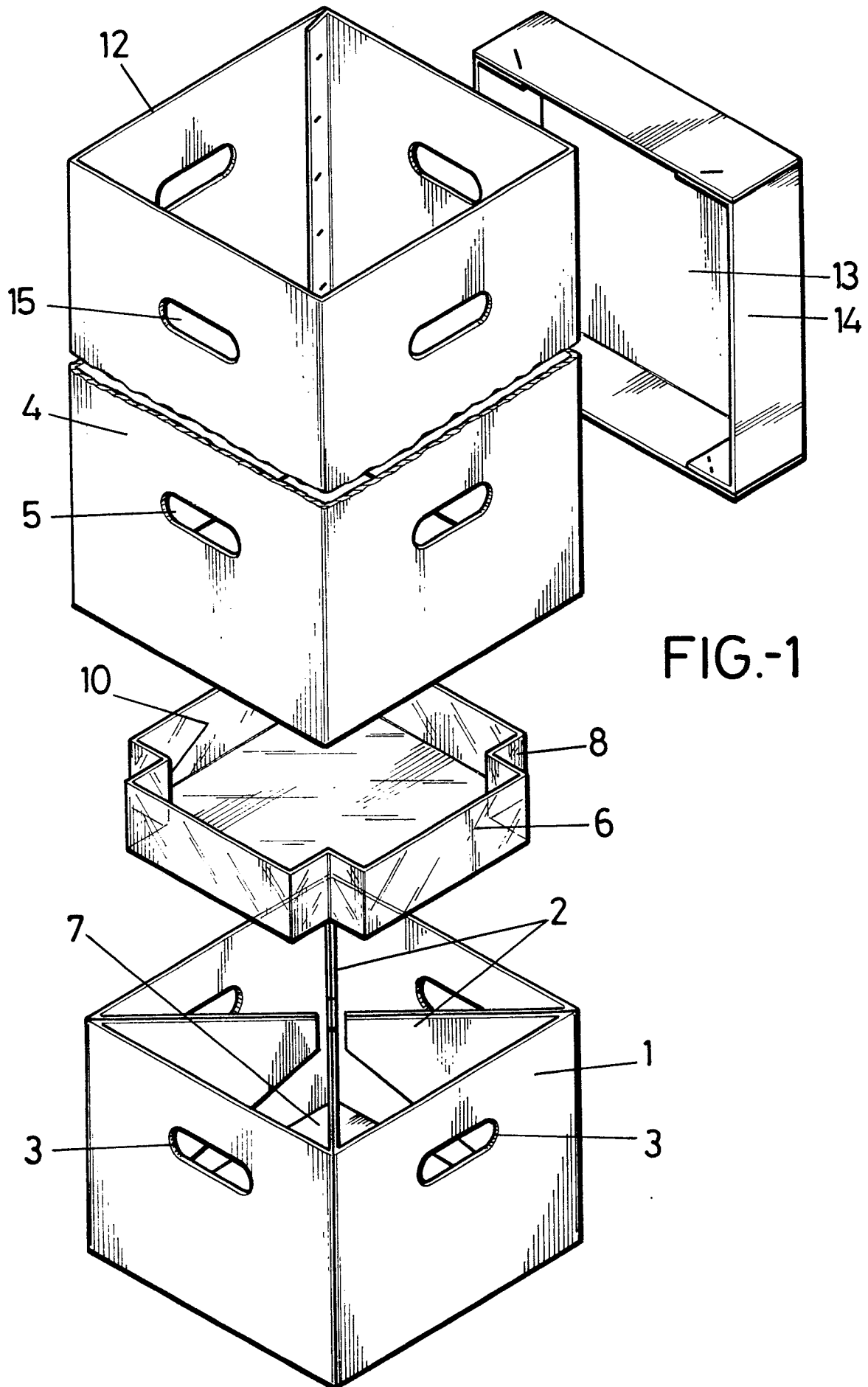


FIG.-1

