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(54) Method for transporting flowers

(57) Method for transporting bunches of flowers. According to the method a bunch (5) is placed onto a piano (1) made of cardboard or a synthetic material and the plano is folded to a frustum of a pyramid. This frustum is then placed in a bucket with a rectangular cross section. Buckets that are filled in this manner can easily be transported on pellets, with a minimum chance of damaging the flowers.

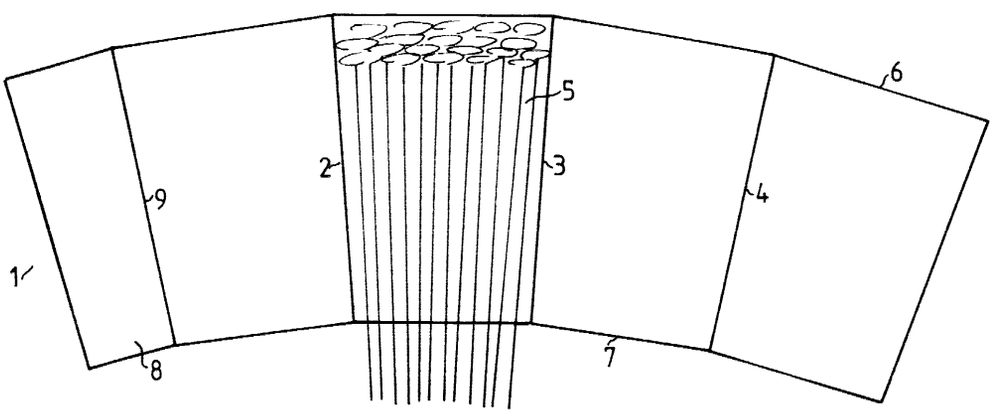

FIG.1A

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Description

[0001] The invention relates to a method for transporting flowers, according to which the flowers are harvested, bundled and placed in buckets that are partly filled with water, after which the buckets filled with flowers are transported. According to the state of the art the bunches are each wrapped in a plastic foil, because the buckets are packed close together and neighbouring bunches will contact one another, which could cause damage to the flowers.

[0002] The disadvantage of the known method is that wrapping up the flowers in plastic foil is time consuming and the foil can be used only once, which is unfavourable from an environmental point of view. Moreover, there is a chance that during the wrapping up, or the unwrapping, the flowers are damaged, which would decrease their commercial value.

[0003] The inventive method substantially obviates these disadvantages and is characterized in that from the flowers to be transported a bunch is taken and placed onto a piano made of paper, cardboard or a synthetic material, that the piano is folded into a frustum of a pyramid and that the frustum with the bunch of flowers inside is placed in the bucket. By providing the piano beforehand with folding lines alongside which it can easily swivel, the folding to a frustum of a pyramid can be performed in one continuous movement. The bunch is now protected by the frustum that surrounds it and that will practically not damage the flowers, provided that the inside has a smooth surface. An additional advantage is that bunches that have been packed this way can comprise up to 10% more flowers, as a result of which the transport costs are decreased.

[0004] According to a favourable realization of the inventive method the frustum with the bunch of flowers inside is after the transport taken from the bucket and placed onto a substantially flat surface, after which the frustum is unrolled and the bunch is lifted up for further treatment. This unrolling can also take place in one continuous movement. The next frustum may then be unrolled on top of the earlier unrolled plano, such that the successively unrolled pianos form a stack.

[0005] According to another aspect of the invention the stacked empty buckets and the stacked pianos are sent back to the flower grower, which implies that no garbage is produced.

[0006] Another favourable realization of the inventive method that reduces even further the necessary transportation space is characterized in that the pianos are folded to rectangular frustums of pyramids and are placed in buckets having a rectangular cross section.

[0007] The invention also relates to a piano provided with folding lines, such that it can be folded to a four-sided frustum of a pyramid, suitable to be applied in the inventive method.

[0008] An embodiment which can be realised relatively cheap and which is moreover substantially harmless for the environment is characterized in that the piano is made of paper or cardboard.

[0009] Another favourable embodiment which is moisture resistant and which therefore may be used a number of times is characterized in that the piano is covered with a layer of a synthetic material.

[0010] Another embodiment which is especially suitable when paper or wood is used is characterized in that the plano is made such that a frustum obtained by folding the piano, does not reach a bottom of a bucket under operational conditions, such that it will not get in touch with the water which is present in the bucket.

[0011] Another favourable embodiment is characterized in that the piano is made of a synthetic material. A piano such made can be used numerous times and it is moreover insensitive to humidity and water. A favourable embodiment is characterized in that the piano is made such that a frustum obtained by folding the piano does reach a bottom of a bucket under operational conditions. In this way a load taking capacity is given to the bucket together with the frustum, as a result of which the buckets can be stacked and the packaging efficiency can be further increased.

[0012] The invention will now be further explained with reference to the following figures, in which:

- Fig. 1A represents a first possible embodiment of a piano;
- Fig. 1B represents a bucket, provided with a piano according to the first embodiment;
- Fig. 2A represents a second possible embodiment of a plano;
- Fig. 2B represents a bucket, provided with a plano according to the second embodiment;
- Fig. 3 schematically represents a pellet with buckets.

[0013] Fig. 1A represents a first possible embodiment of a piano 1 which is manufactured of paper, cardboard or a synthetic material and which is provided with folding lines 2,3,4, well known in the packaging industry, along which the piano can be folded without difficulty. A bunch 5 of freshly harvested flowers, for example chrysanthemum, is placed onto piano 1 and then piano 1 is wrapped around bunch 5, in the process of which an frustum of a pyramid made of cardboard or paper is formed, in such a manner that the flowers are surrounded by the wide upper side 6 and the stems protrude from the narrow lower side 7. Piano 1 may if desired be extended by a flap 8 and an additional folding line 9, which flap 8 will embrace the frustum and improve its structural strength and makes it easier to handle.

[0014] Fig. 1B represents a bucket 10, provided with a folded piano 1 according to the first embodiment. Bucket 10 is rectangular in cross section and is tapered down to the bottom. The dimensions of piano 1 are chosen such that it fits precisely into bucket 10, with the lower side 7 ending about 15 cm. above the bottom of

bucket 10. Bucket 10 is filled with water 11 to a level such that piano 1 will not get wet, which makes it possible to manufacture piano 1 of cheap, non-water-resistant materials like cardboard. It is possible to cover the lower side 7 with a tape made of a synthetic material, in order to prevent that splashing water affects the cardboard. Of course it also possible to cover piano 1 completely with a layer of synthetic material.

[0015] Bucket 10 is preferably provided with a rim 12, which rests against the neighbouring rims during transportation. The dimensions of piano 1 are then preferably chosen such that the rims of neighbouring buckets still fit closely together and that substantially no horizontally directed forces would act upon the pianos during transportation.

[0016] When bucket 10 has reached its destination, the folded piano 1 is taken from bucket 10 in such a matter that bunch 5 remains in place in plano 1, after which piano 1 is put onto for example a table and unrolled, such that bunch 5 falls apart and the flowers can easily be taken out. The successively unrolled pianos build a stack, which can be returned to the supplier, together with the buckets.

[0017] Fig. 2A represents a second possible embodiment of a piano 13 which is manufactured of a synthetic material and which is also provided with folding lines 14,15,16, along which it may be folded without difficulty. A bunch 5 of freshly harvested or otherwise supplied flowers is placed onto piano 13, and then piano 13 is wrapped around bunch 5. In this embodiment, a wide upper side 17 surrounds the flowers and a narrow lower side 18 surrounds the stems. Moreover, piano 13 may be provided with an additional flap 19 and an additional folding line 20, which flap 19 will embrace the frustum of a pyramid such as to make it easier to handle and to improve the structural strength of the frustum of a pyramid especially in a vertical direction.

[0018] Fig. 2B represents a bucket 10, provided with a folded piano 13 according to the second embodiment. The dimensions of piano 11 have been chosen such that it fits precisely into bucket 10 past, but now its lower side 18 rests on the bottom of bucket 10. Piano 13 is partly immersed in the water and is for that reason manufactured of a synthetic material or water-resistant cardboard. Because piano 13 rests on the bottom of bucket 10 it has a load taking capacity and buckets 10 for example can be stacked on top of it during transportation. The load taking capacity, and therewith the stackability, may be further increased by adding an additional flap 19, as shown in Fig. 2A.

[0019] Fig. 3 schematically represents a pellet 21 with buckets 10, in which pianos 13 according to the second embodiment have been placed. Once pellet 21 has been filled with one layer of buckets, a plate 22 made of for example plastified cardboard is put on top and a next layer 23 can be put on top. Finally, the entire loading is secured to the pellet, for example with a net.

Claims

1. Method for transporting flowers, according to which the flowers are harvested, bundled and placed in buckets which are partly filled with water, after which the buckets filled with flowers are transported, characterized in that from the flowers to be transported a bunch is taken and placed onto a piano made of paper, cardboard or a synthetic material, that the piano is folded into a frustum of a pyramid and that the frustum with the bunch of flowers inside is placed in a bucket.

2. Method according to claim 1, characterized in that after the transport the frustum with the bunch of flowers inside is taken from the bucket and placed onto a substantially flat surface, after which the frustum is unrolled and the bunch is lifted up for further treatment.

3. Method according to claim 2, characterized in that next the stacked up empty buckets and the stacked up pianos are returned to the sender.

4. Method according to claim 2, characterized in that the pianos are folded to rectangular frustums and are placed in buckets having a rectangular cross section.

5. Piano provided with folding lines, such that it can be folded to a four-sided frustum of a pyramid, suitable to be applied in a method as described in one of the claims 1 to 4.

6. Piano according to claim 5, characterized in that the piano is made of paper or cardboard.

7. Plano according to claim 6, characterized in that the piano is covered with a layer of a synthetic material.

8. Piano according to claim 6 of 7, characterized in that the piano is made such that a frustum obtained by folding the piano does not reach a bottom of a bucket under operational conditions.

9. Piano according to claim 5, characterized in that the piano is made of a synthetic material.

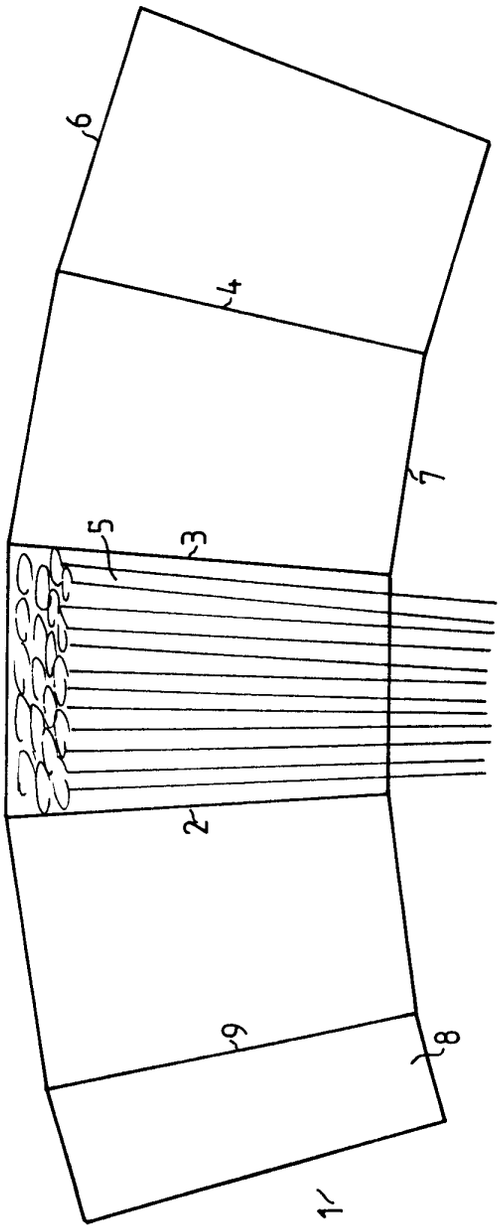
10. Piano according to claim 9, characterized in that the piano is made such that a frustum obtained by folding the piano, does reach a bottom of a bucket under operational conditions.

11. Piano according to claim 5, characterized in that the piano comprises at least for surfaces, separated by folding lines.

12. Piano according to claim 11, characterized in that

the piano moreover comprises an additional flap, attached to one of the surfaces via a folding line.

FIG.1A



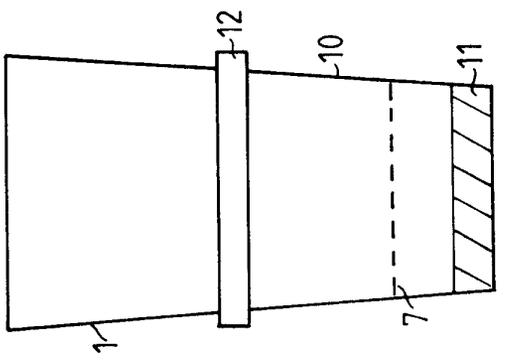


FIG.1B

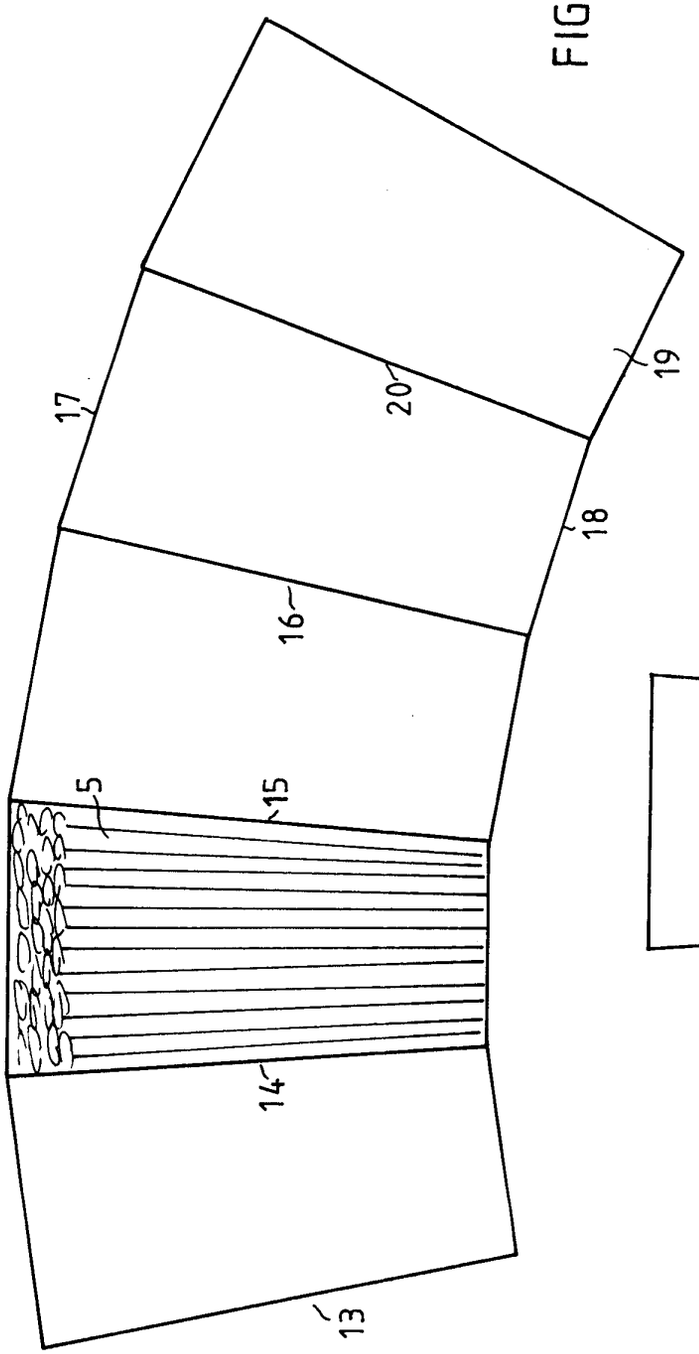


FIG.2A

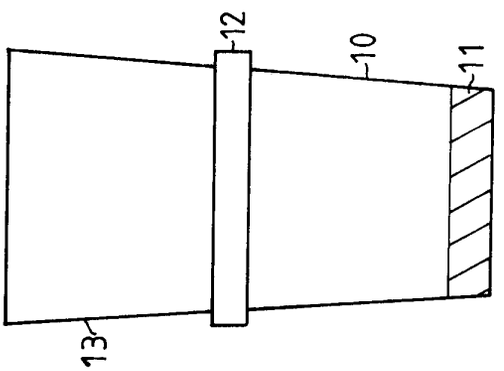


FIG.2B

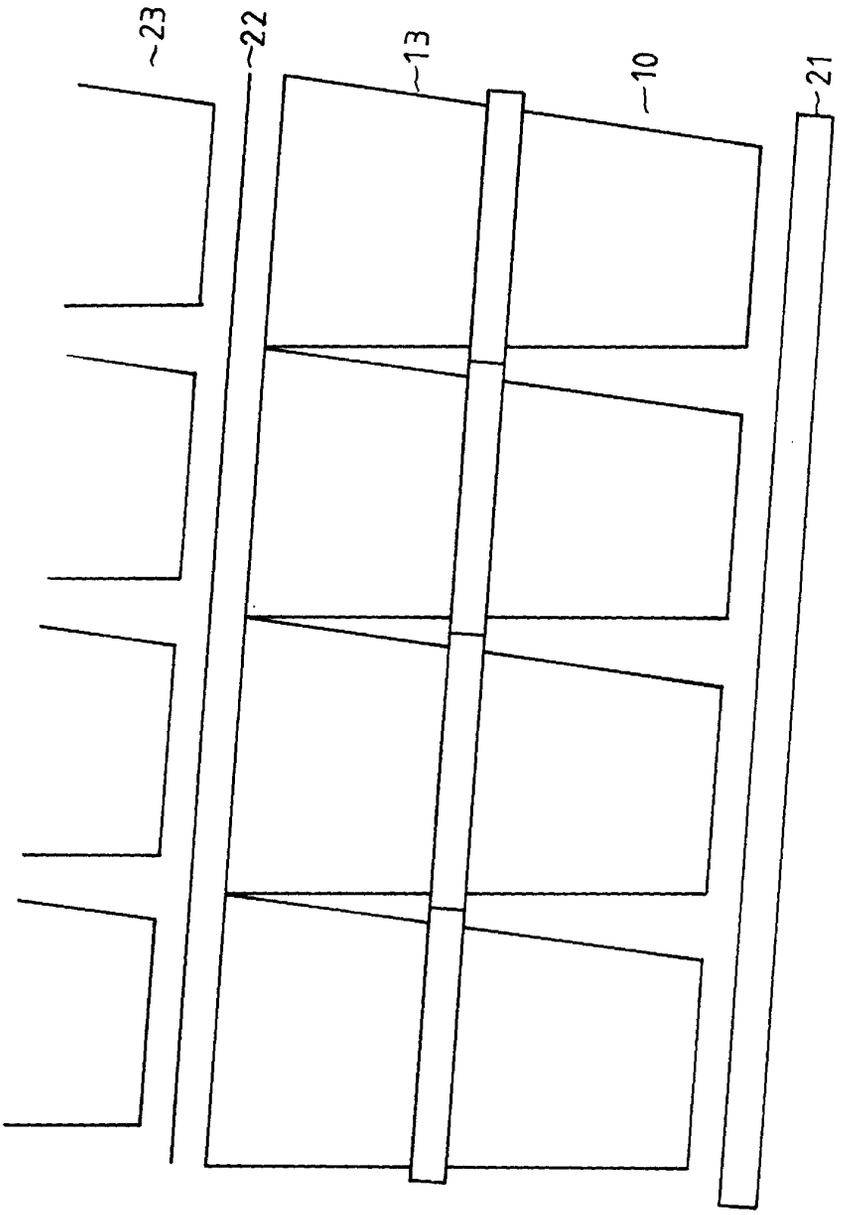


FIG.3

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EUROPEAN SEARCH REPORT

Application Number
EP 00 20 4026

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
A	EP 0 311 174 A (PAGTER & PARTNERS INT) 12 April 1989 (1989-04-12) ---		B65D85/50
A	EP 0 751 072 A (RHEINISCHE WELLPAPPENFABRIK) 2 January 1997 (1997-01-02) -----		

TECHNICAL FIELDS SEARCHED (Int.Cl.7)

B65D
A01G

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	12 June 2001	Martin, A

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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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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12-06-2001

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