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(54) CONTINUOUS BAND OF REINFORCED PLASTICIZED PAPER FOR MANUFACTURING BAGS FOR HORTICULTURAL PRODUCTS OR THE LIKE

(57) The invention relates to a continuous band of reinforced plasticized paper for manufacturing bags for horticultural products or the like, comprising a first continuous band of plasticized paper on at least one side, a second continous band sheet of plastic material having a reticular shape attached to one another by any known method. In the first continuous band of paper, the first four slots are arranged in the confluence areas of the transversal joints and the folding bends to prevent the deterioration of the first continuous band of paper when making the folds. The use of the second continuous band of plastic material increases paper strength and improves the behavior thereof being attached, for example by heat sealing.

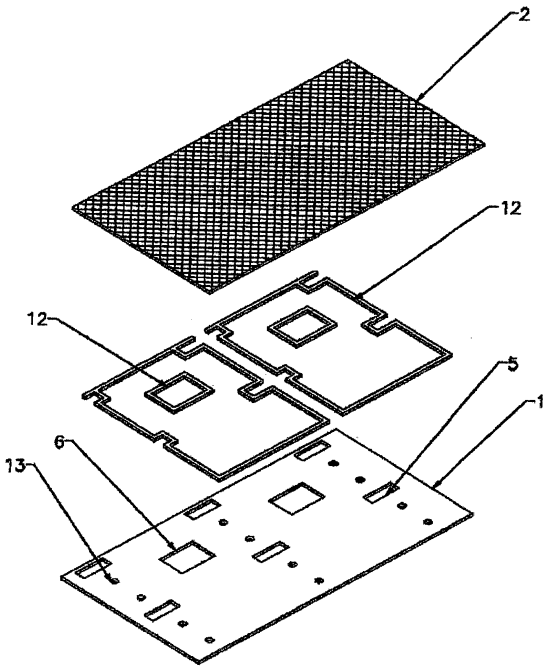

Figure 1

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Description

[0001] Continuous band of reinforced plasticized paper for manufacturing bags for horticultural products or the like.

OBJECT OF THE INVENTION

[0002] The object of the present invention is a continuous band of plasticized paper reinforced with a plastic material being approximately reticular shaped, which is specially designed for the subsequent manufacture of bags for horticultural products or the like by attaching its longitudinal edges to become a continuous tube and by transversal welding and cuts parallel thereto to obtain unitary bags.

[0003] This novel continuous band, thanks to the arrangement of windows and the plastic reinforcing material, provides a better performance in welding processes, a folding which does not damage the continuous band and an easy opening of the bags and which does not damage bag integrity.

BACKGROUND OF THE INVENTION

[0004] The marketing of horticultural products such as oranges or potatoes, is done using bags made of different materials, which need to have holes and windows on their surface for aeration of the product and continuous surfaces on which to include for instance by printing, the information required by the various regulations or advertising the manufacturer may want to include.

The bags can be made of continuous bands intended to close over themselves by attaching their longitudinal edges to form a continuous tube which can be fragmented into a plurality of sectors corresponding to the respective unitary bags by transversal joints and cuts likewise transversal.

[0005] The bands may be made of a single material or by joining various layers of materials.

[0006] The object of the present invention is to use paper in its manufacture to reduce cost and weight, strengthen said paper, so that it can withstand the weight of bagged products, and improve its behaviour in the processes of conventional welding by folding a second sheet of plastic material being reticular and finally, prevent paper breakage when folded to form the bag by a suitable arrangement of windows in the critical folding areas. Another object is to offer the consumer an opening system that does not require sharp objects and containing products does not affect the functionality of the bag, because the bag does not need to be opened at its ends.

Description of the invention

[0007] The continuous band of reinforced plasticized paper for manufacturing bags for horticultural products or the like, object of the present invention, comprises a first continuous sheet of plasticized paper in at least a first side that is intended to be the inside of the bags, the width of said first continuous sheet of paper being the same as the width of the continuous band and a second continuous sheet of plastic material whose width is the same as the width of the continuous band and attached to the entire first side of the first continuous sheet of paper by gluing, heat sealing, ultrasound or similar procedure, the shape of said second continuous sheet being approximately reticular; in each of the sectors corresponding to the unitary bags of the first continuous sheet of paper is conveniently arranged:

- Two first punched windows, each of the first aforementioned windows being located in the area intended to be the upper transversal joint of a sector and the lower transversal joint of the adjacent sector, one of the first window is located in the area of the first continuous paper sheet intended for receiving the first fold and the other first window is located in the area intended for receiving the second fold, and
- One or more punched ventilation windows conveniently arranged in each of the sectors corresponding to the respective bags.

Description of the figures

[0008]

Figure 1: perspective of an exploded view of the continuous band.
Figure 2: perspective of the continuous band
Figure 3: perspective of different models of bags that can be manufactured with the continuous band.

List of references

[0009]

1. Continuous Band
2. First continuous sheet of paper
3. Second continuous sheet
4. Sector
5. First window
6. Ventilation window
7. Upper transversal joint
8. Lower transversal joint
9. Cross sectional line
10. First fold
11. Second fold
12. Reinforcement
13. Hole

Preferred embodiment of the invention

[0010] Figure 1 and 2 show a preferred embodiment of the continuous band (1) object of the present description. The continuous band (1) comprises a first continu-

ous paper sheet (2) plasticized on both sides and a second continuous sheet (3) of plastic material, preferably extruded or laminated polyethylene, reticular shaped. In each of the sectors (4) defined by the cut lines corresponding to each of the unitary bags of the first continuous sheet, two first punched windows (5) are arranged, the said first windows are located in the area of the continuous band intended to implement the upper transversal joint and the lower transversal joint of the adjacent sector, one of the first referred windows being located in the first fold (10) and another first window being located in the second fold (11).

[0011] The first and second fold are carried out during the attachment process of the longitudinal edges of the continuous band, together with additional folds so that the bags present lateral sides when extended or filled. It is in the areas of the continuous band where the transversal joints and the folds converge where there is a risk of breakage of the continuous paper sheet, which is avoided by the first windows. One or more ventilation windows (6) are arranged in the continuous paper sheet for product aeration and to allow the consumer to see, for example, the condition of the packaged product. Through these ventilation windows one can easily tear the second continuous sheet to access the inside of the bag and not break the band preventing the product from spilling.

[0012] As explained above, the use of the second continuous sheet has two primary objectives, the first is to increase the mechanical strength of paper and the second is to improve the performance of the first sheet of paper in attachment procedures such as heat sealing, ultrasound or similar methods. To accomplish these two objectives, reinforcements (12) of plastic material are arranged between the first continuous sheet of paper and the second continuous sheet which may be located either in one or in all of the places described below, such as in the areas intended for the longitudinal and transversal joints at the edges of the first windows, at the edges of the second windows, said reinforcements are arranged between the first continuous sheet and the second continuous sheet or at the edges of the ventilation windows.

[0013] The first transversal joint can form a flap having two or more punched holes (13) acting as a handle to facilitate manipulation of the product and its promotion in the retail locations.

As mentioned in the preceding paragraphs, the upper and lower transversal joints can be made by gluing, heat sealing, ultrasound or other similar procedure.

Claims

1. Continuous band of reinforced plasticized paper for manufacturing bags for horticultural products or the like **characterized by** comprising a first continuous sheet of plasticized paper in at least a first side which is intended to be the inside of the bags, the width of said first continuous sheet of paper being the same as the width of the continuous band and a second continuous sheet of plastic material whose width is the same as the width of the continuous band and being attached to the entire first side of the first continuous sheet of paper by gluing, heat sealing, ultrasound or similar procedure. The shape of said second continuous sheet is approximately reticular. In each of the sectors corresponding to each unitary bag of the first continuous paper sheet, the following is conveniently arranged:

   a) Two windows, each of the aforementioned first window is located in the area intended to be the upper transversal joint and the lower transversal joint of the adjacent sector. One of the first windows is located in the area of the first continuous sheet of paper intended for receiving the first fold, and another first window is located in the area intended for receiving the second fold.

   b) One or more ventilation windows appropriately arranged in each of the sectors corresponding to the respective bags.

2. Continuous band of reinforced plasticized paper for manufacturing bags for horticultural products or the like, according to claim 1, **characterized in that** the second continuous sheet is extruded polyethylene.

3. Continuous band of reinforced plasticized paper for manufacturing bags for horticultural products or the like according to claim 1, **characterized in that** the second continuous sheet is laminated polyethylene.

4. Continuous band of reinforced plasticized paper for manufacturing bags for horticultural products or the like according to any of the preceding claims **characterized in that** the first transversal joint forms a flap in which two or more punched holes are provided as a handle.

5. Continuous band of reinforced plasticized paper for manufacturing bags for horticultural products or the like according to any of the preceding claims **characterized in that** a plurality of reinforcements of plastic material are provided in the areas intended to receive the longitudinal and transversal joints. These reinforcements are arranged between the first continuous sheet and the second continuous sheet.

6. Continuous band of reinforced plasticized paper for manufacturing bags for horticultural products or the like according to any of the preceding claims **characterized in that** a plurality of reinforcements of plastic material are provided at the edges of the first windows, said reinforcements being arranged between the first continuous sheet and the second con-

tinuous sheet.

7. Continuous band of reinforced plasticized paper for manufacturing bags for horticultural products or the like according to any of the preceding claims **characterized in that** a plurality of reinforcements of plastic material are provided at the edges of the second windows, said reinforcements being arranged between the first continuous sheet and the second continuous sheet.

8. Continuous band of reinforced plasticized paper for manufacturing bags for horticultural products or the like according to any of the preceding claims **characterized in that** a plurality of reinforcements of plastic material are provided at the edges of the ventilation windows, said reinforcements being arranged between the first continuous sheet and the second continuous sheet.

9. Continuous band of reinforced plasticized paper for manufacturing bags for horticultural products or the like according to any of the preceding claims, **characterized in that** the upper and the lower transversal joints are achieved by gluing, heat sealing, ultrasound or other similar procedure.

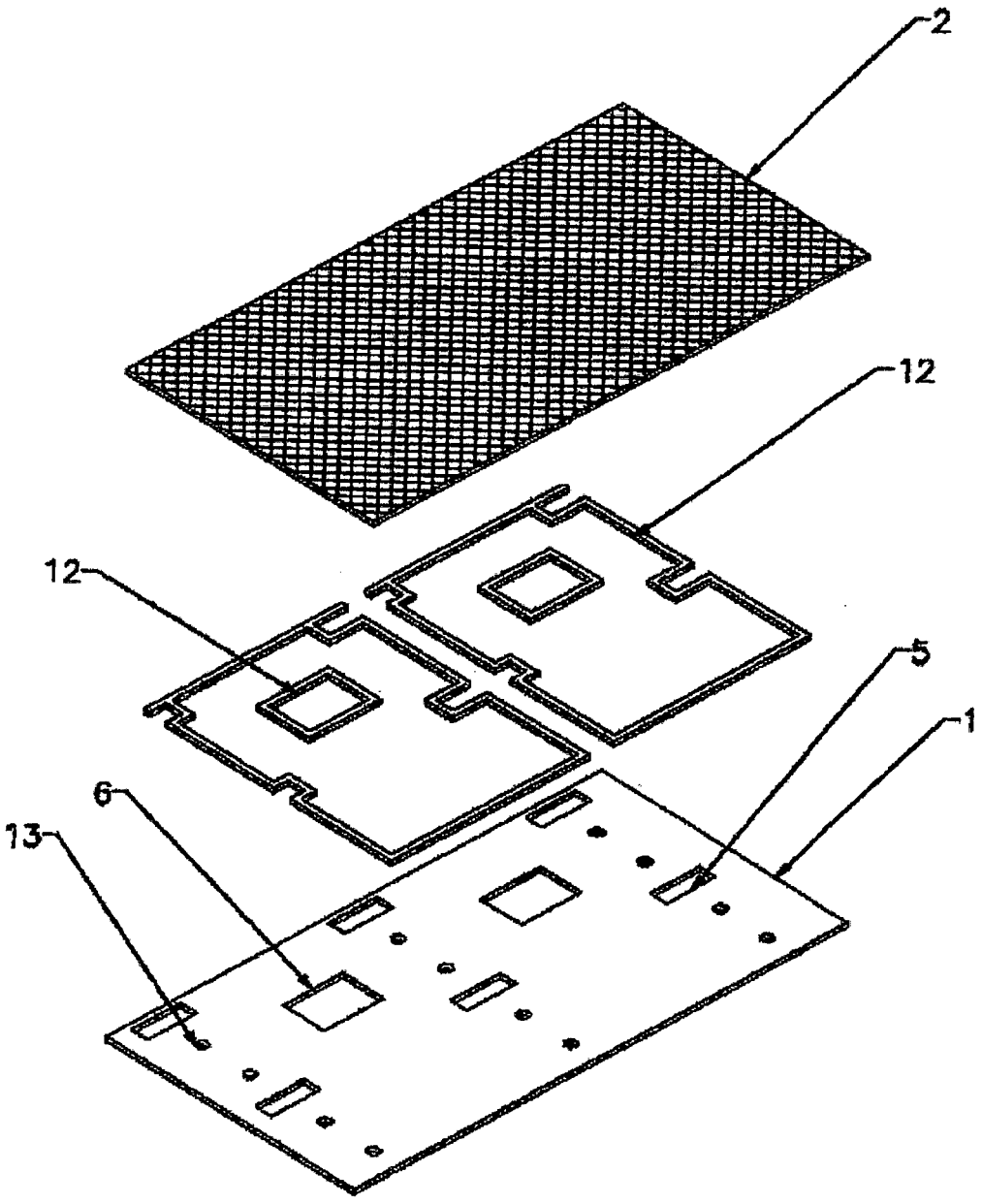

Figure 1

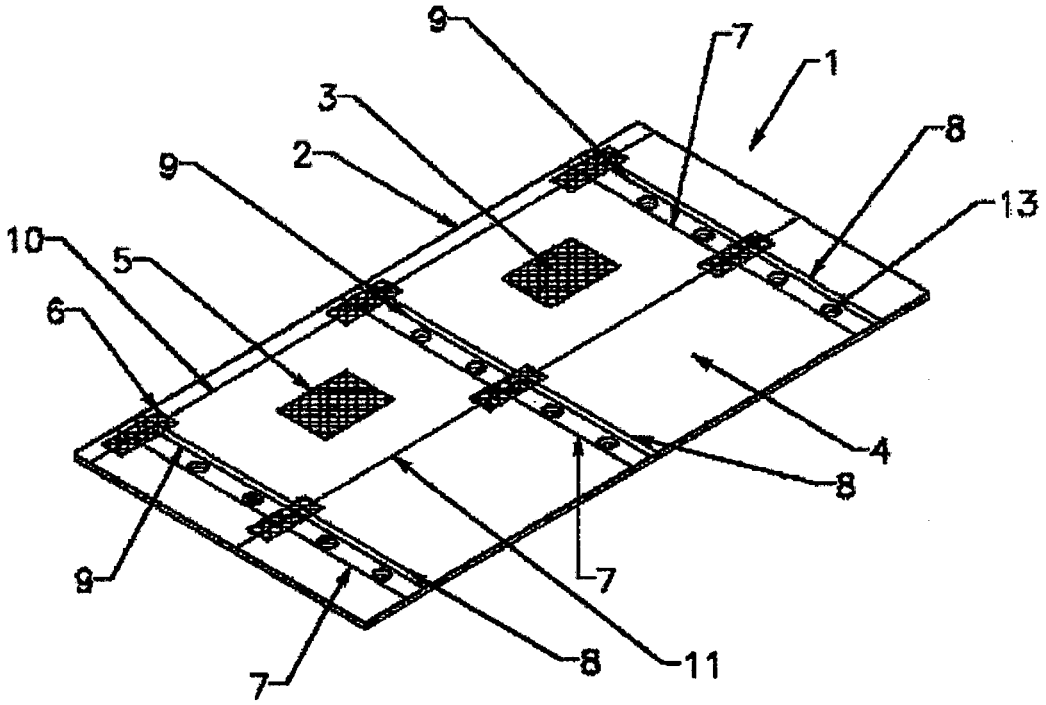

Figure 2

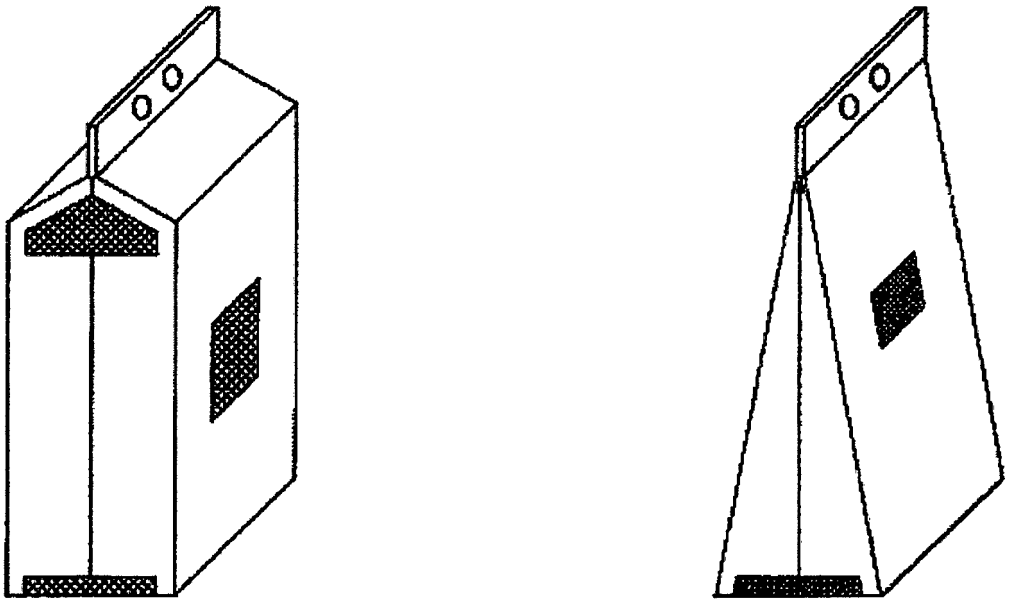

Figure 3

INTERNATIONAL SEARCH REPORT

International application No.
PCT/ES2015/070067

A. CLASSIFICATION OF SUBJECT MATTER

B65D30/02 (2006.01)
B65D30/10 (2006.01)
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
B65D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPODOC, INVENES, WIPI.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2008040826 A1 (MESEGUER CRISTOBAL SA ET AL.) 10/04/2008, page 1, line 9 - page 11, line 4; figures 1 - 10.	1-9
A	ES 1040772U U (MESEGUER CRISTOBAL SA) 16/05/1999, column 2, line 40 - column 4, line 39; figures 1 - 4.	1-9
A	WO 2009122451 A1 (GIACOMETTI FERNANDO) 08/10/2009, page 1, line 5 - page 22, line 20; figures 1 - 20.	1-9
A	WO 2012044452 A1 (NARULA VIR ET AL.) 05/04/2012, page 3, line 30 - page 6, line 16; figures 1 - 7.	1-9

☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.

* Special categories of cited documents:
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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other documents , such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
12/05/2015	**(13/05/2015)**
Name and mailing address of the ISA/ OFICINA ESPAÑOLA DE PATENTES Y MARCAS Paseo de la Castellana, 75 - 28071 Madrid (España) Facsimile No.: 91 349 53 04	Authorized officer E. Álvarez Valdés Telephone No. 91 3498419

Form PCT/ISA/210 (second sheet) (July 2009)

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.
PCT/ES2015/070067

Patent document cited in the search report	Publication date	Patent family member(s)	Publication date
WO2008040826 A1	10.04.2008	US2010024358 A1	04.02.2010
		US8309192 B2	13.11.2012
		EP2070831 A1	17.06.2009
		EP2070831 A4	08.04.2015
		ES2300215 A1	01.06.2008
		ES2300215 B1	01.05.2009
		ES2296534 A1	16.04.2008
		ES2296534 B1	16.03.2009
ES1040772U U	16.05.1999	ES1040772Y Y	01.10.1999
WO2009122451 A1	08.10.2009	JP2011517974 A	23.06.2011
		CN102066207 A	18.05.2011
		US2011019938 A1	27.01.2011
		EP2262695 A1	22.12.2010
WO2012044452 A1	05.04.2012	US2011002561 A1	06.01.2011

Form PCT/ISA/210 (patent family annex) (July 2009)