



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
21.03.2012 Bulletin 2012/12

(51) Int Cl.:
B65D 5/50 (2006.01) B65D 81/107 (2006.01)

(21) Application number: **10009870.6**

(22) Date of filing: **18.09.2010**

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR
Designated Extension States:
BA ME RS

(71) Applicant: **Electrolux Home Products Corporation N.V.**
1130 Brussels (BE)

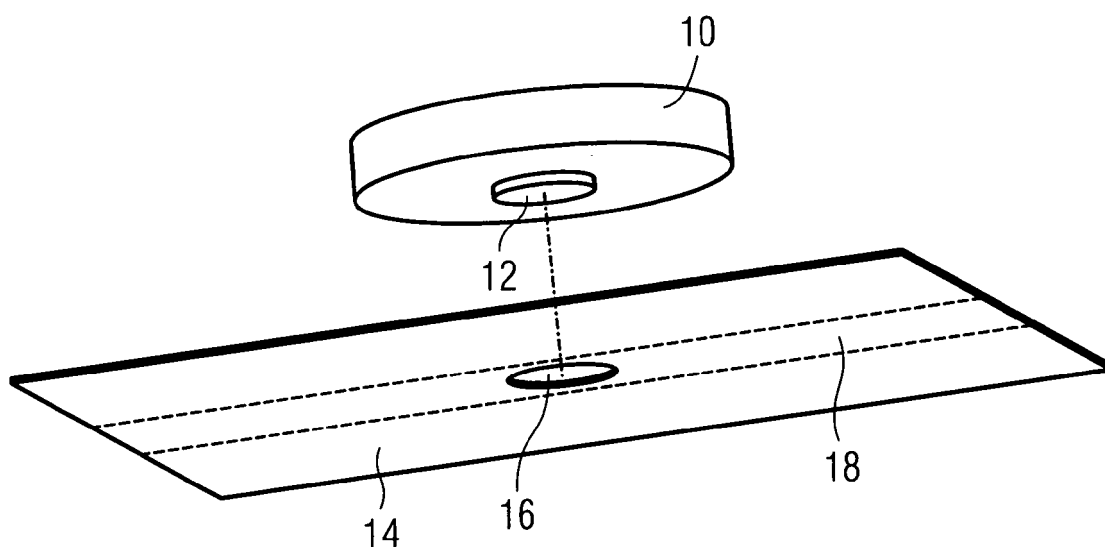
(72) Inventors:
• **Strauss, Hermann**
91583 Diebach (DE)
• **Leyh, Björn**
74572 Blaufelden (DE)
• **Buck, Bernd**
91635 Windelsbach (DE)

(74) Representative: **Baumgartl, Gerhard Willi et al**
Electrolux Dienstleistungs GmbH
Group Intellectual Property
90327 Nürnberg (DE)

(54) **A package system for an apparatus with a glass panel**

(57) The present invention relates to a package system for an apparatus with a panel, in particular for a cooking hob with a glass ceramic panel. The package system includes at least one protection device (10) with at least one plane surface. The plane surface of the protection device (10) is provided for aligning at the panel. The package system comprises at least one paperboard sheet

(14) provided for arranging besides the panel. The protection device (10) forms a cushion element between the panel and the paperboard sheet (14). The protection device (10) comprises at least one appendix (12) and the paperboard sheet (14) comprises at least one cutout (16), wherein said appendix (12) and said cutout (16) are at least partially complementary to each other.



Description

[0001] The present invention relates to a package system for an apparatus with a glass panel, in particular a cooking hob with a glass-ceramic panel, according to the preamble of claim 1.

[0002] An apparatus with a glass panel, in particular a cooking hob with a glass-ceramic panel, requires a package, which damps and/or decreases any crashing forces during the transport. Usually, a protection device is arranged between the glass panel and an adjacent wall of the package system. Said protection device is typically made of an expanded polystyrene (EPS) and covers a central portion of the glass panel. The protection device supports the glass panel and keeps said glass panel in a predetermined distance from the adjacent wall of the package system.

[0003] However, the protection device is not fixed at its predetermined position. Thus, the protection device can be displaced during the transport, so that there is a risk of damage to the glass panel.

[0004] It is an object of the present invention to provide an improved package system for an apparatus with a glass panel, which keeps the protection device for the glass panel at its predetermined position.

[0005] The object of the present invention is achieved by the package system for an apparatus according to claim 1.

[0006] According to the present invention the protection device comprises at least one appendix and the paperboard sheet comprises at least one cutout, wherein said appendix and said cutout are at least partially complementary to each other.

[0007] The main idea of the present invention is the appendix at the protection device, wherein said appendix is insertable into the cutout of the paperboard sheet. The protection device can be fixed at the paperboard sheet. This prevents a displacement of the protection device during the transport.

[0008] According to a preferred embodiment of the present invention the package system includes at least one adhesive tape provided for applying at an outer surface of the paperboard sheet and an outer surface of the appendix. The adhesive tape provides an additional fixation of the protection device at the paperboard sheet.

[0009] Preferably, the outer surface of the paperboard sheet and the outer surface of the appendix extend in the same plane, when the appendix is inserted in the cutout of the paperboard sheet.

[0010] For example, the protection device has the form of a disk. The form of the disk allows that a relative big part of the glass ceramic panel is covered by the protection device on the one hand and the space between the glass ceramic panel and the paperboard sheet is relative small.

[0011] In particular, the form of the cutout corresponds with the cross-section of the appendix.

[0012] Further, the contour of the cutout may be marginally bigger than the cross-section of the appendix. This

facilitates the attaching of the protection device at the paperboard sheet.

[0013] For example, the appendix has form of a circular disk. In a similar way, the cutout has a circular form. The protection device is rotatable at the paperboard sheet.

[0014] In particular, the protection device is made of expanded polystyrene. This allows a simple production.

[0015] Moreover, the protection device and the appendix form a single-piece part. Also the single-piece part contributes to the simple production of the protection device.

[0016] Preferably, the cutout is arranged at a central portion of the paperboard sheet. This allows an optimized protection of the glass ceramic panel.

[0017] For example, the paperboard sheet is a part of a paperboard box. This allows a compact construction of the package system.

[0018] Alternatively, the paperboard sheet is a single sheet. In this case the paperboard sheet can be inserted into paperboard box or arranged at other components of the package system.

[0019] At last, the paperboard sheet may be a part of another component of the package system.

[0020] Novel and inventive features of the present invention are set forth in the appended claims.

[0021] The present invention will be described in further detail with reference to the drawing, in which

FIG 1 illustrates an exploded perspective view of package components for a package system according to a preferred embodiment of the present invention.

[0022] FIG 1 illustrates an exploded perspective view of package components for the package system according to the preferred embodiment of the present invention. The package system is provided for an apparatus with at least one glass panel. In particular, the package system is provided for a cooking hob with a glass ceramic panel.

[0023] The shown package components include a protection device 10 and a paperboard sheet 14. The protection device 10 is a massive formed part. Preferably, the protection device 10 is made of expanded polystyrene (EPS). In this example, the protection device 10 has the form of a flat cylinder or a circular disk. In general, the protection device 10 may have an arbitrary form with at least one plane surface. Said plane surface is provided to be aligned at the glass panel.

[0024] The paperboard sheet 14 may be a part of a paperboard box or formed as a single sheet. In the latter case the paperboard sheet 14 may be provided to be inserted into a container for the cooking hob or forms a part of a composite package system. The paperboard sheet 14 is provided to be arranged besides the glass ceramic panel. The protection device 10 is provided to be arranged between the paperboard sheet 14 and the glass ceramic panel.

[0025] The protection device 10 is suitable for supporting and protecting the glass ceramic panel of the cooking hob, wherein a plane surface of the protection device 10 is aligned at a central portion of said glass ceramic panel. The protection device 10 allows that the glass ceramic panel is kept in a predetermined distance from the paperboard sheet 14.

[0026] The protection device 10 includes an appendix 12. The appendix is arranged opposite to that plane surface of the protection device 10, which is provided to be aligned at the glass ceramic panel. The protection device 10 and the appendix 12 may form a single-piece part. Alternatively, the appendix 12 may be formed as a separate part fixed at the protection device 10. In this example, the appendix 12 has the form of a flat cylinder or a circular disk. A large-area side of the appendix 12 extends parallel to a large-area side of the protection device 10.

[0027] The paperboard sheet 14 comprises a cutout 16 in its central portion. The cutout 16 has a circular form and is marginally bigger than the cross-section of the appendix 12 of the protection device 10. Thus, the appendix 12 of the protection device 10 is insertable into the cutout 16 of the paperboard sheet 14.

[0028] The height of the appendix 12 corresponds with the thickness of the paperboard sheet 14, so that an outer surface of the appendix 12 extends in the same plane as an outer surface of the paperboard sheet 14. An adhesive tape 18 is provided at the outer side of the paperboard sheet 14, wherein said adhesive tape 18 covers at least partially the outer surface of the appendix 12.

[0029] The protection device 10 with the appendix 12 and the paperboard sheet 14 with the cutout 16 are partially complementary to each other. The complementary forms of the protection device 10 and paperboard sheet 14 on the one hand and the adhesive tape 18 at the outer sides of the paperboard sheet 14 and appendix 12 allow a fastening of the protection device 10 at the paperboard sheet 14.

[0030] In this example, the cross-section of the appendix 12 and the form of the cutout 16 are circular. In general, the cross-section of the appendix 12 and the form of the cutout 16 may be arbitrary. However, the cross-section of the appendix 12 and the form of the cutout 16 must be at least partially complementary.

[0031] The at least partially complementary forms of the appendix 12 and the cutout 16 on the one hand and the adhesive tape 18 on the other hand guarantee that the protective device 10 cannot loosen from the paperboard sheet 14.

[0032] The package system mentioned above is provided for a cooking hob with a glass-ceramic panel. In general, the package system may be provided for an arbitrary apparatus with one or more glass panels or other fragile or breakable panels.

[0033] Further, the paperboard sheet 14 may be replaced by a sheet made of another material. For example, instead of the paperboard sheet 14 a wooden panel can

be used.

[0034] Although an illustrative embodiment of the present invention has been described herein with reference to the accompanying drawing, it is to be understood that the present invention is not limited to that precise embodiment, and that various other changes and modifications may be affected therein by one skilled in the art without departing from the scope or spirit of the invention. All such changes and modifications are intended to be included within the scope of the invention as defined by the appended claims.

List of reference numerals

[0035]

10 protection device

12 appendix

14 paperboard sheet

16 cutout

25 18 adhesive tape

Claims

30 1. A package system for an apparatus with a panel, in particular for a cooking hob with a glass ceramic panel, wherein:

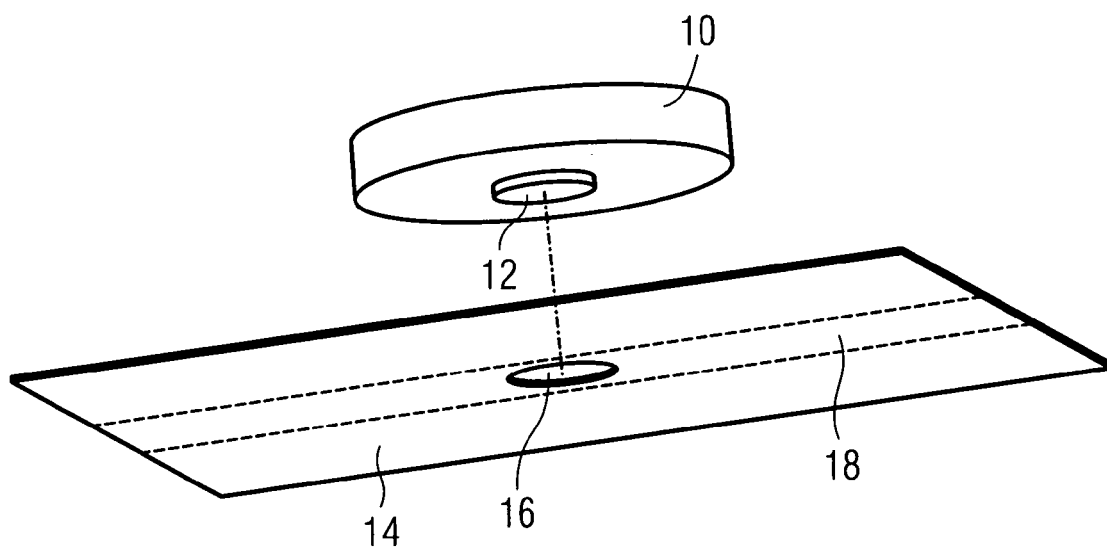
- the package system includes at least one protection device (10) with at least one plane surface,
- the plane surface of the protection device (10) is provided for aligning at the panel,
- the package system comprises at least one paperboard sheet (14) provided for arranging besides the panel, and
- the protection device (10) forms a cushion element between the panel and the paperboard sheet (14), **characterized in, that**

the protection device (10) comprises at least one appendix (12) and the paperboard sheet (14) comprises at least one cutout (16), wherein said appendix (12) and said cutout (16) are at least partially complementary to each other.

2. The package system according to claim 1, **characterized in, that**

the package system includes at least one adhesive tape (18) provided for applying at an outer surface of the paperboard sheet (14) and an outer surface of the appendix (12).

3. The package system according to claim 1 or 2,
characterized in, that
the outer surface of the paperboard sheet (14) and
the outer surface of the appendix (12) extend in the
same plane, when the appendix (12) is inserted in
the cutout (16) of the paperboard sheet (14). 5
4. The package system according to any one of the
preceding claims,
characterized in, that
the protection device (10) has the form of a disk. 10
5. The package system according to any one of the
preceding claims,
characterized in, that
the form of the cutout (16) corresponds with the
cross-section of the appendix (12). 15
6. The package system according to claim 5,
characterized in, that
the contour of the cutout (16) is marginally bigger
than the cross-section of the appendix (12). 20
7. The package system according to any one of the
preceding claims,
characterized in, that
the appendix (12) has form of a circular disk. 25
8. The package system according to any one of the
preceding claims,
characterized in, that
the cutout (16) has a circular form. 30
9. The package system according to any one of the
preceding claims,
characterized in, that
the protection device (10) is made of an expanded
polystyrene. 35
10. The package system according to any one of the
preceding claims,
characterized in, that
the protection device (10) and the appendix (12) form
a single-piece part. 40
11. The package system according to any one of the
preceding claims,
characterized in, that
the cutout (16) is arranged at a central portion of the
paperboard sheet (14). 45
12. The package system according to any one of the
preceding claims,
characterized in, that
the paperboard sheet (14) is a part of a paperboard
box. 50
13. The package system according to any one of the
claims 1 to 11,
characterized in, that
the paperboard sheet (14) is a single sheet.
14. The package system according to any one of the
claims 1 to 11,
characterized in, that
the paperboard sheet (14) is a part of another com-
ponent of the package system. 55





EUROPEAN SEARCH REPORT

Application Number
EP 10 00 9870

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 3 356 209 A (PEZELY JR JOSEPH M) 5 December 1967 (1967-12-05)	1,4,5, 9-14	INV. B65D5/50 B65D81/107
Y	* columns 1-3; figures 3,6 *	2	
Y	DE 70 07 750 U (PLEYEL PLASTIQUES DE LOUVIERS [FR]) 30 July 1970 (1970-07-30) * page 2; figure 1 *	2	
X	DE 11 62 274 B (PAUL HASSE) 30 January 1964 (1964-01-30) * columns 1,2; figure 1 *	1,4,5, 7-14	
X	US 3 399 797 A (HARRY FREEMAN) 3 September 1968 (1968-09-03) * columns 1-4; figures 1,2,10-12 *	1,4,5, 7-14	
X	US 5 692 618 A (BEAK SOON-KI [KR]) 2 December 1997 (1997-12-02) * figures 2-5,7 *	1,3,5	
A	US 2003/159970 A1 (WU TSAN SHENG [TW]) 28 August 2003 (2003-08-28) * paragraph [0016]; figures 2,5 *	1-14	TECHNICAL FIELDS SEARCHED (IPC) B65D
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 3 March 2011	Examiner Jervelund, Niels
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			

1
EPO FORM 1503 03.82 (P04C01)

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

EP 10 00 9870

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
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

03-03-2011

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 3356209	A	05-12-1967	NONE	
DE 7007750	U	30-07-1970	BE 746560 A1 FR 2036028 A7 LU 60435 A1	31-07-1970 24-12-1970 04-05-1970
DE 1162274	B	30-01-1964	NONE	
US 3399797	A	03-09-1968	NONE	
US 5692618	A	02-12-1997	NONE	
US 2003159970	A1	28-08-2003	NONE	