

(19)



(11)

EP 3 173 358 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
31.05.2017 Bulletin 2017/22

(51) Int Cl.:
B65D 83/00 (2006.01) **A47F 1/12** (2006.01)
B65D 25/10 (2006.01) **B65D 5/50** (2006.01)
B65D 5/52 (2006.01)

(21) Application number: **15382586.4**

(22) Date of filing: **25.11.2015**

(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 RS SE SI SK SM TR**
Designated Extension States:
BA ME
Designated Validation States:
MA MD

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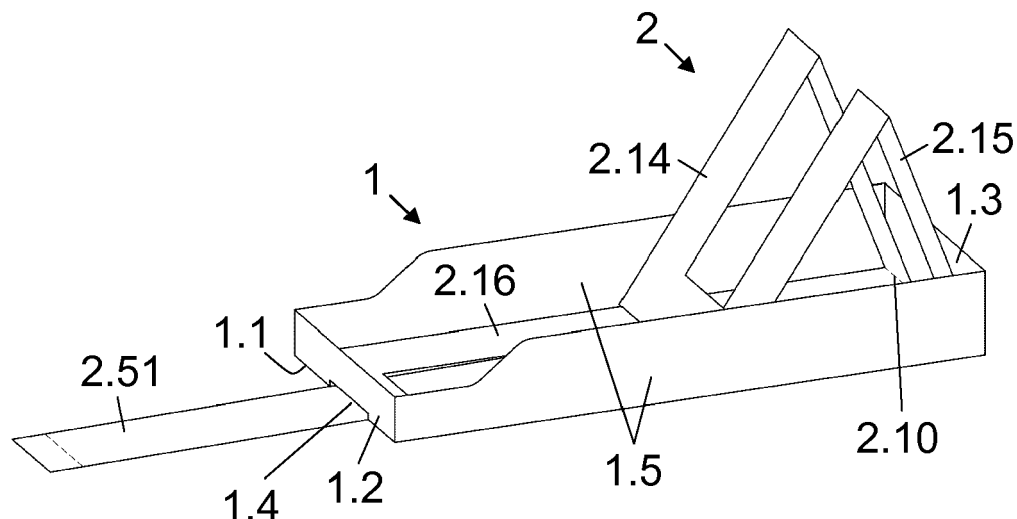
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(54) DISPLAY TRAY WITH HANDLE

(57) Tray with handle formed from a single strip or sheet of cardboard, to bring products closer, the handle is placed inside the cardboard tray and is formed from the tray with a rectangular shape, the sheet includes a first cut shorter than the length thereof and a second parallel cut with the same length as the first cut, a third cut that connects the nearby ends of the first and second cut, thereby defining a central segment, a first fold line

is defined in the first and second larger segments, a second fold line is defined between the first fold line and the end of the sheet, a third fold line joining the ends of the central segment opposite the first cut, the sheet is folded along the first fold line and the second fold line to form a first and a second inclined faces defining a horizontal face.

**Fig.4**

Description**OBJECT OF THE INVENTION**

[0001] The present invention corresponds to the field of cardboard trays provided with a handle to bring the products towards the anterior part of the tray.

BACKGROUND OF THE INVENTION

[0002] Patent EP2724954 discloses a tray with a handle in the form of a strip with a V fold on the rear part thereof. This patent describes a simple yet small and not very robust handle, which makes it impractical, as the V fold may not resist the pull, such that it is necessary to include in the V configurations that reinforce it, such as additional strips; this means that it cannot be formed by a single sheet, requiring at least two strips attached to each other such as by an adhesive. Considering the volume in which these trays are produced this increases the cost and complexity of the product.

[0003] Therefore, there is a need for a tray with a handle that solves the drawbacks of the prior art by avoiding the need for several configurations of the handle.

DESCRIPTION OF THE INVENTION

[0004] The present invention is established and characterised in the independent claims, while the dependent claims describe additional characteristics thereof.

[0005] The subject matter of the invention is a tray with a handle formed in a simple manner, preferably from a single strip or sheet of cardboard. The technical problem to solve is configuring said tray with a handle with a shape, cuts and folding lines that provide the desired object.

[0006] An analogous advantage is the aforementioned simplicity, as a single sheet of cardboard allows making a robust handle.

[0007] An additional advantage is that the handle is aesthetically pleasing, as it is not very conspicuous since the tray acts as a container and the side projecting out of the tray retracts once the products have been moved forward, particularly when the side is shortened such that with the handle retracted the projected side is very small, as specified in claim 2.

[0008] A further advantage is that the configuration of folds makes the handle robust enough that no reinforcements or stiffeners are required, particularly if it is made of corrugated board, as specified in claim 4.

DESCRIPTION OF THE DRAWINGS

[0009] This specification is supplemented with a set of drawings illustrating the preferred embodiment, which are never intended to limit the invention.

Figure 1 is a plan view of the sheet.

Figure 2 is a perspective view of the handle after folding the sheet twice.

Figure 3 shows a perspective view of the handle fully formed.

Figure 4 shows a perspective view of the handle placed in the tray.

Figure 5 shows a perspective view of the tray with a handle for three products, of the package type, arranged on the rear part of the tray.

Figure 6 shows figure 5 when the first inclined face of the handle moves forward and the products approach the anterior part of the tray.

Figure 7 represents figure 6 when the handle is retracted in the rear part of the tray.

PREFERRED EMBODIMENT OF THE INVENTION

[0010] A preferred embodiment is described below with reference to the figures.

[0011] Figures 4 to 7 show a display tray (1) with a handle (2) to bring closer the products (3) deposited on the tray (1), which comprises a base (1.1), an anterior face (1.2) and a posterior face (1.3).

[0012] Figures 1 to 3 show the handle (2) placed inside the cardboard tray (1). The handle (2) is made from a cardboard sheet (2.1), figure 1, with a rectangular shape where said sheet (2.1) includes a first cut (2.2) shorter than the length of the sheet (2.1) and a second cut (2.3) parallel to and with the same length as the first cut (2.2), a third cut (2.4) that connects nearby ends of the first cut (2.2) and second cut (2.3), thereby configuring a central segment (2.5) surrounded by a first larger segment (2.6) followed by a first smaller segment (2.7), followed by a second larger segment (2.8) and followed by a second smaller segment (2.9). This is, an inner tab is cut out along the rectangular shape.

[0013] To form the handle (2) a first fold line (2.10) is made in the first segment (2.6) and second larger segment (2.8), aligned, a second fold line (2.11) is made between the first fold line (2.10) and the end of the sheet (2.1), a third fold line (2.12) is made joining the ends of the central segment (2.5) opposite the third cut (2.4), such that the sheet (2.1) folds along the first fold line (2.10) and along the second fold line (2.11) to form first (2.14) and second (2.15) inclined faces, leaving one horizontal face (2.16), and the central segment (2.5) is folded along the third (2.12) and the fourth (2.13) fold lines such that it embraces the first smaller segment (2.7). The summarised folding sequence can be seen in figures 1 to 3, where the sheet (2.1) of figure 1 is folded along the first fold line (2.10) and along the second fold line (2.11) in the same direction, on the sheet (2.1) to form a peak the apex of which is the second fold line (2.11), figure 2, then

the central segment (2.5) is folded to point towards the anterior part, which corresponds to the second smaller segment (2.9), figure 3.

[0014] In this way, with the handle (2) formed, the horizontal face (2.16) rests on the base (1.1) of the tray (1), the central body (2.5) passes under the second smaller segment (2.9) and exits through an orifice (1.4) in the anterior face (1.2) of the tray (1), figures 4 to 7. These same figures show the sequence used to bring the products (3) towards the anterior part as they are consumed.

[0015] Optionally, figures 2 to 7, the central segment (2.5) is shortened by a fourth cut (2.17) to form a smaller central segment (2.51), such that the central segment (2.5) does not jut out excessively from the tray (1).

[0016] Optionally, figures 4 to 7, the tray (1) comprises two lateral bases (1.5) as a union respectively between the two ends of the anterior face (1.2) and the rear face (1.3), such that the tray (1) can act as a container for the products (3).

[0017] Optionally, the cardboard of the tray (1) and/or the handle (2) is corrugated.

(2.5) is shortened by a fourth cut (2.17) leaving a shorter central segment (2.51).

3. Tray according to any of the preceding claims where the tray (1) comprises two lateral bases (1.5) as a union respectively between the two ends of the anterior face (1.2) and the posterior face (1.3).
4. Tray according to any of the preceding claims where the cardboard is corrugated cardboard.

Claims

1. Display tray with handle to bring closer the products deposited on the tray, the tray (1) comprising a base (1.1), an anterior face (1.2) and a posterior face (1.3), the handle (2) placed inside the cardboard tray (1), the handle (2) formed from a cardboard sheet (2.1) with a rectangular shape, **characterised in that** the sheet (2.1) comprises a first cut (2.2) shorter than the length of the sheet (2.1) and a second cut (2.3) parallel to and with the same length as the first cut (2.2), a third cut (2.4) that connects the ends near the first cut (2.2) and the second cut (2.3), thereby forming a central segment (2.5) surrounded by a first larger segment (2.6) followed by a first smaller segment (2.7) followed by a second larger segment (2.8) and followed by a second smaller segment (2.9), with a first fold line (2.10) in the first (2.6) and second (2.8) larger segments, aligned therewith, a second fold line (2.11) between the first fold line (2.10) and the end of the sheet (2.1), a third fold line (2.12) joining the ends of the central segment (2.5) opposite the third cut (2.4), such that the sheet (2.1) is folded along the first fold line (2.10) and along the second fold line (2.11) to form a first inclined face (2.14) and a second inclined face (2.15) leaving a horizontal face (2.16), the central segment (2.5) folded along the third fold line (2.12) and the fourth fold line (2.13) such that the first smaller segment (2.7) is embraced, the horizontal face (2.16) rests on the base (1.1) of the tray (1), the central segment (2.5) passes under the second smaller segment (2.9) and exits through an orifice (1.4) in the anterior face (1.2) of the tray (1).

2. Tray according to claim 1 where the central segment

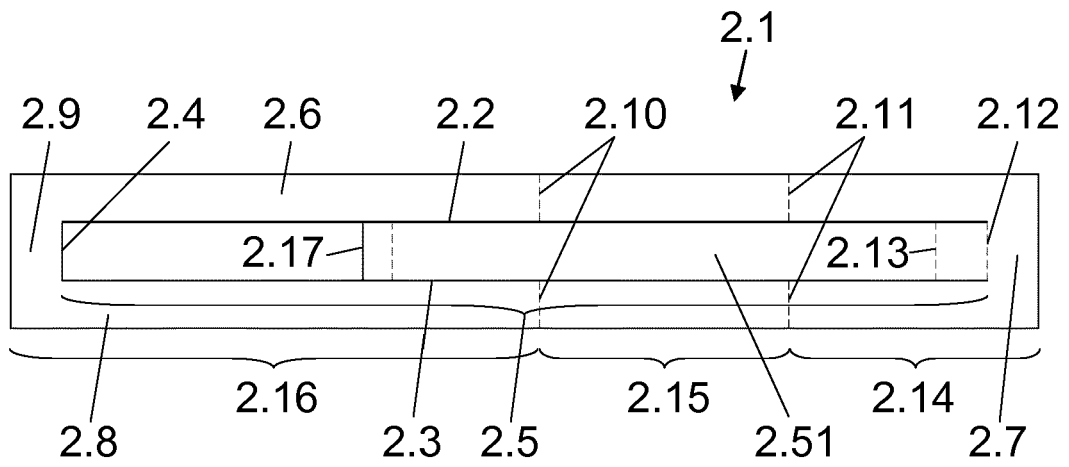


Fig.1

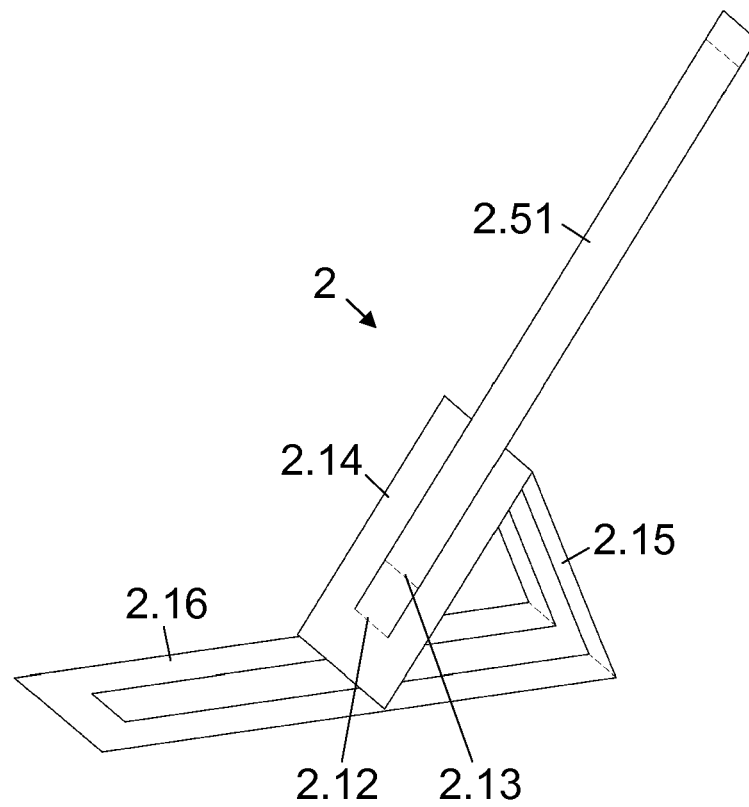


Fig.2

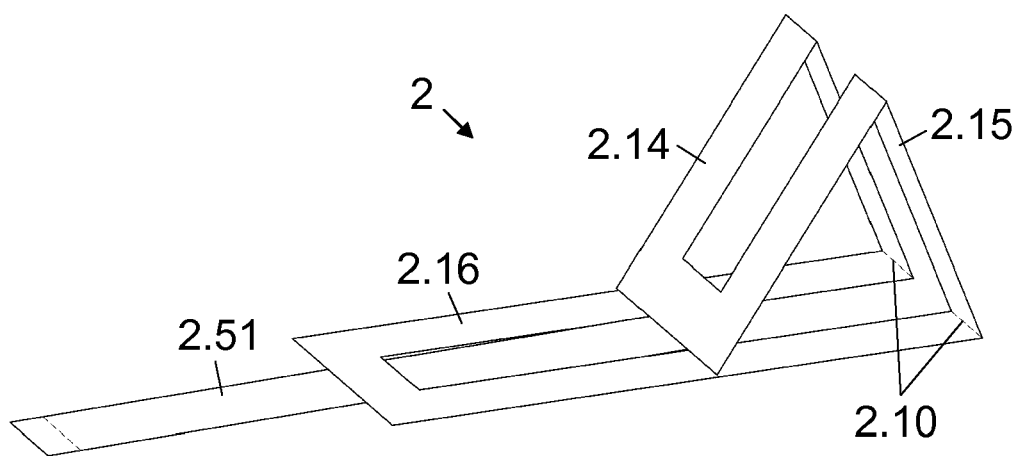


Fig.3

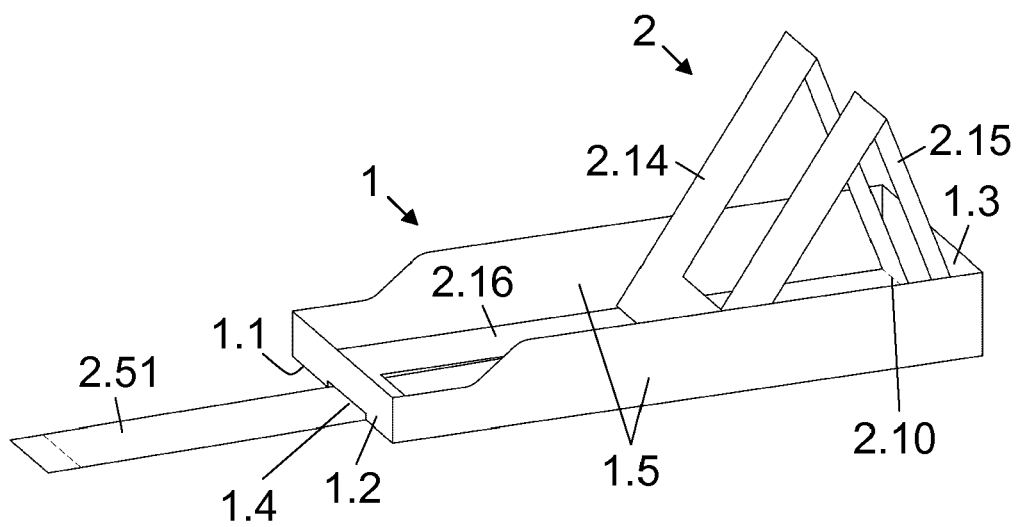


Fig.4

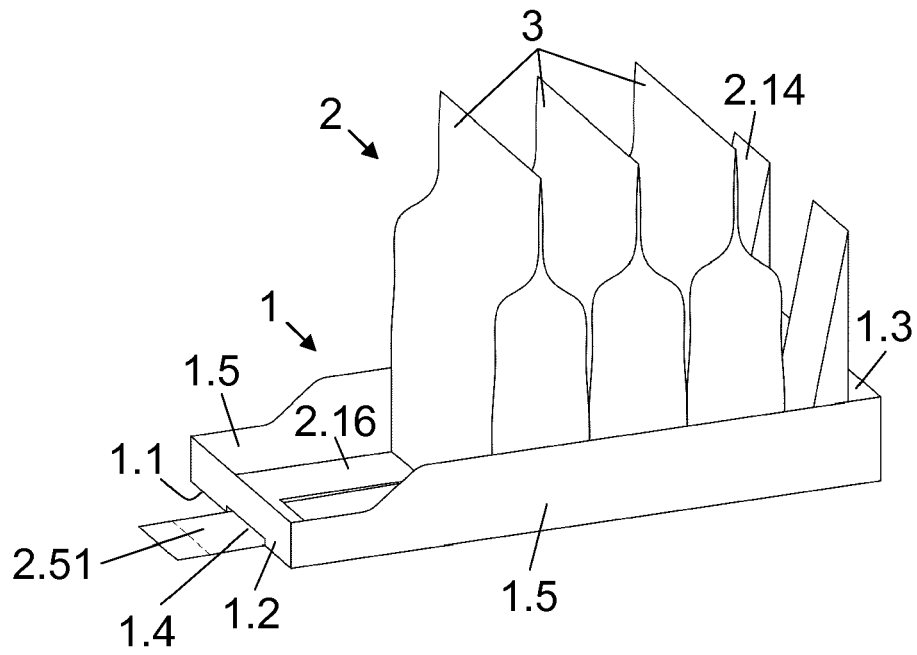


Fig.5

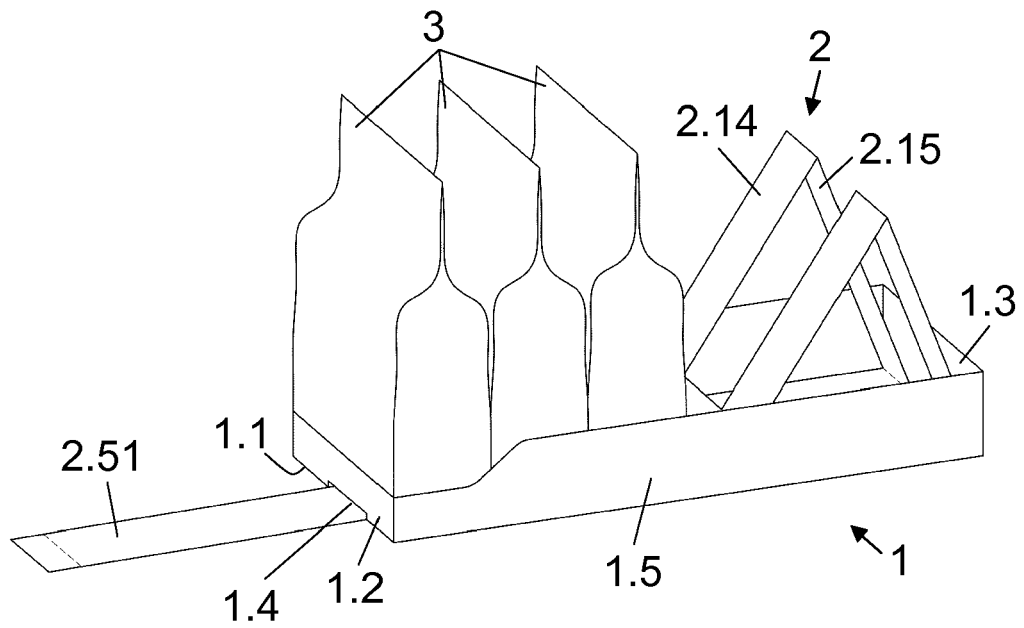


Fig.6

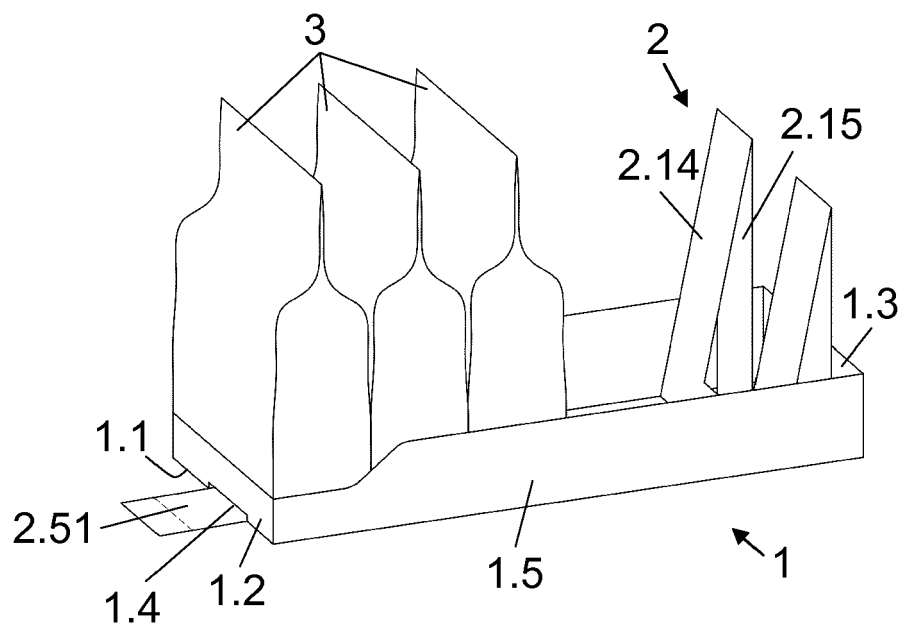


Fig.7



EUROPEAN SEARCH REPORT

Application Number
EP 15 38 2586

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EPO FORM 1503 03.82 (P04C01)

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			TECHNICAL FIELDS SEARCHED (IPC)
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The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 3 May 2016	Examiner Grondin, David
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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ON EUROPEAN PATENT APPLICATION NO.**

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03-05-2016

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